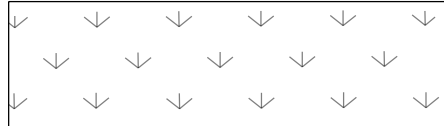

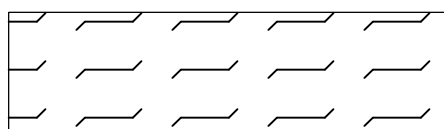
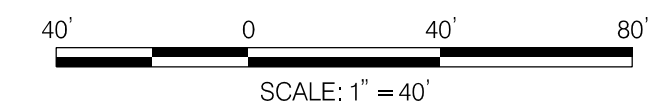


NOTE:
NO ON-SITE PLANTING COUNTED TOWARDS
REFORESTATION LAW MITIGATION REQUIREMENTS.

LEGEND

-  WETLAND PLANTING AREA
-  UPLAND PLANTING AREA
-  COOL SEASON PASTURE MIX



OWNER / DEVELOPER INFORMATION
MARYLAND TRANSPORTATION AUTHORITY
2310 BRIDGING HWY
BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
SW CORNER PARK HEIGHTS AVE
OWINGS MILLS, MD 21117

ECCLESTON MITIGATION SITE

DESIGN PROFESSIONAL
JEREMY KOSER
JOHNSON, MIRMIRAN & THOMPSON, INC.
40 WIGHT AVENUE, HUNT VALLEY, MD 21030
TEL: 410-316-2360
EMAIL: JKoser@jmt.com



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. 31183, EXPIRATION DATE: 1/13/2023.

REVISIONS

100%
SUBMISSION

NOT FOR
CONSTRUCTION

PLANTING PLAN

SCALE AS SHOWN DATE APRIL, 2021 PROJECT NO. 17-10977-002
MDE PROJECT NO. 21-SF-0044 CONTRACT NO. KH-3038-0000
DESIGNED BY PVC COUNTY BALTIMORE COUNTY
DRAWN BY PVC LOGMILE
CHECKED BY JJM /MRG HORIZONTAL SCALE N/A
F.A.P. NO. N/A VERTICAL SCALE N/A

DRAWING NO. **PS-9** OF **9** SHEET NO. 44 OF 86



BY: barranger -

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Wednesday, April 28, 2021 AT 07:10 AM

UPLAND SEED MIX	
SEED MIX	PERCENT (%) BY WEIGHT
Sorghastrum nutans /Indiangrass, PA Ecotype	53.0
Elymus virginicus /Virginia Wildrye, PA Ecotype	15.0
Tridens flavus /Purpletop, VA Ecotype	8.0
Andropogon gerardii/Big Bluestem	5.0
Chamaecrista fasciculata /Partridge Pea, PA Ecotype	5.0
Rudbeckia hirta /Blackeyed Susan, NC Ecotype	3.0
Asclepias syriaca /Common Milkweed, PA Ecotype	2.0
Aster novae-angliae /New England Aster, PA Ecotype	2.0
Aster sagittifolius /Arrowleaf (Sagittate) Aster, PA Ecotype	1.0
Helopsis helianthoides /Oxeye Sunflower, PA Ecotype	1.0
Penstemon digitalis /Tail White Beardtongue, PA Ecotype	1.0
Penstemon hirsutus /Hairy Beardtongue	1.0
Senna hebecarpa /Wild Senna, VA & WV Ecotype	1.0
Solidago juncea /Early Goldenrod, VA Ecotype	1.0
Monarda fistulosa /Wild Bergamot, PA Ecotype	0.8
Pycnanthemum tenuifolium /Narrowleaf Mountainmint	0.3

*APPLIED AT 20 LBS/ACRE
 **LESPEDEZA OF ANY KIND IS NOT TO BE PLANTED ON SITE.

WETLAND SEED MIX	
SEED MIX	PERCENT (%) BY WEIGHT
Panicum clandestinum /Deertongue	20.6
Elymus riparius /Riverbank Wildrye, PA Ecotype	20.0
Andropogon gerardii/Big Bluestem	10.0
Carex lurida /Lurid (Shallow) Sedge, PA Ecotype	10.0
Carex vulpinoidea /Fox Sedge	10.0
Carex scoparia /Blunt Broom Sedge, PA Ecotype	8.0
Panicum virgatum /Switchgrass	8.0
Verbena hastata /Blue Vervain, PA Ecotype	4.0
Juncus effusus /Soft Rush	3.0
Asclepias incarnata /Swamp Milkweed, PA Ecotype	1.0
Aster novae-angliae /New England Aster, PA Ecotype	1.0
Desmodium paniculatum /Panicledleaf Ticktrefoil, PA Ecotype	1.0
Eupatorium fistulosum /Joe Pye Weed, PA Ecotype	1.0
Eupatorium perfoliatum /Boneset, PA Ecotype	0.7
Helenium autumnale /Common Sneezeweed, PA Ecotype	0.5
Monarda fistulosa /Wild Bergamot, PA Ecotype	0.5
Vernonia noveboracensis /New York Ironweed, PA Ecotype	0.5
Mimulus ringens /Square Stemmed Monkeyflower, PA Ecotype	0.2

*APPLIED AT 20 LBS/ACRE
 **LESPEDEZA OF ANY KIND IS NOT TO BE PLANTED ON SITE.

SEED MIX SCHEDULE (TOTAL)		
SEED MIX	SQUARE YARDS (SY)	SQUARE FEET (SF)
WETLAND SEED MIX	78,408	705,669
UPLAND SEED MIX	88,946	800,513

COOL SEASON PASTURE MIX SCHEDULE	
TYPE	SQUARE YARDS (SY)
UPLAND	93,279
WETLAND	525

MATTING SCHEDULE (TOTAL)	
TYPE	SQUARE YARDS (SY)
TYPE 'D' SOIL STABILIZATION MATTING	78,932

*INCLUDES WETLAND COOL SEASON PASTURE MIX AREAS.

BLOWN STRAW SCHEDULE (TOTAL)	
SQUARE YARDS (SY)	
182,224	

*INCLUDES UPLAND COOL SEASON PASTURE MIX AREAS.

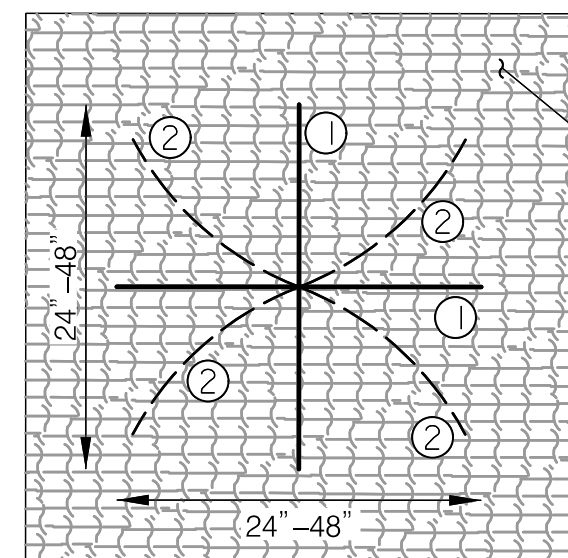
WETLAND TREE PLANTING SCHEDULE (TOTAL)							
QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	CONT. CLASS	SPACING/REMARKS	WETLAND INDICATOR STATUS
490	AR	<i>Acer rubrum</i>	Red Maple	1" cal.	#7	12' o.c.	FAC
490	AS	<i>Acer saccharinum</i>	Silver Maple	1" cal.	#7	12' o.c.	FACW
490	CC	<i>Carpinus caroliniana</i>	America Hornbeam	1" cal.	#7	12' o.c.	FAC
490	BN	<i>Betula nigra</i>	River Birch	1"-3" cal.**	#7, b&b**	12' o.c.	FACW
490	PO	<i>Platanus occidentalis</i>	American Sycamore	1"-3" cal.**	#7, b&b**	12' o.c.	FACW
490	QB	<i>Quercus bicolor</i>	Swamp White Oak	1" cal.	#7	12' o.c.	FACW
490	QP	<i>Quercus palustris</i>	Pin Oak	1" cal.	#7	12' o.c.	FACW
490	SN	<i>Salix nigra</i>	Black Willow	1" cal.	#7	12' o.c.	OBL
490	TD	<i>Taxodium distichum</i>	Bald Cypress	1" cal.	#7	12' o.c.	OBL
491	AN	<i>Acer negundo</i>	Boxelder Maple	1" cal.	#7	12' o.c.	OBL

UPLAND SMALL SHRUB PLANTING SCHEDULE (TOTAL)						
QTY.	KEY	BOTANICAL NAME	COMMON NAME	HEIGHT (FT)	CONT. CLASS	SPACING/REMARKS
1,853	CS	<i>Cornus sericea</i>	Red Osier Dogwood	1.5	#1	12' o.c.
1,853	CA	<i>Cornus amomum</i>	Silky Dogwood	1.5	#1	12' o.c.
1,854	VD	<i>Viburnum dentatum</i>	Northern Arrowwood Viburnum	1.5	#1	12' o.c.

UPLAND TREE PLANTING SCHEDULE (TOTAL)						
QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	CONT. CLASS	SPACING/REMARKS
556	RP	<i>Robinia pseudoacacia</i>	Black Locust	1" cal.	#7	12' o.c.
556	AS	<i>Acer saccharum</i>	Sugar Maple	1"-3" cal.**	#7, b&b**	12' o.c.
556	JV	<i>Juniperus virginiana</i>	Eastern Red Cedar	1" cal.	#7	12' o.c.
556	CC	<i>Cercis canadensis</i>	Eastern Redbud	1" cal.	#7	12' o.c.
556	AT	<i>Asimina triloba</i>	Paw Paw	1" cal.	#7	12' o.c.
556	PD	<i>Populus deltoides</i>	Eastern Cottonwood	1" cal.	#7	12' o.c.
556	NS	<i>Nyssa sylvatica</i>	Black Gum	1" cal.	#7	12' o.c.
556	QR	<i>Quercus rubra</i>	Northern Red Oak	1" cal.	#7	12' o.c.
556	QM	<i>Quercus macrocarpa</i>	Bur Oak	1" cal.	#7	12' o.c.
556	PO	<i>Platanus occidentalis</i>	American Sycamore	1" cal.	#7	12' o.c.

*NO TREES ARE TO BE PLANTED ON SEWER LINES OR MANHOLES, 10' CENTER TO CENTER.

TREE & SHRUB INSTALLATION THROUGH SOIL STABILIZATION MATTING



SOIL STABILIZATION MATTING

- MAKE CUT WITH SHARP KNIFE THROUGH SOIL STABILIZATION MATTING - SEE SOLID LINE IN DIAGRAM. NOTE THAT ALL CUTS IN THE MATTING SHALL BE A MINIMUM OF 2 FEET CLEAR OF ALL MATTING SEAMS, OVERLAPS AND EDGES.
- TEMPORARILY PIN BACK MATTING WITH 4 STAPLES TO INSTALL TREE OR SHRUB - SEE DASHED LINE IN DIAGRAM.
- INSTALL PLANT THROUGH PINNED BACK MATTING. INSTALL PLANT AT PROPER GRADE TO GROUND PLANE.
- REMOVE 4 STAPLES PLACED IN STEP 2 ABOVE THAT WERE USED TO TEMPORARILY PIN BACK THE MATTING DURING ROOT BALL INSTALLATION.
- PLACE 4 STAPLES IN EACH OF FOUR CUT SECTIONS TO WELL ANCHOR SOIL STABILIZATION MATTING BACK OVER TOP OF THE ROOT BALL.
- FOR TREE INSTALLATIONS, INSTALL TREE STAKES THROUGH MATTING, ONCE RE-ANCHORED OVER ROOT BALL.

OWNER /DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRIDGING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117

NOTE:
 NO ON-SITE PLANTING COUNTED TOWARDS
 REFORESTATION LAW MITIGATION REQUIREMENTS.



DESIGN PROFESSIONAL
 JEREMY KOSER
 JOHNSON, MIRMIRAN & THOMPSON, INC.
 40 WIGHT AVENUE, HUNT VALLEY, MD 21030
 TEL: 410-316-2360
 EMAIL: JKoser@jmt.com

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. 31183, EXPIRATION DATE: 1/13/2023.

ECCLESTON MITIGATION SITE

REVISIONS	PLANTING NOTES AND DETAILS	
100% SUBMISSION	SCALE: NA DATE: APRIL 2021 PROJECT NO.: 17-10977-002	MDE PROJECT NO.: 21-SF-0044 CONTRACT NO.: KH-3038-0000
NOT FOR CONSTRUCTION	DESIGNED BY: PVC COUNTY: BALTIMORE COUNTY	DRAWN BY: PVC LOGMILE
	CHECKED BY: JJM /MRG HORIZONTAL SCALE: N/A	F.A.P. NO.: N/A VERTICAL SCALE: N/A
	DRAWING NO. PD- 1 OF 1	SHEET NO. 45 OF 86

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION

USING VEGETATION AS COVER TO PROTECT EXPOSED SOIL FROM EROSION.

PURPOSE

TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.

CONDITIONS WHERE PRACTICE APPLIES

ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS, THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION; SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING; SEEDING AND MULCHING; TEMPORARY STABILIZATION; AND PERMANENT STABILIZATION.

EFFECTS ON WATER QUALITY AND QUANTITY

STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUNOFF TO DOWNSTREAM AREAS.

PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, TRANSPIRATION, PERCOLATION, AND GROUNDWATER RECHARGE. OVER TIME, VEGETATION WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH.

VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE.

SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT

INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.

1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUND COVER.
2. IF AN AREA HAS LESS THAN 40 PERCENT GROUND COVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND SEEDING.
3. IF AN AREA HAS BETWEEN 40 AND 94 PERCENT GROUND COVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.
4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

DEFINITION

ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES

PURPOSE

TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.

CONDITIONS WHERE PRACTICE APPLIES

ANY CUT OR FILL SLOPE GREATER THAN 15 FEET IN HEIGHT. THIS PRACTICE ALSO APPLIES TO STOCKPILES.

CRITERIA

A. INCREMENTAL STABILIZATION - CUT SLOPES

1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES.

2. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1):

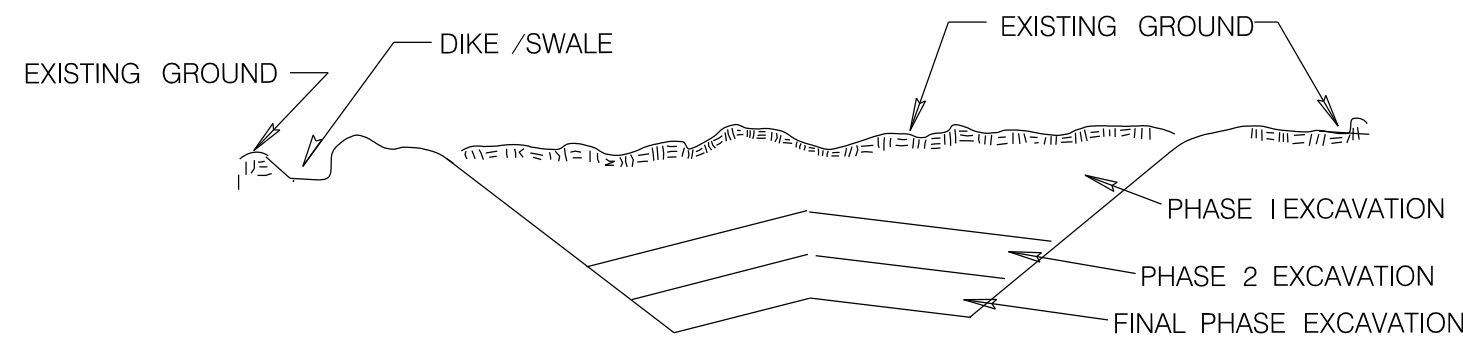
A. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO CONVEY RUNOFF AROUND THE EXCAVATION.

B. PERFORM PHASE 1 EXCAVATION, PREPARE SEEDBED, AND STABILIZE.

C. PERFORM PHASE 2 EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.

D. PERFORM FINAL PHASE EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.



INCREMENTAL STABILIZATION - CUT

B. INCREMENTAL STABILIZATION - FILL SLOPES

1. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL SLOPES AS THE WORK PROGRESSES.

2. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.

3. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.

4. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2):

A. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SILT FENCE ON LOW SIDE OF FILL UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.

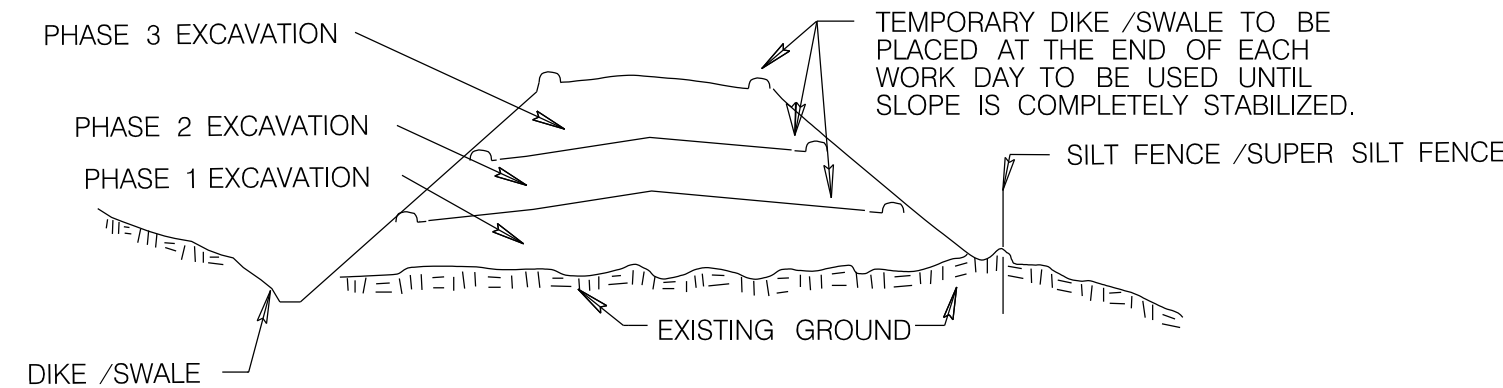
B. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.

C. PLACE PHASE 1 FILL, PREPARE SEEDBED, AND STABILIZE.

D. PLACE PHASE 2 FILL, PREPARE SEEDBED, AND STABILIZE.

E. PLACE FINAL PHASE FILL, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.



INCREMENTAL STABILIZATION - FILL

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION

THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES

WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

A. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

C. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

I. SOIL PH BETWEEN 6.0 AND 7.0.

II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).

III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.

IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.

C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.

D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.

E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.

C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:

A. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 INCHES IN DIAMETER, 3/4 INCHES IN DIAMETER.

B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING

1. SPECIFICATIONS

A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.

B. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.

C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING.

NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

D. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.

FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

Hardiness Zone (from Figure B.3):	7a			Fertilizer Rate (10-20-20)	Lime Rate
	Species	Application Rate (lb/ac)	Seeding Dates		
Annual Ryegrass	40	2-15 to 4-30 and 8-15 to 11-30	0.5 in.	436 lb/ac (10lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
Foxtail Millet	30	5-1 to 8-14	0.5 in.		
Pearl Millet	20	5-1 to 8-14	0.5 in.		

OWNER / DEVELOPER INFORMATION

MARYLAND TRANSPORTATION AUTHORITY
2310 BRIDGING HWY
BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
SW CORNER PARK HEIGHTS AVE
OWINGS MILLS, MD 21117

DESIGN PROFESSIONAL
JEREMY KOSEK
JOHNSON, MIRIRAN & THOMPSON, INC.
40 WIGHT AVENUE, HUNT VALLEY, MD 21030
TEL: 410-316-2360
EMAIL: JKoser@jmt.com

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. 31183, EXPIRATION DATE: 1/13/2023.

ECCLESTON MITIGATION SITE

REVISIONS

100%
SUBMISSION
NOT FOR
CONSTRUCTION

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SCALE N.T.S. DATE APRIL 2021 PROJECT NO. 17-10977-002
MDE PROJECT NO. 21-SF-0044 CONTRACT NO. KH-3038-0000
DESIGNED BY PVC COUNTY BALTIMORE COUNTY
DRAWN BY PVC LOGMILE
CHECKED BY JJM /MRG HORIZONTAL SCALE N/A
F.A.P. NO. N/A VERTICAL SCALE N/A

DRAWING NO. **EN-1** OF **5** SHEET NO. 46 OF 86



BY: barranger -

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B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION.

DEFINITION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

A. SEEDING MIXTURES

1. GENERAL USE

- a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
- b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
- c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
- d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 * POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.

PERMANENT SEEDING SUMMARY

Hardiness Zone (from Figure B.3):		7a			FertilizerRate (10-20-20)			Lime Rate
MIX	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P ₂ O ₅	K ₂ O	
1	Switch Grass	10	2-15 to 4-30 and 5-1 to 5-31	12 in.	45 lb/ac (1.0lb/1000 sf)	90 lb/ac (2.0lb/1000 sf)	90 lb/ac (90 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
	Creeping Red Fescue	15	2-15 to 4-30 and 5-1 to 5-31	12 in.				
	Wild Indigo	2	2-15 to 4-30 and 5-1 to 5-31	12 in.				
8	Tall Fescue	100	2-15 to 4-30 and 8-15 to 10-31	12 in.				

