PIANS OF SUBDIVISION FOR

115 W. MOYER ROAD

SITE SITUATE IN DOUGLASS TOWNSHIP, MONTGOMERY COUNTY

PLAN SHEET INDEX

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3	OF	22	RECORD PLAN OF SUBDIVISION AUGUST 12, 2024	_
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17	OF	22	PLAN AND PROFILE MING DRIVE AUGUST 12, 2024	_
18	OF	22	PLAN AND PROFILE LINKS ROAD AUGUST 12, 2024	_
19	OF	22	LOT 18 WATER & SEWER PROFILE AUGUST 12, 2024	_
20	OF	22	CONSTRUCTION DETAIL SHEET AUGUST 12, 2024	_
21	OF	22	CONSTRUCTION DETAIL SHEET - SANITARY SEWER FACILITIES AUGUST 12, 2024	_
22	OF	22	VEHICLE TURNPATH PLAN AUGUST 12, 2024	_

ADDITIONAL SUPPORTING DOCUMENTS

1 EROSION & SEDIMENT CONTROL AND POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN NARRATIVE AUGUST 12, 2024 2 STORMWATER INFILTRATION REPORT PREPARED BY VW CONSULTANTS, LLC. JULY 4, 2024 3 AQUA WATER MAIN EXTENSION PLAN

DOUGLASS TOWNSHIP

SITE LOCATION MAP 1" = 800'

PREPARED FOR

SITE STATISTICS

- 1. SUBJECT TRACT MAY BE IDENTIFIED BY MONTGOMERY COUNTY TAX ASSESSMENT INFORMATION AS FOLLOWS: DOUGLASS TOWNSHIP TAXMAPID: 32046 028 PARID: 32-00-00664-00-6
- 2. RECORDED DEED DATA IS AS FOLLOWS: AS RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS, ETC., IN AND FOR THE COUNTY OF MONTGOMERY AT NORRISTOWN, PENNSYLVANIA IN: PARID: 32-00-00664-00-6

DEED BOOK 6220, PAGE 2176.

- 3. NAME AND ADDRESS OF THE OWNER OF THE SUBJECT TRACT: PHYLLIS C. SWENSON & TAMMERA S. METKA PO BOX 56 BOYERTOWN, PA. 19512
- 4. AREA STATISTICS: GROSS TRACT AREA = 26.28 AC. (TO TITLE LINES)

ACT 50 UTILITY NOTE

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING COMPANY RECORDS AND/OR ABOVE-GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDER-GROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 12 AS PER THE AMENDMENT OF PA ACT 287 OF 1974, EFFECTIVE OCTOBER 30, 2017 CONTRACTORS MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK. REFERENCE UTILITY CASE NUMBER: 20241150954 & 20241150955.

LOCATE DESK PERSONNEL 136 MUNICIPAL DR PO BOX 370 GILBERTSVILLE, PA. 19525 LEW CHRISTY lewchristy@dejazzd.com DOUGLASS TOWNSHIP PO BOX 297

GILBERTSVILLE, PA. 19525 MICHAEL HEYDT mheydt@douglasstownship.org

4400 WAYNE AVENUE PHILADELPHIA, PA. 19140 ROBERT HARVEY bob_harvey@cable.comcast.com BERKS MONTGOMERY MUNICIPAL FIRSTENERGY CORP AUTHORITY 76 S MAIN ST AKRON, OH. 443081890 OFFICE PERSONNEL COMCAST CABLEVISION 190 SHOEMAKER RD POTTSTOWN, PA. 19464 DAVE FIEDLER

529 KING RD ROYERSFORD, PA. 19468 kzielaskowski@ugi.com



AQUA PENNSYLVANIA INC

BMMA BOARD OF STANDARDS NOTES

- 1. ALL SANITARY SEWER MANHOLE COVERS SHALL HAVE INSERTS EXCEPT WHERE COVERS ARE WATERTIGHT.
- 2. ALL SANITARY SEWER LINES SHALL HAVE A MINIMUM COVER OF FOUR
- 3. LATERALS SHALL HAVE A MINIMUM COVER OF FOUR (4) FEET AND A MINIMUM SLOPE OF 1/4" PER FOOT.
- 4. DEVELOPER IS RESPONSIBLE TO SECURE ALL NECESSARY PERMITS AND PAY APPLICABLE FEES.
- 5. ALL WORK TO BE IN ACCORDANCE WITH BMMA RULES AND REGULATIONS.
- 6. DEVELOPER SHALL COMPLY WITH ALL PERMIT REQUIREMENTS AND CONDITIONS SET FORTH BY BMMA.
- 7. BUILDING SEWERS SHALL BE TESTED IN ACCORDANCE WITH UCC AND PLUMBING CODE REQUIREMENTS.
- 8. DEVELOPER SHALL EXECUTE A SEWAGE SERVICE IMPROVEMENTS AGREEMENT WITH BMMA.
- 9. DEVELOPER IS RESPONSIBLE FOR SECURING THE PROPOSED OFF-SITE EASEMENT AND PROVIDING A COPY OF THE EXECUTED EASEMENT AGREEMENT TO BMMA PRIOR TO CONSTRUCTION.

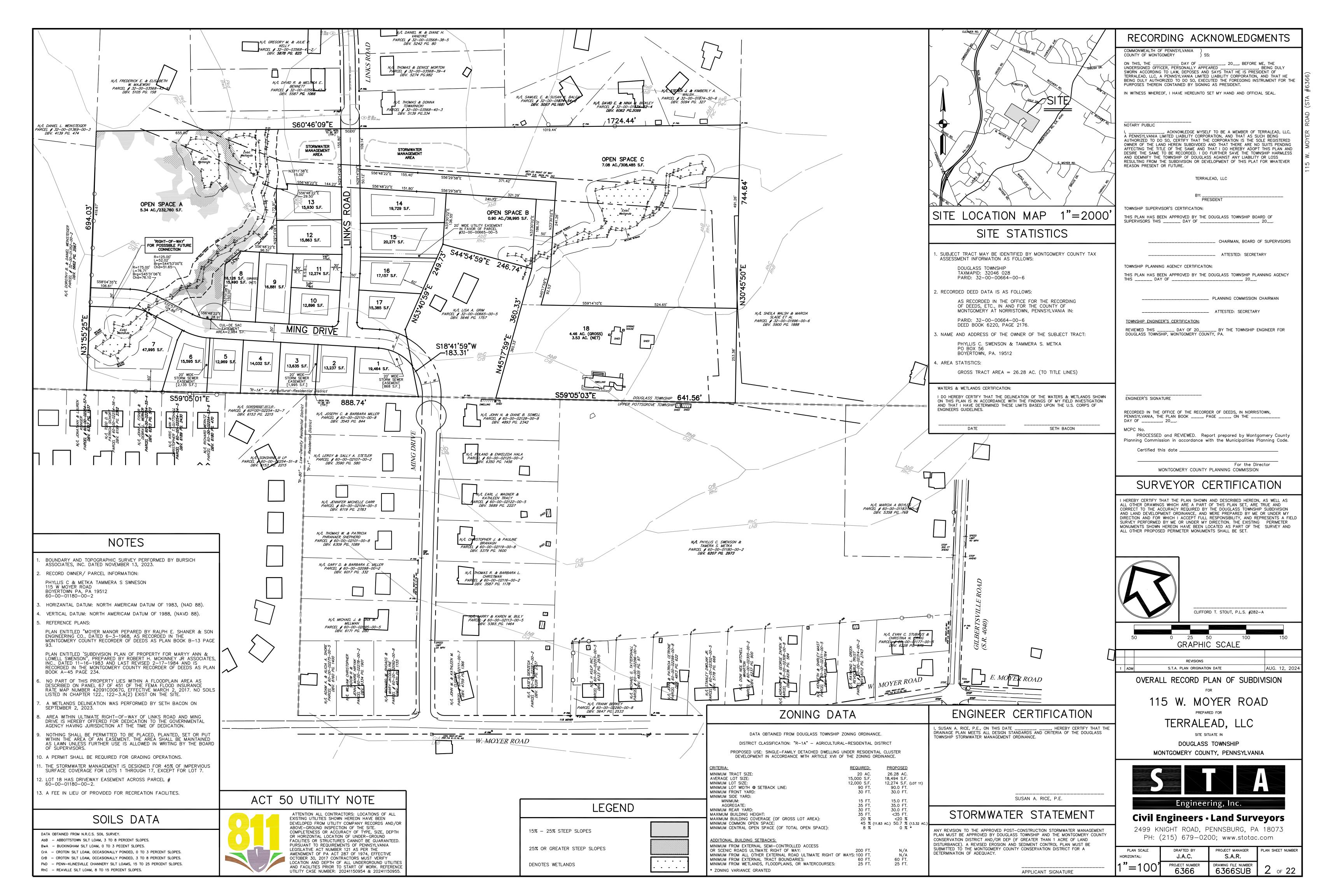
APPROVED AS NOTED BMMA BOARD OF STANDARDS

