

BOROUGH OF PHOENIXVILLE PLANNING COMMISSION
I HEREBY CERTIFY THAT THE BOROUGH OF PHOENIXVILLE PLANNING COMMISSION REVIEWED THIS PLAN AND ISSUED ITS COMMENTS TO BOROUGH COUNCIL PRIOR TO COUNCIL'S ADOPTION OF RESOLUTION 2019 - _____, WHICH APPROVES THIS PLAN AS A FINAL PLAN PURSUANT TO THE BOROUGH'S SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

WILLIAM DAVIDSON
PLANNING COMMISSION CHAIRMAN

BOROUGH OF PHOENIXVILLE BOROUGH COUNCIL
WE HEREBY CERTIFY THAT THE BOROUGH COUNCIL OF THE BOROUGH OF PHOENIXVILLE, CHESTER COUNTY, PENNSYLVANIA, BY ITS RESOLUTION 2019 - _____, ADOPTED _____, 2019, APPROVED THIS PLAN AS A FINAL SUBDIVISION AND/OR LAND DEVELOPMENT PLAN, PURSUANT TO THE BOROUGH'S THEN CURRENT SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE AND THAT THE BOROUGH, ON _____, 2019, HEREBY AUTHORIZES THIS PLAN FOR RECORDING.

E. JEAN KRACK
BOROUGH SECRETARY
JAMES C. KOVALESKI
COUNCIL PRESIDENT

BOROUGH OF PHOENIXVILLE ENGINEER
I, OWEN M. HYNÉ, A PENNSYLVANIA PROFESSIONAL ENGINEER, HAVE REVIEWED THIS PLAN, FOR THE BOROUGH, AND HAVE DETERMINED THAT IT HAS BEEN AMENDED AS REQUIRED BY BOROUGH RESOLUTION _____, AND THAT, BASED ON THE INFORMATION PROVIDED BY THE APPLICANT AND WITH ANY WAIVERS SPECIFICALLY IDENTIFIED AND SHOWN HEREON, THE PLAN COMPLIES WITH THE BOROUGH SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

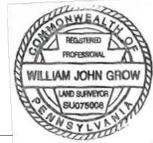
OWEN M. HYNÉ, P.E.
DATE: _____

CHESTER COUNTY PLANNING COMMISSION
THIS PLAN OR AN EARLIER VERSION HEREOF WAS REVIEWED BY THE CHESTER COUNTY PLANNING COMMISSION ON _____, 2019.

CCPC # _____
DIRECTOR _____

SURVEYOR'S CERTIFICATION
I, WILLIAM JOHN GROW, A PENNSYLVANIA PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT THE LOT LINES, STREETS, RIGHTS-OF-WAY AND EASEMENTS SHOWN ON THIS PLAN WERE SURVEYED AND PLOTTED BY ME AND ARE ACCURATE TO THE BEST OF MY KNOWLEDGE. I FURTHER CERTIFY THAT THE SUBDIVISION AND LAND DEVELOPMENT SHOWN HEREON COMPLIES WITH ALL APPLICABLE REGULATIONS INCLUDING BUT NOT LIMITED TO THE BOROUGH ZONING AND SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THAT THE ERROR OF CLOSURE IS NOT GREATER THAN 1:10,000.

WILLIAM JOHN GROW, PLS
NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.
151 RENO AVENUE
NEW CUMBERLAND, PA. 17070
(717) 441-2216
SURVEYOR SIGNATURE _____ DATE _____



ENGINEER'S CERTIFICATION
I, PAUL J. NAVARRO, A PENNSYLVANIA PROFESSIONAL ENGINEER, HEREBY CERTIFY THAT THE SUBDIVISION AND LAND DEVELOPMENT SHOWN HEREON COMPLIES WITH ALL APPLICABLE REGULATIONS INCLUDING BUT NOT LIMITED TO THE BOROUGH ZONING AND SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

PAUL J. NAVARRO, P.E.
NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.
151 RENO AVENUE
NEW CUMBERLAND, PA. 17070
(717) 441-2216
PAUL J. NAVARRO, P.E. DATE _____



OWNER CERTIFICATION & DEDICATION
COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CHESTER

ON THIS THE _____ DAY OF _____, 2019 BEFORE ME THE UNDERSIGNED OFFICER, PERSONALLY APPEARED

OWNER(S) _____ OWNER(S) _____

WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY THAT THEY ARE THE OWNERS AND/OR EQUITABLE OWNERS OF THE PROPERTY SHOWN ON THIS PLAN AND THAT THEY ACKNOWLEDGE THE SAME TO BE THEIR ACT AND PLAN AND DESIRE THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL THE DAY AND DATE ABOVE WRITTEN,
NOTARY _____ MY COMMISSION EXPIRES _____

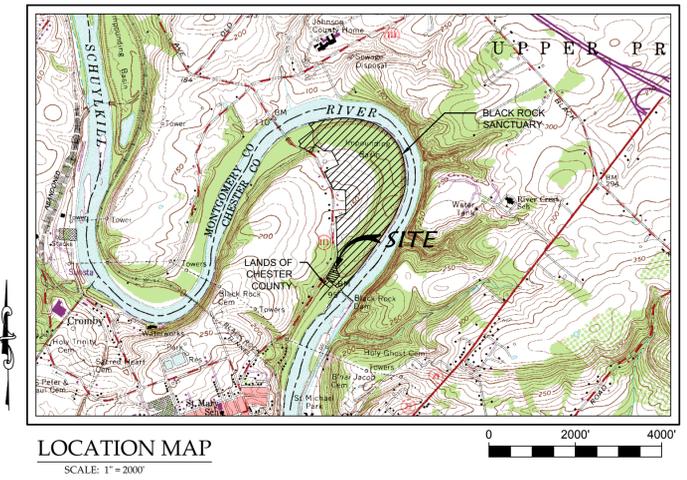
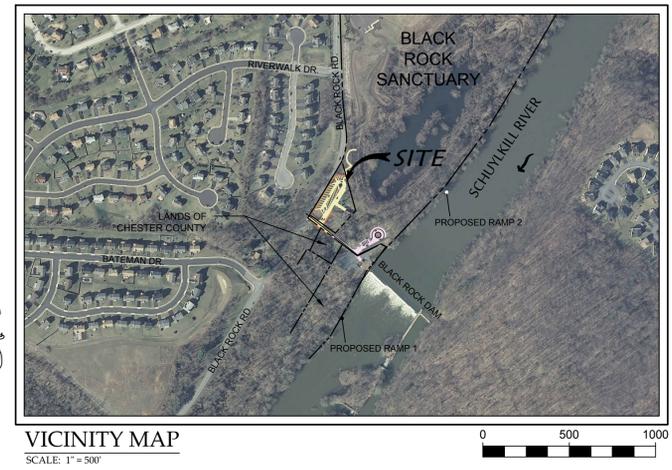
RECORDER OF DEEDS CERTIFICATE

RECORDER OF DEEDS
RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS IN AND FOR THE COUNTY OF CHESTER, AT WEST CHESTER, PA, IN PLAN BOOK _____, PAGE NO. _____ ON _____, 20____
RECORDER OF DEEDS _____

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN FOR BLACK ROCK SANCTUARY BOROUGH OF PHOENIXVILLE CHESTER COUNTY, PENNSYLVANIA MAY 9TH, 2019

PUBLIC UTILITY LIST:

- COMPANY: PHOENIXVILLE BOROUGH
ADDRESS: WATER ST
PHOENIXVILLE, PA. 19460
CONTACT: ANDY FABIAN
- COMPANY: COMCAST
ADDRESS: 4400 WAYNE AVENUE
PHILADELPHIA, PA. 19140
CONTACT: ROBERT HARVEY
EMAIL: BOB_HARVEY@CABLE.COMCAST.COM
- COMPANY: PECO ENERGY C/O USIC
ADDRESS: 450 S HENDERSON RD SUITE B
KING OF PRUSSIA, PA. 19406
CONTACT: NIKKIA SIMPKINS
EMAIL: NIKKIASIMPKINS@USICLLC.COM
- COMPANY: COMCAST CABLEVISION
ADDRESS: 190 SHOEMAKER RD
POTTSTOWN, PA. 19464
CONTACT: DAVE FIEDLER
- COMPANY: VERIZON PENNSYLVANIA LLC
ADDRESS: 1050 VIRGINIA DR
FORT WASHINGTON, PA. 19034
CONTACT: LAURA LIPPINCOTT
EMAIL: LAURA.M.LIPPINCOTT@ONE.VERIZON.COM



ZONING DATA:

LOCATION: BOROUGH OF PHOENIXVILLE, CHESTER COUNTY, PA
ZONING DISTRICT: R1 - RESIDENTIAL INFILL
EXISTING USE: VACANT AND RECREATIONAL
PROPOSED USE: RECREATIONAL PERMITTED BY CONDITIONAL USE
PERMITTED USES BY RIGHT: RESIDENTIAL
CONDITIONAL USE: GRANTED NOVEMBER 13TH, 2018.
R-1 RESIDENTIAL INFILL DIMENSIONAL REQUIREMENTS:

TYPE	SF DETACHED	TWIN	TOWNHOUSE	MULTI-FAMILY	INSTITUTIONAL
MIN. LOT WIDTH	40 FEET	30 FEET	20 FEET	40 FEET	60 FEET
MIN. LOT AREA	5,000 SF	3,000 SF	2,000 SF	4,000 SF	8,000 SF
MAX. IMPERVIOUS	80%	85%	90%	80%	70%
MIN. SIDE YARD	10 FEET	10 FEET	10 FEET	20 FEET	20 FEET
MIN. REAR YARD	25 FEET	20 FEET	20 FEET	20 FEET	25 FEET
MIN. LOT DEPTH	120 FEET	120 FEET	120 FEET	120 FEET	120 FEET
MAX. BLDG. HEIGHT	35 FEET	35 FEET	35 FEET	35 FEET	35 FEET

PROPOSED LOT DIMENSIONS:
(FOR TRAILHEAD LOT, TAX PARCEL 15-3-10)
LOT WIDTH: 360' +/- (NO CHANGE)
LOT AREA: 1.35 ACS. (NO CHANGE)
IMPERVIOUS: PRE. 13% / POST. 42%
SIDE YARD: N/A
REAR YARD: N/A
LOT DEPTH: 225' (NO CHANGE)
BLDG HEIGHT: 14' +/- (EXISTING GARAGE, NO CHANGE)

PROPOSED LOT DIMENSIONS:
(FOR SANCTUARY LOT, TAX PARCEL 15-3A-14)
LOT WIDTH: 2,900' +/- (NO CHANGE)
LOT AREA: 130.7 ACS. (NO CHANGE)
IMPERVIOUS: PRE. 0.89% / POST. 1.12%
SIDE YARD: N/A
REAR YARD: N/A
LOT DEPTH: 1,800' +/- (NO CHANGE)
BLDG HEIGHT: N/A

WAIVERS REQUESTED:

- MODIFICATION TO SECTIONS 22-301.1.B - PRELIMINARY PLAN SUBMISSION
- MODIFICATION TO SECTIONS 22-601 - ENVIRONMENTAL IMPACT ANALYSIS
- MODIFICATION TO SECTIONS 22-602 - TRAFFIC IMPACT STUDY
- MODIFICATION TO SECTIONS 22-702 - FINANCIAL SECURITY
- MODIFICATION TO SECTIONS 22-704 - INSPECTION OF WORK AND MATERIALS
- MODIFICATION TO SECTIONS 22.802 - ESCROW
- MODIFICATION TO SECTIONS 22.802.4 - SECOND ESCROW FOR INSPECTIONS, TESTING OR MAINTENANCE COSTS

STORMWATER MANAGEMENT CERTIFICATION

I/WE _____ BEING THE OWNERS IS/ARE RESPONSIBLE FOR THE PERPETUAL OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM, AND ACKNOWLEDGES THAT THE STORMWATER MANAGEMENT SYSTEM IS TO BE A PERMANENT FEATURE WHICH CANNOT BE ALTERED OR REMOVED WITHOUT PRIOR APPROVAL OF BOROUGH OF PHOENIXVILLE.

STORMWATER CERTIFICATION

I, _____, HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE BOROUGH OF PHOENIXVILLE'S MANAGEMENT ORDINANCE.

WETLANDS CERTIFICATION

I, _____, HEREBY CERTIFY THAT THERE ARE WETLANDS ON THE SUBJECT PROPERTY, THE PROPOSED PROJECT WILL IMPACT ON & OFF-SITE WETLANDS, AND PERMITS ARE REQUIRED FROM THE STATE OR FEDERAL GOVERNMENT.

CONDITIONAL USE APPROVAL:

ON NOVEMBER 13, 2018 THE BOROUGH OF PHOENIXVILLE ZONING HEARING BOARD APPROVED THE DEVELOPMENT OF A PARKING LOT AS AN INSTITUTIONAL USE (PARK AND RECREATION USE) PERMITTED BY CONDITIONAL USE IN THE R1-RESIDENTIAL INFILL DISTRICT.

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE - STOP CALL
PA 1 SYSTEM, INC. POC SERIAL NUMBER
1-800-242-1776 20182532634

GENERAL NOTES:

- THE INTENT OF THIS PLAN IS TO REMOVE AN EXISTING ABANDONED VACANT HOMES & SHED AND CONSTRUCT A NEW TRAILHEAD AND TWO (2) CANOE/KAYAK PORTAGE RAMPS AT THE BLACK ROCK SANCTUARY. PHASE I WILL CONSIST OF AN ACCESS DRIVE, PAVED PARKING AREA WITH DROP OFF, RAIN GARDEN, STORMWATER MANAGEMENT COLLECTION AND CONVEYANCE FACILITIES AND TWO (2) CANOE/KAYAK PORTAGE RAMPS ALONG THE SCHUYLKILL RIVER. PHASE II WILL CONSIST OF A PAVED DRIVEWAY PARKING AREA AND TURNAROUND.
- EXISTING CONDITIONS, BOUNDARY AND UTILITY INFORMATION DEPICTED HEREON HAS BEEN ESTABLISHED BY A SURVEY PERFORMED BY NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. IN JULY 2017. ALL TOPOGRAPHIC AND PLANIMETRIC INFORMATION CONTAINED IN THIS SURVEY WAS TAKEN FROM FIELD SURVEY INFORMATION.
- THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES, TEMPORARY AND PERMANENT, THROUGHOUT THE LIFE OF THE PROJECT. REFER TO EROSION CONTROL PLANS & DETAILS FOR ALL CONTROL MEASURES.
- PROPOSED WATER SUPPLY: N/A
- PROPOSED SEWAGE DISPOSAL: N/A
- A WETLAND DELINEATION HAS BEEN PERFORMED AND MAPPED WETLANDS ARE SHOWN ON THE PLAN.
- PENNSYLVANIA ONE CALL SYSTEM HAS BEEN UTILIZED TO OBTAIN UTILITY INFORMATION FOR THIS PROJECT. SITE SERIAL NUMBER 20182532634 HAS BEEN ASSIGNED TO THIS PROJECT. THE CONTRACTOR SHALL CONTACT ONE-CALL AT 1-800-242-1776 NO LESS THAN THREE (3) DAYS PRIOR TO BEGINNING WORK.
- ALL EXISTING UTILITIES HAVE BEEN SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY ALL UTILITIES PRIOR TO COMMENCING WORK.
- CHESTER COUNTY IS RESPONSIBLE FOR THE PLACEMENT OF ALL TRAFFIC CONTROL SIGNS AS NEEDED WITHIN THE LIMIT OF THE PROPERTY.
- DURING CONSTRUCTION, CONTRACTOR SHALL PROTECT ALL DRAINAGE STRUCTURES, WALKWAYS, ROADWAYS AND THE SCHUYLKILL RIVER FROM SEDIMENTATION.
- THERE SHALL BE NO OBSTRUCTION WITHIN THE CLEAR SIGHT SIGHT TRIANGLE BETWEEN 30 INCHES AND 6 FEET IN HEIGHT.
- ALL DISTURBED AREAS AND AREAS WITH EROSION PROBLEMS ARE TO BE DRESSED WITH TOPSOIL, SEEDED AND MULCHED. THE PROPERTY OWNER IS RESPONSIBLE FOR PREPARING AND IMPLEMENTING AN EROSION AND SEDIMENTATION CONTROL PLAN.
- ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH PENNDOT PUBLICATION 408 STANDARDS LATEST EDITION.
- NO KNOWN PROTECTIVE COVENANTS OR EASEMENTS EXIST OR ARE PROPOSED ON THIS PARCEL.
- THE OWNER/CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A MINIMUM OF 48 HOURS NOTICE AND TO COORDINATE WITH THE BOROUGH / ENGINEER IN REGARDS TO ALL MUNICIPAL INSPECTION WORK REQUIRED ON THE PROJECT SITE.

