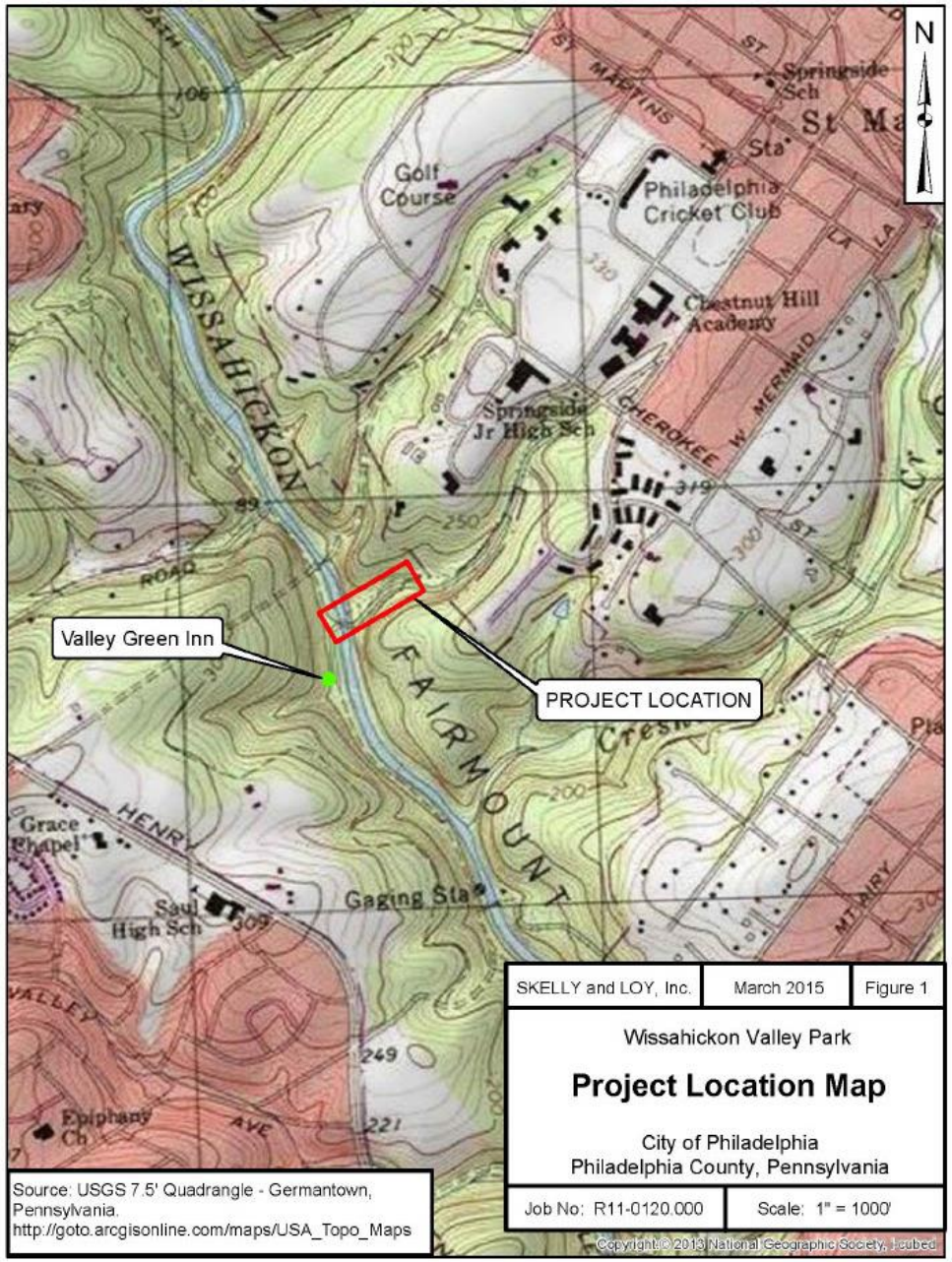
FRIENDS OF THE WISSAHICKON

September 19th 2023 Chestnut Hill Community Association Development Review Committee Meeting

1. Project Summary
2. Existing Conditions
3. Project Details
4. Technical drawings
5. Community Outreach and Important Dates

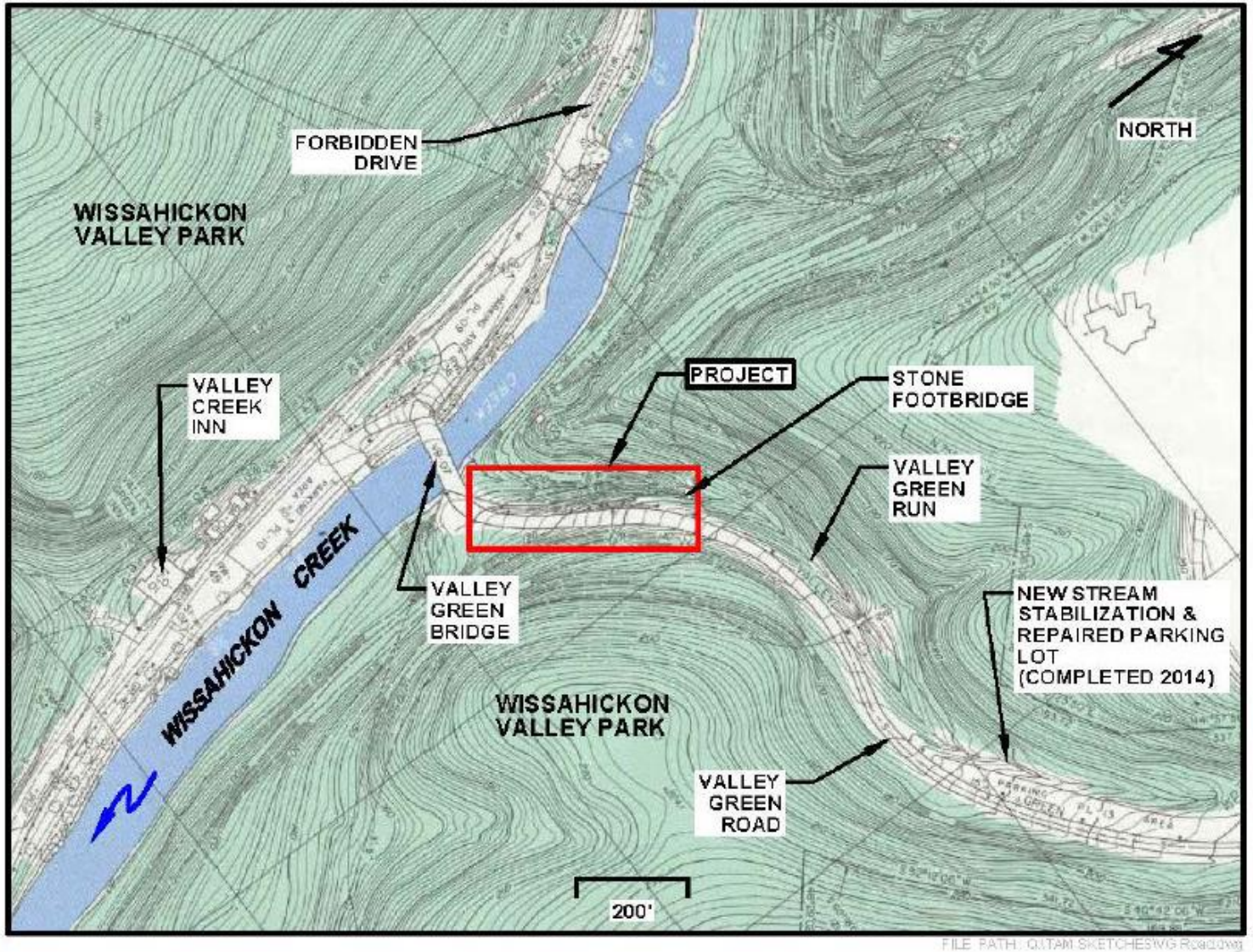
PROJECT CONTEXT MAP



FRIENDS OF THE WISSAHICKON

Let's be friends.

PROJECT CONTEXT MAP



FRIENDS OF THE WISSAHICKON

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VALLEY GREEN RUN RESTORATION & PEDESTRIAN BRIDGE

VALLEY GREEN RUN PEDESTRIAN BRIDGE
PREPARED FOR FRIENDS OF THE WISSAHICKON
SITE PLAN

cvm

Krieger

DECEMBER 21, 2021

Summary:

- Continue restoration efforts of Valley Green Run, while adding a new signature feature to the Park.
- Project is led by Skelly & Loy, with CVMNEXT Construction and Krieger + Associates Architects subcontracting, in partnership with Philadelphia Parks & Recreation, and the Philadelphia Water Department
- Both stream restoration and pedestrian bridge design work is complete and permit ready
- Joint permit from PA DEP & USACE has been issued
- Construction expected to commence Spring 2024
- Valley Green Road, below Wolcott Drive, will be closed for duration of construction

Current Conditions:

- Severe bank erosion on both sides of Valley Green Run, contributing 400 cubic feet of sediment discharge annually

- Unsafe pedestrian access along Valley Green Road due to collapsed wooden boardwalk

Goals:

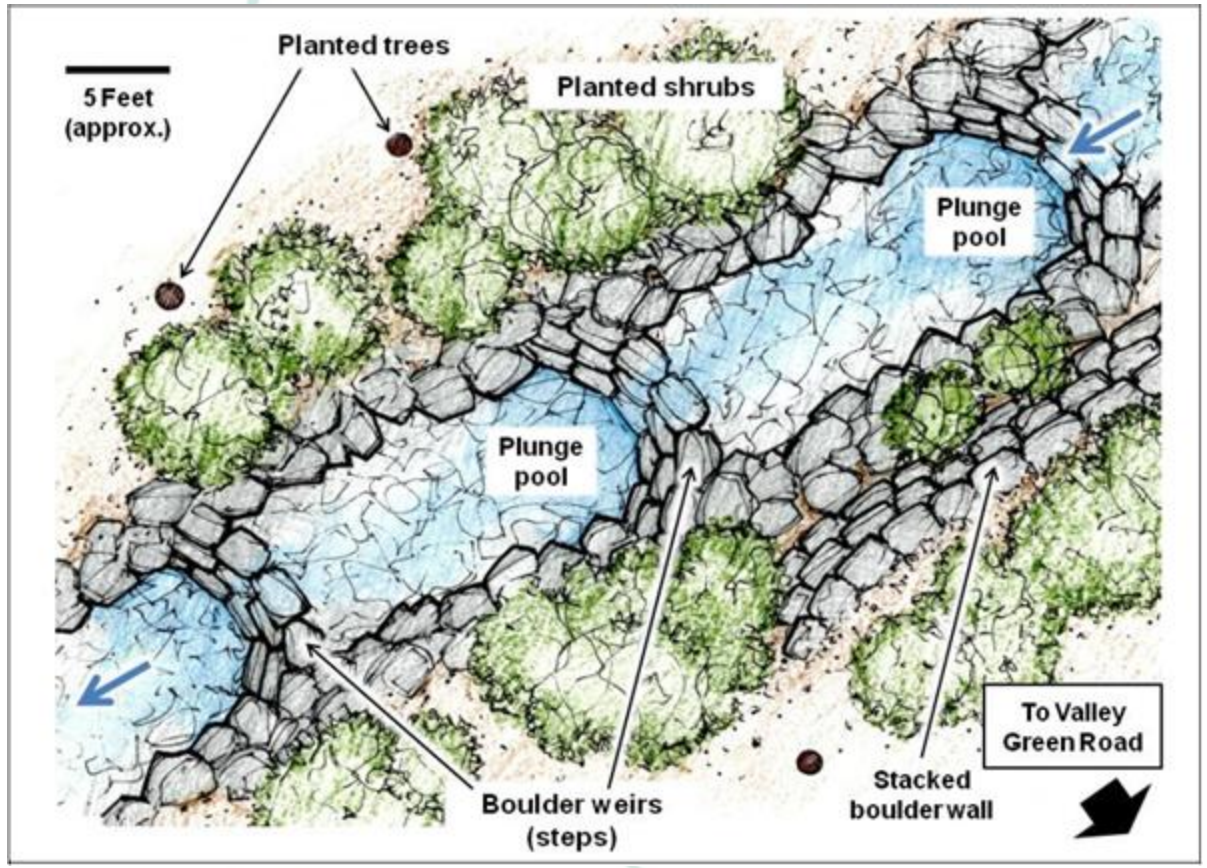
- Reduce sediment discharge through bank stabilization and restoration of streambed with naturalistic, boulder-bed, step-pools

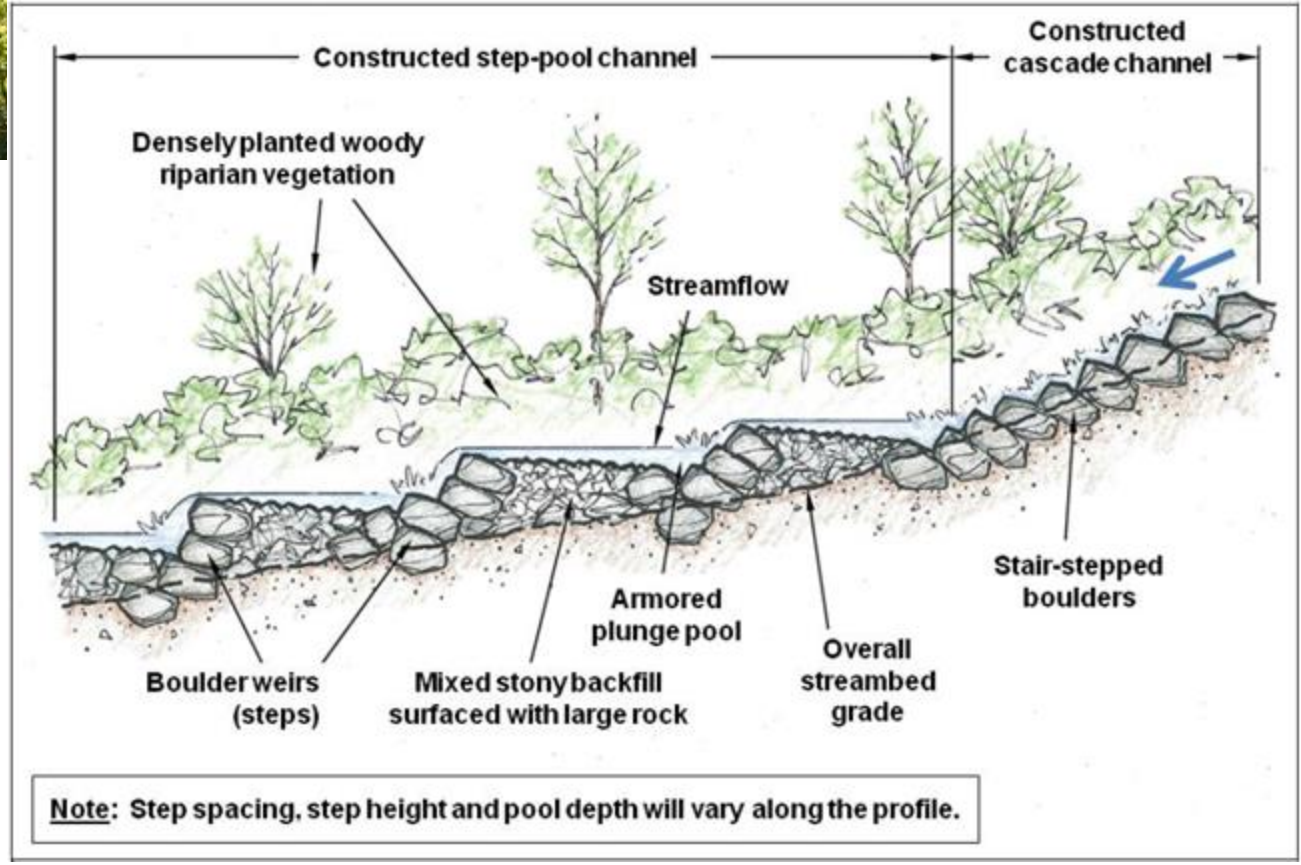
- Restore safe pedestrian access to Valley Green Area with construction of pedestrian walkway

VALLEY GREEN RUN RESTORATION

Streambank restoration:

- Construction of boulder step-pools and bank revetments to reduce speed and force of water, and create resilience



