



**U.S. Army Corps  
of Engineers**

Baltimore District  
PN-21-07

# Public Notice

**In Reply to Application Number  
NAB-2020-61758 (Microsoft Corporation/Building Lot Fill, Road  
Crossing, Utility Line, & Stream Restoration)**

Comment Period: March 1, 2021 to March 30, 2021

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**THE PURPOSE OF THIS PUBLIC NOTICE IS TO INFORM INTERESTED PARTIES OF THE PROPOSED ACTIVITY AND TO SOLICIT COMMENTS. NO DECISION HAS BEEN MADE AS TO WHETHER OR NOT A PERMIT WILL BE ISSUED AT THIS TIME.**

This District has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 USC 1344), as described below:

**APPLICANT:** Microsoft Corporation  
Attn: Ms. Inna Tasmaly  
1 Microsoft Way  
Redmond, Washington 98052

## **WATERWAY AND LOCATION OF THE PROPOSED WORK:**

The proposed project is located in nontidal wetlands and an unnamed tributary to Dorsey Run, in Annapolis Junction, Anne Arundel County, Maryland. (39.116610, -76.791407)

## **OVERALL PROJECT PURPOSE:**

The purpose of the project is to create a data storage center to provide secure data warehousing within close proximity to Fort George G. Meade, Maryland.

## **PROJECT DESCRIPTION:**

The proposed project involves the construction of a multi-unit data center and appurtenant facilities (e.g., roadways, utilities, stormwater, security fencing, etc.) located at a former sand and gravel mining site at the terminus of Dorsey Run Road in Annapolis Junction, Anne Arundel County, Maryland. The proposed project will permanently impact 2,532 linear feet (15,192 square feet) of intermittent stream channel, 20,260 square feet of palustrine forested wetland, and 10,689 square feet of palustrine emergent wetland. In addition, the proposed project will temporarily impact 8,496 square feet of palustrine forested wetland from temporary grading to tie the proposed relocated stream channel into the existing Dorsey Run floodplain.

## **EFFECTS ON AQUATIC RESOURCES:**

Activity (i.e. culvert)	Stream Impact (LF)	Wetland Impact (Sq. Ft.)	Authority (Section 10/404/408)
Site development (i.e. fill, grading, construction)	2,532	39,445	Section 404

**LEAD FEDERAL AGENCY:** The U.S. Army Corps of Engineers, as the lead federal agency, is responsible for all coordination pursuant to applicable federal authorities.

**APPLICANT'S PROPOSED AVOIDANCE, MINIMIZATION, AND COMPENSATORY MITIGATION:**

Avoidance and minimization: As part of the planning process for the proposed project, steps were taken to ensure avoidance and minimization of impacts to aquatic resources to the maximum extent practicable based on the existing site conditions. Proposed development has been focused on the center of the site, which primarily consists of backfilled material following mining reclamation. The perimeter patrol road and anti-terrorism fence were initially proposed through wetlands. However, as a result of agency input requiring the evaluation of alternatives, impacts to wetlands have been avoided and minimized by realigning the anti-terrorism fence and patrol road to outside of the wetland boundaries.

Compensatory Mitigation: As currently proposed, the on-site compensatory mitigation plan will result in the relocation/restoration of 2,781 linear feet of stream channel and the creation and restoration of a minimum 1.19 acres of palustrine forested wetlands adjacent to the stream, to compensate for permanent impacts to 0.47 acres of palustrine forested wetlands and 0.25 acres of palustrine emergent wetlands. Please refer to the table above for a summary of aquatic resource impacts.

**CORPS EVALUATION REQUIREMENTS:**

This project will be evaluated pursuant to Corps Regulatory Program Regulations (33 CFR Parts 320-332). The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonable may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economic, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, and consideration of property ownership and in general, the needs and welfare of the people. The evaluation of the impact of this project will also include application of the Clean Water Act Section 404(b)(1) Guidelines promulgated by the Administrator, U.S. Environmental Protection Agency.

**ENDANGERED SPECIES:** A preliminary review of this application indicates that the proposed work may affect Federally-listed threatened or endangered species or their critical habitat, pursuant to Section 7 of the Endangered Species Act, as amended. As the evaluation of this application continues, additional information may become available which could modify this preliminary determination.

**ESSENTIAL FISH HABITAT:** The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), as amended by the Sustainable Fisheries Act of 1996

(Public Law 04-267), requires all Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH), including species of concern, life cycle habitat, or Habitat Areas of Particular Concern. The project site lies in or adjacent to EFH as described under MSFCMA for managed species under the MSFCMA. The Baltimore District has made a preliminary determination that the project will have no effect on EFH. The Baltimore District has made a preliminary determination that mitigative measures are not required to minimize adverse effects on EFH at this time. This determination may be modified if additional information indicates otherwise.

**HISTORIC RESOURCES:** Pursuant to Section 106 of the National Historic Preservation Act of 1966 and applicable guidance, the Corps has reviewed the latest published version of the National Register of Historic Places and initially determined that no registered properties listed as eligible for inclusion, therein, are located at the site of the proposed work. The Corps has made the preliminary determination that the proposed project would have no effect on historic properties. The Corps final eligibility and effect determination will be based on coordination with the State Historic Preservation Office as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps' identified permit area.

**TRIBAL RESOURCES:** Section 106 of the National Historic Preservation Act also requires federal agencies to consult with federally-recognized American Indian tribes that attach religious and cultural significance to historic properties that may be affected by the agency's undertaking. Corps Tribal Consultation Policy mandates an open, timely, meaningful, collaborative, and effective deliberative communication process that emphasizes trust, respect, and shared responsibility. The policy further emphasizes that, to the extent practicable and permitted by law, consultation works toward mutual consensus and begins at the earliest planning stages, before decisions are made and actions taken. The Corps final eligibility and effect determination will be based on coordination with interested tribes, in accordance with the Corps current tribal standard operating procedures as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on tribal resources.

**MODIFICATION OF CIVIL WORKS PROJECTS: 33 USC 408 (SECTION 408):** All Section 408 proposals will be coordinated internally at USACE. The Section 408 decision will be issued along with the Section 404 and/or Section 10 decision. Please see the following link for more information regarding Section 408:  
<https://www.nab.usace.army.mil/section408/>.

**WATER QUALITY CERTIFICATION:** The applicant is required to obtain a water quality certification in accordance with Section 401 of the Clean Water Act.

**COASTAL ZONE MANAGEMENT PROGRAMS:** Where applicable, the applicant has certified in this application that the proposed activity complies with and will be conducted in a manner consistent with the approved Coastal Zone Management (CZM) Program. By this public notice, we are requesting the State concurrence or objection to the applicant's consistency statement.

The applicant must obtain any State or local government permits which may be required.

**SUBMISSION OF COMMENTS:** The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments provided will become part of the public record for this action and are subject to release to the public through the Freedom of Information Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

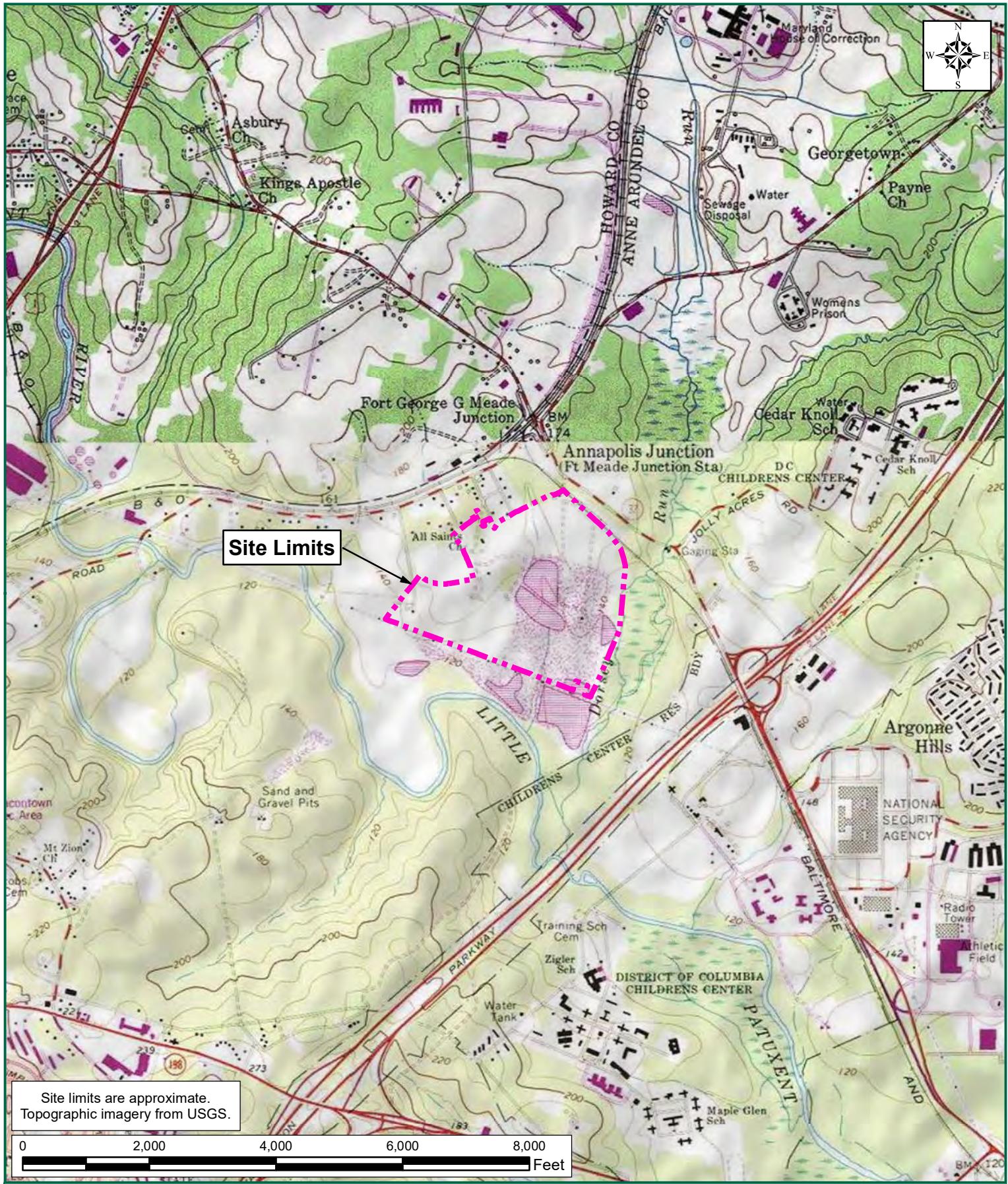
Written comments concerning the work described above related to the factors listed above or other pertinent factors must be received by the U.S. Army Corps of Engineers, Baltimore District within the comment period specified above through postal mail at the address below or electronic submission to the project manager email address below. Written comments should reference the Application Number (NAB-2020-61758).

**PUBLIC HEARING REQUESTS:** Any person who has an interest which may be adversely affected by the issuance of this permit may request a public hearing. The request, which must be in writing, must be received within the comment period as specified above to receive consideration. Also it must clearly set forth the interest which may be adversely affected by this activity and the manner in which the interest may be adversely affected. The public hearing request may be submitted by electronic mail or mailed to the following address:

Nicole Voelker  
Nicole.M.Voelker@usace.army.mil  
U.S. Army Corps of Engineers, Baltimore District  
Regulatory Branch  
2 Hopkins Plaza  
Baltimore, Maryland 21201

It is requested that you communicate this information concerning the proposed work to any persons known by you to be interested, who did not receive a copy of this notice.

General information regarding the Corps' permitting process can be found on our website at <https://www.nab.usace.army.mil/Missions/Regulatory.aspx>. This public notice has been prepared in accordance with Corps implementing regulations at 33 CFR 325.3. If you have any questions concerning this specific project, or would like to request a paper copy of this public notice, please contact Nicole Voelker at [Nicole.M.Voelker@usace.army.mil](mailto:Nicole.M.Voelker@usace.army.mil) or 410-962-1847. This public notice is issued by the Chief, Regulatory Branch.



**YEL01**  
ANNE ARUNDEL COUNTY, MARYLAND  
**FIGURE 1: VICINITY MAP**

**TIMMONS GROUP**  
YOUR VISION ACHIEVED THROUGH OURS.

TIMMONS GROUP JOB NUMBER: 45080  
PROJECT STUDY LIMITS: 161.8 ACRES  
LATITUDE: 39.116610  
LONGITUDE: -76.791407

U.S.G.S. QUADRANGLE(S): LAUREL  
DATE(S): 2016  
WATERSHED(S): PATUXENT (UPPER CHESAPEAKE RIVER BASIN)  
HYDROLOGIC UNIT CODE(S): 02060006

PROJECT NAME & LOCATION  
**YEL01**  
**ANNE ARUNDEL COUNTY,  
MARYLAND**

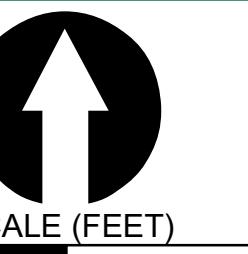
DATE 09/01/2020  
PROJECT NUMBER 45080  
PROJECT NAME YEL01  
DESIGNED BY DRAWN BY  
A. MEHFoud

1. Waters of the U.S. within the project study limits have been located using submeter, Bluetooth GPS antennas by Timmons Group.  
2. Waters of the U.S. have not been confirmed by the U.S. Army Corps of Engineers.  
3. Project limits are approximate.  
4. Topography based on USGS LiDAR.  
5. Cowardin Stream Classifications are based solely on field observations. No formal Stream assessment methodology was completed to determine these Cowardin Classifications.

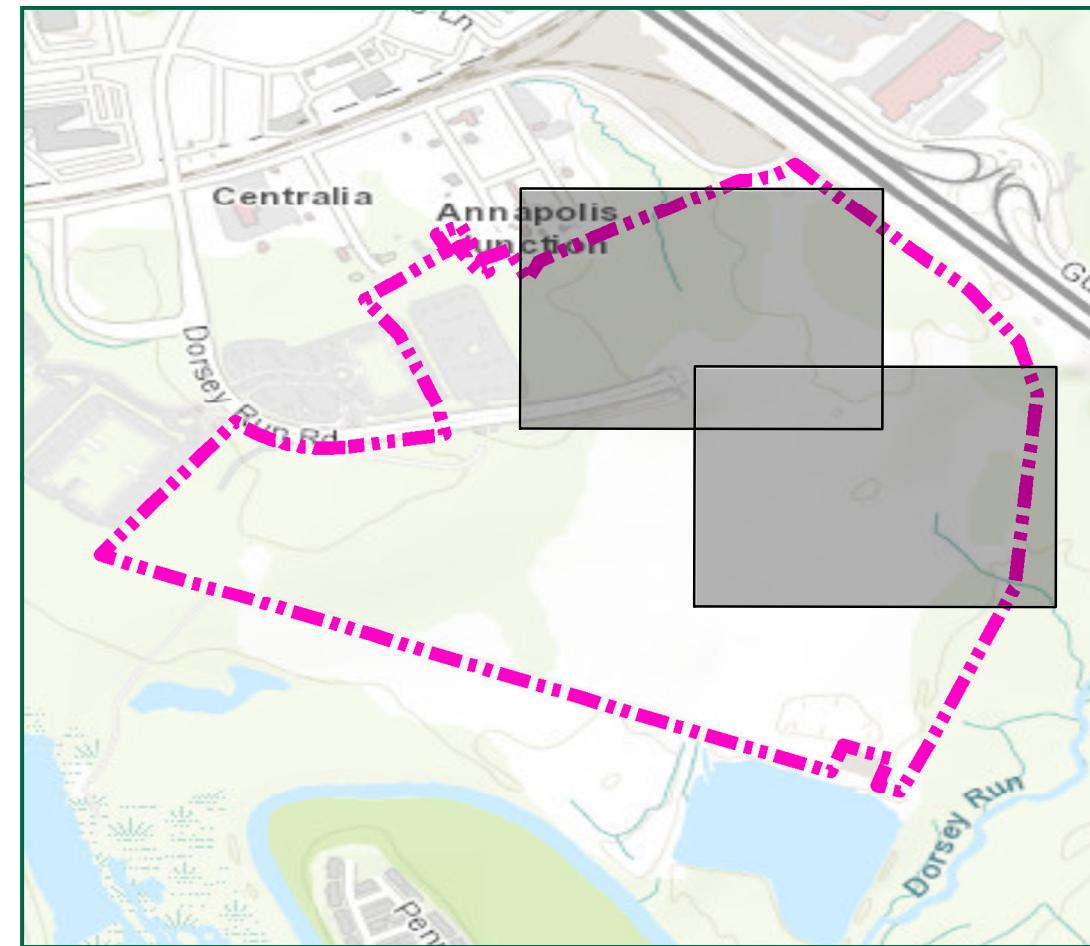
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REVISIONS	
#	MM/DD/YY
1	09/21/21
	UPDATED LAYOUT - DRAFT