DRAWING INDEX

- C100 COVER SHEET
- C101 PLAN NOTES
- C200 OVERALL SITE PLAN
- C300 EXISTING CONDITIONS PLAN
- C400 DEMOLITION PLAN
- C500 LAYOUT PLAN
- C600 GRADING & UTILITY PLAN
- C601 PROFILES
- C700 LANDSCAPE PLAN
- C701 RIVER ACCESS RAMPS 1 AND 2 PLAN
- C800 CONSTRUCTION DETAILS
- C801 CONSTRUCTION DETAILS
- C802 CONSTRUCTION DETAILS
- C803 CONSTRUCTION DETAILS & ENLARGEMENTS
- ES-1 E&S NOTES
- ES-2 E&S PLAN
- ES-3 E&S DETAILS
- ES-4 E&S DETAILS
- PCSM-1 PCSM NOTES
- PCSM-2 PCSM PLAN
- PCSM-3 PCSM DETAILS

PARKING REQUIREMENT

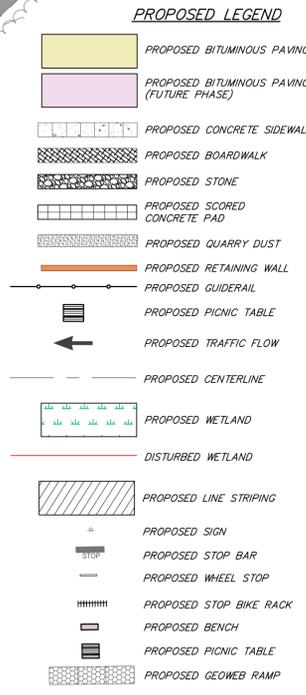
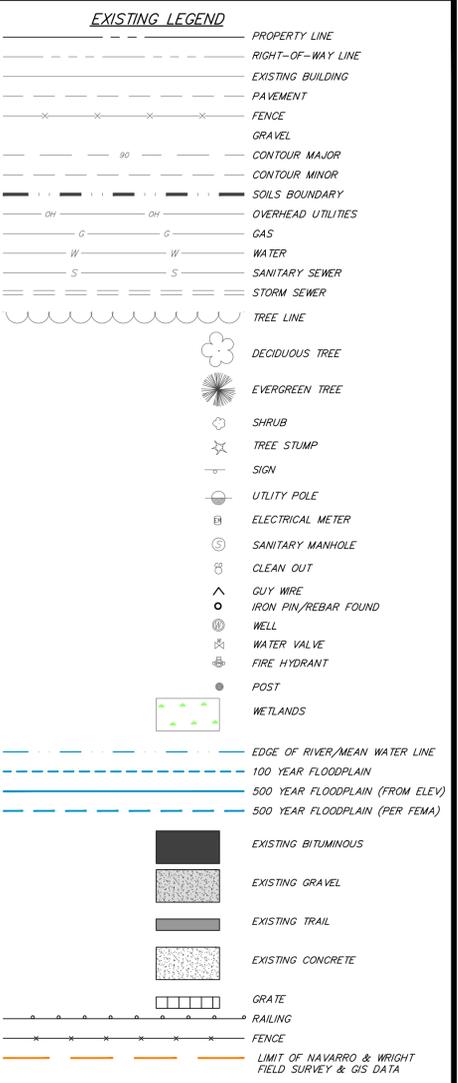
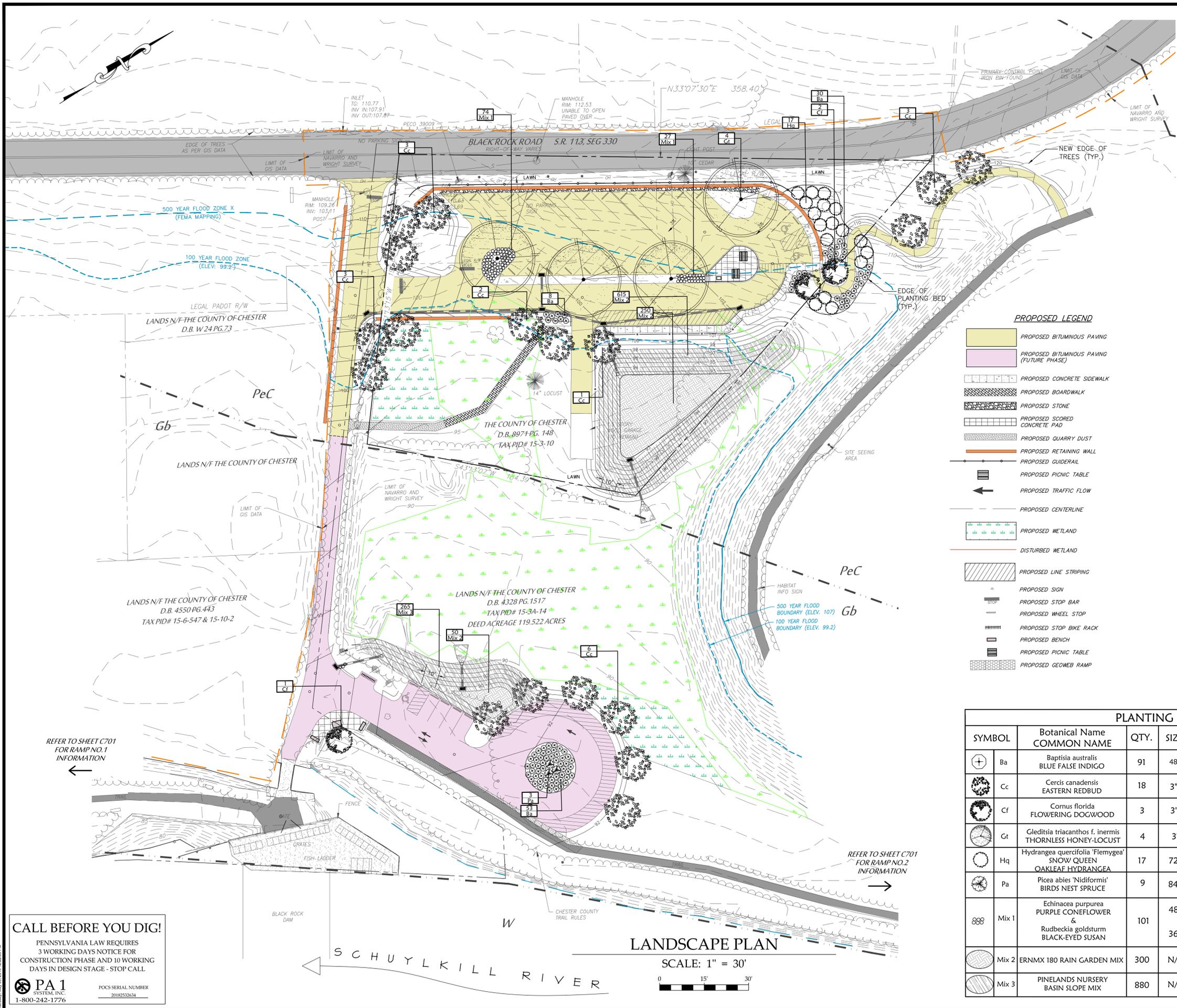
THE BOROUGH OF PHOENIXVILLE ZONING ORDINANCE DOES NOT SPECIFY A REQUIRED NUMBER OF PARKING SPACES PER LAND USE AND REQUIRES THAT PARKING PROVIDED BE BASED ON ACCEPTABLE STANDARDS. CHESTER COUNTY DEPARTMENT OF FACILITIES AND PARKS REQUESTED PROVIDING A MINIMUM OF 20 SPACES.
PARKING PROVIDED:
PHASE I - 29 SPACES OF WHICH 2 ARE ADA ACCESSIBLE.
PHASE II - 5 SPACES OF WHICH 2 ARE ADA ACCESSIBLE.

SOURCE OF TITLE

DEED BOOK 8971 PAGE 148
DEED BOOK 4328 PAGE 1517

TAX PARCEL REFERENCE

TAX PARCEL 15-3-10
TAX PARCEL 15-3A-14
TAX PARCEL 15-3-12



NOTE: SEE SHEET C101 FOR LANDSCAPE NOTES

PLANTING SCHEDULE

SYMBOL	Botanical Name COMMON NAME	QTY.	SIZE	ROOT	SPACING	COMMENTS	NATIVE
Ba	Baptisia australis BLUE FALSE INDIGO	91	48"	CONT. #2	AS SHOWN	PURPLE BLOOM SPRING	YES
Cc	Cercis canadensis EASTERN REDBUD	18	3"	B & B	AS SHOWN	SPRING BLOOMS SEED PODS IN WINTER	YES
Cf	Cornus florida FLOWERING DOGWOOD	3	3"	B & B	AS SHOWN	WHITE BLOOM SPRING	YES
Gt	Gleditsia triacanthos f. inermis THORNLESS HONEY-LOCUST	4	3"	B & B	AS SHOWN	FILTERED SHADE FALL COLOR	YES
Hq	Hydrangea quercifolia 'Flemygea' SNOW QUEEN OAKLEAF HYDRANGEA	17	72"	CONT. #3	AS SHOWN	WHITE BLOOMS SUMMER/FALL	YES
Pa	Picea abies 'Nidiformis' BIRDS NEST SPRUCE	9	84"	CONT. #3	AS SHOWN	EVERGREEN WINTER INTEREST	NO
Mix 1	Echinacea purpurea PURPLE CONEFLOWER & Rudbeckia goldsturm BLACK-EYED SUSAN	101	48" 36"	CONT. #1	AS SHOWN	PURPLE BLOOM WET TOLERANT YELLOW BLOOM WET TOLERANT	YES
Mix 2	ERNMX 180 RAIN GARDEN MIX	300	N/A	N/A	N/A	N/A	YES
Mix 3	PINELANDS NURSERY BASIN SLOPE MIX	880	N/A	N/A	N/A	N/A	YES

LANDSCAPE PLAN

SCALE: 1" = 30'



CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE - STOP CALL

PA 1
SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
2019252624

NO.	DATE	REVISIONS	BY

NAVARRO & WRIGHT
CONSULTING ENGINEERS, INC.

CORPORATE OFFICE
151 RENZO AVENUE
NEW CUMBERLAND, PA 17070
PHONE: (717) 441-2216
FAX: (717) 441-2218
www.navarrowright.com



PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
FOR
BLACK ROCK SANCTUARY
BOROUGH OF PHOENIXVILLE
CHESTER COUNTY
PENNSYLVANIA

DRAWN BY: JIGVC
CHECKED BY: CWB
SCALE: 1" = 30'
DATE: MAY 9, 2019

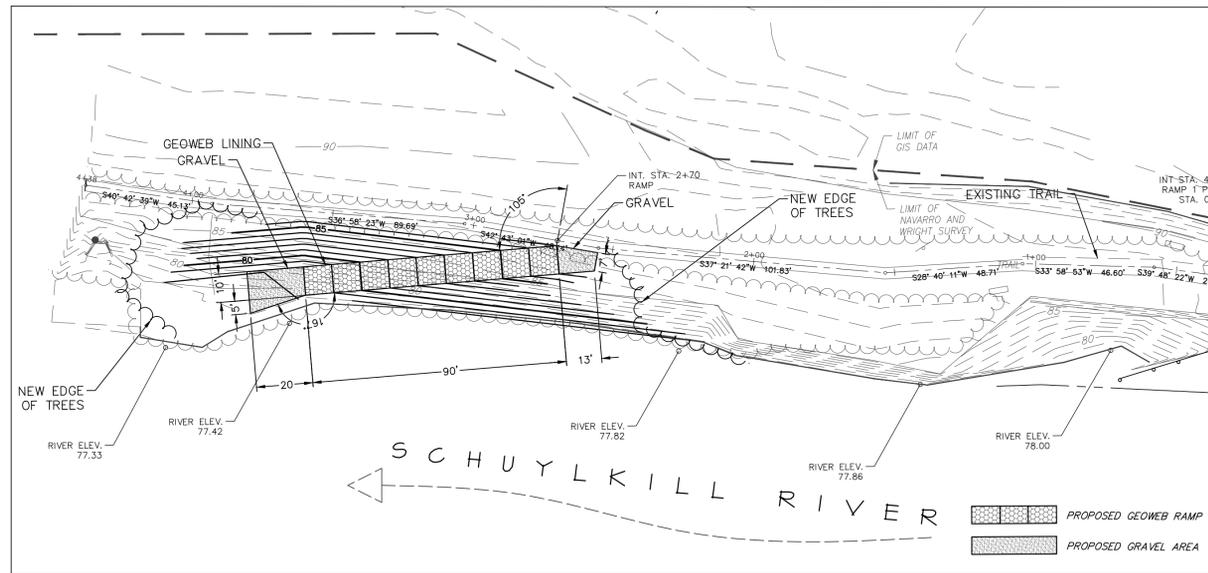
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LANDSCAPE PLAN

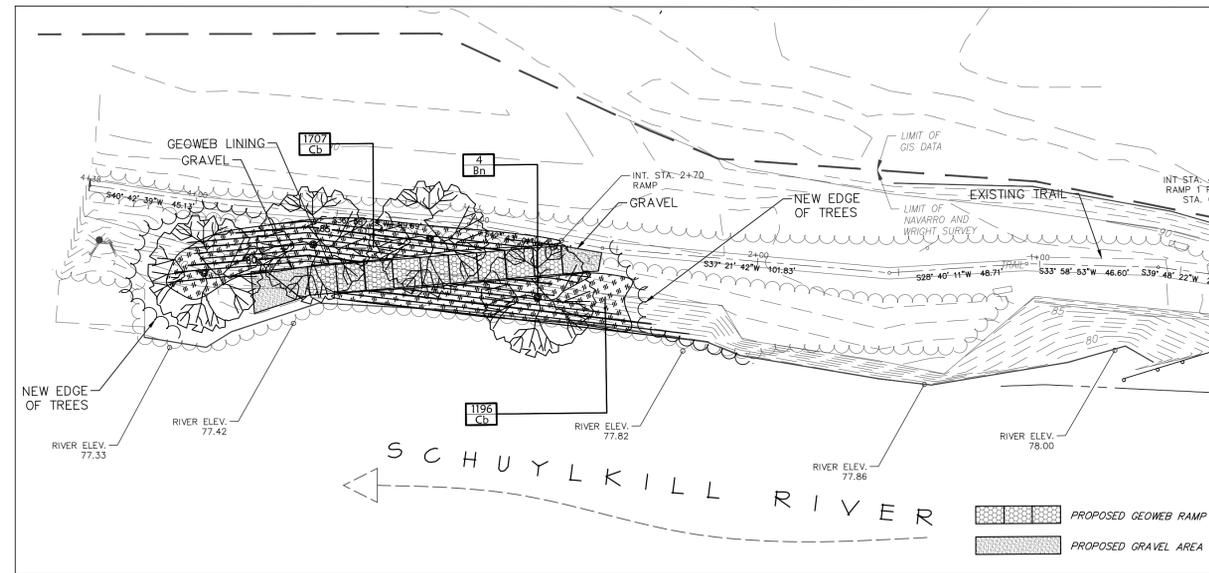
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LAYOUT & GRADING PLAN

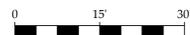


LANDSCAPE PLAN

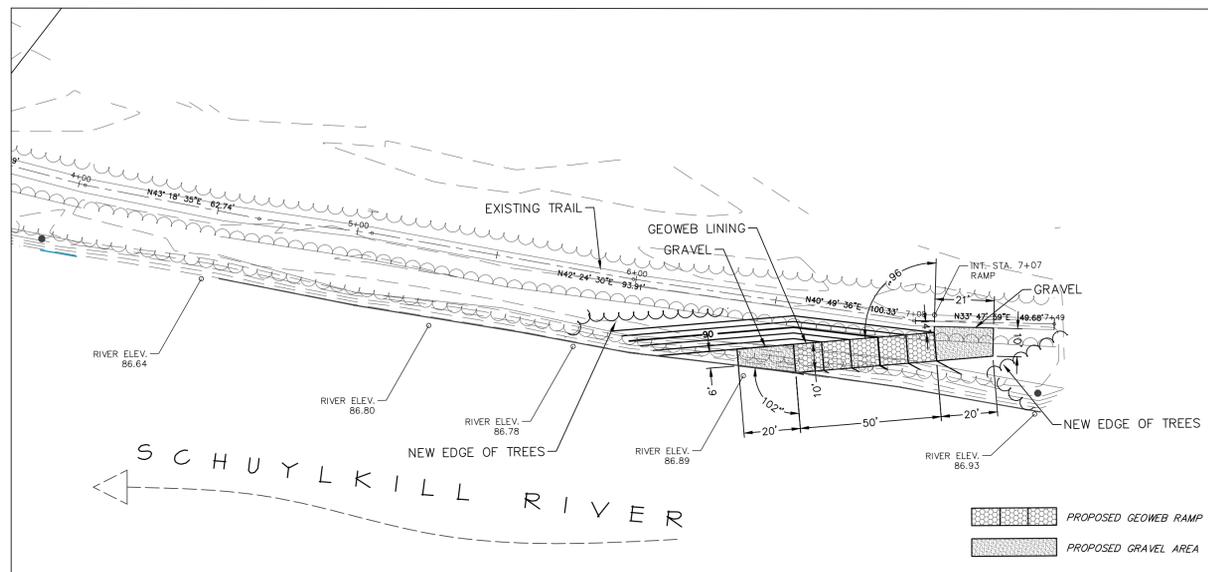
NOTE: SEE SHEET C801 FOR LANDSCAPE NOTES

PROPOSED RAMP 1

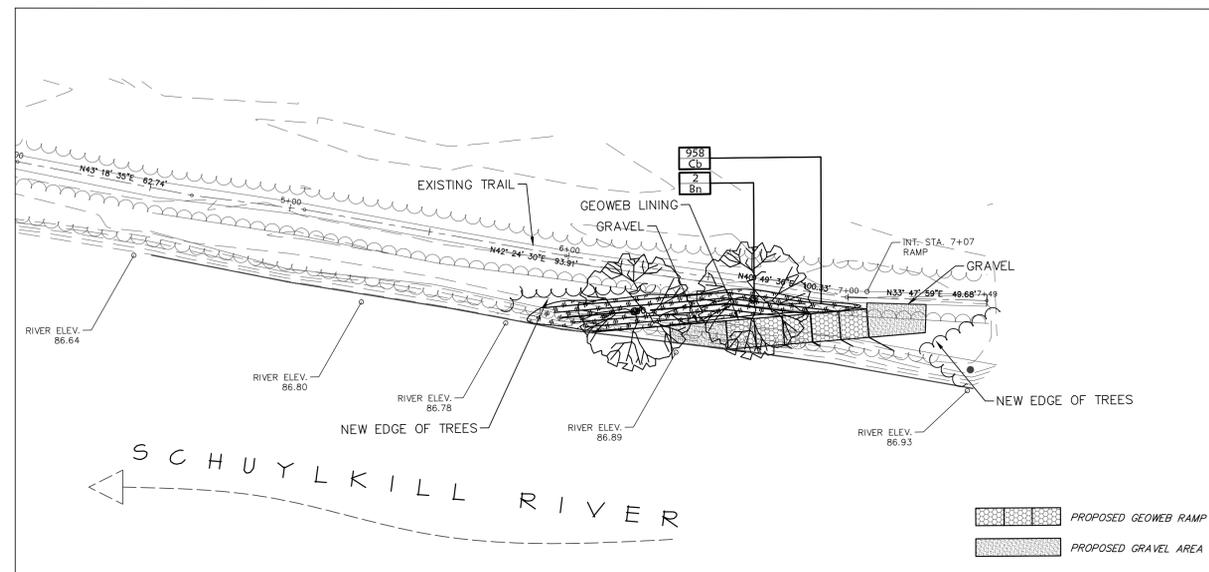
SCALE: 1" = 30'