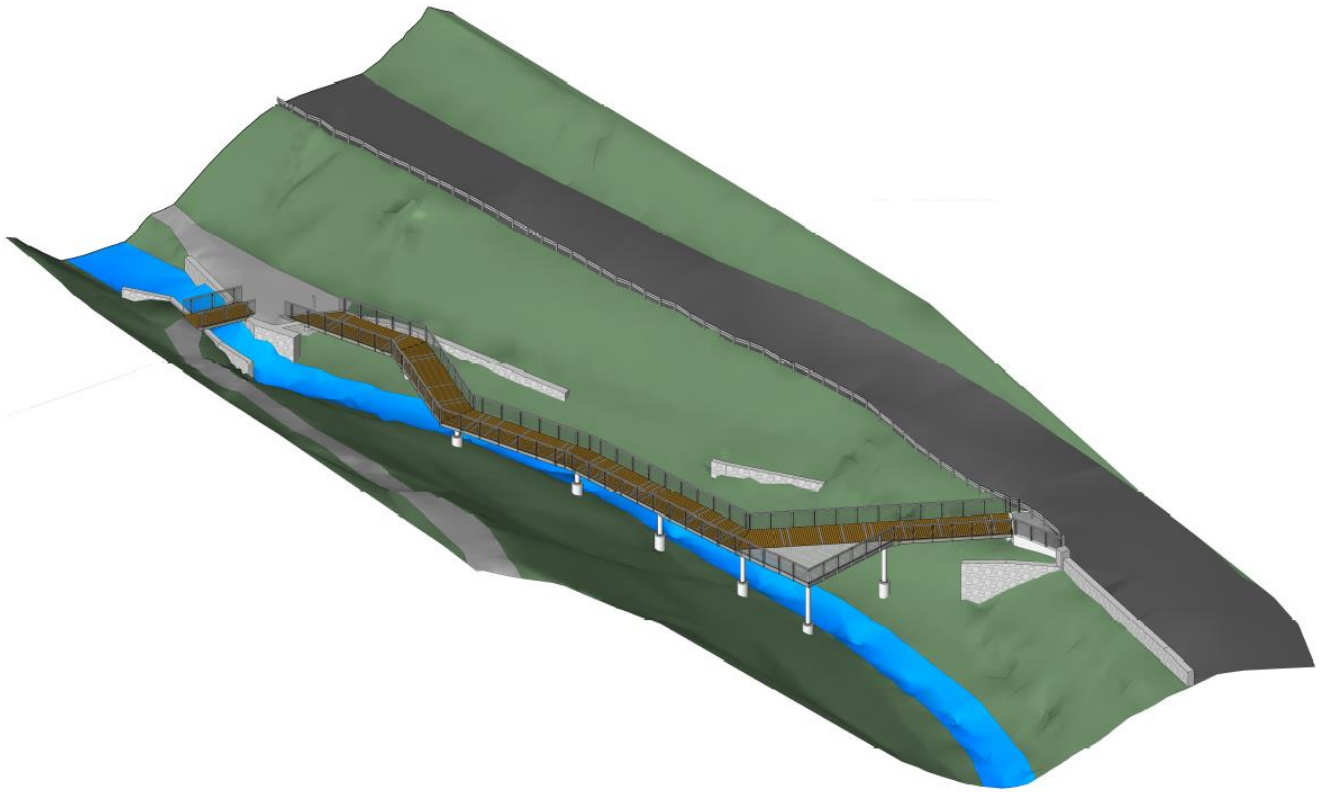


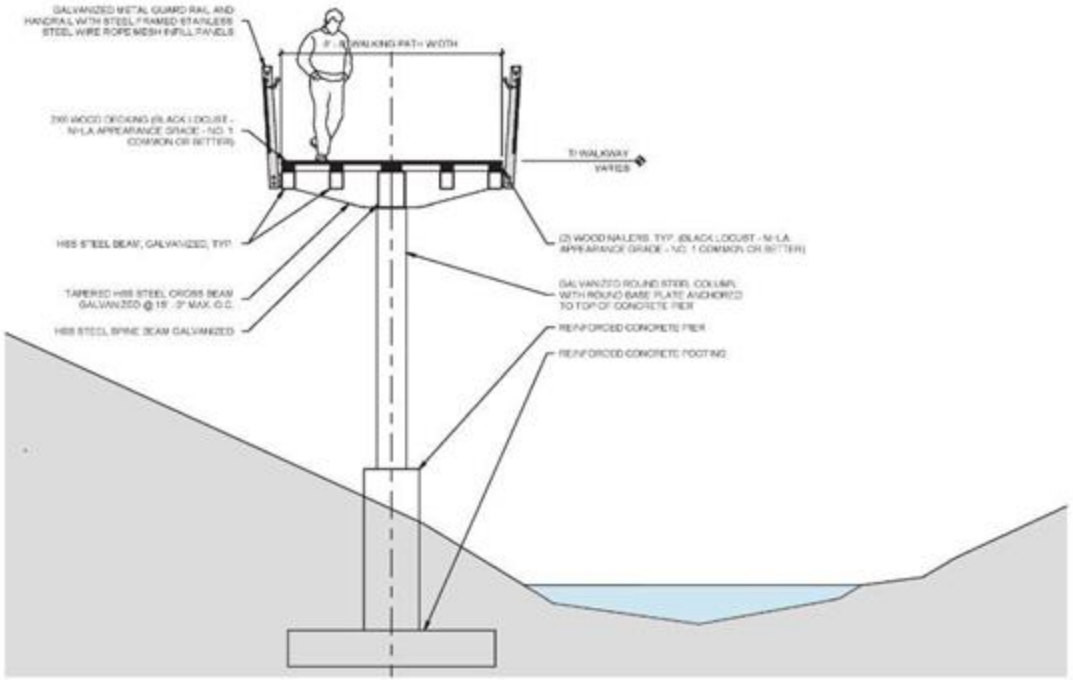
- Shift centerline of stream away from Valley Green Road to protect it
- Regrade of the streambank to accommodate riparian plantings
- Restore ecological function of riparian buffer to filter nonpoint source pollution coming from Valley Green Road

VALLEY GREEN RUN PEDESTRIAN BRIDGE

Bridge Design:

- Length will be approximately 200 feet long and have an added viewing platform
- To maximize resiliency, bridge will not be load bearing on streambank



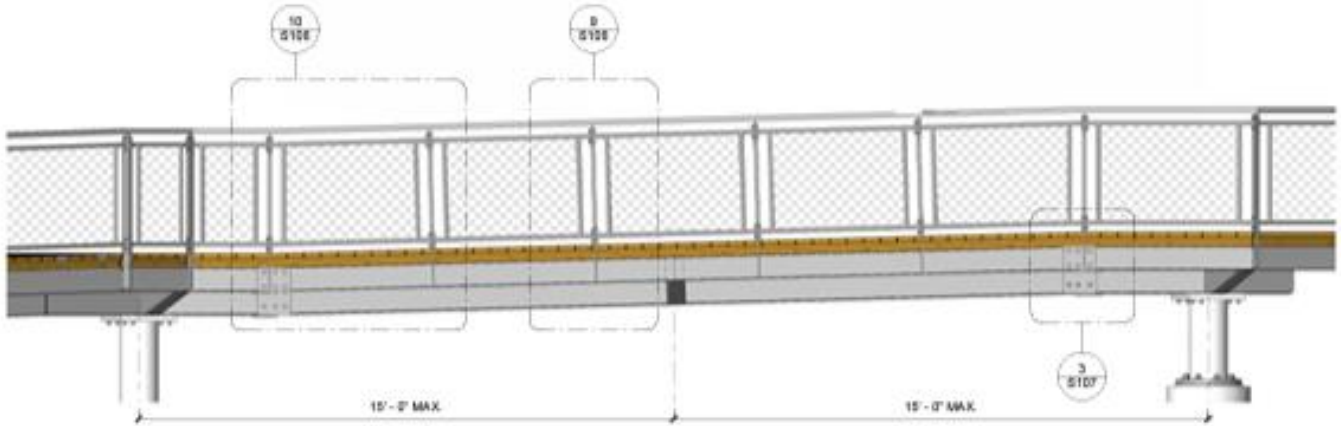


It will have a galvanized steel superstructure, supported by concrete piers and footings

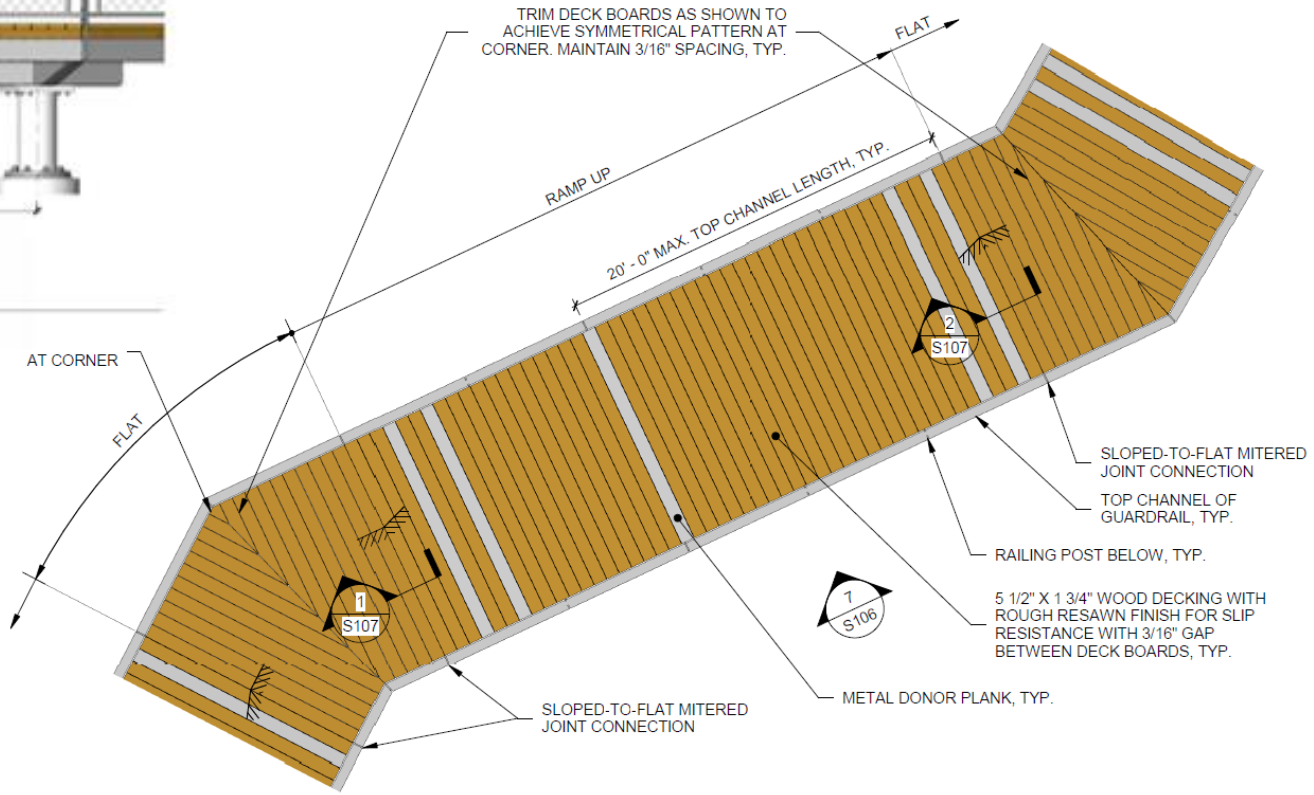
The bridge will have a Black Locust wood decking and the viewing platform will have steel grating

The guardrail and handrail will be stainless steel with a steel wire rope mesh infill

VALLEY GREEN PEDESTRIAN BRIDGE



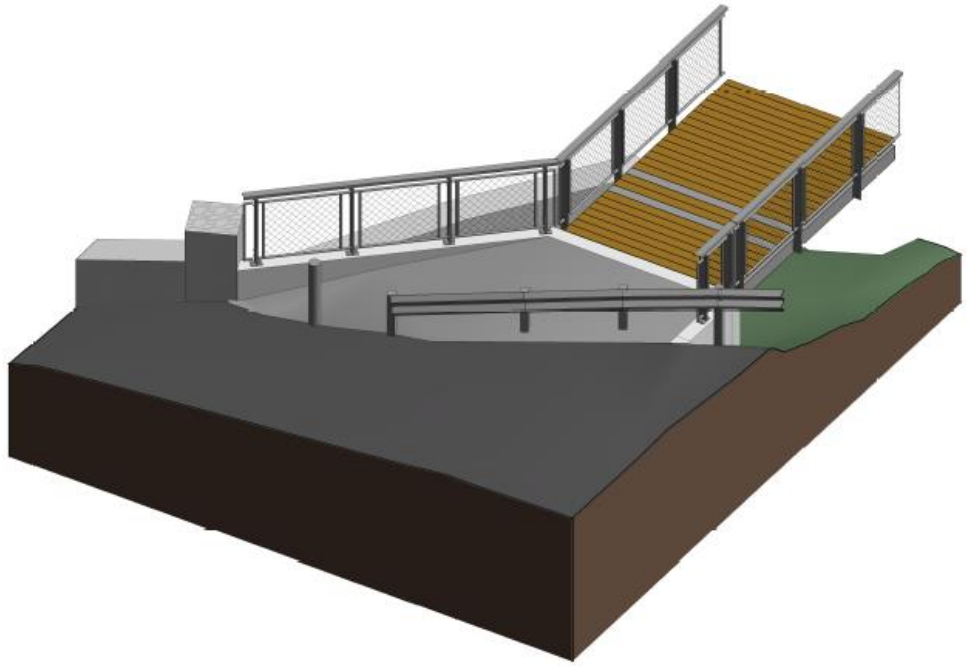
7 S106 PARTIAL ELEVATION
3/8" = 1'-0"



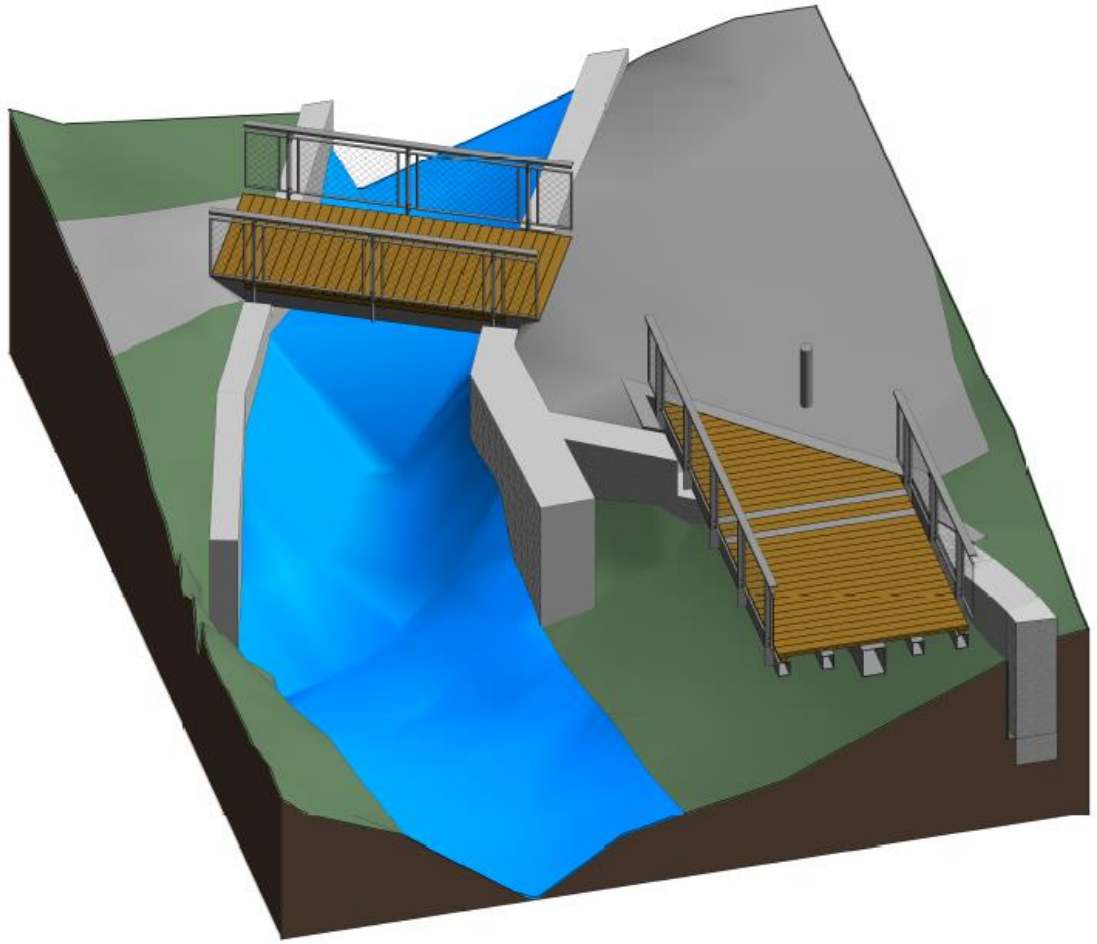
3 S106 PLAN DETAIL - WOOD DECKING
1/4" = 1'-0"

N

VALLEY GREEN PEDESTRIAN BRIDGE



1 ISOMETRIC VIEW - SOUTH END OF PEDESTRIAN BRIDGE



2 ISOMETRIC VIEW - NORTH END OF PEDESTRIAN BRIDGE

cvm

VALLEY GREEN RUN PEDESTRIAN BRIDGE
PREPARED FOR FRIENDS OF THE WISSAHICKON
VIEW A

Krieger

DECEMBER 21, 2021

cvm

VALLEY GREEN RUN PEDESTRIAN BRIDGE
PREPARED FOR FRIENDS OF THE WISSAHICKON
VIEW B

Krieger

DECEMBER 21, 2021

VALLEY GREEN RUN RESTORATION & PEDESTRIAN BRIDGE

FRIENDS OF THE WISSAHICKON

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PERMIT NO. E5101223-001

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHEAST REGIONAL OFFICE
WATERWAYS AND WETLANDS

WATER OBSTRUCTION AND ENCROACHMENT PERMIT

SMALL PROJECT PURSUANT TO SECTION 105.13(e)

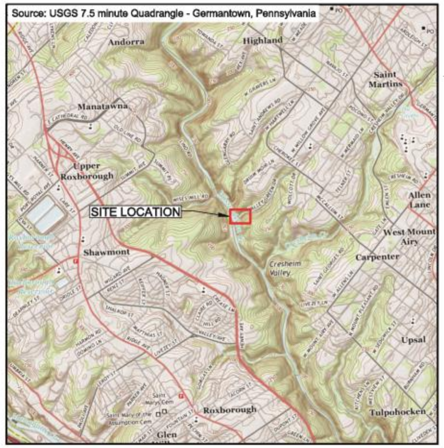
The Department of Environmental Protection ("DEP"), established by the Act of December 3, 1970, P.L. 834 (71 P.S. §§ 510–1 et seq.) and empowered to exercise certain powers and perform certain duties under and by virtue of the Act of November 26, 1978, P.L. 1375, as amended by the Act of October 23, 1979, P.L. 204 (32 P.S. §§ 693.1 et seq.) known as the "Dam Safety and Encroachments Act"; Act of October 4, 1978, P.L. 851 (32 P.S. §§ 679.101 et seq.) known as the "Flood Plain Management Act"; Act of June 22, 1937, P.L. 1987 (35 P.S. §§ 691.1 et seq.) known as the "Clean Streams Law"; and the Administrative Code, Act of April 9, 1929, P.L. 177, as amended, which empowers DEP to exercise certain powers and perform certain duties by law vested in and imposed upon the Water Supply Commission of Pennsylvania and the Water and Power Resources Board, hereby issues this permit to:

Philadelphia Parks and Recreation
1515 Arch Street, 10th Floor
Philadelphia, PA 19102

giving its consent to restore, construct, and maintain approximately 219 feet long eroded bed and banks, and raised pedestrian bridge walkway along the Valley Green Run (TSF/MF) associated with the public safety concerns. The project will also include to replace an existing pedestrian bridge 12-foot by 6-foot at the same location. The channel improvements will include boulder weirs and stacked boulder revetments to stabilize the stream channel and its banks to prevent vertical and horizontal erosion and to dissipate energy during high-flow (flood) events. The site is located within Wissahickon Valley Park (Germantown, PA, USGS Quadrangle Latitude: 40.0559423; Longitude: -75.216753) in the City of Philadelphia City, Philadelphia County.

