

FINAL SUBDIVISION PLAN

OF

WALNUT ACRES

A RESIDENTIAL SITE IN

TILDEN TOWNSHIP, BERKS COUNTY,
PENNSYLVANIA

PREPARED FOR

STEVEN J. & MARLENE A. SKOLODA

71 WALNUT ROAD
HAMBURG, PA 19526

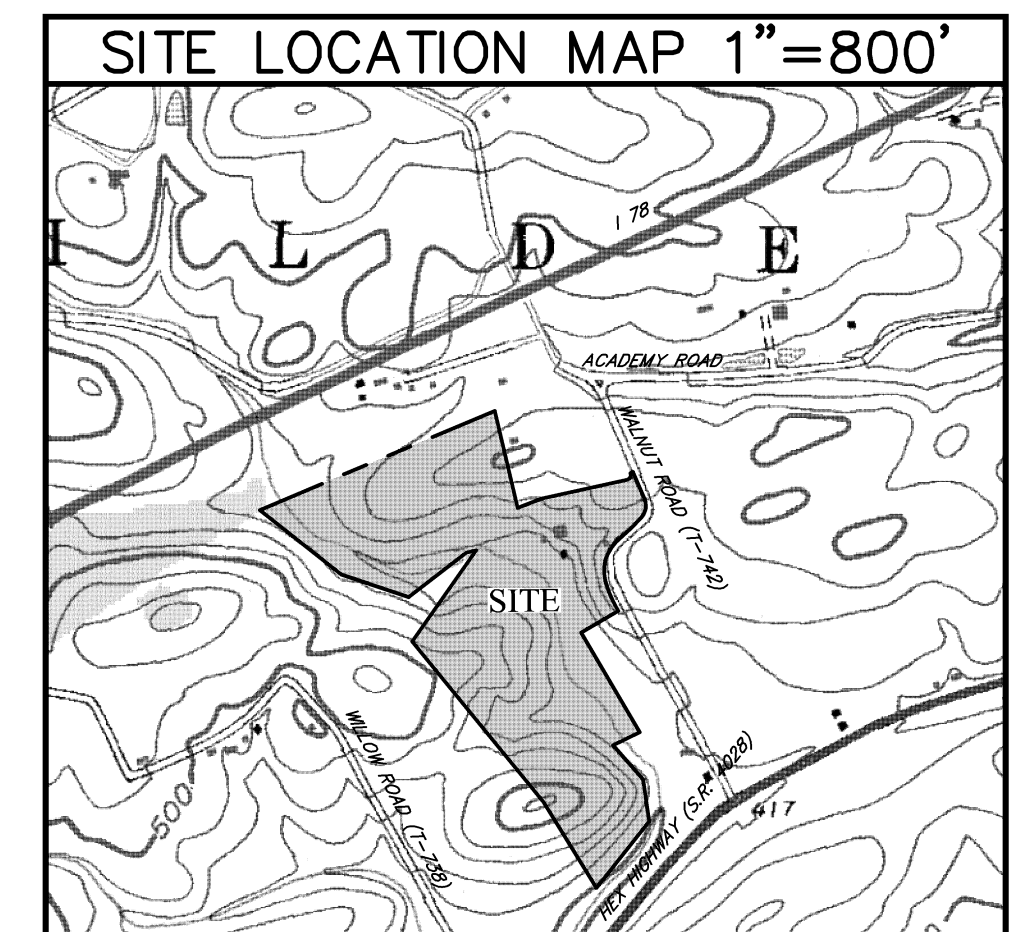
PLANS PREPARED BY



The
Crossroads
GROUP, LLC

16590 Pottsville Pike, Suite A
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CIVIL ENGINEERING † LAND DEVELOPMENT † SITE SURVEY † A/E TELECOM

