DALLAS AREA MUNICIPAL AUTHORITY
DALLAS TOWNSHIP, LUZERNE COUNTY, PENNSYLVANIA

STORMWATER BMP IMPROVEMENTS
SITE P6

UNDERGROUND UTILITY LINE PROTECTION ACT

ARRO CONSULTING, INC. HEREBY STATES THAT, PURSUANT TO THE PROVISIONS OF ACT NO. ACT 287 OF 1974 AS AMENDED BY ACT 50 OF 2017 OF THE PENNSYLVANIA LEGISLATURE, IT HAS COMPLIED WITH THE DESIGNER'S DUTIES PROVISIONS OF THE ACT IN PREPARING THESE DRAWINGS REQUIRING EXCAVATION OR DEMOLITION WORK AT SITES WITHIN THE POLITICAL SUBDIVISION(S) SHOWN ON THE DRAWINGS.

ARRO CONSULTING, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY OR ASSURANCE OR OTHERWISE GUARANTEE THAT THE INFORMATION RECEIVED PURSUANT TO SAID ACT FROM THE FACILITY OWNER, AS THE TERM FACILITY OWNER IS DEFINED IN THE ACT, AS REFLECTED ON THESE DRAWINGS IS CORRECT OR ACCURATE.

DATE: 07/06/2022 BY: ARRO CONSULTING, INC.

PA ONE CALL SERIAL NO: 20221872164

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 or 811 STOP! CALL BEFORE YOU DIG!

THE REFERENCED ACT REQUIRES NOTIFICATION BY DESIGNERS, CONTRACTORS, OR ANY OTHER PARTY INVOLVED IN DISTURBING THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH.

UTILITY LIST

COMPANY: DALLAS TOWNSHIP
ADDRESS: 105 LT MICHAEL CLEARY DR
DALLAS, PA. 18612
CONTACT: GARY VANDEUTSCH
EMAIL: GVANDEUTSCH@DALLASTWP.ORG

COMPANY: DALLAS AREA MUNICIPAL AUTHORITY
ADDRESS: 101 MEMORIAL HWY
SHAVERTOWN, PA. 187089603
CONTACT: AUTHORITY PERSONNEL

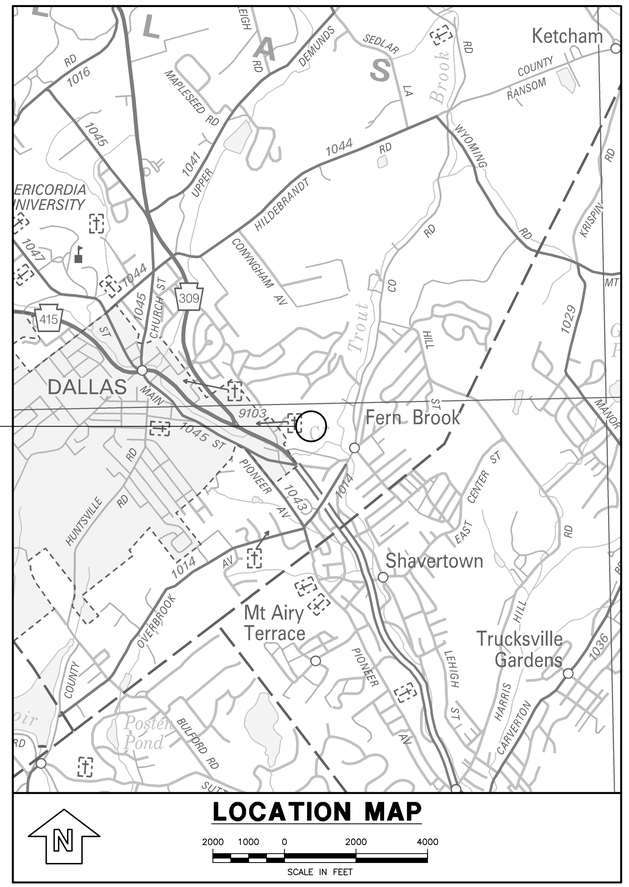
COMPANY: DALLAS SCHOOL DISTRICT
ADDRESS: 2000 CONYGHAM AVENUE
DALLAS, PA. 18612
CONTACT: CHRIS GALLAGHER
EMAIL: CGALLAGHER@DSDHS.COM

COMPANY: VEOLIA WATER PENNSYLVANIA INC
ADDRESS: RTE 309
PO BOX J
DALLAS, PA. 18612
CONTACT: DAN HARRISON
EMAIL: DAN.HARRISON@VEOLIA.COM

COMPANY: UGI UTILITIES INC
ADDRESS: 1 UGI DR
WILKES BARRE, PA. 18711
CONTACT: AMANDA NIXON
EMAIL: ANIXON@UGI.COM

COMPANY: UGI UTILITIES INC
ADDRESS: 1 UGI CENTER
WILKES BARRE, PA. 18711
CONTACT: JONATHAN GENSEL
EMAIL: JGENSEL@UGI.COM

PROJECT LOCATION



LOCATION MAP

DRAWING INDEX

NO	REVISION	DATE	BY	APP.

NO	REVISION	DATE	BY	APP.

MICHAEL J. BINGHAM, PE
RELEASED BY

DESIGN: BCU	CHECKED:
DRAWN: KLL	CHECKED:
DATE: JULY 2022	SURVEY DATE: APRIL 5, 2022
	FIELD BOOK: WEBER

SEAL

SEAL

CLIENT & PROJECT
DALLAS AREA MUNICIPAL AUTHORITY
101 N MEMORIAL HIGHWAY
SHAVERTOWN, PA 18708

STORMWATER BMP IMPROVEMENTS – SITE P5
DALLAS BOROUGH, LUZERNE COUNTY, PA

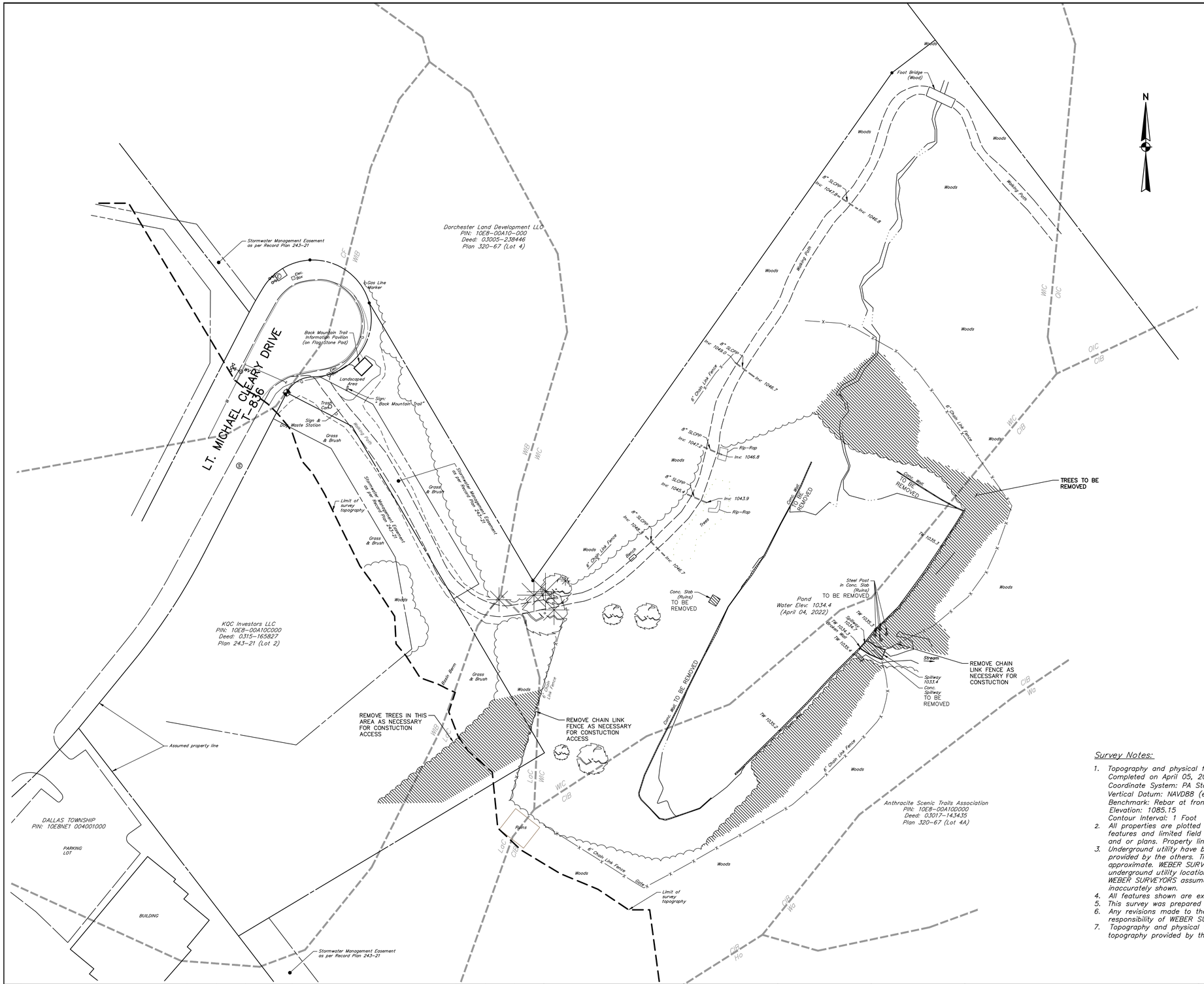
ARRO
108 West Airport Road
Lititz, Pennsylvania 17543
Tel 717.569.7021