Permit/Authorization Status

- Issued:
  - Water Obstruction and Encroachment Permit (PA DEP)
  - Section 404 Clean Water Act Pennsylvania State Programmatic General Permit (USACE)
- Awaiting Authorization:
  - Zoning Permit (City of Philadelphia)
  - Site/Utility Permit – Genral Earth Disturbance (City of Philadelphia) [Approved Dependent on Authorization of Zoning Permit]



SITE LOCATION MAP

0' 2000' 4000'

SCALE IN FEET

VALLEY GREEN RUN RESTORATION

PHILADELPHIA, PENNSYLVANIA

PREPARED FOR

FRIENDS OF THE WISSAHICKON

40 WEST EVERGREEN AVE, SUITE 108
PHILADELPHIA, PA 19118

PREPARED BY

SKELLY AND LOY
A Terracon Company

449 EISENHOWER BOULEVARD
SUITE 300
HARRISBURG, PENNSYLVANIA 17111-2302

PROJECT CONTACT INFORMATION

FRIENDS OF THE WISSAHICKON
RUFFIAN TITTMANN, EXECUTIVE DIRECTOR
PAULINE BERKOWITZ, CAPITAL PROJECTS COORDINATOR
(215) 247-0417

SKELLY AND LOY, INC.
MICHAEL LOWER, P.E.
DANIEL AUNGST, P.E.
CALVIN BUSH, P.E.
(717) 232-0593

GENERAL DRAWINGS	
G-101	COVER
G-102	NOTES
ERSA DRAWINGS	
ERSA-101	EXISTING RESOURCES AND SITE ANALYSIS MAP
DEMOLITION DRAWINGS	
X-101	DEMOLITION PLAN
RESTORATION DRAWINGS	
R-101	SITE PLAN
R-201	PROFILE
R-301	SECTIONS
R-501 THRU R-502	DETAILS
EROSION & SEDIMENT POLLUTION CONTROL DRAWINGS	
ES-101	EROSION & SEDIMENT POLLUTION CONTROL PLAN
ES-501 THRU ES-503	EROSION & SEDIMENT POLLUTION CONTROL DETAILS
LANDSCAPE DRAWINGS	
LS-101	LANDSCAPE PLAN

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

811 Know what's below. Call before you dig.

FINAL DESIGN SERIAL NO's: ____________
PRELIMINARY DESIGN SERIAL NO: 20220350589

DRAWING NO. G-101

FRIENDS OF THE WISSAHICKON
VALLEY GREEN RUN RESTORATION
PHILADELPHIA, PENNSYLVANIA
COVER

DSGN CFB
DFTSMN JRG
CHKR DRA
APPV MEL
SCALE AS SHOWN

REV DESCRIPTION BY APPV DATE

2022-12-22

SKELLY AND LOY
A Terracon Company
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593 - FAX: (717) 232-1799 - WWW.skellyloy.com

PROJECT NUMBER: JN197556
TASK: 01
DATE: DECEMBER 2022

FRIENDS OF THE WISSAHICKON
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E&S PLAN NOTES - PENNSYLVANIA STANDARD

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.

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

3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.

4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.

5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.

6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.

7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.

8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.

9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.

10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.

12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.

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

14. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE PROJECT SITE ONTO VALLEY GREEN ROAD.

15. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.

16. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.

17. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

18. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.

19. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES – 6 TO 12 INCHES ON COMPACTED SOILS – PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.

20. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

22. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.

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

24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

25. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

26. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.

27. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.

28. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.

29. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.

30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.

31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.

32. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.

33. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

E&S PLAN NOTES - PENNSYLVANIA ADDITIONAL

1. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.

2. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.

3. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.

4. CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.

5. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.

6. FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN MAXIMUM 6" LAYERED LIFTS AT 95% DENSITY.

E&S PLAN NOTES - PHILADELPHIA STANDARD

1. AN INDUSTRIAL WASTE PERMIT WILL BE REQUIRED SHOULD PUMPING TO CITY-OWNED INFRASTRUCTURE BECOME NECESSARY DURING CONSTRUCTION. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTRUBED VEGETATED AREAS.

2. INLET PROTECTION MUST BE PROVIDED FOR ALL INLETS OWNED BY PWD THAT ARE LOCATED WITHIN ONE BLOCK OF THE PROJECT SITE.

3. PWD IS NOT RESPONSIBLE FOR ANY CLEANING OR REPAIRS NEEDED ON CITY-OWNED INFRASTRUCTURE DUE TO FAILURE OF ANY EROSION AND SEDIMENT CONTROL PRACTICES. (APPLICANT TO INDICATE RESPONSIBLE PARTY)

4. INSPECTION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES SHALL OCCUR ON A WEEKLY BASIS, BEFORE ANY ANTICIPATED PRECIPITATION EVENTS, AND AFTER ALL PRECIPITATION EVENTS.

5. THE MAXIMUM HEIGHT FOR STOCKPILES AREAS SHALL BE 20 FEET. THE MAXIMUM SLOPE FOR STOCKPILE AREAS SHALL NOT EXCEED 2:1.

6. THE ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED ON-SITE. A STOCKPILE SHALL BE MAINTAINED ON-SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.

7. FILTER FABRIC FENCE SHOULD BE INSTALLED AT LEVEL GRADE. BOTH ENDS OF EACH FENCE SECTION SHOULD BE EXTENDED AT LEAST 8 FEET UPSLOPE AT 45 DEGREES TO MAIN BARRIER ALIGMENT. SUPPORT STAKES SHALL BE SPACED AT A MAXIMUM OF 8 FEET. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FILTER FENCE.

8. ANY FENCE SECTION WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

9. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.

10. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY PWD AND PA DEP.

11. UNTIL THE SITE IS STABILIZED, ALL E&S BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL E&S BMPS PRIOR TO ANY ANTICIPATED STORM EVENT, AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING, MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.

12. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING, AS WELL AS CUTS AND FILLS, SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. PWD SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. PWD MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.

13. AT LEAST THREE (3) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.

14. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING BY PWD AND THE PA DEP PRIOR TO IMPLEMENTATION.

15. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL.

16. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING, AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.

17. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.

18. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO PWD AT THE TIME OF INSPECTION.

19. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE FOLLOWING MANNER: USE ALL SEDIMENT REMOVED FROM BMPS AS FILL MATERIAL.

20. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF THREE TO FIVE INCHES – SIX TO 12 INCHES ON COMPACTED SOILS – PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM FOUR INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF TWO INCHES OF TOPSOIL.

21. 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.

22. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED NINE INCHES IN THICKNESS.

23. 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.

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

25. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

26. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

27. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.

28. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN ONE YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN ONE YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.

29. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.

30. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY PWD AND PA DEP.

31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY E&S BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE E&S BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.

32. SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS. (WHEN APPLICABLE)

33. DURING CONSTRUCTION, THE SELECTED CONTRACTOR IS EXPECTED TO FOLLOW THE PCSMP APPROVED BY PWD. NO CHANGE OR DEVIATION FROM THE APPROVED PCSMP IS PERMITTED WITHOUT PRIOR APPROVAL FROM PWD.

34. ALL WORK ASSOCIATED WITH PWD WATER CONVEYANCE AND SEWER INFRASTRUCTURE SHALL BE DONE IN ACCORDANCE WITH THE CITY OF PHILADELPHIA WATER DEPARTMENT "WATER MAIN STANDARD DETAILS AND CORROSION CONTROL SPECIFICATIONS", 1986 EDITION, AND "STANDARD DETAILS AND STANDARD SPECIFICATIONS FOR SEWERS", 1986 EDITION.

35. CONTACT PWD WATER TRANSPORT RECORDS (1101 MARKET STREET, 2ND FLOOR, PHONE: 215-685-6271) FOR ADDITIONAL APPROVALS AND PERMITS REQUIRED FOR ALL WATER SERVICES, METERS, AND CONNECTIONS TO THE EXISTING AND/OR PROPOSED PWD FACILITIES.

36. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE PADEP'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1, AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

37. A DUST CONTROL PERMIT WILL BE REQUIRED WHEN COMPLETELY DEMOLISHING A BUILDING OR STRUCTURE THAT IS MORE THAN THREE (3) STORIES, GREATER THAN FORTY (40) FEET TALL, OR ENCOMPASSES MORE THAN TEN THOUSAND (10,000) SQUARE FEET; COMPLETELY OR PARTIALLY DEMOLISHING ANY BUILDING OR STRUCTURE BY IMPLOSION; OR ENGAGING IN EARTHWORKS, DEFINED AS "CLEARING, GRUBBING, OR EARTH DISTURBANCE OF ANY LAND IN EXCESS OF 5,000 SQUARE FEET."

CUT AND FILL MATERIALS

1. IF ALL CUT AND FILL MATERIALS WILL BE USED ON THE SITE, A CLEAN FILL DETERMINATION IS NOT REQUIRED BY THE CONTRACTOR UNLESS THERE IS A BELIEF THAT A SPILL OR RELEASE OF A REGULATED SUBSTANCE OCCURRED ON SITE.

2. SHOULD THE SITE REQUIRE FILL IMPORTED FROM AN OFF SITE LOCATION, THE CONTRACTOR WILL BE RESPONSIBLE FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND THE DETERMINATION OF CLEAN FILL.

3. ALL FILL MATERIAL MUST BE USED IN ACCORDANCE WITH PA DEP'S POLICY "MANAGEMENT OF FILL", DOCUMENT NUMBER 258-2182-773.

4. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: 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. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF PA DEP'S POLICY "MANAGEMENT OF FILL".

5. 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.)

6. FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN PA DEP'S POLICY "MANAGEMENT OF FILL". ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.

7. FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH PA DEP'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.

CUT AND FILL MATERIALS
[ADDITIONAL CONSTRAINTS WITHIN WISSAHICKON VALLEY PARK]

1. THE NOTES IN THE ABOVE SECTION TITLED "CUT AND FILL MATERIALS" ARE THE MINIMUM REQUIREMENTS FOR COMPLIANCE WITH PA DEP'S MANAGEMENT OF FILL POLICY (DOCUMENT NO. 258-2182-773). ADDITIONAL CONSTRAINTS ARE REQUIRED FOR THE MANAGEMENT OF CUT AND FILL MATERIALS WITHIN WISSAHICKON VALLEY PARK, AS OUTLINED IMMEDIATELY FOLLOWING.

2. WHILE DEFINED AS CLEAN FILL IN NOTE 5 ABOVE (CUT AND FILL MATERIALS), USED ASPHALT, BRICK, BLOCK, AND CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES IS UNACCEPTABLE FOR USE WITHIN WISSAHICKON VALLEY PARK, AND SHALL NOT BE USED FOR FILL MATERIAL WITHIN WISSAHICKON VALLEY PARK.

3. WHILE DEFINED AS CLEAN FILL IN NOTE 6 ABOVE (CUT AND FILL MATERIALS), FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE ARE UNACCEPTABLE FOR USE WITHIN WISSAHICKON VALLEY PARK, AND SHALL NOT BE USED FOR FILL MATERIAL WITHIN WISSAHICKON VALLEY PARK.

MAINTENANCE SCHEDULE

1. ALL EROSION CONTROL BMPS SHALL BE INSPECTED AND MAINTAINED AT LEAST WEEKLY, BEFORE ANY ANTICIPATED PRECIPITATION, AND AFTER ALL PRECIPITATION EVENTS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING THE REGULAR INSPECTIONS OF THE BMPS AND FOR PERFORMING ANY REQUIRED MAINTENANCE.

3. THE FOLLOWING MAINTENANCE INSTRUCTIONS, CLEANOUT LEVELS, AND REPAIR TIME FRAMES SHALL BE STRICTLY ADHERED TO.

BMP: STANDARD SILT FENCE (18" HIGH)
MAINTENANCE: INSPECT WEEKLY AND AFTER EACH RUNOFF EVENT. INITIATE NEEDED REPAIRS IMMEDIATELY AFTER INSPECTION. ANY SECTION UNDERMINED OR OVERTOPPED SHALL BE REPLACED WITH A ROCK FILTER OUTLET.
CLEANOUT LEVEL: 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE.
REPAIR TIME FRAME: ACCUMULATED SEDIMENT SHALL BE REMOVED WITHIN 24 HOURS. ROCK FILTER OUTLET REPLACEMENTS SHALL BE ACCOMPLISHED IMMEDIATELY.

BMP: COMPOST FILTER SOCK
MAINTENANCE: TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS. INSPECT WEEKLY AND AFTER EACH RUNOFF EVENT. INITIATE NEEDED REPAIRS IMMEDIATELY AFTER INSPECTION.
CLEANOUT LEVEL: 1/2 THE ABOVE-GROUND HEIGHT OF THE SOCK
REPAIR TIME: DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

BMP: WOOD CHIP FILTER BERM
MAINTENANCE: INSPECT WEEKLY AND AFTER EACH RUNOFF EVENT. INITIATE NEEDED REPAIRS IMMEDIATELY AFTER INSPECTION.
CLEANOUT LEVEL: 1/2 THE HEIGHT OF THE BERM.
REPAIR TIME FRAME: ACCUMULATED SEDIMENT SHALL BE REMOVED WITHIN 24 HOURS.

BMP: ROCK CONSTRUCTION ENTRANCE/EXIT
MAINTENANCE: THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. REMOVAL AND REPLACEMENT MAY BE REQUIRED IF ROCK IS TOO CLOGGED.
CLEANOUT LEVEL: SEDIMENT IS TRACKED ONTO THE ROADWAY.
REPAIR TIME FRAME: SEDIMENT TRACKED ONTO ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY.

BMP: PUMPED WATER FILTER BAG
MAINTENANCE: INSPECT DAILY. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. KEEP PUMP INTAKE SCREENS FLOATING AND FREE OF DEBRIS.
CLEANOUT LEVEL: REPLACE SEDIMENT FILTER BAG WHEN 1/2 FULL.
REPAIR TIME FRAME: IF PROBLEMS ARE DETECTED, CEASE PUMPING IMMEDIATELY AND DO NOT RESUME PUMPING UNTIL THE PROBLEMS ARE CORRECTED.

BMP: ROCK FILTER OUTLET
MAINTENANCE: INSPECT WEEKLY AND AFTER EACH RUNOFF EVENT. INITIATE NEEDED REPAIRS IMMEDIATELY AFTER INSPECTION. CLOGGED FILTER STONE (AASHTO NO. 57) SHOULD BE REPLACED.
CLEANOUT LEVEL: 1/2 THE HEIGHT OF THE FILTERS.
REPAIR TIME FRAME: REPLACE FILTER STONE OR COMPLETELY REBUILD THE ROCK FILTER BY THE END OF THE WORK DAY, OR SOONER IF RAIN IS FORECASTED.

BMP: ROCK FILTER
MAINTENANCE: INSPECT WEEKLY AND AFTER EACH RUNOFF EVENT. INITIATE NEEDED REPAIRS IMMEDIATELY AFTER INSPECTION. CLOGGED FILTER STONE (AASHTO NO. 57) SHOULD BE REPLACED.
CLEANOUT LEVEL: 1/2 THE HEIGHT OF THE FILTERS.
REPAIR TIME FRAME: REPLACE FILTER STONE OR COMPLETELY REBUILD THE ROCK FILTER BY THE END OF THE WORK DAY, OR SOONER IF RAIN IS FORECASTED.

BMP: FILTER BAG INLET PROTECTION
MAINTENANCE: INSPECT WEEKLY AND AFTER EACH RUNOFF EVENT. INITIATE REPAIRS IMMEDIATELY AFTER INSPECTION.
CLEANOUT LEVEL: REMOVE SEDIMENT WHEN 1/2 FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED TO A LEVEL WHERE THE INLET IS BYPASSED
REPAIR TIME FRAME: REMOVE ACCUMULATED SEDIMENT OR REPLACE IMMEDIATELY

BMP: TEMPORARY COFFERDAM
MAINTENANCE: INSPECT ONCE PER HOUR DURING BYPASS PUMPING OPERATIONS. ADD ADDITIONAL LAYERS OF SANDBAGS AS REQUIRED TO MAINTAIN POOLING LEVELS BELOW THE BOTTOM OF THE TOP LAYER OF SANDBAGS. ADJUST AND REPLACE SANDBAGS AS INSPECTION REQUIRES. SEAL SURFACE OF COFFERDAM WITH PLASTIC SHEETING IF LEAKS ARE NOTED.
CLEANOUT LEVEL: 1/2 THE HEIGHT OF THE COFFERDAM.
REPAIR TIME FRAME: CEASE BYPASS PUMPING OPERATIONS WITHIN 1 HOUR AND REMOVE ACCUMULATED SEDIMENT BY THE END OF EACH WORK DAY. PUMP BYPASS SHALL NOT BE REINSTALLED UNTIL ACCUMULATED SEDIMENT HAS BEEN REMOVED.