DRAWING DESCRIPTION  
**FIGURE 5:  
STREAM AND  
WETLAND  
IMPACTS MAP -  
DRAFT**



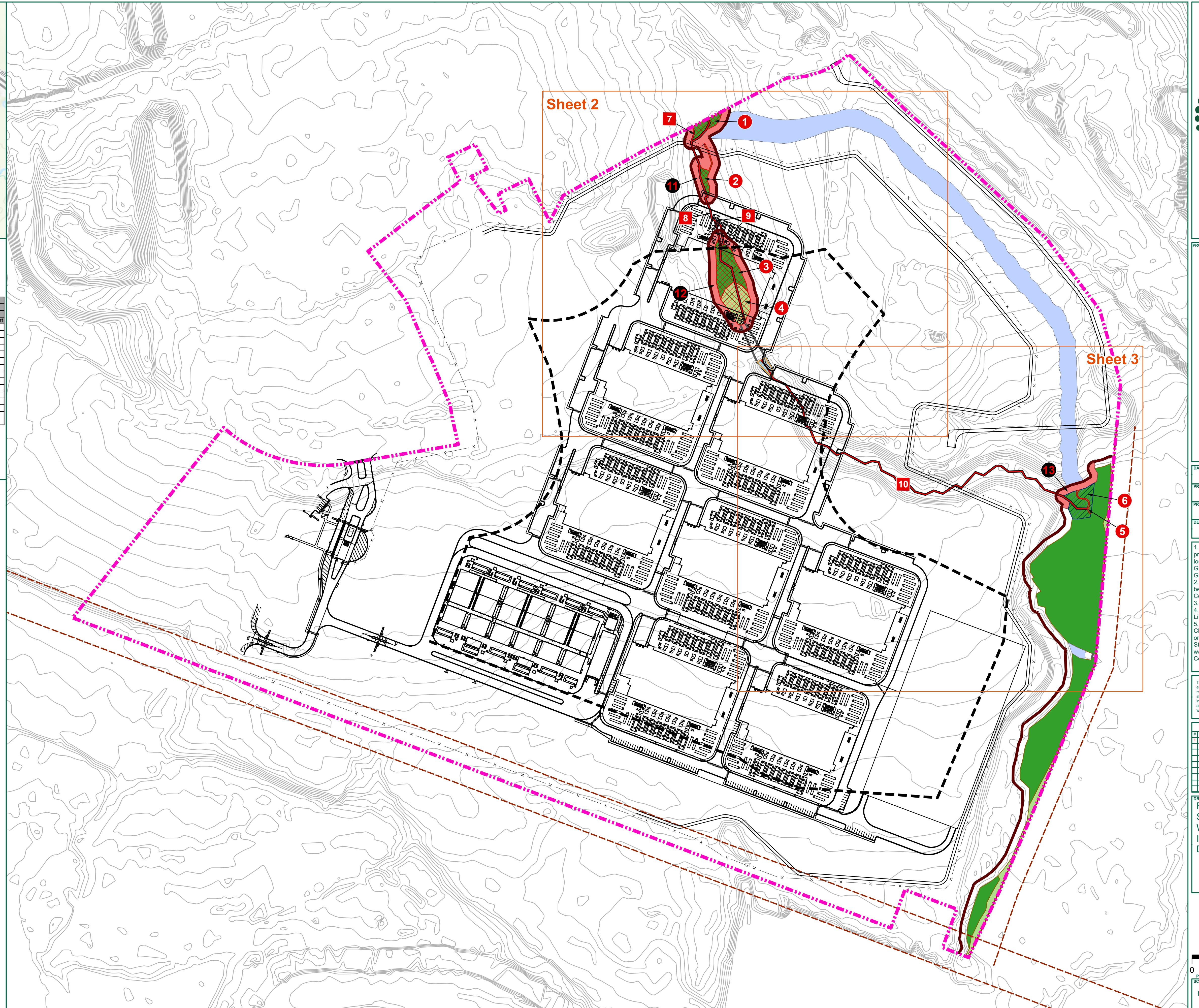
SCALE (FEET)  
0 175 350  
PLANS PRINTED AS-X-Y ARE HALF SCALE  
SCALE SHEET NUMBER  
H:1" = 175' 1



Impacts Table									
Impact ID	Wetland (sq. ft)		Wetland Buffer (sq. ft)		Stream (lf)		Stream Impact		Temporary
	Impact	Conversion	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent	
1	4,201								
2	2,423								
3	2,638								
4	10,689								
5	505								
6	8,496								
7									58
8									828
9									94
10									1,552
11									19,761
12									19,996
13									6,452
Total	8,496 sq ft	30,949 sq ft	0 sq ft	0 sq ft	0 sq ft	46,205 sq ft	0 lf	0 ac	2,532 lf
	0.20 ac	0.71 ac	0.00 ac	0.00 ac	0.00 ac	1.06 ac			

#### Legend

- Main Parcel Limits - 161.8 Acres
- 100 Meter Setback
- Stream Impact
- Buffer Impact
- Wetland Impact
- Permanent Stream Impact
- Storm Sewer Culvert
- Perennial Stream (R3)
- Intermittent Stream (R4)
- 25' Wetland Buffer
- Wetland Buffer Impacts
- Permanent Stream Impact
- Permanent Conversion Impact
- Permanent Wetland Impact
- Temporary Wetland Impact
- Palustrine Emergent (PEM) Wetlands
- Palustrine Forested (PFO) Wetlands
- Compensatory Mitigation Area - 3.3 Acres
- Existing Easement
- Existing Grading



PROJECT NAME & LOCATION  
**YEL01**  
ANNE ARUNDEL COUNTY,  
MARYLAND

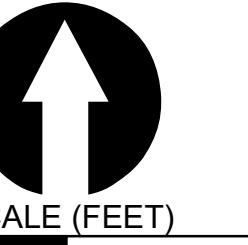
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PROJECT NUMBER 45080  
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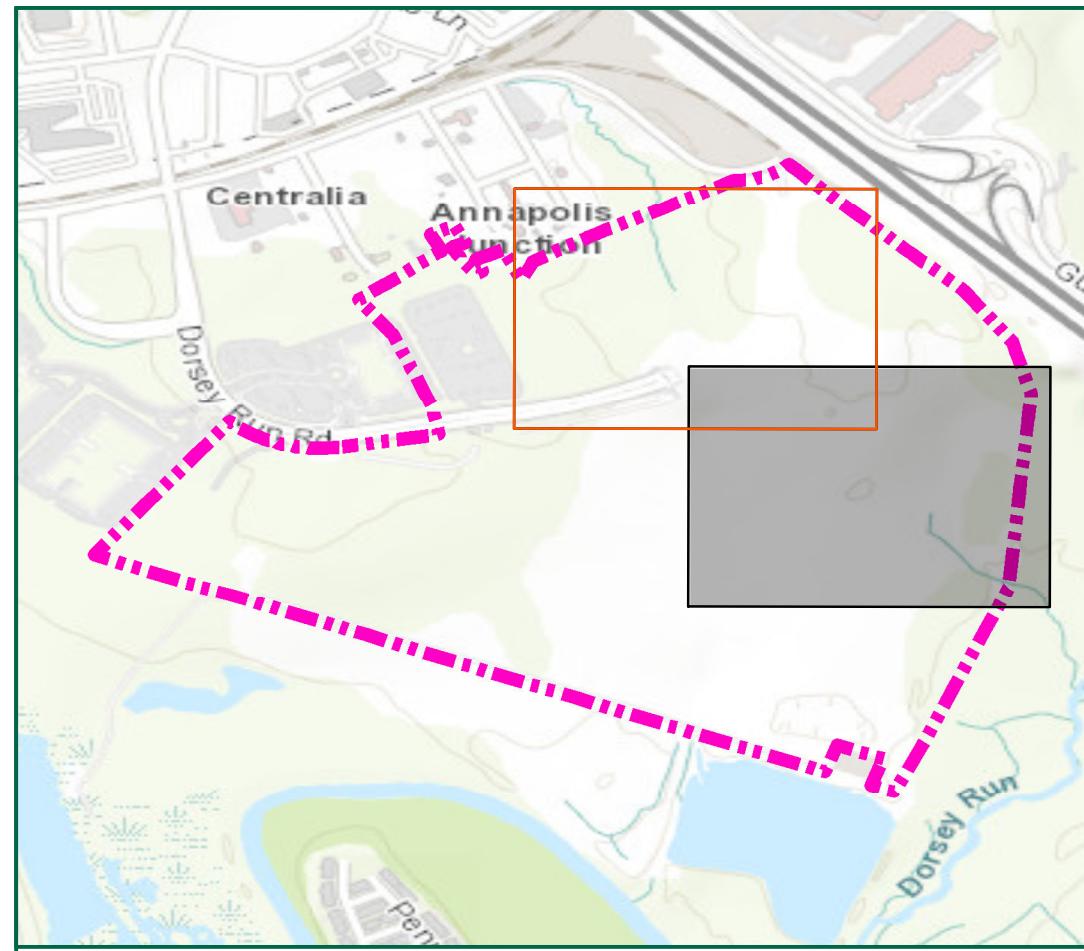
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REVISIONS  
# MM/DD/YY DESCRIPTION  
11 02/21/21 UPDATED LAYOUT - DRAFT

DRAWING DESCRIPTION  
**FIGURE 5:**  
STREAM AND  
WETLAND  
IMPACTS MAP -  
DRAFT

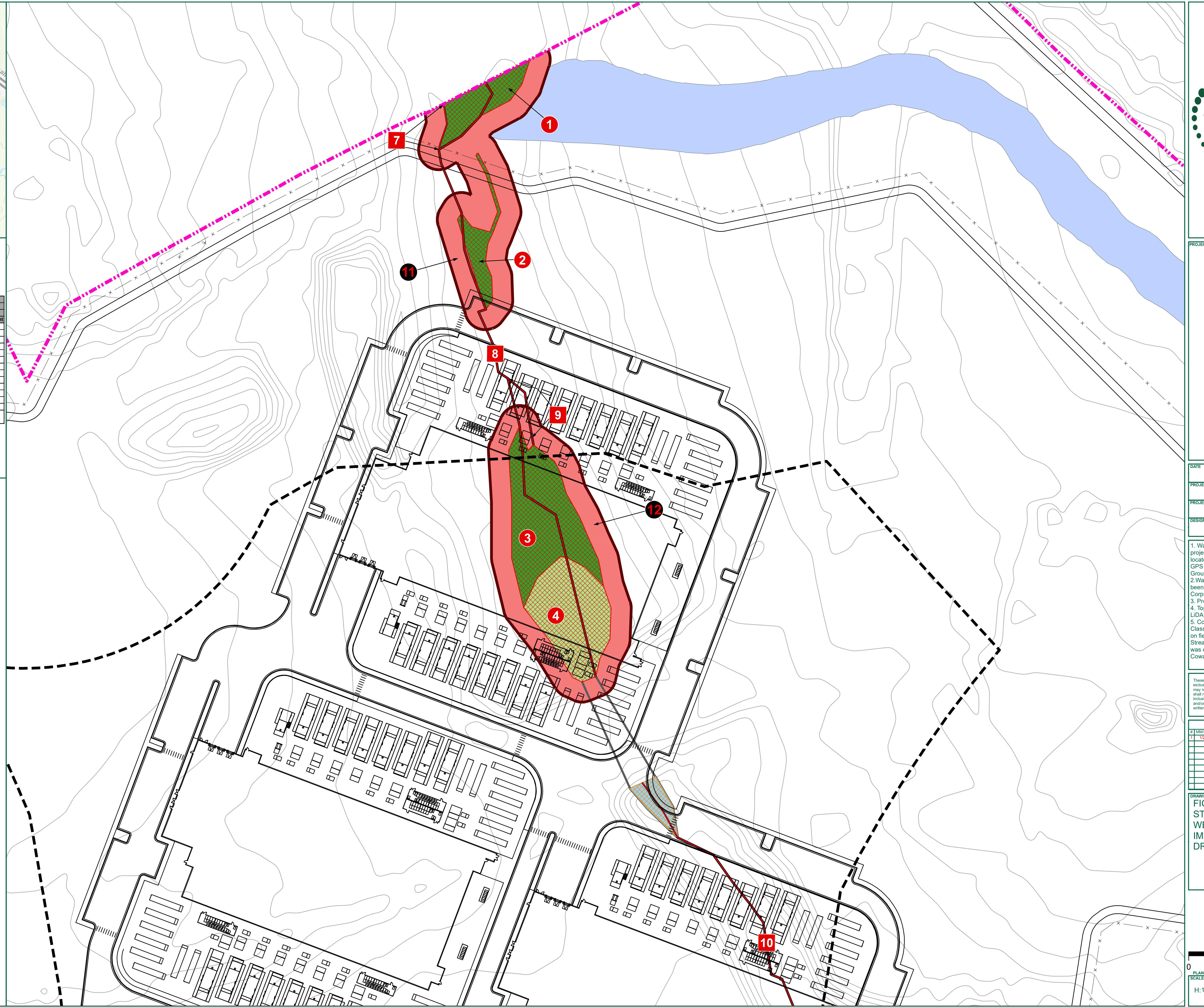


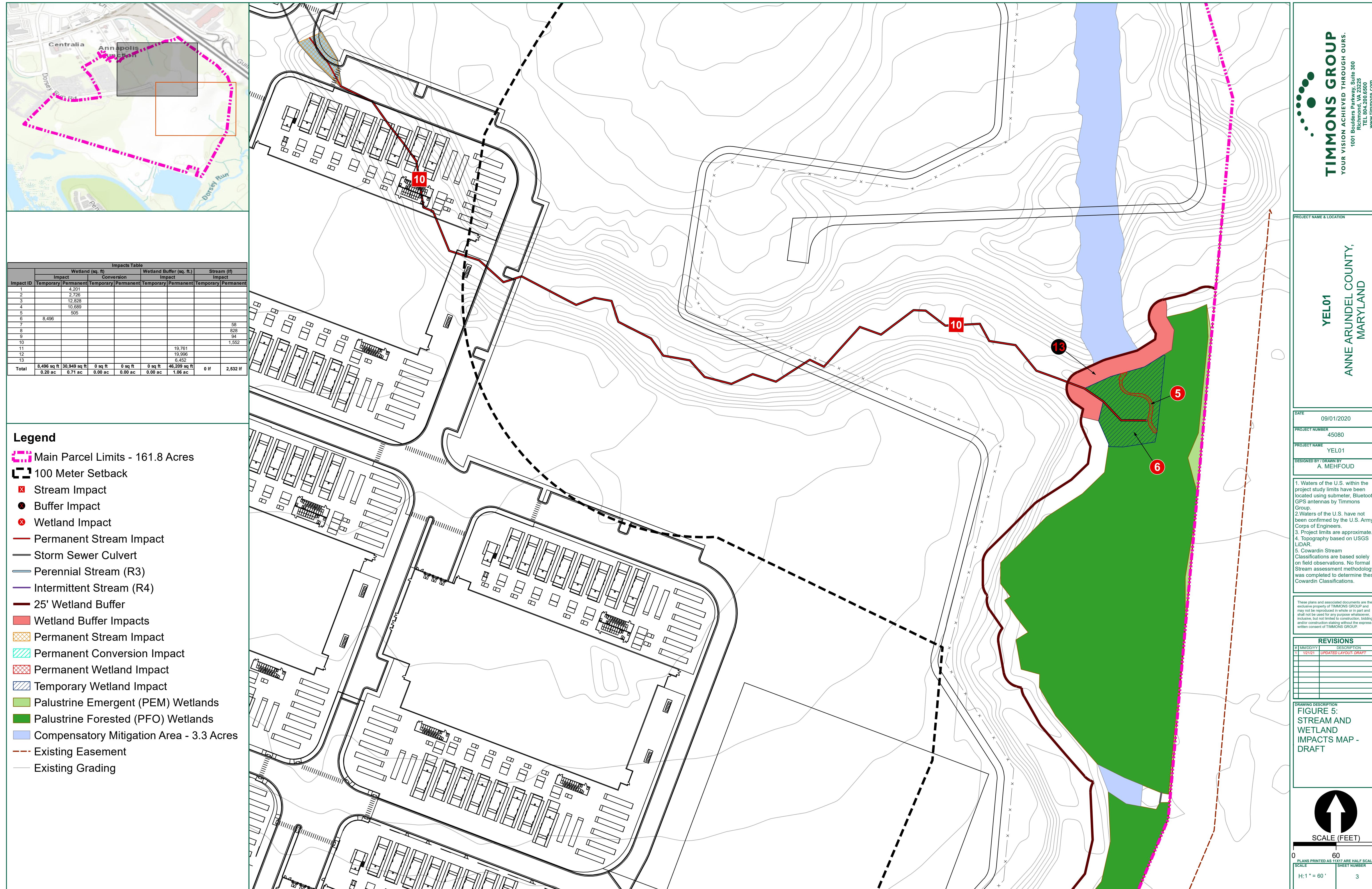
0 60 120  
PLANS PRINTED AS 1X1 ARE HALF SCALE  
SCALE H:1" = 60'  
SHEET NUMBER 2



Impact ID	Impacts Table		Wetland Buffer (sq. ft.)	Stream (lf)	Impact	
	Impact	Conversion				
1	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
1	4,201					
2	2,623					
3	2,638					
4	10,689					
5	505					
6	8,496					
7					58	
8					828	
9					94	
10					1,552	
11					19,761	
12					19,996	
13					6,452	
Total	8,496 sq ft	30,949 sq ft	0 sq ft	0 sq ft	46,205 sq ft	0 lf
	0.20 ac	0.71 ac	0.00 ac	0.00 ac	0.00 ac	0.532 lf

- Legend**
- Main Parcel Limits - 161.8 Acres
  - 100 Meter Setback
  - Stream Impact
  - Buffer Impact
  - Wetland Impact
  - Permanent Stream Impact
  - Storm Sewer Culvert
  - Perennial Stream (R3)
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  - 25' Wetland Buffer
  - Wetland Buffer Impacts
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  - Permanent Conversion Impact
  - Permanent Wetland Impact
  - Temporary Wetland Impact
  - Palustrine Emergent (PEM) Wetlands
  - Palustrine Forested (PFO) Wetlands
  - Compensatory Mitigation Area - 3.3 Acres
  - Existing Easement
  - Existing Grading





# SHEET 3.03



# SHEET 3.04



**DORSEY RUN ROAD**

**EX. FOREST CONSERVATION PROPERTY "CP-5" L.15634 - F.580**

**EX. FOREST CONSERVATION PROPERTY "CP-5" L.15634 - F.580**

**EX. FOREST CONSERVATION PROPERTY "CP-D" L.15634 - F.580**

**EX. FOREST CONSERVATION PROPERTY "CP-E" L.15634 - F.580**

**EX. FOREST CONSERVATION PROPERTY "CP-H" P.B.287 - P.3 & PLAT #14879 L.15634 - F.580**

**EX. FOREST CONSERVATION PROPERTY "CP-H" P.B.287 - P.3 & PLAT #14879 L.15634 - F.580**

**EX. FOREST CONSERVATION PROPERTY "A" P.B.329 - P.43 & PLAT #17019**

**EX. VAR. WIDTH PUBLIC UTILITY ESMT. P.B.280 P.34 L.18285 F.488**

**EX. VAR. WIDTH PUBLIC UTILITY ESMT. P.B.287 - P.3 & PLAT #14872**

**EX. 20' PUBLIC UTILITY EASEMENT P.B.287 - P.1 & PLAT #14877 P.B.266 - P.4**

**EX. VAR. WIDTH PUBLIC UTILITY ESMT. P.B.280 P.34 L.18285 F.488**

**LOT 2RR N/F AJ LOT 2R LLC 8230 DORSEY RUN RD. ACCOUNT # 90221367 L. 19318 / F. 76 PLAT #13832, PLAT #14562 & PLAT #14872**

