

**EAST GOSHEN TOWNSHIP
PLANNING COMMISSION
Meeting Agenda
Wednesday, February 1, 2017
7:00 PM**

- A. Call to Order / Pledge of Allegiance and Moment of Silence
- B. Chairman will ask if anyone is going to record the meeting
- C. **Review of Tracking Log / Determine need for Workshop Meeting**
 - 1. **Possible DVRPC Presentation on the aging demographics of the region (2/15/2017)**
- D. Public Comment on Non-Agenda Items
- E. **Approval of Minutes**
 - 1. **January 4, 2017**
- F. Subdivision and Land Development Applications
 - 1. **1420 E. Strasburg Rd. (Brakman Property, SD/LD)**
 - a. **Revised Plans dated 1/10/2017**
 - b. **Applicant Response Letter dated 1/12/2017**
 - c. **Pennonni Review Letter dated 1/26/2017**
- G. Conditional Uses and Variances
- H. Ordinance Amendments
- I. Old Business
- J. New Business
- K. 2017 Goals
- L. Any Other Matter
- M. Liaison Reports
- N. Correspondence

Bold Items indicate new information to review.

**East Goshen Township
Planning Commission Tracking Log**

Application Name	Application (CU, LD, O, SD, V, SE, CA)	Type (Sk, P, F)	Date Filed	Start Date	Date to Township Engineer	Date to CCPC	Date to Abutting Prop. / ABC's	Extension	PC NLT Action Date	BOS NLT Action Date	Hearing Date	Drop Dead date	Comments
1420 E. Strasburg Rd. / Brakman-Gunnison	SD/LD	P/F	5/18/16	6/1/16	5/19/16	5/19/16	5/20/16	3	3/1/17	3/21/17	NA	3/29/17	
Bold = New Application or PC action required													

Completed in 2017

Draft
EAST GOSHEN TOWNSHIP
PLANNING COMMISSION MEETING
January 4, 2017

The East Goshen Township Planning Commission held a regularly scheduled meeting on Wednesday, January 4, 2017 at 7:00 p.m. at the East Goshen Township building. Members present were: Chairman Adam Knox, Lori Kier, Jim McRee, Dan Daley, and Brad Giresi. Also present was Mark Gordon, Township Zoning Officer and Janet Emanuel, Township Supervisor.

COMMON ACRONYMS:

BOS – Board of Supervisors

CPTF – Comprehensive Plan Task Force

BC – Brandywine Conservancy

CVS – Community Visioning Session

CB – Conservancy Board

SWM – Storm Water Management

CCPC – Chester Co Planning Commission

A. FORMAL MEETING – 7:00 pm

1. Adam called the meeting to order at 7:00 pm. He led the Pledge of Allegiance and a moment of silence to remember our troops.
2. Adam asked if anyone would be recording the meeting and if there were any public comments about non-agenda items. There was no response.
3. Adam reviewed the Tracking Log and determined no need for a workshop
4. Adam noted that the minutes of the December 7, 2016 meeting were approved.

B. SUBDIVISION & LAND DEVELOPMENT APPLICATIONS

1. 1420 E. Strasburg Road (Brakman Property) - Jim Brandolini was present representing the owner. Jim reviewed the revised plan for 1 existing home and 2 new homes. The layout for new home #2 has been changed so the stormwater will flow down the hill to E. Strasburg Road. They received a letter from the County with changes, which have been made. The neighbor on the other side of E. Strasburg has granted an easement to allow for better public sewer/water installation. Jim will submit the revised plan to the Township Engineer for review.

C. LIAISON REPORT

1. Board of Supervisors – Janet reported that Senya has resigned from the Board. She explained the process to apply for the position. Send your application to Rick Smith.

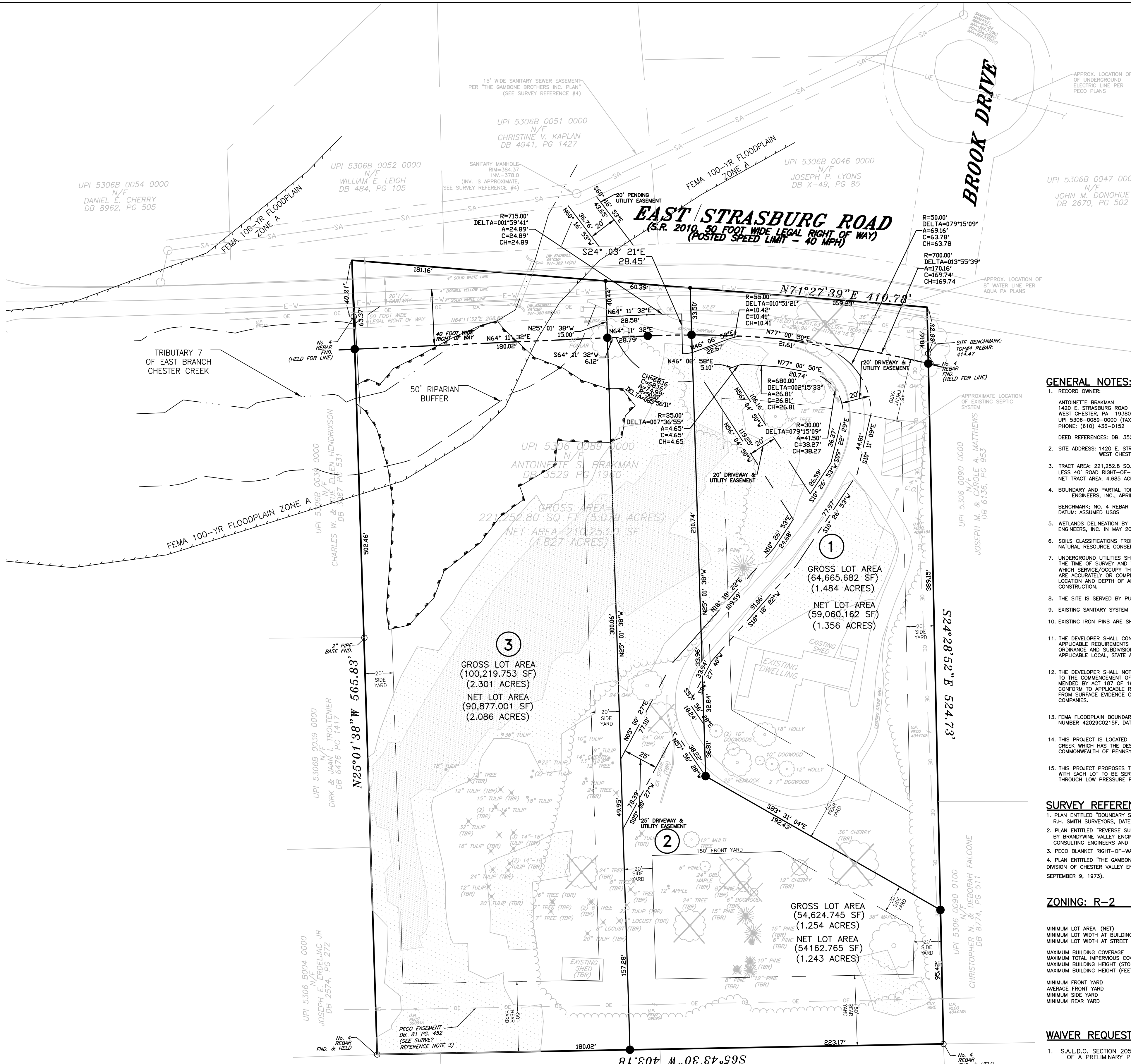
D. OLD BUSINESS

1. Goals for 2016 – Adam will make the presentation at the Annual ABC Meeting this Saturday. Goals for 2017 will be Paoli Pike Trail, Zoning Ordinance review and discuss emerging trends
2. Zoning Ordinance Review – Signs – The Commission continued their review of Temporary Signs, Sections Q thru W covering off premises stand alone and land development signs. No changes were made.

ADJOURNMENT

There being no further business, Dan moved to adjourn the meeting. Adam seconded the motion. The meeting adjourned at 8:10 pm. The next regular meeting will be held on Wednesday, February 1, 2017 at 7:00 pm.

Respectfully submitted, _____
Ruth Kiefer, Recording Secretary






PROPOSED IMPERVIOUS COVERAGE (LOT 3)
 LOT AREA = 90,877.001 SF / 2.086 AC (EXCLUSIVE OF ROW)
 PROPOSED BUILDING COVERAGE:

PROPOSED BUILDING	=	2,734 SF
TOTAL BUILDING COVERAGE	=	2,734 SF
PERCENT PROPOSED BUILDING COVERAGE	=	3.01%

TOTAL IMPERVIOUS COVERAGE:

PROPOSED BUILDING	=	2,734 SF
PROPOSED DRIVEWAY	=	2,082 SF
FUTURE IMPERVIOUS	=	0 SF
TOTAL IMPERVIOUS COVERAGE	=	5,316 SF
PERCENT IMPERVIOUS COVERAGE	=	5.85%

NORTH AMERICAN GREEN S150 TEMPORARY GEOTEXTILE BLANKET (OR APPROVED EQUAL)	
NORTH AMERICAN GREEN SC250 PERMANENT GEOTEXTILE BLANKET (OR APPROVED EQUAL)	
STABILIZED RIP-RAP CONSTRUCTION ENTRANCE	

UPI No.5306-0089-0000

TITLE PLAN.....	SHEET 1	OF 11
CONSTRUCTION IMPROVEMENTS PLAN PLAN.....	SHEET 2	OF 11
EXISTING CONDITIONS PLAN.....	SHEET 3	OF 11
PCSM & GRADING PLAN.....	SHEET 4	OF 11
PCSM NON-STRUCTURAL BMP PLAN.....	SHEET 5	OF 11
PCSM NOTES & DETAILS SHEET.....	SHEET 6	OF 11
EROSION & SEDIMENT CONTROL PLAN.....	SHEET 7	OF 11
E&S NOTES & DETAILS SHEET.....	SHEET 8	OF 11
ENTRANCE ROAD PLAN AND PROFILE.....	SHEET 9	OF 11
SANITARY SEWER PROFILE AND DETAILS.....	SHEET 10	OF 11
LANDSCAPE PLAN.....	SHEET 11	OF 11



CO GAS)
BOULEVARD
056

5	1/10/17	PER CCCD REVIEW LETTER DATED 1/4/17
4	12/19/16	CHANGES TO SANITARY SEWER DESIGN

 COMM COMM

114 EAST LANCASTER AVENUE ~ SECOND FLOOR
DOWNTOWN, PA 19335
TELEPHONE: (610) 518-9003 ~ FAX: (610) 518-9004
COMENG@CEI-1.COM

DRAWN: TT

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CCPC FILE NUMBER: _____

(PLANNING COMMISSION SECRETARY)

RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF
CHESTER COUNTY AT WEST CHESTER, PENNSYLVANIA, IN PLAN
BOOK _____, PAGE _____, ON THIS _____
OF _____, 20____.

(DEPUTY RECORDER OF DEEDS)

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY EAST GOSHEN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

DEVELOPMENT PLAN

FOR

 \underline{RTY}

CHESTER COUN

DATE:	MAY 17, 2016	SHEET
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CONF	18/12/
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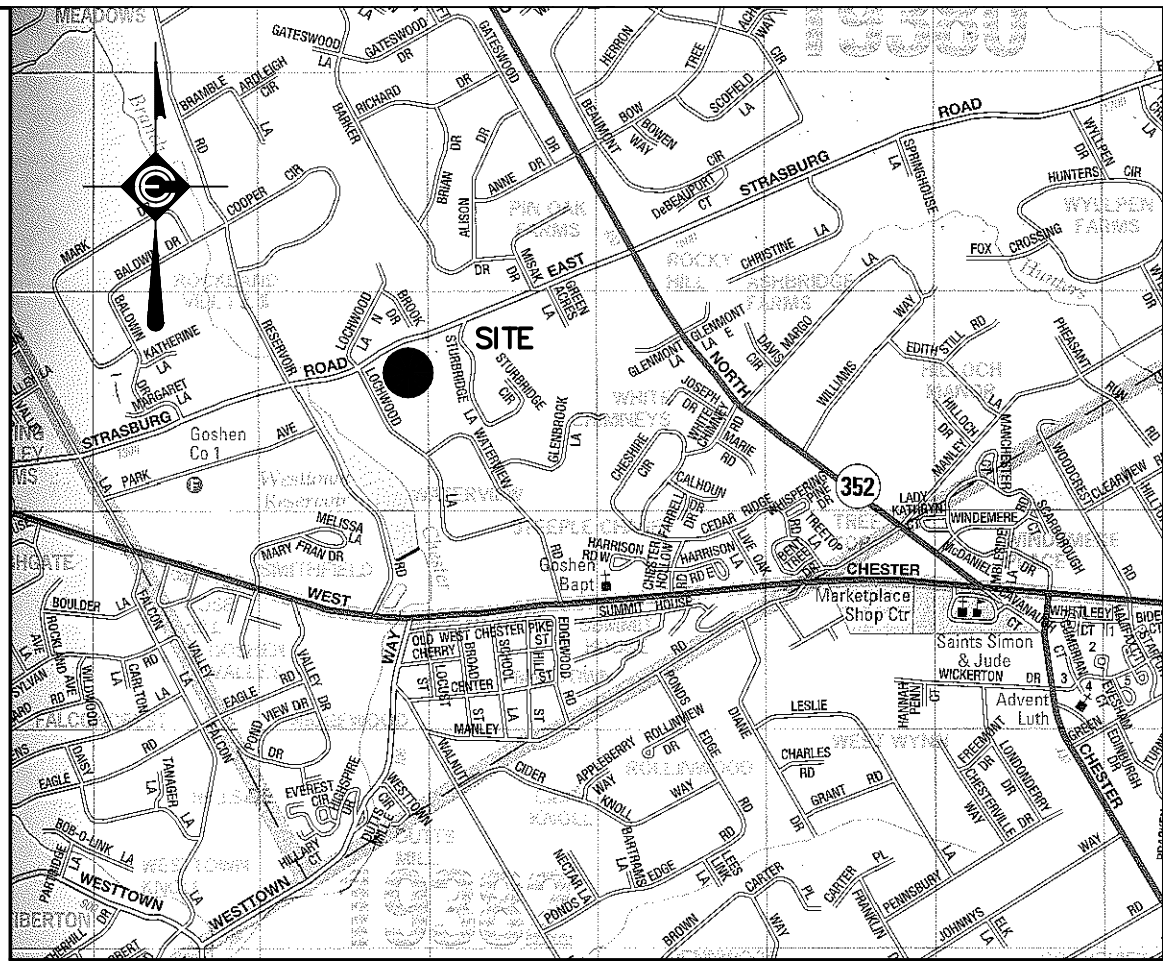
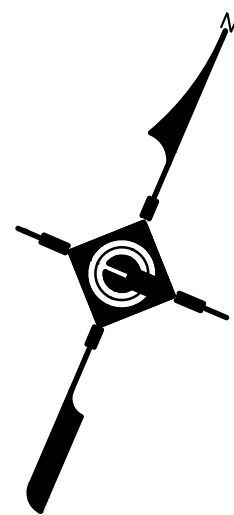
SCALE:	1 = 40

SURVEY:	MBS

DRAWN: *TT*

CHECKED: VK

OF: 11



LOCATION MAP
SCALE 1" = 2000'

GENERAL NOTES:

- RECORD OWNER:
ANTONETTE BRAKMAN
1420 E. STRASBURG ROAD
WEST CHESTER, PA. 19380
UPI 5306-0089-0000 (TAX #53-6-89)
PHONE: (610) 436-0152
DEED REFERENCES: DB. 3529, PG. 1960
SITE ADDRESS: 1420 E. STRASBURG ROAD
WEST CHESTER, PA. 19380
- EQUITABLE OWNER:
JIM BRANDOLINI
GUNNISON DEVELOPMENT CO., LLC
1200 BURNING BUSH LANE
WEST CHESTER, PA. 19380
PHONE: (610) 640-9174
- TRACT AREA: 221,252.8 SQ. FT. / 5.079 ACRES (GROSS)
LESS 40' ROAD RIGHT-OF-WAY: 171,522.849 SQ. FT. / 3.94 ACRES
NET TRACT AREA: 4,685 ACRES (NET)
- BOUNDARY AND PARTIAL TOPOGRAPHY FROM FIELD SURVEY PERFORMED BY COMMONWEALTH ENGINEERS, INC., APRIL 2016.
BENCHMARK: NO. 4 REBAR FOUND, NORTHEAST CORNER OF SITE
DATUM: ASSUMED USGS
- WETLANDS DELINEATION BY VORTEX ENVIRONMENTAL, INC. AND SURVEYED BY COMMONWEALTH ENGINEERS, INC. IN MAY 2016.
- SOILS CLASSIFICATIONS FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) NATURAL RESOURCE CONSERVATION DISTRICT WEB SOIL SURVEY, IN AUGUST, 2014.
- UNDERGROUND UTILITIES SHOWN HEREON WERE PLOTTED FROM OBSERVABLE EVIDENCE AT THE TIME OF SURVEY AND THROUGH INFORMATION PROVIDED BY THE UTILITY COMPANIES WHICH SERVICE/OCCUPY THE SITE. NO GUARANTEE IS MADE THAT UNDERGROUND UTILITIES ARE ACCURATELY OR COMPLETELY SHOWN HEREON. THE SITE CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO BEGINNING CONSTRUCTION.
- THE SITE IS SERVED BY PUBLIC WATER (AQUA PA).
- EXISTING SANITARY SYSTEM PRESENT ON SITE BUT NOT LOCATED.
- EXISTING IRON PINS ARE SHOWN AS THUS "O".
- THE DEVELOPER SHALL CONFORM TO OR CAUSE CONFORMANCE WITH ALL OF THE APPLICABLE REQUIREMENTS OF THIS PLAN AND THE EAST GOSHEN TOWNSHIP ZONING ORDINANCE AND SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AS WELL AS OTHER APPLICABLE LOCAL, STATE AND FEDERAL LAWS, STATUTES, REGULATIONS AND ORDINANCES.
- THE DEVELOPER SHALL NOTIFY UNDERGROUND UTILITY USERS AT LEAST THREE DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION IN ACCORDANCE WITH PA ACT 257 OF 1974, AS AMENDED BY ACT 187 OF 1996 & ALL OTHER APPLICABLE AMENDMENTS, AS WELL AS CONFORM TO APPLICABLE REGULATIONS OF SAO ACTS. UNDERGROUND UTILITIES SHOWN ARE FROM SURFACE EVIDENCE OBSERVABLE IN THE FIELD AND AS MARKED BY THE UTILITY COMPANIES.
- FEMA FLOODPLAIN BOUNDARY TAKEN FROM FLOOD INSURANCE RATE MAP, PANEL 215F, MAP NUMBER 42069C0210F, DATED SEPTEMBER 29, 2006.
- THIS PROJECT IS LOCATED IN THE WATERSHED OF TRIBUTARY 7 OF EAST BRANCH CHESTER CREEK WHICH HAS THE DESIGNATION OF TROUT STOCK FISHES (TSF, MF) BY THE COMMONWEALTH OF PENNSYLVANIA.
- THIS PROJECT PROPOSES THE SUBDIVISION OF THE EXISTING LOT INTO 3 SEPARATE LOTS WITH EACH LOT TO BE SERVED BY PUBLIC WATER AND PUBLIC SEWER. PUBLIC SEWER TO BE THROUGH LOW PRESSURE FORCE MAIN TIED INTO AN EXISTING MANHOLE AS SHOWN.

SURVEY REFERENCE NOTES

- PLAN ENTITLED "BOUNDARY SURVEY PLAN FOR MS. ANTONETTE BRAKMAN", PREPARED BY R.H. SMITH SURVEYORS, DATED MARCH 27, 2007.
- PLAN ENTITLED "REVERSE SUBDIVISION/SUBDIVISION PLAN FOR MICHAEL RIZZIO", PREPARED BY BRANDYME VALLEY ENGINEERS, A DIVISION OF VOLLMER ASSOCIATES, LLP, CONSULTING ENGINEERS AND LAND SURVEYORS, DATED NOVEMBER 30, 2001.
- PECO BLANKET RIGHT-OF-WAY CONTAINED IN MISCELLANEOUS DB. 81, PG. 452.
- PLAN ENTITLED "THE GARDNER BROTHERS INC.", PREPARED BY HENRY S. CONEY INC., DIVISION OF CHESTER VALLEY ENGINEERS, DATED JUNE 6, 1973 (LAST REVISED SEPTEMBER 9, 1973).

LOW DENSITY
RESIDENTIAL DISTRICT

		PROVIDED		
		REQUIRED	EXISTING	
MINIMUM LOT AREA (NET)	1 ACRE	4,685 AC	1,358 AC	1,243 AC
MINIMUM LOT WIDTH AT BUILDING SETBACK LINE	150'	409'	170'	180'
MINIMUM LOT WIDTH AT STREET LINE	60'	409'	170'	180'
MINIMUM LOT WIDTH (FLAG LOT)			60'	
MAXIMUM BUILDING COVERAGE	25%	1,42%	4,50%	4,32%
MAXIMUM TOTAL IMPERVIOUS COVERAGE	35%	5,33%	19,33%	16,22%
MAXIMUM BUILDING HEIGHT (STORIES)	3	30'	30'	30'
MAXIMUM BUILDING HEIGHT (FEET)	30'	30'	30'	30'
MINIMUM FRONT YARD	45'	45'	45'	45'
AVERAGE FRONT YARD	60'	60'	60'	60'
MINIMUM SIDE YARD	20'	20'	20'	20'
MINIMUM REAR YARD	50'	50'	50'	50'

LEGEND:

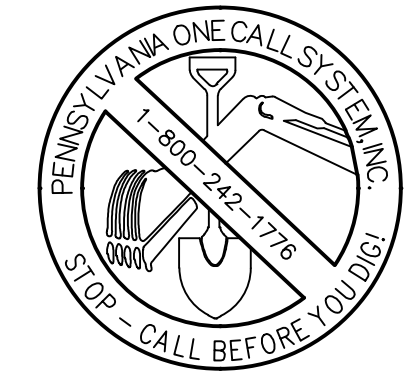
- STEEP SLOPES (15% TO 25%)
- STEEP SLOPES (OVER 25%)
- CONCRETE SURFACE
- EXISTING WETLANDS LINE
- STREAM LINE
- FLOOD HAZARD DISTRICT LINE
- EXISTING INTERMEDIATE CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING WOODS / TREE LINE
- ADJOURNER LINE
- EXISTING STORM SEWER LINE
- EXISTING RIGHT-OF-WAY LINE
- EXISTING PAVING
- EXISTING SOILS LINE
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED STORM SEWER LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED WATER LINE
- PROPOSED WOODS / TREE LINE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- NORTH AMERICAN GREEN S150 TEMPORARY GEOTEXTILE BLANKET (OR APPROVED EQUAL)
- NORTH AMERICAN GREEN SC250 PERMANENT GEOTEXTILE BLANKET (OR APPROVED EQUAL)
- STABILIZED RIP-RAP CONSTRUCTION ENTRANCE

REQUIRED REGULATORY APPROVALS:

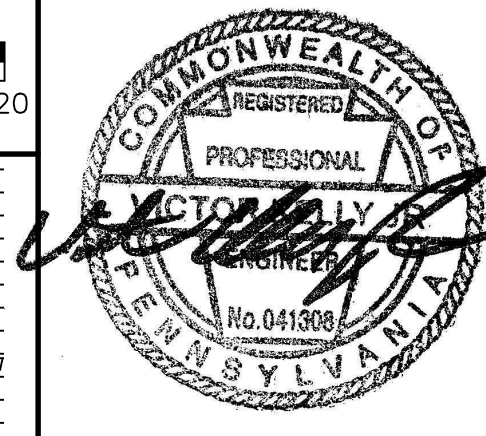
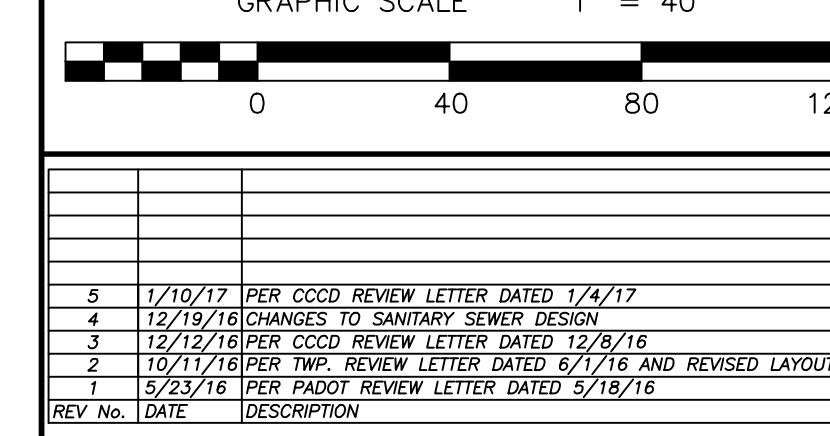
- WIDES PERMIT (PADEP/CCCD)
-APPROVAL STATUS: PENDING
- PLANNING MODULE (PADEP)
-STATUS: EXEMPTION APPROVAL LETTER OBTAINED 12/17/16
- SANITARY SEWER (MUNICIPAL AUTHORITY)
-STATUS: SEWER AVAILABILITY LETTER OBTAINED 5/10/16
- WATER (AQUA)
-STATUS: WATER AVAILABILITY LETTER OBTAINED 5/2/16
- HIGHWAY OCCUPANCY PERMIT (PENNDOT)
-APPROVAL STATUS: PENDING
- FIRE PLANNING (FIRE MARSHAL)
-NOT APPLICABLE
- HISTORIC RESOURCE (HISTORIC COMMITTEE)
-NOT APPLICABLE
- LANDSCAPING (CONSERVANCY BOARD)
-PENDING