BMP: PUMP BYPASS
MAINTENANCE: PUMP BYPASS SYSTEM SHALL BE INSPECTED ONCE PER HOUR DURING OPERATIONS. DISCHARGE LINE SHALL BE INSPECTED FOR LEAKS. INTAKE SCREENS AND OUTLET ENERGY DISSIPATORS SHALL BE INSPECTED FOR CLOGS AND TO VERIFY COMPLETE ASSEMBLY.
CLEANOUT LEVEL: NONE (SEE TEMPORARY COFFER DAM)
REPAIR TIME FRAME: IMMEDIATELY CEASE PUMPING OPERATIONS IF DEFICIENCIES ARE NOTED. REPAIRS SHALL BE COMPLETED PRIOR TO RESUMING BYPASS PUMPING OPERATIONS.

4. ALL SEDIMENT REMOVED FROM EROSION CONTROL BMPS SHALL BE USED AS FILL MATERIAL WITHIN THE PROJECT LIMITS.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WEEKLY INSPECTIONS OF THE SITE BMPS AND INSPECTIONS AFTER EVERY STORMWATER EVENT. EACH INSPECTION MUST BE DOCUMENTED AND ALL REPAIR AND MAINTENANCE WORK MUST ALSO BE DOCUMENTED.

GENERAL PROJECT STARTUP SEQUENCE

1. AT LEAST SEVEN (7) DAYS PRIOR TO ANY EARTH DISTURBANCE, THE INSPECTIONS COORDINATOR OF PWD (OFFICE: 215-685-6387) MUST BE CALLED TO SCHEDULE A PRECONSTRUCTION MEETING.

2. AT LEAST THREE (3) DAYS PRIOR TO (APPLICANT TO NAME EACH SMP) INSTALLATION, THE INSPECTIONS COORDINATOR OF PWD (OFFICE: 215-685-6387) MUST BE CALLED TO SCHEDULE AN INSPECTION (FOR EACH SMP).

3. ALL STONE THAT MAKES UP THE (APPLICANT TO NAME EACH INFILTRATION SMP) MUST REMAIN FREE OF SEDIMENT. IF SEDIMENT ENTERS THE STONE, THE CONTRACTOR MAY BE REQUIRED TO REMOVE THE SEDIMENT AND REPLACE IT WITH CLEAN-WASHED STONE.

4. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT INSPECTIONS COORDINATOR OF PWD (OFFICE: 215-685-6387) FOR A FINAL INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.

5. AS SOON AS SLOPES, CHANNELS, DITCHES, AND OTHER DISTURBED AREAS REACH FINAL GRADE, THEY MUST BE STABILIZED. CESSATION OF ACTIVITY FOR FOUR (4) DAYS OR LONGER REQUIRES TEMPORARY STABILIZATION.

6. THE NPDES NOTICE OF TERMINATION (N.O.T.) MUST BE SUBMITTED TO PA DEP UPON COMPLETION OF CONSTRUCTION (WHEN APPLICABLE).

7. WATER PUMPED FROM WORK AREAS SHOULD BE TREATED FOR SEDIMENT REMOVAL PRIOR TO DISCHARGING TO A "SURFACE WATER" (WHEN APPLICABLE).

CONSTRUCTION SEQUENCE

1. LOCATE INLETS REQUIRING PROTECTION AND INSTALL FILTER BAG INLET PROTECTION. INLET PROTECTION MUST BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE ACTIVITIES.

2. INSTALL TEMPORARY PROTECTIVE FENCE AS SHOWN ON THE PLAN TO MINIMIZE THE FOOTPRINT OF DISTURBANCE.

3. EXCAVATE AND INSTALL ROCK CONSTRUCTION ENTRANCE(S).

4. USE ACCESS ROUTES AS SHOWN ON THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN. STABILIZE ACCESS ROUTE(S) AS NECESSARY WITH COARSE AGGREGATE, COARSE WOOD CHIPS, OR OTHER DURABLE MATERIALS TO BE REMOVED FOLLOWING THE COMPLETION OF CONSTRUCTION. MINIMIZE THE DESTRUCTION OF EXISTING VEGETATION WHENEVER POSSIBLE.

5. IDENTIFY STOCKPILE LOCATIONS AND INSTALL SILT FENCE, COMPOST FILTER SOCK, OR WOOD CHIP FILTER BERM. REFER TO PLANS FOR TYPICAL LOCATIONS. PLACE EXCAVATED AND STORED MATERIALS IN STOCKPILE LOCATIONS. IMMEDIATELY STABILIZE STOCKPILE(S).

6. INSTALL COMPOST SOCK WASHOUT.

7. DEMOLISH EXISTING STRUCTURES AND TREES ACCORDING TO THE DEMOLITION PLAN.

8. INSTALL TEMPORARY COFFERDAM AND PUMP BYPASS (OR OTHER APPROVED WATER MANAGEMENT BMP). REFER TO PLANS FOR TYPICAL SETUP LOCATION. THE CONTRACTOR IS RESPONSIBLE FOR SIZING THE SELECTED WATER MANAGEMENT BMP IN ACCORDANCE WITH THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL. INSTALL PUMPED WATER FILTER BAG. DEWATER WORK AREA.

9. COMMENCE CONSTRUCTION OF STREAM CHANNEL STRUCTURES AND CHANNEL GRADING IN ACCORDANCE WITH DESIGN DRAWINGS AND SPECIFICATIONS WORKING FROM THE UPSTREAM END OF PROJECT AREA TO THE DOWNSTREAM END.

10. INSTALL 15" HDPE PIPE, AND 4' STANDARD PWD SHALLOW INLET AS SHOWN ON THE PLANS. STORMWATER CONVEYANCE PIPES AND INLET MAY BE INSTALLED CONCURRENTLY WITH STREAM CHANNEL CONSTRUCTION WORK.

11. INSPECT INSTALLED STRUCTURES FOR ANY DEFICIENCIES AND CORRECT IMMEDIATELY.

12. SEED, MULCH, AND FERTILIZE IN ACCORDANCE WITH THE DESIGN DRAWINGS AND NOTES. PLACE BIODEGRADABLE EROSION CONTROL BLANKET AND PLANTINGS IN ACCORDANCE WITH THE DESIGN DRAWINGS, NOTES, AND SPECIFICATIONS.

13. REMOVE WATER MANAGEMENT BMPS.

14. AT THE END OF EACH WORKDAY APPLY TEMPORARY OR PERMANENT SEEDING (AS APPROPRIATE) AND MULCH TO AREAS DISTURBED DURING THE WORKDAY.

PROJECT CLOSEOUT SEQUENCE

1. UPON PROJECT COMPLETION, HAUL ANY LEFTOVER MATERIAL OFF THE SITE TO AN APPROVED LOCATION. SEED AND MULCH STOCKPILE AREAS AND ANY REMAINING DISTURBED AREAS.

2. REMOVE TEMPORARY ACCESS ROUTES AND PARKING/STAGING AREAS. BACKFILL AND STABILIZE ALL DISTURBED AREAS AS REQUIRED.

3. REMOVE STABILIZED ROCK CONSTRUCTION ENTRANCES. BACKFILL AND STABILIZE ALL DISTURBED AREAS AS REQUIRED.

4. REVEGETATE ALL DISTURBED AREAS IN ACCORDANCE WITH THE SPECIFICATIONS FOR PERMANENT EROSION AND SEDIMENT CONTROL MEASURES.

5. UPON REACHING SITE STABILIZATION, REMOVE ANY REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL BMPS.

EXISTING LEGEND

- LIMITS OF F.I.R.M. FLOODWAY
- AE — LIMITS OF F.I.R.M. ZONE AE
- X — LIMITS OF F.I.R.M. ZONE X
- LIMITS OF ASSUMED FLOODWAY FOR UNNAMED TRIBUTARY TO WISSAHICKON CREEK
- OHW — EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING GUIDE RAIL
- EXISTING FENCE
- EXISTING STONE WALL
- EXISTING TREE

DRAWING NO.	G-102
	FRIENDS OF THE WISSAHICKON
	VALLEY GREEN RUN RESTORATION
	PHILADELPHIA, PENNSYLVANIA
	NOTES
DSGN	CFB
DFTSMN	JRG
CHKR	DRA
APPV	MEL
SCALE	AS SHOWN
Plotted on:	2022-12-22

REV	DESCRIPTION	BY	APPV	DATE

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COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — MICHAEL EUGENE LOWER — PE071796

SKELLY AND LOY — A Terracon Company
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593 - FAX: (717) 232-1799 - WWW.skellyloy.com

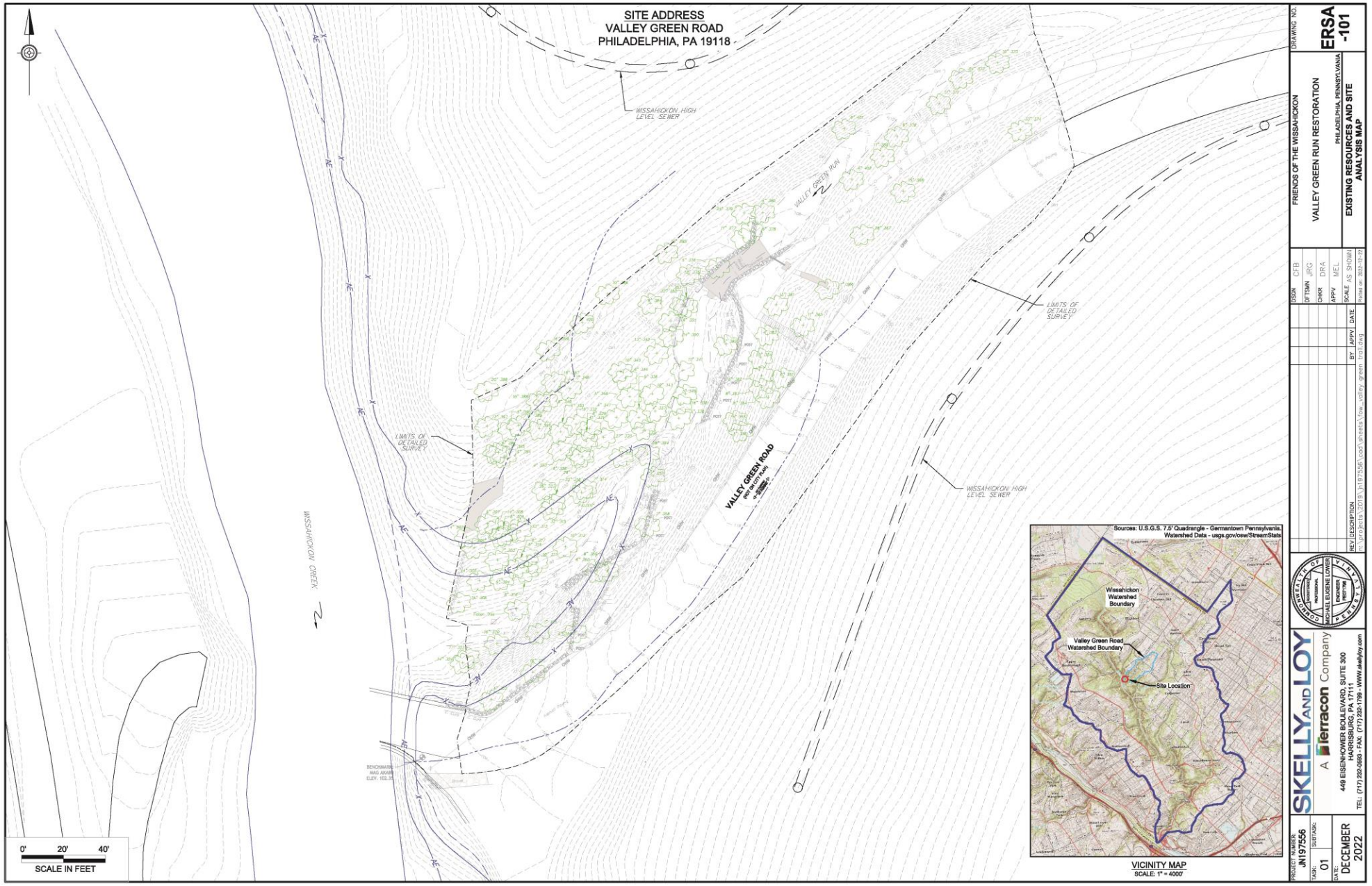
PROJECT NUMBER: JN197556
TASK: 01
SUBTASK:
DATE: DECEMBER 2022

FRIENDS OF THE WISSAHICKON

Let's be friends.

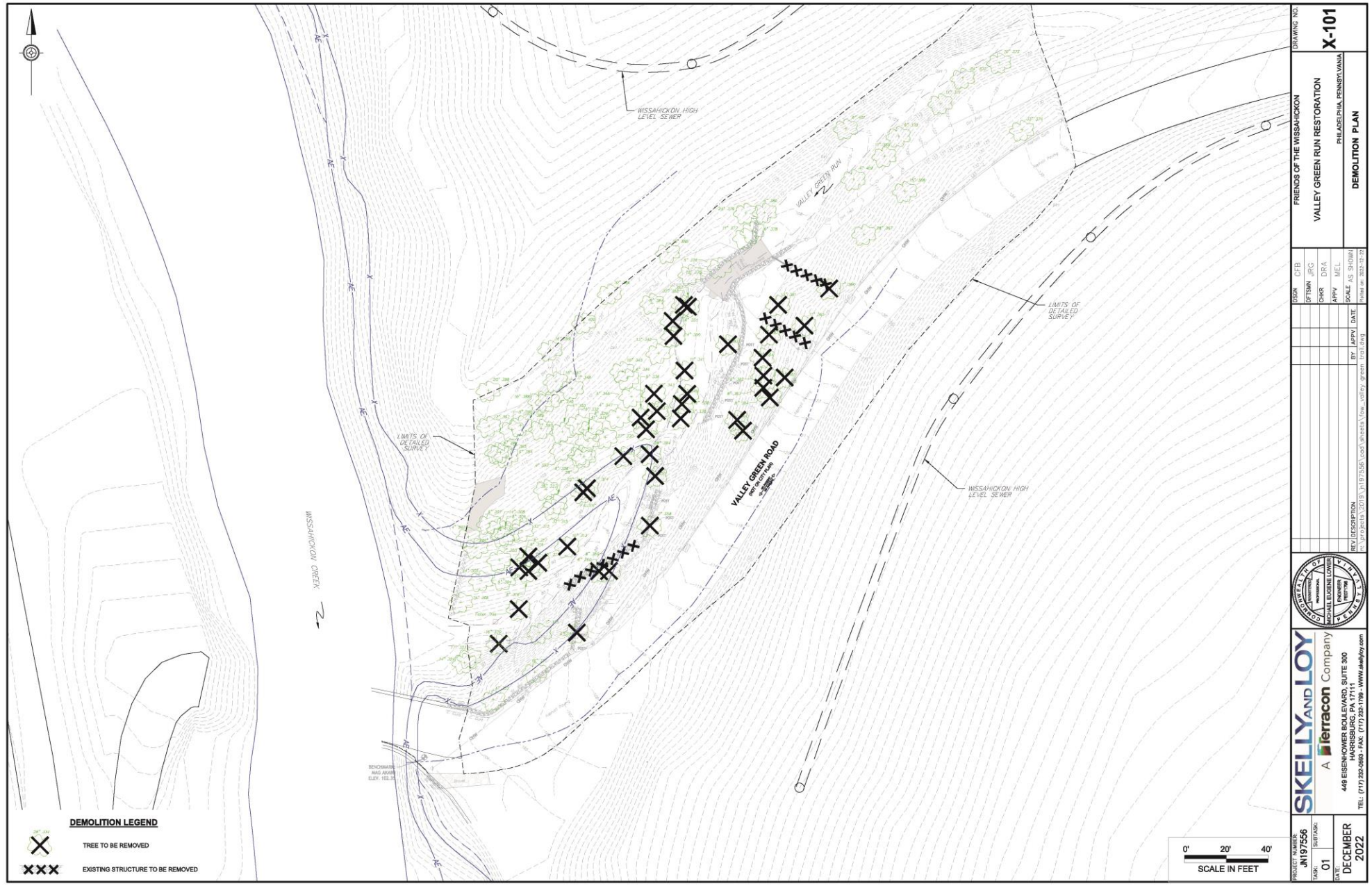
FRIENDS OF THE WISSAHICKON

Let's be friends.



FRIENDS OF THE WISSAHICKON

Let's be friends.