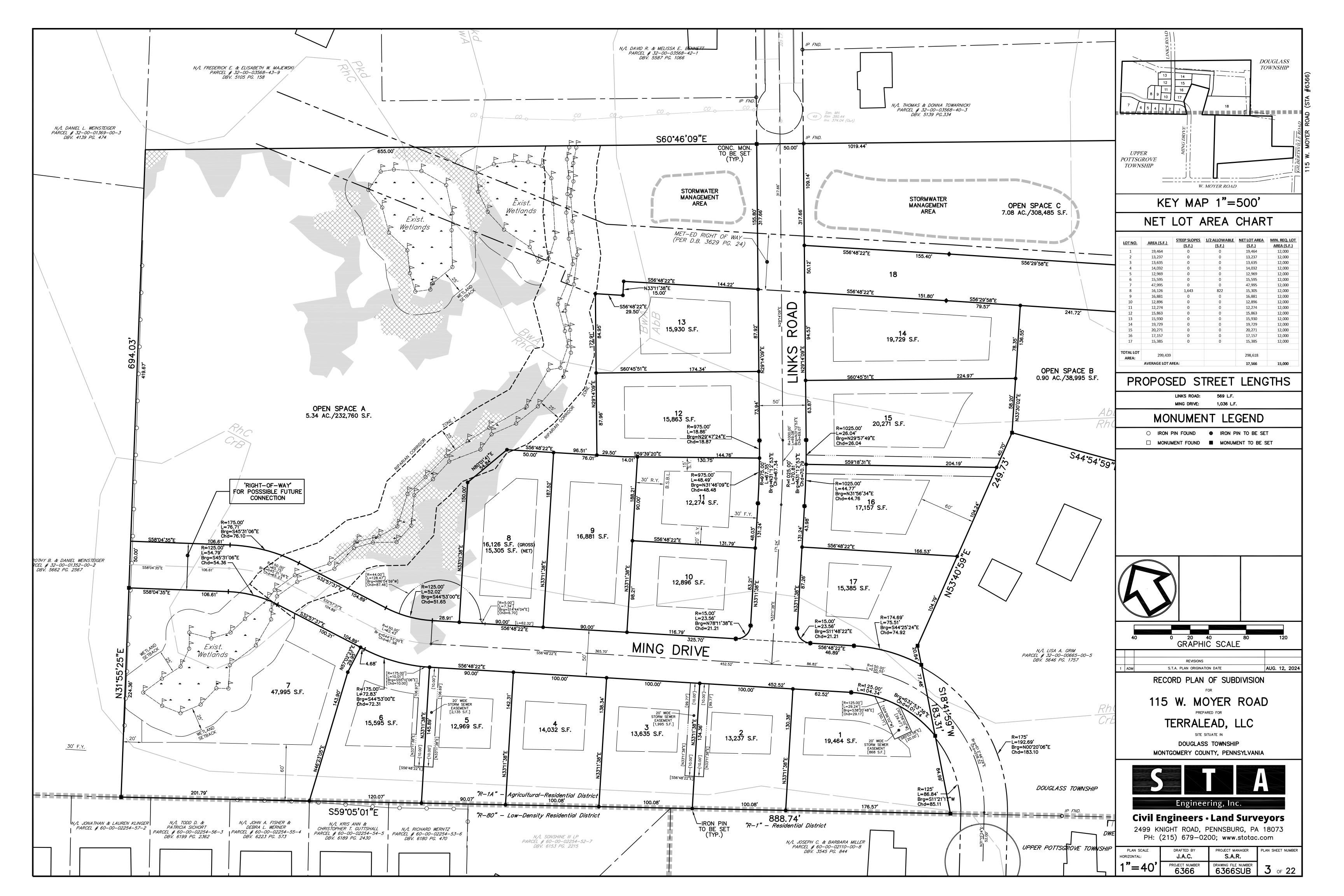
MARK A. TOEPEL, AUTHORITY CHAIRMAN

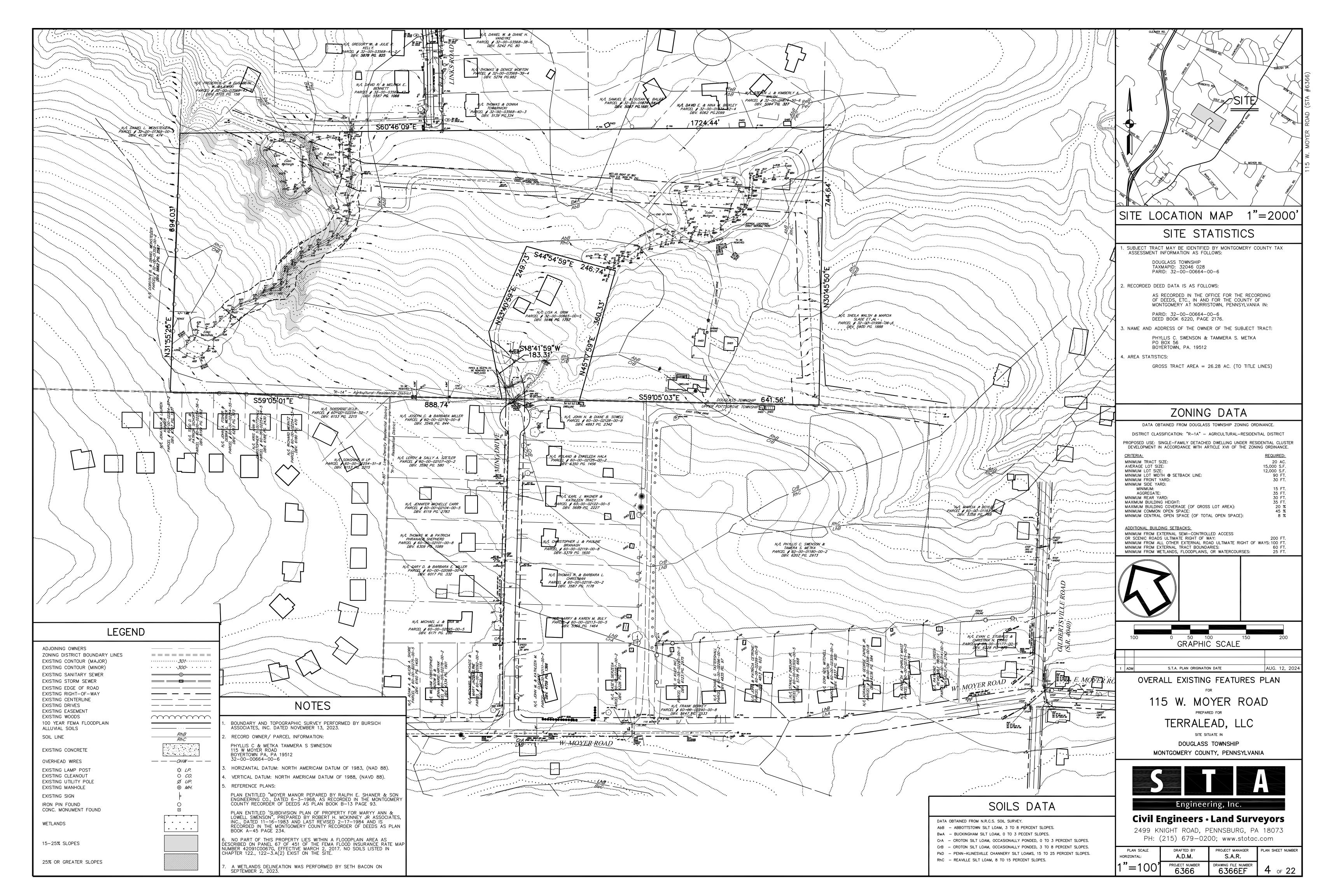
TERRALEAD, LLC

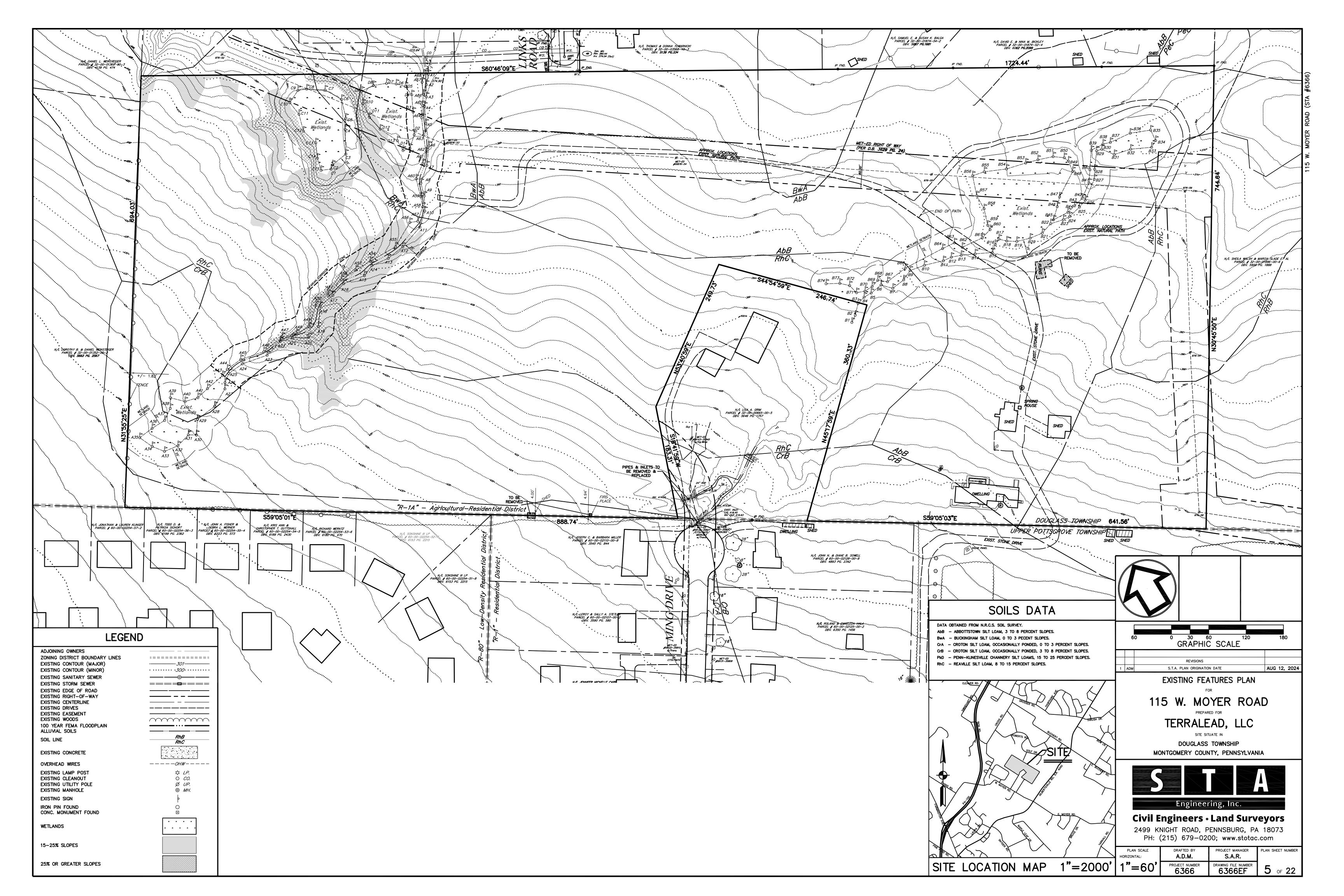
500 EXTON COMMONS EXTON, PA 19341

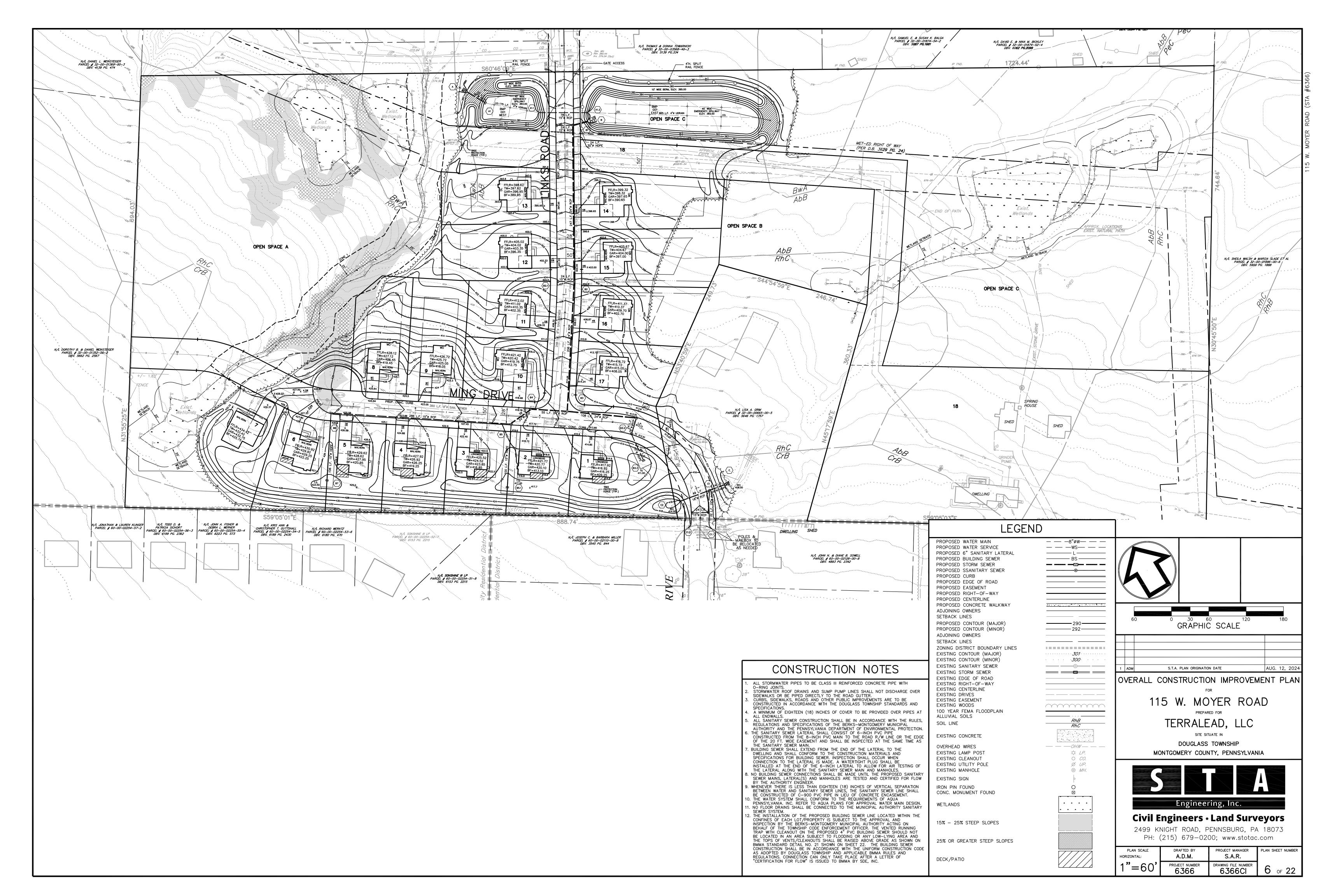


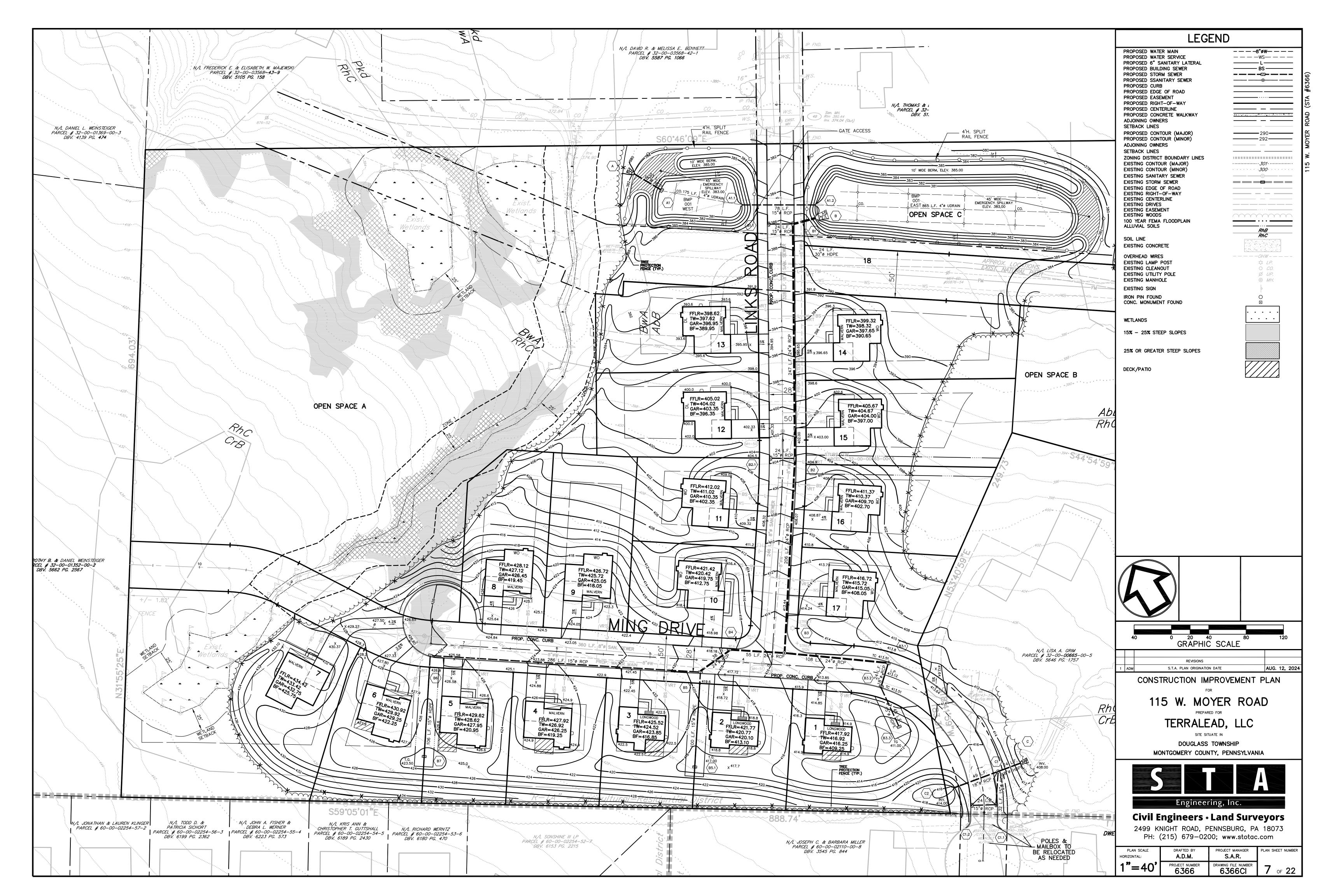


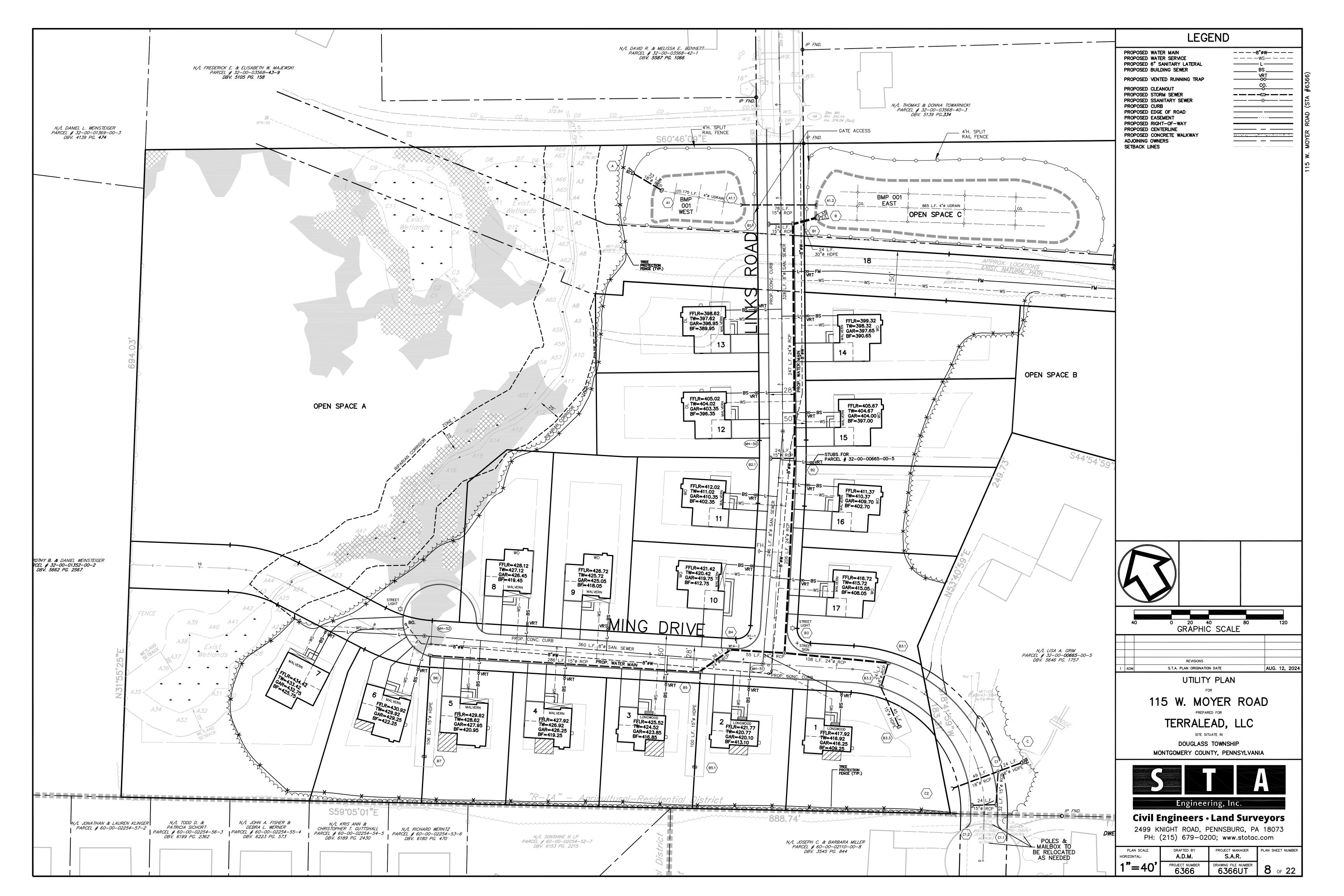


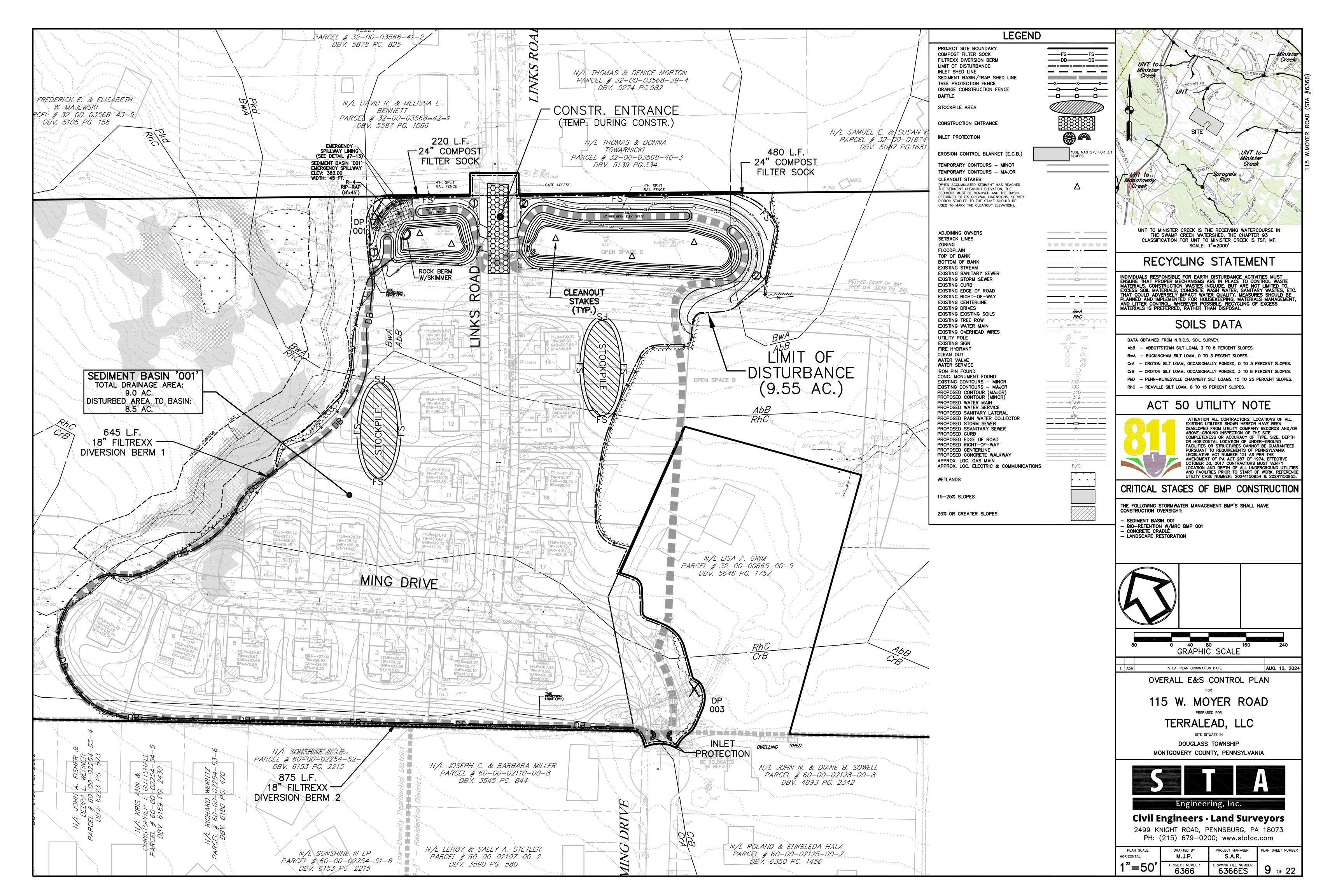












AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.

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.

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.

AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL. DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE 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

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

TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN AMOUNT NECESSARY T 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

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.

D. 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

. 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

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

. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON

 ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OR UNDISTURBED VEGETATED AREAS. 4. 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.

5. 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

5. 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.

DESCRIBED ON THE PLAN DRAWINGS. B. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM OF 3 TO 5 INCHES PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM OF 6 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING.

9. 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

. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER

WITH LOCAL REQUIREMENTS OR CODES. . ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

. 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.

22. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

23. FILLS SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES. 24. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN

OTHER APPROVED METHOD. 5. 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

ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR

THE STANDARDS OF THIS PLAN. 3. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREA. 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 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.

8. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER

PERMANENT STABILIZATION SPECIFICATIONS.

9. 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.

D. 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 THE REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS O BE DONE ONLY DURING THE GERMINATING SEASON.

. 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.

2. 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 \$25,000 IN

MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION. 3. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.

4. SEDIMENT BASINS SHALL 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. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA GUIDELINES AND THE HEALTH AND SAFETY REQUIREMENT OF THE OWNER. THE CONTRACTORS SHALL BE RESPONSIBLE FOR MAINTAINING EXCAVATIONS DURING THE PERIOD OF CONSTRU CONTROL OF GROUNDWATER SEEPAGE AND STORMWATER RUNOFF INTO EXCAVATIONS SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

. APPLICATIONS AND/OR OPERATORS MUST IMPLEMENT ENVIRONMENTAL DUE DILIGENCE TO ENSURE THAT ALL FILL MATERIAL QUALIFIES AS CLEAN FILL. IF BROUGHT FROM OFF—SITE, FILL MUST BE CERTIFIED CLEAN FILL.

7. TO THE BEST OF OUR KNOWLEDGE, NO SPECIAL GEOLOGIC FORMATIONS OR SOIL CONDITIONS HAVING THE POTENTIAL TO CAUSE POLLUTION TO SURFACE WATERS EXIST AT THE SITE.

THERMAL IMPACT: DURING CONSTRUCTION STORMWATER RUNOFF IS FILTERED THROUGH ON—SITE BMP'S TO THE MAXIMUM EXTENT POSSIBLE TO AVOID THERMAL IMPACTS. RUNOFF IS FILTERED THROUGH A SEDIMENT BASIN, COMPOST FILTER SOCK AND UNDISTURBED WOODED/VEGETATED SURFACES PROVIDING AN OPPORTUNITY FOR WATER TO COOL BEFORE RÉACHING THE EXISTING ON-SITE STREAM CHANNEL.

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 designated licensed professional and a

• Critical stages as noted throughout the construction sequence are defined as sequence steps that require the permittee to provide engineering construction oversight. A licensed professional engineer knowledgeable in the design and construction of stormwater BMP's shall conduct the

representative from the Montgomery County Conservation District to an on-site pre-construction

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.

All earth disturbance activities shall proceed in accordance with the following sequence. Each step of the sequence shall be completed before proceeding to the next step, except where noted. Deviation from the sequence must be approved by the Montgomery County Conservation District or by the department prior to implementation.

Any cessation of activity for 4 days or longer requires temporary stabilization.

As soon as slopes, channels, ditches and other disturbed areas reach final grade, they must be permanently stabilized immediately.

Perimeter compost filter sock to be installed by clearing area for sock and installing sock immediately or by clearing and installing sock as you go. No disturbed area should be left without perimeter controls. Sock shall be installed to minimize existing tree removal to the greatest extent possible

Critical Stage - BMP 5.4.1 - Protect Sensitive/Special Value Features (BMP 002) and BMP 5.4.3 -Protect/Utilize Natural Flow Pathways in Overall Stormwater Planning and Design (BMP 003). Ensure all E&S controls are maintained throughout construction to protect the special features and drainage pathways.

Field-mark the limits of disturbance, streams and wetlands prior to disturbance activities (i.e. survey stakes, posts & rope, construction fence, etc.) in accordance with the erosion and sediment control

2. Clear, grub and strip topsoil in the area proposed for the construction entrance. Install the temporary stone construction entrance/tire cleaner in accordance with the construction detail. Install compost filter sock 1 & 2 and diversion berm 1 & 2 as shown on the erosion and sediment control plan. Note: any compost filter sock that is moved during installation of underground pipes should be reinstalled after the pipe is installed.

4. Clear, grub and strip topsoil from the area for the construction of Sediment Basin 001. Stockpile and stabilize topsoil. Protect stockpile with compost filter sock.

5. Critical Stage - Construct Sediment Basin 001. Install permanent outlet structure, outlet pipe, concrete cradle and channelized emergency spillway. Ensure that storm sewer structures and piping have watertight seals and that the permanent orifice is plugged during the E&S stage. Install baffle and sediment clean out stakes as indicated. Install skimmers and rock berms. Install 12" Ø pipe at bottom of basin. Complete final grading of sediment basin area, replace topsoil, seed and mulch and install erosion control matting on side slopes and spillways. Drainage shall be directed to the sediment basin throughout construction and before the on-site storm sewer is installed and functioning with the use of temporary swales and/or diversion berms.

Upon installation and stabilization of the sediment basin and all perimeter sediment control BMP's and at least 3 days prior to proceeding with the bulk earth disturbance activities, the permittee or co-permittee shall provide notification to the department or authorized conservation district. NOTE: SEDIMENT BASIN MUST BE COMPLETELY STABILIZED PRIOR TO ANY EARTH

DISTURBANCE OF THE RESPECTIVE TRIBUTARY DRAINAGE AREA. Strip any remaining topsoil and stockpile. Stabilize stockpile and protect with compost filter sock. Clear and grub any remaining areas left to be disturbed.

Install sanitary sewer starting with the most downstream connection and proceeding upslope Construct all storm sewer structures and piping including A1.1 to A1.2. Storm sewer C2 to C to be constructed with watertight seal. Install inlet protection once installed. Simultaneously install remainder of utilities (water, electric, gas, cable, etc.) in accordance with the following

. Trenches shall be backfilled above the original ground level to allow for settlement and to prevent runoff from following the trench line when backfill settles. Apply soil supplements, seed and mulch as required.

. The total length of excavated trench open at any one time should not be greater than the total length of utility line that can be placed in the trench and backfilled in one working day. l. No more than 50 lineal feet of open trench should exist when utility line installation ceases at the

Install curbing, sidewalk, stone base course and bituminous base course. Stabilize disturbed areas immediately with seed and mulch.

ngs can begin. Install on-lot sediment controls in accordance with onstruction details #10-1, #10-2 or #10-3, as applicable, prior to construction on each lot. It oadway is not stabilized, access to the constructed units shall be stabilized to a minimum of a stone base for construction vehicle access. Construct buildings, sidewalks and interior paving.

Replace topsoil equal to pre-development depths or to a minimum depth of 6-in., whichever is greater. And finish grade, wherever and whenever possible. Seed and mulch each area of disturbance immediately after construction is completed. No more than 15,000 s.f. of disturbed area shall reach final grade before initiating seeding and mulching operations. Graded areas should be scarified or otherwise loosened to a depth of 3- to 5-inches prior to topsoil placement.

2. Install trees and shrubs wherever and whenever possible in accordance with the PCSM Landscape

Perform final landscaping operations. In such cases, permanently seed and mulch disturbed areas Seeding shall follow fertilization and seeding rates specified in seeding specification chart. If finish grading is not practical, temporarily seed all disturbed areas.

OTE: THE MONTGOMERY COUNTY CONSERVATION DISTRICT MUST BE NOTIFIED

PRIOR TO THE CONVERSION OF BMP 001.

14. Critical Stage - upon establishing a minimum uniform 70 % perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements in areas upstream of Sediment Basin 001, the sediment basin can be converted to the permanent stormwater management facility BMP 001. Convert the facility in accordance with the following sequence and the

. Notify Douglass Township and the Conservation District prior to construction b. A licensed professional engineer (or authorized representative) knowledgeable in the design and construction of stormwater BMP's, preferably the design engineer, shall conduct the oversight of conversion of the stormwater facility . Remove the upper one foot of existing soil that has clogged with accumulated sediment and then

excavate BMP bottom area to proposed invert depth and scarify the existing soil surfaces. Do not compact in-situ soils. To the greatest extent possible, excavation should be performed with the lightest practical equipment. Excavation should be placed outside the limits of the bio-retention Install impermeable liner for BMP 001 in accordance with manufacturer's specifications, only if groundwater is encountered and the required one foot of separation from the BMP bottom is not

. Install u-drain and cap with dewatering orifice in accordance with the detail. Connect udrain to exist 12Ø pipe with appropriate end caps/reducers. Ensure that all pipes and seals are watertight. Seal any temporary openings in the concrete box . Install soil mix to required design depth and fine grade, being careful not to compact. Refer to Basin and BMP soil mix specifications. The placement of soil media should be done from outside

the BMP footprint to avoid compaction by construction equipment. Equipment should never drive

g. Prepare for seeding by eliminating any weed growth prior to seed installation using an appropriate herbicide to control undesirable vegetation. For optimal seed establishment, soil ph shall be a. Apply seed by carefully proportioning seed for the entire area. Broadcast seed in two separate applications by applying seed at half the suggested rate for each application to ensure even and

adequate coverage. After the full rate of seeding has been achieved, follow by rolling or tracking seed into the top 1/4 inch of soil to achieve good seed to soil contact - do not roll or track the seed when soil is wet. . Cover seeded area with a light layer of salt hay, threshed straw or pine needles or apply erosion control matting over 3:1 slopes.

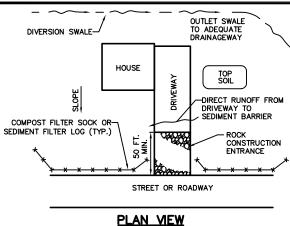
. Plant and mulch according to specifications on the landscape plan. After all construction work is completed, install final paving, permanent striping and signage. . Upon final stabilization, remove all other temporary sediment controls. An area shall be considered to have achieved final stabilization when it has minimum uniform 70 % perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion

and subsurface characteristics sufficient to resist sliding and other movements. Critical Stage - The site engineer shall inspect all PCSM BMP's to ensure that the BMP's have not been impacted by construction activities.

 Within 30 days after the completion of earth disturbance activities authorized by this permit, including the permanent stabilization of the site and proper installation of PCSM BMP's in accordance with the approved PCSM plan, or upon submission of the not if sooner, the permittee shall file with the department or authorized conservation district a statement signed by a licensed professional and by the permittee certifying that work has been performed in accordance with the terms and conditions of this permit and the approved E&S and PCSM plans. Completion certificates are needed to ensure that all work is performed in accordance with the terms and conditions of the permit and approved E&S and PCSM plans.

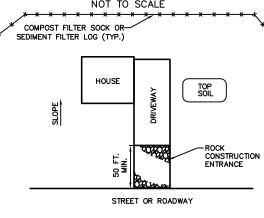
NY SEDIMENT CONTROL, SUCH AS COMPOST FILTER SOCK, ROCK FILTER, OR INLET FILTER MUST NOT BE REMOVED UNTIL ALL VEGETATION (UPSTREAM OF THAT ARTICULAR CONTROL) HAS BEEN RE-ESTABLISHED.

ANY AREA (S) DISTURBED DURING THE REMOVAL OF SEDIMENT CONTROLS SHALL B



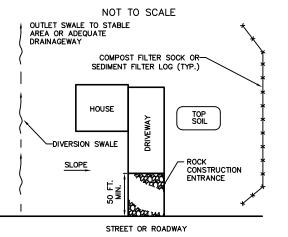
THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER THE LOT EXTENDS MORE THAN 150 FEET ABOVE THE ROADWAY OR WHERE RUNOFF FORM AREAS ABOVE THE LOT IS NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

STANDARD CONSTRUCTION DETAIL #10-1 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY



PLAN VIEW

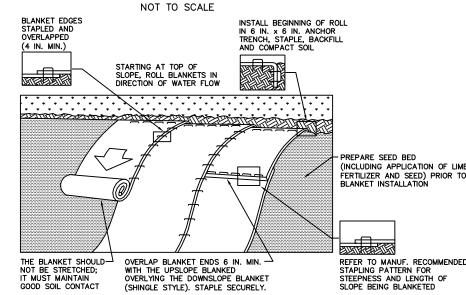
THE AREA DOWNSLOPE OF THE COMPOST SOCK BARRIER/SEDIMENT FILTER LOG MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED. STANDARD CONSTRUCTION DETAIL #10-2 TYPICAL ON-LOT BMPs FOR LOT BELOW ROADWAY



PLAN VIEW

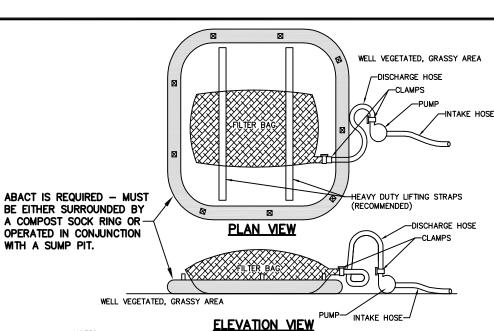
THE AREA DOWNSLOPE OF THE COMPOST SOCK BARRIER/SEDIMENT FILTER LOG MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED. THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER RUNOFF FROM AREAS ABOVE THE LOT ARE NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER ND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY WNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL. IN AREAS WHERE SLOPE IS AT AN OBLIQUE ANGLE TO THE ROADWAY, BMPS SHALL BE DIVERSION CHANNEL MAY OUTLET TO ROADSIDE DITCH OR STORM SEWER SYSTEM, BUT NOT ONTO STREET OR ROADWAY.

STANDARD CONSTRUCTION DETAIL #10-3 TYPICAL ON-LOT BMPs FOR LOT ALONG ASCENDING OR DESCENDING ROADWAY



SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET. THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS. STANDARD CONSTRUCTION DETAIL #11-1 EROSION CONTROL BLANKET INSTALLATION NOT TO SCALE



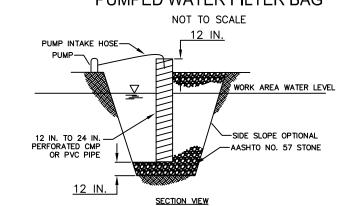
LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE

TM D-4884 STM D-4632 STM D-4833 STM D-3786	60 LB/IN 205 LB 110 LB 350 PSI
STM D-4833	110 LB
TM D=3786	7E0 DCI
11W D 3700	330 P31
TM D-4355	70%
STM D-4751	80 SIEVE
	STM D-4751 BAG WITH MA

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.

