REFERENCE PLANS:

- PLAN ENTITLED, "DECLARATION PLAT ATWIN HILLS, A PLANNED COMMUNITY -ATWIN INVESTMENTS, LP, DECLARANT", PREPARED FOR ATWIN INVESTMENTS, LP, BY CHESTER VALLEY ENGINEERS, INC., PAOLI, PA, DATED 09/05/2006, PROJECT #17724, RECORD PLAN BOOK #6956, PAGE 1251.
- PLAN ENTITLED, "MALVERN STATION REGIONAL RAIL DIVISION TUNNEL AND PARKING LOT IMPROVEMENTS", PREPARED FOR SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY. BY STANTEC CONSULTING SERVICES, INC., WEST CHESTER, PA, DATED 10/28/2009, LAST REVISED 01/29/2010, RECORD PLAN BOOK #18827.
- . PLAN ENTITLED. "PLAN OF PORTION OF MALVERN INDUSTRIAL PARK ESTATE OF JOHN L. SMITH, JR.", PREPARED FOR JOHN L. SMITH, JR., BY HENRY S. CONREY - DIVISION OF CHESTER VALLEY ENGINEERS, INC., WEST CHESTER, PA, DATED 10/12/1984, LAST REVISED 01/07/1993, RECORD PLAN BOOK
- PLAN ENTITLED. "SUBDIVISION PLAN FOR MALVERN BUSINESS PARK". PREPARED FOR MALVERN BUSINESS PARK, BY EDWARD B. WALSH & ASSOCIATES, INC., EXTON, PA, DATED 08/16/1988, LAST REVISED 03/27/1989, RECORD PLAN
- PLAN ENTITLED, "PLAN OF MALVERN SPRINGS", PREPARED FOR WM A. GARRIS & MARY E. GARRIS, BY J.W. HARRY, C.E., COATESVILLE, PA, DATED 05/20/1946, RECORD PLAN BOOK #2, PG. 53.

TITLE REPORT NOTES

- THIS SURVEY WAS PERFORMED UTILIZING A COMMITMENT FOR TITLE INSURANCE BY FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO. PAFA14-4631, EFFECTIVE DATE: 11/20/2014. SCHEDULE B-SECTION II OF THE TITLE COMMITMENT CONTAINS THE FOLLOWING SURVEY RELATED MATTERS (ITEM NUMBERS BELOW CORRESPOND TO THE NUMBERS FROM THE TITLE COMMITMENT AND ARE INDICATED IN AN OCTAGON ON THE PLAN OF SURVEY WHERE APPLICABLE):
- 8. Title to that part of the premises lying in the bed and right of way of all roads, driveways and alleyways is subject to public and private rights therein — PROPERTY DOES NOT BORDER ANY PUBLIC ROADS; PROPERTY IS BOUNDED BY NATIONAL RAILROAD PASSENGER CORPORATION ON THE SOUTHWEST (PLOTTED HEREON).
- Memorandum of PCS Site Management with Spring Spectrum L.P. as in Record Book 4406 page 233 LEASE FOR A CELL TRANSMISSION TOWER SITE (APPROXIMATE LOCATION PLOTTED HEREON, DOES NOT TOUCH SURVEYED PREMISES).
- 10. Assignment and Assumption of Lease Agreement with Global Signal Acquisitions IV LLC dated 6/15/2006 (Lease not Recorded) as in Record Book 6878 page 1964 ASSIGNMENT OF LEASE FOR CELL TOWER TRANSMISSION SITE IN EXCEPTION #9; ALSO GRANTS AN ACCESS & (GUY AND/OR UTILITY) EASEMENT (APPROXIMATE LOCATION PLOTTED HEREON, DOES NOT TOUCH SURVEYED PREMISES).
- 11. Access Easement Agreement dated 7/19/1996 as in Record Book 4077 page 1969 GRANTS AN ACCESS EASEMENT BEYOND THE WESTERLY TERMINUS OF PENNSYLVANIA AVENUE (PLOTTED HEREON).
- 12. Agreement with Philadelphia Electric Company dated 1/4/1991 as in Record Book 2295 page 16 GRANTS A 24' WIDE DRIVEWAY/SLOPE EASEMENT (PLOTTED HEREON), Amendment of Agreement of Easement as in Record Book 4479 page 344 WIDENS THE EASTERLY PORTION OF THE DRIVEWAY/SLOPE EASTERLY TO 50' WIDE (PLOTTED HEREON) EASEMENT TO 50' WIDE (PLOTTED HEREON). 13. Easement Agreement with National Railroad Passenger Corporation dated 1/10/2000 in Record Book 4723 page 2312 — EASEMENT FOR A 60' RADIUS ROADWAY CUL—DE—SAC
- APPROXIMATE LOCATION PLOTTED HEREON). 14. Rights granted to Verizon Pennsylvania Inc., as in Record Book 6369 page 1750 — GRANTS RIGHT TO INSTALL & MAINTAIN ENTRANCE FACILITIES TO THE RATE DEMARCATION POINT ON THE BUILDING ON UPI #2-3-1 (APPROXIMATE LOCATION PLOTTED HEREON, DOES NOT TOUCH SURVEYED DEFENISES)
- 15. Easement Agreement with Global Signal Acquisitions IV LLC dated 6/15/2006 in Record Book 6878 page 1953 GRANTS AN EASEMENT FOR THE TOWER AREA AND ACCESS & (GUY AND/OR UTILITY) EASEMENT (SAME AS EXCEPTIONS 9 & 10, APPROXIMATE LOCATION PLOTTED HEREON, DOES NOT TOWER SUPPLY PREMISES)
- 16. Declaration of Covenants, Conditions and Restrictions of Atwin RECORD BOOK 4406, PAGE 233 (EXCEPTION #9); A 50' WIDE ACCESS EASEMENT FOR INGRESS, EGRESS & UTILITIES (PLOTTED HEREON); A CELL TOWER EASEMENT AREA AND ACCESS & UTILITY EASEMENT (PLOTTED HEREON); ENVIRONMENTALLY CONSTRAINED AREAS (E.G. STEEP SLOPES).

CALL BEFORE YOU DIG! PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING

TOUCH SURVEYED PREMISES).

DAYS IN DESIGN STAGE-STOP CALL Pennsylvania One Call System, Inc



SCALE: NOT TO SCALE

PA ONE CALL

ACT 287 SERIAL NUMBER: 20231302489 & 20231302490 HOWELL KLINE SURVEYING, LLC.. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY LINES, STRUCTURES, ETC. SHOWN ON THE PLANS, NOR DOES HOWELL KLINE SURVEYING, LLC. GUARANTEE THAT ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC. ARE SHOWN. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATIONS OF ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC. BEFORE THE START OF WORK BY CALLING THE PENNSYLVANIA ONE CALL SYSTEM

UTILITIES NOTIFIED

COMPANY: EAST WHITELAND TOWNSHIP
ADDRESS: 209 CONESTOGA RD CONTACT: JOHN NEILD EMAIL: jneild@eastwhiteland.org PHONE:610-648-0600 EXT. 28 COMPANY: COMCAST

AT 1-800-242-1776.

ADDRESS: 1004 CORNERSTONE BLVD DOWNINGTOWN, PA. 19335 CONTACT: TOM RUSSO EMAIL: tom_russo@cable.comcast.com COMPANY: PECO AN EXELON COMPANY C/O USIC

ADDRESS: 450 S HENDERSON ROAD SUITE B

CONTACT: NIKKIA SIMPKINS EMAIL: nikkiasimpkins@usicllc.com PHONE:484-681-5720 COMPANY: LUMEN FORMERLY LEVEL 3 1025 ELDORADO BLVD

CONTACT: LUMEN OPERATOR PERSONNEL EMAIL: RELOCATIONS@LUMEN.COM PHONE:877-366-8344 EXT. 3 COMPANY: ZAYO BANDWIDTH FORMERLY PPL TELCOM LLC ADDRESS: 170 ROBBINS RD

DOWNINGTOWN, PA. 19335 CONTACT: JOHN HOWELLS PHONE:610-476-1634 COMPANY: VERIZON BUSINESS FORMERLY MCI

BRYN MAWR, PA. 19010

7000 WESTON PKWY CONTACT: VICTOR WOOD PHONE:919-414-2782

COMPANY: CROWN CASTLE ADDRESS: 1500 CORPORATE DR CONTACT: FIBER DIG TEAM PERSONNEL EMAIL: fiber.dig@crowncastle.com PHONE: 800-654-3110 COMPANY: AQUA PENNSYLVANIA ADDRESS: 762 LANCASTER AVE

CONTACT: THOMAS WADDY EMAIL: TBWADDY@AQUAAMERICA.COM PHONE: 610-525-1400 EXT. 52105 COMPANY: MALVERN BOROUGH OF ADDRESS: 116 RUTHLAND AVENUE MALVERN
CONTACT: IRA DUTTER
EMAIL: idutter@aol.com
PHONE: 610-644-1819

PRELIMINARY MAJOR LAND DEVELOPMENT PLAN

201 PENNSYLVANIA AVENUE

- 1. RECORD OWNER/MAILING ADDRESS: PA AVE WOODS, LP 120 PENNSYLVANIA AVENUE MALVERN, PA 19355
- 2. SITE ADDRESS: 201 PENNSYLVANIA AVENUE, MALVERN, PA 19355
- 3. TAX PARCEL #: 2-3-1.1 4. SOURCE OF TITLE: RECORD BOOK 9041, PAGE 2079 ("LOT #1", REFERENCE PLAN #1)
- 6. BOUNDARY, TOPOGRAPHY AND PHYSICAL IMPROVEMENTS SHOWN ARE FROM FIELD SURVEY BY HOWELL SURVEYING, LLC. PERFORMED ON 05/11, 05/12 & 05/17/2023.
- 7. CONTOURS PLOTTED FROM AERIAL IMAGERY DATED MAY 12, 2023 AND SUPPLEMENTED WITH FIELD RUN TOPOGRAPHIC SURVEY BY HOWELL SURVEYING, L.L.C.. DATUM: NAVD 88 (COMPUTED USING GEOID18) & NAD 83 (2011) (EPOCH:2010.0000) (AS DETERMINED BY GPS OBSERVATION), SITE BENCH = TOP GRATE OF TYPE "M" INLET LOCATED AT THE END OF THE CUL-DE-SAC, ELEVATION= 543.65',
- 8. UNDERGROUND UTILITIES SHOWN WERE PLOTTED FROM OBSERVABLE EVIDENCE AT THE TIME OF SURVEY AND INFORMATION FROM PLANS SUPPLIED BY UTILITY COMPANIES. NO GUARANTEE IS MADE THAT UNDERGROUND UTILITIES ARE ACCURATELY OR COMPLETELY SHOWN HEREON.
- 9. THIS PROPERTY IS LOCATED WITHIN FLOOD HAZARD ZONE X, AN AREA OF MINIMAL FLOOD HAZARD PER THE NATIONAL FLOOD INSURANCE RATE MAP FOR CHESTER COUNTY, PA. MAP NO. 42029C0160G, PANEL 160 OF 380, DATED SEPTEMBER 29. 2017.
- 10. WETLANDS BOUNDARY LINES WERE DELINEATED BY WOLF BIOSERVICES, INC. AND FLAGS LOCATED BY HOWELL KLINE SURVEYING, LLC. PERFORMED ON: 6/29/2023.
- 11. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION. 12. ALL DIMENSIONS ARE TO EDGE OF PAVING OR FACE OF BUILDING UNLESS NOTED OTHERWISE. SCALED
- DIMENSIONS SHALL NOT BE USED WITHOUT FIRST CONTACTING HOWELL ENGINEERING. 13. THIS PLAN PROPOSES PUBLIC WATER SUPPLY FOR THE NEW BUILDING. PUBLIC WATER WILL BE PROVIDED BY AQUA PENNSYLVANIA. ALL WORK SHALL BE IN ACCORDANCE WITH THEIR STANDARDS AND
- SPECIFICATIONS. ANY INSTALLATION OF GROUNDWATER WELLS IS STRICTLY PROHIBITE 14. THIS PLAN PROPOSES CONNECTION TO PUBLIC SEWER. SANITARY SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH MALVERN BOROUGH STANDARDS.
- 15. ALL PROPOSED UTILITIES MUST BE PLACED UNDERGROUND. 16. THERE ARE NO STREETS, RIGHT-OF-WAYS OR ANY SITES FOR PUBLIC USE INTENDED FOR DEDICATION
- 17. HOWELL ENGINEERING DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS OF THE EXISTING SUBSURFACE UTILITY STRUCTURES SHOWN ON THE PLANS. NOR DOES HOWELL ENGINEERING GUARANTEE THAT ALL SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF THE WORK. TH MALVERN BOROUGH PUBLIC WORKS DIRECTOR SHALL BE CONTACTED IN ADVANCE OF CONSTRUCTION, INFORMED OF THE CONSTRUCTION SCHEDULE AND BE INVITED TO THE PRE-CONSTRUCTION
- 18. REPRESENTATIVES OF MALVERN BOROUGH AND/OR OTHER GOVERNMENTAL AUTHORITIES SHALL HAVE PERMISSION TO GAIN ACCESS TO THE STORMWATER FACILITIES THROUGH A BLANKET EASEMENT OVER THE LOT TO PERFORM INSPECTIONS, MAINTENANCE AND REPAIRS OF THE STORMWATER FACILITY, AS NECESSARY. MALVERN BOROUGH AUTHORITIES HAVE THE RIGHT, BUT NOT THE DUTY, TO ENTER THI PROPERTIES TO MAINTAIN THE FACILITIES AND ANY COSTS INCURRED AS PART OF THE MAINTENANCE, AND/OR REPAIRS SHALL BE THE RESPONSIBILITY OF THE OWNER.
- 19. AN AS-BUILT PLAN, SIGNED AND SEALED BY A PENNSYLVANIA LICENSED PROFESSIONAL LAND SURVEYOR, SHOWING ALL PUBLIC AND PRIVATE IMPROVEMENTS CONSTRUCTED AT THE SITE SHALL BE SUBMITTED TO THE TOWNSHIP, IN BOTH PAPER AND ELECTRONIC FORMS, FOLLOWING COMPLETION O THE CONSTRUCTED IMPROVEMENTS. AS-BUILT PLANS SHALL BE PREPARED IN ACCORDANCE WITH THE TOWNSHIP CODE, SECTION 214-33.
- 20. PRIOR TO FINAL APPROVAL OF THE PCSM PLAN. THE PROPERTY OWNER SHALL SIGN AND RECORD A MAINTENANCE AGREEMENT COVERING ALL STORMWATER CONTROL FACILITIES THAT ARE TO BE PRIVATELY OWNED. THE MAINTENANCE AGREEMENT SHALL BE TRANSFERRED WITH TRANSFER OF OWNERSHIP.

DOCUMENT THAT IS NOT APPLICABLE TO THE PROPERTY. HAS EXPIRED. OR IS NO LONGER VALID OR

21. THESE NOTES ARE FOR INFORMATIONAL PURPOSES AND ANY REFERENCE MADE TO A RECORD

- ENFORCEABLE SHALL NOT BE DEEMED TO BE APPLICABLE TO THE PROPERTY OR REVIVED IN ANY WAY 22. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING PRIOR WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS
- FROM THE OWNER AND ENGINEER. IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE. ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND IT SHALL INDEMNIFY AND HOLD IHE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS TO CONNECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.
- 23. THIS PLAN SHALL NOT BE USED FOR BUILDING STAKEOUT PURPOSES. PROPOSED BUILDING LOCATION AS DEPICTED IS WITHIN ACCEPTABLE TOLERANCES FOR SITE WORK ONLY. PLEASE REFER TO ARCHITECTURAL/STRUCTURAL PLANS FOR EXACT BUILDING PLACEMENT.
- 24. THE LANDOWNER ACKNOWLEDGES THAT, PER THE PROVISIONS OF MALVERN BOROUGH'S STORMWATER MANAGEMENT ORDINANCE, IT IS UNLAWFUL TO MODIFY, REMOVE, FILL, LANDSCAPE, ALTER OR IMPAIR THE EFFECTIVENESS OF, OR PLACE AND STRUCTURE, OTHER VEGETATION, YARD WASTE, BRUSH CUTTINGS, OR OTHER WASTE OR CONVEYANCE DESCRIBED IN THIS O&M PLAN OR TO ALLOW THE BMP OR CONVEYANCE TO EXIST IN A CONDITION WHICH DOES NOT CONFORM TO THIS O&M PLAN, WITHOUT WRITTEN APPROVAL FROM MALVERN BOROUGH.
- 26. THE PROJECT REQUIRES MALVERN BOROUGH APPROVAL FOR LAND DEVELOPMENT. THE AREA OF

25.NO PLANTINGS OR STRUCTURES SHALL BE LOCATED WITHIN 10 FEET OF THE PROPOSED SEWER OR

- EARTH DISTURBANCE IS GREATER THAN 1.0 ACRE THEREFORE CHESTER COUNTY CONSERVATION DISTRICT AND/OR PA DEP APPROVAL IS REQUIRED. NO ADDITIONAL REGULATORY AGENCY APPROVALS ARE REQUIRED TO INITIATE SITE CONSTRUCTION. APPROVALS FROM THE CHESTER COUNTY CONSERVATION DISTRICT AND PA DEP ARE PENDING.
- 28. A NONRESIDENTIAL WASTEWATER DISCHARGE QUESTIONNAIRE SHALL BE SUBMITTED FOR REVIEW PRIOR

27. ALL FEES REQUIRED OR AGREED TO BY THE DEVELOPER SHALL BE PAID PRIOR TO RECORDING OF

SITUATED IN

MALVERN BOROUGH, CHESTER COUNTY PENNSYLVANIA

	DRAWIN	NG INDEX
SHEET NUMBER	DRAWING NUMBER	SHEET TITLE
01	C01.1	COVER SHEET
02	C01.2	TITLE PLAN
03	C02.1	EXISTING CONDITIONS PLAN
04	C03.1	GRADING & UTILITIES PLAN
05	C03.2	PCSWM PLAN
06	C03.3	DRAINAGE AREA PLAN
07	C03.4	PCSWM NOTES & DETAILS
08	C04.1	EROSION CONTROL PLAN
09	C04.2	EROSION CONTROL NOTES & DETAILS
10	C05.1	PROFILES
11	C05.2	PROFILES
12	C06.1	CONSTRUCTION DETAILS
13	C07.1	LANDSCAPE PLAN
14	C07.2	LANDSCAPE NOTES
15	C08.1	TRUCK TURNING PLAN

ZONING DATA TABULATION MALVERN BOROUGH ARTICLE XX-A LI1 - LIMITED INDUSTRIAL DISTRICT SECTION 220-2001A: USE REGULATIONS -WAREHOUSE OR YARD FOR STORAGE, SALE AND DISTRIBUTION SECTION 220-2002A: USE REGULATIONS <u>PROPOSED</u> 9.713 AC. 9.713 AC. 1 ACRE LOT AREA (NET) 4.707 AC. 4.707 AC. LOT WIDTH @ BUILDING LINE 150 FT 255.5 FT 255.5 FT SETBACKS 439.5 FT FRONT 20 FT/50 FT AGG. 27.4 FT/77.1 FT AGG. 20.01% MAXIMUM BUILDING COVERAGE MAXIMUM LOT COVERAGE 48.48% BUILDING HEIGHT (MAXIMUM) 50 FT <50 FT <50 FT *EXISTING NON-CONFORMITY

PARKING TABULATION MALVERN BOROUGH SECTION 220-2501: OFF-STREET PARKING SECTION 220-2501.B: REQUIRED OFF-STREET PARKING INDUSTRIAL/MANUFACTURING USES

	PARKING REQUIREMENT	REQUIRED PARKING	PROPOSED PARKING
WAREHOUSE/STORAGE	1 SPACES PER 1,000 SQUARE FEET GROSS FLOOR AREA	41 PARKING SPACES	69 PARKING SPACES
HANDICAPPED	1 PARKING SPACE FOR EVERY 25 SPACES	2 HANDICAPPED SPACES	4 HANDICAPPED SPACE

<u>WAIVERS REQUESTED</u>

ORDINANCE SECTION 181-513(L)(1) TO INCREASE THE MAXIMUM SLOPE OF THE DRIVEWAY. A PARTIAL WAIVER IS BEING REQUESTED FROM THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 181-402(5)(C) REQUESTING TO DEFER THE TREE REPLACEMENT CALCULATION

A PARTIAL WAIVER IS BEING REQUESTED FROM THE SUBDIVISION AND LAND DEVELOPMENT

. A WAIVER IS BEING REQUESTED FROM THE STORMWATER MANAGEMENT ORDINANCE SECTION 177-306 TO NOT PROVIDE INFILTRATION VOLUME. 4. A WAIVER IS BEING REQUESTED FROM THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE SECTION 181-402(5)(F) TO NOT PROVIDE ADDITIONAL PLANS SHOWING SITE CONDITIONS WITHOUT

REV. DATE

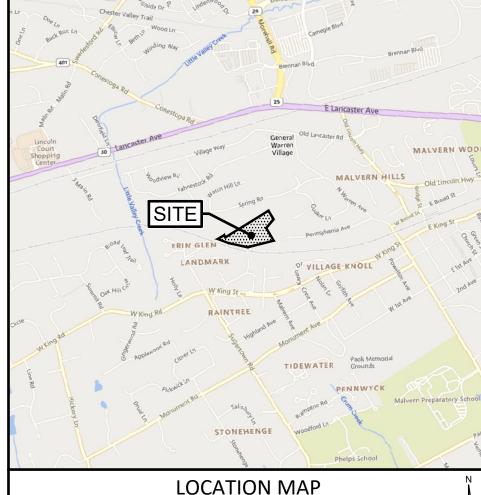
DESCRIPTION

NET LOT AREA TABULATION MALVERN BOROUGH ARTICLE XX-A LI1 - LIMITED INDUSTRIAL DISTRICT SECTION 220-201: DEFINITIONS (LOT AREA) EXCLUDED LOT AREA ALL AREAS WITHIN EXISTING OR RPOPOSED PUBLIC OR PRIVATE STREETS, RIGHT-OF-WAY OR EASEMENTS, RECORDED OR OTHERWISE INCLUDING PUBLIC SEWER, WATER PUBLIC UTILITY, STORM DRAINAGE RETENTION AND/OR DETENTION ALL AREAS OCCUPIED BY COURSES AND/OR BODIES OF WATER, 82,514 S.F. WETLANDS AND FLOODPLAINS 50% OF ANY AREA OF THE LOT WHICH HAS WET OR ALLUVIAL SOILS 50% OF THE AREA OF THE LOT WITH SLOPES 15% TO 20% AND CHANGES IN GRADE OF FOUR FEET OR MORE 75% OF THE AREA OF THE LOT WITH SLOPES OF MORE THAN 20% 123,567 S.F. AND CHANGES IN GRADE OF FOUR FEET OR MORE TOTAL EXCLUDED LOT AREA 218,046 S.F. TOTAL LOT AREA (GROSS) 423,094 S.F. 205,048 S.F. TOTAL LOT AREA (NET)