FRIENDS OF THE WISSAHICKON

VALLEY GREEN RUN RESTORATION

PHILADELPHIA, PENNSYLVANIA

DEMOLITION PLAN

DRAWING NO. X-101

DSGN CTB
DFTSMN JRG
CHKR DRA
APPV MEL
SCALE AS SHOWN

REV | DESCRIPTION | BY | APPV | DATE

N:\projects\2018\JN197556\cad\sheets\Xss_valley green troll.dwg

Plotted on: 2022-12-20

SKELLY AND LOY
A Terracon Company
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593 - FAX: (717) 232-1799 - WWW.skellyloy.com

PROJECT NUMBER: JN197556
TASK: 01 SUBTASK:
DATE: DECEMBER 2022

FRIENDS OF THE WISSAHICKON

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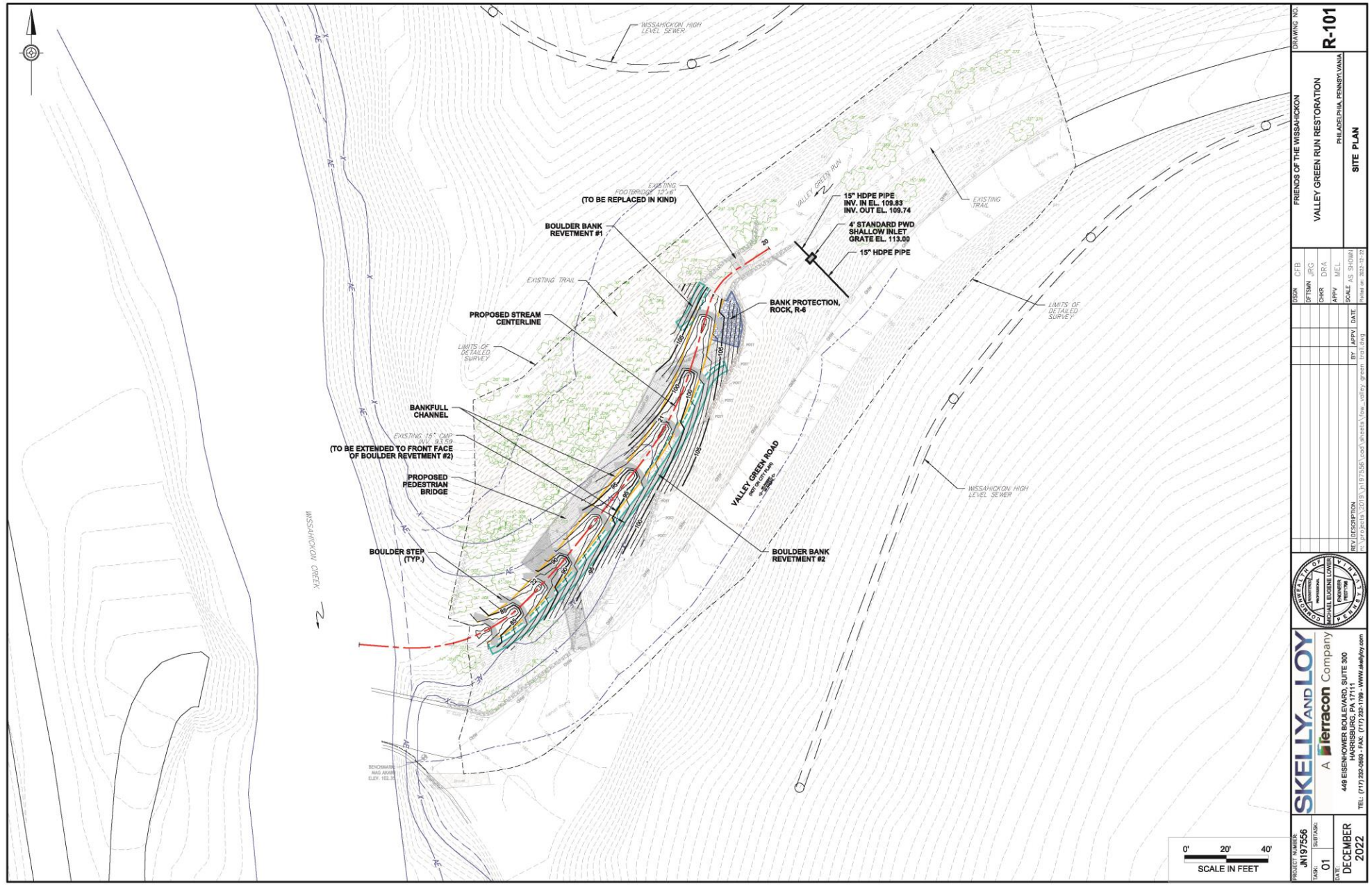

DRAWING NO. R-101

FRIENDS OF THE WISSAHICKON

VALLEY GREEN RUN RESTORATION

PHILADELPHIA, PENNSYLVANIA

SITE PLAN

DSGN	CTB
DFTSMN	JRC
CHKR	DRA
APPV	MEL
SCALE	AS SHOWN

REV	DESCRIPTION	BY	APPV	DATE

Plotted on: 2022-12-20

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COMMONWEALTH OF PENNSYLVANIA — Registered Professional Engineer — MICHAEL EUGENE LOWER

SKELLY AND LOY
A Terracon Company
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593 - FAX: (717) 232-1799 - WWW.skellyloy.com

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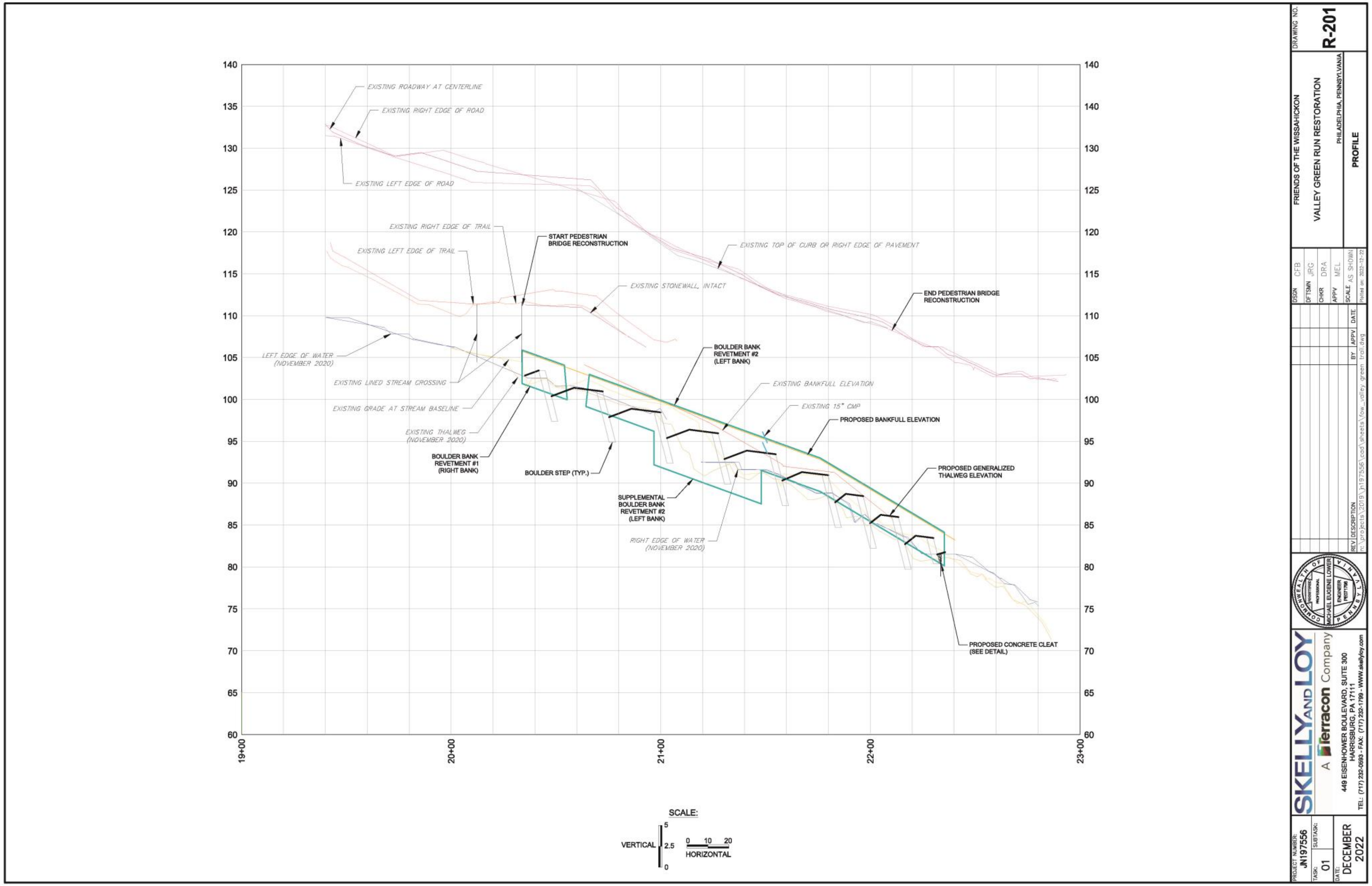

FRIENDS OF THE WISSAHICKON

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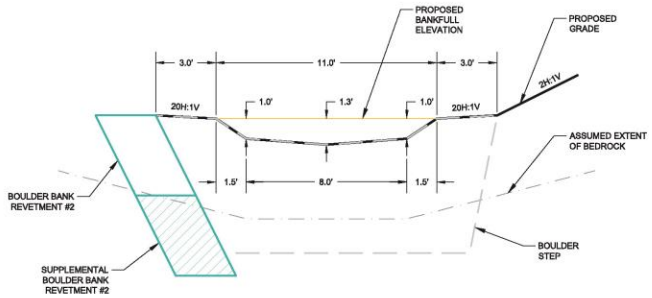
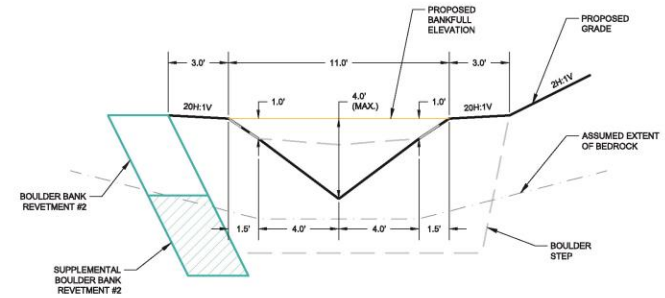


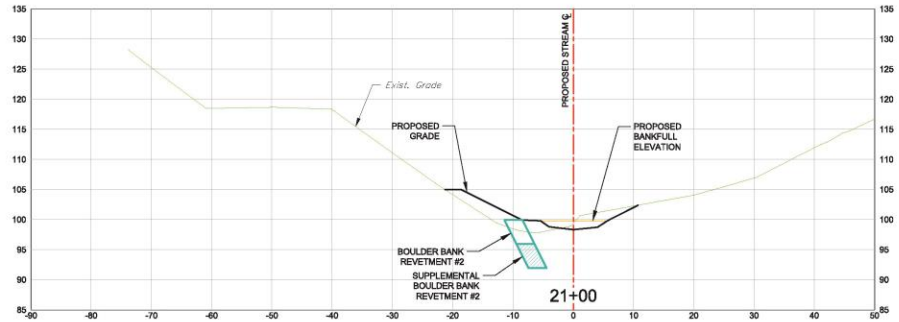
RIFFLE SECTION IMMEDIATELY PRECEDING STEP

0' 3' 6'
SCALE IN FEET

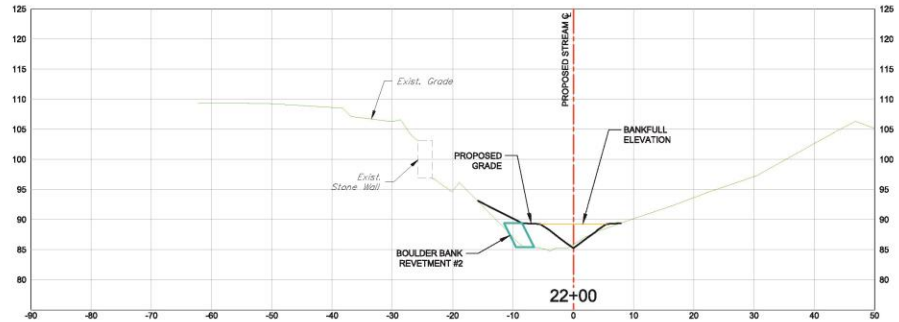


POOL SECTION IMMEDIATELY BELOW STEP

0' 3' 6'
SCALE IN FEET



0' 10' 20'
SCALE IN FEET



0' 10' 20'
SCALE IN FEET

DRAWING NO. R-301

FRIENDS OF THE WISSAHICKON
VALLEY GREEN RUN RESTORATION
PHILADELPHIA, PENNSYLVANIA
SECTIONS

DSGN CTB
DFTSMN JRC
CHKR DRA
APPV MEL
SCALE AS SHOWN
Plotted on: 2022-12-20

REV	DESCRIPTION	BY	APPV	DATE

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COMMONWEALTH OF PENNSYLVANIA
MICHAEL EUGENE LOWER
Engineer

SKELLY AND LOY
A Terracon Company
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593 - FAX: (717) 232-1799 - WWW.skellyloy.com

PROJECT NUMBER: JN197556
TASK: 01 SUBTASK:
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FRIENDS OF THE WISSAHICKON
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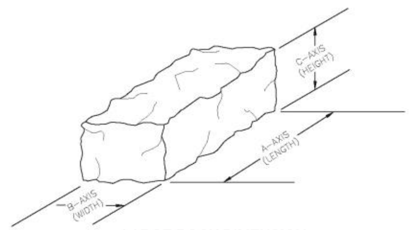
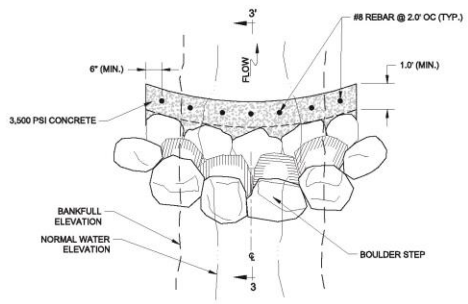
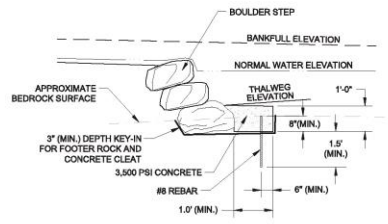


LARGE ROCK DIMENSION
NOT TO SCALE

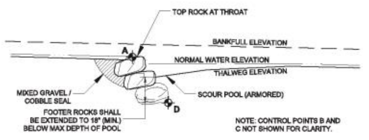


PLAN VIEW

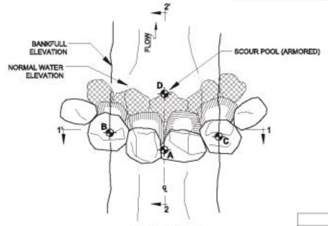


PROFILE VIEW 3-3'

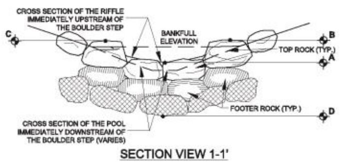
CONCRETE CLEAT
NOT TO SCALE



PROFILE VIEW 2-2'



PLAN VIEW



SECTION VIEW 1-1'

