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NIFI - RIVANNA GREENWAY STABILIZATION WPO201800047/VESCP PLAN

WPO201800047/VESCP PLAN

ALBEMARLE COUNTY, VIRGINIA



VICINITY MAP
SCALE: 1" = 1 MI.

PROJECT INFORMATION

- CLIENT: COUNTY OF ALBEMARLE / FACILITIES ENVIRONMENTAL SERVICES / PROJECT MANAGEMENT DIVISION
PHONE: 1-434-872-4501 EXT. 3421
EMAIL: WHARRIS@ALBEMARLE.ORG
- PROJECT AGENT: WALTER HARRIS IV
PROJECT ENGINEER: ECOSYSTEM SERVICES
ECOSYSTEM SERVICES, LLC
1739-A ALLIED STREET
CHARLOTTESVILLE, VA 22903
CONTACT: KIP MUMAW
540.239.1428
KIP@ECOSYSTEMSERVICES.US
- PROPERTY OWNER: COUNTY OF ALBEMARLE
- TOTAL ACREAGE OF DISTURBANCE: 0.81 (35,256 SQ FT.)
- PROJECT WATERSHED: RIVANNA
- HYDROLOGIC UNIT CODE: 02080204
- COUNTY PROJECT NUMBER: WPO20180047
- TAX MAP PARCEL #'S: 93A2-1A, 93A2-NN-33, 93A2-NN-32
- 1750 PIPER WAY, KESWICK, VA 22903

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VICINITY MAP
SCALE: 1:24,000

APPROVAL:

REGULATORY AUTHORITY SIGNATURE	TITLE	DATE
REGULATORY AUTHORITY SIGNATURE	TITLE	DATE

PROJECT NARRATIVE

THERE ARE SEVERAL DRAINAGE SWALES AND CULVERTS THAT DRAIN ACROSS THE GLENMORE GOLF COURSE AND INTO THE RIVANNA RIVER TO THE WEST OF THE GREENWAY TRAIL. AS THE RIVANNA RIVER HAS HISTORICALLY DROPPED IN ELEVATION AND BECOME MORE DISCONNECTED FROM THE ADJACENT FLOODPLAIN, MIGRATING HEADCUTS, I.E. AREAS OF VERTICAL DEGRADATION, HAVE FORMED AS THESE DRAINAGE SWALES DROP IN ELEVATION AT THEIR CONFLUENCE WITH THE RIVANNA RIVER.

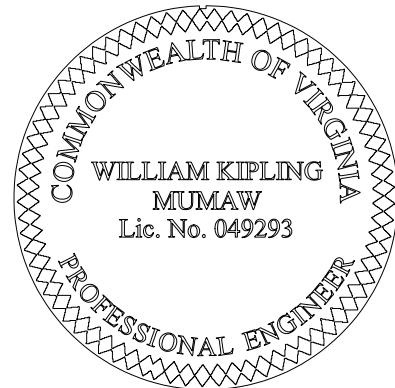

THE OBJECTIVES OF THE PROPOSED PROJECTS ARE TO PREVENT EROSION AND REDUCE THE PROBABILITY THAT FUTURE FLOODING WILL COMPROMISE AREAS OF THE RIVANNA GREENWAY AS WELL AS THE LARGER GLENMORE COUNTRY CLUB.THESE LOCATIONS ARE CURRENTLY EXHIBITING EROSION THAT HAS THE POTENTIAL TO UNDERMINE THE EXISTING TRAIL AS WELL AS POSE SAFETY HAZARDS TO GOLF COURSE AND TRAIL USERS ALIKE.

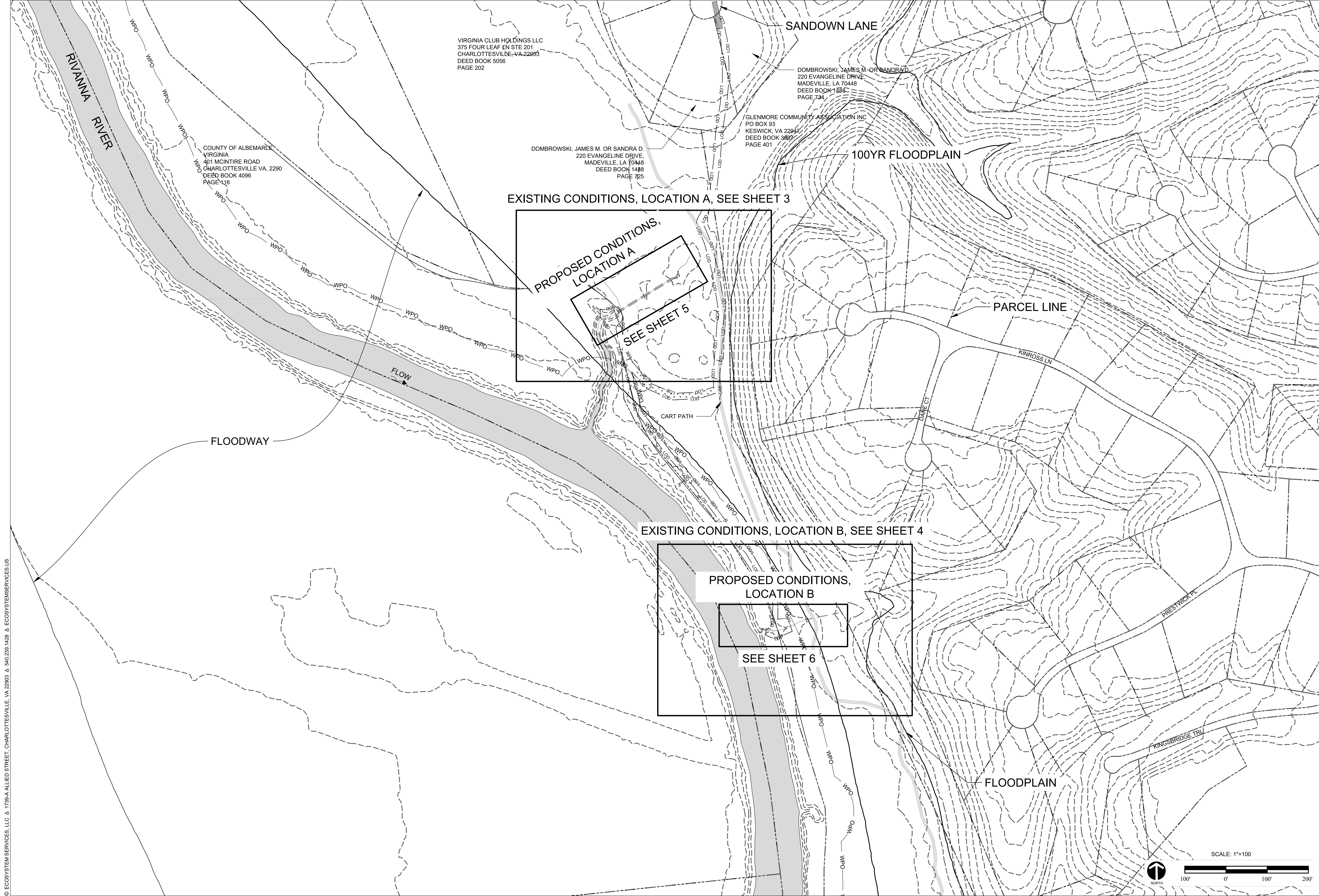
THE TREATMENT PROPOSED IN LOCATION A CONSISTS OF INSTALLING 15' OF 48" HDPE PIPE EXTENDING FROM THE EXISTING PIPE AND A STEEL END SECTION. PLACING FILL MATERIAL COMPACTING IN 6" LIFTS AND INSTALLATION OF CLASS III RIPRAP AT A 1:1 SLOPE FROM THE PIPE OUTLET UPGRADIENT APPROXIMATELY 5' AND THEN TRANSITIONING TO A SOIL LIFT AT A 3:1 SLOPE AND TYING IN TO EXISTING GRADE ADJACENT TO THE EXISTING TRAIL. THE RIPRAP WILL PREVENT SCOUR AND DISSIPATE THE ENERGY OF BACKWATER AND RECEDING FLOOD EVENTS. THE SOIL LIFTS PROVIDE A SAFER TRANSITION TO THE RIPRAP SLOPE AS WELL AS ADDRESSING POOR SOIL CONDITIONS BY IMPORTING TOPSOIL THAT WILL ALLOW FOR BETTER PLANTING ESTABLISHMENT. THE SOIL LIFTS WOULD BE PLANTED BOTH IN-BETWEEN LIFTS AND ALSO AT THE TOP OF THE LIFT. THE SOIL LIFTS ARE ALSO WRAPPED IN MATTING WHICH PREVENTS EROSION AS PLANTS BECOME ESTABLISHED. WOODY MATERIAL SHOULD BE INSTALLED IN-BETWEEN THE SOIL LIFTS TO PROVIDE LONG-TERM STABILITY AND REDUCE FUTURE SAFETY RISKS.

THE TREATMENT PROPOSED IN LOCATION B CONSISTS OF INSTALLING A 12" RCP PIPE TO CONVEY RUNOFF UNDERNEATH THE GREENWAY, CONDUCTING THE ASSOCIATED GRADING OF THE GREENWAY, AND INSTALLATION OF TWO ROCK SILLS, RIPRAP BED MATERIAL, AND ASSOCIATED GRADING AND PLANTING. THIS TREATMENT WILL ADDRESS EROSION FROM THE CONVEYANCE CHANNEL AS WELL AS THE TRANSITION TO THE RIVANNA RIVER BY SLOWLY DISSIPATING ENERGY THROUGH ROCK WEIRS AND POOLS.

GENERAL NOTES

- THIS IS A WATER QUALITY PROJECT. CHANNEL AND FLOOD PROTECTION REGULATIONS HAVE BEEN MET THROUGH NO CONCENTRATED STORMWATER FLOW BEING RELEASED FROM THE PROJECT AREA. THERE IS NO INCREASE IN IMPERVIOUS AREA. NUTRIENT DISCHARGE FOR THIS PROJECT IS UNDER 0.41 LBS PER ACRE PER YEAR.
- ALL BASEMAPPING AND TOPOGRAPHIC SURVEY INFORMATION IS PROVIDED BY ECOSYSTEM SERVICES. THE SURVEY OCCURRED ON MARCH 21ST, 2018.
- ADDITIONAL BASE MAPPING OBTAINED FROM COUNTY GIS AND VGIN.
- HORIZONTAL DATUM: NAD83 VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT
- VERTICAL DATUM: NAVD 88, US FOOT
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 OR 1-800-552-7001 PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- ALL WORK SHALL BE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL STANDARDS.
- ANY WORK THAT IS REQUIRED FOR THE SUCCESSFUL COMPLETION OF THE PROJECT AS SPECIFIED IN THIS SET OF PLANS BUT NOT SPECIFICALLY ADDRESSED IN THE PLAN SET SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO COMPLETE SUCH WORK.
- THE PROJECT DOES NOT INCLUDE THE ADDITION OF ANY IMPERVIOUS COVER. NO INCREASE IN RUNOFF WILL RESULT FROM THIS PROJECT.
- NO WORK SHALL BEGIN WITHOUT ACQUISITION OF ALL LOCAL, STATE, AND FEDERAL PERMITS AND APPROVALS.
- THE CONTRACTOR SHALL CONTACT ALBEMARLE COUNTY FOR A PRE-CONSTRUCTION MEETING PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- SHOULD A DISCREPANCY BE FOUND IN THE PLAN SET, THE CONTRACTOR SHALL CONSULT WITH DESIGN ENGINEER PRIOR TO COMPLETION OF SPECIFIC WORK.
- ALL GRADING ACTIVITIES SHALL INCLUDE REMOVAL AND TEMPORARY STOCKPILING OF TOP SOIL, EXECUTION OF GRADING, AND REPLACEMENT OF TOPSOIL TO ACHIEVE FINAL GRADES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS AS A RESULT OF ITS WORK PERFORMED DURING THE CONTRACT PERIOD. THIS RESPONSIBILITY SHALL INCLUDE RE-SEEDING DISTURBED AREAS AND TEMPORARY ACCESS ROADS.
- THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND STAGING MATERIAL INSIDE THE LIMITS OF DISTURBANCE UNLESS PRIOR APPROVAL BY THE PROJECT ENGINEER IS PROVIDED.
- CLEARING & GRUBBING SHALL BE CONFINED TO THOSE AREAS NEEDED FOR CONSTRUCTION ACCESS AND GRADING.
- UNDER NO CIRCUMSTANCES ARE TREES OVER 10" DBH TO BE REMOVED WITHOUT PRIOR APPROVAL FROM THE PROJECT ENGINEER UNLESS OTHERWISE SPECIFIED WITHIN THIS PLAN SET.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL TAKE-OFF QUANTITIES INCLUDING BUT NOT LIMITED TO FILL, STONE, AND VEGETATIVE MATERIALS.
- PLAN VIEW LOCATION OF STRUCTURES IS APPROXIMATE. STRUCTURE PLACEMENT SHOULD FOLLOW THE PROFILE VIEW AND STRUCTURE DETAILS.
- IF SITE OR CONSTRUCTION CONSTRAINTS PREVENT POOL OR STRUCTURE ELEVATIONS FROM BEING CONSISTENT WITH THE PLAN SET, THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER TO FIELD MODIFY THE ELEVATIONS.
- ALL SECTION VIEWS ARE ORIENTED LOOKING DOWNSTREAM UNLESS OTHERWISE SPECIFIED.
- IN CONFORMANCE WITH DPOR REGULATIONS, SECTION 54.1-112 INVITED BIDDERS MUST DISCLOSE (I) WHETHER BIDDER IS A RESIDENT OR NONRESIDENT OF THE COMMONWEALTH, (II) WHETHER THE PROPER LICENSE OR CERTIFICATE HAS BEEN ISSUED TO THE BIDDER, AND (III) THE INFORMATION REQUIRED OF THE BIDDER TO SHOW EVIDENCE OF PROPER LICENSURE OR CERTIFICATION UNDER THE PROVISIONS OF THE ABOVE MENTIONED CORRESPONDING CHAPTER.