TITLE: TITLE SHEET

SCALE	DWG. NO.
AS SHOWN	

PROJECT NO.	SHEET NO.	REV.
11138.09	1 OF 7	

Dwg. Name: 1113809-D01.DWG Plotted: 7/12/2022 12:39 PM



LEGEND

- UTILITY POLE
- LIGHT STANDARD
- VALVE
- SEWER VENT
- MANHOLE
- STORM SEWER
- FIRE HYDRANT
- HEDGE ROW
- EDGE OF MACADAM
- EDGE OF GRAVEL
- CURB
- PROPERTY LINE
- LEGAL R/W LINE
- 1025 CONTOUR LINES
- SHRUB
- DECIDUOUS TREE
- CONIFER TREE
- LANDSCAPED AREA
- EXISTING CENTERLINE
- FARM FIELDS
- STREAMS
- S SAN SEWER
- W WATER
- G GAS
- OH OVERHEAD ELEC
- UE UNDERGROUND ELEC
- SOILS BOUNDARY LINE
- FEATURES TO BE DEMOLISHED

SOILS

CF – CUT AND FILL LAND

CIB – CHIPPEWA SILT LOAM
3 TO 8 PERCENT SLOPES

Ho – HOLLY SILT LOAM

LaC – LACKAWANA CHANNERY SILT LOAM
8 TO 25 PERCENT SLOPES

OIC – OQUAGA AND LORDSTOWN CHANNERY SILT LOAMS,
8 TO 15 PERCENT SLOPES

WIB – WELLSBORO CHANNERY SILT LOAMS,
3 TO 8 PERCENT SLOPES

WIC – WELLSBORO CHANNERY SILT LOAMS,
8 TO 15 PERCENT SLOPES

Wa – WAYLAND SILT LOAM

Survey Notes:

1. *Topography and physical features shown hereon obtained from a field survey performed by WEBER SURVEYORS Completed on April 05, 2022. 931 Stony Battery Road, Landisville, PA (717)-898-9466. Coordinate System: PA State Plane, North Zone – 3701, Ref Frame: NAD83(2011) Epoch 2010.00. Vertical Datum: NAVD88 (established by GPS observation GEOID12B) Benchmark: Rebar at front lot corner east side cul-de-sac, See plan. Elevation: 1085.15 Contour Interval: 1 Foot*
2. *All properties are plotted from the deeds of record, recorded subdivision plans or lot plans, existing topographic features and limited field data. The accuracy of the plotting reflect the accuracy or inaccuracy of the deeds and or plans. Property lines were not surveyed by the Professional Land Surveyor responsible for this project.*
3. *Underground utility have been shown according to surface evidence, markings provided by others, and or plans provided by the others. The actual location of these utilities have not been field verified and the locations are approximate. WEBER SURVEYORS does not make any representation, warranty, assurance or guarantee that the underground utility location information provided by others and reflected on these drawings is correct or accurate. WEBER SURVEYORS assumes no responsibility for a any damage as a result of underground utilities omitted or inaccurately shown.*
4. *All features shown are existing unless otherwise noted.*
5. *This survey was prepared without the benefit of a title search.*
6. *Any revisions made to these plans after the date of plan preparation or latest revision date shall not be the responsibility of WEBER SURVEYORS. Plan release date April 11, 2022.*
7. *Topography and physical features shown heron outside the limit of survey topography is based on lidar topography provided by the Pennsylvania Spatial Data Access (PASDA).*

NO	REVISION	DATE	BY	APP.

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MICHAEL J. BINGHAM, PE
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DESIGN BCU	CHECKED
DRAWN KLL	CHECKED
DATE JULY 2022	SURVEY DATE APRIL 5, 2022
	FIELD BOOK WEBER

SEAL

SEAL

CLIENT & PROJECT
DALLAS AREA MUNICIPAL AUTHORITY
101 N MEMORIAL HIGHWAY
SHAVERTOWN, PA 18708

STORMWATER BMP IMPROVEMENTS – SITE P6
LUZERNE COUNTY, PA

ARRO
108 West Airport Road
Lititz, Pennsylvania 17543
Tel 717.569.7021

TITLE
EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE 0 20' 40' 80' 120'
SCALE: 1" = 40'

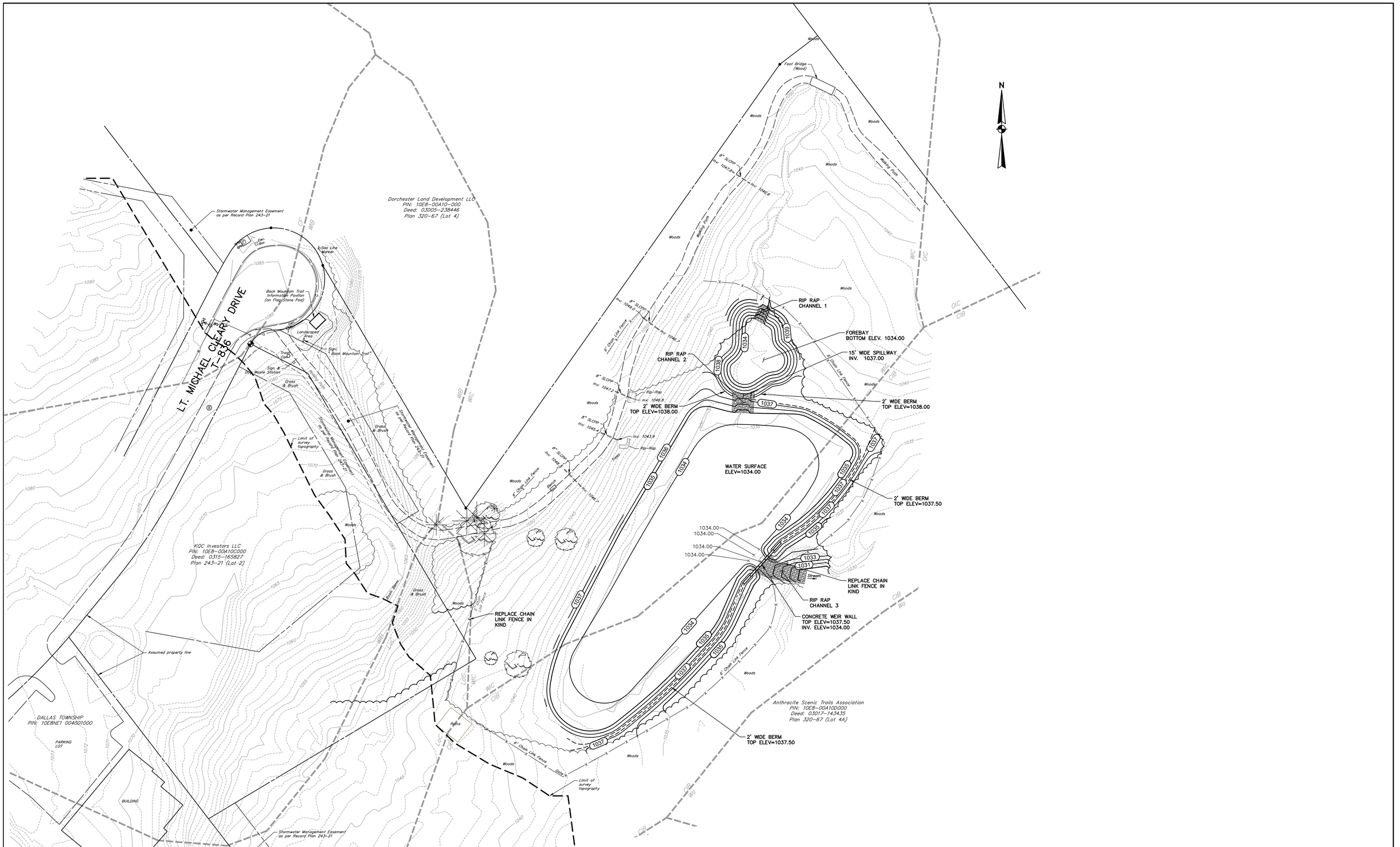
DWG. NO.

