

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN OF STUDENT UNION BUILDING AND TENNIS COURTS

**SITUATED IN
WILLISTOWN TOWNSHIP, CHESTER COUNTY
PENNSYLVANIA**

ZONING ORDINANCE

AREA AND HEIGHT REGULATIONS (SECTION 139-40)

UPI 54-1-16

OFFICE DISTRICT (ARTICLE X)

	REQUIRED	EXISTING	PROPOSED
MIN. LOT AREA	2 ACRES	44.4 ACRES	44.4 ACRES
MIN. LOT WIDTH AT BUILDING LINE	250 FEET	2950 FEET	2950 FEET
MIN. LOT WIDTH AT STREET LINE	150 FEET	3150 FEET	3150 FEET
BUILDING PLACEMENT			
MIN. STREET LINE SETBACK	35 FEET	142 FEET	142 FEET
MIN. REAR & SIDE YARD SETBACK	40 FEET	403 FEET	403 FEET
MIN. BUILDING SETBACK FROM STREET LINE/CENTER LINE	75/100 FEET	142 FEET	142 FEET
BLDG. AND FLOOR AREA COVERAGE			
MAX. BUILDING COVERAGE	30 %	4.42 %	5.34 %
MAX. TOTAL IMP. COVERAGE	60 %	22.27 %	25.03 %
MAX. TOTAL FLOOR AREA	80 %	8.12 %	9.04 %
MAX. BUILDING HEIGHT	35 FEET	<35 FEET	<35 FEET
MAX. BUILDING HEIGHT	35 FEET	<35 FEET	<35 FEET

PARKING TABULATION

EXISTING PARKING - OUT FRONT	84 SPACES
PARKING TO BE REMOVED	84 SPACES
PARKING TO BE REPLACED	101 SPACES

IMPERVIOUS SUMMARY

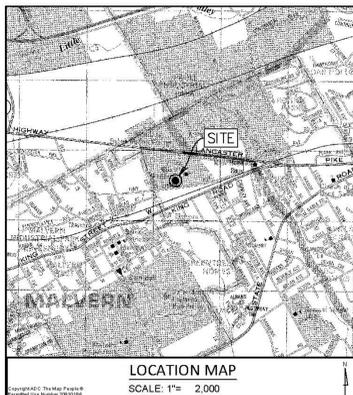
EXISTING IMPERVIOUS TO BE REMOVED	35,788 S.F.
NEW IMPERVIOUS	77,080 S.F.
TOTAL NET DIFFERENCE	41,292 S.F.

STEEP SLOPE DISTURBANCE

EXISTING STEEP SLOPES	149,892 S.F. (100.0%)
PROPOSED STEEP SLOPE DISTURBANCE	500 S.F. (0.33%)
REQUIRED STEEP SLOPES TO BE PROTECTED	74,948 S.F. (50.00%)
TOTAL STEEP SLOPES PROTECTED	149,397 (99.67%)

DRAWING INDEX

NO.	DRAWING NUMBER	SHEET TITLE
01	C01.1	COVER SHEET
02	C01.2	OVERALL SITE PLAN
03	C01.3	ENLARGED SITE PLAN
04	C02.1	OVERALL EXISTING CONDITIONS - DEMO PLAN
05	C02.2	ENLARGED EXISTING CONDITIONS - DEMO PLAN
06	C03.1	GRADING PLAN
07	C03.2	UTILITIES PLAN
08	C04.1	OVERALL PCSWM PLAN
09	C04.2	PCSWM PLAN
10	C04.3	PCSWM NOTES
11	C04.4	PCSWM DETAILS
12	C04.5	PREDEVELOPED DRAINAGE AREA PLAN
13	C04.6	POST DEVELOPED DRAINAGE AREA PLAN
14	C05.1	OVERALL EROSION CONTROL PLAN
15	C05.2	EROSION CONTROL PLAN
16	C05.3	EROSION CONTROL NOTES
17	C05.4	EROSION CONTROL DETAILS
18	C06.1	PROFILES
19	C07.1	CONSTRUCTION DETAILS
20	C07.2	ADA DETAILS
21	C08.1	LANDSCAPE PLAN
22	C09.1	LIGHTING PLAN



GENERAL NOTES:

- RECORD OWNER: CONVENT OF SISTERS SERVANTS OF IMMACULATE HEART OF MARY, 1140 KING ROAD, P.O. BOX 200, IMMACULATA, PA 19345. SOURCE OF TITLE: UPI 54-1-16-E DEED/RECORD BOOK 18268, PAGE 1 LOT AREA: 44.40 ACRES (GROSS). SOURCE OF TITLE: UPI 54-1-21-E DEED/RECORD BOOK 18290, PAGE 1 LOT AREA: 1.54 ACRES 87,420 S.F. NET.
- BOUNDARY BEARINGS SHOWN HEREON ARE OBTAINED TO PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (NAD-83) AND IS TAKEN FROM FIELD SURVEY PREPARED BY NAVE NEWELL ON JULY 21, 2015. TOPOGRAPHY FOR A MAJORITY OF THE SITE WAS ALSO TAKEN FROM A PLAN PREPARED BY NAVE NEWELL AND WAS OBTAINED FROM AERIAL MAPPING PERFORMED ON MAY 03, 2015.
- TOPOGRAPHIC INFORMATION WITHIN THE AREA OF PROPOSED CONSTRUCTION SHOWN IS FROM FIELD SURVEY BY HOWELL KLINE SURVEYING, LLC, PERFORMED IN AUGUST 2017. PROJECT BENCHMARK IS AN EXISTING SANITARY SEWER MANHOLE LOCATED IN THE COURTYARD AREA NEXT TO THE ALCOHOLISM DR. ELEV. = 311.21'
- BOUNDARY AND PLAN INFORMATION FOR UPI 54-1-21-E WAS TAKEN FROM APPROVED LAND DEVELOPMENT PLANS PREPARED BY CHALL ASSOCIATES, INC. PLAN DATED 3-15-2007 AND LAST REVISED 4-18-2007.
- 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.
- THIS PROPERTY IS LOCATED WITHIN FLOOD HAZARD ZONE X, AN AREA DETERMINED TO BE OUTSIDE THE 100 YEAR ANNUAL CHANCE FLOOD PLAN AS PER THE NATIONAL FLOOD INSURANCE RATE MAP FOR CHESTER COUNTY, PA, MAP NO. 422020165, PANEL 145 OF 360, DATED SEPTEMBER 28, 2006.
- SOILS INFORMATION PROVIDED WITH SUPPORT FROM THE NATURAL RESOURCES CONSERVATION SERVICE. SOILS ATTRIBUTE DATA IS DERIVED FROM THE NRCS SOIL DATA MAP.
- THE PURPOSE OF THIS PLAN IS TO PROVIDE ACCESS AND CIRCULATION IMPROVEMENTS WITHIN PREVIOUSLY DEVELOPED AREAS OUT FRONT OF THE SITE AND ALONG CURBS. ADJACENT THE PLANS ALSO PROPOSE STORM WATER MANAGEMENT, EROSION & SEDIMENTATION CONTROL, DRIVEWAY SITE LIGHTING AND LANDSCAPING.
- NO NEW PUBLIC WATER OR PUBLIC SANITARY SEWER IS REQUIRED.
- NO NEW BUILDINGS OR BUILDING ADDITIONS ARE PROPOSED.
- THE RECORD OWNER SHALL OWN AND MAINTAIN THE PROPOSED STORMWATER MANAGEMENT FACILITIES LOCATED ONSITE.
- D.L. HOWELL & ASSOCIATES, INC. DOES NOT GUARANTEE THE ACCURACY OF THE EXISTING SUBSURFACE UTILITY STRUCTURES SHOWN ON THE PLANS. NOR DOES D.L. HOWELL & ASSOCIATES, INC. GUARANTEE THE ALL SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE START OF THE WORK.
- LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION IN ACCORDANCE WITH PENNSYLVANIA ACT 287 OF 1974 AS AMENDED BY PENNSYLVANIA ACT 187 OF 1995. "ONE CALL" SYSTEM HAS EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE. SANITARY SEWER, WATER, ELECTRIC, GAS AND ALL OTHER UTILITY SERVICES CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CROSSINGS WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE PERMITS CONCERNING THE WORK, ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING APPROPRIATE STANDARDS AND SPECIFICATIONS:
 - WILLISTOWN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND AMENDMENTS.
 - MOORE SPECIFICATION PUBLICATION, 408/2003 LATEST EDITION & ALL OF THE LATEST ADDENDA.
- THE LIMITS OF DISTURBANCE SHALL BE STAKED IN THE FIELD AND MARKED WITH ORANGE CONSTRUCTION TENDING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL BE MAINTAINED DURING THE ENTIRE PERIOD OF CONSTRUCTION. NO VARIATION THEREFROM SHALL BE PERMITTED, UNLESS APPROVED BY THE TOWNSHIP ENGINEER IN WRITING, SUBJECT TO SUCH REASONABLE CONDITIONS AS HE MAY DETERMINE NECESSARY.
- ALL NON-FIRED OR NON-STABILIZED GROUND SURFACES SHALL BE PROTECTED WITH VEGETATIVE GROWTH THAT IS CAPABLE OF PREVENTING EROSION.
- ALL DIMENSIONS ARE TO FACE OF CURB OR FACE OF BUILDING UNLESS NOTED OTHERWISE. SCALED DIMENSIONS SHALL NOT BE USED WITHOUT FIRST CONTACTING THE ENGINEER OR ARCHITECT.
- REPRESENTATIVES OF WILLISTOWN TOWNSHIP AND/OR OTHER GOVERNMENTAL AUTHORITIES SHALL HAVE PERMISSION TO GAIN ACCESS TO THE STORMWATER BED THROUGH A BLANKET EASEMENT OVER THE PROPERTY TO PERFORM INSPECTIONS, MAINTENANCE AND REPAIRS OF THE BASIN, AS NECESSARY.
- STORMWATER DEVICES SHALL NOT BE REMOVED, ALTERED OR RELOCATED BY THE LANDOWNER IN THE EVENT OF THE FAILURE OF THE LANDOWNER TO COMPLY WITH THESE CONDITIONS AND RESTRICTIONS. THE TOWNSHIP SHALL HAVE THE AUTHORITY TO RESTORE SAID STORMWATER MANAGEMENT FACILITIES TO THEIR ORIGINAL STATE AND THE COSTS THEREOF SHALL BE ASSESSED TO THE LANDOWNER. THE TOWNSHIP, BEFORE IT MAY EXERCISE THIS RIGHT, SHALL NOTIFY THE LANDOWNER BY CERTIFIED MAIL OF ITS INTENTION TO DO SO. THE NOTICE SHALL SET FORTH IN WHAT MANNER THE OWNER HAS ALTERED THE STORMWATER MANAGEMENT FACILITIES, AND IF THE OWNER FAILS TO CORRECT THE ALTERATION LISTED IN THE NOTICE FROM THE TOWNSHIP, THEN AND ONLY THEN THE TOWNSHIP MAY EXERCISE THIS RIGHT.
- ALL OTHER UTILITY LINES, INCLUDING BUT NOT LIMITED TO ELECTRIC, GAS, STREETLIGHT SUPPLY AND TELEPHONE, SHALL BE PLACED UNDERGROUND. INSTALLATION OF ALL UTILITIES SHALL BE IN STRICT ACCORDANCE WITH THE ENGINEERING STANDARDS AND SPECIFICATIONS OF THE TOWNSHIP, MUNICIPAL AUTHORITY OR OTHER PUBLIC UTILITY CONCERNED.
- ALL CURB INCH SHALL BE 5" UNLESS OTHERWISE NOTED.
- THESE NOTES ARE FOR INFORMATIONAL PURPOSES AND ANY REFERENCE MADE TO A RECORD DOCUMENT THAT IS NOT APPLICABLE TO THE PROPERTY, HAS EXPIRED, OR IS NO LONGER VALID OR ENFORCEABLE SHALL NOT BE DEEMED TO BE APPLICABLE TO THE PROPERTY OR REVISED IN ANY WAY BY NOTATION HERE.
- ALL PROPOSED UTILITIES MUST BE PLACED UNDERGROUND.
- AN AS-BUILT PLAN WILL NEED TO BE COMPLETED AT PROJECT COMPLETION. SAID PLAN SHALL BE SUBMITTED ALONG WITH AN EXPLANATION OF ANY DISCREPANCY WITH THE APPROVED PLANS, WITHIN 3 MONTHS OF CONSTRUCTION COMPLETION.
- AN ARBORIST SHALL BE CONTACTED PRIOR TO CONSTRUCTION TO REVIEW THE TREE PROTECTION MEASURES, PROPOSED LIGHT POLES, AND TREE PLANTINGS WITHIN 40' OF THE AMERICAN BEECH TREE ON THE NORTH SIDE OF THE 2 STORY BUILDING INSIDE THE LOOP ROAD. PROPOSED LOCATIONS SHALL BE APPROVED OR REVISED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE ARBORIST.

WAIVERS REQUESTED

- FROM SECTION 23-54.A, A PARTIAL WAIVER IS REQUESTED FOR THE REMAINDER OF THE PLANTINGS REQUIRED AROUND THE EXISTING BUILDING. SEE NOTE ON LANDSCAPE PLAN PLANTING SCHEDULE.
- FROM SECTION 123-17 OF THE S.L.D.O TO COMBINE THE PRELIMINARY AND FINAL PLAN REQUIREMENTS AND CONSIDER THE PLAN AS PRELIMINARY/FINAL.
- FROM SECTION 123-17.8.2.1, PARTIAL WAIVER TO SHOW ALL EXISTING LEGAL R.O.W. LINES BUT TO NOT IDENTIFY THE METES AND BOUNDS.

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REV.		

COMMONWEALTH OF PENNSYLVANIA COUNTY OF CHESTER

ON THIS THE _____ DAY OF _____ A.D. 20__

BEFORE ME, THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH

OF PENNSYLVANIA RESIDING IN _____

PERSONALLY APPEARED _____ WHO

ACKNOWLEDGED HIMSELF / HERSELF TO BE THE _____

AND THAT AS SUCH TO DO SO, HE / SHE EXECUTED THE FOREGOING PLAN BY

SIGNING HIS/ HER NAME AS _____

THAT HE / SHE IS THE OWNER'S REPRESENTATIVE OF THE DESIGNATED LAND.

APPROVAL OF THE PLAN HAS BEEN OBTAINED AND IS ENDORSED THEREON

AND THAT HE / SHE DESIRES THAT THE FOREGOING PLAN MAY BE DULY RECORDED.

NOTARY PUBLIC _____

MY COMMISSION EXPIRES: _____

REVIEWED BY THE PLANNING COMMISSION OF WILLISTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA, THIS _____ DAY OF _____, 20__

CHAIRPERSON _____

APPROVED BY THE BOARD OF SUPERVISORS OF WILLISTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA, THIS _____ DAY OF _____, 20__

CHAIRMAN _____

VICE CHAIRMAN _____

MEMBER _____

REVIEWED BY THE CHESTER COUNTY PLANNING COMMISSION THIS _____ DAY OF _____, 20__

SECRETARY _____

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 _____

CERTIFICATE OF CONFORMANCE - P.E.

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THESE PLANS ARE IN CONFORMITY WITH ENGINEERING ZONING, BUILDING, SANITATION AND OTHER APPLICABLE TOWNSHIP ORDINANCES AND REGULATIONS WITH EXCEPTION TO ANY WAIVER REQUESTS.

CHRISTOPHER M. DALY, P.E. LICENSE NO. PE063005

APPLICANT/RECORD OWNER

CONVENT OF SISTERS SERVANTS OF IMMACULATA HEART OF MARY
1140 KING ROAD
P.O. BOX 200
IMMACULATA, PA 19345

C/O VILLA MARIA ACADEMY
370 CENTRAL AVENUE
MALVERN, PA 19355
ATTN: SISTER REGINA RYAN
(610)-644-2251

PREPARED BY:

DLHowell
Civil Engineering
Land Planning
Environmental
D.L. Howell & Assoc., Inc.

1250 Wrights Lane
West Chester, PA 19380
Phone: (610) 918-9002
Fax: (610) 918-9003
www.DLHowell.com

DATE: 07/31/2020
SCALE: N.T.S.
DRAWN BY: ACS
CHECKED BY: CMD
PROJECT NO.: 3119
JOB FILE: (SEE COVER SHEET) (s)
PLOTTED: 07/31/2020
DRAWING NO.: C01.1
SHEET 01 of 22



DLHowell

Civil Engineering
Land Planning
Environmental
www.DLHowell.com

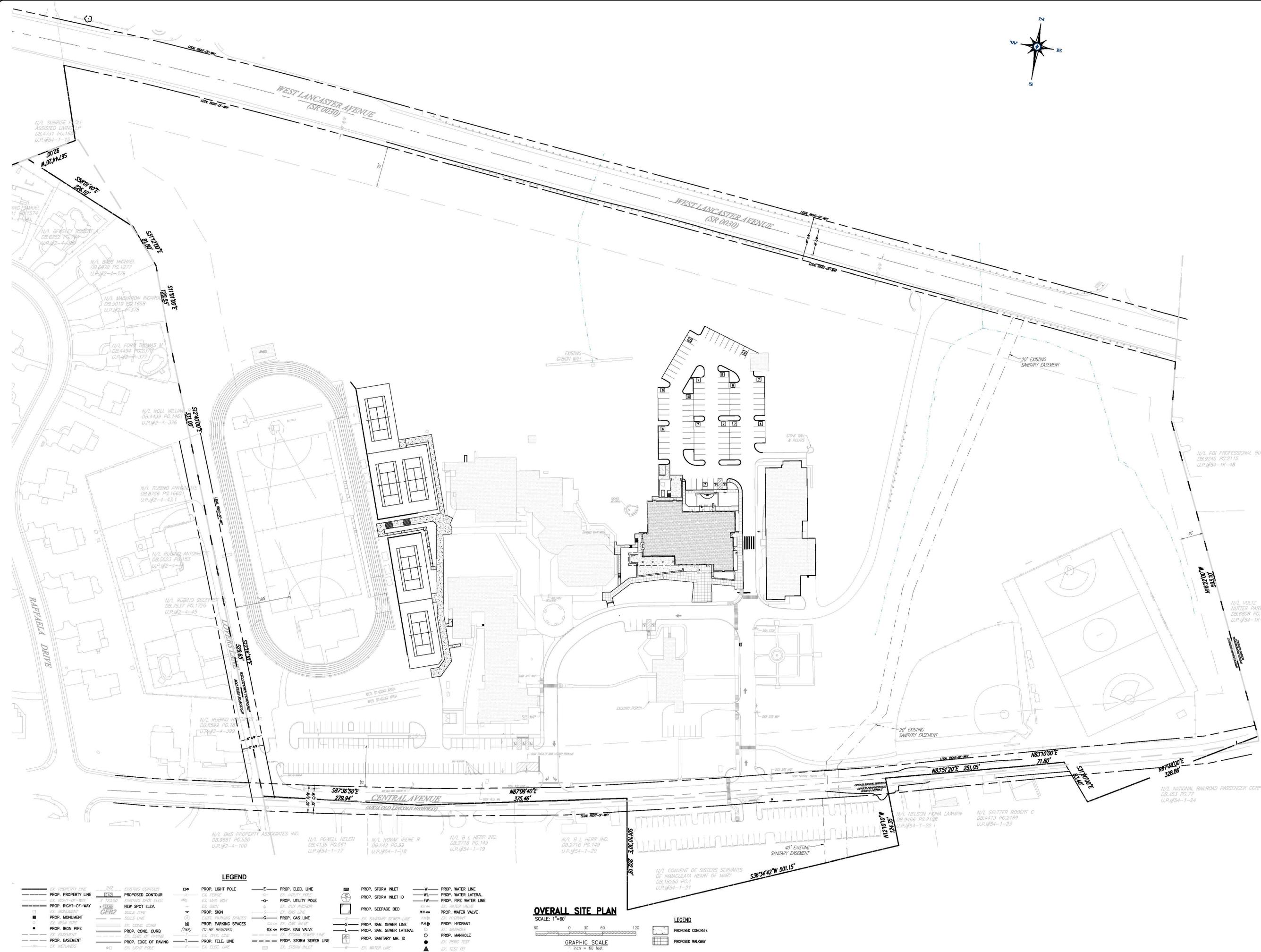
1250 Wight's Lane
West Chester, PA 19380
Phone: (610) 918-9002
Fax: (610) 918-6003