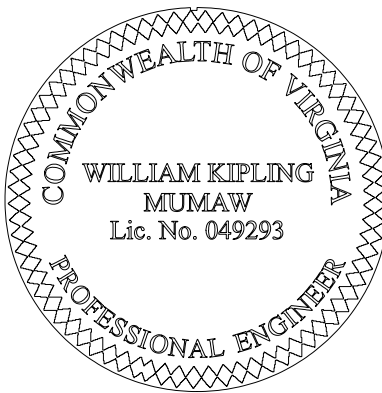
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DESIGNED: WKM			
DRAWN: JNB/JAT			
PROJECT #: 18-0003			
DATE: 12/19/2018			
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WPO201800047/VESCP PLAN
OVERVIEW
ALBEMARLE COUNTY, VIRGINIA

REVISION:

PROJECT MANAGER: WKM
DESIGNED: WKM
DRAWN: JNB/JAT
PROJECT #: 18-0003
DATE:
SHEET:

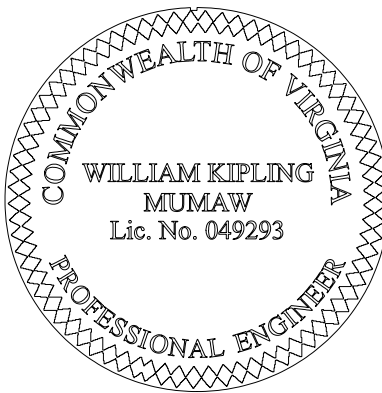
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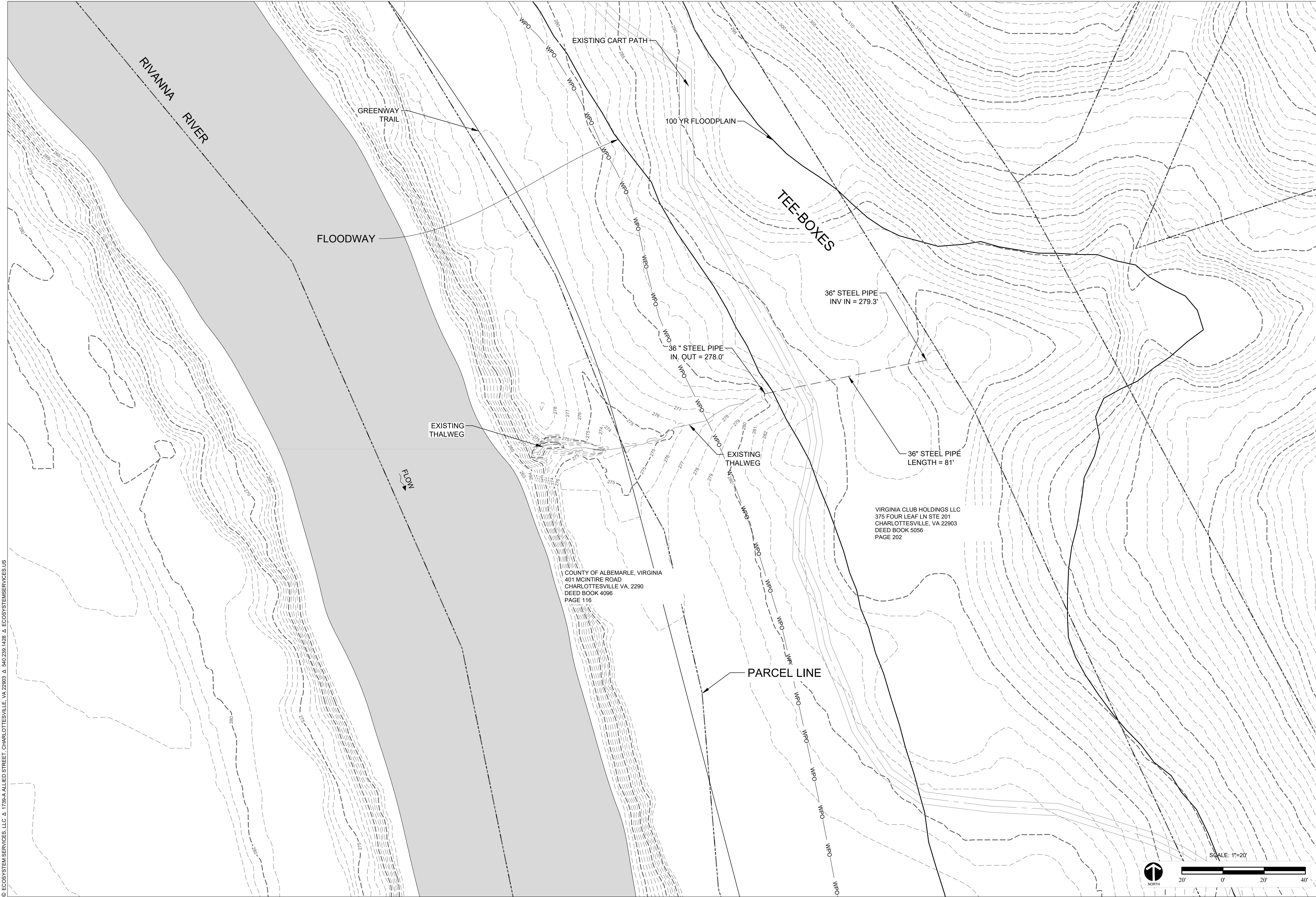
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WPO201800047/VESCP PLAN
EXISTING CONDITIONS - LOCATION A
ALBEMARLE COUNTY, VIRGINIA

REVISION:

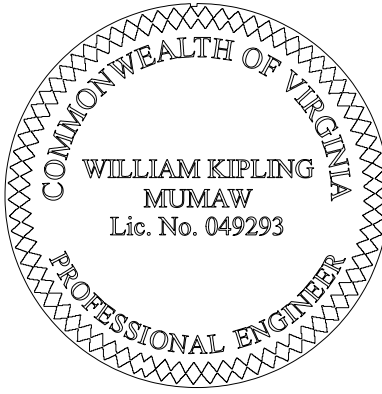
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DESIGNED:	WKM
DRAWN:	JNB/JAT
PROJECT #:	18-0003
DATE:	12/19/18
SHEET:	

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EXISTING CONDITIONS - LOCATION B
ALBEMARLE COUNTY, VIRGINIA

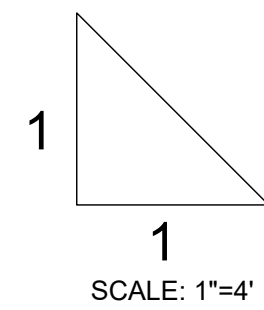
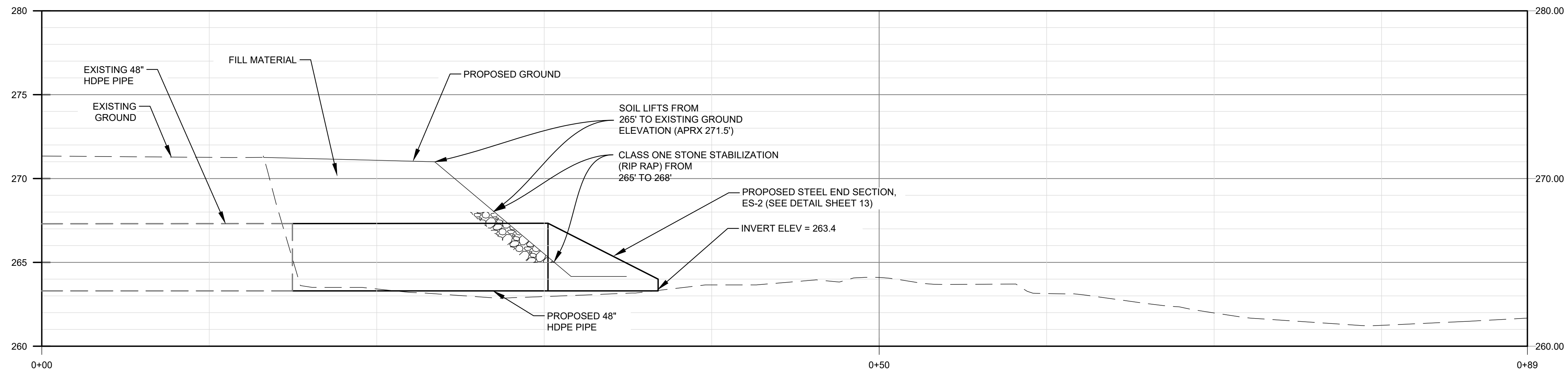
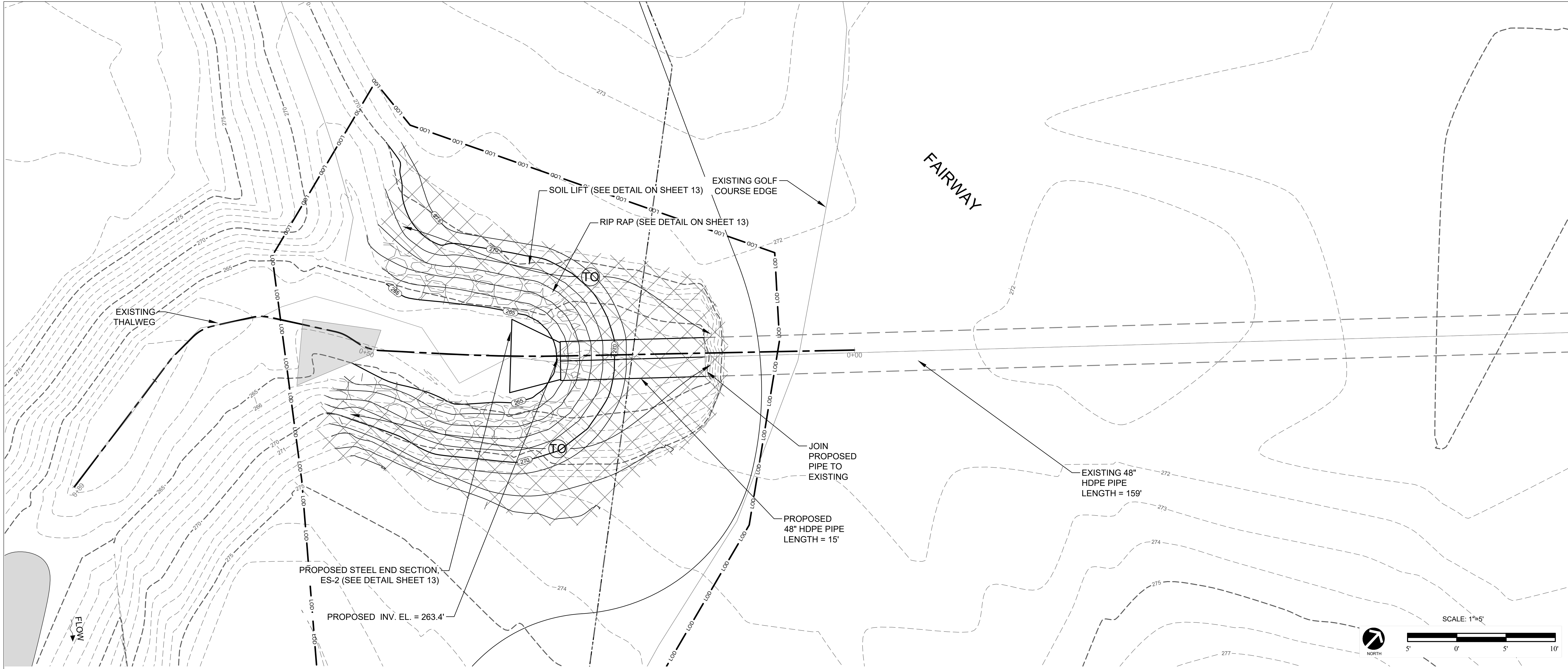
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DESIGNED:	WKM
DRAWN:	JNB/JAT
PROJECT #:	18-0003
DATE:	12/19/18