PLANTING SCHEDULE RAMP 1							
SYMBOL	Botanical Name COMMON NAME	QTY.	SIZE	ROOT	SPACING	COMMENTS	NATIVE
Bn	Betula nigra RIVER BIRCH	4	3"	B & B	AS SHOWN	WET TOLERANT WINTER INTEREST FALL COLOR	YES
Cp	Carex blanda COMMON WOODLAND SEDGE	2903	PLUG	LP 32	12" O.C.	WET TOLERANT EVERGREEN FOLIAGE	YES



LAYOUT & GRADING PLAN



LANDSCAPE PLAN

NOTE: SEE SHEET C801 FOR LANDSCAPE NOTES

PROPOSED RAMP 2

SCALE: 1" = 30'



PLANTING SCHEDULE RAMP 2							
SYMBOL	Botanical Name COMMON NAME	QTY.	SIZE	ROOT	SPACING	COMMENTS	NATIVE
Bn	Betula nigra RIVER BIRCH	2	3"	B & B	AS SHOWN	WET TOLERANT WINTER INTEREST FALL COLOR	YES
Cb	Carex blanda COMMON WOODLAND SEDGE	958	PLUG	LP 32	12" O.C.	WET TOLERANT EVERGREEN FOLIAGE	YES

CALL BEFORE YOU DIG!
 PENNSYLVANIA LAW REQUIRES
 3 WORKING DAYS NOTICE FOR
 CONSTRUCTION PHASE AND 10 WORKING
 DAYS IN DESIGN STAGE - STOP CALL

 POCS SERIAL NUMBER
 2018252654
 1-800-242-1776

Thursday, May 05, 2016 11:37:46 AM

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NO.	DATE	REVISIONS	BY

NAVARRO & WRIGHT
 CONSULTING ENGINEERS, INC.
 CORPORATE OFFICE
 151 RENNO AVENUE
 NEW CUMBERLAND, PA 17070
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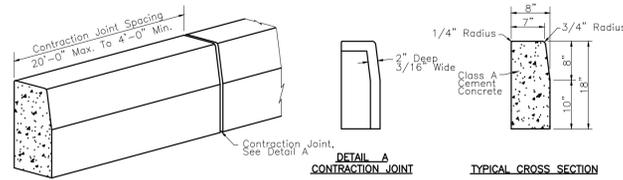


PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
 FOR
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 CHESTER COUNTY
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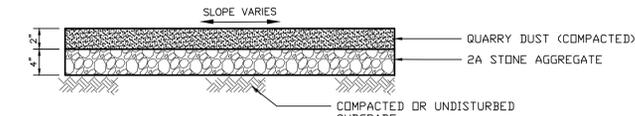
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 CHECKED BY: CWB
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 DATE: MAY 9, 2019

JOB NUMBER:
1705SC066

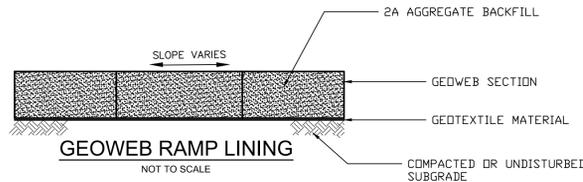
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**RIVER ACCESS
 RAMPS 1 & 2
 PLAN**
 DRAWING NUMBER:
C701



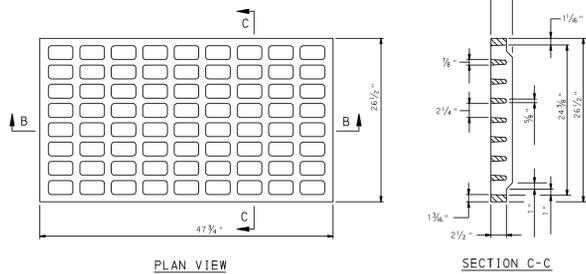
PLAIN CEMENT CONCRETE CURB
NOT TO SCALE



QUARRY DUST TRAIL
NOT TO SCALE

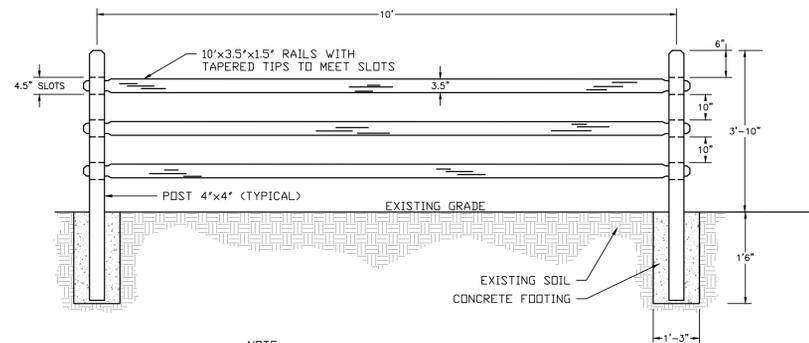


GEOWEB RAMP LINING
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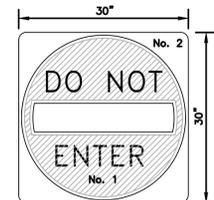
ONE PIECE CAST IRON GRATE - BICYCLE SAFE
NOT TO SCALE

- NOTES:
1. ALL INLET GRATES SHALL BE CONSTRUCTED TO THE MOST CURRENT PENNDOT PUBLICATION 408 SPECIFICATIONS AND AS PER DETAIL RC-45M OF THE MOST CURRENT PENNDOT PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION.
 2. PROVIDE SUITABLE LIFTING DEVICES FOR HANDLING AND INSTALLATION.

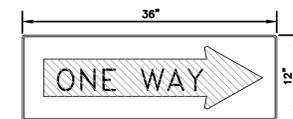


- NOTE:
- 1) ALL WOOD FOR SPLIT RAIL FENCE TO BE PRESSURE TREATED
 - 2) END POST SHALL BE TERMINAL POST.

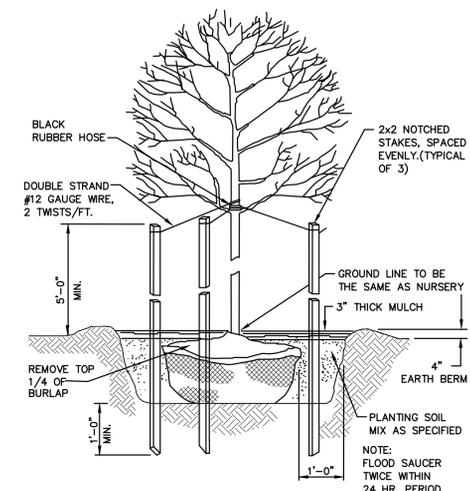
SPLIT-RAIL FENCE
NOT TO SCALE



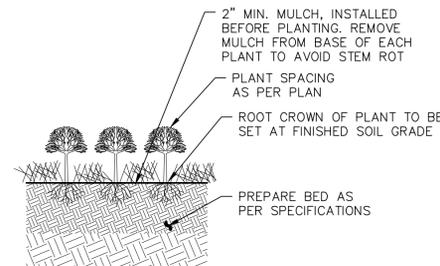
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BACKGROUND RED (REFLECTORIZED)
No.2 BACKGROUND WHITE (REFLECTORIZED)
REFER TO PADOT PUB. NO. 236, HANDBOOK OF APPROVED SIGNS PART 1 OF 3, REGULATORY SIGNS, FOR ADDITIONAL INFORMATION



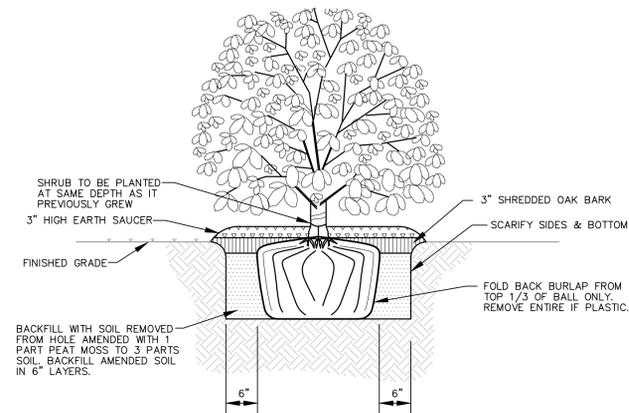
COLOR: ARROW AND BORDER WHITE (REFLECTORIZED)
BACKGROUND AND LEGEND BLACK (NON-REFLECTORIZED)
REFER TO PADOT PUB. NO. 236, HANDBOOK OF APPROVED SIGNS PART 1 OF 3, REGULATORY SIGNS, FOR ADDITIONAL INFORMATION



DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



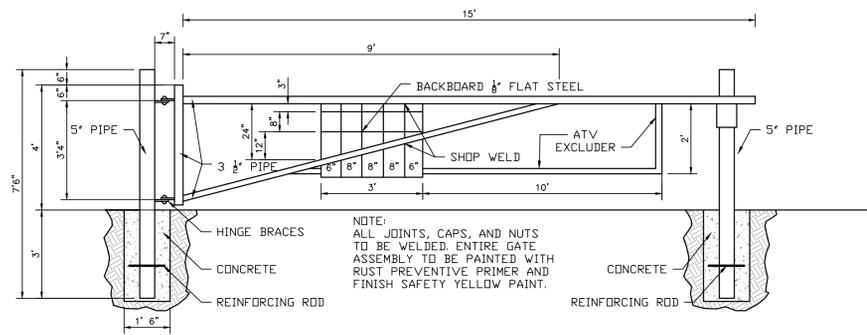
GROUND COVER PLANTING
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE

LANDSCAPE NOTES:

1. ALL TREES, SHRUBS, HEDGES, OR GROUND COVER THAT DIE OR ARE DESTROYED SHALL BE REPLACED WITHIN SIX (6) MONTHS.
2. AT THE TIME OF PLANTING, DECIDUOUS TREES SHALL HAVE A MINIMUM CALIPER OF 3 INCHES MEASURED A MINIMUM OF SIX (6) INCHES ABOVE THE SOIL LINE.
3. CONIFER TREES SHALL HAVE A MINIMUM HEIGHT OF SIX FEET.
4. EVERGREEN SHRUBS, EXCEPT THOSE USED FOR LOW GROUNDCOVERS, SHALL HAVE AN AVERAGE HEIGHT OF 20 INCHES.
5. DECIDUOUS SHRUBS SHALL HAVE AN AVERAGE HEIGHT OF 30 INCHES.
6. TREES LESS THAN 3 INCHES IN CALIPER SHALL BE PROPERLY STAKED OR TREES MORE THAN 3 INCHES IN CALIPER SHALL BE GUIED AND BE PROPERLY PROTECTED FOR A PERIOD OF ONE YEAR FROM THE DATE OF PLANTING.
7. ANY NYLON ROPE USED IN BALLING THE TREE MUST BE CUT AND REMOVED FROM THE ROOT BALL.
8. ALL PLANT MATERIAL SHALL BE 'A-No.1' GRADE PLANT STOCK GROWN IN A NURSERY WITH A COMPARABLE/SIMILAR CLIMATE AS THE PROJECT SITE.
9. THE LANDSCAPE ARCHITECT MUST APPROVE ALL PLANT SOURCES PRIOR TO DELIVERY OF PLANT MATERIAL TO THE PROJECT SITE.
10. ANY PLANT MATERIAL CONSIDERED BY THE OWNER AND/OR LANDSCAPE ARCHITECT TO BE UNACCEPTABLE SHALL BE REMOVED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE, FROM THE PROJECT SITE.
11. ALL PLANT MATERIAL MUST BE PLANTED WITHIN 24 HOURS OF DELIVERY TO THE PROJECT SITE.
12. THE CONTRACTOR IS RESPONSIBLE FOR WATERING PLANT MATERIAL THROUGHOUT THE DURATION OF THE PROJECT AND UNTIL THE DATE OF FINAL ACCEPTANCE.
13. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR BEYOND THE DATE OF FINAL ACCEPTANCE BY THE OWNER. REPLACEMENTS ARE NOT LIMIT TO ONE TIME.
14. ALL PLANT REPLACEMENTS SHALL BE MADE AT THE APPROPRIATE SEASONAL PLANTING TIME & ANY PLANT MATERIAL THAT DOES NOT SURVIVE SHALL BE REPLACED WITHIN 6 MONTHS.
15. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL APPLICABLE CONTRACTORS. UTILITY LOCATIONS MUST BE MARKED PRIOR TO BEGINNING PLANT INSTALLATION.
16. ALL PLANTING AREAS SHALL BE MULCHED WITH DOUBLE SHREDDED HARDWOOD TANBARK MULCH. SEE PLANTING DETAILS FOR ADDITIONAL PLANTING INFORMATION.
17. PLANT PLACEMENT ON THIS SHEET IS SHOWN FOR ILLUSTRATION PURPOSES. COORDINATE FINAL PLACEMENT WITH OWNER BEFORE PLANTING.
18. ALL WOODEN STAKES USED AS TREE GUYS SHALL BE REMOVED BY THE CONTRACTOR AT THE ONE YEAR ANNIVERSARY OF TREE PLANTING AT NO ADDITIONAL COST TO THE OWNER.



HEAVY DUTY GATE
NOT TO SCALE

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3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE - STOP CALL

PA 1
SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
2018252634

NO.	DATE	REVISIONS	BY

NAVARRO & WRIGHT
CONSULTING ENGINEERS, INC.
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NEW CUMBERLAND, PA 17070
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PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
FOR
BLACK ROCK SANCTUARY
BOROUGH OF PHOENIXVILLE
CHESTER COUNTY
PENNSYLVANIA

DRAWN BY: JIGVC
CHECKED BY: CWB
SCALE: AS NOTED
DATE: MAY 9, 2019

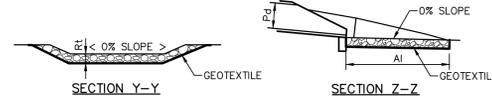
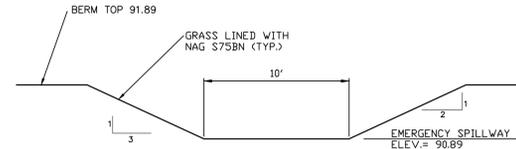
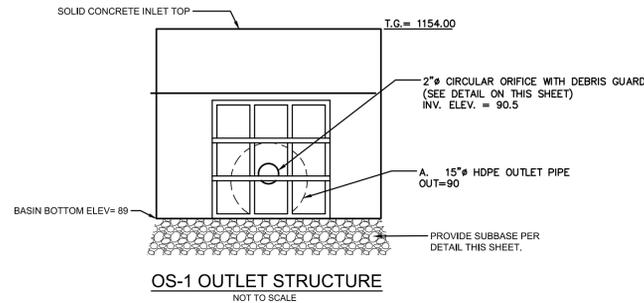
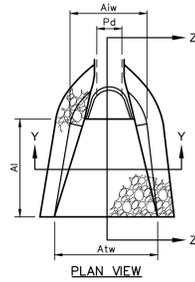
JOB NUMBER:
1705SC066

DRAWING DESCRIPTION:
**CONSTRUCTION
DETAILS**

DRAWING NUMBER:
C801

Thursday, May 09, 2018 11:38:42 AM

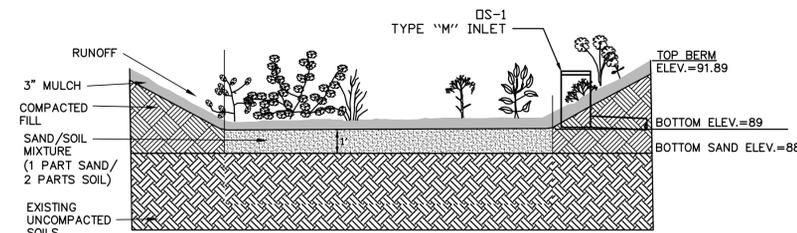
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OUTLET NO.	PIPE DIA. PD (IN)	RIPRAP			APRON	
		SIZE (R-)	THICK. Rt (IN)	LENGTH AI (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
EW-1	15	3	12	8	4	12
EW-2	15	3	12	8	4	12
EW-3	15	3	12	8	4	12
EW-4	15	3	12	8	4	12

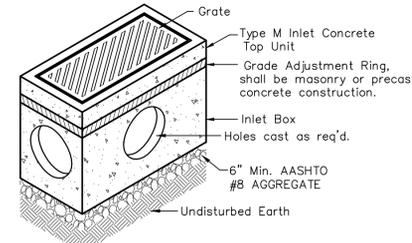
ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
 ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.
 EXTEND RIPRAP ON BACK SIDE OF APRON TO AT LEAST 1/2 DEPTH OF PIPE ON BOTH SIDES TO PREVENT SCOUR AROUND THE PIPE.

**STANDARD CONSTRUCTION DETAIL #9-1
 RIPRAP APRONS AT PIPE OUTLET WITH
 FLARED END SECTION OR ENDWALL**
 NOT TO SCALE



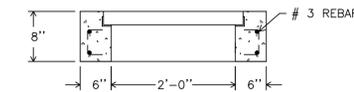
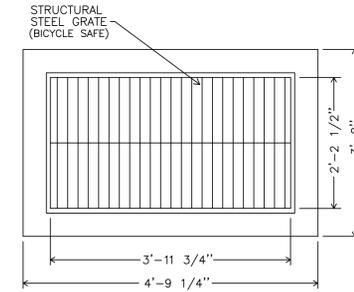
1. GRADING OF THE RAIN GARDEN SHOULD BE ACCOMPLISHED WITH LOW-COMPACTATION EARTH MOVING EQUIPMENT TO PREVENT COMPACTION OF THE UNDERLYING SOILS.
2. THE RAIN GARDEN SHOULD BE SEEDED WITH THE FOLLOWING - ERNMX-180 RAIN GARDEN MIX.