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ACT 121 NOTIFICATION

THE UNDERGROUND UTILITY LINE PROTECTION LAW
(ACT 121 AMENDS ACT 287 OF 1974)
SITE SERIAL NO. 2015280284/20152812965

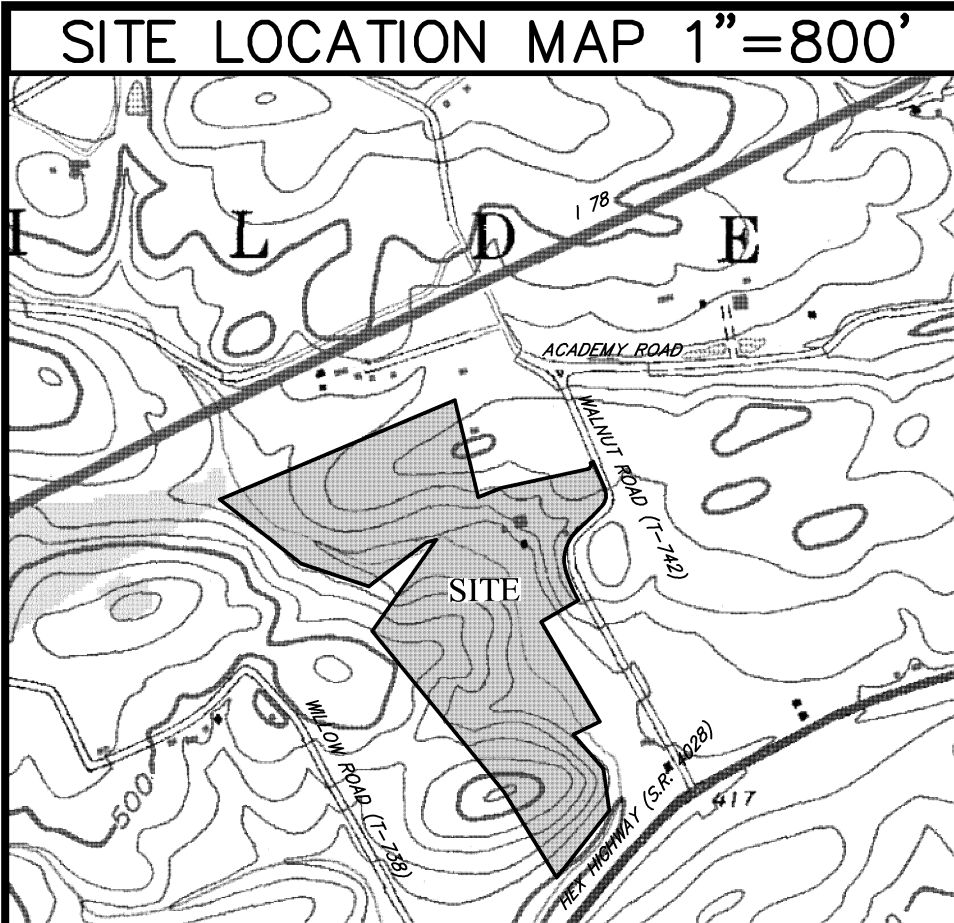
LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT 121 OF 2008, AS AMENDED BY ACT 181 OF 2006, ACT 159 OF 2004, ACT 187 OF 1996, ACT 177 OF 1996 AND ACT 287 OF 1974, CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-242-1778, NO LESS THAN 3, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.

NO.	PLAN REVISIONS	DATE
A	REVISION PER CLIENT REVIEW	8/14/15
B	REVISION PER TOWNSHIP ENGINEER REVIEW LETTER DATED 8/15/16	9/30/16
C	REVISION PER TWP, ENG. AND BCDD REVIEW LETTERS BOTH DATED 10/31/16	12/23/16
D	REVISION PER BCDD REVIEW LETTER DATED 07/19/17	09/10/17
E	REVISION PER TOWNSHIP ENGINEER REVIEW LETTER DATED 1/17/17	06/18/17
F	REVISION PER TWP, ENGINEERING COMMENTS AND LIGHTING REVISION	12/06/17
G	REVISION PER BCDD REVIEW LETTER DATED 10/16/18	10/30/18
H	REVISION PER BCDD REVIEW LETTER DATED 12/07/18	01/15/19
I	REVISION PER TOWNSHIP REVIEW LETTER DATED 10/31/17	03/10/20

Note: These plans are not to be used for construction unless the plan contains a red stamp indicating "ISSUED FOR CONSTRUCTION" by The Crossroads Group, LLC. The Crossroads Group, LLC shall assume no liability for construction performed from plans not containing this stamp.

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WALNUT ACRES
STEVEN J. & MARLENE A. SKOLODA
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA
PROJECT NUMBER: 1866



OWNER INFORMATION

THE SUBJECT PARCEL IS IDENTIFIED BY THE FOLLOWING INFORMATION AS RECORDED IN THE OFFICE FOR RECORDING OF DEEDS, BERKS COUNTY COURTHOUSE IN READING, PENNSYLVANIA.