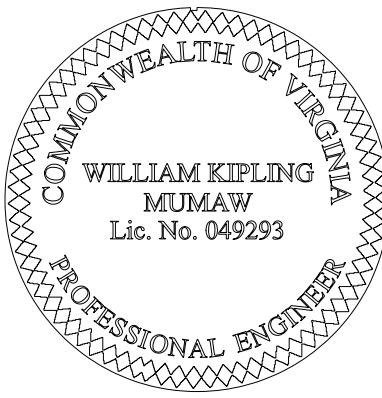
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PROPOSED CONDITIONS - LOCATION A
ALBEMARLE COUNTY, VIRGINIA

REVISION:

PROJECT MANAGER: WKM

DESIGNED: WKM

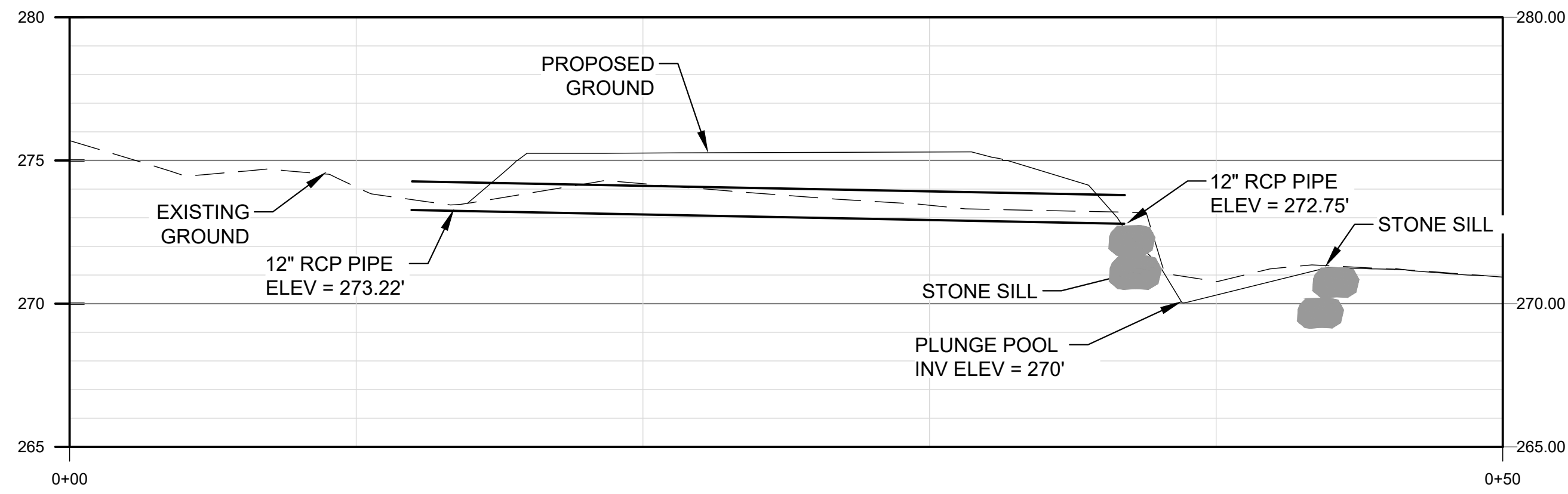
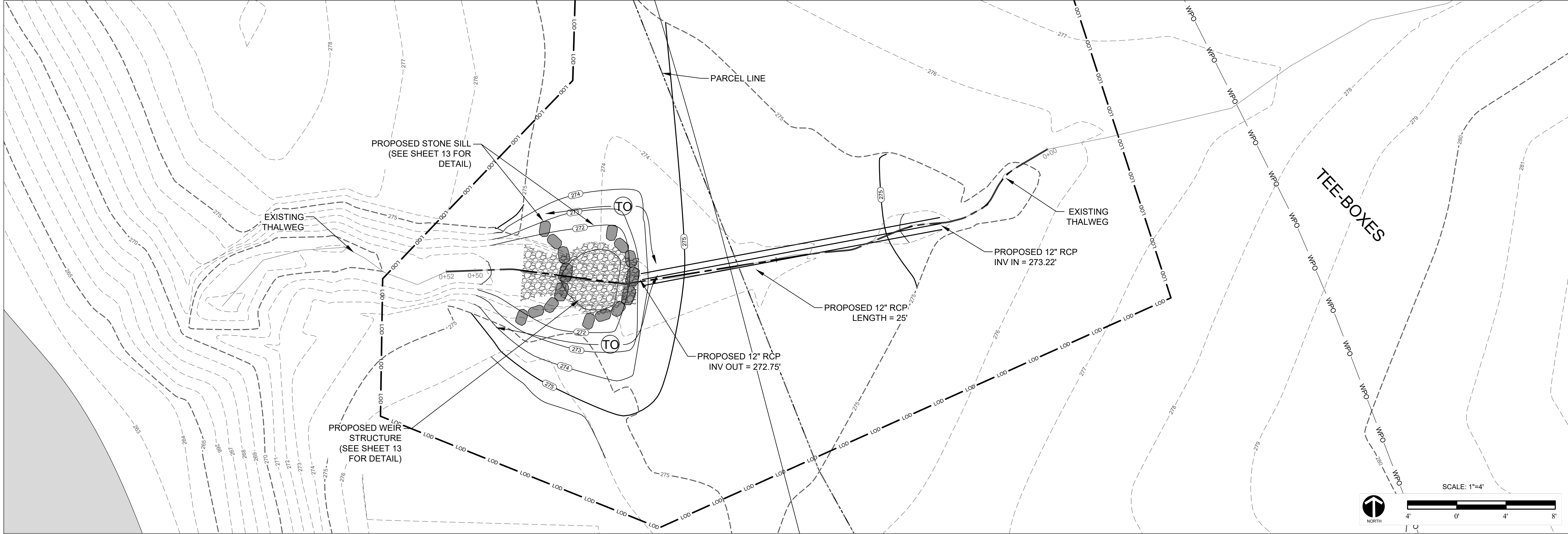
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PROJECT #: 18-0003

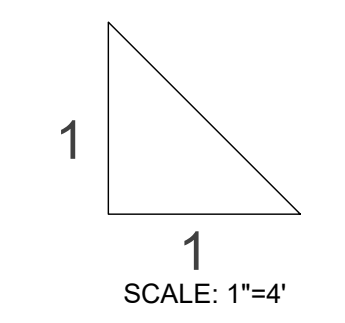
DATE: 12/19/18


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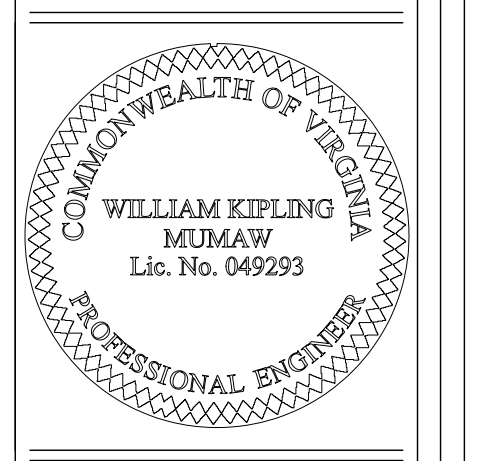


LOCATION B PROPOSED PROFILE





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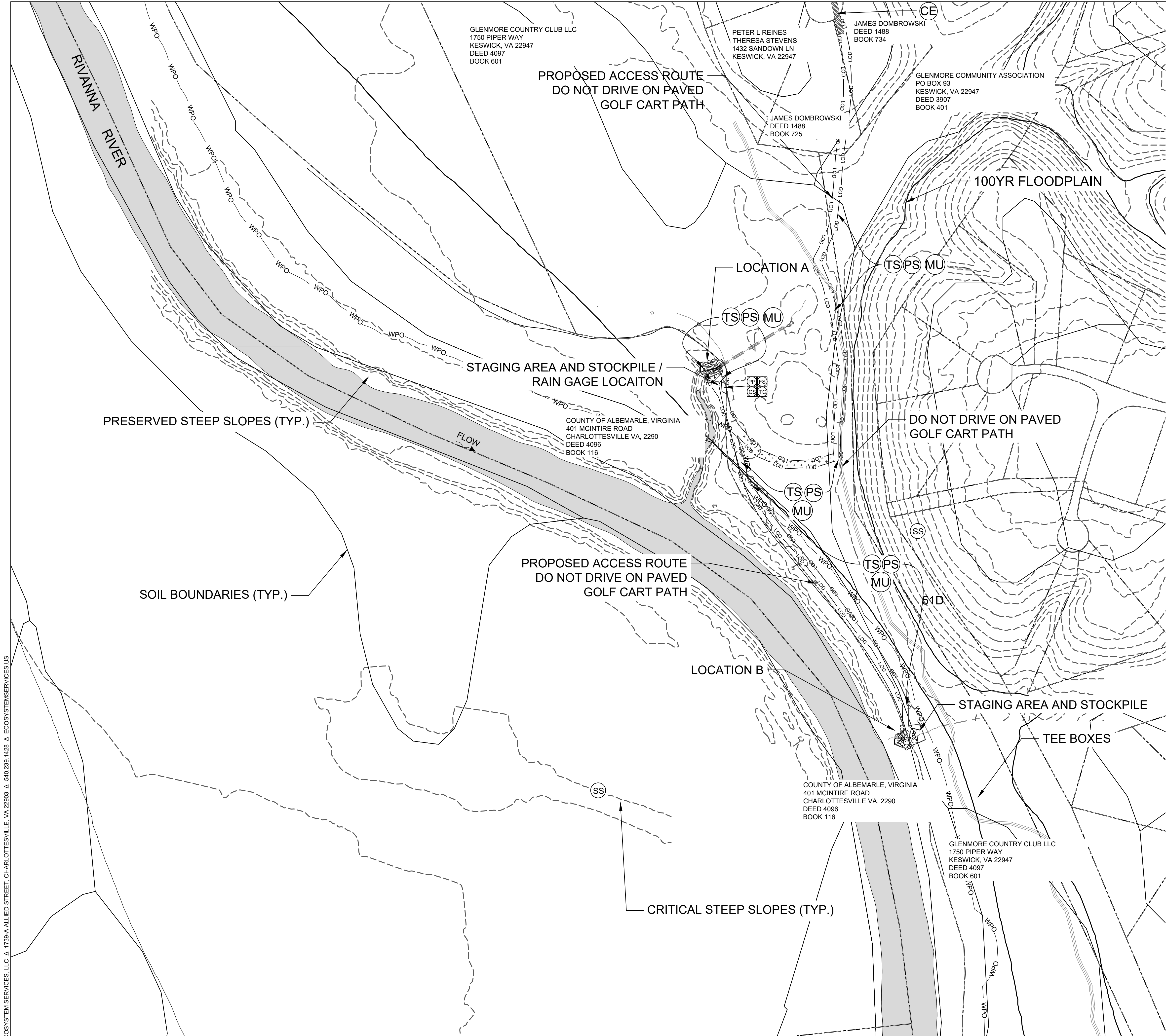