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PRELIMINARY/FINAL
OVERALL SITE PLAN
OWNER: VILLA MARIA ACADEMY
PROJECT: STUDENT UNION AND TENNIS COURTS
LOCATION: 370 CENTRAL AVENUE
WILLISTOWN TOWNSHIP, CHESTER COUNTY, PA

DATE:	07/31/2020
SCALE:	1" = 80'
DRAWN BY:	ACB
CHECKED BY:	CMC
PROJECT NO.:	3119
DATE FOR ORIGINAL SITE PLAN:	
DATE FOR THIS REVISION:	07/31/2020
DRAWING NO.:	C01.2
SHEET:	02 of 22

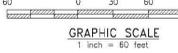


LEGEND

- EX. PROPERTY LINE
- PROP. PROPERTY LINE
- EX. RIGHT-OF-WAY
- PROP. RIGHT-OF-WAY
- PROP. MONUMENT
- EX. IRON PIPE
- PROP. IRON PIPE
- PROP. EASEMENT
- EX. WETLANDS
- EX. EXISTING CONTOUR
- PROP. PROPOSED CONTOUR
- EX. EXISTING SPOT ELEV.
- PROP. NEW SPOT ELEV.
- EX. CONC. CURB
- PROP. CONC. CURB
- EX. PROP. EDGE OF PAVING
- EX. LIGHT POLE
- PROP. LIGHT POLE
- EX. ELEC. LINE
- PROP. ELEC. LINE
- EX. UTILITY POLE
- PROP. UTILITY POLE
- EX. GUY ANCHOR
- PROP. GUY ANCHOR
- EX. GAS LINE
- PROP. GAS LINE
- EX. GAS VALVE
- PROP. GAS VALVE
- EX. STORM SEWER LINE
- PROP. STORM SEWER LINE
- EX. SAN. SEWER LATERAL
- PROP. SAN. SEWER LATERAL
- EX. SANITARY MH. ID
- PROP. SANITARY MH. ID
- EX. WATER LINE
- PROP. WATER LINE
- EX. WATER LATERAL
- PROP. WATER LATERAL
- EX. FIRE WATER LINE
- PROP. FIRE WATER LINE
- EX. WATER VALVE
- PROP. WATER VALVE
- EX. MANGROLE
- PROP. MANGROLE
- EX. TEST PIT
- PROP. TEST PIT
- EX. PROPOSED CONCRETE
- PROP. PROPOSED WALKWAY

OVERALL SITE PLAN

SCALE: 1" = 80'



LEGEND

- PROP. CONCRETE
- PROP. WALKWAY



DLHowell

Civil Engineering
Land Planning
Environmental
www.DLHowell.com

1250 Wights Lane
West Chester, PA 19380
Phone: (610) 918-9002
Fax: (610) 918-9003



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PRELIMINARY/FINAL
OVERALL EXISTING CONDITIONS - DEMO PLAN
 CLIENT: VILLA MARIA ACADEMY
 PROJECT: STUDENT UNION AND TENNIS COURTS
 LOCATION: 370 CENTRAL AVENUE
 WILLISTOWN TOWNSHIP, CHESTER COUNTY, PA

DATE:	07/31/2020
SCALE:	1"=60'
DRAWN BY:	ACB
CHECKED BY:	CMC
PROJECT NO.:	3119
DATE PLOTTED:	07/31/2020
DATE PRINTED:	07/31/2020
PLANTING:	07/31/2020
DATE:	07/31/2020
SCALE:	1"=60'
DRAWN BY:	ACB
CHECKED BY:	CMC
PROJECT NO.:	3119
DATE PLOTTED:	07/31/2020
DATE PRINTED:	07/31/2020
PLANTING:	07/31/2020
DATE:	07/31/2020
SCALE:	1"=60'
DRAWN BY:	ACB
CHECKED BY:	CMC
PROJECT NO.:	3119
DATE PLOTTED:	07/31/2020
DATE PRINTED:	07/31/2020
PLANTING:	07/31/2020



- LEGEND**
- EX. PROPERTY LINE
 - PROP. PROPERTY LINE
 - PROP. RIGHT-OF-WAY
 - EX. MONUMENT
 - PROP. MONUMENT
 - EX. IRON PIPE
 - EX. GASSEMENT
 - EX. WETLANDS
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - NEW SPOT ELEV.
 - SOILS TYPE
 - SOILS LINE
 - EX. CONC. CURB
 - PROP. CONC. CURB
 - PROP. EDGE OF PAVING
 - EX. LIGHT POLE
 - PROP. LIGHT POLE
 - EX. MAIL BOX
 - PROP. SIGN
 - EXIST. PARKING SPACES
 - PROP. PARKING SPACES TO BE REMOVED
 - EX. SIDE WALK
 - PROP. SIDE WALK
 - EX. STORM SEWER LINE
 - PROP. STORM SEWER LINE
 - EX. STORM INLET
 - PROP. STORM INLET
 - EX. SANITARY SEWER LINE
 - PROP. SANITARY SEWER LINE
 - EX. SANITARY MH. ID
 - PROP. SANITARY MH. ID
 - EX. WATER LINE
 - PROP. WATER LINE
 - EX. FIRE WATER LINE
 - PROP. FIRE WATER LINE
 - EX. WATER VALVE
 - PROP. WATER VALVE
 - EX. HYDRANT
 - PROP. HYDRANT
 - EX. MANDHOLE
 - PROP. MANDHOLE
 - EX. PERC. TEST
 - PROP. PERC. TEST
 - EX. TEST PIT
 - PROP. TEST PIT
 - CONC. & ASPHALT TO BE REMOVED
 - COMPOSITE TENNIS COURT TO BE REMOVED

DEMO LEGEND

- CONC. & ASPHALT TO BE REMOVED
- COMPOSITE TENNIS COURT TO BE REMOVED

STEEP SLOPES

- 15%-25% SLOPES
- >25% SLOPES

OVERALL EXISTING CONDITIONS - DEMO PLAN
 SCALE: 1"=60'
 GRAPHIC SCALE
 1 inch = 60 feet

- EXISTING UTILITIES LEGEND**
- WATER SERVICE LINE
 - FIRE WATER SERVICE LINE
 - SANITARY SERVICE LINE
 - GAS SERVICE LINE
 - UNDERGROUND ELECTRIC SERVICE LINE
 - UNDERGROUND COMMUNICATIONS SERVICE LINE



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

Pennsylvania One Call System, Inc.

1-800-242-1776

ONE CALL NOTE
NO SCALE

ACT 287 SERIAL NUMBER 20180151801
D. L. Howell & Associates, Inc. does not guarantee the
accuracy of the locations for existing subsurface utility
lines, structures, etc. shown on the plans, nor does D. L.
Howell & Associates, Inc. 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 at
1-800-242-1776.

ONE CALL CONTACTS

COMPANY: AQUA PENNSYLVANIA INC
ADDRESS: 782 W LANCASTER AVE
BETH LEWIS, PA 17310
CONTACT: STEVE PRIZZI
EMAIL: sprizzi@aquapenn.com

COMPANY: COMCAST CABLE
ADDRESS: 1004 CORNERSTONE BLVD
DOWNTOWN, PA 18335
CONTACT: TOM RUSSO
EMAIL: tom_russo@cable.comcast.com

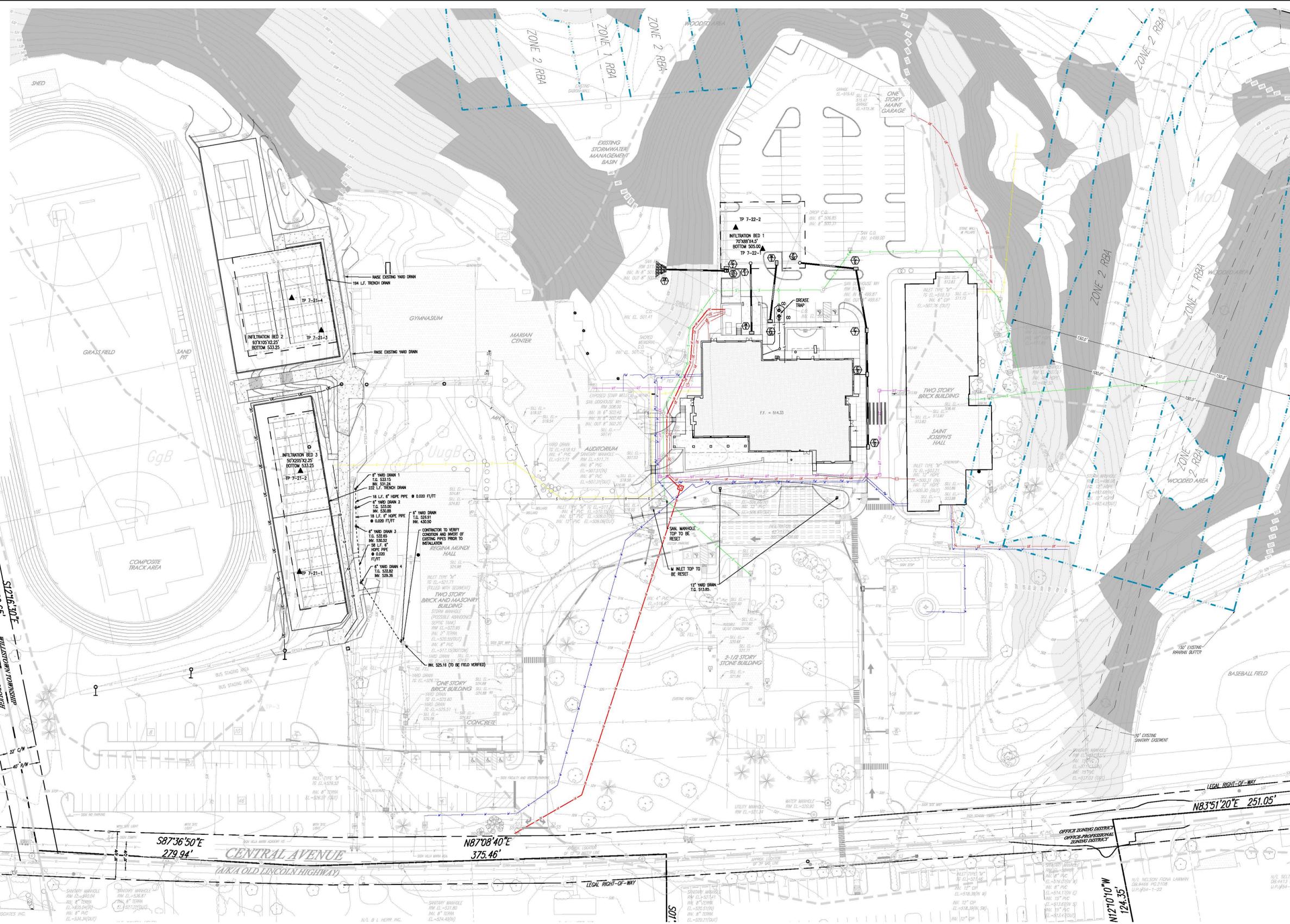
COMPANY: PECO ENERGY C/O USC
ADDRESS: 450 S HENDERSON RD SUITE B
KING OF PRUSSIA, PA 19406
CONTACT: NIKKIA SIMPINS
EMAIL: NIKKIASIMPINS@USCC.LC.COM

COMPANY: LEVEL 3 COMMUNICATIONS LLC
ADDRESS: 1025 ELKHORND BLVD BLDG
BROOMFIELD, CO 80021
CONTACT: LEVEL 3 OPERATOR PERSONNEL
EMAIL: RELO@LEVEL3.COM

COMPANY: ZAYO BANDWIDTH FORMERLY PPL
TELECOM LLC
ADDRESS: 1060 HARDEES DR UNIT H
ABERDEEN, MD 21001
CONTACT: GEORGE HUBB
EMAIL: ghubb@zayo.com

COMPANY: WILLSTOWN TOWNSHIP
ADDRESS: 888 SUGARTOWN ROAD
MULLEN, PA 19355
CONTACT: JIM STARS
EMAIL: jstars@willstown.pa.us

COMPANY: VERIZON PENNSYLVANIA LLC
ADDRESS: 1200 VIRGINIA DR
FORT WASHINGTON, PA 19034
CONTACT: LAURA LIPPINCOTT
EMAIL: LAURA.LIPPINCOTT@NONE.VERIZON.COM



UTILITIES PLAN
SCALE: 1"=40'



LEGEND

- | | | | | | |
|-----------------------|------------------------|---------------------|--------------------------|-----------------------------|-----------------------|
| — EX. PROPERTY LINE | — EX. EXISTING CONTOUR | — PROP. LIGHT POLE | — PROP. ELEC. LINE | — PROP. STORM INLET | — PROP. WATER LINE |
| — PROP. PROPERTY LINE | — PROPOSED CONTOUR | — EX. MANHOLE | — PROP. UTILITY POLE | — PROP. STORM INLET ID | — PROP. WATER LATERAL |
| — PROP. RIGHT-OF-WAY | — NEW SPOT ELEV. | — EX. SIGN | — EX. GAS LINE | — PROP. SEEPAGE BED | — PROP. WATER LINE |
| — EX. EMBANKMENT | — EX. SOILS TYPE | — EX. SIGN SPACES | — PROP. GAS LINE | — PROP. SANI. SEWER LINE | — PROP. WATER VALVE |
| — PROP. MONUMENT | — EX. CONC. CURB | — EX. TO BE REMOVED | — PROP. GAS VALVE | — PROP. SANI. SEWER LATERAL | — EX. MANHOLE |
| — EX. BASEMENT | — EX. EDGE OF PAVING | — EX. ELEC. LINE | — PROP. STORM SEWER LINE | — PROP. SANITARY MH ID | — EX. POND TEST |
| — PROP. EASEMENT | — EX. LIGHT POLE | — EX. ELEC. LINE | — PROP. STORM SEWER LINE | — PROP. SANITARY MH ID | — EX. TEST PIT |

UTILITY NOTES:

- PRIOR TO EXISTING CONSTRUCTION, ALL UTILITY SERVICES IN THE AREA SHALL BE LOCATED AND MEASURES TAKEN TO PROTECT THE EXISTING FACILITIES. ANY DAMAGE TO EXISTING FACILITIES SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL PERSONS VEHICLES AND BUILDINGS WITHIN THE CONSTRUCTION AREAS FROM INJURY AND DAMAGE DURING THE COURSE OF WORK.
- CONSTRUCTION SHALL BE LOCATED, AND MEASURES TAKEN TO PROTECT THE EXISTING FACILITIES IN ACCORDANCE WITH PENNSYLVANIA ACT 38. ANY DAMAGE TO EXISTING FACILITIES RESULTING FROM THE NEGLIGENCE OF THE CONTRACTOR SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE.
- LOCATION OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM FIELD SURVEY AND EXISTING RECORDS. COMPLETENESS AND ACCURACY OF EXISTING UTILITY INFORMATION IS NOT GUARANTEED. PRIOR TO THE START OF ANY CONSTRUCTION, THE CONTRACTOR SHALL ACCURATELY FIELD VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES AT POINTS OF CONNECTION AND POTENTIAL CONFLICT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF ANY DEVIATION FROM INFORMATION SHOWN ON THESE PLANS.
- ALL SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL STATUTES AND REGULATIONS.
- ALL TRENCHING, SHORING AND EXCAVATING OPERATIONS SHALL BE PERFORMED IN COMPLIANCE WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- SCALED DIMENSIONS FROM THIS PLAN SHALL NOT BE USED FOR CONSTRUCTION WITHOUT CONFIRMATION FROM D.L. HOWELL & ASSOC. INC.
- IF ANY UNSUITABLE SOIL IS ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL REMOVE IT AND REPLACE IT WITH COMPACTED STRUCTURAL MATERIAL.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE LOCAL AUTHORITY OR GOVERNING AGENCY OF THE BEGINNING DATE OF CONSTRUCTION AND TO ENSURE THAT NO WORK IS PERFORMED WITHOUT THE REQUIRED PERMITS AND INSPECTIONS BY THE LOCAL AUTHORITY OR GOVERNING AGENCY.
- IF CONDITIONS IN THE FIELD DIFFER FROM THOSE SHOWN ON THE PLAN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED TRAFFIC CONTROL, SHEETING, SHORING AND BARRICADES OF OPEN EXCAVATIONS.
- ALL MATERIALS AND METHODS OF CONSTRUCTION FOR STORMWATER FACILITIES AND SEEDING SHALL CONFORM TO PENNDOT FORM 408 SPECIFICATIONS, LATEST EDITION.
- THE CONTRACTOR SHALL SUPERSEDE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, SAFETY PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK AND FOR COORDINATION OF ALL PORTIONS OF THE WORK UNDER CONTRACT.
- CONTRACTOR SHALL REVIEW VARIOUS PHASES OF WORK WITH THE OWNER TO DETERMINE WHETHER ANY PHASE WILL CONFLICT WITH THE OWNER'S ONLY OPERATIONS. WHERE CONFLICT IS APPARENT THE CONTRACTOR SHALL COORDINATE WITH THE OWNER THE WORK TO BE PERFORMED SO AS TO BE THE LEAST DISRUPTIVE.
- ALL CURBING, CONCRETE OR PAVING TO BE REMOVED SHALL BE SAW CUT FIRST TO ENSURE A CLEAN SEPARATION FROM EXISTING.
- ANY PAVING DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REMOVED TO SUBGRADE AND REPLACED WITH THE PAVING SECTION.
- WHERE ALL NEW BITUMINOUS PAVING MEETS EXISTING BITUMINOUS A HOT BITUMINOUS SEALANT SHALL BE POURED ALONG THE SAW CUT JOINT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL, REPLACEMENT, AND MAINTENANCE OF ALL EXISTING LANDSCAPING DURING CONSTRUCTION. THIS INCLUDES PROPER STORM MATERIAL TO BE REUSED, FIRMING WHERE REQUIRED AND PROTECTING EXISTING ROOT STRUCTURES OF TREES WHERE CONSTRUCTION OCCURS WITHIN THE DRP LINE.
- THE PAVED AREAS WITHIN THE RIGHT-OF-WAY, THAT ARE DISTURBED DURING INSTALLATION, SHALL BE MILLED AND OVERLAD WITH WEARING COURSE.
- ALL EXISTING UTILITIES ON THE SUBJECT PROPERTY MUST BE FIELD LOCATED PRIOR TO THE START OF ANY EXCAVATION.
- THE EXISTING OUTFALL PIPE FOR THE INFILTRATION BED CONNECTION SHALL BE INSPECTED FOR SEDIMENT ACCUMULATION AND DETEIORATION DAMAGE. PIPE CLEANING AND REPAIRS/REPLACEMENT TO BE COMPLETED, PRIOR TO CONSTRUCTION OF UPSTREAM PROPOSED CONVEYANCE PIPES.