TOWNSHIP: TILDEN

PARCEL NO. 84447404846536 DEED BOOK-PAGE: 4543/0541 PARCEL AREA: 73.71 Ac.

TOTAL TRACT AREA: 73.71 Ac. (PER DEED)

APPLICANT & RECORD OWNER:

STEVEN J. SKOLODA AND MARLENE A. SKOLODA
71 WALNUT ROAD
HAMBURG, PA 19526-8964

OPEN SPACE AREA CALCULATIONS

DESCRIPTION	AREA/AC.
OPEN SPACE A	24.3212
OPEN SPACE B	.6881
CONSERVATION EASEMENT C	18.0291
OPEN SPACE TOTAL	43.0384
FLOOD PLAIN / WETLANDS	11.1037
STEEP SLOPES >25%	1.0816

GENERAL NOTES

- PROPOSED SKETCH PLAN UTILIZES CLUSTER DEVELOPMENT AS APPROVED BY THE TILDEN TOWNSHIP ZONING HEARING BOARD IN A CERTIFICATION OF ORDER DATED MAY 27, 2011, WHICH ADDITIONALLY ALLOWS FOR THE CLUSTER BONUS OF FIFTEEN PERCENT (15%).
- LOT CALCULATIONS BASED ON "BY-RIGHT" PLAN PREPARED BY LUDGATE ENGINEERING CORP., LAST REVISED ON 9/30/10 SHOWING A TOTAL OF THIRTY (30) LOTS WITH APPROVED SEWER TESTING ALLOWING FOR THIRTY-FOUR (34) POTENTIAL "CLUSTER" LOTS.
- THE INTENDED USE OF THESE LOTS ARE: SINGLE FAMILY DETACHED DEVELOPMENT. LOTS 1 TO 25 UTILIZE THE "PERMITTED CLUSTER" DESIGN CONCEPT AS ALLOWED WITHIN THE R-2 ZONING DISTRICT.
- IRON PINS SHALL BE SET AS NOTED ON THIS PLAN. ALL OTHER PROPERTY CORNERS SHALL BE MARKED WITH IRON PINS UPON FINAL GRADING AND TOWNSHIP ENGINEER APPROVAL.
- ALL PROPOSED ROADWAYS ARE HEREBY OFFERED FOR DEDICATION TO TILDEN TOWNSHIP. TOTAL PROPOSED NEW ROADWAY = 2,000 LF.
- THE DEVELOPER, ITS SUCCESSORS OR ASSIGNS, HEREBY RESERVES THE RIGHT TO ENTER UPON EACH AND EVERY LOT AND AREA OF THE SUBDIVISION/DEVELOPMENT DEPICTED HEREON, UNTIL EXPIRATION OF THE STATUTORY MAINTENANCE PERIOD FOLLOWING DEDICATION OF PUBLIC IMPROVEMENTS AS SET FORTH IN SECTION 502 OF THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, AS AMENDED, 53 P.S. 10509, FOR THE PURPOSE OF COMPLETING ANY LANDSCAPING AS REQUIRED BY THE MUNICIPALITY AND FURTHER, TO MAKE SUCH MODIFICATIONS IN GRADING AND/OR DRAINAGE IMPROVEMENTS ON ANY LOT AS MAY BE NECESSARY IN THE DISCRETION OF THE DEVELOPER, ITS SUCCESSORS OR ASSIGNS, AND/OR THE MUNICIPAL ENGINEER FOR SATISFACTORY STORMWATER MANAGEMENT.
- SITE GRADING MAY WARRANT CONSTRUCTION OF RETAINING WALLS OR RETAINING STRUCTURES TO PROVIDE FOR PROPER SUPPORT AND/OR DRAINAGE FOR CERTAIN LOTS, EITHER TO THE USE AND BENEFIT OF THE LOT ON WHICH SAME MAY BE SITUATED, OR TO THE USE AND BENEFIT OF AN ADJOINING LOT OR LOTS. THE DEVELOPER RESERVES THE SOLE DISCRETION WITH REGARD TO ERECTION OF SAME PRIOR TO SETTLEMENT ON ANY INDIVIDUAL LOT. SAID RETAINING WALLS SHALL BE LIMITED TO A MAXIMUM OF 3 FEET IN HEIGHT, AND APPROVAL BY THE TOWNSHIP ENGINEER WILL BE OBTAINED BEFORE CONSTRUCTION. SUCH RETAINING WALLS OR STRUCTURES SHALL NOT BE REMOVED OR ALTERED BY THE PURCHASER, HIS SUCCESSORS OR ASSIGNS, BUT SHALL REMAIN IN PLACE AND SHALL BE PROPERLY MAINTAINED BY THE OWNER OF THE LOT ON WHICH ERECTED.