PERMANENT SEEDING SUMMARY FOR WETLANDS

Hardiness Zone (from Figure B.3):		7a			FertilizerRate (10-20-20)			Lime Rate
MIX	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P ₂ O ₅	K ₂ O	
3	Sheep Fescue	20	2-15 to 4-30 and 5-1 to 5-31	12 in.	45 lb/ac (1.0lb/1000 sf)	90 lb/ac (2.0lb/1000 sf)	90 lb/ac (2.0lb/1000 sf)	2 tons /ac (90 lb/1000 sf)
	Redtop	1	2-15 to 4-30 and 5-1 to 5-31	12 in.				
	Canada Wild Rye	3	2-15 to 4-30 and 5-1 to 5-31	12 in.				
	Common Lespedeza	10	2-15 to 4-30 and 5-1 to 5-31	12 in.				

2. TURFGRASS MIXTURES

- a. AREAS WHERE TURFGRASS MAY BE DESIRED, INCLUDE LAWNS, PARKS, PLAYGROUNDS AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
- b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT, IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MAISTURE BY WEIGHT.
 - iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
 - iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS, FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1* TO 3 POUNDS PER 1000 SQUARE FEET.

NOTES:
SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77 "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION, AND ASSURES A PURE GENETIC LINE.

c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES

CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)

- d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1" INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
- e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS OR ON ADVERSE SITES.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION

A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES

STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

CRITERIA

1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING
3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 37 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEP THAN 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

1. NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NONTIDAL WETLAND, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
3. DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIAL FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.
4. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO THE NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
5. REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.
6. RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
7. ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (UNIOLA SP.), AND/OR RYE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
8. AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST-CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
9. TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM:
 - USE III WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD OCTOBER 1 THROUGH APRIL 30, INCLUSIVE, DURING ANY YEAR.
10. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
11. CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

OVERLAP OR ABUT ROLL EDGES (TYP.)

6 IN DEEP (MIN.) KEY IN TRENCH

PREPARED SLOPE (SEEDBED) WITH SEED IN PLACE

6 IN MIN. OVERLAP AT ROLL END (TYP.)

STANDARD SYMBOL

TSSMS > 2 lb/ft²

CONSTRUCTION SPECIFICATIONS

ISOMETRIC VIEW

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWNSLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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* TO BE TYPE D STABILIZATION MATTING AS DESCRIBED IN SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.

OWNER / DEVELOPER INFORMATION
MARYLAND TRANSPORTATION AUTHORITY
2310 BRONING HWY
BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
SW CORNER PARK HEIGHTS AVE
OWINGS MILLS, MD 21117



DESIGN PROFESSIONAL

JEREMY KOSER
JOHNSON, MIRMIRAN & THOMPSON, INC.
40 WIGHT AVENUE, HUNT VALLEY, MD 21030
TEL: 410-316-2360
EMAIL: JKoser@jmt.com

PROFESSIONAL CERTIFICATION

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ECCLESTON MITIGATION SITE

REVISIONS

100%
SUBMISSION
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EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

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MDE PROJECT NO. 21-SF-0044 CONTRACT NO. KH-3038-0000
DESIGNED BY PVC COUNTY BALTIMORE COUNTY
DRAWN BY PVC LOGMILE
CHECKED BY JMM /MRG HORIZONTAL SCALE N/A
F.A.P. NO. N/A VERTICAL SCALE N/A

DRAWING NO. **EN- 2** OF **5** SHEET NO. 47 OF 86

MGWC 1.2: PUMP-AROUND PRACTICE

Temporary measures for diverting in-channel construction sites

DESCRIPTION

The work should consist of installing a temporary pump-around and supporting measures to divert flow around in-stream construction sites.

IMPLEMENTATION SEQUENCE

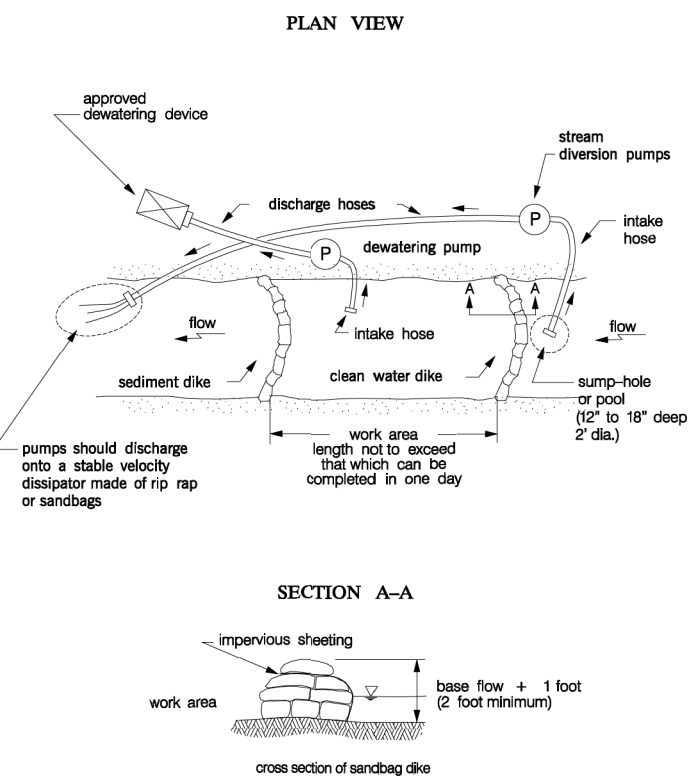
Sediment control measures, pump-around practices, and associated channel and bank construction should be completed in the following sequence (refer to Detail 1.2):

1. Construction activities including the installation of erosion and sediment control measures should not begin until all necessary easements and/or right-of-way have been acquired. All existing utilities should be located in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and should repair the damage at his/her own expense to the county's or utility company's satisfaction.
2. The contractor should notify the Maryland Department of the Environment or WMA sediment control inspector at least 4 days before beginning construction. Additionally, the contractor should address the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
3. The contractor should conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sediment control measures. The contractor should state all limits of disturbance prior to the pre-construction meeting so they may be reviewed. The participants will also designate the contractor's staging areas and flag all areas within the limit of disturbance which will be removed for construction access. Trees should not be removed within the limit of disturbance without approval from the WMA or local authority.
4. Construction should not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor should stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
5. Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor should begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. In some cases, work may begin downstream if appropriate. The sequence of work should be followed unless the contractor obtains written approval for deviation from the WMA or local authority. The contractor should only begin work in an area which can be completed by the end of the day including grading adjacent to the channel. At the end of each work day, the work area must be stabilized and the pump-around removed from the channel. Work should not be conducted in the channel during rain events.
6. Sanding dikes should be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow should be pumped around the work area. The pump should discharge onto a stable velocity dissipater made of rip rap or sandbags.

MGWC 1.2: PUMP-AROUND PRACTICE

7. Water from the work area should be pumped to a sediment filtering structure such as a dewatering boom, sediment bag, or other approved device. The structure should be located such that the water drains back into the channel below the downstream sanding dike.
8. Traversing a channel reach with equipment within the work area where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then rubber mats or similar measures should be used to minimize disturbance to the channel. Temporary stream crossings should be used only when necessary and only when needed on the plans or specified. (See Section 4, Stream Crossings; Maryland Guidelines to Wetland Construction.)
9. All stream restoration measures should be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross-sections. All grading must be stabilized on the end of each day with seed and mulch or seed and mulch as specified on the plans.
10. After an area is completed and stabilized, the clean water dike should be removed. After the first sediment flush, a new clean water dike should be established upstream from the old sediment dike. Finally, upon establishment of a new sediment dike below the old one, the old sediment dike should be removed.
11. A pump-around must be installed on any tributary or steep drain outfall which contributes flow to the work area. This should be accomplished by locating a sanding dike at the downstream end of the tributary or steep drain outfall and pumping the stream flow around the dike. This water should discharge onto the same velocity dissipater used for the main stem pump-around.
12. If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump-around practices, should follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem should resume. Water from the tributary should continue to be pumped around the work area in the main stem.
13. The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approves their removal.
14. After construction, all disturbed areas should be graded and revegetated as per the planting plan.

**Maryland's Guidelines to Waterway Construction
DETAIL 1.2: PUMP-AROUND PRACTICE**



H-1 STANDARDS AND SPECIFICATIONS

FOR

MATERIALS

Table H-1: Geotextile Fabrics

PROPERTY	TEST METHOD	MINIMUM AVERAGE ROLL VALUES					
		WOVEN NONPERMEABLE GEOTEXTILE		WOVEN NONPERMEABLE NONWOVEN GEOTEXTILE		NONWOVEN GEOTEXTILE	
		MD	CD	MD	CD	MD	CD
Grab Tensile Strength	ASTM D-4632	200 lb	200 lb	170 lb	150 lb	200 lb	200 lb
Grab Tensile Elongation	ASTM D-4632	15%	10%	15%	15%	50%	50%
Triaxial Tensile Strength	ASTM D-4911	75 lb	75 lb	100 lb	100 lb	40 lb	40 lb
Fracture Strength	ASTM D-6241	450 lb	450 lb	900 lb	900 lb		
Apparent Opening Size ¹	ASTM D-4751	U.S. Sieve 30 (0.6 mm)	U.S. Sieve 30 (0.6 mm)	U.S. Sieve 70 (0.25 mm)	U.S. Sieve 70 (0.25 mm)		
Permeability	ASTM D-4491	0.05 sec ²	0.05 sec ²	0.28 sec ²	0.28 sec ²	1.1 sec ²	1.1 sec ²
Tensile Resistance Estimated at 500 hours	ASTM D-4355	70% strength	70% strength	70% strength	70% strength		