TRITER 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.

ABACT IS REQUIRED - MUST BE EITHER SURROUNDED BY A COMPOST SOCK RING OR OPERATED IN CONJUNCTION WITH A SUMP PIT. STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

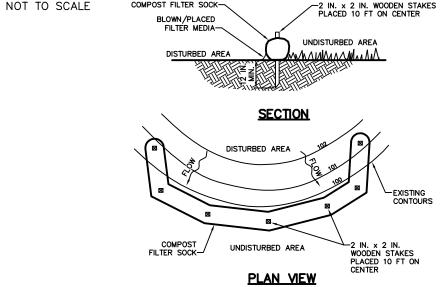


SET PUMP INTAKE INSIDE STANDPIPE.

LOCATE SUMP AT LOW POINT IN WORK AREA AND OUTSIDE OF CONSTRUCTION ACTIVITY. WHEREVER RUNOFF FROM A WORK AREA FLOWS DIRECTLY TO THE SUMP AREA, A FILTER BAG SHALL BE ATTACHED AT THE DISCHARGE POINT UNLESS PUMPING TO A SEDIMENT BASIN OR SEDIMENT TRAP. MINIMUM DIAMETER OF PIT BOTTOM SHALL BE 24" LARGER THAN PIPE DIAMETER. MINIMUM DEPTH OF PIT SHALL BE 24" BELOW WATER LEVEL IN WORK AREA (INCLUDING THE AASHTO #57 STONE). 12" TO 24" PERFORATED CMP OR PVC PIPE SHALL BE SET ON 12" OF CLEAN AASHTO # 57 STONE. VOID SPACE AROUND PIPE SHALL BE FILLED WITH AASHTO # 57 STONE. PIPE TO EXTEND 12" MIN. ABOVE TOP OF STONE AND/OR WATER BEING PUMPED FROM WORK AREA.

DISCHARGE FROM PUMP SHALL BE TO A STABLE AREA BELOW DISTURBANCES FROM THE WORK ZONE. SUMP MAY BE USED IN CONJUNCTION WITH FILTER BAG WHERE ADDITIONAL FILTERING IS NEEDED. STANDARD CONSTRUCTION DETAIL #3-17

SUMP PIT



NOTES:
SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL.
COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.
COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL
BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM
SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND
THE SLOPE OF ITS TRIBUTARY AREA.
TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE
BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
COMPOST FILTER 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. BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURERS RECOMMENDATIONS. 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.

STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK

SOIL SYMBOL DEPTH TO SEASONAL HIGH WATER TABLE REACTION BEDROCK 3.3 - 5.0 | 5.3 - 6.9 4.5 - 6.50.5 - 1.5 6.7 - 8.3 | 5.6 - 6.5 0.8 - 1.0 5.6 - 6.8 5.4 - 6.0 5.2 - 6.00 - 1/25.4 - 6.9 3.6 - 6.0 5.1 - 6.5 Penn-Klinesville Χ 1.7 - 3.3 0.5 - 3.0

LIMITATIONS OF PENNSYLVANIA SOILS PERTAINING TO EARTHMOVING PROJECTS (Absence of an X does not mean "No Potential Limitation"

NOTÉ: THIS IS NOT NECESSARILY AN ALL-INCLUSIVE LIST.

RESOLUTION OF SOIL TYPE LIMITATIONS

1. APPROPRIATE PRECAUTIONS SHOULD BE TAKEN TO SAFEGUARD WORKERS DURING ALL TRENCHING AND EXCAVATION OPERATIONS. ALL APPLICABLE OSHA STANDARDS AND REGULATIONS MUST BE IMPLEMENTED AT ALL TIMES.
2. SUITABLE PRECAUTIONS, SUCH AS COATING WITH NON—CORROSIVE MATERIALS, SHOULD BE TAKEN TO PROTECT UNDERGROUND PIPES, CONDUITS AND STORAGE TANKS FROM SOILS WITH THE POTENTIAL TO CAUSE CORROSION.
3. SEASONAL HIGH WATER TABLES WILL BE MANAGED BY EFFECTIVE SITE GRADING, DRAINAGE FACILITIES WITHIN ROADWAYS, AND BASEMENT DRAINS COUPLED WITH INDIVIDUAL UNIT SUMP PUMPS, IF REQUIRED.
4. WHERE SHALLOW DEPTH TO BEDROCK IS PRESENT, LIMIT EXCAVATION DEPTHS. IF THIS IS NOT POSSIBLE, BEDROCK MAY REQUIRE BLASTING IN AREAS WHERE RIPPER TEETH ON EXCAVATING EQUIPMENT CANNOT REMOVE MATERIAL BY MECHANICAL MEANS.

MECHANICAL MEANS.

5. NO GRADING SHALL BE PERFORMED IN FROZEN SOILS FOR SOIL TYPES DETERMINED TO HAVE LIMITATIONS DUE TO FROST AND/OR LISTED AS POOR UNDER WINTER GRADING.

6. DISTURBANCE IS LIMITED WITHIN AREAS PRONE TO FLOODING.

7. WHEN UNSUITABLE MATERIAL IS ENCOUNTERED IN EMBANKMENT AND WATERWAY AREAS, SUITABLE MATERIAL THAT COMPLIES WITH COMPACTION DETAIL SPECIFICATIONS MUST BE IMPORTED. MATERIAL MUST BE SUITABLE FOR STABILIZATION AND THE MINIMIZATION OF EROSION. SETBACKS SHOULD COMPLY WITH THE STANDARDS CONTAINED IN CHAPTER 16 OF THE E&S MANUAL UNLESS IT CAN BE SHOWN THAT CUTS AND FILLS DO NOT POSE A HAZARD TO PUBLIC SAFETY OR TO SURFACE WATERS. ROAD FILL MATERIAL MAY NEED TO BE IMPORTED IF SOILS HAVE LOW STRENGTH.

8. INFILTRATION TESTS SHOULD BE PERFORMED ON SITE TO DETERMINE SUITABLE AREAS FOR INFILTRATION FACILITIES.

9. FOR SOILS HAVING LIMITATIONS DUE TO PIPING, SPECIAL CARE SHOULD BE TAKEN WHEN USING THESE SOILS FOR BACKFILL AROUND BASIN OUTFALL PIPES. THE USE OF A FILTER DIAPHRAGM, ANTI-DEEP COLLAR OR OTHER ACCEPTABLE DEVICE MILET BE SPECIFIED.

10. POOR TOPSOIL SHALL BE AMENDED BEFORE RE-SPREADING OVER LAWN AREAS. SOIL TESTING MAY BE REQUIRED TO DETERMINE THE PROPER APPLICATION OF SOIL AMENDMENTS TO PROMOTE GROWTH OF DESIRED VEGETATION.

11. EASILY ERODIBLE SOILS SHALL DISCHARGE TO AN EROSION AND SEDIMENT CONTROL BMP DURING CONSTRUCTION AND STABILIZED WITH APPROPRIATE EROSION CONTROL MATTING AND VEGETATION FOR THE PERMANENT CONDITION. SEDIMENT THAT ACCUMULATES WITHIN THESE BMP'S CAN BE DISPOSED OF WITHIN LANDSCAPED AREAS ON—SITE. DISTURBED AREAS THAT DO NOT DRAIN TO A BMP MUST BE STABILIZED IMMEDIATELY.

12. USE A SEDIMENT FILTER BAG TO DEWATER THE WORK ZONE IN AREAS WITH SHALLOW DEPTHS TO SATURATED ZONES, SEASONAL HIGH—WATER TABLES, PONDING AND WETNESS.

FILTREXX SILT SOXX & RUNOFF DIVERSION INSPECTION AND MAINTENANCE NOTES

INSPECTION:

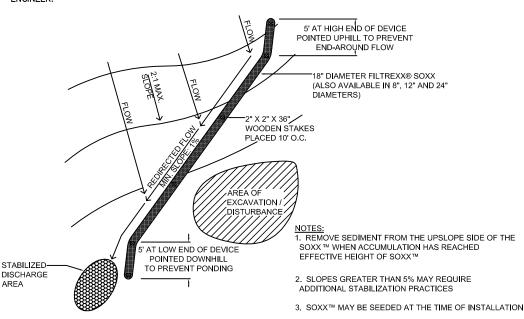
ROUTINE INSPECTION SHOULD BE CONDUCTED WITHIN 24 HRS OF A RUNOFF EVENT OR AS DESIGNATED BY THE REGULATING AUTHORITY. SEDIMENT CONTROL SHOULD BE REGULARLY INSPECTED TO MAKE SURE THEY MAINTAIN THEIR SHAPE AND ARE PRODUCING ADEQUATE HYDRAULIC FLOW THROUGH. IF PONDING BECOMES EXCESSIVE, ADDITIONAL SEDIMENT CONTROL MAY BE REQUIRED TO REDUCE EFFECTIVE SLOPE LENGTH OR SEDIMENT REMOVAL MAY BE NECESSARY, SEDIMENT CONTROL SHALL BE INSPECTED UNTIL AREA ABOVE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED

1. THE CONTRACTOR SHALL MAINTAIN THE SEDIMENT CONTROL IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.

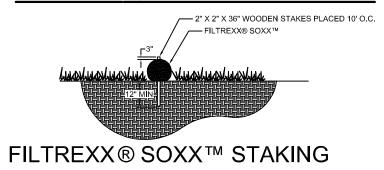
2. IF THE SEDIMENT CONTROL HAS BEEN DAMAGED, IT SHALL BE REPAIRED, OR REPLACED IF BEYOND REPAIR. 3. THE CONTRACTOR SHALL REMOVE SEDIMENT AT THE BASE OF THE UPSLOPE SIDE OF THE SEDIMENT CONTROL WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE SEDIMENT CONTROL, OR AS DIRECTED BY THE

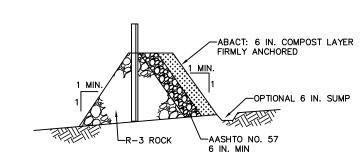
4. SEDIMENT CONTROL SHALL BE MAINTAINED UNTIL DISTURBED AREA ABOVE THE DEVICE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS CEASED. 5. THE FilterMedia WILL BE DISPERSED ON SITE ONCE DISTURBED AREA HAS BEEN PERMANENTLY STABILIZED, CONSTRUCTION

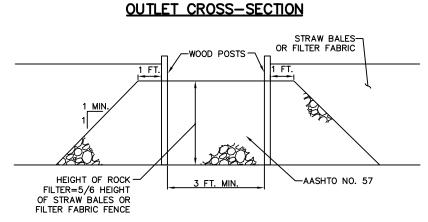
ACTIVITY HAS CEASED, OR AS DETERMINED BY THE ENGINEER. 6. FOR LONG-TERM SEDIMENT AND POLLUTION CONTROL APPLICATIONS, SEDIMENT CONTROL CAN BE SEEDED AT TIME OF INSTALLATION TO CREATE A VEGETATIVE FILTERING SYSTEM FOR PROLONGED AND INCREASED FILTRATION OF SEDIMENT AND SOLUBLE POLLUTANTS (CONTAINED VEGETATIVE FILTER STRIP). THE APPROPRIATE SEED MIX SHALL BE DETERMINED BY THE



FILTREXX® RUNOFF DIVERSION



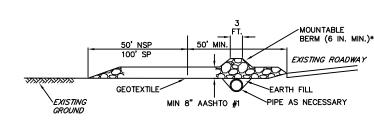


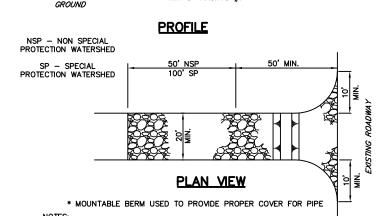


UP-SLOPE FACE

A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET. ABACT IS REQUIRED: A 6 INCH LAYER OF COMPOST SHOULD BE ADDED AND ANCHORED ON TOP OF THE UPSLOPE SIDE OF THE AASHTO #57 STONE. A 6-INCH DEEP SUMP MAY BE INSTALLED IMMEDIATELY UPSLOPE OF THE ROCK FILTER OUTLET TO PROVIDE ADDITIONAL SEDIMENT REMOVAL CAPACITY.

STANDARD CONSTRUCTION DETAIL #4-6 **ROCK FILTER OUTLET** NOT TO SCALE



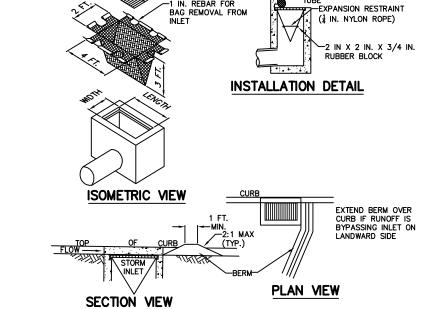


REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED 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

CONSTRUCTION ENTRANCE SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. PERFORM DAILY AND AS NEEDED STREET SWEEPING TO ENSURE SEDIMENT IS REMOVED FROM EXISTING ROAD WAYS.

ABACT IS REQUIRED — MUST PROVIDE ADDITIONAL 50' OF 2RC IN NON SPECIAL PROTECTION WATERSHEDS. STANDARD CONSTRUCTION DETAIL #3-1 **ROCK CONSTRUCTION ENTRANCE**

NOT TO SCALE



MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS. ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS STANDARD CONSTRUCTION DETAIL #4-15 FILTER BAG INLET PROTECTION - TYPE C INLET

NOT TO SCALE

RENCH EXCAVATION NOTES:

. Trenches shall be backfilled above the original ground level to allow for settlement and to prevent runoff from following the trench line when backfill settles.

2. Apply soil supplements, seed and mulch as required.

. The total length of excavated trench open at any one time should not be greater than the total length of utility line that can be placed in the trench and backfilled

2. No more than 50 lineal feet of open trench should exist when utility line installation ceases at the end of the work day.

. Open trench operations should not exceed 30 calandar days. Longer time periods maj be approved on a case—by—case basis where sufficient justification is provided. 2. The length of time should be the minimum necessary to efficiently excayate the trench, install the pipe, backfill the trench and begin stabilization of the disturbed

MAINTENANCE AND INSPECTION OF EROSION CONTROL FACILITIES

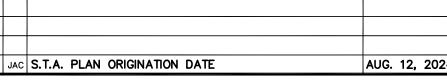
SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED II TOPSOIL STOCKPILES. MMFDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR

UNTIL THE SITE ACHIEVES FINAL STABILIZATION, THE OPERATOR SHALL ASSURE THAT THE BMPS ARE IMPLEMENTED, OPERATED AND MAINTAINED PROPERLY AND COMPLETELY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL BMP FACILITIES. THE OPERATOR WILL MAINTAIN AND MAKE AVAILABLE TO THE COUNTY CONSERVATION DISTRICT COMPLETE, WRITTEN INSPECTIONS. ALL MAINTENANCE WORK INCLUDING CLEANING, REPAIR, REPLACEMENT, REGRADING, AND RESTABILIZATION SHALL BE PERFORMED IMMEDIATELY.

ROCK CONSTRUCTION ENTRANCE — WILL BE RECONSTRUCTED WHEN CLOGGED WITH SEDIMENTS.
MATERIALS MUST BE MASHED COMPLETELY FREE OF ALL FOREIGN MATERIALS OR NEW ROCK USED TREBUILD THE FILTER. WATERBAR — DAMAGED OR ERODED WATERBARS SHALL BE RESTORED TO ORIGINAL DIMENSIONS WITHIN 24 HOURS OF INSPECTION. EMPORARY STREAM CROSSING — DAMAGE SHALL BE REPAIRED AND ANY SEDIMENT DEPOSITS SHALI BE REMOVED WITHIN 24 HOURS OF INSPECTION. PUMPED WATER FILTER BAG — IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED. SUMP PIT — IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED. CONCRETE WASHOUT — TO BE CLEANED ONCE CONCRETE WASHOUT LEVEL REACHES 1/2 THE HEIGH COMPOST FILTER SOCK - TO BE CLEANED ONCE SEDIMENT LEVEL REACHES 1/2 THE HEIGHT.

NLET FILTER BAG — SHALL BE CLEANED AND/OR REPLACED WHEN BAG IS HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED. DAMAGED FILTER BAGS SHALL BE REPLACED IMMEDIATLEY AFTER THE INSPECTION. SEDIMENT TRAP — ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE TRAP RESTORED TO ORIGINAL DIMENSIONS. IMMEDIATELY RESTORE DAMAGED EMBANKMENTS, SPILLWAYS AND OUTLETS TO DESIGN SPECIFICATIONS. REPLACE DAMAGED OR WARPED BAFFLES WITHIN 7 DAYS OF INSPECTION.

RIPRAP APRON - ANY DISPLACED RIPRAP SHALL BE REPLACED IMMEDIATELY. EROSION CONTROL BLANKET — DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS. ROCK FILTER - ROCK FILTER BERM AND ROCK FILTER OUTLET TO BE CLEANED OR RECONSTRUCTED ONCE SEDIMENT LEVEL REACHES 1/2 THE BERM HEIGHT. ILL INSPECTIONS SHOULD BE LOGGED ONTO DEP FORM 3150-FM-BCW0271d DATED 12/2019, OR AST REVISED AND KEPT ON SITE AT ALL TIMES.



E&S DETAIL SHEET

TERRALEAD, LLC SITE SITUATE IN

DOUGLASS TOWNSHIP MONTGOMERY COUNTY, PENNSYLVANIA

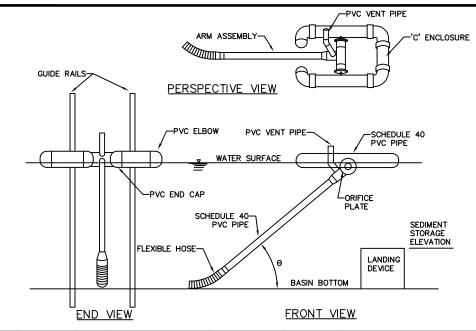


Civil Engineers • Land Surveyors

2499 KNIGHT ROAD, PENNSBURG, PA 18073

PH: (215) 679-0200; www.stotac.com PLAN SHEET NUMBER S.A.R. HORIZONTAL: PROJECT NUMBER

6366ESDET



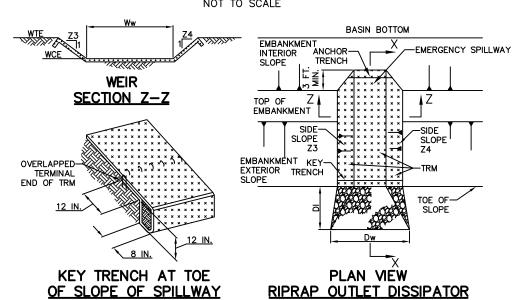
END VIEW								FRONT VI	<u>EW</u>			
				ARM		ORI	FICE	TOP OF		FLEXIBLE HO	DSE	
BASIN NO.	WATER SURFACE ELEVATION (FT)	SKIM- MER SIZE (IN)	ARM LENGTH (FT)	ARM DIA (IN)	ARM MAT'L	ORIFICE DIA (IN)	ORIFICE HEAD (IN)	LANDING DEVICE ELEVATION (FT)	HOSE DIA. (IN)	FLEXIBLE HOSE LENGTH (IN)	FLEXIBLE HOSE ATTACHMENT ELEVATION (FT)	HOSE MAT'L
001	382.50	4	9.0	3	PVC	1.4	4	381.00	3	8 IN. OR AS SPECIFIED PER MANUFACTURER	380.00	PVC

ORIFICE DIAMETER MUST BE EQUAL TO OR LESS THAN ARM DIAMETER A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.

SKIMMER SHALL BE MANUFACTURED BY: J.W. FAIRCLOTH & SON P.O. BOX 757 HILLS BOROUGH, NC 27278-0757

SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION. ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS. SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN—OUT STAKE OR THE TOP OF THE LANDING DEVICE. A SEMI-CIRCULAR LANDING ZONE MAY BE SUBSTITUTED FOR THE GUIDE RAILS (STANDARD CONSTRUCTION DETAIL # 7-3).

STANDARD CONSTRUCTION DETAIL #7-1



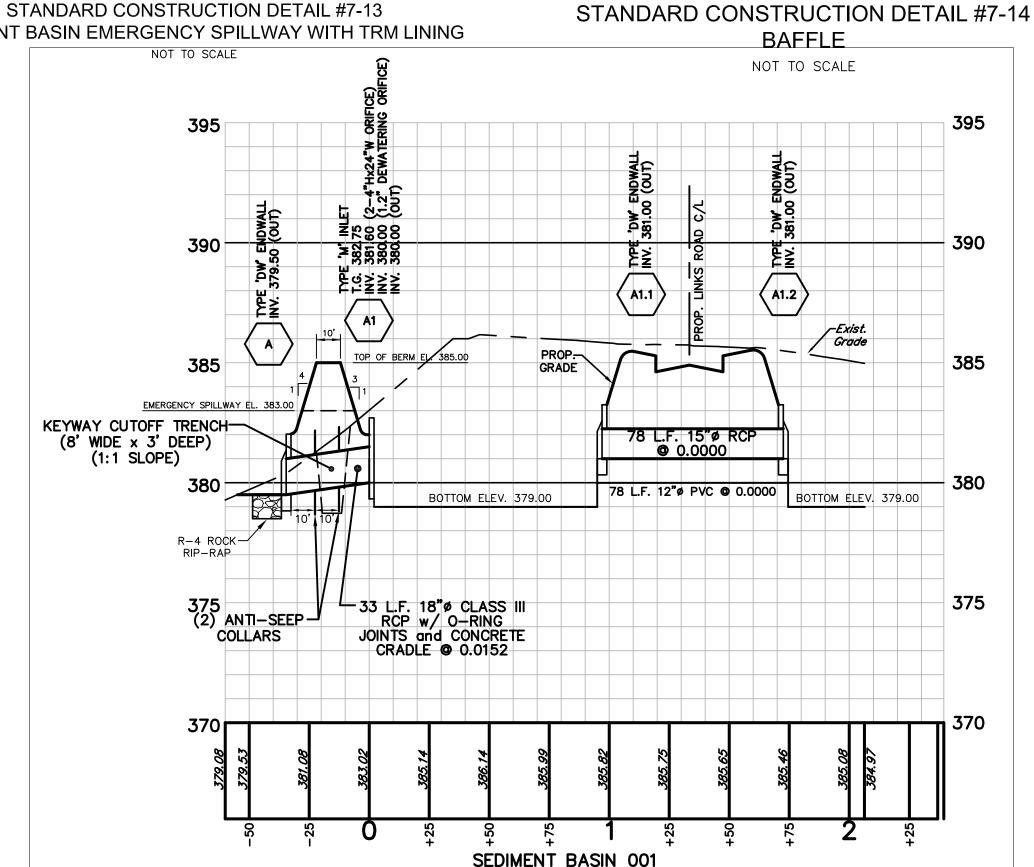
SLOPE PER MANUFACTURER

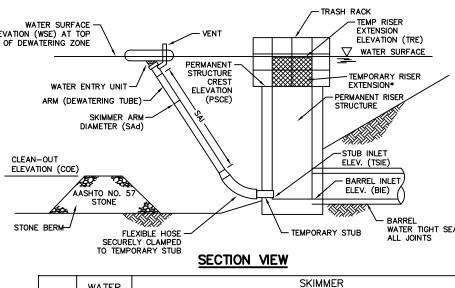
EMBANKMENT SECTION ALONG EMERGENCY SPILLWAY

			WEIR			LINII	NG	CHAI	NNEL		DISSIF	PATOR	
BASIN NO.	Z3 (FT)	Z4 (FT)	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	TRM TYPE	STAPLE PATTERN	Z5 (FT)	DEPTH Cd (FT)	LENGTH DI (FT)	WIDTH Dw (FT)	RIPRAP SIZE (R)	RIPRA THICI DRt (IN)
001	3	3	385.00	383.00	45	P300	E	3	0.75	8	50	4	18

HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING.
DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY.
RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR.
THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS

SEDIMENT BASIN EMERGENCY SPILLWAY WITH TRM LINING



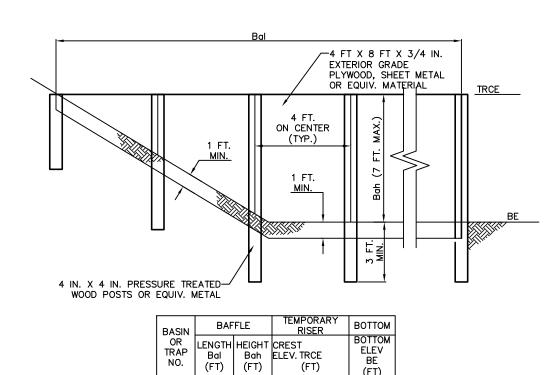


					SEC III	JN VIE	<u>w</u>				
		WATER					SKIMI	MER			
	SURFACE		ORIFICE			ARM			FLEXIBLE HOSE		
	BASIN NO.	ELEV. WSE (FT)	DIA. (IN)	HEAD (FT)	MAT'L	DIA. SAd (IN)	LENGTH SAL (FT)	MAT'L	DIA. (IN)	LENGTH (IN)	MAT'L
	001	382.50			SEE ST	ANDARD	CONSTR	RUCTION	DETAIL	# 7-1	
	·					·					
					1 5			1 5.0			

TEMF	PORARY	STUB		PERM	PERMANENT RISER			R EXTEN	SION	BARREL
INSIDE	INVERT		BASIN	CREST	HORIZ (PENING	CREST	HORIZ (PENING	INLET
DIA (IN)	ELEV TSIE (FT)	MAT'L	NO.	ELEV PSCE (FT)	LENGTH EI (IN)	WIDTH Ew (IN)	ELEV TRE (FT)	LENGTH (IN)	WIDTH (IN)	ELEV BIE (FT)
3	380.00	PVC	001	382.75	48	24	N/A	N/A	N/A	380.00

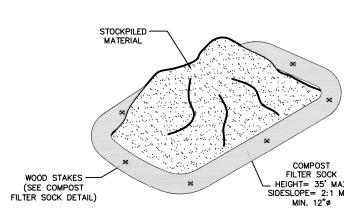
ALL POST-CONSTRUCTION ORIFICES ON PERMANENT RISER BELOW TEMPORARY RISER EXTENSION SHALL HAVE WATER-TIGHT TEMPORARY SEALS PROVIDED. THE USE OF A STEEL PLATE AND WATERTIGHT SEAL IS PREFERRED BUT MARINE GRADE PLYWOOD IS ALSO ACCEPTABLE. TEMPORARY STUB INVERT ELEVATION SHALL BE SET AT OR BELOW SEDIMENT CLEAN-OUT ELEVATION. A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED. SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION. ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS. SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE STONE BERM. SEE STANDARD CONSTRUCTION DETAIL #7-3 FOR CONFIGURATION OF STONE BERM.