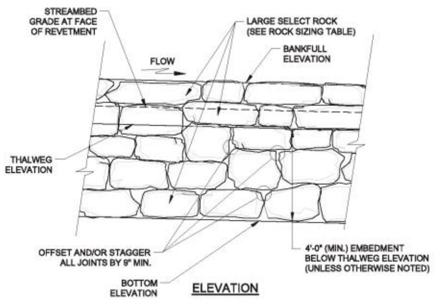
ROCK SIZING TABLE

BOULDER STEP	LENGTH (A-AXIS)	WIDTH (B-AXIS)	HEIGHT (C-AXIS)
MINIMUM (FT)	3.0	3.0	1.5
MAXIMUM (FT)	5.0	5.0	3.0

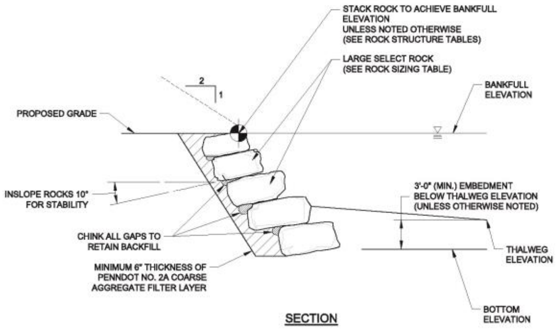
BOULDER STEP
NOT TO SCALE

GENERAL BOULDER STEP CONSTRUCTION NOTES

1. ALL BOULDER STEP STRUCTURES SHALL BE CONSTRUCTED UNDER THE DIRECT SUPERVISION OF, AND SUBJECT TO THE APPROVAL OF, A SUPERVISING ENGINEER (OR STREAM RESTORATION SPECIALIST) WITH EXPERIENCE IN FLUVIAL GEOMORPHOLOGY AND NATURAL CHANNEL RECONSTRUCTION.
2. THE BOULDER STEP STRUCTURES SHALL BE INSTALLED IN GENERAL ACCORDANCE WITH THE PLAN DETAILS AND IN THE LOCATIONS SHOWN IN THE PLANS, OR AS OTHERWISE APPROVED BY THE ENGINEER. ALL IN-STREAM STRUCTURES MAY BE FIELD ADJUSTED AS NEEDED TO ACHIEVE THE DESIRED IMPROVEMENTS TO CHANNEL CONVEYANCE AND STABILITY.
3. THE BOULDER STEP STRUCTURES SHALL BE INSTALLED IN A MANNER DESIGNED TO ACHIEVE THE FOLLOWING GEOMORPHOLOGICAL AND BIOLOGICAL OBJECTIVES: 1) TO RE-CREATE A STABLE AND NATURALISTIC STEP-POOL CHANNEL ARCHITECTURE; 2) TO PROVIDE BED AND BANK STABILIZATION; 3) TO ALLOW FOR NORMAL BEDLOAD SEDIMENT TRANSPORT; 4) TO REDIRECT FLOW VELOCITY VECTORS AWAY FROM ADJACENT STREAMBANKS; AND 5) TO PROVIDE WELL-OXYGENATED POOL HABITAT FOR AQUATIC ORGANISMS.
4. BOULDER STEP STRUCTURES SHALL BE CONSTRUCTED OF FLAT OR SEMI-FLAT ROCK. INDIVIDUAL ROCK FRAGMENTS SHALL BE DENSE, SOUND, AND FREE FROM CRACKS AND FISSURES. ROCK DENSITY SHALL BE AT LEAST 160 POUNDS PER CUBIC FOOT. NO CONCRETE, MAN-MADE ROCKS, OR SOFT OR FRIABLE ROCKS (SUCH AS SHALE) SHALL BE USED FOR THE CONSTRUCTION OF THE STEP STRUCTURES.
5. CONSTRUCTION OF THE BOULDER STEP STRUCTURES REQUIRES INDIVIDUAL SELECTION AND PLACEMENT OF EACH ROCK IN EACH STRUCTURE. INITIAL PREPARATION OF THE LOCATION WHERE THE STEP STRUCTURE IS TO BE PLACED MAY INCLUDE EXCAVATION, REMOVAL OF UNSUITABLE MATERIAL, PLACEMENT OF SELECT FOUNDATION MATERIALS, GRADING, AND BACKFILLING
6. UNLESS DIRECTED OTHERWISE BY THE ENGINEER, THE COMPONENTS OF THE BOULDER STEP STRUCTURES SHALL BE INSTALLED IN THE FOLLOWING ORDER: 1) FOOTER ROCKS, 2) FOOTER ROCK CHINKING, 3) GRADED GRAVEL/COBBLE SEAL, 4) TOP ROCKS, 5) TOP ROCK CHINKING, 6) GRADED GRAVEL/COBBLE SEAL, AND 7) POOL ARMOR.
7. FOOTER ROCKS SHALL BE PLACED INDIVIDUALLY AND KEYED INTO CHANNEL BED AND BANK AS SHOWN IN THE DETAILS. THE TOP SURFACE OF THE FOOTER ROCKS SHOULD BE PLACED TO PROVIDE A STABLE FOUNDATION FOR THE TOP ROCKS.
8. BEGINNING WITH THE FOOTER ROCKS, ROCKS IN THE STEP STRUCTURE SHALL BE DISTINCTLY INSLOPED (CANTED) IN AN UPSTREAM DIRECTION. THIS ANGLE SHALL GENERALLY VARY BETWEEN 6 TO 15 DEGREES AS MEASURED ALONG THE UPPER, FLAT FACE OF THE ROCK.
9. THE TOP ROCKS SHALL BE PLACED INDIVIDUALLY ABOVE AND UPSTREAM OF THE FOOTER ROCKS AS SHOWN IN THE PLAN DETAIL. THE TOP SURFACE OF TOP ROCK(S) WITHIN THE THROAT (OR CENTER SECTION) OF THE STEP STRUCTURE SHALL BE PLACED AS CLOSE AS POSSIBLE TO THE PROPOSED INVERT (THALWEG) ELEVATION, OR AS APPROVED BY THE ENGINEER.
10. THE TOP ROCKS IN THE STRUCTURE SHALL BE PLACED TO CREATE AN UNEVEN BUT OVERALL CONCAVE-UPWARDS SURFACE ALONG THE STEP STRUCTURE CREST (SEE SECTION VIEW 1-1'). THE TOP SURFACE OF THE TOP ROCKS AT THE CHANNEL MARGIN SHALL BE AT OR ABOVE THE BANKFULL CHANNEL ELEVATION. THE TOP ROCKS SHALL BE PLACED END-TO-END AND TIGHTLY WEDGED TOGETHER.
11. THE OUTER ENDS OF THE STEP STRUCTURE ARMS SHALL EXTEND AT LEAST 4 FEET INTO THE BANKFULL STREAMBANK.
12. NO SIGNIFICANT VOIDS SHALL EXIST BETWEEN ADJOINING ROCKS IN THE BOULDER STEP STRUCTURE. IN ORDER TO PREVENT EXCESSIVE PIPING BETWEEN ROCKS AND ENCOURAGE SEALING OF THE STRUCTURE, ALL SIGNIFICANT GAPS AND VOIDS BETWEEN ADJOINING ROCKS SHALL BE CHINKED (FROM THE UPSTREAM SIDE ONLY) WITH SMALLER ROCK FRAGMENTS. ALL VOIDS GREATER THAN OR EQUAL TO 3 INCHES IN SIZE SHALL BE INDIVIDUALLY CHINKED.
13. CARE SHALL BE TAKEN TO ENSURE A GRADED GRAVEL/COBBLE 'SEAL' IN THE STREAMBED ON THE UPSTREAM SIDE OF THE BOULDER STEP STRUCTURE. AT THE DESCRETION OF THE ENGINEER, STREAMBED MATERIAL EXCAVATED FOR THE STEP STRUCTURE MAY BE USED TO CREATE THE SEAL.
14. BANKS ADJACENT TO THE BOULDER STEP STRUCTURE SHALL BE REGRADED OR RE-SHAPED AFTER INSTALLATION OF THE STEP STRUCTURE, AS DIRECTED BY THE ENGINEER, TO PROVIDE THE PROPER DESIGN CHANNEL DIMENSIONS.
15. BOULDER STEP STRUCTURES SHALL BE CONSTRUCTED TO WITHIN +/-0.5' OF THE VERTICAL DESIGN ELEVATION, OR AS OTHERWISE DIRECTED BY THE ENGINEER.
16. ANY MATERIAL IMPORTED FOR THE GRAVEL/COBBLE SEAL SHALL BE 6-INCH MINUS OR AN APPROVED EQUAL. POOL ARMOR MATERIAL SHALL BE 18-INCH MINUS MATERIAL OR AN APPROVED EQUAL.
17. THE INDIVIDUAL ROCKS USED FOR THE FOOTER ROCKS, TOP ROCKS AND KEYSTONES IN THE BOULDER STEP STRUCTURE SHALL GENERALLY CONFORM TO THE FOLLOWING SIZE SPECIFICATIONS IN THE ROCK SIZING TABLE.
18. THE RATIOS OF (LENGTH/HEIGHT) AND (WIDTH/HEIGHT) SHALL BE GREATER THAN OR EQUAL TO 1.50.
19. DUE TO THE WIDE RANGE OF ACCEPTABLE ROCK THICKNESSES, ACHIEVEMENT OF THE MINIMUM EMBEDMENT DEPTH MAY REQUIRE MORE LAYERS OF ROCK THAN DEPICTED IN THE ROCK STRUCTURE DETAIL.



ELEVATION



SECTION

ROCK SIZING TABLE

BOULDER BANK REVETMENT	LENGTH (A-AXIS)	WIDTH (B-AXIS)	HEIGHT (C-AXIS)
MINIMUM (FT)	3.0	3.0	1.5
MAXIMUM (FT)	5.0	5.0	3.0

BOULDER BANK REVETMENT
NOT TO SCALE

GENERAL BANK PROTECTION ROCK STRUCTURE NOTES
[APPLY TO BOULDER BANK REVETMENT]

1. THE BOULDER BANK REVETMENT SHALL BE INSTALLED AS GENERALLY SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. THE INTENT IS TO ACHIEVE A STABLE, 'NATURAL-APPEARING' TOE REVETMENT WHICH IS SOMEWHAT IRREGULAR IN PLANFORM AND SECTION. THIS WILL PROVIDE A COMPLEX SHORELINE ENVIRONMENT.
2. BOULDERS FOR THE BOULDER BANK REVETMENT SHALL CONSIST OF SELECT BLOCK-SHAPED ROCK (BLOCKSTONE) WITH THE DIMENSIONS INDICATED IN THE ROCK TABLE.
3. BANK BATTER (FACE ANGLE) SHALL GENERALLY BE 1H:1V, OR AS OTHERWISE DIRECTED BY THE ENGINEER.
4. EMBED FOOTER ROCK IN A TOE TRENCH EXCAVATED TO A MINIMUM DEPTH OF 4.0' BELOW THALWEG UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
5. CARE SHALL BE TAKEN TO INSLOPE PLACED BOULDERS DOWN AND INTO THE BANK (I.E. PLACE BOULDERS "DOWN AT THE HEEL") TO ENSURE BOULDER STABILITY, AS SHOWN IN THE PLAN DETAILS.
6. THE ELEVATION OF THE TOP OF THE BOULDER BANK REVETMENT SHALL FOLLOW THE PROPOSED BANKFULL ELEVATION SHOWN ON THE PROFILE, OR AS OTHERWISE DIRECTED BY THE ENGINEER. SEE CROSS SECTIONS AND PROFILE FOR BANKFULL ELEVATIONS.
7. INTERSPERSE DIFFERENT BOULDER SIZES IN THE REVETMENT TO ACHIEVE A NATURAL APPEARANCE. OFFSET THE JOINTS BETWEEN BOULDERS IN ADJACENT COURSES IN A ONE-OVER-TWO PATTERN IN FACE VIEW.
8. SLIGHTLY STAGGER THE BOULDERS ALONG THE LENGTH OF THE BANK TO CREATE MINOR UNDULATIONS ALONG THE ROCK-PROTECTED BANKLINE.
9. ADJACENT BOULDERS IN ANY COURSE SHALL BE TIGHTLY WEDGED TOGETHER END-TO-END AND THOROUGHLY SEATED ONE ON TOP OF THE OTHER SO THAT THEY ARE STABLE. NO BOULDER IN THE REVETMENT SHALL BE UNSTABLE UNDERFOOT OR SUSCEPTIBLE TO DISPLACEMENT BY STREAM FORCES.
10. COARSE AGGREGATE FILTER MATERIAL (PENNDOT 2A OR EQUAL) SHALL BE PLACED ON THE LANDWARD SIDE OF THE REVETMENT, AT LEAST 6 INCHES THICK.
11. LARGER VOIDS BETWEEN ADJACENT BOULDERS SHALL BE HAND-CHINKED FROM BEHIND WITH APPROPRIATELY-SIZED ROCK FRAGMENTS BEFORE INSTALLATION OF THE COARSE AGGREGATE FILTER MATERIAL AND SOIL BACKFILL.
12. THE UPSTREAM ENDS OF THE BOULDER BANK REVETMENT SHALL CURL AWAY FROM THE BANKFULL CHANNEL AND KEY INTO THE BANK AS SHOWN ON THE PLAN, OR SHALL BE OTHERWISE TERMINATED AS DIRECTED BY THE ENGINEER.

TREATMENT OF BEDROCK, ROCK STRUCTURES
[BOULDER BANK REVETMENT, BOULDER STEP]

1. IF SCHIST, PHYLLITE, OR OTHER SOFT WEATHERED BEDROCK IS ENCOUNTERED DURING EXCAVATION FOR THE ROCK STRUCTURES (BOULDER BANK REVETMENT, BOULDER STEP), EXTEND EXCAVATION THROUGH THE SOFT WEATHERED BEDROCK BY MEANS OF RIPPING, EXCAVATING, TEARING, OR OTHER MECHANICAL MEANS TO ACHIEVE THE MINIMUM SPECIFIED EMBEDMENT DEPTH.
2. IF DOLOMITE, SHALE, OR OTHER HARD TO VERY HARD BEDROCK IS ENCOUNTERED, PERFORM LIMITED EXCAVATION AS NECESSARY TO PROVIDE A UNIFORM SURFACE FOR THE FIRST COURSE OF ROCK.
3. SLOPE THE BOTTOM OF ALL ROCK EXCAVATION AWAY FROM THE CHANNEL TO ENSURE THAT THE FIRST AND SUBSEQUENT COURSES OF ROCK ARE INSLOPED 10 DEGREES.

DRAWING NO. R-501
FRIENDS OF THE WISSAHICKON
VALLEY GREEN RUN RESTORATION
PHILADELPHIA, PENNSYLVANIA
DETAILS

DSGN CFB | DFTSMN JRG | CHKR DRA | APPV MEL | SCALE AS SHOWN

PROJECT NUMBER: JN197556
TASK: 01
DATE: DECEMBER 2022

SKELLY AND LOY
A Terracon Company
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593 - FAX: (717) 232-1799 - WWW.skellyloy.com

FRIENDS OF THE WISSAHICKON
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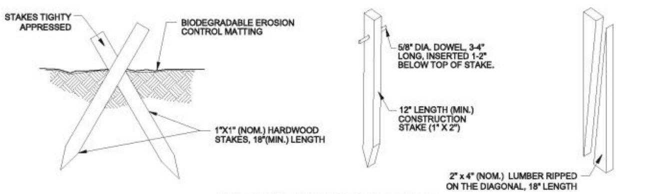
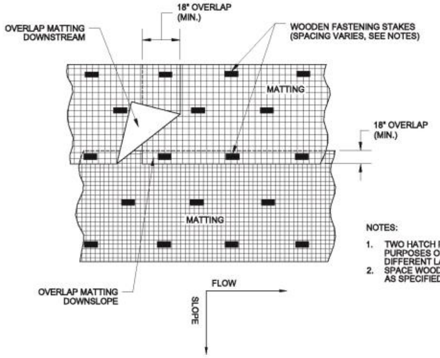


WOODEN FASTENING STAKES

NOT TO SCALE



NOTES:

1. TWO HATCH PATTERNS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY TO DEPICT THE SAME MATERIAL IN DIFFERENT LAYERS.
2. SPACE WOODEN FASTENING STAKES AT 24" (MAX.) OR AS SPECIFIED BY THE MATTING MANUFACTURER.

BIODEGRADABLE EROSION CONTROL MATTING

NOT TO SCALE

PROJECT NUMBER: JN197556
TASK: 01 SUBTASK:
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SKELLY AND LOY
A Terracon Company
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593 - FAX: (717) 232-1799 - WWW.skellyloy.com

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
MICHAEL EUGENE LOWER
PE071798

REV	DESCRIPTION	BY	APPV	DATE

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DSGN CFB
DFTSMN JRG
CHKR DRA
APPV MEL
SCALE AS SHOWN
Plotted on: 2022-12-22

FRIENDS OF THE WISSAHICKON
VALLEY GREEN RUN RESTORATION
PHILADELPHIA, PENNSYLVANIA
DETAILS

DRAWING NO. R-502

FRIENDS OF THE WISSAHICKON

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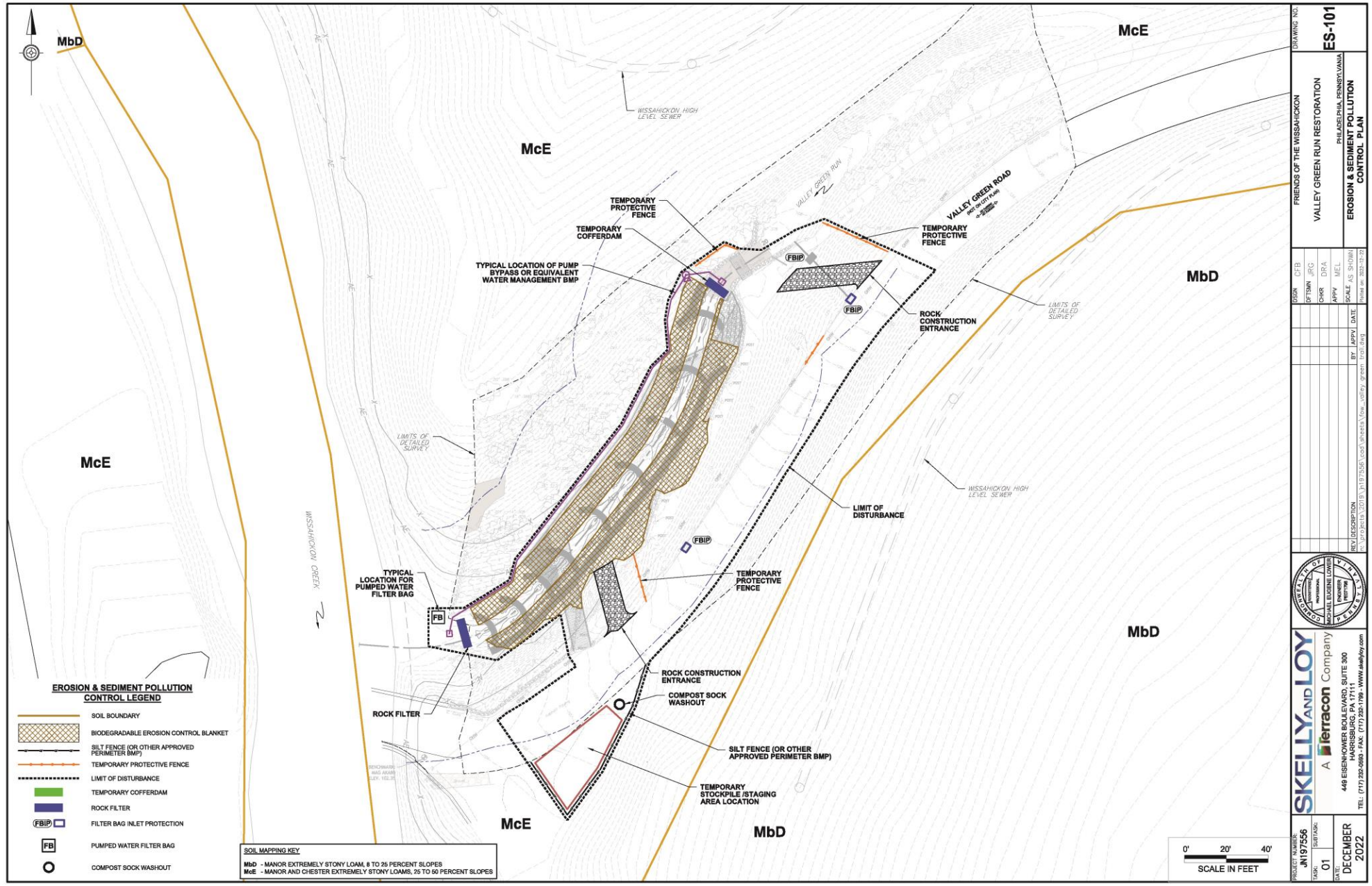

FRIENDS OF THE WISSAHICKON

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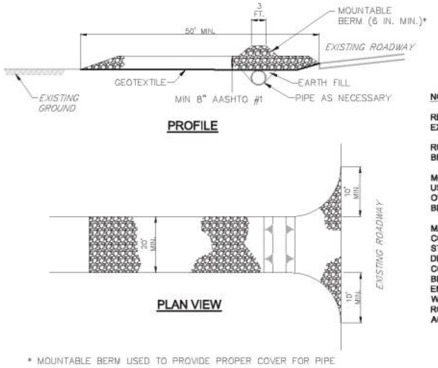


NOTES:

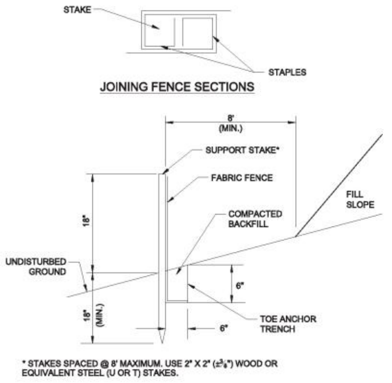
REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

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.