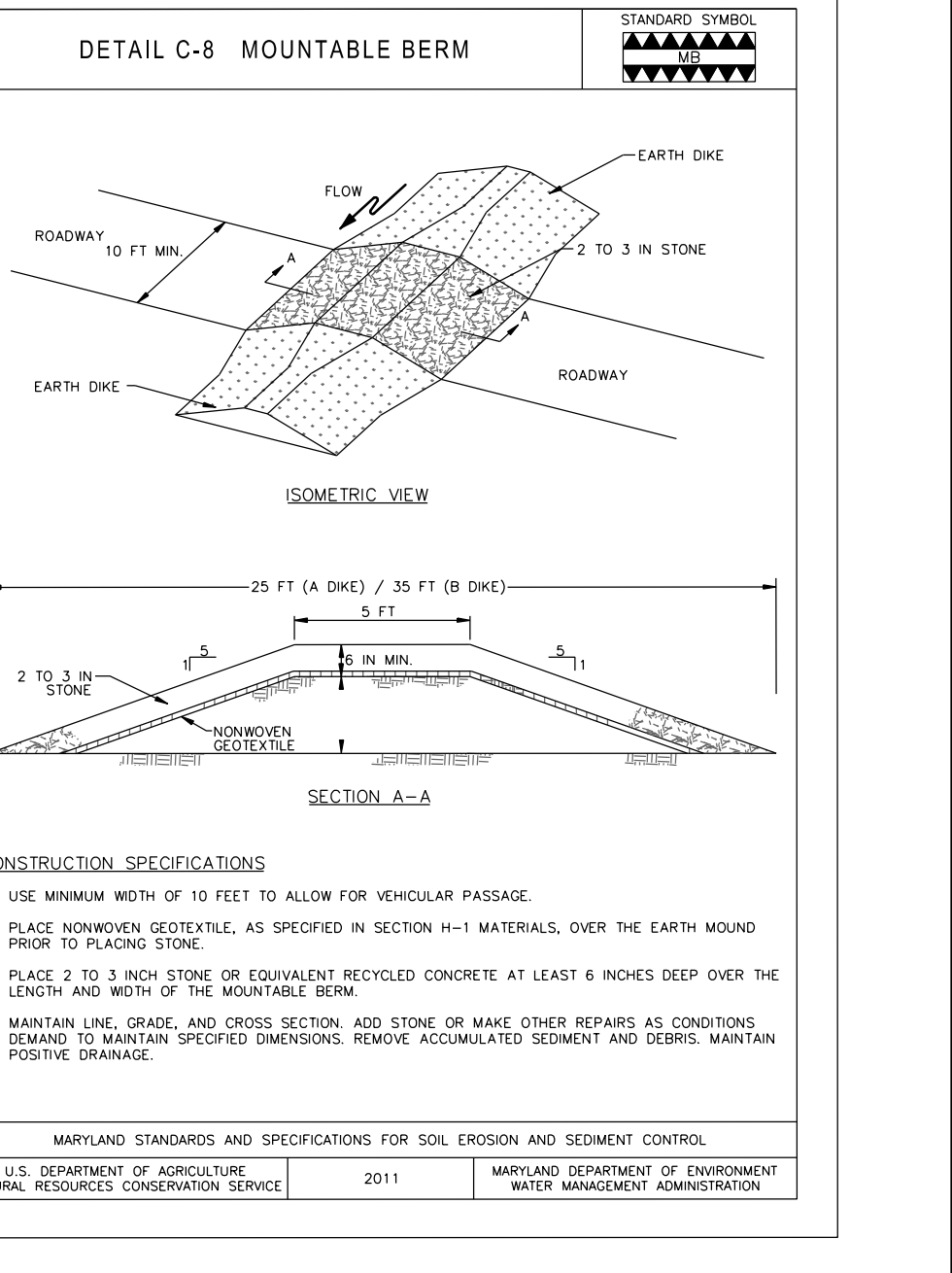
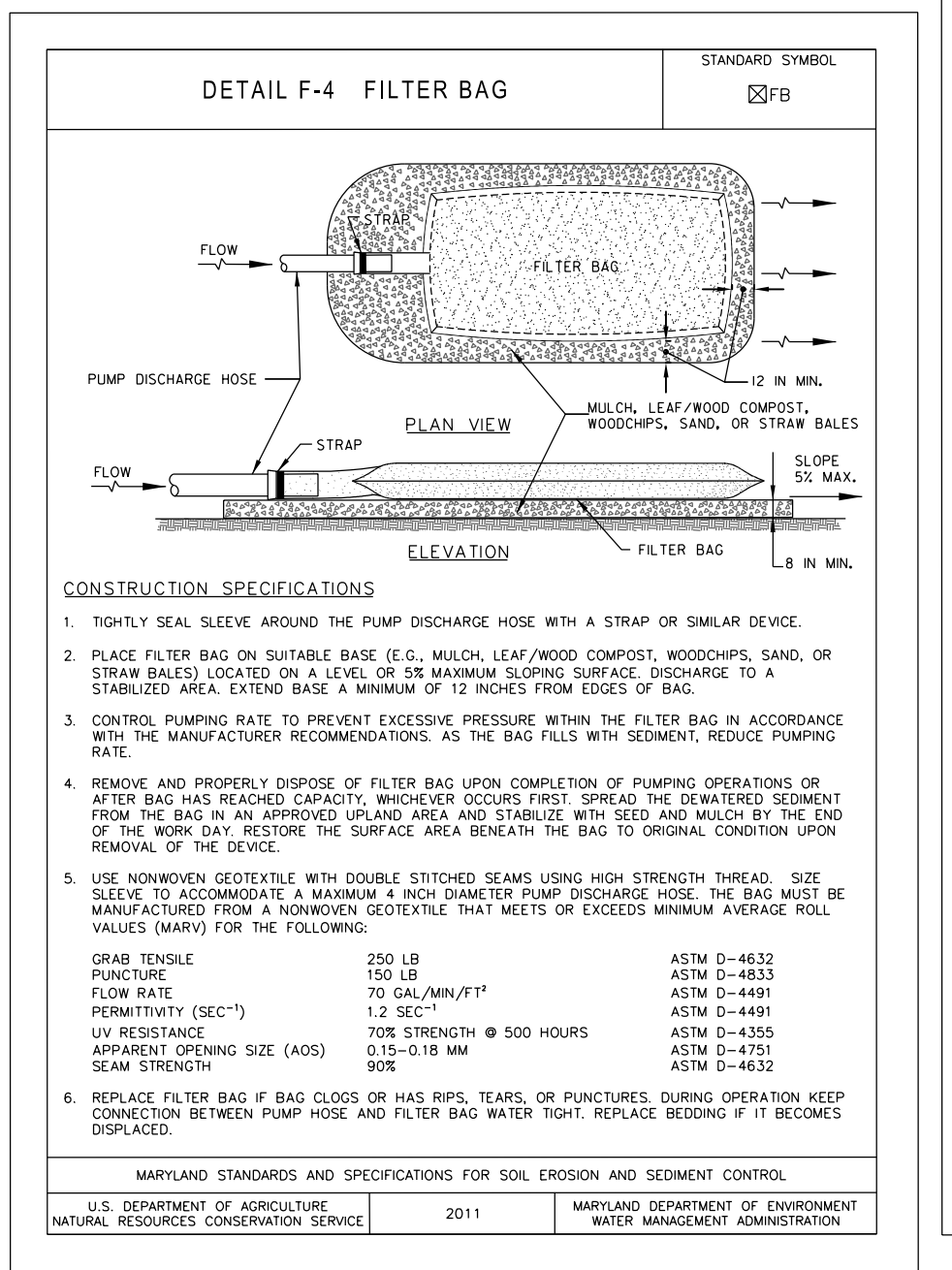
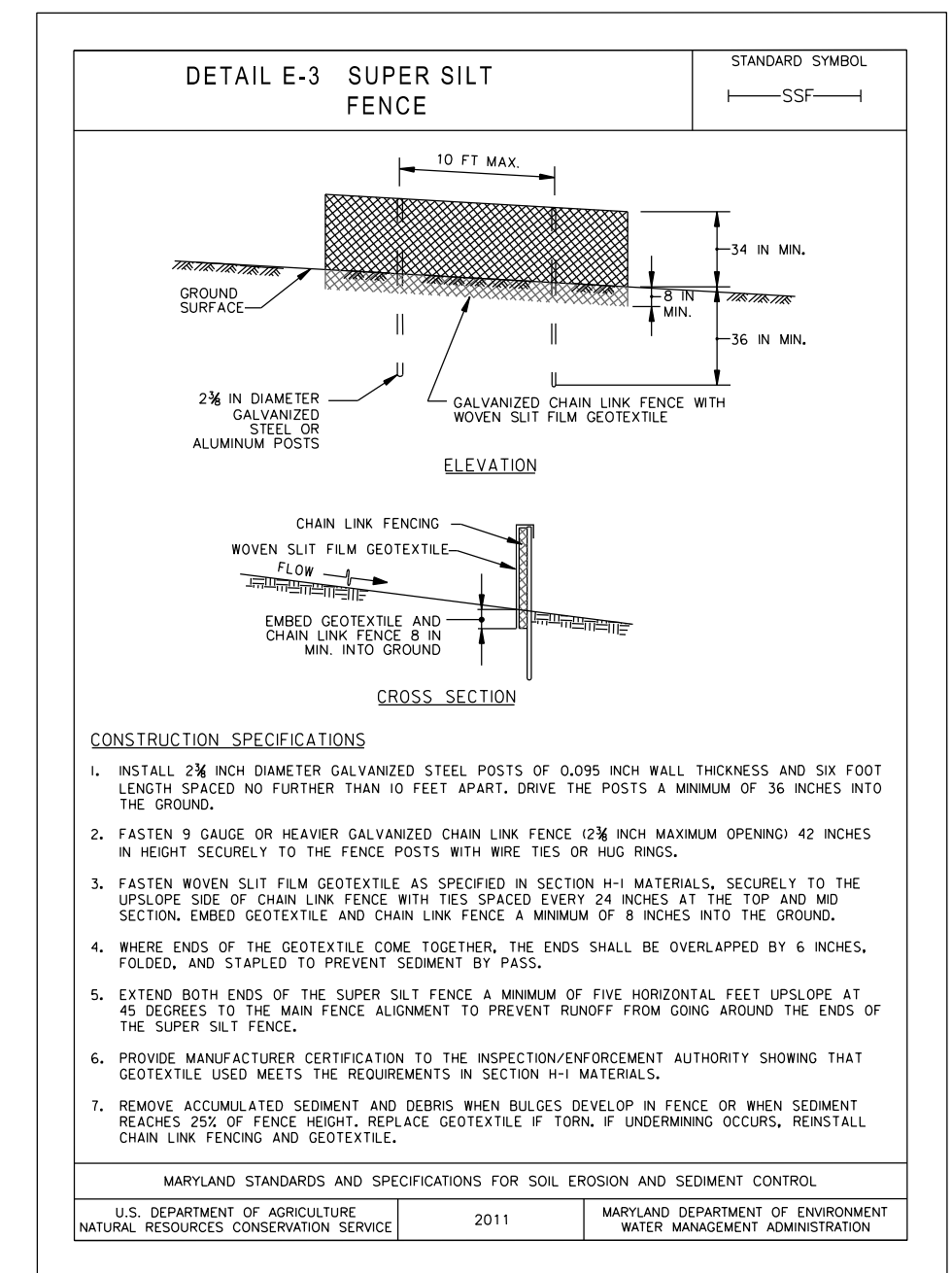
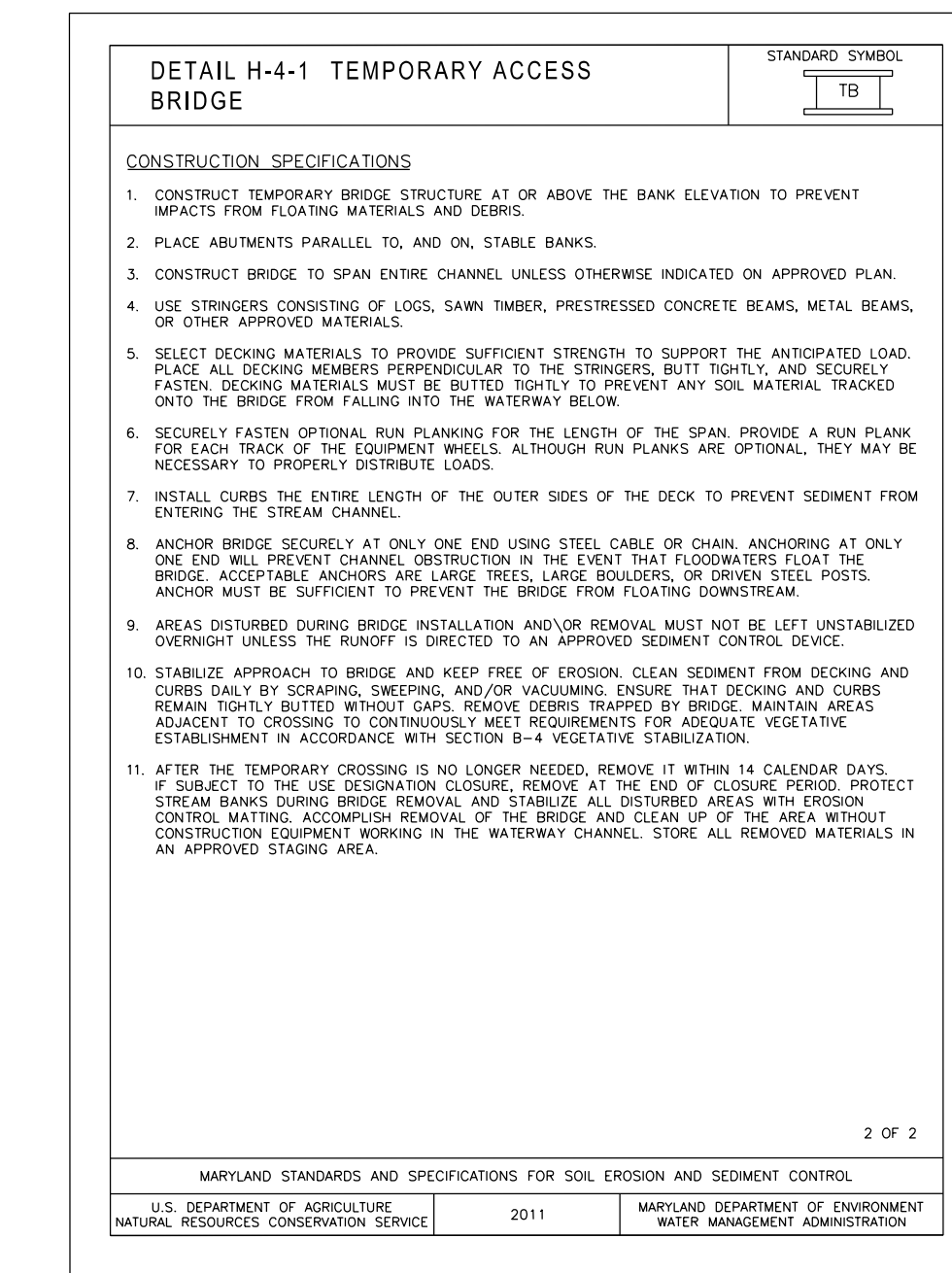
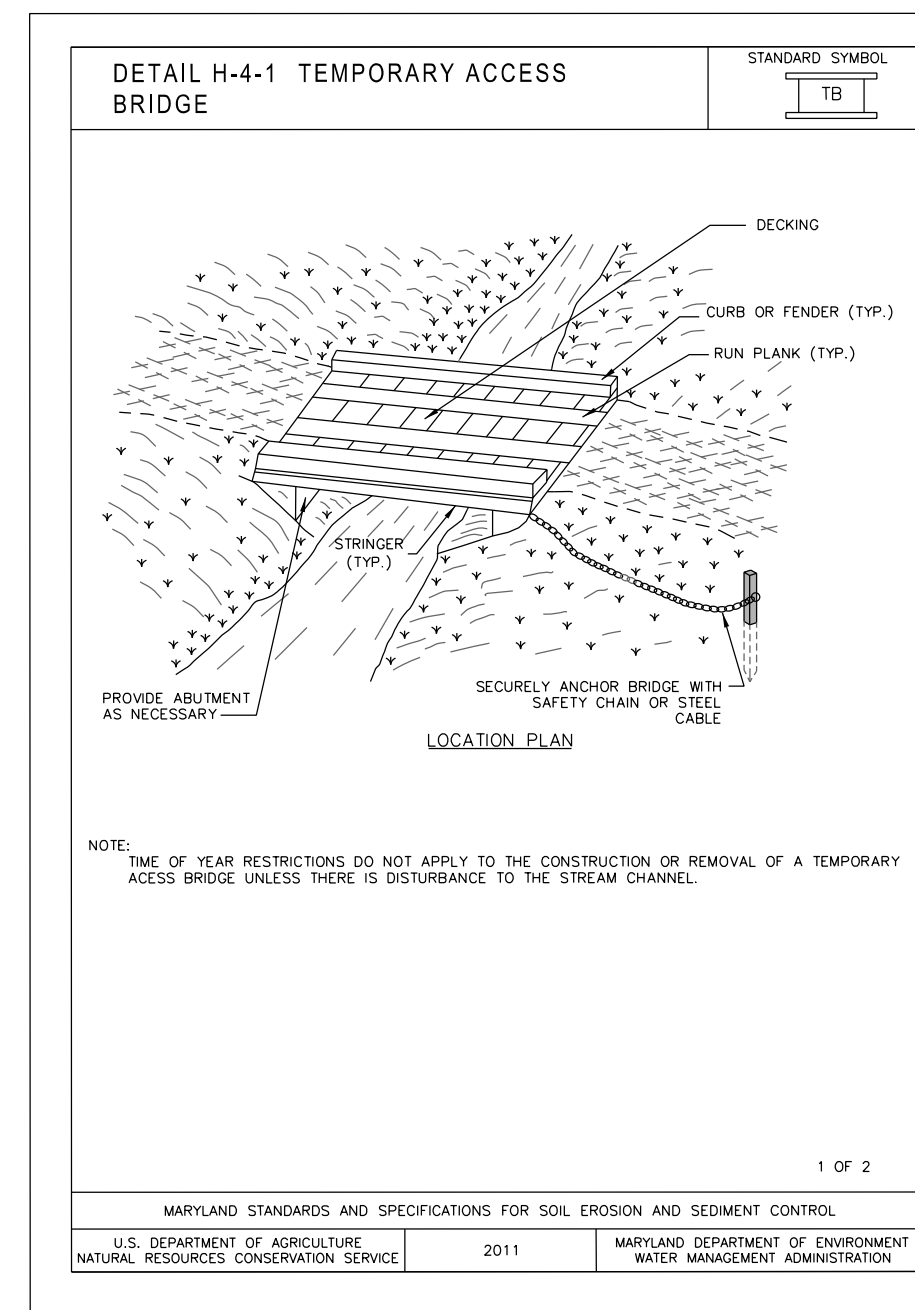
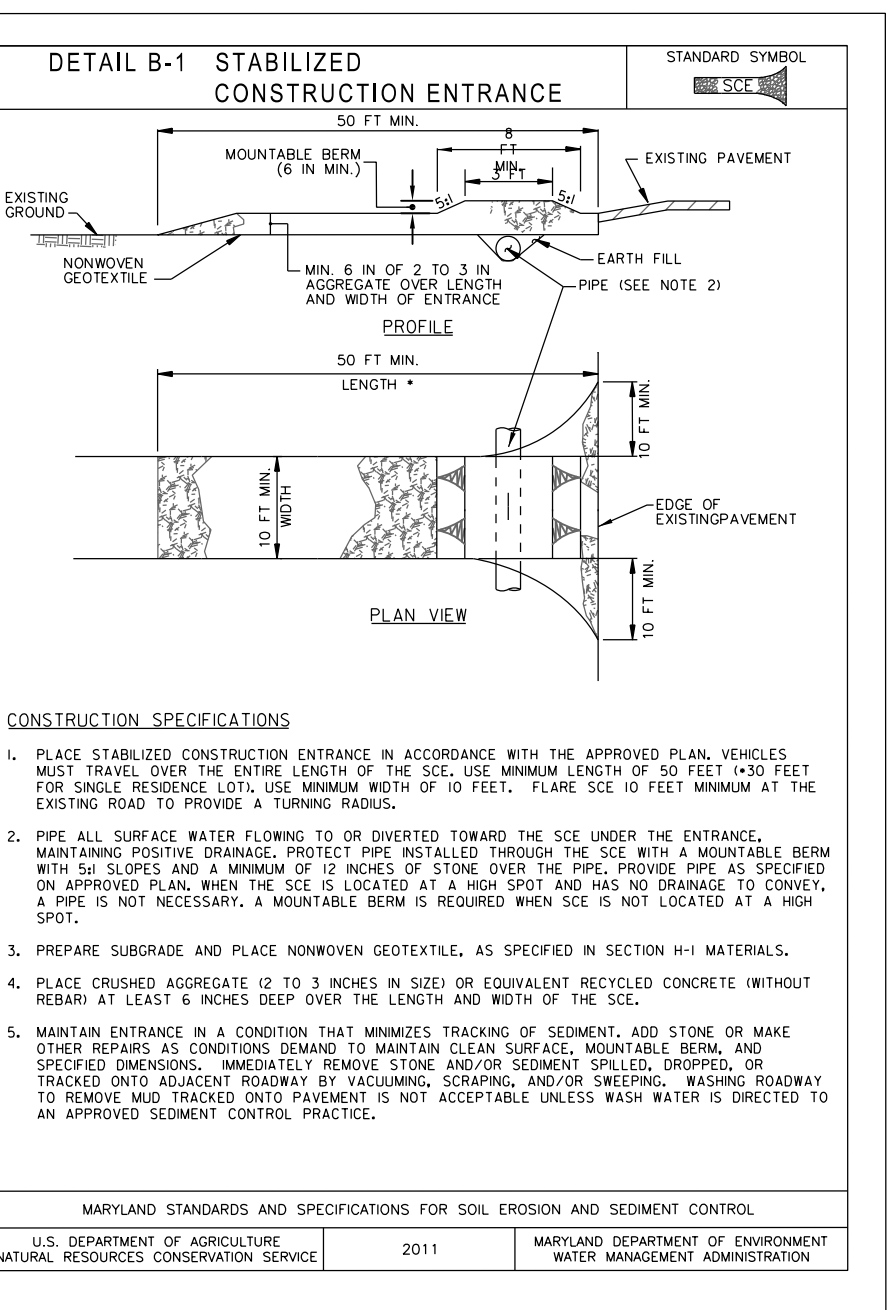
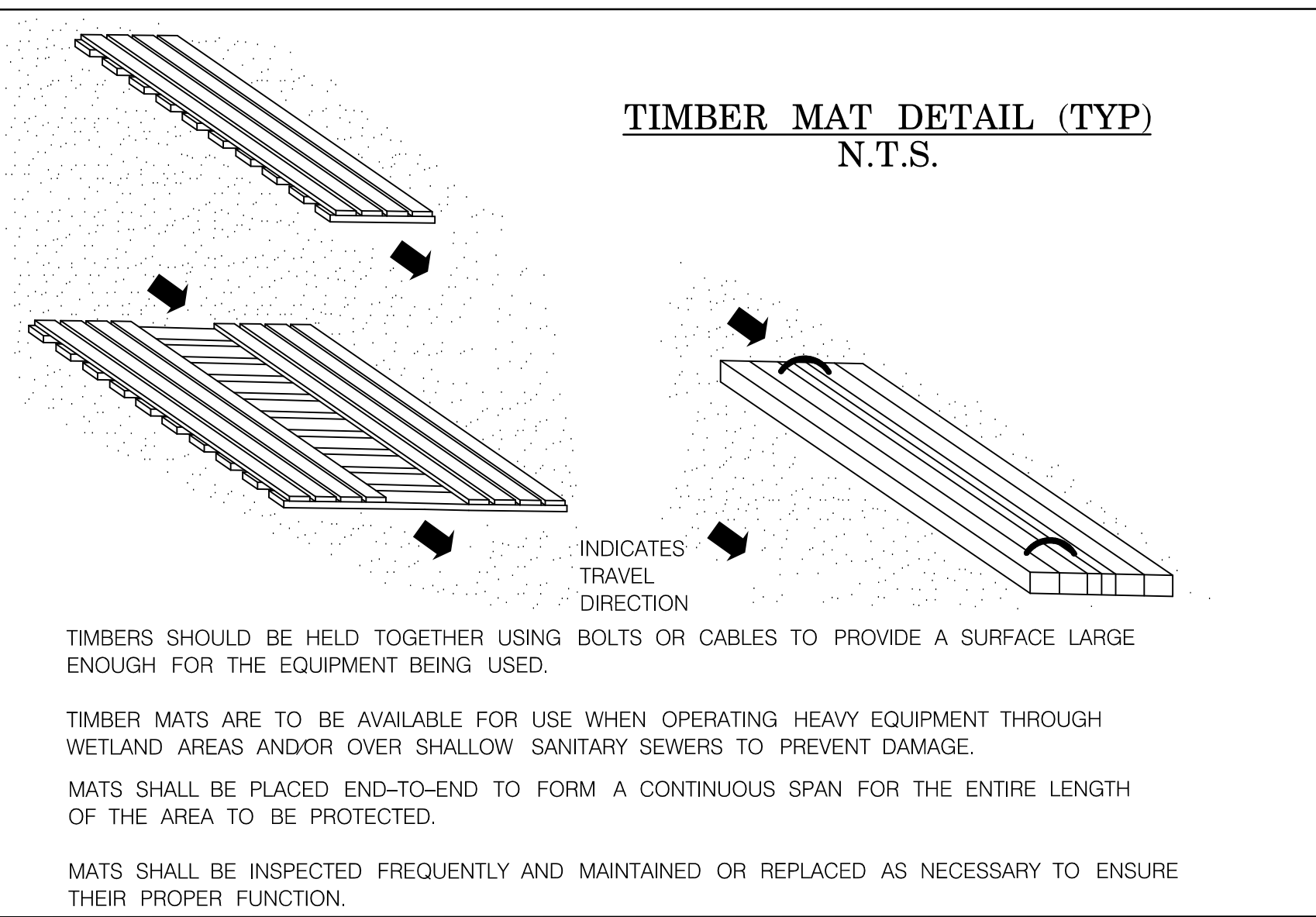
¹ All AOS values except apparent opening size (AOS) represent minimum average roll values (MARV). MARV is calculated as the typical minus two standard deviations. MD is machine direction, CD is cross direction.

² Values for AOS represent the average maximum opening.

Geotextiles must be evaluated by the National Transportation Product Evaluation Program (NTPPE) and conform to the requirements in Table H-1.

The geotextile must be inert to commonly encountered chemicals and hydrocarbons and must be rot and mildew resistant. The geotextile must be manufactured from fibers consisting of long chain synthetic polymers and composed of a minimum of 95 percent by weight of polypropylene or polyesters, not formed into a stable network so the filaments or yarns retain their dimensional stability relative to each other, including selvages.

When more than one section of geotextile is necessary, overlap the sections by at least one foot. The geotextile must be pulled flat over the applied surface. Equipment must not run over exposed fabric. When placing riprap on geotextile, do not exceed a one foot drop height.



DESIGN PROFESSIONAL
JEREMY KOSER
JOHNSON, MIRIMIRAN & THOMPSON, INC.
40 WIGHT AVENUE, HUNT VALLEY, MD 21030
TEL: 410-316-2360
EMAIL: JKoser@jmt.com

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. 31183, EXPIRATION DATE: 1/13/2023.

REVISIONS	100% SUBMISSION	NOT FOR CONSTRUCTION			
OWNER / DEVELOPER INFORMATION MARYLAND TRANSPORTATION AUTHORITY 2310 BROENING HWY BALTIMORE, MD 21224					
MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88					
GREENSPRING PARK ROAD SW CORNER VALLEY HEIGHTS AVE OWINGS MILLS, MD 21117					
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS					
SCALE	N.T.S.	DATE	APRIL 2021	PROJECT NO.	17-10977-002
MDE PROJECT NO.	21-SF-0044	CONTRACT NO.	KH-3038-0000		
DESIGNED BY	PVC	COUNTY	BALTIMORE COUNTY		
DRAWN BY	PVC	LOGMILE			
CHECKED BY	JJM /MRG	HORIZONTAL SCALE	N/A		
F.A.P. NO.	N/A	VERTICAL SCALE	N/A		
DRAWING NO.	EN-3	OF	5	SHEET NO.	48 OF 86

BY: barranger

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Wednesday, April 28, 2021 AT 07:13 AM

MDE EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY MDE AT (410) 537-3510 SEVEN (7) DAYS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY MDE, SHALL BE REQUIRED TO HOLD A PRECONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF MDE.
2. THE CONTRACTOR SHALL NOTIFY MDE IN WRITING AND BY TELEPHONE AT THE FOLLOWING POINTS:
 - A. THE REQUIRED PRE-CONSTRUCTION MEETING.
 - B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES.
 - C. DURING THE INSTALLATION OF SEDIMENT BASINS (TO BE CONVERTED INTO PERMANENT STORMWATER MANAGEMENT STRUCTURES) AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN), NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION OF EACH STEP IS MANDATORY.
 - D. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
 - E. PRIOR TO REMOVAL OF ALL SEDIMENT CONTROL DEVICES.
 - F. PRIOR TO FINAL ACCEPTANCE.
3. THE PLAN APPROVAL LETTER, APPROVED EROSION AND SEDIMENT CONTROL PLANS, DAILY LOG BOOKS, AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF MDE AND THE AGENCY RESPONSIBLE FOR THE PROJECT.
4. THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE AND SHALL HAVE THEM INSPECTED AND APPROVED BY THE MDE INSPECTOR PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES. MINOR SEDIMENT CONTROL DEVICE LOCATION ADJUSTMENTS MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE MDE INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM MDE INSPECTOR. THE CONTRACTOR SHALL OBTAIN PRIOR AGENCY AND MDE APPROVAL FOR MODIFICATIONS TO THE EROSION AND SEDIMENT CONTROL PLAN AND/OR SEQUENCE OF CONSTRUCTION.
5. THE MDE INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SAFETY OR SEDIMENT CONTROL MEASURES, IF DEEMED NECESSARY.
6. THE CONTRACTOR SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO PUBLIC ROADS. ALL MATERIALS DEPOSITED ONTO PUBLIC ROADS SHALL BE REMOVED IMMEDIATELY.
7. THE CONTRACTOR SHALL INSPECT DAILY AND MAINTAIN CONTINUOUSLY IN AN EFFECTIVE OPERATING CONDITION ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIME AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM THE MDE INSPECTOR.
8. EROSION AND SEDIMENT CONTROL FOR UTILITY CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH APPROVED PLANS. UTILITY CONSTRUCTION SHALL ONLY BE FOR AREAS WITHIN THE DELINEATED LIMIT OF DISTURBANCE. CALL *MISS UTILITY* AT 1-800-257-7777 48 HOURS PRIOR TO THE START OF WORK.
WHEN SAME DAY STABILIZATION IS APPROVED:
 - A. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH.
 - B. TRENCHES FOR UTILITY INSTALLATION SHALL BE BACKFILLED, COMPACTED, AND STABILIZED AT THE END OF EACH WORKING DAY. NO MORE TRENCH SHALL BE OPENED THAN CAN BE COMPLETED THE SAME DAY.
9. ALL WATER REMOVED FROM EXCAVATED AREAS SHALL BE PASSED THROUGH AN MDE APPROVED DEWATERING PRACTICE OR PUMPED TO A SEDIMENT TRAP OR BASIN PRIOR TO DISCHARGE TO A FUNCTIONAL STORM DRAIN SYSTEM OR TO STABLE GROUND SURFACE.
10. CONCRETE WASHOUT STRUCTURES SHALL BE USED WHEN CONCRETE TRUCKS, DRUMS, PUMPS, CHUTES, OR OTHER EQUIPMENT IS RINSED OR CLEANED ON-SITE.
11. CONSTRUCTION ACTIVITIES PRODUCING DUST SHALL IMPLEMENT CONTROL MEASURES TO AVOID THE SUSPENSION OF DUST PARTICLES AND/OR PREVENT DUST FROM BLOWING OFF-SITE OR TO AREAS WITHOUT TREATMENT.
12. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
 - B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
13. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. REFER TO APPROPRIATE SPECIFICATIONS FOR TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SODDING, AND GROUND COVERS.
14. WHEN SEEDING, ALL DISTURBED AREAS WITH SLOPES FLATTER THAN 2:1 SHALL BE STABILIZED WITH 4 INCHES OF TOPSOIL, SEED, AND MULCH. ALL DISTURBED AREAS WITH SLOPES 2:1 OR STEEPER SHALL BE STABILIZED WITH MATTING OVER 2 INCHES OF TOPSOIL AND SEED.
15. ALL SEDIMENT BASINS, TRAP EMBANKMENTS AND SLOPES, PERIMETER DIKES, SWALES AND ALL DISTURBED SLOPES STEEPER OR EQUAL TO 3:1 SHALL BE STABILIZED WITH SEED AND ANCHORED STRAW MULCH, SOD, OR OTHER APPROVED STABILIZATION MEASURES, AS SOON AS POSSIBLE BUT NO LATER THAN THREE (3) CALENDAR DAYS AFTER ESTABLISHMENT. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM SHALL BE MINIMIZED. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.
16. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITH SEED AND AN APPROVED EROSION CONTROL MATTING, SOD, RIP-RAP, OR OTHER APPROVED STABILIZATION MEASURES.
17. FOR STOCKPILE SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1), THE CONTRACTOR SHALL APPLY SEED AND ANCHORED STRAW MULCH, SOD, OR OTHER APPROVED STABILIZATION MEASURES TO THE FACE OF THE STOCKPILE WITHIN THREE (3) CALENDAR DAYS OF ACTIVITY HAVING CEASED ON THE RESPECTIVE FACE. FOR SLOPES 3:1 OR FLATTER, THE CONTRACTOR SHALL APPLY STABILIZATION MEASURES TO THE FACE OF THE STOCKPILE WITHIN SEVEN (7) CALENDAR DAYS OF ACTIVITY HAVING CEASED ON THE RESPECTIVE FACE. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.
18. FOR FINISHED GRADING, THE CONTRACTOR SHALL PROVIDE ADEQUATE GRADIENTS TO PREVENT WATER FROM PONDING FOR MORE THAN TWENTY-FOUR (24) HOURS AFTER THE END OF A RAINFALL EVENT. DRAINAGE COURSES AND SWALE FLOW AREAS MAY TAKE AS LONG AS FORTY-EIGHT (48) HOURS AFTER THE END OF A RAINFALL EVENT TO DRAIN. AREAS DESIGNED TO HAVE STANDING WATER SHALL NOT BE REQUIRED TO MEET THIS REQUIREMENT.
19. WHERE DEEMED APPROPRIATE BY THE ENGINEER OR INSPECTOR, SEDIMENT BASINS AND TRAPS MAY NEED TO BE SURROUNDED WITH AN APPROVED SAFETY FENCE. THE FENCE MUST CONFORM TO LOCAL ORDINANCES AND REGULATIONS. THE DEVELOPER OR OWNER SHALL CHECK WITH LOCAL BUILDING OFFICIALS ON APPLICABLE SAFETY REQUIREMENTS. WHERE SAFETY FENCE IS DEEMED APPROPRIATE AND LOCAL ORDINANCES DO NOT SPECIFY FENCING SIZES AND TYPES, THE FOLLOWING SHALL BE USED AS A MINIMUM STANDARD: THE SAFETY FENCE SHALL BE MADE OF WELDED WIRE AND AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THAN 2 INCHES IN WIDTH AND 4 INCHES IN HEIGHT WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE SHALL BE MAINTAINED AND IN GOOD CONDITION AT ALL TIMES.