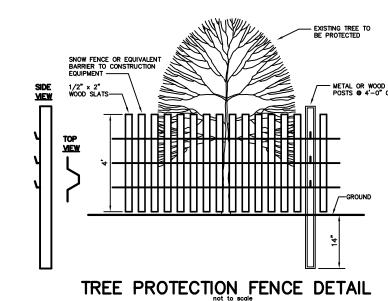
STANDARD CONSTRUCTION DETAIL #7-2 SKIMMER ATTACHED TO PERMANENT RISER NOT TO SCALE

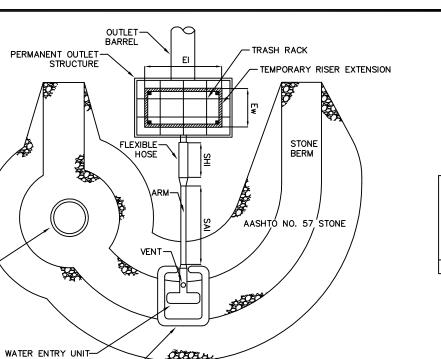


SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION. AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS. SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION. DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION. BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.



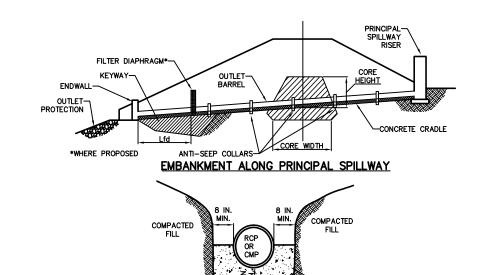




FLOAT-

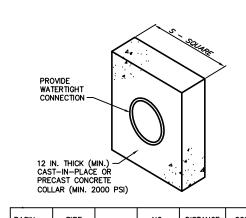
NO GUIDE RAILS SHALL BE REQUIRED FOR THIS INSTALLATION. THIS DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD CONSTRUCTION DETAILS #7-2 AND #7-4.

> STANDARD CONSTRUCTION DETAIL #7-3 SKIMMER WITH STONE LANDING BERM NOT TO SCALE

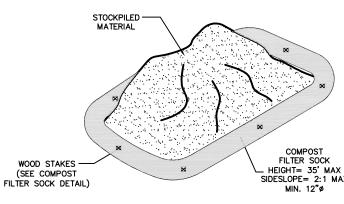


CROSS-SECTION AT OUTLET BARREL A CONCRETE CRADLE MAY BE USED IN CONJUNCTION WITH ANTI-SEEP COLLARS AND/OR FILTER DIAPHRAGM. ANTI-SEEP COLLAR NUMBER, SIZE AND SPACING SHALL BE AS SHOWN ELSEWHERE IN PLAN.

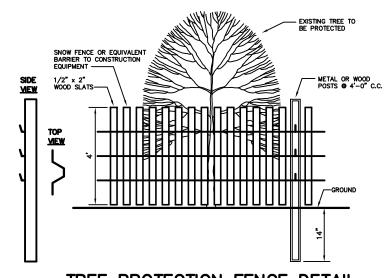
FILTER DIAPHRAGM LOCATION (Lfd) SHALL BE AS SHOWN IN FIGURE 7.8 OF THE PA DEP EROSION CONTROL MANUAL. STANDARD CONSTRUCTION DETAIL #7-17 CONCRETE CRADLE FOR BASIN OR TRAP **OUTLET BARREL** NOT TO SCALE

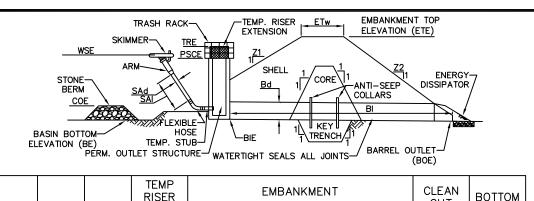


NOTES: ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT. COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE. STANDARD CONSTRUCTION DETAIL #7-16 CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS



STOCKPILE CONTROL





| WIDTH | TRENCH | TRENCH | COE

DEPTH | WIDTH

(FT)

(FT)

ELEV TRE

GREATER THAN 2/3 THE LIFT THICKNESS.

	SKIMMER				OUTLET BARREL						
BASIN NO.	DIA SAd (IN)	LENGTH SAi (FT)	MAT'L	DIA Bd (IN)	INLET ELEV BIE (FT)	MAT'L	LENGTH BI (FT)	OUTLET ELEV BOE (FT)			
001	SEE STANDARD CONSTRUCTION DETAIL #7-1			18	380.00	RCP	33	0.0152			

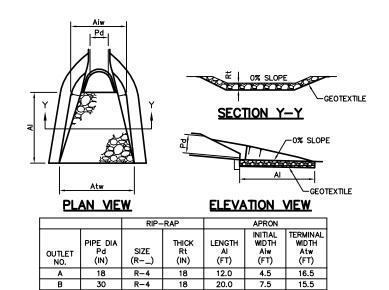
ETw

SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. IN ORDER TO FACILITATE MAINTENANCE AND RESTORATION, THE POOL AREA SHALL BE CLEARED OF ALL BRUSH, TREES, AND OBJECTIONABLE MATERIAL FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODLY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO

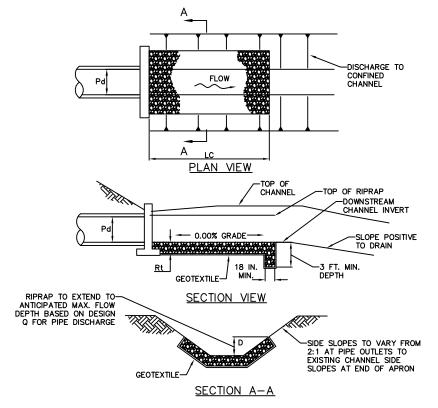
UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED, MULCHED, BLANKETED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT. INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PROVIDE ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN. BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE INSPECTED FOR EROSION, PIPING AND SETTLEMENT. DASIN EMBANNMENTS, SHILL BE IMMEDIATELY. DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY.

ANY ACCUMULATED SEDIMENT REMOVED FROM THE SEDIMENT BASIN DURING SOIL REMEDIATION PROCEDURES SHALL BE TESTED TO ENSURE THE SEDIMENT IS FREE OF POLLUTANTS. IF POLLUTANTS ARE FOUND, THE SEDIMENT SHALL BE TRANSPORTED OFF—SITE TO AN APPROVED FACILITY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

STANDARD CONSTRUCTION DETAIL #7-4 SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS - SKIMMER NOT TO SCALE



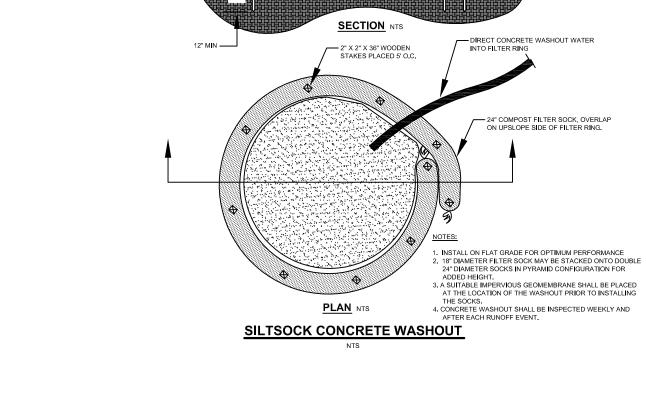
ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS. ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY. STANDARD CONSTRUCTION DETAIL #9-1 RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL NOT TO SCALE

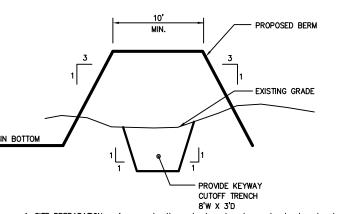


		RIP	RAP			Α	PRON		
OUTLET NO.	PIPE DIA Pd (IN)	SIZE R	THICK. Rt (IN)	LENGTH LC (FT)	INITIAL BOTTOM WIDTH (AT ENDWALL) (FT)	END WIDTH (FT)	INITIAL TOP WDTH (AT ENDWALL) (FT)	END TOP WIDTH (FT)	SIDE SLOPE H: V
С	18	4	18	10	4.5	4.5	10.5	10.5	2:1

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS. ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-3 RIPRAP APRON AT PIPE OUTLET TO AN EXISTING CHANNEL





1. SITE PREPARATION — Areas under the embankment and any structural works shall be cleared, grubbed and the topsoil stripped to remove the trees, vegetation, roots, or objectionable material. In order to facilitate clean—out and other restoration, the pool 2. CUT OFF TRENCH — A cut—off trench will be excavated along the centerline dam on earth fill embankments. the minimum depth shall be 3 feet. The cut—off trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be 8 feet but wide enough to permit operation of compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for embankment. The trench shall be kept free from standing water during backfilling operations.

3. EMBANKMENT — The fill material shall be taken from selected borrow areas. It shall be free of roots, woody vegetation, oversized stones, rocks or other objectionable material. Areas on which fill is to be placed shall be scarified prior to placement of fill

The fill material should contain sufficient moisture so that it can be formed be hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Fill material will be placed in 6 to 8 inch layers and shall be continuous over the entire length of the fill. Compaction will be obtained by routing earthmoving equipment and vibratory roller compactors over the fill so that the entire surface of the fill is traversed but at least one tread track of the equipment and compactor drum. The embankment shall be constructed to an elevation of 5% higher than the design height to allow for

All basin embankments should be compacted by sheepsfoot or pad roller. The loose lift thickness should be 9 inches or less, depending on roller size, and the maximum particle size is 6 inches or less — 2/3 lift thickness. Five passes of the compaction equipment over the entire surface of each lift is required. Embankment compaction to stable a second of the compaction to stable as the compaction of the co

BASIN BERM DETAIL

Mixture	Recommended Seed M	Seeding Rate -	Pure Live Se
Number	Species	Most Sites	Adverse S
	Spring oats (spring), or	64	96
	Annual ryegrass (spring or fall), or	10	15
1 ²	Winter wheat (fall), or	90	120
	Winter rye (fall)	56	112
	Tall fescue, or	60	75
	Fine fescue, or	35	40
2 ³	Kentucky bluegrass, plus	25	30
	Redtop ⁴ , or	3	3
	Perennial ryegrass	15	20
	Birdsfoot trefoil, plus	6	10
3	Tall fescue	30	35
	Birdsfoot trefoil, plus	6	10
4	Reed canarygrass	10	15
	Crownvetch, plus	10	15
5 ⁸	Tall fescue, or	20	25
	Perennial ryegrass	20	25
	Crownvetch, plus	10	15
6 ^{5,8}	Annual ryegrass	20	25
	Birdsfoot trefoil, plus	6	10
7 ⁸	Crownvetch, plus	10	15
	Tall fescue	20	30
	Flatpea, plus	20	30
8	Tall fescue, or	20	30
	Perennial ryegrass	20	25
	Serecia lespedeza, plus	10	20
9 ⁶	Tall fescue, plus	20	25
	Redtop ⁴	3	3
	Tall fescue, plus	40	60
10	Fine fescue	10	15
	Deertongue, plus	15	20
11	Birdsfoot trefoil	6	10
	Switchgrass, or	15	20
12 ⁷	Big Bluestem, plus	15	20
	Birdsfoot trefoil	6	10
	Orchardgrass, or	20	30
13	Smooth bromegrass, plus	25	35
	Birdsfoot trefoil	6	10

enn State, "Erosion Control and Conservation Plantings on Noncropland"

PLS is the product of the percentage of pure seed times percentage germination divided by 100. For example, to secure the actual planting rate for switchgrass, divide 12 pounds PLS shown on the seed tag. Thus, if the PLS content of a given seed lot is 35%, divide 12 PLS by 0.35 to obtain 34.3 pounds of seed required to plant one acre. All mixtures in this table are shown in terms of PLS.

required to plant one acre. All mixtures in this table are shown in terms of PLS.

If high-quality seed is used, for most sites seed spring oats at a rate of 2 bushels per acre, winter wheat at 11.5 bushels per acre, and winter rye at 1 bushel per acre. If germination is below 90%, increase these suggested seeding rates by 0.5 bushel per acre.

This mixture is suitable for frequent mowing. Do not cut shorter than 4 inches.

Keep seeding rate to that recommended in table. These species have many seeds per pound and are very competitive. To seed small quantities of small seeds such as weeping lovegrass and redtop, dilute with dry sawdust, sand, rice hulls, buckwheat hulls, etc.

Use for highway slopes and similar sites where the desired species after establishment is crownvetch.

6. Use only in extreme southeastern or extreme southwestern Pennsylvania. Serecia lespedeza is not well Do not mow shorter than 9 to 10 inches.
 Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

Recommended Seed Mixtures for Stabilizing Disturbed Areas Nurse Seed Mixture

	Nurse	Seed Mixture
Site Condition	Crop	(Select one mixture)
Slopes and Banks (not mowed)		
Well-drained	1 plus	3, 5, 8, or 12 ¹
Variable drainage	1 plus	3 or 7
Slopes and Banks (mowed)		
Well-drained	1 plus	2 or 10
Slopes and Banks (grazed/hay)		
Well-drained	1 plus	2, 3, or 13
Gullies and Eroded Areas	1 plus	3, 5, 7, or 12 ¹
Erosion Control Facilities (BMPs)	<u> </u>	
Sod waterways, spillways, frequent water flow areas	1 plus	2, 3, or 4
Drainage ditches	l .	
Shallow, less than 3 feet deep	1 plus	2, 3, or 4
Deep, not mowed	1 plus	5 or 7
Pond banks, dikes, levees, dams, diversion channels,		
And occasional water flow areas		
Mowed areas	1 plus	2 or 3
Non-mowed areas	1 plus	5 or 7
For hay or silage cn diversion channels and		
occasional water flow areas	1 plus	3 or 13
Highways 2		
Non-mowed areas		
Pure crownvetch ³	1 plus	5 or 6
Well-drained	1 plus	5, 7, 8, 9, or 10
Variable drained	1 plus	3 or 7
Poorly drained	1 plus	3 or 4
Areas mowed several times per year	1 plus	2, 3, or 10
Utility Right-of-way		
Well-drained	1 plus	5, 8, or 12 ¹
Variable drained	1 plus	3 or 7
Well-drained areas for grazing/hay	1 plus	2, 3, or 13
Effluent Disposal Areas	1 plus	3 or 4
Sanitary Landfills	1 plus	3, 5, 7, 11 ¹ , or 12 ¹
Surface mines		
Spoils, mine wastes, fly ash, slag, settling basin		l
Residues and other severely disturbed areas	1 plus	3, 4, 5, 7, 8, 9, 11 ¹ , or 12 ¹
(lime to soil test)		
Severely disturbed areas for grazing/hay	1 plus	3 or 13
Penn State, "Erosion Control and Conservation Pantings of	n Noncropla	nd"

 For seed mixtures 11 and 12, only use spring oats or weeping lovegrass (included in mix) as nurse crop.
 Contact the Pennsylvania Department of Transportation district roadside specialist for specific suggestions on treatment techniques and management practices. 3. Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

	SEEDING SPE TEMPORARY SEEDING (
	205050			
MIXTURE NUMBER	SPECIES	% BY WEIGHT	APPLICATION RATE	PURE LIVE SEED (PLS)
1	SPRING OATS (SPRING)	100%	4-5 LBS PER 1000 S.F.	64
(OR	ANNUAL RYEGRASS (SPRING OR FALL)	100%	4-5 LBS PER 1000 S.F.	10
APPROVED	WINTER WHEAT (FALL)	100%	4-5 LBS PER 1000 S.F.	90
EQUAL)	WINTER RYE (FALL)	100%	4-5 LBS PER 1000 S.F.	56
MIYTURE	SPECIES		SEEDING RATES	
MIXTURE NUMBER	SPECIES	% BY WEIGHT		PURE LIVE SEED
				(PLS)
2	TALL FESCUE	100%	6-8 LBS PER 1000 S.F.	60
(OR	FINE FESCUE	100%	4-5 LBS PER 1000 S.F.	35
APPROVED	KENTUCKY BLUEGRASS	80-90%	3-4 LBS PER 1000 S.F.	25
EQUAL)	PLUS REDTOP	10-20%		3
	PERENNIAL RYEGRASS	100%	2-5 LBS PER 1000 S.F.	15
	SUITABLE FOR FREQUENT MOWING.			
	SUITABLE FOR FREQUENT MOWING. DO NOT CUT SHORTER THAN 4 INCHES.			

WATER IS 50% OF CONCRETE WASHOU

FILTER SOCK

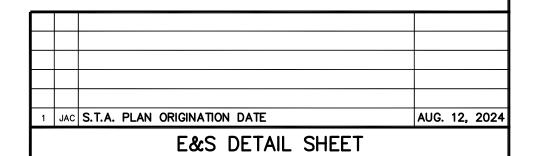
NOTE: WHEN A DISTURBED AREA IS TO BE STABILIZED BY VEGETATION, NO MORE THAN 15,000 S.F. SHALL REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED. WAITING UNTIL EARTHMOVING ACTIVITIES ARE COMPLETED BEFORE SEEDING AND MULCHING OPERATIONS ARE COMPLETED IS NOT RECOMENDED.

TABLE 11.2	SOIL AMENDA	MENT APPLICA	ATION RATE E	QUIVALENT
SOIL AMENDMENT	PERMANEN1	SEEDING APPLIC	ATION RATE	NOTES
SOIL AMENDMENT	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	NOIES
AGRICULTURAL LIME	6 TONS	240 lb.	2,480 lb.	OR AS PER SOIL TEST; MAY NOT BE REQUIRED IN AGRICULTURAL FIEL
10-20-20 FERTILIZER	1,000 lb.	25 lb.	210 lb.	OR AS PER SOIL TEST; MAY NOT BE REQUIRED IN AGRICULTURAL FIEL
	TEMPORARY	SEEDING APPLIC	ATION RATE	
AGRICULTURAL LIME	1 TON	40 lb.	410 lb.	TYPICALLY NOT REQUIRED FOR TOPSOIL STOCKPILE
10-10-10 FERTILIZER	500 lb.	12.5 lb.	100 lb.	TYPICALLY NOT REQUIRED FOR TOPSOIL STOCKPILE

Adapted from Penn State, "Erosion Control and Conservation Plantings on Noncropland" NOTES: A COMPOST BLANKET WHICH MEETS THE STANDARDS OF THIS CHAPTER MAY BE SUBSTITUTED FOR THE SOIL AMENDMENTS SHOWN IN THIS TABLE. SOIL TESTING IS RECOMMENDED IN ORDER TO DETERMINE APPROPRIATE LIME AND FERTILIZATION RATES.