	STEEP SLOPES DISTURBANCE TABULA	<u> </u>		
		TOTAL AREA	DISTURBED AREA	% OF DISTURBANC
	SLOPES 15% TO 20% AND CHANGES IN GRADE OF FOUR FEET OR MORE	27,879 S.F.	9,254 S.F.	33.19%
	SLOPES OF MORE THAN 20% AND CHANGES IN GRADE OF FOUR FEET OR MORE	230,289 S.F.	31,343 S.F.	13.61%
/	TOTAL STEEP SLOPE AREA	258,168 S.F.	40,597 S.F.	15.73%
				100

OF THE LAND HEREIN PROPOSED TO BE DEVELOPED AND THAT ALL NECESSARY APPROVALS HAVE BEEN OBTAINED, AND THAT SAID OWNER ADOPTS THIS PLAN AND DESIRES THE SAME TO BE RECORDED. E. KAHN DEVELOPMENT NAME: ELI KAHN TITLE: PRESIDENT/FOUNDER COMMONWEALTH OF PENNSYLVANIA: COUNTY OF CHESTER ON THE _____ DAY OF _____, 2022, BEFORE ME, UNDERSIGNED OFFICER, PERSONALLY APPEARED JOHN MCMAHON, WHO ACKNOWLEDGED HIMSELF TO BE THE PRESIDENT AND FOUNDER OF E. KAHN DEVELOPMENT. THE OWNER/DEVELOPER AND, BEING AUTHORIZED TO DO S EXECUTED THE FOREGOING PLAN ON BEHALF OF THE COMPANY FOR THE PURPOSES THEREIN CONTAINED. IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND NOTARIAL SEAL. NOTARY PUBLIC REVIEWED BY THE PLANNING COMMISSION OF MALVERN BOROUGH, CHESTER COUNTY, PENNSYLVANIA, THIS _____, DAY OF _____, 20 ____. CHAIRPERSON APPROVED BY THE BOARD OF COMMISSIONERS OF MALVERN BOROUGH, CHESTER COUNTY, PENNSYLVANIA, THIS CHAIRPERSON REVIEWED BY THE CHESTER COUNTY PLANNING COMMISSION THIS _____, DAY OF _____, 20 ___. REVIEWED BY THE MALVERN BOROUGH ENGINEER THIS _____, 20 ___. BOROUGH ENGINEER RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF CHESTER COUNTY AT WEST CHESTER, PENNSYLVANIA, IN PLAN BOOK _____ PAGE ____, ON THE ____ DAY OF _____ 20 ___ (DEPUTY) RECORDER OF DEEDS <u>CERTIFICATE OF CONFORMANCE - P.E.</u> I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THESE PLANS ARE IN CONFORMITY WITH ENGINEERING, ZONING, BUILDING, SANITATION AND OTHER APPLICABLE BOROUGH ORDINANCES AND REGULATIONS WITH THE EXCEPTION OF THE WAIVERS LISTED ON THE PLAN. DAVID W. GIBBONS

OWNER CERTIFICATION AND ACKNOWLEDGEMENT OF PLAN I HEREBY CERTIFY THAT E. KAHN DEVELOPMENT IS THE REGISTERED OWNER



SCALE: 1" = 2,000'

PREPARED BY:

\ ENGINEER /

DAVID W. GIBBONS, P.E.



Civil Engineering | Land Planning | Environmental 1250 Wrights Lane, West Chester, PA 19380 Phone: (610) 918-9002 Fax: (610) 918-9003

HECKED BY: 4668 CAD FILE: 00 COVER SHEET.dwg PLOTTED: 04-03-2024 C01.1 SHEET 01 OF 15

04-03-2024

AS SHOWN

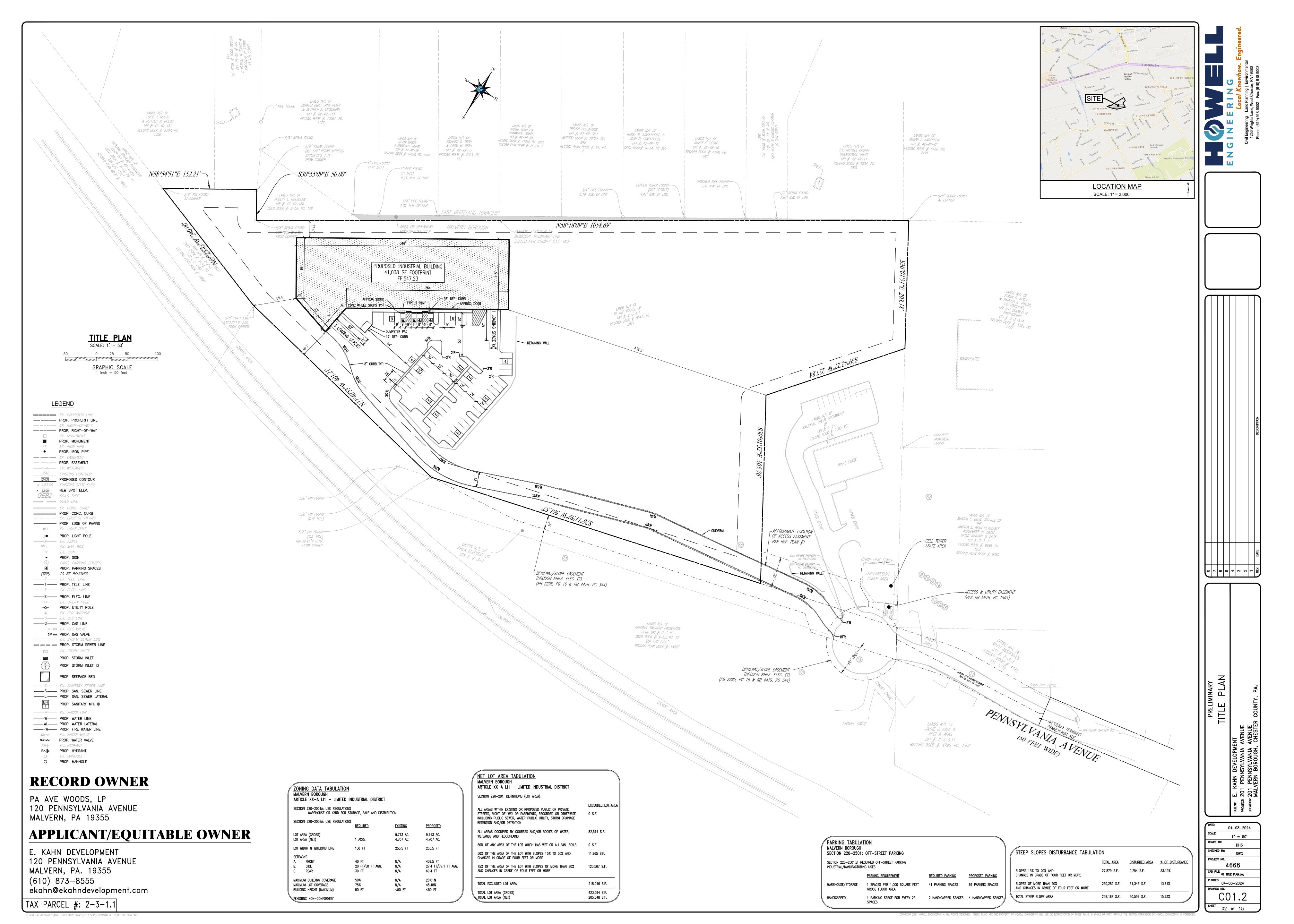
RECORD OWNER

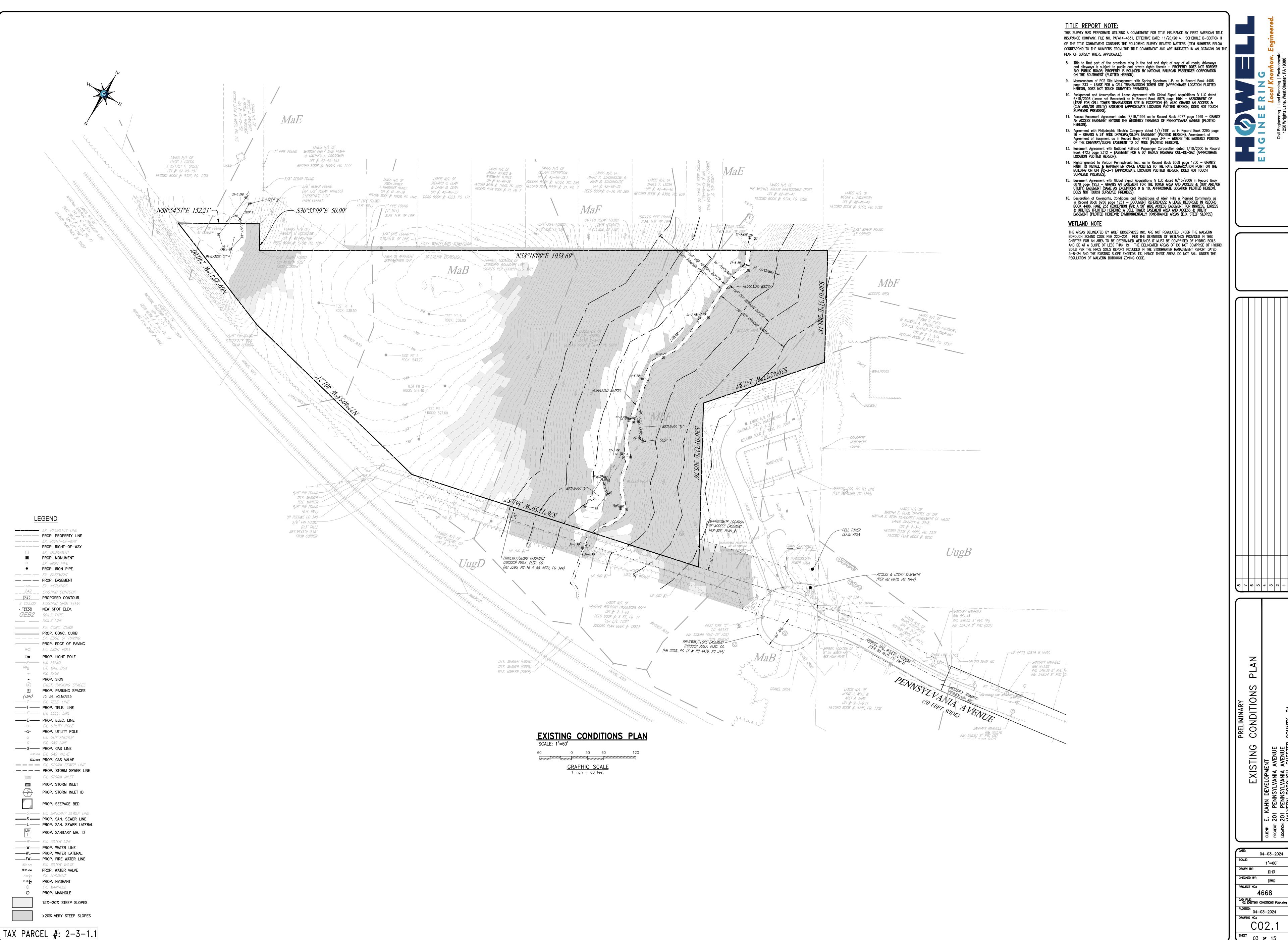
120 PENNSYLVANIA AVENUE MALVERN, PA 19355

APPLICANT/EQUITABLE OWNER E. KAHN DEVELOPMENT PA AVE WOODS, LP

120 PENNSYLVANIA AVENUE MALVERN, PA. 19355 (610) 873-8555 ekahn@ekahndevelopment.com

TAX PARCEL #: 2-3-1.1

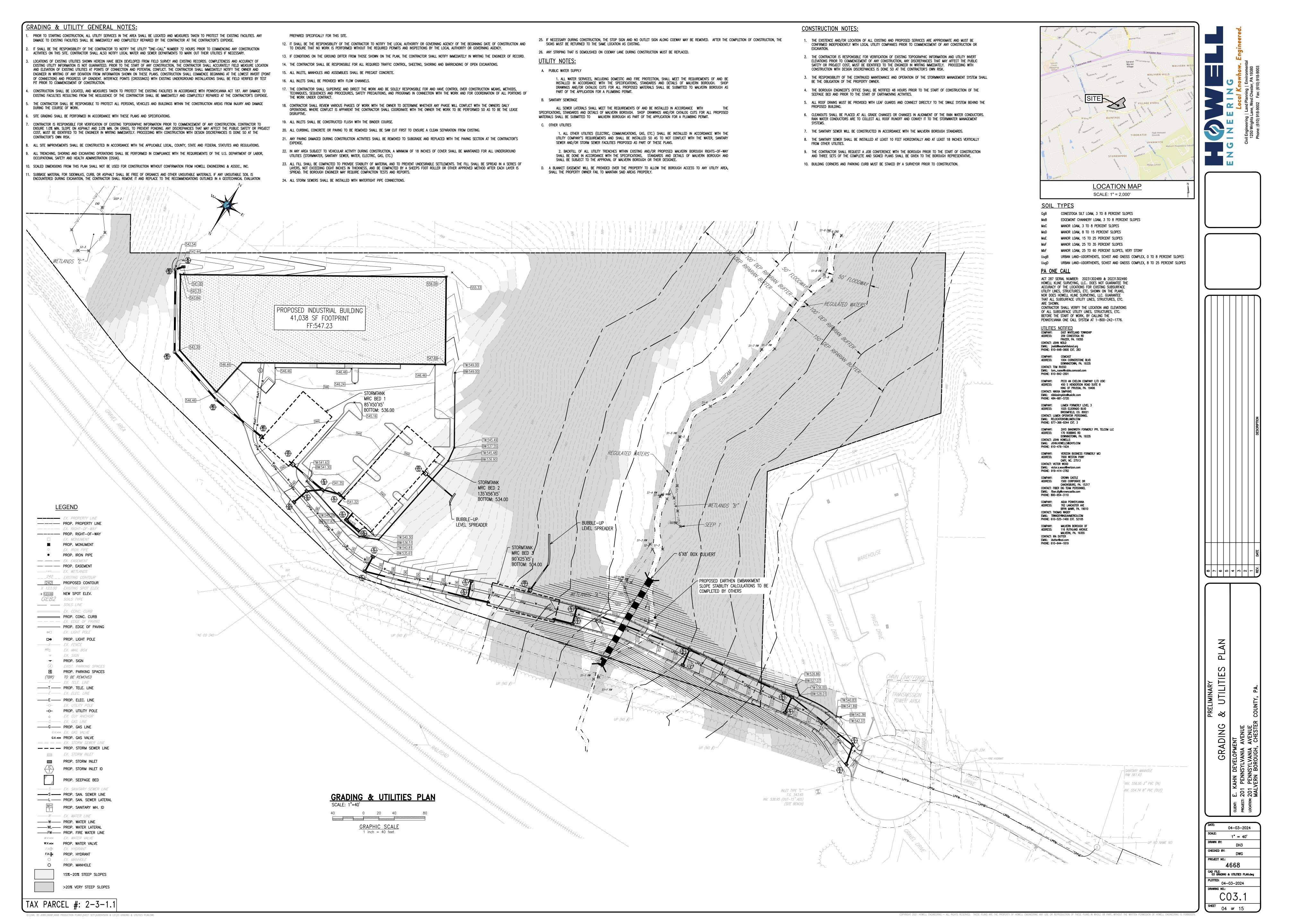


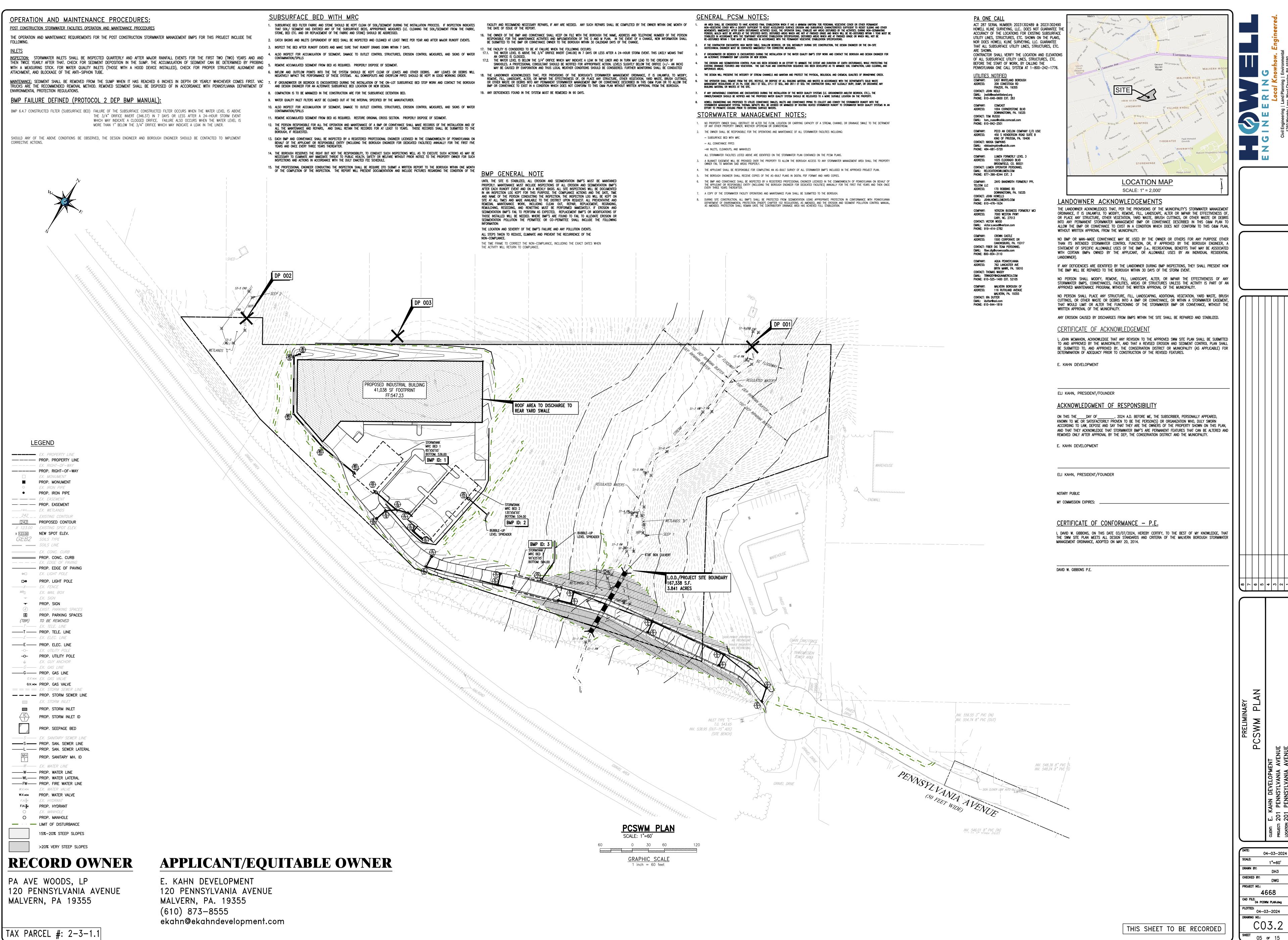


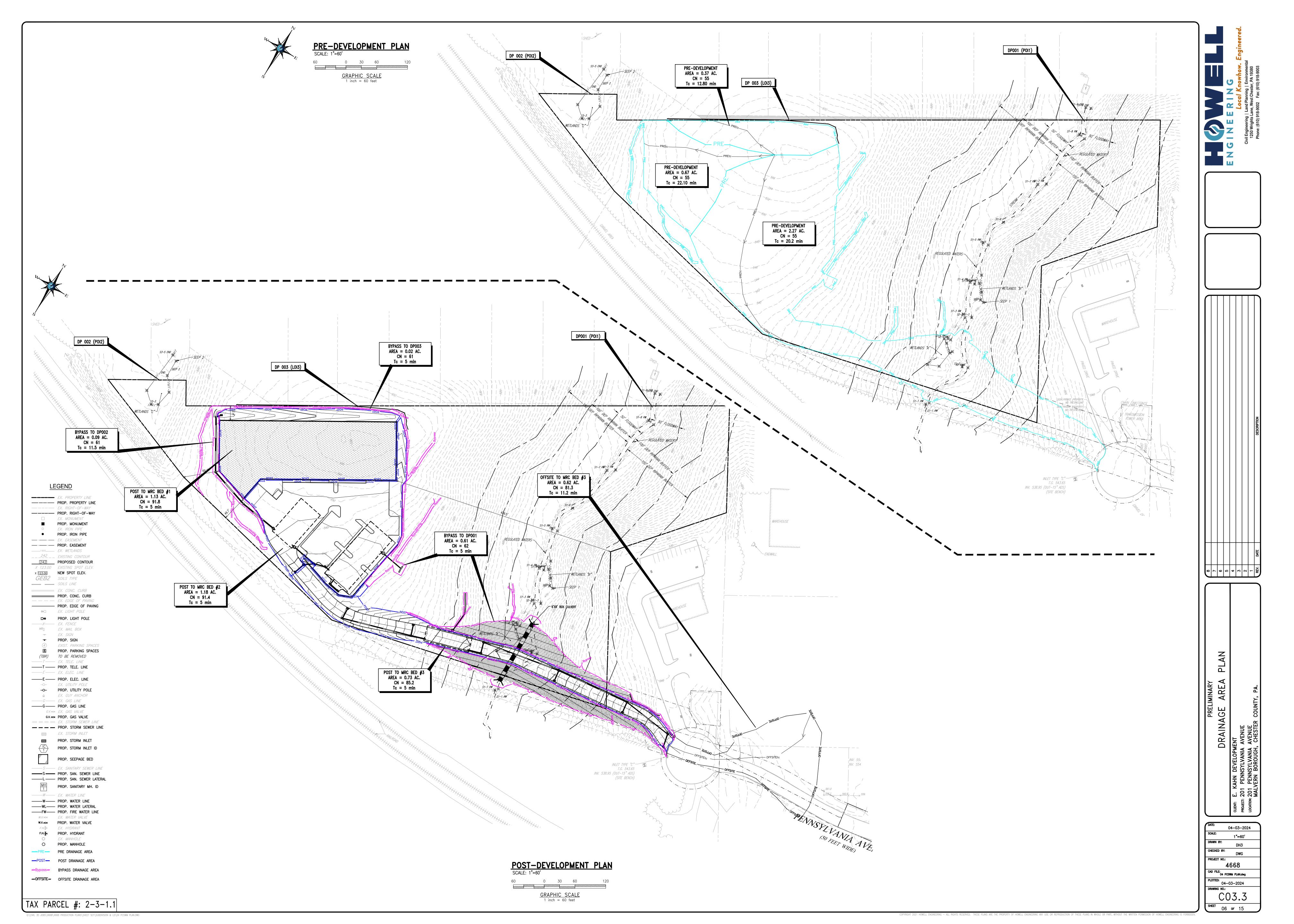
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04-03-2024

03 of 15







BMP PROTECTION NOTE: - 102.8(f)(7) SITE CONTRACTOR SHALL PROVIDE PROTECTION FOR STORMWATER BMPS UNTIL DRAINAGE AREA IS COMPLETELY

PNDI RESULTS:

NO KNOWN IMPACT PA GAME COMMISSION: PA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES: NO KNOWN IMPACT PA FISH AND BOAT COMMISSION: NO KNOWN IMPACT U.S. FISH AND WILDLIFE SERVICE: A QUALIFIED BOG TURTLE SURVEYOR IS NEEDED TO EVALUATE THE WETLANDS IN AND WITHIN 300 FEET OF THE PROJECT AREA AND WILL BE CONFIRMED BY OTHERS.