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PRELIMINARY/FINAL UTILITIES PLAN
OWNER: VILLA MARIA ACADEMY
PROJECT: STUDENT UNION AND TENNIS COURTS
LOCATION: 370 CENTRAL AVENUE
WILLSTOWN TOWNSHIP, CHESTER COUNTY, PA

DATE: 07/31/2020
SCALE: 1"=40'
DRAWN BY: ABC
CHECKED BY: CMD
PROJECT NO.: 3119
CNO FILE NO: 0000000000
PLANNED BY: 07/31/2020
DRAWING NO.: C03.2
SHEET 07 of 22



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PRELIMINARY/FINAL PCSWM NOTES

VILLA MARIA ACADEMY
PROJECT: STUDENT UNION AND TENNIS COURTS
LOCATION: 370 CENTRAL AVENUE, WILLISTOWN TOWNSHIP, PA
CHESTER COUNTY, PA

DATE:	07/31/2020
SCALE:	N.T.S.
DRAWN BY:	ACS
CHECKED BY:	CMD
PROJECT NO.:	3119
CAD FILE:	07/31/2020
PLOTTED:	07/31/2020
DRAWING NO.:	C04.3
SHEET:	10 of 22

PCSM PLANNING DESIGN NOTE: - 102.8(b)
THE STORMWATER MANAGEMENT SYSTEMS HAVE BEEN DESIGNED TO MAXIMIZE INFILTRATION BEST MANAGEMENT PRACTICES (BMP) TECHNOLOGIES AND MINIMIZE POINT SOURCE DISCHARGES. THIS PLAN WILL FURTHER ACT TO PREVENT/PROMOTE THE FOLLOWING:

- PRESERVE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING STREAM
- PREVENT AN INCREASE IN THE RATE OF STORMWATER RUNOFF
- MINIMIZE ANY INCREASE IN STORMWATER RUNOFF VOLUME
- MINIMIZE IMPROVED AREAS
- MAINTAIN THE PROTECTION OF EXISTING DRAINAGE FEATURES AND EXISTING VEGETATION
- MINIMIZE LAND CLEARING AND GRADING
- MINIMIZE SOIL COMPACTION
- UTILIZE OTHER STRUCTURAL OR NONSTRUCTURAL BMPs THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF

RECEIVING SURFACE WATERS - 102.8(f)(5)
THE PENNSYLVANIA TITLE 25, CHAPTER 83 CLASSIFICATION FOR THE RECEIVING WATERS OF THE COMMONWEALTH:
AN UNNAMED TRIBUTARY (UNT) OF THE LITTLE VALLEY CREEK, A TRIBUTARY TO THE VALLEY CREEK IN THE VALLEY CREEK WATERSHED, A EXCEPTIONAL WATER QUALITY (EQ) WATER COURSE

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

BMP PROTECTION NOTE: - 102.8(f)(7)
SITE CONTRACTOR SHALL PROVIDE PROTECTION FOR INFILTRATION BMPs UNTIL DRAINAGE AREA IS COMPLETELY STABILIZED.
DRAINAGE AREAS IN BMPs MUST BE 70% STABILIZED BEFORE RUNOFF CAN ENTER THE BMP.

THERMAL IMPACTS NOTE: - 102.8(f)(13)
THE APPLICANT HAS PROPOSED TO INFILTRATE IN THREE INFILTRATION BEDS AND CAPTURE THE PROPOSED VOLUME TO THE BEDS FROM THE 2 YEAR SCS STORM EVENT AND MANAGE THE STORMS UP TO THE 100 YEAR SCS STORM EVENT. ADDITIONAL COOLING WILL OCCUR WITHIN THE STORM SEWER CONVEYANCE PIPES AND INFILTRATION BEDS PRIOR TO ENTERING ANY SURFACE WATERS.

PROJECT WASTE NOTE: - 102.8(f)(11)
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 28.01 ET SEQ. 28.11 ET SEQ. AND 28.11 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

GEOLOGIC FORMATION NOTE: - 102.8(f)(12)

BEDROCK GEOLOGY		U1/2	U1/3
MAP SYMBOL	NAME	AGE	UNIT
Xg	ODONTOUR FORMATION	PROBABLY LOWER PREGLACIAL	PHYLITE HORNBLENDE GNEISS

THERE ARE NO KNOWN GEOLOGIC FORMATIONS THAT WOULD NEGATIVELY IMPACT SITE DEVELOPMENT (i.e. SINKHOLES, FAULTS, FRACTURES, etc.).

LONG-TERM OPERATION AND MAINTENANCE: - 102.8(i)
THE PCSWM PLAN, INSPECTION REPORTS, AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR CONSERVATION DISTRICT.

BMP IMPLEMENTATION/INSTALLATION/CRITICAL STAGE OVERSIGHT AND AS-BUILT PLAN REQUIREMENTS: - 102.8(f)(2)

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, PREVIOUSLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

CRITICAL STAGES

- INSTALLATION OF INFILTRATION BEDS 1, 2, & 3
- INSTALLATION OF WATER QUALITY FILTER

AS-BUILT PLANS

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

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 MUNICIPAL ENGINEER.

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) PROCESSING.

NOTICE OF TERMINATION & FINANCIAL SECURITY

A NOTICE OF TERMINATION (NOT) WILL BE REQUIRED TO BE SUBMITTED FOLLOWING THE APPROVAL OF THE FINAL AS-BUILT PLANS (SEE POST CONSTRUCTION STORMWATER FACILITIES OPERATIONS AND MAINTENANCE PROCEDURES - THIS PLAN).

ANY PERFORMANCE AND/OR FINANCIAL SECURITIES ESTABLISHED FOR THE PROJECT SHALL INCLUDE REQUIREMENTS FOR SUBMITTAL OF AS-BUILT PLANS AND ENGINEERING CONSTRUCTION OVERSIGHT.

POST-REPORTING AND RECONSTRUCTION: - THE PCSWM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR 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:
"I DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA.C.S.A. § 4004 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSWM 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 DESIGN AND SEDIMENT CONTROL REQUIREMENTS), AND PCSWM 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, ADDRESS AND LOCATION;
(2) THE OPERATOR NAME AND ADDRESS;
(3) THE PERMIT NUMBER;
(4) THE REASON FOR PERMIT TERMINATION.

THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSWM BMPs IN ACCORDANCE WITH § 102.8(f)(2) AND PROOF OF COMPLIANCE WITH § 102.8(f)(2).

PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION AND APPROVAL OF THE NOT.

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 PCSWM BMPs ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE.

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

FOR ANY PROPERTY CONTAINING A PCSWM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDS OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSWM BMP AND RELATED OBLIGATIONS IN THE CHAIN OF TITLE COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDING INSTRUMENT MUST IDENTIFY THE PCSWM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSWM BMPs AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSWM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEES, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER § 102.7(b)(5) (RELATING TO PERMIT TERMINATION).

THE PERSON 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 PCSWM BMPs OR TO PERFORM LONG-TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE DEPARTMENT.

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

VEHICLES SHOULD NOT BE PARKED OR DRIVEN OVER INFILTRATION BMPs.

SOIL USE LIMITATIONS AND RESOLUTIONS

SOIL TYPES - pH 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 LABORATORY.

NET SOIL TYPES
TO RESOLVE THIS LIMITATION VEGETATIVE SPECIES THAT ARE TOLERANT TO WET CONDITIONS SHOULD BE SELECTED FOR LANDSCAPING.

POOR SUITABILITY FOR WINTER GRADING / FROST ACTION
ADEQUATE COMPACTION OF SOIL IS REQUIRED FOR THE EMBANKMENTS, PIPE BANKS, ROAD CONSTRUCTION AND THE BUILDING PADS. IF ADEQUATE COMPACTION CANNOT BE ACHIEVED DUE TO FROST ACTION OR NET 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 EASC SEQUENCE.

PERMEABLE SOIL FOR IMPAVMENT CONSTRUCTION
SOIL SHOULD BE IMPORTED FROM OTHER AREAS ON SITE. THE CHESTER COUNTY CONSERVATION DISTRICT MUST APPROVE ANY DEVIATION FROM THE EASC SEQUENCE.

POORLY SUITED AS SOURCES OF TOPSOIL
IDENTIFYING AND VALUING CHARACTERISTICS, THAT RENDER SOIL TYPES POORLY SUITED AS TOPSOIL.

ERODIBLE SOIL
TYPES EXHIBITING K VALUES GREATER THAN 0.38 OR PLASTICITY INDEX VALUES LOWER THAN 10, LIMIT VEGETATIVE STABILIZATION OF CHANNELS. RESOLUTIONS: TEMPORARY CHANNEL LINING, PROTECTIVE PERMANENT CHANNEL LINING, DECREASING CHANNEL GRADE, INCREASING CHANNEL WIDTH, SELECTION VEGETATIVE WITH GREATER REGENERANCE, SELECTING PERMANENT LININGS OTHER THAN GRASSES, AND IMPLEMENTING COMBINATION OF THESE AND OTHER METHODS.

SOILS SUSCEPTIBLE TO SINGLETON FORMATION
LOCATING FACILITIES, SUCH AS SEDIMENT BANS OR TRAPS OR STORMWATER DETENTION OR RETENTION BANS, ON OTHER SOIL TYPES, LINING RESERVOIR AREAS WITH IMPERMEABLE LININGS, LIMITING STORMWATER DEPTHS, LIMITING RETENTION TIMES AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.

GENERAL PCSM NOTES:

1. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS, IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE. THE OPERATOR SHALL SURVEY ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, REGRASS MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE OR WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
2. THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OR REPLACEMENT OF PCSWM BMPs UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSWM BMPs.
3. IF THE CONTRACTOR ENCOUNTERS HIGH WATER TABLE, SHALLOW BEDROCK, SANDHOLES OR SOIL INSTABILITY DURING SITE CONSTRUCTION, THE DESIGN ENGINEER OR THE ON-SITE GEOTECHNICAL ENGINEER MUST BE CONTACTED IMMEDIATELY FOR CORRECTIVE MEASURES.
4. IF GROUNDWATER OR BEDROCK IS ENCOUNTERED DURING THE INSTALLATION OF THE INFILTRATION BMP'S STOP WORK AND CONTACT THE TOWNSHIP AND DESIGN ENGINEER FOR AN ALTERNATE STORMWATER BMP LOCATION OR NEW DESIGN.
5. THE EROSION AND SEDIMENTATION CONTROL PLAN HAS BEEN DESIGNED IN AN EFFORT TO MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE, WHILE PROTECTING THE EXISTING DRAINAGE FEATURES AND VEGETATION. THE EASC PLAN AND CONSTRUCTION SEQUENCE HAS BEEN DEVELOPED AS TO MINIMIZE SOIL COMPACTION, LAND CLEARING, AND IMPROVED AREAS.
6. THE DESIGN WILL PRESERVE THE INTEGRITY OF STREAM CHANNELS AND MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE DOWNSTREAM WATERSHED.
7. 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 28.01 ET SEQ., 271.1 ET SEQ., AND 28.11 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.
8. IF ANY UNWARRANTABLE CONDITIONS ARE ENCOUNTERED DURING THE INSTALLATION OF THE BMPs (I.E. GROUNDWATER AND/OR BEDROCK, ETC.), THE OWNER/ENGINEER SHOULD BE NOTIFIED AND THE PROPOSED SYSTEM SHOULD BE RELOCATED TO A MORE SUITABLE LOCATION ON THE PROPERTY.
9. THE PENNSYLVANIA TITLE 25, CHAPTER 83 CLASSIFICATION FOR THE RECEIVING WATERS OF THE COMMONWEALTH, UNT TO A TRIBUTARY TO THE VALLEY CREEK WITHIN WILLISTOWN TOWNSHIP IS CLASSIFIED AS AN EXCEPTIONAL WATER QUALITY (EQ) WATER COURSE.
10. DLH HAS PROPOSED TO UTILIZE INLETS AND CONVEYANCE PIPING TO COLLECT AND CONVEY THE STORMWATER RUNOFF INTO THE STORMWATER MANAGEMENT SYSTEM. THERMAL IMPACTS WILL BE MITIGATED BY ROUTING HEATED RUNOFF THROUGH A BELOW GROUND INFILTRATION FACILITY WHICH WILL ALLOW INFILTRATED RUNOFF TO COOL PRIOR TO REACHING SURFACE WATERS.

STORMWATER MANAGEMENT NOTES:

1. NO PROPERTY OWNER SHALL OBSTRUCT OR ALTER THE FLOW, LOCATION OR CARRYING CAPACITY OF A STREAM, CHANNEL OR DRAINAGE SWALE TO THE DETRIMENT OF ANY OTHER PROPERTY OWNER, WHETHER UPSTREAM OR DOWNSTREAM.
2. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE OPERATIONS AND MAINTENANCE OF ALL STORMWATER FACILITIES INCLUDING:
 - INFILTRATION BED 1, 2, & 3
 - WATER QUALITY FILTERS & SHOUTS
3. ALL STORMWATER FACILITIES LISTED ABOVE ARE IDENTIFIED ON THE STORMWATER PLAN CONTAINED ON THE PCSWM PLANS.
4. A BLANKET EASEMENT WILL BE PROVIDED OVER THE ENTIRE SITE AND EACH LOT TO ALLOW THE TOWNSHIP ACCESS TO ANY STORMWATER MANAGEMENT AREA SHOULD THE PROPERTY OWNER FAIL TO MAINTAIN SAID AREAS PROPERLY.
5. THE APPLICANT SHALL BE RESPONSIBLE FOR COMPLETING AN AS-BUILT SURVEY OF ALL STORMWATER BMPs INCLUDED IN THE APPROVED PROJECT PLAN.
6. THE TOWNSHIP ENGINEER SHALL RECEIVE COPIES OF THE AS-BUILT PLANS IN DIGITAL CAD FORMAT (OR SIMILAR DIGITAL DATA).
7. THE OWNERS OF THE STORMWATER FACILITIES SHALL PREPARE AND SUBMIT A REPORT TO THE TOWNSHIP ENGINEER DESCRIBING ALL MAINTENANCE ACTIVITIES AND FREQUENCIES ANNUALLY.
8. A COPY OF THE STORMWATER FACILITY OPERATIONS AND MAINTENANCE PLAN SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER.
9. SEDIMENT REMOVAL SHALL OCCUR WHEN THE BED IS THOROUGHLY DRY, DISPOSAL OF DEBRIS, TRASH, SEDIMENT, AND OTHER WASTE MATERIAL SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
10. DURING SITE CONSTRUCTION, ALL INFILTRATION BMPs SHALL BE PROTECTED FROM DISTURBANCE USING APPROPRIATE PROTECTION IN CONFORMANCE WITH PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (PADEP) CHAPTER 102 REGULATIONS, AS AMENDED, AND THE EROSION AND SEDIMENT POLLUTION CONTROL MANUAL, AS AMENDED. PROTECTION SHALL REMAIN UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FULL STABILIZATION.
11. THE AREA DOWNSTREAM OF DP 001 SHALL BE KEPT IN GOOD CONDITION DURING AND AFTER CONSTRUCTION ACTIVITIES COMMENCE. IF ANY REPAIRS IN THIS AREA ARE NEEDED, THEY SHALL BE PERFORMED AS ROUTINE MAINTENANCE.
12. BMP FAILURE DEFINED (PROTOCOL 2 DEP BMP MANUAL):
 - 102.11(c)(2)

BMP #4.3 SUBSURFACE INFILTRATION BED FAILURE OF THE BED OCCURS WHEN THE BOTTOM OF THE BED BECOMES OVERLY COMPACTED AND/OR SEDIMENT OR DEBRIS ENTERS THE BED AND CLOSSES THE VOID SPACES WHEN THE FACILITY DOES NOT FLOW WITHIN 72 HOURS.

PRIMARY CAUSES OF FAILURE INCLUDE SOIL COMPACTION/SHRINKING WHICH LEADS TO POOR INFILTRATION RATES, LACK OF PROPER STABILIZATION PRIOR TO BMP INSTALLATION WHICH LEADS TO SEDIMENTATION; LACK OF PRETREATMENT LEADING TO SEDIMENTATION, AND LACK OF PROPER BMP MAINTENANCE.

IF ANY OF THE ABOVE CONDITIONS BE OBSERVED, THE DESIGN ENGINEER AND TOWNSHIP ENGINEER SHOULD BE CONTACTED TO IMPLEMENT CORRECTIVE ACTIONS.

POST CONSTRUCTION STORMWATER FACILITIES OPERATION AND MAINTENANCE PROCEDURES:

WITHIN THREE (3) MONTHS OF THE APPLICATION FOR NOTICE OF TERMINATION OF THE NPDES PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION THE PROPERTY OWNER SHALL ASSUME RESPONSIBILITY FOR STORMWATER RELATED DISCHARGES FROM THE SITE. SUBSEQUENTLY ALL INSPECTIONS AND ANY MAINTENANCE REQUIRED FOR THE CONTINUED OPERATION OF POST CONSTRUCTION STORMWATER MANAGEMENT BMPs SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. INSPECTIONS SHALL BE COMPLETED FOR EACH INSPECTION PERIOD REQUIRED AND FILED PROMPTLY WITH THE TOWNSHIP USA ADMINISTRATOR. ALL INSPECTIONS SHALL BE IN ACCORDANCE WITH THE OPERATIONS AND MAINTENANCE AGREEMENT.

THE OPERATION AND MAINTENANCE REQUIREMENTS FOR THE POST CONSTRUCTION STORMWATER MANAGEMENT BMPs FOR THIS PROJECT INCLUDE THE FOLLOWING:

INLETS AND DRAINS (OWNER RESPONSIBILITY)
INSPECTION: STORMWATER INLETS AND DRAINS SHALL BE INSPECTED QUARTERLY AND AFTER MAJOR RAINFALL EVENTS (2") FOR THE FIRST TWO (2) YEARS AND THEN YEARLY AFTER THAT. CHECK FOR SEDIMENT DEPOSITION IN THE SWALE. 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), CHECK FOR PROPER STRUCTURE ALIGNMENT AND ATTACHMENT, AND EVIDENCE OF THE ANTI-SIPHON TUBE.