20. ALL SEDIMENT TRAP DEPTH DIMENSIONS ARE RELATIVE TO THE OUTLET ELEVATION. ALL TRAPS SHALL HAVE A STABLE OUTFALL. ALL TRAPS AND BASINS SHALL HAVE STABLE INFLOW POINTS.
21. SEDIMENT SHALL BE REMOVED AND THE TRAP OR BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE QUARTER OF THE TOTAL DEPTH OF THE TRAP OR BASIN. TOTAL DEPTH SHALL BE MEASURED FROM THE TRAP OR BASIN BOTTOM TO THE CREST OF THE OUTLET.
22. SEDIMENT REMOVED FROM TRAPS (AND BASINS) SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN, WETLAND OR TREE-SAVE AREA. WHEN PUMPING SEDIMENT LADEN WATER, THE DISCHARGE SHALL BE DIRECTED TO AN MDE APPROVED SEDIMENT TRAPPING DEVICE PRIOR TO RELEASE FROM THE SITE. A SUMP PIT MAY BE USED IF SEDIMENT TRAPS THEMSELVES ARE BEING PUMPED OUT.
23. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE CONTRACTOR SHALL STABILIZE AND HAVE ESTABLISHED PERMANENT STABILIZATION FOR ALL CONTRIBUTORY DISTURBED AREAS USING SOD OR AN APPROVED PERMANENT SEED MIXTURE WITH REQUIRED SOIL AMENDMENTS AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHERE THE SLOPE DOES NOT EXCEED 10% AND GRADING HAS BEEN DONE TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED AS SOON AS POSSIBLE, BUT NOT LATER THAN THREE (3) CALENDAR DAYS AFTER ESTABLISHMENT FOR SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND SEVEN (7) CALENDAR DAYS FOR FLATTER SLOPES. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, TEMPORARY SEED AND ANCHORED STRAW MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE APPLIED BY MARCH 15 OR EARLIER IF GROUND AND WEATHER CONDITIONS ALLOW.
24. TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE REMOVED WITH PERMISSION OF THE MDE INSPECTOR WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. UPON REMOVAL OF SEDIMENT CONTROL DEVICES, THE AREA DISTURBED BY REMOVAL SHALL BE STABILIZED WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED, WITHIN 24 HOURS OF SAID REMOVAL. STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS TIME PERIOD AS WELL.
25. OFF-SITE SPOIL OR BORROW AREAS ON STATE OR FEDERAL PROPERTY SHALL HAVE PRIOR APPROVAL BY MDE AND OTHER APPLICABLE STATE, FEDERAL, AND LOCAL AGENCIES; OTHERWISE APPROVAL SHALL BE GRANTED BY THE LOCAL AUTHORITIES. ALL WASTE AND BORROW AREAS OFF-SITE SHALL BE PROTECTED BY SEDIMENT CONTROL MEASURES AND STABILIZED.
26. SITE INFORMATION:
 - A. AREA DISTURBED 54.16 ACRES
 - B. TOTAL CUT 63,942 CUBIC YARDS
 - C. TOTAL FILL 1,478 CUBIC YARDS
 - D. OFF-SITE WASTE /BORROW AREA LOCATION TBD

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

Owner/Developer Certification:

"I/We hereby certify that all 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 Maryland Department of the Environment approved training program for the control of erosion and sediment before beginning the project. I/We hereby authorize the right of entry for periodic on-site evaluation by appropriate inspection and enforcement authority or the State of Maryland, Department of the Environment. I/We hereby certify that stormwater management facilities will be maintained in accordance with approved plans."

Date _____ Owner's/Developer's Signature _____

Responsible Personnel Certification No. _____ Printed Name and Title _____

Design Certification:

"I hereby certify that this plan has been designed in accordance with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control, the 2000 Maryland Stormwater Design Manual, Volumes I & II including supplements, the Environment Article Sections 4-101 through 116 and Sections 4-201 and 215, and the Code of Maryland Regulations (COMAR) 26.17.01 and COMAR 26.17.02 for erosion and sediment control and stormwater management, respectively."

Date _____ Designer's Signature _____

MD Registration No. _____ Printed Name _____
P.E., R.L.S., or R.L.A. (circle one)

Professional Certification:

"I hereby certify 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.: 31183 Expiration Date: 1/13/2023

OWNER / DEVELOPER INFORMATION
MARYLAND TRANSPORTATION AUTHORITY
2310 BRCEVING HWY
BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
SW CORNER PARK HEIGHTS AVE
OWINGS MILLS, MD 21117



DESIGN PROFESSIONAL
JEREMY KOSER
JOHNSON, MIRMIRAN & THOMPSON, INC.
40 WIGHT AVENUE, HUNT VALLEY, MD 21030
TEL: 410-316-2360
EMAIL: JKoser@jmt.com

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. 31183, EXPIRATION DATE: 1/13/2023

ECCLESTON MITIGATION SITE

REVISIONS	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
100% SUBMISSION	SCALE <u>N.T.S.</u> DATE <u>APRIL 2021</u> PROJECT NO. <u>17-10977-002</u> MDE PROJECT NO. <u>21-SF-0044</u> CONTRACT NO. <u>KH-3038-0000</u> DESIGNED BY <u>PVC</u> COUNTY <u>BALTIMORE COUNTY</u> DRAWN BY <u>PVC</u> LOGMILE _____ CHECKED BY <u>JJM /MRG</u> HORIZONTAL SCALE <u>N/A</u> F.A.P. NO. <u>N/A</u> VERTICAL SCALE <u>N/A</u>
NOT FOR CONSTRUCTION	DRAWING NO. EN-4 OF 5 SHEET NO. 49 OF 86



SEQUENCE OF CONSTRUCTION

- THE CONTRACTOR SHALL NOTIFY MDE AT (410) 537-3510 SEVEN (7) DAYS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND UNLESS WAIVED BY MDE, SHALL BE REQUIRED TO HOLD A PRECONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES AND A REPRESENTATIVE OF MDE.
- MDE TRACKING/PERMIT NUMBER IS 21-SF-0044. IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD OF OCTOBER 1 TO APRIL 30.
- WATERWAY CONSTRUCTION TO BE DONE IN ACCORDANCE WITH MDE STANDARDS AND DETAILS AS SHOWN ON THE PLANS.
- CONTRACTOR SHALL DISTURB ONLY AS MUCH AREA THAT CAN BE BROUGHT TO FINAL GRADE AND STABILIZED AT THE END OF EACH DAY. AT THE END OF EACH WORK DAY THE CONTRACTOR SHALL STABILIZE ANY DISTURBED AREA WITHIN THE LOD NOT DIRECTED TO AN EROSION AND SEDIMENT CONTROL DEVICE AND AS NOTED. ALL DISTURBED AREAS ARE TO BE STABILIZED AS SHOWN ON THE PLANTING PLANS.
- WHERE PUMP AROUND PRACTICES ARE UTILIZED, THE EXACT LOCATION OF THE HOSES AND FILTER BAG MAY BE MODIFIED IN THE FIELD BASED ON EXISTING CONDITIONS. ANY ADJUSTMENTS MUST BE APPROVED BY THE INSPECTOR.
- WORK WITHIN THE FLOODPLAIN SHALL BE CONDUCTED IN AN ORDER WHICH DOES NOT REQUIRE THE CONTRACTOR TO TRACK OVER FINISHED GRADING OR CROSS OVER THE STREAM IN ANY AREAS OTHER THAN THOSE SHOWN ON THE PLANS. THE ACCESS ROAD AND ANY STOCKPILE AREAS WILL BE REMOVED DURING THE FLOODPLAIN GRADING WORK IN EACH CONSTRUCTION PHASE (UNLESS OTHERWISE SPECIFIED) AND SHALL NOT BE REMOVED UNTIL EACH WORK AREA IS PERMANENTLY STABILIZED. SOIL LAYDOWN AREAS WILL BE REDUCED IN SIZE AS ADJACENT ACCESS ROADS ARE REMOVED DURING FLOODPLAIN GRADING. NO EROSION AND SEDIMENT CONTROL MEASURE ASSOCIATED WITH A SOIL LAYDOWN AREA MAY BE REMOVED PRIOR TO STABILIZATION.
- THE STREAM WORK IS DIVIDED INTO 14 PHASES. PHASES 1-11 ARE TO BE CONSTRUCTED SEQUENTIALLY. PHASES 12 AND 13 ARE TO BE CONSTRUCTED SEQUENTIALLY BUT ALSO CAN BE CONSTRUCTED CONCURRENTLY WITH PHASES 2-11 OR PHASE 14. PHASE 14 IS TO BE CONSTRUCTED AFTER THE COMPLETION OF PHASE 9 AND CAN BE CONSTRUCTED CONCURRENTLY WITH PHASES 10-13.

STREAM CONSTRUCTION PHASE 1 LOD = 54.16 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 1 LOD.
- CLEAR AND GRUB THE WORK AREA REQUIRED FOR INSTALLATION OF THE STABILIZED CONSTRUCTION ENTRANCES (SCE-1 THROUGH SCE-5) AND CLEAR WATER DIVERSION PIPE (CWD-3). REMOVE EXISTING TRAFFIC BARRIER W-BEAM AS INDICATED ON DRAWING MT-2 PRIOR TO INSTALLATION OF SCE-2.
- WITH THE EROSION AND SEDIMENT CONTROL INSPECTOR'S PERMISSION, INSTALL MULCH ACCESS ROADS (MAR-A THROUGH MAR-D & MAR-F THROUGH MAR-L), TIMBER MAT ACCESS ROADS (TAR-A, TAR-B, TAR-C, TAR-E & TAR-F), TEMPORARY ACCESS BRIDGES (TB-1 THROUGH TB-9), TEMPORARY STAGING AND STOCKPILE AREAS, CLEAR WATER DIVERSION PIPES (CWD-1, CWD-2, & CWD-4), FILTER LOGS (FL-1 THROUGH FL-14), AND SUPER SILT FENCE (SSF-1 THROUGH SSF-11 & SSF-13 THROUGH SSF-38) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9. NOTE, MULCH ACCESS ROAD (MAR-E) AND TIMBER MAT ACCESS ROAD (TAR-D) TO BE INSTALLED AFTER STREAM DIVERSION REMOVAL; FLOODPLAIN WILL NEED TO DRY OUT PRIOR TO INSTALLATION.
- DEMOLISH 18" TERRACOTTA PIPE AT SPRING HOUSE AND 10" TERRACOTTA PIPE AT SPRING BOX. TO REMOVE STREAM DIVERSIONS AND RESUME IN-CHANNEL FLOW AS INDICATED ON DRAWINGS EP-3, EP-4 AND EP-6. DEMOLITION AND DIVERSION PIPE WATER FLOW TO BE STOPPED BEFORE OFFLINE CONSTRUCTION. SALVAGE WHEEL AND PUMPS FROM SPRING HOUSE.
- WITH THE EROSION AND SEDIMENT CONTROL INSPECTOR'S PERMISSION, INSTALL MULCH ACCESS ROAD (MAR-E), TIMBER MAT ACCESS ROAD (TAR-D) AND SUPER SILT FENCE (SSF-12).

STREAM CONSTRUCTION PHASE 2 - OFFLINE CONSTRUCTION (STA. 101+27 TO STA. 102+32, STA. 102+60 TO STA. 110+88, STA. 116+08 TO STA. 116+99, STA. 117+39 TO STA. 118+68, STA. 119+72 TO STA. 120+38, STA. 120+81 TO STA. 122+51, STA. 123+05 TO STA. 123+67, STA. 124+14 TO STA. 124+71, STA. 125+72 TO STA. 126+46, STA. 200+43 TO STA. 202+77, STA. 207+46 TO STA. 211+51, STA. 300+47 TO STA. 301+15, STA. 305+29, STA. 305+64 TO STA. 305+91, STA. 305+24 TO STA. 306+42, STA. 306+73 TO STA. 307+05, STA. 307+76 TO STA. 308+35, STA. 308+55 TO STA. 308+90, STA. 309+36 TO STA. 309+65, STA. 400+00 TO STA. 403+07, STA. 500+00 TO STA. 501+18 TO STA. 501+54, STA. 601+28 TO STA. 603+01, STA. 603+75 TO STA. 606+19, STA. 606+52 TO STA. 607+45, STA. 608+53 TO STA. 609+29, STA. 610+00 TO STA. 611+46, STA. 612+91 TO STA. 614+59 & STA. 800+00 TO STA. 803+21) LOD = 30.69 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 2 LOD.
- WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, GRADE THE PROPOSED STREAM AND FLOODPLAIN TO THE EXTENT POSSIBLE WITHOUT IMPACTING THE EXISTING CHANNEL AS SHOWN ON DRAWINGS EP-10 THROUGH EP-12. CONCURRENTLY REMOVE SUPER SILT FENCE (SSF-14, SSF-19, SSF-20, SSF-32 & SSF-33), FILTER LOGS (FL-9), TEMPORARY ACCESS BRIDGES (TB-1 & TB-8), TIMBER MAT ACCESS ROADS (TAR-A, TAR-B & TAR-E) AND MULCH ACCESS ROADS (MAR-A, MAR-B, MAR-F & MAR-I) AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES WITHIN THE WORK AREA AS SHOWN.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1 THROUGH SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.

STREAM CONSTRUCTION PHASE 3 (STA. 803+21 TO STA. 803+42, STA. 119+57 TO STA. 119+72, STA. 120+38 TO STA. 120+81, STA. 122+51 TO STA. 123+05, STA. 123+67 TO STA. 124+14, STA. 124+79 TO STA. 125+69 & STA. 126+46 TO STA. 126+96) LOD = 2.88 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 3 LOD.
- INSTALL TIMBER MAT ACCESS ROAD (TAR-G), PUMP-AROUND PRACTICE (PAP 3-1), SAND BAG DIKES (SBD 3-1 & SBD 3-2) AND FILTER BAG (FB 3-1) AS SHOWN ON DRAWING EP-15.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN. CONCURRENTLY REMOVE TIMBER MAT ACCESS ROAD (TAR-G) AND TEMPORARY ACCESS BRIDGE (TB-9) AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1 THROUGH SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE PUMP-AROUND PRACTICE (PAP 3-1), SAND BAG DIKES (SBD 3-1 & SBD 3-2) AND FILTER BAG (FB 3-1).

STREAM CONSTRUCTION PHASE 4 (STA. 114+03 TO STA. 116+08, STA. 116+99 TO STA. 117+39, STA. 118+68 TO STA. 119+57, STA. 309+72 TO STA. 309+90 & STA. 611+46 TO STA. 612+91) LOD = 2.68 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 4 LOD.
- INSTALL PUMP-AROUND PRACTICES (PAP 4-1, PAP 4-2 & PAP 4-3), SAND BAG DIKES (SBD 4-1 THROUGH SBD 4-4) AND FILTER BAG (FB 4-1) AS SHOWN ON DRAWINGS EP-16 AND EP-17.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN. CONCURRENTLY REMOVE TIMBER MAT ACCESS ROAD (TAR-B), MULCH ACCESS ROAD (MAR-A), FILTER LOGS (FL-1 & FL-2), SUPER SILT FENCE (SSF-4) AND TEMPORARY ACCESS BRIDGE (TB-2) AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS. INSTALL SUPER SILT FENCE (SSF-39) ONCE MULCH ACCESS ROAD (MAR-A) IS REMOVED.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1 THROUGH SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.

- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE PUMP-AROUND PRACTICES (PAP 4-1, PAP 4-2 & PAP 4-3), SAND BAG DIKES (SBD 4-1 THROUGH SBD 4-4) AND FILTER BAG (FB 4-1).

STREAM CONSTRUCTION PHASE 5 (STA. 603+24 TO STA. 603+75, STA. 606+19 TO STA. 606+52, STA. 607+45 TO STA. 608+53 & STA. 609+29 TO STA. 609+94) LOD = 2.84 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 5 LOD.
- INSTALL PUMP-AROUND PRACTICE (PAP 5-1), SAND BAG DIKES (SBD 5-1 & SBD 5-2), AND FILTER BAG (FB 5-1) AS SHOWN ON DRAWINGS EP-18 AND EP-19.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN. CONCURRENTLY REMOVE MULCH ACCESS ROADS (MAR-B & MAR-C), TEMPORARY ACCESS BRIDGE (TB-3), SUPER SILT FENCE (SSF-11), FILTER LOGS (FL-3 THROUGH FL-7) AND STAGING AND STOCKPILE AREA AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1 THROUGH SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE PUMP-AROUND PRACTICE (PAP 5-1), SAND BAG DIKES (SBD 5-1 AND SBD 5-2), FILTER BAG (FB 5-1), CLEAR WATER DIVERSION PIPES (CWD-2 & CWD-4), SUPER SILT FENCE (SSF-9 & SSF-10) AND STABILIZED CONSTRUCTION ENTRANCE (SCE-2).

STREAM CONSTRUCTION PHASE 6 (STA. 600+00 TO STA. 601+28 & STA. 603+01 TO STA. 603+24) LOD = 1.43 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 6 LOD.
- INSTALL PUMP-AROUND PRACTICE (PAP 6-1), SAND BAG DIKES (SBD 6-1 & SBD 6-2), AND FILTER BAG (FB 6-1) AS SHOWN ON DRAWING EP-20.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN. CONCURRENTLY REMOVE MULCH ACCESS ROAD (MAR-I) AND SUPER SILT FENCE (SSF-24) AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1, SLA-2, SLA-5, SLA-6, SLA-7 & SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER. PLEASE NOTE, ACCESS NO LONGER PROVIDED FOR SLA-3 AND SLA-4.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE PUMP-AROUND PRACTICE (PAP 6-1), SAND BAG DIKES (SBD 6-1 AND SBD 6-2), AND FILTER BAG (FB 6-1).