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WPO201800047/VESCP PLAN

PROPOSED CONDITIONS - LOCATION B

ALBEMARLE COUNTY, VIRGINIA

REVISION:	
PROJECT MANAGER:	WKM
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PROJECT #:	18-0003
DATE:	12/19/18
SHEET:	6



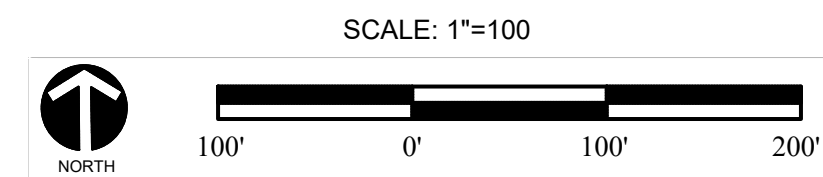
VSMF WAIVER CONDITIONS
1. NO CHANGES SHALL BE MADE TO THE PROJECT THAT WOULD SIGNIFICANTLY ALTER THE PREDEVELOPMENT RUNOFF CHARACTERISTICS OF THE LAND SURFACE AFTER THE COMPLETION OF CONSTRUCTION AND FINAL STABILIZATION. ACTIVITIES AT LOCATIONS A AND B ARE CONSIDERED PROJECT MAINTENANCE TO STABILIZE AND RESTORE ORIGINALLY CONSTRUCTED CONDITIONS AND ARE EXEMPT FROM THE REQUIREMENTS OF THE VSMF.
SEE SHEETS 11 AND 12 FOR ESC NOTES AND DETAILS

LEGEND

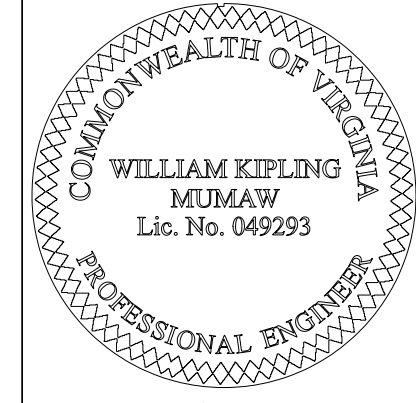
- LOD — LIMIT OF DISTURBANCE
- — — EXISTING MAJOR CONTOUR
- — — EXISTING MINOR CONTOUR
- — — PROPOSED MAJOR CONTOUR
- — — PROPOSED MINOR CONTOUR
- GRAVEL OR RIPRAP, AS NOTED
- SF — SILT FENCE
- WPO — WATER PROTECTION ORDINANCE, 100' BOUNDARY
- MULCH-LINED CONSTRUCTION ACCESS ROAD
- PARCEL BOUNDARY
- STSL — STEEP SLOPES
- 474 EXISTING CONTOURS
- (476) PROPOSED CONTOURS
- TP — TREE PROTECTION AND SAFETY FENCE
- SAF — SAFETY FENCE
- EXISITING TREE
- TREE LINE

SWPP ELEMENTS LEGEND*					
NO.	TITLE	KEY		UNITS	QUANTITY
N/A	PORTA POTTY	PP		EA	1
N/A	FUELING STATION	FS		EA	AS NEEDED
N/A	CHEMICAL STORAGE	CS		EA	AS NEEDED
N/A	TRASH CONTAINMENT	TC		EA	AS NEEDED

EROSION/SEDIMENT CONTROL LEGEND					
NO.	TITLE	KEY	SYMBOL	UNITS	QUANTITY
MGWC 1.2	PUMP AROUND DIVERSION	P		EA	1
3.05	SILT FENCE	SF		LF	TBD
3.02	TEMP. STONE CONSTRUCTION ENTRANCE	CE		EA	1
3.31	TEMPORARY SEEDING	TS		EA	AS NEEDED
3.32	PERMANENT SEEDING	PS		EA	AS NEEDED
3.35	MULCHING	ML		EA	AS NEEDED
N/A	STEEP SLOPES	SS		N/A	N/A
3.36	SOIL STABILIZATION BLANKETS AND MATTING	BM		EA	AS NEEDED
3.19	RIPRAP	RR		EA	TBD
3.26	DEWATERING STRUCTURE	DS		EA	1
3.30	TOPSOILING	TO		EA	AS NEEDED



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WPO201800047/VESCP PLAN
EROSION AND SEDIMENT CONTROL OVERVIEW
ALBEMARLE COUNTY, VIRGINIA

REVISION:

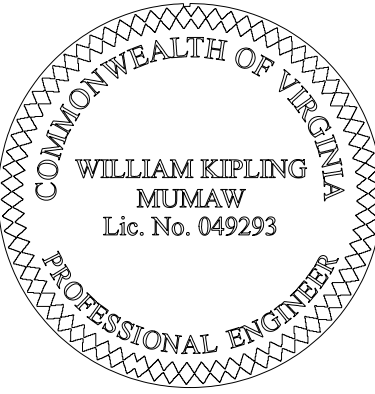
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DESIGNED: WKM
DRAWN: JNB/JAT
PROJECT #: 18-0003
DATE: 12/19/18
SHEET:

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WPO201800047/VESCP PLAN
EROSION AND SEDIMENT CONTROL 1
ALBEMARLE COUNTY, VIRGINIA

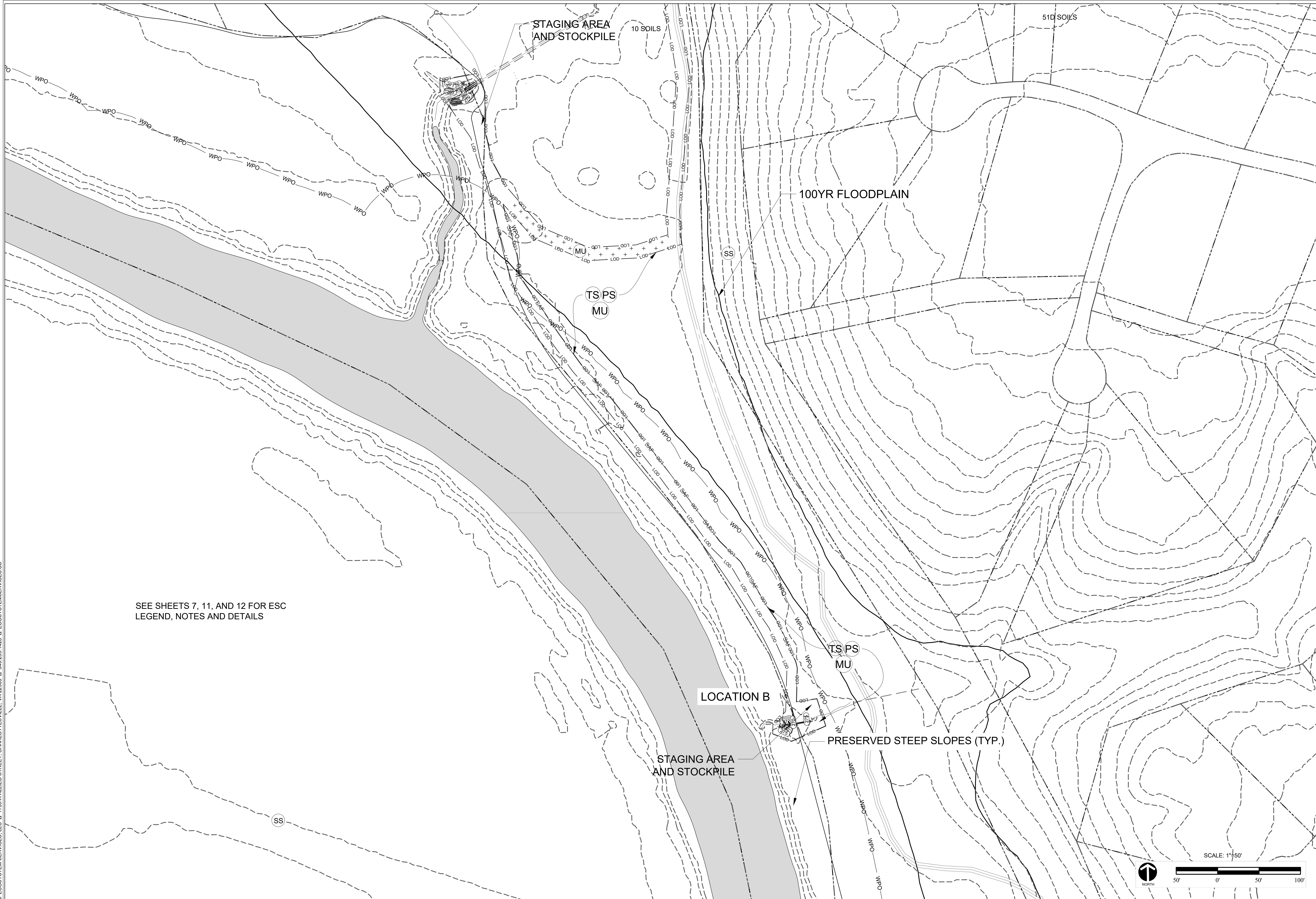
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PROJECT MANAGER:	WKM
DESIGNED:	WKM
DRAWN:	JNB/JAT
PROJECT #:	18-0003
DATE:	12/19/18

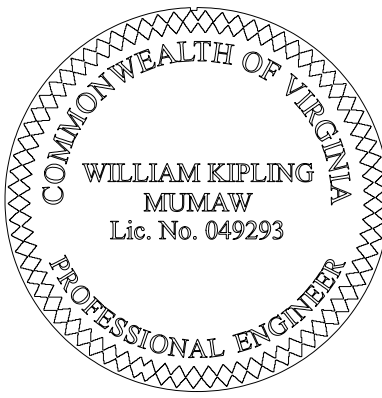
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WPO201800047/VESCP PLAN
EROSION AND SEDIMENT CONTROL 2
ALBEMARLE COUNTY, VIRGINIA