MAINTENANCE: SEDIMENT SHALL BE REMOVED FROM THE SWAMP WHEN IT HAS REACHED 6 INCHES IN DEPTH OR YEARLY WHICHEVER COMES FIRST. 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. IF 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 MANUFACTURERS SPECIFICATIONS.

SUBSURFACE INFILTRATION BEDS (OWNER RESPONSIBILITY)
INSPECTION: SUBSURFACE INFILTRATION SYSTEMS SHALL BE INSPECTED QUARTERLY AND AFTER MAJOR RAINFALL EVENTS (2") FOR THE FIRST TWO (2) YEARS AND THEN YEARLY AFTER THAT. INSPECTION ITEMS SHALL INCLUDE THE CONDITION OF THE INFILTRATION PORTS AND ANY VISIBLE CONNECTIONS, SEDIMENT ACCUMULATION OR STANDING WATER IN THE MANHOLE AND ANY SETTLING OR BREAKS/CRACKS ALONG THE LENGTH OF THE SYSTEM. INSPECT ROOF LEAKS AND OVERFLOW PIPES FOR BLOCKAGE. ACCUMULATED RUNOFF WITHIN THE STORAGE SYSTEM FROM ALL STORM EVENTS SHOULD BE DISCHARGED WITHIN 48 HOURS.

MAINTENANCE: REMOVE ANY LOGS, DEBRIS AND OTHER MATERIAL FROM THE MANHOLE SWAMP IF SEDIMENT IS OBSERVED IN THE MANHOLE PIPE, FILL THE SYSTEM WITH A HIGH POWERED JET, MANNING SLUIC TO CATCH AND DISPOSE OF THE REPLACED MATERIAL BY AN APPROVED METHOD SUCH AS A VACUUM TRUCK. UNDOOR ROOF CONNECTIONS AND OVERFLOW PIPES AS NECESSARY AND DISCONNECTED ROOF LEADINGS. IF SIGNIFICANT SETTLEMENT HAS OCCURRED, THE COLLECTED RUNOFF SHOULD NOT BE DUMPED OR THERE ARE BREAKS/CRACKS, CONSULT THE TOWNSHIP AND THE ENGINEER OF RECORD FOR APPROPRIATE REMEDIATION MEASURES.

SHOUT WATER QUALITY INLETS (OWNER RESPONSIBILITY)
INSPECTION: THE PROPERTY OWNER SHALL, AT ALL TIMES PROPERLY OPERATE AND MAINTAIN THE WATER QUALITY STRUCTURES PER MANUFACTURERS SPECIFICATIONS. INSPECTIONS OF THE WATER QUALITY UNITS SHALL BE PERFORMED QUARTERLY FOR THE FIRST YEAR OF OPERATION AND ANNUALLY THEREAFTER. A SLUDGE JUDGE OR OTHER SLUDGE MEASURING TOOL SHALL BE UTILIZED TO MEASURE THE DEPTH OF SEDIMENT IN THE INLET BOTTOM DURING EACH INSPECTION. THE INSPECTION REPORT SHALL INCLUDE THE FOLLOWING INFORMATION FOR EACH INSPECTION EVENT:

- A. THE DATE AND TIME OF INSPECTION;
- B. THE NAME OF THE INDIVIDUAL(S) WHO PERFORMED THE INSPECTION;
- C. THE TOTAL DEPTH OF SEDIMENT IN THE STRUCTURE;
- D. THE TOTAL DEPTH OF OIL AND GREASE IN THE STRUCTURE;
- E. TRANSPORT AND DISPOSAL RECORDS OF REMOVED PRODUCT(S).

MAINTENANCE: PER MANUFACTURERS RECOMMENDATION, THE STRUCTURE SHALL BE CLEARED WHEN THE SWAMP IS HALF FULL. REFER TO PLAN FOR SWAMP DEPTHS. MAINTENANCE IS BEST PERFORMED WITH A VACUUM TRUCK. TRANSPORT AND DISPOSAL OF SEDIMENT AND OIL SHALL BE DONE IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS. TO MAINTAIN THE SHOUT HOODS THEMSELVES, AN ANNUAL INSPECTION OF THE ANTI-SIPHON TUBE AND ACCESS HOODS ARE RECOMMENDED. A SIMPLE FLOTTING OF THE HOOD OR A GENTLE RIDDING WITH A FLEXIBLE HOSE ARE ALL THINGS TYPICALLY NEEDED TO MAINTAIN THE ANTI-SIPHON PROPERTIES. OPENING AND CLOSING THE ACCESS HOODS ONCE A YEAR ENSURES A LIFE-TIME OF TROUBLE-FREE SERVICE. THE OWNER SHALL PERMIT TOWNSHIP OFFICIALS AND/OR THEIR AGENTS TO ENTER THE PROPERTY TO INSPECT THE STORMWATER WATER QUALITY STRUCTURE AND TO SAMPLE ANY DISCHARGE OF STORMWATER.

SITE SOILS

MAP UNIT: G08-GLENELG SILT LOAM, 3 TO 8 PERCENT SLOPES
COMPONENT: GLENELG (85X)

THE GLENELG COMPONENT MAKES UP 85 PERCENT OF THE MAP UNIT. SLOPES ARE 3 TO 8 PERCENT. THIS COMPONENT IS ON NEARLY LEVEL TO STEEPLY DISSECTED HILLSLOPES. UPLANDS. THE PARENT MATERIAL CONSISTS OF RESIDUUM WEATHERED FROM PHYLITE. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 60 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH. AVAILABLE WATER TO A DEPTH OF 60 INCHES (OR RESTRICTED DEPTH) IS HIGH. SHRINK-SWELL POTENTIAL IS LOW. THIS SOIL IS NOT FLOODED. IT IS NOT PONDED. THERE IS NO ZONE OF WATER SATURATION WITHIN A DEPTH OF 72 INCHES. ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 3 PERCENT. NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 2. THIS SOIL DOES NOT MEET HYDRO CRITERIA.

COMPONENT: G04 (10X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE G04 SOIL IS A MINOR COMPONENT.

COMPONENT: GLENVILLE (5X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE GLENVILLE SOIL IS A MINOR COMPONENT.

MAP UNIT: G04-GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES
COMPONENT: GLENVILLE (90X)

THE GLENVILLE COMPONENT MAKES UP 90 PERCENT OF THE MAP UNIT. SLOPES ARE 0 TO 3 PERCENT. THIS COMPONENT IS ON HILLS, HILLSLOPES. THE PARENT MATERIAL CONSISTS OF COLLUVIUM DERIVED FROM SCHIST AND/OR COLLUVIUM DERIVED FROM GNEISS. DEPTH TO A ROOT RESTRICTIVE LAYER, FRAGMENTAL, IS 15 TO 30 INCHES. THE NATURAL DRAINAGE CLASS IS MODERATELY WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY LOW. AVAILABLE WATER TO A DEPTH OF 60 INCHES (OR RESTRICTED DEPTH) IS MODERATE. SHRINK-SWELL POTENTIAL IS LOW. THIS SOIL IS NOT FLOODED. IT IS NOT PONDED. A SEASONAL ZONE OF WATER SATURATION IS AT 21 INCHES DURING JANUARY, FEBRUARY, MARCH, APRIL, NOVEMBER, DECEMBER. ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 3 PERCENT. NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 2K. THIS SOIL DOES NOT MEET HYDRO CRITERIA.

COMPONENT: BAILE (5X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE BAILE SOIL IS A MINOR COMPONENT.

COMPONENT: GLENELG (5X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE GLENELG SOIL IS A MINOR COMPONENT.

MAP UNIT: M0C-MANOR LOAM, 8 TO 15 PERCENT SLOPES
COMPONENT: MANOR (85X)

THE MANOR COMPONENT MAKES UP 85 PERCENT OF THE MAP UNIT. SLOPES ARE 8 TO 15 PERCENT. THIS COMPONENT IS ON HILLS, PREMOUNTS. THE PARENT MATERIAL CONSISTS OF RESIDUUM WEATHERED FROM PHYLITE. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 60 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH. AVAILABLE WATER TO A DEPTH OF 60 INCHES (OR RESTRICTED DEPTH) IS MODERATE. SHRINK-SWELL POTENTIAL IS LOW. THIS SOIL IS NOT FLOODED. IT IS NOT PONDED. THERE IS NO ZONE OF WATER SATURATION WITHIN A DEPTH OF 72 INCHES. ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 3 PERCENT. NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 2. THIS SOIL DOES NOT MEET HYDRO CRITERIA.

COMPONENT: MT. AIRY (5X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE MT. AIRY SOIL IS A MINOR COMPONENT.

COMPONENT: BLOCKTOWN (5X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE BLOCKTOWN SOIL IS A MINOR COMPONENT.

COMPONENT: GLENVILLE (5X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE GLENVILLE SOIL IS A MINOR COMPONENT.

MAP UNIT: M0D-MANOR LOAM, 15 TO 25 PERCENT SLOPES
COMPONENT: MANOR (85X)

THE MANOR COMPONENT MAKES UP 85 PERCENT OF THE MAP UNIT. SLOPES ARE 15 TO 25 PERCENT. THIS COMPONENT IS ON HILLSLOPES ON UPLAND PREMOUNTS. THE PARENT MATERIAL CONSISTS OF RESIDUUM WEATHERED FROM PHYLITE. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 60 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH. AVAILABLE WATER TO A DEPTH OF 60 INCHES (OR RESTRICTED DEPTH) IS MODERATE. SHRINK-SWELL POTENTIAL IS LOW. THIS SOIL IS NOT FLOODED. IT IS NOT PONDED. THERE IS NO ZONE OF WATER SATURATION WITHIN A DEPTH OF 72 INCHES. ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 3 PERCENT. NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 4E. THIS SOIL DOES NOT MEET HYDRO CRITERIA.

COMPONENT: BLOCKTOWN (5X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE BLOCKTOWN SOIL IS A MINOR COMPONENT.

COMPONENT: MT. AIRY (5X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE MT. AIRY SOIL IS A MINOR COMPONENT.

COMPONENT: GLENVILLE (5X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE GLENVILLE SOIL IS A MINOR COMPONENT.

MAP UNIT: M0E-MANOR LOAM, 25 TO 35 PERCENT SLOPES
COMPONENT: MANOR (85X)

THE MANOR COMPONENT MAKES UP 85 PERCENT OF THE MAP UNIT. SLOPES ARE 25 TO 35 PERCENT. THIS COMPONENT IS ON UPLANDS, NEARLY LEVEL TO VERY STEEP DISSECTED HILLSLOPES. THE PARENT MATERIAL CONSISTS OF RESIDUUM WEATHERED FROM MICA SCHIST. DEPTH TO A ROOT RESTRICTIVE LAYER IS GREATER THAN 60 INCHES. THE NATURAL DRAINAGE CLASS IS WELL DRAINED. WATER MOVEMENT IN THE MOST RESTRICTIVE LAYER IS MODERATELY HIGH. AVAILABLE WATER TO A DEPTH OF 60 INCHES (OR RESTRICTED DEPTH) IS MODERATE. SHRINK-SWELL POTENTIAL IS LOW. THIS SOIL IS NOT FLOODED. IT IS NOT PONDED. THERE IS NO ZONE OF WATER SATURATION WITHIN A DEPTH OF 72 INCHES. ORGANIC MATTER CONTENT IN THE SURFACE HORIZON IS ABOUT 2 PERCENT. NONIRRIGATED LAND CAPABILITY CLASSIFICATION IS 4E. THIS SOIL DOES NOT MEET HYDRO CRITERIA.

COMPONENT: GLENVILLE (2X)
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR SOIL COMPONENTS. THE GLENVILLE SOIL IS A MINOR COMPONENT.

MAP UNIT: M0F-MANOR LOAM, 25 TO 60 PERCENT SLOPES, VERY STONY
COMPONENT: MANOR, VERY STONY (100X)

THE MANOR, VERY STONY COMPONENT MAKES UP 100 PERCENT OF THE MAP UNIT. SLOPES ARE 25 TO 60 PERCENT. THIS COMPONENT IS ON NEARLY LEVEL TO VERY STEEP DISSECTED



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NO.	DESCRIPTION	DATE
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7		
6		
5		
4		
3		
2		
1		

PRELIMINARY/FINAL PCSWM DETAILS

CLIENT: VILLA MARIA ACADEMY
PROJECT: STUDENT UNION AND TENNIS COURTS
LOCATION: 370 CENTRAL AVENUE
WILLISTOWN TOWNSHIP, CHESTER COUNTY, PA

DATE: 07/31/2020
SCALE: N.T.S.
DRAWN BY: ACS
CHECKED BY: CMD
PROJECT NO.: 3119
JOB NO.: 04000000000000000000
PLOTTED: 07/31/2020
DRAWING NO.: C04.4
SHEET: 11 of 22

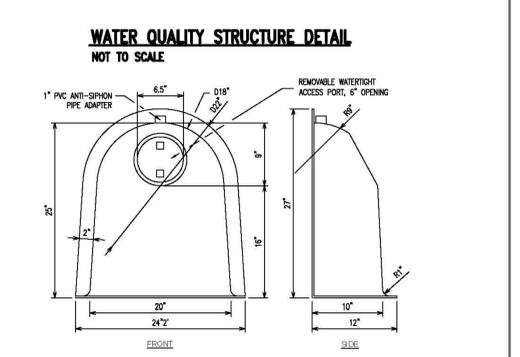
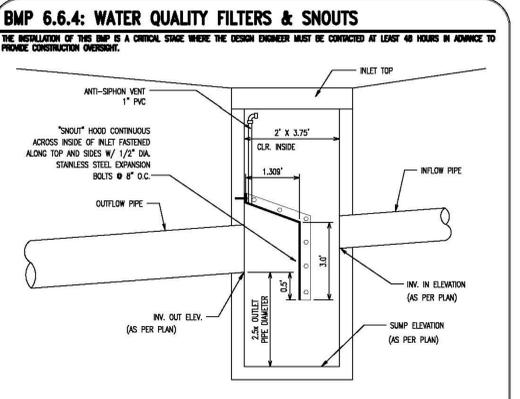
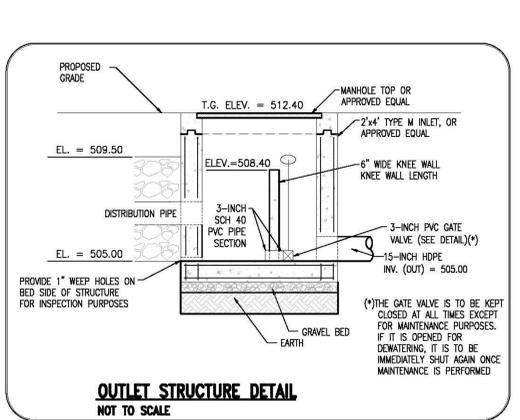
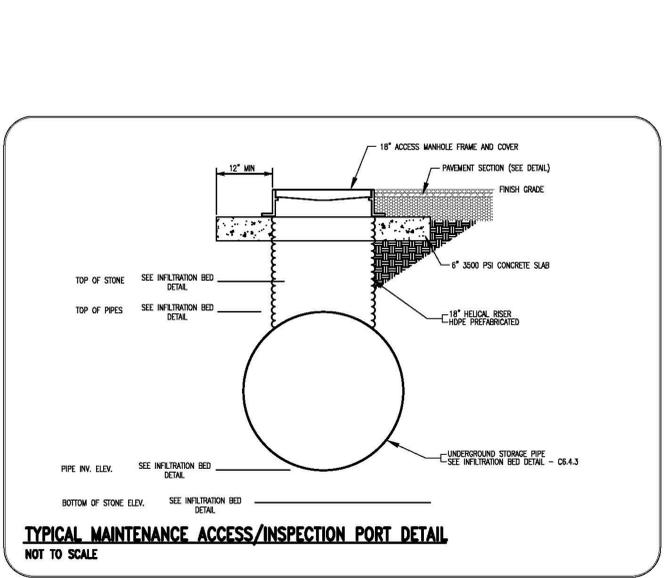
Agri Drain
C O R P O R A T I O N
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1 1/2", 2", 3", 4", 6", & 8" Valterra Gate Valves
Inexpensive valve for industrial, agricultural, and commercial markets.

- Most provide a stable base, and installation using flexible couplers is recommended.
- Valve sealed as a drain valve to tanks.
- Available in SCH-40S PVC pipe.
- Unrestricted flow.
- Quick opening.
- Trouble-free simplicity.
- 100% water tested at factory.
- Quick shut-off to save pressure or vacuum lines.
- Other sizes available.

Materials and Specifications	
Color	White
Body	PVC
Shaft	304SS
Handle	Plastic
Seals	Stainless
Max PSI Open/Closed	30/45

3-INCH PVC GATE VALVE DETAIL
NOT TO SCALE



PIPE O.D.	SNOOT SIZE
<12"	12" OR R
<18"	18" OR R
<24"	24" OR R
<30"	30" OR R
<36"	36" OR R
<48"	48" OR R

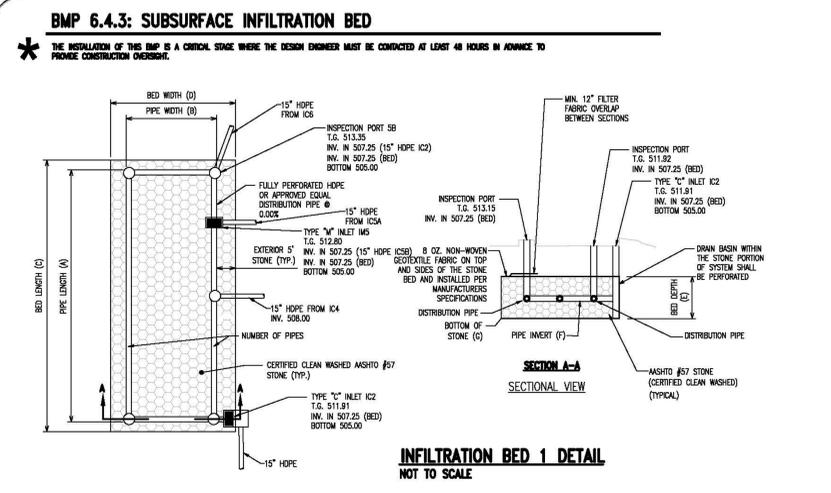
F=(FLAT BACK FOR SQUARE STRUCTURES)
R=(ROUND STRUCTURES)

18" SNOOT OIL & DEBRIS STOP
NOT TO SCALE

STORMWATER WATER QUALITY STRUCTURE OPERATION AND MAINTENANCE SPECIFICATIONS:

- THE PROPERTY OWNER SHALL AT ALL TIMES PROPERLY OPERATE AND MAINTAIN THE WATER QUALITY STRUCTURES PER MANUFACTURER'S SPECIFICATIONS. AN INSPECTION REPORT SHALL BE PROVIDED TO THE TOWNSHIP FOLLOWING EACH INSPECTION EVENT. INSPECTIONS OF THE WATER QUALITY UNITS SHALL BE PERFORMED QUARTERLY FOR THE FIRST YEAR OF OPERATION AND SEMIANNUALLY THEREAFTER.
- THE INSPECTION REPORT SHALL INCLUDE THE FOLLOWING INFORMATION FOR EACH INSPECTION EVENT:
 - THE DATE AND TIME OF INSPECTION;
 - THE NAME OF THE INDIVIDUAL(S) WHO PERFORMED THE INSPECTION;
 - THE TOTAL DEPTH OF SEDIMENT IN THE STRUCTURE;
 - THE TOTAL DEPTH OF OIL AND GRASS IN THE STRUCTURE; AND
 - TRANSFER AND DISPOSAL RECORDS OF REMOVED PRODUCTS.
- PER MANUFACTURER RECOMMENDATION, THE STRUCTURE SHALL BE CLEANED WHEN THE SUMP IS HALF FULL. FOR ICS THE SUMP IS 3.75 FEET DEEP AND SHOULD THEREFORE BE CLEANED OUT WHEN 1.5 FEET OF MATERIAL COLLECTS IN THE SUMP.
- MAINTENANCE IS BEST DONE WITH A VACUUM TRUCK. TRANSPORT AND DISPOSAL OF SEDIMENT AND OIL SHALL BE DONE IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS.
- TO MAINTAIN THE SNOOT HOODS THEMSELVES, AN ANNUAL INSPECTION OF THE ANTI-SIPHON VENT AND ACCESS HATCH ARE RECOMMENDED. A SIMPLE FLUSHING OF THE VENT, OR A GENTLE RUBBING WITH A FLEXIBLE WIRE ARE ALL THINGS TYPICALLY NEEDED TO MAINTAIN THE ANTI-SIPHON PROPERTIES. OPENING AND CLOSING THE ACCESS HATCH ONCE A YEAR ENSURES A LIFETIME OF TROUBLE-FREE SERVICE.
- THE OWNER SHALL PERMIT THE TOWNSHIP OFFICIALS AND/OR THEIR AGENTS TO ENTER THE PROPERTY TO INSPECT THE STORMWATER WATER QUALITY STRUCTURE AND TO SAMPLE ANY DISCHARGE OF STORMWATER.