RAIN GARDEN CROSS SECTION
 NOT TO SCALE

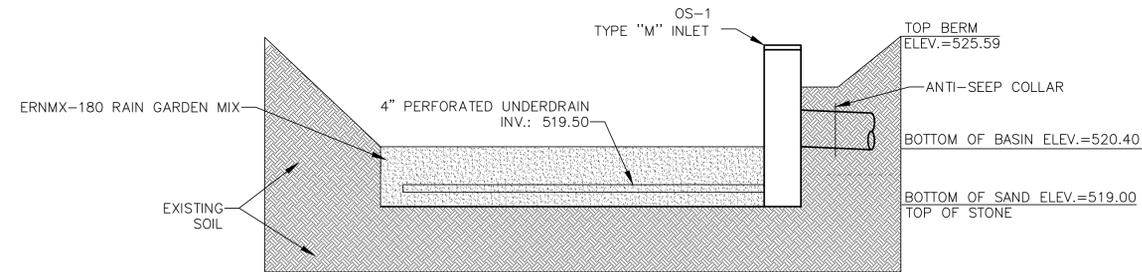


- NOTES:**
1. ALL INLETS GREATER THAN 5 FEET IN DEPTH SHALL BE PROVIDED WITH ALUMINUM MANHOLE TYPE STEPS, NO GREATER THAN 12" APART.
 2. ALL INLETS TO BE PROVIDED WITH A MIN. 6" SUMP.

TYPE M INLET
 NOT TO SCALE

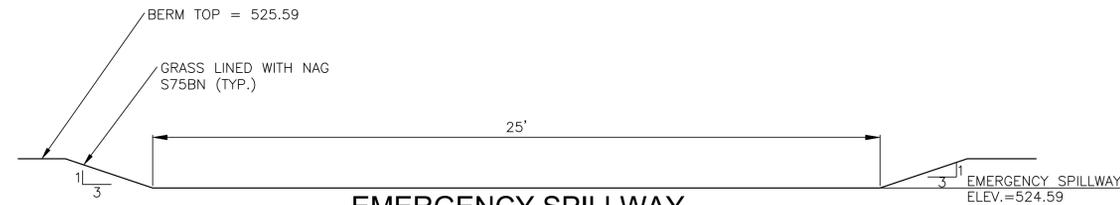


TYPE M CONCRETE INLET TOP
 NOT TO SCALE



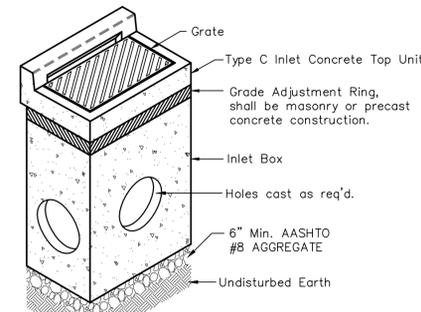
1. PROTECTION INFILTRATION BASIN AREA FROM COMPACTION PRIOR TO INSTALLATION.
2. EXCAVATE INFILTRATION BASIN BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE.
3. THE INFILTRATION BASIN SHALL BE PROTECTED FROM SEDIMENT ENTRY FOLLOWING INSTALLATION.
4. WHENEVER CANOPY (OVERALL VEGETATION) REACHES A HEIGHT OF 18"-24", USE A BRUSH HOG MOWER OR STRING TRIMMER TO TRIM THE MEADOW GRASSES TO A HEIGHT OF 8" (NOTE: A LAWN MOWER SHALL NOT BE USED OR THE MOWER HEIGHT WILL BE TOO LOW AND NATIVE SEEDLINGS WILL BE KILLED).

INFILTRATION BASIN DETAIL
 1" = 4'



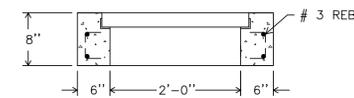
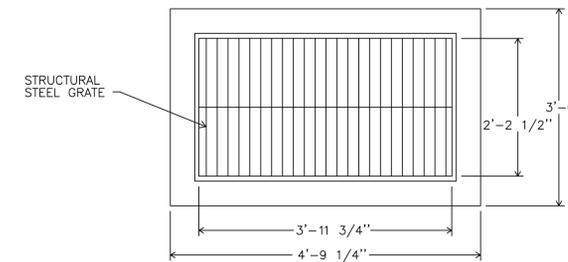
EMERGENCY SPILLWAY
 1" = 4'

PROVIDE NORTH AMERICAN GREEN S75BN TEMPORARY LINER FOR BOTH EMERGENCY SPILLWAYS AND THEIR CHANNELS



- NOTES:**
1. ALL INLETS GREATER THAN 5 FEET IN DEPTH SHALL BE PROVIDED WITH ALUMINUM MANHOLE TYPE STEPS, NO GREATER THAN 12" APART.
 2. ALL INLETS IN PAVED AREAS SHALL HAVE BICYCLE SAFE GRATES.
 3. ALL INLETS SHALL HAVE WEEP HOLES COVERED WITH GEOTEXTILE FABRIC PLACED AT THE APPROPRIATE ELEVATIONS TO COMPLETELY DRAIN THE SUBGRADE PRIOR TO PLACING THE BASE COURSE AND SURFACE COURSE.
 4. CONCRETE FLOW CHANNELS ARE REQUIRED IN ALL INLETS.

TYPE C INLET
 NOT TO SCALE



PennDOT TYPE M CONCRETE INLET TOP
 NOT TO SCALE

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POCS SERIAL NUMBER
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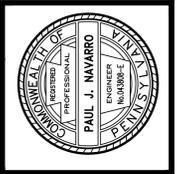
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NO.	DATE	REVISIONS	BY

NAVARRO & WRIGHT
 CONSULTING ENGINEERS, INC.

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PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
 FOR
BLACK ROCK SANCTUARY
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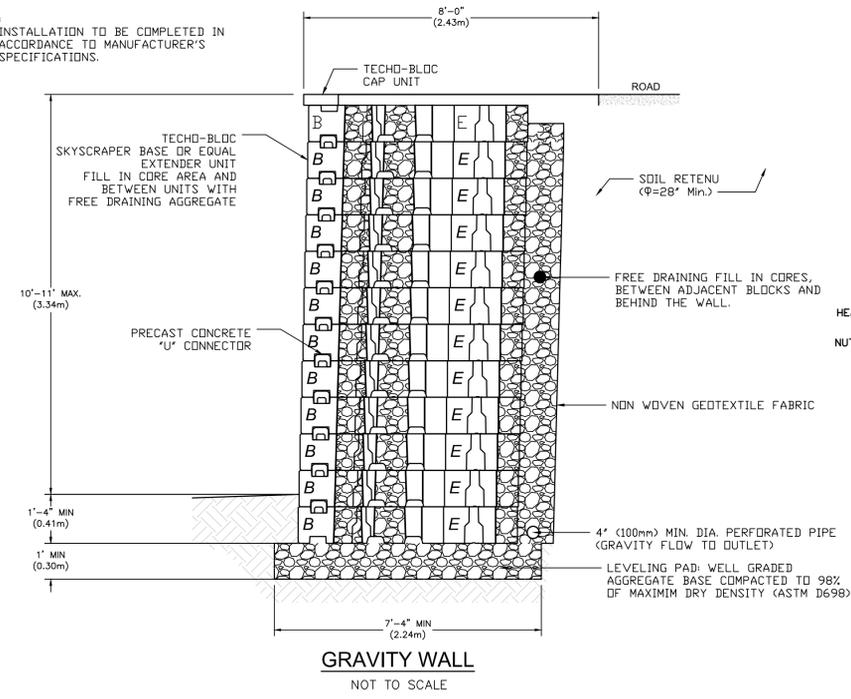
DRAWN BY: JIG/VC
 CHECKED BY: CWB
 SCALE: AS NOTED
 DATE: MAY 9, 2019

JOB NUMBER:
1705SC066

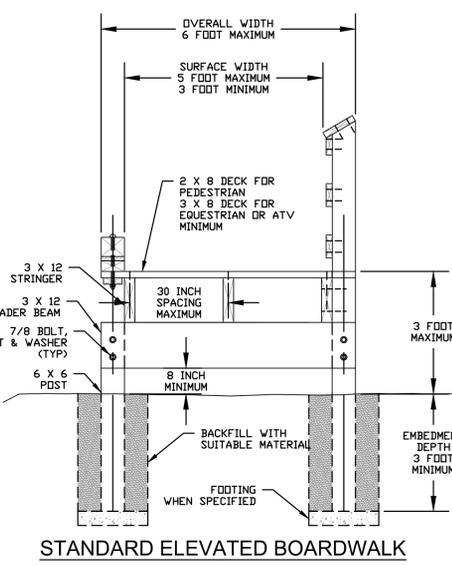
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DRAWING NUMBER:
C802

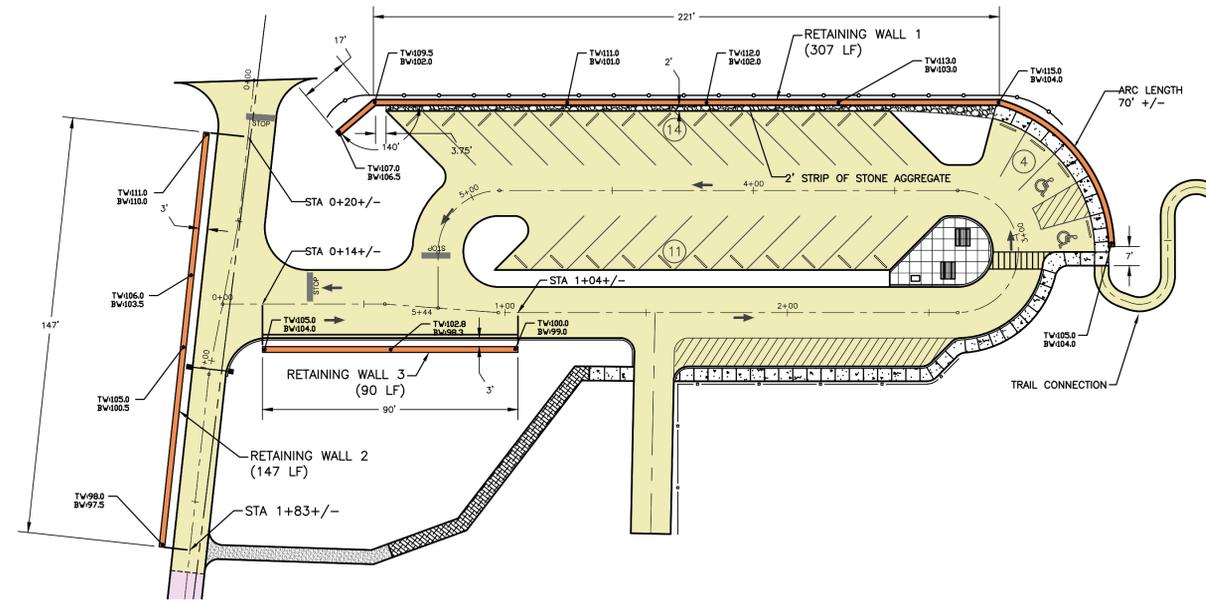
NOTE:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS.



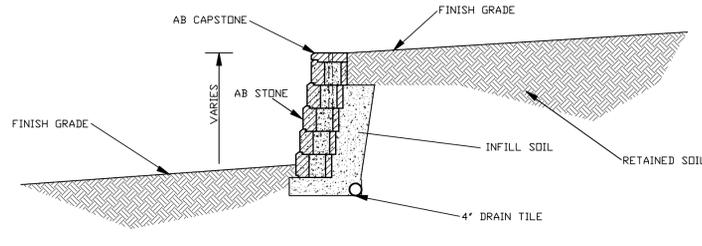
GRAVITY WALL
NOT TO SCALE



STANDARD ELEVATED BOARDWALK
NOT TO SCALE
NOTE: SEE UNITED STATES DEPARTMENT OF AGRICULTURE FOREST SERVICE TRAIL CONSTRUCTION PLANS FOR ALL ASSOCIATED STANDARD BOARDWALK DETAILS.



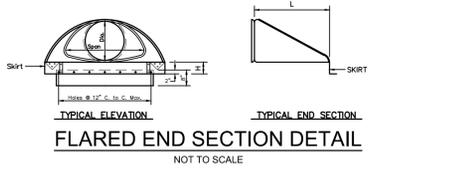
LAYOUT FOR RETAINING WALLS 1, 2 AND 3
SCALE: 1" = 30'



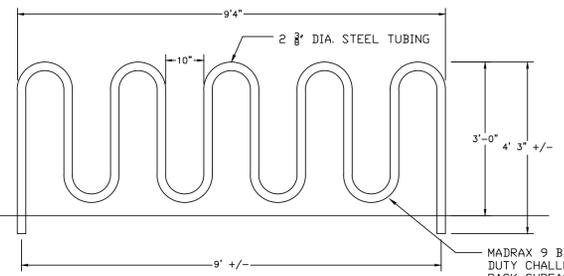
ALLAN BLOCK TYPICAL SECTION (GRAVITY WALL)
NOT TO SCALE
* SOIL PARAMETERS: (ASSUMED TO BE EQUAL OR GREATER THAN)
PHI=27 DEGREES
BEARING CAPACITY = 2500 PSI
C=0 PSF
WALL BATTER IS SPECIFIED AS 12 DEGREES (AB STONES)
REFER TO ALLAN-BLOCK SPECIFICATIONS FOR MORE THOROUGH WALL DESIGN GUIDELINES
NOTE:
MAXIMUM HEIGHT OF WALL ALLOWED AS PER MANUFACTURER WITHOUT ENGINEERING DESIGN AND CALCULATIONS IS 10 FEET. WALLS HIGHER WILL REQUIRE DESIGN, STAMP AND SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF PENNSYLVANIA.

DIMENSIONS FOR POLYETHYLENE END SECTIONS FOR CIRCULAR CORRUGATED PLASTIC PIPE

DIAM.	(±1")	B	H	(±1/2")	W	PART No.
12"	6.5"	10"	6.5"	28"	29"	1210 NP
15"	6.5"	10"	6.5"	25"	29"	1210 NP
18"	7.5"	15"	6.5"	32"	35"	1810 NP
24"	7.5"	18"	6.5"	45"	45"	2410 NP
30"	10.5"	NA	7"	53"	68"	3010 NP
36"	10.5"	NA	7"	53"	68"	3610 NP

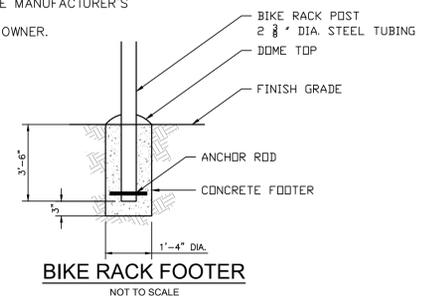


FLARED END SECTION DETAIL
NOT TO SCALE

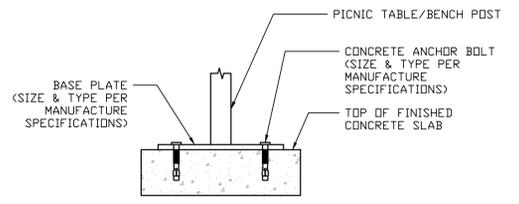


HEAVY DUTY 9 LOOP 11 BICYCLE BIKE RACK
NOT TO SCALE

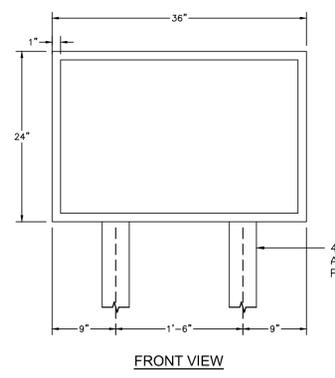
NOTES:
1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. CONSULTANT TO SELECT COLOR (FINISH), SEE MANUFACTURER'S SPECIFICATIONS.
3. SEE SITE PLAN FOR LOCATION OR CONSULT OWNER.



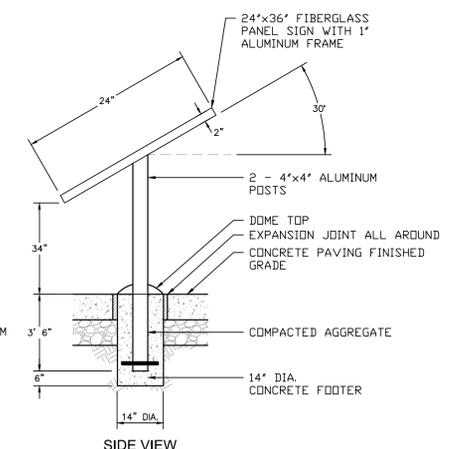
BIKE RACK FOOTER
NOT TO SCALE



PICNIC TABLE & BENCH SURFACE MOUNT
NOT TO SCALE

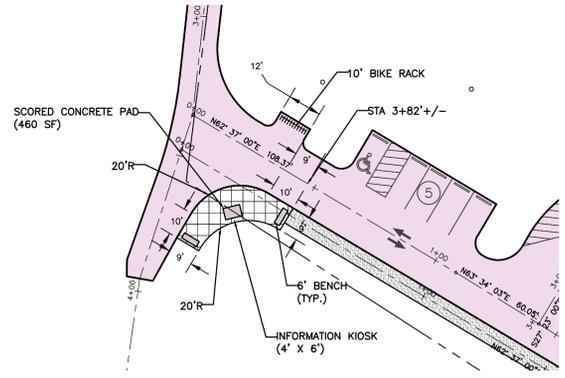


FRONT VIEW



SIDE VIEW

LOW PROFILE 24" X 36" INTERPRETIVE SIGN
NOT TO SCALE



LAYOUT FOR INFORMATION KIOSK AREA
SCALE: 1" = 30'

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
PA 1 SYSTEM, INC.
POCS SERIAL NUMBER 2018252634
1-800-242-1776

NO.	DATE	REVISIONS	BY

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NEW CUMBERLAND, PA 17070
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PRELIMINARY/FINAL LAND DEVELOPMENT PLAN FOR
BLACK ROCK SANCTUARY
BOROUGH OF PHOENIXVILLE
CHESTER COUNTY
PENNSYLVANIA