PROJECT NO. 11138.09

SHEET NO. 2 OF 7

REV.

Dwg. Name: 1113809-S11-P6.DWG Plotted: 7/12/2022 12:39 PM



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DATE: JULY 2022	SURVEY DATE: APRIL 5, 2022
	FIELD BOOK: WEBER

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DALLAS AREA MUNICIPAL AUTHORITY
101 N MEMORIAL HIGHWAY
SHAVERTOWN, PA 18708

STORMWATER BMP IMPROVEMENTS – SITE P6
LUZERNE COUNTY, PA

ARRO
108 West Airport Road
Lititz, Pennsylvania 17543
Tel 717.569.7021

TITLE

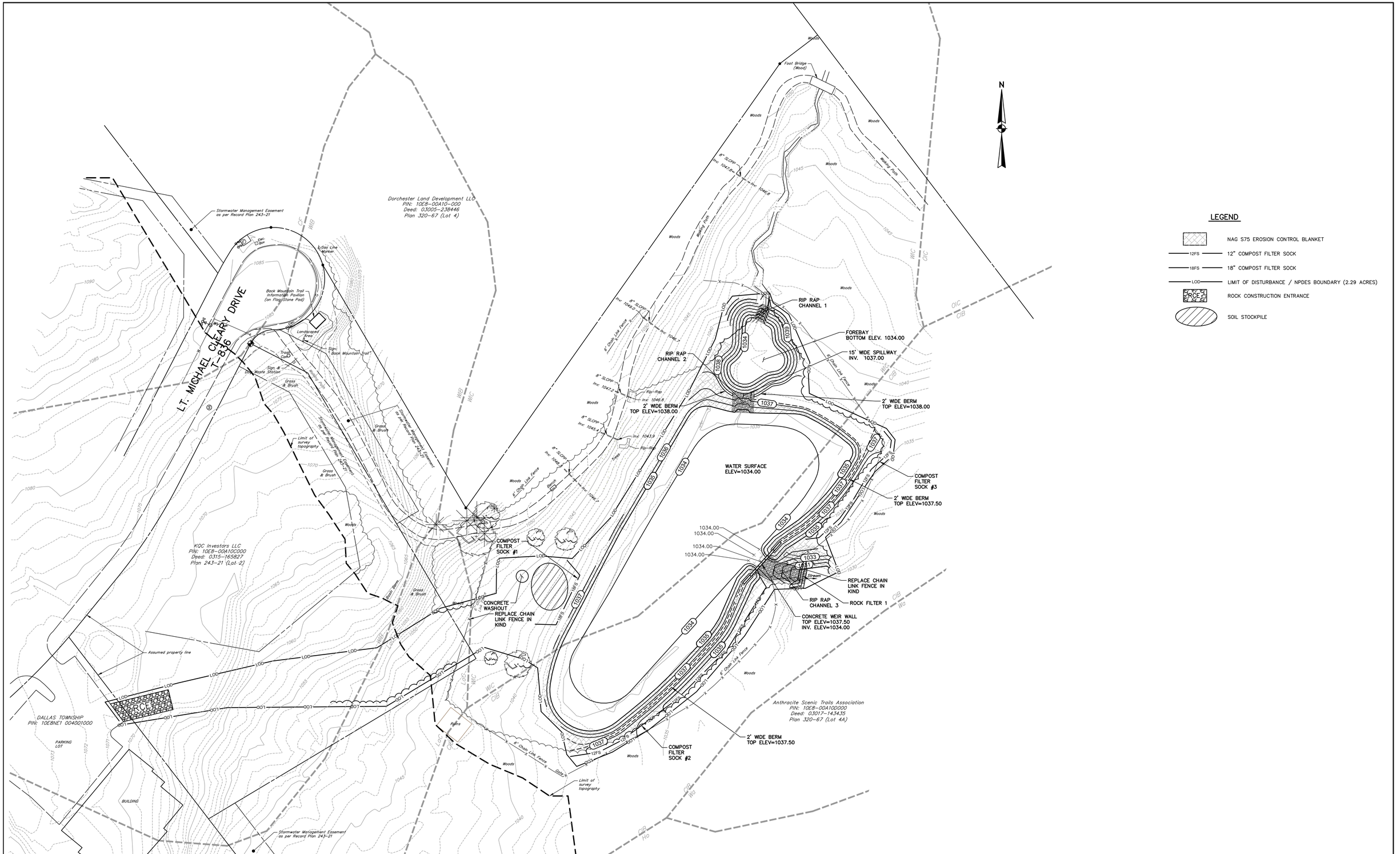
PROPOSED CONDITIONS

SCALE 0 20' 40' 80' 120'
SCALE: 1" = 40'

DWG. NO.

PROJECT NO.	SHEET NO.	REV.
11138.09	3 OF 7	

Dwg. Name: 1113809-S11-P6.DWG Plotted: 7/12/2022 12:39 PM



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DRAWN: KLL	CHECKED:
DATE: JULY 2022	SURVEY DATE: APRIL 5, 2022
	FIELD BOOK: WEBER

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CLIENT & PROJECT
DALLAS AREA MUNICIPAL AUTHORITY
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SHAVERTOWN, PA 18708