- WATER SERVICE SHALL BE PROVIDED BY INDIVIDUAL ON-LOT WELLS.
- SANITARY SEWER SERVICE SHALL BE PROVIDED BY COMMUNITY SEWER SYSTEMS. LOTS 26 THROUGH 29 ARE SERVED BY INDIVIDUAL ON-LOT SEPTIC.
- NO PLANTINGS, TREES OR STRUCTURES SHALL BE PERMITTED WITHIN ANY PROPOSED EASEMENTS. EASEMENTS CROSSING LOTS SHALL BE MAINTAINED AS LAWN AREAS BY THE LOT OWNER.
- ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH PENNDOT SPECIFICATIONS, PUBLICATION 408 STANDARDS AND TILDEN TOWNSHIP STANDARD SPECIFICATIONS, AS APPLICABLE.
- GAS, ELECTRIC, TELEPHONE AND CABLE TELEVISION FACILITIES SHALL BE PROVIDED TO ALL UNITS VIA UNDERGROUND SERVICE.
- THE APPLICANT SHALL ESTABLISH A HOMEOWNERS ASSOCIATION IN ACCORDANCE WITH APPLICABLE LAW INCLUDING, BUT NOT LIMITED TO, THE TILDEN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.
- THE HOMEOWNERS ASSOCIATION SHALL BE COMPRISED OF ALL PROPOSED LOTS AND SHALL BE RESPONSIBLE FOR AND ATTEND TO REQUIRED MAINTENANCE AND IMPROVEMENTS OF ON-SITE SEPTIC SYSTEMS, COMMON AREAS AND ALL STOPS BE SEWER EASEMENTS AND STORMSEWER FACILITIES LOCATED WITHIN SAID EASEMENTS THE DETENTION BASIN AND ASSOCIATED CONTROL STRUCTURES ARE PERMANENT STRUCTURES AND SHALL NOT BE REMOVED OR ALTERED. THE HOMEOWNERS ASSOCIATION SHALL HAVE THE RESPONSIBILITY FOR THE PERPETUAL MAINTENANCE OF THE DETENTION BASIN, ALL OUTLET STRUCTURES AND STORM PIPES WHICH ARE LOCATED THEREIN. NO CHANGES SHALL BE MADE TO THE STRUCTURES, PIPES OR FINISH GRADING WITHOUT PRIOR WRITTEN APPROVAL FROM THE TOWNSHIP. THE TOWNSHIP HAS THE RIGHT TO ENTER EASEMENTED AREAS TO PERFORM ANY REQUIRED MAINTENANCE WHICH HAS NOT BEEN PROPERLY PERFORMED OR CARRIED OUT IN A TIMELY MANNER. THE OWNER OF LAND OVER WHICH THESE EASEMENTS EXIST SHALL BE RESPONSIBLE FOR THE COST OF ANY MAINTENANCE WHICH IS PERFORMED BY THE TOWNSHIP. THE TOWNSHIP SHALL LIEN THE PROPERTY FOR SAID COSTS UNTIL THE TOWNSHIP HAS BEEN REIMBURSED.
- APPROXIMATELY SIX (6) ACRES OF LOT 30 SHALL BE DESIGNATED AS SUBJECT TO AN OPTION TO PURCHASE BY THE HOA FOR RECREATIONAL PURPOSES. THE PURCHASE SHALL BE COMPLETED AS AN EASEMENT AND DOES NOT REQUIRE FURTHER SUBDIVISION. THE HOA HAS THE RIGHT TO EXERCISE THIS OPTION WITHIN FIVE (5) YEARS AFTER FINAL PLAN APPROVAL TO USE THE DESIGNATED AREA AS A RECREATIONAL AREA FOR THE BENEFIT OF THE HOMEOWNERS. SUCH EXERCISE OF AN OPTION SHALL REQUIRE THE ONE (100) PERCENT APPROVAL