	TABLE 1	1.6 MULCH A	PPLICATION R	ATES
MULCH TYPE	APP	LICATION RATE (N	/IIN.)	NOTES
MOLCH TIFE	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	NOIES
STRAW	3 TONS	140 lb.	1,240 lb.	EITHER WHEAT OR OAT STRA FREE OF WEEDS, NOT CHOPPED OR FINELY BROKE
HAY	3 TONS	140 lb.	1,240 lb.	TIMOTHY, MIXED CLOVER AN TIMOTHY OR OTHER NATIVE FORAGE GRASSES
WOOD CHIPS	4-6 TONS	185-275 lb.	1,650-2,500 lb.	MAY PREVENT GERMINATION OF GRASSES AND LEGUMES
HYDROMULCH	1 TON	47 lb.	415 lb.	SEE LIMITATIONS ABOVE
STDAW AND L	AV MILICH SHOLL	ID DE ANCHODER	OP TACKIEIED II	MMEDIATELY AFTED

4. MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. 5. SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5% WOOD FIBER HYDROMULCH MAY BE APPLIED ON SIEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE FOR ANY HYDROMULCH SHOULD BE 2,000 LB/ACRE AT A MINIMUL

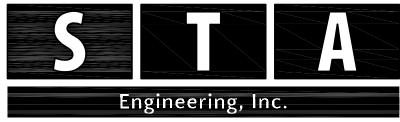


115 W. MOYER ROAD

TERRALEAD, LLC

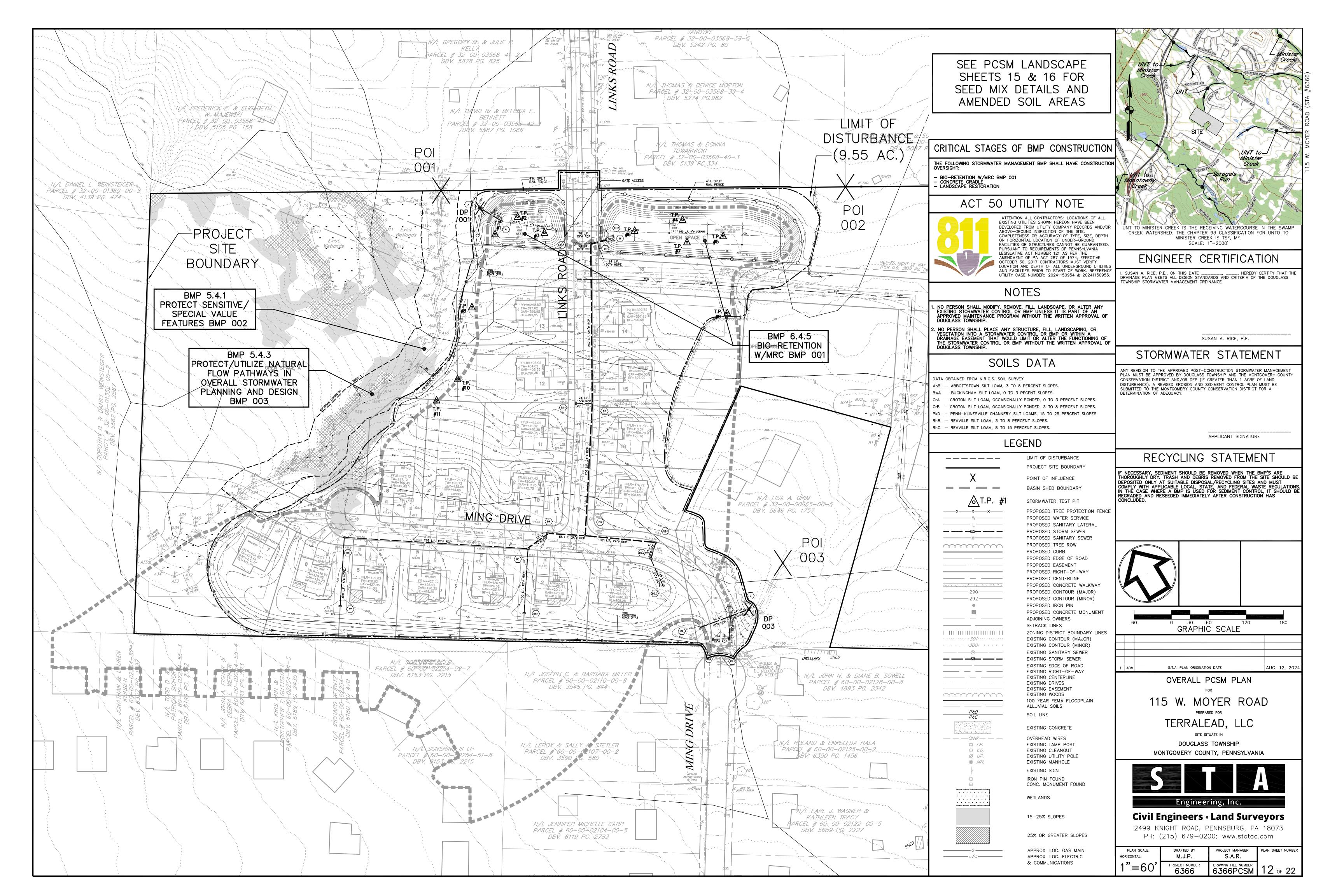
DOUGLASS TOWNSHIP MONTGOMERY COUNTY, PENNSYLVANIA

SITE SITUATE IN



Civil Engineers • Land Surveyors 2499 KNIGHT ROAD, PENNSBURG, PA 18073 PH: (215) 679-0200; www.stotac.com

PLAN SCALE HORIZONTAL:	DRAFTED BY J.A.C.	PROJECT MANAGER S.A.R.	PLAN SHEET NUMBER
N.T.S.	PROJECT NUMBER 6366	DRAWING FILE NUMBER 6366ESDET	11 of 2 1



POST-CONSTRUCTION STORMWATER MANAGEMENT OPERATION & MAINTENANCE NOTES

1. BMP DESCRIPTIONS:

The primary BMP's proposed for the development site consists of the following:

Non-Structural BMP's

BMP 5.4.1 Protect Sensitive/Special Value Features - Stream and wetlands to remain

BMP 5.4.3 Protect/Utilize Natural Flow Pathways in Overall Stormwater Planning and Design

Structural BMP's

BMP 6.4.5 Bio-retention w/MRC BMP 001

2. GENERAL BMP OPERATION, MAINTENANCE, INSPECTION AND CERTIFICATION NOTES:

At such time that the site is stabilized and the temporary during construction erosion and sediment controls are removed, the permanent non-structural and structural BMP's will be installed and functioning. The structural BMP's are intended to be permanent facilities that mitigate peak flows and address minimal volume control in addition to promoting water quality

General Maintenance - The stormwater management BMP's shall be owned and maintained by a Homeowners Association (HOA) in perpetuity. The HOA shall conduct maintenance on a short-term and long-term schedule in accordance with the maintenance procedures outlined in this narrative and on the PCSM plans. Until such time that the site is fully established and operational, the developer and/or permittee shall perform the required maintenance of the stormwater management BMP's. In addition to the procedures outlined in the narrative and on the plans, the HOA shall be responsible to make a visual inspection of the BMP facilities after every storm event greater than 1.0-inch and after extreme events (10-, 50- and 100-year storm events) to verify their integrity and to note any damage requiring corrective action. Furthermore, the HOA shall be responsible to perform an annual inspection of the facilities and generate a report to document the condition of the facilities. Copies of the annual report shall be submitted to the HOA for review and, where required, corrective action. If significant repairs are required, the Township Engineer shall be consulted prior to repair. The Municipality shall have the right, but not the duty, to inspect the stormwater management facilities, and if the HOA fails to do so, perform necessary maintenance. Blanket easements over the stormwater management facilities will be provided for access to the facilities by all parties requiring access in the HOA documents.

Critical Stages/Oversight - The permittee shall provide engineering construction oversight during installation of all aspects of the stormwater management facility. A licensed professional engineer knowledgeable in the design and construction of stormwater BMPs, preferably the design engineer, shall conduct the oversight. Refer to the PCSM plans for a complete tabulation of the designated BMP's requiring construction oversight.

Final Certification - the permittee shall include with the Notice of Termination "Record Drawings" with a final certification statement from a licensed professional, which reads as follows:

"I. (name), do hereby certify pursuant to the penalties of 18. Pa.c.s.a. § 4904 to the best of my knowledge, information and belief, that the accompanying record drawings accurately reflect the as-built conditions, are true and correct, and are in conformance with Chapter 102 of the Rules and Regulations of the Department of Environmental Protection and that the project site was constructed in accordance with the approved PCSM Plan, all approved plan changes and accepted construction practices."

The permittee shall retain a copy of the record drawings as a part of the approved PCSM Plan and shall provide a copy of the record drawings as a part of the approved PCSM Plan to the person identified in this section as being responsible for the long-term operation and maintenance of the PCSM BMP's.

Upon permanent stabilization of the earth disturbance activity under § 102.22(a)(2) (relating to permanent stabilization), and installation of BMP's in accordance with an approved plan prepared and implemented in accordance with \\$ 102.4 and 102.8 (relating to erosion and sediment control requirements; and PCSM requirements), the permittee or co-permittee shall submit a Notice of Termination (NOT) to the Department or County Conservation District. Prior to accepting the NOT, the Department and/or Conservation District staff will perform a final inspection and approve or deny the NOT.

3. SPECIFIC BMP OPERATION AND MAINTENANCE NOTES:

Inspect BMP's after every storm event greater than 1.0-inch and after extreme events (10-, 50- and 100-year storm events) for damage and/or erosion activity, paying close attention to the embankments, spillway, and berm. Repair erosion with appropriate measures immediately.

Inspect BMP plantings on a monthly basis during the growing season for the first two years to evaluate plant establishment and mortality - replace dead plants with same or like plants able to establish in the cultural conditions present. If necessary replace plants with a different species suitable to any microclimatic effects that might develop.

Long Term:

Short Term:

Until the permittee or co-permittee has received written approval of a Notice of Termination, the permittee or co-permittee will remain responsible for compliance with the permit terms and conditions including long-term operation and maintenance of all PCSM BMP's on the project site and responsibility for violations occurring on the project site.

The permittee or co-permittee shall be responsible for long-term operation and maintenance of PCSM BMP's unless a different person is identified in the Notice of Termination and has agreed to long-term operation and maintenance of PCSM

For any property containing a PCSM BMP, the permittee or co-permittee shall record an instrument with the recorder of deeds, which will assure disclosure of the PCSM BMP and the related obligations in the ordinary course of a title search of the subject property. The recorded instrument must identify the PCSM BMP, provide for necessary access related to long-term operation and maintenance for PCSM BMP's and provide notice that the responsibility for long-term operation and maintenance of the PCSM BMP is a covenant that runs with the land that is binding upon and enforceable by subsequent grantees, and provide proof of filing with the Notice of Termination under § 102.7(b)(5) (relating to permit termination).

The person or entity responsible for performing long-term operation and maintenance may enter into an agreement with another person including a conservation district, non-profit organization, municipality, authority, private corporation or other person to transfer the responsibility for PCSM BMP's or to perform long-term operation and maintenance and provide notice

A permittee or co-permittee that fails to transfer long-term operation and maintenance of the PCSM BMP or otherwise fails to comply with this requirement shall remain jointly and severally responsible with the landowner for long-term operation and maintenance of the PCSM BMP's located on the property.

A written report must be completed to document each inspection and all BMP repair and maintenance activities.

The PCSM Plan, inspection reports and monitoring records shall be available for review and inspection by the Department or the Conservation District.

Specific BMP Construction Sequence and Long-Term Maintenance Notes:

GENERAL:

1. Catch basins and inlets should be inspected and cleaned at least two times per year and after storm events greater than 1.0-inch and after extreme events (10-, 50- and 100-year storm events)

2. Vehicles should not be parked or driven over infiltration BMP's.

3. Structural BMP's should be inspected for accumulation of sediment, damage to outlet structures, signs of contamination or

spills, and berm stability.

BMP 5.4.1 - PROTECT SENSITIVE/SPECIAL VALUE FEATURES

BMP 5.4.3 - PROTECT/UTILIZE NATURAL FLOW PATHWAYS IN OVERALL STORMWATER PLANNING AND

Individual property owners will own and maintain the property within their lot, which includes the areas listed below. The level of maintenance required within these areas will be maintained as close to its existing conditions as possible and require limited management.

The areas shall be maintained as follows:

Wooded Areas

The wooded areas will be left in their natural state and maintained to a limited degree to preserve their health and stability. This shall be accomplished by the removal of damaging invasive vines along the woodland edges and in forest gaps. Live and dead trees shall not be cut down or removed unless they pose a threat to human safety. Dead trees shall be left standing and lying on the forest floor for wildlife habitat.

Stream and Wetland Areas

Limiting disturbance adjacent to stream and wetland areas will provide the best protection for these areas. The vegetation surrounding the stream and wetland areas shall not be disturbed. The vegetation will provide an effective buffer and naturally control erosion and sedimentation, absorb chemicals, and excess nutrients, and promote infiltration of stormwater runoff. Monitor and control invasive weeds to prevent competition with native species. Inspect annually for colonization of invasive plants. Remove invasive plants without disturbing desirable species. Limit the use of broadly applied herbicide sprays in favor of hand removal and localized application of herbicide sprays (when air is still). Inspect, at a minimum, once a year and after severe storms for evidence of erosion, sediment deposit, or concentrated flow channels. Repairs should be made as soon as possible to halt erosion and stabilize any effected areas. Stabilize areas subject to erosion using a native meadow seed mix in meadow areas or in wooded areas using native shrubs and/or trees capable of quickly generating a dense fibrous root system, such as shrubby dogwoods (silky dogwood, gray dogwood, and red osier dogwood), Virginia sweetspire, alders, willows, sycamores, and river birch. Periodically monitor channel flows, particularly after severe storm events. Natural debris shall not be removed from the stream bed unless it is significantly impeding the flow of water in the stream and causing excessive flooding. Should debris removal be necessary, debris should be left at a point just above the stream bank to enhance wildlife habitat and ensure nutrient recycling. Removal of debris should be limited to that required to return stream flow to its natural state. If possible, limit activities within naturalized areas, between April 15 and August 15. Disturbance within this period can be detrimental to a variety of wildlife.

BMP 6.4.5 - BIO-RETENTION W/MRC BMP 001

Characteristics and Functions

1. The BMP has 3:1 side slopes. BMP 001 is 2.00 ft. deep from the emergency spillway elevation to the bottom of the BMP. 2. The BMP has 2.0 ft. of amended soil in the bottom and is proposed to be seeded with a seed mix that will create a naturalized BMP setting requiring minimal maintenance (mowing).

3. An underdrain with a small orifice of 1.2 inches is utilized to dewater the BMP at the end of the 24-hour storm (surface storage and soil storage volume).

4. Additional trees and shrubs are planted in and around the BMP to create a naturalized setting.

5. The BMP controls peak stormwater flows for all design storms and provides water quality benefits.

6. The BMP has 0.6 ft. of surface storage for stormwater runoff (i.e. the controlling orifice is set above the bottom of the

Construction Sequence-Critical Stage:

1. Unless otherwise infeasible, construction of the permanent basin should be scheduled to allow for installation of the specified seed mixes as soon as permanent basin construction is complete between early April to mid-June to provide the plants with a full growing season to build strong root reserves for winter hardiness. In no case shall seed be installed prior to April 1 or later than September 15. Install annual rye cover crop for over-wintering, followed by site preparation and application of the specified seed mixes during the following spring.

2. A licensed professional engineer (or authorized representative) knowledgeable in the design and construction of stormwater BMP's, preferably the design engineer, shall conduct the oversight during installation.

3. Install the MRC BMP during final phases of site construction to prevent sedimentation and/or damage from construction activity. After installation, prevent sediment-laden water from entering via overland, inlets and pipes.

4. Install and maintain proper E&S BMPs during construction. 5. If necessary, excavate the MRC BMP bottom to an un-compacted subgrade free from rocks and debris. Do NOT

6. Install impermeable liner per manufacturer's specifications for BMP 001 only if groundwater is encountered and the required one foot of separation from the BMP bottom is not met.

7. Install outlet control structures and reinforced spillway, pipe bedding, underdrain piping and aggregate envelope,

8. Install equalizing pipe and endwalls.

9. Place soil media gently. Do not compact soil media. The placement of soil media should be done from outside the BMP footprint to avoid compaction by construction equipment. Equipment should never drive over placed soil

10. Prepare for seeding by eliminating any weed growth prior to seed installation using an appropriate herbicide to control undesirable vegetation. For optimal seed establishment, soil ph shall be between 5.5 and 6.5.

11. Seed and stabilize disturbed area. Apply seed by carefully proportioning seed for the entire area. Broadcast seed in two separate applications by applying seed at half the suggested rate for each application to ensure even and adequate coverage. After the full rate of seeding has been achieved, follow by rolling or tracking seed into the top 1/4 inch of soil to achieve good seed to soil contact - do not roll or track the seed when soil is wet. Vegetate with native

12. Cover seeded area with a light layer of salt hay, threshed straw or pine needles and apply erosion control matting over 3:1 slopes and the basin floor

13 Maintain inlet protection and other F&S RMPs until the site is fully stabilized

1. Upgradient catch basins and inlets should be inspected and cleaned annually, or more often if historical maintenance records suggest a more frequent cleaning.

2. The vegetation (for the MRC BMP and contributing drainage area) should be maintained in good condition, and

3. Care should be taken to avoid excessive compaction by mowers. Mow only as appropriate for vegetative species.

4. Inspect at least two times per year after runoff events greater than 0.8 inch and after the 1.2-inch/2-hour storm event and extreme events (10-, 50- and 100-year storm events). Make sure that runoff drains down within the design parameters to ensure the maximum time of 72 hours is not being exceeded. Inspection of the following areas should occur 72 hours following the end of the storm event and should include (at a minimum) the following:

a. Inspect for the presence of water or ponding at the BMP surface.

b. Inspect for sediment collecting in the BMP surface.

c. Inspect the outlet and rip-rap for signs of clogging or damage.

d. Inspect the outlet structure and orifice for signs of clogging or damage.

e. Inspect vegetation for bare spots or areas of erosion that are occurring

f. Inspect for health of trees and shrubs. g. Take corrective measures as needed

5. At least two times per year and after the 1,2-inch/2-hour storm event and extreme events (10-, 50- and 100-year storm events), or more if historical maintenance indicate it is necessary, inspect for accumulation of sediment, damage to outlet control structures, erosion, signs of water contamination/spills, and instability.

6. As needed, remove accumulated sediment to maintain infiltration through the MRCs soil media and to maintain water quality functionality. Restore original cross section. Properly dispose of sediment.

7. All MRC BMP components should be maintained as indicated in the Stormwater BMP Manual.

8. Any repairs made to the principal spillway (riser or barrel) should be reviewed by a professional engineer. Vertical trenching to expose the barrel should not be allowed under any circumstances. The trench side slopes should be

9. Care must be taken to protect the facility from excessive sediments from the drainage shed. Whenever additional land disturbance activity takes place in the area draining to the facility, effective erosion and sediment control measures must first be put in place to exclude sediments from the basin.

10. Should the facility fail to manage the volume or reduce the level of pollutants anticipated as designed, a professional engineer should evaluate the facility to determine appropriate measures to be taken to ensure that the facility functions properly.

11. If slow drainage is occurring, a professional engineer should evaluate the facility as may be required to determine an appropriate course of action and if additional pumping and clean out of the perforated piping is necessary. If slow drainage persists, other corrective action may be required, including but not limited to, replacement of the facility. RIP-RAP MAINTENANCE NOTES:

1. All rip-rap aprons shall be inspected after runoff events greater than 1.0 inch and after extreme events (10-, 50and 100-year storm events).

2. Displaced rip-rap within the apron should be replaced immediately.

3. Replace rip-rap on back side of apron on both sides of pipe as needed to prevent scour around the pipe.

LANDSCAPE RESTORATION

1. All plant material to be installed in accordance with the planting practices stated in Chapter 3 of "Tree Maintenance" by P.P. Pirone (fifth or most recent edition).

2. Take extreme care in handling and installing all plants to prevent damage to bark, branches, and root balls.

3. All planting areas shall be free from weeds prior to the beginning of planting operation. Contact herbicide sprays should only be used as required and all manufactures specifications followed.

4. Prepare tree and shrub planting pits with proper size excavations and backfill during planting with prepared

backfill mixture. Backfill in layers, water thoroughly to allow settlement and remove air pockets.

5. Plant root balls at the same relation to grade as previously grown at the nursery. High or low root balls shall not be

6. Backfill planting soil of 50% topsoil and 50% peat moss shall be mixed with existing soil at a rate of 1/3 planting soil and 2/3 existing soil.

7. Fertilize all plants with appropriate starter fertilizer at time of planting.

grouping or cluster of shrubs to the extent of their collective branch drip line.

9. Mulch all plantings immediately after planting operations are completed with a three-inch (3") layer of finely

8. All plantings must be thoroughly watered within the first 12 hours of installation. The contractor is responsible for

shredded bark mulch or licorice root. The mulch shall be aged a minimum of 6 months. A granular pre-emergent weed control shall be spread prior to mulching. The limit of this mulch for deciduous trees and single evergreen trees shall be the area of the pit excavation. For all evergreen tree and shrub clusters, a fully mulched bed shall be created. Mulch planting beds entirely around and

between all plants for a fully mulched bed. Depth shall be cleanly cut and tapered to match surrounding lawn grades. 10. All shrubs are to be mulched in groups. No singularly mulched shrubs will be accepted, unless a singular speciman shrub in lawn has been shown on the drawings. A continuous mulch bed shall be provided for each

providing water for this operation

1. Application of a carefully selected herbicide around the protective tree shelters/tubes may be necessary, and reinforced by selective cutting/manual removal, if necessary for the initial 2 to 3 years of growth and may be necessary for up to 5 years until tree growth and tree canopy begins to form, naturally inhibiting weed growth (once shading is adequate, growth of invasives and other weeds will be naturally prevented, and the trees becomes

2. Review of the new trees should be undertaken intermittently to determine if replacement trees should be provided (some modest rate of planting failure is usual).

3. Landscape restoration areas planted with a proper cover crop can be expected to require annual mowing to

SPECIAL GEOLOGIC FORMATIONS OR SOIL CONDITIONS & POTENTIAL POLLUTION: To the best of our knowledge, no geologic formations or soil conditions having the potential to cause pollution to surface waters exist at the site.

THERMAL IMPACT STATEMENT:

Stormwater runoff from the proposed impervious surfaces will be directed into the bio-retention w/MRC stormwater management facility before reaching the on-site existing stream, to minimize the potential for thermal impacts. Stormwater runoff will be managed and filtered in the facility before being discharged over existing established vegetated surfaces where the runoff has additional time to cool before reaching the surface waters.

SITE SPECIFIC CONSTRUCTION SEQUENCE

CONSTRUCTION SEQUENCE NOTES: 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 designated licensed professional and a representative from the Montgomery County Conservation District to an on-site pre-construction

• Critical stages as noted throughout the construction sequence are defined as sequence steps that require the permittee to provide engineering construction oversight. A licensed professional engineer knowledgeable in the design and construction of stormwater BMP's shall conduct the

• 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.

• All earth disturbance activities shall proceed in accordance with the following sequence. Each step of the sequence shall be completed before proceeding to the next step, except where noted. Deviation from the sequence must be approved by the Montgomery County Conservation District or by the

• Any cessation of activity for 4 days or longer requires temporary stabilization.

As soon as slopes, channels, ditches and other disturbed areas reach final grade, they must be permanently stabilized immediately

• Perimeter compost filter sock to be installed by clearing area for sock and installing sock immediately or by clearing and installing sock as you go. No disturbed area should be left without perimeter controls. Sock shall be installed to minimize existing tree removal to the greatest extent

• Critical Stage - BMP 5.4.1 - Protect Sensitive/Special Value Features (BMP 002) and BMP 5.4.3 -Protect/Utilize Natural Flow Pathways in Overall Stormwater Planning and Design (BMP 003). Ensure all E&S controls are maintained throughout construction to protect the special features and drainage pathways.

ONSTRUCTION SEQUENCE: Field-mark the limits of disturbance, streams and wetlands prior to disturbance activities (i.e. survey stakes, posts & rope, construction fence, etc.) in accordance with the erosion and sediment control

Clear, grub and strip topsoil in the area proposed for the construction entrance. Install the temporary stone construction entrance/tire cleaner in accordance with the construction detail. 3. Install compost filter sock 1 & 2 and diversion berm 1 & 2 as shown on the erosion and sediment

control plan. Note: any compost filter sock that is moved during installation of underground pipes

should be reinstalled after the pipe is installed 4. Clear, grub and strip topsoil from the area for the construction of Sediment Basin 001. Stockpile and stabilize topsoil. Protect stockpile with compost filter sock.

Critical Stage - Construct Sediment Basin 001. Install permanent outlet structure, outlet pipe, concrete cradle and channelized emergency spillway. Ensure that storm sewer structures and piping have watertight seals and that the permanent orifice is plugged during the E&S stage. Install baffle and sediment clean out stakes as indicated. Install skimmers and rock berms. Install 12" Ø pipe at bottom of basin. Complete final grading of sediment basin area, replace topsoil, seed and mulch and install erosion control matting on side slopes and spillways. Drainage shall be directed to the sediment basin throughout construction and before the on-site storm sewer is installed and functioning with the use of temporary swales and/or diversion berms.

. Upon installation and stabilization of the sediment basin and all perimeter sediment control BMP's and at least 3 days prior to proceeding with the bulk earth disturbance activities, the permittee or co-permittee shall provide notification to the department or authorized conservation district.

NOTE: SEDIMENT BASIN MUST BE COMPLETELY STABILIZED PRIOR TO ANY EARTH DISTURBANCE OF THE RESPECTIVE TRIBUTARY DRAINAGE AREA.

Strip any remaining topsoil and stockpile. Stabilize stockpile and protect with compost filter sock.

Clear and grub any remaining areas left to be disturbed. . Install sanitary sewer starting with the most downstream connection and proceeding upslope. Construct all storm sewer structures and piping including A1.1 to A1.2. Storm sewer C2 to C to be constructed with watertight seal. Install inlet protection once installed. Simultaneously install remainder of utilities (water, electric, gas, cable, etc.) in accordance with the following

1. Trenches shall be backfilled above the original ground level to allow for settlement and to prevent runoff from following the trench line when backfill settles. . Apply soil supplements, seed and mulch as required.

The total length of excavated trench open at any one time should not be greater than the total length of utility line that can be placed in the trench and backfilled in one working day. l. No more than 50 lineal feet of open trench should exist when utility line installation ceases at the

Construction of dwellings can begin. Install on-lot sediment controls in accordance with construction details #10-1, #10-2 or #10-3, as applicable, prior to construction on each lot. If roadway is not stabilized, access to the constructed units shall be stabilized to a minimum of a stone

base for construction vehicle access. Construct buildings, sidewalks and interior paving.

Install curbing, sidewalk, stone base course and bituminous base course. Stabilize disturbed areas

. Replace topsoil equal to pre-development depths or to a minimum depth of 6-in., whichever is greater. And finish grade, wherever and whenever possible. Seed and mulch each area of disturbance mmediately after construction is completed. No more than 15,000 s.f. of disturbed area shall reach final grade before initiating seeding and mulching operations. Graded areas should be scarified or otherwise loosened to a depth of 3- to 5-inches prior to topsoil placement.

Install trees and shrubs wherever and whenever possible in accordance with the PCSM Landscape

3. Perform final landscaping operations. In such cases, permanently seed and mulch disturbed areas. Seeding shall follow fertilization and seeding rates specified in seeding specification chart. If finish grading is not practical, temporarily seed all disturbed areas.