STORMWATER BMP IMPROVEMENTS – SITE P6
LUZERNE COUNTY, PA

ARRO
108 West Airport Road
Lititz, Pennsylvania 17543
Tel 717.569.7021

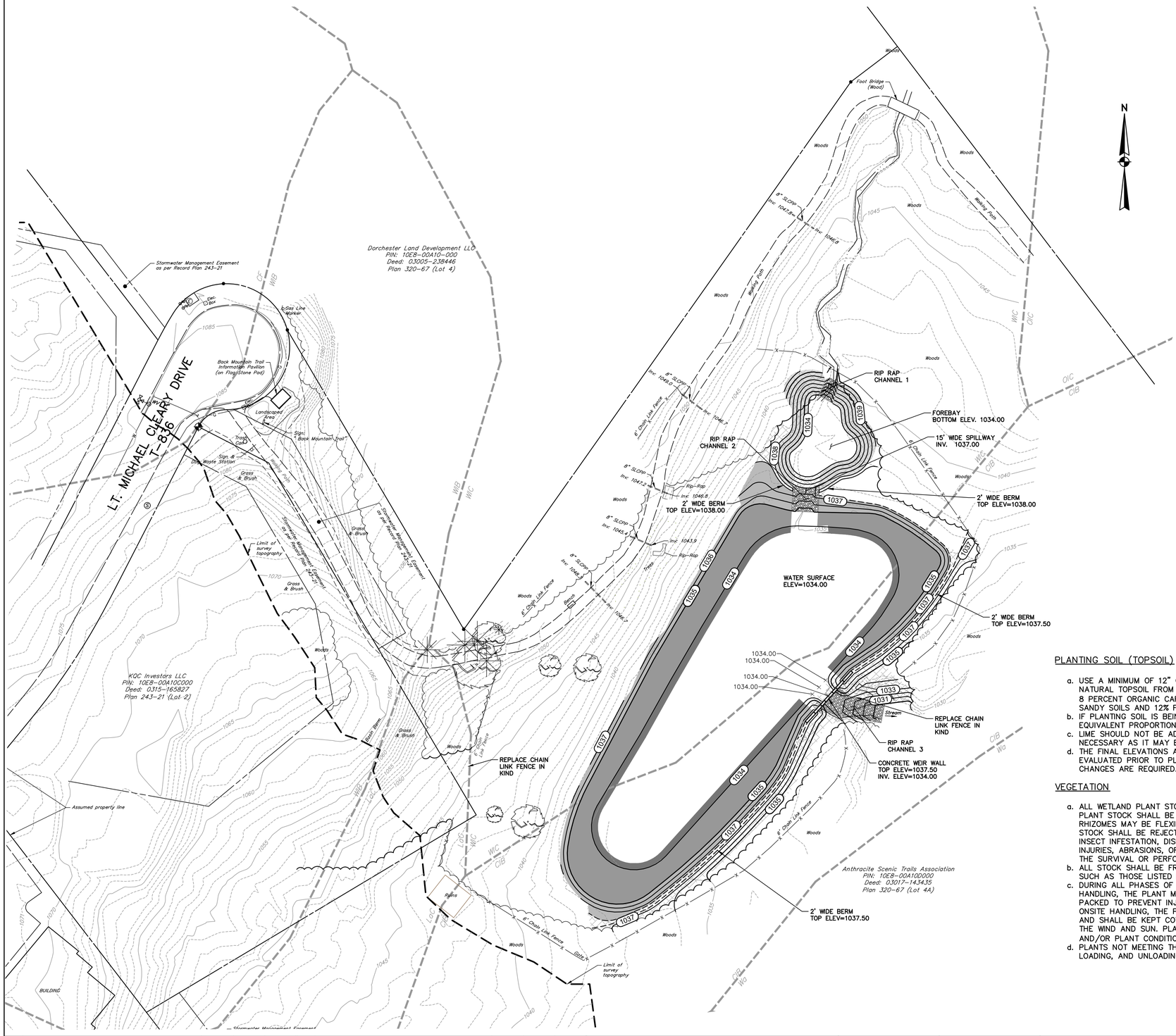
TITLE
EROSION AND SEDIMENT CONTROL PLAN

SCALE 0 20' 40' 80' 120'
SCALE: 1" = 40'

DWG. NO.

PROJECT NO.	SHEET NO.	REV.
11138.09	4 OF 7	

Dwg. Name: 1113809-S11-P6.DWG Plotted: 7/12/2022 12:39 PM



LEGEND

- ZONE 2 SHALLOW WATER TERRACE
- ZONE 3 LOW MARSH ZONE PLANTINGS
- ZONE 4 HIGH MARSH
- ZONE 5 FLOODPLAIN TERRACE

PLANTING SOIL (TOPSOIL)

a. USE A MINIMUM OF 12" OF TOPSOIL IN MARSH AREAS OF THE WETLAND. IF NATURAL TOPSOIL FROM THE SITE IS TO BE USED IT MUST HAVE AT LEAST 8 PERCENT ORGANIC CARBON CONTENT (BY WEIGHT) IN THE A-HORIZON FOR SANDY SOILS AND 12% FOR OTHER SOIL TYPES.
b. IF PLANTING SOIL IS BEING IMPORTED IT SHOULD BE MADE UP OF EQUIVALENT PROPORTIONS OF ORGANIC AND MINERAL MATERIALS.
c. LIME SHOULD NOT BE ADDED TO PLANTING SOIL UNLESS ABSOLUTELY NECESSARY AS IT MAY ENCOURAGE THE PROPAGATION OF INVASIVE SPECIES.
d. THE FINAL ELEVATIONS AND HYDROLOGY OF THE WETLAND ZONES SHOULD BE EVALUATED PRIOR TO PLANTING TO DETERMINE IF GRADING OR PLANTING CHANGES ARE REQUIRED.

VEGETATION

a. ALL WETLAND PLANT STOCK SHALL EXHIBIT LIVE BUDS OR SHOOTS. ALL PLANT STOCK SHALL BE TURGID, FIRM, AND RESILIENT. INTERNODES OF RHIZOMES MAY BE FLEXIBLE AND NOT NECESSARILY RIGID. SOFT OR MUSHY STOCK SHALL BE REJECTED. THE STOCK SHALL BE FREE OF DELETERIOUS INSECT INFESTATION, DISEASE AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT THAT COULD ADVERSELY AFFECT THE SURVIVAL OR PERFORMANCE OF THE PLANTS.
b. ALL STOCK SHALL BE FREE FROM INVASIVE OR NUISANCE PLANTS OR SEEDS SUCH AS THOSE LISTED IN APPENDIX B.
c. DURING ALL PHASES OF THE WORK, INCLUDING TRANSPORT AND ONSITE HANDLING, THE PLANT MATERIALS SHALL BE CAREFULLY HANDLED AND PACKED TO PREVENT INJURIES AND DESICCATION. DURING TRANSIT AND ONSITE HANDLING, THE PLANT MATERIAL SHALL BE KEPT FROM FREEZING AND SHALL BE KEPT COVERED, MOIST, COOL, OUT OF WEATHER, AND OUT OF THE WIND AND SUN. PLANTS SHALL BE WATERED TO MAINTAIN MOIST SOIL AND/OR PLANT CONDITIONS UNTIL ACCEPTED.
d. PLANTS NOT MEETING THESE SPECIFICATIONS OR DAMAGED DURING HANDLING, LOADING, AND UNLOADING WILL BE REJECTED.

ZONE 2

SHALLOW WATER TERRACE

- SOFT STEM BULRUSH

ZONE 3

LOW MARSH ZONE PLANTINGS

- BROAD LEAF CATTAIL
- BLUE FLAG IRIS
- RICE CATGRASS

ZONE 5

FLOODPLAIN TERRACE

- SWAMP MILKWEED
- WOOL GRASS
- SILKY DOGWOOD

ZONE 5

FLOODPLAIN TERRACE

- SWITCHGRASS
- BLACKHAW
- RIVER BIRCH

PLANTING DETAIL

NO SCALE

NO	REVISION	DATE	BY	APP.

NO	REVISION	DATE	BY	APP.

MICHAEL J. BINGHAM, PE
RELEASED BY

DESIGN: BCU	CHECKED:
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DATE: JULY 2022	SURVEY DATE: APRIL 5, 2022
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STORMWATER BMP IMPROVEMENTS – SITE P6
LUZERNE COUNTY, PA

ARRO
108 West Airport Road
Lititz, Pennsylvania 17543
Tel 717.569.7021

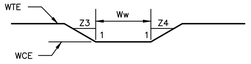
TITLE
LANDSCAPE PLAN

SCALE 0 20' 40' 80' 120'
SCALE: 1" = 40'

DWG. NO.

PROJECT NO.	SHEET NO.	REV.
11138.09	5 OF 7	

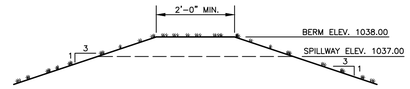
Dwg. Name: 1113809-S11-P6.DWG Plotted: 7/12/2022 12:39 PM



WEIR
SECTION Z–Z

BASIN NO.	WEIR					
	Z3 (FT)	Z4 (FT)	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	LINING *
FOREBAY 1	3	3	1038.00	1037.00	15	R–4 RIP–RAP

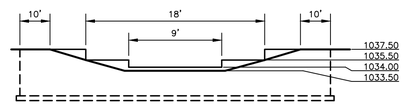
FOREBAY SPILLWAY
NO SCALE



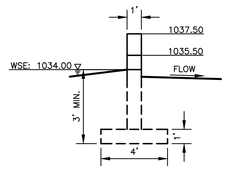
FOREBAY BERM DETAIL
NO SCALE

CONCRETE WEIR CONSTRUCTION NOTES:

1. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO ADEQUATELY BRACE THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.
2. CAST IN PLACE CONCRETE DESIGN STRENGTH 3,000 P.S.I. @ 28 DAYS.
3. CONCRETE COVER: BOTTOM OF FOOTINGS CAST AGAINST EARTH 3"
   OTHER FOUNDATION SURFACES 2"
4. ALL BACKFILL AGAINST FOUNDATIONS AND WALLS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180, METHOD C.
5. IF ROCK IS ENCOUNTERED, FOUNDATIONS AREAS ARE TO BE POURED DIRECTLY ON LEVEL ROCK.
6. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS AND DIMENSIONS WITH FIELD CONDITIONS PRIOR TO ORDERING OR FABRICATING ANY MATERIALS.
7. REINFORCING STEEL SHALL CONFORM TO ASTM A–615 GRADE 60. DETAILING, BENDING AND PLACEMENT OF ALL REINFORCING SHALL BE IN ACCORDANCE WITH LATEST A.C.I. CODE. MINIMUM LAP 36 BAR DIAMETERS.
8. REBAR SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
9. ASSUMED ALLOWABLE SOIL BEARING PRESSURE IS 2,000 PSI. CONTRACTOR TO PROVIDE SOILS TESTING AND VERIFY IN FIELD. BOTTOM OF FOOTING TO BE LOCATED 1' MINIMUM INTO EXISTING GROUND AND 3' MINIMUM BELOW FINISHED GRADE.
10. EXPANSION AND CONTRACTION JOINTS:
    A. JOINT LOCATIONS SHALL BE SHOWN ON CONTRACT DRAWINGS. IF NO LOCATIONS ARE GIVEN, CONCRETE RETAINING WALLS SHALL HAVE CONTRACTION JOINTS A MAXIMUM OF EVERY 30'–0" AND EXPANSION JOINTS WITH CORK TYPE EXPANSION MATERIAL A MAXIMUM OF EVERY 50"–0".
    B. STOP KEY x" BELOW WALL.
    C. REINFORCING STEEL SHALL NOT PASS THROUGH CONTRACTION OR EXPANSIONS JOINTS.
    D. ALL KEYS ARE NOMINAL SIZE.
    E. ONLY PLACE CONTRACTION AND EXPANSION JOINTS IN STEPS IF NO JOINT IN FOOTER.
11. THE CONCRETE WEIR SHALL BE EMBEDDED A MINIMUM OF 10' INTO THE BASIN BERM ON EACH SIDE.

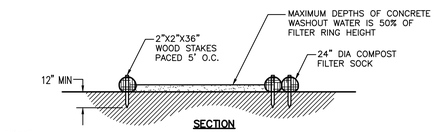


PROFILE



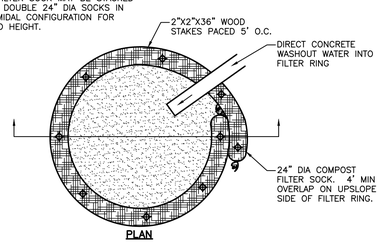
SECTION

CONCRETE WEIR WALL
NO SCALE



SECTION

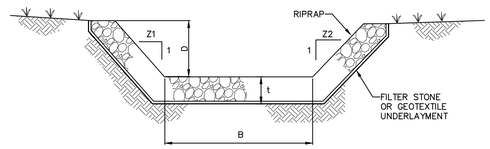
NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. 18" DIA FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIA SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.



PLAN

NOTE: A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.

CONCRETE WASHOUT DETAIL
NO SCALE



(LOOKING DOWNSTREAM)

CHANNEL CROSS–SECTION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	Z1 (FT)	Z2 (FT)	RIPRAP GRADATION (R–__)	RIPRAP DEPTH t (IN)	UNDERLAYMENT	UNDER–LAYMENT THICKNESS (IN)
1	N/A	6	1	3	3	4	18	GEOTEXTILE	N/A
2	N/A	10	1	3	3	4	18	GEOTEXTILE	N/A
3	N/A	10	1	3	3	4	18	GEOTEXTILE	N/A

NOTES:

FILTER STONE UNDERLAYMENT FOR BED SLOPES ≥ 0.10 FT/FT (10 %) SHALL BE USED.

CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL AFTER ROCK PLACEMENT. CHANNEL MUST BE OVER–EXCAVATED A SUFFICIENT AMOUNT TO ALLOW FOR THE VOLUME OF ROCK PLACED WITHIN THE CHANNEL WHILE PROVIDING THE SPECIFIED FINISHED DIMENSIONS.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE.

DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

THE MINIMUM ROCK THICKNESS (t) SHALL BE 1.5 TIMES THE MAX ROCK SIZE.

RIPRAP CHANNEL
NO SCALE

NO	REVISION	DATE	BY	APP.

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MICHAEL J. BINGHAM, PE
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DESIGN	CHECKED
BCU	
DRAWN	CHECKED
KLL	
DATE	SURVEY DATE
JULY 2022	FIELD BOOK

SEAL

SEAL

CLIENT & PROJECT
DALLAS AREA MUNICIPAL AUTHORITY
101 N MEMORIAL HIGHWAY
SHAVERTOWN, PA 18708

STORMWATER BMP IMPROVEMENTS – SITE P5
DALLAS BOROUGH, LUZERNE COUNTY, PA

ARRO
108 West Airport Road
Lititz, Pennsylvania 17543
Tel 717.569.7021

TITLE
DESIGN DETAILS

SCALE: AS SHOWN
DWG. NO.

PROJECT NO.: 11138.09
SHEET NO.: 6 OF 7
REV.

Dwg. Name: 1113809–D01.DWG Plotted: 7/12/2022 12:39 PM

STANDARD E&S PLAN NOTES

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOTCOMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V ORFLATTER.
9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 et. seq., 271.1, AND 287.1 et. seq. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
14. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM LOTS (SPECIFY LOT NUMBERS) ONTO (SPECIFY ROAD NAMES).
15. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
16. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
17. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
18. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
19. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES (6 TO 12 INCHES ON COMPACTED SOILS) PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
20. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
22. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
23. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
25. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
26. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
27. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
28. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
29. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
32. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
33. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