PENNSYLVANIA ONE CALL
(CONSULTANT TO ACT 173, 174 AND ALL OTHER APPLICABLE AMENDMENTS) COMMONWEALTH ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY LINES OR STRUCTURES SHOWN ON THIS PLAN. FOR EXISTING COMMONWEALTH ENGINEERS, INC. GUARANTEE THAT ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., ARE SHOWN.
THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., BEFORE THE START OF WORK. (TELEPHONE: (800) 242-1776)

UPI No.5306-0089-0000



UNDERGROUND UTILITY USERS
PHILADELPHIA ELECTRIC COMPANY
1000 SWINERTON ROAD
BERLIN, PA. 19312
(610) 848-7702
AQUA PA LANCASTER AVE.
BRYN MAWR, PA. 19010
(877) 967-2762
EAST GOSHEN TOWNSHIP
1580 PAOLI PIKE
WEST CHESTER, PA. 19380
(610) 992-1771
VERIZON PENNSYLVANIA INC.
600 MARKET STREET, 6TH FLOOR
PHILADELPHIA, PA. 19107
(215) 592-4151
COMCAST
601 N. MONROE RD.
P.O. BOX 351
CATONSVILLE, PA. 19330
(800) 934-6489
WILLIAMS (TRANSCO GAS)
3000 FIRST LANE BOULEVARD
HOUSTON, TX 77056
(800) 440-8475



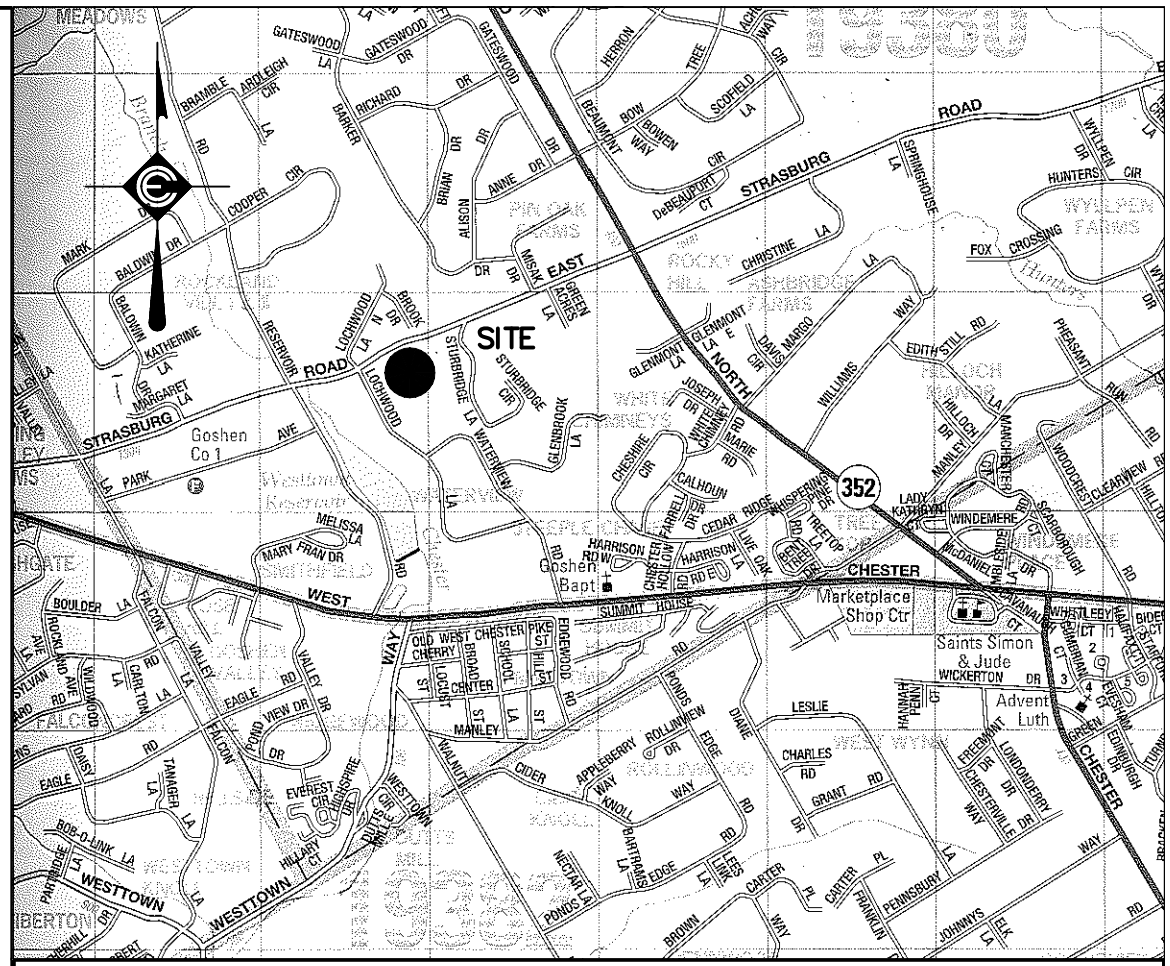
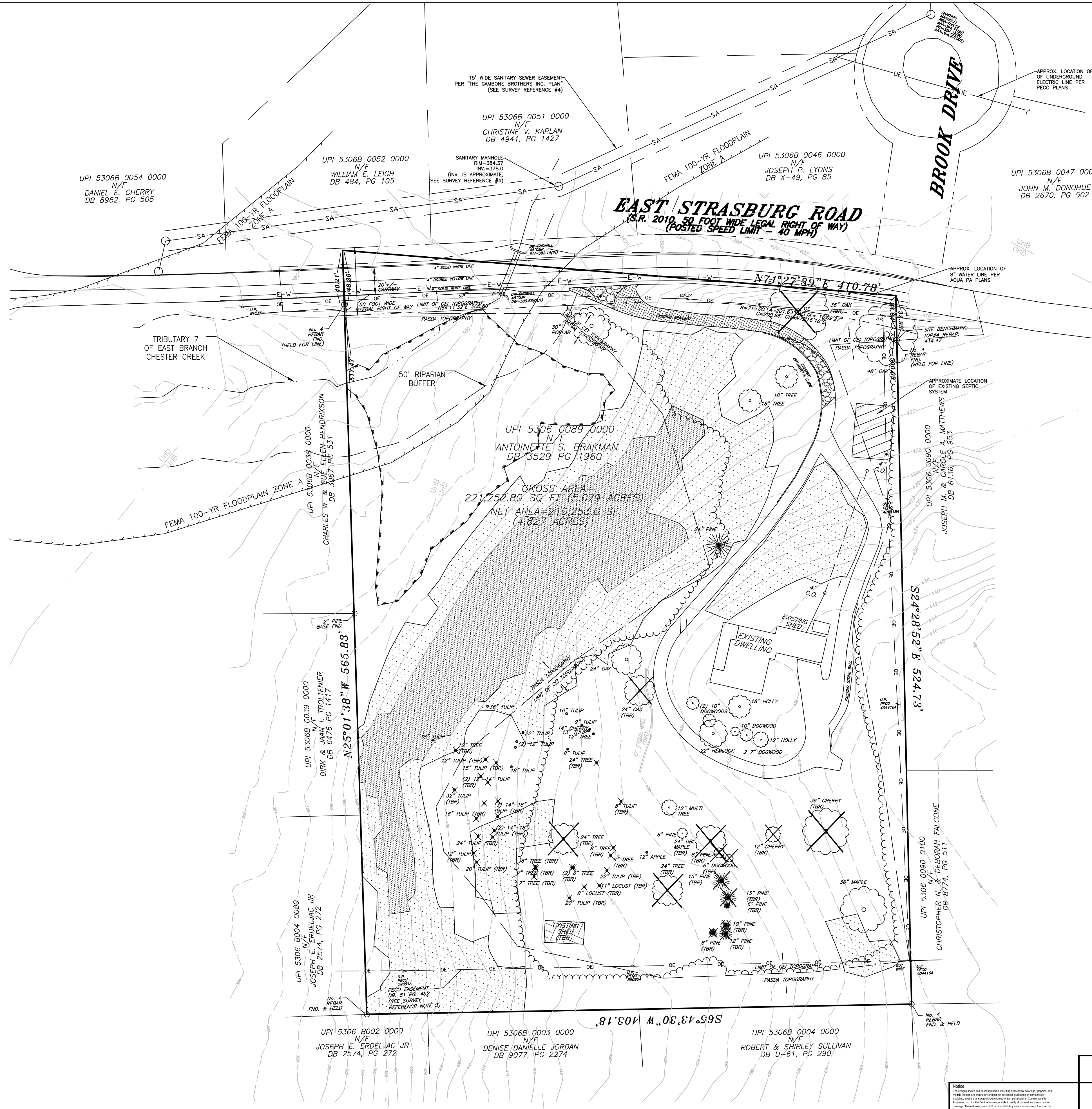
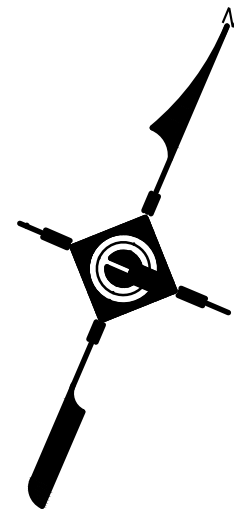
CONSTRUCTION IMPROVEMENTS PLAN

SUBDIVISION AND LAND DEVELOPMENT PLAN
(PRELIMINARY/FINAL) FOR
BRAKMAN PROPERTY

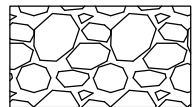
EAST GOSHEN TOWNSHIP		CHESTER COUNTY, PA	
DATE:	MAY 17, 2016	SHEET:	
SCALE:	1" = 40'		
SURVEY:	MSB		
DRAWN:	TT		
CHECKED:	VK		
DRAWING NO.	201541-(C)	OF: 11	

COMMONWEALTH ENGINEERS, INC.

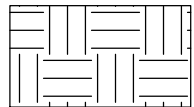
114 EAST LANCASTER AVENUE ~ SECOND FLOOR
DOWNTOWN, PA 19335
TELEPHONE: (610) 518-9003 ~ FAX: (610) 518-9004
COMENG@CEI-1.COM



LOCATION MAP
SCALE 1" = 2000'



=IMPERVIOUS AREA TO BE PERMANENTLY REMOVED
AND REPLACED WITH LAWN COVER
(TOTAL AREA=726 SQ. FT.)



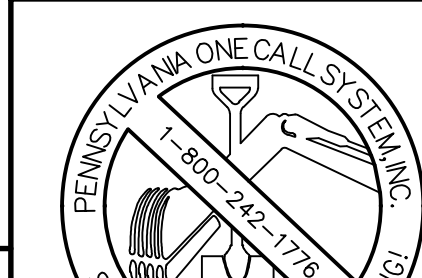
=IMPERVIOUS AREA TO BE PERMANENTLY REMOVED
AND REPLACED WITH LAWN COVER
(TOTAL AREA=2050 SQ. FT.)

LEGEND:

- STEEP SLOPES (15% TO 25%)
- STEEP SLOPES (OVER 25%)
- CONCRETE SURFACE
- EXISTING WETLANDS LINE
- STREAM LINE
- FLOOD HAZARD DISTRICT LINE
- EXISTING INTERMEDIATE CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING WOODS / TREE LINE
- ADJUNCTION LINE
- EXISTING STORM SEWER LINE
- EXISTING RIGHT-OF-WAY LINE
- EXISTING PAVING
- EXISTING SOILS LINE
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED STORM SEWER LINE
- PROPOSED SANITARY SEWER LINE
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- SUPER SILT FENCE
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- NORTH AMERICAN GREEN S150
TEMPORARY GEOTEXTILE BLANKET
(OR APPROVED EQUAL)
- NORTH AMERICAN GREEN SC250
PERMANENT GEOTEXTILE BLANKET
(OR APPROVED EQUAL)
- STABILIZED RIP-RAP
CONSTRUCTION ENTRANCE

PENNSYLVANIA ONE CALL
(PURSUANT TO ACT 127, 128 AND ALL OTHER APPLICABLE AMENDMENTS) COMMONWEALTH ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY LINES OR THE DEPTHS OF THE LINES, NOR DOES COMMONWEALTH ENGINEERS, INC. GUARANTEE THAT ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., ARE SHOWN.
THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATIONS OF ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., BEFORE THE START OF WORK. (TELEPHONE: (800) 242-1776)

UPI No.5306-0089-0000



PENNSYLVANIA ONE-CALL
SYSTEM SERIAL NUMBER: 20160320567

UNDERGROUND UTILITY USERS

PHILADELPHIA ELECTRIC COMPANY
1100 SWINERTON ROAD
BERWYN, PA 19312
(610) 648-7702

AQUA PA
762 W. LANCASTER AVE.
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EAST GOSHEN TOWNSHIP
2000 FIRST OAK BOULEVARD
WEST CHESTER, PA 19380
(610) 692-7171

VERIZON PENNSYLVANIA, INC.
300 RACE STREET, 6TH FLOOR
PHILADELPHIA, PA 19107
(215) 592-4151

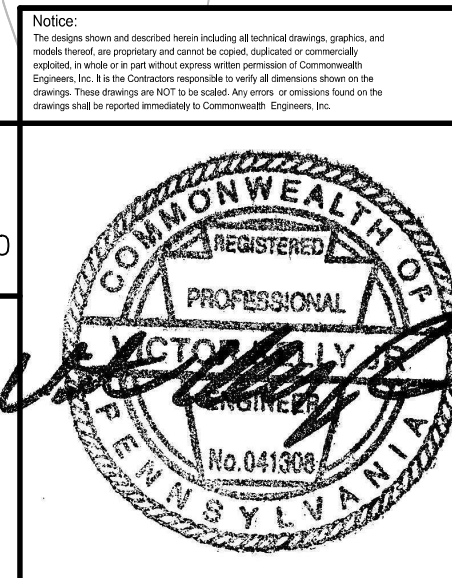
COMCAST
610 W. MONACAY RD.
P.O. BOX 351
CONTOHLE, PA 19320
(800) 934-6489

WILLIAMS (TRANSOCO) GAS
1500 FIRST OAK BOULEVARD
HOUSTON, TX 77056
(800) 440-8475

GRAPHIC SCALE 1" = 40'



REV	NO.	DATE	DESCRIPTION
1	1/10/17	PER CCOD REVIEW LETTER DATED 1/4/17	
2	12/15/16	CHANGES TO SANITARY SEWER DESIGN	
3	12/15/16	PER CCOD REVIEW LETTER DATED 12/8/16	
4	10/17/16	PER TWP. REVIEW LETTER DATED 8/1/16 AND REVISED LAYOUT	
5	12/23/16	PER PASAD. REVIEW LETTER DATED 5/18/16	



EXISTING CONDITIONS PLAN

SUBDIVISION AND LAND DEVELOPMENT PLAN (PRELIMINARY/FINAL) FOR BRAKMAN PROPERTY

EAST GOSHEN TOWNSHIP

CHESTER COUNTY, PA

COMMONWEALTH ENGINEERS, INC.

114 EAST LANCASTER AVENUE ~ SECOND FLOOR
DOWNTOWN, PA 19335
TELEPHONE: (610) 518-9003 ~ FAX: (610) 518-9004
COMENG@CEI-1.COM

DATE: MAY 17, 2016

SCALE: 1"=40'

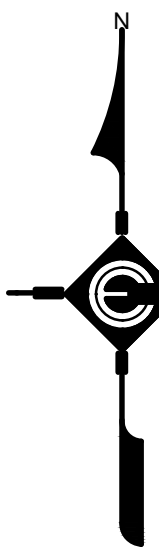
SURVEY: MBS

DRAWN: TT

CHECKED: VK

DRAWING NO. 201541-(C)

OF: 11



SOIL IDENTIFICATION:

SYMBOL	DESCRIPTION	HYDROLOGIC GROUP	DEPTH TO WATER	DEPTH TO BEDROCK
UHB	URBAN LAND-GLAUSTONE COMPLEX, 0 TO 8 PERCENT SLOPES	A	>80"	60"-100"
UHD	URBAN LAND-GLAUSTONE COMPLEX, 0 TO 8 PERCENT SLOPES	A	>80"	60"-100"

SOIL USE LIMITATIONS & RESOLUTIONS:

ONLY THOSE LIMITATIONS TO ON-SITE SOILS AS DESCRIBED BY APPENDIX E OF THE 2012 EROSION CONTROL MANUAL ARE ADDRESSED BELOW.

USE LIMITATION:	PROPOSED RESOLUTION(S):
1. CUTBANKS CAVE (UHB,UHD)	ALL APPLICABLE OSHA STANDARDS AND REGULATIONS WILL BE IMPLEMENTED.
2. CORROSIVENESS TO CONCRETE AND/OR STEEL (UHB,UHD)	CHEMICAL PRE-TREATMENT OF ANY CONCRETE ENDWALLS TO PROVIDE ANTI-CORROSIVE PROPERTIES.
3. EASILY ERODIBLE (UHB,UHD)	EROSION CONTROL MATING IS PROPOSED AS APPROPRIATE.
4. HYDRIC SOILS/INCLUSIONS (UHB,UHD)	LIMITED DISTURBANCE IN ANY POTENTIAL HYDRIC AREAS.
5. SLOW PERCOLATION (UHB,UHD)	ON-SITE TESTING WAS PERFORMED TO ENSURE ADEQUATE PERCOLATION FOR BMP FACILITIES.
6. FROST ACTION (UHB,UHD)	FROST ACTION IS NOT EXPECTED TO AFFECT PROPOSED FACILITIES.
7. SHRINK/SWELL (UHB,UHD)	SHRINK/SWELL IS NOT EXPECTED TO AFFECT PROPOSED FACILITIES.

FINAL CERTIFICATION REQUIREMENTS:

THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS:

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

(1) THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.
(2) THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION & MAINTENANCE OF THE PCSM PLAN.

NOTICE OF TERMINATION REQUIREMENTS:

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

SITE GEOLOGY:

THE ENTIRE SITE IS UNDERLAIN BY FELSIC GNEISS PER THE PADEP EMAPPA WEBSITE.

CONSTRUCTION WASTE DISPOSAL NOTE:

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTE PRODUCTS IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 280.1 ET SEQ., 271.1 ET SEQ. AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIALS OR WASTE PRODUCTS AT THE SITE.

LEGEND:

STEEP SLOPES (15% TO 25%)	
STEEP SLOPES (OVER 25%)	
CONCRETE SURFACE	
EXISTING WETLANDS LINE	
STREAM LINE	
FLOOD HAZARD DISTRICT LINE	
EXISTING INTERMEDIATE CONTOUR	
EXISTING INDEX CONTOUR	
EXISTING WOODS / TREE LINE	
ADJOURNER LINE	
EXISTING STORM SEWER LINE	
EXISTING RIGHT-OF-WAY LINE	
EXISTING PAVING	
EXISTING SOILS LINE	
PROPOSED INTERMEDIATE CONTOUR	
PROPOSED INDEX CONTOUR	
PROPOSED SPOT ELEVATION	
PROPOSED STORM SEWER LINE	
PROPOSED SANITARY SEWER LINE	
PROPOSED WATER LINE	
PROPOSED WOODS / TREE LINE	
SUPER SILT FENCE	
LIMIT OF DISTURBANCE	

NORTH AMERICAN GREEN S150 TEMPORARY GEOTEXTILE BLANKET (OR APPROVED EQUAL)	
NORTH AMERICAN GREEN S2250 PERMANENT GEOTEXTILE BLANKET (OR APPROVED EQUAL)	
STABILIZED RIP-RAP CONSTRUCTION ENTRANCE	

PENNSYLVANIA ONE CALL
(FOR USE ONLY BY THE CONTRACTOR) COMMONWEALTH ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY LINES OR STRUCTURES ON THIS PLAN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., BEFORE THE START OF WORK. (PHONE: (800) 242-1776)

UPI No.5306-0089-0000

OFFER OF BLANKET EASEMENT:

A BLANKET STORMWATER MANAGEMENT EASEMENT IS PROVIDED OVER AND ACROSS THE PROPERTY IN TRACT OF EAST GOSHEN TOWNSHIP TO ALLOW THE TOWNSHIP AND ITS AGENT AND BUSINESS ACCESS TO THE PROPOSED STORMWATER MANAGEMENT FACILITIES. THE TOWNSHIP IS GRANTED THE RIGHT, BUT NOT THE DUTY, TO ACCESS AND CONDUCT PERIODIC INSPECTIONS AND TO UNDERTAKE OTHER ACTIONS THAT MAY BE NECESSARY TO ENFORCE THE REQUIREMENTS OF THE TOWNSHIP'S STORMWATER MANAGEMENT ORDINANCE OR OF ANY APPLICABLE ODM PLAN OR ODM AGREEMENT.

PCSM PLAN REVISIONS:

I HEREBY ACKNOWLEDGE THAT ANY REVISIONS TO THE APPROVED SWM SITE PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE TOWNSHIP AND ANY REVISIONS TO THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE CONSERVATION DISTRICT OR TOWNSHIP (AS APPLICABLE) FOR A DETERMINATION OF ADEQUACY PRIOR TO THE CONSTRUCTION OF THE REVISED FEATURES.

(JIM BRANDOLINI) (DATE)

PCSM PLAN CERTIFICATION:

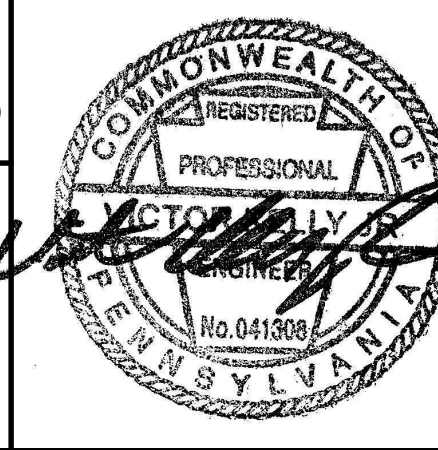
I, VICTOR KELLY, JR., PE, ON THIS DATE, HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE SWM SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE EAST GOSHEN TOWNSHIP STORMWATER MANAGEMENT ORDINANCE (CHAPTER 165).

(VICTOR KELLY, JR., PE) (DATE)



UNDERGROUND UTILITY USERS
PHILADELPHIA ELECTRIC COMPANY 1500 PHILADELPHIA AVENUE BERYON, PA 19107 (215) 592-4151
VERIZON PENNSYLVANIA INC. 1500 PHILADELPHIA AVENUE BERYON, PA 19107 (215) 592-4151
COMCAST 815 N. LANCASTER RD. P.O. BOX 351 CONANTVILLE, PA 19330 (800) 934-6489
WILLIAMS (TRANSCO GAS) 2800 FIRST OAK BOULEVARD HOUSTON, TX 77056 (800) 440-8475
EAST GOSHEN TOWNSHIP 2000 FIRST OAK BOULEVARD WEST CHESTER, PA 19380 (610) 992-1771

GRAPHIC SCALE		1" = 40'
5	1/16/17	PER CCOD REVIEW LETTER DATED 1/4/17
4	12/19/16	CHANGES TO SANITARY SEWER DESIGN
3	12/12/16	PER CCOD REVIEW LETTER DATED 12/16/16
2	10/17/16	PER TWP. REVIEW LETTER DATED 6/17/16 AND REVISED LAYOUT
1	5/23/16	PER PADOT REVIEW LETTER DATED 5/18/16
REV NO.	DATE	DESCRIPTION



PCSM & GRADING PLAN

SUBDIVISION AND LAND DEVELOPMENT PLAN (PRELIMINARY/FINAL) FOR BRAKMAN PROPERTY

EAST GOSHEN TOWNSHIP

CHESTER COUNTY, PA

DATE: MAY 17, 2016

SHEET: 4

SCALE: 1"=40'

SURVEY: MBS

DRAWN: TT

CHECKED: VK

DRAWING NO. 201541-(C)

OF: 11

COMMONWEALTH ENGINEERS, INC.