STREAM CONSTRUCTION PHASE 7 (STA. 206+75 TO STA. 207+46, STA. 300+00 TO STA. 300+47, STA. 301+15 TO STA. 304+21, STA. 305+29 TO STA. 305+64, STA. 305+91 TO STA. 306+42 TO STA. 306+73, STA. 307+05 TO STA. 307+76, STA. 308+35 TO STA. 308+55, STA. 308+90 TO STA. 309+36 & STA. 500+91 TO STA. 501+18) LOD = 3.50 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 7 LOD.
- INSTALL PUMP-AROUND PRACTICES (PAP 7-1 & PAP 7-2), SAND BAG DIKES (SBD 7-1 THROUGH SBD 7-5) AND FILTER BAGS (FB 7-1, FB 7-2 & FB 7-3) AS SHOWN ON DRAWINGS EP-21 AND EP-22.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN. CONCURRENTLY REMOVE TIMBER MAT ACCESS ROADS (TAR-C & TAR-F), MULCH ACCESS ROADS (MAR-A, MAR-F & MAR-G), TEMPORARY ACCESS BRIDGE (TB-5), FILTER LOGS (FL-9) AND STAGING AND STOCKPILE AREA AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1, SLA-2, SLA-5, SLA-6, SLA-7 & SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER. PLEASE NOTE, ACCESS NO LONGER PROVIDED FOR SLA-3 OR SLA-4.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE PUMP-AROUND PRACTICES (PAP 7-1 & PAP 7-2), SAND BAG DIKES (SBD 7-1 THROUGH SBD 7-5), FILTER BAGS (FB 7-1, FB 7-2 & FB 7-3) AND CLEAR WATER DIVERSION PIPES (CWD-1).

STREAM CONSTRUCTION PHASE 8 (STA. 111+11 TO STA. 114+03, STA. 211+70 TO STA. 211+88 & STA. 403+07 TO STA. 403+27) LOD = 1.92 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 8 LOD.
- INSTALL TIMBER MAT ACCESS ROAD (TAR-H), PUMP-AROUND PRACTICE (PAP 8-1), SAND BAG DIKES (SBD 8-1 & SBD 8-2) AND FILTER BAG (FB 8-1) AS SHOWN ON DRAWING EP-23.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN. CONCURRENTLY REMOVE TIMBER MAT ACCESS ROAD (TAR-H) AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1, SLA-2, SLA-5, SLA-6, SLA-7 & SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER. PLEASE NOTE, ACCESS NO LONGER PROVIDED FOR SLA-3 OR SLA-4.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE PUMP-AROUND PRACTICE (PAP 8-1), SAND BAG DIKES (SBD 8-1 & SBD 8-2), AND FILTER BAG (FB 8-1).

STREAM CONSTRUCTION PHASE 9 (STA. 100+00 TO STA. 101+27, STA. 102+32 TO STA. 102+60, STA. 110+88 TO STA. 111+11 & STA. 211+51 TO STA. 211+70) LOD = 2.12 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 9 LOD.
- INSTALL PUMP-AROUND PRACTICES (PAP 9-1 THROUGH PAP 9-5), SAND BAG DIKES (SBD 9-1 THROUGH SBD 9-6) AND FILTER BAGS (FB 9-1 & FB 9-2) AS SHOWN ON DRAWINGS EP-24 AND EP-25.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN. CONCURRENTLY REMOVE TIMBER MAT ACCESS ROAD (TAR-H) AND SUPER SILT FENCE (SSF-21) AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1, SLA-2, SLA-5, SLA-6, SLA-7 & SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER. PLEASE NOTE, ACCESS NO LONGER PROVIDED FOR SLA-3 OR SLA-4.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE PUMP-AROUND PRACTICES (PAP 9-1 THROUGH PAP 9-5), SAND BAG DIKES (SBD 9-1 THROUGH SBD 9-6), SUPER SILT FENCE (SSF-30 & SSF-31), AND FILTER BAGS (FB 9-1 & FB 9-2).

STREAM CONSTRUCTION PHASE 10 - OFFLINE CONSTRUCTION (FLOODPLAIN GRADING) LOD = 2.88 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 10 LOD.
- EXCAVATE AND GRADE THE PROPOSED FLOODPLAIN AS SHOWN ON DRAWING EP-26. CONCURRENTLY REMOVE MULCH ACCESS ROAD (MAR-F) AND TEMPORARY ACCESS BRIDGE (TB-4) AS PROPOSED GRADING IS PERFORMED. INSTALL ALL FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1, SLA-2, SLA-5, SLA-6, SLA-7 & SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER. PLEASE NOTE, ACCESS NO LONGER PROVIDED FOR SLA-3 OR SLA-4.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE SUPER SILT FENCE (SSF-13).

STREAM CONSTRUCTION PHASE 11 (STA. 200+00 TO STA. 206+75) LOD = 7.75 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 11 LOD.
- INSTALL PUMP-AROUND PRACTICE (PAP 11-1), SAND BAG DIKES (SBD 11-1 & SBD 11-2) AND FILTER BAG (FB 11-1) AS SHOWN ON DRAWING EP-27.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN. CONCURRENTLY REMOVE TEMPORARY ACCESS BRIDGES (TB-6 & TB-7), MULCH ACCESS ROADS (MAR-A, MAR-F & MAR-H), STAGING AND STOCKPILE AREA, FILTER LOGS (FL-10 & FL-11) AND SUPER SILT FENCE (SSF-18) AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL FROM AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1, SLA-2, SLA-5, SLA-6, SLA-7 & SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER. PLEASE NOTE, ACCESS NO LONGER PROVIDED FOR SLA-3 OR SLA-4.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE PUMP-AROUND PRACTICE (PAP 11-1), SAND BAG DIKES (SBD 11-1 & SBD 11-2), FILTER BAG (FB 11-1), SUPER SILT FENCE (SSF-15, SSF-16, SSF-17, SSF-8, SSF-7, SSF-6, SSF-5, SSF-39, SSF-3, SSF-2, SSF-1) AND STABILIZED CONSTRUCTION ENTRANCE (SCE-1).

STREAM CONSTRUCTION PHASE 12 (STA. 903+40 TO STA. 907+22) LOD = 3.30 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 12 LOD.
- INSTALL PUMP-AROUND PRACTICE (PAP 12-1), SAND BAG DIKES (SBD 12-1 & SBD 12-2) AND FILTER BAG (FB 12-1) AS SHOWN ON DRAWING EP-28.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN. CONCURRENTLY REMOVE MULCH ACCESS ROADS (MAR-K & MAR-L) AND SUPER SILT FENCE (SSF-38) AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-7 & SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER. PLEASE NOTE, ACCESS NO LONGER PROVIDED FOR SLA-1 THROUGH SLA-6.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE PUMP-AROUND PRACTICE (PAP 12-1), SAND BAG DIKES (SBD 12-1 & SBD 12-2), AND FILTER BAG (FB 12-1).

STREAM CONSTRUCTION PHASE 13 (STA. 900+00 TO STA. 903+40) LOD = 2.35 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 13 LOD.
- INSTALL PUMP-AROUND PRACTICE (PAP 13-1), SAND BAG DIKES (SBD 13-1 & SBD 13-2) AND FILTER BAG (FB 13-1) AS SHOWN ON DRAWING EP-29.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN. CONCURRENTLY REMOVE MULCH ACCESS ROADS (MAR-J, MAR-K & MAR-L) AND SUPER SILT FENCE (SSF-39 THROUGH SSF-40) AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-7 & SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER. PLEASE NOTE, ACCESS NO LONGER PROVIDED FOR SLA-1 THROUGH SLA-6.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE PUMP-AROUND PRACTICE (PAP 13-1), SAND BAG DIKES (SBD 13-1 & SBD 13-2), FILTER BAG (FB 13-1), SUPER SILT FENCE (SSF-34, SSF-35, SSF-36 & SSF-37) AND STABILIZED CONSTRUCTION ENTRANCES (SCE-3 & SCE-4).

STREAM CONSTRUCTION PHASE 14 (STA. 700+00 TO STA. 707+65) LOD = 2.88 AC

- CONTRACTOR TO PERFORM STAKEOUT OF PHASE 14 LOD.
- EXCAVATE AND GRADE THE PROPOSED STREAM AND FLOODPLAIN AS SHOWN ON DRAWINGS EP-30 AND EP-31. CONCURRENTLY REMOVE MULCH ACCESS ROADS (MAR-D, MAR-E & MAR-I), TIMBER MAT ACCESS ROAD (TAR-D), SUPER SILT FENCE (SSF-12 & SSF-22 THROUGH SSF-29), FILTER LOGS (FL-12 THROUGH FL-14) AND STAGING AND STOCKPILE AREA AS PROPOSED GRADING IS PERFORMED. INSTALL ALL IN-STREAM AND FLOODPLAIN STRUCTURES AND FILL THE EXISTING CHANNEL AS SHOWN ON THE PLANS.
- PLACE EXCESS SOIL ON DESIGNATED SOIL LAYDOWN AREAS (SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9, AS DIRECTED BY THE ENGINEER. PLEASE NOTE, ACCESS NO LONGER PROVIDED FOR SLA-1 THROUGH SLA-7.
- PERMANENTLY STABILIZE THE WORK AREA AS SHOWN ON THE PLANTING PLANS.
- ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, CONTRACTOR TO REMOVE ALL REMAINING EROSION AND SEDIMENT CONTROLS AND IMMEDIATELY STABILIZE ANY DISTURBANCE CAUSED BY THE REMOVAL.

LOD = 54.16 ACRES

OWNER /DEVELOPER INFORMATION

MARYLAND TRANSPORTATION AUTHORITY
2310 BRCENING HWY
BALTIMORE, MD 21224

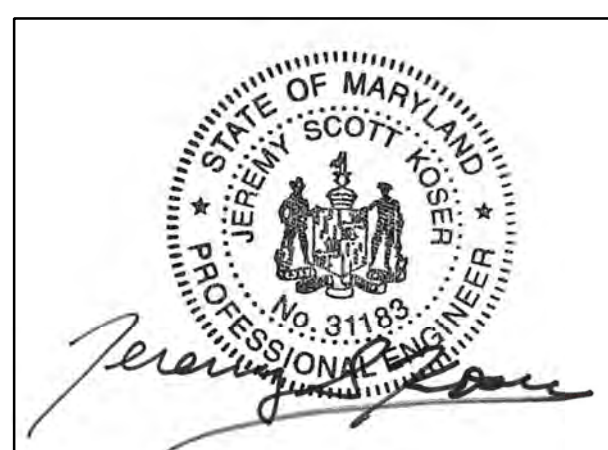
MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
SW CORNER PARK HEIGHTS AVE
OWINGS MILLS, MD 21117

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SCALE _____ N.T.S. DATE APRIL 2021 PROJECT NO. 17-10977-002
MDE PROJECT NO. 21-SF-0044 CONTRACT NO. KH-3038-0000
DESIGNED BY PVC COUNTY BALTIMORE COUNTY
DRAWN BY PVC LOGMILE _____
CHECKED BY JJM /MRG HORIZONTAL SCALE N/A
F.A.P. NO. N/A VERTICAL SCALE N/A

DRAWING NO. **EN-5** OF **5** SHEET NO. 50 OF 86



DESIGN PROFESSIONAL
JEREMY KOSER
JOHNSON, MIRIRAN & THOMPSON, INC.
40 WIGHT AVENUE, HUNT VALLEY, MD 21030
TEL: 410-316-2360
EMAIL: JKoser@jmt.com

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. 31189, EXPIRATION DATE: 1/13/2023.

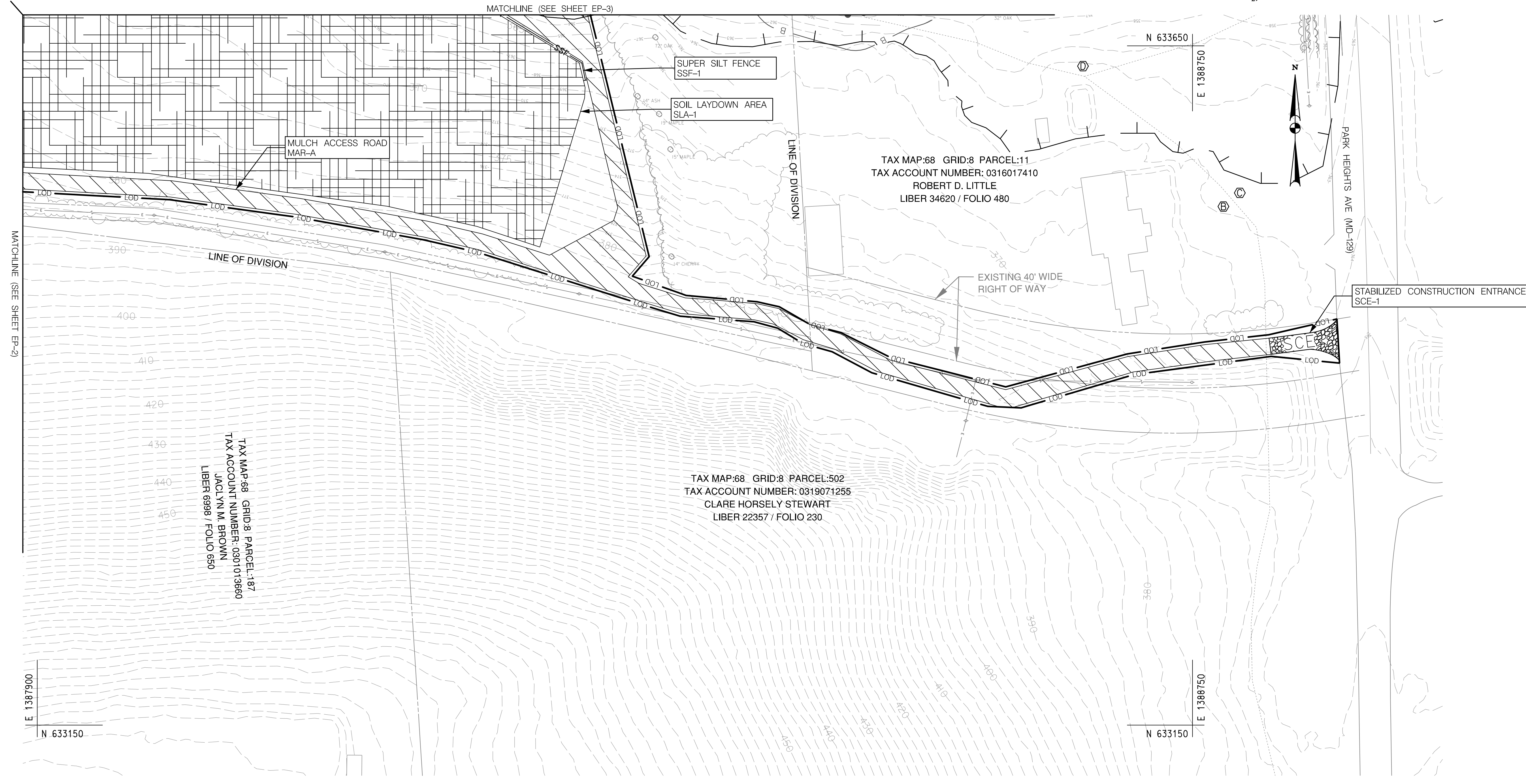
ECCLESTON MITIGATION SITE

REVISIONS

100%
SUBMISSION

NOT FOR
CONSTRUCTION

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION

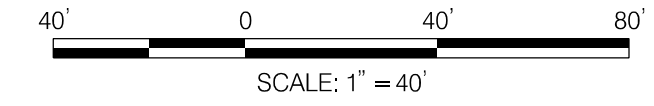


- NOTES:
1. ALL DISTURBED AREAS SHALL BE STABILIZED BY THE END OF EACH DAY, PER THE SEQUENCE OF CONSTRUCTION.
 2. WHERE THE LOD EXTENDS BEYOND THE CONSERVATION EASEMENT, PROPERTY ACCESS IS PROVIDED WITH RIGHT-OF-ENTRY AGREEMENTS. NO GRADING IS TO OCCUR IN THIS PHASE. PROPOSED CHANNEL SHOWN FOR REFERENCE.
 3. DRAINAGE PATTERS ARE NOT TO BE ALTERED WITH THE PLACEMENT OF SOIL IN THE SOIL LAYDOWN AREAS.

OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRIDGING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117



DESIGN PROFESSIONAL
 JEREMY KOSER
 JOHNSON, MIRIMIRAN & THOMPSON INC.
 40 WIGHT AVENUE, HUNT VALLEY, MD 21030
 TEL: 410-316-2360
 EMAIL: JKoser@jmt.com

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. 31183, EXPIRATION DATE: 1/13/2023.

ECCLESTON MITIGATION SITE

REVISIONS
100% SUBMISSION
NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN - PHASE 01

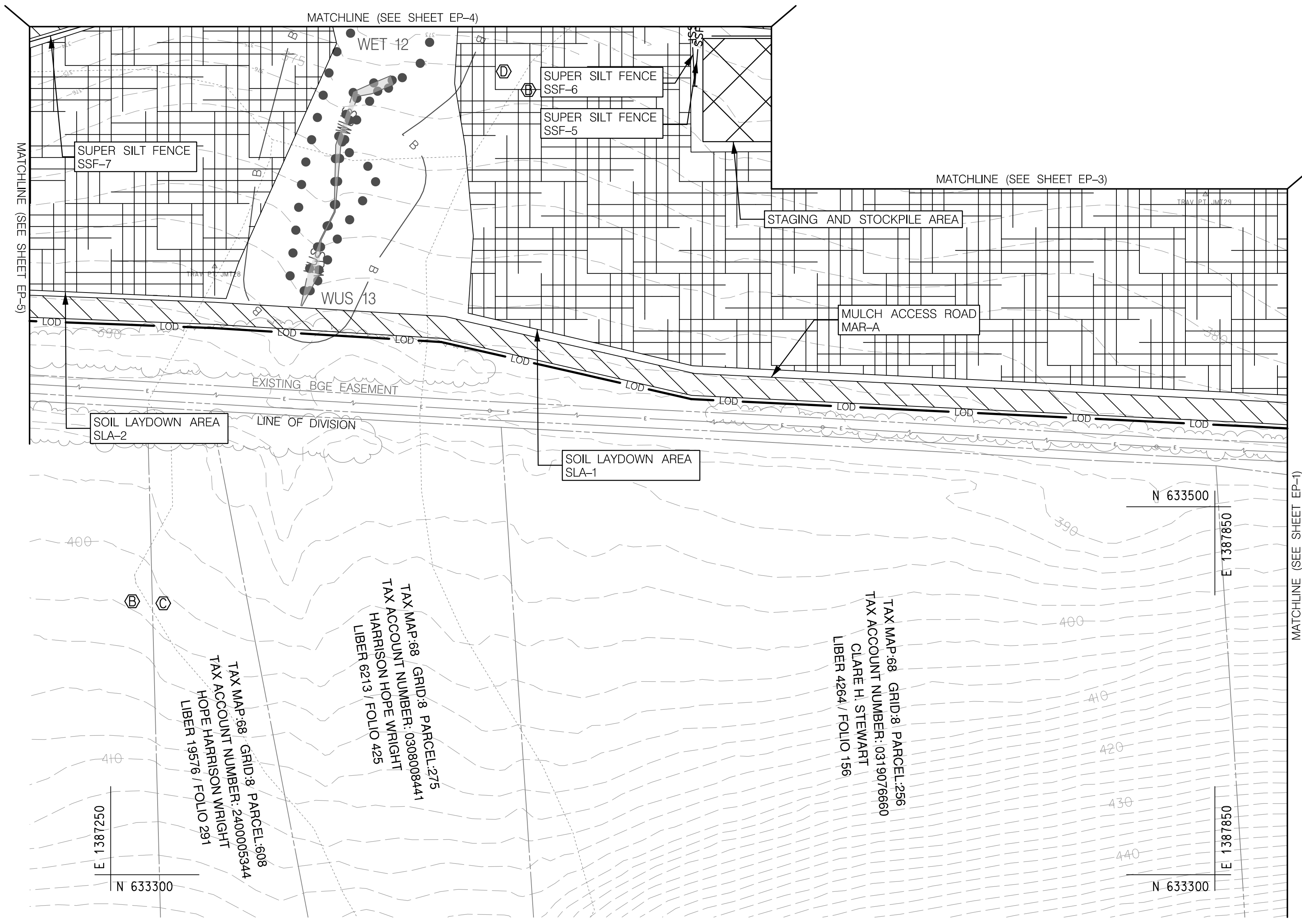
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY
DRAWN BY PVC		LOGMILE
CHECKED BY JJM /MRG		HORIZONTAL SCALE N/A
F.A.P. NO. N/A		VERTICAL SCALE N/A

DRAWING NO. **EP-1** OF **31** SHEET NO. 51 OF 86

BY: barranger -

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 Wednesday, April 28, 2021 AT 07:16 AM

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION

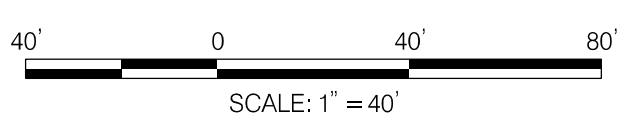


- NOTES:
1. ALL DISTURBED AREAS SHALL BE STABILIZED BY THE END OF EACH DAY, PER THE SEQUENCE OF CONSTRUCTION.
 2. WHERE THE LOD EXTENDS BEYOND THE CONSERVATION EASEMENT, PROPERTY ACCESS IS PROVIDED WITH RIGHT-OF-ENTRY AGREEMENTS.
 3. NO GRADING IS TO OCCUR IN THIS PHASE. PROPOSED CHANNEL SHOWN FOR REFERENCE.
 4. DRAINAGE PATTERNS ARE NOT TO BE ALTERED WITH THE PLACEMENT OF SOIL IN THE SOIL LAYDOWN AREAS.

OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRIDGING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117



DESIGN PROFESSIONAL
 JEREMY KOSEK
 JOHNSON, MIRIRAN & THOMPSON, INC.
 40 WIGHT AVENUE, HUNT VALLEY, MD 21030
 TEL: 410-316-2360
 EMAIL: JKoser@jmt.com

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. 31183, EXPIRATION DATE: 1/13/2023.

ECCLESTON MITIGATION SITE

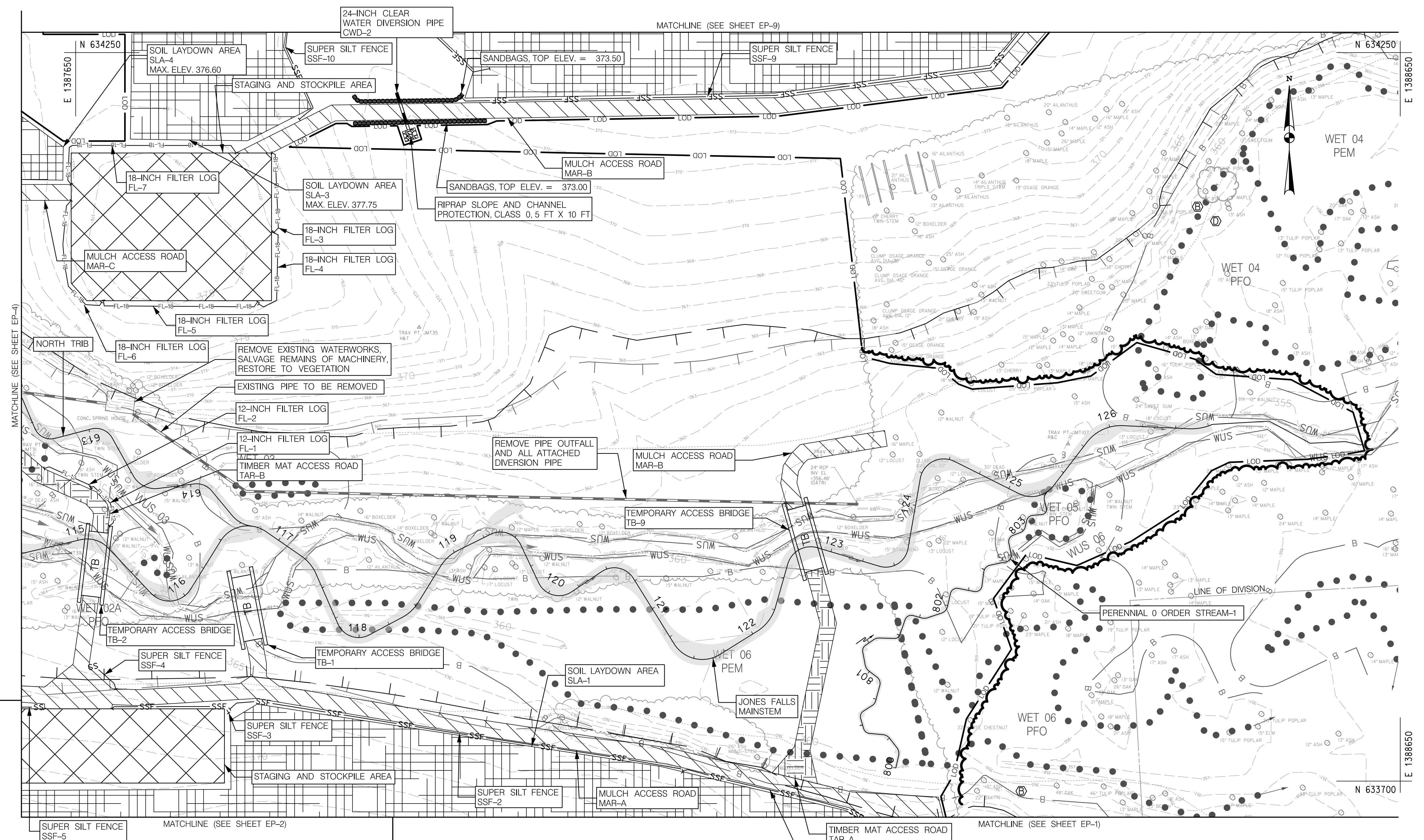
REVISIONS
100% SUBMISSION
NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN - PHASE 01			
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002	
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000	
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY	
DRAWN BY PVC		LOGMILE	
CHECKED BY JJM /MRG		HORIZONTAL SCALE N/A	
F.A.P. NO. N/A		VERTICAL SCALE N/A	
DRAWING NO. EP-2 OF 31		SHEET NO. 52 OF 86	

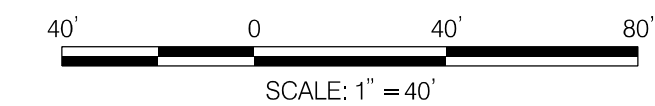
BY: barranger -

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 Wednesday, April 28, 2021 AT 07:17 AM

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION



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OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRIDGING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
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 OWINGS MILLS, MD 21117



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ECCLESTON MITIGATION SITE

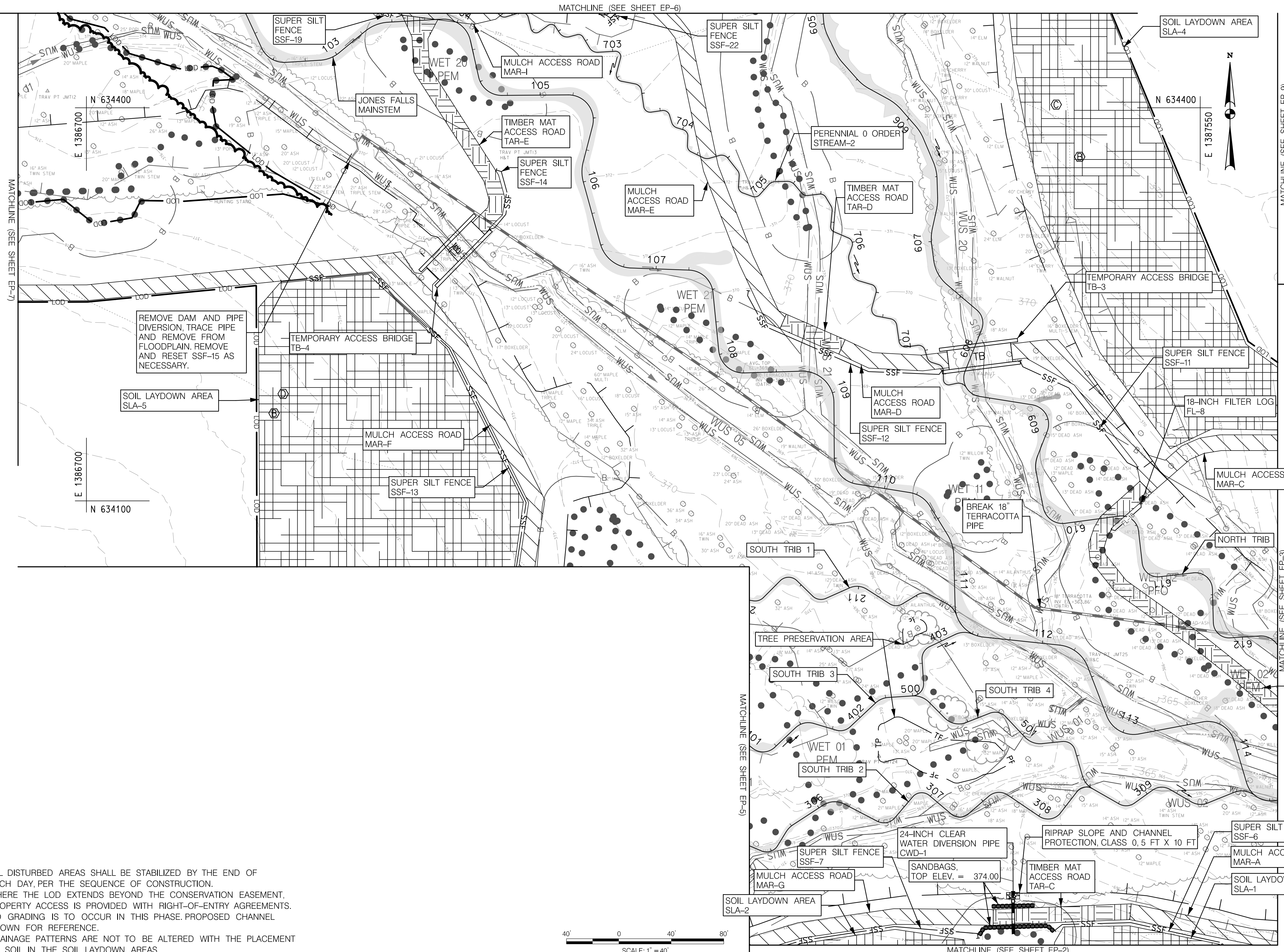
REVISIONS
100% SUBMISSION
NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN - PHASE 01			
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002	
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000	
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY	
DRAWN BY PVC		LOGMILE	
CHECKED BY JMM /MRG		HORIZONTAL SCALE N/A	
F.A.P. NO. N/A		VERTICAL SCALE N/A	
DRAWING NO. EP-3	OF 31	SHEET NO. 53	OF 86

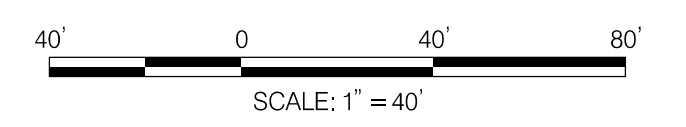
BY: barranger

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SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION



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OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRIDGING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117



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ECCLESTON MITIGATION SITE

REVISIONS
100% SUBMISSION
NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN - PHASE 01

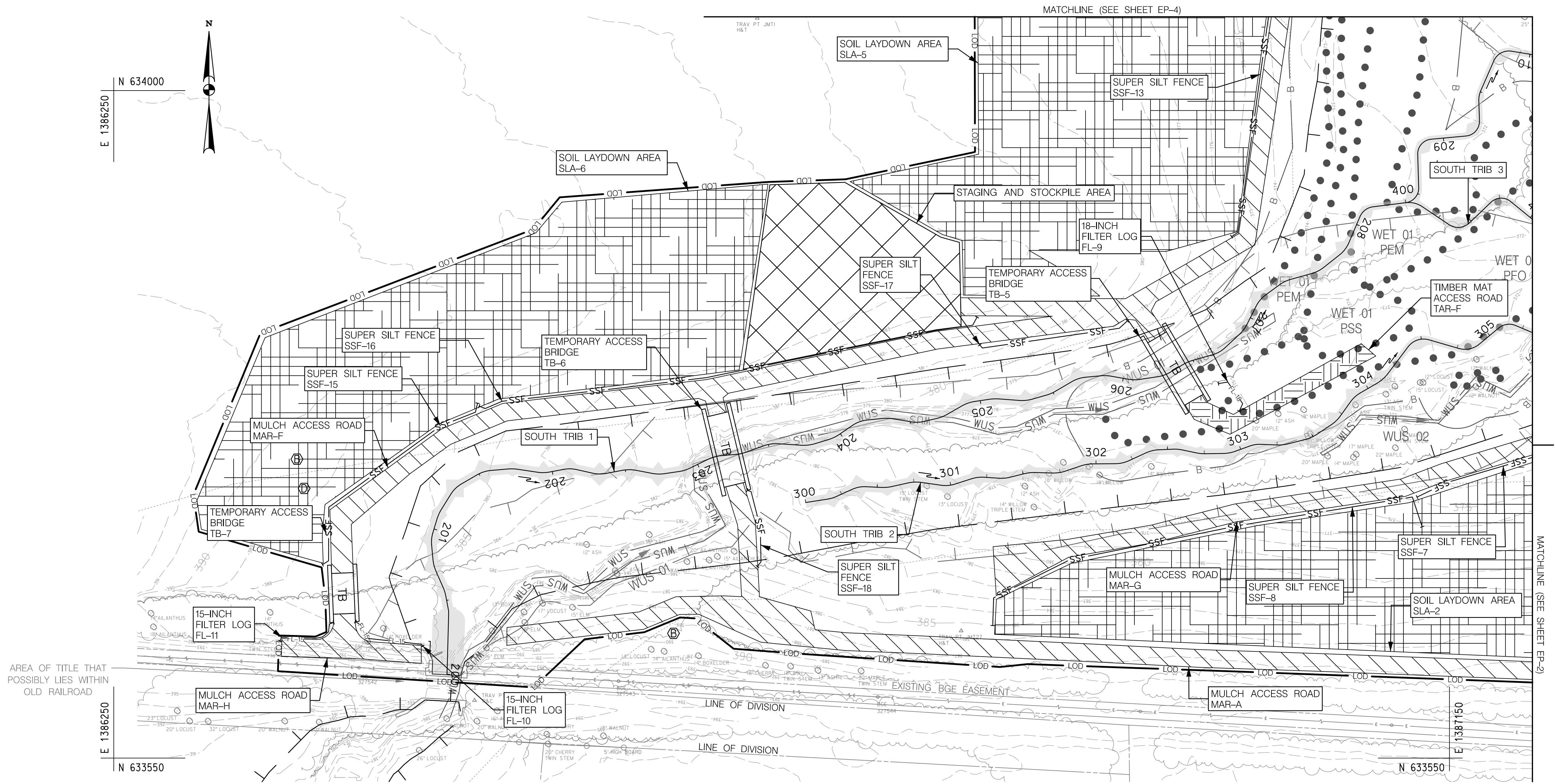
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY
DRAWN BY PVC		LOGMILE
CHECKED BY JMM /MRG		HORIZONTAL SCALE N/A
F.A.P. NO. N/A		VERTICAL SCALE N/A

DRAWING NO. **EP - 4** OF **31** SHEET NO. 54 OF 86

BY: K. Higgins

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SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION



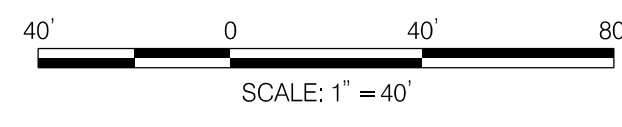
AREA OF TITLE THAT POSSIBLY LIES WITHIN OLD RAILROAD

- NOTES:
1. ALL DISTURBED AREAS SHALL BE STABILIZED BY THE END OF EACH DAY, PER THE SEQUENCE OF CONSTRUCTION.
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OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRACING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117



BY: barranger



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 JEREMY KOSER
 JOHNSON, MIRIMIRAN & THOMPSON, INC.
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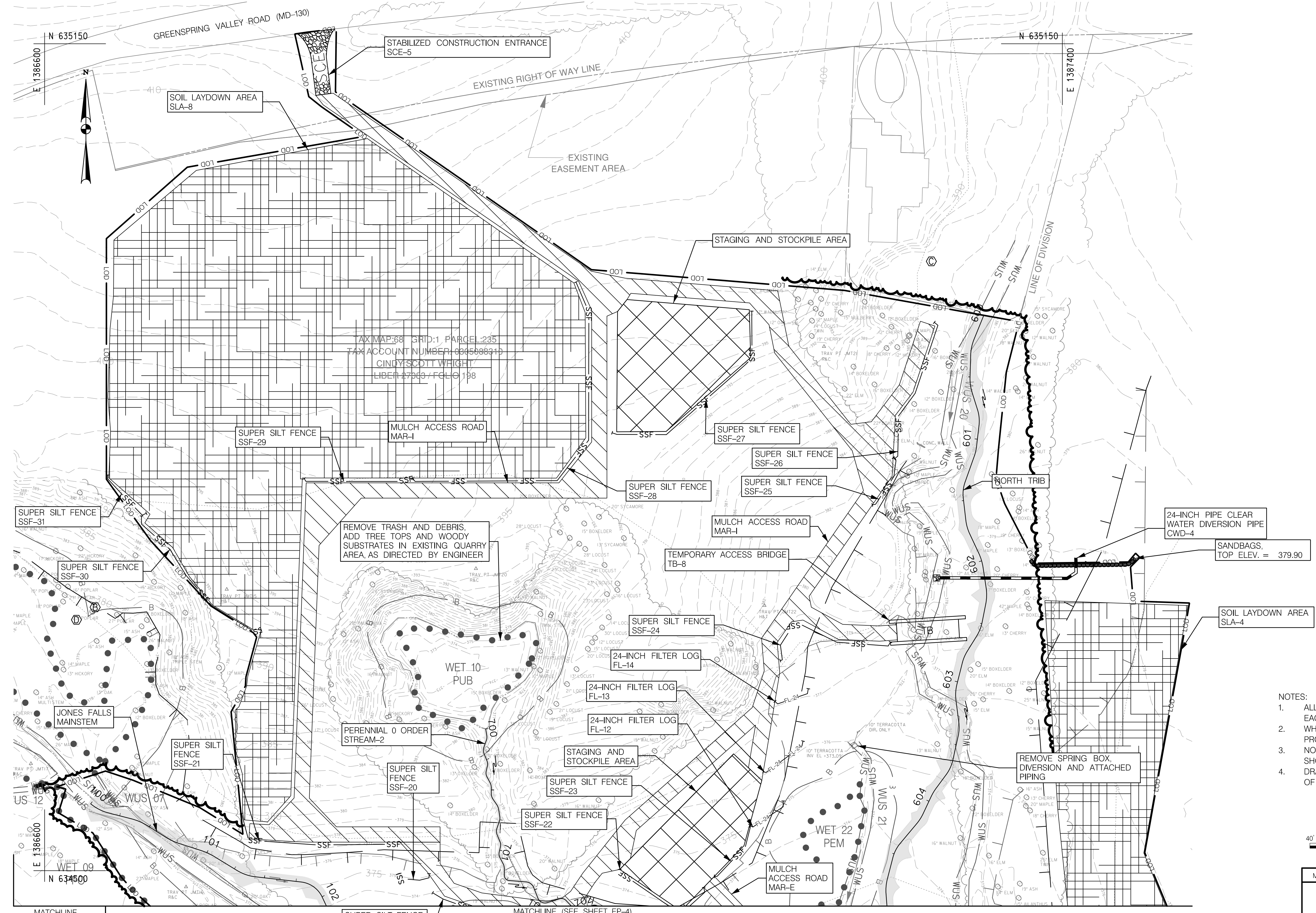
ECCLESTON MITIGATION SITE

REVISIONS
100% SUBMISSION
NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN - PHASE 01			
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002	
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000	
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY	
DRAWN BY PVC		LOGMILE	
CHECKED BY JJM /MRG		HORIZONTAL SCALE N/A	
F.A.P. NO. N/A		VERTICAL SCALE N/A	
DRAWING NO. EP - 5	OF 31	SHEET NO. 55	OF 86

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 Wednesday, April 28, 2021 AT 07:19 AM

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION



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SCALE: 1" = 40'

OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRICENING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