CONSTRUCTION SEQUENCE

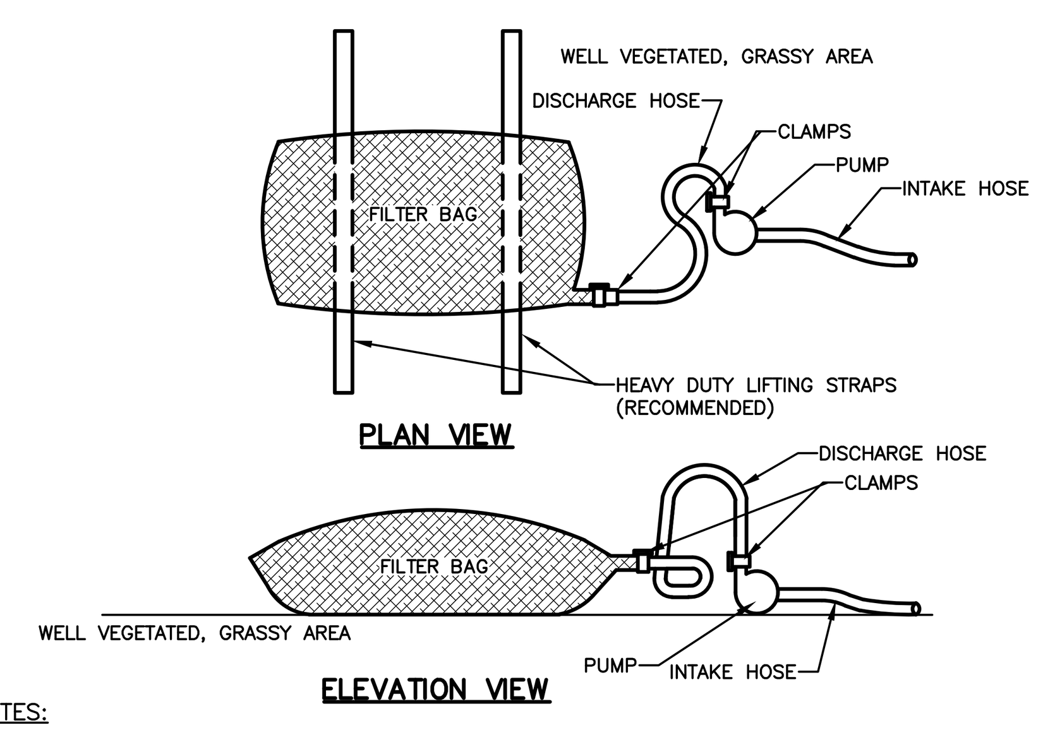
1. INSTALL ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
   a. INSTALL ROCK CONSTRUCTION ENTRANCE IN ACCORDANCE TO THE PLAN AND ROCK CONSTRUCTION DETAILS.
   b. COMPOST FILTER SOCK SHALL BE INSTALLED IN THE LOCATION AND SIZES DEPICTED ON PLANS. COMPOST FILTER SOCK AND ITS MAINTENANCE SHALL MEET THE REQUIREMENTS SHOWN ON THE COMPOST FILTER SOCK DETAIL.
2. PREPARE SITE FOR EXCAVATION AND/OR EMBANKMENT CONSTRUCTION.
   a. ALL EXISTING VEGETATION SHOULD REMAIN IF FEASIBLE AND SHALL ONLY BE REMOVED IF NECESSARY FOR CONSTRUCTION.
   b. IF EXCAVATION IS REQUIRED, CLEAR THE AREA TO BE EXCAVATED OF ALL VEGETATION. REMOVE ALL TREE ROOTS, ROCKS, AND BOULDERS ONLY IN EXCAVATION AREA.
3. WATER IN THE EXISTING POND SHALL BE REMOVED VIA A PUMPED WATER FILTER BAG AND DISCHARGED INTO THE STABILIZED DOWNSTREAM CHANNEL.
   a. PUMPING OF WATER SHALL BE PERFORMED PER THE PUMPED WATER FILTER BAG DETAIL AND CORRESPONDING NOTES.
4. EXCAVATE BOTTOM OF BASIN AND SEDIMENT FOREBAY TO DESIRED ELEVATION.
   a. IF EXCAVATED MATERIAL IS TO BE STORED ON-SITE, A MATERIAL STOCKPILE SHALL BE UTILIZED IN THE LOCATION DENOTED ON THE PLANS. THE STOCKPILE SHALL MEET THE REQUIREMENTS OF THE MATERIAL STOCKPILE DETAIL.
5. INSTALL SURROUNDING EMBANKMENTS AND CONCRETE WEIR WALL.
6. GRADE SUBSOIL IN BOTTOM OF BASIN. COMPACT SURROUNDING EMBANKMENT AREAS AND AROUND INLET AND OUTLET STRUCTURES.
7. APPLY AND GRADE PLANTING SOIL.
8. APPLY GEO-TEXTILES AND OTHER EROSION-CONTROL MEASURES.
9. SEED, PLANT AND MULCH ACCORDING TO PLANTING PLAN
10. INSTALL ANY ANTI-GRAZING MEASURES, IF NECESSARY.
11. ONCE PROPER FINAL STABILIZATION HAS BEEN REACHED, ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED AND THE AREA SHALL BE STABILZED. THESE CONTROLS INCLUDE:
    a. ROCK CONSTRUCTION ENTRANCE, ROCK FILTER, PUMPED WATER FILTER BAG, AND COMPOST FILTER SOCK.

OPTIONAL NOTES

1. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.
2. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
3. CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
4. BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
5. BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
6. ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
7. UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
8. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
9. FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN MAXIMUM LAYERED LIFTS AT % DENSITY.

OPERATION AND MAINTENANCE PLAN

1. BMP P6 – WET DETENTION POND
   a. ALL REQUIRED MAINTENANCE SHALL BE PERFORMED BY AND AT THE OWNER'S EXPENSE.
   b. MAINTENANCE IS NECESSARY EVERY QUARTER TO ENSURE PROPER FUNCTIONALITY OF THE WET DETENTION POND.
   c. ANY BASIN STRUCTURE THAT IS EXPECTED TO RECEIVE AND/OR TRAP DEBRIS AND SEDIMENT SHALL BE THOROUGHLY INSPECTED FOR EXCESSIVE DEBRIS AND CLOGGING. INSPECTIONS SHALL BE CONDUCTED AT MINIMUM FOUR (4) TIMES PER YEAR OR IMMEDIATELY FOLLOWING ANY STORM CREATING GREATER THAN ONE (1) INCH OF WATER.
   d. SEDIMENT FOREBAYS SHALL BE CLEANED WHEN ACCUMULATED SEDIMENT REACHES HALF THE TOTAL DEPTH OF THE FOREBAY.
   e. INSPECT THE BASIN AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. MOSQUITO'S SHALL NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS.
   f. ALSO INSPECT FOR DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SLOPE STABILITY IN THE BERMS.
   g. UPKEEP OF VEGETATION INCLUDING MOWING AND/OR TRIMMING SHALL BE PERFORMED AS NECESSARY TO SUSTAIN THE SYSTEM. ALL DETRITUS SHALL BE REMOVED FROM THE BASIN.
      1) FERTILIZERS AND PESTICIDES SHALL NOT BE USED IN MAINTAINING THE VEGETATION.
      2) ALL VEGETATED AREAS SHALL BE INSPECTED EVERY YEAR FOR ANY EROSION.
      3) ALL VEGETATED AREAS SHALL BE INSPECTED EVERY YEAR FOR UNWANTED GROWTH OF EXOTIC AND/OR INVASIVE SPECIES.
      4) VEGETATIVE COVER SHALL BE MAINTAINED AT A MINIMUM OF NINETY-FIVE (95) PERCENT. VEGETATION SHALL BE REESTABLISHED IF VEGETATIVE COVER HAS BEEN REDUCED BY TEN (10) PERCENT.
   h. A DAM AND INSPECTION CHECKLIST SHALL BE INCLUDED IN THE MAINTENANCE AND SHALL BE COMPLETED AT A MINIMUM OF ONCE EVERY YEAR.
2. ADDITIONAL NOTES
   a. REGULAR INSPECTION OF THE WET DETENTION POND SHALL OCCUR TO ASSURE PROPER IMPLEMENTATION OF BMP'S. OPERATION AND MAINTENANCE PLANS SHALL BE INSPECTED BY A QUALIFIED PERSON, WHICH MAY INCLUDE THE LANDOWNER OR THE OWNER'S DESIGNEE (INCLUDING THE MUNICIPALITY FOR DEDICATED AND OWNED FACILITIES).
   b. ANY PARK IMPROVEMENTS, SUCH AS THE WALKING PATH, SHALL BE RETURNED TO THEIR ORIGINAL CONDITION POST CONSTRUCTION.



NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

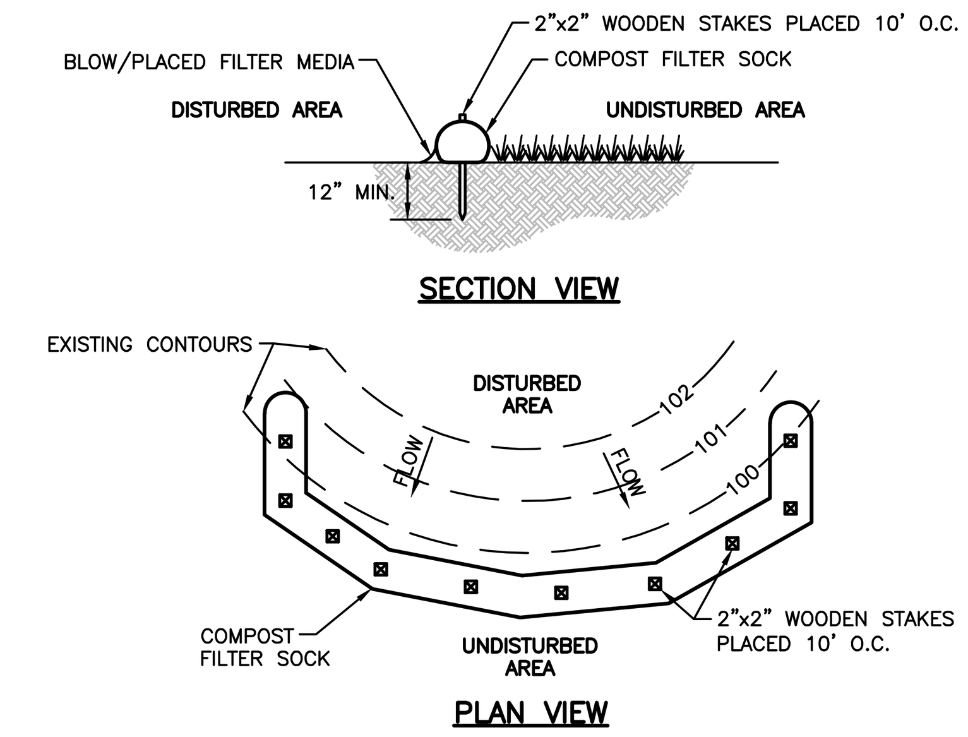
THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

PUMPED WATER FILTER BAGS SHALL BE SURROUNDED BY A RING OF COMPOST FILTER SOCK.