OF ALL THE HOMEOWNERS OF THE HOA. THE OWNER OF LOT 30 SHALL RECEIVE A SUM OF \$3,000.00 FROM EACH OF THE LOT OWNERS THAT BELONG TO THE HOA AND LOT OWNERS OF THE HOA WILL BE ASSESSED FOR THE PROPOSED IMPROVEMENTS FOR RECREATIONAL PURPOSES AT THAT TIME. IN THE EVENT THAT THE EXERCISE TO OPTION WITHIN FIVE (5) YEARS AFTER FINAL PLAN APPROVAL IS NOT EXERCISED, THE OPTION SHALL EXPIRE AND ALL RIGHTS THEREUNDER SHALL BE NULLIFIED. LOT 30 SHALL BE SUBJECT TO A CONSERVATION AND OPEN SPACE EASEMENT IN PERPETUITY THAT PREVENTS ANY DEVELOPMENT OTHER THAN A ONE (1) SINGLE FAMILY RESIDENCE. THIS RESTRICTION SHALL BE SHOWN ON THE FINAL PLAN AND IN ANY DEED OF CONVEYANCE FOR THIS LOT.
- THIS PLAN CONTAINS PRELIMINARY INFORMATION PERTAINING TO UNDERGROUND UTILITIES WHICH IS FOR GENERAL INFORMATION ONLY, AND MAY NOT BE BASED ON AN ACTUAL SUBSURFACE LOCATION SURVEY. ALL SUBSURFACE INFORMATION SHOWN ON THESE PLANS NEEDS TO BE VERIFIED BY THE PLAN USER. THE PREPARER OF THIS PLAN ASSUMES NO RESPONSIBILITY FOR AND MAKES NO REPRESENTATION OR WARRANTIES AS TO THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES OR OTHER UNDERGROUND FEATURES. THE PLAN USER SHALL EXECUTE A PA ONE CALL PRIOR TO ANY EXCAVATION ON THE SITE.
- ANY AREAS OF WETLANDS AS ARE DELINEATED AND DEPICTED UPON THIS PLAN OF SUBDIVISION MAY BE SUBJECT TO FEDERAL REGULATION. ANY DISTURBANCE OF THESE WETLANDS, INCLUDING THE DISCHARGE OF DREDGED OR FILL MATERIAL INTO THESE WETLANDS MAY REQUIRE A DEPARTMENT OF THE ARMY PERMIT PURSUANT TO SECTION 404 OF THE CLEAN WATER ACT. ADDITIONAL INFORMATION MAY BE OBTAINED BY CONTACTING THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND/OR THE ARMY CORPS OF ENGINEERS OFFICES.
- PROPOSED LOT #30 SHALL NOT BE CONSIDERED AS A BUILDING LOT UNTIL SUCH TIME THAT A SUITABLE SEWAGE DISPOSAL AREA IS PROVIDED IN CONFORMANCE WITH PA DEP CODE 25, CHAPTER 73.
- A COPY OF THE FINAL APPROVED PLAN SHALL BE PROVIDED BY THE SUBDIVIDER TO ALL LOT PURCHASERS.
- FUTURE DRIVEWAY FOR LOT 28 SHALL BE LOCATED A MINIMUM OF FIFTY FEET (50') FROM THE POINT OF INTERSECTION OF THE EDGE OF CARTWAY LINES FOR EVA'S WAY AND WALNUT ROAD.
- NO VISION OBSTRUCTING OBJECTS SHALL BE PERMITTED WITHIN THE CLEAR SIGHT TRIANGLES THAT EXCEED THE HEIGHT OF THIRTY INCHES (2.5') OR BELOW THE HEIGHT OF TEN FEET (10') MEASURED FROM THE CENTERLINE ELEVATION OF THE INTERSECTING STREET.
- PROPOSED ROAD EVA'S WAY SHALL HAVE A POSTED SPEED LIMIT OF 20 MPH.
- NO FURTHER SUBDIVISION OF ANY LOT OR COMMON OPEN SPACE AREA DEPICTED HEREON IS PERMITTED.
- THE EXISTING POSTED SPEED LIMIT OF WALNUT ROAD (T-742) IS 30 MPH.