SNOOT INLET SCHEDULE	
INLET	SIZE
IMA	18"
ICSA	18"
ICB	18"



BED	PIPE OR MATERIAL	PIPE SIZE (D)	PIPE LENGTH (L)	NUMBER OF PIPES	PIPE LENGTH (L)	BED WIDTH (B)	BED LENGTH (L)	BED DEPTH (D)	PIPE INVERT	PIPE BOT. OF STONE	BASIN SLOPE		
BED 1	STONE	* HOPE	1.25	1.50	2	78"	60"	88"	70"	4.5'	507.25	505.00	0.0000

GENERAL NOTES:

- ALL PIPE LISTED AS HOPE SHALL BE FULLY DEGRADABLE HIGH DENSITY POLYETHYLENE PIPE.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE TOWNSHIP ENGINEER'S APPROVAL PRIOR TO INSTALLATION.
- A SPECIFICATION SHEET FOR THE NON-WOVEN FABRIC MUST BE SUBMITTED TO THE TOWNSHIP ENGINEER PRIOR TO CONSTRUCTION OF BED.

CONSTRUCTION SEQUENCE

- PROTECT INFILTRATION BED AREA FROM COMPACTION PRIOR TO INSTALLATION.
- IF POSSIBLE, INSTALL INFILTRATION BED DURING LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY.
- INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
- IF NECESSARY, EXCAVATE INFILTRATION BED BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE.
- SEED AND STABILIZE TOPSOIL.
- DAMAGE AREA TO INFILTRATION FACILITY SHALL BE 70% STABILIZED PRIOR TO RAINFALL FROM CONTRIBUTING AREA ENTERING FACILITY.

NOTES:

- COMPACTION IS TO BE MINIMIZED IN THE AREAS DESIGNATED FOR INFILTRATION.
- INFILTRATION BED FILTER FABRIC AND STONE SHOULD BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS. IF INSPECTION INDICATES THAT SOIL SEDIMENT HAS ENTERED ANY OF THE INFILTRATION BEDS, APPROPRIATE MEASURES (IE. CLEANING THE SOIL/SEDIMENT FROM THE FABRIC, STONE, BED ETC. AND OR REPLACEMENT OF THE FABRIC AND STONE) SHOULD BE ADDRESSED.
- ALL STONE FOR THE CONSTRUCTION OF THE STONE INFILTRATION BED SHOULD BE UNIFORMLY GRADED AND CERTIFIED CLEAN WASHED AGGREGATE.
- THE BOTTOM OF ALL INFILTRATION BED SHALL BE UNDISTURBED OR UNCOMPACTED SUBGRADE.

OPERATION AND MAINTENANCE:

- INFILTRATION BED FILTER FABRIC AND STONE SHOULD BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS. IF INSPECTION INDICATES THAT SOIL/SEDIMENT HAS ENTERED ANY OF THE INFILTRATION BEDS, APPROPRIATE MEASURES (IE. CLEANING THE SOIL/SEDIMENT FROM THE FABRIC, STONE, BED ETC. AND OR REPLACEMENT OF THE FABRIC AND STONE) SHOULD BE ADDRESSED.
- INFLOW AND OUTFLOW POINTS INTO THE INFILTRATION SYSTEM SHOULD BE KEPT CLEAR OF LEAVES AND OTHER DEBRIS. ANY LEAVES OR DEBRIS WILL NEGATIVELY IMPACT THE PERFORMANCE OF THESE SYSTEMS. ALL DOWNSPOUTS AND OVERFLOW PIPES SHOULD BE KEPT IN GOOD WORKING ORDER.
- IF GROUNDWATER OR BEDROCK IS ENCOUNTERED DURING THE INSTALLATION OF THE INFILTRATION BED STOP WORK AND CONTACT THE TOWNSHIP AND DESIGN ENGINEER FOR AN ALTERNATE SEEPAGE BED LOCATION OR NEW DESIGN.
- COMPACTION IS TO BE MINIMIZED IN AREAS DESIGNATED FOR INFILTRATION.
- CATCH BASINS AND INLETS (UPSTREAM OF INFILTRATION BED) SHOULD BE INSPECTED AND CLEANED AT LEAST TWICE PER YEAR AND AFTER MAJOR RAINFALL EVENTS.
- INSPECT THE BED AFTER RAINFALL EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. MOSQUITOS SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS.
- ALSO INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, AND SIGNS OF WATER CONTAMINATION/SPILLS.
- REMOVE ACCUMULATED SEDIMENT FROM BASIN AS REQUIRED. RESTORE ORIGINAL CROSS SECTION AND INFILTRATION RATE. PROPERLY DISPOSE OF SEDIMENT.

SPECIFICATIONS

STONE:

- SHALL BE 2-INCH TO 1-1/2-INCH UNIFORMLY GRADED COARSE AGGREGATE, WITH A WASH LOSS OF NO MORE THAN 0.5%, AGGREGATE SIZE NUMBER 3 PER AGGREGATE SPECIFICATIONS, PART 1, 19TH ED., 1996, OR LATER AND SHALL HAVE VOIDS 40% AS MEASURED BY ASTM-228.

NON-WOVEN GEOTEXTILE:

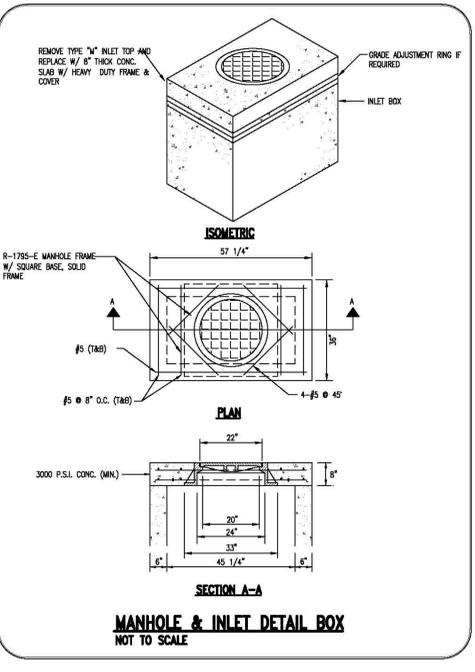
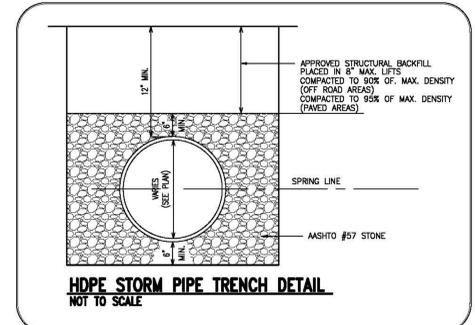
- SHALL CONSIST OF NEEDLED NON-WOVEN POLYPROPYLENE FIBERS AND MEET THE FOLLOWING PROPERTIES:
 - GRAB TENSILE STRENGTH (ASTM-D4822) 120 LBS
 - MULLEN BURST STRENGTH (ASTM-D3786) 225 PSJ
 - FLOW RATE (ASTM-D4411) 95 GAL/MIN/FT²
 - UV RESISTANCE AFTER 500 HRS (ASTM-D4326) 70%
 - HEAT-SET OR HEAT-CALCINATED FABRICS ARE NOT PERMITTED
 - ACCEPTABLE TYPES INCLUDE W8011 140N, AM500 4547, AND GEOTEX 451.

PEE:

- SHALL BE CONTINUOUSLY PERFORATED, SMOOTH INTERIOR.
- HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL MEET AGS10 M252, TYPE S OR AGS10 M254, TYPE S.

SEDIMENT BASIN INLETS AND STRUCTURES:

- CONCRETE CONSTRUCTION: CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 1001, PENNDOT SPECIFICATIONS, 1990 OR LATEST EDITION.
- PRECAST CONCRETE INLETS AND MANHOLES: PRECAST CONCRETE INLETS MAY BE SUBSTITUTED FOR CAST-IN-PLACE STRUCTURES AND SHALL BE CONSTRUCTED AS SPECIFIED FOR CAST-IN-PLACE. PRECAST STRUCTURES MAY BE USED IN ONLY THOSE AREAS WHERE THERE IS NO CONFLICT WITH EXISTING UNDERGROUND STRUCTURES THAT MAY NECESSITATE REVISION OF INLETS. TYPE M STANDARD PENNDOT INLET BOXES WILL BE MODIFIED TO PROVIDE MINIMUM 12 INCH SUMP SLURP AND BOTTOM LEADING BASINS, OPEN TO GRAVEL SUMPS IN SUB-GRADE, WHEN SITUATED IN THE RECHARGE BED.
- CATCH BASINS/CLEANOUTS/SLURP DRAINS SHALL HAVE H=10 OR H=20 RATED GRATES, DEPENDENT ON THEIR PLACEMENT (H=20 IF VEHICULAR LOADING).
- STEEL REINFORCING BARS OVER THE TOP OF THE OUTLET STRUCTURE SHALL CONFORM TO ASTM A618, GRADES 60 AND 40.

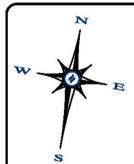
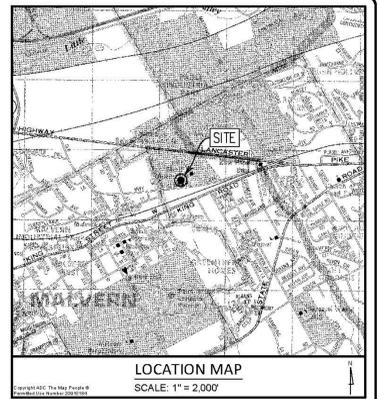




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Fax: (610) 918-9003



LEGEND

<ul style="list-style-type: none"> PROP. PROPERTY LINE PROP. RIGHT-OF-WAY PROP. MONUMENT PROP. IRON PIPE PROP. EASEMENT 	<ul style="list-style-type: none"> PROPOSED CONTOUR NEW SPOT ELEV. SOILS TYPE PROP. CONC. CURB EX. EDGE OF PAVING EX. LIGHT POLE 	<ul style="list-style-type: none"> PROP. LIGHT POLE PROP. ELEC. LINE PROP. UTILITY POLE EX. GUY ANCHOR PROP. GAS LINE PROP. SAN. SEWER LATERAL PROP. TELE. LINE EX. STORM INLET 	<ul style="list-style-type: none"> PROP. STORM INLET PROP. STORM INLET ID PROP. SEEPAGE BED PROP. SAN. SEWER LINE PROP. SAN. SEWER LATERAL PROP. SANITARY MH. ID EX. WATER LINE 	<ul style="list-style-type: none"> PROP. WATER LINE PROP. WATER LATERAL PROP. FIRE WATER LINE EX. WATER VALVE PROP. HYDRANT PROP. MANHOLE EX. PERC TEST EX. TEST PIT 	<ul style="list-style-type: none"> PROPOSED CONCRETE PROPOSED WALKWAY 	<p>EROSION CONTROL LEGEND</p> <ul style="list-style-type: none"> LIMIT OF DISTURBANCE CFS18 18" COMPOST FILTER SOCK CFS24 24" COMPOST FILTER SOCK OCF ORANGE CONSTRUCTION FENCE TS TOPSOIL STOCKPILE RCE STABILIZED ROCK CONSTRUCTION ENTRANCE IP INLET PROTECTION 	<p>EXISTING UTILITIES LEGEND</p> <ul style="list-style-type: none"> W WATER SERVICE LINE FW FIRE WATER SERVICE LINE S SANITARY SERVICE LINE G GAS SERVICE LINE UE UNDERGROUND ELECTRIC SERVICE LINE UC UNDERGROUND COMMUNICATIONS SERVICE LINE
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OVERALL EROSION CONTROL PLAN
SCALE: 1"=60'

GRAPHIC SCALE
1 inch = 60 feet

STEEP SLOPES LEGEND

- STEEP SLOPES (15-25%)
- STEEP SLOPES (>25%)

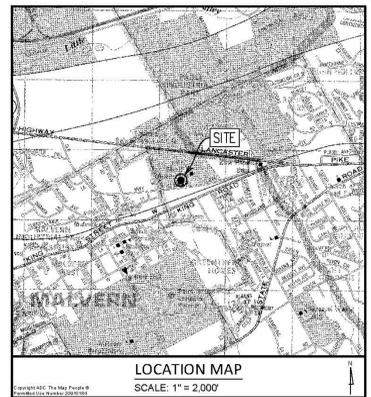


NO.	DATE	DESCRIPTION
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PRELIMINARY/FINAL
OVERALL EROSION CONTROL PLAN

CLIENT: VILLA MARIA ACADEMY
PROJECT: STUDENT UNION AND TENNIS COURTS
LOCATION: 370 CENTRAL AVENUE
WILLISTOWN TOWNSHIP, CHESTER COUNTY, PA

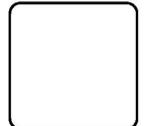
DATE:	07/31/2020
SCALE:	1"=60'
DRAWN BY:	ACB
CHECKED BY:	CMD
PROJECT NO.:	3119
CAD FILE:	EROSION CONTROL_Plan.dwg
DATE:	07/31/2020
DRAWING NO.:	C05.1
SHEET:	14 of 22



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Fax: (610) 918-9003



EROSION AND SEDIMENT CONTROL NARRATIVE
THE PURPOSE OF THIS NARRATIVE AND THE EROSION CONTROL ASPECTS OF THE PLANS ARE TO PREVENT THE ACCELERATED EROSION OF EXPOSED 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 THE PLAN. THIS PLAN WILL FURTHER ACT TO PROVIDE THE FOLLOWING:

- MINIMIZE EXTENT AND DURATION OF EARTH DISTURBANCE
- MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION
- MINIMIZE SOIL COMPACTION
- UTILIZE OTHER MEASURES OR CONTROLS THAT PREVENT OR MINIMIZE GENERATION OF INCREASED STORMWATER RUNOFF

RECEIVING SURFACE WATERS
THE PENNSYLVANIA TITLE 25, CHAPTER 93 CLASSIFICATION FOR THE RECEIVING WATERS OF THE COMMONWEALTH:
AN UNIMPAIRED TRIBUTARY (AND) OF THE TITTLE VALLEY CREEK, A TRIBUTARY TO THE VALLEY CREEK IN THE VALLEY CREEK WATERSHED; A EXCEPTIONAL VALUE (EV) AND MIGRATORY FISHES (MF) WATER COURSE.
SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

MAINTENANCE - 102.4(b)(5)(c)
MAINTENANCE OF EROSION AND SEDIMENT CONTROL DEVICES WILL CONSIST OF WEEKLY INSPECTIONS OF EACH DEVICE TO DETERMINE HOW WELL THE SOIL STABILIZATION MEASURES USED ARE WORKING. ALL FACILITIES WILL BE INSPECTED AFTER EVERY STORM TO DETERMINE THEIR DURABILITY TO WITHSTAND DRIVING RAIN AND EROSION. 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.
A WRITTEN REPORT DOCUMENTING ALL INSPECTIONS AND REPAIRS MUST BE KEPT ON-SITE AT ALL TIMES. INSPECTIONS SHALL BE LOGGED ONTO DEP FORM 3150-FM-BWENR008 DATED 2/2012 AND KEPT ON-SITE AT ALL TIMES.
THE FOLLOWING MAINTENANCE PROCEDURES SHALL APPLY:

1. ANY SEEDED OR SOILED AREAS THAT HAVE BECOME STRIPPED OF VEGETATION SHALL BE REVEGETATED WITH APPROPRIATE STABILIZATION MATERIALS. THIS PROCEDURE SHALL BE REPEATED AFTER EVERY STABLE STORM (OF 2) UNTIL NO MORE SIGNS OF EROSION ARE EVIDENT.
2. AT WEEKLY INSPECTIONS AND AFTER EACH RAIN EVENT NECESSARY CLEANING WILL BE PERFORMED.
3. 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.

PROJECT WASTE NOTE: - 102.4(b)(5)(c)(ii)
THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR REUSE OF ALL BUILDING MATERIAL AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 2601 ET SEQ., 2711 ET SEQ., AND 2801.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

GEOLOGIC FORMATION NOTE: - 102.8(1)(12)
THERE ARE NO KNOWN GEOLOGIC FORMATIONS THAT WOULD NEGATIVELY IMPACT SITE DEVELOPMENT (i.e. SINKHOLES, FAULTS, FRACTURES, KARST).

THERMAL IMPACTS NOTE: - 102.4(b)(5)(c)(iii)
THERMAL IMPACTS ARE BEING MITIGATED DURING CONSTRUCTION PHASE BY ROUTING CONSTRUCTION RUNOFF PERMITTED EROSION CONTROL MEASURES, E.G. COMPOST FILTER SOCKS, AND THEN THROUGH EXISTING WELL VEGETATED AREAS WHICH ALLOW FURTHER COOLING BEFORE ENTERING SURFACE WATERS.