PUMPED WATER FILTER BAG DETAIL

NO SCALE

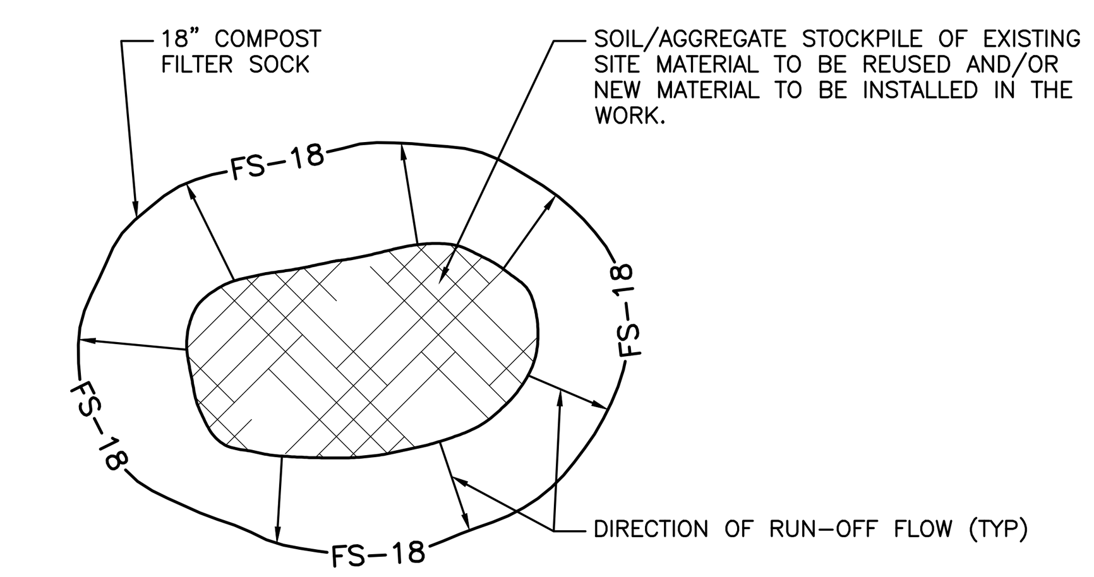


NOTES:

1. SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.
2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
5. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

COMPOST FILTER SOCK DETAIL

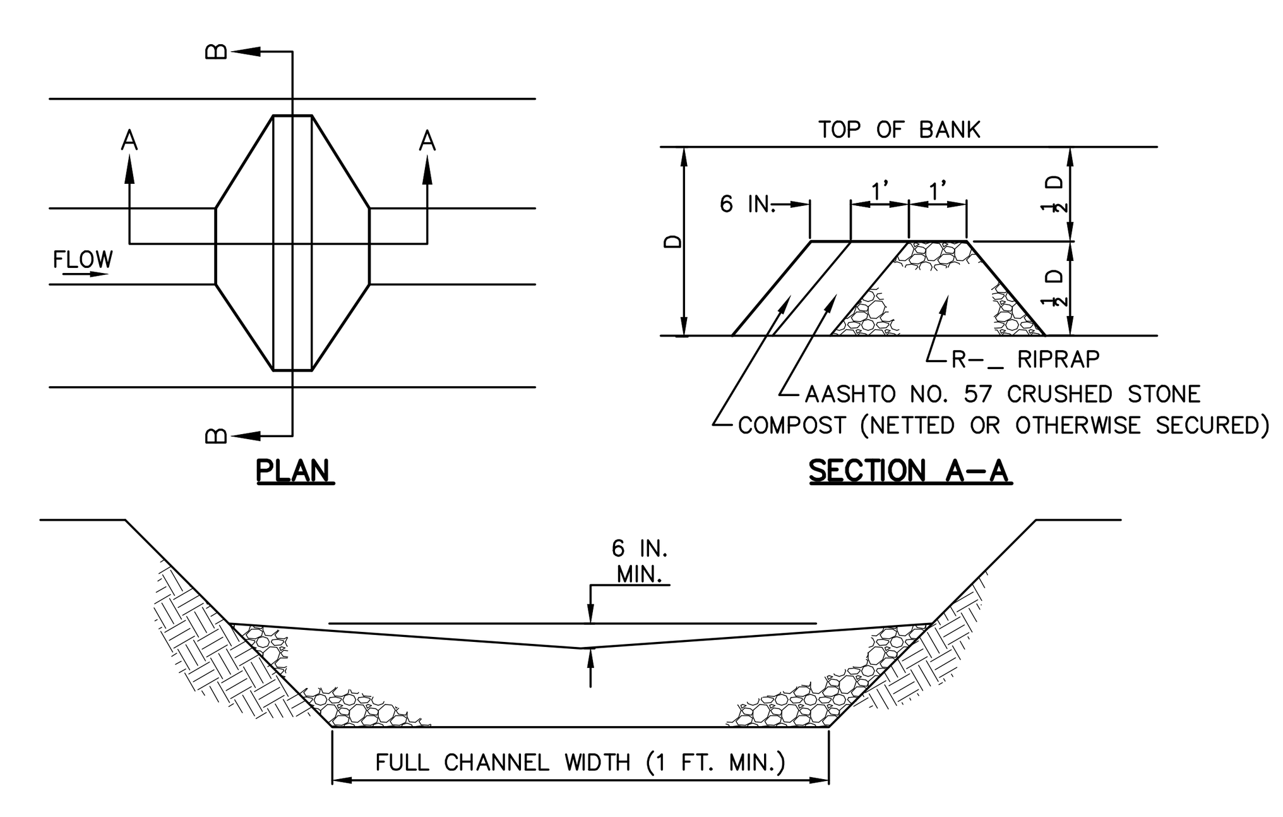
NO SCALE



NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED.
2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.

MATERIAL STOCKPILE

NO SCALE



ROCK FILTER NO.	LOCATION	D (FT)	RIPRAP SIZE (R-_)
1	OUTLET STR	4	4

FOR D ≥ 3 FT. – USE R-4
FOR D ≥ 2 FT. TO D < 3 FT. – USE R-3
NOT APPLICABLE FOR D < 2 FT.