ES-3-1 ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE



ES-4-7 STANDARD SILT FENCE (18" HIGH)

1. FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3.

TABLE 4.3
FABRIC PROPERTIES FOR SILT FENCE

FABRIC PROPERTY	MINIMUM ACCEPTABLE VALUE	TEST METHOD
GRAB TENSILE STRENGTH (LB)	120	ASTM D1682
ELONGATION AT FAILURE (%)	20% MAX.	ASTM D1682
MULLEN BURST STRENGTH (PSI)	200	ASTM D 3786
TRAPEZOIDAL TEAR STRENGTH (LB)	50	
PUNCTURE STRENGTH (LB)	40	ASTM D 751 (MODIFIED)
SLURRY FLOW RATE (GAL/MIN/SF)	0.3	ASTM 5141
EQUIVALENT OPENING SIZE	30	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY (%)	80	ASTM G-26

2. FABRIC WIDTH SHALL BE 30" MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.

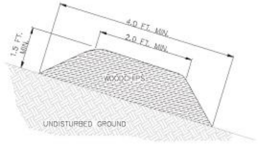
3. SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT (SEE FIGURE 4.1).

4. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVEGROUND HEIGHT OF THE FENCE.

5. ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL ES-4-6).

6. FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

ES-4-7 STANDARD SILT FENCE (18" HIGH)
NOT TO SCALE



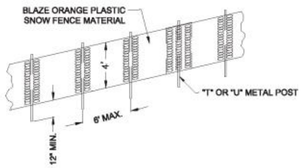
NOTES:

PRIOR TO PLACEMENT OF THE BERM, OBSTRUCTIONS SUCH AS TREE LIMBS, LARGE ROCKS, ETC. SHALL BE REMOVED.

WOOD CHIP FILTER BERM SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BERM SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BERM ALIGNMENT. WOOD CHIP BERMS SHALL NOT BE LOCATED IN AREAS OF CONCENTRATED FLOW OR USED TO CONSTRUCT SEDIMENT TRAPS OR OTHER IMPOUNDMENTS.

BERMS MAY BE LEVELED WHEN THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED OR LEFT IN PLACE.

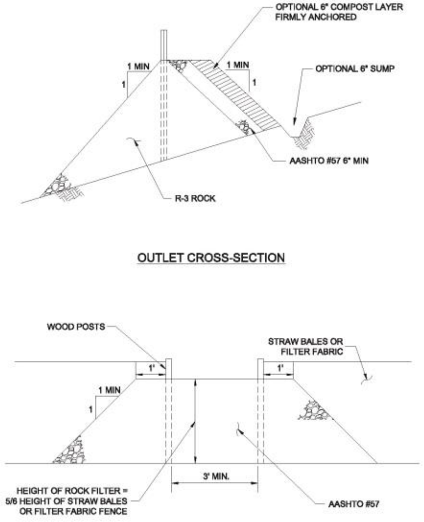
ES-4-12 WOOD CHIP FILTER BERM
NOT TO SCALE



NOTES:

1. INSTALL THE FENCE USING A METAL "T" OR "U" POST DRIVEN INTO THE GROUND TO A DEPTH OF 12 TO 18 INCHES. POSTS SHOULD BE SPACED EVERY 6 FEET.
   NOTE: NOTCHED POSTS ARE IDEAL TO PREVENT THE FENCE FROM SLIPPING.
2. SECURE THE FENCE TO THE POST USING THREE WIRE TIES, WRAPPED AROUND THE FENCE STRAND AND THE POST. TENSION WIRE OR ROPE MAY BE USED AS A TOP STRINGER AND WOVEN THROUGH THE TOP ROW OF STRANDS TO PREVENT POTENTIAL SAGGING.
3. TWO ROLLS OF SAFETY FENCE MAY BE OVERLAPPED AT THE INTERSECTION OF A POST AND SECURED WITH WIRE TIES.

TEMPORARY PROTECTIVE FENCE
NOT TO SCALE



ES-4-6 ROCK FILTER OUTLET

1. A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

2. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

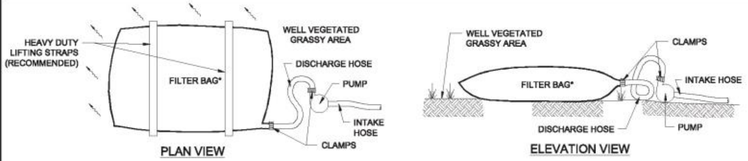
ES-4-6 ROCK FILTER OUTLET
NOT TO SCALE

DRAWING NO. ES-501
FRIENDS OF THE WISSAHICKON
VALLEY GREEN RUN RESTORATION
PHILADELPHIA, PENNSYLVANIA
EROSION & SEDIMENT POLLUTION CONTROL DETAILS
DSGN CFB | DFTSMN JRG | CHKR DRA | APPV MEL | SCALE AS SHOWN
REV | DESCRIPTION | BY | APPV | DATE

SKELLY AND LOY
A Terracon Company
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593 - FAX: (717) 232-1799 - WWW.skellyloy.com

PROJECT NUMBER: JN197556
TASK: 01
SUBTASK:
DATE: DECEMBER 2022

FRIENDS OF THE WISSAHICKON
Let's be friends.



ES-3-16 PUMPED WATER FILTER BAG

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

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

2. 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.

3. 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.

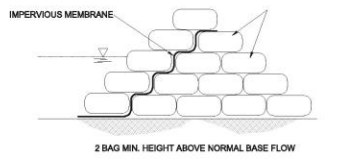
4. NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

5. 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.

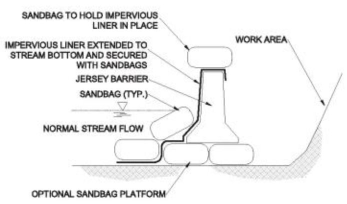
6. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

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

ES-3-16 PUMPED WATER FILTER BAG
NOT TO SCALE



STACKED SANDBAGS OPTION



JERSEY BARRIER OPTION

ES-3-15 SANDBAG DIVERSION DAM OR COFFERDAM
NOT TO SCALE

STANDARD E&S WORKSHEET # 21
Temporary and Permanent Vegetative Stabilization Specifications

PROJECT NAME: VALLEY GREEN RUN RESTORATION
LOCATION: CITY OF PHILADELPHIA, PHILADELPHIA, PA
PREPARED BY: MCN DATE: 2022-12-16
CHECKED BY: CFB DATE: 2022-12-16

SPECIFICATIONS: The Department recommends the use of the Penn State publication, "Erosion Control and Conservation Plantings on Noncropland," as the standard to use for the selection of species, seed specifications, mixtures, liming and fertilizing, time of seeding, and seeding methods. Specifications for these items may also be obtained from PennDOT's Publication # 408, Section 804 or by contacting the applicable county conservation district. Upon selection of a reference, that reference should be used to provide all specifications for seeding, mulching, and soil amendments. The following specification will be used for this project:

(TEMPORARY)
*SPECIES: ANNUAL RYE
% PURE LIVE SEED: 100 %
APPLICATION RATE: 40 LB./ACRE
FERTILIZER TYPE: 50-50-50 (X-X-X)
FERTILIZER APPL. RATE: 150 LB./ACRE
LIMING RATE: 1 T./ACRE
MULCH TYPE: STRAW
MULCHING RATE: 3.0 T./ACRE

(PERMANENT) TOPSOIL PLACEMENT DEPTH: IN.
*SPECIES: SEE LANDSCAPING SPECIFICATIONS
% PURE LIVE SEED: %
APPLICATION RATE LB./ACRE
FERTILIZER TYPE: (X-X-X)
FERTILIZER APPL. RATE: LB./ACRE
LIMING RATE: T./ACRE
MULCH TYPE:
MULCHING RATE: T./ACRE
ANCHOR MATERIAL:
ANCHORING METHOD:
RATE OF ANCHOR MATERIAL APPL.: LB./ACRE
SEEDING SEASON DATES:

(PERMANENT - STEEP SLOPE)
TOPSOIL PLACEMENT DEPTH: IN.
*SPECIES: Hard Fescue Mix (50%), Creeping Red Fescue (35%), Annual Ryegrass (10%)
% PURE LIVE SEED: 97 %
APPLICATION RATE: 48 LB./ACRE
FERTILIZER TYPE: 10-20-20 (X-X-X)
FERTILIZER APPL. RATE: 675 LB./ACRE
LIMING RATE: 2 T./ACRE
MULCH TYPE: STRAW
MULCHING RATE: 3.0 T./ACRE
ANCHOR MATERIAL: EROSION CONTROL BLANKET
ANCHORING METHOD: STAKED (SEE EROSION CONTROL PLANS)
RATE OF ANCHOR MATERIAL APPL.: LB./ACRE
SEEDING SEASON DATES: MARCH 15 - JUNE AND AUGUST 1 - OCTOBER 15

*If more than one species is used, indicate application rate for each species.
Note: This worksheet should be added to the plan drawings.

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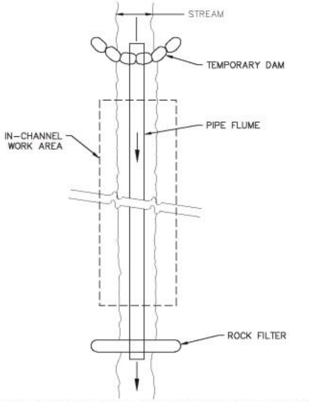


RIGID OR FLEXIBLE PIPE FLUME THROUGH A WORK AREA CONSTRUCTION SEQUENCE

1. INSTALL TEMPORARY PIPE THROUGH THE WORK AREA. PLACE OUTLET OF TEMPORARY PIPE TO MINIMIZE EROSION AT DISCHARGE SITE OR PROVIDE TEMPORARY ENERGY DISSIPATION MEASURES.

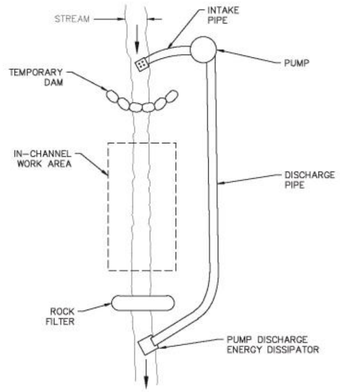
2. CONSTRUCT A COFFERDAM UPSTREAM OF THE WORK AREA TO DIVERT FLOW THROUGH THE TEMPORARY PIPE. ANCHOR AND SEAL TEMPORARY PIPE SECURELY AT INLET.

3. CONSTRUCT A ROCK FILTER DOWNSTREAM OF WORK AREA AND UPSTREAM OF TEMPORARY PIPE DISCHARGE.

4. PERFORM CONSTRUCTION ACTIVITIES WITHIN THE WORK AREA.

5. UPON COMPLETION OF CONSTRUCTION, REMOVE THE TEMPORARY COFFERDAM, TEMPORARY PIPE, AND ROCK FILTER.

OPTION 1
RIGID OR FLEXIBLE PIPE FLUME
THROUGH A WORK AREA



TEMPORARY COFFERDAM AND PUMP BYPASS CONSTRUCTION SEQUENCE

1. SET UP BYPASS PUMP AND TEMPORARY PIPING. PLACE OUTLET OF TEMPORARY PIPE TO MINIMIZE EROSION AT DISCHARGE SITE OR PROVIDE TEMPORARY ENERGY DISSIPATION MEASURES. FIRMLY ANCHOR PUMP AND PIPING.

2. CONSTRUCT OUTLET PROTECTION IF NEEDED.

3. CONSTRUCT TEMPORARY COFFERDAM UPSTREAM OF WORK AREA TO IMPOUND WATER FOR BYPASS PUMP INTAKE. USE FLOATING INTAKE FOR PUMPS WHERE POSSIBLE.

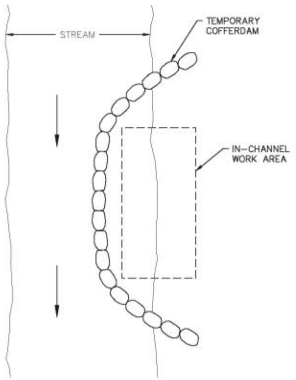
4. CONSTRUCT A ROCK FILTER DOWNSTREAM OF WORK AREA AND UPSTREAM OF TEMPORARY PIPE DISCHARGE.

5. CHECK OPERATION OF PUMP AND PIPING SYSTEM.

6. PERFORM CONSTRUCTION WITHIN THE WORK AREA.

7. UPON COMPLETION OF CONSTRUCTION, REMOVE THE TEMPORARY COFFERDAM, BYPASS PUMP, TEMPORARY PIPE AND ROCK FILTER.

OPTION 2
TEMPORARY COFFERDAM AND
PUMP BYPASS AROUND
IN-CHANNEL WORK AREAS



IN-STREAM COFFERDAM CONSTRUCTION SEQUENCE

1. CONSTRUCT COFFERDAM FROM THE EXISTING CHANNEL EMBANKMENT UPSTREAM OF THE PROJECT CONSTRUCTION AREA TURNING ROUGHLY PARALLEL TO THE FLOW OF THE STREAM AND TYING BACK IN TO THE EXISTING CHANNEL EMBANKMENT DOWNSTREAM OF THE PROJECT CONSTRUCTION AREA. LIMIT THE ENCLOSED AREA FOR CONSTRUCTION TO ONLY WHAT IS NECESSARY FOR CONSTRUCTION ACTIVITY. LEAVE SUFFICIENT UNIMPEDED SPACE OUTSIDE THE ENCLOSURE FOR CONTINUOUS FLOW IN EXISTING CHANNEL.

2. DEWATER EXCAVATION IN ACCORDANCE WITH TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES NOTE 4.

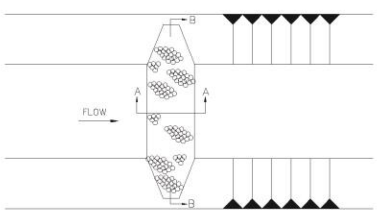
3. PERFORM REQUIRED CONSTRUCTION ACTIVITIES IN THE AREA ENCLOSED BY THE COFFERDAM.

4. UPON COMPLETION OF CONSTRUCTION, REMOVE THE TEMPORARY COFFERDAM.

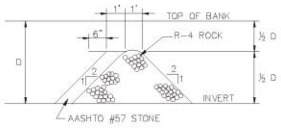
OPTION 3
IN-STREAM COFFERDAM DIVERSION

WATER MANAGEMENT BMP-OPTIONS
NOT TO SCALE

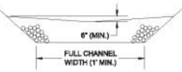
FOR 3' ≤ D, USE R-4
FOR 2' ≤ D, USE R-3
NOT APPLICABLE FOR D < 2'



PLAN VIEW



SECTION A-A



SECTION B-B

ES-4-14 ROCK FILTER

FILTER NO.	LOCATION	D (FT.)	RIPRAP SIZE
1	ALL ROCK FILTERS	3.0	R-4

1. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTER.

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

ES-4-14 ROCK FILTER
NOT TO SCALE

DRAWING NO. ES-502
FRIENDS OF THE WISSAHICKON
VALLEY GREEN RUN RESTORATION
PHILADELPHIA, PENNSYLVANIA
EROSION & SEDIMENT POLLUTION CONTROL DETAILS

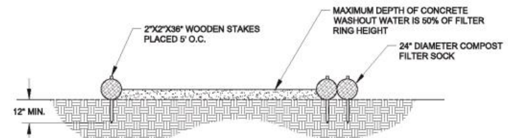
DSGN CFB
DFTSMN JRG
CHKR DRA
APPV MEL
SCALE AS SHOWN

REV DESCRIPTION BY APPV DATE

SKELLY AND LOY A Terracon Company
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593 - FAX: (717) 232-1799 - www.skellyloy.com

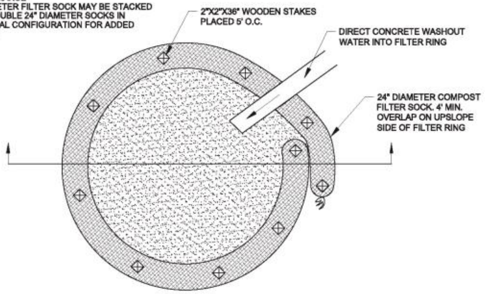
PROJECT NUMBER: JN197556
TASK: 01
SUBTASK:
DATE: DECEMBER 2022

FRIENDS
OF THE
WISSAHICKON
Let's be friends.



SECTION

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



PLAN

A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.
ADAPTED FROM FILTREXX

COMPOST SOCK WASHOUT

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 (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
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)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years
Two-ply systems					
Inner Containment Netting			HDPE biaxial net		
			Continuously wound		
			Fusion-welded junctures		
			3/4" X 3/4" Max. aperture size		
Outer Filtration Mesh			Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch)		
			3/16" Max. aperture size		
Sock fabrics composed of burlap may be used on projects lasting 6 months or less.					

Filtrexx & JMD

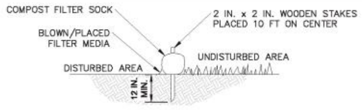
TABLE 4.2
Compost Standards

Organic Matter Content	25% - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5 - 8.5
Moisture Content	30% - 60%
Particle Size	98% pass through 3/8" sieve
Soluble Salt Concentration	5.0 dS/m (mmhos/cm) Maximum

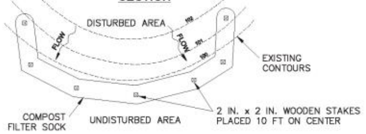
Filtrexx

ES-3-15 SOCK FABRIC AND COMPOST STANDARDS

NOT TO SCALE



SECTION



PLAN VIEW

NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO 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.