**LOT 3RR AJ LOT 3R LLC 8220 DORSEY RUN RD. ACCOUNT # 90221368 PLAT #13833, PLAT #14563 & PLAT #14873**

**UG ELEC Mark**

**11629  
156.45  
PP 487**

**1162  
157.4  
PP 56**

**10719  
155.14**

**140.0**

**SAN**

**VAR. WIDTH PUBLIC UTILITY, SEWER PUMPING STATION ACCESS AND PRIVATE S.W.M.P. ACCESS ESMT. P.B. 329 - P.43 & PLAT # 17019 (TO BE RELOCATED AND VACATED)**

**SHEET 3.05**

L.15634 - F.580

**EX. RIGHT OF WAY**  
P.B. 60 - P. 76 &  
PLAT #13842

**EX. FOREST CONSERVATION PROPERTY "B"**  
P.B.329 - P.43 & PLAT  
#17019

**EX. FOREST CONSERVATION PROPERTY "C"**  
P.B.329 - P.43 &  
PLAT #17019

**EX. FOREST CONSERVATION PROPERTY "CP-N"**  
L.15634 - F.580

**EX. 40' PRIVATE COMMON USE ACCESS**  
ESMT. #3  
L.15485 - F.346 &  
L.24073 F.221  
(TO BE VACATED ON  
LOT 14R)

**EX. VAR. WIDTH PUBLIC UTILITY,  
SEWER PUMPING STATION  
ACCESS AND PRIVATE S.W.M.P.  
ACCESS ESMT.**  
P.B. 329 - P.43 & PLAT # 17019

**EX. 40' PRIVATE COMMON USE ACCESS**  
ESMT. #3  
L.15485 - F.346 &  
L.24073 F.221  
(TO BE VACATED ON LOT 14R)

**EX. VAR. WIDTH PUBLIC UTILITY, SEWER PUMPING STATION ACCESS AND PRIVATE S.W.M.P. ACCESS ESMT.**  
P.B. 329 - P.43 & PLAT # 17019

**LOT 12R N/F**  
KONTERRA PARTNERSHIP LTD  
8231 DORSEY RUN RD.  
ACCOUNT # 90221377  
L. 4372 / F. 340  
PLAT #13839 & PLAT #14879

**LOT 14R N/F**  
KONTERRA PARTNERSHIP LTD  
8251 DORSEY RUN RD.  
ACCOUNT # 90221379  
L. 4372 / F. 340  
PLAT #13841 & PLAT #14881

**SHEET 3.06**

**SCALE 1"=80'**

0 80'

# THE GROWTH ZONE

CITATION BUSINESS DARK

## ANNE ARUNDEL COUNTY - MARYLAND

## **EROSION & SEDIMENT CONTROL KEY PLAN**

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# **50% PLAN NOT FOR CONSTRUCTION**

THIS DRAWING PREPARED AT THE  
**CORPORATE OFFICE**  
1001 Boulders Parkway, Suite 300 | Richmond, VA 23225  
EL 804.200.6500 FAX 804.560.1016 [www.timmmons.com](http://www.timmmons.com)

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REVISION DESCRIPTION

ANSWER

YOUR VISION ACHIEVED THROUGH OURS.  
T

DATE			
7/10/20			DRAWN BY

I  
D  
E  
C  
E

*J. GORDON*  
DESIGNED BY  
*B. SNYDER*  
CHECKED BY  
*B. SNYDER*  
SCALE  
 $1'' = 80'$

50% PLAN  
NOT FOR  
CONSTRUCTION

# TIMMONS GROUP

## EROSION & SEDIMENT CONTROL PLAN

ANNE ARUNDEL COUNTY - MARYLAND

THIS DRAWING PREPARED AT THE  
CORPORATE OFFICE  
1001 Boulders Parkway, Suite 300 | Richmond, VA 23225  
TEL: 804.200.6500 FAX: 804.560.1016 www.timmons.com

REVISION DESCRIPTION

YOUR VISION ACHIEVED THROUGH OURS.

DATE

7/10/20

DRAWN BY

I. GORDON

DESIGNED BY

B. SNYDER

CHECKED BY

B. SNYDER

SCALE

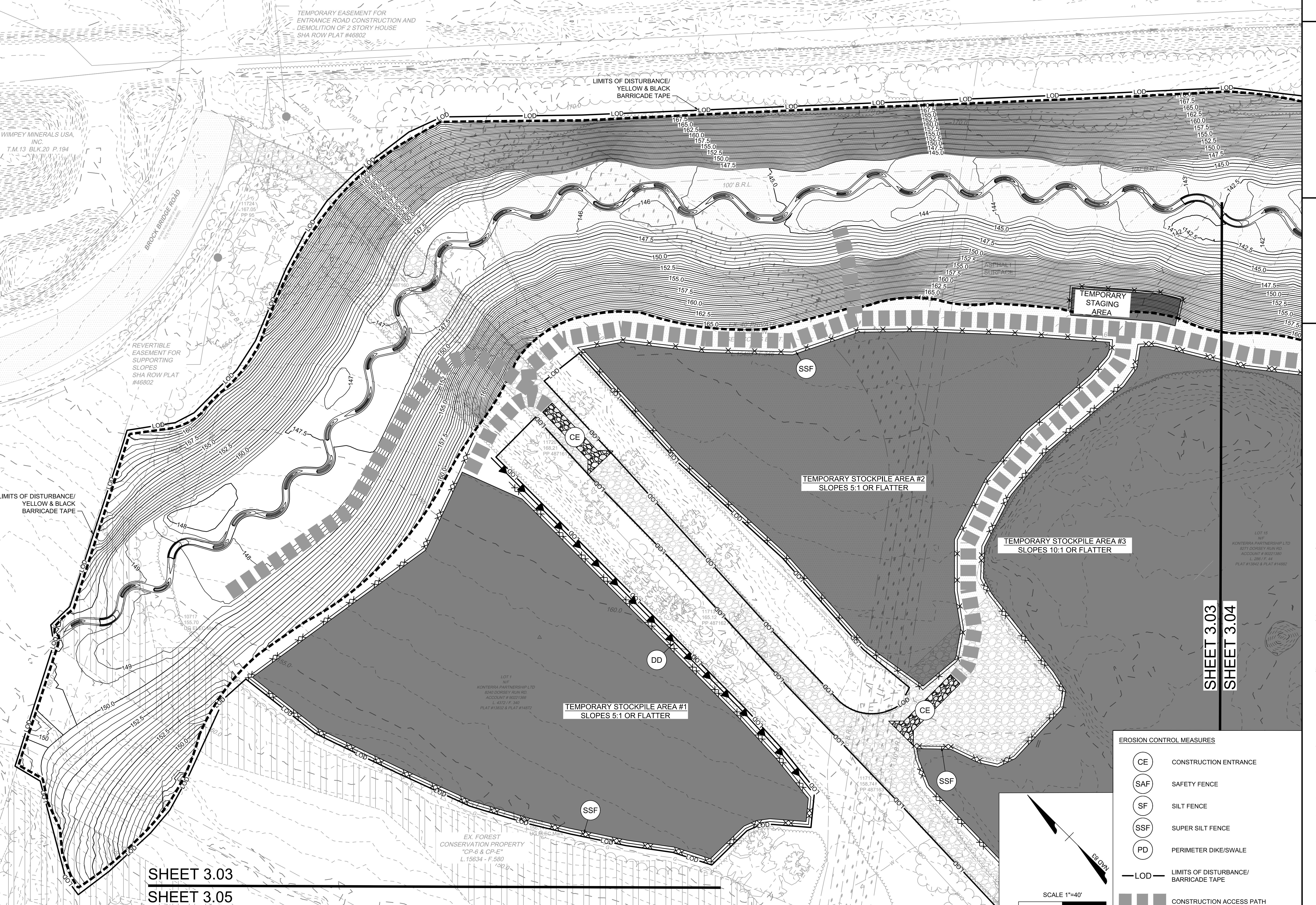
1" = 40'

SHEET 3.03  
SHEET 3.04

JOB NO.  
45080

SHEET NO.  
3.03

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50% PLAN  
NOT FOR  
CONSTRUCTION

THIS DRAWING PREPARED AT THE  
CORPORATE OFFICE  
1001 Boulders Parkway, Suite 300 | Richmond, VA 23225  
TEL: 804.200.6500 FAX: 804.560.1016 www.timmons.com

REVISION DESCRIPTION

DATE

# TIMMONS GROUP

## EROSION & SEDIMENT CONTROL PLAN

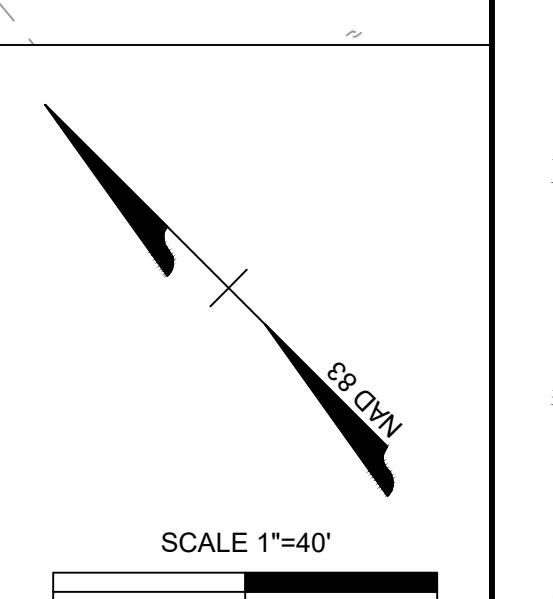
ANNE ARUNDEL COUNTY - MARYLAND

YEL01 - ANNAPOLIS JUNCTION BUSINESS PARK (STREAM RELOCATION)

JOB NO.  
45080

SHEET NO.  
3.04

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EROSION CONTROL MEASURES	
CE	CONSTRUCTION ENTRANCE
SAF	SAFETY FENCE
SF	SILT FENCE
SSF	SUPER SILT FENCE
PD	PERIMETER DIKE/SWALE
LOD	LIMITS OF DISTURBANCE/ BARRICADE TAPE
CONSTRUCTION ACCESS PATH	

SHEET 3.03  
SHEET 3.04

SHEET 3.04  
SHEET 3.06

TEMPORARY STOCKPILE AREA #3  
SLOPES 10:1 OR FLATTER

LOT 15  
N.F.  
KONTERRA PARTNERSHIP LTD.  
8271 DORSET RUN RD.  
ACCOUNT # 90221388  
L.286/F.43  
PLAT # 15242 & PLAT # 14882





# TIMMONS GROUP

ANNE ARUNDEL COUNTY - MARYLAND  
CONSTRUCTION NOTES

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THIS DRAWING PREPARED AT THE CORPORATE OFFICE	1001 Boulders Parkway, Suite 300   Richmond, VA 23225
TEL: 804.200.6500 FAX: 804.560.1016 www.timmons.com	

REVISION DESCRIPTION	

**50% PLAN  
NOT FOR  
CONSTRUCTION**

**GENERAL NOTES:**

1. OWNER/DEVELOPER:  
KONTERA PARTNERSHIP LTD  
14401 SWEITZER LANE, SUITE 200  
LAUREL, MD 20707  
ATTN: SPURGE EISMEIER  
PHONE: (301) 953-9870  
EMAIL: SEISMEIER@KONTERA.COM
2. ENGINEER OF RECORD:  
TIMMONS GROUP  
20110 ASHBROOK PLACE, SUITE 100  
ASHBURN, VA 20147  
ATTN: LUKE FETCHO, PE  
PHONE: (703) 554-6712  
EMAIL: LUKE.FETCHO@TIMMONS.COM
3. NUMBER OF LOTS AFFECTED BY THIS PROJECT: 3
4. LIMITS OF DISTURBANCE: 35.85 AC.
5. TAX PARCEL NUMBER: 90221374, 90221375, 90221377
6. EXISTING ZONING OF PROPERTY THROUGH WHICH PROJECT IS PROPOSED: W-2 (LIGHT INDUSTRIAL DISTRICT).
7. EXISTING USE OF PROPERTY THROUGH WHICH PROJECT IS PROPOSED: VACANT.
8. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE MOST RECENT VERSION OF MDOT SHA'S BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES, AS AMENDED BY CONTRACT PROVISIONS AND THESE PLANS. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH ANNE ARUNDEL COUNTY STANDARDS AND SPECIFICATIONS, IF MORE STRINGENT.
9. SURVEY NOTES:
  - 9.1. FOR THE PURPOSE OF ASSESSMENT AND TAXATION, THE SUBJECT PROPERTY IS IDENTIFIED AS PARCEL 195; LOTS 1, 2RR, 3RR, 8RRR, 9R, 10R, 12R, 13R, 14R, 15 AND 16, AS SHOWN ON TAX MAP 13 (GRID 20) FOR ANNE ARUNDEL COUNTY, MARYLAND, WHOSE TAX ID NUMBERS ARE 04-90221367, 04-90221373, 04-90221366, 04-90221374, 04-90221375, 04-90221377, 04-90221378, 04-90221379, 04-90221380, AND 04-90221381 WITH STREET ADDRESSES OF 8201, 8211, 8220, 8230, 8240, 8221, 8231, 8241, 8251, 8271, & 8261 DORSEY RUN ROAD, ANNAPOLIS JUNCTION, MD 20701
  - 9.2. THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE "X" AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN; ZONE "X" AREA DETERMINED TO BE INSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN; ZONE "A" AREA WITH NO BASE FLOOD ELEVATIONS DETERMINED; ZONE "AE" AREA WITH BASE FLOOD ELEVATIONS DETERMINED; AND A PORTION OF THE PROPERTY TO THE SOUTH LIES WITHIN ZONE "AE" REGULATORY FLOODWAY AREA, RUNNING WITH THE LITTLE PATUXENT RIVER AS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAP FOR ANNE ARUNDEL COUNTY, MARYLAND, MAP No. 24003C0106E, EFFECTIVE DATE 10/16/2012.
  - 9.3. THE FIELDWORK FOR THIS SURVEY WAS STARED ON 12/18/2019, WITH THE LAST DATE OF FIELDWORK BEING 03/03/2020.
  - 9.4. ACCORDING TO GIS-WORLD2.AACOUNTY.ORG ONLINE ZONING MAP FOR ANNE ARUNDEL COUNTY, MARYLAND (ZONING LETTER WAS NOT PROVIDED BY CLIENT), THE SUBJECT PROPERTY IS ZONED AS W2, W3, R5 AND OS.
  - 9.5. EVIDENCE OF CEMETERIES OR BURIAL GROUNDS WAS OBSERVED ON THE SUBJECT PROPERTY AND IS SHOWN HEREON.
  - 9.6. COORDINATES SHOWN HEREON WERE ESTABLISHED USING LEICA GEOSYSTEMS, SMARTNET RTK NETWORK AND ARE BASED ON MARYLAND STATE PLANE COORDINATES SYSTEM NAD 83. ALL BEARINGS AND DISTANCES SHOWN ARE BASED ON GRID COORDINATES. THE AVERAGE SCALE FACTOR FOR THE SUBJECT PROPERTY IS 0.99995670. THE PROPERTY ELEVATION ARE BASED ON NAVD88 VERTICAL DATUM. THE CONTOUR INTERVALS SHOWN HEREON IS SET TO 5.0 FEET.
  - 9.7. THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A TITLE REPORT DELIVERED FROM THE CLIENT ON JANUARY 22, 2020.
  - 9.8. ALL DRIVE SURFACES ARE ASPHALT AND ALL CURBS & GUTTERS AND WALKWAYS ARE CONCRETE UNLESS OTHERWISE NOTED.
  - 9.9. ALL TOPOGRAPHIC FEATURES WERE ACQUIRED BY A COMBINATION OF AIRBORNE / MOBILE LIDAR AND CONVENTIONAL SURVEY.
  - 9.10. NO ORTHO PHOTOGRAPHY WAS CONDUCT FOR THIS SURVEY.
  10. THE PROPOSED WORK FALLS WITHIN THE BOUNDARIES OF A "ZONE A" MAPPED FEMA FLOODPLAIN OR FLOODWAY.
  11. REFER TO THE PLANS AND TECHNICAL SPECIFICATIONS FOR SPECIAL PROVISIONS.

**CONSTRUCTION NOTES**

1. PRE-CONSTRUCTION PREPARATION & NOTIFICATION

- 1.1. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER A MINIMUM OF ONE (1) WEEK PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES FOR VERIFICATION THEY ARE IN ACCORDANCE WITH THE APPROVED PERMITS.
- 1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATIONS OF ALL EXISTING UTILITIES AND SERVICES WITHIN THE PROJECT LIMITS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS, AND MUST CONTACT "MD811" A MINIMUM OF 72 HOURS PRIOR TO ANY CONSTRUCTION WORK. ALL UTILITIES SHALL BE CLEARLY IDENTIFIED PRIOR TO CONSTRUCTION. THE LOCATION OF EXISTING UTILITIES WITHIN THE PROJECT AREA IS NOT NECESSARILY SHOWN ON THE CONSTRUCTION DRAWINGS AND WHERE SHOWN IS ONLY APPROXIMATELY CORRECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES WHETHER ABOVE GRADE OR UNDERGROUND FACILITIES.
- 1.3. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING ACCOMMODATING PROJECT STAKEHOLDERS (PROJECT ENGINEER, SUBCONTRACTORS, CERTIFIED RESPONSIBLE LAND DISTURBER, OWNER'S REPRESENTATIVE, SWPPP COORDINATOR, AND THE LOCAL PLAN APPROVING AUTHORITY) A MINIMUM OF ONE (1) WEEK PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES. AT THIS TIME, THE CONTRACTOR SHALL BE PREPARED TO REVIEW THEIR WORKFLOW PLAN AND PROPOSED CONSTRUCTION SCHEDULE (REFERENCE FOLLOWING SUBMITTALS SECTION).

- 1.4. THE CONTRACTOR SHALL INSTALL TREE PROTECTION FENCE AND SAFETY FENCE AND THEN NOTIFY THE PROJECT ENGINEER OF THE COMPLETED INSTALLATION. THE PROJECT ENGINEER SHALL THEN PROVIDE THE COUNTY INSPECTOR 48-HOUR NOTIFICATION TO SCHEDULE AN ONSITE PRE-CONSTRUCTION MEETING TO INSPECT THE INSTALL OF THESE EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ISSUANCE OF THE LAND DISTURBANCE PERMIT. THE CONTRACTOR SHALL ENSURE THEIR CERTIFIED RESPONSIBLE LAND DISTURBER IS AVAILABLE TO ATTEND THIS PRE-CONSTRUCTION MEETING AS WELL.