DRAWN BY: JIGVC
CHECKED BY: CWB
SCALE: AS NOTED
DATE: MAY 9, 2019

JOB NUMBER:
1705SC066

DRAWING DESCRIPTION:
CONSTRUCTION DETAILS & ENLARGEMENTS

DRAWING NUMBER:
C803

Thursday, May 09, 2018 11:38:00 AM

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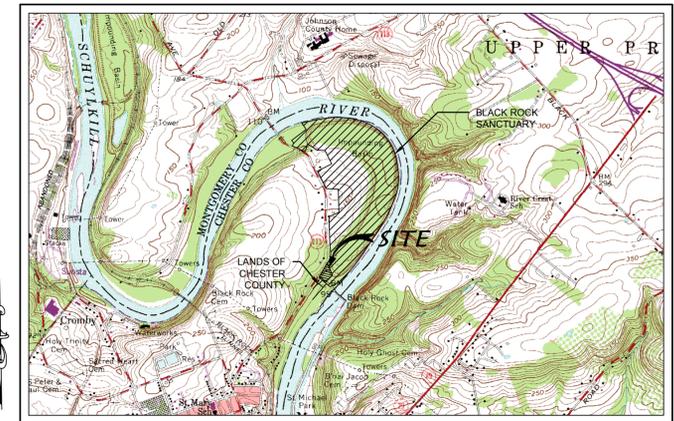
EROSION & SEDIMENTATION POLLUTION CONTROL PLAN

FOR

BLACK ROCK SANCTUARY

BOROUGH OF PHOENIXVILLE CHESTER COUNTY, PENNSYLVANIA

MAY 9TH, 2019



LOCATION MAP
SCALE: 1" = 2000'



VICINITY MAP
SCALE: 1" = 500'

GENERAL E&S CONTROL

- THE PURPOSE OF THIS PLAN IS TO PROVIDE EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION OF A 9,000 SF BUILDING AND PARKING LOT, NEW DRIVE AND STORMWATER MANAGEMENT FACILITIES.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
- AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARED, AND A REPRESENTATIVE OF THE DAUPHIN COUNTY CONSERVATION DISTRICT (717-921-8100) TO AN ON-SITE PRE-CONSTRUCTION MEETING.
- AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- THE PERMITTEE AND CO-PERMITTEE MUST ENSURE THAT VISUAL SITE INSPECTIONS ARE CONDUCTED WEEKLY, AND AFTER EACH MEASURABLE PRECIPITATION EVENT BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT THE EROSION AND SEDIMENT CONTROL (E & S) BEST MANAGEMENT PRACTICES (BMPs) ARE OPERATION AND EFFECTIVE IN PREVENTING POLLUTION TO THE WATERS OF THE COMMONWEALTH. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT, AND INCLUDE:
 - A SUMMARY OF THE SITE CONDITIONS, E&S BMPs, AND COMPLIANCE; AND
 - THE DATE, TIME AND THE NAME OF THE PERSON CONDUCTING THE INSPECTION
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- ALL TEMPORARY STOCKPILED NON-STABILIZED MATERIALS SHALL BE COVERED WITH A TARP, MULCH, OR OTHER SUITABLE STABILIZATION IN ORDER TO PREVENT WASH-OFF WHEN PRECIPITATION IS IMMINENT.
- WHERE DUST OR WIND EROSION IS A PROBLEM, THE UNSTABLE SURFACES SHALL BE TREATED WITH WATER OR OTHER SUITABLE DUST SUPPRESSOR.
- TEMPORARY SEEDING SHALL BE PLACED IN ACCORDANCE WITH THE TEMPORARY SEEDING SPECIFICATIONS. TEMPORARY SEEDING SHALL BE APPLIED TO THOSE AREAS THAT ARE A POTENTIAL EROSION RISK AND THOSE AREAS WHERE CONSTRUCTION ACTIVITIES HAVE ENDED.
- AN EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL DISTURBED SLOPES 3:1 OR STEEPER, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF WATERS OF THE COMMONWEALTH.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND SHALL ENSURE THAT SITES RECEIVING EXCESS MATERIAL HAVE AN APPROVED EROSION AND SEDIMENTATION CONTROL PLAN THAT COMPLIES WITH THE CONDITIONS OF CHAPTER 102 AND/OR OTHER FEDERAL, STATE, AND LOCAL REGULATIONS.
- ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH PA DEPS SOLID WASTE MANAGEMENT REGULATIONS AT TITLE 25 PA CODE 360.1 ET SEQ., 271.1, AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN ONE (1) YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

MAINTENANCE PROGRAM

- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROL DEVICES 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.
- A ROCK CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE POINT OF CONSTRUCTION INGRESS AND EGRESS AS NOTED ON THE PLAN. THE STRUCTURE WILL PREVENT TRACKING AND FLOWING OF SEDIMENT ONTO EXISTING STABILIZED AREAS. CLEAN AND REDRESS THE ROCK CONSTRUCTION ENTRANCE WHEN THE VOID BECOMES CHOKED WITH MUD AND SEDIMENT. THE ENTRANCE SHALL REMAIN FUNCTIONAL FOR THE DURATION OF THE PROJECT.
- WHERE DUST OR WIND EROSION IS A PROBLEM, THE UNSTABLE SURFACE(S) SHALL BE SPRINKLED WITH WATER OR OTHER SUITABLE DUST SUPPRESSER.
- ANY TEMPORARY EROSION CONTROL MEASURE APPLIED TO EXPOSED SOIL SURFACES SHALL REMAIN FUNCTIONAL UNTIL VEGETATIVE COVER IS SUFFICIENTLY ESTABLISHED.
- PERMANENT SOIL PROTECTION WILL BE COMPLETED AS EARLY AS PRACTICAL.
- ANY DEBRIS ACCUMULATED AT SILT BARRIERS SHALL BE REMOVED AND PROPERLY DISPOSED. BARRIERS SHALL BE CHECKED DAILY AND REALIGNED OR RESET AS REQUIRED. REMOVE SEDIMENT WHEN IT REACHES ONE HALF OF FENCE HEIGHT.
- ALL CHANNELS MUST BE KEPT FREE OF OBSTRUCTIONS SUCH AS FILL GROUND, FALLEN LEAVES & WOODY DEBRIS, ACCUMULATED SEDIMENT, AND CONSTRUCTION MATERIALS/WASTES. CHANNELS SHOULD BE KEPT MOWED AND/OR FREE OF ALL WEEDY, BRUSHY OR WOODY GROWTH. ANY UNDERGROUND UTILITIES RUNNING ACROSS/ THROUGH THE CHANNEL(S) SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL(S) REPAIRED AND STABILIZED PER THE CHANNEL CROSS-SECTION DETAIL.
- VEGETATED CHANNELS SHALL BE CONSTRUCTED FREE OF ROCKS, TREE ROOTS, STUMPS OR OTHER PROJECTIONS THAT WILL IMPEDE NORMAL CHANNEL FLOW AND/OR PREVENT GOOD LINING TO SOIL CONTACT. THE CHANNEL SHALL BE INITIALLY OVER-EXCAVATED TO ALLOW FOR THE PLACEMENT OF TOPSOIL.
- VEGETATIVE STABILIZATION SHALL BE PERIODICALLY INSPECTED FOR PROPER GROWTH. ANY AREAS NOT RESPONDING SHALL BE PROMPTLY RESEED. AREAS WHICH SHOW SIGNS OF EROSION PRIOR TO STABILIZATION SHALL BE GRADED, RESEEDED AND RE-MULCHED AS SOON AS POSSIBLE. SOD SHALL BE UTILIZED AT AREAS WHERE SEEDING DOES NOT APPEAR TO BE PROPERLY STABILIZING AN AREA.
- CLEAN AND REDRESS THE ROCK FILTER BERMS WHEN THE VOIDS BECOME CHOKED WITH MUD AND SEDIMENT. ROCK FILTER BERMS SHALL REMAIN FUNCTIONAL FOR THE DURATION OF THE PROJECT.

STABILIZATION SPECIFICATIONS

- UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
- PERMANENT STABILIZATION IS DEFINED AS 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.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN DRAWINGS IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. TOPSOIL STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 2:1 OR FLATTER.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES TO TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING.
- TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHENEVER POSSIBLE PRIOR TO SEEDING.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- AN EROSION CONTROL BLANKET WILL BE INSTALLED ON ALL DISTURBED SLOPES 3:1 OR STEEPER, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF A SURFACE WATER.

SEQUENCE OF CONSTRUCTION

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

CONTACT CHESTER COUNTY CONSERVATION DISTRICT (CCCD) AT (610) 925-4920 A MINIMUM OF THREE (3) DAYS PRIOR TO COMMENCEMENT OF EARTH DISTURBANCE ACTIVITIES.

ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.

ALL BEST MANAGEMENT PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND LOCATIONS SHOWN ON THE PLANS.

THE ORDER OF THE FOLLOWING SEQUENCE IS SUBJECT TO CHANGE DUE TO SITE SPECIFIC CONDITIONS AND CONSTRUCTION METHODS. ALL CHANGES SHALL BE APPROVED BY THE CCCD.

- FIELD LOCATE THE PROPOSED LIMITS OF DISTURBANCE.
- INSTALL A STABILIZED ROCK CONSTRUCTION ENTRANCE AT AN ACCESS POINT TO THE SITE, AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE DETAIL PROVIDED ON THE PLAN.
- INSTALL 12" FILTER SOCK (OR APPROVED EQUAL) AT LOCATIONS SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE DETAILS PROVIDED.
- CLEAR AND GRUB THE SITE.
- STRIP AND STOCKPILE TOPSOIL. TOPSOIL CAN BE PLACED AT THE TEMPORARY STOCKPILE LOCATION PROVIDED ON THE PLAN. PLACE 18" SILT SOCK DOWNSLOPE OF THE TEMPORARY TOPSOIL STOCKPILE. SEED THE STOCKPILE WITH A TEMPORARY SEEDING MIXTURE. ALL STOCKPILES SHALL BE SHALL BE A MAXIMUM OF 35 FEET IN HEIGHT WITH SIDE SLOPES OF 2:1V OR FLATTER.
- BEGIN ROUGH GRADING THE SITE.
- INSTALL STORM SEWER SYSTEM AND INLET PROTECTION AT EACH INLET AND RIP RAP APRON AT EW-4.
- INSTALL SUBBASE STONE FOR ALL PROPOSED CONCRETE AND ASPHALT AREAS, EFFECTIVELY REMOVING THE STABILIZED ROCK CONSTRUCTION ENTRANCE.
- INSTALL INFILTRATION BASIN, OUTLET STRUCTURE (OS-1), OUTFALL CULVERT, ANTI-SEEP COLLAR AND LEVEL SPREADER IN ACCORDANCE WITH THE SPECIFIC CONSTRUCTION SEQUENCE AND DETAILS PROVIDED ON THE PCSM PLAN.
- INSTALL OUTLET STRUCTURE (OS-3), OUTFALL CULVERT, EW-4 AND RIP RAP APRON IN ACCORDANCE WITH SPECIFIC CONSTRUCTION SEQUENCE AND DETAILS PROVIDED ON THE PLAN.
- INSTALL ALL CONCRETE AND ASPHALT SURFACES AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE DETAILS PROVIDED ON THE PLAN.
- INSTALL LANDSCAPING IN ACCORDANCE WITH THE LANDSCAPE PLAN AND DETAILS PROVIDED ON THE PLAN.
- SPREAD TOPSOIL, SEED, MULCH, AND PLACE APPROPRIATE GROUND COVERS FOR FINISHED AREAS. TOPSOIL SHALL BE PLACED TO A MINIMUM DEPTH OF SIX (6) INCHES.
- UPON STABILIZATION OF 75% OF THE SITE AND WITH THE CONSENT OF THE DAUPHIN COUNTY CONSERVATION DISTRICT, E&S BEST MANAGEMENT PRACTICES (BMPs), SUCH AS SILT SOCKS, INLET PROTECTION, AND ROCK FILTER, CAN BE REMOVED. ALL DISTURBED SOILS RESULTING FROM BMP REMOVAL SHALL BE STABILIZED WITH SEED AND MULCH IMMEDIATELY. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS 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.
- AN OPERATION AND MAINTENANCE AGREEMENT HAS BEEN PREPARED FOR THIS PROJECT AND IS PART OF THE STORMWATER MANAGEMENT PLAN.
- NOTHING SHALL BE PLANTED OR PLACED WITHIN THE EASEMENT WHICH WOULD ADVERSELY AFFECT THE FUNCTION OF THE EASEMENT OR CONFLICT WITH ANY CONDITIONS ASSOCIATED WITH SUCH EASEMENT.
- THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING EASEMENT MAINTENANCE AND SHALL ASSURE THE CONTINUED FUNCTIONALITY OF THE EASEMENT.
- THIS STORMWATER MANAGEMENT PLAN SHALL BE ON-SITE AND AVAILABLE FOR REVIEW THROUGHOUT THE DURATION OF THE REGULATED ACTIVITIES.

SOIL LIMITATIONS & RESOLUTIONS

- AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- 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.
- FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

ACT 287/121 UNDERGROUND UTILITY PROTECTION ACT

NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. HEREBY STATES THAT, PURSUANT TO THE PROVISIONS OF ACT NO. 287 OF 1974, AS AMENDED BY ACT 121 OF 2008 OF THE PENNSYLVANIA LEGISLATURE, IT HAS PERFORMED THE FOLLOWING IN PREPARING THESE DRAWINGS REQUIRING EXCAVATION OR DEMOLITION WORK AT SITES WITHIN THE POLITICAL SUBDIVISION(S) OR LAND DEVELOPMENT(S) SHOWN ON THE DRAWINGS:

- PURSUANT TO SECTION 4, CLAUSE (2) OF SAID ACT, NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. REQUESTED FROM EACH USER'S OFFICE DESIGNATED ON SUCH LIST PROVIDED BY THE ONE CALL SYSTEM NOTIFICATION, THE INFORMATION PRESCRIBED BY SECTION 2, CLAUSE (4) OF SAID ACT, NOT LESS THAN (10) NOR MORE THAN (90) DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED.
 - PURSUANT TO SECTION 4, CLAUSE (3) OF SAID ACT, NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. HAS SHOWN UPON THESE DRAWINGS "THE POSITION AND TYPE OF EACH LINE, AS DERIVED FROM INFORMATION MADE AS REQUIRED BY CLAUSE (2), THE SERIAL NUMBER PROVIDED BY THE ONE CALL SYSTEM, THE TOLL-FREE PHONE NUMBER, AND THE NAME OF THE USER, THE USER'S DESIGNATED OFFICE ADDRESS AND PHONE NUMBER, AS SHOWN ON THE LIST REFERRED TO IN SECTION 4, CLAUSE (5) OF SAID ACT.
 - PURSUANT TO SECTION 4, CLAUSE (5) OF SAID ACT, NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. HAS MET THEIR OBLIGATIONS OF CLAUSE (2) BY CALLING THE ONE CALL SYSTEM SERVING THE LOCATION WHERE EXCAVATION IS TO BE PERFORMED.
- AND NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTEE THAT THE INFORMATION RECEIVED PURSUANT TO SAID REQUEST AND AS REFLECTED ON THESE DRAWINGS IS CORRECT OR ACCURATE, BUT NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. IS REFLECTING SAID INFORMATION ON THESE DRAWINGS ONLY DUE TO THE REQUIREMENTS OF SAID ACT 181 EFFECTIVE MARCH 29, 2007.
- ONE CALL SYSTEM SERIAL NO. NOTIFICATION BY NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.
ONE CALL SYSTEM SERIAL NO.: 20182532634

DRAWING INDEX

- | | |
|------|---|
| ES-1 | COVER SHEET |
| ES-2 | EROSION & SEDIMENTATION POLLUTION CONTROL PLAN |
| ES-3 | EROSION & SEDIMENTATION POLLUTION CONTROL DETAILS |
| ES-4 | EROSION & SEDIMENTATION POLLUTION CONTROL DETAILS |

OWNER / APPLICANT

THE COUNTY OF CHESTER
DEPARTMENT OF FACILITIES & PARKS
313 W. MARKET STREET SUITE 420
WEST CHESTER, PA 19380
PHONE: 610.344.6000
CONTACT: MR. DAVID STAUFFER