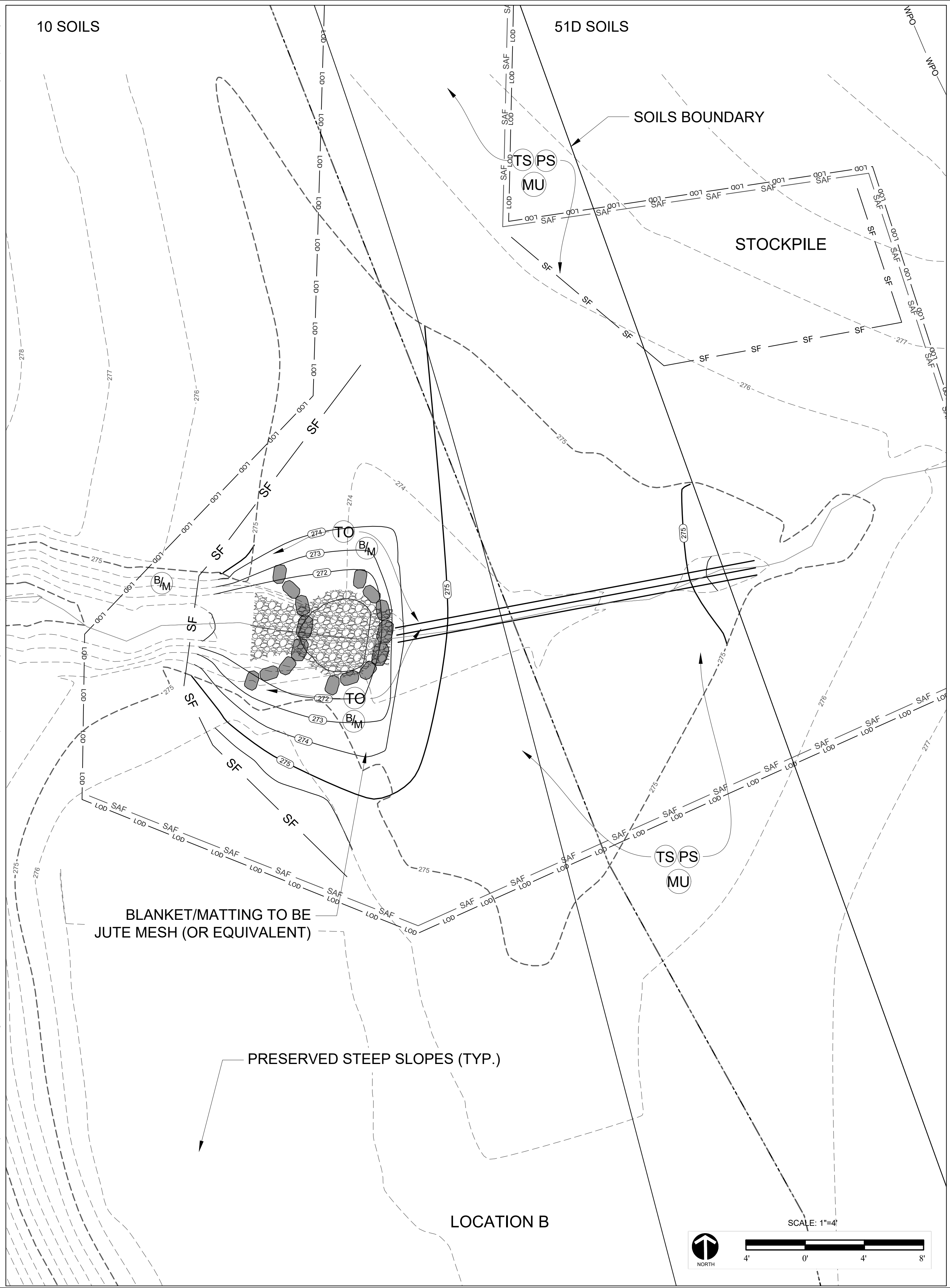
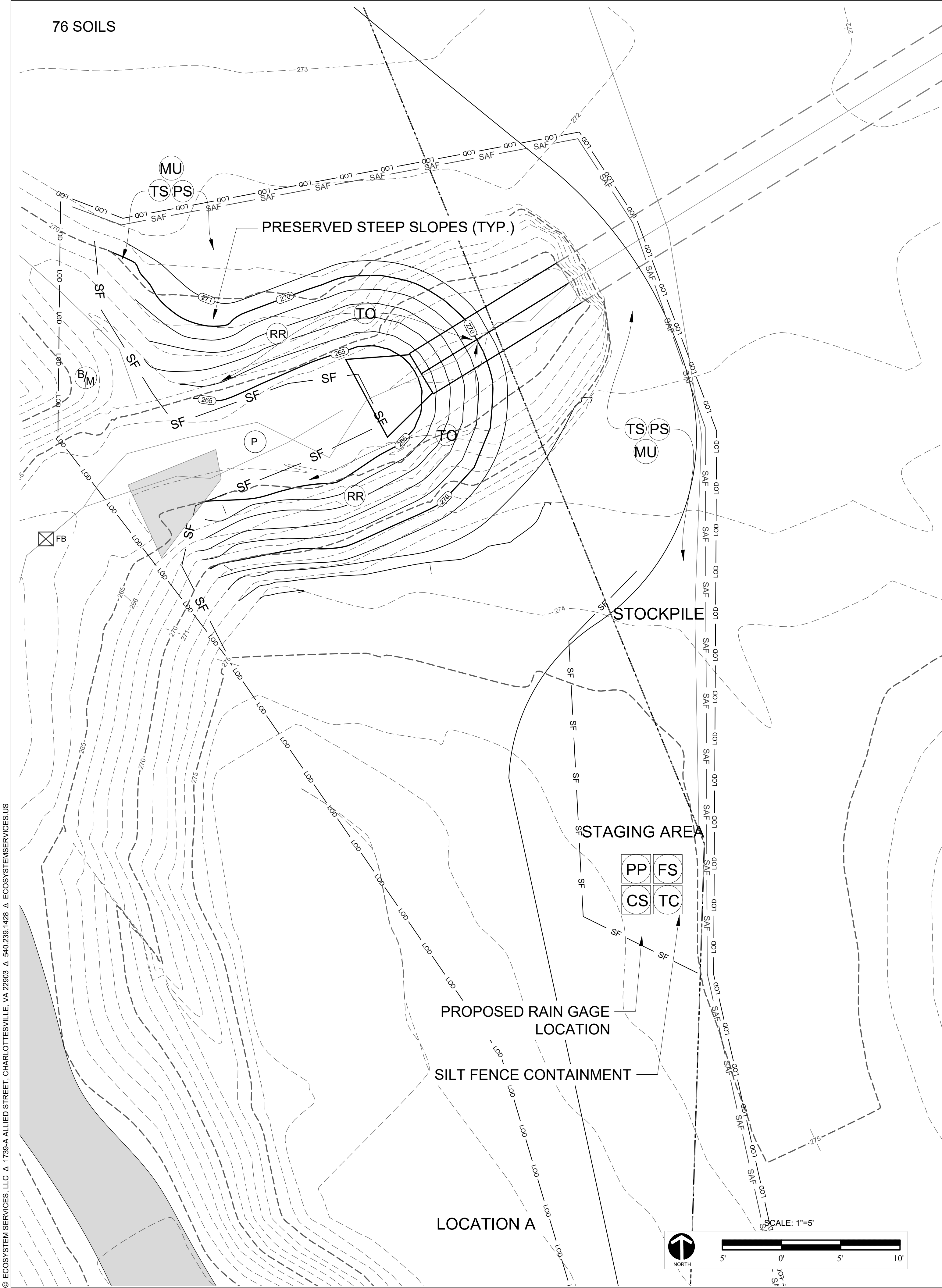
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PROJECT MANAGER:	WKM
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DRAWN:	JNB/JAT
PROJECT #:	18-0003
DATE:	12/19/18

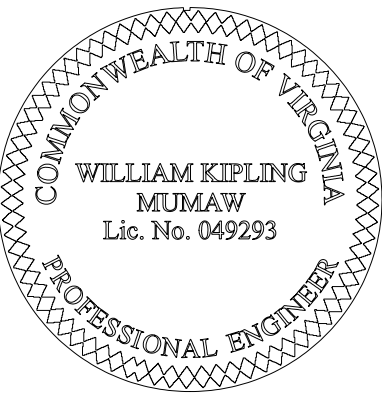
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WPO201800047/VESCP PLAN
EROSION AND SEDIMENT CONTROL 3
ALBEMARLE COUNTY, VIRGINIA

REVISION:

PROJECT MANAGER: WKM
DESIGNED: WKM
DRAWN: JNB/JAT
PROJECT #: 18-0003
DATE: 12/19/18

SHEET:

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EROSION & SEDIMENT CONTROL NARRATIVE

SITE DESCRIPTION

THE PROJECT IS CONTAINED WITHIN TWO CONTIGUOUS PARCELS. THE PROJECT PROPERTY IS LOCATED IN THE PIEDMONT PHYSIOGRAPHIC PROVINCE AND ALL WATER RESOURCES ARE PART OF THE RIVANNA RIVER WATERSHED WHICH DRAINS TO THE JAMES RIVER WATERSHED (HUC: 02080204).

AREA TOPOGRAPHY IS MODERATELY TO SEVERELY STEEP ALONG THE STREAM VALLEYS WITH 10% - 25+% SLOPES AND GENTLY TO MODERATELY SLOPING WITH 0-5% SLOPES LOCATED IN THE STREAM VALLEY FLOOR.

ADJACENT PROPERTY

LAND USES IN THE VICINITY INCLUDE EXISTING RESIDENTIAL AND COMMERCIAL DEVELOPMENT.

OFFSITE AREAS

NO OFFSITE AREAS ARE ASSOCIATED WITH THIS PROJECT. IF ADDITIONAL MATERIAL IS REQUIRED TO BE TAKEN OFF-SITE, CONTRACTOR IS TO PROVIDE SWPPP AND ESC PLAN FOR OFF-SITE AREAS.

SOILS

THE SOILS WITHIN THE PROJECT LIMITS INCLUDE THE FOLLOWING:

- 1) BUNCOMBE LOAMY SAND (10)
- 2) RIVERVIEW LOAM (76)
- 3) MANTEO CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES (51D)

CRITICAL EROSION AREAS:

THE ENTIRE PROJECT SITE IS A CRITICAL AREA. WORK IN CRITICAL AREAS SHOULD BE UNDERTAKEN WITH CARE TO NOT IMPACT DOWNSTREAM AQUATIC RESOURCES. THE ESC MEASURES PROPOSED AND SEQUENCE OF CONSTRUCTION ARE PLANNED TO REDUCE DOWNSTREAM SEDIMENTATION TO THE MAXIMUM EXTENT POSSIBLE.

EROSION AND SEDIMENT CONTROL MEASURES:

- 1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THIRD EDITION (1992). NO EROSION AND SEDIMENT CONTROL STRUCTURE SHALL BE REMOVED WITHOUT THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR.
- 2. ALL PERMITS AND EROSION AND SEDIMENT CONTROL PLANS SHALL BE KEPT ONSITE. THE SWPPP SHALL BE HELD ON SITE AND MADE AVAILABLE UPON REQUEST TO ANY REGULATORY AUTHORITY AND THE GENERAL PUBLIC. ALL CONSTRUCTION ACTIVITIES SHALL BE LOGGED AND A RECORD KEPT ONSITE.
- 3. A PRECONSTRUCTION MEETING SHALL BE HELD AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION. AT A MINIMUM THE SITE SUPERINTENDENT SHALL CONTACT THE OWNER, THE PROJECT ENGINEER, DEQ, AND COUNTY REPRESENTATIVES TO SCHEDULE THE PRECONSTRUCTION MEETING.
- 4. CONTRACTOR SHALL INSTALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES (STONE CONSTRUCTION ENTRANCE, LIMITS OF DISTURBANCE (TO BE DEMARCATED BY ORANGE SAFETY FENCE AND/OR FLAGGING), STOCKPILE/STAGING AREA AND SILT FENCE) WHERE SHOWN ON PLANS.
- 7. CONTRACTOR SHALL REVIEW THE LOD LIMITS AND ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES WITH THE COUNTY INSPECTOR AND OWNER OR OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK.
- 9. ALL STREAM WORK SHALL BE COMPLETED IN THE DRY WITH THE USE OF THE PUMP AROUND SYSTEM..
- 10. NO EQUIPMENT OR MATERIALS ARE TO BE STORED IN THE FEMA MAPPED FLOODPLAIN.
- 11. A RAIN GAGE WILL BE INSTALLED ON THE SITE.
- 12. STOCKPILE AREAS SHALL BE UTILIZED PRIMARILY FOR STORAGE OF ROCK AND SOIL. SILT FENCE TO BE UTILIZED ON THE PERIMETER OF THESE AREAS AND ANY ADDITIONAL AREAS IF APPROVED BY COUNTY INSPECTOR AND COUNTY REPRESENTATIVE.
- 13.ESC MATTING (EC-2) SHALL BE APPLIED TO ALL DISTURBED AREAS AT PIPE OUTFALLS AT LOCATION A AND LOCATION B, AND TO ANY UNDISTURBED SLOPE GREATER THAN OR EQUAL TO 3:1.