- 1.5. LIMITED CONSTRUCTION ACCESS EASEMENTS ARE SPECIFIED ON THE CONSTRUCTION DRAWINGS. ALTERNATIVES OR DEVIATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER AND OWNER PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR PROPOSED ALTERNATIVES WITH DELINEATION OF ENTRANCE LOCATIONS AND ACCESS PATHS SHALL BE INCLUDED IN THE PROPOSED WORKFLOW PLAN.

- 1.6. PRIOR TO THE PRE-CONSTRUCTION MEETING, NON-IMPACT WETLANDS SHALL BE FLAGGED AND NO DISTURBANCE SHALL OCCUR WITHIN THESE AREAS.

- 1.7. IF THERE ARE ANY COUNTY MAINTAINED SIGNS WITHIN THE CONSTRUCTION LIMITS THAT THE CONTRACTOR FEELS ARE IN THE WAY, PLEASE CONTACT BUREAU OF HIGHWAYS AT (410) 222-7500 FOR REMOVAL AND REINSTALLATION.

2. SUBMITTALS

- 2.1. CONTRACTOR SHALL DEVELOP A WORKFLOW PLAN AND CONSTRUCTION SCHEDULE FOR SUBMITTAL TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL A MINIMUM OF ONE (1) WEEK PRIOR TO THE PRE-CONSTRUCTION MEETING. THE PROPOSED WORKFLOW PLAN SHALL DESCRIBE/DELINATE THE CONTRACTOR'S PROPOSED CONSTRUCTION ACCESS PATHS, ALTERNATE TEMPORARY STOCKPILE LOCATIONS, ESTIMATED DAILY CHANNEL SEGMENTS, AND ALTERNATIVE MEANS & METHODS. THE PROPOSED CONSTRUCTION SCHEDULE SHALL INCLUDE SUBMITTAL REVIEW TIME, KEY CONSTRUCTION AND CRITICAL PATH TASKS, PHASING OF WORK FLOW, WEATHER CONTINGENCY, AS-BUILT SURVEY COORDINATION, PLANTING PERIOD AND SUBSTANTIAL AND/OR FINAL COMPLETION GOALS.

- 2.2. CONTRACTOR SHALL PROVIDE EXPERIENCE QUALIFICATIONS TO THE PROJECT ENGINEER IDENTIFYING THE KEY PERSONNEL TO BE WORKING ON THE PROJECT, INCLUDING THEIR PROJECT MANAGER, SUPERINTENDENT AND SWPPP COORDINATOR. CONTRACTOR SHALL ALSO SPECIFY THE MINIMUM NUMBER OF DAILY CREW/STAFF AND EQUIPMENT TO BE EXPECTED ON SITE DURING CONSTRUCTION.

- 2.3. CONTRACTOR SHALL BE RESPONSIBLE TO SUBMIT THREE (3) COPIES OF THE MATERIAL CERTIFICATIONS TO THE PROJECT ENGINEER FOR REVIEW ON ANY CONSTRUCTION MATERIALS USED ON THE PROJECT SITE. THE CERTIFICATION SHALL STATE THAT THE PRODUCT IS MANUFACTURED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE APPROVED SHOP DRAWING OR DETAIL, AS APPLICABLE. ANY MATERIALS ORDERED OR WORK PERFORMED WITH SAID MATERIALS BY THE CONTRACTOR BEFORE THE PROJECT ENGINEER HAS REVIEWED THE RESPECTIVE MATERIAL CERTIFICATIONS SHALL BE AT THE RISK OF THE CONTRACTOR.

- 2.4. CONTRACTOR SHALL SUBMIT DEWATERING PLAN TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL A MINIMUM OF ONE (1) WEEK PRIOR TO THE PRE-CONSTRUCTION MEETING.

- 2.5. REVIEW TIME FOR THE SPECIFIED SUBMITTALS SHALL BE CLEARLY NOTED IN THE CONSTRUCTION SCHEDULE. ALLOW A MINIMUM OF ONE (1) WEEK REVIEW TIME FOR SUBMITTAL PACKAGE.

3. SURVEYING

- 3.1. THE SURVEYOR WILL STAKE OUT THE NEW STREAM ALIGNMENT. PC AND PT POINTS SHALL BE STAKED ALONG THE CENTERLINE AND AT 60-FOOT OFFSETS, IDENTIFIED BY CORRESPONDING CENTERLINE STATION. THE CENTER OF EACH CURVE SHALL BE STAKED AND MARKED WITH THE CORRESPONDING RADIUS OF CURVATURE. VERTICAL CONTROL BENCHMARKS SHALL BE CLEARLY MARKED AT A MINIMUM OF 1,000-FOOT INTERVALS ALONG THE PROPOSED STREAM CHANNEL.

- 3.2. IF DURING CONSTRUCTION, THE EXISTING ELEVATIONS (ESPECIALLY STREAM INVERTS) SHOWN ON THESE CONSTRUCTION DRAWINGS ARE FOUND TO DIFFER SIGNIFICANTLY FROM THE ELEVATIONS IN THE FIELD, THE CONTRACTOR MUST NOTIFY THE PROJECT ENGINEER IMMEDIATELY FOR AN ADJUSTMENT IN ELEVATIONS.

- 3.3. THE SURVEYOR WILL SCHEDULE AND PERFORM THE AS-BUILT SURVEY FOLLOWING WRITTEN NOTIFICATION, FROM THE CONTRACTOR TO THE PROJECT ENGINEER, STATING THAT SUBSTANTIAL COMPLETION HAS BEEN ACHIEVED. THIS COORDINATION SHALL BE PERFORMED PRIOR TO DISKING, FINAL SEEDING AND PLANTING.

- 3.4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH ADDITIONAL AS-BUILT SURVEY RESULTING FROM PROJECT AREAS DISCOVERED TO NOT BE IN SUBSTANTIAL ACCORDANCE WITH THE SPECIFIED DESIGN.

4. MINIMIZING IMPACTS

- 4.1. ALL NECESSARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE ATTACHED EROSION AND SEDIMENT CONTROL PLAN SHEETS PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES. ALTERNATIVE AND/OR ADDITIONAL MEASURES SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO INSTALLATION.

- 4.2. DISTURBANCE OF EXISTING MATURE TREES SHALL BE MINIMIZED TO THE GREATEST EXTENT PRACTICABLE. TREE PROTECTION MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS TO PRESERVE TREES NOT UTILIZED FOR STRUCTURES OR DISTURBED BY GRADING. CONTRACTOR SHALL ONLY REMOVE VEGETATION NECESSARY TO PERFORM GRADING OPERATIONS DEPICTED ON THE CONSTRUCTION DRAWINGS. TREE AND ROOT DAMAGE SHALL BE AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE WITHIN THE PROJECT BOUNDARY AND TEMPORARY CONSTRUCTION ACCESS AREAS.

- 4.3. MATERIALS, SUPPLIES OR EQUIPMENT SHALL BE STOCKPILED AND/OR STORED OUTSIDE OF NON-IMPACT WETLAND LIMITS. CONTRACTOR SHALL NOT TRAVEL ACROSS, STORE SPOILS ON OR OTHERWISE IMPACT THE NON-IMPACT WETLANDS AND FLAGGED BUFFER AREAS. ALL TEMPORARY IMPACTS TO WETLANDS SHALL BE RE-VEGETATED.

- 4.4. MATERIAL STORAGE AND STAGING AREAS SHALL BE LOCATED AND PROTECTED AS SHOWN ON THE ATTACHED EROSION AND SEDIMENT CONTROL PLAN SHEETS. ANY DEVIATION FROM THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE APPROVED BY THE PROJECT ENGINEER AND OWNER PRIOR TO IMPLEMENTATION. ALL EQUIPMENT AND SUPPLIES SHALL BE STORED WITHIN THE CONSTRUCTION STAGING AREA WHILE CONSTRUCTION ACTIVITIES HAVE CEASED FOR THE DAY.

- 4.5. EXCESS EXCAVATION MATERIAL SHALL BE DISPOSED OF IN A SUITABLE LOCATION APPROVED BY THE PROJECT ENGINEER AND OWNER. SUITABLE LOCATIONS FOR SPREADING AND/OR STOCKPILING EXCESS MATERIAL WILL BE DISCUSSED AT THE PRE-CONSTRUCTION MEETING. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE PROJECT ENGINEER AND OWNER PRIOR TO PERMANENTLY PLACING EXCESS MATERIAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COST ASSOCIATED WITH REMOVING AND RELOCATING ANY EXCESS MATERIAL PLACED WITHOUT PRIOR APPROVALS. CONTRACTOR SHALL ENDEAVOR TO SEPARATE SUITABLE AND UNSUITABLE MATERIALS DURING EXCAVATION OPERATIONS TO ALLOW FOR SEPARATE MEANS OF DISPOSAL FOR EXCESS MATERIALS.

- 4.6. THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS AND DISPOSE OF OFFSITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. ANY NECESSARY PERMITS REQUIRED FOR SUCH DISPOSAL SHALL BE OBTAINED BY THE CONTRACTOR AT THEIR EXPENSE.
- 4.7. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND DEVICES NECESSARY TO PROTECT THE PROJECT LIMITS, ADJACENT PROPERTY, EMPLOYEES, AND THE GENERAL PUBLIC FOR THE DURATION OF THE PROJECT CONSTRUCTION.
- 4.8. STRIP AND STOCKPILE TOPSOIL IN DESIGNATED MATERIAL STORAGE AREAS.
- 4.9. THE CONTRACTOR SHALL REMOVE ALL TREES, STUMPS, SHRUBS, BRUSH AND OTHER ORGANIC MATERIAL WITHIN THE GRADING LIMITS NECESSARY TO FACILITATE EARTHWORK ACTIVITIES. OTHER DEBRIS SHALL ALSO BE REMOVED.
- 4.10. ALL VEGETATION REMOVED WITHIN THE PROJECT LIMITS THAT CANNOT BE CHIPPED OR USED FOR STRUCTURES SHALL BE HAULED OFF-SITE AND DISPOSED OF BY THE CONTRACTOR.

5. CONSTRUCTION GUIDELINES

- 5.1. THE PROJECT SITE BOUNDARIES ARE SHOWN ON THE PLANS AS LIMITS OF DISTURBANCE (LOD). THE CONTRACTOR SHALL PERFORM ALL ACTIVITIES RELATED TO THIS CONTRACT WITHIN THE LIMITS OF DISTURBANCE. THE PROJECT SITE SHALL BE ACCESSED THROUGH THE DESIGNATED ACCESS POINT OFF COPPER CREEK LANE ACCESS ROAD, AS SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS THROUGHOUT ALL CONSTRUCTION ACTIVITIES. UPON COMPLETION OF ALL WORK, THE CONTRACTOR WILL RESTORE THE AREA TO A CONDITION EQUAL TO OR BETTER THAN FOUND PRIOR TO CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FEATURES PRIOR TO COMPLETION OF THE PROJECT.

- 5.2. NO PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT SHALL BE ALLOWED ON THE ACCESS ROAD. CONSTRUCTION VEHICLES AND EQUIPMENT SHALL BE STORED IN THE "TEMPORARY STAGING AREA" DEPICTED ON THE EROSION AND SEDIMENT CONTROL PLAN.
- 5.3. ALL REFERENCES TO "LEFT" AND "RIGHT" IN THE CONSTRUCTION DRAWINGS ARE IN REFERENCE TO LOOKING DOWNSTREAM.
- 5.4. STREAM CONSTRUCTION SHALL PROCEED FROM DOWNSTREAM TO UPSTREAM, WORKING AND COMPLETING ONE SEGMENT OF THE PROPOSED CHANNEL AT A TIME. IF NEEDED, PUMP ANY BASE STREAM FLOW FROM UPSTREAM OF THE ACTIVE WORK AREA TO DOWNSTREAM OF THE ACTIVE WORK AREA.

- 5.5. AS STATED IN SECTION 2.1 IN THESE CONSTRUCTION NOTES, THE CONTRACTOR IS RESPONSIBLE FOR DESCRIBING THEIR PROPOSED CONSTRUCTION MEANS AND METHODS IN THEIR WORKFLOW PLAN.

- 5.6. CONTRACTOR SHALL MONITOR WEATHER FORECASTS AND PREPARE SITE CONDITIONS, INCLUDING EROSION CONTROL MEASURES, FOR PENDING STORMS CAPABLE OF PRODUCING SIGNIFICANT RAINFALL.

- 5.7. THE CONTRACTOR SHALL PERFORM ALL ROUGH AND FINE GRADING EARTHWORK OPERATIONS IN ACCORDANCE WITH PROPOSED GRADES AND TECHNICAL SPECIFICATIONS, AS SHOWN HEREIN.

- 5.8. ON BENCHES AND SLOPES ABOVE BANKFULL ELEVATION, THE CONTRACTOR SHALL STRIP, STOCKPILE, AND REPLACE 6 INCHES OF TOPSOIL PRIOR TO ACHIEVING FINAL ELEVATION. EACH SECTION SHALL BE ROUGH GRADED FIRST ALONG THE SPECIFIED SEGMENT, THEN INSTALL STRUCTURES AND BRING PROPOSED STREAM BED AND BANKS TO FINAL GRADE AS WORK PROGRESSES DOWNSTREAM. EXISTING PLANT MATERIALS THAT HAVE BEEN TEMPORARILY STORED FOR RELOCATION SHALL THEN BE BROUGHT BACK TO THESE AREAS AND REPLANTED AT THE FINAL GRADE.

- 5.9. FINAL GRADE OF THE PROPOSED CHANNEL SHALL UTILIZE THE SPECIFIED BED SUBSTRATE MATERIAL. STONES SHALL BE ROUNDED AND PLACED TO CREATE A DENSE MASS WITH A MINIMUM OF VOIDS.

- 5.10. COIR FABRIC ALONG THE BANKS SHALL BE INSTALLED ALONG WITH INSTALLATION OF ROCK AND WOOD STRUCTURES SO THAT FABRIC CAN BE PLACED FIRST WITH SILLS ON TOP TO PIN FABRIC IN PLACE. SILLS SHALL BE EMBEDDED SO THAT TOPS ARE AT FINAL PROPOSED GRADE.

- 5.11. EACH STREAM SEGMENT SHALL BE BROUGHT TO FINAL GRADE AND STABILIZED DAILY BEFORE CONTINUING TO THE NEXT SEGMENT, ALLOWING DIVERTED (PUMP AROUND) STREAM FLOW TO BE REDIRECTED BACK INTO THE COMPLETED SECTIONS OF THE PROPOSED CHANNEL.

- 5.12. AS FINAL GRADE AND STABILIZATION OF THE BANKS PROGRESSES DOWNSTREAM, THE BANKS AND OTHER GRADED SURFACES SHALL BE SEADED AND LINED WITH MATTING AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ALL DENUDED AND DISTURBED AREAS UNTIL WHICH TIME THEY HAVE BEEN STABILIZED WITH THE SPECIFIED VEGETATIVE COVER. THE COUNTY INSPECTOR AND PROJECT ENGINEER SHALL DETERMINE WHEN THE SITE HAS BEEN COMPLETELY STABILIZED.

- 5.13. SPECIFIED PLANTINGS AND REFORESTATION SHALL OCCUR IN ACCORDANCE WITH THE PLANTING PLAN FOLLOWING FINAL GRADING, MATTING, SEEDING AND AS-BUILT SURVEY COORDINATION. CONTRACTOR SHALL ONLY USE ATV SCALE VEHICLES AND SMALL EQUIPMENT TO COMPLETE PLANTING WORK TO AVOID TRACK RUTTING AND DISRUPTION OF FINAL GRADE.

- 5.14. UPON COMPLETION OF CONSTRUCTION AND VEGETATIVE STABILIZATION, THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE ATTACHED EROSION AND SEDIMENT CONTROL NOTES. THIS WORK INCLUDES PERMANENT SEEDING OF ANY REMAINING DISTURBANCE TO TEMPORARY MATERIAL STORAGE AREAS AND ACCESS EASEMENTS.

GEOTECHNICAL NOTES

1. SOIL MATERIALS

- 1.1. SUITABLE FILL MATERIALS ARE DEFINED AS THOSE COMPLYING WITH ASTM D2487 SOIL CLASSIFICATION GROUPS SW, SP, SM, SC, GW, GP, GM OR GC, UNLESS APPROVED OTHERWISE BY THE PROJECT ENGINEER.

- 1.2. UNSUITABLE FILL MATERIALS ARE DEFINED AS THOSE COMPLYING WITH

**50% PLAN  
NOT FOR  
CONSTRUCTION**

THIS DRAWING PREPARED AT THE  
**CORPORATE OFFICE**  
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REVISION DESCRIPTION

YOUR VISION ACHIEVED THROUGH OURS.