114 EAST LANCASTER AVENUE ~ SECOND FLOOR
DOWNTOWN, PA 19335
TELEPHONE: (610) 518-9003 ~ FAX: (610) 518-9004
COMENG@CEI-1.COM

LOCATION MAP

SCALE 1" = 2000'

GENERAL NOTES:

- RECORD OWNER: ANTOINETTE BRAKMAN
1420 E. STRASBURG ROAD
WEST CHESTER, PA 19380
UPI 5306-0089-0000 (TAX #53-6-89)
PHONE: (610) 436-0152
DEED REFERENCES: DB. 3529, PG. 1960
2. SITE ADDRESS: 1420 E. STRASBURG ROAD
WEST CHESTER, PA 19380
3. TRACT AREA: 221,252.8 SQ. FT. / 5.079 ACRES (GROSS)
LESS 40' ROAD RIGHT-OF-WAY 17,152.849 SQ. FT. / 0.394 ACRES
NET TRACT AREA: 4.685 ACRES (NET)
4. BOUNDARY AND PARTIAL TOPOGRAPHY FROM FIELD SURVEY PERFORMED BY COMMONWEALTH ENGINEERS, INC., APRIL 2016.
BENCHMARK: NO. 4 REBAR FOUND, NORTHEAST CORNER OF SITE
DATING: ASSUMED
5. WETLANDS DELINEATION BY VORTEX ENVIRONMENTAL, INC. AND SURVEYED BY COMMONWEALTH ENGINEERS, INC. IN MAY 2016.
6. SOILS CLASSIFICATIONS FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) NATURAL RESOURCE CONSERVATION DISTRICT WEB SOIL SURVEY, IN AUGUST, 2014.
7. UNDERGROUND UTILITIES SHOWN HEREON WERE PLOTTED FROM OBSERVABLE EVIDENCE AT THE TIME OF SURVEY AND THROUGH INFORMATION PROVIDED BY THE UTILITY COMPANIES WHICH SERVICE/OCCUPY THE SITE. NO GUARANTEE IS MADE THAT UNDERGROUND UTILITIES ARE ACCURATELY OR COMPLETELY SHOWN HEREON. THE SITE CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO BEGINNING CONSTRUCTION.
8. THE SITE IS SERVED BY PUBLIC WATER (AQUA PA).
9. EXISTING SANITARY SYSTEM PRESENT ON SITE BUT NOT LOCATED.
10. EXISTING IRON PINS ARE SHOWN AS THUS "O".
11. THE DEVELOPER SHALL CONFORM TO OR CAUSE CONFORMANCE WITH ALL OF THE APPLICABLE REQUIREMENTS OF THIS PLAN AND THE EAST GOSHEN TOWNSHIP ZONING ORDINANCE AND SUBORDINATE AND LAND DEVELOPMENT ORDINANCE AS WELL AS OTHER APPLICABLE LOCAL, STATE AND FEDERAL LAWS, STATUTES, REGULATIONS AND ORDINANCES.
12. THE DEVELOPER SHALL NOTIFY UNDERGROUND UTILITY USERS AT LEAST THREE DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION IN ACCORDANCE WITH PA ACT 287 OF 1974, AS AMENDED BY ACT 187 OF 1996 & ALL OTHER APPLICABLE AMENDMENTS, AS WELL AS CONFORM TO APPLICABLE REGULATIONS OF SAID ACTS. UNDERGROUND UTILITIES SHOWN ARE FROM SURFACE EVIDENCE OBSERVABLE IN THE FIELD AND AS MARKED BY THE UTILITY COMPANIES.
13. FEMA FLOODPLAIN BOUNDARY TAKEN FROM FLOOD INSURANCE RATE MAP, PANEL 215F, MAP NUMBER 420820215F, DATED SEPTEMBER 29, 2006
14. THIS PROJECT IS LOCATED IN THE WATERSHED OF TRIBUTARY 7 OF EAST BRANCH CHESTER CREEK WHICH HAS THE DESIGNATION OF TROUT STOCK FISHES (TSF, MF) BY THE COMMONWEALTH OF PENNSYLVANIA.
15. THIS PROJECT PROPOSES THE SUBDIVISION OF THE EXISTING LOT INTO 3 SEPARATE LOTS WITH EACH LOT TO BE SERVED BY PUBLIC WATER AND PUBLIC SEWER. PUBLIC SEWER TO BE THROUGH LOW PRESSURE FORCE MAIN TIED INTO AN EXISTING MANHOLE AS SHOWN.

SURVEY REFERENCE NOTES

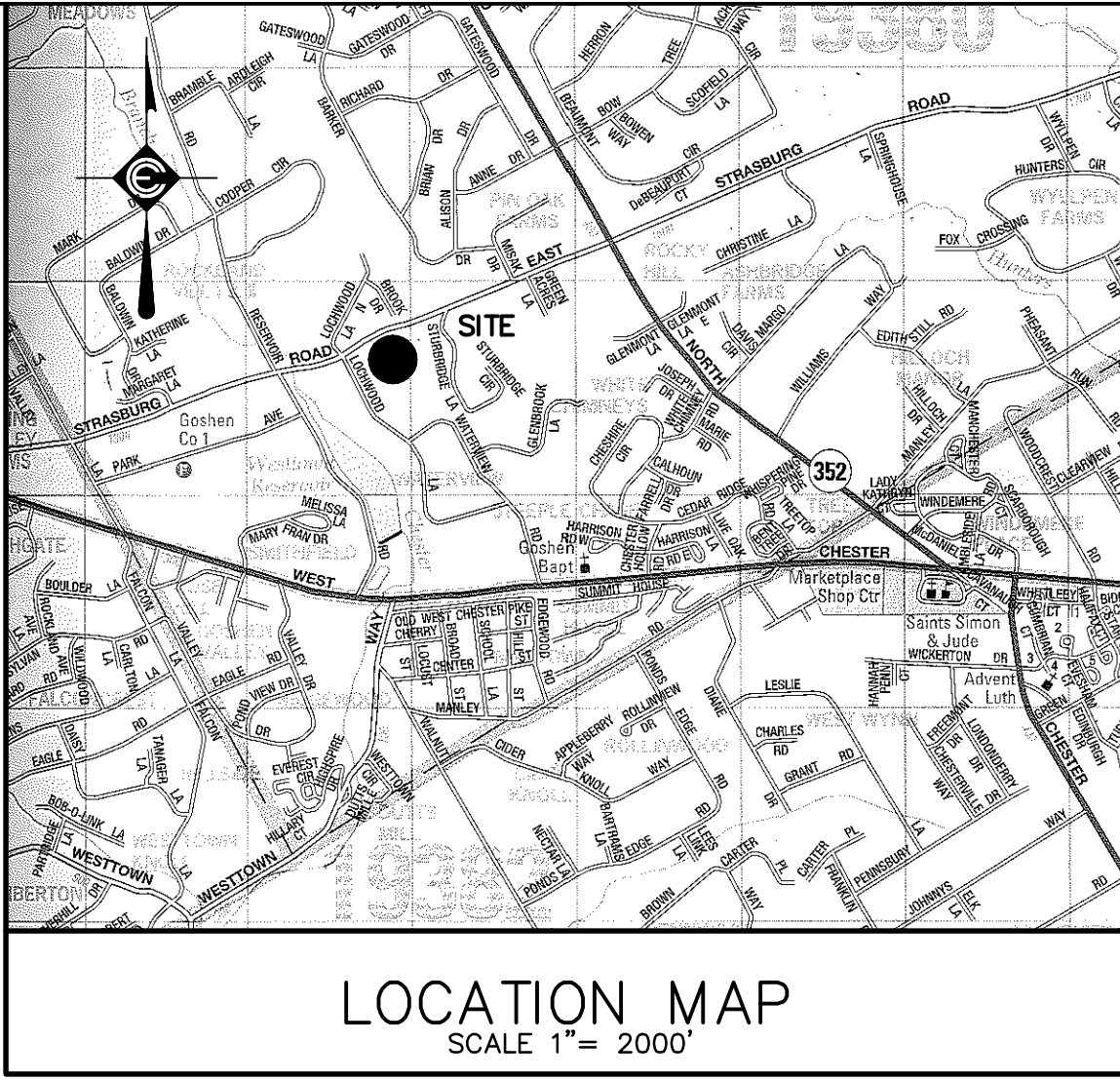
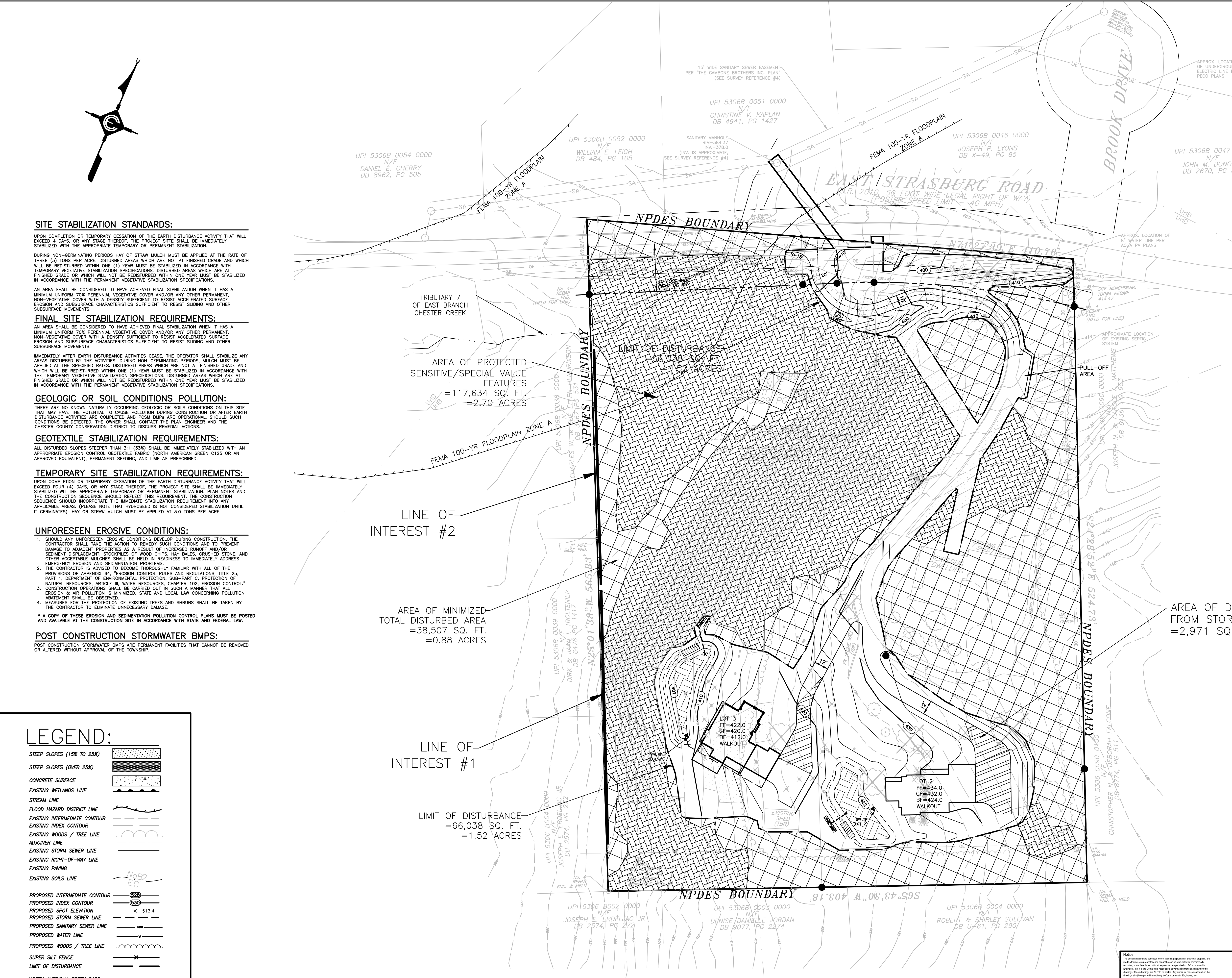
- PLAN ENTITLED "BOUNDARY SURVEY PLAN FOR M.S. ANTOINETTE BRAKMAN", PREPARED BY R.H. SMITH SURVEYORS, DATED MARCH 27, 2007.
2. PLAN ENTITLED "REVERSE SUBDIVISION/SUBDIVISION PLAN FOR MICHAEL RIZZO", PREPARED BY BRANDYWINE VALLEY ENGINEERS, A DIVISION OF VOLLMER ASSOCIATES, LLP, CONSULTING ENGINEERS AND LAND SURVEYORS, DATED NOVEMBER 30, 2001.
3. PECO BLANKET RIGHT-OF-WAY CONTAINED IN MISCELLANEOUS DB. 81, PG. 432.
4. PLAN ENTITLED "THE GAMMONS BROTHERS INC.", PREPARED BY HENRY S. CONKEY INC., DIVISION OF CHESTER VALLEY ENGINEERS, DATED JUNE 6, 1973 (LAST REVISED SEPTEMBER 9, 1973).

STORMWATER TEST PIT INFORMATION:

INFILTRATION TESTING PERFORMED WITH A DOUBLE-RING INFILTROMETER					
TEST PIT ID	INFILTRATION RATE	TESTING RATE	TESTING RATE	LIMITING ZONE	DESCRIPTION
LOT 2	2.50 IN/HR	36"	420.3	61"	ROCK ENCOUNTERED
LOT 3	2.25 IN/HR	24"	406.6	48"	ROCK ENCOUNTERED

RECEIVING WATERSHED NOTICE:

THIS PROJECT IS WHOLLY LOCATED WITHIN THE WATERSHED OF TRIBUTARY 7 OF EAST BRANCH CHESTER CREEK, A WATERSHED DESIGNATED TROUT STOCK FISHERY, MIGRATORY FISHERY (TSF, MF) BY THE COMMONWEALTH OF PENNSYLVANIA.



SITE STABILIZATION STANDARDS:

UPON COMPLETION OF 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.

DURING NON-GERMINATING PERIODS HAY OR STRAW MULCH MUST BE APPLIED AT THE RATE OF THREE (3) TONS PER ACRE. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER AND/OR ANY OTHER PERMANENT, NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER SUBSURFACE MOVEMENTS.

FINAL SITE STABILIZATION REQUIREMENTS:

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER AND/OR ANY OTHER PERMANENT, NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER SUBSURFACE MOVEMENTS.

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (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 REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

GEOLOGIC OR SOIL CONDITIONS POLLUTION:

THERE ARE NO KNOWN NATURALLY OCCURRING GEOLOGIC OR SOILS CONDITIONS ON THIS SITE THAT MAY HAVE THE POTENTIAL TO CAUSE POLLUTION DURING CONSTRUCTION OR AFTER EARTH DISTURBANCE ACTIVITIES ARE COMPLETED AND PCSM BMPs ARE OPERATIONAL. SHOULD SUCH CONDITIONS BE DETECTED, THE OWNER SHALL CONTACT THE PLAN ENGINEER AND THE CHESTER COUNTY CONSERVATION DISTRICT TO DISCUSS REMEDIAL ACTIONS.

GEOTEXTILE STABILIZATION REQUIREMENTS:

ALL DISTURBED SLOPES STEEPER THAN 3:1 (33%) SHALL BE IMMEDIATELY STABILIZED WITH AN APPROPRIATE EROSION CONTROL GEOTEXTILE FABRIC (NORTH AMERICAN GREEN C125 OR AN APPROVED EQUIVALENT), PERMANENT SEEDING, AND LIME AS PRESCRIBED.

TEMPORARY SITE STABILIZATION REQUIREMENTS:

UPON COMPLETION OF TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED FOUR (4) DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION. PLAN NOTES AND THE CONSTRUCTION SEQUENCE SHOULD REFLECT THIS REQUIREMENT. THE CONSTRUCTION SEQUENCE SHOULD INCORPORATE THE IMMEDIATE STABILIZATION REQUIREMENT INTO ANY APPLICABLE AREAS. (PLEASE NOTE THAT HYDROSEED IS NOT CONSIDERED STABILIZATION UNTIL IT GERMINATES). HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.

UNFORESEEN EROSION CONDITIONS:

1. SHOULD ANY UNFORESEEN EROSION CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE THE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED RUNOFF AND/OR SEDIMENT DISPLACEMENT. STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE, AND OTHER ACCEPTABLE MULCHES SHALL BE HELD IN READINESS TO IMMEDIATELY ADDRESS EMERGENCY EROSION AND SEDIMENTATION PROBLEMS.
 2. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH ALL OF THE PROVISIONS OF APPENDIX 64, "EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUB-PART C, PROTECTION OF NATURAL RESOURCES, ARTICLE II, WATER RESOURCES, CHAPTER 102, EROSION CONTROL."
 3. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT ALL EROSION & AIR POLLUTION IS MINIMIZED. STATE AND LOCAL LAW CONCERNING POLLUTION ABATEMENT SHALL BE OBSERVED.
 4. MEASURES FOR THE PROTECTION OF EXISTING TREES AND SHRUBS SHALL BE TAKEN BY THE CONTRACTOR TO ELIMINATE UNNECESSARY DAMAGE.
- * A COPY OF THESE EROSION AND SEDIMENTATION POLLUTION CONTROL PLANS MUST BE POSTED AND AVAILABLE AT THE CONSTRUCTION SITE IN ACCORDANCE WITH STATE AND FEDERAL LAW.

POST CONSTRUCTION STORMWATER BMPs:

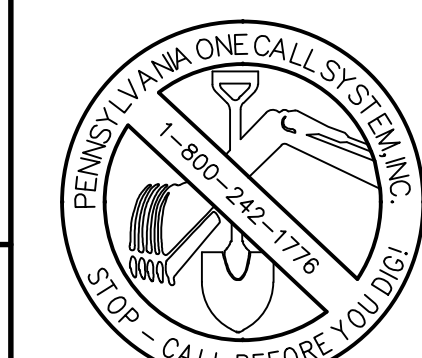
POST CONSTRUCTION STORMWATER BMPs ARE PERMANENT FACILITIES THAT CANNOT BE REMOVED OR ALTERED WITHOUT APPROVAL OF THE TOWNSHIP.

LEGEND:

- STEEP SLOPES (15% TO 25%)
- STEEP SLOPES (OVER 25%)
- CONCRETE SURFACE
- EXISTING WETLANDS LINE
- STREAM LINE
- FLOOD HAZARD DISTRICT LINE
- EXISTING INTERMEDIATE CONTOUR
- EXISTING INDEX CONTOUR
- ADJACENT LINE
- EXISTING STORM SEWER LINE
- EXISTING RIGHT-OF-WAY LINE
- EXISTING PAVING
- EXISTING SOILS LINE
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED STORM SEWER LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED WATER LINE
- PROPOSED WOODS / TREE LINE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- NORTH AMERICAN GREEN S150 TEMPORARY GEOTEXTILE BLANKET (OR APPROVED EQUAL)
- NORTH AMERICAN GREEN SC250 PERMANENT GEOTEXTILE BLANKET (OR APPROVED EQUAL)
- STABILIZED RIP-RAP CONSTRUCTION ENTRANCE

PENNSYLVANIA ONE CALL
(PSEUDO) 800-333-3333 OR 800-333-3333 (SEE APPLICABLE MOVEMENTS) COMMONWEALTH ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY LINES OR THE DEPTHS, NOR DOES COMMONWEALTH ENGINEERS, INC. GUARANTEE THAT ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATIONS OF ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., BEFORE THE START OF WORK. TELEPHONE: (800) 242-1776

UPI No.5306-0089-0000



PENNSYLVANIA ONE-CALL SYSTEM SERIAL NUMBER: 20160320567

UNDERGROUND UTILITY USERS

PHILADELPHIA ELECTRIC COMPANY
1520 SPRINGFIELD ROAD
BERWYN, PA 19312
(610) 648-7702

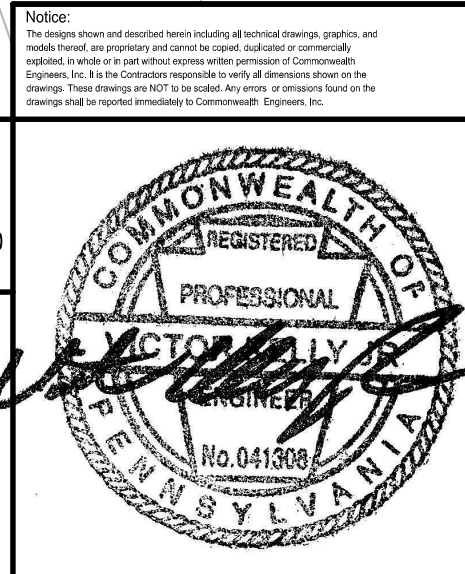
VERIZON PENNSYLVANIA INC.
300 MAIN STREET, 6TH FLOOR
PHILADELPHIA, PA 19107
(215) 592-4151

COMCAST
672 W. LANCASTER RD.
P.O. BOX 351
CONESTOGA, PA 19320
(800) 934-6489

WILLIAMS (TRANSOCO) GAS
2800 FIRST W. BOULEVARD
HOUSTON, TX 77056
(800) 440-8475

EAST GOSHEN TOWNSHIP
1000 WEST CHESTER, PA 19380
(610) 692-7171

GRAPHIC SCALE 1" = 40'	
REV	NO. DATE DESCRIPTION
1	1/10/17 PER CCOD REVIEW LETTER DATED 1/4/17
2	12/15/16 CHANGES TO SANITARY SEWER DESIGN
3	12/15/16 PER CCOD REVIEW LETTER DATED 12/8/16
4	10/17/16 PER TWP. REVIEW LETTER DATED 8/1/16 AND REVISED LAYOUT
5	12/23/16 PER PAIDOT REVIEW LETTER DATED 5/18/16



PCSM NON-STRUCTURAL BMP PLAN

SUBDIVISION AND LAND DEVELOPMENT PLAN (PRELIMINARY/FINAL) FOR BRAKMAN PROPERTY

EAST GOSHEN TOWNSHIP

CHESTER COUNTY, PA

COMMONWEALTH ENGINEERS, INC.

114 EAST LANCASTER AVENUE ~ SECOND FLOOR
DOWNTOWNTOWN, PA 19335
TELEPHONE: (610) 518-9003 ~ FAX: (610) 518-9004
COMENG@CEI-1.COM

DATE:	MAY 17, 2016	SHEET:
SCALE:	1"=40'	
SURVEY:	MBS	
DRAWN:	TT	
CHECKED:	VK	
DRAWING NO.	201541-(C)	OF: 11

5

APPLICANT/RESPONSIBLE PARTY:

GUNNISON DEVELOPMENT CO., 1200 BURNING BUSH LANE, WEST CHESTER, PA 19380,
(610) 640-9174

PROJECT DESCRIPTION

(PER EAST GOSHEN TOWNSHIP
STORMWATER MANAGEMENT
ORDINANCE SECTION 195-27.C:

- The project site is currently a combination of woods, meadow, and lawn with one existing dwelling and two existing sheds. There is also an existing septic system on the site. Stormwater runoff drains off the site from east to west into Tributary 7 of East Branch Chester Creek (TSC, MF).
- This site achieves the requirements of East Goshen Township Stormwater Management Ordinance Section 195-18 by controlling stormwater runoff to pre-development conditions. These requirements are displayed throughout the PCSM Plans, E&S/PC Plans, and the corresponding report.
- This site achieves the requirements of East Goshen Township Stormwater Management Ordinance Sections 195-15 through 195-23 through the use of a variety of stormwater BMPs (rain gardens) and conveyance systems (swales) to control stormwater runoff to pre-development conditions while complying with the design standards stated in the above stormwater management ordinance sections.
- This project proposes the construction of 2 new dwellings and new paved driveway areas. Stormwater runoff from the new buildings will be directed to individual on-to-rain gardens through overland flow or roof drain collection piping systems. These rain gardens will retain and infiltrate runoff for the various design storms. Erosion and sediment control will be achieved primarily through the use of silt fences.
- The project proposes no adverse effects on adjacent or downstream properties or conveyance systems since the project proposed the use of stormwater BMPs that will control stormwater runoff to pre-development conditions for various design storm events and that will retain runoff volume onsite for the 2-year storm.
- The project implements water quality BMPs in the form of conserving of riparian buffers and minimizing of total disturbed areas.
- Construction of this project is anticipated to begin the winter of 2017 and end the summer of 2017.
- This project will be constructed as a single phase.

SWM GENERAL NOTES:

- THE STORMWATER MANAGEMENT PLAN APPROVED BY THE TOWNSHIP SHALL BE ON SITE THROUGHOUT THE DURATION OF THE REGULATED ACTIVITY.
- THE SWM PLAN FOR THIS PROJECT IS ASSOCIATED WITH THE POST-CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE NAMED "BRAKMAN PROPERTY" AND DATED 5/17/16.
- THE SWM PLAN FOR THIS PROJECT IS ASSOCIATED WITH THE "EROSION AND SEDIMENT CONTROL PLAN" (SHEET 7) OF THE FULL SITE PLAN SET TITLED "BRAKMAN PROPERTY" DATED 5/17/16.
- THE SECOND OWNER EACH LOT WILL BE RESPONSIBLE FOR ONGOING INSPECTIONS, OPERATION, REPAIR, AND MAINTENANCE OF THE SWM BMPs AND CONVEYANCES AFTER THE COMPLETION OF CONSTRUCTION.

INFILTRATION GENERAL NOTES:

- DURING SITE CONSTRUCTION ALL INFILTRATION PRACTICE COMPONENTS SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL.
- DURING SITE CONSTRUCTION INFILTRATION AREAS SHALL BE PROTECTED FROM SEDIMENTATION.
- AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPACTION AND POROSITY. ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL.
- ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION.

RAIN GARDEN
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. FOLLOW ALL GUIDELINES AND PROCEDURES AS STATED IN "EROSION & SEDIMENTATION POLLUTION CONTROL MEASURES" DURING ENTIRE CONSTRUCTION PROCEDURE.

- EXCAVATE RAIN GARDEN AREA AND CONSTRUCT BERM, EMERGENCY SPILLWAY, OUTLET PIPE, AND SLOPE. SPREADER WHILE KEEPING CONSTRUCTION EQUIPMENT OFF RAIN GARDEN BOTTOM AS MUCH AS POSSIBLE.
- BACKFILL RAIN GARDEN BOTTOM WITH AMENDED SOIL/PLANTING MIXTURE.
- PLANT BOTTOM OF RAIN GARDEN WITH THE "RAIN GARDEN SEED MIXTURE" OR AN APPROVED EQUIVALENT.
- FOLLOW REQUIRED MAINTENANCE AND MONITORING GUIDELINES.