RECYCLING OR DISPOSAL OF MATERIALS
ANY OFF-SITE WASTE AND BORROW AREA MUST HAVE AN EAS PLAN REVIEWED AND APPROVED BY COCD PRIOR TO BEING ACTIVATED.

NO.	DESCRIPTION	DATE
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PRELIMINARY/FINAL
EROSION CONTROL PLAN
CLIENT: VILLA MARIA ACADEMY
PROJECT: STUDENT UNION AND TENNIS COURTS
LOCATION: 370 CENTRAL AVENUE
WILLISTOWN TOWNSHIP, CHESTER COUNTY, PA

DATE: 07/31/2020
SCALE: 1"=40'
DRAWN BY: ACB
CHECKED BY: CMD
PROJECT NO.: 3119
JOB TITLE: EROSION CONTROL PLAN
DATE: 07/31/2020
SHEET NO.: C05.2
SHEET 15 OF 22

LEGEND

--- PROP. PROPERTY LINE	--- PROPOSED CONTOUR	--- PROP. LIGHT POLE	--- PROP. ELEC. LINE	--- PROP. STORM INLET	--- PROP. WATER LINE
--- PROP. RIGHT-OF-WAY	--- NEW SPOT ELEV.	--- EX. MAIL BOX	--- PROP. UTILITY POLE	--- PROP. STORM INLET ID	--- PROP. WATER LATERAL
--- PROP. MONUMENT	--- SOILS TYPE	--- EX. SIGN	--- EX. GUY ANCHOR	--- PROP. SEEPAGE BED	--- PROP. FIRE WATER LINE
--- EX. EROSION	--- EX. STORM SEWER	--- EX. TELE. LINE	--- EX. STORM SEWER LINE	--- PROP. SAN. SEWER LINE	--- EX. WATER VALVE
--- PROP. EASEMENT	--- PROP. CONC. CURB	--- EX. TELE. LINE	--- EX. STORM SEWER LINE	--- PROP. SAN. SEWER LATERAL	--- EX. WATER VALVE
	--- EX. LIGHT POLE	---	---	--- PROP. SANITARY MH. ID	--- PROP. HYDRANT
				---	--- PROP. MANHOLE
				---	--- EX. PERC. TEST
				---	--- EX. TEST PIT

EROSION CONTROL PLAN
SCALE: 1"=40'
GRAPHIC SCALE
1 inch = 40 feet

LEGEND

--- PROPOSED CONCRETE	--- PROPOSED WALKWAY
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STEEP SLOPES LEGEND

--- STEEP SLOPES (15-25%)
--- STEEP SLOPES (>25%)

COMPOST FILTER SOCK TABLE

ROW #	TYPE	LOCATION	SLOPE	SLOPE LENGTH ABOVE BARBER (L)
1	24" OFS	EAST OF INFILTRATION BED 3	6.2%	420
1	24" OFS	EAST OF INFILTRATION BED 2	6%	400
1	18" OFS	WEST OF INFILTRATION BED 2	2.0%	100
1	18" OFS	EAST OF INFILTRATION BED 1	2.2%	80
1	18" OFS	NORTH OF EXISTING PARKING LOT	2.3%	160

EROSION CONTROL LEGEND

--- LIMIT OF DISTURBANCE	--- WATER SERVICE LINE
--- CFS18 18" COMPOST FILTER SOCK	--- FIRE WATER SERVICE LINE
--- CFS24 24" COMPOST FILTER SOCK	--- SANITARY SERVICE LINE
--- ODF ORANGE CONSTRUCTION FENCE	--- GAS SERVICE LINE
--- TS TOPSOIL STOCKPILE	--- UNDERGROUND ELECTRIC SERVICE LINE
--- RCE ROCK CONSTRUCTION ENTRANCE	--- UNDERGROUND COMMUNICATIONS SERVICE LINE
--- IP INLET PROTECTION	

EXISTING UTILITIES LEGEND

--- WATER SERVICE LINE
--- FIRE WATER SERVICE LINE
--- SANITARY SERVICE LINE
--- GAS SERVICE LINE
--- UNDERGROUND ELECTRIC SERVICE LINE
--- UNDERGROUND COMMUNICATIONS SERVICE LINE



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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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EROSION AND SEDIMENTATION CONTROL NARRATIVE

THE PURPOSE OF THIS NARRATIVE AND THE EROSION CONTROL ASPECTS OF THE PLANS ARE TO PREVENT THE ACCELERATED EROSION OF EXPOSED 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. SEVERE DISTURBANCES TO THE EROSION AND SEDIMENTATION CONTROL PLAN WILL BE CONSIDERED AS A VIOLATION OF THE PERMITS. THE EXTENT AND DURATION OF EARTH DISTURBANCE, SOIL COMPACTION, AND MAINTENANCE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION. THE DESIGN FURTHER UTILIZES OTHER MEASURES AND CONTROLS THAT PREVENT OR MINIMIZE OCCURRENCE OF INCREASED STORMWATER RUNOFF.

EROSION AND SEDIMENTATION CONTROL GENERAL NOTES

- 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 CONTRACTOR OR LAND OWNER MUST CONTACT THE CHESTER COUNTY CONSERVATION DISTRICT AT 610-918-4600 FOR ASSISTANCE WITH THESE CHANGES.
- 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 2601.1 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 UNFRIENDLY WEATHER 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 A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THE PURPOSE OF 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 UPON REQUEST.
- THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 6A, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL RESOURCES, SUB-PART C, PROTECTION OF NATURAL RESOURCES, ARTICLE II, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
- THE CONTRACTOR MUST DEVELOP AND HAVE APPROVED BY THE CHESTER COUNTY CONSERVATION DISTRICT, A SEPARATE EROSION 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.
- SEDS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- LIMITS OF DISTURBANCE MUST BE CLEARLY MARKED IN THE FIELD PRIOR TO ANY DISTURBANCE. ANY CHANGE OR ENLARGEMENT INTO 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 EROSION AND SEDIMENTATION CONTROLS AFTER EACH RAINFALL EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THE PURPOSE OF 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 UPON REQUEST.
- PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, AND RETENING 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 REMOVE, ELIMINATE & PREVENT THE RECURSIVE OF THE NON-COMPLIANCE.
 - C. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, 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 WETBEN OR FINAL STABILIZATION MUST BE ADDRESSED WITH IMMEDIATE STABILIZATION OF DISTURBANCE AREAS UTILIZING VEGETATIVE STABILIZATION MUST BE SEEDED / PLANTED AND MULCHED IN SUFFICIENT TIME TO GERMINATE BY THE END OF EACH YEAR. SEEDING MUST BE APPLIED AT THE SPECIFIED RATES DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- 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 LENGTH IN THE SEDIMENT TRAP.
- 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.
- 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 (DURLEX 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 BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS IMMEDIATELY UPON DISCOVERING UNFRIENDLY 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 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 OF THEIR LOCATIONS. ANY OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN EROSION AND SEDIMENT CONTROL PLAN 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-WASHING COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING THE TIME PERIOD THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED IMMEDIATELY UPON DISCOVERING UNFRIENDLY 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.
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- SEDIMENT TRAPS MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES.
- 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.
- 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 REUSE PERMIT.
- AS-BUILT PLANS OF THE STORMWATER BMP'S 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 BMP'S.
- 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 IN 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, DREKED MATERIAL, USED ASPHALT, AND BROCK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RESPONSIBLE 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 THE SITE IS CLEAN FILL. FROM (P-20) MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE OR QUALITY 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 INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE FIRST LAND USE OF THE PROPERTY DETERMINES 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 RESEEDING SHALL HAVE A MINIMUM 1 INCHES TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. I.E. WAYS.
- SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY OR AS NEEDED OR AS DIRECTED BY THE CDDO OR MUNICIPALITY AND DISPOSED AS A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOULED OR DREPT INTO ANY ROAD SIDE OTHER STORM SEWER OR SURFACE WATER.
- ANY DAMAGE THAT OCCURS AS A RESULT OF THE BURN 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 EAS PLANS ASSOCIATED WITH THE WATER OBSTRUCTION OR ENCROACHMENT ACTIVITIES SHOULD HAVE THOSE PLANS UPDATED AND SUBMITTED TO CHESTER COUNTY CONSERVATION DISTRICT.

UTILITY LINE TRENCH EXCAVATION NOTES:

- LIMIT ADVANCED CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIME 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.
- ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH. COMPOST FILTER SOCK SHALL BE PLACED DOWNSLOPE OF THE TRENCH AREA WHEN EXCAVATING ADJACENT TO THE SPURWAY BUTTER ZONE (WATER LINE EXTENSION).
- LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUS INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
- 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.
- ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED.

TREE PROTECTION NOTES:

- WHERE EXISTING TREES ARE TO REMAIN, NO CHANGE IN EXISTING GRADE SHALL BE PERMITTED WITHIN THE DRP LINE OF THE TREES. APPROPRIATE FENCING FOUR FEET IN HEIGHT SHALL BE PLACED AT THE DRP LINE OF TREES TO REMAIN, WHEREVER ADJACENT TO PROPOSED CONSTRUCTION. SUCH FENCING SHALL BE MAINTAINED IN PLACE THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITY. ROOTS SHALL NOT BE CUT WITHIN THE DRP LINE OF ANY TREES TO REMAIN.
- TREES WITHIN 25 FEET OF A BUILDING, OR BORDERING ENTRANCES OR EXITS TO BUILDING SITES, SHALL BE PROTECTED BY A TEMPORARY BARRIER TO BE MAINTAINED IN PLACE THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITY.
- NO BOARDS OR OTHER MATERIAL SHALL BE NAILED OR OTHERWISE ATTACHED TO TREES DURING CONSTRUCTION.
- CONSTRUCTION MATERIALS, EQUIPMENT, SOIL AND/OR DEBRIS SHALL NOT BE STORED NOR DISPOSED OF WITHIN THE DRP LINES OF TREES TO REMAIN, EXCEPT FOR MULCHED ROSEMARY WATER USED TO PREVENT SOIL COMPACTION.
- TREE TRUNKS, LIMBS, AND EXPOSED ROOTS DAMAGED DURING CONSTRUCTION SHALL BE PROTECTED FROM FURTHER DAMAGE BY BEING TREATED IMMEDIATELY IN ACCORDANCE WITH ACCEPTED PROFESSIONAL LANDSCAPE PROCEDURES.

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 WORKING ACTIVITIES WILL BE STAGED AS FOLLOWS:
 - AN ON-SITE PRE-CONSTRUCTION MEETING IS REQUIRED TO OCCUR NO LESS THAN 7-DAYS PRIOR TO ANY EARTH DISTURBANCES UNLESS NOTIFIED OTHERWISE BY THE DEP OR THE CHESTER COUNTY CONSERVATION DISTRICT. PERMITTEES, CO-PERMITTEES, ALL APPROPRIATE MUNICIPAL OFFICIALS, REPRESENTATIVES FROM THE CHESTER COUNTY CONSERVATION DISTRICT AND THE SEED DEP, AND LICENSED PROFESSIONALS OR DESIGNERS RESPONSIBLE FOR THE EARTH DISTURBANCE ACTIVITY, INCLUDING IMPLEMENTATION OF EAS AND PCSM PLAN, SHALL ATTEND A PRE-CONSTRUCTION MEETING.
 - 72 HOURS PRIOR TO ANY SOIL DISTURBANCE, CONTRACTOR SHALL CONTACT THE CHESTER COUNTY SOIL CONSERVATION DISTRICT AT WILLOWDALE TOWN CENTER, 688 UNIONVILLE ROAD, SUITE 200, KENNETT SQUARE, PA 19348, (610) 925-4620.
 - ALL SITE WORK TO BE PERFORMED DURING THE SUMMER TO AVOID SCHOOL CAMPUS ACTIVITIES. SITE CONTRACTOR MUST COORDINATE WITH THE SCHOOL TO PROVIDE METHODS TO SAFEGUARD FROM CONTACTS WITH SUMMER CAMPUS ACTIVITIES.
 - INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCES TO CLEARING AND DETAILED ON THE PLANS. THE ENTRANCES WILL BE CONSTRUCTED AND MAINTAINED AS DESCRIBED ON THE EAS CONTROL PLAN DRAWINGS.
 - STAKE LIMITS OF DISTURBANCE IN THE FIELD PRIOR TO SHOWING OF ANY EARTH DISTURBANCE. ANY CHANGE OR ENLARGEMENT INTO THESE AREAS WITHOUT CONSERVATION DISTRICT REVIEW AND APPROVAL MAY REQUIRE THE CONTRACTOR TO CEASE DISTURBANCE AND OBTAIN AN EARTH DISTURBANCE PERMIT. INSTALL DRAINAGE CONSTRUCTION FENCING AROUND INFILTRATION AREAS AS SHOWN ON THE PLANS TO PROTECT FROM COMPACTION. INSTALL TREE PROTECTION FENCING AS SHOWN ON THE PLANS.
 - INSTALL THE COMPOST FILTER SOCKS AS SHOWN ON THE PLANS AND AS DIRECTED BY THE CONSERVATION DISTRICT. MAINTAIN TEMPORARY CONTROL MEASURES UNTIL PERMANENT COVER IS ESTABLISHED. THE CONTRACTOR WILL INSTALL THE SYSTEMS IN CONFORMANCE WITH THE DETAILS AND MANUFACTURER'S SPECIFICATIONS.
 - NOTE: ALL EROSION AND SEDIMENT CONTROLS MUST BE COMPLETELY CONSTRUCTED AND STABILIZED PRIOR TO DISTURBANCE OF THE TERTIARY AREA TO THEM.
 - REMOVE/RELOCATE UNDERGROUND UTILITIES (WATER SERVICES, ELECTRIC, GAS, COMMUNICATIONS, ETC.) AND REMOVE TREES AS NECESSARY PRIOR TO THE START OF ANY EARTH DISTURBANCE ACTIVITIES.
 - CLEAR AND GRUB THE NECESSARY AREAS WITHIN THE LIMIT OF DISTURBANCE.
 - STAIR TOPSOIL IN AREAS FOR PROPOSED UNDERGROUND PIPE STORAGE FACILITIES. STOCKPILE TOPSOIL IN LOCATION SHOWN ON PLANS. EXCAVATION MATERIAL WITHIN AREA UNDERGROUND INFILTRATION BED SHALL REMAIN ONSITE AND BE PLACED AT SPECIFIED LOCATION. EXCAVATION MATERIAL SHALL BE PLACED TO NOT EXCEED 3:1 FILL SLOPES. EXCAVATION MATERIAL SHALL BE IMMEDIATELY STABILIZED WITH EROSION CONTROL BLANKET AND TEMPORARY SEED MIX. UPON COMPLETION OF FILL ACTIVITIES AND WITHIN 4 DAYS SPREAD TOPSOIL SHALL BE PLACED OVER ENTIRE FILL AREA AND SEEDED WITH PERMANENT SEED MIX. ALL 3:1 SLOPES SHALL BE PERMANENTLY STABILIZED WITH EROSION CONTROL BLANKET.
 - REMOVE EXISTING TENNIS COURTS AND BEGIN ROUGH GRADING FOR BUILDING FOOTPRINT.
 - EXCAVATE AND CONSTRUCT UNDERGROUND INFILTRATION BED 1. IF THE CONTRACTOR ENCOUNTERS A HIGH WATER TABLE, SHALLOW BEDROCK, SINGHOLES OR SOIL INSTABILITY DURING CONSTRUCTION OF THE BED, THE DESIGN ENGINEER AND THE OWNER MUST BE CONTACTED IMMEDIATELY. THIS IS A CRITICAL STAGE WHERE THE DESIGNER MUST BE CONTACTED AT LEAST 48 HOURS IN ADVANCE TO PROVIDE CONSTRUCTION OVERSIGHT. LONGER INSPECTIONS TO BE NOTIFIED AT LEAST 36 HOURS PRIOR TO INSTALLATION OF UNDERGROUND INFILTRATION BED.
 - INSTALL INLETS AND STORM SEWER PIPING SERVING UNDERGROUND INFILTRATION BED 1. ALL INLETS MUST BE SEALED AND ALL PIPING DIRECTED TO THE FACILITIES MUST REMAIN SEALED UNTIL THE DRAINAGE AREAS CONTRIBUTE TO THEM ARE FULLY STABILIZED TO ENSURE SEDIMENT DOES NOT ENTER THE SYSTEMS. AT THAT TIME AND SUBSEQUENT TO AN INSPECTION BY THE CHESTER COUNTY CONSERVATION DISTRICT, THE INLET PROTECTION CAN BE REMOVED AND PIPING CAN BE UNSEALED AND PUT INTO SERVICE.
 - BEGIN CONSTRUCTION OF PROPOSED UNIFORM BUILDING.
 - STAIR TOPSOIL IN AREAS FOR STUDDED TENNIS COURTS AND STOCKPILE. BEGIN ROUGH GRADING ACTIVITIES FOR THE TENNIS COURTS AND RETAINING WALL.
 - BEGIN CONSTRUCTION OF RETAINING WALL.
 - ONCE RETAINING WALL IS CONSTRUCTED, EXCAVATE AND CONSTRUCT UNDERGROUND INFILTRATION BEDS 2 & 3. IF THE CONTRACTOR ENCOUNTERS A HIGH WATER TABLE, SHALLOW BEDROCK, SINGHOLES OR SOIL INSTABILITY DURING CONSTRUCTION OF THE BEDS, THE DESIGN ENGINEER AND THE OWNER MUST BE CONTACTED IMMEDIATELY. THIS IS A CRITICAL STAGE WHERE THE DESIGN ENGINEER MUST BE CONTACTED AT LEAST 48 HOURS IN ADVANCE TO PROVIDE CONSTRUCTION OVERSIGHT. LONGER INSPECTIONS TO BE NOTIFIED AT LEAST 36 HOURS PRIOR TO INSTALLATION OF UNDERGROUND INFILTRATION BED.
 - MILL EXISTING PARKING AREAS.
 - BEGIN CONSTRUCTION OF THE PROPOSED CONCRETE CURB AND SIDEWALKS IN THE LOCATIONS SPECIFIED ON THE PLAN.
 - PLACE THE STONE BASE COURSE FOR THE RECONSTRUCTION OF THE PARKING AREA DISTURBED FOR INFILTRATION BED 1.
 - AFTER DRAINAGE AREAS TO STORMWATER BMP'S ARE 70% STABILIZED, REMOVE SEALS FROM BMP'S AND INSTALL WATER QUALITY SOCKETS IN PROPOSED INLETS. THIS IS A CRITICAL STAGE WHERE THE DESIGN ENGINEER MUST BE CONTACTED AT LEAST 48 HOURS IN ADVANCE TO PROVIDE CONSTRUCTION OVERSIGHT.
 - PAVE ACCESS AND PARKING AREAS WITH WEARING COURSE AND INSTALL TRAFFIC CONTROL, PAVEMENT MARKINGS AND SIGNAGE.
 - UPON COMPLETION OF CONSTRUCTION ACTIVITIES, ALL DISTURBED AREAS MUST BE STABILIZED. ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED AND THERE ARE NO FUTURE SITES OF EROSION EVENT AND UPON FINAL APPROVAL BY THE CHESTER COUNTY SOIL CONSERVATION DISTRICT, REMOVE ALL TEMPORARY EROSION CONTROL STRUCTURES.
 - NO RUNOFF SHALL BE PERMITTED TO ENTER ANY STORMWATER MANAGEMENT BMP UNTIL THE SITE IS AT 70% STABILIZATION.
 - THE DESIGN ENGINEER SHALL INSPECT ALL PCSM PLANS TO ENSURE THAT THEY HAVE NOT BEEN IMPACTED BY CONSTRUCTION ACTIVITIES. THIS IS A CRITICAL STAGE WHERE THE DESIGN ENGINEER MUST BE CONTACTED AT LEAST 48 HOURS IN ADVANCE.
 - NOTICE OF TERMINATION & FINANCIAL SECURITY
 - A NOTICE OF TERMINATION (NOT) WILL BE REQUIRED TO BE SUBMITTED FOLLOWING THE APPROVAL OF THE FINAL AS-BUILT PLANS (SEE POST CONSTRUCTION STORMWATER FACILITIES OPERATIONS AND MAINTENANCE PROCEDURES - THIS PLAN) ANY PERFORMANCE AND/OR FINANCIAL SECURITIES ESTABLISHED FOR THE PROJECT SHALL INCLUDE REQUIREMENTS FOR SUBMITTAL OF AS-BUILT PLANS AND ENGINEERING CONSTRUCTION OVERSIGHT.