DATE

7/10/20

DRAWN BY

I. GORDON

DESIGNED BY

B. SNYDER

CHECKED BY

B. SNYDER

SCALE

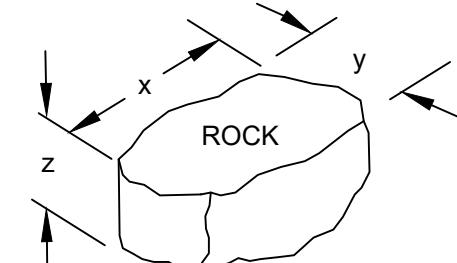
NONE

REV. 11/07/17

**TIMMONS GROUP**  
YEL01 - ANNAPOLIS JUNCTION BUSINESS PARK (STREAM RELOCATION)  
ANNE ARUNDEL COUNTY - MARYLAND  
CONSTRUCTION DETAILS

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REACH (SLOPE)	MATERIAL	SIZE (D <sub>50</sub> ) in.	SIZE (D <sub>50</sub> ) mm
MAIN (0.0 - 1.5%)	GRAVEL	2	56
MAIN (1.5 - 3.0%)	COBBLE	6	150



SUITABLE ROCKS WILL HAVE THE FOLLOWING THREE PRIMARY DIMENSIONS ( $\pm 2"$ ):

x = LONGEST DIMENSION  
y = INTERMEDIATE DIMENSION  
z = SHORTEST DIMENSION

REACH (SLOPE)	INTERMEDIATE DIMENSION, Y (in.)
MAIN (0.0 - 1.5%)	27
MAIN (1.5 - 3.0%)	36

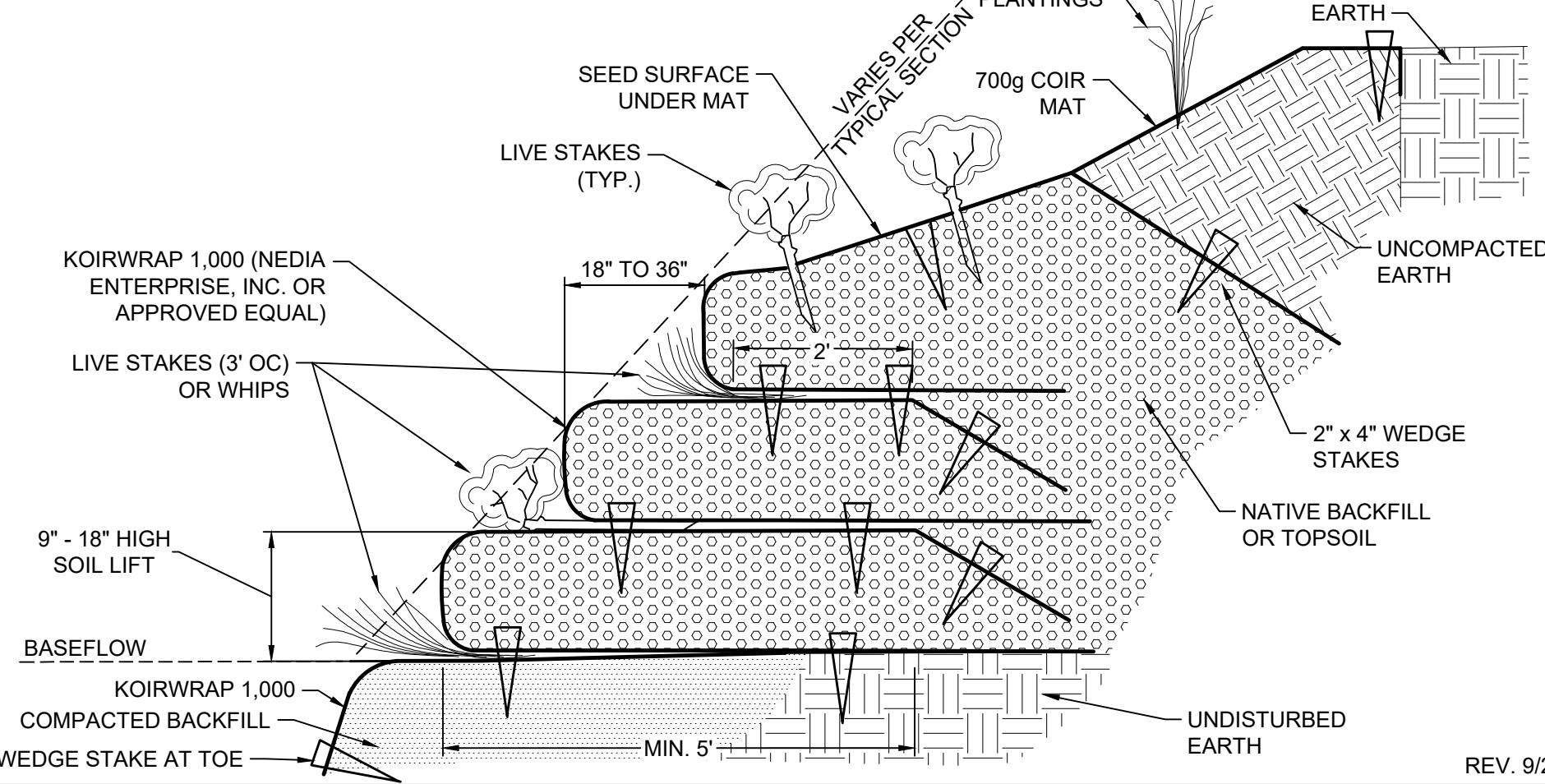
- ALL MATERIAL USED FOR SECTIONS OF THE STREAM CHANNEL THAT ARE RAISED ABOVE EXISTING GRADE SHALL BE REVIEWED AND APPROVED BY THE PROJECT ENGINEER PRIOR TO PLACEMENT IN THE STREAM CHANNEL.
- COBBLE AND GRAVEL MATERIALS SHALL BE ROUNDED IN NATURE AND COMMON TO RIVERBED FORMATIONS.
- SUBSTRATE SHALL BE NATURAL ROUNDED ROCK.
- THE APPROVED MIX WILL BE DOCUMENTED TO ACCOMMODATE MIXING AT THE PLANT AND ENSURE CONSISTENCY WITH SITE DELIVERED LOADS.

REV. 08/16/18

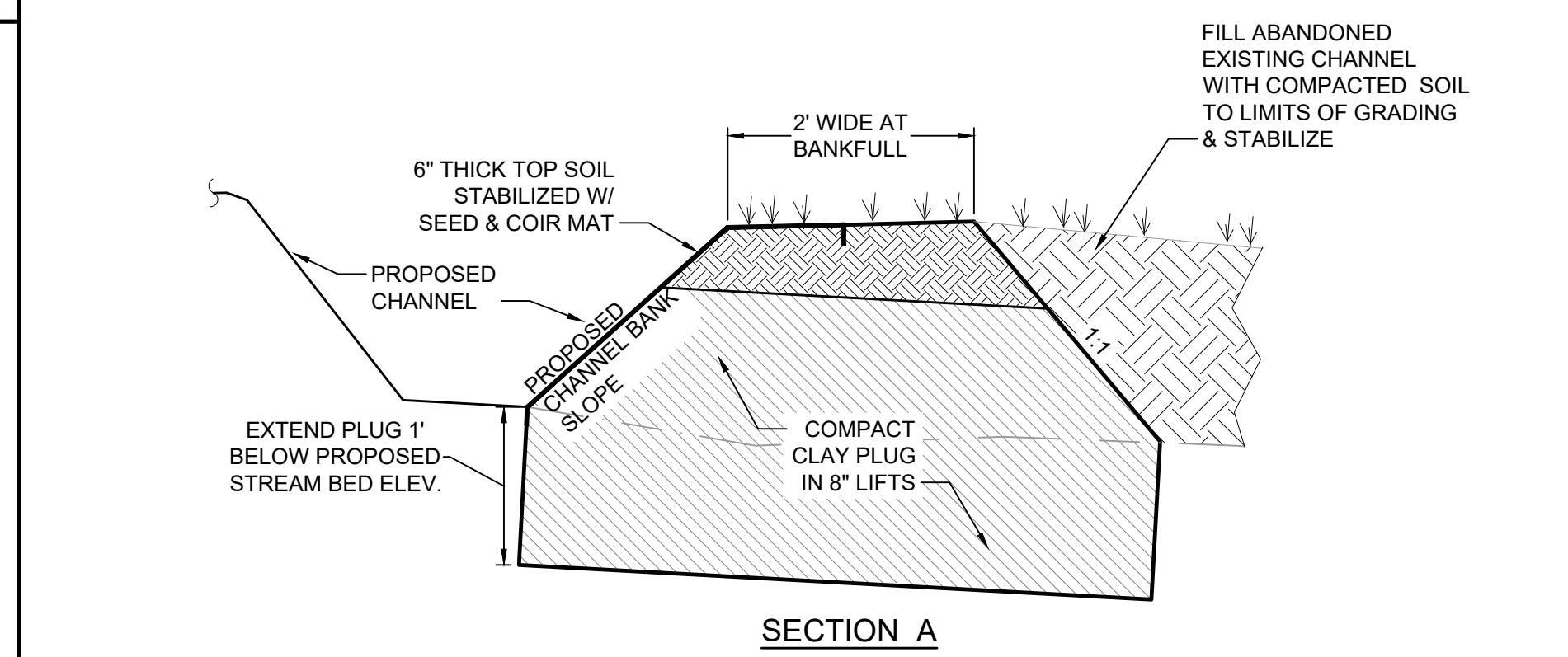
REV. 9/26/11

**SUBSTRATE MIX SPECIFICATIONS**  
NO SCALE

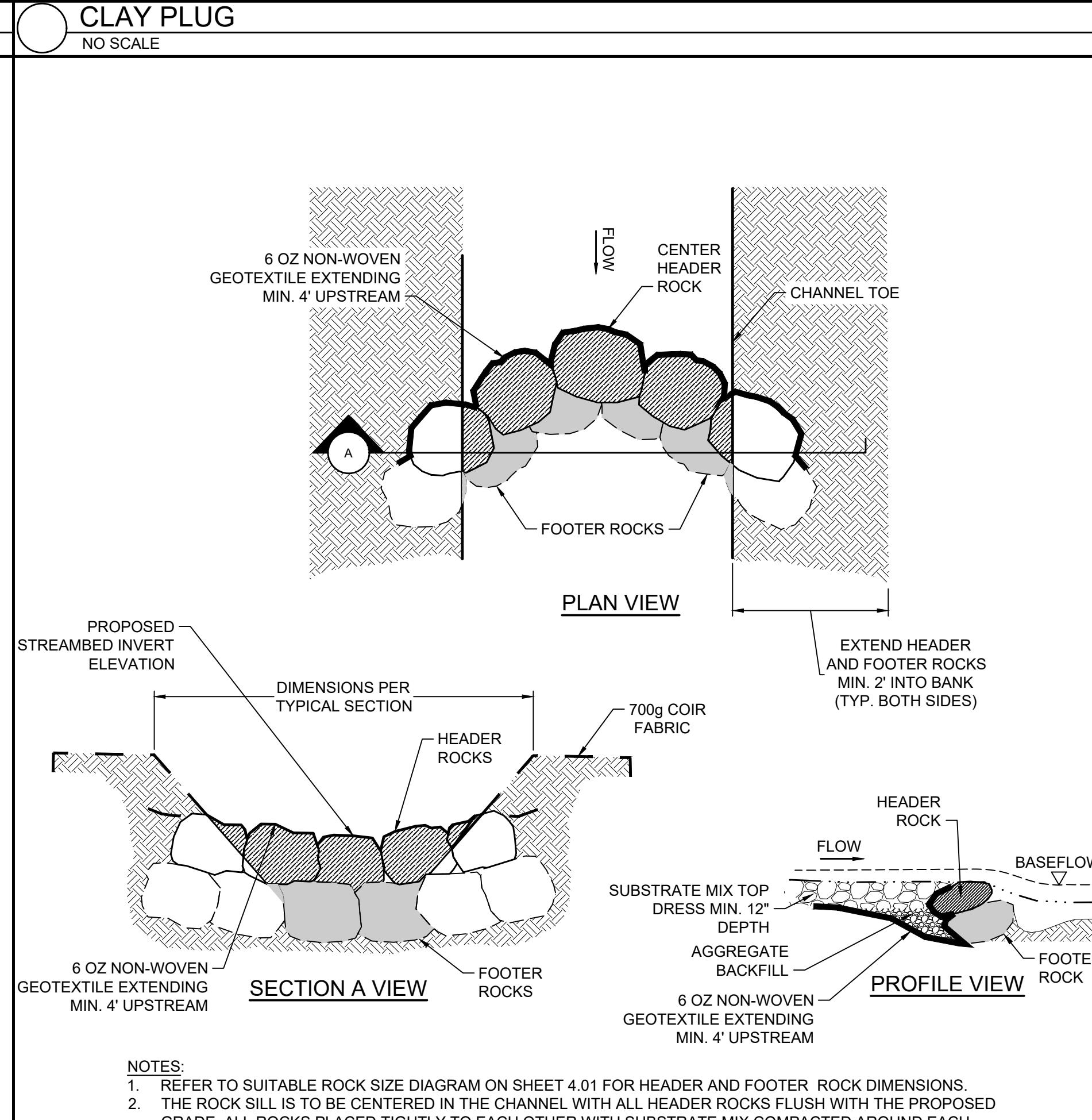
**SUITABLE ROCK SIZE DIAGRAM**  
NO SCALE



**REINFORCED SOIL LIFTS**  
NO SCALE



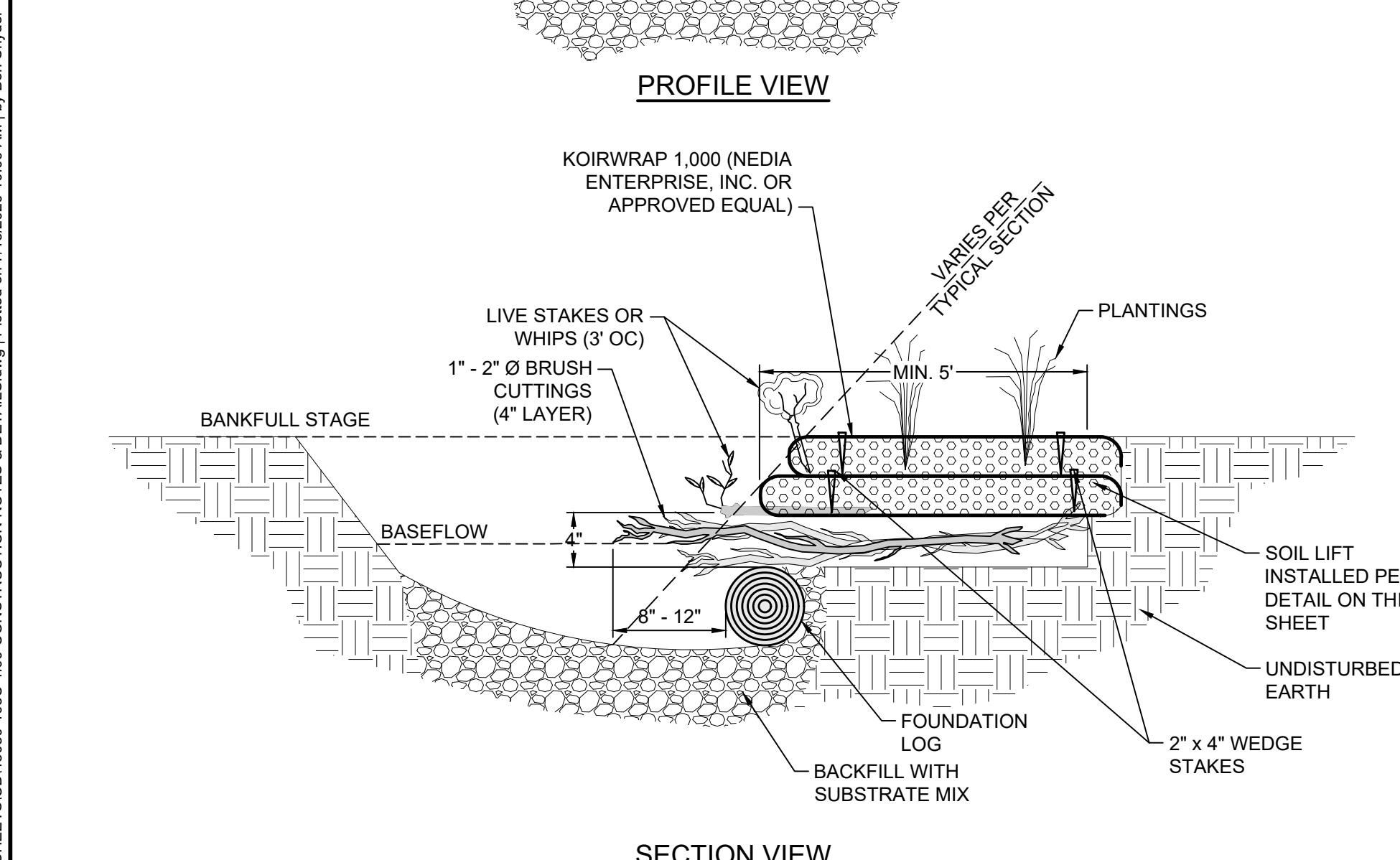
SECTION A



PLAN VIEW

SECTION A VIEW

PROFILE VIEW

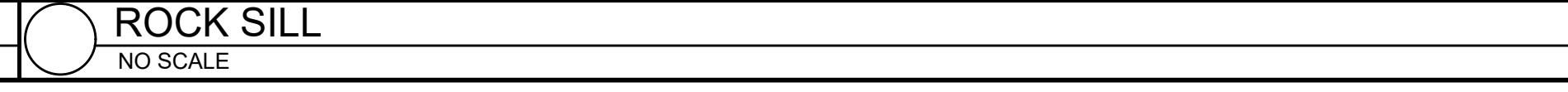


SECTION VIEW

NOTES:

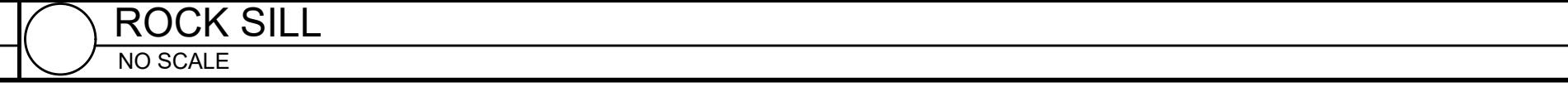
- THE FOUNDATION LOG MAY OR MAY NOT REST ON THE BOTTOM OF THE POOL. IF THE LOG IS ELEVATED ABOVE THE BOTTOM OF THE POOL, A BENCH SHALL BE CUT IN TO HOLD THE LOG.
- THE BRUSH CUTTINGS SHALL BE INSTALLED AT 2" ABOVE AND 2" BELOW BASEFLOW.
- THE BRUSH CUTTINGS SHALL NOT EXTEND INTO THE CENTER OF THE CHANNEL OBSTRUCTING FLOW.
- SOIL LIFT SHALL BE INSTALLED PER THE DETAIL ON SHEET 4.01.
- REFER TO BRUSH TOE STRUCTURE TABLE ON SHEET 4.03.