SEQUENCE OF CONSTRUCTION

- 1. CONSTRUCTION WILL BE CONDUCTED IN ONE PHASE AT EACH LOCATION. OUTFALL WORK WILL BE STABILIZED AT THE END OF EACH DAY.
- 2. PERMANENTLY STABILIZE WITH SEED MIX AND TOPSOIL ONCE FINAL GRADE IS MET. UPON APPROVAL FROM COUNTY ESC INSPECTOR, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE REMOVED.
- 3. IMPLEMENT PLANTING PLAN

PUMP AROUND PRACTICE - STD. & SPEC. 5.1 (THE VIRGINIA STREAM RESTORATION AND BEST MANAGEMENT PRACTICES GUIDE, 2004.)

PUMP AROUND PRACTICE WILL BE INSTALLED WHERE NECESSARY TO ENSURE PROPER STREAM FLOW MAINTENANCE AND CLEAN WATER DISCHARGE FROM ACTIVE WORK AREAS. SPECIFIC LOCATIONS ARE NOT SPECIFIED ON PLANS AS THE LOCATION AND METHODS WILL VARY THROUGHOUT THE DURATION.

DEWATERING DEVICE - STD. AND SPEC. 3.26 OR DIRT SEDIMENT BAG.

FILTER BAG OR AN APPROVED ALTERNATIVE SHALL BE USED AS PART OF THE PUMP AROUND PRACTICE.

TEMPORARY STONE CONSTRUCTION ENTRANCE- STD. & SPEC. 3.02

A TEMPORARY STONE CONSTRUCTION ENTRANCE WILL BE PROVIDED AS SHOWN ON THESE PLANS.

SILT FENCE- STD. & SPEC. 3.05

SILT FENCE WILL BE INSTALLED AT LOCATIONS SHOWN ON THESE PLANS IN ORDER TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT FROM THE DISTURBED AREAS DURING CONSTRUCTION OPERATIONS IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.

TEMPORARY SEEDING & MULCHING -STD. 3.31 & SPEC & 3.35

TEMPORARY SEEDING AND MULCHING WILL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. FOR TEMPORARY SEEDING USE 50% OF THE RECOMMENDED RATES OF FERTILIZER, LIME AND FULL AMOUNT OF SEED AND MULCH REQUIRED FOR REGULAR SEEDING. MULCHING SHALL CONSIST OF STRAW MULCH.

PERMANENT SEEDING-STD. & SPEC 3.32

PERMANENT SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN FOURTEEN (14) DAYS.

TEMPORARY SEEDING MIXTURE:

THE FOLLOWING TEMPORARY SEEDS SPECIES SHALL BE USED FOR TEMPORARY SOIL STABILIZATION. WHERE SEASONS TRANSITION IT IS RECOMMENDED TO COMBINE BOTH HEAT AND COLD TOLERANT SPECIES. ANNUAL RYE GRASS SHALL NOT BE USED.

Common Name	Botanical Name	Application Rate (lbs/ac)	Planting Period
Rye Grain	<i>Secale cereale</i>	25	Nov. 1st - April 30th
Wheat	<i>Triticum aestivum</i>	30	Nov. 1st - April 30th
German Millet	<i>Setaria italic</i>	10	May 1st - Sept. 30th
Browntop Millet	<i>Urochloa ramosa</i>	10	May 1st - Sept. 30th

STABILIZATION NOTES

- 1. PERMANENT SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN FOURTEEN (14) DAYS. SEEDING AND SELECTION OF THE SEED MIXTURE SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK 3.32. ROADS AND PARKING AREAS SHALL BE STABILIZED WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED.
- 2. PLANTING AT TIMES OTHER THAN THOSE SPECIFIED MAY BE DONE ONLY UNDER SPECIFIC CONDITIONS AND WITH THE CONSENT OF THE ENGINEER.
- 3. ALL OPERATIONS SHALL BE PERFORMED ONLY WHEN THE SOIL IS IN PROPER CONDITION TO PERMIT SATISFACTORY WORK.
- 4. SURFACE SHALL BE CLEARED OF ALL GRADE STAKES, TRASH AND ANY OTHER OBJECTS WHICH WOULD HINDER INSTALLATION OF SEED.
- 5. SEED SHALL BE APPLIED WITH AN APPROPRIATE METHOD EITHER BY HYDROSEEDING/HYDROMULCHING OR BROADCAST SPREAD.
- 6. HYDROSEED OR HYDRO MULCH SHALL BE DYED GREEN TO AID IN VISUAL METERING DURING APPLICATION AND SHALL BE APPLIED AT A RATE OF 1200 POUNDS PER ACRE.
- 7. UNLESS HYDROSEEDING/HYDROMULCHING METHODS ARE USED, SEED SHALL BE RAKED AND LIGHTLY ROLLED. SEED SHALL BE COVERED WITH STRAW MULCH AT A RATE OF 1.5 TONS PER ACRE AND SHALL BE OF STANDARD QUALITY AND FREE OF WEEDS.

MAINTENANCE SCHEDULE

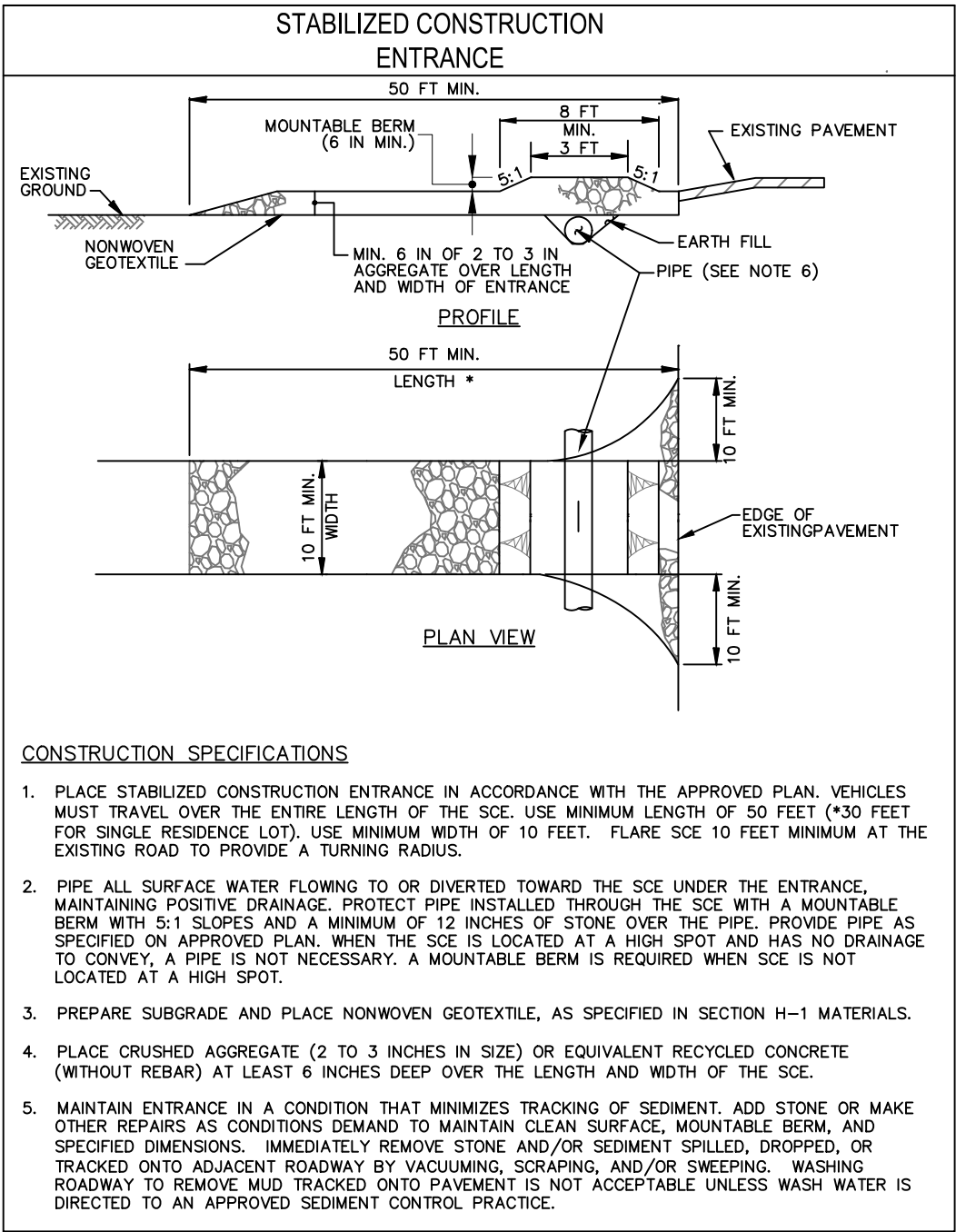
IN GENERAL, THE CONTRACTOR SHALL CHECK ALL EROSION AND SEDIMENT CONTROL MEASURES EVERY FIVE BUSINESS DAYS AND WITHIN 48-HOURS OF THE END OF A STORM EVENT THAT IS 0.25 INCHES OR GREATER. IF A BMP IS FOUND TO BE DEFICIENT, CORRECTIVE ACTION(S) SHALL BE COMPLETED AS SOON AS PRACTICABLE, BUT NO LATER THAN SEVEN DAYS AFTER DISCOVERY OF ANY DEFICIENCY.

UNLESS OTHERWISE SPECIFIED, ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THIRD EDITION, 1992. A COPY OF THE APPROVED ESC PLAN SHALL BE MADE AVAILABLE ONSITE AT ALL TIMES.

- 1. TEMPORARY STONE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAYS OR PRIVATE STREETS. PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE SHALL BE EXECUTED AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED AS SOON AS PRACTICABLE BUT NO LATER THAN THE END OF THE WORK DAY.
- 2. SILT FENCE SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT AND WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, REPAIRED, AND SEEDED.
- 3. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM.
- 4. STREAM DIVERSIONS SHALL BE INSPECTED DAILY AND AFTER EACH RAIN TO ENSURE PROPER FUNCTION AND THAT THE INTEGRITY OF THE LININGS ARE NOT IMPAIRED.
- 5. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED TO THE EXTENT THAT SUCH INSPECTIONS ARE PRACTICABLE.
- 6. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED DAILY FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