WAIVERS GRANTED

- WAIVER GRANTED BY THE TILDEN TOWNSHIP BOARD OF SUPERVISORS AT THE DECEMBER 9, 2016 WORKSHOP MEETING TO ALLOW 27 LOTS TO ACCESS A CUL-DE-SAC STREET (SECTION 502.14).
- WAIVER GRANTED BY THE TILDEN TOWNSHIP BOARD OF SUPERVISORS AT THE FEBRUARY 8, 2017 MEETING TO ALLOW THE VERTICAL SCALE OF 1"=5' FOR THE PROFILES (SECTION 402 (1)(2)(i)).
- WAIVER GRANTED BY THE TILDEN TOWNSHIP BOARD OF SUPERVISORS AT THE JUNE 21, 2017 MEETING TO ALLOW A VERTICAL CURVE AS SHOWN ON THE CURRENT DESIGN PLANS PROVIDED PROPOSED ROAD (EVA'S WAY) BE POSTED WITH A 20 MPH SPEED LIMIT (SECTION 502(g)(1)(i)).

ZONING DATA

OBTAINED FROM THE TILDEN ZONING ORDINANCE, ORDINANCE 122, DATED JULY 1998.

ZONING DISTRICT: R-2 RESIDENTIAL DISTRICT

PROPOSED USE: RESIDENTIAL SINGLE FAMILY DEVELOPMENT

MINIMUM REQUIREMENTS	PERMITTED	ACTUAL
MINIMUM LOT AREA:	40,000 S.F.	40,000 S.F.
MINIMUM LOT WIDTH @ BLDG SET BACK LINE:	140'	140'
MINIMUM FRONT YARD FROM STREET:	60'	60'
MINIMUM SIDE YARD:	75' (AGS, MIN 30')	45' / 30'
MINIMUM REAR YARD:	50'	50'
MAXIMUM BUILDING COVERAGE:	15%	<15%
MAXIMUM BUILDING HEIGHT:	35'	35'

EXISTING FEATURES

- TRACT BOUNDARY
- EXISTING PARCEL LINE TO BE ABOLISHED
- EXISTING RIGHT-OF-WAY
- EXISTING EASEMENT
- ADJOINING PROPERTY LINE
- EXISTING ZONING/TOWNSHIP BOUNDARY
- EXISTING WATER LINE/SERVICE
- EXISTING STORM SEWER LINE/INLET
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE (UNDERGROUND)
- EXISTING ELECTRIC LINE (OVERHEAD)
- EXISTING SANITARY SEWER LINE/MANHOLE
- EXISTING SANITARY LATERAL
- EXISTING CURB
- EXISTING EDGE OF ROAD (PAVED)
- EXISTING SHOULDER (ROAD)
- EXISTING EDGE OF ROAD (UNPAVED)
- EXISTING DRIVEWAY
- EXISTING ROAD CENTERLINE
- EXISTING FENCE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING SOILS DELINEATION LINE
- STREAM CHANNEL
- FEMA DELINEATED FLOODPLAIN
- EXISTING GUBERNAIL
- EXISTING WOODLINE
- EXISTING BRUSHLINE
- EXISTING BUILDINGS
- EXISTING GUBERNAIL
- EXISTING WETLANDS
- EXIST-DECIDUOUS
- EXIST-EVERGREEN
- EXIST-HEADWALL LIGHT POST
- SIGN
- STREET SIGN
- UTILITY-POLE
- WELL
- IP
- BOUND

WETLAND DELINEATION CERTIFICATION

I DO HEREBY CERTIFY THAT THE DELINEATION OF THE WETLANDS SHOWN ON THIS PLAN IS IN ACCORDANCE WITH THE FINDINGS OF MY FIELD INVESTIGATION AND THAT I HAVE DETERMINED THESE LIMITS BASED UPON THE CORPS OF ENGINEER GUIDELINES.

DATE: _____

SOIL SCIENTIST: JASON J. MEASE
(DELVAL SOIL AND ENVIRONMENTAL CONSULTANTS, INC.)