RAIN GARDEN
LONG-TERM MAINTENANCE SCHEDULE:

THE OWNER OF THE PROPERTY AND ITS SUCCESSORS SHALL BE RESPONSIBLE FOR ALL ROUTINE AND NON-ROUTINE MAINTENANCE AS DESCRIBED BELOW. MAINTENANCE IS NECESSARY TO ENSURE THE PROPER FUNCTIONALITY OF THE RAIN GARDEN FACILITY, AND SHOULD TAKE PLACE AT LEAST 2 TIMES PER YEAR. A WRITTEN REPORT DOCUMENTING EACH INSPECTION AND ALL BMP REPAIR AND MAINTENANCE ACTIVITIES SHALL BE MADE AVAILABLE UPON REQUEST. REPLACEMENT OF THIS PCSM BMP MAY BE REQUIRED TO ENSURE PROPER FUNCTION AND OPERATION.

- DEBRIS MAY NEED TO BE REMOVED ONCE A YEAR.
- PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING SEASON.
- THE RAIN GARDEN SHOULD BE INSPECTED AT LEAST 2 TIMES PER YEAR FOR SEDIMENT BUILDUP, EROSION, VEGETATIVE CONDITIONS, ETC.
- DURING PERIODS OF EXTENDED DROUGHT, THE RAIN GARDEN MAY REQUIRE WATERING.
- FAILURE OF THE RAIN GARDEN OCCURS WHEN THE RAIN GARDEN DOES NOT INFLUENT WITHIN 72 HOURS AFTER A RUNOFF EVENT. IN THE EVENT OF FAILURE OF THE RAIN GARDEN, THE PLUG THAT WAS USED TO COVER THE 2" CIRCULAR ORIFICE IN THE RISER PIPE SHALL BE REMOVED UNTIL THERE IS NO LONGER ANY STANDING WATER REMAINING IN THE RAIN GARDEN. ONCE THE RAIN GARDEN HAS BEEN DEWATERED, THE PLUG SHALL BE REPLACED IMMEDIATELY.

RAIN GARDEN SEED MIXTURE:

SPECIES NAME	COMMON NAME	PERCENT WEIGHT
<i>Chamaecrista nictitans</i> (hololepis)	RIVER OATS, PA/VA ECOTYPE BLEND	40%
PA/VA Ecotype Blend		
<i>Carex vaginulosa</i> , PA Ecotype	FOX SEDGE, PA ECOTYPE	25%
<i>Elymus virginicus</i> , PA Ecotype	VIRGINIA WHEAT, PA ECOTYPE	20%
<i>Glycerhiza pinnatifida</i> , PA Ecotype	AUTUMN BENTGRASS, PA ECOTYPE	1%
<i>Carex scoparia</i> , PA Ecotype	BLUNT BROOM SEDGE, PA ECOTYPE	1%
<i>Juncus effusus</i>	SORT RUSH, PA ECOTYPE	1%
<i>Juncus tenuis</i> , PA Ecotype	PATH RUSH, PA ECOTYPE	1%

SEED MIX APPLICATION RATE: 15 LBS/ACRE WITH A COVER CROP OF RAIN PINE AT 30 LBS/ACRE

SEED MIX AVAILABILITY: ERNST CONSERVATION SEEDS
8884 MERCER PIKE
MEADVILLE, PA 16335
PHONE: (800) 873-3321
FAX: (814) 336-2043

PRODUCT No.: ERNMK-180-1

RECEIVING WATERSHED NOTICE:

THIS PROJECT IS WHOLLY LOCATED WITHIN THE WATERSHED OF TRIBUTARY 7 OF EAST CHESTER CREEK, A WATERBOD DESIGNATED TRIBUTARY STOCK FISHERY, MIGRATORY FISHERY (TSC, MF) BY THE COMMONWEALTH OF PENNSYLVANIA.

PERMANENT SEED MIXTURE:

NAME	PARTS BY WEIGHT	PERCENT PURITY	GERMINATION
KENTUCKY BLUE GRASS VARIETIES	25%	95%	85%
PENNSTAR/PENNINE PERENNIAL RYEGRASS	25%	95%	85%
PENNLAWN FESCUE	25%	95%	85%
ANNUAL RYEGRASS	25%	95%	85%

TEMPORARY SEED MIXTURE:

SITE PREPARATION: APPLY 1 TON OF AGRICULTURAL-GRADE LIMESTONE PER ACRE PLUS FERTILIZER AT THE RATE OF 50-60 LBS PER ACRE, WORK INTO THE SOIL WHERE POSSIBLE. SECURE A SOIL TEST BEFORE APPLICATION OF PERMANENT SEEDING. AFTER SEEDING, MULCH WITH HAY OR STRAW AT A RATE OF 3 TONS PER ACRE.

SPECIES FOR SPRING SEEDING (UP TO JUNE 15)

LBS/ACRE:
ANNUAL RYEGRASS 40
OR SPRING OATS 96 (3 BU)
OR SPRING OATS PLUS RYEGRASS 64 LBS OATS (2BU) + 20 LBS ANNUAL OR PERENNIAL RYEGRASS
OR WINTER RYE 168 (3 BU)
OR WINTER WHEAT 168 (3 BU)

FOR LATE SPRING & SUMMER SEEDING (JUNE 16 TO AUGUST 15)

ANNUAL RYEGRASS 40
OR JAPANESE OR FOXTAIL MILLET 35
OR SUDAGRASS 96 (3 BU)
OR SPRING OATS 96 (3 BU)
OR WINTER WHEAT 168 (3 BU)
OR WINTER RYE 168 (3 BU)

FOR LATE SUMMER & FALL SEEDING (AUGUST 16 AND LATER)

ANNUAL RYEGRASS 40
OR SPRING OATS (CAN BE USED BUT WILL WINTER KILL) 96
OR WINTER WHEAT 168 (3 BU)
OR WINTER RYE 168 (3 BU)

MULCH, LIME, FERTILIZER, SOD & SEED NOTES:

MULCH: APPLIED MULCH SHALL BE EITHER HAY/STRAW OR HYDROMULCH. HAY/STRAW MULCH SHALL BE FREE OF WEEDS AND OTHER WHICH ARE NOT DESIRED. MULCH MUST BE APPLIED TO ALL AREAS AT A RATE OF 3 TONS PER ACRES, ON STEEP SLOPES AREAS (GREATER THAN 3:1), COVER SEEDED AREAS WITH AN ACCEPTABLE GEOTEXTILE. EROSION CONTROL, BLANKET, AREAS RECEIVING HAY/STRAW MULCH SHALL BE IMMEDIATELY ANCHORED EITHER BY CRIMPING WITH A TRACTOR DRAWN IMPLEMENT OR WITH EMULSIFIED ASPHALT CONTAINING NO SOLVENTS OR DILUTING AGENTS TOXIC TO PLANT OR ANIMAL LIFE UNFORMALLY APPLIED AT THE RATE OF 31 GAL PER 1,000 SQUARE FEET.

HYDROMULCH SHALL BE COMPOSED OF WOOD FIBER OR RECYCLED PAPER AND SHALL BE MECHANICALLY APPLIED AT THE RATE OF 65 LBS PER 1,000 SQUARE FEET.

LIME: AGRICULTURAL GRADE LIME SHALL BE APPLIED TO ALL DISTURBED AREAS PRIOR TO SEEDING AT THE RATE OF FOUR (4) TONS PER ACRE.

FERTILIZER: 10-20-20 FERTILIZER SHALL BE APPLIED TO ALL DISTURBED AREAS PRIOR TO SEEDING AT THE RATE OF ONE THOUSAND (1,000) LBS PER ACRE.

SOD: KENTUCKY BLUEGRASS SOD (IF CALLED FOR) SHALL BE GROWN UNDER THE SUPERVISION OF THE PA DEPARTMENT OF AGRICULTURE BUREAU OF PLANT INDUSTRY OR BE COMPOSED OF ONLY BLUE TAC CERTIFIED SEED.

SEED: ALL SEED SHALL BE FRESH. ALL NEW CROP SEED SHALL BE LABELED IN ACCORDANCE WITH THE FEDERAL SEED ACT IN EFFECT ON THE DATE OF INVIATION FOR BIDS. ALL SEED SHALL BE FURNISHED IN SCALE STANDARD TO KIND. PERCENT BY WEIGHT, PURITY AND GERMINATION. THE GRAIN SEED SHALL CONTAIN THE PERCENTAGES OF PURITY AND GERMINATION INDICATED ON THE LIST FURNISHED WITH THE APPLICABLE PLAN. SEED MIX SHALL BE AS SPECIFIED. SPREAD AT THE RATE OF 5 POUNDS PER 1,000 SQUARE FEET (MINIMUM). FOR SLOPE 3:1 OR GREATER, USE 7.5 POUNDS OF SEED PER 1,000 SQUARE FEET.

SEEDING & MULCHING NOTES:

- DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITY HAS CEASED MUST BE IMMEDIATELY SEEDING AND MULCHED. DURING NON-GERMINATION PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES (MINIMUM OF 3 TONS/ACRE). DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR SHALL BE IMMEDIATELY MULCHED AT 3 TONS PER ACRE AND SEEDING WITH A QUICK-GROWING TEMPORARY SEED MIXTURE. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE IMMEDIATELY MULCHED AT 3 TONS PER ACRE AND SEEDING WITH THE PERMANENT SEED MIXTURE. LIME SHALL BE APPLIED IN ALL CASES AT THE PRESCRIBED RATE.
- DIVERSIONS, CHANNELS, SWALES, SEDIMENT BASINS, SEDIMENT TRAPS AND SOIL STOCKPILES SHALL BE SEEDING AND MULCHED IMMEDIATELY.
- HAY/STRAW MULCH MUST BE APPLIED AT A RATE OF AT LEAST 3 TONS PER ACRE.
- AREAS UTILIZED VEGETATIVE STABILIZATION MUST BE SEEDING AND MULCHED WITHIN THE APRIL 15TH TO OCTOBER 15TH GERMINATION WINDOW. SEEDING WILL BE ACCOMPLISHED THROUGH HYDROSEEDING OF CONVENTIONAL SEEDING METHODS.
- GEOTEXTILE EROSION CONTROL CHANNEL LINING AND SLOPE PROTECTION SHALL BE INSTALLED WHERE INDICATED AND PER THE MANUFACTURER'S SPECIFICATIONS IMMEDIATELY UPON THE COMPLETION OF GRADING ACTIVITIES.

BMP MAINTENANCE REQUIREMENTS:

UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTION OF ALL EROSION AND SEDIMENTATION BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTIONS WILL BE DOCUMENTED IN THE INSPECTION LOG. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES & MADE AVAILABLE TO THE DISTRICT UPON REQUEST. ALL EROSION AND SEDIMENTATION BMPs INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, RESEEDING AND RENETTING, MUST BE PREPARED IMMEDIATELY IF EROSION AND SEDIMENTATION ARE OBSERVED. IF EROSION IS EXPECTED, REPLACEMENT BMPs OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED. IF EROSION IS FOUND TO FAIL TO ALLEVATE EROSION OR SEDIMENT POLLUTION, THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION:

- THE LOCATION AND SEVERITY OF THE BMPs FAILURE AND ANY POLLUTION EVENTS.
- STEPS TAKEN TO REDUCE, ELIMINATE, & PREVENT RECURRENCE OF NON-COMPLIANCE.
- THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.

AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs MUST BE STABILIZED IMMEDIATELY.

PCSM LONG TERM OPERATIONS
AND MAINTENANCE REQUIREMENTS:

UNTIL THE PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPs ON THE PROJECT SITE 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 PCSM BMPs UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs.

FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP, PROVIDE FOR NECESSARY ACTIONS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMPs AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEES, AND PROVIDE PROOF OF FILING WITH THE NOTICE 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 PCSM 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 PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs LOCATED ON THE PROPERTY.

PCSM REPORTING AND RECORD KEEPING:

THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE DISTRICT ENGINEER.

PCSM FACILITY SCHEDULE OF INSPECTIONS:

REGULARLY SCHEDULED INSPECTIONS. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSPECTED AT LEAST 2 TIMES PER YEAR TO ENSURE PROPER FUNCTIONALITY AND THE CONTINUING INTEGRITY OF THE FACILITY.

SPOT INSPECTIONS. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSPECTED IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL EVENT TO ENSURE PROPER FUNCTIONALITY AND THE CONTINUING INTEGRITY OF THE FACILITY.

ANY MAINTENANCE, REPAIR OR FACILITY REPLACEMENT SHALL BE IMMEDIATELY PERFORMED IN ACCORDANCE WITH THE MAINTENANCE PROCEDURES DESCRIBED IN THESE PLANS.

CONSTRUCTION OVERSIGHT REQUIREMENTS:

THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BMPs. ADDITIONAL SOIL TESTING MAY BE REQUIRED PRIOR TO THE INSTALLATION OF INFILTRATION BMPs TO ENSURE PROPER LOCATION & FUNCTION. A LICENSED PROFESSIONAL ENGINEER KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF STORMWATER BMPs, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

OVERALL SEQUENCE OF CONSTRUCTION:

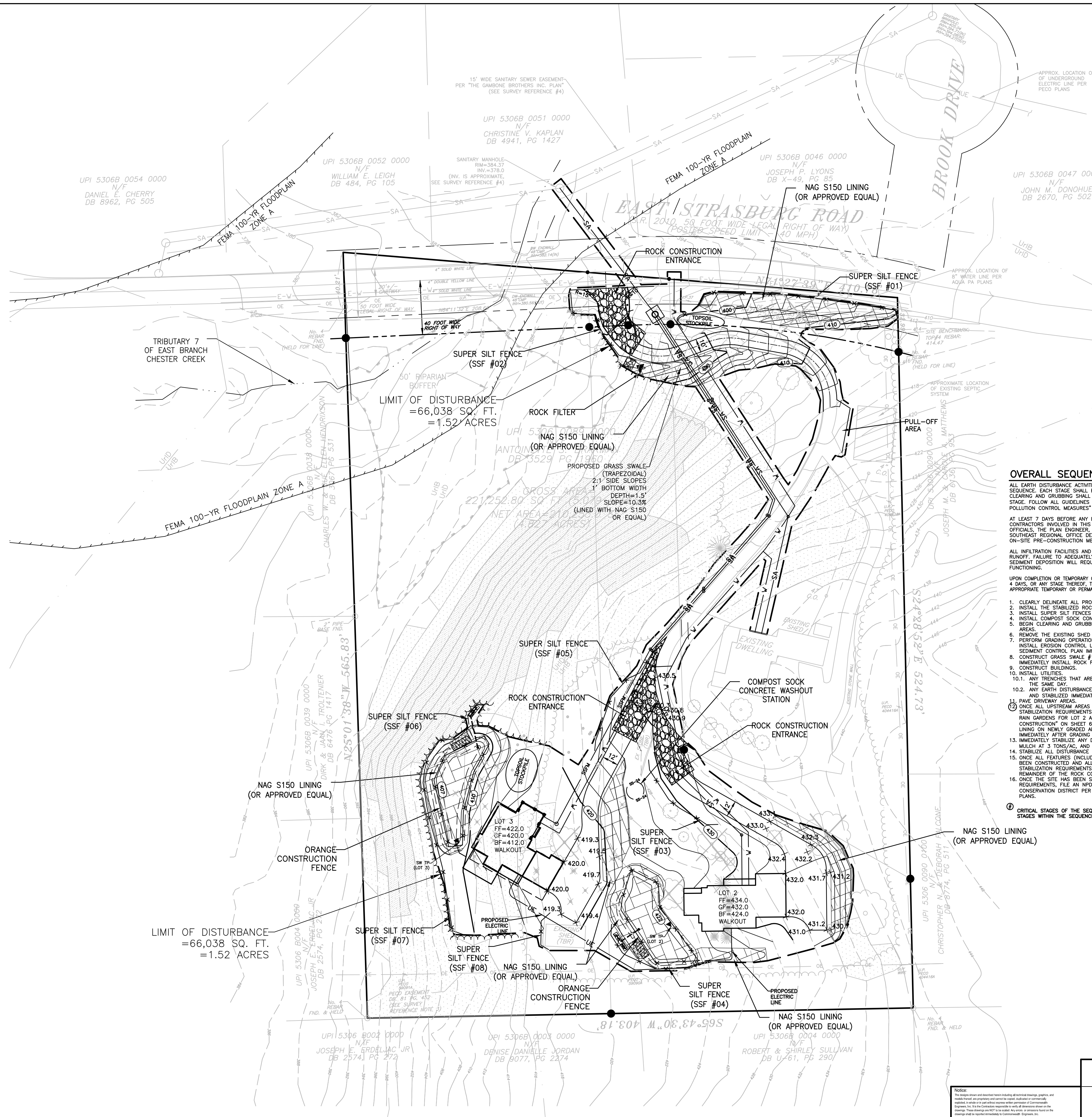
ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. FOLLOW ALL GUIDELINES AND PROCEDURES AS STATED IN "EROSION & SEDIMENTATION POLLUTION CONTROL MEASURES" DURING ENTIRE CONSTRUCTION PROCEDURE.

AT LEAST 7 DAYS BEFORE ANY EARTHMOVING BEGINS, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THIS PROJECT, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE PLAN ENGINEER, THE CHESTER COUNTY CONSERVATION DISTRICT, AND THE SOUTHEAST REGIONAL OFFICE DEPARTMENT OF ENVIRONMENTAL PROTECTION ENGINEER TO AN ON-SITE PRE-CONSTRUCTION MEETING.

ALL INFILTRATION FACILITIES AND RAIN GARDENS SHALL BE PROTECTED FROM SEDIMENT-LADEN RUNOFF. FAILURE TO ADEQUATELY PROTECT INFILTRATION FACILITIES AND RAIN GARDENS FROM SEDIMENT DEPOSITION WILL REQUIRE REPAIRS TO RESTORE TO PROPER FUNCTIONING.

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.

- CLEARLY DELINEATE ALL PROPOSED DISTURBANCE LIMITS AND TREES TO BE PROTECTED.
- INSTALL THE STABILIZED ROCK CONSTRUCTION ENTRANCES.
- INSTALL SUPER SILT FENCES AS SHOWN ON EROSION & SEDIMENT CONTROL PLAN.
- INSTALL COMPOST SOCK CONCRETE WASHOUT STATION.
- BEGIN CLEANING AND GRUBBING OF AREAS FOR THE PROPOSED BUILDINGS AND DRIVEWAY AREAS.
- REMOVE THE EXISTING SHED AS NOTED ON THE PLANS.
- PERFORM GRADING OPERATIONS FOR DRIVEWAY AREAS AND AROUND PROPOSED BUILDINGS. INSTALL EROSION CONTROL LINING ON NEWLY GRADED AREAS AS SHOWN ON EROSION & SEDIMENT CONTROL PLAN IMMEDIATELY AFTER GRADING FOR EACH AREA IS COMPLETED.
- CONSTRUCT GRASS SWALE #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, #101, #102, #103, #104, #105, #106, #107, #108, #109, #110, #111, #112, #113, #114, #115, #116, #117, #118, #119, #120, #121, #122, #123, #124, #125, #126, #127, #128, #129, #130, #131, #132, #133, #134, #135, #136, #137, #138, #139, #140, #141, #142, #143, #144, #145, #146, #147, #148, #149, #150, #151, #152, #153, #154, #155, #156, #157, #158, #159, #160, #161, #162, #163, #164, #165, #166, #167, #168, #169, #170, #171, #172, #173, #174, #175, #176, #177, #178, #179, #180, 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#1010, #1011, #1012, #1013,



THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BMPs. ADDITIONAL SOIL TESTING MAY BE REQUIRED PRIOR TO THE INSTALLATION OF INFILTRATION BMPs TO ENSURE PROPER LOCATION & FUNCTION. A LICENSED PROFESSIONAL ENGINEER KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF STORMWATER BMPs, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTE PRODUCTS IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ. AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIALS OR WASTE PRODUCTS AT THE SITE.

BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CHESTER COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY AND DISPOSED OF IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL SEDIMENT BE WASHED, SHOVELED, OR SWEEPED INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER, INCLUDING THE SITE'S WETLANDS OR STREAM CHANNEL.

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

THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL WHICH READS AS FOLLOWS:

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

- (1) THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.
- (2) THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION & MAINTENANCE OF THE PCSM PLAN.

STEEP SLOPES (15% TO 25%)

STEEP SLOPES (OVER 25%)

CONCRETE SURFACE

EXISTING WETLANDS LINE

STREAM LINE

FLOOD HAZARD DISTRICT LINE

EXISTING INTERMEDIATE CONTOUR

EXISTING INDEX CONTOUR

EXISTING WOODS / TREE LINE

ADJOINER LINE




EXISTING STREET SEWER LINE

EXISTING RIGHT-OF-WAY LINE

EXISTING PAVING

EXISTING SOILS LINE

LIMIT OF DISTURBANCE:
=66,038 SQ. FT.
=1.52 ACRES

NORTH AMERICAN GREEN S150 TEMPORARY GEOTEXTILE BLANKET (OR APPROVED EQUAL)	
NORTH AMERICAN GREEN SC250 PERMANENT GEOTEXTILE BLANKET (OR APPROVED EQUAL)	
STABILIZED RIP-RAP CONSTRUCTION ENTRANCE	

PENNSYLVANIA ONE CALL

UPI No.5306-0089-0000

PENNSYLVANIA ONE-CALL
SYSTEM SERIAL NUMBER: 20160320567

PHILADELPHIA ELECTRIC COMPANY 1050 SWEDESFORD ROAD BERWYN, PA 19312 (610) 648-7702	VERIZON PENNSYLVANIA INC. 900 RACE STREET, 6TH FLOOR PHILADELPHIA, PA 19107 (215) 592-4151
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AQUA PA
762 W. LANCASTER AVE.
BRYN MAWR, PA 19010
(877) 987-2782

COMCAST
RT. 82 & MONACY RD.
P.O. BOX 351
COATESVILLE, PA 19320
(610) 387-1111

EAST GOSHEN TOWNSHIP
1580 PAOLI PIKE
WEST CHESTER, PA 19380
(610) 692-7171

VERIZON PENNSYLVANIA INC.
900 RACE STREET, 6TH FLOOR
PHILADELPHIA, PA 19107
(215) 592-4151

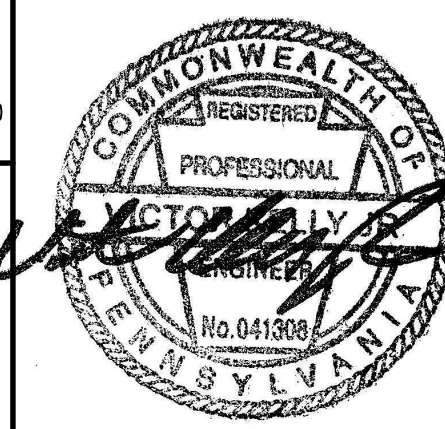
COMCAST
RT. 82 & MONACY RD.
P.O. BOX 351
COATESVILLE, PA 19320
(610) 381-2155

WILLIAMS (TRANSCO GAS)
2800 POST OAK BOULEVARD
HOUSTON, TX 77056
(800) 440-8475

GRAPHIC SCALE 1" = 40'



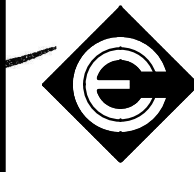
5	1/10/17	PER CCOD REVIEW LETTER DATED 1/4/17
4	12/19/16	CHANGES TO SANITARY SEWER DESIGN
3	12/12/16	PER CCOD REVIEW LETTER DATED 12/8/16
2	10/17/16	PER TWP. REVIEW LETTER DATED 6/1/16 AND REVISED LAYOUT
1	5/23/16	PER PILOT REVIEW LETTER DATED 5/18/16
REV NO.	DATE	DESCRIPTION



*SUBDIVISION AND LAND DEVELOPMENT PLAN
(PRELIMINARY/FINAL) FOR
BRAKMAN PROPERTY*

EAST GOSHEN TOWNSHIP

CHESTER COUNTY, PA



COMMONWEALTH ENGINEERS, INC.

114 EAST LANCASTER AVENUE ~ SECOND FLOOR
DOWNTOWN, PA 19335
TELEPHONE: (610) 518-9003 ~ FAX: (610) 518-9004
COMENG@CEI-1.COM

DATE:	MAY 17, 2016	SHEET:
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DATE:	MAY 17, 2016	SHEET:
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[illegible]

SCALE: $1''=40'$

SURVEY:	MBS
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DRAWN:	II
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DRAWN:	17

CHECKED: VK

DRAWING NO. 201541-(C) OF:

OF: 11

PLAN REFERENCE NOTE:

THIS EROSION & SEDIMENT CONTROL PLAN IS ASSOCIATED WITH THE "PCSM & GRADING PLAN" (SHEET 4) OF THE FULL SITE PLAN SET TITLED "BRAKMAN PROPERTY" AND DATED 5/17/16.

SITE STABILIZATION STANDARDS:

DURING 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.

DURING NON-GERMINATING PERIODS, HAY OR STRAW MULCH MUST BE APPLIED AT THE RATE OF THREE (3) TONS PER ACRE. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS. (P-501) MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER AND/OR ANY OTHER PERMANENT, NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER SURFACE MOVEMENTS.

TEMPORARY SITE STABILIZATION REQUIREMENTS:

UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED FOUR (4) DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION PLAN NOTES AND THE CONSTRUCTION SEQUENCE SHOULD REFLECT THIS REQUIREMENT. THE CONSTRUCTION SEQUENCE SHOULD INCORPORATE THE IMMEDIATE STABILIZATION REQUIREMENT INTO ANY APPLICABLE AREAS. (PLEASE NOTE THAT REDISTURBED IS NOT CONSIDERED STABILIZATION UNTIL IT GERMINATES). HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.