SOURCE OF TITLE

DEED BOOK 8971 PAGE 148
DEED BOOK 4328 PAGE 1517

TAX PARCEL REFERENCE

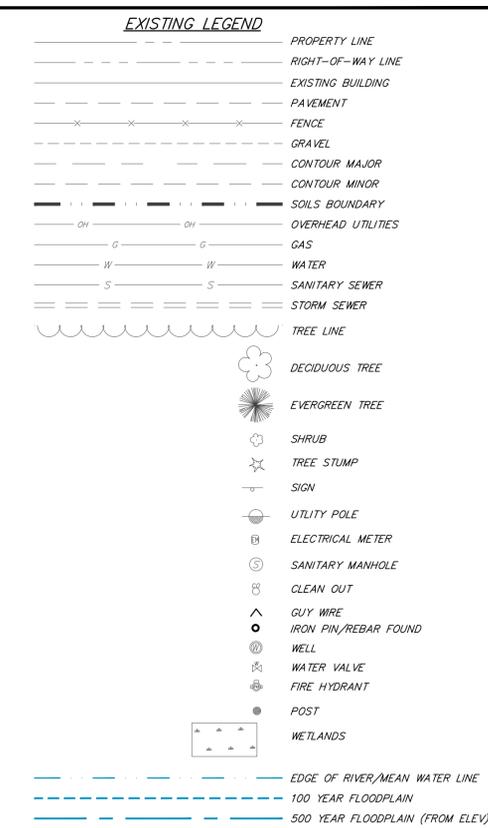
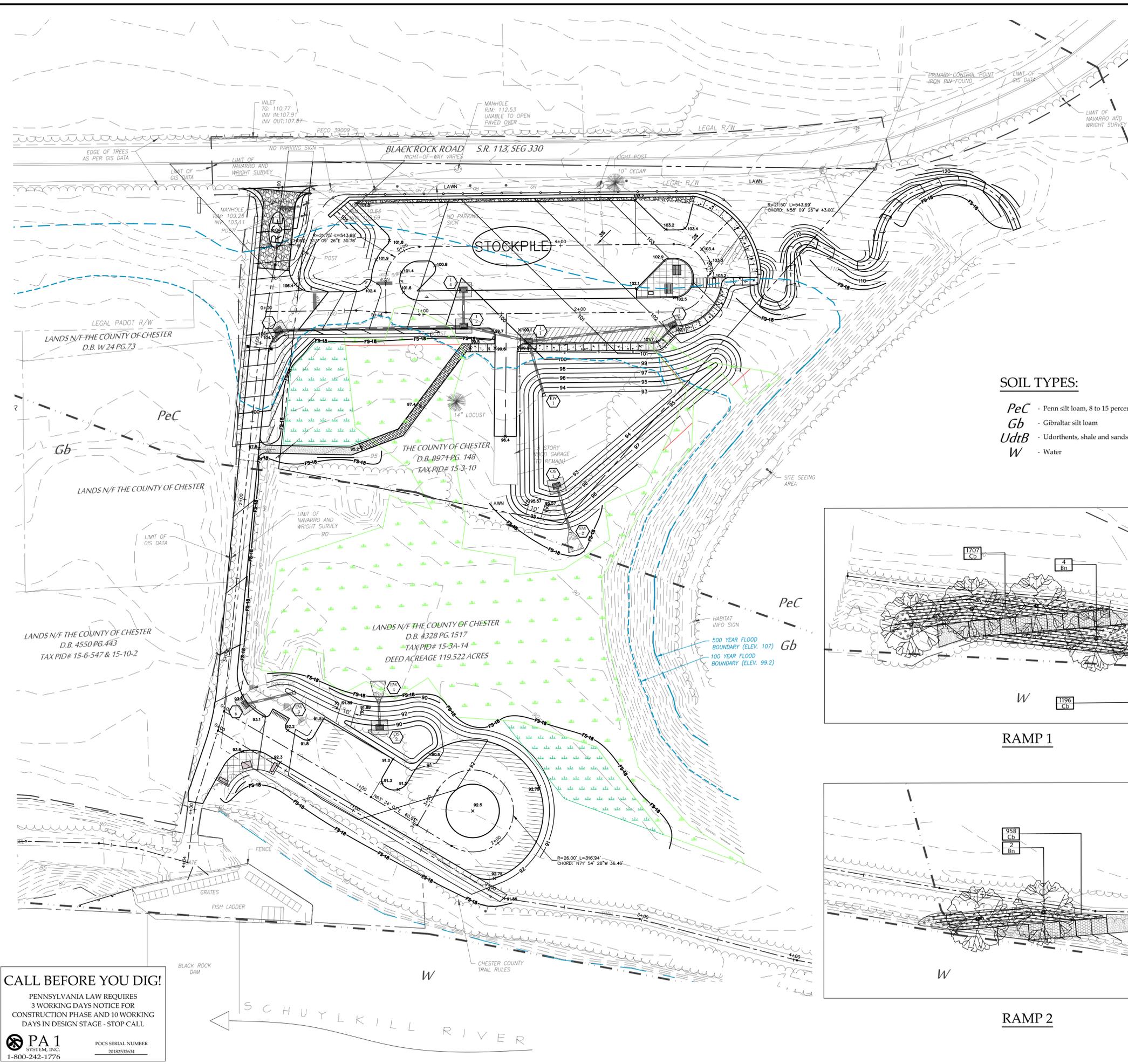
TAX PARCEL 15-3-10
TAX PARCEL 15-3A-14
TAX PARCEL 15-3-12

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE - STOP CALL

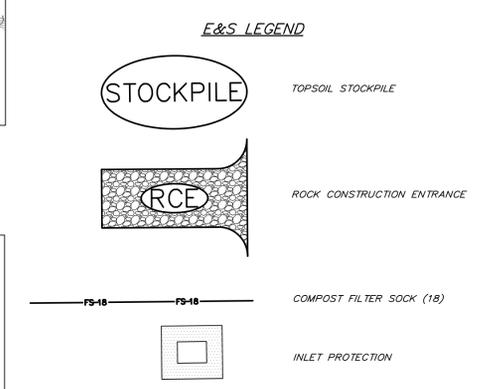
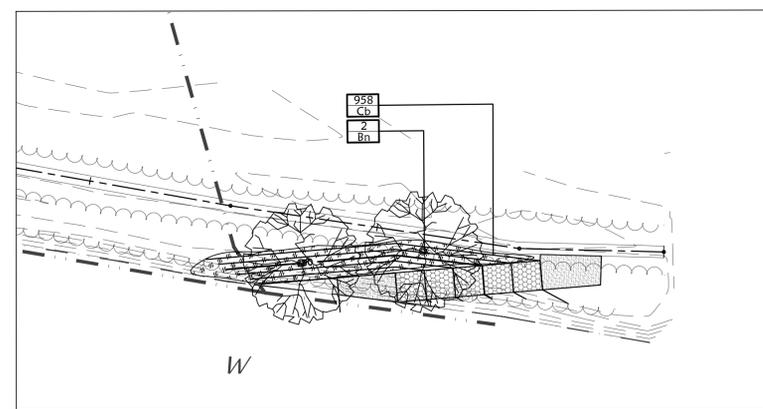
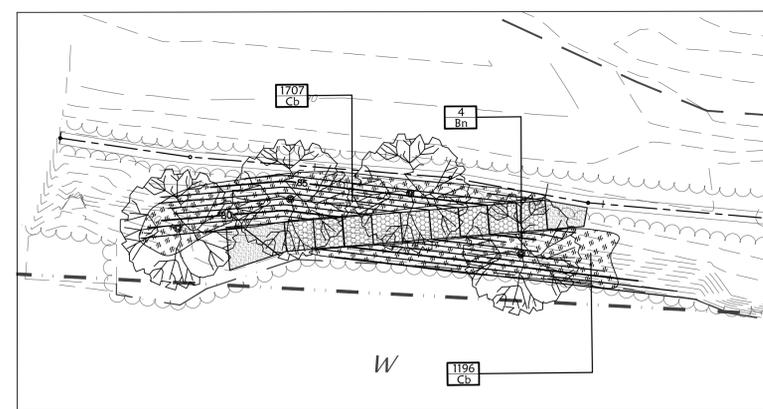
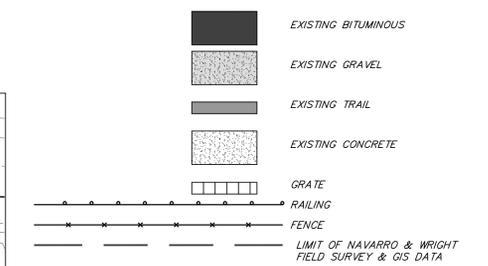
PA 1
SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20182532634



SOIL TYPES:

- PeC** - Penn silt loam, 8 to 15 percent slopes
- Gb** - Gibraltar silt loam
- UdtB** - Udorthents, shale and sandstone, 0 to 8 percent slopes
- W** - Water

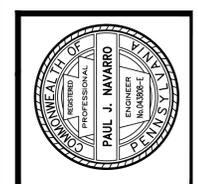


NO.	REVISIONS	DATE	BY

NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.

CORPORATE OFFICE
151 RENO AVENUE
NEW CUMBERLAND, PA 17070
www.navarrowright.com

PHONE: (717) 441-2216
FAX: (717) 441-2218



EROSION & SEDIMENTATION POLLUTION CONTROL PLAN FOR

BLACK ROCK SANCTUARY
BOROUGH OF PHOENIXVILLE
CHESTER COUNTY
PENNSYLVANIA

DRAWN BY: JIG/VC
CHECKED BY: CWB
SCALE: 1" = 30'
DATE: MAY 9, 2019

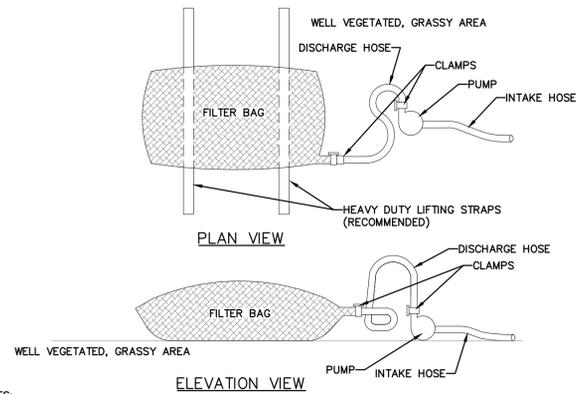
JOB NUMBER:
1705SC066

DRAWING DESCRIPTION:
EROSION & SEDIMENTATION POLLUTION CONTROL PLAN
DRAWING NUMBER:
ES-2

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA 1 SYSTEM, INC.
POCS SERIAL NUMBER: 2018232634
1-800-242-1776



NOTES:

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

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4832	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

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

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

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

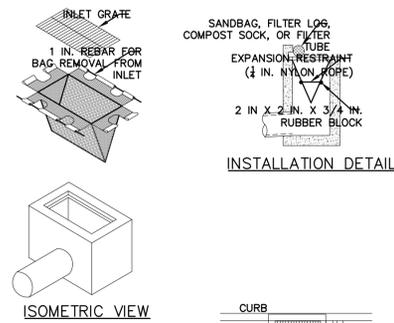
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

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

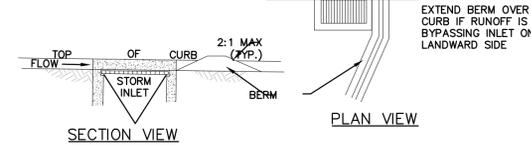
FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

**STANDARD CONSTRUCTION DETAIL #3-16
PUMPED WATER FILTER BAG**

NOT TO SCALE



ISOMETRIC VIEW



NOTES:

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.

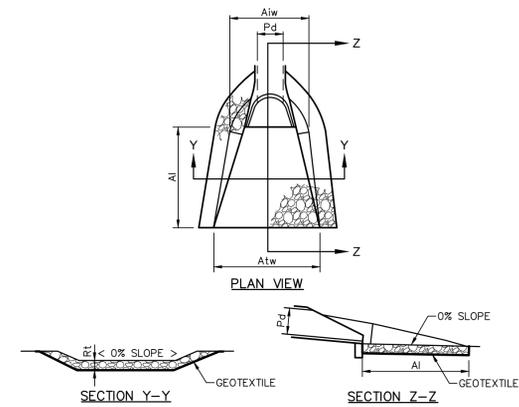
ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 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



OUTLET NO.	PIPE DIA. PD (IN)	RIPRAP		APRON		
		SIZE (R-)	THICK. Rt (IN)	LENGTH Al (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
EW-1	15	3	12	8	4	12
EW-2	15	3	12	8	4	12
EW-3	15	3	12	8	4	12
EW-4	15	4	12	8	4	12

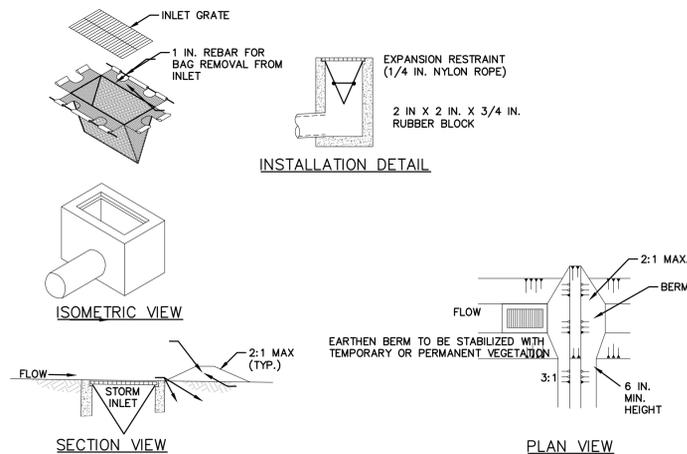
ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

EXTEND RIPRAP ON BACK SIDE OF APRON TO AT LEAST 1/2 DEPTH OF PIPE ON BOTH SIDES TO PREVENT SCOUR AROUND THE PIPE.

**STANDARD CONSTRUCTION DETAIL #9-1
RIPRAP APRONS AT PIPE OUTLET WITH
FLARED END SECTION OR ENDWALL**

NOT TO SCALE



NOTES:

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 IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

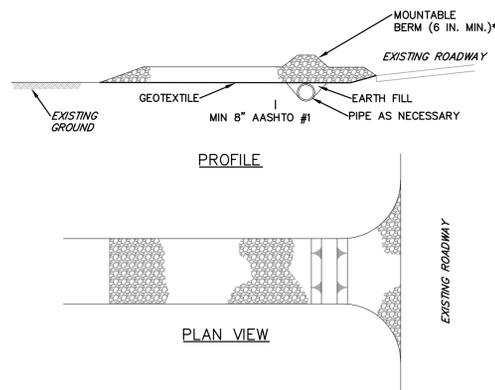
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

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 #4-16
FILTER BAG INLET PROTECTION - TYPE M INLET**

NOT TO SCALE



**STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE**

NOT TO SCALE

* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

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

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

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

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

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE - STOP CALL



POCS SERIAL NUMBER
20182532634

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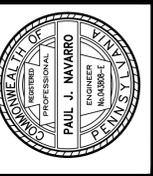
NO.	DATE	REVISIONS	BY

NAVARRO & WRIGHT
CONSULTING ENGINEERS, INC.

PHONE: (717) 441-2216
FAX: (717) 441-2218

CORPORATE OFFICE
151 RENO AVENUE
NEW CUMBERLAND, PA 17070

www.navarrowright.com



EROSION & SEDIMENTATION POLLUTION
CONTROL PLAN
FOR
BLACK ROCK SANCTUARY
BOROUGH OF PHOENIXVILLE
CHESTER COUNTY
PENNSYLVANIA

DRAWN BY:	JIG/VC
CHECKED BY:	CWB
SCALE:	
DATE:	MAY 9, 2019

JOB NUMBER:
1705SC066

DRAWING DESCRIPTION:
EROSION & SEDIMENTATION
POLLUTION
CONTROL
DETAILS
DRAWING NUMBER:
ES-3

SEED MIXTURES

TEMPORARY SEED MIXTURE

TEMPORARY SEEDING SHALL CONSIST OF ANNUAL RYEGRASS (100% BY WEIGHT), OR EQUIVALENT, AND SHALL BE PLACED AT THE RATE OF 40 POUNDS PER ACRE; PURITY: 95%; GERMINATION: 85%. TEMPORARY SEEDING SHALL BE APPLIED TO DISTURBED AREAS THAT ARE TO BE REDISTURBED LATER IN THE CONSTRUCTION PROCESS.

PERMANENT SEED MIXTURE

THE FOLLOWING SEEDING MIXTURE, APPLIED AT THE RATE OF 50 POUNDS PER ACRE:

- A) KENTUCKY BLUEGRASS MIXTURE (POA PRATENSIS). A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 25% OF THE TOTAL KENTUCKY BLUEGRASS COMPONENT. PERCENTAGE OF TOTAL SEED MIXTURE BY WEIGHT: 50%; PURITY: 98%; GERMINATION: 80%; MAXIMUM PERCENTAGE OF WEED SEED: 0.20%.

MULCH SPECIFICATIONS

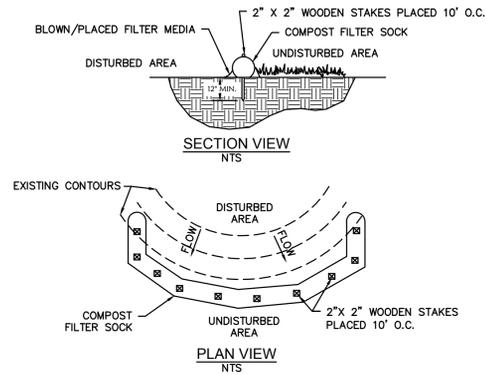
ON ALL DISTURBED AREAS WHICH DO NOT HAVE AN EROSION CONTROL BLANKET SPECIFIED FOR INSTALLATION, STRAW MULCH SHALL BE APPLIED AT THE RATE OF 3.0 TONS PER ACRE IMMEDIATELY AFTER SEEDING THE SURFACE. ON STEEP SLOPES OF 3:1 OR GREATER, MULCH SHALL BE ANCHORED THROUGH THE USE OF JUTE NETTING OR MIXING WITH ASPHALT AT THE RATE OF 100 GALLONS PER 3 TONS OF STRAW MULCH.

SOIL AMENDMENTS SPECIFICATIONS:

APPLY THE FOLLOWING SOIL SUPPLEMENTS PRIOR TO TEMPORARY AND PERMANENT SEEDING:

COMPOST SHALL MEET THE FOLLOWING STANDARDS:

ORGANIC MATTER CONTENT	80% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
PH	5.5 - 8.0
MOISTURE CONTENT	35% - 55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 DS MAXIMUM



COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN. 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 FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S 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**

NOT TO SCALE

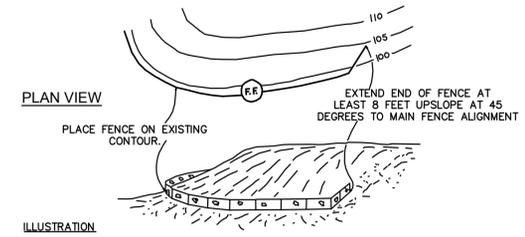


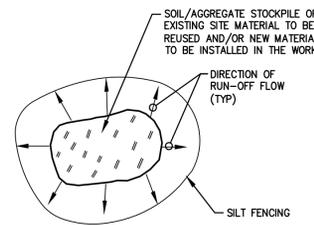
TABLE 4.1
COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFFPP)	MULTI-FILAMENT POLYPROPYLENE (HDMEPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	% AT 1000 HR.	23% AT 1000 HR.		100 % AT 1000 HR.	100 % AT 1000 HR.
TWO-PLY SYSTEMS					
INNER CONTAINMENT NETTING	HDPE BIAXIAL NET				
	CONTINUOUSLY WOUND FUSION-WELDED JUNCTURES				
OUTER FILTRATION MESH	3/4" x 3/4" MAX. APERTURE SIZE				
	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER & NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)				
SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.					