COMPOST FILTER SOCKS

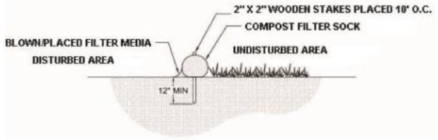
SOCK NO.	Dia. In.	LOCATION	SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER (FT)
N/A	18"	TEMPORARY STOCKPILES	25% MAX	8' MIN

ES-4-1 COMPOST FILTER SOCK

NOT TO SCALE

STANDARD E&S WORKSHEET #1
Compost Filter Socks

PROJECT NAME: VALLEY GREEN RUN RESTORATION
LOCATION: CITY OF PHILADELPHIA, PHILADELPHIA PA
PREPARED BY: MCN DATE: 2022-12-22
CHECKED BY: JDM DATE: 2022-12-22



SOCK NO.	Dia. In.	LOCATION	SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER (FT)
N/A	18"	TEMPORARY STOCKPILES	25% MAX	8' MIN

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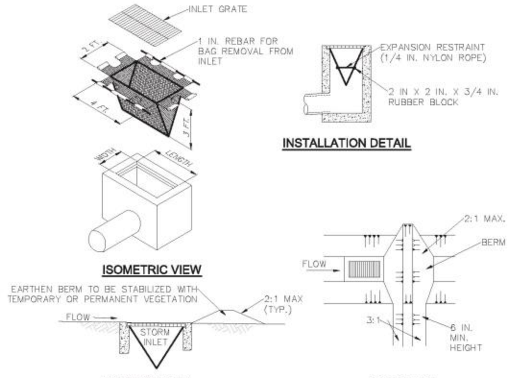


NOTES:

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.

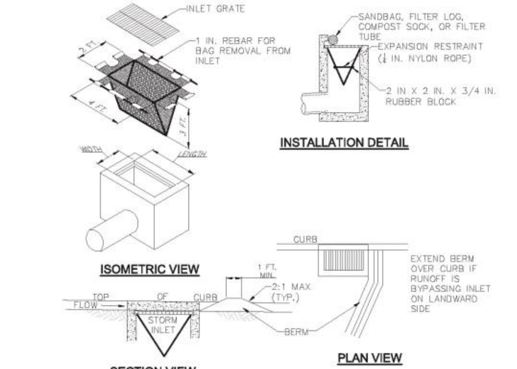
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

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 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.

FILTER BAG INLET PROTECTION

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 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.

FILTER BAG INLET PROTECTION CURBED ROADWAY

NOT TO SCALE

DRAWING NO. ES-503
FRIENDS OF THE WISSAHICKON
VALLEY GREEN RUN RESTORATION
PHILADELPHIA, PENNSYLVANIA
EROSION & SEDIMENT POLLUTION CONTROL DETAILS

DSGN CFB | DFTSMN JRG | CHKR DRA | APPV MEL | SCALE AS SHOWN

REV | DESCRIPTION | BY | APPV | DATE

SKELLY AND LOY
A Terracon Company
449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PA 17111
TEL: (717) 232-0593 - FAX: (717) 232-1799 - WWW.skellyloy.com

PROJECT NUMBER: JN197556
TASK: 01
SUBTASK:
DATE: DECEMBER 2022

FRIENDS OF THE WISSAHICKON

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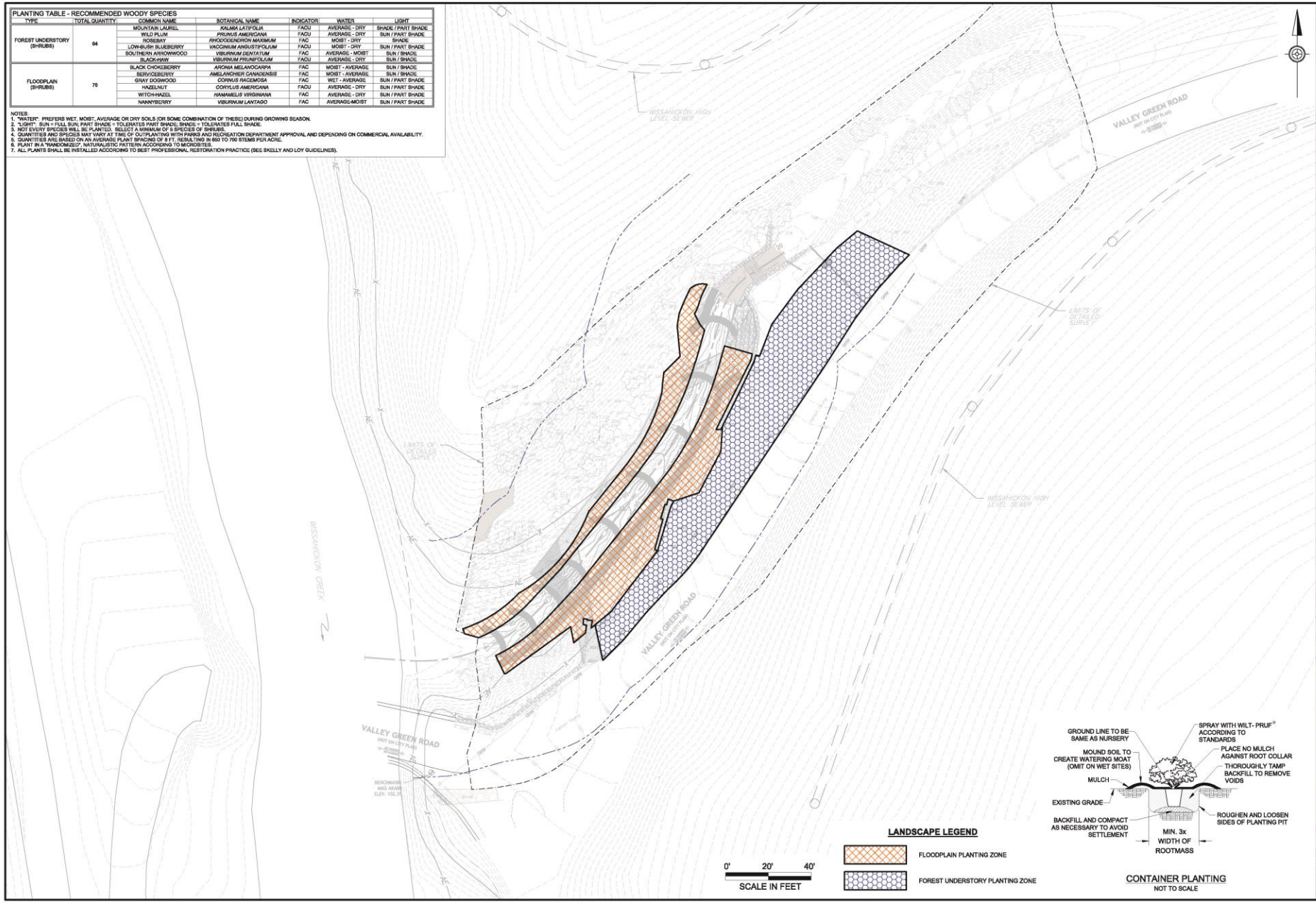
PLANTING TABLE - RECOMMENDED WOODY SPECIES						
TYPE	TOTAL QUANTITY	COMMON NAME	BOTANICAL NAME	INDICATOR	WATER	LIGHT
FOREST UNDERSTORY (SHRUBS)	64	MOUNTAIN LAUREL	*KALMIA LATIFOLIA*	FACU	AVERAGE - DRY	SHADE / PART SHADE
		WILD PLUM	*PRUNUS AMERICANA*	FACU	AVERAGE - DRY	SUN / PART SHADE
		ROSEBAY	*RHODODENDRON MAXIMUM*	FAC	MOIST - DRY	SHADE
		LOW-BUSH BLUEBERRY	*VACCINIUM ANGUSTIFOLIUM*	FACU	MOIST - DRY	SUN / PART SHADE
		SOUTHERN ARROWWOOD	*VIBURNUM DENTATUM*	FAC	AVERAGE - MOIST	SUN / SHADE
		BLACK-HAW	*VIBURNUM PRUNIFOLIUM*	FACU	AVERAGE - DRY	SUN / SHADE
FLOODPLAIN (SHRUBS)	76	BLACK CHOKEBERRY	*ARONIA MELANOCARPA*	FAC	MOIST - AVERAGE	SUN / SHADE
		SERVICEBERRY	*AMELANCHIER CANADENSIS*	FAC	MOIST - AVERAGE	SUN / SHADE
		GRAY DOGWOOD	*CORNUS RACEMOSA*	FAC	WET - AVERAGE	SUN / PART SHADE
		HAZELNUT	*CORYLUS AMERICANA*	FACU	AVERAGE - DRY	SUN / PART SHADE
		WITCH-HAZEL	*HAMAMELIS VIRGINIANA*	FAC	AVERAGE - DRY	SUN / PART SHADE
		NANNYBERRY	*VIBURNUM LANTAGO*	FAC	AVERAGE-MOIST	SUN / PART SHADE

NOTES:
1. "WATER": PREFERS WET, MOIST, AVERAGE OR DRY SOILS (OR SOME COMBINATION OF THESE) DURING GROWING SEASON.
2. "LIGHT": SUN = FULL SUN; PART SHADE = TOLERATES PART SHADE; SHADE = TOLERATES FULL SHADE.
3. NOT EVERY SPECIES WILL BE PLANTED. SELECT A MINIMUM OF 5 SPECIES OF SHRUBS.
4. QUANTITIES AND SPECIES MAY VARY AT TIME OF OUTPLANTING WITH PARKS AND RECREATION DEPARTMENT APPROVAL AND DEPENDING ON COMMERCIAL AVAILABILITY.
5. QUANTITIES ARE BASED ON AN AVERAGE PLANT SPACING OF 8 FT, RESULTING IN 650 TO 700 STEMS PER ACRE.
6. PLANT IN A "RANDOMIZED", NATURALISTIC PATTERN ACCORDING TO MICROSITES.
7. ALL PLANTS SHALL BE INSTALLED ACCORDING TO BEST PROFESSIONAL RESTORATION PRACTICE (SEE SKELLY AND LOY GUIDELINES).



CONTAINER PLANTING
NOT TO SCALE

DRAWING NO. LS-101

FRIENDS OF THE WISSAHICKON

VALLEY GREEN RUN RESTORATION

PHILADELPHIA, PENNSYLVANIA

LANDSCAPE PLAN

REV	DESCRIPTION	BY	APPV	DATE

DSGN CTB
DFTSMN JRC
CHKR DRA
APPV MEL
SCALE AS SHOWN
Plotted on: 2022-12-20

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SKELLY AND LOY
A terracon Company
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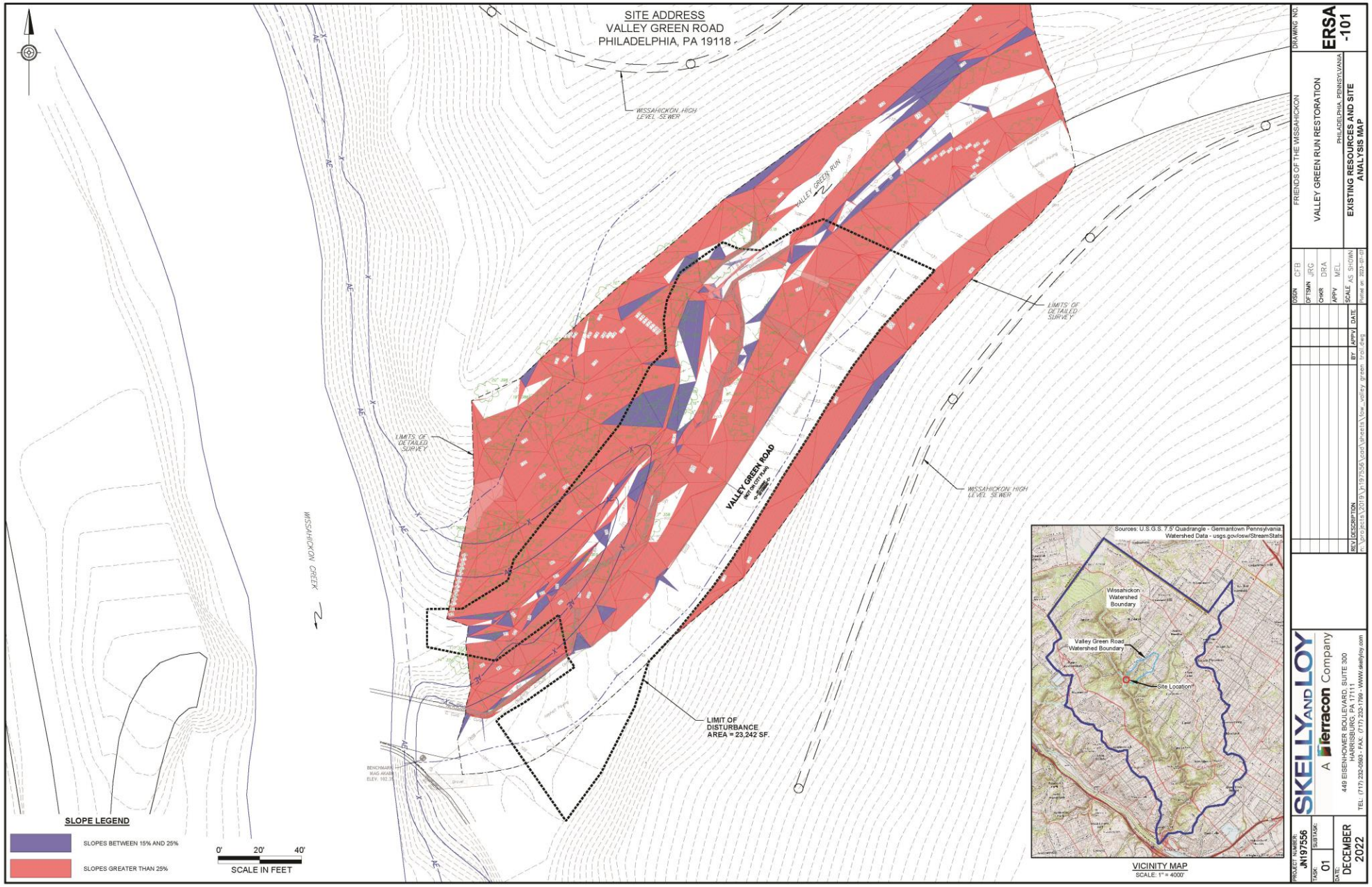
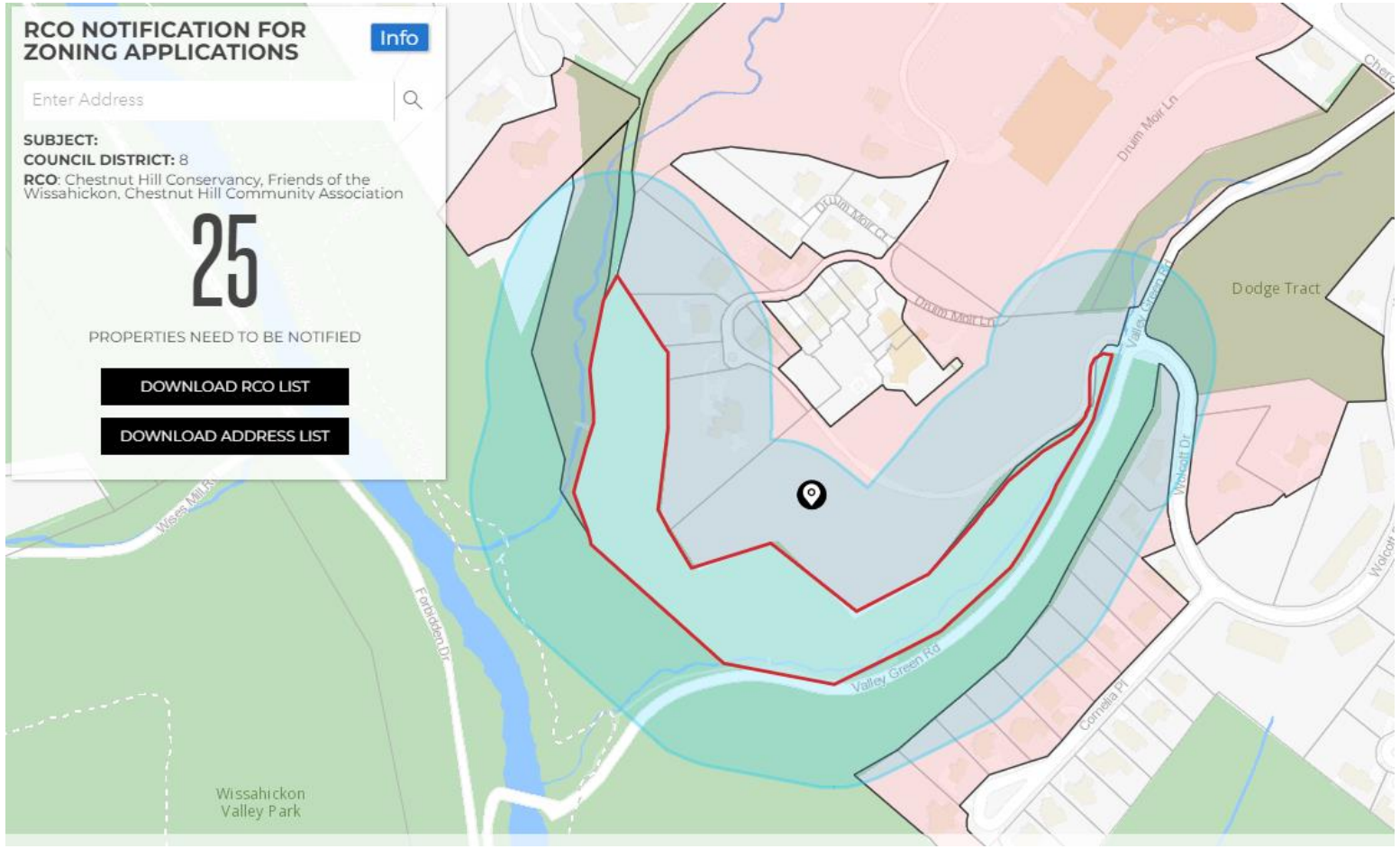


Community Outreach



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Important Dates

- September 19 – First DRC Meeting
- *September 22 – Mail Neighbor Notice Letters
- *October 5th – Potential Meetings with Chestnut Hill Conservancy and CHCA's Land Use, Planning and Zoning Committee
- **October 17 – Second DRC Meeting / OFFICIAL RCO Meeting**
- October 26 – CHCA Board Meeting
- **November 14 at 9:30 a.m. - ZBA Hearing**

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Thank you