THERMAL IMPACTS NOTE: - 102.8(f)(13) COOLING WILL OCCUR IN THE PROPOSED SUBSURFACE CONSTRUCTED FILTER AND BIORETENTION BASIN WHERE A SLOW RELEASE IS PROPOSED. THE MANAGED RELEASE OF STORMWATER WILL PREVENT ANY DETRIMENTAL THERMAL IMPACTS FROM OCCURRING.

RECEIVING SURFACE WATERS - 102.4(b)(5)(v) *THE PENNSYLVANIA TITLE 25, CHAPTER 93 CLASSIFICATION FOR THE RECEIVING WATERS OF THE COMMONWEALTH

UNT TO LITTLE VALLEY CREEK IN THE VALLEY CREEK WATERSHED: A EXCEPTIONAL VALUE (EV) AND MIGRATORY FISHES (MF) WATER COURSE

BMP PROTECTION NOTE: - 102.8(f)(7)

SITE CONTRACTOR SHALL PROVIDE PROTECTION FOR STORMWATER BMPS UNTIL DRAINAGE AREA IS COMPLETELY STABILIZED.

BMP GENERAL NOTE:

UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION SHALL BE ENTERED INTO THE LOG. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, REMULCHING, RESEEDING, AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED. WHERE BMP'S ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENTATION POLLUTION, THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION:

- A. THE LOCATION AND SEVERITY OF THE BMP'S FAILURE AND ANY POLLUTION EVENTS.
- B. ALL STEPS TAKEN TO REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE

ACTIVITY WILL RETURN TO COMPLIANCE.

C. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE

REFERENCE THE POST CONSTRUCTION STORMWATER MANAGEMENT REPORT PREPARED FOR 20 PENNSYLVANIA AVENUE. AS PREPARED BY HOWELL ENGINEERING. DATED 03/07/2024. FOR STORMWATER MANAGEMENT CALCULATIONS ASSOCIATED WITH THIS PROJECT. PLEASE NOTE THAT THE STORMWATER HAS BEEN DESIGNED FOR A TOTAL IMPERVIOUS COVERAGE DEPICTED ON THIS PLAN SET. ANY FUTURE IMPERVIOUS ABOVE AND BEYOND WHAT IS PROPOSED PER THIS PLAN MUST HAVE SEPARATE STORMWATER MANAGEMENT DESIGNED AT THAT TIME, IF WARRANTED BY THE TOWNSHIP'S STORMWATER MANAGEMENT ORDINANCE.

BMP IMPLEMENTATION/INSTALLATION/CRITICAL STAGE OVERSIGHT AND AS-BUILT PLAN REQUIREMENTS

OVERSIGHT

THE APPLICANT/PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BEST MANAGEMENT PRACTICES (BMPs). ADDITIONAL SOIL TESTING MAY BE REQUIRED PRIOR TO THE INSTALLATION OF INFILTRATION BMPs TO ENSURE PROPER LOCATION AND FUNCTION. A LICENSED PROFESSIONAL ENGINEER KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF STORMWATER BMPs, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT. CRITICAL STAGES

 INSTALLATION OF SUBSURFACE MRC BEDS BMP SEQUENCE OF CONSTRUCTION

1. INSTALL SUBSURFACE MRC BED 2. INSTALL LEVEL SPREADER 3. INSTALL WATER QUALITY FILTERS

AS-BUILT PLANS REGARDLESS OF OWNERSHIP, THE APPLICANT/PERMITTEE SHALL SUBMIT TO THE TOWNSHIP AN ACTUAL AS-BUIL PLAN FOR THE STORMWATER MANAGEMENT FACILITIES REQUIRED PER THE APPROVED STORMWATER MANAGEMEN PLAN. THE AS-BUILT PLAN SHALL SHOW ALL FINAL DESIGN SPECIFICATIONS FOR ALL PERMANENT STORMWATE MANAGEMENT FACILITIES AND SHALL BE BASED ON AN ACTUAL FIELD SURVEY PERFORMED BY THE SURVEYOR OF RECORD. THE SURVEYOR SHALL CERTIFY AS TO THE ACCURACY OF THE AS—BUILT DATA. IN ADDITION TO THE SURVEYOR'S CERTIFICATION, THE AS-BUILT PLAN SHALL CONTAIN A STATEMENT SIGNED AND SEALED BY THE ENGINEER OF RECORD INDICATING THAT THE BMPs WERE INSTALLED PER THE APPROVED STORMWATER

THE AS-BUILT PLAN FOR THE STORMWATER MANAGEMENT FACILITIES SHALL BE SUBMITTED TO THE TOWNSHIP WITHIN SIX MONTHS OF THE COMPLETION OF THE PROJECT FOR REVIEW AND FINAL INSPECTION BY THE

AS-BUILT PLANS FOR THE STORMWATER BMPS SHALL BE SUBMITTED TO THE CONSERVATION DISTRICT WITHIN SIX MONTHS FOLLOWING THE COMPLETION OF THE PROJECT TO ALLOW FOR NOTICE OF TERMINATION (NOT)

NOTICE OF TERMINATION & FINANCIAL SECURITY A NOTICE OF TERMINATION (NOT) WILL BE REQUIRED TO BE SUBMITTED FOLLOWING THE APPROVAL OF THE FINAL

FOR SUBMITTAL OF 'AS-BUILT' PLANS AND ENGINEERING CONSTRUCTION OVERSIGHT.

AS-BUILT PLANS (SEE POST CONSTRUCTION STORMWATER FACILITIES OPERATIONS AND MAINTENANCE PROCEDURES ANY PERFORMANCE AND/OR FINANCIAL SECURITIES ESTABLISHED FOR THE PROJECT SHALL INCLUDE REQUIREMENTS

<u>PCSM REPORTING AND RECORDKEEPING</u> — THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT. THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS:

DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA.C.S.A. \$ 4904 T IE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES

UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER \$ 102.22(A)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMPS IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH §\$ 102.4 AND 102.8 (RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS; AND PCSM REQUIREMENTS), THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.

THE NOTICE OF TERMINATION (NOT) MUST INCLUDE 1) THE FACILITY NAME, ADDRÈSS AND LOCATION.

2) THE OPERATOR NAME AND ADDRESS. (3) THE PERMIT NUMBER. 4) THE REASON FOR PERMIT TERMINATION

) identification of the persons who have agreed to and will be responsible for Long-term ÒPERATION AND MAINTENANCE OF THE PCSM BMPS IN ACCORDANCE WITH \$ 102.8(M) AND PROOF OF PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION.

PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION. THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPS ON THE PROJECT SITE

THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPS UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPS.

FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE FUSM BMP AND THE RECARED OBLICATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG—TERM OPERATION AND MAINTENANCE FOR PCSM BMPS AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG—TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEES, AND PROVIDE PROOF OF FILING WITH THE NOTICE O TERMINATION UNDER § 102.7(B)(5) (RELATING TO PERMIT TERMINATION).

THE PERSON RESPONSIBLE FOR PERFORMING LONG-TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON INCLUDING A CONSERVATION DISTRICT, NONPROFIT ORGANIZATION, MUNICIPALITY, AUTHORITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR PCSM BMPS OR TO PERFORM LONG-TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE

A PERMITTEE OR CO-PERMITTEE THAT FAILS TO TRANSFER LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS LOCATED ON THE PROPERTY.

VEHICLES SHOULD NOT BE PARKED OR DRIVEN OVER THE ABOVE-GROUND MRC BASIN.

LONG TERM OPERATION AND MAINTENANCE SCHEDULE:

POST CONSTRUCTION STORMWATER FACILITIES OPERATION AND MAINTENANCE PROCEDURES:



E APPLICANT SHALL BE RESPONSIBLE FOR THE MAINTENANCE, IMPROVEMENT, REPAIR, REPLACEMENT, REGULATION, MANAGEMENT, AND CONTROL OF STORMWATER MANAGEMENT FACILITIES LOCATED WITHIN THE BOUNDARIES OF A UNIT, INCLUDING WITHOUT LIMITATION, THE "MRC BASIN" SITUATE ON UNIT 1, "SUBSURFACE MRC BED" SITUATE ON UNIT 1, AND "SUBSURFACE INFILTRATION BED" SITUATE ON UNIT 2, EACH AS SHOWN ON THE PLAN AS WELL AS ANY OTHER STORMWATER MANAGEMENT FACILITIES IN THE FORM OF A BASIN SUBSURFACE BED OR INFILTRATION BED EXISTING NOW OR IN THE FUTURE, TOGETHER WITH ALL LEVEL SPREADERS, STORMWATER MANAGEMENT PIPES AND INLETS. NOTWITHSTANDING THE ASSOCIATION'S RESPONSIBILITY TO MAINTAIN, REPAIR, IMPROVE, REPLACE, REGULATE, CONTROL AND MANAGE SUCH SUBSURFACE BEDS, INFILTRATION BEDS, AND BASINS, TOGETHER WITH ALL LEVEL SPREADERS, STORMWATER MANAGEMENT PIPES AND INLETS, ANY STORMWATER MANAGEMENT FACILITIES IN THE FORM OF STORMWATER RUNOFF SWALES AND BERMS (IF ANY) LOCATED WITHIN THE BOUNDARIES OF A UNIT SHALL BE MAINTAINED BY THE OWNER OF SUCH UNIT.

THE PERSON RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF A BMP OR CONVEYANCE SHALL MAKE RECORDS OF THE INSTALLATION AND OF ALL MAINTENANCE AND REPAIRS, AND SHALL RETAIN THE RECORDS IN PERPETUITY. THESE RECORDS SHALL BE SUBMITTED TO THE MUNICIPALITY, AS THEY ARE PREPARED AND RECEIVED BY THE PERSON RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE BMP OR

THE OWNER OF EACH BMP AND CONVEYANCE SHALL KEEP ON FILE WITH THE MUNICIPALITY THE NAME, ADDRESS, AND TELEPHONE NUMBER OF THE PERSON RESPONSIBLE FOR MAINTENANCE ACTIVITIES AND IMPLEMENTATION OF THE O&M PLAN. IN THE EVENT OF A CHANGE, NEW INFORMATION SHALL BE SUBMITTED BY THE BMP OR CONVEYANCE OWNER TO THE MUNICIPALITY WITHIN 30 WORKING DAYS OF THE CHANGE. THE OPERATION AND MAINTENANCE REQUIREMENTS FOR THE POST CONSTRUCTION STORMWATER MANAGEMENT

<u>SUBSURFACE MRC BED (THE APPLICANT'S RESPONSIBILITY)</u>

BMP'S FOR THIS PROJECT INCLUDE THE FOLLOWING:

<u>INSPECTION:</u> MRC SYSTEM SHALL BE INSPECTED AT LEAST TWICE PER YEAR AFTER RUNOFF EVENTS GREATER THAN 0.80 INCH OR MORE IF HISTORICAL MAINTENANCE INDICATES IT IS NECESSARY. INSPECTION ITEMS SHALL INCLUDE THE CONDITION OF THE INSPECTION PORTS. OUTLET STRUCTURE. AND ANY VISIBLE CONNECTIONS. SEDIMENT ACCUMULATION OR STANDING WATER IN THE INSPECTION PORTS OR OUTLET STRUCTURE, SIGNS OF WATER CONTAMINATION OR SPILLS, AND ANY SETTLING OR BREAKOUTS ALONG THE LENGTH OF THE SYSTEM. INSPECT ROOF LEADERS AND OVERFLOW PIPES FOR BLOCKAGE. ACCUMULATED RUNOFF WITHIN THE STORAGE SYSTEM FROM ALL STORM EVENTS SHALL BE DISSIPATED WITHIN 7 DAYS.

MAINTENANCE: REMOVE ANY ACCUMULATED SEDIMENT AND DEBRIS FROM THE INSPECTION PORTS AND OUTLET STRUCTURE SUMP IF SEDIMENT IS OBSERVED IN THE MANIFOLD PIPE, FLUSH THE SYSTEM WITH A HIGH POWERED JET, MAKING SURE TO CATCH AND DISPOSE OF THE DISPLACED MATERIAL BY AN APPROVED METHOD SUCH AS A VACUUM TRUCK. UNCLOG ROOF CONNECTIONS AND OVERFLOW PIPES AS NECESSARY AND REPAIR ANY DISCONNECTED ROOF LEADERS. IF SIGNIFICANT SETTLEMENT HAS OCCURRED, THE COLLECTED RUNOFF DOES NOT DEWATER OR THERE ARE BREAKOUTS. CONSULT THE TOWNSHIP AND THE ENGINEER OF RECORD FOR APPROPRIATE RENOVATION MEASURES. LEAF LITTER SHALL BE REMOVED ANNUALLY.

INLETS (THE APPLICANT'S RESPONSIBILITY) INSPECTION: INLETS SHALL BE INSPECTED AND CLEANED ANNUALLY OR MORE OFTEN IF HISTORICAL MAINTENANCE RECORDS SUGGEST A MORE FREQUENT CLEANING. WHEN INLETS ARE INSPECTED, THE VEGETATION IN THE BMP CONTRIBUTING DRAINAGE AREAS SHALL ALSO BE INSPECTED TO ENSURE IT IS IN GOOD CONDITION. CHECK FOR SEDIMENT DEPOSITION IN THE SUMP. THE ACCUMULATION OF SEDIMENT CAN BE DETERMINED BY PROBING WITH A MEASURING STICK. IF APPLICABLE, FOR WATER QUALITY INLETS (THOSE WITH A HOOD DEVICE INSTALLED),

MAINTENANCE: SEDIMENT SHALL BE REMOVED FROM THE SUMP WHEN IT HAS REACHED 6 INCHES IN DEPTH OR YEARLY WHICHEVER COMES FIRST. LEAF LITTER SHALL BE REMOVED ANNUALLY. VACUUM TRUCKS ARE THE RECOMMENDED REMOVAL METHOD. CLEAR THE DRAIN HOLES IN THE BOTTOM OF THE INLET. REMOVED SEDIMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS. IN WATER QUALITY INLETS. IF APPLICABLE, CLEAR THE ANTI-SIPHON TUBE AS NECESSARY AND RE-ATTACH OR RE-ALIGN THE HOOD UNIT IF IT HAS SHIFTED. OPERATION AND MAINTENANCE SHALL BE PER MANUFACTURES SPECIFICATIONS. IF ANY BARE SPOTS AND/OR EROSION ARE IDENTIFIED IN THE BMP CONTRIBUTING Drainage areas, they shall be revegetated and repaired.

CHECK FOR PROPER STRUCTURE ALIGNMENT AND ATTACHMENT, AND BLOCKAGE OF THE ANTI-SIPHON TUBE.

<u>STREAM CROSSING (THE APPLICANT'S RESPONSIBILITY)</u> INSPECTION: THE STREAM CROSSING CULVERT SHALL BE INSPECTED ANNUALLY FOR THE FIRST FIVE (5) YEARS AFTER CONSTRUCTION AND EVERY THREE (3) YEARS THEREAFTER. THE CULVERT SHALL ALSO BE INSPECTED FOLLOWING STORM EVENTS CONSISTING OF AT LEAST A 25-YEAR STORM (5.73 INCHES OF RAINFALL) AND/OR WHENEVER SIGNIFICANT CHANGES (SUCH AS NEW DEVELOPMENT RESULTING IN INCREASED RUNOFF OR CHANNEL ALTERATIONS) OCCUR UPSTREAM OF THE CULVERT, FOLLOW-UP AND MORE FREQUENT INSPECTIONS MAY BE REQUIRED DÉPENDING ON THE TYPE AND EXTENT OF ANY PROBLEMS FOUND DURING THE INSPECTION PROCESS. A QUALIFIED PROFESSIONAL ENGINEER SHALL PERFORM A STRUCTURAL INSPECTION IN ACCORDANCE WITH TH MANUFACTURER'S INSPECTION GUIDELINES AS WELL AS INSPECT THE CULVERT OPENINGS FOR ANY SEDIMENT ACCUMULATION, VEGETATION OVERGROWTH, AND/OR TRASH/DEBRIS WITHIN THE CULVERT.

MAINTENANCE: REMOVE SEDIMENT, VEGETATION OVERGROWTH AND TRASH/DEBRIS AT THE INFLOW AND OUTFLOW POINTS AS NECESSARY TO INSURE THAT THE CULVERT STAYS FREE AND CLEAR OF OBSTRUCTIONS. MAKE ANY STRUCTURAL REPAIRS NECESSARY AS DIRECTED BY A QUALIFIED PROFESSIONAL ENGINEER.

SOIL USE LIMITATIONS AND RESOLUTIONS

ACID SOIL TYPES: pHs LOWER THAN 5.5

SOIL TESTS SHOULD BE TAKEN TO DETERMINE THE ACTUAL SOIL PH REACTION. A PH OF 5.5 SHOULD BE ACHIEVED. TO RESOLVE THIS LIMITATION THE SOIL PH SHOULD BE ADJUSTED BY APPLYING LIME RATES IN ACCORDANCE WITH THE PENN STATE AGRONOMY GUIDE AND THE RECOMMENDATIONS FROM A REPUTABLE

TO RESOLVE THIS LIMITATION VEGETATIVE SPECIES THAT ARE TOLERANT TO WET CONDITIONS SHOULD BE

SOIL SHOULD BE IMPORTED FROM OTHER AREAS ON SITE, THE CHESTER COUNTY CONSERVATION DISTRICT MUST APPROVE ANY DEVIATION FROM THE E&SC SEQUENCE.

WET SOIL TYPES / HIGH WATER TABLE DURING EXCAVATION ACTIVITIES WATER TO BE PUMPED TO A DEWATERING STRUCTURE, SEE DETAIL

POOR SUITABILITY FOR WINTER GRADING / FROST ACTION ADEQUATE COMPACTION OF SOIL IS REQUIRED FOR THE EMBANKMENTS, PIPE BACKFILL, ROAD CONSTRUCTION AND THE BUILDING PADS. IF ADEQUATE COMPACTION CANNOT BE ACHIEVED DUE TO FROST ACTION OR WET SOIL TYPE, EITHER SOIL SHOULD BE IMPORTED FROM OTHER AREAS ON SITE OR CONSTRUCTION OF THESE FACILITIES SHOULD NOT BE WORKED ON DURING PERIODS PRONE TO FROST. THE CHESTER COUNTY

CONSERVATION DISTRICT MUST APPROVE ANY DEVIATION FROM THE E&SC SEQUENCE. PERMEABLE SOIL FOR EMBANKMENT CONSTRUCTION SOIL SHOULD BE IMPORTED FROM OTHER AREAS ON SITE. THE CHESTER COUNTY CONSERVATION DISTRICT MUST

APPROVE ANY DEVIATION FROM THE E&SC SEQUENCE. POORLY SUITED AS SOURCES OF TOPSOIL IDENTIFYING AND RESOLVING CHARACTERISTICS, THAT RENDER SOIL TYPES POORLY SUITED AS TOPSOIL.

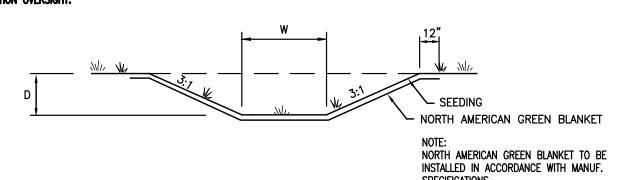
TYPES EXHIBITING K VALUES GREATER THAN 0.36 OR PLASTICITY INDEX VALUES LOWER THAN 10, LIMIT VEGETATIVE STABILIZATION OF CHANNELS. RESOLUTIONS: TEMPORARY CHANNEL LINING, PROVIDING PERMANENT

CHANNEL LINING, DECREASING CHANNEL GRADE, INCREASING CHANNEL WIDTH, SELECTION VEGETATIVE WITH GREATER RETARDANCE, SELECTING PERMANENT LININGS OTHER THAN GRASSES, AND IMPLEMENTING COMBINATION OF THESE AND OTHER METHODS. SOILS SUSCEPTIBLE TO SINKHOLE FORMATION

DEPTHS, LIMITING RETENTION TIMES AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.