FIGURE 4.1
SEDIMENT BARRIER ALIGNMENT
NOT TO SCALE

EARTHWORK DUE DILIGENCE

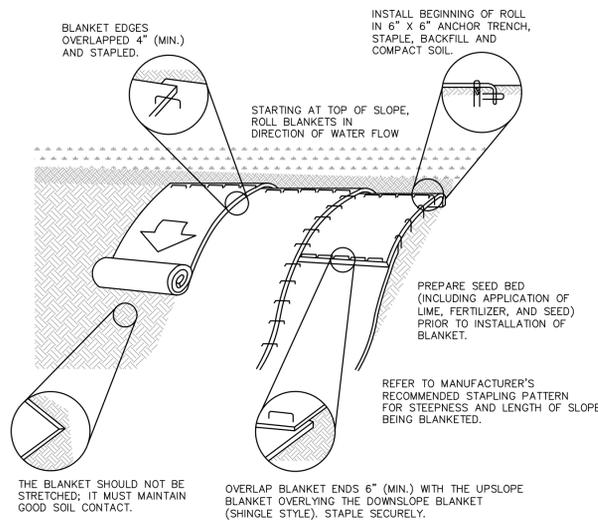
- CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE:
 - a. IF THE SITE WILL HAVE EXCESS FILL THAT WILL NEED TO BE EXPORTED TO AN OFF-SITE LOCATION, THE RESPONSIBILITY OF CLEAN FILL DETERMINATION AND ENVIRONMENTAL DUE DILIGENCE RESTS WITH THE APPLICANT.
 - b. IF ALL CUT AND FILL MATERIALS WILL BE USED ON THE SITE, A CLEAN FILL DETERMINATION IS NOT REQUIRED BY THE OPERATOR UNLESS THERE IS A BELIEF THAT A SPILL OR RELEASE OF A REGULATED SUBSTANCE OCCURRED ON THE SITE.
- CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)
- ENVIRONMENTAL DUE DILIGENCE: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE.



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

MATERIAL STOCKPILE

NOT TO SCALE



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

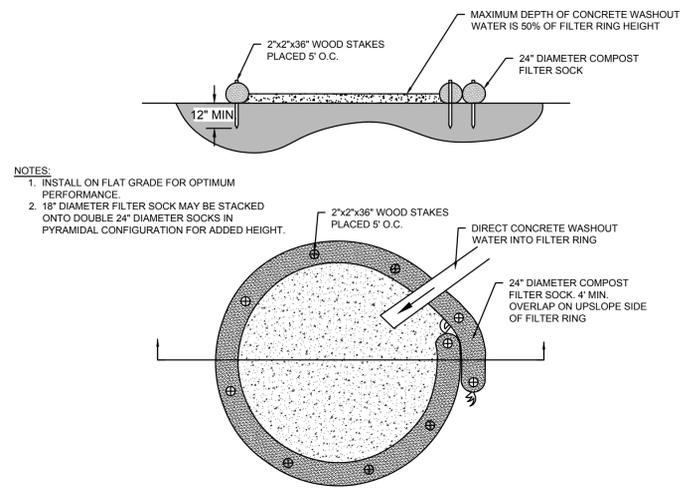


FIGURE 3.18
TYPICAL COMPOST SOCK WASHOUT INSTALLATION
NOT TO SCALE

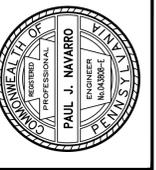
CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA 1 SYSTEM, INC. POCS SERIAL NUMBER 2018232634 1-800-242-1776

NO.	DATE	REVISIONS	BY

NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.
CORPORATE OFFICE
151 RENO AVENUE
NEW CUMBERLAND, PA 17070
PHONE: (717) 441-2216
FAX: (717) 441-2218
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EROSION & SEDIMENTATION POLLUTION CONTROL PLAN FOR
BLACK ROCK SANCTUARY
BOROUGH OF PHOENIXVILLE CHESTER COUNTY PENNSYLVANIA

DRAWN BY: JIG/VC
CHECKED BY: CWB
SCALE:
DATE: MAY 9, 2019

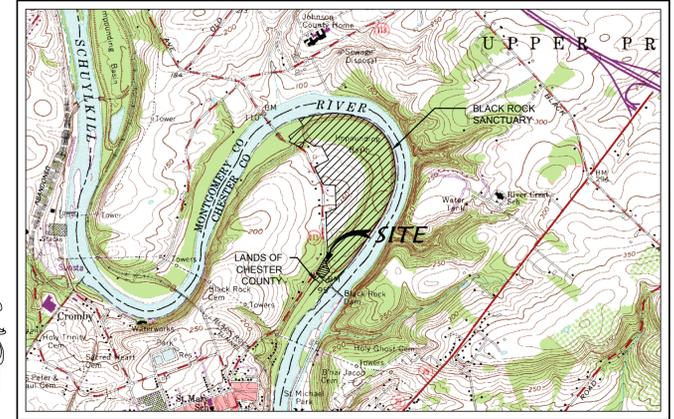
JOB NUMBER:
1705SC066

DRAWING DESCRIPTION:
EROSION & SEDIMENTATION POLLUTION CONTROL DETAILS
DRAWING NUMBER:
ES-4

POST CONSTRUCTION & STORMWATER MANAGEMENT PLAN FOR BLACK ROCK SANCTUARY

BOROUGH OF PHOENIXVILLE CHESTER COUNTY, PENNSYLVANIA

MAY 9TH, 2019



LOCATION MAP
SCALE: 1" = 2000'



VICINITY MAP
SCALE: 1" = 500'

PCSM PLAN GENERAL NOTES

1. NAVARRO AND WRIGHT CONSULTING ENGINEERS, INC. BEARS NO RESPONSIBILITY FOR THE LOCATION, ACCURACY AND COMPLETENESS OF EXISTING FEATURES SHOWN HEREON, INCLUDING UNDERGROUND UTILITIES. CONTRACTOR IS TO VERIFY ALL EXISTING SITE FEATURES INFORMATION.
2. REFER TO ACCOMPANYING DOCUMENTS INCLUDING BUT NOT LIMITED TO LAND DEVELOPMENT OR SUBDIVISION PLANS AND THEIR NARRATIVES FOR ADDITIONAL INFORMATION ON EXISTING AND PROPOSED FEATURES PRESENTED WITHIN THIS PLAN. A STORMWATER MANAGEMENT PLAN FOR MUNICIPAL APPROVAL (SMP-MA) MAY INCORPORATE DESIGN FEATURES ON THIS PLAN.
3. AS BUILT DRAWINGS WILL BE PROVIDED UPON COMPLETION OF THE STORMWATER MANAGEMENT IMPROVEMENTS.
4. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL COMPLY WITH ALL REQUIREMENTS OF THE NPDES PERMIT FOR THE PROJECT SITE, INCLUDING OBTAINING STATUS AS A CO-PERMITTEE OF THE PERMIT. FOR INFORMATION REGARDING COMPLIANCE WITH THE NPDES PERMIT, CONTACT:

CHESTER COUNTY CONSERVATION DISTRICT
688 UNIONVILLE ROAD, SUITE 200
KENNETT SQUARE, PA 19348
PHONE: 610-925-4920

SEEDING AND MULCH SPECIFICATIONS

TEMPORARY COVER - PENNDOT FORMULA E	
SPECIES	ANNUAL RYE GRASS (98% PURE LIVE SEED)
APPLICATION RATE	18 LB. PER 1000 SQUARE YARD
APPLICATION DATE	MARCH 15 TO OCTOBER 15
PERMANENT COVER - PENNDOT FORMULA B	
SPECIES	PERENNIAL GRASS MIXTURE (20% BY WEIGHT, 98% PURE LIVE SEED) CREEPING RED FESCUE (30% BY WEIGHT, 98% PURE LIVE SEED) KENTUCKY BLUE GRASS MIXTURE (50% BY WEIGHT, PURE LIVE)
APPLICATION RATE	21 LB. PER 1000 SQUARE YARD
APPLICATION DATE	MARCH 15 TO JUNE 1 AUGUST 1 TO OCTOBER 15

*VEGETATIVE STABILIZATION WILL BE PERIODICALLY INSPECTED FOR PROPER GROWTH. ANY AREAS NOT RESPONDING WILL BE PROMPTLY RESEEDED. AREAS WHICH SHOW SIGNS OF EROSION PRIOR TO STABILIZATION SHALL BE GRADED, RESEEDED, AND RE-MULCHED AS SOON AS POSSIBLE.

MULCHING SPECIFICATIONS:
HAY OR STRAW - AIR-DRIED, FREE OF SEED AND COARSE MATERIAL. INSTALLATION RATE FOR PERMANENT AND TEMPORARY STABILIZATION IS THREE (3) TONS PER ACRE AND SHALL BE CRIMPED IN. THE MULCHING WILL BE UTILIZED DURING WINTER MONTHS AS A GOOD GROUND COVER ON TOPSOIL STOCKPILES, GRADED SLOPES AND OTHER AREAS TO BE GRADED. THE DISTURBED AREAS WILL BE SEEDED WITHIN THE FIRST WEEK OF THE DESIGNATED GROWING SEASON OR BEFORE IF THE WEATHER IS FAVORABLE.

SOIL SUPPLEMENT SPECIFICATIONS:
SUPPLEMENTS SHALL CONFORM TO THE REQUIREMENTS OF PENNDOT PUBLICATION #08, SECTION 804.

TEMPORARY LIMING - PULVERIZED AGRICULTURAL LIMESTONE - APPLIED AT 800 LB/1000 S.Y. FERTILIZER - 10-20-10 - APPLIED AT 400 LB. PER ACRE

PERMANENT LIMING - PULVERIZED AGRICULTURAL LIMESTONE - APPLIED AT 4 TONS PER ACRE FERTILIZER - 10-20-20 - APPLIED AT 1000 LB. PER ACRE

WETLAND SEEDING MIXTURE SPECIFICATIONS:
SEE POST CONSTRUCTION STORMWATER MANAGEMENT DETAIL SHEET

MAINTENANCE & OPERATION PROGRAM

THE PURPOSE OF THESE INSTRUCTIONS IS TO IDENTIFY THE OWNERSHIP AND MAINTENANCE ACTIVITIES ASSOCIATED WITH THE PROPOSED POST-CONSTRUCTION STORMWATER MANAGEMENT FACILITIES. THE SUBJECT SITE HAS BEEN DESIGNED SUCH THAT THE INCREASE IN STORMWATER VOLUME SHALL BE ATTENUATED BY THE FOLLOWING BEST MANAGEMENT PRACTICES (BMP'S):

INFILTRATION BASIN
RAIN GARDEN

ERNMX-180 RAIN GARDEN MIX SHALL BE USED FOR THE INFILTRATION BASIN.

WHENEVER CANOPY (OVERALL VEGETATION) REACHES A HEIGHT OF 18'-24" USE A BRUSH HOG, MOWER OR STRING TRIMMER TO TRIM THE MEADOW GRASSES TO A HEIGHT OF 6" (NOTE: A LAWN MOWER SHALL NOT BE USED AS THE MOWER HEIGHT WILL BE TOO LOW AND NATIVE SEEDLINGS WILL BE KILLED).

IN ORDER TO MEET THE NPDES PHASE II REQUIREMENTS THESE FACILITIES HAVE BEEN DESIGNED TO PARTIALLY OR COMPLETELY INFILTRATE THE INCREASE IN STORMWATER RUNOFF VOLUME DURING THE 2 YEAR, 24 HOUR STORM EVENT AND/OR PROVIDE WATER QUALITY MITIGATION IF INFILTRATION CANNOT BE ACCOMPLISHED.

THE AFOREMENTIONED FACILITIES SHALL BE THE RESPONSIBILITY OF THE LOT OWNERS ON WHICH THE STORMWATER INFILTRATION FACILITY IS LOCATED, OR AN ESTABLISHED COMMUNITY ASSOCIATION THAT HAS MAINTENANCE RESPONSIBILITIES FOR FACILITIES WITHIN COMMON USE AREAS. IN ACCORDANCE WITH THE TOWNSHIP'S STORMWATER MANAGEMENT ORDINANCE, THE LOT OWNER SHALL ENTER INTO A LEGALLY BINDING AGREEMENT WITH THE TOWNSHIP TO INSURE THE FACILITIES ARE MAINTAINED PROPERLY IN ACCORDANCE WITH THE FOLLOWING PROPOSED MAINTENANCE SCHEDULE/PROGRAM.

INFILTRATION MAINTENANCE NOTES:

ALL STORMWATER MANAGEMENT FACILITIES ON THIS SITE WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER. THESE FACILITIES INCLUDE AN INFILTRATION BASIN AND ALL MEANS OF CONVEYANCE OF STORMWATER TO THE FACILITY. THESE FACILITIES AND PROPOSED MAINTENANCE OF EACH ARE PROVIDED ON THE LAND DEVELOPMENT PLAN PROVIDED IN CONJUNCTION WITH THIS REPORT.

ADDITIONALLY, A COPY OF THE TOWNSHIP'S STORMWATER OPERATIONS AND MAINTENANCE AGREEMENT IS INCLUDED WITH THIS REPORT AND WILL BE EXECUTED BY THE OWNER PRIOR TO CONSTRUCTION.

INFILTRATION MAINTENANCE NOTES:

1. BASIN AND INLET SHOULD BE INSPECTED AND CLEANED AT LEAST TWO TIMES PER YEAR AND AFTER RUNOFF EVENTS.
2. THE VEGETATION ALONG THE SURFACE OF THE INFILTRATION BASIN SHOULD BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS REVEGETATED AS SOON AS POSSIBLE.
3. VEHICLES SHOULD NOT BE PARKED OR DRIVEN ON AN INFILTRATION BASIN, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS.
4. INSPECT THE BASIN AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS.
5. INSPECT ACCUMULATED OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION, SPILLS, AND SLOPE STABILITY IN THE BERMS.
6. MOW ONLY AS APPROPRIATE FOR VEGETATIVE COVER SPECIES.
7. REMOVE ACCUMULATED SEDIMENT FROM BASIN AS REQUIRED. RESTORE ORIGINAL CROSS SECTION AND INFILTRATION RATE. PROPERLY DISPOSE OF SEDIMENT.
8. ROUTINE INSPECTION AND CLEANING OF INLET 18" TO PREVENT CLOGGING OF WEEP HOLES AND STAGNANT WATER WITHIN THE INLET AS REQUIRED.

RAIN GARDEN MAINTENANCE NOTES:

1. AT LEAST ONCE EACH YEAR AND AFTER STORM EVENTS EXCEEDING ONE (1) INCH OF RAINFALL, INSPECT RAIN GARDEN / BIORETENTION BED MULCH, PLANTS, CLEANOUTS, AND INLET STRUCTURES AND AREAS DRAINING TO GARDENS / BEDS.
2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING ONE (1) INCH OF RAINFALL, REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM RAIN GARDEN / BIORETENTION BEDS, CLEANOUTS, AND INLET STRUCTURES DRAINING TO GARDENS / BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS.
3. AFTER STORM EVENTS EXCEEDING ONE (1) INCH OF RAINFALL, INSPECT RAIN GARDENS / BIORETENTION BEDS TO DETERMINE IF THEIR PONDING AREAS DRAIN WITHIN TWENTY FOUR (24) HOURS.
4. MAINTAIN RAIN GARDENS / BIORETENTION BEDS IN GOOD CONDITION (I.E. >60% VEGETATIVE COVERAGE AND 100% 3" MULCH COVERAGE). IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS.
5. WHILE VEGETATION IS BEING ESTABLISHED, PRUNE AND WEED AS NEEDED.
6. EACH YEAR REMOVE DETRITUS. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF EACH GROWING SEASON.
7. PROHIBIT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS.
8. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON RAIN GARDENS / BIORETENTION BEDS OR ON AREAS THAT DRAIN TO GARDENS / BEDS.
9. IF FAILURE OF THE RAIN GARDEN (STANDING WATER IS OBSERVED IN THE RAIN GARDEN FOR EXTENDED PERIODS OF TIME AFTER RAINFALL EVENTS) IS REALIZED, THE MULCH AND/OR SAND/SOIL LAYERS SHOULD BE REMOVED AND REPLACED, ALONG WITH THE WETLAND VEGETATION. THE SUBSURFACE INFILTRATION BED SHOULD BE EVALUATED AS WELL. SEE "MAINTENANCE NOTES" ON THIS SHEET.

STORMWATER OPERATION & MAINTENANCE CERTIFICATION

I, _____, BEING THE OWNERS IS/ARE RESPONSIBLE FOR THE PERPETUAL OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM, AND ACKNOWLEDGES THAT THE STORMWATER MANAGEMENT SYSTEM IS TO BE A PERMANENT FIXTURE WHICH CANNOT BE ALTERED OR REMOVED WITHOUT PRIOR APPROVAL OF SWATARA TOWNSHIP.

STORMWATER DESIGN CERTIFICATION

I, _____, HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE SWATARA TOWNSHIP'S STORMWATER MANAGEMENT ORDINANCE.

SEQUENCE OF CONSTRUCTION

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

CONTACT CHESTER COUNTY CONSERVATION DISTRICT (CCCD) AT (610) 925-4920 A MINIMUM OF THREE (3) DAYS PRIOR TO COMMENCEMENT OF EARTH DISTURBANCE ACTIVITIES.

ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.

ALL BEST MANAGEMENT PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND LOCATIONS SHOWN ON THE PLANS.

THE ORDER OF THE FOLLOWING SEQUENCE IS SUBJECT TO CHANGE DUE TO SITE SPECIFIC CONDITIONS AND CONSTRUCTION METHODS. ALL CHANGES SHALL BE APPROVED BY THE CCCD.