FINAL SITE STABILIZATION REQUIREMENTS:

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER AND/OR ANY OTHER PERMANENT, NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER SURFACE MOVEMENTS.

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (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 REDISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

STABILIZATION NEAR SURFACE WATERS:

DISTURBED AREAS TO BE RE-VEGETATED WITHIN 50 FEET OF SURFACE WATERS SHALL BE STABILIZED WITH EROSION CONTROL BLANKETING.

SEEDING & MULCHING NOTES:

- DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITY HAS CEASED MUST BE IMMEDIATELY SEEDING AND MULCHING. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES (MINIMUM OF 3 TONS/ACRE). DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR SHALL BE IMMEDIATELY MULCHED AT 3 TONS PER ACRE AND SEEDING WITH A SUITABLE TEMPORARY SEED MIXTURE. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN ONE YEAR MUST BE IMMEDIATELY MULCHED AT 3 TONS PER ACRE AND SEEDING WITH THE PERMANENT SEED MIXTURE. LIME SHALL BE APPLIED IN ALL CASES AT THE PRESCRIBED RATE.
- DIVERSIONS, CHANNELS, SWALES, SEDIMENT BASINS, SEDIMENT TRAPS AND SOIL STOCKPILES SHALL BE SEEDING AND MULCHED IMMEDIATELY.
- HAY/STRAW MULCH MUST BE APPLIED AT A RATE OF AT LEAST 3 TONS PER ACRE.
- SEEDING AND MULCHING SHALL BE COMPLETED WITHIN THE PERIOD OF APRIL 15TH TO OCTOBER 15TH GERMINATION WINDOW. SEEDING WILL BE ACCOMPLISHED THROUGH HYDROSEEDING OF CONVENTIONAL SEEDING METHODS.
- GEOTEXTILE EROSION CONTROL, CHANNEL LINING AND SLOPE PROTECTION SHALL BE INSTALLED WHERE INDICATED AND PER THE MANUFACTURER'S SPECIFICATIONS IMMEDIATELY UPON THE COMPLETION OF GRADING ACTIVITIES.

FINAL CERTIFICATION REQUIREMENTS:

THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS:

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

- THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.
- THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE PERMIT PLAN PLANNED TO THE PERSON IDENTIFIED IN THE APPROVED PCSM PLAN.
- RESPONSIBLE FOR THE LONG-TERM OPERATION & MAINTENANCE OF THE PCSM PLAN.

NOTICE OF TERMINATION REQUIREMENTS:

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

E&S PLAN PLANNING & DESIGN:

APPROXIMATELY 1.52 ACRES OF DISTURBANCE ARE ANTICIPATED WITH THIS PROPOSAL. IMPROVEMENTS WILL BE CONSTRUCTED AS A SINGLE PHASE:

PRIMARY E&S BMPs: THE PRIMARY EROSION CONTROL FACILITIES FOR THIS SITE WILL CONSIST OF SUPER SILT FENCE INSTALLED DOWNSLOPE OF ANTICIPATED DISTURBANCE.

SECONDARY E&S BMPs: SECONDARY EROSION CONTROL FACILITIES WILL INCLUDE STABILIZED CONSTRUCTION ENTRANCES, TROPIC STOCKPILES, GEOTEXTILE STABILIZATION, WASHOUT, STABILIZATION, AND PROPOSED SEQUENCES OF CONSTRUCTION THAT WILL ENSURE MINIMAL OVERALL DISTURBANCE AND THE POTENTIAL FOR SEDIMENT POLLUTION.

MINIMIZATION OF EXTENT & DURATION OF EARTH DISTURBANCE: THE EROSION & SEDIMENT CONTROL PLAN HAS BEEN DESIGNED TO MINIMIZE THE EXTENT & DURATION OF EARTH DISTURBANCE BY STRICTLY DELINEATING THE LIMITS OF DISTURBED AREAS AND PROVIDING A SEQUENCE OF CONSTRUCTION THAT REQUIRES SENSIBLE AND EFFICIENT PROJECT STAGING AND IMMEDIATE STABILIZATION OF DISTURBED AREAS BEFORE RUNOFF EXITS THE SITE.

MINIMIZATION OF SOIL COMPACTION: SOIL COMPACTION WILL BE MINIMIZED BY STRICTLY DELINEATING THE LIMITS OF DISTURBED AREAS.

MEASURES THAT PREVENT OR MINIMIZE GENERATION OF INCREASED STORMWATER RUNOFF: THE PROPOSED SUPER SILT FENCE WILL PROVIDE STORMWATER RATE CONTROL DURING CONSTRUCTION THROUGH THE SLOWED RELEASE OF RUNOFF.

POTENTIAL FOR THERMAL POLLUTION: ANY POTENTIAL THERMAL IMPACTS CREATED BY THE PROPOSED SITE IMPROVEMENTS WILL BE MITIGATED BY CAPTURING & MITIGATING THE INCREASED STORMWATER RUNOFF FROM PRE-DEVELOPMENT CONDITIONS TO POST-DEVELOPMENT CONDITIONS FOR THE 2-YEAR DESIGN STORM EVENT. THIS PROVISION OF SIGNIFICANT GROUNDWATER RECHARGE WILL COOL THE COLLECTED OVERLAND FLOW. THE 2-YEAR DESIGN STORM OF 3.2 INCHES REPRESENTS MORE THAN 80% OF THE ANNUAL RAINFALL. THUS, THE INCREASED RUNOFF FROM APPROXIMATELY 80% OF THE ANNUAL RAINFALL EVENTS WILL BE INFILTRATED INTO THE GROUND AND WILL NOT BE RELEASED.

OVERLAND IN ADDITION, THE PROPOSED WETLAND PLANTINGS IN THE RAIN GARDENS WILL PROVIDE NATURAL GROUND COVER ALLOWING BIOFILTRATION AND FURTHER MITIGATION OF THERMAL IMPACTS AND COOLING OF OVERLAND RUNOFF. FINALLY, BOTH RAIN GARDENS WILL DISPERSE TO A SUBSURFACE LEVEL SPREADER DEVICE THAT WILL PROMOTE SOME ADDITIONAL INFILTRATION AND COOLING OF BASIN DISCHARGE PRIOR TO RELEASE INTO THE RECEIVING WATERSHED.

GEOTEXTILE STABILIZATION REQUIREMENTS:

ALL DISTURBED SLOPES STEEPER THAN 3:1 (33%) SHALL BE IMMEDIATELY STABILIZED WITH AN APPROPRIATE EROSION CONTROL GEOTEXTILE FABRIC (NORTH AMERICAN GREEN C125 OR AN APPROVED EQUIVALENT), PERMANENT SEEDING, AND LIME AS PRESCRIBED.

PUMPED WATER FILTER BAG REQUIREMENTS:

ALL PUMPING OF SEDIMENT LADEN WATER OR POTENTIALLY SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.

EROSION CONTROL PLAN REVISION NOTICE:

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

UNFORESEEN EROSION CONDITIONS:

- SHOULD ANY UNFORESEEN EROSION CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE THE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED RUNOFF AND/OR SEDIMENT DISPLACEMENT. STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE, AND OTHER ACCEPTABLE MULCHES SHALL BE HELD IN READINESS TO IMMEDIATELY ADDRESS EMERGENCY EROSION AND SEDIMENTATION PROBLEMS.
- THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH ALL OF THE PROVISIONS OF APPROXIMATELY 84, "EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUB-PART C, PROTECTION OF NATURAL RESOURCES, ARTICLE II, WATER RESOURCES, CHAPTER 102, EROSION CONTROL."
- CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT ALL EROSION & AIR POLLUTION IS MINIMIZED. STATE AND LOCAL LAW CONCERNING POLLUTION ABATEMENT SHALL BE OBSERVED.
- MEASURES FOR THE PROTECTION OF EXISTING TREES AND SHRUBS SHALL BE TAKEN BY THE CONTRACTOR TO ELIMINATE UNNECESSARY DAMAGE.

* A COPY OF THESE EROSION AND SEDIMENTATION POLLUTION CONTROL PLANS MUST BE POSTED AND AVAILABLE AT THE CONSTRUCTION SITE IN ACCORDANCE WITH STATE AND FEDERAL LAW.

DURING CONSTRUCTION THERMAL POLLUTION:

ANY POTENTIAL THERMAL IMPACTS CREATED BY THE PROPOSED SITE IMPROVEMENTS WILL BE MITIGATED DURING CONSTRUCTION BY UTILIZING THE SILT FENCE AND STORMWATER MANAGEMENT RAIN GARDENS. IN ADDITION, RUNOFF FROM SOME OF THE IMPERVIOUS AREAS WILL EVENTUALLY FLOW INTO SWALES THAT WILL PROMOTE SOME ADDITIONAL COOLING OF WATER.

GEOLOGIC OR SOIL CONDITIONS POLLUTION:

THERE ARE NO KNOWN NATURALLY OCCURRING GEOLOGIC OR SOIL CONDITIONS ON THIS SITE THAT MAY HAVE THE POTENTIAL TO CAUSE POLLUTION AFTER EARTH DISTURBANCE ACTIVITIES ARE COMPLETED AND PCSM BMPs ARE OPERATIONAL. SHOULD SUCH CONDITIONS BE DETECTED, THE OWNER SHALL CONTACT THE PLAN ENGINEER AND THE CHESTER COUNTY CONSERVATION DISTRICT TO DISCUSS REMEDIAL ACTIONS.

IMPORTED FILL MATERIAL NOTICE:

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

SPRINGS & SEEPS NOTICE:

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

SEDIMENT TRACKING NOTICE:

SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY AND DISPOSED OF IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER, INCLUDING THE SITE'S WETLANDS OR STREAM CHANNEL.

TOPSOIL APPLICATION NOTE:

AREAS WHICH ARE TO BE TOP-SOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES (6 TO 12 INCHES ON COMPACTED SOILS) PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED (YARDS, OPEN SPACE AREAS, STORMWATER BASINS, ETC.) SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING.

SEDIMENT TRACKING NOTICE:

SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY AND DISPOSED OF IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER, INCLUDING THE SITE'S WETLANDS OR STREAM CHANNEL.

PERMANENT SEED MIXTURE:

NAME	PARTS BY WEIGHT	PERCENT PURITY	GERMINATION
KENTUCKY BLUE GRASS VARIETIES	25%	90%	85%
PENNSYLVANIA PERENNIAL RYEGRASS	25%	90%	85%
PENNSYLVANIA FESCUE	25%	90%	85%
ANNUAL RYEGRASS	25%	90%	85%

TEMPORARY SEED MIXTURE:

SITE PREPARATION: APPLY 1 TON OF AGRICULTURAL-GRADE LIMESTONE PER ACRE PLUS FERTILIZER AT THE RATE OF 50-50-50 PER ACRE. WORK INTO THE SOIL WHERE POSSIBLE. SUCCESSIONAL SEEDING: APPLY 1 TON OF AGRICULTURAL-GRADE LIMESTONE PER ACRE PLUS FERTILIZER WITH HAY OR STRAW AT A RATE OF 3 TONS PER ACRE.

SPECIES:

FOR SPRING SEEDING (UP TO JUNE 15)

	LBS/ACRE
ANNUAL RYEGRASS	96 (3 BU)
OR SPRING OATS	40
OR SPRING OATS PLUS RYEGRASS	64 LBS OATS (2BU) + 20 LBS ANNUAL RYEGRASS
OR WINTER WHEAT	180 (3 BU)
OR WINTER RYE	168 (3 BU)

FOR LATE SPRING & SUMMER SEEDING (JUNE 16 TO AUGUST 15)

ANNUAL RYEGRASS	40
OR JAPANESE OR FOXTAIL MILLET	35
OR SUDANGRASS	40
OR SPRING OATS	96 (3 BU)
OR WINTER WHEAT	180 (3 BU)
OR WINTER RYE	168 (3 BU)

FOR LATE SPRING & FALL SEEDING (AUGUST 16 AND LATER)

ANNUAL RYEGRASS	40
OR SPRING OATS (CAN BE USED BUT WILL WINTER KILL)	96
OR WINTER WHEAT	180 (3 BU)
OR WINTER RYE	168 (3 BU)

MULCH, LIME, FERTILIZER, SOD & SEED NOTES:

MULCH: APPLIED MULCH SHALL BE EITHER HAY/STRAW OR HYDROMULCH OR HYDROMULCH. MULCH SHALL BE FREE OF WEEDS AND, NOT MOLDED OR ROTTEN, AND SHALL BE APPLIED TO ALL AREAS AT A RATE OF 3 TONS PER ACRE. ON STEEP SLOPE AREAS (GREATER THAN 3:1), COVER SHOULD BE APPLIED WITH AN ACCEPTABLE GEOTEXTILE EROSION CONTROL BLANKET. ALL AREAS REQUIRING MULCH SHALL BE IMMEDIATELY ANCHORED EITHER BY CRIMPING WITH A TRACTOR GRAPIN IMPLIFIER OR WITH EMULSIFIED ASPHALT CONTAINING NO SOLVENTS OR DILUTING AGENTS TOXIC TO PLANT OR ANIMAL LIFE UNIFORMLY APPLIED AT THE RATE OF 51 GAL. PER 1,000 SQUARE YARDS.

HYDROMULCH SHALL BE COMPOSED OF WOOD FIBER OR RECYCLED PAPER AND SHALL BE MECHANICALLY APPLIED AT THE RATE OF 40 LBS PER 1,000 SQUARE FEET.

LIME: AGRICULTURAL GRADE LIME SHALL BE APPLIED TO ALL DISTURBED AREAS PRIOR TO SEEDING AT THE RATE OF FOUR (4) TONS PER ACRE.

FERTILIZER: 10-20-20 FERTILIZER SHALL BE APPLIED TO ALL DISTURBED AREAS PRIOR TO SEEDING AT THE RATE OF ONE THOUSAND (1,000) LBS PER ACRE.

SOD: KENTUCKY BLUEGRASS SOD (IF CALLED FOR) SHALL BE GROWN UNDER THE SUPERVISION OF THE PA DEPARTMENT OF AGRICULTURE BUREAU OF PLANT INDUSTRY. SOD SHALL BE COMPOSED OF ONLY BLUE GRASS CERTIFIED SEED.

SEED: ALL SEED SHALL BE FRESH. ALL NEW CROP SEED SHALL BE LABELED IN ACCORDANCE WITH THE US DEPT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT ON THE DATE OF INVIATION FOR BIDS. ALL SEED SHALL BE FURNISHED IN SCALE STANDARD TO LIST. PERCENT BY WEIGHT PURITY AND GERMINATION. THE GRASS SEED SHALL CONTAIN PERCENTAGES OF PURITY AND GERMINATION INDICATED ON THE LIST FURNISHED WITH THE APPLICABLE PLAN. SEED MAY SHALL BE AS SPECIFIED, SPREAD AT THE RATE OF 5 POUNDS PER 1,000 SQUARE FEET (MINIMUM). FOR SLOPE 3:1 OR GREATER, USE 7.5 POUNDS OF SEED PER 1,000 SQUARE FEET.

SOIL IDENTIFICATION:

SYMBOL	DESCRIPTION	HYDROLOGIC GROUP	DEPTH TO WATER	DEPTH TO BEDROCK
UBW	URBAN LAND-GLAUSTONE COMPLEX, 0 TO 8 PERCENT SLOPES	A	>80"	60"-100"
UWD	URBAN LAND-GLAUSTONE COMPLEX, 0 TO 8 PERCENT SLOPES	A	>80"	60"-100"

SOIL USE LIMITATIONS & RESOLUTIONS:

ONLY THOSE LIMITATIONS TO ON-SITE SOILS AS DESCRIBED BY APPENDIX E OF THE 2012 EROSION CONTROL MANUAL ARE ADDRESSED BELOW.

USE LIMITATION:	PROPOSED RESOLUTION(S):
1. CUTBANKS CAVE (UWB,UWD)	ALL APPLICABLE OSHA STANDARDS AND REGULATIONS WILL BE IMPLEMENTED.
2. CORROSION/TOXICITY TO CONCRETE AND/OR STEEL (UWB,UWD)	CHEMICAL PRE-TREATMENT OF ANY CONCRETE ENDS/EDGES TO PROVIDE ANTI-CORROSIVE PROPERTIES.
3. EASILY ERODIBLE (UWB,UWD)	EROSION CONTROL MATING IS PROPOSED AS APPROPRIATE.
4. HYDRIC SOILS/INCLUSIONS (UWB,UWD)	LIMITED DISTURBANCE IN ANY POTENTIAL HYDRIC AREAS.
5. SLOW PERCOLATION (UWB,UWD)	ON-SITE TESTING WAS PERFORMED TO ENSURE ADEQUATE PERCOLATION FOR BMP FACILITIES.
6. FROST ACTION (UWB,UWD)	FROST ACTION IS NOT EXPECTED TO AFFECT PROPOSED FACILITIES.
7. SHRINK/SWELL (UWB,UWD)	SHRINK/SWELL IS NOT EXPECTED TO AFFECT PROPOSED FACILITIES.

RECEIVING WATERSHED NOTICE:

THIS PROJECT IS WHOLLY LOCATED WITHIN THE WATERSHED OF TRIBUTARY 7 OF EAST CHESTER CREEK, A WATERSHED DESIGNATED THROUGH STATE STOCK FISHERY, MIGRATORY FISHERY (TSF, MP) BY THE COMMONWEALTH OF PENNSYLVANIA.

INFILTRATION FACILITY PROTECTION NOTICE:

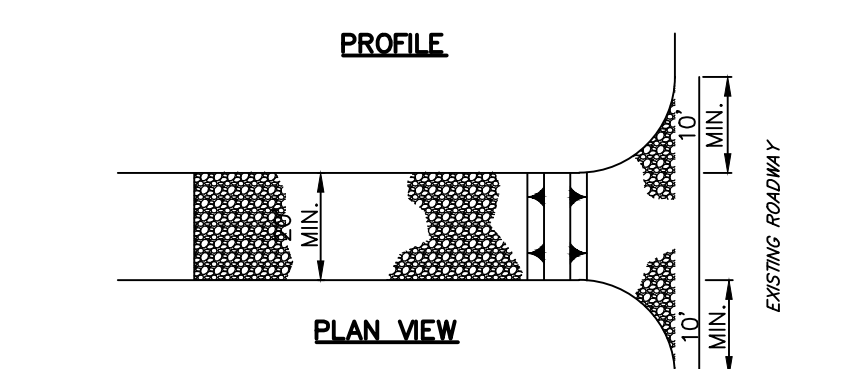
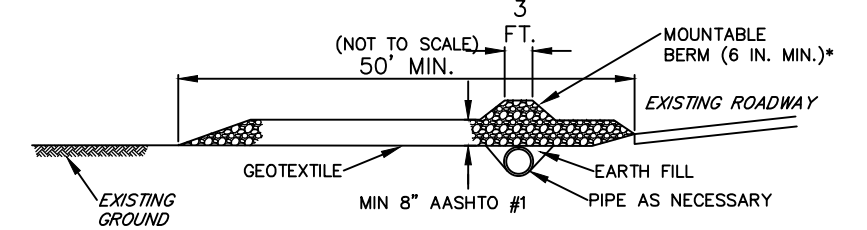
ALL PROPOSED UNDERGROUND STRUCTURAL INFILTRATION FACILITIES PROPOSED WITH THESE PLANS MUST BE PROTECTED DURING CONSTRUCTION FROM SOIL COMPACTION AND SOIL CONTAMINATION AT ALL TIMES. CONSTRUCTION OF ALL INFILTRATION FACILITIES SHALL BE STAGED IN SUCH A MANNER AS TO AFFORD THE FACILITY MAXIMUM PROTECTION FROM CONTAMINATION AND SOIL COMPACTION DURING CONSTRUCTION.

BMP MAINTENANCE REQUIREMENTS:

UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTION OF ALL EROSION AND SEDIMENTATION BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE. THE COMPLIANCE ACTIONS REQUIRED TO CORRECT ANY DEFICIENCIES WILL BE LISTED IN THE INSPECTION LOG. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES & MADE AVAILABLE TO THE DISTRICT FOR REVIEW. IF EROSION AND SEDIMENTATION BMPs FAIL TO PERFORM AS EXPECTED, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RETENING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED. WHERE BMPs ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION, THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION:

- THE LOCATION AND SEVERITY OF THE BMPs FAILURE AND ANY POLLUTION EVENTS.
- ALL STEPS TAKEN TO, REDUCE, ELIMINATE, & PREVENT RECURRENT OF NON-COMPLIANCE.
- THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.

AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs MUST BE STABILIZED IMMEDIATELY.



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

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

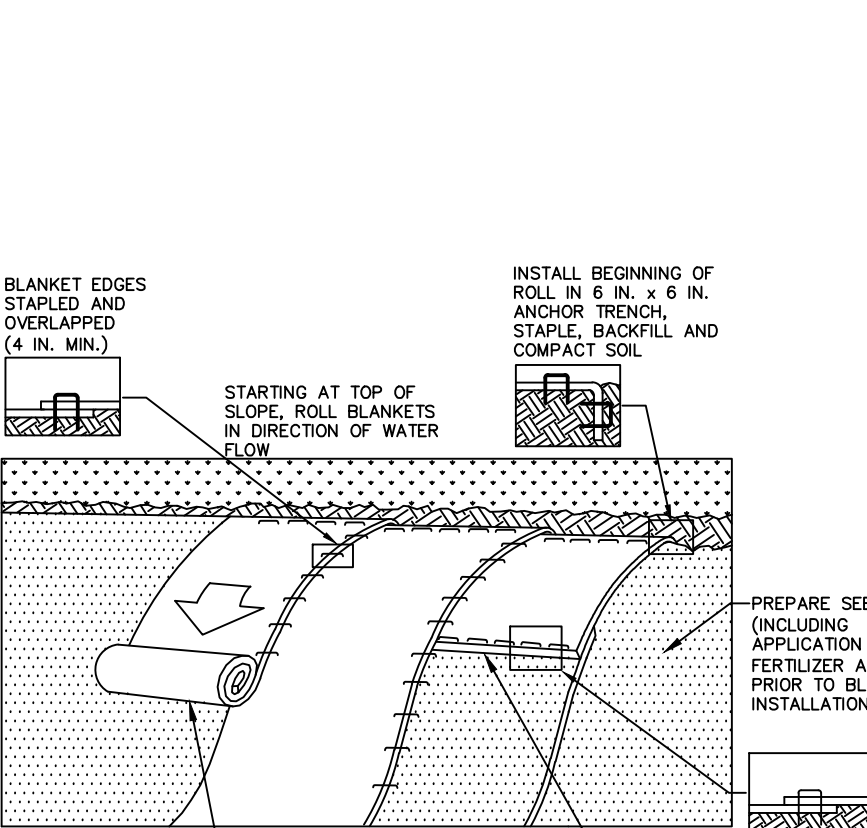
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

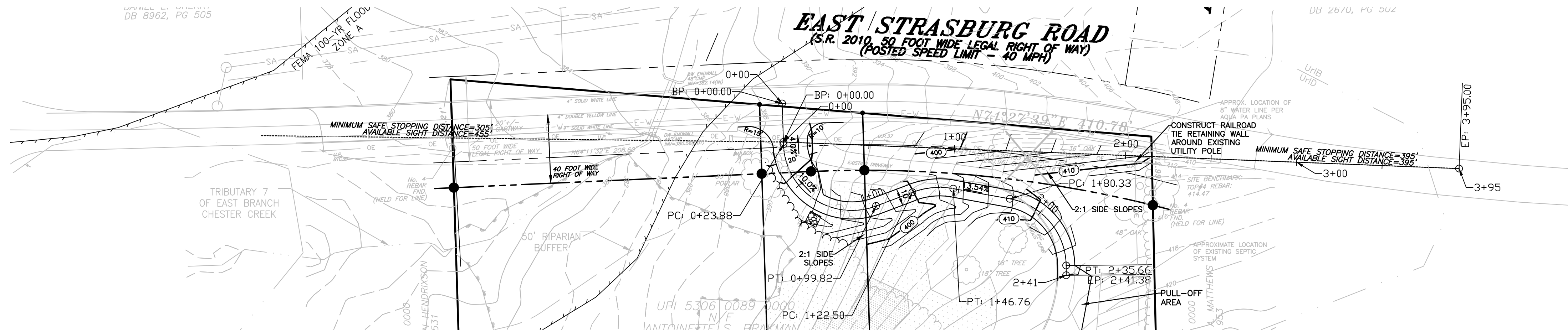
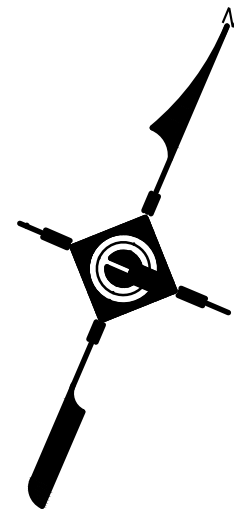
MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