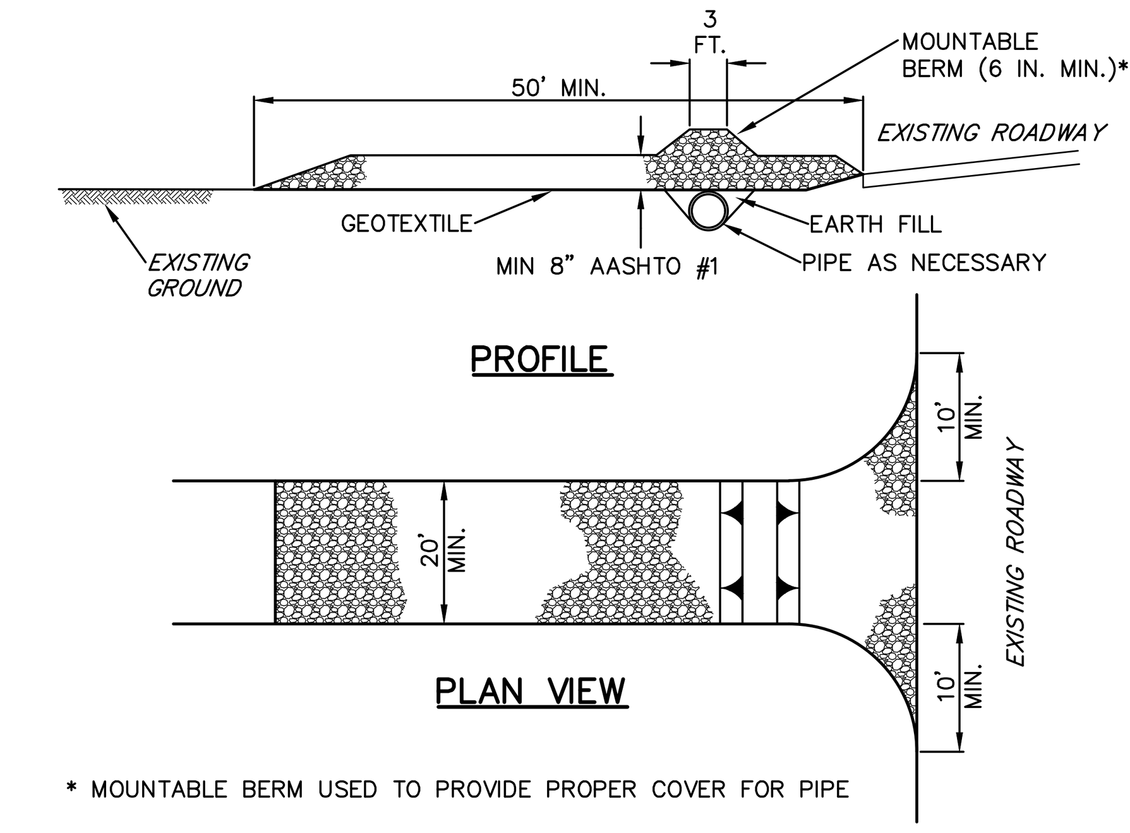
NOTES:

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.

IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

TEMPORARY ROCK FILTER DETAIL

NO SCALE



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

ROCK CONSTRUCTION ENTRANCE

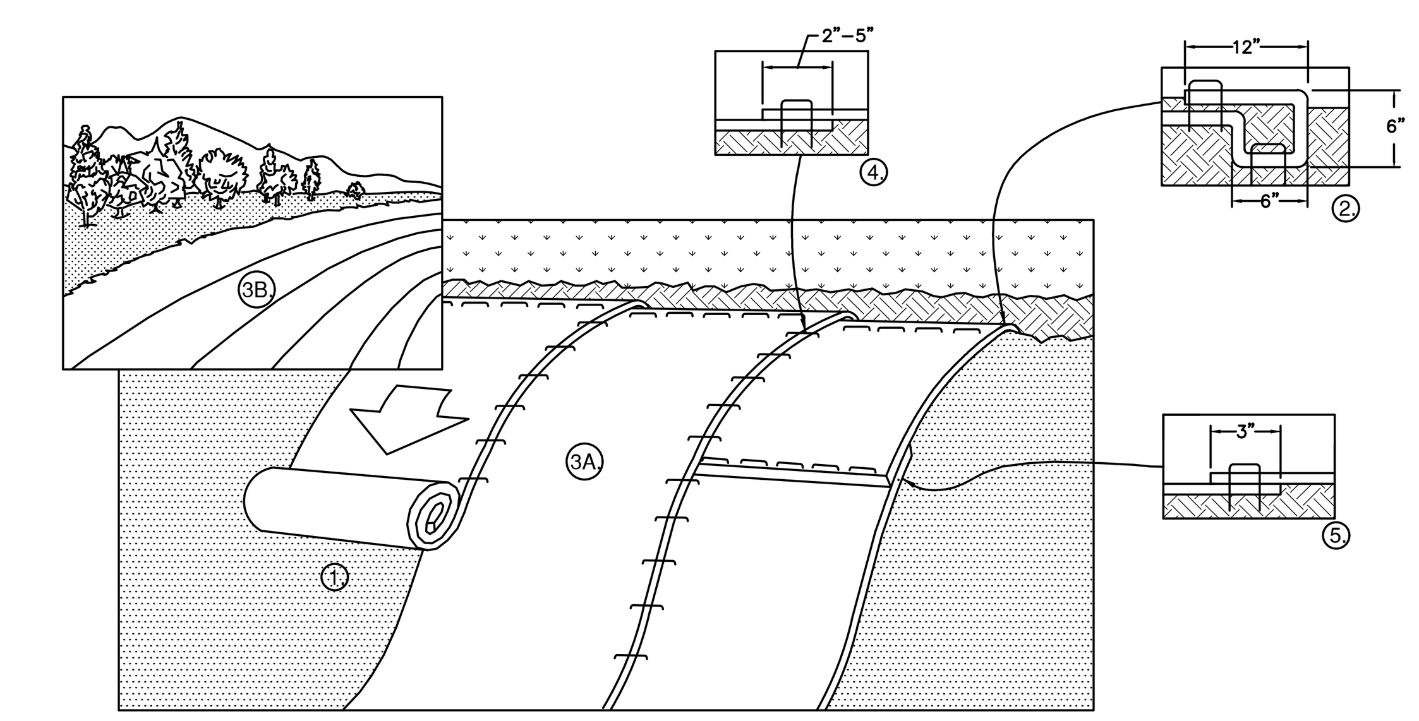
NO SCALE

APPLICATION	SPECIES	APPLICATION RATE/CONTENT	LIMING RATE +	% PURE LIVE SEED	FERTILIZER	SEEDING DATES
TEMPORARY	ANNUAL RYE	48 LBS./AC	2000 LBS/AC	98%	10-10-10 @ 1000 LBS/AC	NOT AFTER OCT. 15
PERMANENT	PERENNIAL RYE	41 LBS./AC	6 TONS	97%	SEE NOTE 1.1 BELOW	BETWEEN MARCH 31 AND JUNE 1 AND AUGUST 1 AND OCT 15
	RED FESCUE	60 LBS./AC		97%		
	KENTUCKY BLUEGRASS	102 LBS./AC		97%		
NATIVE DETENTION AREA MIX	ERNMX-183 DEERTONGUE 47% VIRGINIA WILDRYE 25% FOX SEDGE 20% AUTUMN BENTGRASS 5% TICKLEGRASS 2% PATH RUSH 1%	22 LBS./AC	NONE	97%	NONE	BETWEEN MARCH 31 AND JUNE 1 AND AUGUST 1 AND OCT 15

+ AGRICULTURAL-GRADE LIMESTONE * COMMERCIAL GRADE FERTILIZER

1. FERTILIZER AND LIME SHALL BE AS FOLLOWS:
   1.1. PERMANENT SEEDING
   10-10-20 ANALYSIS COMMERCIAL FERTILIZER @ 1000 LBS./AC
   AGRICULTURAL LIME @ 6 TONS PER ACRE
   1.2. TEMPORARY SEEDING
   10-10-10 IBDU FERTILIZER @ 500 LBS./AC
   AGRICULTURAL LIME @ 1 TON PER ACRE
2. SPECIFICATION ITEMS OBTAINED USING PADOT PUBLICATION NO. 408 AND THE PENN STATE AGRONOMY GUIDE (1991, 1992).
3. ALL SEEDED AREAS SHALL BE MULCHED WITH HAY OR STRAW. SEE MULCH NOTES, SECTION L ABOVE.

SEEDING SCHEDULE



NOTES:
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/ STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

EMBANKMENT PROTECTION

NO SCALE

NO	REVISION	DATE	BY	APP.	NO	REVISION	DATE	BY	APP.

MICHAEL J. BINGHAM, PE
RELEASED BY
DESIGN: BCU | CHECKED:
DRAWN: KLL | CHECKED:
DATE: JULY 2022 | SURVEY DATE: ---- | FIELD BOOK: ----

SEAL

SEAL

CLIENT & PROJECT
DALLAS AREA MUNICIPAL AUTHORITY
101 N MEMORIAL HIGHWAY
SHAVERTOWN, PA 18708

STORMWATER BMP IMPROVEMENTS – SITE P5
DALLAS BOROUGH, LUZERNE COUNTY, PA

ARRO
108 West Airport Road
Lititz, Pennsylvania 17543
Tel 717.569.7021

TITLE: EROSION AND SEDIMENT CONTROL DETAILS

SCALE: AS SHOWN | DWG. NO.
PROJECT NO.: 11138.09 | SHEET NO.: 7 OF 7 | REV.

Dwg. Name: 1113809-D01.DWG Plotted: 7/12/2022 12:39 PM