NOTE: THE MONTGOMERY COUNTY CONSERVATION DISTRICT MUST BE NOTIFIED PRIOR TO THE CONVERSION OF BMP 001

14. Critical Stage - upon establishing a minimum uniform 70 % perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements in areas upstream of Sediment Basin 001, the sediment basin can be converted to the permanent stormwater management facility BMP 001. Convert the facility in accordance with the following sequence and the construction details:

. Notify Douglass Township and the Conservation District prior to construction. b. A licensed professional engineer (or authorized representative) knowledgeable in the design and construction of stormwater BMP's, preferably the design engineer, shall conduct the oversight of conversion of the stormwater facility Remove the upper one foot of existing soil that has clogged with accumulated sediment and then

excavate BMP bottom area to proposed invert depth and scarify the existing soil surfaces. Do not compact in-situ soils. To the greatest extent possible, excavation should be performed with the lightest practical equipment. Excavation should be placed outside the limits of the bio-retention area to the greatest extent practical. I. Install impermeable liner for BMP 001 in accordance with manufacturer's specifications, only if

e. Install u-drain and cap with dewatering orifice in accordance with the detail. Connect udrain to exist 12Ø pipe with appropriate end caps/reducers. Ensure that all pipes and seals are watertight. Seal any temporary openings in the concrete box. Install soil mix to required design depth and fine grade, being careful not to compact. Refer to

Basin and BMP soil mix specifications. The placement of soil media should be done from outside

groundwater is encountered and the required one foot of separation from the BMP bottom is not

the BMP footprint to avoid compaction by construction equipment. Equipment should never drive over placed soil media. . Prepare for seeding by eliminating any weed growth prior to seed installation using an appropriate herbicide to control undesirable vegetation. For optimal seed establishment, soil ph shall be between 5.5 and 6.5 n. Apply seed by carefully proportioning seed for the entire area. Broadcast seed in two separate applications by applying seed at half the suggested rate for each application to ensure even and

seed into the top 1/4 inch of soil to achieve good seed to soil contact - do not roll or track the seed . Cover seeded area with a light layer of salt hay, threshed straw or pine needles or apply erosion

adequate coverage. After the full rate of seeding has been achieved, follow by rolling or tracking

. Plant and mulch according to specifications on the landscape plan.

. After all construction work is completed, install final paving, permanent striping and signage. 6. Upon final stabilization, remove all other temporary sediment controls. An area shall be considered to have achieved final stabilization when it has minimum uniform 70 % perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.

7. Critical Stage - The site engineer shall inspect all PCSM BMP's to ensure that the BMP's have not

8. Within 30 days after the completion of earth disturbance activities authorized by this permit, including the permanent stabilization of the site and proper installation of PCSM BMP's in accordance with the approved PCSM plan, or upon submission of the not if sooner, the permittee shall file with the department or authorized conservation district a statement signed by a licensed professional and by the permittee certifying that work has been performed in accordance with the terms and conditions of this permit and the approved E&S and PCSM plans. Completion certificates are needed to ensure that all work is performed in accordance with the terms and conditions of the permit and approved E&S and PCSM plans.

ANY SEDIMENT CONTROL. SUCH AS COMPOST FILTER SOCK, ROCK FILTER, OR INLET

TILTER MUST NOT BE REMOVED UNTIL ALL VEGETATION (UPSTREAM OF THAT PARTICULAR CONTROL) HAS BEEN RE-ESTABLISHED. ANY AREA (S) DISTURBED DURING THE REMOVAL OF SEDIMENT CONTROLS SHALL BE MMEDIATÈLY RE-STABILIZED.

SEEDING SPECIFICATIONS

SEEDING RATES

8 BY WEIGHT APPLICATION RATE PURE LIVE SEED

TEMPORARY SEEDING (DURING CONSTRUCTION)

				(PLS)			
1	SPRING OATS (SPRING)	100%	4-5 LBS PER 1000 S.F.	64			
OR	ANNUAL RYEGRASS (SPRING OR FALL)	100%	4-5 LBS PER 1000 S.F.	10			
APPROVED	WINTER WHEAT (FALL)	100%	4-5 LBS PER 1000 S.F.	90			
EQUAL)	WINTER RYE (FALL)	100%	4-5 LBS PER 1000 S.F.	56			
PERMANENT SEEDING FOR LAWN AREAS OUTSIDE OF BMP AREAS							
MIXTURE	SPECIES	SEEDING RATES					
NUMBER	SPECIES	% BY WEIGHT	APPLICATION RATE	PURE LIVE SEED (PLS)			
2	TALL FESCUE	100%	6-8 LBS PER 1000 S.F.	60			
(OR	FINE FESCUE	100%	4-5 LBS PER 1000 S.F.	35			
APPROVED	KENTUCKY BLUEGRASS	80-90%	3-4 LBS PER 1000 S.F.	25			
EQUAL)	PLUS REDTOP	10-20%		3			
İ	PERENNIAL RYEGRASS	100%	2-5 LBS PER 1000 S.F.	15			
	SUITABLE FOR FREQUENT MOWING. DO NOT CUT SHORTER THAN 4 INCHES. APPLICATION DATES:						

MARCH 15 - JUNE 15 AUGUST 1 - OCTOBER 15

TABLE 11.2 SOIL AMENDMENT APPLICATION RATE EQUIVALENT PERMANENT SEEDING APPLICATION RATE								
SOIL AMENDMENT	PERMANENT	SEEDING APPLICA	ATION RATE	NOTES				
GOIL TIME TO METT	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	110125				
AGRICULTURAL LIME	6 TONS	240 lb.	2,480 lb.	OR AS PER SOIL TEST; MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS				
10-20-20 FERTILIZER	1,000 lb. 25 lb.		210 lb.	OR AS PER SOIL TEST; MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS				
	TEMPORARY	SEEDING APPLICA	ATION RATE					
AGRICULTURAL LIME	1 TON	40 lb.	410 lb.	TYPICALLY NOT REQUIRED FOR TOPSOIL STOCKPILES				
10-10-10 FERTILIZER	500 lb.	12.5 lb.	100 lb.	TYPICALLY NOT REQUIRED FOR TOPSOIL STOCKPILES				

NOTES: A COMPOST BLANKET WHICH MEETS THE STANDARDS OF THIS CHAPTER MAY BE SUBSTITUTED FOR THE SOIL AMENDMENTS SHOWN IN THIS TABLE. SOIL TESTING IS RECOMMENDED IN ORDER TO DETERMINE APPROPRIATE LIME AND

FERTIL									
TABLE 11.6 MULCH APPLICATION RATES									
MULCH TYPE	APP	LICATION RATE (N	iin.)	NOTES					
MOLCH TIPE	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	NOTES					
STRAW	3 TONS	140 lb.	1,240 lb.	EITHER WHEAT OR OAT STRA FREE OF WEEDS, NOT CHOPPED OR FINELY BROKE					
HAY	3 TONS	140 lb.	1,240 lb.	TIMOTHY, MIXED CLOVER AN TIMOTHY OR OTHER NATIVE FORAGE GRASSES					
WOOD CHIPS	4-6 TONS	185-275 lb.	1,650-2,500 lb.	MAY PREVENT GERMINATION OF GRASSES AND LEGUMES					
HYDROMULCH	1 TON	47 lb.	415 lb.	SEE LIMITATIONS ABOVE					

2. POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24-HOUR CURING PERIOD AND A SOIL TEMPERATURE HIGHER THAN 45 DEGREES ARE TYPICALLY REQUIRED. APPLICATION SHOULD GENERALLY BE HEAVIEST AT EDGES OF SEEDEL AREAS AND AT CRESTS OF RIDGES AND BANKS TO PREVENT LOSS BY WIND. THE REMAINDER OI THE AREA SHOULD HAVE BINDER APPLIED UNIFORMLY. BINDERS MAY BE APPLIED AFTER MULCH IS SPREAD OR SPRAYED INTO THE MULCH AS IT IS BEING BLOWN ONTO THE SOIL. APPLYING STRAW AND BINDER TOGETHER IS GENERALLY MORE EFFECTIVE.

4. MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANIFACTUREPS'S PERCHAMENDATIONS.

TABLE 11.4

Recommended Seed Mixtures							
Mixture		Seeding Rate -	Pure Live Seed 1				
Number	Species	Most Sites	Adverse Sites				
	Spring oats (spring), or	64	96				
	Annual ryegrass (spring or fall), or	10	15				
1 ²	Winter wheat (fall), or	90	120				
	Winter rye (fall)	56	112				
	Tall fescue, or	60	75				
	Fine fescue, or	35	40				
2 ³	Kentucky bluegrass, plus	25	30				
	Redtop ⁴ , or	3	3				
	Perennial ryegrass	15	20				
	Birdsfoot trefoil, plus	6	10				
3	Tall fescue	30	35				
	Birdsfoot trefoil, plus	6	10				
4	Reed canarygrass	10	15				
	Crownvetch, plus	10	15				
5 ⁸	Tall fescue, or	20	25				
	Perennial ryegrass	20	25				
	Crownvetch, plus	10	15				
6 ^{5,8}	Annual ryegrass	20	25				
	Birdsfoot trefoil, plus	6	10				
7 ⁸	Crownvetch, plus	10	15				
	Tall fescue	20	30				
	Flatpea, plus	20	30				
8	Tall fescue, or	20	30				
	Perennial ryegrass	20	25				
	Serecia lespedeza, plus	10	20				
9 ⁶	Tall fescue, plus	20	25				
	Redtop⁴	3	3				
	Tall fescue, plus	40	60				
10	Fine fescue	10	15				
	Deertongue, plus	15	20				
11	Birdsfoot trefoil	6	10				
	Switchgrass, or	15	20				
12 ⁷	Big Bluestem, plus	15	20				
	Birdsfoot trefoil	6	10				
	Orchardgrass, or	20	30				
13	Smooth bromegrass, plus	25	35				
. •	Birdsfoot trefoil	6	10				

Birdsfoot trefoil 6 10
Penn State, "Erosion Control and Conservation Plantings on Noncropland" 1. PLS is the product of the percentage of pure seed times percentage germination divided by 100. For

example, to secure the actual planting rate for switchgrass, divide 12 pounds PLS shown on the seed tag Thus, if the PLS content of a given seed lot is 35%, divide 12 PLS by 0.35 to obtain 34.3 pounds of seed required to plant one acre. All mixtures in this table are shown in terms of PLS. If high-quality seed is used, for most sites seed spring oats at a rate of 2 bushels per acre, winter wheat at 11.5 bushels per acre, and winter rye at 1 bushel per acre. If germination is below 90%, increase these suggested seeding rates by 0.5 bushel per acre.

 This mixture is suitable for frequent mowing. Do not cut shorter than 4 inches.
 Keep seeding rate to that recommended in table. These species have many seeds per pound and are very competitive. To seed small quantities of small seeds such as weeping lovegrass and redtop, dilute with dry sawdust, sand, rice hulls, buckwheat hulls, etc. Use for highway slopes and similar sites where the desired species after establishment is crownvetch. 6. Use only in extreme southeastern or extreme southwestern Pennsylvania. Serecia lespedeza is not well

dapted to most of PA.

Do not mow shorter than 9 to 10 inches.

Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species. **TABLE 11.5**

Site Condition	Nurse Crop	Seed Mixture (Select one mixture)
Slopes and Banks (not mowed)	Стор	(Select Sile Illixture
Well-drained	1 plus	3, 5, 8, or 12 ¹
Variable drainage	1 plus	3 or 7
Slopes and Banks (mowed)	1 pius	3 01 1
Well-drained	1 plus	2 or 10
Slopes and Banks (grazed/hay)	1 pius	2 01 10
Well-drained	1 plus	2, 3, or 13
Gullies and Eroded Areas	1 plus	3, 5, 7, or 12 ¹
Erosion Control Facilities (BMPs)	1 pius	3, 3, 7, 01 12
Sod waterways, spillways, frequent water flow areas	1 plus	2, 3, or 4
Drainage ditches	i pius	2, 3, 51 4
Shallow, less than 3 feet deep	1 plus	2, 3, or 4
Deep, not mowed	1 plus	5 or 7
Pond banks, dikes, levees, dams, diversion channels,	1 pius	3017
And occasional water flow areas		
Mowed areas	1 plus	2 or 3
Non-mowed areas	1 plus	5 or 7
For hay or silage on diversion channels and	1 plus	0 01 7
occasional water flow areas	1 plus	3 or 13
Highways ²	1 pido	0 01 10
Non-mowed areas		
Pure crownvetch ³	1 plus	5 or 6
Well-drained	1 plus	5, 7, 8, 9, or 10
Variable drained	1 plus	3 or 7
Poorly drained	1 plus	3 or 4
Areas mowed several times per year	1 plus	2, 3, or 10
Utility Right-of-way	, pido	2, 0, 01 10
Well-drained	1 plus	5, 8, or 12 ¹
Variable drained	1 plus	3 or 7
Well-drained areas for grazing/hay	1 plus	2, 3, or 13
Effluent Disposal Areas	1 plus	3 or 4
Sanitary Landfills	1 plus	3, 5, 7, 11 ¹ , or 12 ¹
Surface mines	, pido	0, 0, 7, 11 , 0, 12
Spoils, mine wastes, fly ash, slag, settling basin		
Residues and other severely disturbed areas	1 plus	3, 4, 5, 7, 8, 9, 11 ¹ , or 12 ¹
(lime to soil test)	. p.30	0, 1, 0, 1, 0, 0, 11 , 01 12
Severely disturbed areas for grazing/hay	1 plus	3 or 13
Penn State, "Erosion Control and Conservation Plantings of		

1. For seed mixtures 11 and 12, only use spring oats or weeping lovegrass (included in mix) as nurse crop. 2. Contact the Pennsylvania Department of Transportation district roadside specialist for specific suggestions on treatment techniques and management practices.

Seed mixtures containing crown vetch should not be used in areas adjacent to wetlands or stream channels due to the invasive nature of this species.

IMPERVIOUS COVER CHART FOR STORMWATER MANAGEMENT DESIGN

115 W. MOYER ROAD

8/12/2024

	DROD LOT AREA	20 0/ B# AV	DI DC	FOOTPRINT	45 % MAX.
LOT NO	PROP. LOT AREA (S.F.)	20 % MAX. COV.	BLDG. (S.F.)	SHOWN (S.F.)	IMP. COV. * (S.F.)
1	19,464	3,893	•	1,564	8,759
2	13,237			1,564	5,957
2	· ·	2,647		'	•
3	13,635	2,727		1,700	6,136
4	14,032	2,806		1,913	6,314
5	12,969	2,594		2,147	5,836
6	15,595	3,119		2,147	7,018
7	47,995	9,599		2,147	7,650**
8	16,126	3,225	5	2,147	7,257
9	16,881	3,376		2,147	7,596
10	12,896	2,579		2,147	5,803
11	12,274	2,455	,	2,147	5,523
12	15,863	3,173		2,147	7,138
13	15,930	3,186	•	2,147	7,169
14	19,729	3,946		2,147	8,878
15	20,271	4,054	ı	2,147	9,122
16	17,157	3,431		2,147	7,721
17	15,385	3,077	,	2,147	6,923
				Total	120,800
Design M			2.77	AC	
Road	Area		0.95	AC	
Drive Apron A			0.11	AC	
Additional Imp	ervious Area		0.32	AC	
Total Site I	mpervious		4.15	AC	
* This chart is used t	o document the impervious s	surface used in the de	esign calculat	ions for stormwater managem	ent. The maximum

This chart is used to document the impervious surface used in the design calculations for stormwater management. The maximum impervious coverage column should dictate the maximum impervious coverage allowed per lot without the need for additional stormwater management facilities. Any property owner seeking to increase impervious cover beyond that which is anticipated by this plan will be required to provide additional stormwater management and treatment.

** Lot 7 accounts for additional impervious surface in line with all other building lots instead of the 45 % max. impervious cover.

TEST PIT INFILTRATION DATA RMP BOTTOM INFILTRATION ELEV. (FT.) TEST PIT GRADE ELEV. DEPTH ELEV. ELEV LOCATION R=ROCK ELEV. (FT.) (FT.) (in/hr) (FT.) (FT.) W=WATER 383.5 380.5 R 380.5 382.5 1.375 BMP 001 WEST 379.0 BIORETENTION w/MRC 384.0 381.0 R 381.0 383.0 0.00 BMP 001 WEST 379.0 BIORETENTION w/MRC 2 386.0 382.0 R 382.0 384.0 BMP 001 WEST 379.0 BIORETENTION w/MRC 378.0 R 378.0 0.00 BMP 001 EAST 379.0 382.5 380.5 BIORETENTION w/MR 383.0 378.8 R 378.8 381.0 0.00 BMP 001 EAST 379.0 BIORETENTION w/MRC 384.5 378.3 R 378.3 380.5 0.00 BMP 001 EAST 379.0 BIORETENTION w/MRC 384.0 379.0 379.0 379.0 R 381.0 0.00 BMP 001 EAST BIORETENTION w/MRC 392.0 8 389.0 R 389.0 391.0 0.00 386.0 383.0 R 383.0 385.0 0.00 9 _ _ _ 400.0 397.0 R 397.0 399.0 0.00 10 _ _ 400.5

402.5

0.00

SOIL MIX FOR BMP's (INCLUDING MRC BMP's)

403.5

SPECIFICATIONS: MUST BE WELL BLENDED, HOMOGENEOUS MIX BY VOLUME OF APPROXIMATELY 1/3 COMPOST, 1/3 SAND (C-33), & 1/3 TOPSOIL WITH CLAY CONTENT OF 10% OR LESS.

400.5 R

2. MUST MEET SOIL PERMEABILITY OF 2.0 IN/HR. . MUST HAVE MAX. 5% ORGANICS BY VOLUME. COMPOST USED SHALL MEET THE FOLLOWING PHYSICAL PARAMETERS:

25% - 100% (DRY WEIGHT BASIS) ORGANIC MATTER CONTENT MOISTURE CONTENT 30% - 60% PASS THROUGH 34" SIEVE SOLUBLE SALT CONCENTRATION BULK DENSITY OF THE AMENDED SOIL TO MEET THE FOLLOWING CRITERIA

SITY OF THE AMENDED SOIL TO MEE	THE FOLLOWING CRITERIA:
SOIL TEXTURE	IDEAL BULK DENSITIES
	g/cm3
SANDS, LOAMY SANDS	<1.60
SANDY LOAMS, LOAMS	<1.40
SANDY CLAY LOAMS, LOAMS, CLAY LOAMS	<1.40
SILT, SILT LOAMS	<1.30
SILT LOAMS, SILTY CLAY LOAMS	<1.10
SANDY CLAYS, SILTY CLAYS, SOME CLAY LOAMS (35-45% CLAY)	<1.10
(22 121 2211)	11.10

CLAYS (>45% CLAY) <1.10

SOURCE: PROTECTING URBAN SOIL QUALITY, USDA-NRCS . THE AMENDED SOIL MIXTURE SHOULD BE APPROVED BY THE ENGINEER OR SOIL SCIENTIST PRIOR TO PLACEMENT. ON-SITE SOILS WITH AN ORGANIC MATTER CONTENT OF AT LEAST 5% CAN BE PROPERLY STOCKPILED (TO MAINTAIN ORGANIC CONTENT) AND REUSED AS THE TOPSOIL COMPONENT OF THE AMENDED SOILS.

APPLICATION:

REFER TO DETAILS FOR SOIL AMENDMENT DEPTHS WITHIN BMP's. THE AMENDED SOIL SHOULD BE PLACED DURING DRY, FRIABLE SOIL CONDITIONS ON SCARIFIED, UNCOMPACTED SUB-GRADE.

I. CARE SHOULD BE TAKEN TO AVOID COMPACTION OF BOTH THE SUB-GRADE AND AMENDED SOIL DURING PLACEMENT. . SEED AND STABILIZE IMMEDIATELY AFTER PLACEMENT. 5. PREVENT SEDIMENTATION OF THE AMENDED SOIL AFTER PLACEMENT.

S.T.A. PLAN ORIGINATION DATE AUG. 12, 202

PCSM DETAIL SHEET

TERRALEAD, LLC

SITE SITUATE IN DOUGLASS TOWNSHIP MONTGOMERY COUNTY, PENNSYLVANIA



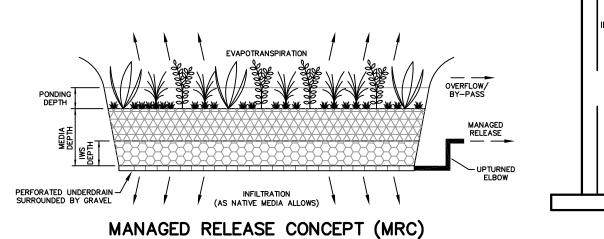
Civil Engineers • Land Surveyors

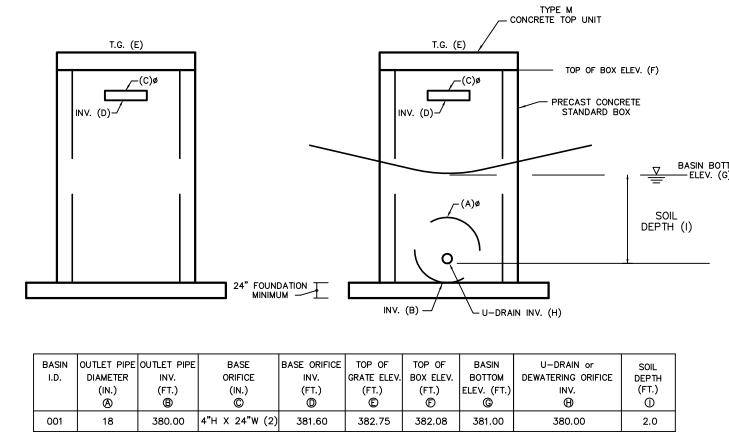
2499 KNIGHT ROAD, PENNSBURG, PA 18073

PH: (215) 679-0200; www.stotac.com

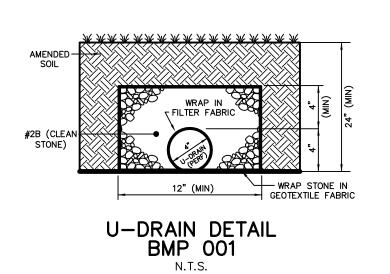
PLAN SHEET NUMBER PLAN SCALE PROJECT MANAGER M.J.P. S.A.R. HORIZONTAL:

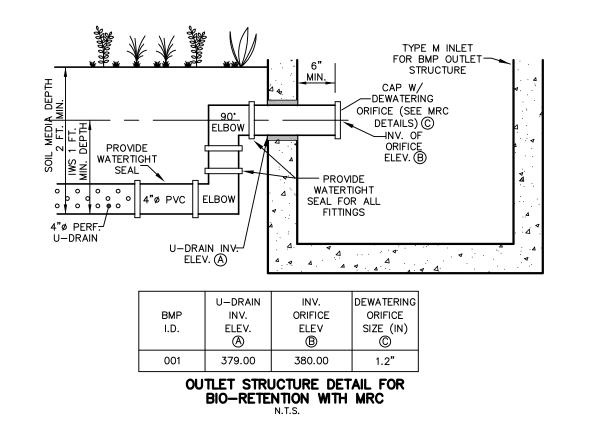
6366PCSM

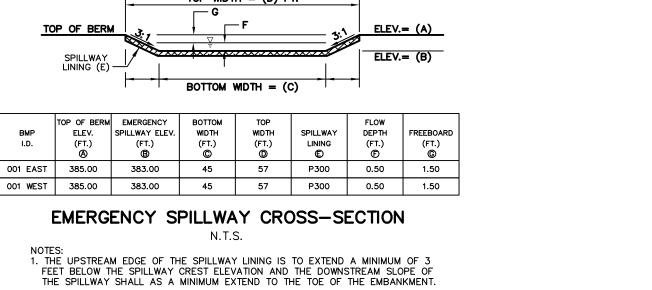


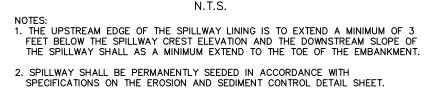


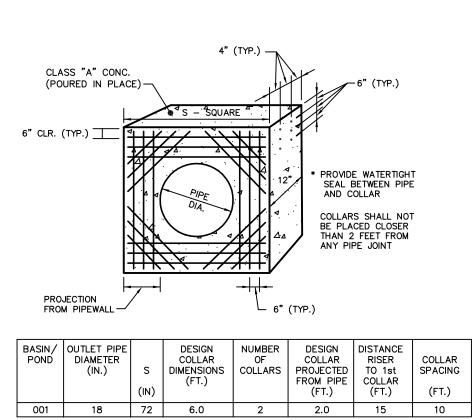
OUTLET STRUCTURE DETAIL



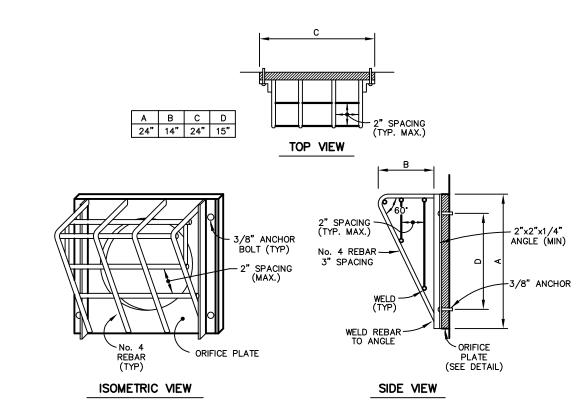




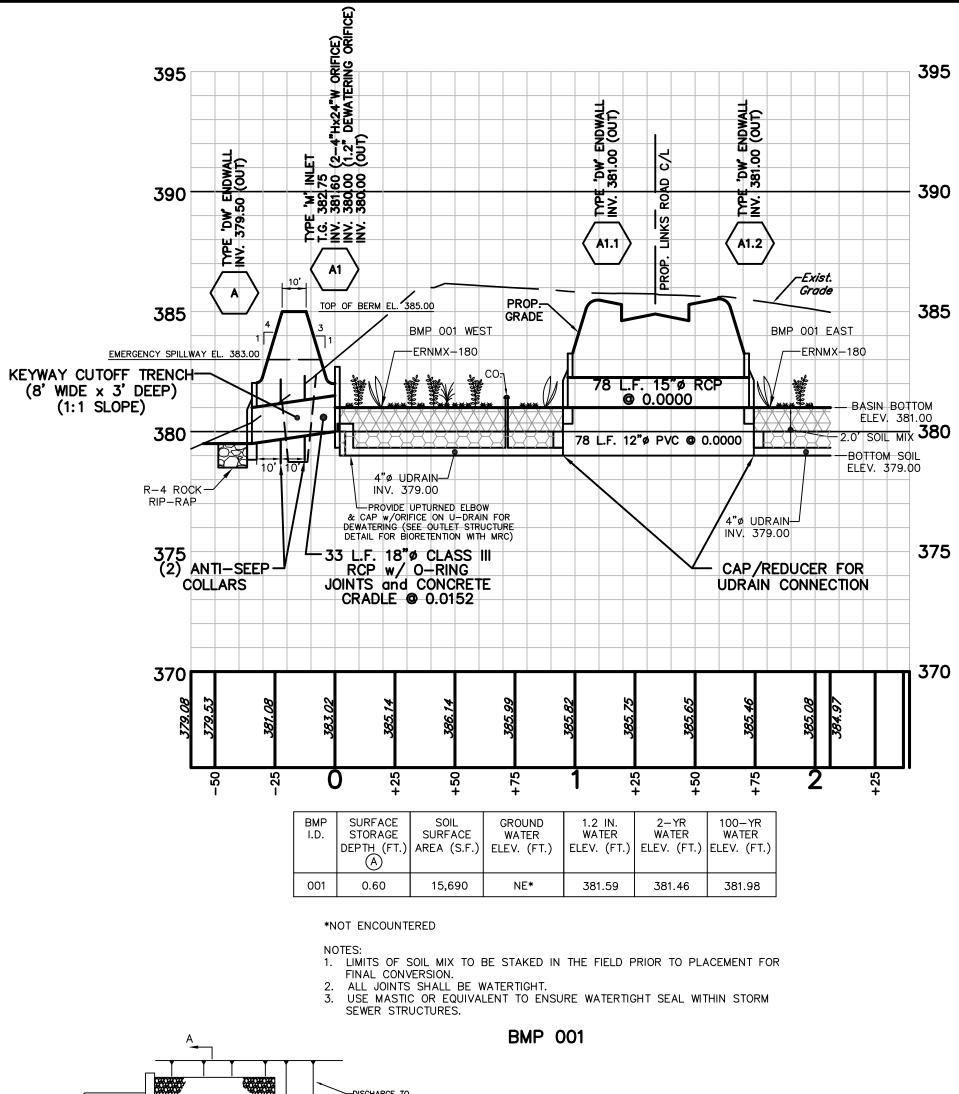




REINFORCED CAST-IN-PLACE ANTI-SEEP COLLAR



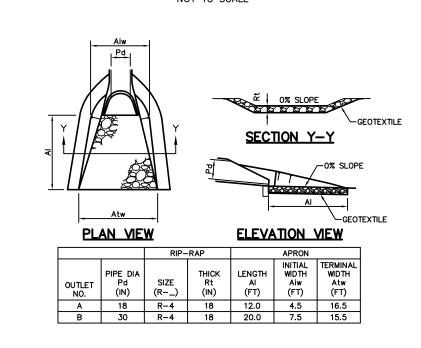
TRASH RACK DETAILS AFTER RACK IS CONSTRUCTED (WELDED) THE ASSEMBLY SHALL BE PAINTED WITH EPOXY COATING.



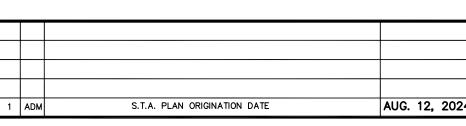
PLAN VIEW GEOTEXTILE 18 IN. RIPRAP TO EXTEND TO— ANTICIPATED MAX. FLOW DEPTH BASED ON DESIGN Q FOR PIPE DISCHARGE SECTION VIEW SECTION A-A

		RIP	RAP	APRON APRON						
OUTLET NO.	PIPE DIA Pd (IN)	SIZE R	THICK. Rt (IN)	LENGTH LC (FT)	INITIAL BOTTOM WIDTH (AT ENDWALL) (FT)	END WIDTH (FT)	INITIAL TOP WIDTH (AT ENDWALL) (FT)	END TOP WIDTH (FT)	SIDE SLOPES H: V	
С	18	4	18	10	4.5	4.5	10.5	10.5	2:1	

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS. ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY. STANDARD CONSTRUCTION DETAIL #9-3 RIPRAP APRON AT PIPE OUTLET TO AN EXISTING CHANNEL NOT TO SCALE



ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS. STANDARD CONSTRUCTION DETAIL #9-1 RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL NOT TO SCALE



PCSM DETAIL SHEET

115 W. MOYER ROAD

TERRALEAD, LLC SITE SITUATE IN

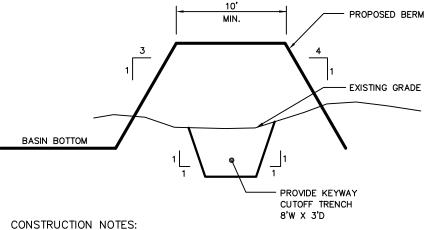
DOUGLASS TOWNSHIP MONTGOMERY COUNTY, PENNSYLVANIA



Civil Engineers • Land Surveyors

2499 KNIGHT ROAD, PENNSBURG, PA 18073

PH: (215) 679-0200; www.stotac.com PLAN SHEET NUMBER PROJECT MANAGER PLAN SCALE M.J.P. S.A.R. HORIZONTAL: N.T.S. 6366PCSM 14 of 22



CONSTRUCTION NOTES:

1. SITE PREPARATION — Areas under the embankment and any structural works shall be cleared, grubbed and the topsoil stripped to remove the trees, vegetation, roots, or objectionable material. In order to facilitate clean—out and other restoration, the pool area will be cleared of all brush and excess trees. 2. CUT OFF TRENCH — A cut—off trench will be excavated along the centerline dam on earth fill embankments. the minimum depth shall be 3 feet. The cut—off trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be 8 feet but wide enough to permit operation of compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for embankment. The trench shall be kept free from standing water during backfilling operations. 3. EMBANKMENT — The fill material shall be taken from selected borrow areas. It shall be free of roots, woody vegetation, oversized stones, rocks or other objectionable material. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material should contain sufficient moisture so that it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Fill material will be placed in 6 to 8 inch layers and shall be continuous over the entire length of the fill. Compaction will be obtained by routing earthmoving equipment and vibratory roller compactors over the fill so that the entire surface of the fill is traversed but at least one tread track of the equipment and compactor drum. The embankment shall be constructed to an elevation of 5% higher than the design height to allow for settlement. All basin embankments should be compacted by sheepsfoot or pad roller. The loose lift thickness should be 9 inches or less, depending on roller size, and the maximum particle size is 6 inches or less — 2/3 lift thickness. Five passes of the compaction equipment over the entire surface of each lift is required. Embankment compaction to visible non-movement is also required.

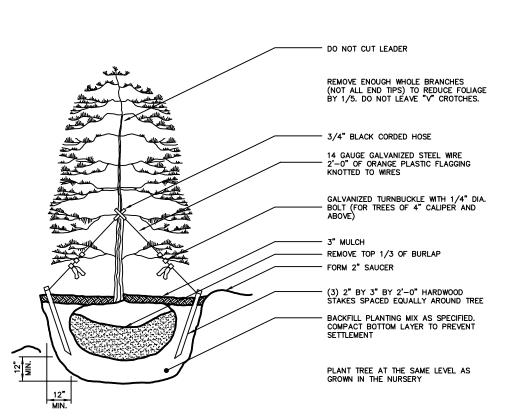
BASIN BERM CONSTRUCTION DETAIL



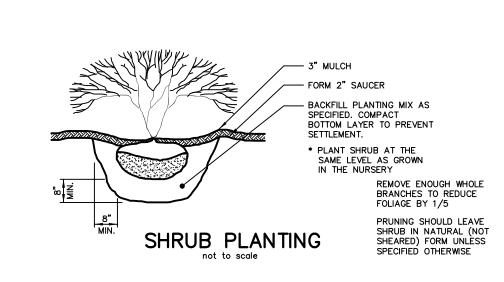
LANDSCAPE REQUIRI	EMENT	S	
LANDSCAPE REQUIREMENTS	REQUIRED	PROVIDED	Г
230-46: STREET TREES REQ.: 1 TREE PER 35 FT.			
LINKS ROAD — 946 FT. (DOES NOT INCLUDE MET-ED ROW) MING DRIVE — 1,006 FT.	27 TREES 29 TREES	27 TREES 29 TREES	
230-47: SOFTENING BUFFER	C DED 400 ET		L
REQ.: 1 CANOPY TREE, 2 UNDERSTORY TRESS & 2 EVERGREEN:	5 PER 100 FT.		⊢
FOR 5,734 L.F. PROPERTY LINE - 4,404 L.F. WOODED AREA TO REMAIN 1,330 L.F. SOFTENING BUFFER			L
CANOPY TREES (2.5" MIN. CAL.) UNDERSTORY TREES (1.5" MIN. CAL.) EVERGREEN TREES (8' MIN. HEIGHT)	13 TREES 27 TREES 27 TREES	13 TREES 27 TREES 27 TREES	L
230-49.B: ADDITIONAL PLANTINGS			┝
REQ.: 1 CANOPY TREE PER 10,000 S.F. OF LOT AREA			
FOR 299,439 S.F. OF LOT AREA TREES	30 TREES	30 TREES	
230-50: BASIN PLANTINGS			L
REQ.: 2 TREES, & 10 SHRUBS PER 100 FT.			
FOR 675 FT. OF PERIMETER FOR 001 EAST			L
TREES SHRUBS	14 TREES 68 SHRUBS	14 TREES 68 SHRUBS	L
FOR 315 FT. OF PERIMETER FOR 001 WEST	e TDEES	6 TDEES	L
TREES SHRUBS	32 SHRUBS	6 TREES 32 SHRUBS	L
REPLACEMENT TREES	TBD	173 TREES	L

Rubber hose ── Wire guys — Triple strand 14 gauge steel wire (4" Cal. & Over) - 3" Mulch depth Plant saucer Compacted topsoil Remove burlap from top 1/3 of ball 2"x2"x8' Hardwood tree stakes (3 Per tree) Compacted topsoil, 6" min. depth

TYPICAL DECIDUOUS TREE PLANTING DETAIL



TYPICAL EVERGREEN TREE PLANTING DETAIL





TREES

AMELANCHIER CANADENSIS

BN BETULA NIGRA

MV | MAGNOLIA VIRGINIANA

STREET TREES										
SHALL BE PL	LANTED	A MIN. OF 5	5 FT.	& 1	MAX.	OF 15	FT.	FROM	ROW	
PLANT SCHEDULE										
COMMON NAME			SIZ	ZE	ROOT	QTY.				

	TEMM SOMEDOLL								
Y	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	QTY.				
	SHADE TREES								
	ACER RUBRUM	RED MAPLE	2.5" CAL.	B&B	20				
	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEYLOCUST	2.5" CAL.	В&В	6				
	KOELREUTERIA PANICULATA	GOLDEN RAIN TREE	2.5" CAL.	B&B	12				
	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	В&В	7				
	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B	11				
				TOTAL:	56				

SOFTENING BUFFER

PLANT SCHEDULE

1 CANOPY TREE,	2 UNDERSTORY	TREES AND 2 E	EVERGREENS	REQUIRED PER	EVERY 10	00
	PROPERTY BO	DUNDARY WITHOU	JT EXISTING '	VEGETATION		

KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	QTY.] PLANTING NOTES
<u> </u>	CANOPY TREES	OOMMON NAME		1,001	4	· I	1 LANTING NOTES
	CANOPI IRLES						4 ALL DIANTS CHALL BE TYPICAL OF THEIR SPECIES OF VARIETY. THEY SHALL HAVE
AS	ACER SACCHARUM	SUGAR MAPLE	1.5" CAL.	B&B	6		1. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. THEY SHALL HAVE WELL DEVELOPED BRANCHES, AND VIGOROUS FIBROUS ROOT SYSTEMS. THEY SHALL BE
LT	LIRIODENDRON TULIPIFERA	TULIPTREE	1.5" CAL.	B&B	5		FREE FROM DISFIGURING KNOTS, SUN SCALE, INJURIES, ABRASIONS OF BARK, PLANT DISEASES, INSECT EGGS, BORERS, AND ALL FORMS OF INFESTATION. ALL COLLECTED
QB	QUERCUS BICOLOR	SWAMP WHITE OAK	1.5" CAL.	B&B	2		MATERIAL SHALL BE CLEAN, SOUND STOCK, AND FREE FROM DECAYING STUMPS.
		•		TOTAL:	13		2. SIZE AND GRADING STANDARDS SHALL CONFORM TO THE "U.S.A. STANDARD FOR NURSERY STOCK". LOOSE, BROKEN, OR MANUFACTURED BALLS WILL BE REJECTED.
	UNDERSTORY TREES						3. BALLED AND BURLAPED, AND BALLED AND PLATFORM PLANTS, SHALL HAVE SOLID BAL
СС	CERCIS CANADENSIS	REDBUD	1.5" CAL.	B&B	12		OF EARTH SECURELY HELD IN PLACE BY BURLAP AND STOUT ROPE. MINIMUM BALL SIZES SHALL BE SPECIFIED IN THE "U.S.A. STANDARD FOR NURSERY STOCK" AS
CF	CORNUS FLORIDA	FLOWERING DOGWOOD	1.5" CAL.	B&B	7		SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMAN.
HV	HAMMAMELIS VIRGINIANA	WITCH HAZEL	1.5" CAL.	В&В	8		4. PROVIDE CONTINUOUS DOUBLE-SHREDDED HARDWOOD BARK (3" THICK) AT THE BASE OF THE SPECIMEN TREES AND SHRUBS.
				TOTAL:	27		5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING WHERE THE UNDERGROUND
	EVERGREEN TREES						UTILITIES EXIST ON—SITE. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING NEAR THESE UTILITIES.
AC	ABIES CONCOLOR	WHITE FIR	8' HT.	B&B	10		6. ALL DISTURBED PERVIOUS AREAS EXCEPT PLANTING BEDS SHALL BE SEEDED AND
10	ILEX OPACA	AMERICAN HOLLY	8' HT.	B&B	8		MULCHED.
PS	PINUS STROBUS	WHITE PINE	8' HT.	B&B	9		7. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, CULTIVATING, FERTILIZING, SPRAYING

TOTAL: 27

1.5" CAL. | B&B | **4**

2.5" CAL. | B&B | **2** |

1.5" CAL. B&B **2**

TOTAL: 32

ADDITIONAL PLANTINGS 1 CANOPY TREE PER 10,000 S.F. OF LOT AREA PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	QTY.
	SHADE TREES				
AR	ACER RUBRUM	RED MAPLE	2.5" CAL.	В&В	6
GT	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEYLOCUST	2.5" CAL.	B&B	6
KP	KOELREUTERIA PANICULATA	GOLDEN RAIN TREE	2.5" CAL.	B&B	7
QB	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5" CAL.	B&B	5
TA	TILIA AMERICANA	AMERICAN LINDEN	2.5" CAL.	B&B	6
				TOTAL:	30

STORMWATER PLANTINGS - BASIN 001 EAST

	CHARE TRE	TC.												
KEY	BOTANICAL	NAME			СОММ	ON NAME			SIZE	ROC	т	QTY.		
						PLANT	SCH	HEDULE	-					
	2	TREES	AND	10 SHI	RUBS	REQUIRED	PER	EVERY	100	L.F.	OF	BASII	N PERIMETER	

SHADBLOW SERVICEBERRY

DIN	BETOLA NIGNA	KIVEK BIKCH	2.5 CAL.	l porp	"	
MV	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	1.5" CAL.	B&B	5	
				TOTAL:	14	
	SHRUBS					
AA	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	24" HT.	B&B	11	
cs	CORNUS SERICEA	REDOSIER DOGWOOD	24" HT.	B&B	12	
LB	LINDERA BENZOIN	SPICEBUSH	24" HT.	B&B	13	
MP	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	24" HT.	B&B	13	
RV	RHODODENDRON VISCOSUM	SWAMP AZALEA	24" HT.	B&B	11	
VT	VIBURNUM TRIBOLUM	AMERICAN CRANBERRY	24" HT.	B&B	8	
			_	TOTAL:	68	

STORMWATER PLANTINGS - BMP 001 WEST 2 TREES AND 10 SHRUBS REQUIRED PER EVERY 100 L.E. OF BASIN PERIMETER

	2 THEES AND TO STINODS REQUIRED FER EVERY TOO E.T. OF BASIN FERIMETER									
	PLANT SCHEDULE									
KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT QTY.						
	SHADE TREES									
AC	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	1.5" CAL.	B&B	2					

				TOTAL:	6	
	SHRUBS					
AA	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	24" HT.	B&B	8	
cs	CORNUS SERICEA	REDOSIER DOGWOOD	24" HT.	B&B	10	
LB	LINDERA BENZOIN	SPICEBUSH	24" HT.	B&B	3	
MP	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	24" HT.	B&B	3	
RV	RHODODENDRON VISCOSUM	SWAMP AZALEA	24" HT.	B&B	5	
VT	VIBURNUM TRIBOLUM	AMERICAN CRANBERRY	24" HT.	B&B	3	

BASIN SEEDING NOTES

FOR OPTIMUM RESULTS, SEED SHOULD BE INSTALLED BETWEEN EARLY APRIL TO MID JUNE TO PROVIDE THE PLANTS WITH A FULL GROWING SEASON TO BUILD STRONG ROOT RESERVES FOR WINTER HARDINESS UNLESS OTHERWISE INFEASIBLE, CONSTRUCTION OF THE PERMANENT BASIN(S) SHOULD BE SCHEDULED ALLOW FOR INSTALLATION OF THE SPECIFIED SEED WITHIN THIS TIMEFRAME. IN NO CASE SHALL SEED BE INSTALLED PRIOR TO APRIL 1 OR LATER THAN SEPTEMBER 15. INSTALL ANNUAL RYE COVER CROP FOR OVER—WINTERING, FOLLOWED BY SITE PREPARATION AND APPLICATION OF THE SPECIFIED SEED DURING THE FOLLOWING SPRING.

SITE PREPARATION: ELIMINATE ANY WEED GROWTH PRIOR TO SEED INSTALLATION USING AN APPROPRIATE HERBICIDE TO CONTROL UNDESIRABLE VEGETATION. SUPPLEMENT TOPSOIL WITH LEAF COMPOST MIXED THOROUGHLY INTO THE TOP 10 INCHES OF TOPSOIL. FOR OPTIMUM SEED ESTABLISHMENT, SOIL PH SHALL BE BETWEEN 5.5 AND 6.5.

SEEDING APPLICATION:

CAREFULLY PROPORTIONING SEED FOR THE ENTIRE AREA, BROADCAST SEED IN TWO SEPARATE

APPLICATIONS BY APPLYING SEED AT HALF THE SUGGESTED RATE FOR EACH APPLICATION TO ENSURE

EVEN AND ADEQUATE COVERAGE. AFTER THE FULL RATE OF SEEDING HAS BEEN ACHIEVED, FOLLOW BY ROLLING OR TRACKING SEED INTO THE TOP 1/4 INCH OF SOIL TO ACHIEVE GOOD SEED TO SOIL CONTACT — DO NOT ROLL OR TRACK THE SEED WHEN SOIL IS WET. COVER SEEDED AREA WITH A LAYER OF HYDROMULCH OR LIGHT LAYER OF SALT HAY, THRESHED STRAW OR PINE NEEDLES.

DURING THE FIRST YEAR, WHENEVER THE VEGETATION REACHES 12 TO 18 INCHES TALL, IT SHOULD BE MOWED TO NO LESS THAN 8 INCHES BY ROTARY MOWER OR WEED EATER/LINE TRIMMER TO PREVENT WEEDS FROM GOING TO SEED. DO NOT MOW WITH A LAWN MOWER. THEREAFTER, THE SEEDED AREA MAY BE MOWN TO A HEIGHT OF 6 INCHES ONCE ANNUALLY IN LATE WINTER/EARLY SPRING PRIOR TO MARCH 15. AS AN ALTERNATIVE, MOWING MAY OCCUR IN EARLY JULY. MOWING SHOULD NOT OCCUR AT ANY

PLANTING NOTES

OTHER TIMES OF YEAR.

ALL DISTURBED PERVIOUS AREAS EXCEPT PLANTING BEDS SHALL BE SEEDED AND ULCHED. 7. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, CULTIVATING, FERTILIZING, SPRAYING, TIGHTENING, AND REPAIRING OF GUYS, REMOVAL AND REPLACEMENT OF DEAD MATERIAL, RESETTING SETTLED PLANTS TO PROPER GRADES OR UPRIGHT POSITION, AND OTHER NECESSARY OPERATIONS AS MAY BE REQUIRED TO KEEP THE PLANTS IN A LIVE AND LEARLY CROWNED.

8. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO COMMENCING WORK TO REVIEW THE EXISTING CONDITIONS. NOTIFY THE LANDSCAPE DESIGNER AND THE TOWNSHIP ENGINEER OF ANY MAJOR DISCREPANCIES WHICH AFFECT THE WORK.

D. BEFORE MIXING PLANTING MIXTURE, CLEAN TOPSOIL OF ROOTS, PLANTS, SODS, STONE, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL OR TOXIC TO PLANT GROWTH.

O. PLANTING MIXTURE SHALL CONTAIN TOPSOIL FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT THE PROJECT SITE. OBTAIN TOPSOIL ONLY FROM NATURALLY, WELL DRAINED SITE WHERE TOPSOIL OCCURS IN A DEPTH OF NOT LESS THAN 4 INCHÉS. DO NOT OBTAIN FROM BOGS OR

. STREET TREES AND OTHER REQUIRED PLANT MATERIAL SHALL NOT BE PLANTED UNTIL THE FINISHED GRADING OF THE PROPERTY HAS BEEN COMPLETED. 12. NO GRADING IS TO OCCUR WITHIN 5 FEET OF OVERALL TRACT BOUNDARY LINE, UNLESS SPECIFICALLY DEPICTED.

5. UNDERBRUSH CLEARING TO BE ALLOWED TO FACILITATE POTENTIAL ADDITIONAL PLANTINGS. NO TREES ARE TO BE REMOVED AS PART OF UNDERBRUSH, CLEARING WITHIN 5 FEET OF OVERALL BOUNDARY LINE.

4. IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE, 2009, SECTION 503.2.1, STREET TREES SHALL BE MAINTAINED IN A MANNER THAT PROVIDES A VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES.

SEED MIX SPECIFICATIONS

BASIN AND BIO-RETENTION BOTTOM MIX ERNST SEEDS RAIN GARDEN MIX NUMBER ERNMX-180, OR APPROVED EQUAL FOR UPLAND AND MEADOW SITES. SEED

RATE IS 20 LB PER ACRE WITH A COVER CROP OF GRAIN RYE AT 30 LB PER ACRE.

BASIN SIDE SLOPES MIX

ERNST SEEDS NATIVE STEEP SLOPE MIX W/ANNUAL RYGRASS NUMBER ERNMX—181, OR APPROVED EQUAL FOR DISTURBED SITES AND STEEP SLOPES. SEED RATE IS 60 LB PER ACRE OR 1 LB PER 1,000 SQ. FT.