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 OWINGS MILLS, MD 21117



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ECCLESTON MITIGATION SITE

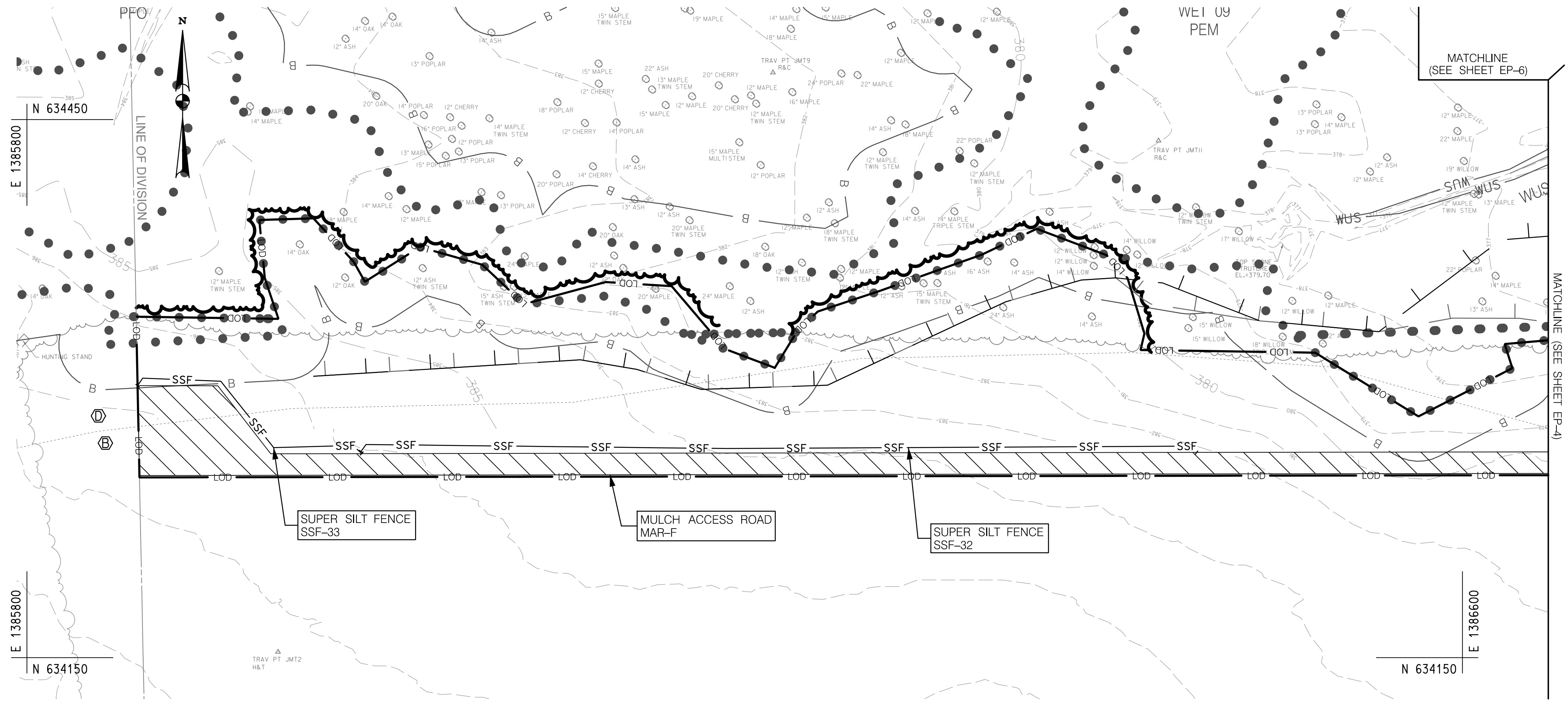
REVISIONS
100% SUBMISSION
NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN - PHASE 01			
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO.	17-10977-002
MDE PROJECT NO.	21-SF-0044	CONTRACT NO.	KH-3038-0000
DESIGNED BY	PVC	COUNTY	BALTIMORE COUNTY
DRAWN BY	PVC	LOGMILE	
CHECKED BY	JJM /MRG	HORIZONTAL SCALE	N/A
F.A.P. NO.	N/A	VERTICAL SCALE	N/A
DRAWING NO.	EP-6	OF	31
		SHEET NO.	56 OF 86

BY: barranger -

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SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION



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OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRONING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117

BY: barranger



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 JOHNSON, MIRMIRAN & THOMPSON, INC.
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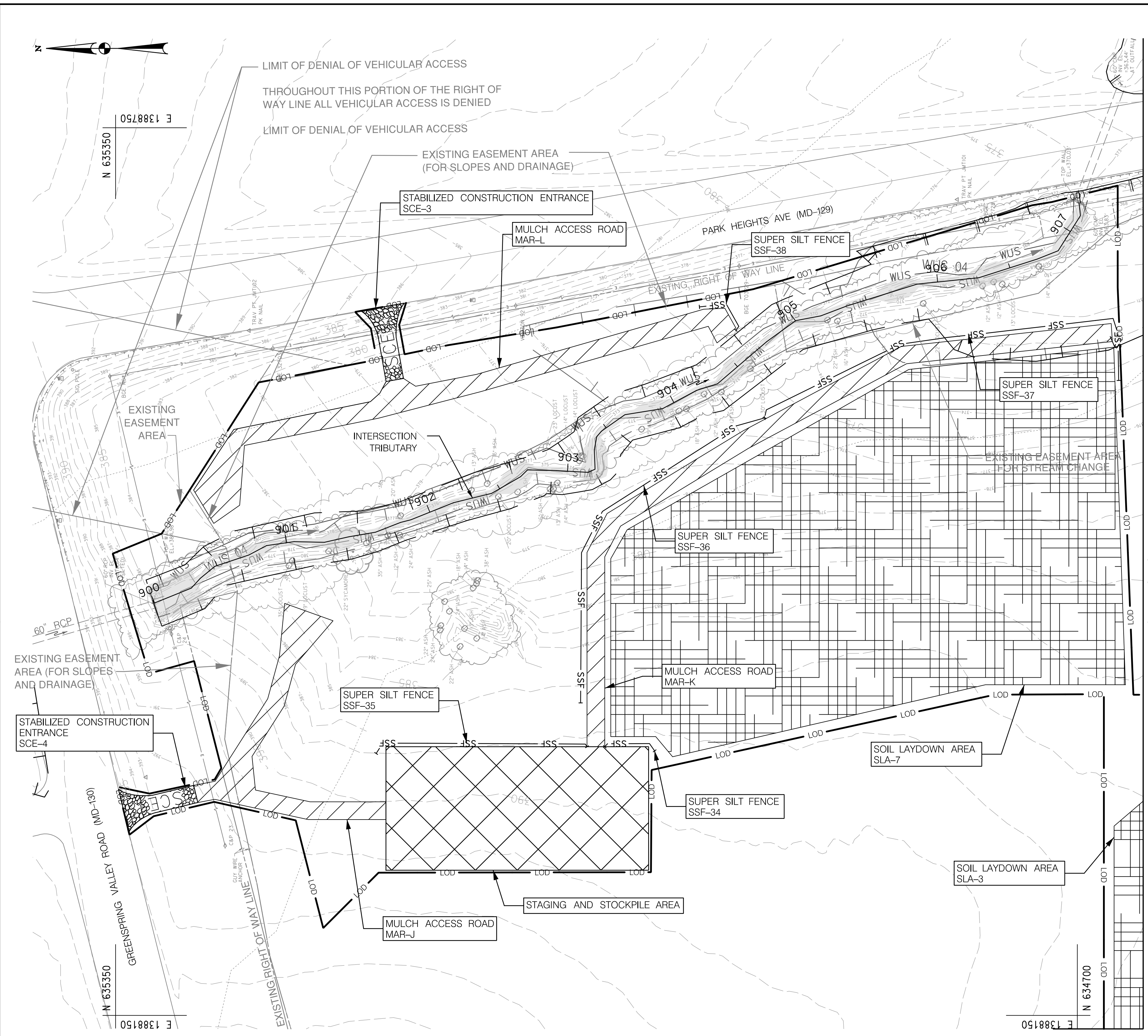
ECCLESTON MITIGATION SITE

REVISIONS	EROSION AND SEDIMENT CONTROL PLAN - PHASE 01	
100% SUBMISSION	SCALE AS SHOWN	DATE APRIL 2021
NOT FOR CONSTRUCTION	MDE PROJECT NO. 21-SF-0044	PROJECT NO. 17-10977-002
	DESIGNED BY PVC	COUNTY BALTIMORE COUNTY
	CHECKED BY JMM /MRG	LOGMILE
	F.A.P. NO. N/A	HORIZONTAL SCALE N/A
		VERTICAL SCALE N/A
	DRAWING NO. EP-7 OF 31	SHEET NO. 57 OF 86

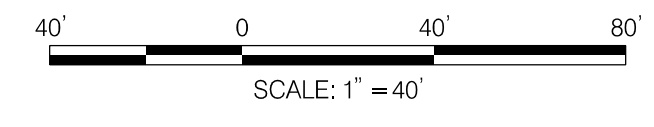
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SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION

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 - 3.



MATCHLINE (SEE SHEET EP-9)



OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRIDGING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117

EROSION AND SEDIMENT CONTROL PLAN - PHASE 01

REVISIONS

100% SUBMISSION

NOT FOR CONSTRUCTION

SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY
DRAWN BY PVC		LOGMILE
CHECKED BY JJM / MRG		HORIZONTAL SCALE N/A
F.A.P. NO. N/A		VERTICAL SCALE N/A

DRAWING NO. **EP-8** OF **31** SHEET NO. 58 OF 86

BY: barranger -

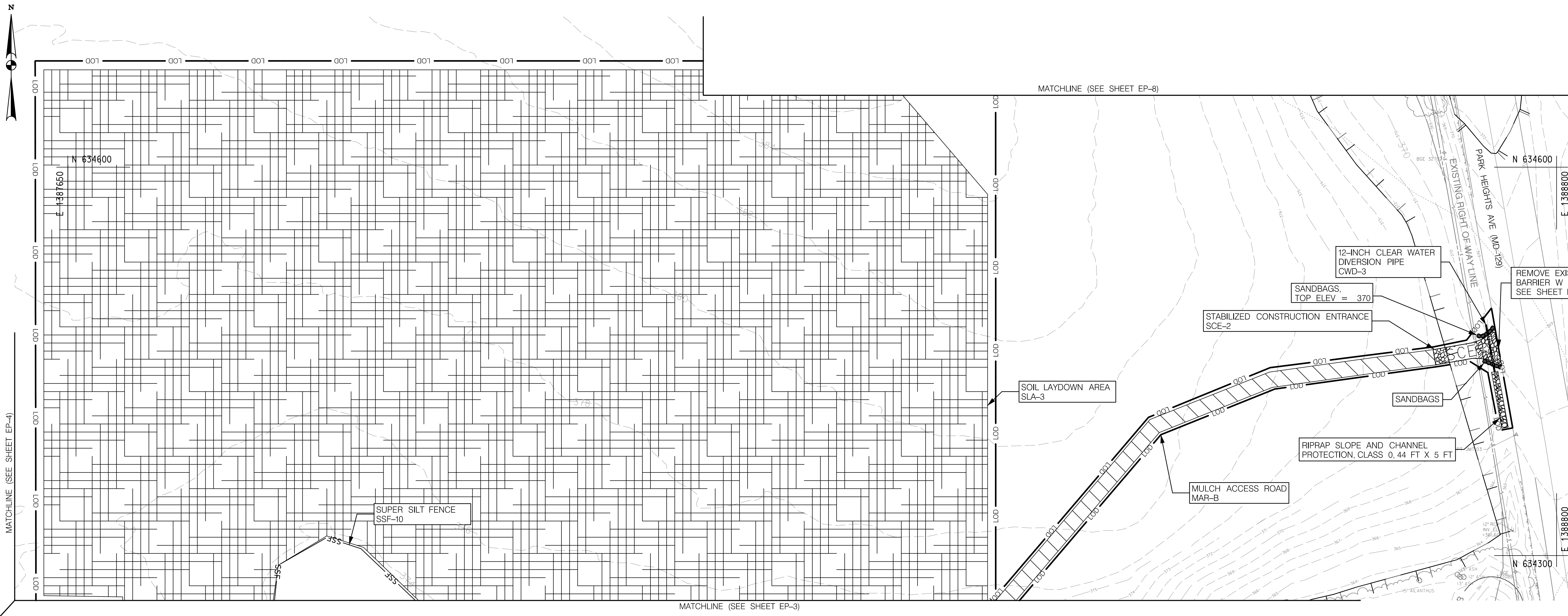




DESIGN PROFESSIONAL
 JEREMY KOSER
 JOHNSON, MIRIRAN & THOMPSON, INC.
 40 WIGHT AVENUE, HUNT VALLEY, MD 21030
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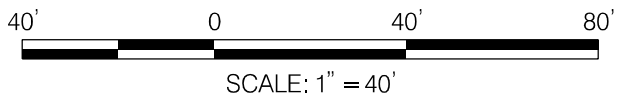
PROFESSIONAL CERTIFICATION
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ECCLESTON MITIGATION SITE



SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION

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OWNER / DEVELOPER INFORMATION
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ECCLESTON MITIGATION SITE

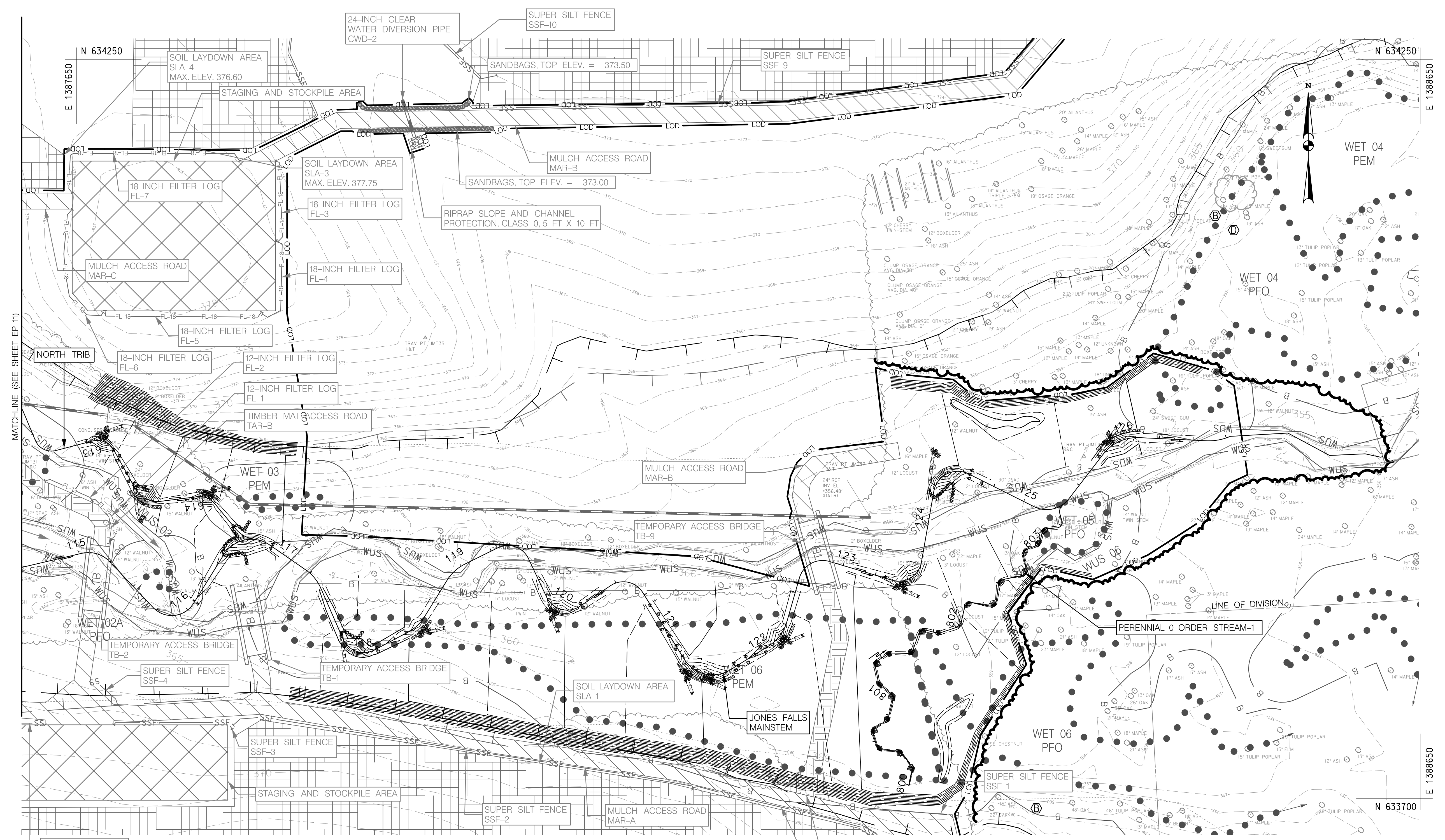
REVISIONS
100% SUBMISSION
NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN - PHASE 01			
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002	
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000	
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY	
DRAWN BY PVC		LOGMILE	
CHECKED BY JJM /MRG		HORIZONTAL SCALE N/A	
F.A.P. NO. N/A		VERTICAL SCALE N/A	
DRAWING NO. EP-9	OF 31	SHEET NO. 59	OF 86

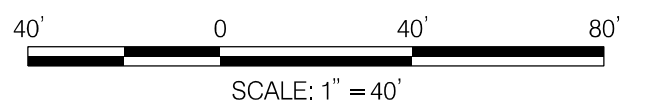
BY: barranger -

C:\2017\170977_002_Eccleston_PRRM_Turnkey\CADD\YES_P0109_Eccleston.dgn Wednesday, April 28, 2021 AT 07:21 AM

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION



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 3. LOD INCLUDED FOR PREVIOUSLY INSTALLED ACCESS ROAD. SEE PHASE 1 OF CONSTRUCTION FOR LIMITS OF ACCESS ROAD.
 4. THE CONTRACTOR SHALL SET UP PUMP-AROUND PRACTICES FOR A DISTANCE OF NO MORE THAN 500- FEET OF EXISTING STREAM LENGTH AT ONE TIME, PER PUMP-AROUND PRACTICE.
 5. EXCESS SOIL TO BE PLACED ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1 THROUGH SLA-8) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9 AS DIRECTED BY THE ENGINEER. THICKNESS MAY VARY. DRAINAGE PATTERNS ARE NOT TO BE ALTERED WITH THE PLACEMENT OF THE SOIL IN THE SOIL LAYDOWN AREAS.



OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRICENING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117

ECCLESTON MITIGATION SITE

DESIGN PROFESSIONAL
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 TEL: 410-316-2360
 EMAIL: JKoser@jmt.com

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EROSION AND SEDIMENT CONTROL PLAN - PHASE 02

REVISIONS

100% SUBMISSION

NOT FOR CONSTRUCTION

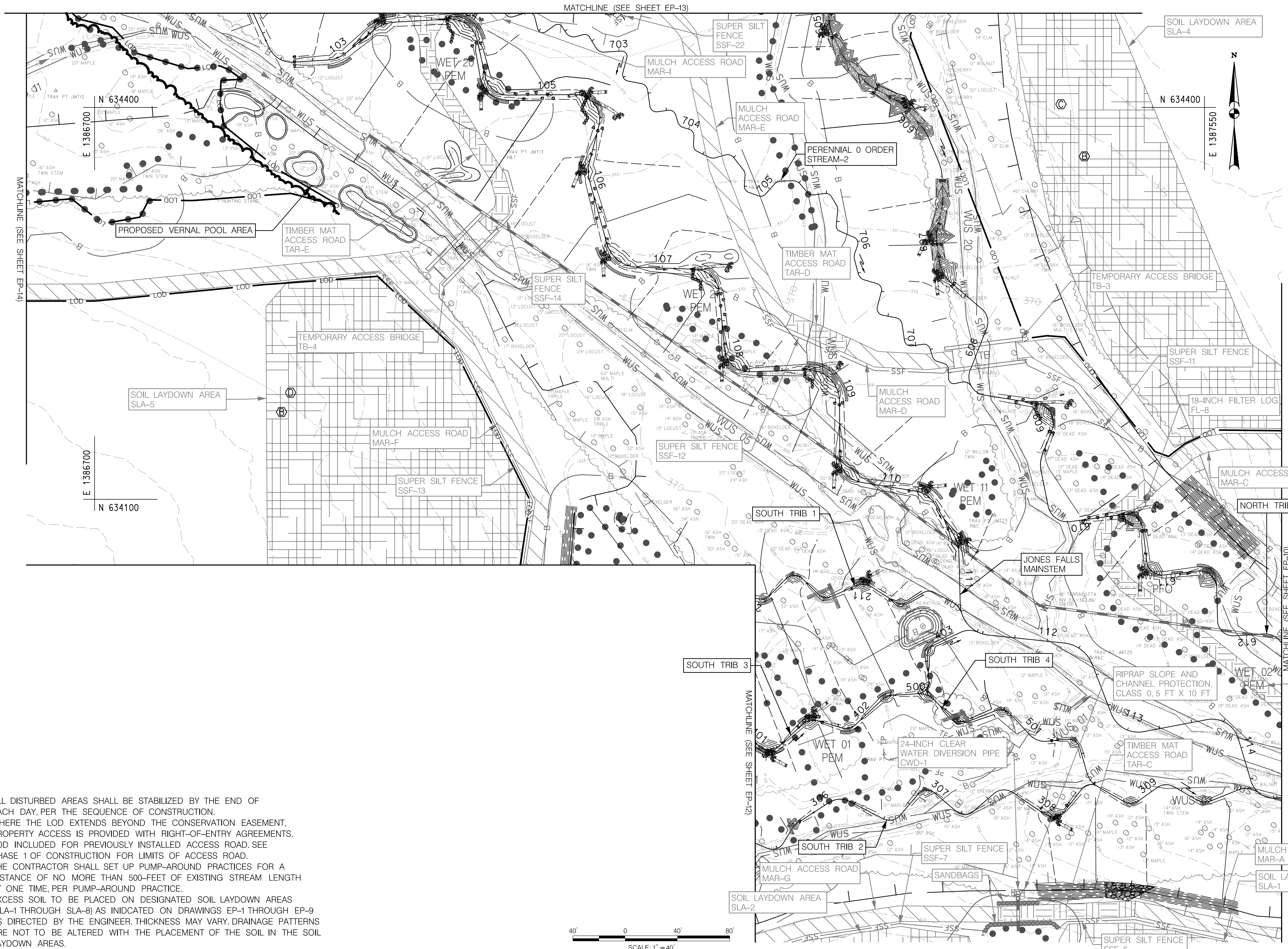
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY
DRAWN BY PVC		LOGMILE
CHECKED BY JMM /MRG		HORIZONTAL SCALE N/A
F.A.P. NO. N/A		VERTICAL SCALE N/A
DRAWING NO. EP-10	OF 31	SHEET NO. 60 OF 86



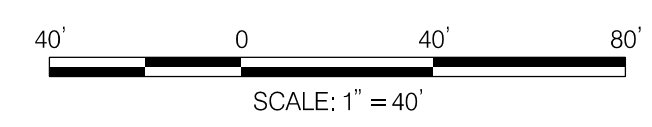
BY: barranger

C:\2021\1710977_002_Erosion\PRM_Turnin\CAD\EP02.dwg, PLOT01, Erosion.dgn, Wednesday, April 28, 2021 AT 07:22 AM

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION



- NOTES:
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 3. THE CONTRACTOR SHALL SET UP PUMP-AROUND PRACTICES FOR A DISTANCE OF NO MORE THAN 500-FEET OF EXISTING STREAM LENGTH AT ONE TIME, PER PUMP-AROUND PRACTICE.
 4. EXCESS SOIL TO BE PLACED ON DESIGNATED SOIL LAYDOWN AREAS (SLA-1 THROUGH SLA-5) AS INDICATED ON DRAWINGS EP-1 THROUGH EP-9 AS DIRECTED BY THE ENGINEER. THICKNESS MAY VARY. DRAINAGE PATTERNS ARE NOT TO BE ALTERED WITH THE PLACEMENT OF THE SOIL IN THE SOIL LAYDOWN AREAS.



OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRACING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

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 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117

ECCLESTON MITIGATION SITE

DESIGN PROFESSIONAL
 JEREMY KOSER
 JOHNSON, MIRMIRAN & THOMPSON, INC.
 40 WIGHT AVENUE, HUNT VALLEY, MD 21030
 TEL: 410-316-2360
 EMAIL: JKoser@jmt.com

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. 31183, EXPIRATION DATE: 1/13/2023.



REVISIONS

100% SUBMISSION
NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN - PHASE 02

SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY
DRAWN BY PVC		LOGMILE
CHECKED BY JMM /MRG		HORIZONTAL SCALE N/A
F.A.P. NO. N/A		VERTICAL SCALE N/A

DRAWING NO. **EP - 11** OF **31** SHEET NO. 61 OF 86



BY: K Higgins

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SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION



N 634000

E 1386300

MATCHLINE (SEE SHEET EP-11)

AREA OF TITLE THAT POSSIBLY LIES WITHIN OLD RAILROAD

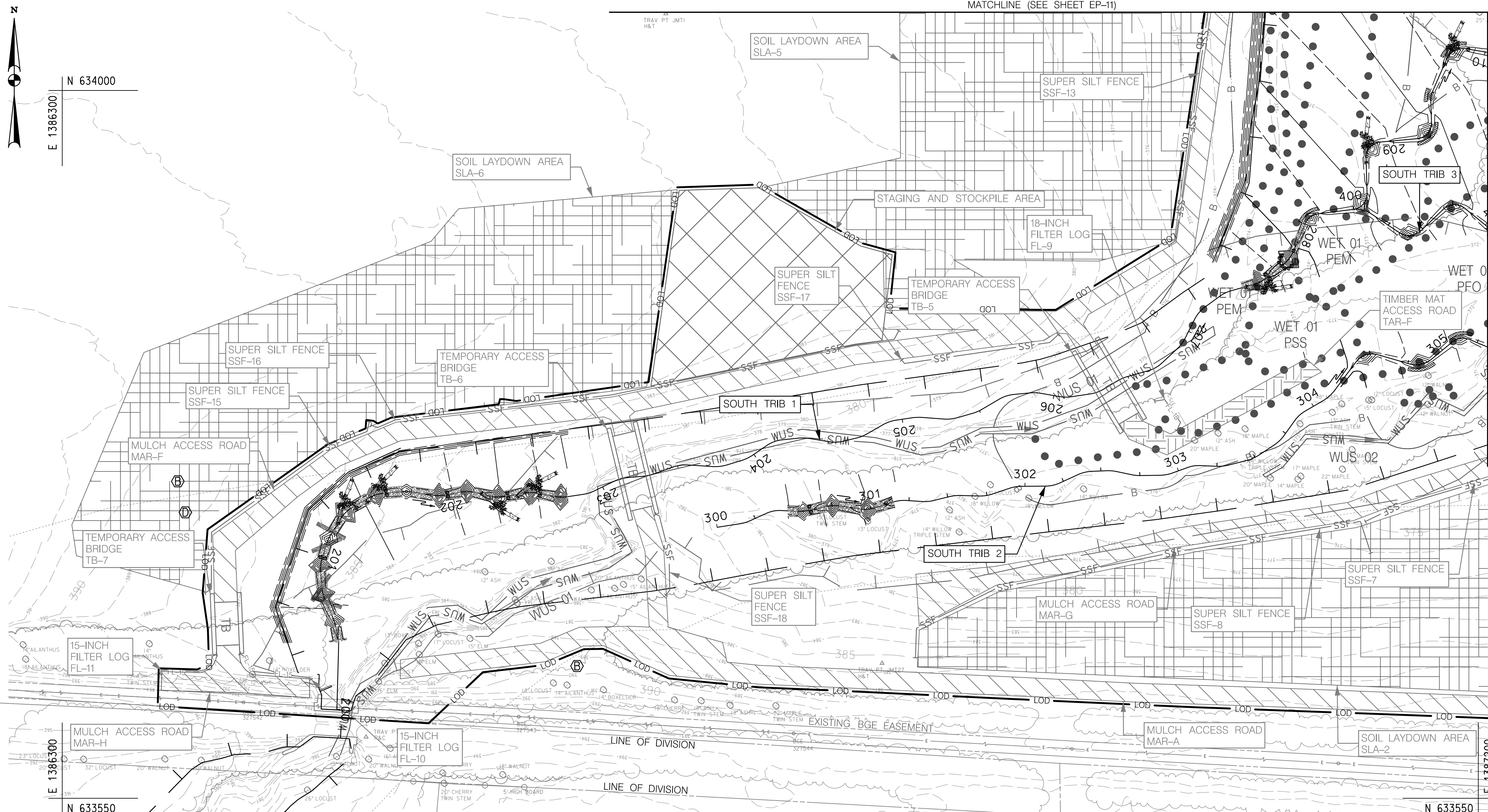
E 1386300

N 633550

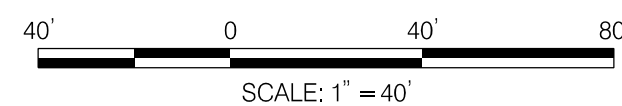
MATCHLINE (SEE SHEET EP-11)

E 1387200

N 633550



- NOTES:
1. ALL DISTURBED AREAS SHALL BE STABILIZED BY THE END OF EACH DAY, PER THE SEQUENCE OF CONSTRUCTION.
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OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRACING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117

BY: barranger



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ECCLESTON MITIGATION SITE

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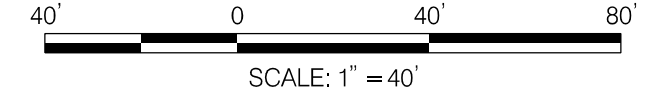
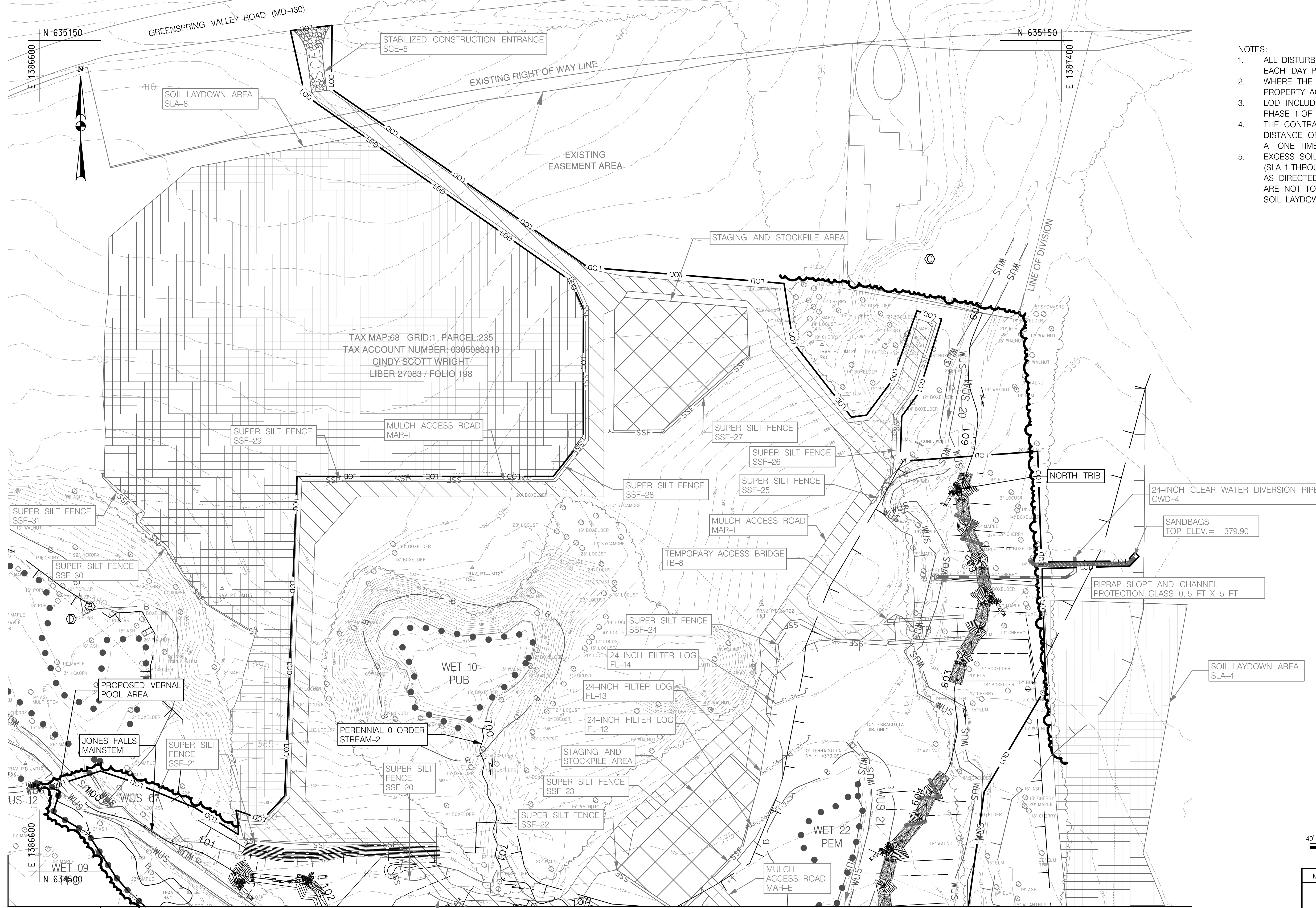
EROSION AND SEDIMENT CONTROL PLAN - PHASE 02			
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002	
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000	
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY	
DRAWN BY PVC		LOGMILE	
CHECKED BY JMM /MRG		HORIZONTAL SCALE N/A	
F.A.P. NO. N/A		VERTICAL SCALE N/A	
DRAWING NO. EP - 12	OF 31	SHEET NO. 62	OF 86

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 Wednesday, April 28, 2021 AT 07:24 AM

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION

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OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRIDGING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117

MATCHLINE
 (SEE SHEET EP-14)

MATCHLINE (SEE SHEET EP-11)



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 JOHNSON MIRMIRAN & THOMPSON INC.
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EROSION AND SEDIMENT CONTROL PLAN - PHASE 02

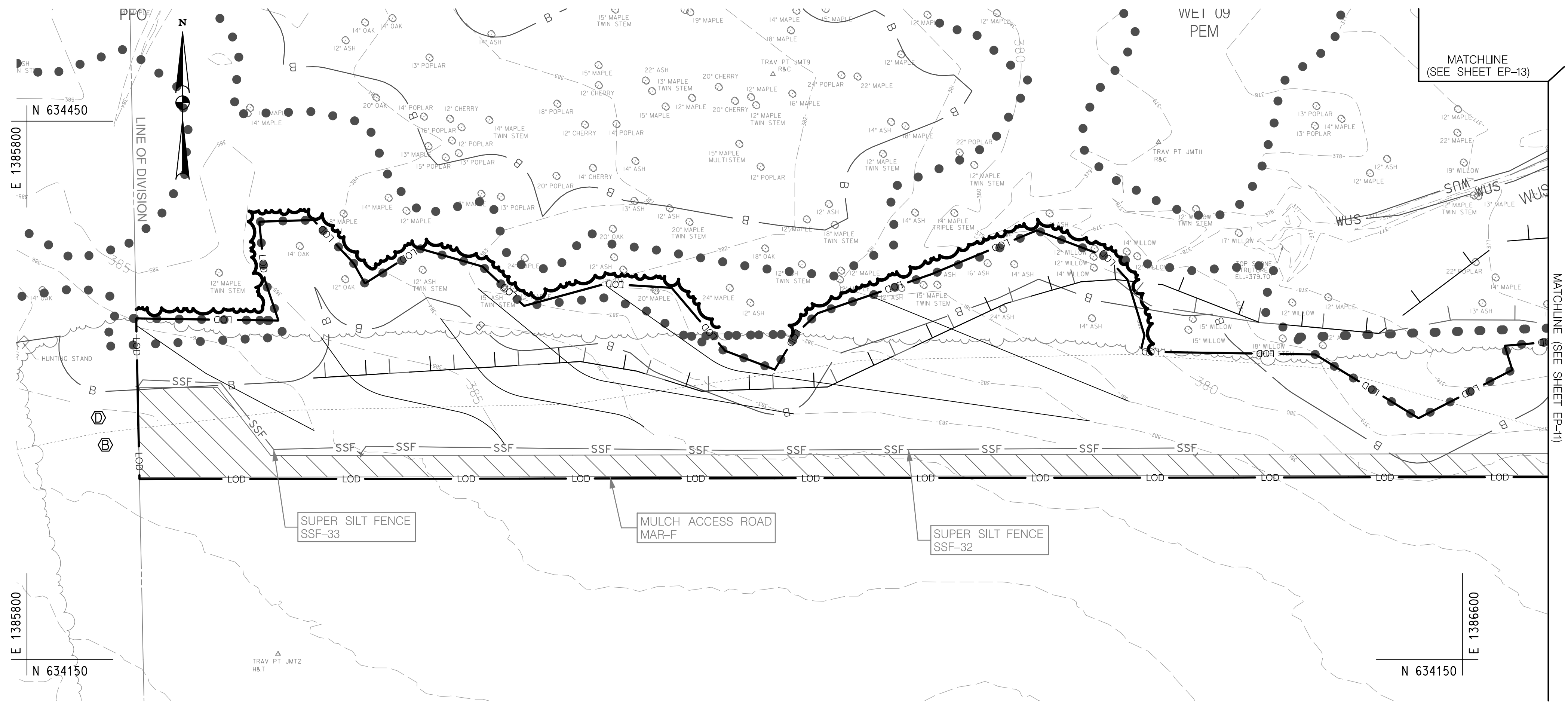
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY
DRAWN BY PVC		LOGMILE
CHECKED BY JMM /MRG		HORIZONTAL SCALE N/A
F.A.P. NO. N/A		VERTICAL SCALE N/A

DRAWING NO. EP-13 OF 31 SHEET NO. 63 OF 86

BY: barranger -

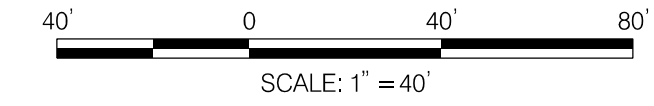
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OWNER / DEVELOPER INFORMATION
 MARYLAND TRANSPORTATION AUTHORITY
 2310 BRIDGING HWY
 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
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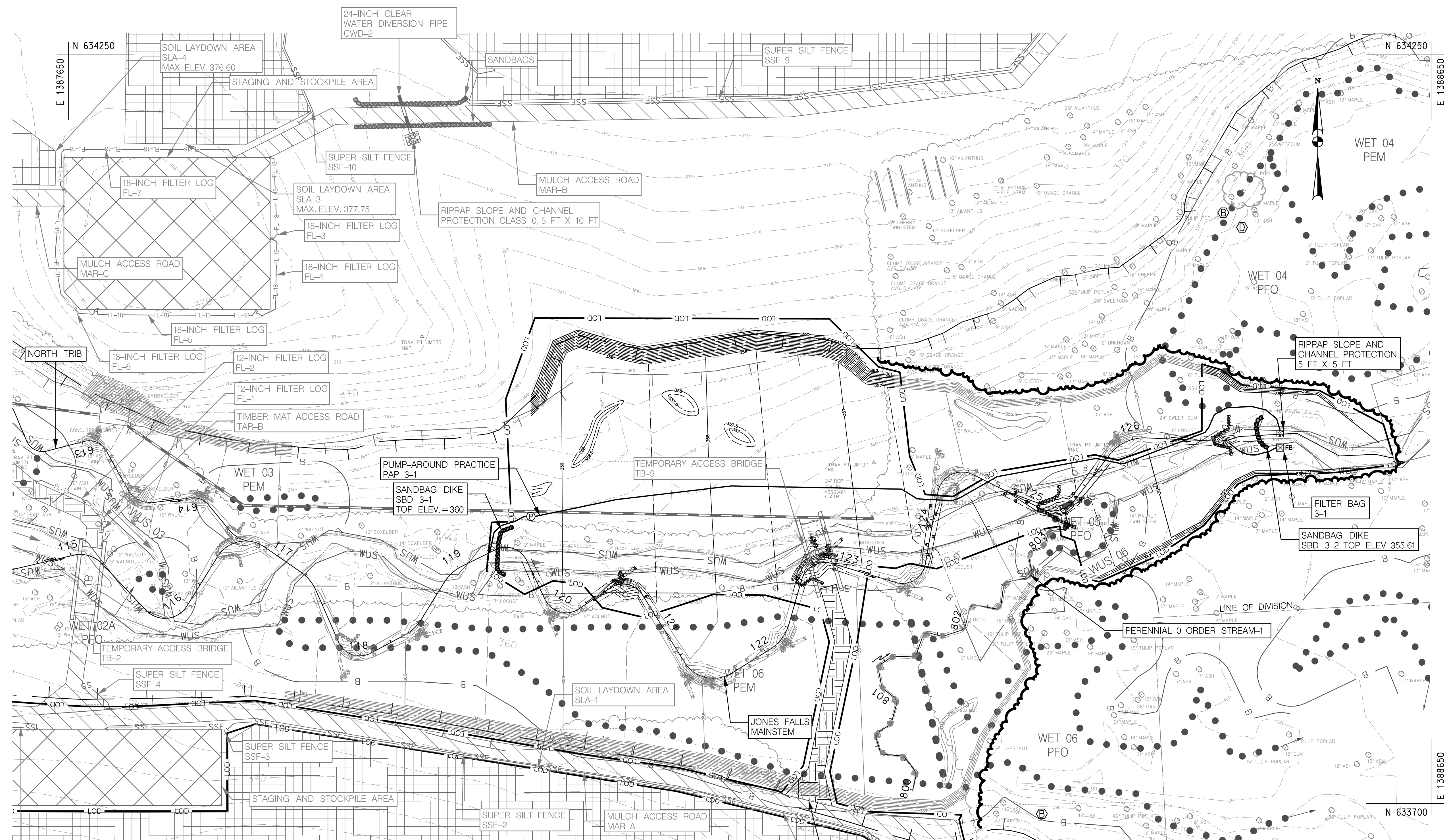
REVISIONS
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NOT FOR CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN - PHASE 02			
SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO.	17-10977-002
MDE PROJECT NO.	21-SF-0044	CONTRACT NO.	KH-3038-0000
DESIGNED BY	PVC	COUNTY	BALTIMORE COUNTY
DRAWN BY	PVC	LOGMILE	
CHECKED BY	JJM /MRG	HORIZONTAL SCALE	N/A
F.A.P. NO.	N/A	VERTICAL SCALE	N/A
DRAWING NO.	EP-14	OF	31
SHEET NO.	64	OF	86

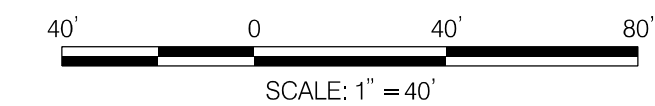
BY: barranger

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 Wednesday, April 28, 2021 AT 07:25 AM

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION



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 BALTIMORE, MD 21224

MARYLAND COORDINATE SYSTEM - HOR. NAD 8391 MD STATE PLANE VERT. NAVD 88

GREENSPRING VALLEY ROAD
 SW CORNER PARK HEIGHTS AVE
 OWINGS MILLS, MD 21117

EROSION AND SEDIMENT CONTROL PLAN - PHASE 03

SCALE AS SHOWN	DATE APRIL 2021	PROJECT NO. 17-10977-002
MDE PROJECT NO. 21-SF-0044		CONTRACT NO. KH-3038-0000
DESIGNED BY PVC		COUNTY BALTIMORE COUNTY
DRAWN BY PVC		LOGMILE
CHECKED BY JJM /MRG		HORIZONTAL SCALE N/A
F.A.P. NO. N/A		VERTICAL SCALE N/A

DRAWING NO. **EP-15** OF **31** SHEET NO. 65 OF 86

ECCLESTON MITIGATION SITE

DESIGN PROFESSIONAL
 JEREMY KOSER
 JOHNSON, MIRMIRAN & THOMPSON, INC.
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BY: K. Higgins

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