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 DESCRIBED IN EACH STAGE.
- AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL WRITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENTATION CONTROL PLAN PREPARER, AND A REPRESENTATIVE OF THE CHESTER COUNTY CONSERVATION DISTRICT 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 2601.1 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.
- A WEEKLY INSPECTION LOG SHALL BE FORWARDED TO THE MUNICIPALITY'S 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 UNFRIENDLY 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.
- AS SOON AS SLOPES, CHANNELS, DITCHES, AND OTHER DISTURBED AREAS REACH FINAL GRADE, THEY MUST BE STABILIZED IMMEDIATELY.
- SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INADEQUATE TO ADEQUATELY MITIGATING STORMWATER DRAINAGE THERMAL IMPACTS PRIOR TO THE DISCHARGE TO SURFACE WATERS, THE DESIGN ENGINEER MUST BE CONTACTED IMMEDIATELY AND ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE SUCH PROBLEMS.

TOPSOIL APPLICATION

GRADED AREAS SHOULD BE SCARIFIED OR OTHERWISE LOOSENEED 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 SHOULD BE UNIFORMLY DISTRIBUTED ACROSS THE DISTURBED AREA TO A DEPTH OF 4 TO 8 INCHES MINIMUM - 2 INCHES ON FILL OUTSLOPES. SPREADING SHOULD BE DONE IN SUCH A MANNER THAT SOODING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL PREPARATION OR TILLAGE. IRREGULARITIES IN THE SURFACE, RESULTING FROM TOPSOIL PLACEMENT SHOULD 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 THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETERMINED, TO PROPER GRADING AND SEEDING PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHEREVER POSSIBLE PRIOR TO SEEDING.

DEPTH (ft)	CUBIC YARDS OF TOPSOIL REQUIRED FOR APPLICATION TO VARIOUS DEPTHS PER 1,000 SQUARE FEET	PER ACRE
1	15.1	134
2	6.2	268
3	6.1	483
4	12.4	537
5	15.5	672
6	18.6	806
7	21.7	940
8	24.8	1,074

EXCEPTIONAL VALUE WATERSHED NOTES:

- THE PROJECT IS LOCATED IN A HIGH QUALITY WATERSHED. THE SPECIAL PROTECTION WATERS IMPLEMENTATION HANDBOOK BEST MANAGEMENT PRACTICES APPLY TO ALL NEW NON-AGRICULTURAL ACTIVITIES/PRACTICES RESULTING IN AN EARTH DISTURBANCE ON HIGH QUALITY OR EXCEPTIONAL VALUE WATERSHEDS. IMPLEMENTATION OF THESE PRACTICES AND THE ADDITIONAL REQUIREMENTS FOR SPECIFIC ACTIVITIES LISTED IN THE HANDBOOK PLUS SELECTED STORMWATER MANAGEMENT PRACTICES DESCRIBED IN SECTION TWO OF THE HANDBOOK CONSTITUTE APPROPRIATE, REASONABLE AND COST EFFECTIVE BEST MANAGEMENT PRACTICES FOR NON-POINT SOURCE CONTROL. PERSONS ENGAGED IN THESE LAND DISTURBANCE ACTIVITIES ARE EXPECTED TO COMPLY WITH BOTH THE GENERAL AND PROGRAM SPECIFIC REQUIREMENTS LISTED IN THIS APPENDIX.
- THIS PROJECT IS IN AN EXCEPTIONAL VALUE STREAM DESIGNATION. EXTREME CARE SHOULD BE EXERCISED IN ALL DISTURBANCE ACTIVITIES TO PREVENT DEGRADATION TO THE WATERS OF THE COMMONWEALTH.
- BECAUSE THIS PROJECT IS IN A SPECIALLY PROTECTED HIGH QUALITY OR EXCEPTIONAL VALUE WATERSHED, UPON COMPLETION OR TEMPORARY CESSATION OF EARTH DISTURBANCE ACTIVITIES, THE PROJECT SITE MUST BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

GENERAL E&S NOTE:

- DLH HAS PROPOSED TO UTILIZE INLETS AND CONVEYANCE PIPES TO COLLECT AND CONVEY THE STORMWATER RUNOFF INTO THE STORMWATER MANAGEMENT SYSTEM. THERMAL IMPACTS WILL BE AVOIDED OR MINIMIZED BY ROUTING HEATED STORMWATER RUNOFF TO STORMWATER INFILTRATION TRENCHES IN AN EFFORT TO PROMOTE COOLING PRIOR TO ENTERING SURFACE WATERS.

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 DRAINING RAIN AND EROSION. INSPECTIONS WILL BE CONDUCTED WITH ALL DAMAGES TO FACILITIES IMMEDIATELY REPAIRED. CONSTRUCTION EQUIPMENT SHALL BE REMOVED BEFORE THE END OF EACH WORKING DAY. WRITTEN DOCUMENTATION OF THE INSPECTIONS SHALL BE LOGGED ONTO DEP FORM 3156-FM-BMP004A, 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:

- ANY EXPOSED OR SOODED AREAS THAT HAVE BECOME STRIPPED OF VEGETATION SHALL BE REESTABLISHED WITH APPROPRIATE STABILIZATION MATERIALS. THIS PROCEDURE SHALL BE REPEATED AFTER EVERY STABLE STORM (2"+) UNTIL NO MORE SIGNS OF EROSION ARE EVIDENT.
- AT WEEKLY INSPECTIONS AND AFTER EACH RAIN EVENT NECESSARY CLEANING WILL BE PERFORMED.
- ANY FETTER FABRIC FENCE WHICH HAS BEEN UNIFORMED OR OVER TOPPED, MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.
- ANY SEDIMENT REMOVED FROM BMP'S DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE AND INCORPORATED INTO THE SITE GRADING.

DEFINITIONS (PER THE DEPARTMENT OF ENVIRONMENTAL PROTECTION):

CLEAN FILL - UNCONTAMINATED, NONWATER-SOLUBLE, NONDECOMPOSABLE INERT SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREKED MATERIAL, USED ASPHALT, AND BROCK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND RESPONSIBLE AS SUCH. (25 PA. CODE §§ 271.101 AND 287.101) THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED.

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

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 RAINFALL EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THE PURPOSE OF 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 UPON REQUEST. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, RESEEDING, AND RETENING 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 REMOVE, ELIMINATE AND PREVENT THE RECURSIVE OF THE NON-COMPLIANCE.
- C. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.

SEEDING, MULCHING AND SODDING

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 3:1 SHALL BE STABILIZED WITH EITHER SOIL OR PERMANENT SEEDING AND MULCH 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 BELOW. DURING NON-GERMINATING PERIODS APPLICABLE AT THE RATES DEVELOPED BELOW.

SHOULD UNFRIENDLY WEATHER CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED SEDIMENT DISCHARGE. STOCKPILES OF WOOD CHIPS, HWY BULKES, CRUSHED STONE AND/OR OTHER MULCHES SHALL BE HELD IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.

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 EAS MANUAL AND/OR THE PENN STATE AGRONOMY GUIDE.

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 SEEDER AREAS WITH UNROTTED SMALL GRASS STRAW AT A RATE OF 3 TONS PER ACRE.

SITE PREPARATION: APPLY 4 TONS AGRICULTURAL GRADE LIMESTONE (EQUIVALENT TO 100 LBS PER 1000 S.F.) PER ACRE PLUS 10-20 TO 10-20 FERTILIZER AT A RATE 800 LBS (EQUIVALENT TO 25 LBS PER 1000 S.F.) PER ACRE AND WORK IN WHERE POSSIBLE. SECURE A SOIL TEST BEFORE MAKING A PERMANENT SEEDING. AFTER SEEDING, MULCH WITH STR



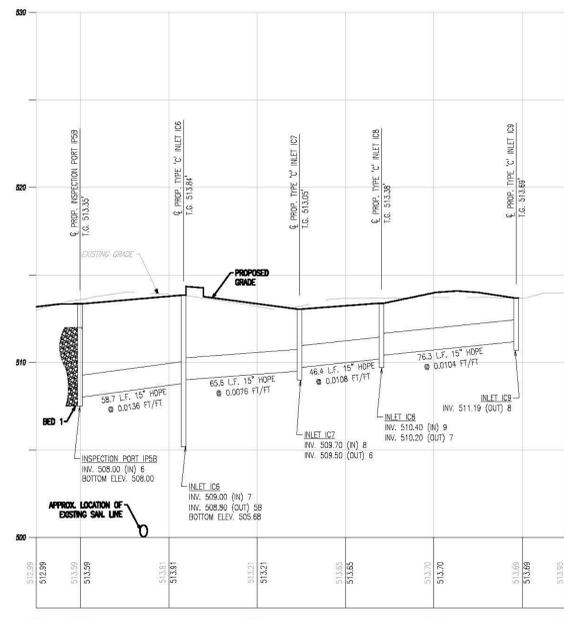
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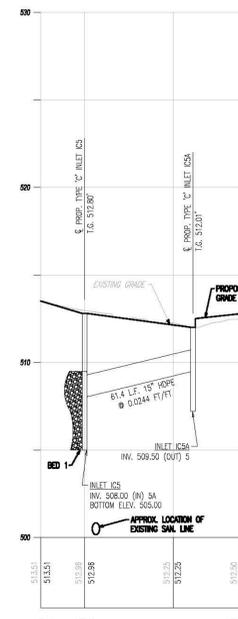
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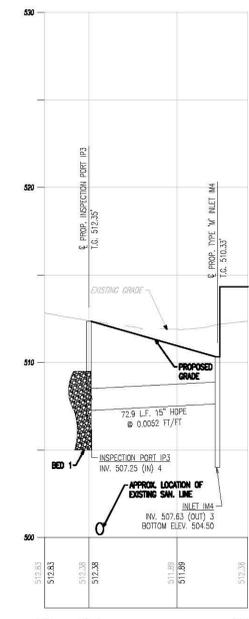
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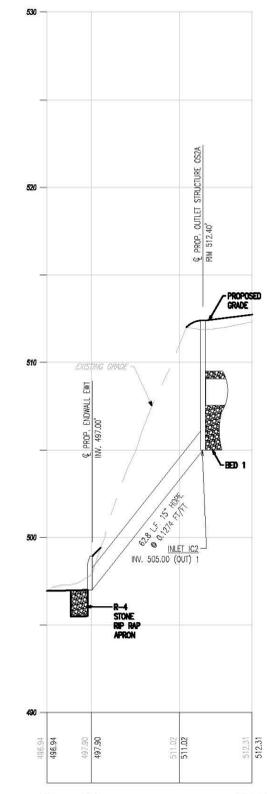
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HORIZ SCALE: 1"=40'
VERT SCALE: 1"=4'



ICSA TO BED 1 PROFILE
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VERT SCALE: 1"=4'



BED 1 TO EW1 PROFILE
HORIZ SCALE: 1"=40'
VERT SCALE: 1"=4'

GENERAL PROFILE NOTE:
ALL EXISTING UTILITIES ARE SHOWN AT APPROXIMATE DEPTHS AND LOCATIONS AND NEED TO BE FIELD VERIFIED.

PRELIMINARY/FINAL
PROFILES

CLIENT: VILLA MARIA ACADEMY
PROJECT: STUDENT UNION AND TENNIS COURTS
LOCATION: 370 CENTRAL AVENUE
WILLISTOWN TOWNSHIP, CHESTER COUNTY, PA

DATE:	07/31/2020
SCALE:	1"=40'
DRAWN BY:	ACS
CHECKED BY:	CMO
PROJECT NO.:	3119
CAD FILE:	19 PRELIM.Dwg
PLOTTED:	07/31/2020
DRAWING NO.:	C06.1
SHEET:	18 of 22



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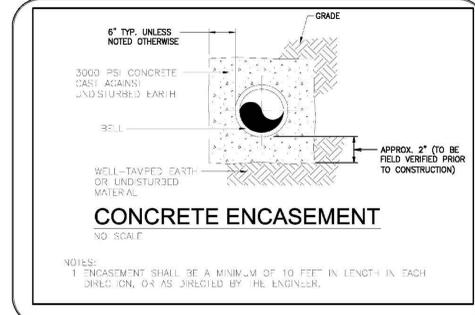
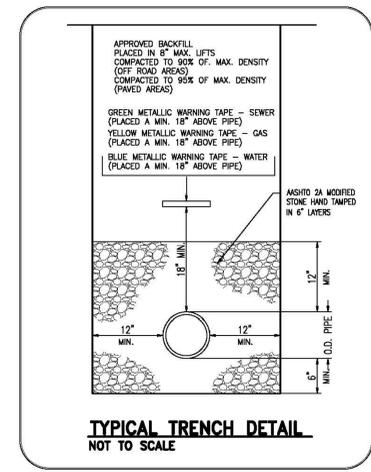
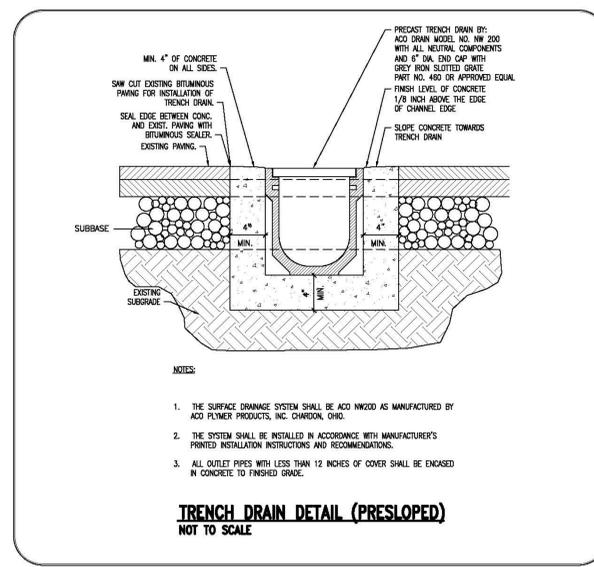
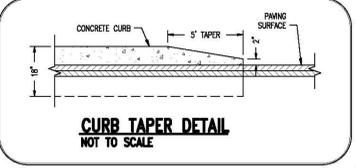
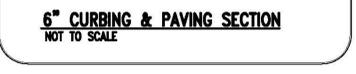
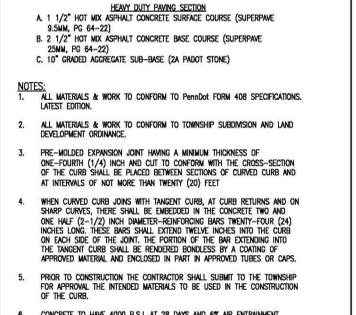
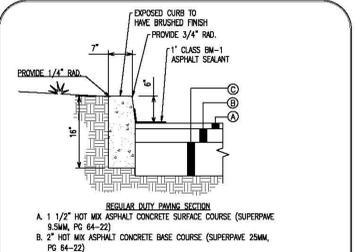
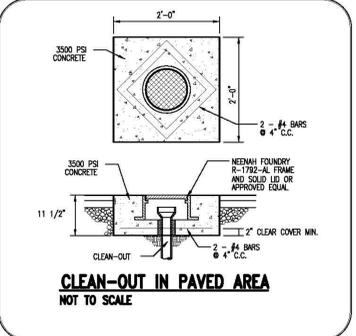
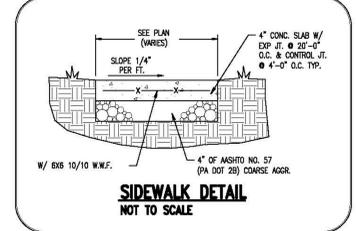
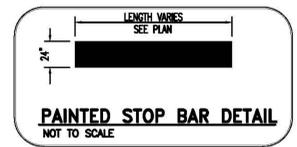
1250 Wrights Lane
West Chester, PA 19380
Phone: (610) 918-9002
Fax: (610) 918-9003



NO.	DATE	DESCRIPTION
1		
2		
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6		
7		
8		

PRELIMINARY/FINAL
CONSTRUCTION DETAILS
CLIENT: VILLA MARIA ACADEMY
PROJECT: STUDENT UNION AND TENNIS COURTS
LOCATION: 370 CENTRAL AVENUE
WILLISTOWN TOWNSHIP, CHESTER COUNTY, PA

DATE:	07/31/2020
SCALE:	N.T.S.
DRAWN BY:	ACB
CHECKED BY:	CMD
PROJECT NO.:	3119
CAD FILE:	18 CONSTRUCTION DETAILS.dwg
PLOTTED:	07/31/2020
DRAWING NO.:	C07.1
SHEET:	19 of 22



R1-1 STOP SIGN

(a) Justification. The Stop Sign (R1-1) is authorized for use on those streets or highways which intersect with a through highway or at a stop intersection so designated by the Department with reference to State-designated highways or local authorities with reference to highways under their jurisdiction. The R1-1 sign is also authorized for use in work zones involving one-way, two-way roadways. All installations where all applications are controlled by an R1-1 sign, a supplemental ALL-WAY plaque (R1-5P) shall be mounted below each R1-1 sign.

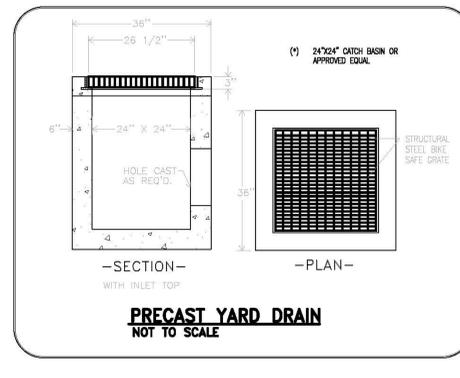
(b) Authorization. Before local authorities designate any highway as a through highway or stop intersection which will intersect or affect a State-designated highway, approval of each designation shall first be obtained from the Department. Approval to install R1-1 signs in work zones shall not require the approval of the Department or local authorities when the conditions established in the Department's Temporary Traffic Control Guidelines are satisfied.