BMP 6.4.8 VEGETATED SWALE

THE INSTALLATION OF THIS BMP IS A CRITICAL STAGE WHERE THE DESIGN ENGINEER MUST BE CONTACTED AT LEAST 48 HOURS IN ADVANCE TO PROVIDE CONSTRUCTION OVERSIGHT.



SPECIFICATIONS TEMPORARY INTERCEPTOR CHANNEL CHANNEL V Q SLOPE # (FPS) (CFS) (FT/FT) LINING

TRAPEZOIDAL SWALE - GRASS LINED

5.81 | 12.72 | 3.88 | 3' | 1 | N.A. GREEN C125 | 0.5' FREEBOARD

CONSTRUCTION SEQUENCE

BEGIN VEGETATED SWALE CONSTRUCTION ONLY WHEN THE UPGRADIENT TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE. VEGETATED SWALES SHOULD BE CONSTRUCTED AND STABILIZED EARLY IN THE CONSTRUCTION SCHEDULE, PREFERABLY BEFORE MASS EARTHWORK AND PAVING INCREASE

ROUGH GRADE THE VEGETATED SWALE. EQUIPMENT SHALL AVOID EXCESSIVE COMPACTION AND/OR LAND DISTURBANCE. EXCAVATING EQUIPMENT SHOULD OPERATE FROM THE SIDE OF THE SWALE AND NEVER ON THE BOTTOM. IF EXCAVATION LEADS TO SUBSTANTIAL COMPACTION OF THE SUBGRADE (WHERE AN INFILTRATION TRENCH IS NOT PROPOSED), 18 INCHES SHALL BE REMOVED AND REPLACED WITH A BLEND OF TOPSOIL AND SAND TO PROMOTE INFILTRATION AND BIOLOGICAL GROWTH. AT THE VERY LEAST, TOPSOIL SHALL BE THOROUGHLY DEEP PLOWED INTO THE SUBGRADE IN ORDER TO PENETRATE THE COMPACTED ZONE AND PROMOTE AERATION AND THE FORMATION OF MACROPORES. FOLLOWING THIS, THE AREA SHOULD BE DISKED PRIOR TO FINAL GRADING

CONSTRUCT CHECK DAMS, IF REQUIRED. . FINE GRADE THE VEGETATED SWALE. ACCURATE GRADING IS CRUCIAL FOR SWALES. EVEN THE SMALLEST NON—CONFORMITIES MAY COMPROMISE FLOW CONDITIONS.

SEED, VEGETATE AND INSTALL PROTECTIVE LINING AS PER APPROVED PLANS AND ACCORDING TO FINAL PLANTING LIST. PLANT THE SWALE AT A TIME OF THE YEAR WHEN SUCCESSFUL ESTABLISHMENT WITHOUT IRRIGATION IS MOST LIKELY. HOWEVER, TEMPORARY IRRIGATION MAY BE NEEDED IN PERIODS OF LITTLE RAIN OR DROUGHT. VEGETATION SHOULD BE ESTABLISHED AS SOON AS POSSIBLE TO PREVENT EROSION AND SCOUR. ONCE ALL TRIBUTARY AREAS ARE SUFFICIENTLY STABILIZED, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROLS. IT IS VERY IMPORTANT THAT THE SWALE BE STABILIZED BEFORE RECEIVING UPLAND STORMWATER FLOW.

MAINTENANCE

MAINTENANCE ACTIVITIES TO BE DONE ANNUALLY AND WITHIN 48 HOURS AFTER EVERY MAJOR STORM EVENT (> 1 INCH RAINFALL DEPTH):

1. INSPECT AND CORRECT EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION (ADDRESS WHEN > 3 INCHES AT ANY SPOT OR COVERING VEGETATION)

2. INSPECT VEGETATION ON SIDE SLOPES FOR EROSION AND FORMATION OF RILLS OR GULLIES, CORRECT AS NEEDED.

3. INSPECT FOR POOLS OF STANDING WATER; DEWATER AND DISCHARGE TO AN APPROVED LOCATION AND RESTORE TO DESIGN GRADE 4. MOW AND TRIM VEGETATION TO ENSURE SAFETY, AESTHETICS, PROPER SWALE OPERATION, OR TO SUPPRESS WEEDS AND INVASIVE VEGETATION; DISPOSE OF CUTTINGS IN A LOCAL COMPOSTING FACILITY; MOW ONLY WHEN SWALE IS DRY TO AVOID RUTTING

5. INSPECT FOR LITTER; REMOVE PRIOR TO MOWING 6. INSPECT FOR UNIFORMITY IN CROSS-SECTION AND LONGITUDINAL SLOPE, CORRECT AS NEEDED

7. INSPECT SWALE INLET (CURB CUTS, PIPES, ETC.) AND OUTLET FOR SIGNS OF EROSION OR BLOCKAGE, CORRECT AS NEEDED

MAINTENANCE ACTIVITIES TO BE DONE AS NEEDED:

1. PLANT ALTERNATIVE GRASS SPECIES IN THE EVENT OF UNSUCCESSFUL ESTABLISHMENT

2. RESEED BARE AREAS; INSTALL APPROPRIATE EROSION CONTROL MEASURES WHEN NATIVE SOIL IS EXPOSED OR EROSION CHANNELS A

3. ROTOTILL AND REPLANT SWALE IF DRAW DOWN TIME IS MORE THAN 48 HOURS

4. INSPECT AND CORRECT CHECK DAMS WHEN SIGNS OF ALTERED WATER FLOW (CHANNELIZATION, OBSTRUCTIONS, EROSION, ETC.) ARE IDENTIFIED 5. WATER DURING DRY PERIODS, FERTILIZE, AND APPLY PESTICIDE ONLY WHEN ABSOLUTELY NECESSARY

WINTER MAINTENANCE ACTIVITIES: 1. INSPECT SWALE IMMEDIATELY AFTER THE SPRING MELT, REMOVE RESIDUALS (E.G. SAND) AND REPLACE DAMAGED VEGETATION WITHOUT DISTURBING REMAINING

2. IF ROADSIDE OR PARKING LOT RUNOFF IS DIRECTED TO THE SWALE, MULCHING AND/OR SOIL AERATION/MANIPULATION MAY BE REQUIRED IN THE SPRING TO RESTORE SOIL STRUCTURE AND MOISTURE CAPACITY AND TO REDUCE THE IMPACTS OF DEICING AGENTS. 3. USE NONTOXIC, ORGANIC DEICING AGENTS, APPLIED EITHER AS BLENDED, MAGNESIUM CHLORIDE—BASED LIQUID PRODUCTS OR AS PRETREATED SALT.

4. USE SALT-TOLERANT VEGETATION IN SWALES.

SPECIFICATIONS

<u>swale soil:</u> • shall be uscs class ML (inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity), SM (silty sands, POORLY GRADED SAND-SILT MIXTURES), SW (WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES) OR SC (CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES). THE FIRST THREE OF THESE DESIGNATIONS ARE PREFERRED FOR SWALES IN COLD CLIMATES. IN GENERAL, SOIL WITH A HIGHER PERCENT ORGANIC CONTENT IS PREFERRED.

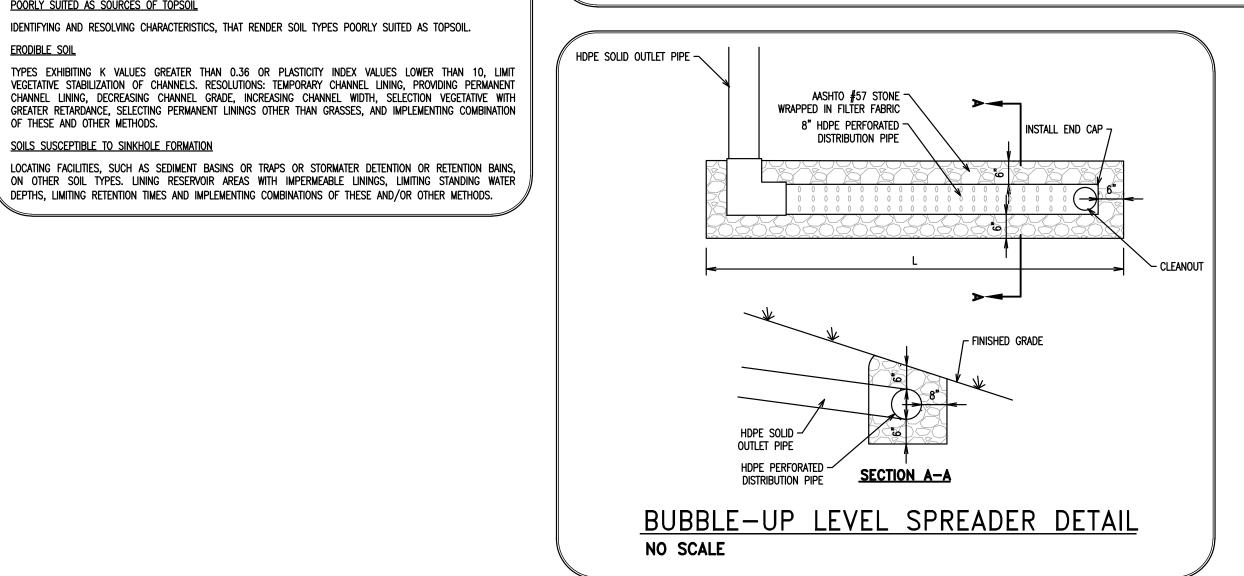
SHALL BE ASTM C-33 FINE AGGREGATE CONCRETE SAND (0.02 IN TO 0.04 IN).

a. CONSTRUCTED OF NATURAL WOOD SHALL BE 6 IN TO 12 IN DIAMETER AND NOTCHED AS NECESSARY.
b. The following species are acceptable: black locust, red mulberry, cedars, catalpa, white oak, chestnut oak, black walnut. The following species are not acceptable, as they can rot over time: ash, beech, birch, elm, hackberry, hemlock, hickories, maples, red and black oak, pines, poplar, spruce, sweetgum, and willow.

EARTHEN CHECK DAM: a. Shall be constructed of sand, gravel, and sandy loam to encourage grass cover (sand: astm c-33 fine aggregate concrete sand 0.02 in TO 0.04 IN, GRAVEL: AASHTO M-43 0.5 IN TO 1.0 IN). STONE CHECK DAM:

a. SHALL BE CONSTRUCTED OF R—4 RIP RAP OR EQUIVALENT

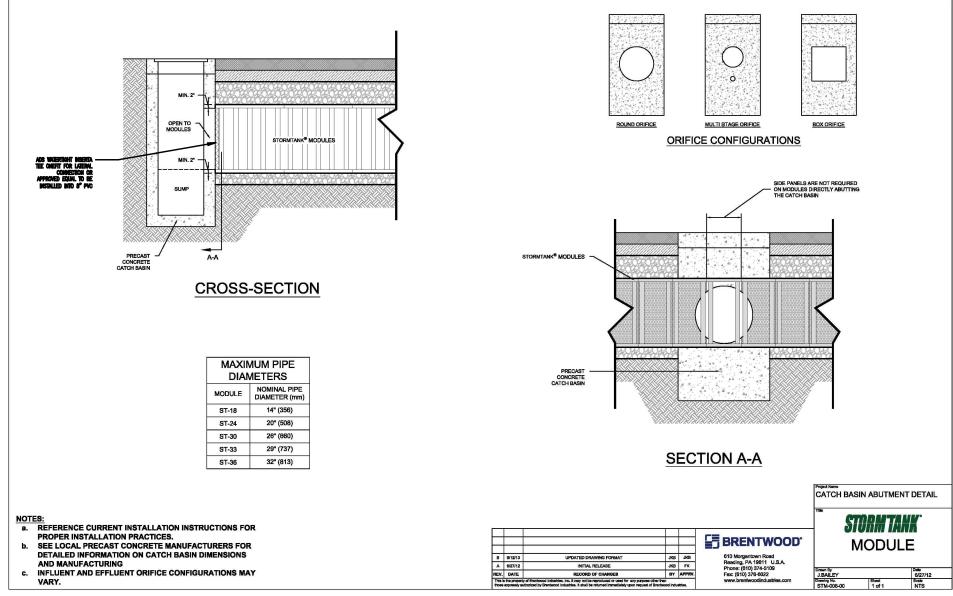
<u>VEGETATION:</u>
• PLANT WITH NATIVE SPECIES

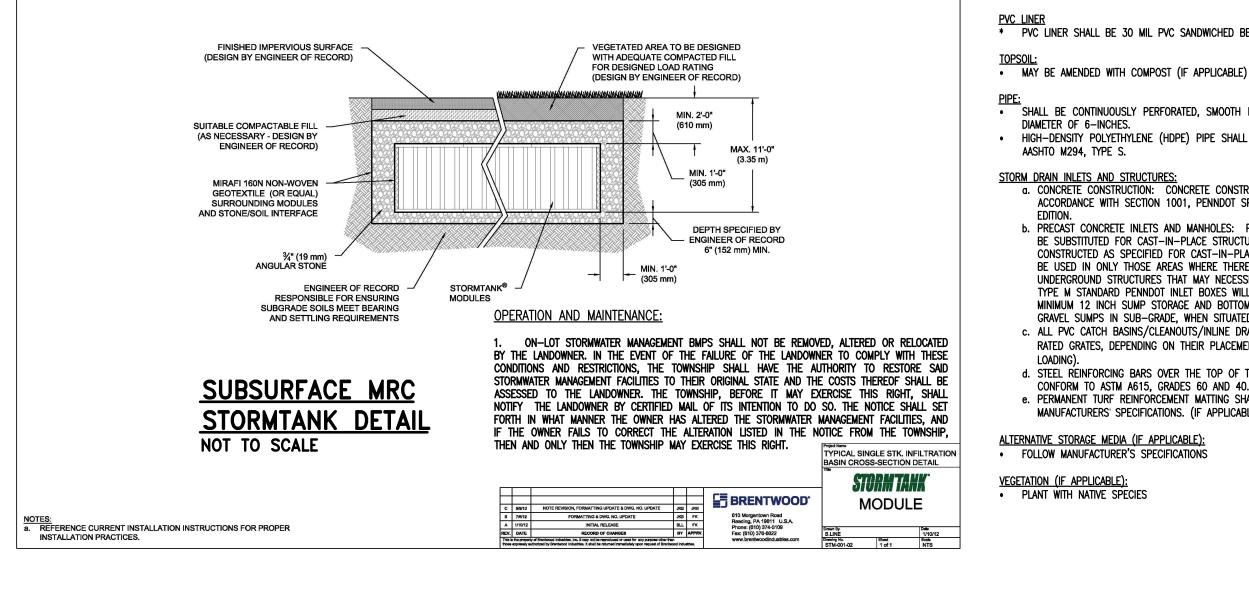


SUBSURFACE MRC STORMTANK BED

THE INSTALLATION OF THIS BMP IS A CRITICAL STAGE WHERE A LICENSED PROFESSIONAL MUST BE CONTACTED AT LEAST 48 HOURS IN ADVANCE TO PROVIDE CONSTRUCTION OVERSIGHT.

<u>General notes:</u>
1. All pipe listed as hdpe shall be fully <u>Perforated</u> high density POLYETHYLENE PIPE.
THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE TOWNSHIF ENGINEER'S APPROVAL PRIOR TO INSTALLATION.





NOTE: ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED

CONSTRUCTION SEQUENCE

INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. . EXCAVATE BED BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE. PRIOR TO PLACEMENT OF AGGREGATE, THE SOIL SURFACE AT THE BOTTOM OF THE BED SHALL BE SCARIFIED. PLACE GEOTEXTILE AND PVC LINER ALONG BOTTOM AND SIDE OF THE EXCAVATED BED PROVIDING THE NECESSARY OVERLAPS OF FABRIC. 4. PLACE STONE ON TOP OF THE FABRIC TO THE DEPTH SPECIFIED IN THE DETAIL. INSTALL PIPES. BACKFILL WITH STONE TO THE TOP OF BED ELEVATION. WRAP BED AND PLACE PVC LINER SANDWICHED BETWEEN GEOTEXTILE FABRIC ON TOP

OPERATION AND MAINTENANCE:

DOWN WITHIN 7 DAYS.

SPECIFICATIONS

7. BACKFILL OVER TOP OF THE BED WITH SOIL.

OF STONE PROVIDING MINIMUM 1 FOOT OVERLAP.

. BED FILTER FABRIC AND STONE SHALL BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS. IF INSPECTION INDICATES THAT SOIL/ SEDIMENT HAS ENTERED ANY OF THE BEDS, APPROPRIATE MEASURES (I.E. CLEANING THE SOIL/SEDIMENT FROM THE FABRIC, STONE, BED ETC. AND OR REPLACEMENT OF THE FABRIC AND STONE) SHALL BE ADDRESSED.

INFLOW AND OUTFLOW POINTS INTO THE THE SYSTEMS SHALL BE KEPT CLEAR O LEAVES AND OTHER DEBRIS. ANY LEAVES OR DEBRIS WILL NEGATIVELY IMPACT THE

PERFORMANCE OF THESE SYSTEMS. ALL DOWNSPOUTS AND OVERFLOW PIPES SHALL BE KEPT IN GOOD WORKING ORDER. . IF GROUNDWATER OR BEDROCK IS ENCOUNTERED DURING THE INSTALLATION OF THE

BEDS STOP WORK AND CONTACT THE TOWNSHIP AND DESIGN ENGINEER FOR AN ALTERNATE BED LOCATION OR NEW DESIGN. 4. COMPACTION IS TO BE MINIMIZED.

5. CATCH BASINS AND INLETS (UPGRADIENT OF BED) SHALL BE INSPECTED AND CLEANED AT LEAST TWICE PER YEAR AND AFTER MAJOR RUNOFF EVENTS. 6. INSPECT THE BED AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS

. ALSO INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, AND SIGNS OF WATER CONTAMINATION/SPILLS 8. REMOVE ACCUMULATED SEDIMENT FROM BASIN AS REQUIRED. PROPERLY DISPOSE OF

9. THE FACILITY IS CONSIDERED TO BE AT FAILURE WHEN THE FOLLOWING OCCURS: 9.1. THE WATER LEVEL IS ABOVE THE 0.65" ORIFICE INVERT (336.50) IN 7 DAYS OR

LESS AFTER A 24-HOUR STORM EVENT. THIS LIKELY MEANS THAT AN ORIFICE IS 9.2. THE WATER LEVEL IS BELOW THE 0.65" ORIFICE WHICH MAY INDICATE A LEAK IN THE LINER. A PROFESSIONAL CONSULTANT SHOULD BE NOTIFIED FOR APPROPRIATE ACTION. LEVELS SLIGHTLY BELOW THE ORIFICE (+/- AN INCH) MAY BE CAUSED BY EVAPORATION AND THUS LOCAL WEATHER CONDITIONS SHOULD BE CONSIDERED. FURTHER MONITORING SHALL BE CONDUCTED.

SHALL BE UNIFORMLY GRADED COARSE AGGREGATE, AASHTO SIZE NUMBER 57 PER AASHTO SPECIFICATIONS, PART I, 19TH ED., 1998, OR LATER AND SHALL HAVE VOIDS 40% AS MEASURED BY ASTM-C29.

* PVC LINER SHALL BE 30 MIL PVC SANDWICHED BETWEEN (2) 12 OZ. GEOTEXTILE

SHALL BE CONTINUOUSLY PERFORATED, SMOOTH INTERIOR, WITH A MINIMUM INSIDE DIAMETER OF 6-INCHES. HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL MEET AASHTO M252, TYPE S OR AASHTO M294, TYPE S.