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

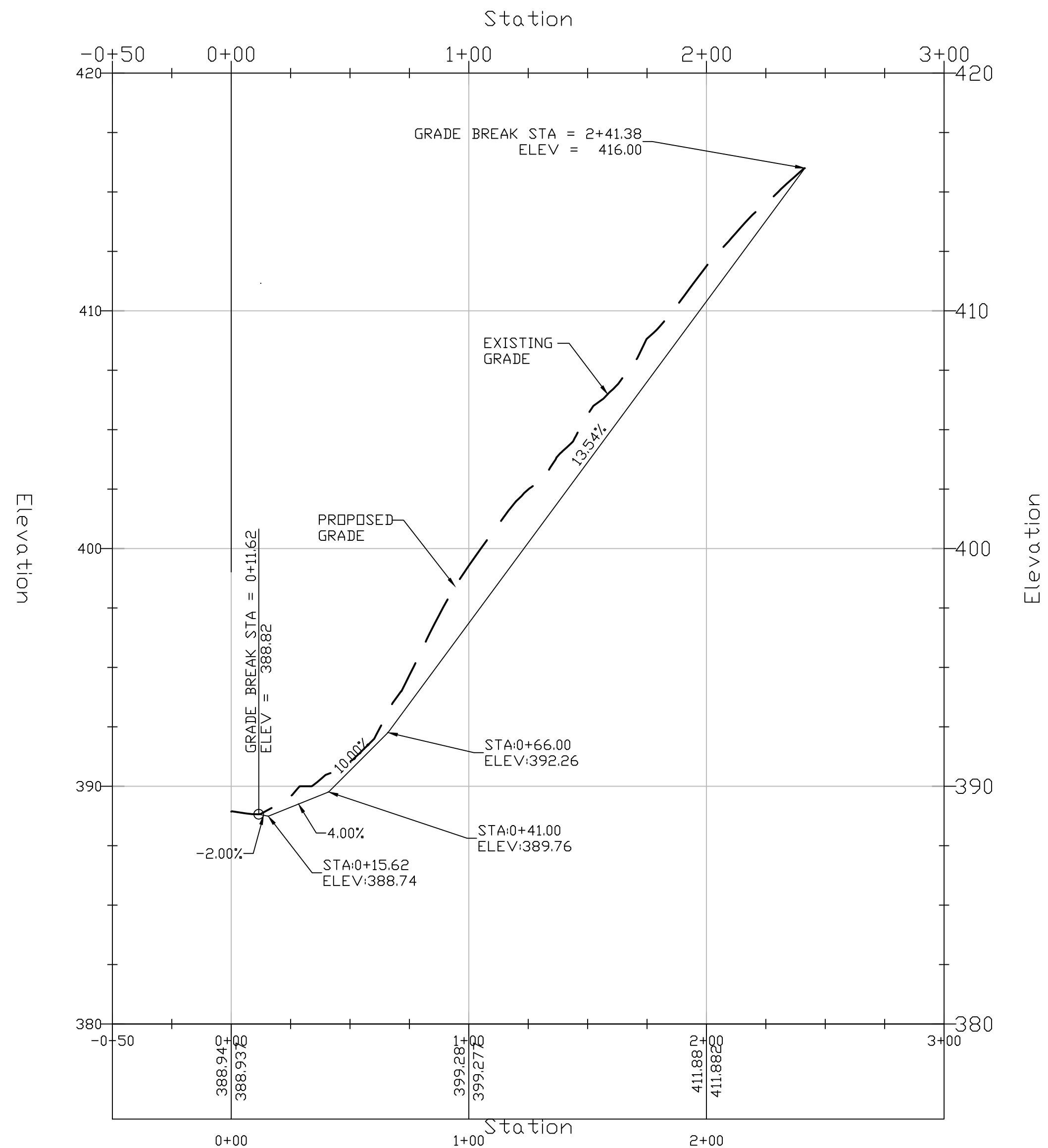
STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE

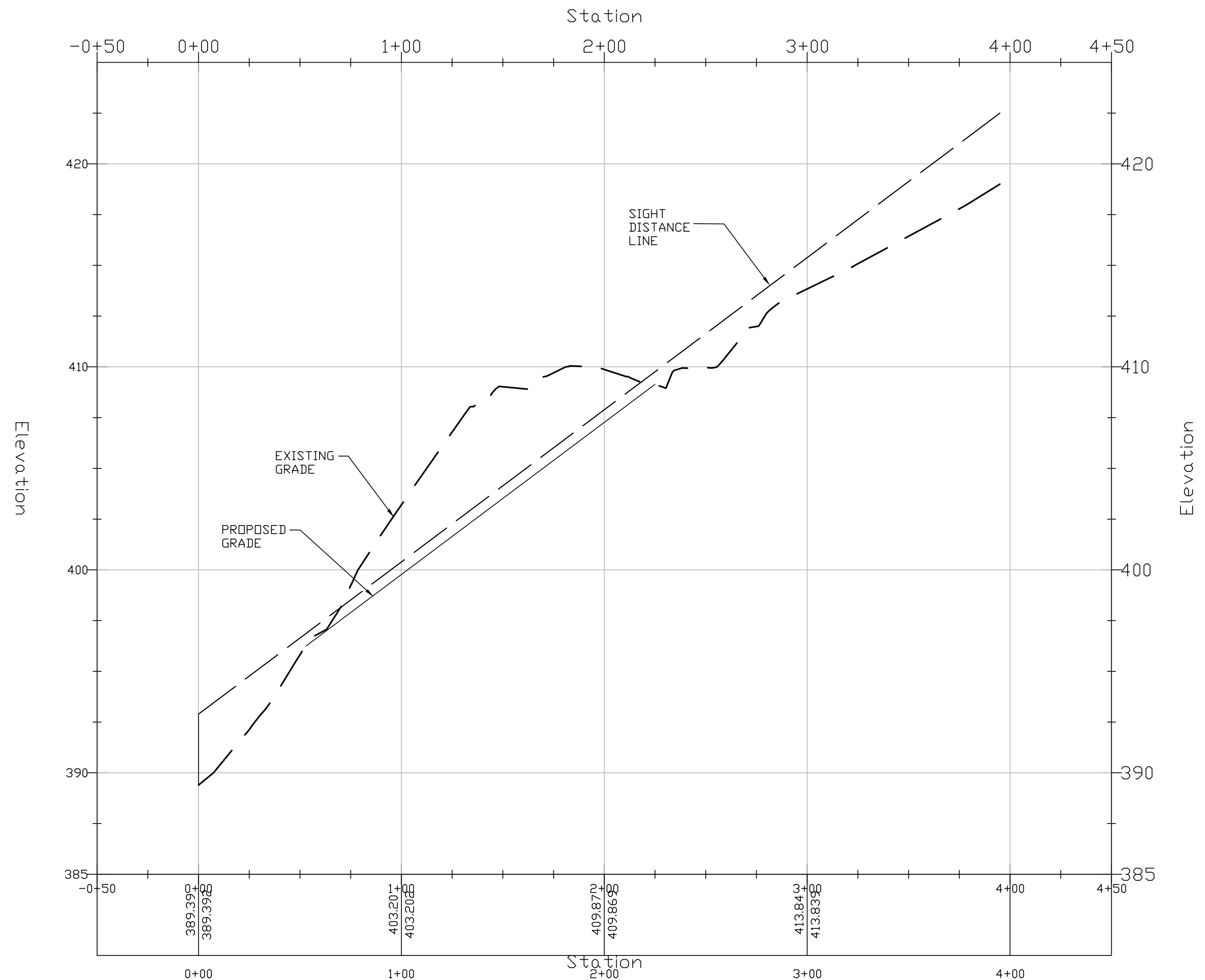




PLAN VIEW
(SCALE: 1"=40')



PROFILE VIEW (DRIVEWAY ENTRANCE)
(SCALE: 1"=4' VERTICAL; 1"=40' HORIZONTAL)



PROFILE VIEW (RIGHT SIGHT DISTANCE LINE)
(SCALE: 1"=4' VERTICAL; 1"=40' HORIZONTAL)

SIGHT DISTANCE NOTE:

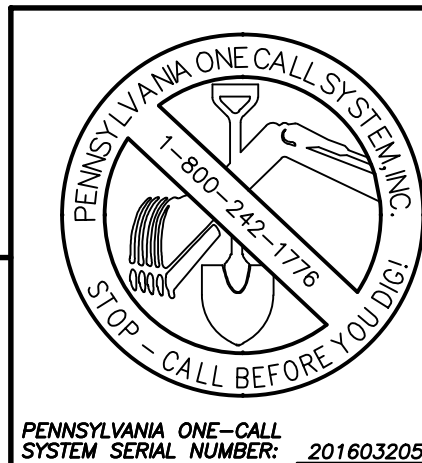
SIGHT DISTANCES TO BE FIELD VERIFIED POST-CONSTRUCTION
TO CONFIRM PROPER SIGHT DISTANCES ARE MET.

LEGEND:

- STEEP SLOPES (15% TO 25%)
STEEP SLOPES (OVER 25%)
CONCRETE SURFACE
EXISTING WETLANDS LINE
STREAM LINE
FLOOD HAZARD DISTRICT LINE
EXISTING INTERMEDIATE CONTOUR
EXISTING INDEX CONTOUR
EXISTING WOODS / TREE LINE
ADJONER LINE
EXISTING STORM SEWER LINE
EXISTING RIGHT-OF-WAY LINE
EXISTING PAVING
EXISTING SOILS LINE
PROPOSED INTERMEDIATE CONTOUR
PROPOSED INDEX CONTOUR
PROPOSED SPOT ELEVATION
PROPOSED STORM SEWER LINE
PROPOSED SANITARY SEWER LINE
PROPOSED WATER LINE
PROPOSED WOODS / TREE LINE
SUPER SILT FENCE
LIMIT OF DISTURBANCE
NORTH AMERICAN GREEN S150
TEMPORARY GEOTEXTILE BLANKET
(OR APPROVED EQUAL)
NORTH AMERICAN GREEN SC250
PERMANENT GEOTEXTILE BLANKET
(OR APPROVED EQUAL)
STABILIZED RIP-RAP
CONSTRUCTION ENTRANCE

PENNSYLVANIA ONE CALL
(PURSUANT TO ACT 361, 375, 38 AND ALL OTHER APPLICABLE AMENDMENTS) COMMONWEALTH
ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE
UTILITY LINES OR STRUCTURES SHOWN ON THIS PLAN. FOR USE BY COMMONWEALTH ENGINEERS, INC.
GUARANTEE THAT ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., ARE SHOWN.
THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATIONS OF ALL SUBSURFACE UTILITY LINES,
STRUCTURES, ETC., BEFORE THE START OF WORK. (TELEPHONE: (800) 242-1776)

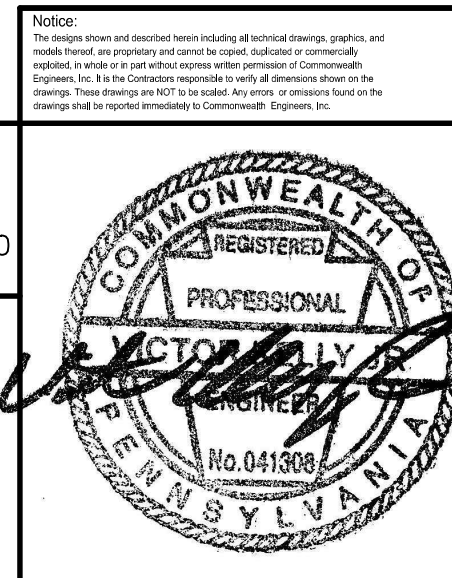
UPI No.5306-0089-0000



UNDERGROUND UTILITY USERS

PHILADELPHIA ELECTRIC COMPANY
1500 SPRINGFIELD ROAD
BERWYN, PA 19312
(610) 648-7702
AQUA PA
762 W. LANCASTER AVE.
BRYN MAWR, PA 19010
(877) 967-2762
EAST GOSHEN TOWNSHIP
1580 PAOLI PIKE
WEST CHESTER, PA 19380
(610) 692-7171
VERIZON PENNSYLVANIA INC.
3000 RUCK STREET, 6TH FLOOR
PHILADELPHIA, PA 19107
(215) 592-4151
COMCAST
RT. 52 & MONACY RD.
P.O. BOX 351
CONESTOGA, PA 19320
(800) 934-6489
WILLIAMS (TRANSOCO GAS)
2800 POST OAK BOULEVARD
HOUSTON, TX 77056
(800) 440-8475

GRAPHIC SCALE		1" = 40'		
	0	40	80	120



ENTRANCE DRIVEWAY PLAN & PROFILE

SUBDIVISION AND LAND DEVELOPMENT PLAN
(PRELIMINARY/FINAL) FOR
BRAKMAN PROPERTY

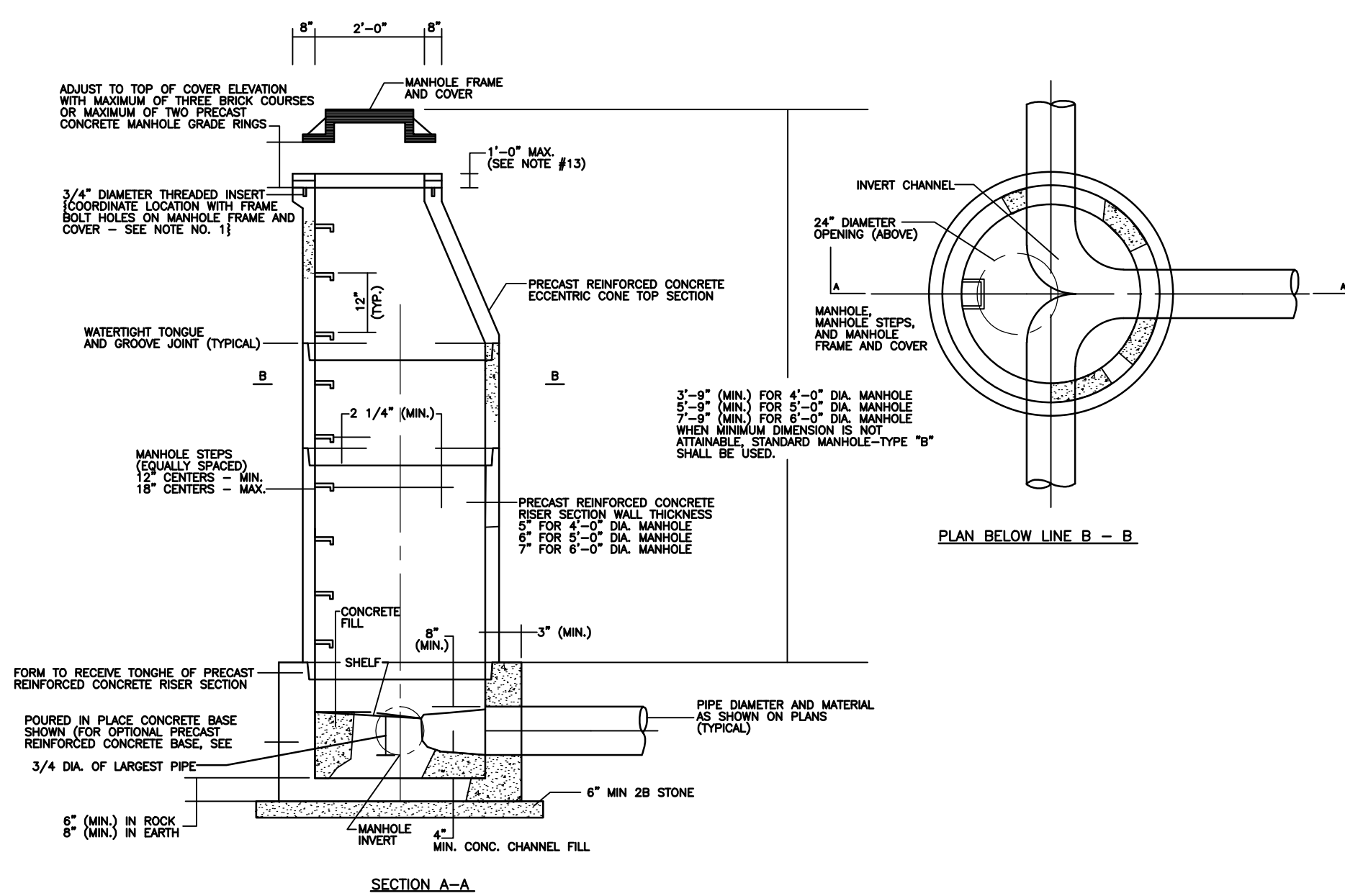
EAST GOSHEN TOWNSHIP

CHESTER COUNTY, PA



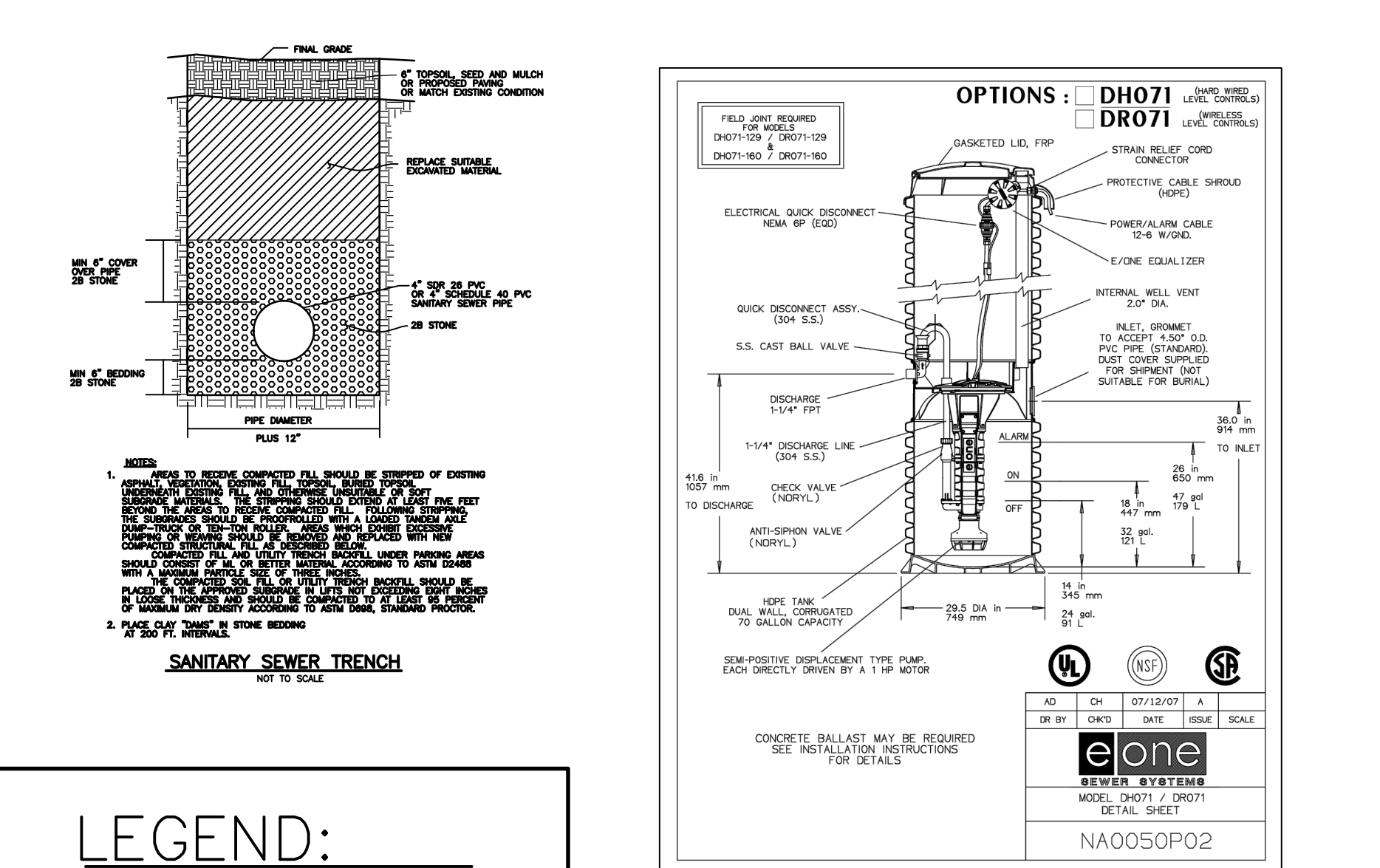
COMMONWEALTH ENGINEERS, INC.
114 EAST LANCASTER AVENUE ~ SECOND FLOOR
DOWNTOWN, PA 19335
TELEPHONE: (610) 518-9003 ~ FAX: (610) 518-9004
COMENG@CEI-1.COM

DATE:	MAY 17, 2016	SHEET:
SCALE:	AS SHOWN	
SURVEY:	MBS	
DRAWN:	TT	
CHECKED:	VK	
DRAWING NO.	201541-(C)	OF: 11



- NOTES:
1. THE DEPTH OF THE INVERT CHANNEL SHALL BE EQUAL TO 3/4 OF THE DIAMETER OF THE SEWER.
 2. THE SLOPE SHALL SLOPE TOWARD THE INVERT CHANNEL AT A RATE OF 1" PER FOOT.
 3. TYPE MANHOLES (SHALLOW TYPE) TO BE PROVIDED WHERE REQUIRED BY DEPTH CONDITIONS.
 4. FOR MANHOLES HAVING 3' DIA. AND 6' DIA. BASE REDUCTION IN DIA. TO 4" SHALL START AT THE FIRST JOINT ABOVE THE INVERT.
 5. ALL MANHOLE FRAMES SHALL BE BOLTED TO THE CONE SECTION WITH 4-3/4" DIA. BOLTS WITH WASHERS AND NUTS. BOLTS TO BE AT 90°/27 ON THE BOLT CIRCLE FOR WATER TIGHT COVERS USE 4-3/4" DIA. BOLTS AT 90°/27 ON THE BOLT CIRCLE.
 6. USE THE SPECIFICATIONS FOR LENGTH OF PIPE CONNECTIONS TO MANHOLE.
 7. ALL CONCRETE SHALL BE 4000 P.S.I. MINIMUM, USING TYPE I PORTLAND CEMENT.
 8. ENTIRE OUTSIDE SURFACE OF MANHOLE SHALL RECEIVE TWO COATS OF BITUMINOUS COATING. KOP-CONC. INC. BITUMASTIC NO. 300-41 THEMED 48H-413 THEMED TAR OR APPROVED EQUAL.
 9. APPLIED AT 20 MILS. MINIMUM THICKNESS.
 10. MANHOLE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ASTM D478.
 11. MANHOLE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ASTM D478.
 12. 4" DIA. MANHOLE - 6" TO 15" PIPES. 6" DIA. MANHOLE - 16" TO 30" PIPES. 6" DIA. MANHOLE - 30" TO 48" PIPES.
 13. WHEN TWO OR MORE GRADE ADJUSTMENT RINGS ARE USED, A WATER TIGHT PVC CONNECTOR SHALL BE INSTALLED BETWEEN THE FRAME AND THE CONE. CONNECTOR SHALL BE WATER-LOK CONNECTOR OR ANTI-FLOATING BE A-LON PRODUCTS, INC. OR APPROVED EQUAL.
 14. MANHOLES THAT RECEIVE FORCE MAIN DISCHARGE OR THAT ARE LOCATED ON INTERCEPTORS OR TRUNK SEWERS SHALL BE CONSTRUCTED WITH A PVC LINER.