REV. 7/5/17



PLAN VIEW

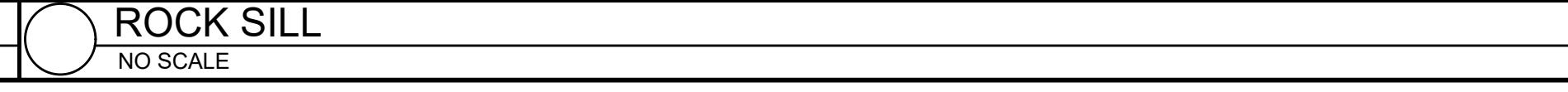
SECTION VIEW



PLAN VIEW

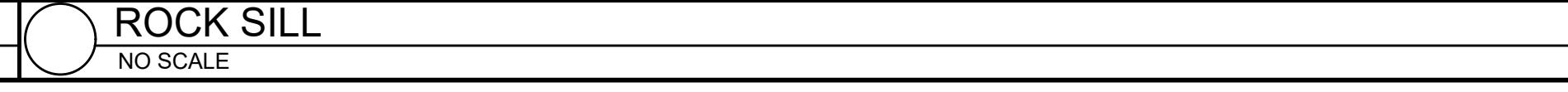
SECTION VIEW

**BRUSH TOE**  
NO SCALE



PLAN VIEW

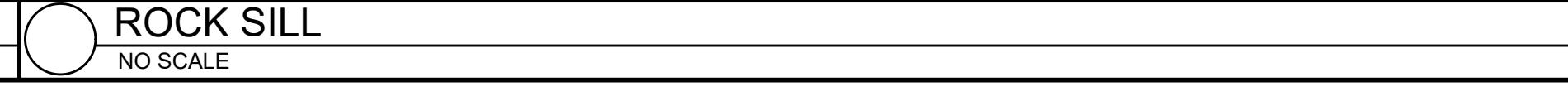
SECTION VIEW



PLAN VIEW

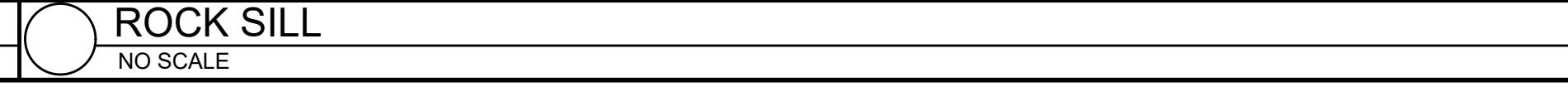
SECTION VIEW

**ROCK SILL**  
NO SCALE



PLAN VIEW

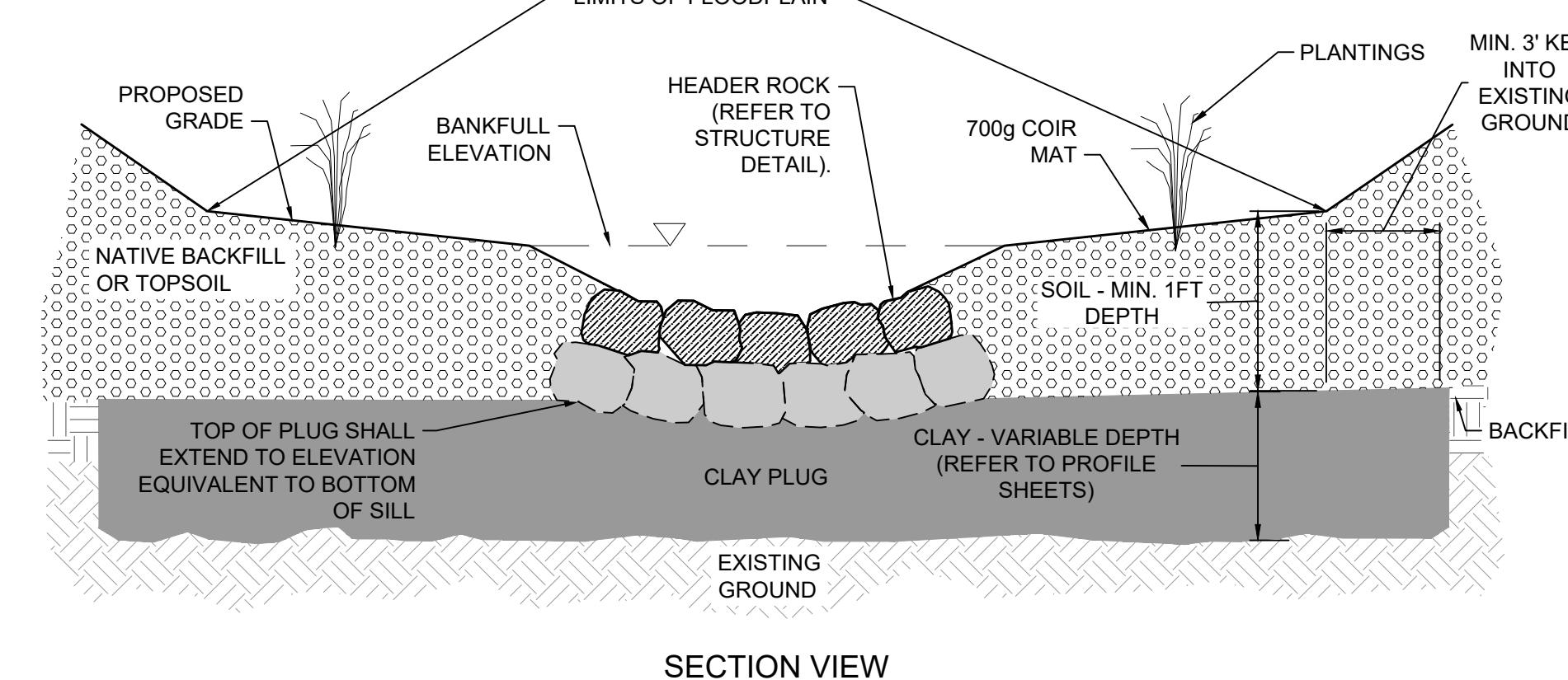
SECTION VIEW



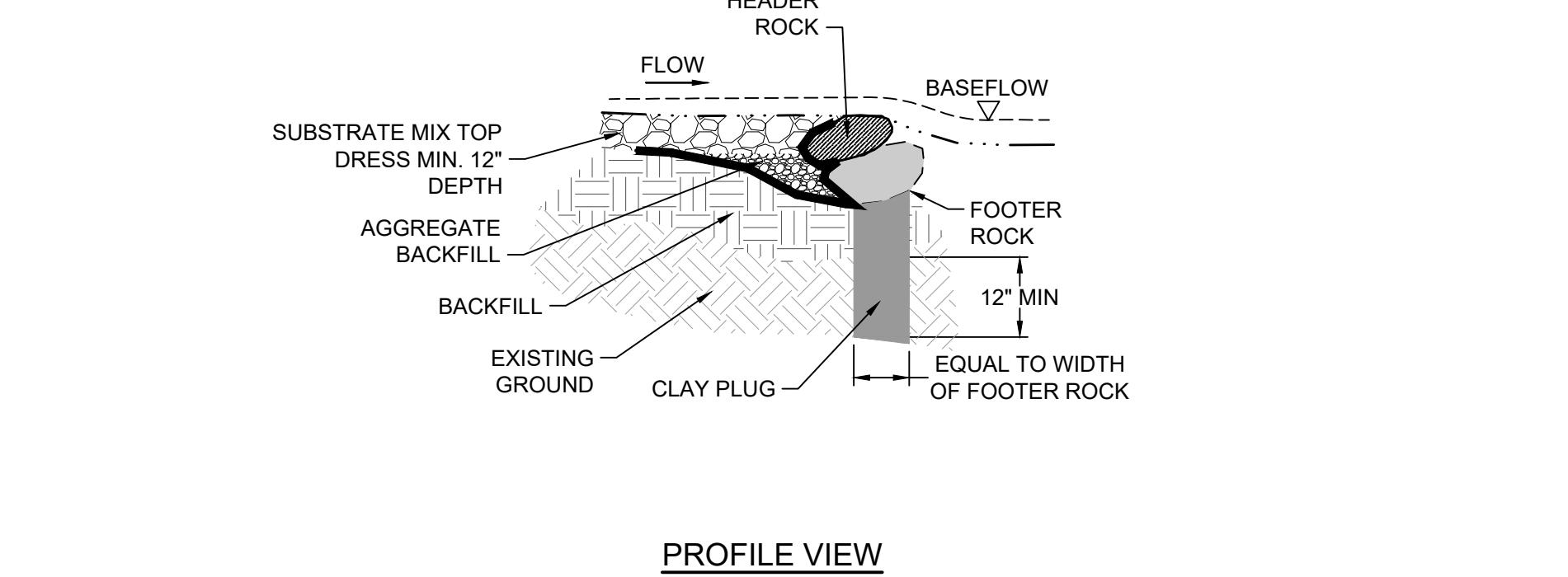
PLAN VIEW

SECTION VIEW

**LOG SILL (TRIPLE)**  
NO SCALE



SECTION VIEW

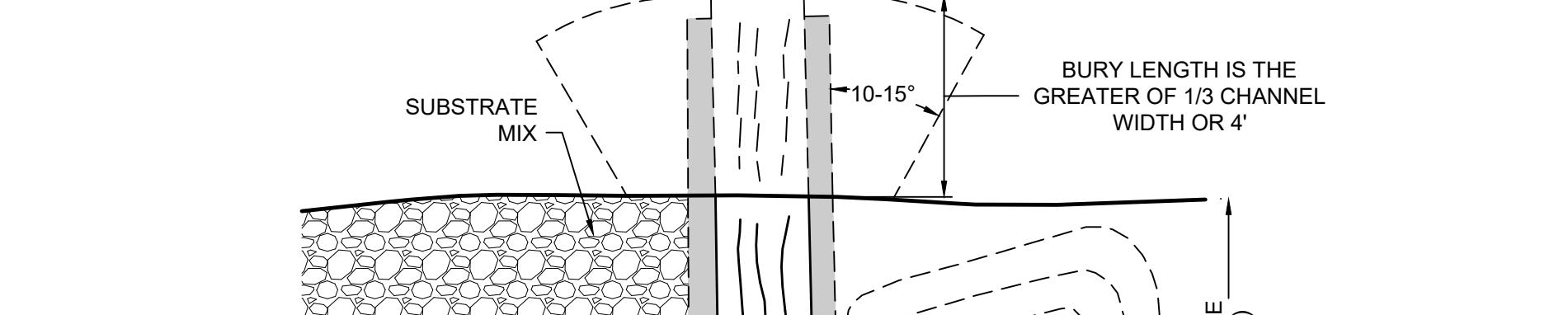


PROFILE VIEW

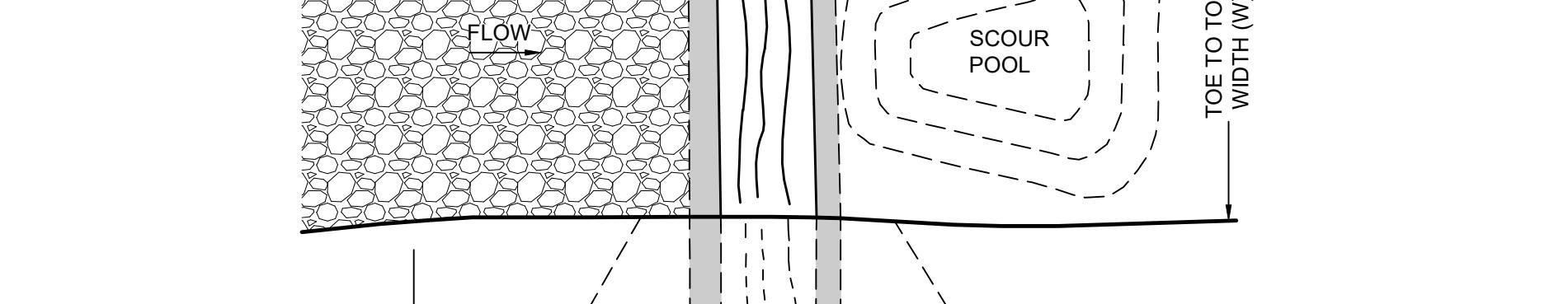
- NOTES:
- REFER TO GRADING PLAN AND PROFILE SHEETS FOR PLUG DIMENSIONS.
  - BOTTOM OF PLUG SHALL EXTEND A MINIMUM OF 12 INCHES INTO UNDISTURBED IN-SITU SOIL MATERIAL.
  - PLUG SHALL EXTEND THE WIDTH OF THE VALLEY AND KEY INTO EXISTING SIDE SLOPES, BEYOND THE FLOODPLAIN LIMITS.

**CLAY PLUG**  
NO SCALE

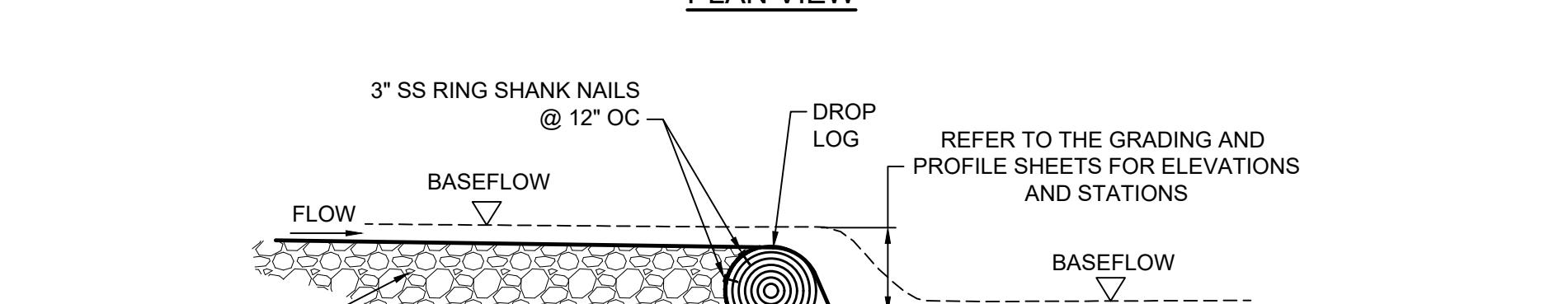
**VALLEY WIDE CLAY PLUG**  
NO SCALE



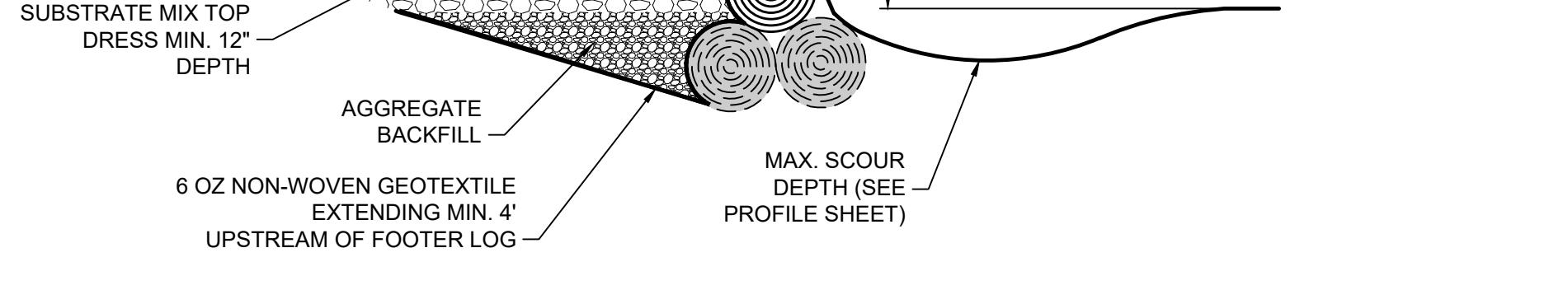
SECTION VIEW



SECTION VIEW



SECTION VIEW



SECTION VIEW

**YEL01 - ANNAPOLIS JUNCTION BUSINESS PARK (STREAM RELOCATION)**  
ANNE ARUNDEL COUNTY - MARYLAND  
CONSTRUCTION DETAILS

**JOB NO.**  
**45080**

**JOB NO.**  
**4.01**

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# TIMMONS GROUP

YEL01 - ANNAPOLIS JUNCTION BUSINESS PARK (STREAM RELOCATION)