SIGNATURE: _____

PROPOSED FEATURES

- PROPOSED BUILDING
- PROPOSED BUILDING - SETBACK LINE
- PROPOSED LOT - PARCEL LINE
- PROPOSED EASEMENT - LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED ROAD CENTERLINE
- PROPOSED ROAD EDGE (PAVED/NO CURB)
- PROPOSED ROAD SHOULDER
- PROPOSED ROAD PAVEMENT MARKINGS
- PROPOSED SEWER MAIN - PIPING
- PROPOSED SEWER LATERAL
- PROPOSED STORM SEWER - PIPING
- PROPOSED DRIVEWAY
- PROPOSED DEED RESTRICTION - LINE
- CLEAR SIGHT TRIANGLE
- PROPOSED SANITARY FORCE MAIN
- PROPOSED PHASE LINE
- PROPOSED BUFFER
- PROPOSED CONCRETE
- PROPOSED RIP-RAP
- PROPOSED CONCRETE MONUMENT
- PROPOSED LIGHT POST
- PROPOSED TRAFFIC SIGN
- PROPOSED STREET NAME SIGN
- PROPOSED UTILITY POLE
- PROPOSED HEADWALL/ENDWALL
- PROPOSED INLET
- PROPOSED STORM MANHOLE
- PROPOSED SANITARY MANHOLE LABEL
- PROPOSED STORM SEWER LABEL
- PROPOSED WELL

Parcel Table

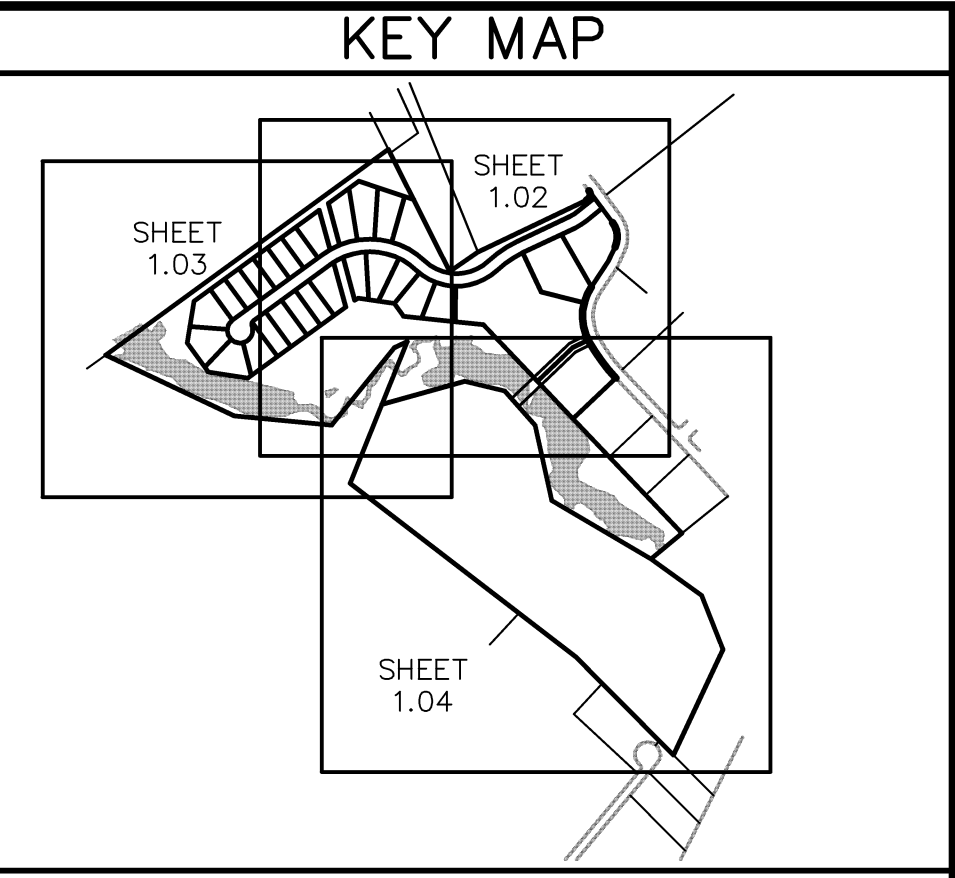
PARCEL	Area
LOT 1	41,113 AC.
LOT 2	25,210 AC.
LOT 3	28,967 AC.
LOT 4	22,023 AC.
LOT 5	18,722 AC.
LOT 6	15,010 AC.
LOT 7	15,010 AC.
LOT 8	15,010 AC.
LOT 9	15,010 AC.
LOT 10	15,010 AC.
LOT 11	15,657 AC.
LOT 12	25,227 AC.
LOT 13	24,800 AC.
LOT 14	23,736 AC.
LOT 15	18,214 AC.
LOT 16	16,425 AC.
LOT 17	19,318 AC.
LOT 18	16,377 AC.
LOT 19	16,377 AC.
LOT 20	21,996 AC.
LOT 21	19,344 AC.
LOT 22	23,787 AC.
LOT 23	19,898 AC.
LOT 24	23,447 AC.
LOT 25	22,107 AC.
LOT 26	196,035 AC.
LOT 27	60,822 AC.
LOT 28	52,105 AC.
LOT 29	70,546 AC.
LOT#30	1,097,146 AC.