STORM DRAIN INLETS AND STRUCTURES:

a. CONCRETE CONSTRUCTION: CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 1001, PENNDOT SPECIFICATIONS, 1990 OR LATEST b. Precast concrete inlets and manholes: Precast concrete inlets may CONSTRUCTED AS SPECIFIED FOR CAST-IN-PLACE. PRECAST STRUCTURES MAY

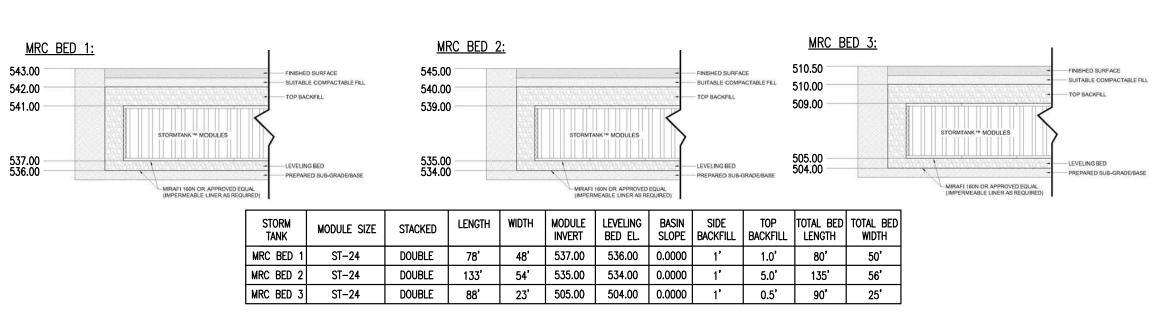
UNDERGROUND STRUCTURES THAT MAY NECESSITATE REVISION OF INVERTS. TYPE M STANDARD PENNDOT INLET BOXES WILL BE MODIFIED TO PROVIDE MINIMUM 12 INCH SUMP STORAGE AND BOTTOM LEACHING BASINS, OPEN TO GRAVEL SUMPS IN SUB-GRADE, WHEN SITUATED IN THE RECHARGE BED. c. ALL PVC CATCH BASINS/CLEANOUTS/INLINE DRAINS SHALL HAVE H-10 OR H-20 RATED GRATES, DEPENDING ON THEIR PLACEMENT (H-20 IF VEHICULAR

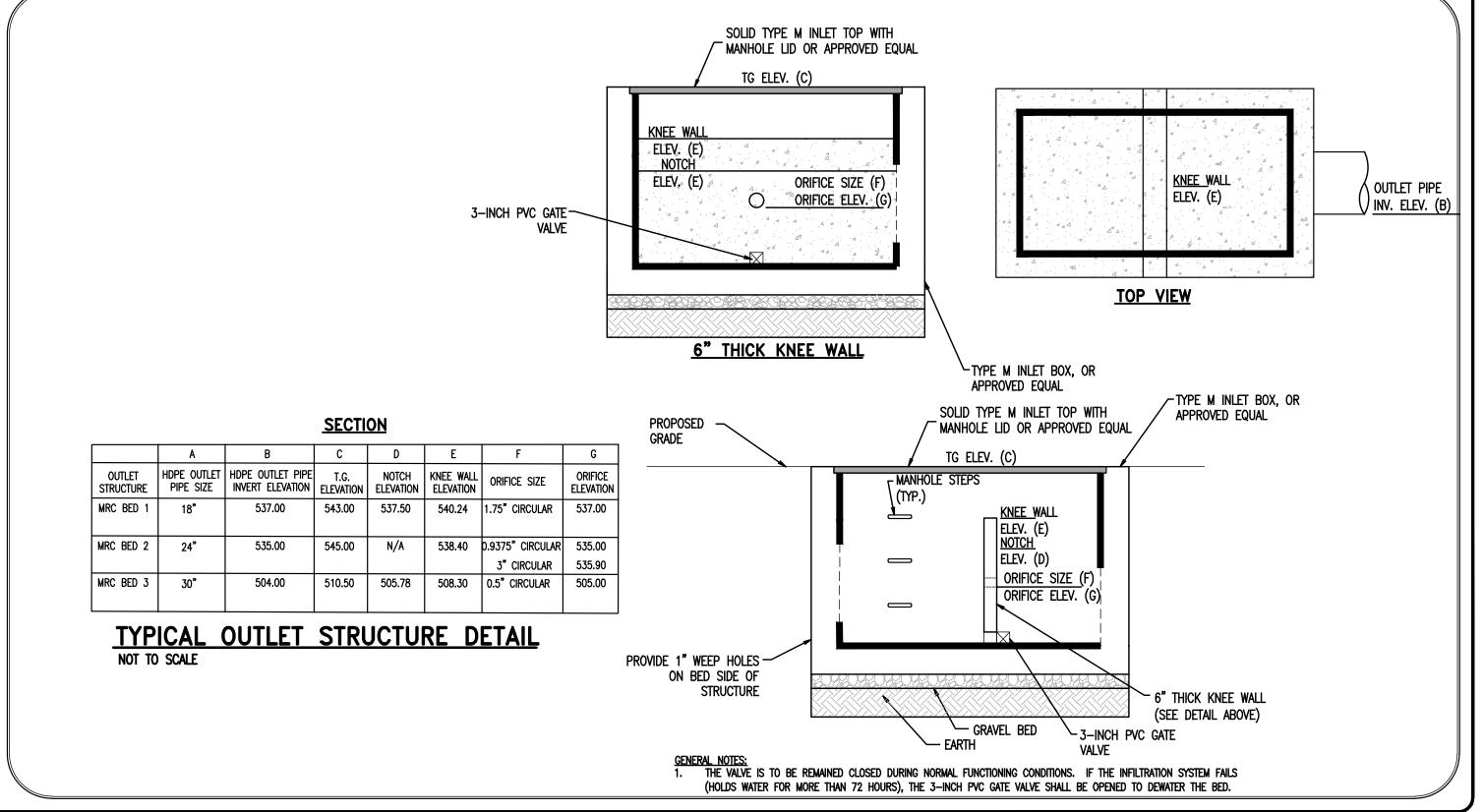
BE USED IN ONLY THOSE AREAS WHERE THERE IS NO CONFLICT WITH EXISTING

d. Steel reinforcing bars over the top of the outlet structure shall CONFORM TO ASTM A615, GRADES 60 AND 40. e. PERMANENT TURF REINFORCEMENT MATTING SHALL BE INSTALLED ACCORDING TO MANUFACTURERS' SPECIFICATIONS. (IF APPLICABLE)

ALTERNATIVE STORAGE MEDIA (IF APPLICABLE): FOLLOW MANUFACTURER'S SPECIFICATIONS

VEGETATION (IF APPLICABLE): PLANT WITH NATIVE SPECIES





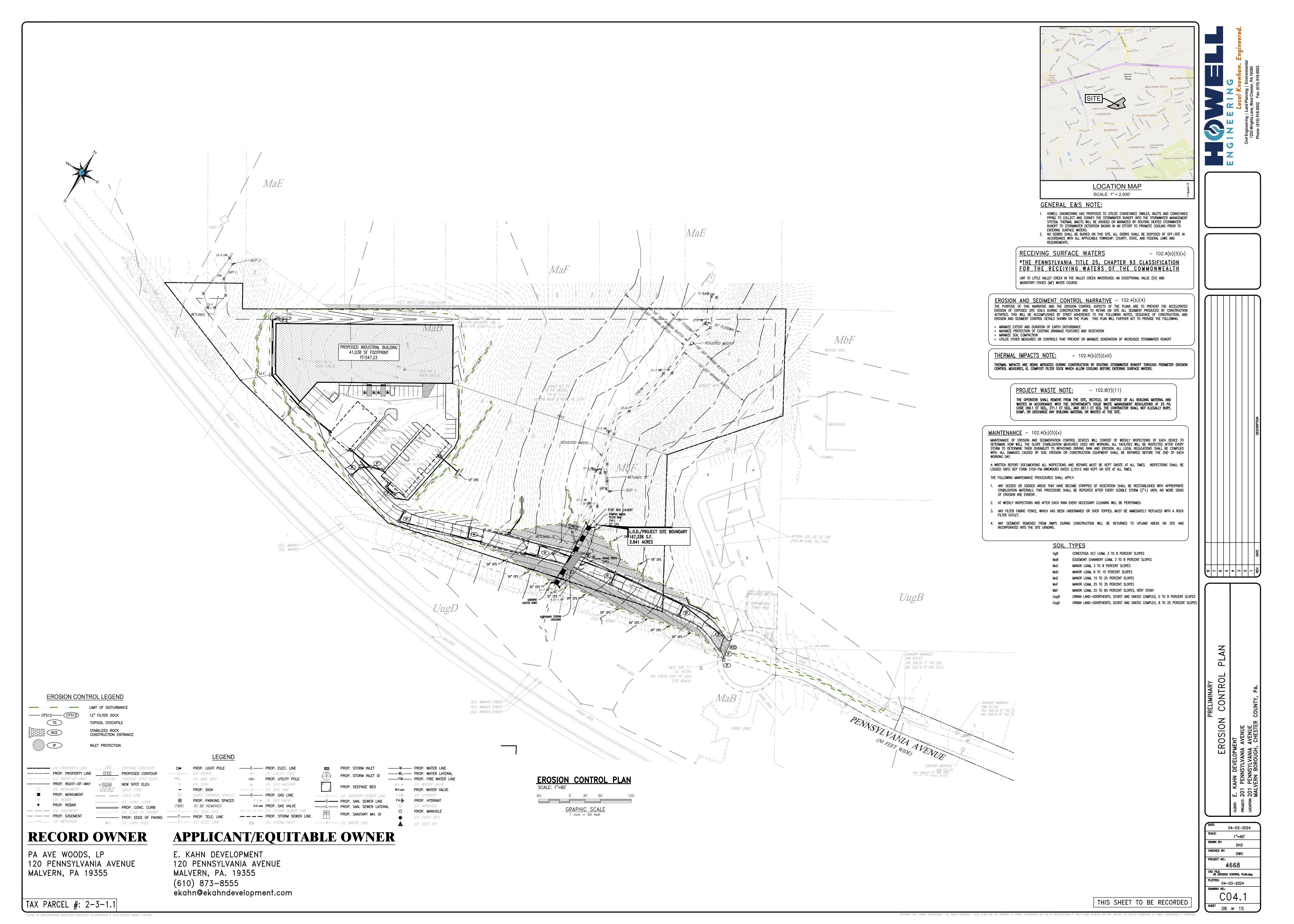
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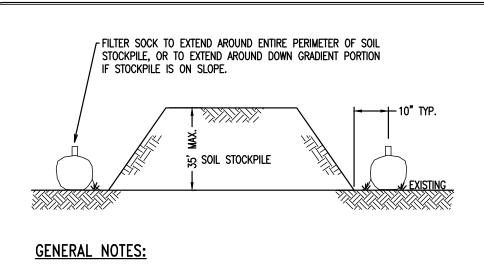


SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 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.

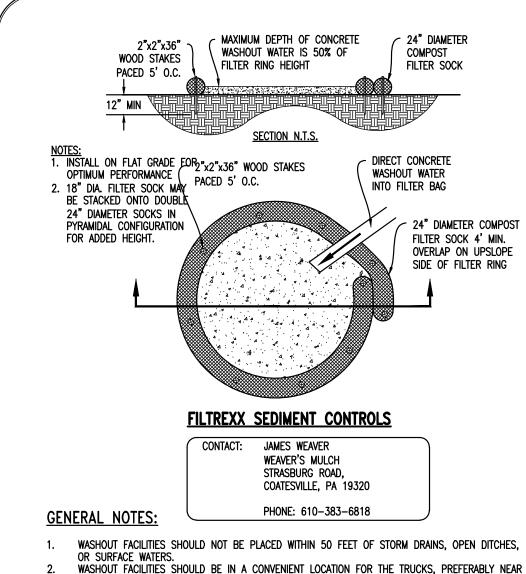
BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL

STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK NOT TO SCALE



- 1. SEE FILTER SOCK DETAIL FOR FILTER SOCK INSTALLATION SPECIFICATIONS AND MAINTENANCE REQUIREMENTS. 2. STOCKPILE HEIGHT MUST NOT EXCEED 35-FEET. 5. STOCKPILE SLOPE MUST BE 3:1 OR FLATTER.
- 4. IF THE STOCKPILE IS TO REMAIN FOR MORE THAN 15 DAYS. IT SHALL BE STABILIZED WITH UNROTTED SMALL GRAIN STRAW OR SALT HAY AT A RATE OF 3 TONS PER ACRE. 5. SILT FENCES SHALL BE MAINTAINED IN PLACE UNTIL TOPSOIL STOCKPILE HAS BEEN ELIMINATED AND SHALL BE REMOVED ONLY WHEN DIRECTED BY THE CHESTER COUNTY

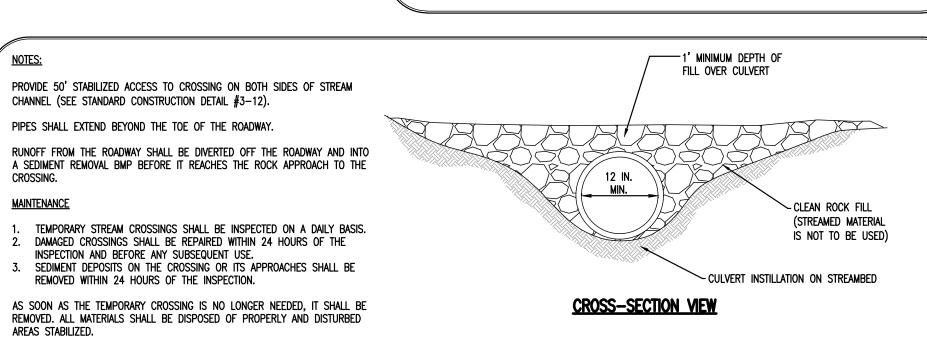
SOIL STOCKPILE DETAIL NO SCALE



THE PLACE WHERE THE CONCRETE IS BEING POURED, BUT FAR ENOUGH FROM OTHER VEHICULAR RAFFIC TO MINIMIZE THE POTENTIAL FOR ACCIDENTAL DAMAGE OR SPILLS. WHEREVER POSSIBLE, THEY SHOULD BE LOCATED ON SLOPES NOT EXCEEDING A 2% GRADE.

COMPOST SOCKS SHOULD BE STAKED IN THE MANNER RECOMMENDED BY THE MANUFACTURER AROUND PERIMETER OF THE GEOMEMBRANE SO AS TO FORM A RING WITH THE ENDS OF THE SOCK LOCATED AT THE UPSLOPE CORNER. CARE MUST BE TAKEN TO ENSURE CONTINUOUS CONTACT OF HE SOCK WITH THE GEOMEMBRANE AT ALL LOCATIONS. WHERE NECESSARY, SOCKS MAY BE STACKED AND STAKED SO AS TO FORM A TRIANGULAR CROSS-SECTION. PROPER SIGNAGE SHOULD BE PROVIDED TO DRIVERS SO THAT THEY ARE AWARE OF THE PRESENCE

COMPOST SOCK WASHOUT

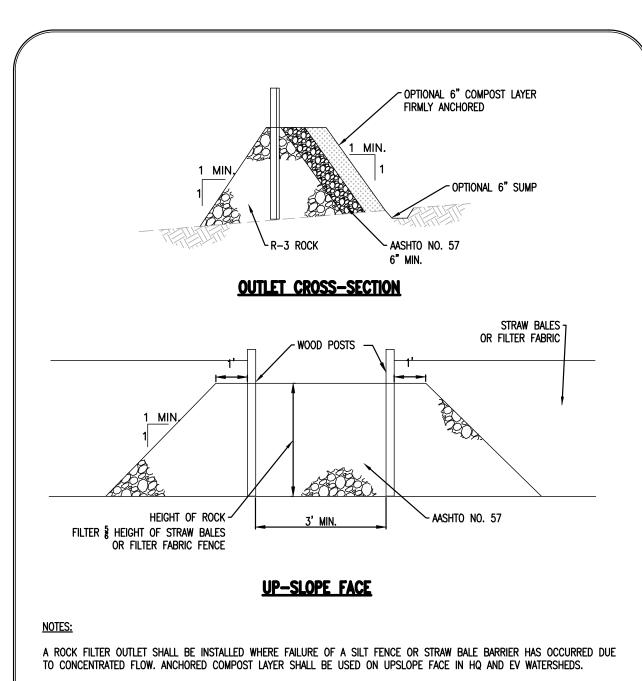


OF WASHOUT FACILITIES.

STANDARD CONSTRUCTION DETAIL #3-13
TEMPORARY STREAM CROSSING

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NOT TO SCALE

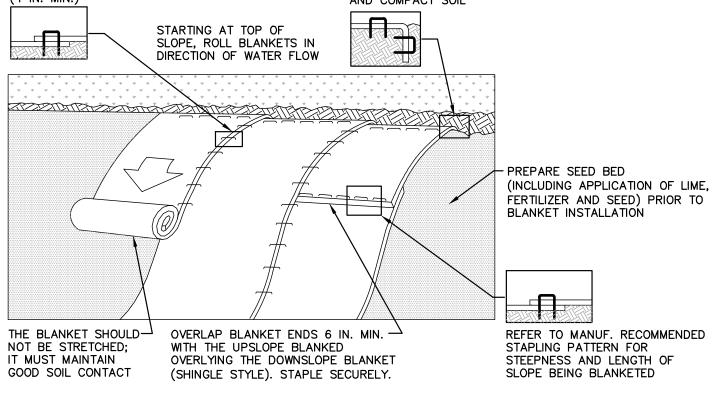


SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

NOT TO SCALE INSTALL BEGINNING OF ROLI STAPLED AND IN 6 IN. x 6 IN. ANCHOR OVERLAPPED TRENCH, STAPLE, BACKFILL (4 IN. MIN.) AND COMPACT SOIL STARTING AT TOP OF SLOPE, ROLL BLANKETS IN DIRECTION OF WATER FLOW

STANDARD CONSTRUCTION DETAIL #4-6

ROCK FILTER OUTLET

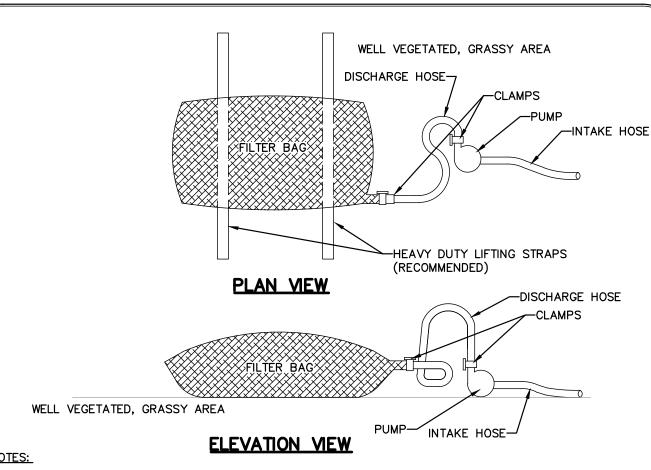


SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

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

NOT TO SCALE

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



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: PROPERT' TEST METHOD MINIMUM STANDARD

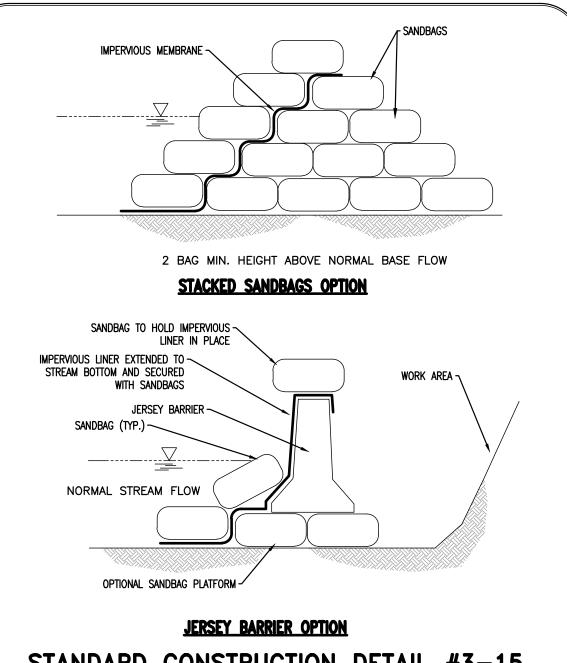
AVG. WIDE WIDTH STRENGTH ASTM D-4884 60 LB/IN ASTM D-4833 ASTM D-3786 MULLEN BURST ASTM D-4355 ASTM D-4751 | 80 SIEVE

PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALI 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.

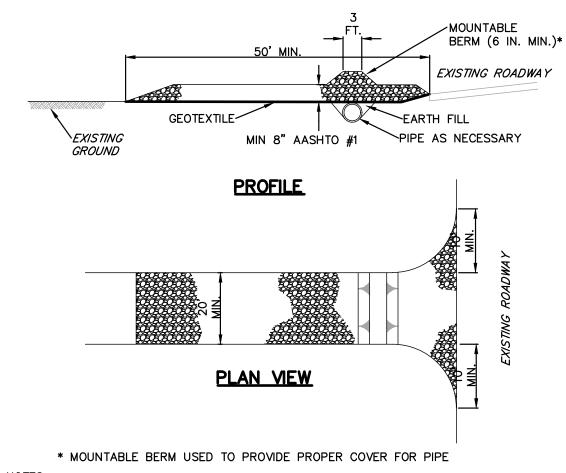
A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE

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



STANDARD CONSTRUCTION DETAIL #3-15 SANDBAG DIVERSION DAM OR COFFERDAM NOT TO SCALE



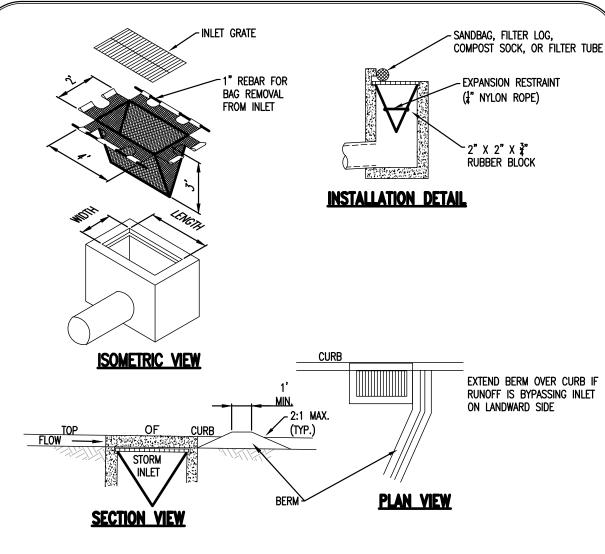
REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE

SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED D THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SIT 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.

> STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE NOT TO SCALE



MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED

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 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

EROSION AND SEDIMENTATION CONTROL NARRATIVE

THE PURPOSE OF THIS NARRATIVE AND THE FROSION CONTROL ASPECTS OF THE PLANS ARE TO PREVENT THE ACCELERATED FROSION OF EXPOSEL SITE SOILS DURING CONSTRUCTION AND TO RETAIN ON SITE ALL SEDIMENT PRODUCED BY CONSTRUCTION ACTIVITIES. THIS WILL BE ACCOMPLISHED BY STRICT ADHERENCE TO THE FOLLOWING NOTES, SEQUENCE OF CONSTRUCTION, AND EROSION AND SEDIMENT CONTROL DETAILS SHOWN ON THI PLAN. THE EROSION CONTROLS PROVIDED WILL MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE, SOIL COMPACTION, AND MAXIMIZI

PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION. THE DESIGN FURTHER UTILIZES OTHER MEASURES AND CONTROLS THAT PREVENT

THE CONTRACTOR OR LAND OWNER MUST CONTACT THE CHESTER COUNTY CONSERVATION DISTRICT AT 610-925-4920 FOR ADEQUACY OF

STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE AND OTHER MULCHES SHOULD BE HELD IN READINESS TO DEAL IMMEDIATELY

EROSION AND SEDIMENTATION CONTROL GENERAL NOTES

OR MINIMIZE GENERATION OF INCREASED STORMWATER RUNOFF.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. IF ANY SIGNIFICANT CHANGES ARE TO BE MADE TO THE LIMITS OF DISTURBANCE OR TO THE EROSION AND SEDIMENTATION CONTROL PLAN,

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIAL AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE. SHOULD UNFORESEEN EROSIVE CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR MUST TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED RUNOFF AND OR SEDIMENT DISPLACEMENT

WITH EMERGENCY PROBLEMS OF FROSION. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOF O DISCHARGE OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE SUCH PROBLEMS.

THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISION OF APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL RESOURCES, SUB-PART C, PROTECTION OF NATURAL RESOURCES, ARTICLE

THE CONTRACTOR MUST DEVELOP AND HAVE APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT. A SEPARATE FROSION AND SEDIMENTATION CONTROL PLAN FOR EACH SPOIL, BORROW OR OTHER WORK AREA NOT DETAILED IN THE APPROVED PLAN, WHETHER LOCATED WITHIN OR OUTSIDE THE CONSTRUCTION LIMITS. 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. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR

LIMITS OF DISTURBANCE MUST BE CLEARLY MARKED IN THE FIELD PRIOR TO ANY DISTURBANCE. ANY CHANGE OR ENCROACHMENT ONTO THESE AREAS WITHOUT CONSERVATION DISTRICT REVIEW AND APPROVAL MAY REQUIRE THE CONTRACTOR TO CEASE DISTURBANCE AND OBTAIN AN EARTH DISTURBANCE PERMIT.

UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL FROSION AND SEDIMENTATION CONTROLS AFTER FACH STORM EVENT AND ON A WEEKLY BASIS ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT

AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED. WHERE BMP'S ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION: A THE LOCATION & SEVERITY OF THE BMP'S FAILURE & ANY POLLUTION EVENTS.

B. ALL STEPS TAKEN TO REDUCE, ELIMINATE & PREVENT THE RECURRENCE OF THE NON-COMPLIANCE.

ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, REMULCHING, RESEEDING

C. THE TIME FRAME TO CORRECT THE NONCOMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION. ALL AREAS REQUIRING INTERIM OR FINA STABILIZATION MUST BE ADDRESSED WITH IMMEDIATE STABILIZATION OF DISTURBANCE. AREAS UTILIZING VEGETATIVE STABILIZATION MUST BE SFEDED / PLANTED AND MULCHED IN SUFFICIENT TIME TO GERMINATE BY OCTOBER 15 OF FACH YEAR, SFEDING WILL BE ACCOMPLISHED THROUGH THE USE OF CONVENTIONAL SEEDING AND MULCHING AT A RATE OF 3.0 TONS PER ACRE AS RECOMMENDED IN THE PENN STATE

AFTER FINAL STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP'S MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMP'S MUST BE STABILIZED IMMEDIATELY. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 ABOVE GROUND HEIGHTS OF COMPOST FILTER SOCKS AND WHEN THEY

REACH THE CLEAN-OUT ELEVATION IN THE SEDIMENT BASIN. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITH THIS PLAN.

16. EROSION AND SEDIMENTATION CONTROL INSPECTIONS SHALL BE PERFORMED ON A WEEKLY BASIS AND AFTER EVERY RAIN EVENT. ALL SLOPES STEEPER THAN 3:1 MUST UTILIZE EROSION CONTROL BLANKET (CURLEX BLANKET OR APPROVED EQUAL).

IF UNSUITABLE MATERIAL IS ENCOUNTERED DURING CONSTRUCTION, A GEOTECHNICAL ENGINEER SHOULD BE ONSITE FOR RESOLUTIONS TO THE UNSUITABLE SOIL. TEMPORARY TOPSOIL STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET, AND SLOPES MUST BE 2:1 OR FLATTER.

BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E & S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CHESTER COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. 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 POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

ALL PUMPING OF SEDIMENT LADEN WATER OR POTENTIALLY SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS THEIR LOCATIONS. ANY OFF-SITE WASTE AND BORROW AREA MUST HAVE AN EROSION AND SEDIMENT CONTROL PLAN REVIEWED AND

APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT PRIOR TO BEING ACTIVATED. 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 UBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIE EASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE T FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT

24. SEDIMENT TRAPS MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES.

25. IF THE CONTRACTOR ENCOUNTERS HIGH WATER TABLE, SHALLOW BEDROCK, OR SOIL INSTABILITY DURING SITE CONSTRUCTION, THE DESIGN ENGINEER OR THE ON-SITE GEOTECHNICAL ENGINEER MUST BE CONTACTED IMMEDIATELY FOR CORRECTIVE MEASURES. 26. IF THE SITE CONSTRUCTION YIELDS A NET CUT RESULTING IN EXCESS SOIL BEING REMOVED FROM THE SITE THE SOIL MUST BE

TRANSFERRED TO A SITE WITH A VALID NPDES PERMIT. AS-BUILT PLANS OF THE STORMWATER BMPS SHALL BE PROVIDED WITHIN SIX MONTHS FOLLOWING THE COMPLETION OF EACH PHASE. THE AS-BUILT PLANS SHALL BE SIGNED AND SEALED BY A PA REGISTERED PROFESSIONAL ENGINEER.

A NOTICE OF TERMINATION (N.O.T.) WILL BE REQUIRED TO BE SUBMITTED FOLLOWING APPROVAL OF THE FINAL AS-BUILT PLANS. PRIOR TO ACCEPTING THE N.O.T., THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION TO ENSURE SITE STABILIZATION AND VERIFY ADEQUATE INSTALLATION AND FUNCTION OF STORMWATER BMPS.

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO USE CLEAN FILL AND TO PERFORM ENVIRONMENTAL DUE DILIGENCE, AS REQUIRED BY THE DISTRICT, TO DETERMINE THAT ALL FILL IMPORTED TO THE SITE MEETS THE DEP'S DEFINITION OF CLEAN FILL. SEE DEFINITIONS OF CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE THIS SHEET.

AN EROSION CONTROL BLANKET WILL BE INSTALLED ON ALL DISTURBED SLOPES STEEPER THAN 3:1, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF WATERS OF THE COMMONWEALTH. 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).

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.

ENVIRONMENTAL DUE DILIGENCE MUST BE PERFORMED TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY NSPECTIONS, 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 A 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 THE DEPARTMENT'S POLICY "MANAGEMENT OF CLEAN FILL".

AREAS WHICH ARE TO BE TOP-SOILED 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 SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY OR

AS NFFDED OR AS DIRECTED BY THE CCCD OR MUNICIPALITY AND DISPOSED AS A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED. SHOVELED OR SWEPT INTO ANY ROAD SIDE DITCH. STORM SEWER OR SURFACE WATER. ANY DAMAGE THAT OCCURS AS A RESULT OF THE BASIN OR TRAP DISCHARGE SHALL BE REPAIRED IN A PERMANENT MANNER THAT IS

SATISFACTORY TO THE MUNICIPALITY, CONSERVATION DISTRICT AND DOWN SLOPE LANDOWNERS. ANY CHANGES RECOMMENDED BY ANY REVIEWING BODY OF THE WATERWAY AND WETLAND ENCROACHMENT/IMPACTS THAT WILL AFFECT THE PCSM OR E&S PLANS ASSOCIATED WITH THE WATER OBSTRUCTION OR ENCROACHMENT ACTIVITIES SHOULD HAVE THOSE PLAN UPDATED AND SUBMITTED TO CHESTER COUNTY CONSERVATION DISTRICT.

PERMANENT SEEDING SPECIFICATIONS * LIMESTONE - RAW, GROUND AGRICULTURAL LIMESTONE CONTAINING MORE THAN 90% CARBONATES. - USE 800 LBS. PER

* COMMERCIAL FERTILIZER (10-20-20) OR SLOW-RELEASE NITROGEN FERTILIZER (38-0-0) - USE 140 LBS. PER 1,000 S.Y. MIXED INTO THE SEEDBED PRIOR TO SEEDING. · MULCH — CLEAN OAT OR STRAW SHALL BE FREE FROM MATURE SEED—BEARING STALKS OR ROOTS OF PROHIBITED OR NOXIOUS WEEDS. APPLY AT A RATE OF 3.0 TONS PER ACRE. THE MULCH SHOULD BE STABILIZED UNTIL THE VEGETATIVE

COVER IS ESTABLISHED. SPREAD MULCH UNIFORMLY IN A LOOSE LAYER 1/2" TO 1" DEEP. MULCH ANCHORING (MULCH NETTING, PEG AND TWINE, LIQUID MULCH BINDER) SHALL BE ACCOMPLISHED IMMEDIATELY AFTER MULCH PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER.

* SEED MIXTURE - SHALL BEAR A GUARANTEED STATEMENT OF ANALYSIS.

PERMANENT SEEDING SPECIFICATIONS (PLS = PURE LIVE SEED PERCENTAGE) MIN. GERMINATION %'S LAWN AND MOWED AREAS:

. KENTUCKY BLUEGRASS 30 PLS (LBS/ACRE) 12 OZ. PER 1,000 S.F. PERENNIAL RYEGRASS 20 PLS (LBS/ACRE) 8 OZ. PER 1.000 S.F. 3 PLS (LBS/ACRE) 2 OZ. PER 1.000 S.F PENNLAWN-FINE FESCUE 40 PLS (LBS/ACRE) 16 OZ. PER 1,000 S.F. PERENNIAL RYEGRASS 20 PLS (LBS/ACRE) 8 OZ. PER 1,000 S.F. REDTOP 3 PLS (LBS/ACRE) 2 OZ. PER 1,000 S.F. 80% SLOPES OR UN-MOWED AREAS:

25 PLS (LBS/ACRE) 10 OZ. PER 1,000 S.F. . CROWNVETCH 25 PLS (LBS/ACRE) 10 OZ. PER 1,000 S.F. PERENNIAL RYEGRASS areas to be stabilized must be seeded/planted in sufficient time to germinate, at least 4 to 6 weeks of growth PRIOR TO HARD FROSTS. AFTER SEEDING IS COMPLETE, MULCH THE SEEDED AREAS WITH UNROTTED SMALL GRAIN STRAW AT A

PERMANENT SEEDING SHALL ONLY OCCUR DURING THE DATES LISTED ABOVE. IF AREAS ARE PREPARED FOR SEEDING AT OTHER

A RATE OF 3 TONS PER ACRES. THE MULCH SHALL REMAIN IN PLACE UNTIL SEEDING DATES ARE APPROPRIATE. THE MULCH

TIMES, THEN THE PREPARED SEEDBED SHALL BE HEAVILY MULCHED WITH CLEAN UNROTTED SMALL GRAIN STRAW OR SALT HAY AT

SHALL BE REMOVED; THE AREA SHALL BE DRESSED, SEEDED AND REMULCHED AS DESCRIBED ABOVE. ALL DISTURBED AREAS REQUIRING FINAL STABILIZATION MUST BE ADDRESSED IMMEDIATELY.

MAINTENANCE & INSPECTION OF EROSION CONTROLS:

MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL DEVICES WILL CONSIST OF WEEKLY INSPECTIONS OF EACH DEVICE TO DETERMINE HOW WELL THE SLOPE STABILIZATION MEASURES AND SEDIMENT CONTROL FACILITIES USED ARE WORKING. ALL FACILITIES WILL BE INSPECTED AFTER EVERY STORM TO DETERMINE THEIR DURABILITY TO WITHSTAND DRIVING RAIN AND FROSIO ALL LOCAL REGULATIONS SHALL BE COMPLIED WITH. ALL DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION EQUIPMENT SHALL BE REPAIRED BEFORE THE END OF EACH WORKING DAY. WRITTEN DOCUMENTATION OF THE INSPECTIONS SHALL BE LOGGED ONTO DEP FORM 3150-FM-BWEW0083, DATED FEBRUARY 2012, AND SHALL BE KEPT ON SITE AT ALL TIMES AND/OR PROVIDED TO THE NECESSARY AGENCIES UPON REQUEST.

THE FOLLOWING MAINTENANCE PROCEDURES SHALL APPLY: 1. ANY SEEDED OR SODDED AREAS THAT HAVE BECOME STRIPPED OF VEGETATION SHALL BE REESTABLISHED WITH APPROPRIAT

STABILIZATION MATERIALS. THIS PROCEDURE SHALL BE REPEATED AFTER EVERY SIZABLE STORM (2"+) UNTIL NO MORE SIGN AT WEEKLY INSPECTIONS AND AFTER EACH RAIN EVENT NECESSARY CLEANING WILL BE PERFORMED.

ANY FILTER FABRIC FENCE, WHICH HAS BEEN UNDERMINED OR OVER TOPPED, MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET 4. ANY SEDIMENT REMOVED FROM BMPS DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE AND

INCORPORATED INTO THE SITE GRADING.

DEFINITIONS (PER THE DEPARTMENT OF ENVIRONMENTAL PROTECTION): <u>CLEAN FILL</u>-UNCONTAMINATED, NONWATER-SOLUBLE, NONDECOMPOSABLE 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 RECOGNIZABLE AS SUCH. (25 PA. CODE §§ 271.101 AND 287.101) THE

ENVIRONMENTAL DUE DILIGENCE-INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, LECTRONIC DATA BASE SEARCHES, REVIEW OF OWNERSHIP AND USE HISTORY OF PROPERTY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS.

TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED

BMP GENERAL NOTE:

UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUS INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND TH DATE. TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION, THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES. AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, REMULCHING, RESEEDING, AND RENETTING MUST BE PERFORMED IMMEDIATELY. II EROSION AND SEDIMENTATION BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED. WHERE BMP'S ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENTATION POLLUTION THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION:

A. THE LOCATION AND SEVERITY OF THE BMP'S FAILURE AND ANY POLLUTION EVENTS B. ALL STEPS TAKEN TO REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE NON-COMPLIANCE. C. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO

COMPLIANCE. CONSTRUCTION SEQUENCE NOTES:

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

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, AND THE EROSION AND SEDIMENTATION CONTROL PLAN PREPARER TO AN ON-SITE PRE-CONSTRUCTION MEETING.

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIAL AND WASTES IN ACCORDANCE

WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL WASTES AT THE SITE.

4. A WEEKLY INSPECTION LOG SHALL BE FORWARDED TO MALVERN BOROUGH ADMINISTRATIVE OFFICE DURING CONSTRUCTION.

UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

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.

SEQUENCE OF CONSTRUCTION

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. EROSION AND SEDIMENTATION CONTROL MEASURES AND EARTH MOVING ACTIVITIES WILL BE STAGED AS FOLLOWS:

1. AT LEAST 7 DAY'S BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSI ACTIVITIES INCLUDING BUT NOT LIMITED TO: THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, AND THE EROSION AND SEDIMENTATIVE CONTROL PLAN PREPARER FOR AN ON-SITE PRE-CONSTRUCTION MEETING.

2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NO THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES.

3. STAKE LIMITS OF DISTURBANCE IN THE FIELD PRIOR TO CLEARING OF ANY EARTH DISTURBANCE. 4. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCE AT ROAD AS SHOWN ON THE PLAN.

5. INSTALL THE SILT FENCE AS SHOWN ON THE PLANS. MAINTAIN TEMPORARY CONTROL MEASURES UNTIL PERMANENT COVER IS ESTABLISHED THE CONTRACTOR WILL INSTALL THE SYSTEMS IN CONFORMANCE WITH THE DETAILS AND MANUFACTURER'S SPECIFICATIONS. 6. ALL EROSION AND SEDIMENT CONTROLS MUST BE COMPLETELY INSTALLED AND STABILIZED PRIOR TO DISTURBANCE.

7. CLEAR AND GRUB, IF NECESSARY. 8. STRIP TOPSOIL IN BUILDING AND PARKING AREAS AND STOCKPILE. PLACE TOPSOIL IN DESIGNATED TOPSOIL STOCKPILE LOCATION AND

SURROUND WITH SILT FENCE. SEED AND MULCH WITH TEMPORARY SEED MIX SPECIFICATION. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEE ROUGH GRADE PARKING AND BUILDING PAD. THE SPOILS FROM THIS EXCAVATION SHALL BE USED FOR THE CONSTRUCTION OF TH

EMBANKMENT. A QUALIFIED GEOTECHNICAL ENGINEER SHALL VERIFY THE COMPACTION AND SOIL PROPERTIES OF THE MATERIAL BEING EXCAVATED AND THE MATERIAL TO BE USED FOR THE EMBANKMENT.

10. BEGIN CONSTRUCTION OF MRC BEDS AS SHOWN ON PLANS. THIS IS A CRITICAL STAGE WHERE THE DESIGN ENGINEER MUST BE CONTACTED <u>AT LEAST 48 HOURS IN ADVANCE TO PROVIDE CONSTRUCTION OVERSION</u> 11. INSTALL STORM SEWER INLETS, INLET PROTECTION AND PIPING ASSOCIATED WITH THESE SYSTEMS. ALL INLETS FOR THE UNDERGROUND BEDS

MUST BE SEALED UNTIL THE LOT AREAS CONTRIBUTORY TO THEM ARE FULLY STABILIZED TO ENSURE SEDIMENT DOES NOT ENTER T SYSTEM. AT THAT TIME THE BEDS CAN BE UNSEALED AND PUT INTO SERVICE. INSTALL UNDERGROUND UTILITIES (WATER SERVICES, ELECTRIC, GAS, COMMUNICATIONS, ETC.) ASSOCIATED WITH THE BUILDING. THE WATER LINE SHALL BE EXCAVATED, INSTALLED, BACKFILLED AND STABILIZED ON A DAILY BASIS, WITH ONLY AS MUCH EXCAVATED AS CAN BE

13. BEGIN BUILDING CONSTRUCTION. ONCE INSTALLED, ROOF DRAINS SHALL DISCHARGE TO THE REAR BUILDING SWALE. PRIOR TO ANY BUILDING CONSTRUCTION, A STABILIZED LAYDOWN/STAGING/CONTRACTOR PARKING IS TO BE PROVIDED.

14. FINE GRADE ACCESS DRIVES AND PARKING AREAS.

15. CONSTRUCT CONCRETE CURB.

16. PLACE STONE BASE COURSE ON ALL PARKING AND CIRCULATION AREAS. 17. PAVE PARKING AREAS WITH BINDER COURSE IN ACCORDANCE WITH PAVING SPECIFICATIONS ON THE PLANS.

18. ONCE DRAINAGE AREAS ARE ADEQUATELY STABILIZED, REMOVE INLET PROTECTION.

19. PROVIDE A MINIMUM OF SIX (6) INCHES OF TOPSOIL ON ALL DISTURBED AREAS. SEED AND MULCH ALL DISTURBED AREAS WITH PERMANEN

INSTALL LANDSCAPING MATERIAL.

21. PAVE PARKING AREAS WITH WEARING COURSE. SEAL BETWEEN CURB AND PAVING AND PAVEMENT JOINTS, AS SPECIFIED, WITH BITUMINOUS SEAL COAT.

22. ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL STRUCTURES.

SEEDING, MULCHING AND SODDING

ALL SEEDING, MULCHING AND SODDING SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS OF THE CHESTER COUNTY CONSERVATION DISTRICT. ALL SLOPES STEEPER THAN 5H:1V SHALL BE STABILIZED WITH EITHER SOD OR PERMANENT SEEDING AND MULCH AND ANCHORED IN PLACE WITH JUTE NETTING. NO SLOPES SHALL BE STEEPER THAN 2H:1V. TEMPORARY AND PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH THE PENN STATE AGRONOMY GUIDE OR AS RECOMMENDED BELDS DURING NON-GERMINATING PERIODS APPLY MULCH AT THE RATES RECOMMENDED BELOW. IF THE SITE IS TO REMAIN INACTIVE FOR OVER 6 MONTHS OR AT THE COMPLETION OF FINAL GRADING APPLY PERMANENT SEED AND MULCH AS RECOMMENDED BELOW.

SHOULD UNFORESEEN EROSIVE CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT/DOWN GRADIENT PROPERTIES AS A RESULT OF INCREASED SEDIMENT DISPLACEMENT. STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE AND/OR OTHER MULCHES SHALL BE HELD IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.

E&S MANUAL AND/OR THE PENN STATE AGRONOMY GUIDE.

TEMPORARY SEEDING SPECIFICATIONS WHERE IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA IMMEDIATELY AFTER THE FINAL EARTH MOVING HAS BEEN COMPLETED, TEMPORARY SEEDING SHALL BE DONE IN ACCORDANCE TO THE CHESTER COUNTY CONSERVATION DISTRICT, THE

RATE OF 3 TONS PER ACRE. STRAW AND HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN CRIMP-DISC SHALL BE USED TO ANCHOR THE STRAW OR HAY INTO THE SOIL. SITE PREPARATION: APPLY AGRICULTURAL GRADE LIMESTONE AT A RATE OF 800 LBS. PER 1000 S.Y. PLUS 10-20-20 FERTILIZER AT A RATE OF 140 LBS. PER 1,000 S.Y. AND WORK IN WHERE POSSIBLE. SECURE A SOIL TEST BEFORE MAKING A PERMANENT

AREAS TO BE STABILIZED MUST BE SEEDED/PLANTED IN SUFFICIENT TIME TO GERMINATE, AT LEAST 4 TO 6 WEEKS OF GROWTH

PRIOR TO HARD FROSTS. AFTER SEFDING IS COMPLETE, MULICH THE SEFDED AREAS WITH LUNROTTED SMALL GRAIN STRAW AT A

SEEDING. AFTER SEEDING, MULCH WITH STRAW AT A RATE OF 3.0 TONS PER ACRE. TEMPORARY SEED MIXTURE: APPLY ANNUAL RYE GRASS AT 40 LBS. PER ACRE

TOPSOIL APPLICATION

(EQUIVALENT TO 1 LBS. PER 1000 S.F.)

graded areas shall be scarified or otherwise loosened to a depth of 3 to 5 inches to permit bonding of the Topsoil to the surface areas and to provide a roughened surface to prevent topsoil from sliding down slope. Topsoil shall be uniformly distributed across the disturbed area to a dept of 4 to 8 inches minimum — 2 inches ON FILL OUTSLOPES. SPREADING SHALL BE DONE IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH MINIMUM OF ADDITIONAL PREPARATION OR TILLAGE. IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOIL PLACEMENT SHALL BE CORRECTED IN ORDER TO PREVENT FORMATION OF DEPRESSIONS UNLESS SUCH DEPRESSIONS ARE PART OF THE PCSM PLAN. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN HE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPOSED GRADING AND SEEDBED

PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHEREVER POSSIBLE PRIOR TO

Cubic Yards	TABLE 11.1 of Topsoil Required for Application to	/arious Depths
Depth (in)	Per 1,000 Square Feet	Per Acre
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806
7	21.7	940
8	24.8	1,074

UTILITY LINE TRENCH EXCAVATION NOTES:

LIMIT ADVANCED CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.

WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.

3. ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

COMPLETED THE SAME DAY. 5. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT

AND/OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE. 6. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED.

PROJECT NO.: 4668

4. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE

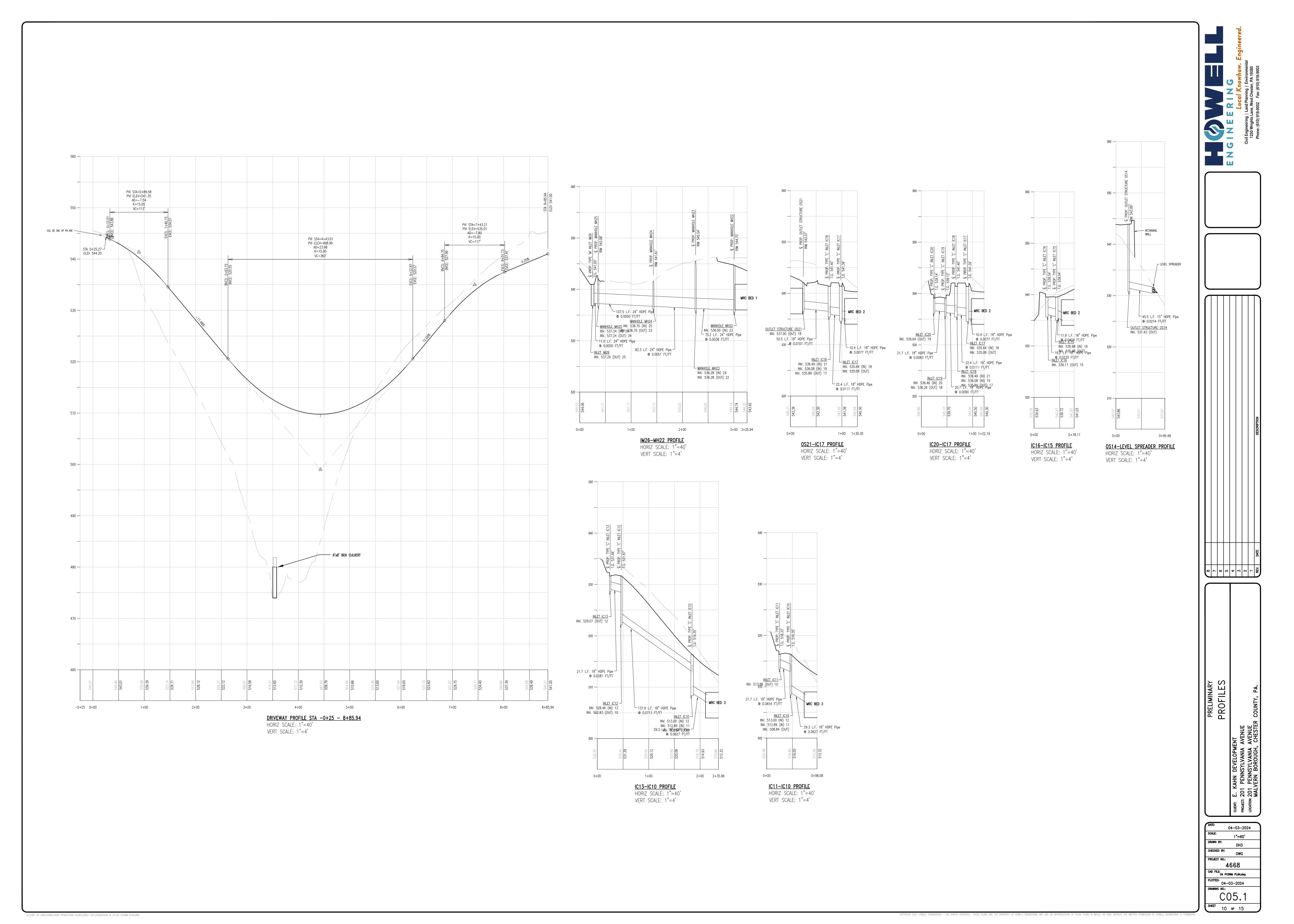
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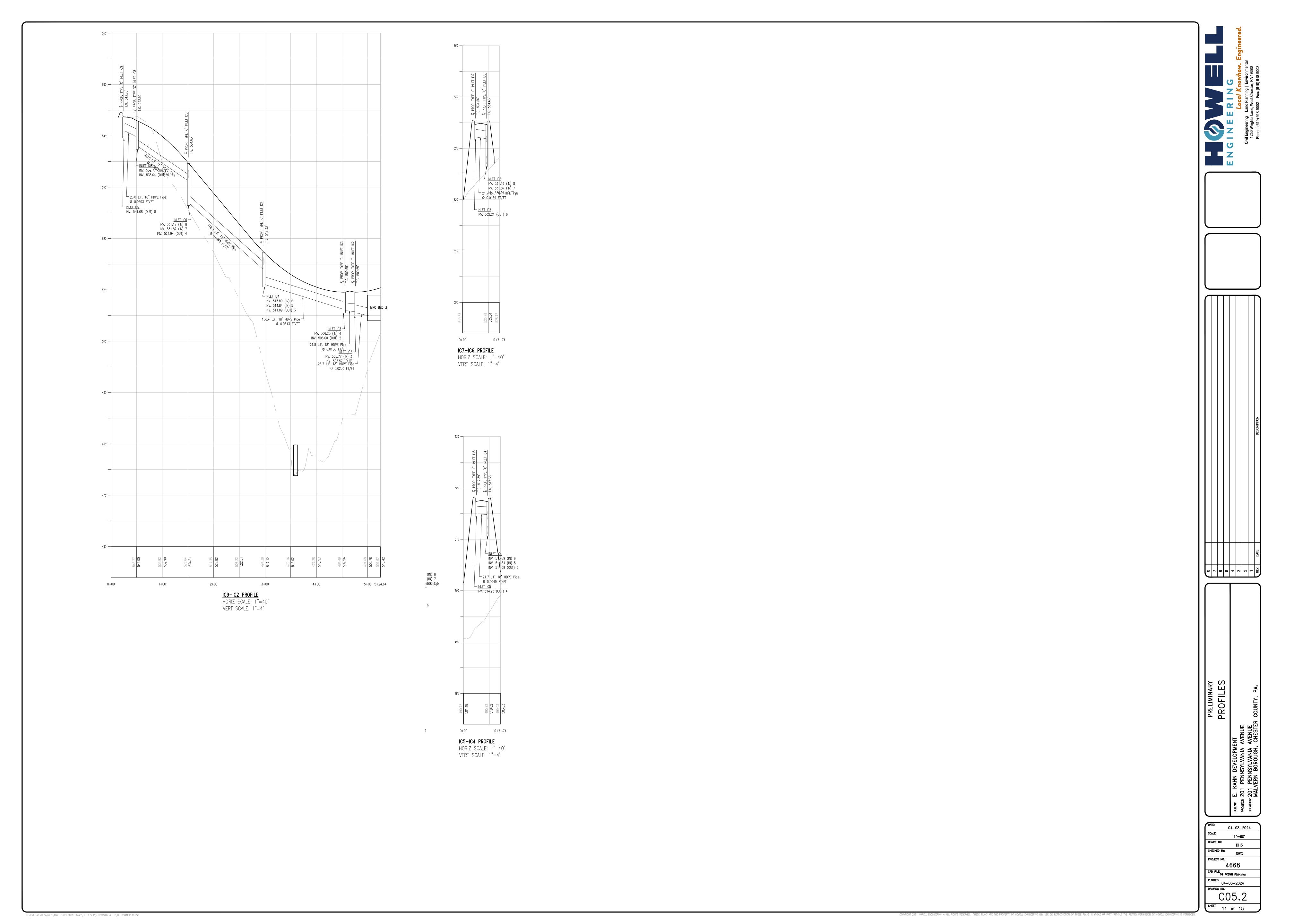
04-03-2024 1"=60'

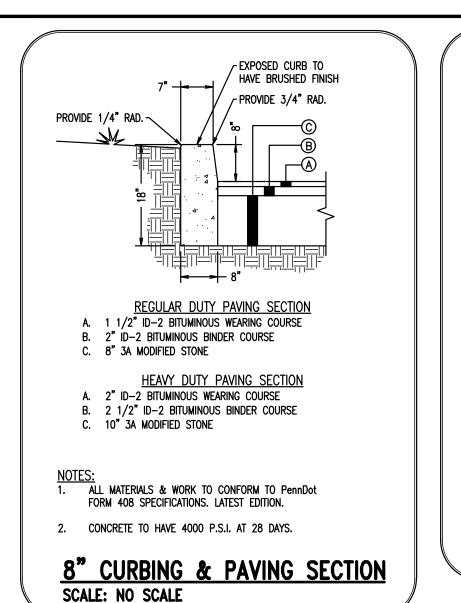
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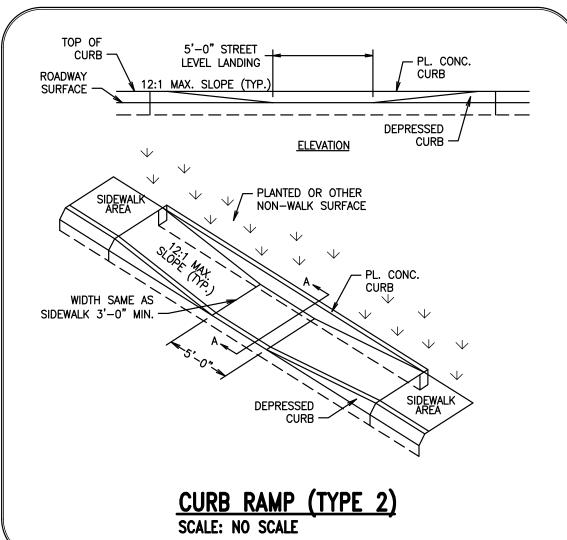


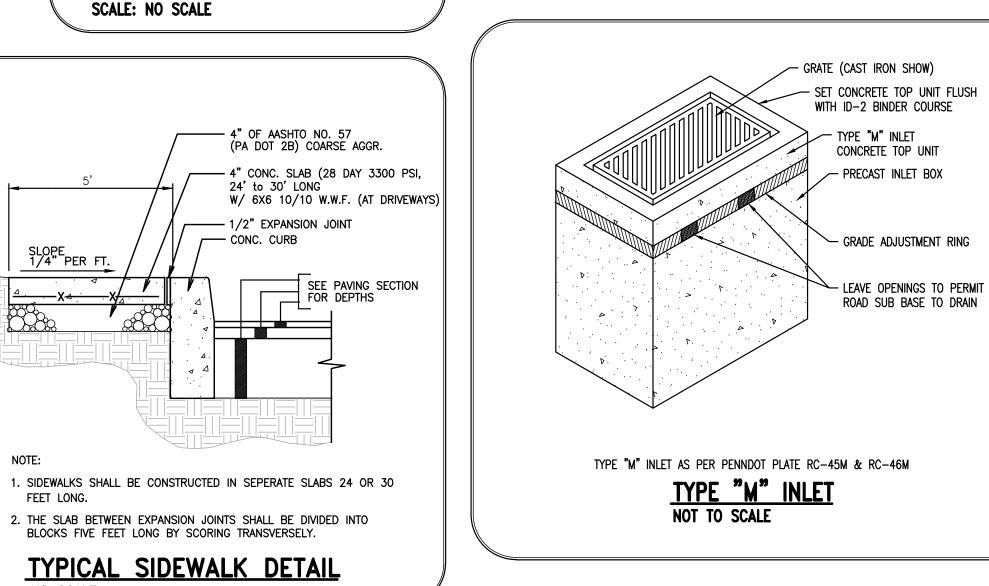


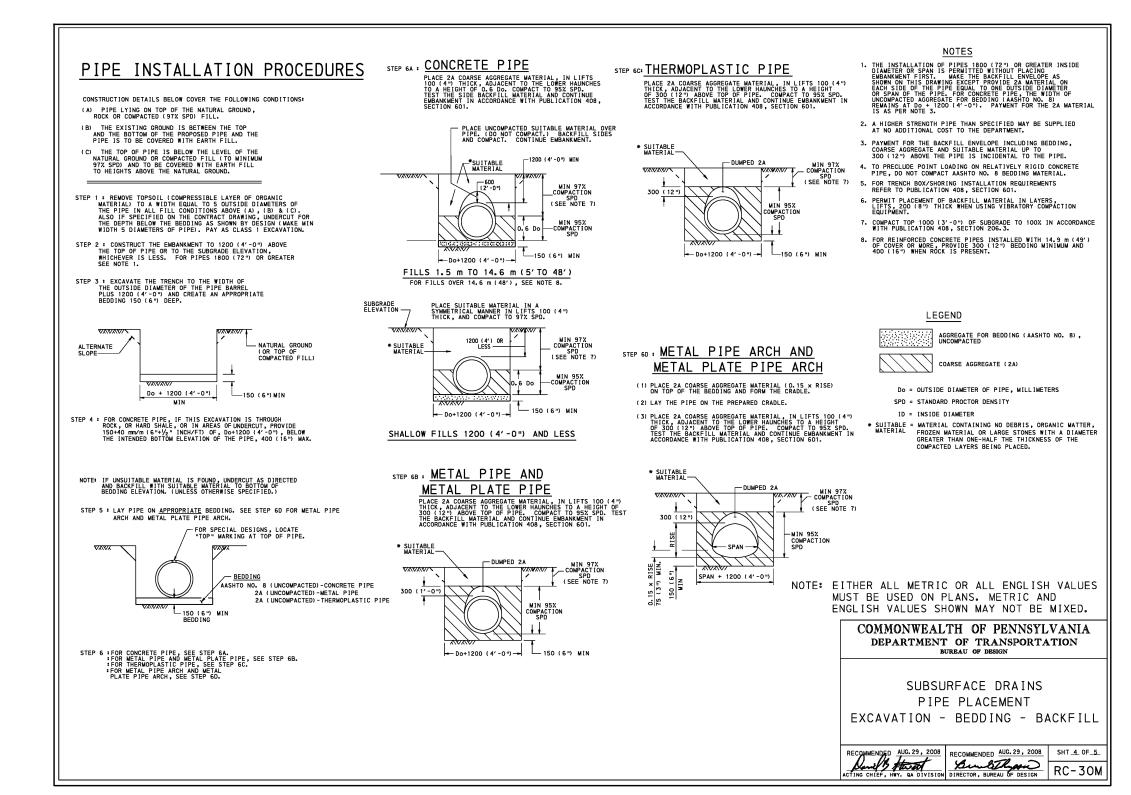
SLOPE 1/4" PER FT.

NOTE:

Q:\CIVIL 3D JOBS\4668\4668 PRODUCTION PLANS\SHEET SET\SUBDIVISION & LD\06 CONSTRUCTION DETAILS.DWG

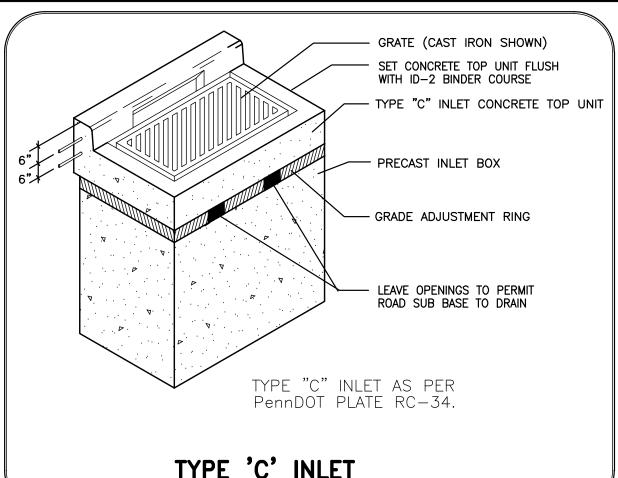




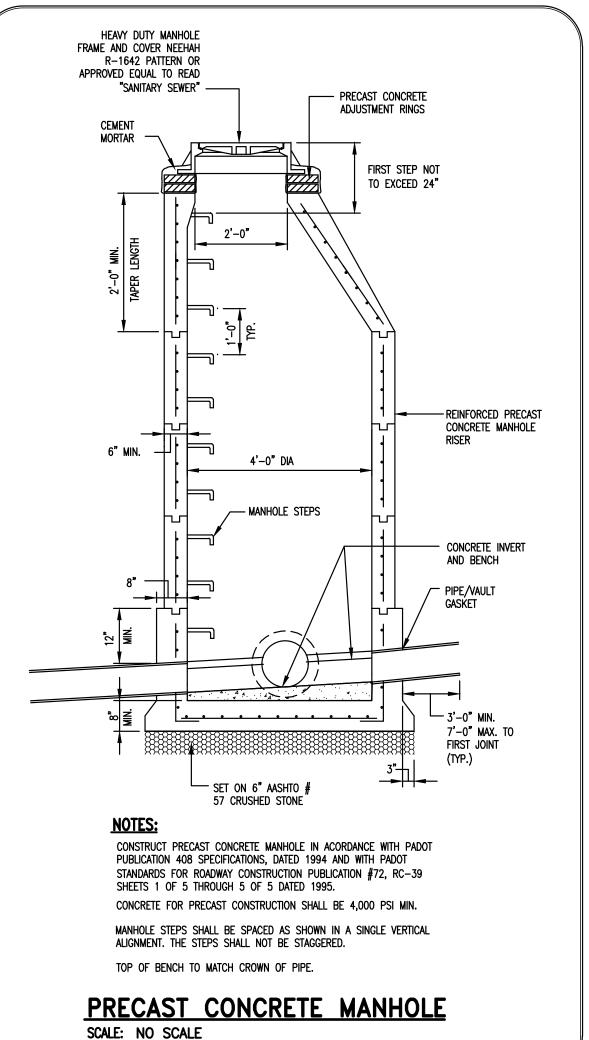


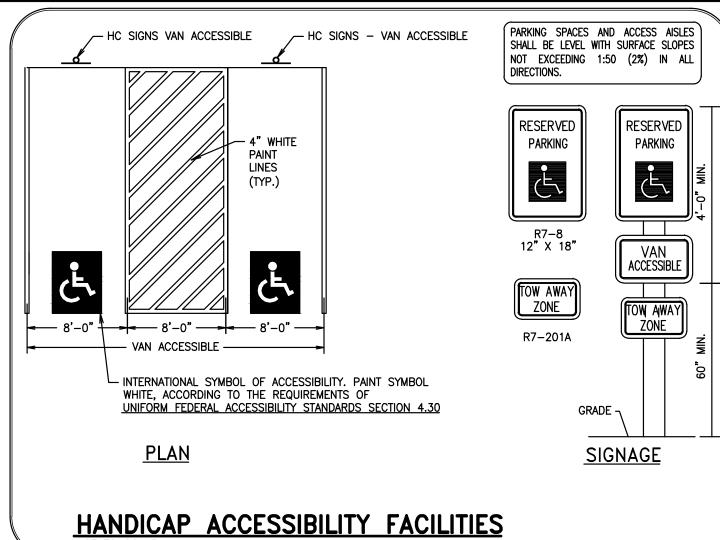
1. ALL STORM SEWER UTILITIES BENEATH A PAVED SURFACE SHALL BE BEDDED AND BACKFILLED WITH PENNDOT NO. 2A STONE UP TO SUBGRADE OR PAVED SURFACES. STONE MUST BE BACKFILLED IN 6" LIFTS AND SOLIDLY COMPACTED TO THE SATISFACTION OF THE TOWNSHIP. 2. PRIOR TO BACKFILLING AROUND INLETS WITH 2A AGGREGATE, THE INSIDE AND OUTSIDE OF INLET PIPE CONNECTIONS

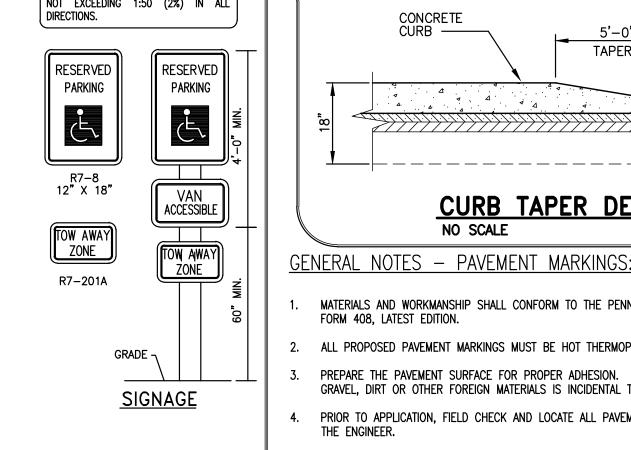
SHALL BE SEALED WITH NON-SHRINK GROUT UNLESS DIRECTED BY THE TOWNSHIP ENGINEER.