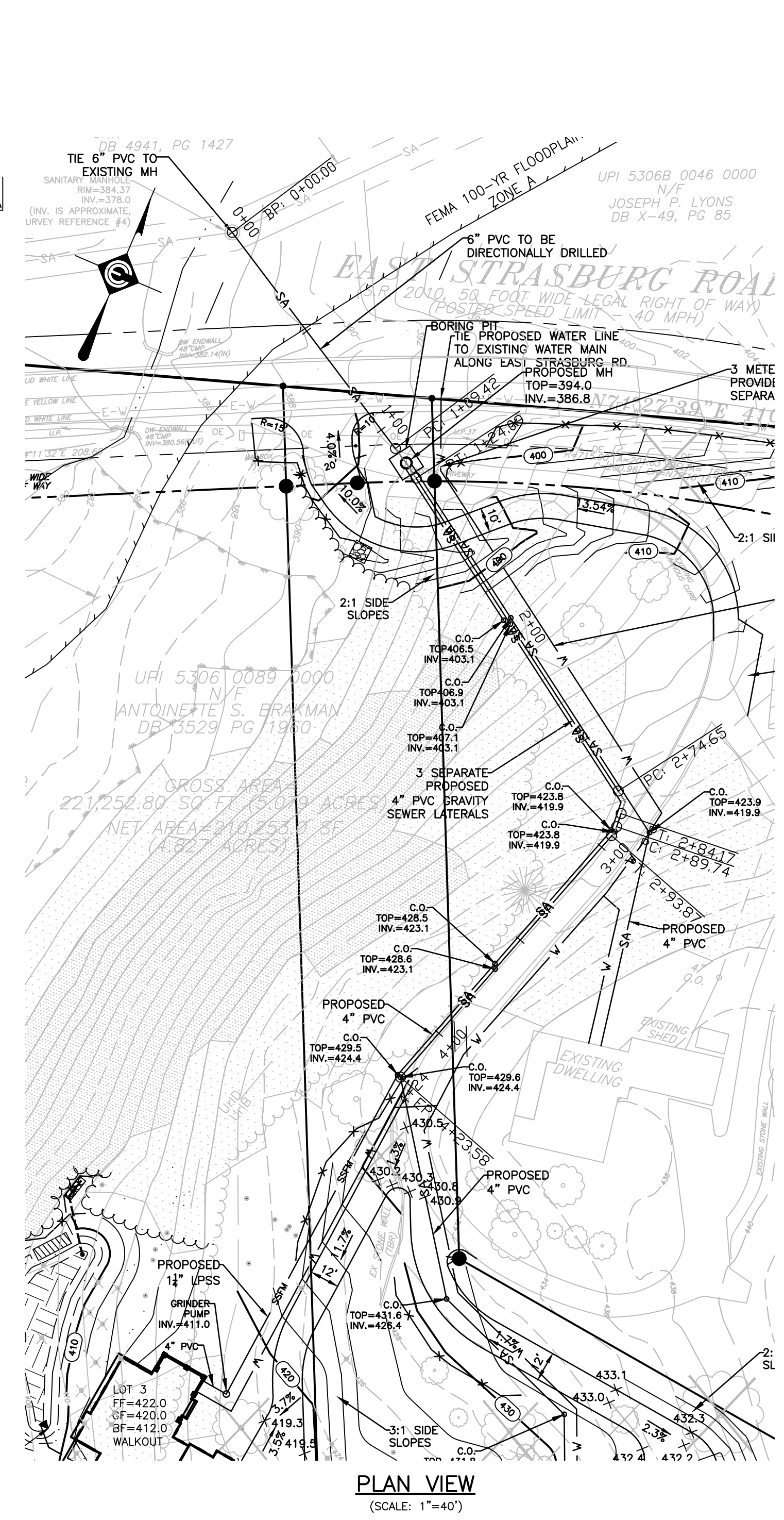
TYPE "A" STANDARD MANHOLE
NOT TO SCALE



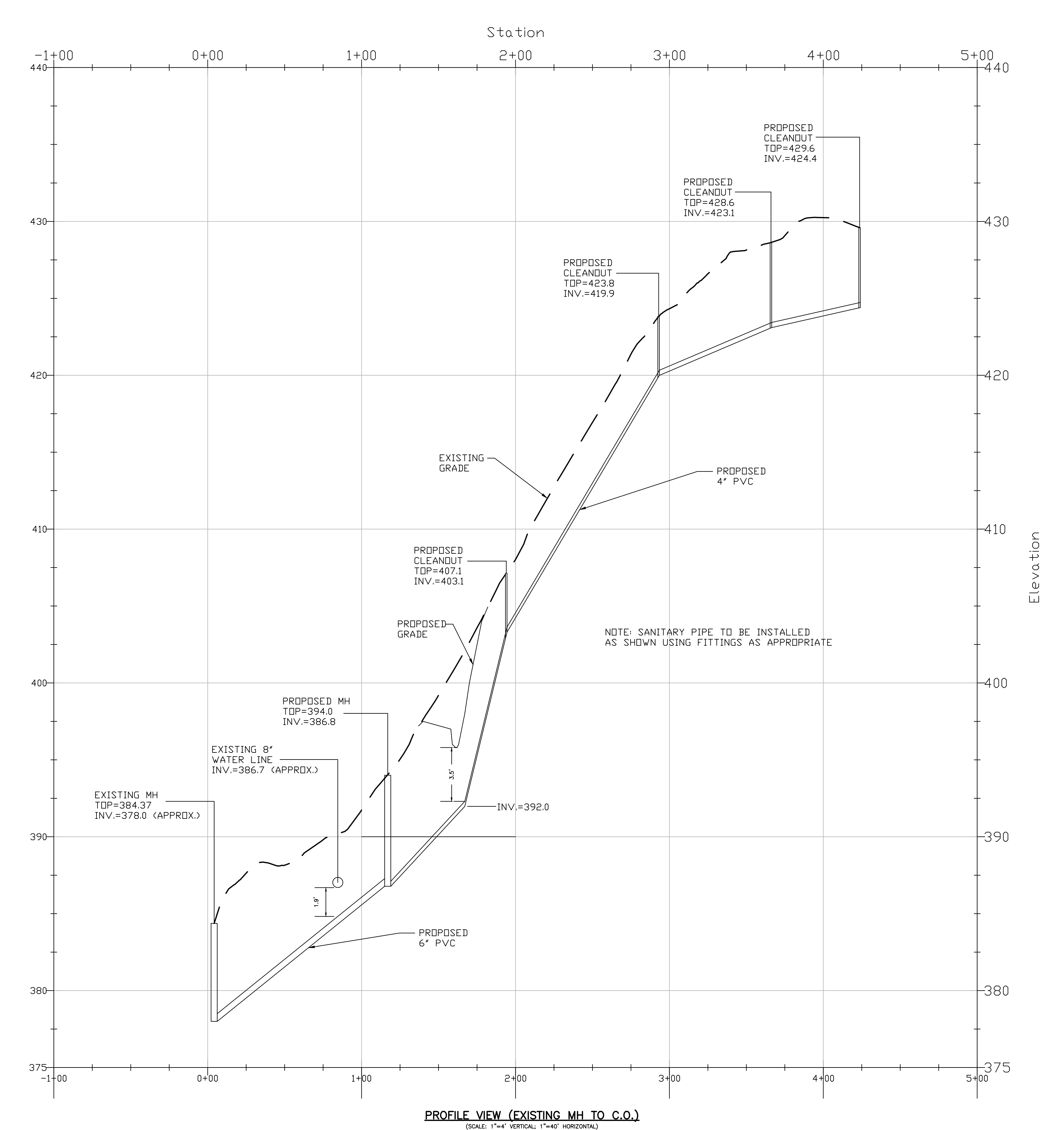
- LEGEND:**
- STEEP SLOPES (15% TO 25%)
 - STEEP SLOPES (OVER 25%)
 - CONCRETE SURFACE
 - EXISTING WETLANDS LINE
 - STREAM LINE
 - FLOOD HAZARD DISTRICT LINE
 - EXISTING INTERMEDIATE CONTOUR
 - EXISTING INDEX CONTOUR
 - EXISTING WOODS / TREE LINE
 - ADJOURNER LINE
 - EXISTING STORM SEWER LINE
 - EXISTING RIGHT-OF-WAY LINE
 - EXISTING PAVING
 - EXISTING SOILS LINE
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 - PROPOSED INDEX CONTOUR
 - PROPOSED SPOT ELEVATION
 - PROPOSED STORM SEWER LINE
 - PROPOSED SANITARY SEWER LINE
 - PROPOSED WATER LINE
 - PROPOSED WOODS / TREE LINE
 - SUPER SILT FENCE
 - LIMIT OF DISTURBANCE
 - NORTH AMERICAN GREEN S150 TEMPORARY GEOTEXTILE BLANKET (OR APPROVED EQUAL)
 - NORTH AMERICAN GREEN S250 PERMANENT GEOTEXTILE BLANKET (OR APPROVED EQUAL)
 - STABILIZED RIP-RAP CONSTRUCTION ENTRANCE

PENNSYLVANIA ONE CALL
(FOR SUBSURFACE UTILITY LOCATIONS) COMMONWEALTH ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY LINES SHOWN ON THE PLAN. FOR SUBSURFACE UTILITY LINES, LOCATIONS, DEPTHS, ETC., BEFORE THE START OF WORK. TELEPHONE: (800) 242-1776

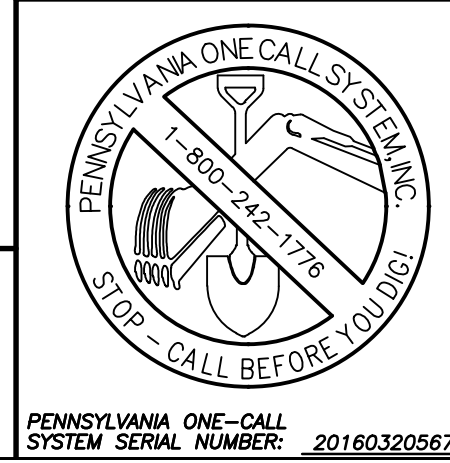
UPI No.5306-0089-0000



- INSTALLATION NOTES:**
1. SANITARY PIPE TO BE INSTALLED AS SHOWN USING FITTINGS (45 DEGREES OR LESS) AS APPROPRIATE.
 2. GRINDER PUMP DISCHARGE PIPING SHALL BE BEDDED IN EITHER SAND OR SCREENINGS. THE BEDDING SHALL BE AT LEAST 4 INCHES THICK. AFTER THE DISCHARGE PIPING HAS BEEN TESTED AND INSPECTED, AN ADDITIONAL 12 INCHES OF SAND OR SCREENINGS SHALL BE PLACED OVER THE PIPE.
 3. ALL GRAVITY SEWER PIPES FROM THE HOUSES TO INCLUDE A FRESH AIR VENT, A BUILDING TRAP, AND CLEANOUTS (AS SHOWN ON THE PLAN) TO BE INSTALLED PER EAST GOSHEN TOWNSHIP ORDINANCE SECTION 188-31.C.



PROFILE VIEW (EXISTING MH TO C.O.)
(SCALE: 1"=4' VERTICAL; 1"=40' HORIZONTAL)



UNDERGROUND UTILITY USERS

PHILADELPHIA ELECTRIC COMPANY
1500 SPRINGFIELD ROAD
BERWYN, PA 19312
(610) 648-7702

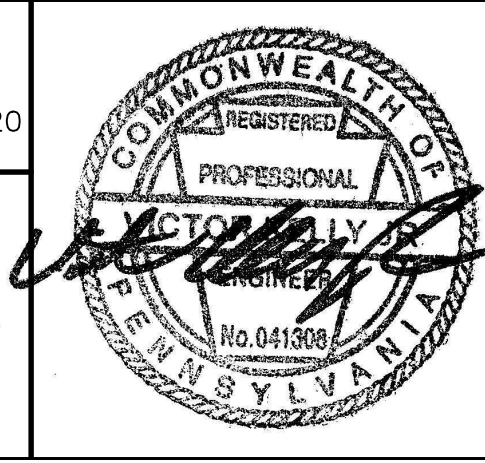
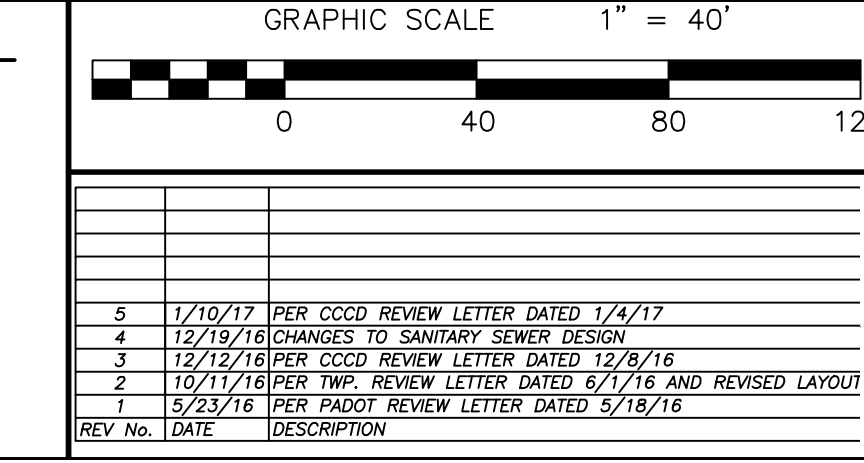
AQUA, PA.
762 W. LANCASTER AVE.
BRYN MAWR, PA 19010
(877) 967-2762

EAST GOSHEN TOWNSHIP
1580 PAOLI PIKE
WEST CHESTER, PA 19380
(610) 692-1771

VERIZON PENNSYLVANIA INC.
500 WICK STREET, 8TH FLOOR
PHILADELPHIA, PA 19107
(215) 592-4151

COMCAST
RT. 82 & MONACY RD.
P.O. BOX 351
CONESTOGUE, PA 19330
(800) 934-6489

WILLIAMS (TRANSOCO GAS)
2900 FIRST OAK BOULEVARD
HOUSTON, TX 77056
(800) 440-8475



SANITARY SEWER PROFILE AND DETAILS

SUBDIVISION AND LAND DEVELOPMENT PLAN
(PRELIMINARY/FINAL) FOR
BRAKMAN PROPERTY

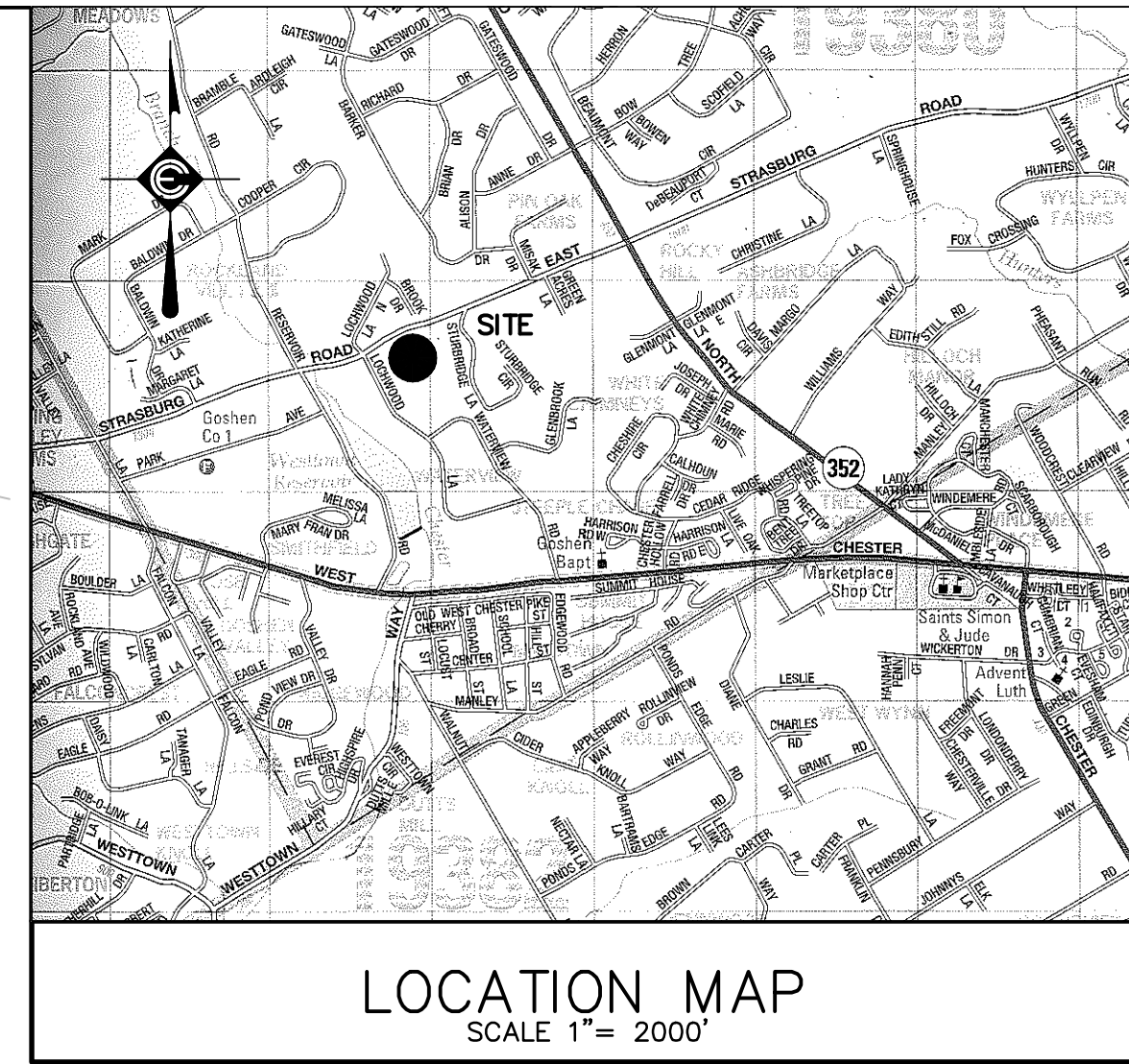
EAST GOSHEN TOWNSHIP
CHESTER COUNTY, PA

DATE: MAY 17, 2016
SCALE: AS SHOWN
SURVEY: MBS
DRAWN: JT
CHECKED: VK
DRAWING NO. 201541-(C)

COMMONWEALTH ENGINEERS, INC.
114 EAST LANCASTER AVENUE ~ SECOND FLOOR
DOWNTOWN, PA 19335
TELEPHONE: (610) 518-9003 ~ FAX: (610) 518-9004
COMENG@CEI-1.COM

10

OF: 11



- GENERAL NOTES:**
- RECORD OWNER: ANTOINETTE BRAKMAN, 1420 E. STRASBURG ROAD, WEST CHESTER, PA 19380, UPI 5306-0089-0000 (TAX #53-6-89), PHONE: (610) 436-0152. DEED REFERENCES: DB 3529, PG. 1960.
 - SITE ADDRESS: 1420 E. STRASBURG ROAD, WEST CHESTER, PA 19380.
 - TRACT AREA: 221,252.80 SQ. FT. / 5.079 ACRES (GROSS). LESS 40' ROAD RIGHT-OF-WAY: 17,152.849 SQ. FT. / 0.394 ACRES. NET TRACT AREA: 4.685 ACRES (NET).
 - BOUNDARY AND PARTIAL TOPOGRAPHY FROM FIELD SURVEY PERFORMED BY COMMONWEALTH ENGINEERS, INC., APRIL 2016. BENCHMARK: NO. 4 REBAR FOUND, NORTHEAST CORNER OF SITE. DATUM: ASSUMED USGS.
 - WETLANDS DELINEATION BY VORTEX ENVIRONMENTAL, INC. AND SURVEYED BY COMMONWEALTH ENGINEERS, INC. IN MAY 2016.
 - SOIL CLASSIFICATIONS FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) NATURAL RESOURCE CONSERVATION DISTRICT WEB SOIL SURVEY, IN AUGUST, 2014.
 - UNDERGROUND UTILITIES SHOWN HEREON WERE PROVIDED FROM OBSERVABLE EVIDENCE AT THE TIME OF SURVEY AND THROUGH INFORMATION PROVIDED BY THE UTILITY COMPANIES WHICH SERVICE/OCCUPY THE SITE. NO GUARANTEE IS MADE THAT UNDERGROUND UTILITIES ARE ACCURATELY OR COMPLETELY SHOWN HEREON. THE SITE CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO BEGINNING CONSTRUCTION.
 - THE SITE IS SERVED BY PUBLIC WATER (AQUA PA).
 - EXISTING SANITARY SYSTEM PRESENT ON SITE BUT NOT LOCATED.
 - EXISTING IRON PINS ARE SHOWN AS THUS "O".
 - THE DEVELOPER SHALL CONFORM TO OR CAUSE CONFORMANCE WITH ALL OF THE APPLICABLE REQUIREMENTS OF THIS PLAN AND THE EAST GOSHEN TOWNSHIP ZONING ORDINANCE AND SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AS WELL AS OTHER APPLICABLE LOCAL, STATE AND FEDERAL LAWS, STATUTES, REGULATIONS AND ORDINANCES.
 - THE DEVELOPER SHALL NOTIFY UNDERGROUND UTILITY USERS AT LEAST THREE DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION IN ACCORDANCE WITH PA ACT 287 OF 1974, AS AMENDED BY ACT 187 OF 1996 & ALL OTHER APPLICABLE AMENDMENTS, AS WELL AS CONFORM TO APPLICABLE REGULATIONS OF SAID ACTS. UNDERGROUND UTILITIES SHOWN ARE FROM SURFACE EVIDENCE OBSERVABLE IN THE FIELD AND AS MARKED BY THE UTILITY COMPANIES.
 - FEMA FLOODPLAIN BOUNDARY TAKEN FROM FLOOD INSURANCE RATE MAP, PANEL 215F, MAP NUMBER 4202020215F, DATED SEPTEMBER 29, 2006.
 - THIS PROJECT IS LOCATED IN THE WATERSHED OF TRIBUTARY 7 OF EAST BRANCH CHESTER CREEK WHICH HAS THE DESIGNATION OF TROUT STOCK FISHES (TSF, MF) BY THE COMMONWEALTH OF PENNSYLVANIA.
 - THIS PROJECT PROPOSES THE SUBDIVISION OF THE EXISTING LOT INTO 3 SEPARATE LOTS WITH EACH LOT TO BE SERVED BY PUBLIC WATER AND PUBLIC SEWER. PUBLIC SEWER TO BE THROUGH LOW PRESSURE FORCE MAIN TIED INTO AN EXISTING MANHOLE AS SHOWN.

- SURVEY REFERENCE NOTES**
- PLAN ENTITLED "BOUNDARY SURVEY PLAN FOR MS. ANTOINETTE BRAKMAN", PREPARED BY R.H. SMITH SURVEYORS, DATED MARCH 27, 2007.
 - PLAN ENTITLED "REVERSE SUBDIVISION/SUBDIVISION PLAN FOR MICHAEL RIZZO", PREPARED BY BRANDYWINE VALLEY ENGINEERS, A DIVISION OF VOLLMER ASSOCIATES, LLP, CONSULTING ENGINEERS AND LAND SURVEYORS, DATED NOVEMBER 30, 2001.
 - PECO BLANKET RIGHT-OF-WAY CONTAINED IN MISCELLANEOUS DB 81, PG. 452.
 - PLAN ENTITLED "THE GAMBOINE BROTHERS INC.", PREPARED BY HENRY S. CONKEY INC., DIVISION OF CHESTER VALLEY ENGINEERS, DATED JUNE 6, 1973 (LAST REVISED SEPTEMBER 9, 1973).

LANDSCAPE NOTE
FOUNDATION PLANTINGS TO BE PROVIDED BY BUILDER.

TREE REMOVAL QUANTITIES

SUBDIVISION AND LAND DEVELOPMENT ORIGINANCE SECTION	QUANTITY OF EXISTING TREES ON SITE	QUANTITY OF TREES ALLOWED TO BE REMOVED	QUANTITY OF TREES TO BE REMOVED	PERCENTAGE OF TREES TO BE REMOVED
205-61C	336	67	42	12.5

LANDSCAPE PLAN

SUBDIVISION AND LAND DEVELOPMENT PLAN (PRELIMINARY/FINAL) FOR BRAKMAN PROPERTY

EAST GOSHEN TOWNSHIP

CHESTER COUNTY, PA

DATE: MAY 17, 2016

SHEET: 11

SCALE: 1"=40'

SURVEY: MBS

DRAWN: TT

CHECKED: VK

DRAWING NO. 201541-(C)

OF: 11

COMMONWEALTH ENGINEERS, INC.

114 EAST LANCASTER AVENUE ~ SECOND FLOOR

DOWNTOWN, PA 19335

TELEPHONE: (610) 518-9003 ~ FAX: (610) 518-9004

COMENG@CEI-1.COM

LEGEND:

STEEP SLOPES (15% TO 25%)

STEEP SLOPES (OVER 25%)

CONCRETE SURFACE

EXISTING WETLANDS LINE

STREAM LINE

FLOOD HAZARD DISTRICT LINE

EXISTING INTERMEDIATE CONTOUR

EXISTING INDEX CONTOUR

EXISTING WOODS / TREE LINE

ADJONNER LINE

EXISTING STORM SEWER LINE

EXISTING RIGHT-OF-WAY LINE

EXISTING PAVING

EXISTING SOILS LINE

PROPOSED INTERMEDIATE CONTOUR

PROPOSED INDEX CONTOUR

PROPOSED SPOT ELEVATION

PROPOSED STORM SEWER LINE

PROPOSED SANITARY SEWER LINE

PROPOSED WATER LINE

PROPOSED WOODS / TREE LINE

SUPER SILT FENCE

LIMIT OF DISTURBANCE

NORTH AMERICAN GREEN S150 TEMPORARY GEOTEXTILE BLANKET (OR APPROVED EQUAL)

NORTH AMERICAN GREEN SC250 PERMANENT GEOTEXTILE BLANKET (OR APPROVED EQUAL)

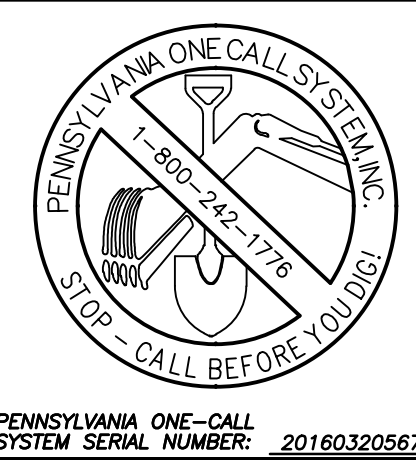
STABILIZED RIP-RAP CONSTRUCTION ENTRANCE

PENNSYLVANIA ONE CALL

(PERMANENT TO ACT 125, 125.08 AND ALL OTHER APPLICABLE AMENDMENTS) COMMONWEALTH ENGINEERS, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY LINES OR THE DESIGNATION OF THE LINES, NOR DOES COMMONWEALTH ENGINEERS, INC. GUARANTEE THAT ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., ARE SHOWN.

THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATIONS OF ALL SUBSURFACE UTILITY LINES, STRUCTURES, ETC., BEFORE THE START OF WORK. TELEPHONE: (800) 242-1776

UPI No.5306-0089-0000



UNDERGROUND UTILITY USERS

PHILADELPHIA ELECTRIC COMPANY
1520 SPRINGFIELD ROAD
BERWYN, PA 19312
(610) 648-7702

AQUA PA
762 W. LANCASTER AVE.
BRYN MAWR, PA 19010
(877) 967-2762

EAST GOSHEN TOWNSHIP
2800 FIRST OAK BOULEVARD
HOUSTON, TX 77056
(610) 692-1171

VERIZON PENNSYLVANIA INC.
300 ROCK STREET, 6TH FLOOR
PHILADELPHIA, PA 19107
(215) 592-4151

COMCAST
601 E. 82 & MONACY RD.
P.O. BOX 351
CONELAND, PA 19320
(800) 934-6489

WILLIAMS (TRANSOCO GAS)
2000 FIRST OAK BOULEVARD
HOUSTON, TX 77056
(800) 440-8475

GRAPHIC SCALE 1" = 40'

0	40	80	120
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REV	NO.	DATE	DESCRIPTION
1	1/10/17	PER CCOD REVIEW LETTER DATED 1/4/17	
2	12/15/16	CHANGES TO SANITARY SEWER DESIGN	
3	12/12/16	PER CCOD REVIEW LETTER DATED 12/8/16	
2	10/17/16	PER TWP. REVIEW LETTER DATED 8/1/16 AND REVISED LAYOUT	
1	12/23/16	PER TWP. REVIEW LETTER DATED 5/18/16	



Memorandum

East Goshen Township
1580 Paoli Pike
West Chester, PA 19380

Voice: 610-692-7171
Fax: 610-692-8950
E-mail: mgordon@eastgoshe.org

Date: 1/26/2017
To: Planning Commission
From: Mark Gordon, Township Zoning Officer *mlb*
Re: 1420 E. Strasburg Rd. - SD/LD Application

Dear Commissioners,

The Township has received revised subdivision documents for the Brakman SD/LD application. As you know, this is a 5 acre wooded parcel in the R-2 District, is proposed to be subdivided into three lots. The property will use the existing driveway on E. Strasburg Rd. however alignment and sight distance modifications will be made to improve safety in accordance with the PennDOT approval. The existing home will be saved and two new Single Family homes will be constructed. All three new lots will be served by public water and public sanitary sewer. The applicant is seeking the Planning Commission recommendation for approval to include the following waiver from the Subdivision Ordinance:

1. 205-31 - Combine Prelim and Final Plan Approval
 - a. Staff has no objection to this request.

The Township engineer, staff, the applicants engineer and the applicant have worked closely over the last 6+ months on a number of the major issues identified during the initial discussions in the summer of 2016. Some of the major issues were:

1. Tree removal and the absence of a tree plan or landscape plan
2. Location of SWM rain gardens
3. The extend of the grading proposed
4. Sanitary Sewer
5. Driveway access and safety

The applicant has addressed most of the main issues in the revised plan submission however there are still details to be cleaned up. At this time staff is not recommending approval by the PC at this time due to the number of outstanding comments on the engineers' letter and the absence of a Landscape Plan and a recommendation from the Conservancy Board.

The Township has until March 29, 2017 to render a decision on this application, which would require a Planning Commission recommendation on or before March 15th.



One South Church Street
Second Floor
West Chester, PA 19382
T: 610-429-8907
F: 610-429-8918

www.pennoni.com

January 26, 2017

EGOS 0118

Mark A. Gordon
Director of Code Enforcement/Zoning Officer
East Goshen Township
1580 Paoli Pike
West Chester, PA 19380

**RE: 1420 E. Strasburg Road, Brakman Property
Preliminary/Final Subdivision and Land Development – 3rd Submission**

Dear Mark:

As requested, we have reviewed the following information, prepared by Commonwealth Engineers, Inc., regarding the referenced submission:

- *"Subdivision and Land Development Plan for Brakman Property"* (ten sheets) dated May 17, 2016, last revised October 11, 2016;
- *"Post-Construction Stormwater Management Plan Narrative prepared for Brakman Property"* dated May 17, 2016, last revised October 24, 2016; and
- Subdivision and Land Development application and supporting documents.

The owner, Antoinette Brakman, proposes to subdivide UPI No. 53-6-89 (5.079 acres) into three residential lots; new single family dwellings are proposed for both Lot 2 (1.243 acre) and Lot 3 (2.086 acre). There is an existing dwelling on Lot 1 that will remain. All lots will be served by on-site water and public sanitary sewer. The parcel is located on the south side of E. Strasburg Road (SR 2010), 400± feet east of its intersection with Lochwood Lane, within the R-2 Low Density Residential zoning district. A shared driveway will provide access to all three lots.

The applicant has requested the following waiver:

1. From §205.1 requiring a preliminary plan submission.

The following comments from our December 5, 2016 review letter remain outstanding (new comments in *italics*):

SANITARY SEWER

1. The elevations of the existing manhole on the Kaplan property should be field surveyed to confirm the actual elevations.

Remains outstanding. The manhole needs to be field surveyed now that a gravity sewer connection is proposed.

2. We recommend the inclusion of an additional detail showing the connection of the LPSS lines to the new manhole. Detail and notes should include, at minimum:
 - a. LPSS discharge pipes to enter connecting manhole at bottom of manhole.
 - b. Details on discharge piping into flow channel within manhole.
 - c. That manhole wall openings should be precast with A-lok gaskets.

The sewage system has been redesigned to no longer discharge the force main into this manhole. However, a detail should be included that shows the connection/orientation of the three 4-inch PVC gravity lines into the new manhole with flow channel(s).

3. We recommend that interior of the new manhole be lined with a Duraplate-type liner, or equal, since the manhole will be subject to hydrogen sulfide deterioration from the pressure sewers. The interior of the existing manhole on the Kaplan property should also be lined with a Sprayroq polyurethane liner, or equal, to mitigate the same deterioration.

An additional manhole has been proposed on the subject property with Standard Manhole Detail Note #14 on Sheet 10 stating that any manhole receiving force main discharge should be lined with a PVC liner. For clarity, this note should call out the referenced manhole specifically and state that it shall receive a Duraplate-type PVC liner or approved equal.

4. We recommend the inclusion of additional details or notes regarding the gravity sewer lateral from the house to the grinder pump including, at minimum, pipe material, size, cleanout, trap, and vent cap.

Installation Note #3 has been added on Sheet 10 that all gravity sewer pipes should be installed as per §188-31.C. This note should also reference the "East Goshen Township Sewer Lateral/Building Sewer Detail" if not including the detail on this plans. We recommend that the detail be added to the plans to ensure compliance.

5. Plan views propose the Lot 3 grinder pump invert elevation as 411.0 feet. Proposed grade at this location is approximately 420 feet. The literature submitted for the E/ONE model DH071-93/DR071-93 grinder pump shows that cover to grade above the 4-inch gravity invert is only 55-inches. This is not consistent with the elevations on the plan.

6. Plans notes should state that there shall be a spare pump on-site. (§188-33.B.(2)(a))

7. The sewer system design has been revised to eliminate grinder pumps from Lots 1 and 2 in favor of gravity sewer systems. Lot 3 retains the grinder pump and now has a proposed pressure sewer for approximately 150 feet whereupon it transitions to a 4-inch PVC gravity sewer at a cleanout. An additional manhole has been proposed on the subject property, and directional drilling is proposed for the new main to connect to the existing manhole on the Kaplan property. Comments on the redesign follow:

- a. We typically do not recommend horizontal directional drilling (HDD) gravity sewers due to the rocky conditions in the area and potential of the drill and ultimately the sewer to fluctuate vertically and horizontally resulting in sags and blockages. We also question the feasibility to drill directly into the existing manhole and pull the pipe through. However, since the sewer is proposed with a steep approx. 9% slope, we would not object to HDD in this case under the following conditions and at the Applicant's own risk; if the conditions are not met, the Applicant would need to remove and replace the sewer, likely via open cut, with an acceptable sewer line at his cost:

1. The pipe should be fused HDPE DR11 instead of PVC.

2. It shall pass a mandrel test for the installed pipe size.
 3. It shall pass a CCTV inspection to the satisfaction of the Township.
 4. It shall pass a lamp test to the satisfaction of the Township.
 5. The pipe shall pass a pressure test.
 - b. The proposed gravity sewer main shall be 8" diameter instead of 6-inch diameter. (§205-71.B.(4)(d)[1])
 - c. When sewer lines are designed with a grade in excess of 20%, steep slope anchors shall be installed. (§205-71.B.(4)(d)[3]) One section of the gravity sewer laterals, from approximately 1+65 to 1+90 on the Sheet 10 profile, has a slope of approximately 40%. Steep slope anchors need to be included in the design for this stretch of piping with details added to the plans.
 - d. Cleanouts need to be added to each lateral pipe at the right of way line. (§188-31.C.(3)(a)) The Township will then be responsible for the laterals from cleanouts to manhole.
 - e. A note should be added to the plans that the 8-inch sewer main and the proposed manhole will be dedicated to East Goshen Township.
 - f. A transition coupling detail should be added for the Lot 3 pipe transition from pressure to gravity sewer.
 - g. A detail should be added for the connection of the proposed gravity sewer main to the existing manhole on the Kaplan property indicating that the manhole will be cored and the opening sealed with a Link-Seal modular seal or approved equal. Additionally, we recommend the new sewer enter the manhole at the top of the existing bench to avoid having to core cut the bench, and a cast-in-place concrete channel should be constructed above the existing bench to convey flow into the existing channel.
 - h. The horizontal separation distance between all the proposed water lines and the sewer lines should be a minimum of 10 feet.
 - i. On Sheet 7, silt fence or filter sock should be added along the location of the existing manhole and proposed sewer on the Kaplan property if any earth disturbance will occur during sewer construction.
 - j. The profile view (Sheet 10) indicates that the existing water main has less than 3 feet of cover. We understand this is the depth at which Aqua believes the main MAY be located. The Applicant should consider installing the sewer main a little deeper at this location to minimize the risk of a conflict, specifically since the new manhole may not be deep enough to address such a conflict.
 8. The proposed sanitary sewer laterals are within 2 feet to the easement line, which provides a limited area for maintenance in the future. (§188-31.B.(8)) We recommend the easement width be increased or lateral locations adjusted to provide at least 5 feet to the edge of the easement.
 9. The following comments are in regards to the new Standard Manhole detail and notes on Sheet 10:
 - a. The manhole cover adjustment note should only reference precast grade rings; the reference to bricks should be deleted.
 - b. In lieu of a separate cover detail, a note should be added that the manhole cover should read "East Goshen Municipal Authority Sanitary Sewer". Notes should also be added which state that the manhole shall be traffic rated, bolted down, and watertight.
 - c. We question why the base is stated to be cast-in-place. We suggest a precast base be used instead.
 - d. Note #11 – Manhole steps should be steel reinforced polypropylene. Reference to aluminum should be deleted.
 - e. Note #12 – A note should be added to clarify that this is to be a 4 feet diameter manhole, or the note be revised to require a 4 feet diameter manhole for "up to 15-inch pipes".

GENERAL

10. A Sight Distance Note was added to Sheet 9 as requested. This note should appear on a plan that is to be recorded.
11. A Landscaping Note appears on Sheet 11 indicating foundation plantings are to be provided by the builder. A plan should be provided indicating proposed plantings.
12. Per the PaDEP BMP Manual it is recommended that additional plantings, such as shrubs and trees, be included in the rain garden area, per PaDEP specifications. The applicant should present a planting detail identifying plant species to be used and the number of plantings.
13. Please additionally note the status of the following reviews/permits:
 - a. NPDES Permit (PaDEP/CCCD) (§195-15.C(2), -16.A, -17.A) – Correspondence has not yet been received.
 - b. Planning Module (PaDEP) (§240-24.F, §205-33.B(22)(a)) – *Exemption approval letter dated 12/17/16.*
 - c. Sanitary Sewer (Municipal Authority) – Correspondence has not yet been received.
 - d. Water (Aqua) – Will Serve letter dated May 2, 2016.
 - e. Highway Occupancy Permit (PennDOT) – Correspondence has not yet been received.
 - f. Fire Planning (Fire Marshal) – Not applicable.
 - g. Historic Resource (Historical Comm.) – Not applicable.
 - h. Landscaping (Conservancy Board) – *Comments via January 19, 2017 e-mail.*

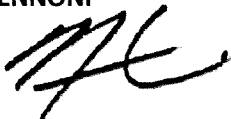
The existing deed for the parcel, proposed draft legal descriptions for Lots 1, 2 and 3, and all other easements associated with the property (driveway, utility, sewer, etc.) and the Kaplan property should be provided to the Township. All legal descriptions, easements and agreements are subject to review and approval by the Township Solicitor.

The applicant is reminded that a stormwater O&M agreement as well as a Grinder Pump Station O&M agreement shall be executed with the Township prior to plan recording.

Should you have any further questions or comments, please contact the undersigned.

Sincerely,

PENNONI



Nathan M. Cline, PE
Township Engineer

cc: Rick Smith, Township Manager (via e-mail)
Gunnison Development Co., LLC (via e-mail)
Thomas Tran, P.E., Commonwealth Engineers, Inc. (via e-mail)
Mike Ellis, PE (via e-mail)



COMMONWEALTH ENGINEERS, INC.

114 East Lancaster Avenue ~ Second Floor ~ Downingtown, PA 19335
Telephone: (610) 518-9003 ~ Fax: (610) 518-9004 ~ comeng@cei-1.com

January 12, 2017

Mr. Mark A. Gordon
Director of Code Enforcement/Zoning Office
East Goshen Township
1580 Paoli Pike
West Chester, PA 19380

Re: Brakman Property, 1420 E. Strasburg Road
Preliminary/Final Subdivision and Land Development

Dear Mr. Gordon:

The following revisions are offered in response to Review Letter dated June 1, 2016 issued by Nathan M. Cline, P.E. of Pennoni, Township Engineer, for the above-referenced plan submission. Pennoni comments are shown in *italics*. Commonwealth Engineers, Inc., responses are shown in **bold**.

ZONING

1. *A clear sight triangle and the required sight distance per §240-23.D (11) should be indicated at the proposed driveway.*

The plan indicates the minimum required sight distance has been met; to the east, it meets the minimum requirement exactly. Further, it appears there are trees within the right-of-way and along the property frontage to be removed. Therefore, we recommend that the sight distance be field verified post-construction to confirm property sight distances are met. A note on the plan should be added.

1. **A note labeled as "Sight Distance Note" has been added to Sheet 9.**

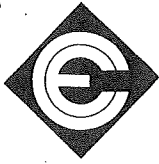
SUBDIVISION & LAND DEVELOPMENT

2. *Regarding trees, the Applicant should review §205-61 and §205-63 regarding existing trees, replacement of trees and the protection of existing trees during construction.*

Per the Code, the property is considered a wooded lot (§205-7), as it has two or more viable, noninvasive trees, six inches or greater in diameter breast height (dbh), per every 1,500 square feet of gross lot area, exclusive of street right-of-way.

The Applicant previously provided a Tree Survey Plan and Tree Survey Count of all trees and their conditions, and has updated the plans accordingly. On Sheet 9, the Applicant indicates there are 375 existing trees. However, per the definition, trees that are dead, invasive or within the street right-of-way do not count towards

PROFESSIONAL CIVIL ENGINEERING



COMMONWEALTH ENGINEERS, INC.

TO: East Goshen Township
RE: 1420 E. Strasburg Rd, Brakman Property
DATE: January 12, 2017
PAGE: 2

the total count. Please revise the calculation on Sheet 9 accordingly. Note further that lines 139-147 are missing in the previously provided Tree Survey Count.

2. The calculation on the Landscape Plan (now Sheet 11) has been revised accordingly. A revised tree survey summary is included with this submission.
3. Street trees with a minimum caliper of three inches shall be provided where deemed advisable by the Planning Commission and/or Supervisors. (§205-62).

We defer to the Township.

3. It was decided at a meeting on 12/14/16 between the township, the township engineer, and the applicant that the township would support that the placement of new street trees for this project would not be required.

STORMWATER MANAGEMENT

4. A planting plan for the raingardens in accordance with the PA BMP Manual is recommended.

The Applicant has indicated that the rain gardens will be planted with a seed mix, however, the detail notes that mulch is to be applied after planting. Consideration shall be given to the impacts of mulch application on seed germination and growth.

4. The details and construction sequence associated with the rain garden installations have been revised by the removal of the references to the installation of mulch at the bottom of the rain gardens.
5. The Applicant has indicated that Rooftop Disconnection non-structural volume credits are being utilized to reduce the post-construction 2-year storm event runoff volume. Per the PaDEP BMP Manual checklist provided, one of the items states that the contributing rooftop area to each disconnection point shall be 500 square feet or less. However, the entire roof areas are being discharged at single points at each rain garden.
5. Rooftop Disconnection is no longer being used as a credit toward the non-structural BMP calculations. Sheet 5 and the PCSM Report have been revised accordingly. Also note that now only one roof drain collection piping system is being proposed (to divert roof drainage of the south side of the Lot 3 house to the rain garden).
6. The Applicant has indicated that Disconnection from Storm Sewers non-structural volume credits are being utilized to reduce the post-construction 2-year storm event runoff volume. Per the PaDEP BMP Manual



COMMONWEALTH ENGINEERS, INC.

TO: East Goshen Township
RE: 1420 E. Strasburg Rd, Brakman Property
DATE: January 12, 2017
PAGE: 3

checklist provided, one of the items states that the vegetated disconnection area shall have a maximum slope of 5%. The downhill slopes along a long stretch of the driveway appear to exceed this threshold. The amount of impervious area considered for disconnection should be recalculated accordingly.

6. The amount of impervious area being considered for credit has been revised as shown on Sheet 5. The PCSM report has been revised accordingly.
7. *Per §195-24.B, one foot of freeboard is required above the maximum pool elevation computed when the facility functions for the one-hundred-year proposed conditions inflow. Pages 66 and 67 of the narrative indicate that only 0.35 feet and 0.33 feet are provided for the Lot 2 and Lot 3 rain gardens, respectively.*
7. The maximum pool elevation for the 100-year storm for both rain gardens is equal to the top of the grate of the outlet pipe since the rain gardens have been sized to retain on site the entire 100-year storm. The top of the grate for both rain gardens is located 1 foot below the berm elevation. The emergency spillway calculations provided in the PCSM Report are presented only to demonstrate the adequacy of the spillway to convey the 100-year storm in the event of failure of the rain gardens and the clogging of the outlet grates.

SANITARY SEWER

8. *A product submittal for the proposed grinder pump which includes the manufacturer's detail sheet, pump curve, and installation instructions shall be provided for review. The grinder pump unit and piping needs to comply with the specifications of §188-33. Additionally, the grinder pump system piping size, material, depth, method of connection to the existing manhole, and other information to demonstrate compliance with the requirements of the Township Ordinance shall be shown on the plans. A profile of the LPSS shall also be provided since there are a few significant grade changes and a utility crossing(s) along the proposed route (§188-33.A. (3).(a)-(d)).*

Remains outstanding.

8. Grinder pump product information is included with this submission. Applicable details are shown on the plan. Also, the sanitary sewer design has been changed to be mostly a gravity sewer system as discussed with township staff. A profile of the majority of the system is provided on Sheet 10.
9. We anticipate a Sewage Facilities Planning Module will be required by PaDEP for this project, in lieu of an exemption/waiver, since one sewer pipe carries wastewater from more than one dwelling. A Sewage Facilities Planning Application Mailer shall be submitted to PaDEP to initiate this process (§205-33.B (22)).



COMMONWEALTH ENGINEERS, INC.

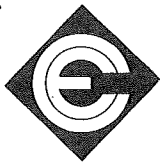
TO: East Goshen Township
RE: 1420 E. Strasburg Rd, Brakman Property
DATE: January 12, 2017
PAGE: 4

The Applicant submitted the Mailer. We anticipate an exemption/waiver will now be applicable since separate pipes are proposed for each house; however, the comment remains outstanding until PaDEP Planning approval or exemption is obtained.

9. An exemption approval letter dated 12/7/16 was obtained and is included with this submission.
10. *An air release valve may be needed on the common LPSS since the subject property is much higher than the roadway and higher than the connection manhole in Brook Drive.*

Remains outstanding, pending analysis of elevation; submittal of the LPSS.

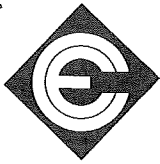
 10. The valve should no longer be required because of the significant change to the sanitary sewer design which is now mostly gravity sewer.
 11. *We do not anticipate that the bend along the shared driveway can be directionally drilled. We recommend a more direct path to the connecting manhole.*
 11. The layout of the pipe to be directionally drilled has been revised accordingly.
 12. *The elevations of the existing manhole on the Kaplan property should be field surveyed to confirm the actual elevations.*
 12. The top elevations of the existing manhole were field surveyed.
 13. *We recommend that LPSS lines not connect directly to the existing manhole on the Kaplan property due to the 90-degree angle of orientation of the LPSS with the sewer main, unknown physical condition of the manhole, and extent of LPSS on private property. We instead recommend a new manhole be constructed on the south side of East Strasburg Road with a gravity sewer extension from the existing manhole on the Kaplan property. All three LPSS lines should then connect directly to the new manhole. That gravity extension and manhole could be dedicated to the Township, and the full extent of all LPSS lines would be private.*
 13. The plans have been revised accordingly.
 14. *We recommend the inclusion of an additional detail showing the connection of the LPSS lines to the new manhole. Detail and notes should include, at minimum:*
 - a. LPSS discharge pipes to enter connecting manhole at bottom of manhole.



COMMONWEALTH ENGINEERS, INC.

TO: East Goshen Township
RE: 1420 E. Strasburg Rd, Brakman Property
DATE: January 12, 2017
PAGE: 5

- a. This comment should no longer be applicable because of the significant change to the sanitary sewer design which is now mostly gravity sewer.
- b. Details on discharge piping into flow channel within manhole.
- b. This comment should no longer be applicable because of the significant change to the sanitary sewer design which is now mostly gravity sewer.
- c. That manhole wall openings should be precast with A-lok gaskets.
- c. This comment should no longer be applicable because of the significant change to the sanitary sewer design which is now mostly gravity sewer.
15. We recommend that interior of the new manhole be lined with a Duraplate-type liner, or equal, since the manhole will be subject to hydrogen sulfide deterioration from the pressure sewers. The interior of the existing manhole on the Kaplan property should also be lined with a Sprayon polyurethane.
15. Pressure sewers are no longer being proposed at the manhole connection.
16. We recommend the pipe routing be revised to eliminate bends greater than 45 degrees within the LPSS, OR to include notes that multiple 45 or 22.5 degree bends will be used at those locations where sharp turns must occur.
16. A note labeled as "Installation Note" has added to Sheet 10.
17. A utility easement on the Kaplan property is required as indicated on the plans.
17. The utility easement has been revised accordingly per the revised sanitary sewer design.
18. §188-33.D. (3) – Grinder pump discharge piping shall be minimum 1-1/4 inch; the proposed piping is only 1-inch.
18. The Grinder Pump (now only on Lot 3) discharge pipe has been labeled as 1-1/4 inch.
19. §188-33.D. (9). (a) – Plans should indicate that, where LPSS is installed via open cut trench, discharge piping shall be bedded in either sand or screenings. The bedding shall be at least 4 inches thick. After the discharge piping has been tested and inspected, an additional 12 inches of sand or screenings shall be placed over the pipe.



COMMONWEALTH ENGINEERS, INC.

TO: East Goshen Township
RE: 1420 E. Strasburg Rd, Brakman Property
DATE: January 12, 2017
PAGE: 6

19. The above information has been included as part of the note labeled as "Installation Note" on Sheet 10.
20. We recommend the inclusion of additional details or notes regarding the gravity sewer lateral from the house to the grinder pump including, at minimum, pipe material, size, cleanout, trap, and vent cap.
20. Details and notes (under "Installation Notes") have been added to Sheet 10. Also, cleanouts have been added to all gravity sewers as appropriate.

GENERAL

21. Please additional note the status of the following reviews/permits:
- a. NPDES Permit (PaDEP/CCCD) (§195-15.C (2), -16.A, -17.A) – Not applicable. Correspondence has not yet been received.
 - a. A status chart has been added to Sheet 2.
 - b. Planning Module (PaDEP) (§240-24.F, §205-33.B(22)(a)) – Correspondence has not yet been received.
 - b. A status chart has been added to Sheet 2.
 - c. Sanitary Sewer (Municipal Authority) – Correspondence has not yet been received.
 - c. A status chart has been added to Sheet 2.
 - d. Water (Aqua) – Will Serve Letter dated May 2, 2016.
 - d. A status chart has been added to Sheet 2.
 - e. Highway Occupancy Permit (PaDOT) – Correspondence has not yet been received.
 - e. A status chart has been added to Sheet 2.
 - f. Fire Planning (Fire Marshal) – Not applicable.
 - f. A status chart has been added to Sheet 2.
 - g. Historic Resource (Historical Comm.) – Not applicable.



COMMONWEALTH ENGINEERS, INC.

TO: East Goshen Township
RE: 1420 E. Strasburg Rd, Brakman Property
DATE: January 12, 2017
PAGE: 7

- g. A status chart has been added to Sheet 2.
- h. *Landscaping (Conservancy Board) – Correspondence has not yet been received.*
- h. A status chart has been added to Sheet 2.
22. *The existing deed for the parcel, proposed draft legal descriptions for Lots 1, 2 and 3 and all other easements associated with the property (driveway, utility, sewer, etc.) should be provided to the Township. All legal descriptions, easements and agreements are subject to review and approval by the Township Solicitor.*
22. The existing deed is provided with this submission. Documents for proposed items are pending.
23. *The Applicant is reminded that a Stormwater O&M Agreement as well as a Grinder Pump Station O&M Agreement shall be executed with the Township prior to plan recording.*
23. Noted.

We hope that the above plan revisions satisfy your requirements. If you have any questions or need further clarification of the revisions we have made, please feel free to contact me.

Sincerely,

Thomas Tran, P.E.
Project Engineer

cc: Gunnison Development Co., LLC

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