(c) Size. The standard size R1-1 sign shall be 30" x 30" for single lane conventional highways and 36" x 36" for multi-lane conventional highways. The 24" x 24" size shall only be used for stop signs with restrictive physical conditions and vehicle usage that prohibits the installation of the standard size R1-1. A sign that is mounted back-to-back with a R1-1 sign shall also display the size of the R1-1 sign. If necessary, the size of the R1-1 sign should be increased so that any other sign rotated back-to-back with it remains within the edges of the R1-1 sign.

SIGN SIZE	DIMENSIONS - IN					
	A	B	C	D	BOR-SID.	BLANK-SID.
18" x 18"	6	6	8	0.4	—	—
24" x 24"	8	8	10	0.6	B1-24	—
30" x 30"	10	10	12.6	0.8	B1-30	—
36" x 36"	12	12	15	0.8	B1-36	—
48" x 48"	16	16	20	1.2	B1-48	—

COLOR:
LEGEND AND NUMBER: APPROVED FOR THE SECRETARY OF TRANSPORTATION
WHITE (REFLECTORIZED) By: C. Row Date: 02-29-12
CRK, Traffic Engineering and Permits Section
Bureau of Maintenance and Operations
BACKGROUND: RED (REFLECTORIZED)

STOP SIGN DETAIL
NOT TO SCALE





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West Chester, PA 19380
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Fax: (610) 918-9003



NO.	DATE	DESCRIPTION
8		
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2		
1		

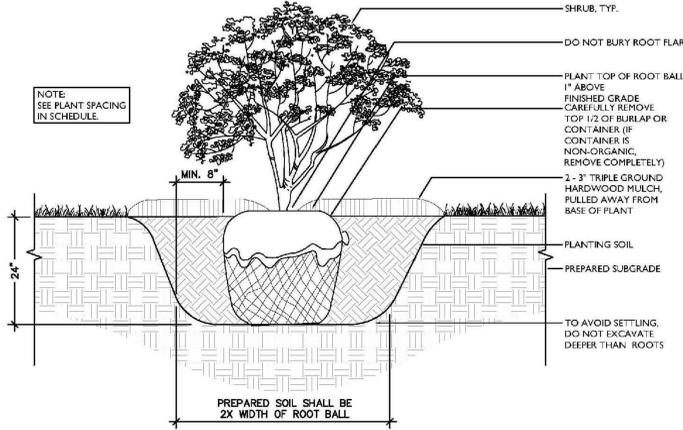
TOWNSHIP OF WILLISTOWN LANDSCAPE REQUIREMENTS		REQUIRED	PROPOSED
CHAPTER 7-2: ENVIRONMENTAL PROTECTION			
Article X: Landscaping, Buffering and Screening; Development and Construction Standards			
§ 73-54 (A) Minimum Planting Standards			
1. Per 1,000 square feet gross building footprint area			
Proposed 16,742 SF Building			
Trees*	(2) Deciduous Trees per = 33.4 Trees	34 Deciduous Trees	13 Deciduous
Trees*	(4) Deciduous Shrubs per = 67.8 Shrubs	68 Deciduous Shrubs	68 Deciduous Shrubs
Trees*	(1) Evergreen Tree per = 16.7 Trees	17 Evergreen Trees	4 Evergreen
Trees*	(2) Evergreen Shrubs per = 33.4 Shrubs	34 Evergreen Shrubs	40 Evergreen Shrubs
3. Per 2,000 square feet parking/loading area			
13,068 SF of Paving Added to Existing Parking Field			
Trees*	(1) Deciduous Trees = 13.0 Deciduous Trees	13 Deciduous Trees	13 Deciduous Trees
Trees*	(2) Deciduous Shrubs = 26.1 Deciduous Shrubs	27 Deciduous Shrubs	48 Deciduous Shrubs
Trees*	(1) Evergreen Tree = 13.0 Evergreen Trees	13 Evergreen Trees	13 Evergreen Trees
Trees*	(2) Evergreen Shrubs = 26.1 Evergreen Shrubs	27 Evergreen Shrubs	27 Evergreen Shrubs
§ 73-54 (B) Minimum Planting Standards			
1. Parking areas exceeding 20,000 SF shall have 50% of the parking area's net perimeter bordered by trees and shrubs at least 5 feet in width AND 50% of the net parking area border shall be bordered by trees and shrubs 1/2 feet in width.			
13,068 SF New Parking + 33,464 SF Existing Parking = 46,532 SF Parking Area			
		Satisfied by Existing Vegetation	

- GENERAL PLANTING NOTES:
- ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z603-2004). PLANT ACCORDING TO ANSI A300 PART 6.
 - SCARIFY THE SUBGRADE AND SIDES OF THE PLANTING HOLE WHEN PLANTING IN CLAY SOILS (MORE THAN 15% CLAY).
 - LIFT AND SET THE TREE BY ROOTBALL ONLY. DO NOT LIFT USING THE TREE TRUNK AND DO NOT USE TREE TRUNK AS A LEVER.
 - SET THE TOP OF THE ROOTBALL LEVEL WITH THE SOIL SURFACE OR SLIGHTLY HIGHER IF THE SOIL IS PRONE TO SETTLING.
 - AFTER THE TREE IS SET IN PLACE, REMOVE BURLAP, WIRE AND STRAPS FROM AT LEAST THE UPPER 1/2 OF THE ROOTBALL.
 - PRUNING SHALL BE LIMITED TO DEAD, DISEASED, OR BROKEN LIMBS ONLY AND SHALL BE IN ACCORDANCE WITH THE ANSI A300 SPECIFICATIONS. IF ADDITIONAL PRUNING IS NECESSARY, IT SHALL BE DONE BY A CERTIFIED ARBORIST.
 - REMOVE ANY TRUNK WRAP REMAINING AT TIME OF PLANTING. NO WRAPS SHALL BE PLACED ON TRUNK.
 - DO NOT REMOVE TREE IDENTIFICATION TAGS UNTIL THE LANDSCAPE ARCHITECT HAS CONFIRMED CORRECT SPECIES MATCHES THE PROJECT PLANTING SCHEDULE.

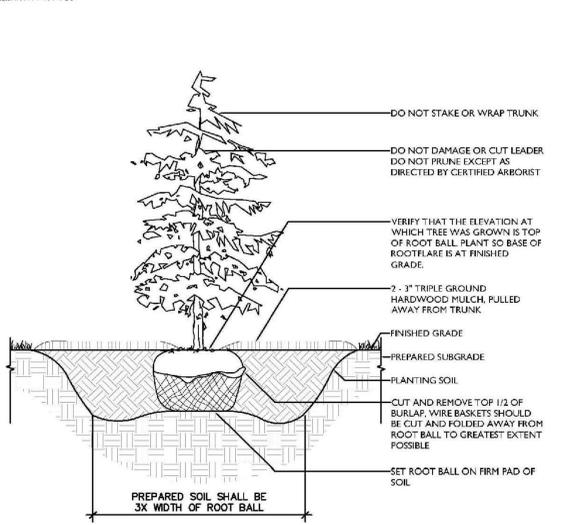
*Note: Planting area(s) around the proposed building are limited due to the existing buildings, parking, walkways, utilities, and landscaping. The applicant is requesting a waiver for the remainder of the building footprint plantings: (2) Deciduous Trees and (13) Evergreen Trees

VILLA MARIA - PLANT SCHEDULE				
Quantity	Symbol	Scientific Name	Common Name	Size
TREES				
5	⊙	ULMUS AMERICANA 'PRINCETON ELM'	'PRINCETON ELM' ELM	2'-2.5" CAL., 12-14' HT. B&B
15	+	QUERCUS PHAEOLIS	WILLOW OAK	2'-2.5" CAL., 12-14' HT. B&B
8	⊗	CORNUS FLORIDA 'RUTGERS'	'RUTGERS' FLOWERING DOGWOOD	2'-2.5" CAL., 12-14' HT. B&B
10	⊕	PICEA GLAUCA	WHITE SPRUCE	6-8' HT., SPACING AS SHOWN
7	⊗	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	6-8' HT., SPACING AS SHOWN
SHRUBS				
74	⊙	RHUS GRO LOW	GRO LOW SUMAC	18-24" HT., 36-48" SPACING
42	⊕	CORNUS SERICEA 'ARCTIC FIRE'	'ARCTIC FIRE' RED TWIG DOGWOOD	18-24" HT., 36-48" SPACING
54	⊕	ILEX GLABRA 'COMPACTA'	'COMPACTA' INKBERY HOLLY	18-24" HT., 36-48" SPACING
13	⊕	ILEX OREANA 'HELLER'	'HELLER' HOLLY	18-24" HT., 36-48" SPACING

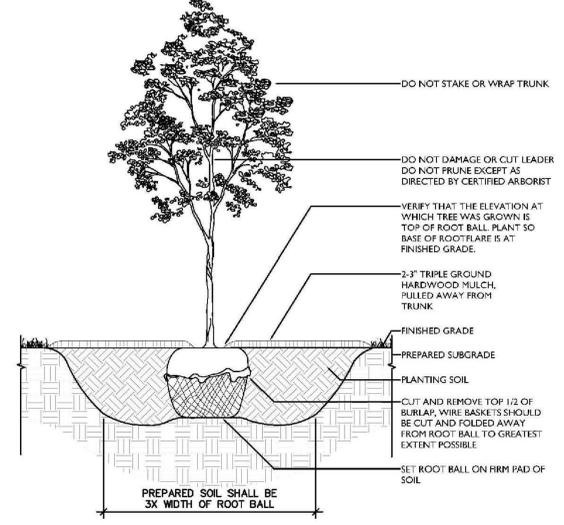
*CONTRACTOR TO SOO ALL DISTURBED AREAS AND VERIFY QUANTITY IN FIELD



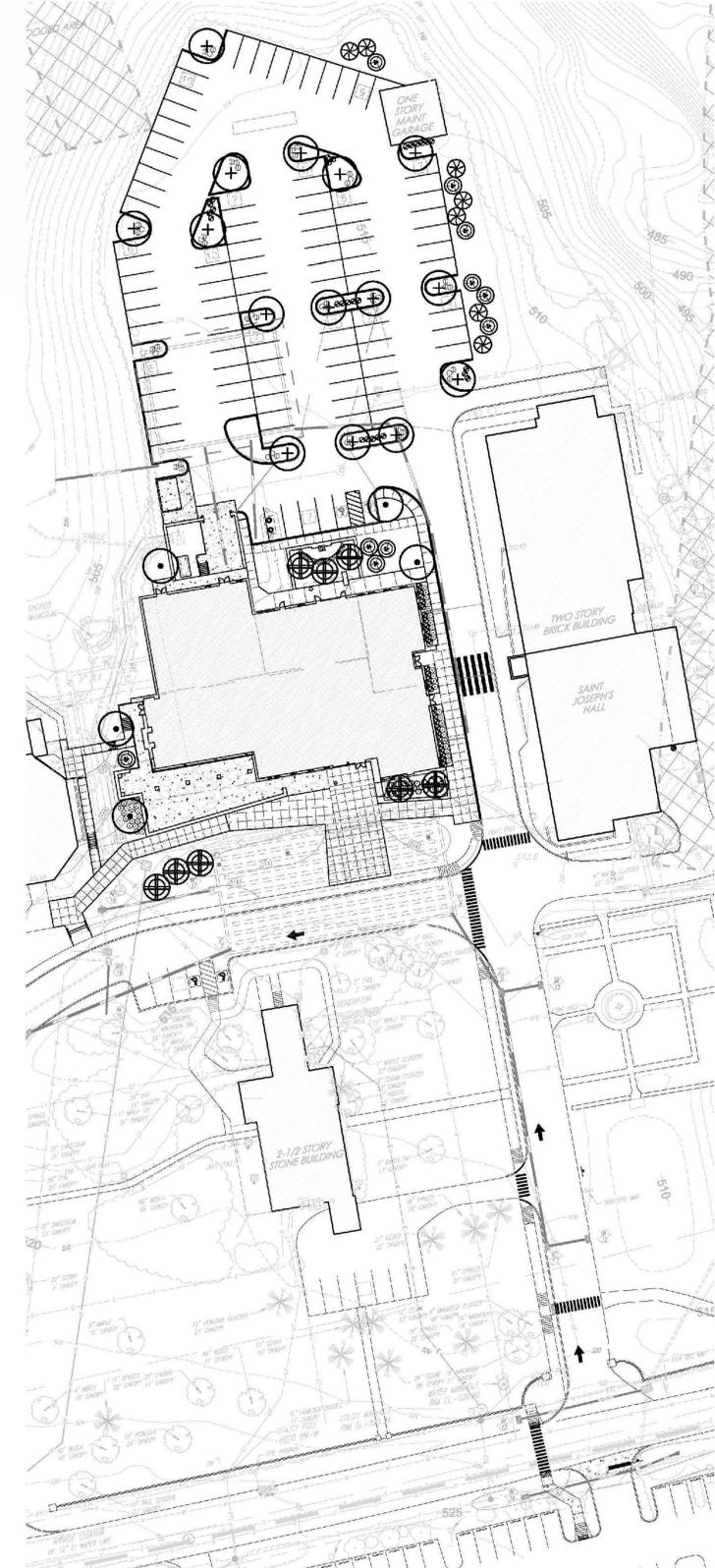
2 SHRUB DETAIL ON GRADE SCALE: 1" = 1'-0"



3 EVERGREEN TREE PLANTING DETAIL ON GRADE SCALE: 1/2" = 1'-0"



1 DECIDUOUS TREE PLANTING DETAIL ON GRADE SCALE: 1/2" = 1'-0"



SITE PLAN NOTES:

- ALL LINES AND GRADE WORK NOT PRESENTLY ESTABLISHED AT THE SITE SHALL BE LAID OUT BY A REGISTERED LAND SURVEYOR OR PROFESSIONAL CIVIL ENGINEER EMPLOYED BY THE CONTRACTOR IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EXISTING TREES AND PLANT MATERIALS WITHIN THE AREA OF THE PROPOSED IMPROVEMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING PA ONE CALL AND LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY DIGGING OR PLANT REMOVAL OCCURS.
- THIS PLAN TO BE USED FOR LANDSCAPING AND SITE IMPROVEMENT PURPOSES ONLY.
- ALL DIMENSIONS SHOWN ARE TO FACE OF MATERIALS, UNLESS SHOWN OTHERWISE.
- ALL LINES ARE PARALLEL OR PERPENDICULAR UNLESS SHOWN OTHERWISE.
- PLANS CREATED FROM DRAWINGS FROM [SOURCE] DATED 07/25/2020.
- LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED AND MARKED IN THE FIELD, PRIOR TO ANY DIGGING OPERATIONS.
- CONTRACTOR SHALL INSTALL SILT FENCE IN ANY AREAS WHERE SOIL MAY RUNOFF INTO PARKING AREAS OR INTO EXISTING INLETS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ALL DEBRIS OFF-SITE, CLEAN-UP OF ALL PAVED AREAS (ROADWAYS, SIDEWALKS, ETC.), AND RESTORATION OF ALL DISTURBED LAWN AREAS.
- CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ANY DAMAGE TO UNDERGROUND UTILITIES DAMAGED.
- VERIFY LAYOUT OF ALL PROPOSED WORK TO EXISTING CONDITIONS. REPORT DISCREPANCIES BEFORE ANY CLEARING OR EXCAVATION IS DONE.
- CONTRACTOR SHALL PROVIDE SCREENED PLANTING SOIL WHERE PLANTING IS TO OCCUR. 36" DEPTH, 6" DEPTH AT LAWN AREAS.
- NO TREE SHALL BE PLANTED CLOSER THAN 10 FEET FROM AN UNDERGROUND UTILITY.
- ALL PLANT MATERIAL SHALL BE OF SPECIMEN QUALITY.
- ALL PLANT MATERIAL SHALL CONFORM WITH THE MOST CURRENT VERSION OF THE "AMERICAN STANDARD FOR NURSERY STOCK".
- CONTRACTOR SHALL PROVIDE LANDSCAPE ARCHITECT WITH NURSERY SOURCE OF ALL PLANT MATERIAL. LANDSCAPE ARCHITECT SHALL PERFORM A SITE VISIT TO INSPECT NURSERY SOURCE PRIOR TO DELIVERY OF PLANT MATERIAL.
- ALL TREES AND SHRUBS DELIVERED TO THE SITE SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING. ALL TREES AND SHRUBS SHALL HAVE WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME.
- ALL PLANT SUBSTITUTIONS MUST BE APPROVED BY THE MUNICIPALITY.
- ANY PLANT MATERIAL EXHIBITING SIGNS OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS OR DISFIGUREMENT SHALL BE REJECTED.
- ALL PLANT MATERIAL SHALL BE LAID OUT IN FIELD BY LANDSCAPE ARCHITECT. NOTE: NO SHRUBS SHALL BE PLANTED UNTIL ALL TREE PLANTING IS COMPLETED.
- ALL PROPOSED SHRUBS SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS, CONSISTING OF 2-3" TRIPLE GROUND HARDWOOD MULCH.
- ALL PLANT MATERIAL SHALL BE THOROUGHLY WATERED DURING INSTALLATION.
- ALL PLANT MATERIAL AT LEAST THREE (3) TIMES IN ABSENCE OF NATURAL RAINFALL.
- PROVIDE STAKED LAYOUT ON SITE FOR OWNER AND LANDSCAPE ARCHITECT'S REVIEW PRIOR TO COMMENCING WORK.
- FOLLOWING COMPLETION, THE EXISTING VEGETATION WILL BE INSPECTED FOR HEALTH AND QUALITY, AND IF NOT DEEMED IN GOOD CONDITION, REPLACED WITH THE EQUIVALENT COMPENSATORY PLANTING.
- ALL PLANT MATERIAL SHALL BE GUARANTEED FOR TWENTY-FOUR (24) MONTHS.
- PLEASE NOTE, CLIENT DID NOT RETAIN ORSATTI & STUART, INC. TO PROVIDE LONG TERM MAINTENANCE SPECIFICATIONS FOR THE LANDSCAPE MATERIAL.
- V.L.H. = VERIFY IN FIELD.

PRELIMINARY/FINAL
LANDSCAPE PLAN

CLIENT: VILLA MARIA ACADEMY
PROJECT: STUDENT UNION AND TENNIS COURTS
LOCATION: 370 CENTRAL AVENUE
WILLISTOWN TOWNSHIP, CHESTER COUNTY, PA

DATE:	07/31/2020
SCALE:	1"=40'
DRAWN BY:	JSH
CHECKED BY:	FJS
PROJECT NO.:	3119
CAD FILE:	14-1000-10.dwg
PLOTTED:	07/31/2020
DRAWING NO.:	C08.1
SHEET:	21 of 22