1. FIELD LOCATE THE PROPOSED LIMITS OF DISTURBANCE.
2. INSTALL A STABILIZED ROCK CONSTRUCTION ENTRANCE AT AN ACCESS POINT TO THE SITE, AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE DETAIL PROVIDED ON THE PLAN.
3. INSTALL 12" FILTER SOCK (OR APPROVED EQUAL) AT LOCATIONS SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE DETAILS PROVIDED.
4. CLEAR AND GRUB THE SITE.
5. STRIP AND STOCKPILE TOPSOIL. TOPSOIL CAN BE PLACED AT THE TEMPORARY STOCKPILE LOCATION PROVIDED ON THE PLAN. PLACE 18" SILT SOCK DOWNSLOPE OF THE TEMPORARY TOPSOIL STOCKPILE. SEED THE STOCKPILE WITH A TEMPORARY SEEDING MIXTURE. ALL STOCKPILES SHALL BE SHALL BE A MAXIMUM OF 35 FEET IN HEIGHT WITH SIDE SLOPES OF 2H:1V OR FLATTER.
6. BEGIN ROUGH GRADING THE SITE.
7. INSTALL STORM SEWER SYSTEM AND INLET PROTECTION AT EACH INLET AND RIP RAP APRON AT EW-4.
8. INSTALL SUBBASE STONE FOR ALL PROPOSED CONCRETE AND ASPHALT AREAS, EFFECTIVELY REMOVING THE STABILIZED ROCK CONSTRUCTION ENTRANCE.
9. INSTALL INFILTRATION BASIN, OUTLET STRUCTURE (OS-1), OUTFALL CULVERT, ANTI-SEEP COLLAR AND LEVEL SPEADER IN ACCORDANCE WITH THE SPECIFIC CONSTRUCTION SEQUENCE AND DETAILS PROVIDED ON THE PCSM PLAN.
10. INSTALL OUTLET STRUCTURE (OS-3), OUTFALL CULVERT, EW-4 AND RIP RAP APRON IN ACCORDANCE WITH SPECIFIC CONSTRUCTION SEQUENCE AND DETAILS PROVIDED ON THE PLAN.
11. INSTALL ALL CONCRETE AND ASPHALT SURFACES AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE DETAILS PROVIDED ON THE PLAN.
12. INSTALL LANDSCAPING IN ACCORDANCE WITH THE LANDSCAPE PLAN AND DETAILS PROVIDED ON THE PLAN.
13. SPREAD TOPSOIL, SEED, MULCH, AND PLACE APPROPRIATE GROUND COVERS FOR FINISHED AREAS. TOPSOIL SHALL BE PLACED TO A MINIMUM DEPTH OF SIX (6) INCHES.
14. UPON STABILIZATION OF 75% OF THE SITE AND WITH THE CONSENT OF THE DAUPHIN COUNTY CONSERVATION DISTRICT, E6S BEST MANAGEMENT PRACTICES (BMP'S), SUCH AS SILT SOCKS, INLET PROTECTION, AND ROCK FILTER CAN BE REMOVED. ALL DISTURBED SOILS RESULTING FROM BMP REMOVAL SHALL BE STABILIZED WITH SEED AND MULCH IMMEDIATELY. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS 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.
15. AN OPERATION AND MAINTENANCE AGREEMENT HAS BEEN PREPARED FOR THIS PROJECT AND IS PART OF THE STORMWATER MANAGEMENT PLAN.
16. NOTHING SHALL BE PLANTED OR PLACED WITHIN THE EASEMENT WHICH WOULD ADVERSELY AFFECT THE FUNCTION OF THE EASEMENT OR CONFLICT WITH ANY CONDITIONS ASSOCIATED WITH SUCH EASEMENT.
17. THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING EASEMENT MAINTENANCE AND SHALL ASSURE THE CONTINUED FUNCTIONALITY OF THE EASEMENT.
18. THIS STORMWATER MANAGEMENT PLAN SHALL BE ON-SITE AND AVAILABLE FOR REVIEW THROUGHOUT THE DURATION OF THE REGULATED ACTIVITIES.

ACT 287/121 UNDERGROUND UTILITY PROTECTION ACT

NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. HEREBY STATES THAT, PURSUANT TO THE PROVISIONS OF ACT NO. 287 OF 1974, AS AMENDED BY ACT 121 OF 2008, OF THE PENNSYLVANIA LEGISLATURE, IT HAS PERFORMED THE FOLLOWING IN PREPARING THESE DRAWINGS REQUIRING EXCAVATION OR DEMOLITION WORK AT SITES WITHIN THE POLITICAL SUBDIVISION(S) OR LAND DEVELOPMENT(S) SHOWN ON THE DRAWINGS:

1. PURSUANT TO SECTION 4, CLAUSE (2) OF SAID ACT, NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. REQUESTED FROM EACH USER'S OFFICE DESIGNATED ON SUCH LIST PROVIDED BY THE ONE CALL SYSTEM NOTIFICATION, THE INFORMATION PRESCRIBED BY SECTION 2, CLAUSE (4) OF SAID ACT, NOT LESS THAN (10) NOR MORE THAN (40) DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED.

2. PURSUANT TO SECTION 4, CLAUSE (3) OF SAID ACT, NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. HAS SHOWN UPON THESE DRAWINGS "THE POSITION AND TYPE OF EACH LINE, AS DERIVED PURSUANT TO THE REQUEST MADE AS REQUIRED BY CLAUSE (2), THE SERIAL NUMBER PROVIDED BY THE ONE CALL SYSTEM, THE TOLL-FREE PHONE NUMBER, AND THE NAME OF THE USER, THE USER'S DESIGNATED OFFICE ADDRESS AND PHONE NUMBER, AS SHOWN ON THE LIST REFERRED TO IN SECTION 4, CLAUSE (5) OF SAID ACT.

3. PURSUANT TO SECTION 4, CLAUSE (5) OF SAID ACT, NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. HAS MET THEIR OBLIGATIONS OF CLAUSE (2) BY CALLING THE ONE CALL SYSTEM SERVING THE LOCATION WHERE EXCAVATION IS TO BE PERFORMED.

AND NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTEE THAT THE INFORMATION RECEIVED PURSUANT TO SAID REQUEST AND AS REFLECTED ON THESE DRAWINGS IS CORRECT OR ACCURATE, BUT NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. IS REFLECTING SAID INFORMATION ON THESE DRAWINGS ONLY DUE TO THE REQUIREMENTS OF SAID ACT 181 EFFECTIVE MARCH 29, 2007.

ONE CALL SYSTEM SERIAL NO. NOTIFICATION BY NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.
ONE CALL SYSTEM SERIAL NO.: 20180381731
ONE CALL SYSTEM CALL DATE: JANUARY 9, 2018

RAIN GARDEN #1

1. THE CONTRACTOR SHALL EXCAVATE THE RAIN GARDEN TO DIMENSIONS AND ELEVATIONS PROVIDED ON THE POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) PLAN.
2. THE CONTRACTOR SHALL CONSTRUCT THE EMERGENCY SPILLWAY TO THE DIMENSIONS AND ELEVATIONS PROVIDED ON THE DETAIL. THE EMERGENCY SPILLWAY SHOULD BE IMMEDIATELY STABILIZED WITH SEED AND MULCH.
3. THE CONTRACTOR SHALL INSTALL THE OUTLET STRUCTURE (OS-1) AND OUTFALL CULVERT AS SHOWN ON THE PCSM PLAN.
4. THE CONTRACTOR SHALL INSTALL THE SAND/SOIL MIXTURE AND MULCH LAYERS AS SHOWN ON THE DETAIL PROVIDED.
5. THE CONTRACTOR SHALL PRESOAK THE PLANTING SOIL AND INSTALL WETLAND VEGETATION IN THE BOTTOM OF THE RAIN GARDEN AS SHOWN ON THE DETAIL PROVIDED.

DRAWING INDEX

PCSM-1	COVER SHEET
PCSM-2	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
PCSM-3	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS

OWNER / APPLICANT

THE COUNTY OF CHESTER
DEPARTMENT OF FACILITIES & PARKS
313 W. MARKET STREET SUITE 420
WEST CHESTER, PA 19380
PHONE: 610.344.6000
CONTACT: MR. DAVID STAUFFER

SOURCE OF TITLE

DEED BOOK 8971 PAGE 148
DEED BOOK 4328 PAGE 1517

TAX PARCEL REFERENCE

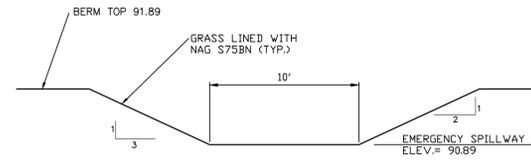
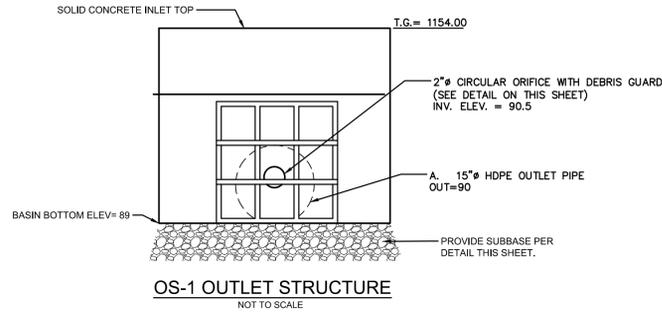
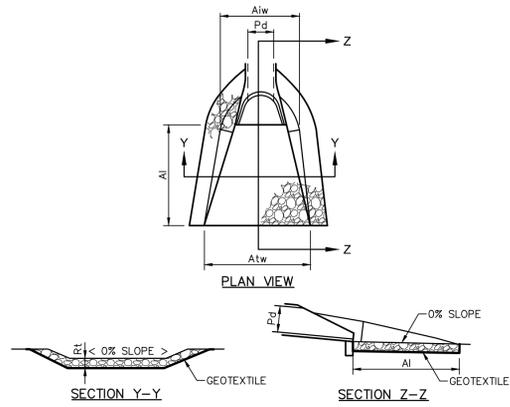
TAX PARCEL 15-3-10
TAX PARCEL 15-3A-14
TAX PARCEL 15-3-12

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE - STOP CALL

PA 1 SYSTEM, INC. PCSM SERIAL NUMBER
1-800-242-1776 20182532634

PCSM-1



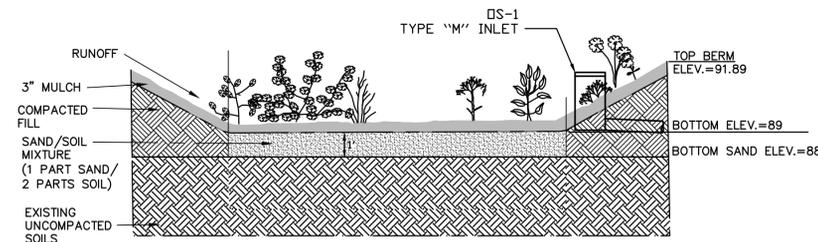
EMERGENCY SPILLWAY

NOT TO SCALE
 PROVIDE NORTH AMERICAN GREEN S75BN TEMPORARY LINER FOR THE EMERGENCY SPILLWAY AND ITS CHANNEL.

OUTLET NO.	PIPE DIA. PD (IN)	RIPRAP		APRON		
		SIZE (R-)	THICK. Rt (IN)	LENGTH AI (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
EW-1	15	3	12	8	4	12
EW-2	15	3	12	8	4	12
EW-3	15	3	12	8	4	12
EW-4	15	3	12	8	4	12

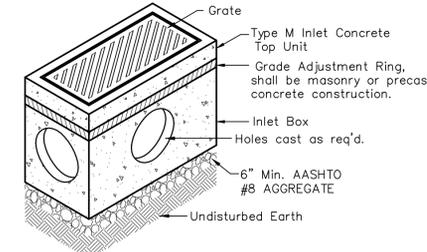
ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
 ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.
 EXTEND RIPRAP ON BACK SIDE OF APRON TO AT LEAST 1/2 DEPTH OF PIPE ON BOTH SIDES TO PREVENT SCOUR AROUND THE PIPE.

**STANDARD CONSTRUCTION DETAIL #9-1
 RIPRAP APRONS AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL**
 NOT TO SCALE



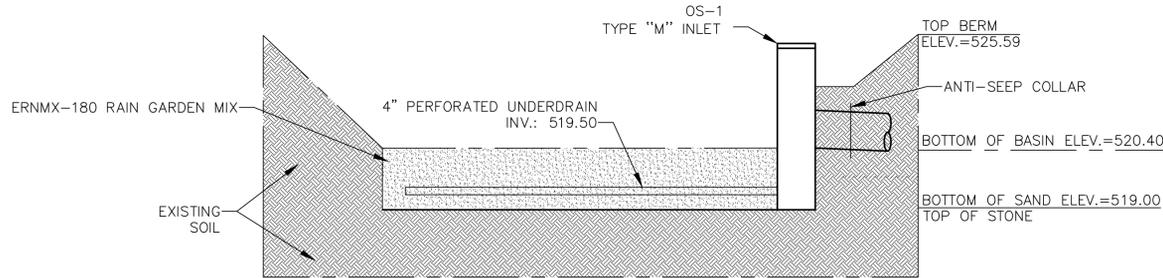
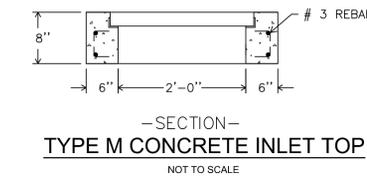
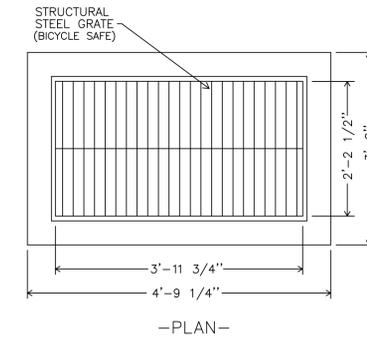
1. GRADING OF THE RAIN GARDEN SHOULD BE ACCOMPLISHED WITH LOW-COMPACTION EARTH MOVING EQUIPMENT TO PREVENT COMPACTION OF THE UNDERLYING SOILS.
2. THE RAIN GARDEN SHOULD BE SEEDED WITH THE FOLLOWING - ERNMX-180 RAIN GARDEN MIX.

RAIN GARDEN CROSS SECTION
 NOT TO SCALE



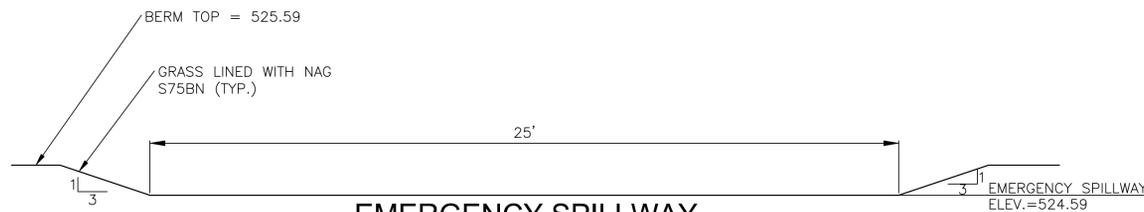
- NOTES:**
1. ALL INLETS GREATER THAN 5 FEET IN DEPTH SHALL BE PROVIDED WITH ALUMINUM MANHOLE TYPE STEPS, NO GREATER THAN 12" APART.
 2. ALL INLETS TO BE PROVIDED WITH A MIN. 6" SUMP.

TYPE M INLET
 NOT TO SCALE



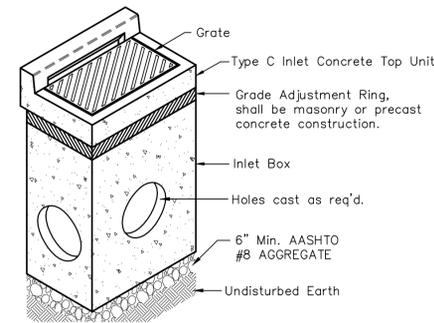
1. PROTECTION INFILTRATION BASIN AREA FROM COMPACTION PRIOR TO INSTALLATION.
2. EXCAVATE INFILTRATION BASIN BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE.
3. THE INFILTRATION BASIN SHALL BE PROTECTED FROM SEDIMENT ENTRY FOLLOWING INSTALLATION.
4. WHENEVER CANOPY (OVERALL VEGETATION) REACHES A HEIGHT OF 18"-24", USE A BRUSH HOG MOWER OR STRING TRIMMER TO TRIM THE MEADOW GRASSES TO A HEIGHT OF 8" (NOTE: A LAWN MOWER SHALL NOT BE USED OR THE MOWER HEIGHT WILL BE TOO LOW AND NATIVE SEEDLINGS WILL BE KILLED).

INFILTRATION BASIN DETAIL
 1" = 4"



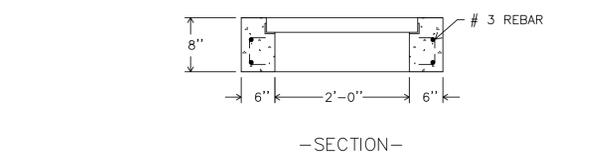
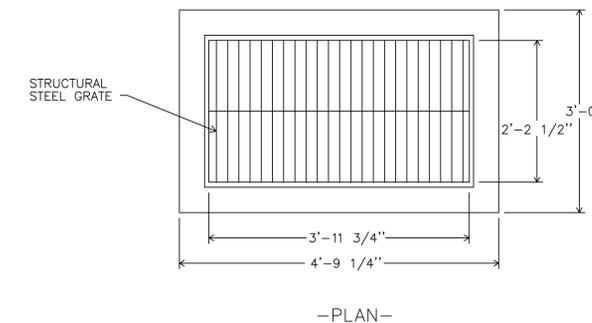
EMERGENCY SPILLWAY
 1" = 4"

PROVIDE NORTH AMERICAN GREEN S75BN TEMPORARY LINER FOR BOTH EMERGENCY SPILLWAYS AND THEIR CHANNELS



- NOTES:**
1. ALL INLETS GREATER THAN 5 FEET IN DEPTH SHALL BE PROVIDED WITH ALUMINUM MANHOLE TYPE STEPS, NO GREATER THAN 12" APART.
 2. ALL INLETS IN PAVED AREAS SHALL HAVE BICYCLE SAFE GRATES.
 3. ALL INLETS SHALL HAVE WEEP HOLES COVERED WITH GEOTEXTILE FABRIC PLACED AT THE APPROPRIATE ELEVATIONS TO COMPLETELY DRAIN THE SUBGRADE PRIOR TO PLACING THE BASE COURSE AND SURFACE COURSE.
 4. CONCRETE FLOW CHANNELS ARE REQUIRED IN ALL INLETS.

TYPE C INLET
 NOT TO SCALE



PennDOT TYPE M CONCRETE INLET TOP
 NOT TO SCALE

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA 1 SYSTEM, INC.
 1-800-242-1776
 POCS SERIAL NUMBER: 2018232634

NO.	DATE	REVISIONS	BY

NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.
 CORPORATE OFFICE: 151 RENO AVENUE, NEW CUMBERLAND, PA 17070
 PHONE: (717) 441-2216, FAX: (717) 441-2218
 www.navarrowright.com



PRELIMINARY/FINAL LAND DEVELOPMENT PLAN FOR **BLACK ROCK SANCTUARY**
 BOROUGH OF PHOENIXVILLE, CHESTER COUNTY, PENNSYLVANIA

DRAWN BY: JIG/VC
 CHECKED BY: CWB
 SCALE:
 DATE: MAY 9, 2019

JOB NUMBER:
1705SC066

DRAWING DESCRIPTION:
POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
 DRAWING NUMBER:
PCSM-3