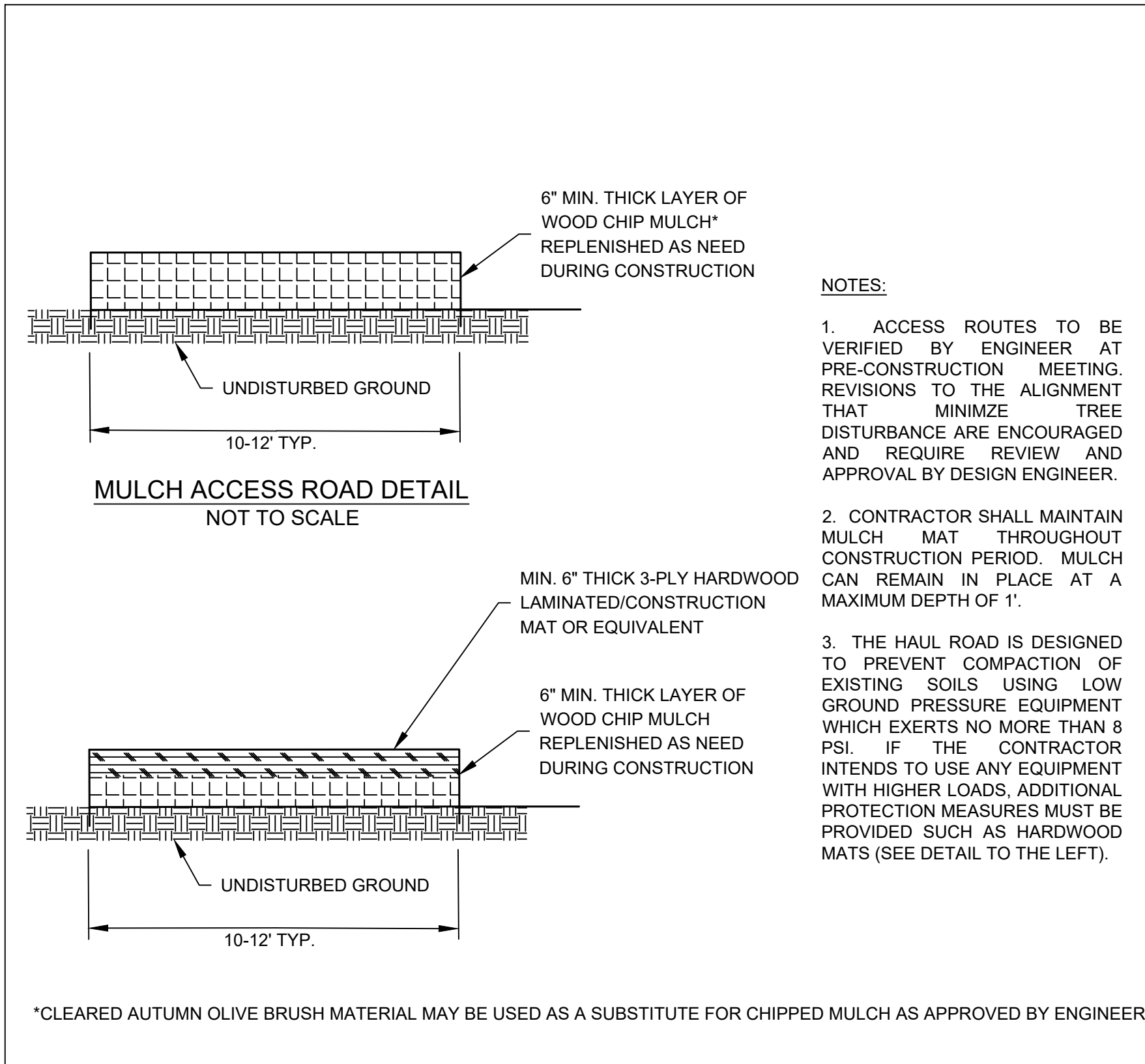
EROSION AND SEDIMENT CONTROL NOTES

- 1. THE OWNER/DEVELOPER MUST NOTIFY ALBEMARLE COUNTY AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTIONS IN ACCORDANCE WITH APPLICABLE COUNTY ORDINANCES AND POLICIES.
- 2. THE OWNER/DEVELOPER GRANTS THE RIGHT-OF-ENTRY ON THIS PROPERTY TO THE DESIGNATED ALBEMARLE COUNTY PERSONNEL FOR THE PURPOSE OF INSPECTING AND MONITORING FOR COMPLIANCE WITH TITLE 10.01, CHAPTER 5, ARTICLE 4 OF THE CODE OF VIRGINIA, EROSION AND SEDIMENT CONTROL LAW AND THE DESIGN AND CONSTRUCTION STANDARDS MANUAL SECTION 750.04 (C).
- 3. ALL EROSION CONTROL MEASURES SHOWN ON THE APPROVED PLAN MUST BE IN PLACE AND INSPECTED AND APPROVED BY THE DESIGNATED AUTHORITY PRIOR TO CLEARING, STRIPPING OF TOPSOIL OR GRADING.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE DESIGNATED AUTHORITY.
- 5. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL COMPLETE AND ADEQUATE STABILIZATIONS IS ACHIEVED.
- 6. WATER MUST BE PUMPED INTO AN APPROVED FILTERING DEVICE DURING DEWATERING OPERATIONS.
- 7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WILL BE REMOVED WITHIN 30 DAYS AFTER ADEQUATE SITE STABILIZATION AND AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, AS AUTHORIZED BY THE DESIGNATED VESCP INSPECTORS. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES WILL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- 8. AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.



STONE CONSTRUCTION ENTRANCE

STD. & SPEC. 3.02

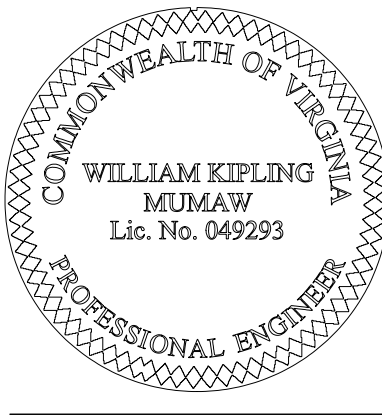


HARDWOOD MAT AND MULCH ACCESS ROAD DETAIL

NOT TO SCALE



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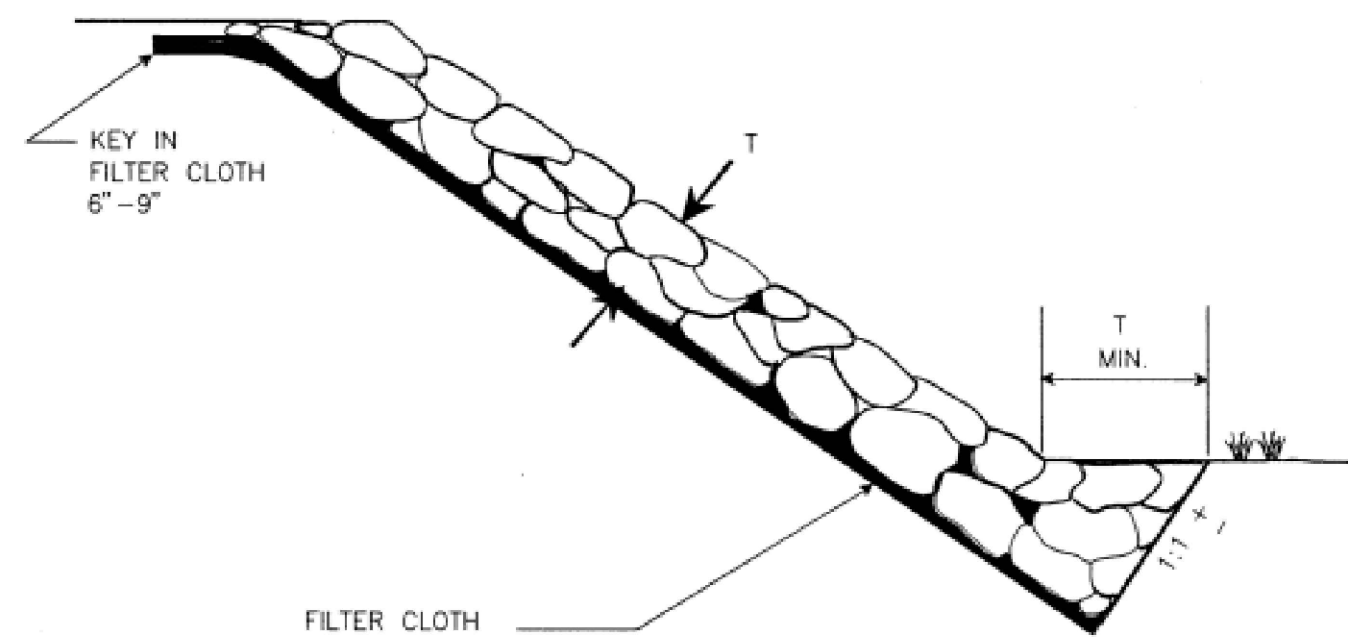
NIFI - RIVANNA GREENWAY STABILIZATION
WPO201800047/VESCP PLAN
EROSION AND SEDIMENT CONTROL DETAILS
ALBEMARLE COUNTY, VIRGINIA

REVISION:

PROJECT MANAGER:	WKM
DESIGNED:	WKM
DRAWN:	JNB/JAT
PROJECT #:	18-0003
DATE:	12/19/18

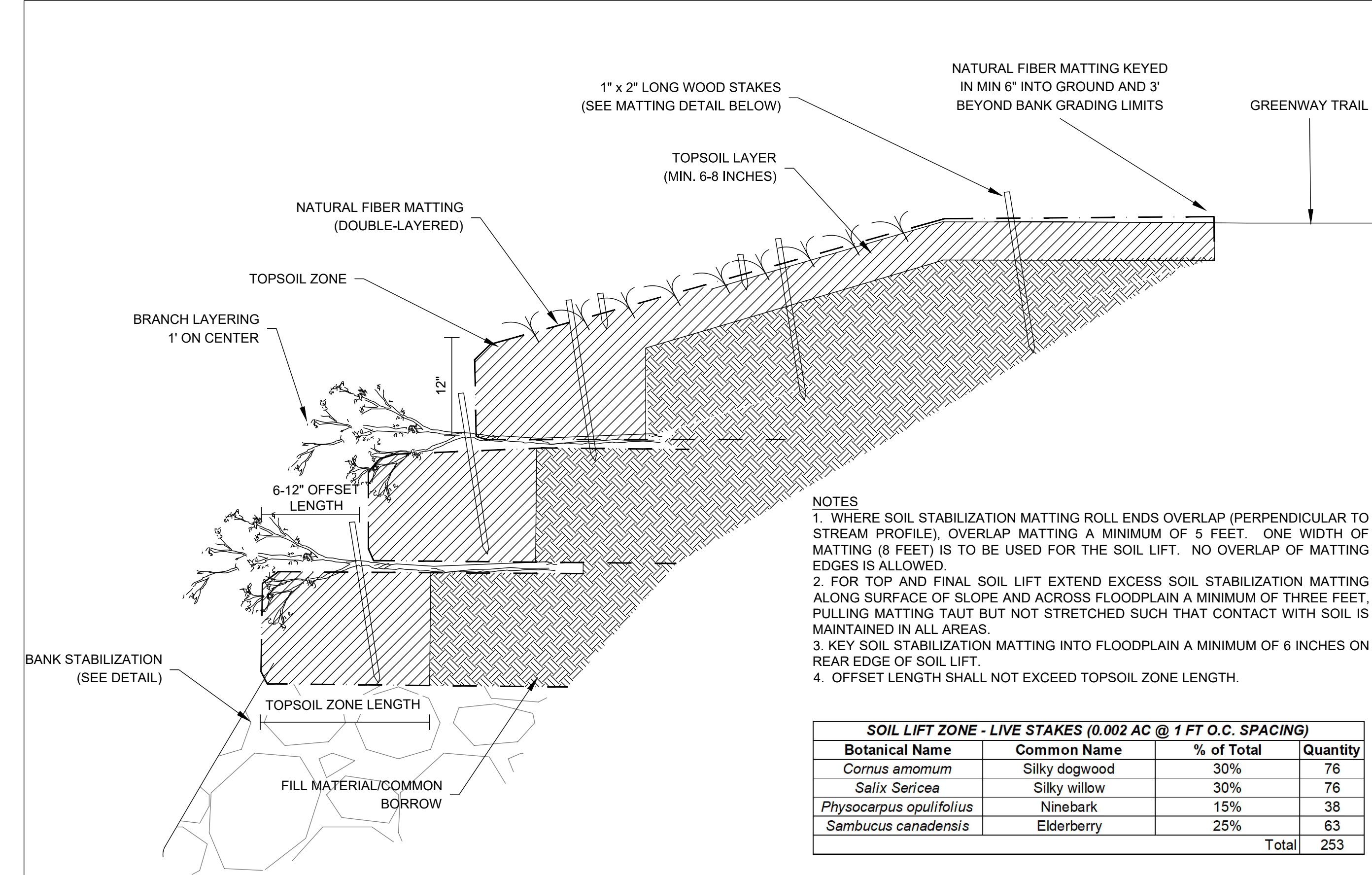
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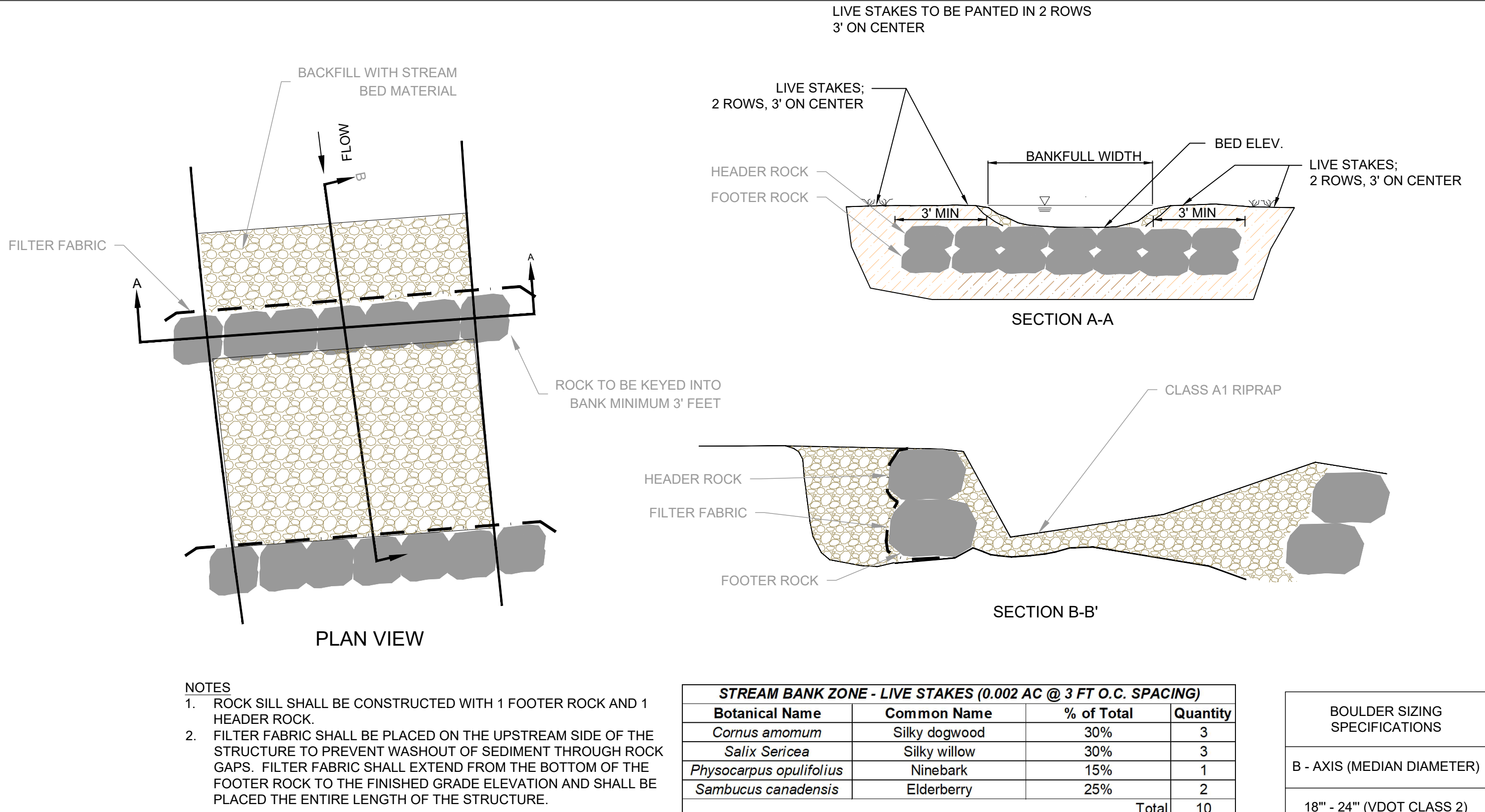