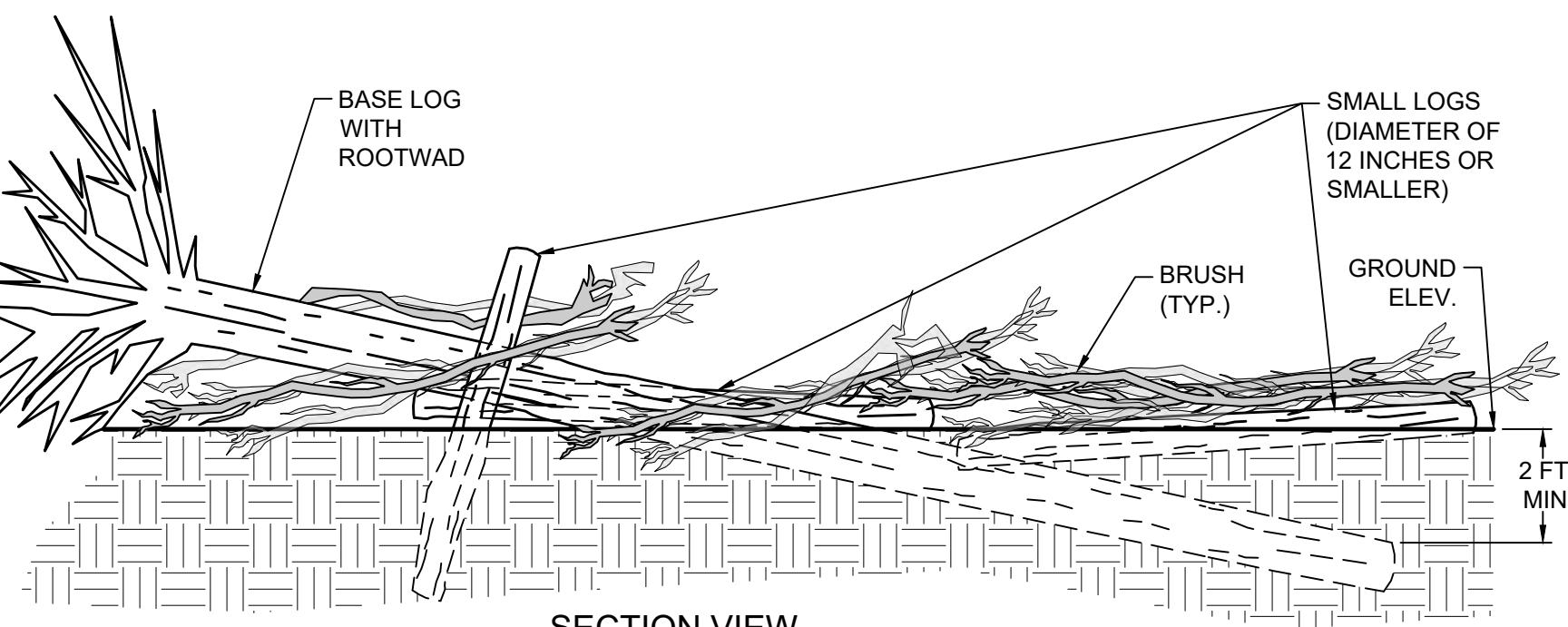
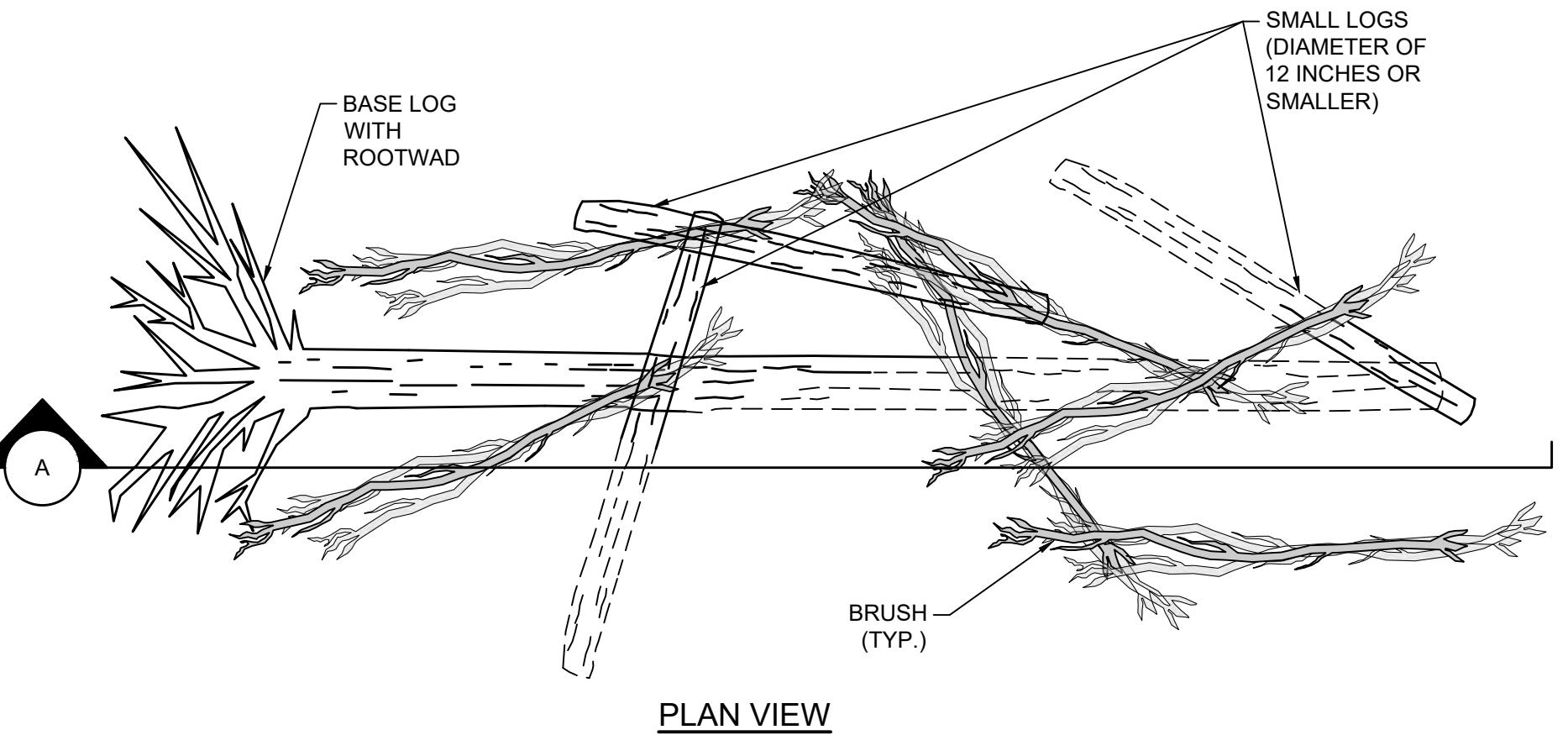
ANNE ARUNDEL COUNTY - MARYLAND

CONSTRUCTION DETAILS

JOB NO.  
45080  
SHEET NO.  
4.02

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**50% PLAN  
NOT FOR  
CONSTRUCTION**



**NOTES:**

1. REFER TO GRADING PLAN FOR FLOODPLAIN WOODY DEBRIS LOCATIONS. WOODY DEBRIS PILES SHOULD BE A MINIMUM 10 FEET FROM THE TOP OF CHANNEL BANKS.
2. DEBRIS PILE SHALL HAVE 1 BASE LOG WITH A MINIMUM DIAMETER OF 18 INCHES. END OF LOG SHALL BE BURIED TO A MINIMUM DEPTH OF 2 FEET LEAVING ROOT WAD EXPOSED ABOVE GROUND ELEVATION.
3. DEBRIS PILE SHALL HAVE 2 TO 6 SMALL LOGS WITH DIAMETERS OF 12 INCHES OR SMALLER.
4. BRUSH SHALL HAVE DIAMETERS BETWEEN 1 AND 8 INCHES AND SHALL BE PLACED RANDOMLY WITHIN AND AROUND THE BASE LOG AND SMALL LOGS.

REV. 02/18/20  
 FLOODPLAIN WOODY DEBRIS  
 NO SCALE

**50% PLAN  
NOT FOR  
CONSTRUCTION**

# TIMMONS GROUP

YEL01 - ANNAPOLIS JUNCTION BUSINESS PARK (STREAM RELOCATION)

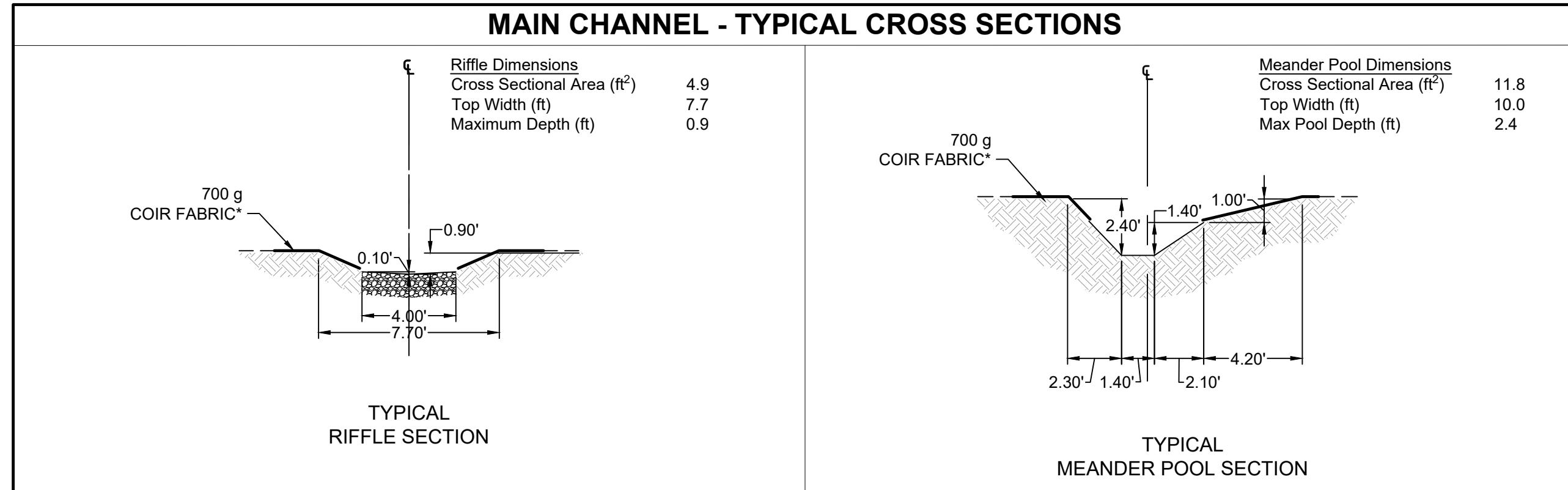
ANNE ARUNDEL COUNTY - MARYLAND

## TYPICAL SECTIONS & STRUCTURE DETAILS

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JOB NO.  
**45080**  
SHEET NO.  
**4.03**

## STRUCTURE TABLES



MAIN REACH SILL/HEADER TABLE		
STRUCTURE NAME	STATION	ELEVATION
TRIPLE LOG SILL	10+27.80	148.90
TRIPLE LOG SILL	10+55.44	148.78
TRIPLE LOG SILL	10+89.28	148.18
TRIPLE LOG SILL	11+24.22	148.05
TRIPLE LOG SILL	11+63.29	147.84
TRIPLE LOG SILL	12+09.74	147.14
TRIPLE LOG SILL	12+39.92	147.00
TRIPLE LOG SILL	12+75.01	146.90
TRIPLE LOG SILL	13+10.32	146.82
TRIPLE LOG SILL	13+48.32	146.71
TRIPLE LOG SILL	13+85.21	146.57
TRIPLE LOG SILL	14+25.69	146.38
TRIPLE LOG SILL	14+69.95	146.25
TRIPLE LOG SILL	15+03.09	146.11
TRIPLE LOG SILL	15+40.81	146.00
TRIPLE LOG SILL	15+80.10	145.90
TRIPLE LOG SILL	16+17.20	145.75
TRIPLE LOG SILL	16+50.86	145.60
TRIPLE LOG SILL	16+85.71	145.46
TRIPLE LOG SILL	17+22.65	145.30

MAIN REACH SILL/HEADER TABLE		
STRUCTURE NAME	STATION	ELEVATION
TRIPLE LOG SILL	17+58.82	145.15
TRIPLE LOG SILL	17+97.26	145.00
TRIPLE LOG SILL	18+39.18	144.86
TRIPLE LOG SILL	18+59.93	144.78
TRIPLE LOG SILL	18+92.03	144.60
TRIPLE LOG SILL	19+29.16	144.40
TRIPLE LOG SILL	19+66.26	144.24
TRIPLE LOG SILL	19+91.58	144.13
TRIPLE LOG SILL	20+22.89	143.96
TRIPLE LOG SILL	20+61.65	143.82
TRIPLE LOG SILL	20+95.09	143.64
TRIPLE LOG SILL	21+31.13	143.45
TRIPLE LOG SILL	21+64.76	143.28
TRIPLE LOG SILL	21+97.61	143.16
TRIPLE LOG SILL	22+34.13	143.00
TRIPLE LOG SILL	22+66.63	142.90
TRIPLE LOG SILL	23+02.95	142.77
TRIPLE LOG SILL	23+35.16	142.66
TRIPLE LOG SILL	23+75.74	142.48
TRIPLE LOG SILL	24+09.32	142.33

MAIN REACH SILL/HEADER TABLE		
STRUCTURE NAME	STATION	ELEVATION
ROCK SILL	32+08.51	129.90
TRIPLE LOG SILL	32+46.94	128.93
TRIPLE LOG SILL	32+78.55	128.55
ROCK SILL	33+11.94	128.15
ROCK SILL	33+46.75	127.33
ROCK SILL	33+77.73	126.59
TRIPLE LOG SILL	34+14.06	126.20
ROCK SILL	34+49.06	125.46
TRIPLE LOG SILL	34+78.93	125.17
ROCK SILL	35+06.79	124.88
ROCK SILL	35+33.20	124.57
TRIPLE LOG SILL	35+61.16	124.30
ROCK SILL	35+92.12	123.87
ROCK SILL	36+21.85	123.54
TRIPLE LOG SILL	36+49.31	123.26
TRIPLE LOG SILL	36+80.00	123.06
TRIPLE LOG SILL	37+23.22	122.82
TRIPLE LOG SILL	37+61.60	122.66
ROCK SILL	37+76.76	122.66

## CLAY PLUG TABLES

CLAY PLUG TABLE		
STRUCTURE NAME	START STATION	END STATION
CLAY PLUG	10+18.14	10+51.64
CLAY PLUG	37+66.96	37+84.46

DATE  
7/10/20  
DRAWN BY  
I. GORDON  
DESIGNED BY  
B. SNYDER  
CHECKED BY  
B. SNYDER  
SCALE  
AS SHOWN

YOUR VISION ACHIEVED THROUGH OURS.

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CORPORATE OFFICE  
1001 Boulders Parkway, Suite 300 | Richmond, VA 23225  
TEL: 804.200.6500 FAX: 804.560.1016 www.timmons.com

SCALE 1"=5'  
0 5' 10'

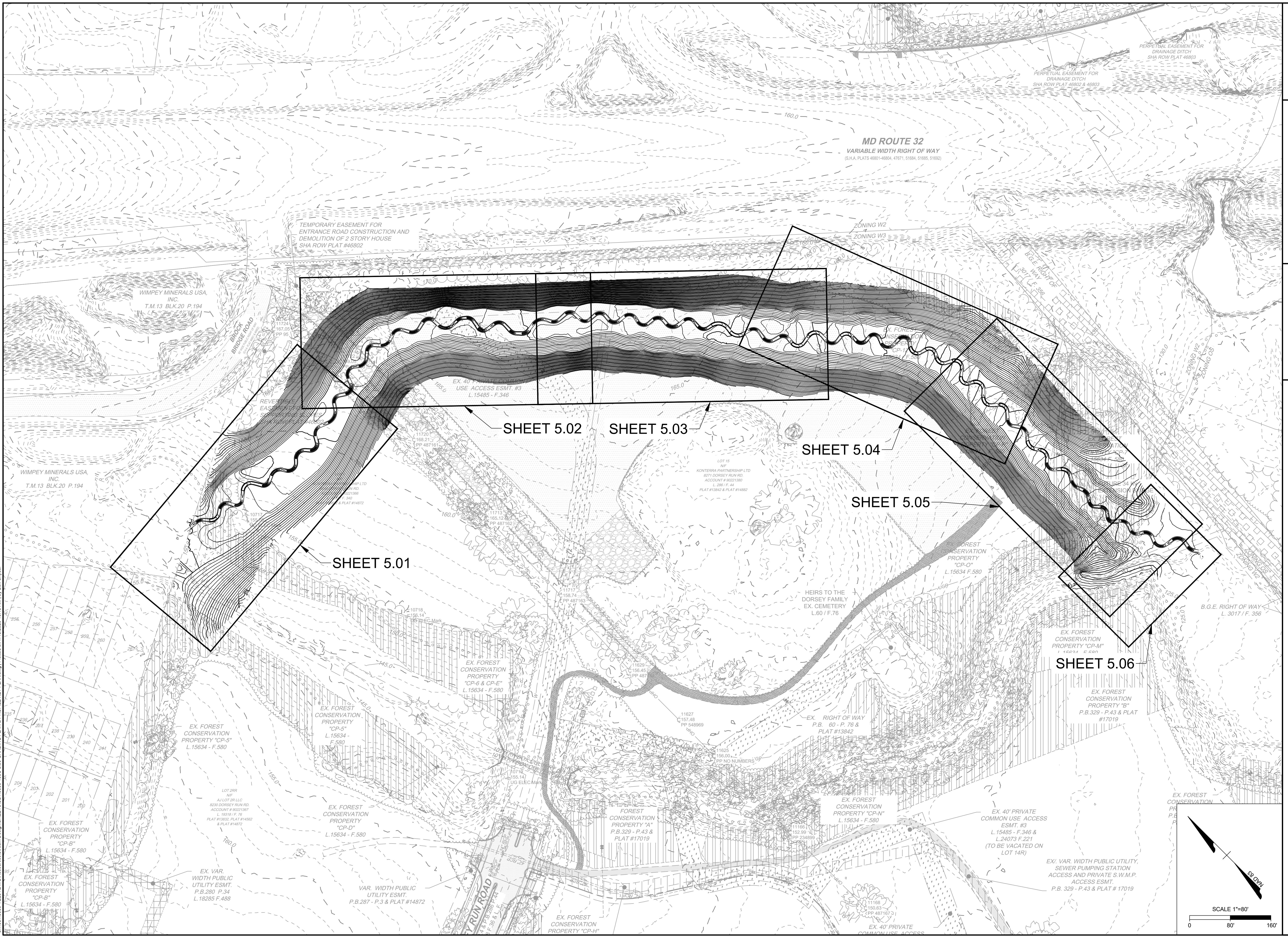
# **50% PLAN NOT FOR CONSTRUCTION**

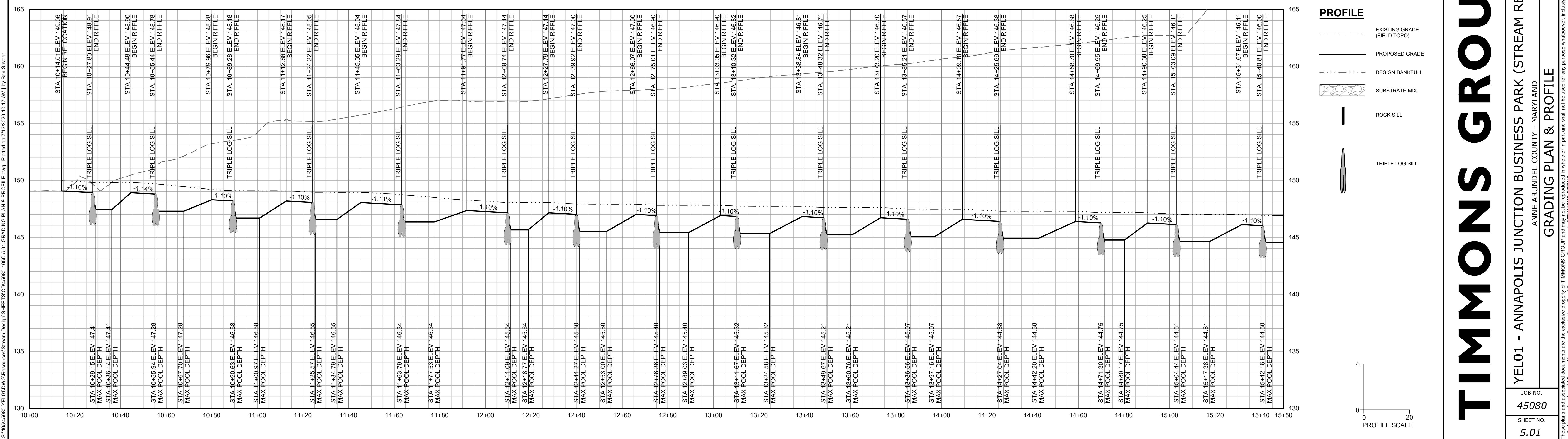
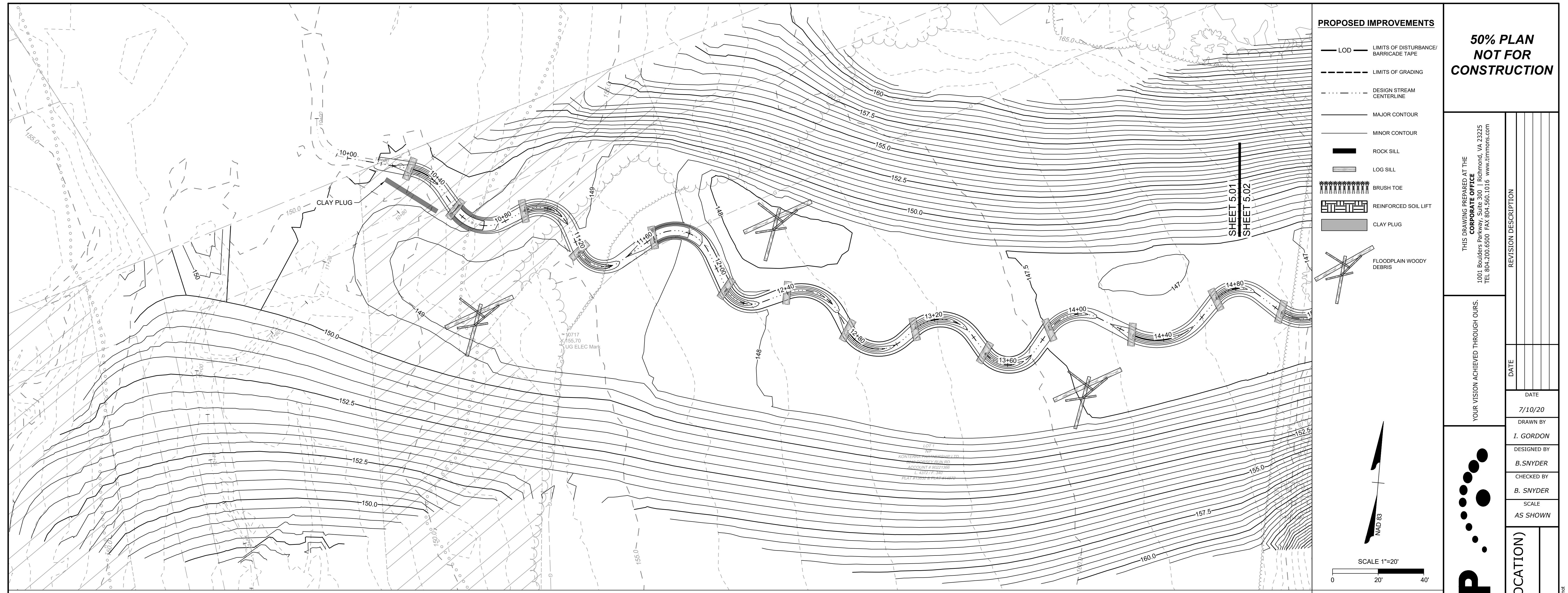
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**Group  
Graz  
Suzuki  
Sigma**