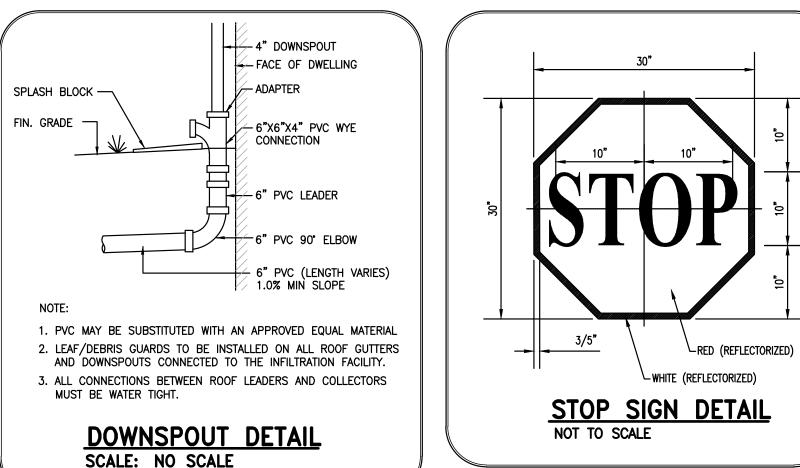


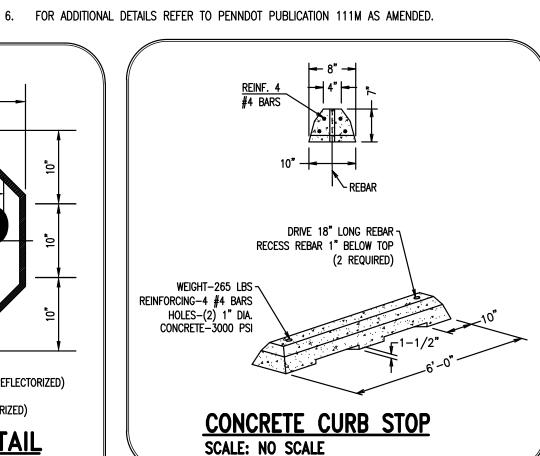
TYPE 'C' INLET
NO SCALE











PAVING SURFACE

TAPER

MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION

PREPARE THE PAVEMENT SURFACE FOR PROPER ADHESION. ANY SWEEPING OR REMOVAL OF DEBRIS,

PRIOR TO APPLICATION, FIELD CHECK AND LOCATE ALL PAVEMENT MARKINGS, TO THE SATISFACTION OF

WHERE BITUMINOUS SEALANTS PREVENT OR MAKES IMPRACTICAL THE EXTENDING OF LINES TO FACE OF

CURB, EXTEND LINES TO EDGE OF SEALANT OR WITHIN ONE FOOT OF THE FACE OF CURB.

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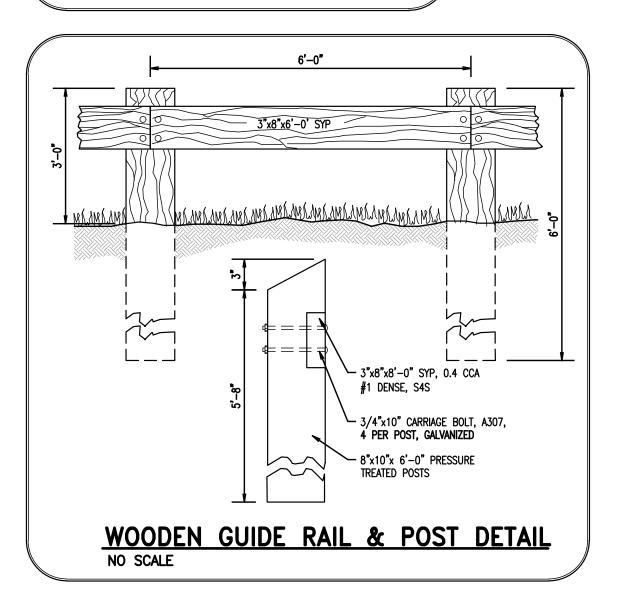
ALL PROPOSED PAVEMENT MARKINGS MUST BE HOT THERMOPLASTIC TYPE.

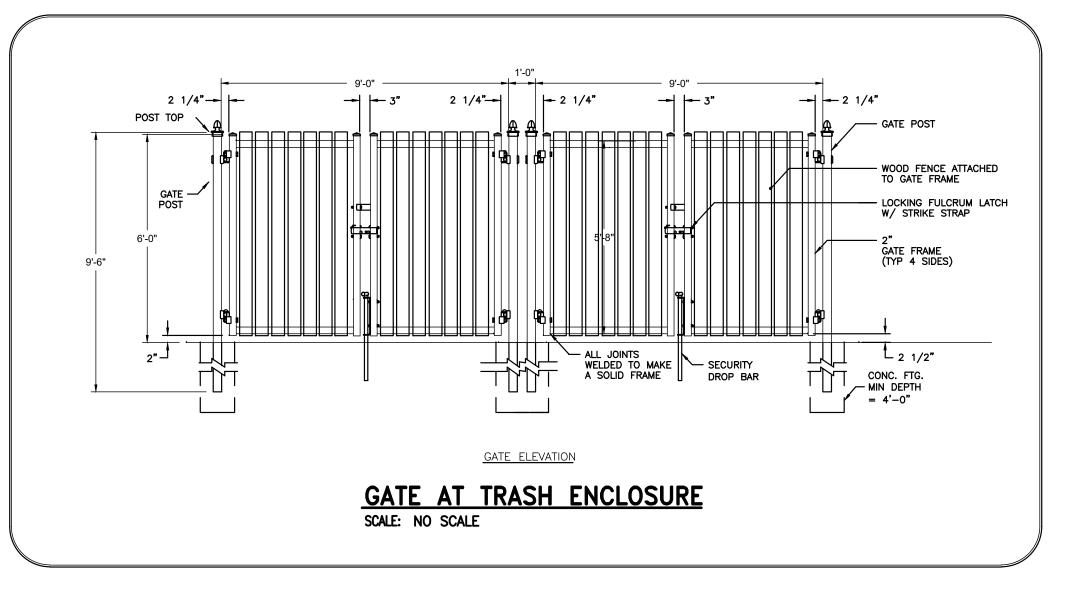
GRAVEL, DIRT OR OTHER FOREIGN MATERIALS IS INCIDENTAL TO THE INSTALLATION,

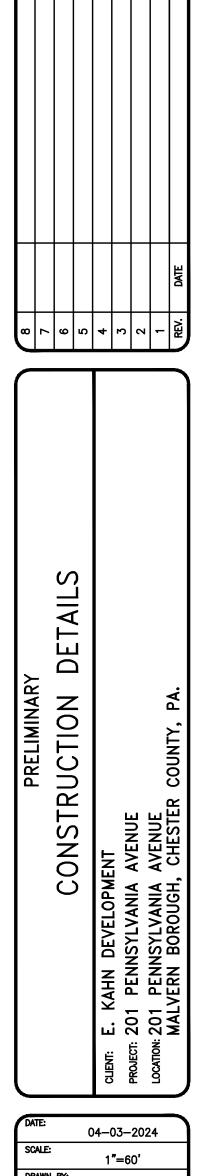
FORM 408, LATEST EDITION.

THE ENGINEER.

CURB TAPER DETAIL

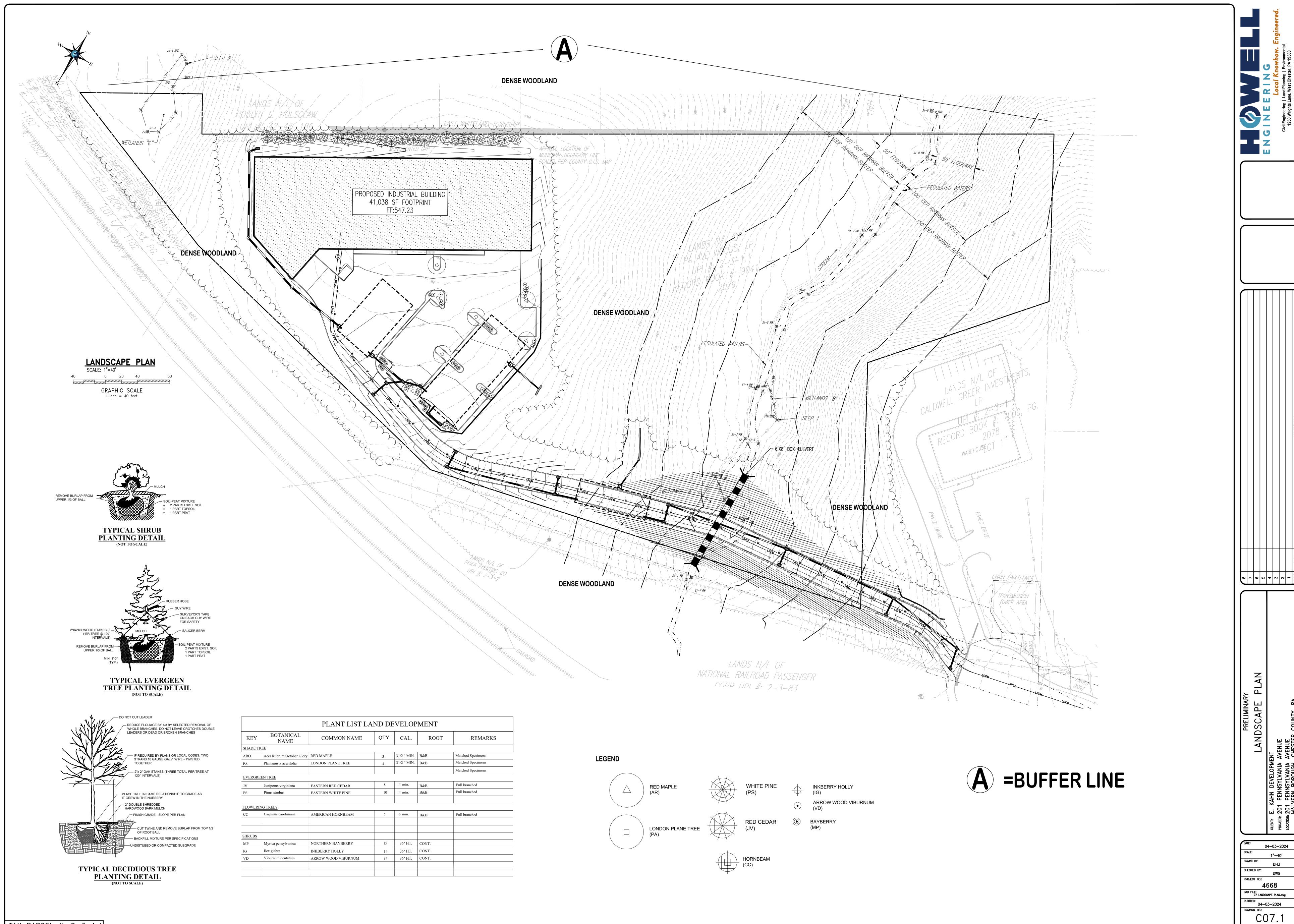






AD FILE: 06 CONSTRUCTION DETAILS.dwg C06.1

12 of 15



TAX PARCEL #: 2-3-1.1

Q:\CIVIL 3D JOBS\4668\4668 PRODUCTION PLANS\SHEET SET\SUBDIVISION & LD\07 LANDSCAPE PLAN.DWG

SHEET 13 OF 15

GENERAL SPECIFICATIONS		
A. NOTES & PLANTING INSTRUCTIONS THE EXECUTION OF THIS PLAN INCLUDES THE FURNISHING OF PLANT MAT SUFFICIENT TOPSOIL NUTRIENT ADDITIVES, PEAT MOSS, PLANTING, PRUNIFING OF PLANTING OF PROPERTY OF THE PROPERTY OF T	NG, STAKING, WATERING, LABO	R, CLEAN-UP AND
ALL OTHER NECESSARY SERVICES TO EXECUTE THE PLANTINGS PROPERL SPECIFICATIONS AND DETAILS. 2. ALL PLANT MATERIALS ARE TO BE NURSERY GROWN, OF EXCELLENT LAN DISEASES. FURTHERMORE, PLANTS SHALL HAVE BEEN GROWN FOR AT LEA	NDSCAPE QUALITY AND FREE F	FROM INSECTS AND
THE SITE. 3. INSTALLATION TO BE IN ACCORDANCE WITH AMERICAN ASSOCIATION OF N 4. PLANT SIZES SHALL BE A FAIR AVERAGE BETWEEN THE SIZE RANGE IND ABOVE GROUND.	IURSERYMAN STANDARDS.	
 TREES IN PAVED AREAS SHALL BE UNIFORM IN SHAPE, SIZE, AND CHAR 7' FROM GROUND. IF TREES CANNOT BE LOCATED WHERE SHOWN DUE TO UTILITIES OR OT 	HER OBSTRUCTIONS, EXISTING	
TREES SHALL BE RELOCATED IN THE FIELD AS APPROVED BY THE OWNER 7. NO SUBSTITUTIONS ARE ACCEPTABLE UNLESS APPROVED BY THE OWNER 8. LANDSCAPE CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL FOR A PEINSPECTION OF THE LANDSCAPE INSTALLATION BY THE MUNICIPALITY.	S'S REPRESENTATIVE AND THE	
9. BACKFILL MIXTURE SHALL BE A MIXTURE BY VOLUME OF 3/4 TOPSOIL (T 10. ALL SHRUBS AND GROUND COVER SHALL BE PLACED IN CONTINUOUS BE 11. MULCH TO BE SHREDDED OAK BARK OR APPROVED EQUAL AND SPREAD	DS AS DELINEATED ON THE F TO A MINIMUM DEPTH OF 2	PLANS. INCHES.
 A PRE-EMERGENT HERBICIDE SUCH AS "TREPLAN" SHALL BE APPLIED T MANUFACTURER'S RECOMMENDATION (PRIOR TO PLACEMENT OF MULCH). HERBICIDE SHALL BE INCLUDED AS A PART OF THIS WORK. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE TO SELECT. 	A SECOND APPLICATION OF F	PRE-EMERGENT
APPROVE STAKING OF ALL PLANT MATERIAL LOCATIONS AT THE SITE BEFO 14. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR WATERING IN SUFFICIENTLY COMPLETED AND TURNED OVER TO OWNER.		UNTIL JOB IS
SEEDING SPECIFICATIONS: 1. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDED.		
 SEEDING SHALL COMMENCE BETWEEN AUGUST 15 AND SEPTEMBER 30, WEATHER PERMITS AND/OR AS APPROVED BY THE OWNER'S REPRESENTA TOPSOIL USED FOR SEEDING IS STOCKPILED ON SITE. TOPSOIL SHALL E GRADED, REMOVING ALL DEBRIS AND STONES LARGER THAN 1". REMOVE 	NTIVE. BE SPREAD TO A DEPTH OF (6" AND FIND
 4. INCORPORATE BY DISCING INTO THE TOP 2" OF THE TOPSOIL THE FOLLO 4.1. AGRICULTURAL LIMESTONE AT 50 LBS./1000 S.F. 4.2. FERTILIZER (5-10-5) AT 30 LBS./1000 S.F. 	OWING:	
5. SEEDING MIX: APPLY GRASS SEED COMPOSED OF THE FOLLOWING VARIET PROPORTIONS AND SHALL TEST THE MINIMUM PERCENTAGES OF PURITY A MIXTURE A: (SEED RATE @ 4-1/2 LBS./1,000 S.F. OR 200 LB./ACRE PROP. MIN. % MIN. % MAX %		IN INC
BY WT. COMMON NAME GERMINATION 30 % HYBRID KY BLUEGRASS 80 30 % HYBRID TURF TYPE TALL FESCUE 80 40 % HYBRID PERENNIAL RYE 80	PURE SEED 95 95	WEED SEED 0.02 0.02 0.02
6. FIRM SEED BED WITH ROLLER AND MULCH WITH SALT HAY AND ASPHAL RATE OF 1,500 LBS. PER ACRE. 7. ALL LAWN WORK INCLUDING THE REPAIR OF WASHOUTS, GULLIES, ETC.,		ULCH AT THE
CALENDAR YEAR FROM THE DATE OF COMPLETION OF INSTALLATION. 8. SOD (IF REQUIRED) SHALL BE SAME AS SEED MIX AND INSTALLED IN AC		O. L.
181–525 LANDSCAPING, SCREENING AND STREET TREES. B. BUFFERING AND SCREENING. ALL SUBDIVISION OR LAND	REQUIRED	PROPOSED
DEVELOPMENT PLANS SHALL COMPLY WITH THE REQUIREMENTS SET FORTH IN \$ 220-2309 C. STREET TREES.	0	U
(2) ONE STREET TREE SHALL BE PROVIDED FOR EVERY 35 FEET OF STREET FRONTAGE OR FRACTION THEREOF. [2] AN AVERAGE OF ONE STREET TREE SHALL BE PLANTED FOR EVERY 35 FEET OF STREET FRONTAGE.		
220–2309 BUFFERING AND SCREENING. A. APPLICABILITY AND BUFFER CLASSIFICATION. ALL BUFFERS SHALL INCLUDE		
A SCREEN PLANTING OF TREES, SHRUBS OR OTHER PLANT (3) INDUSTRIAL BUFFER: ANY INDUSTRIAL USE, UNLESS OTHERWISE SPECIFIED IN THIS CHAPTER, OUTDOOR STORAGE AREAS, UTILITY USE, IN ADDITION TO STANDARDS IN ARTICLE XXIV, ABUTTING		
ANY RESIDENTIALLY ZONED DISTRICT OR RESIDENTIAL USE SHALL PROVIDE AN INDUSTRIAL BUFFER. B. GENERAL REQUIREMENTS.		
(1) EXISTING VEGETATION SHOULD BE PRESERVED WHEREVER POSSIBLE. EXISTING TREES WITHIN THE REQUIRED BUFFER YARD GREATER THAN FOUR INCHES IN CALIPER OR GREATER THAN EIGHT FEET IN HEIGHT SHALL BE PRESERVED TO THE		
EXTENT FEASIBLE. SUCH TREES MAY BE COUNTED TOWARDS REQUIRED PLANT MATERIALS. C. BUFFER STANDARDS.		
(1) THERE SHALL BE A BUFFER AREA OF NOT LESS THAN 20 FEET IN WIDTH PROVIDED. (4) INDUSTRIAL BUFFER: ONE EVERGREEN PER 20 FEET, PLUS ONE		
BERM FOUR FEET HIGH; OR SIX-FOOT HIGH CEDAR OR SPRUCE FENCING WITH ONE FLOWERING OR EVERGREEN TREE EVERY 20 FEET. SCREEN BUFFERS	<u>required</u>	<u>PROPOSED</u>
A= 1260 LF./ 20 = 63 EVERGREENS	63 EVERGREENS	18 EVERGREENS 5 FLOWERING TREES ONLY 375 LF TO BE
		SCREENED. EXISTING WOODLAND TO SATISFY REST OF THE REQUIREMENT.
D. OFF—STREET PARKING. (10) BUFFERING AND SCREENING.		PROPOSED 7 SHADE TREES
[3] SURFACE TREATMENT OF RAISED PLANTING ISLANDS AND PERIMETER PLANTINGS SHALL BE GRASS, GROUND COVER, OR LOW MAINTENANCE SHRUBS.		42 SHRUBS
(B) THE FOLLOWING ADDITIONAL STANDARDS SHALL APPLY TO PARKING LOTS IN EXCESS OF 20 PARKING SPACES: [3] AT LEAST 75% OF EACH ISLAND SHALL BE PLANTED AND MAINTAINED WITH GROUND COVER, SHRUBS, TREES. AT LEAST ONE SHADE TREE SHALL BE PLANTED PER ISLAND.		
D. VEGETATION DISTURBANCE AND REPLACEMENT. (B) ANY WOODLAND DISTURBANCE IN EXCESS OF 5.000 SQUARE FEET		
OF EXISTING AREA OF WOODLAND OR HEDGEROW(S) FOR EACH PRINCIPAL USE PERMITTED ON ANY LOT OR TRACT.		
(5) CALCULATION OF REQUIRED VEGETATION REPLACEMENT. WHERE LAND DISTURBANCE EXCEEDS ANY OF THE STANDARDS SET FORTH IN SUBSECTION D(1) ABOVE,[1]		
REPLACEMENT TREE CALCULATION BASED ON AREA OF WOODLAND DISTURBANCE. AT A MINIMUM, FOR EACH 500 SQUARE FEET OF WOODLAND DISTURBANCE AREA, ONE TREE AT LEAST THREE TO 3 1/2 INCH CALIPER SHALL BE PLANTED.		
[2] REPLACEMENT TREE CALCULATION MINIMUM NUMBER AND CALIPER OF REPLACEMENT TREES: 1, 12 INCHES TO 18 INCHES DBH 1,3 TO 3 1/2 INCHES CALIPER	<u>required</u> TBD	<u>PROPOSED</u> TBD
1, 12 INCHES TO 18 INCHES DBH 1,3 TO 3 1/2 INCHES CALIPER 1, 18 INCHES TO 24 INCHES DBH2,3 TO 3 1/2 INCHES CALIPER 1, 24 INCHES TO 36 INCHES DBH3,3 TO 3 1/2 INCHES CALIPER 1, GREATER THAN 36 INCHES DBH4,3 TO 3 1/2 INCHES CALIPER		
(B) REQUIRED REPLACEMENT SHRUBS. AT A MINIMUM, FOR EACH 500 SQUARE FEET OF WOODLAND DISTURBANCE AREA, TWO SHRUBS AT LEAST 24 INCHES TO 30 INCHES IN HEIGHT SHALL BE PLANTED IN ADDITION	г	
TO ANY REQUIRED TREE REPLACEMENT. 220-2204 WOODLANDS AND SPECIMEN VEGETATION.	<u>required</u>	<u>PROPOSED</u>
A. STANDARDS FOR LAND DISTURBANCE. (1) UNLESS UNDERTAKEN AS AN APPROVED TREE HARVESTING ACTIVITY CONDUCTED IN COMPLIANCE WITH THE REQUIREMENTS, AS FOLLOWS, NO MORE THAN	TBD	TBD
60% OF WOODLANDS SHALL BE REGRADED, CLEARED, BUILT UPON OR OTHERWISE ALTERED. C. PROTECTION OF SPECIMEN VEGETATION.		
(1) NO SPECIMEN VEGETATION SHALL BE REMOVE FROM AN LOT OR TRACT EXCEPT WHERE APPLICANT DEMONSTRATES TO THE SATISFACTION OF THE BOROUGH	Y I.	