LOCATION B
LOCATION A

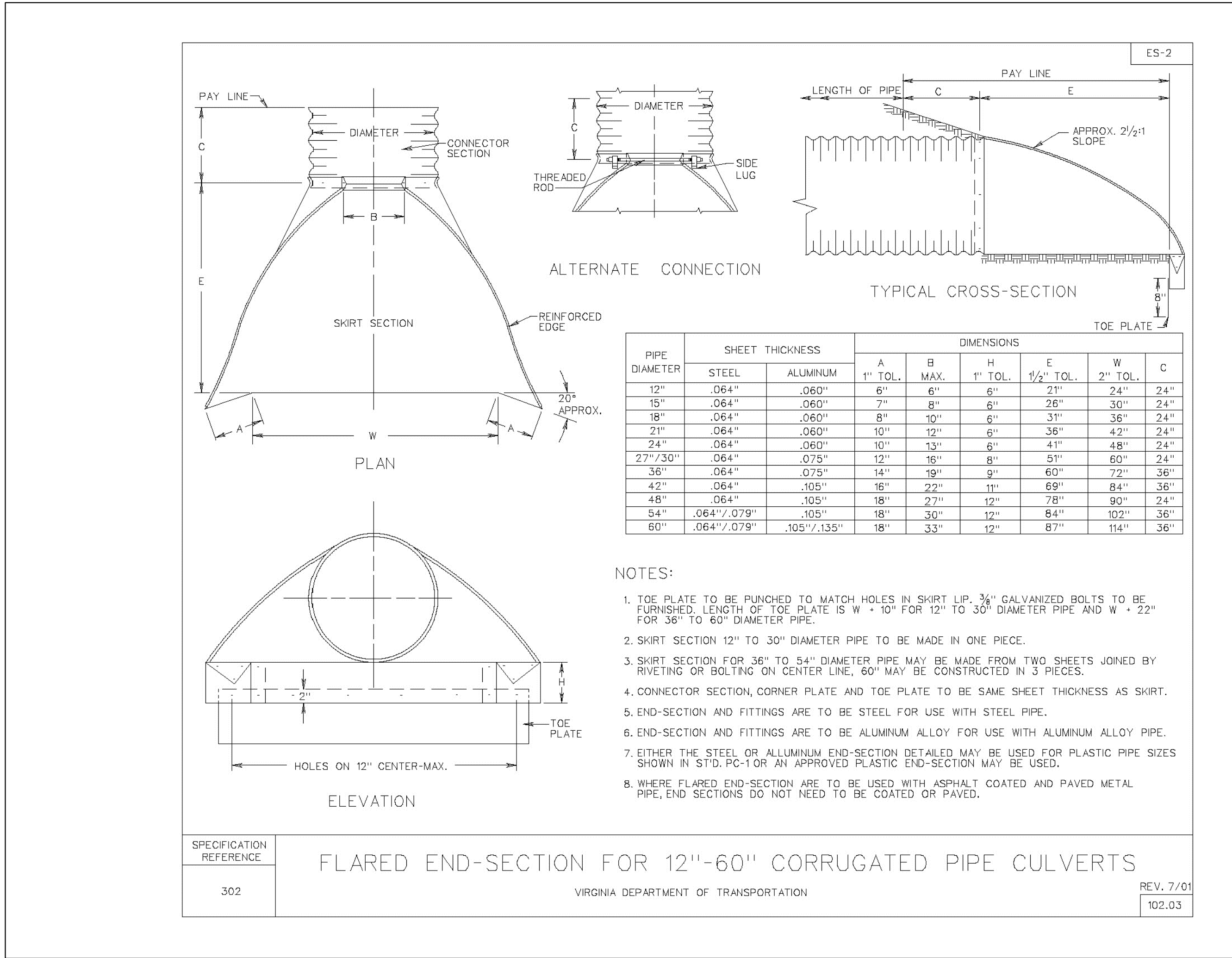
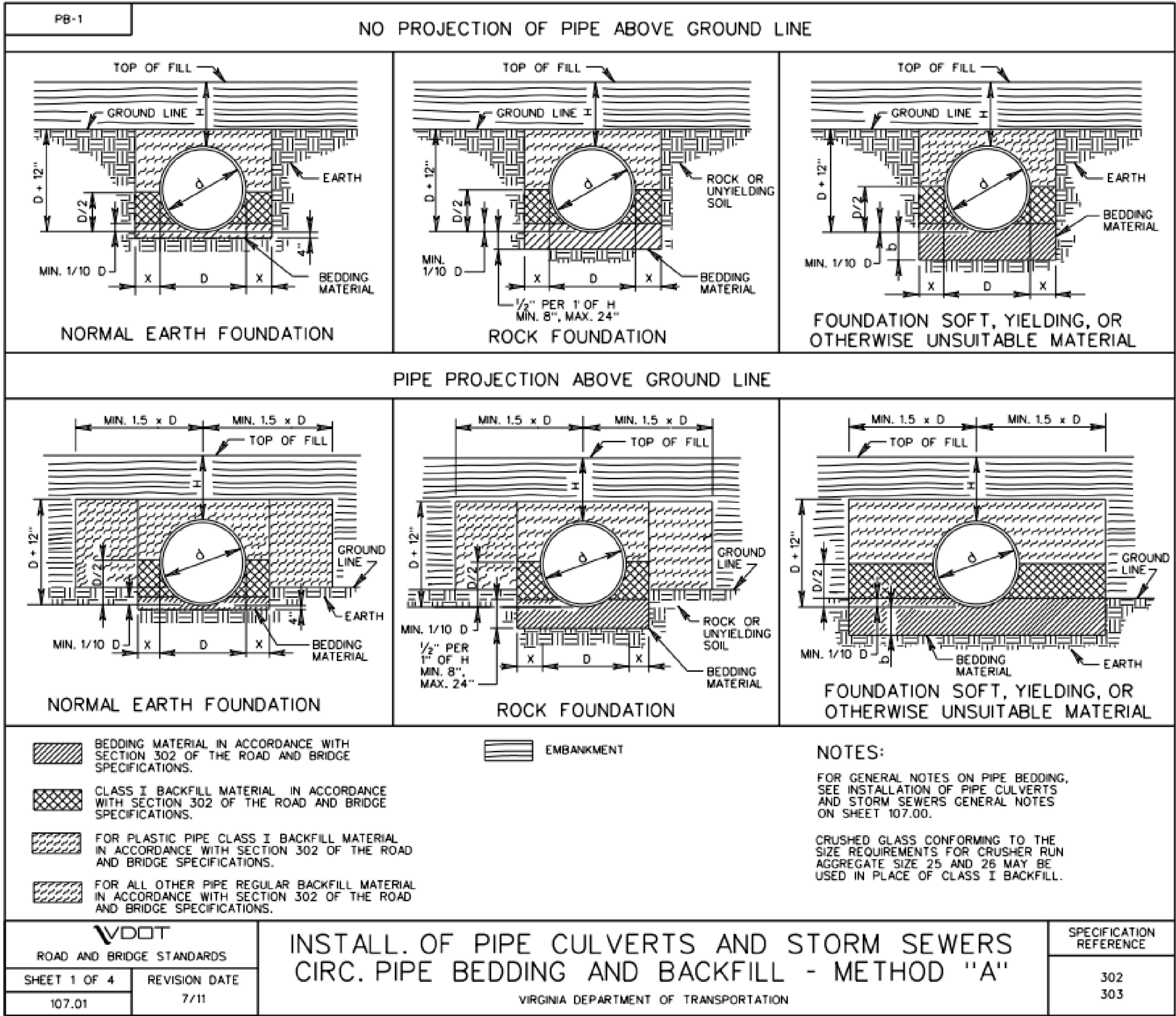
LOCATION B
LOCATION A



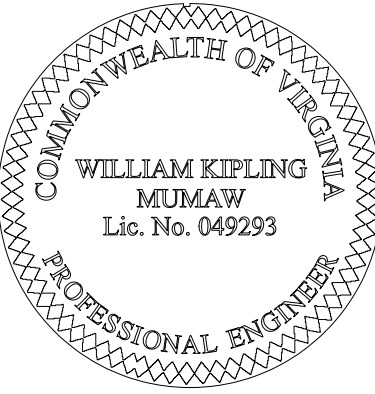
SOIL LIFT DETAIL
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ROCK SILL
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WPO201800047/VESCP PLAN
STRUCTURE DETAILS
ALBEMARLE COUNTY, VIRGINIA

REVISION:

PROJECT MANAGER: WKM
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DRAWN: JNB/JAT
PROJECT #: 18-0003
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SHEET:

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