SECTION BUSINESS PARK

# GRADING PLAN & PROFILE KEY PLAN





# THE MONSANTO GROUP

# TIMMONS GROUP

## GRADING PLAN & PROFILE

ANNE ARUNDEL COUNTY - MARYLAND

SHEET 5.02

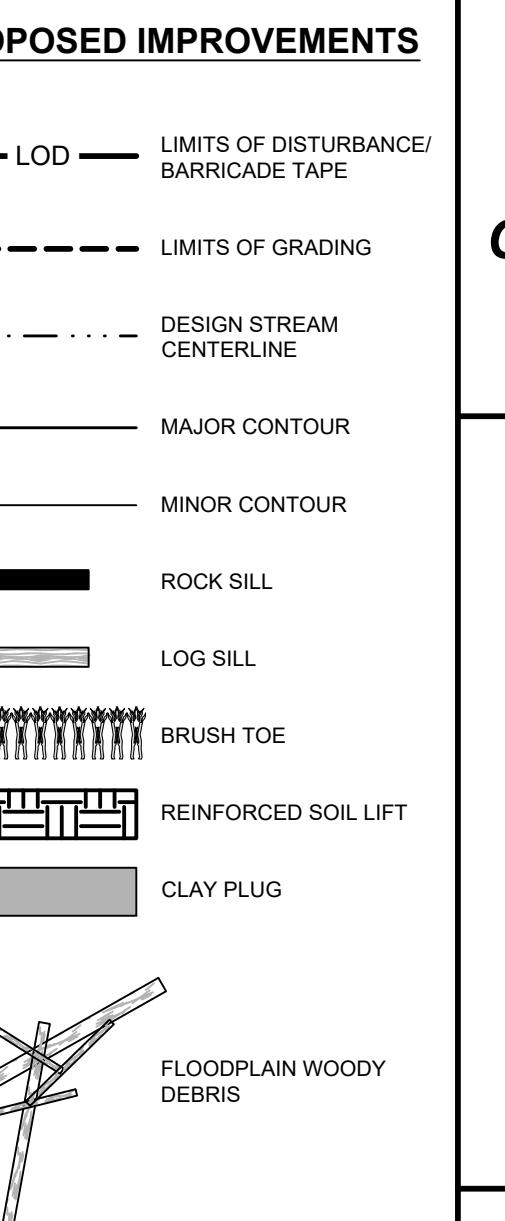
JOB NO.  
45080

PROFILE SCALE

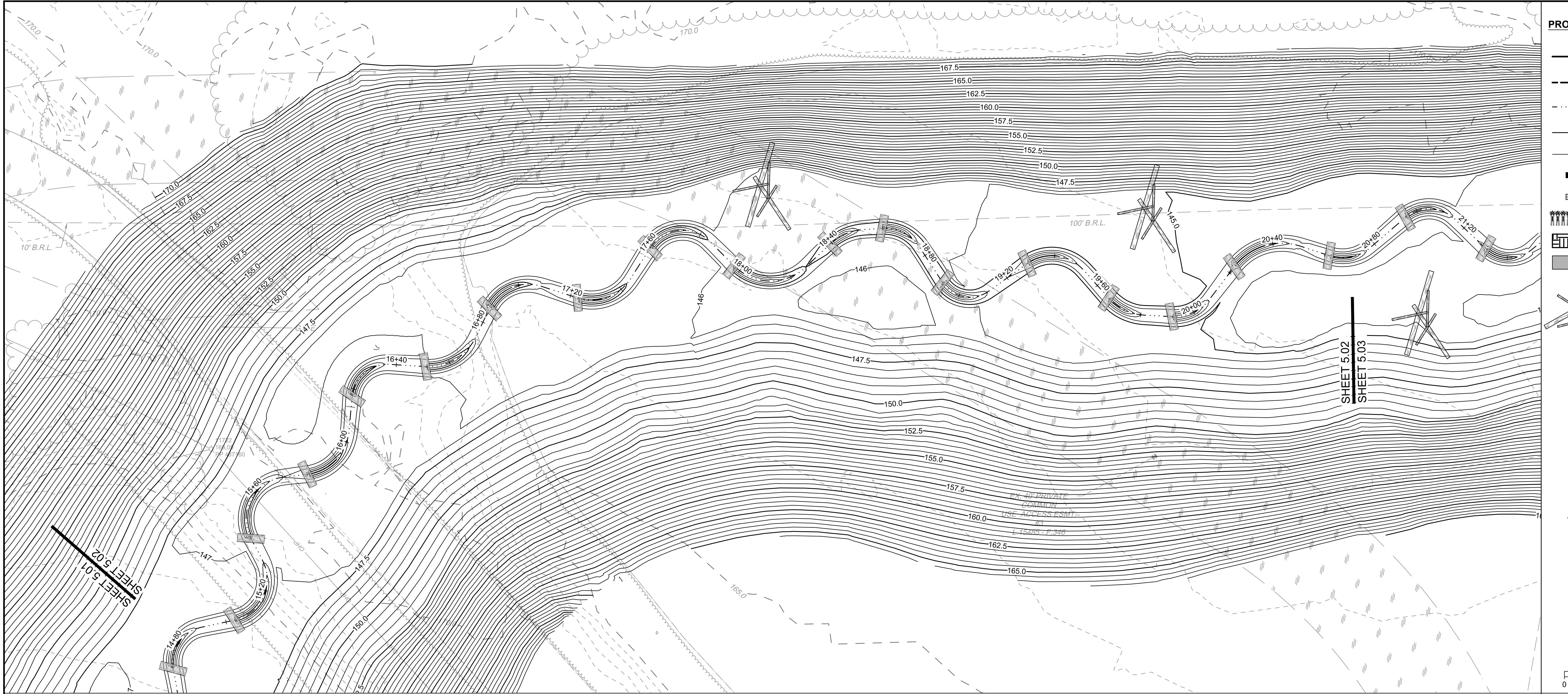
4  
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50% PLAN NOT FOR CONSTRUCTION	
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	DATE
7/10/20	DRAWN BY
I. GORDON	DESIGNED BY
B. SNYDER	CHECKED BY
B. SNYDER	SCALE AS SHOWN



SCALE 1"=20'  
0 20' 40'



# TIMMONS GROUP

## GRADING PLAN & PROFILE

ANNE ARUNDEL COUNTY - MARYLAND

SHEET 5.03

JOB NO.  
45080

PROFILE SCALE

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20

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125

130

135

140

145

150

155

160

SCALE 1"=20'

0

20'

40'

DATE

7/10/20

DRAWN BY

I. GORDON

DESIGNED BY

B. SNYDER

CHECKED BY

B. SNYDER

SCALE

AS SHOWN

DATE

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION

</div

# TIMMONS GROUP

## GRADING PLAN & PROFILE

ANNE ARUNDEL COUNTY - MARYLAND

### YEL01 - ANNAPOLIS JUNCTION BUSINESS PARK (STREAM RELOCATION)

PROPOSED IMPROVEMENTS		50% PLAN NOT FOR CONSTRUCTION	
—	LOD	—	LIMITS OF DISTURBANCE/ BARRICADE TAPE
- - -	LIMITS OF GRADING	- - -	DESIGN STREAM CENTERLINE
- - -	MAJOR CONTOUR	- - -	MINOR CONTOUR
—	ROCK SILL	—	LOG SILL
—	BRUSH TOE	—	REINFORCED SOIL LIFT
—	CLAY PLUG	—	FLOODPLAIN WOODY DEBRIS

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7/10/20

DRAWN BY

I. GORDON

DESIGNED BY

B. SNYDER

CHECKED BY

B. SNYDER

SCALE AS SHOWN

1"

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40'

NAD 83

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SCALE 1"-20'

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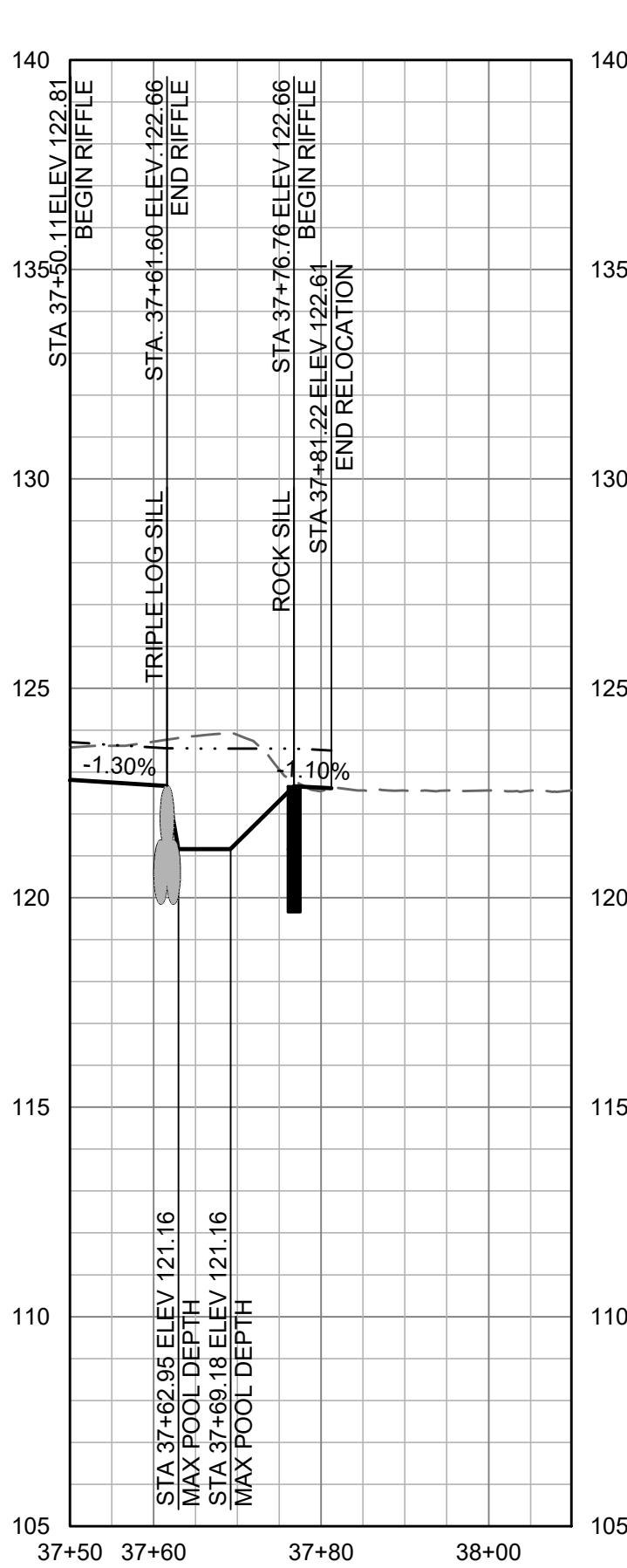
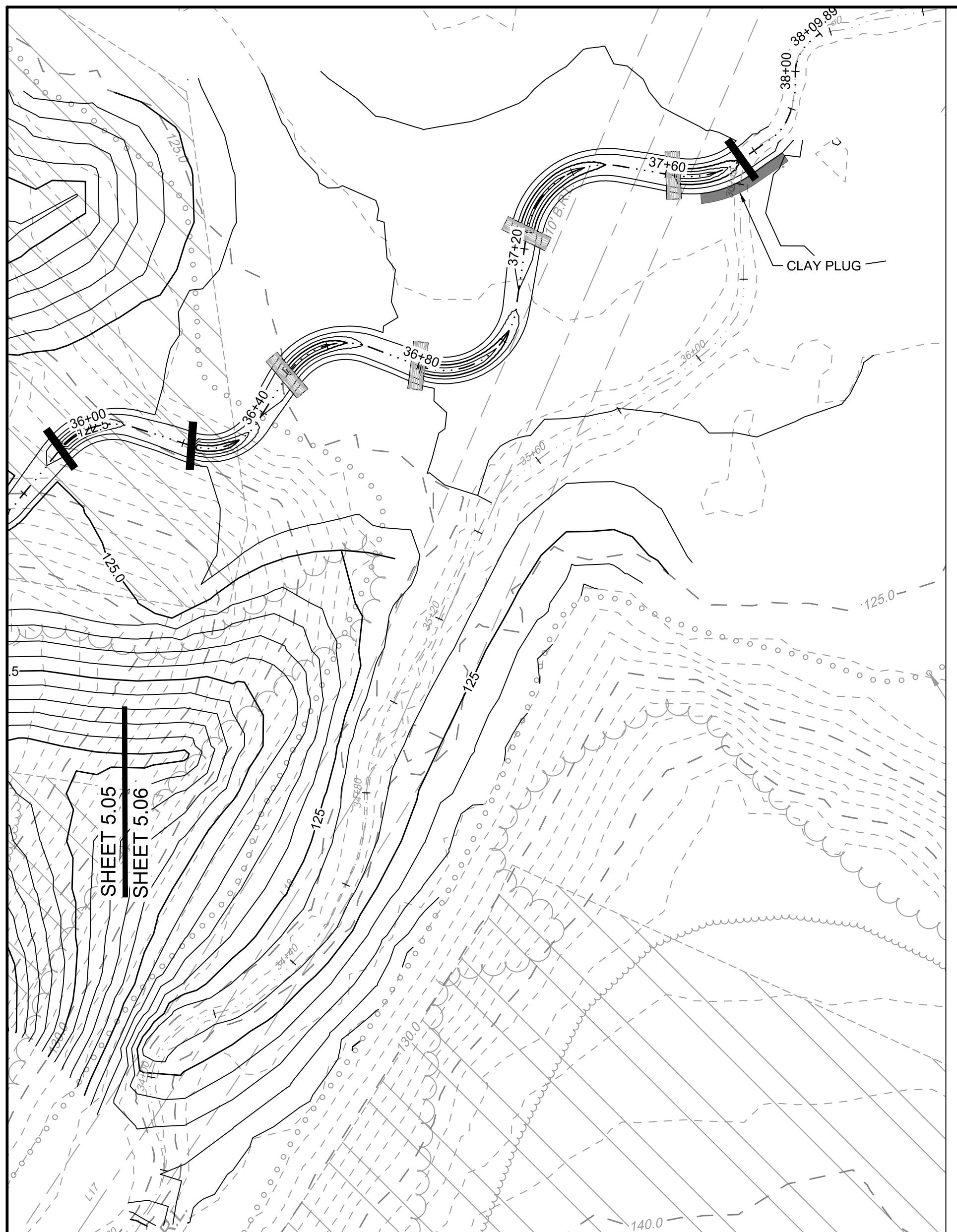
NAD 83

0

20'

40'





# TIME GROUPS

# INJECTION BUSINESS PARK (STREAM

YEL01 - ANNAPOLIS JUNCTION BUSINESS PARK (STREAM RELOC)	
ANNE ARUNDEL COUNTY - MARYLAND	
<b>GRADING PLAN &amp; PROFILE</b>	
JOB NO.	45080
SHEET NO.	5.06

**PROPOSED IMPROVEMENTS**

— LOD — LIMITS OF DISTURBANCE/BARRICADE TAPE

- - - - - LIMITS OF GRADING

- . . . - - - DESIGN STREAM CENTERLINE

— — — — — MAJOR CONTOUR

— — — — — MINOR CONTOUR

[Solid black rectangle] ROCK SILL

[Hatched rectangle] LOG SILL

[Skewer pattern] BRUSH TOE

[Grid pattern] REINFORCED SOIL LIFT

[Solid grey rectangle] CLAY PLUG

[Crossed sticks] FLOODPLAIN WOODY DEBRIS

# **50% PLAN NOT FOR CONSTRUCTION**

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REVISION DESCRIPTION

# PROFILE

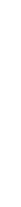
- - - - EXISTING GRADE  
 (FIELD TOPO)

— PROPOSED GRADE

- - - - DESIGN BANKFULL

 SUBSTRATE MIX

 ROCK SILL

 TRIPLE LOG SILL

4  
 0  
 0 20  
 PROFILE SCALE