AVAILABILITY: SEED MIXES ARE AVAILABLE FROM ERNST CONSERVATION SEEDS, MEADVILLE, PA 800-873-3321, WWW. ERNSTSEED.COM

PCSM LANDSCAPE DETAIL SHEET

AUG. 12, 202

S.T.A. PLAN ORIGINATION DATE

115 W. MOYER ROAD

TERRALEAD, LLC

SITE SITUATE IN DOUGLASS TOWNSHIP

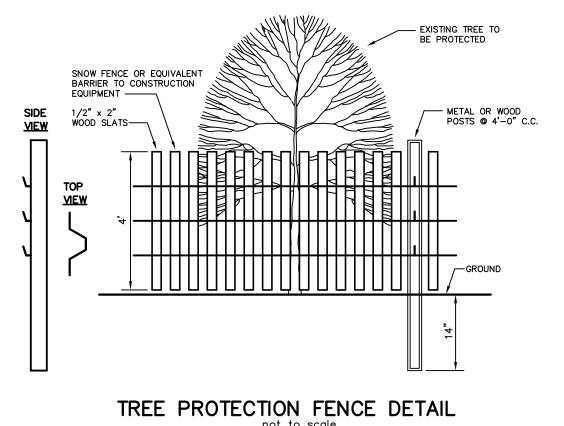
MONTGOMERY COUNTY, PENNSYLVANIA

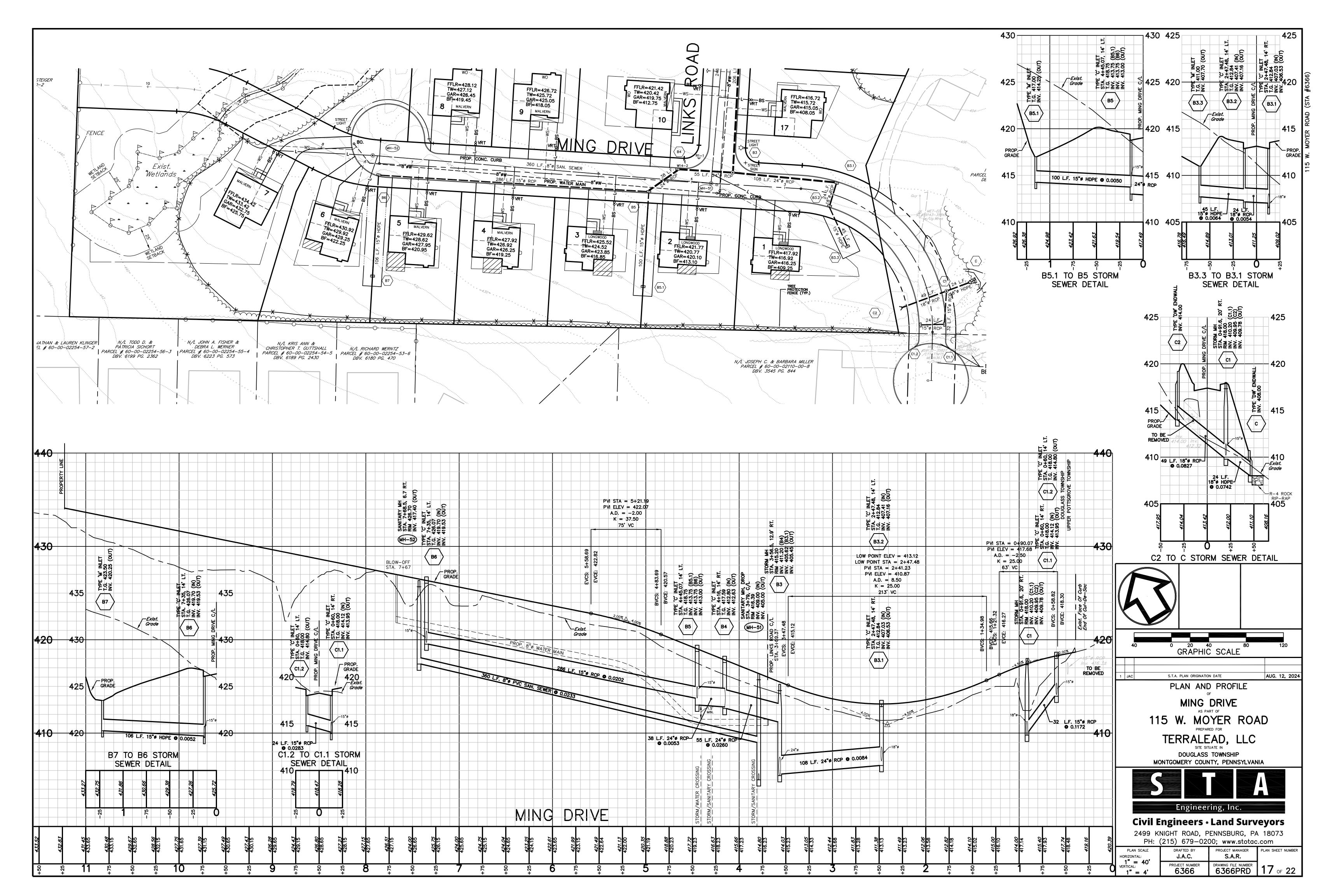


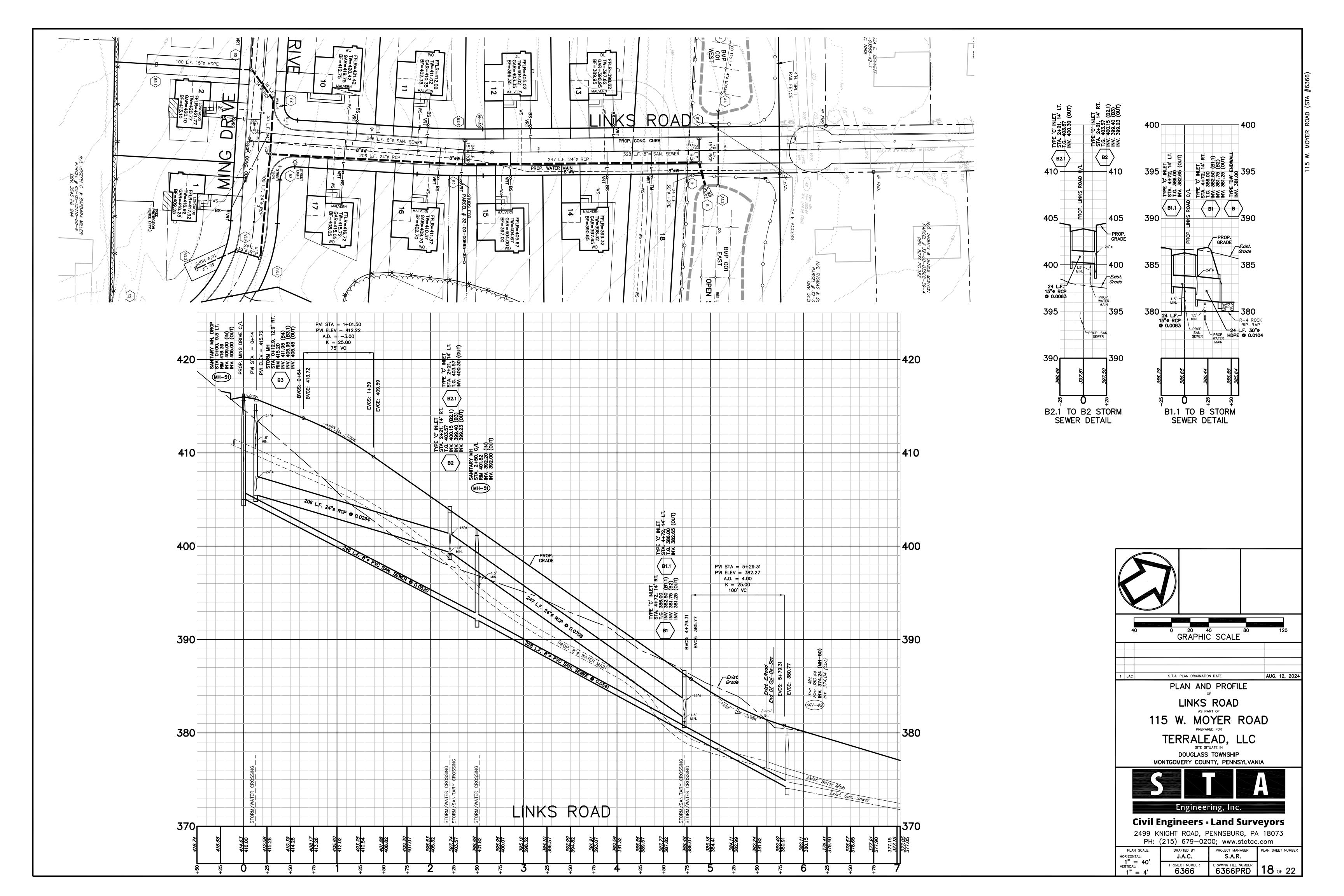
Civil Engineers • Land Surveyors

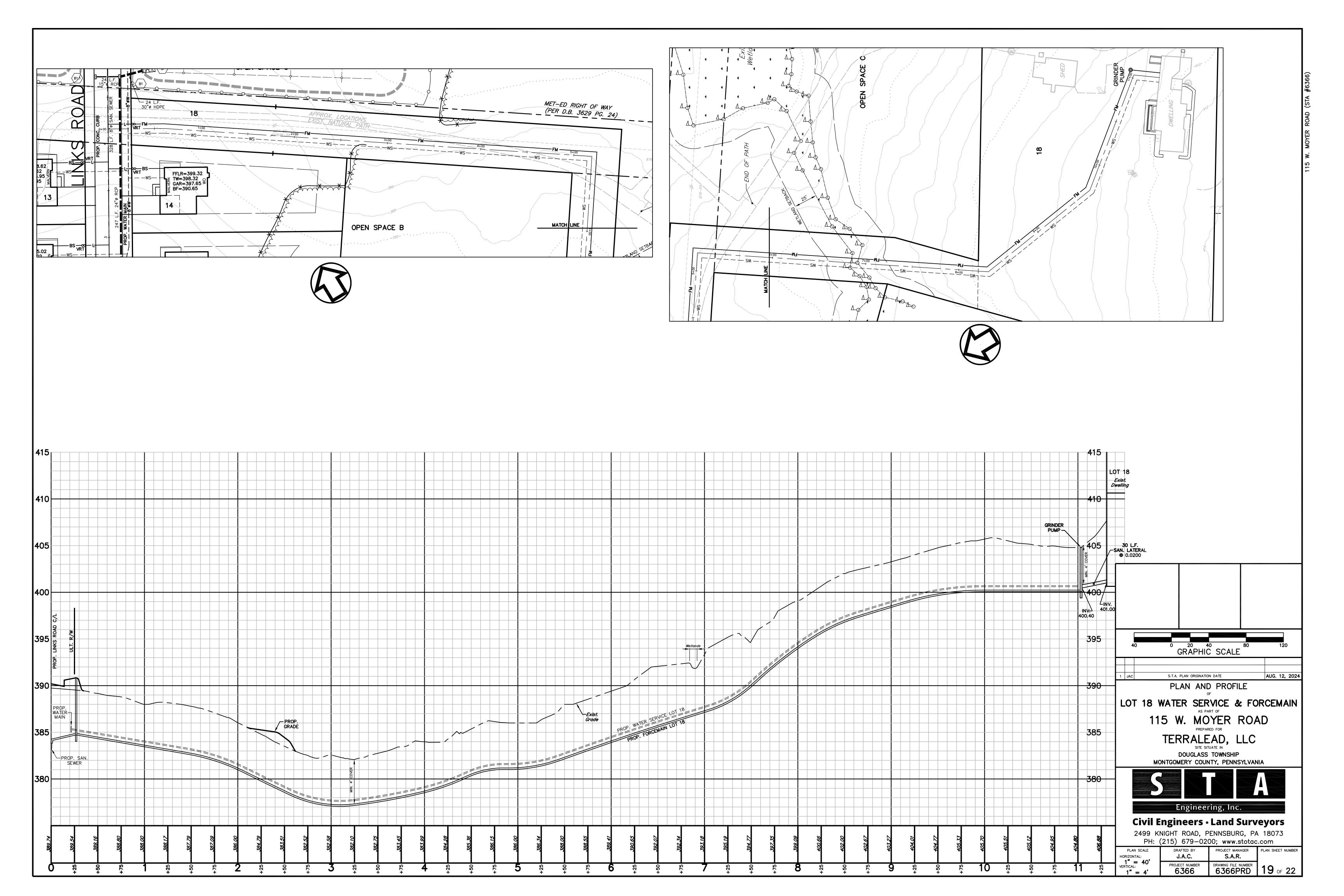
2499 KNIGHT ROAD, PENNSBURG, PA 18073 PH: (215) 679-0200; www.stotac.com

PROJECT MANAGER PLAN SHEET NUMBER A.D.M. S.A.R. N.T.S. DRAWING FILE NUMBER 6366LA 16 of 22 6366







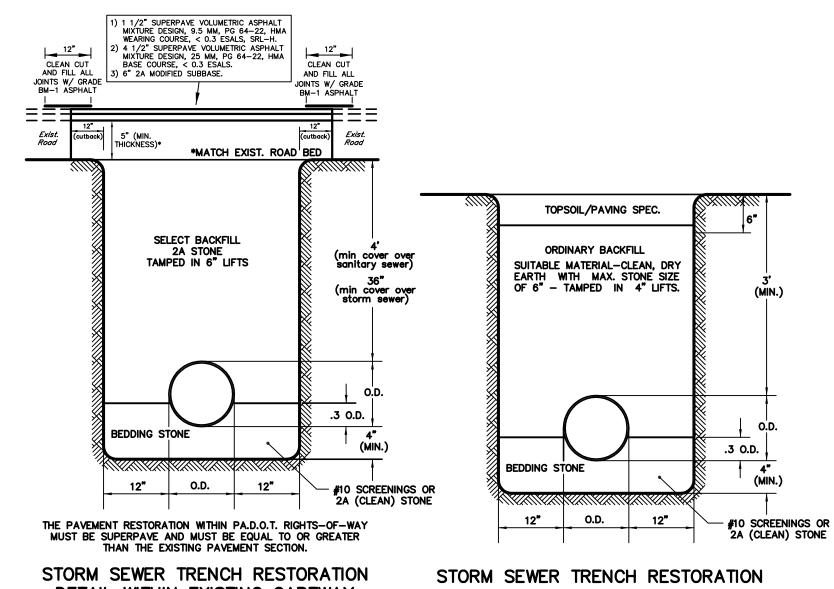


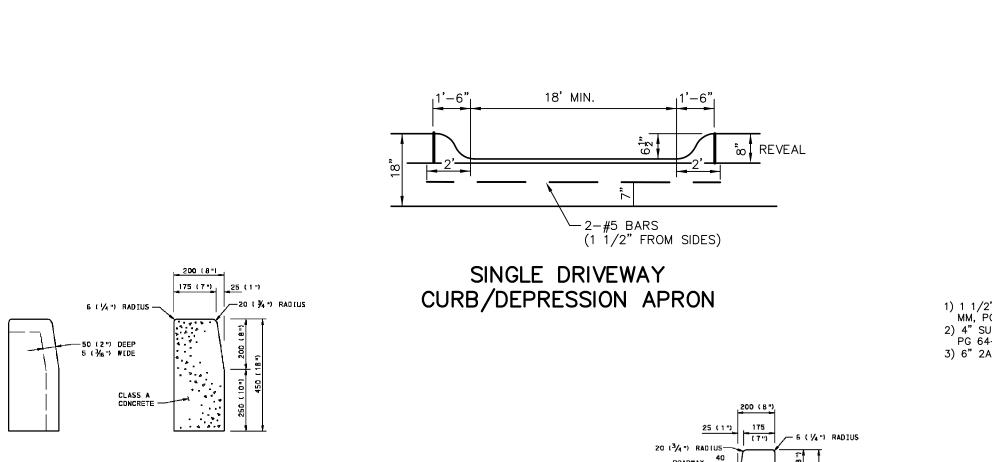
REFER TO PENNDOT PUBLICATION 72M, STANDARDS FOR ROADWAY CONSTRUCTION FOR THE FOLLOWING APPLICABLE STORM SEWER DETAILS:

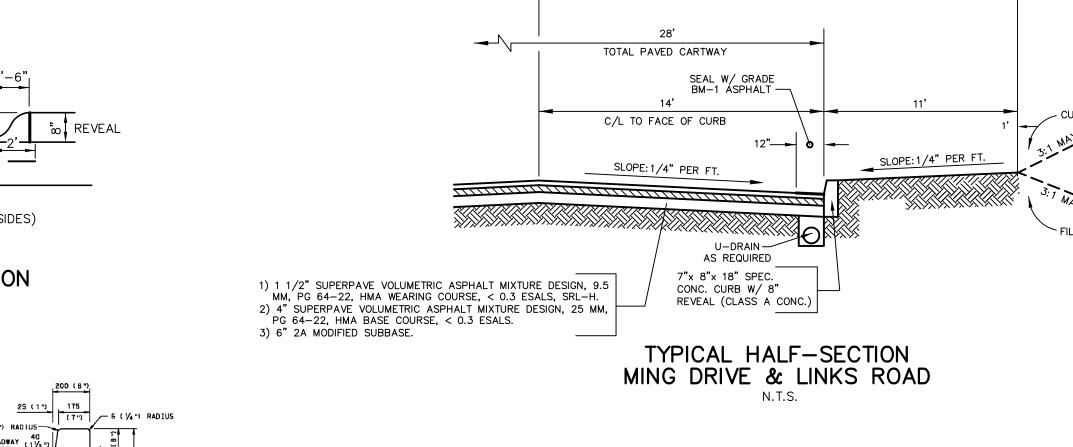
RC-30M: (5 SHEETS) SUBSURFACE DRAINS (NOV. 30, 2021) RC-31M: (3 SHEETS) ENDWALLS (NOV. 30, 2021)

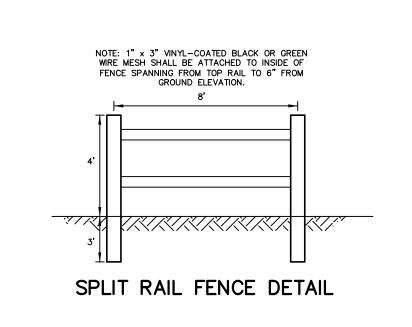
RC-33M: (2 SHEETS) END SECTIONS FOR PIPE CULVERTS (JUNE 1, 2020) RC-39M: (30 SHEETS) STORM WATER MANHOLES (NOV. 30, 2021)

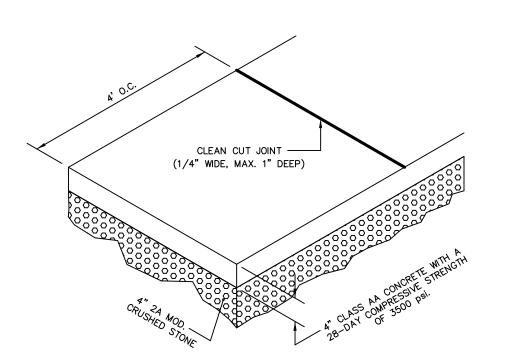
RC-45M: (24 SHEETS) INLET TOPS, GRATES AND FRAMES (FEB. 19, 2021) RC-46M: (34 SHEETS) INLET BOXES (FEB. 19, 2021)











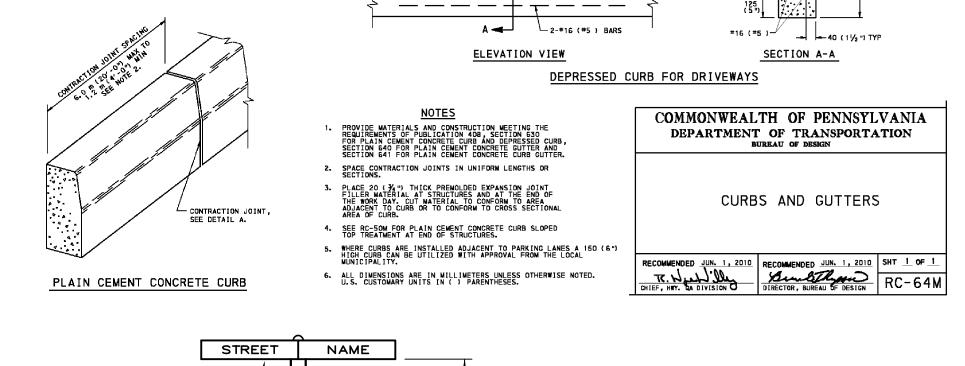
USE CLASS AA CONCRETE WITH A 28-DAY COMPRESSIVE STRENGTH OF 3,500 psi.

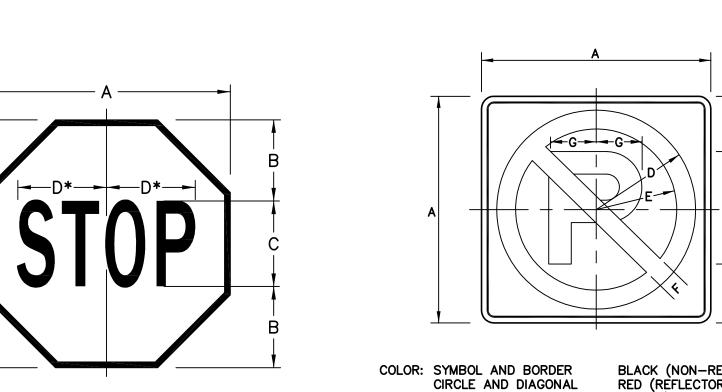
- 2. CLEAN CUT JOINT TO BE FORMED EVERY 5 FT.
- 3. EXPANSION JOINTS WITH 1/2" PRE-MOLDED MATERIAL SHALL BE PLACED EVERY 30 FT.
- 4. SUITABLE PROTECTION & CURING SHALL BE PER PADOT t 711.1. 5. ALL EDGES TO BE ROUNDED WITH A 1/4" TOOL.

CONVENTIONAL SIDEWALK DETAIL

N.T.S.

1 JAC S.T.A. PLAN ORIGINATION DATE







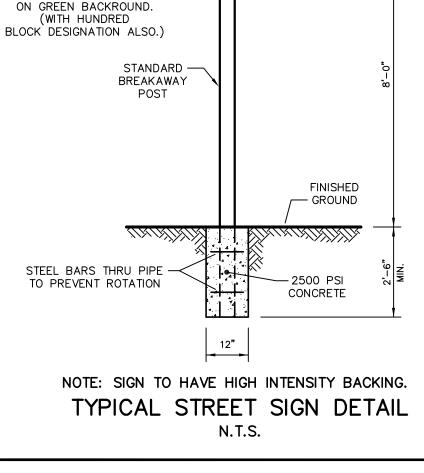


DRAWING FILE NUMBER

6366DET | 20 of 22

CONSTRUCTION DETAIL SHEET

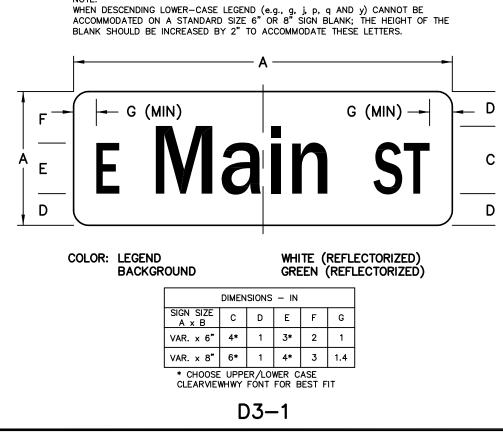
AUG. 12, 2024

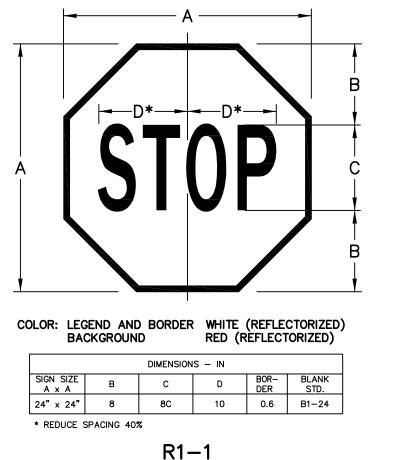


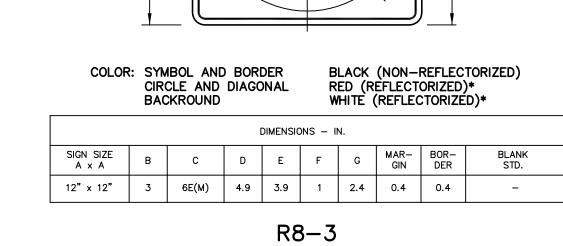
CROSS SECTION

CONTRACTION JOINT

APPROVED NAME PLATE WITH -EMBOSSED WHITE LETTERS







YELLOW (REFLECTORIZED) NOTE: SIGN TO HAVE HIGH INTENSITY BACKING. W14-2