ACT 121 NOTIFICATION

THE UNDERGROUND UTILITY LINE PROTECTION LAW (ACT 121 AMENDS ACT 287 OF 1974) SITE SERIAL NO. 20152802894/20152812965

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT 121 OF 2008, AS AMENDED BY ACT 181 OF 2008, ACT 189 OF 2004, ACT 197 OF 1988, ACT 198 OF 1986 AND ACT 287 OF 1974, CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-242-1976, NO LESS THAN 3, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.

PENNSYLVANIA ONE-CALL SYSTEM
800-242-1976
CALL BEFORE YOU DIG



CERTIFICATION OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BERKS

ON THIS, _____ DAY OF _____, 20____, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED STEVEN J. SKOLODA, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT HE IS THE OWNER, OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE SUBDIVISION PLAN THEREOF WAS MADE AT HIS/ITS DIRECTION, THAT HE ACKNOWLEDGES THE SAME TO BE HIS/ ITS ACT AND PLAN, AND THAT ALL STREETS AND OPEN SPACES CONTAINED IN LOTS NUMBER SHOWN AND NOT HERETOFORE DEDICATED ARE HEREBY DEDICATED TO THE PUBLIC USE EXCEPT THOSE LABELED "NOT FOR DEDICATION" (AND ANY OTHER RESTRICTIONS OR RESERVATIONS)

STEVEN J. SKOLODA
MY COMMISSION EXPIRES _____, 20____.

CERTIFICATION OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BERKS

ON THIS, _____ DAY OF _____, 20____, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED MARLENE A. SKOLODA, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT SHE IS THE OWNER, OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE SUBDIVISION PLAN THEREOF WAS MADE AT HIS/ITS DIRECTION, THAT HE ACKNOWLEDGES THE SAME TO BE HIS/ ITS ACT AND PLAN, AND THAT ALL STREETS AND OPEN SPACES CONTAINED IN LOTS NUMBER SHOWN AND NOT HERETOFORE DEDICATED ARE HEREBY DEDICATED TO THE PUBLIC USE EXCEPT THOSE LABELED "NOT FOR DEDICATION" (AND ANY OTHER RESTRICTIONS OR RESERVATIONS)

MARLENE A. SKOLODA
MY COMMISSION EXPIRES _____, 20____.

CERTIFICATION OF ACCURACY

I HEREBY CERTIFY THAT THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE SUBDIVISION ORDINANCE OF THE TOWNSHIP OF TILDEN.

_____ 20____

CERTIFICATE OF MUNICIPAL APPROVAL

AT A MEETING HELD ON _____, 20____, THE PLANNING COMMISSION OF THE TOWNSHIP OF TILDEN, BY RESOLUTION, DULY ENACTED, RECOMMENDED FOR APPROVAL, THE PRELIMINARY SUBDIVISION OF THE PROPERTY OF STEVEN J. SKOLODA & MARLENE A. SKOLODA, AS SHOWN HEREON.

AT THE MEETING HELD ON _____, 20____, THE BOARD OF SUPERVISORS OF THE TOWNSHIP OF TILDEN, BY RESOLUTION DULY ENACTED, APPROVED THE PRELIMINARY SUBDIVISION PLAN OF THE PROPERTY OF STEVEN J. SKOLODA & MARLENE A. SKOLODA, AS SHOWN HEREON.

BCPC No. 63-13044

PROCESSED and REVIEWED. A report has been prepared by the BERKS County Planning Commission in accordance with the Municipalities Planning Code.

Certified this date _____

For the Director
BERKS County Planning Commission

DESIGN PROFESSIONAL CERTIFICATION

I DO HEREBY CERTIFY THAT DESIGN PLANS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AS A LICENSED PROFESSIONAL IN THE COMMONWEALTH OF PENNSYLVANIA.

SIGNATURE: JOSHUA D. HOAGLAND (PE081273)

RECORDER OF DEEDS

PROJECT MANAGER: JDH
DRAWING FILE NAME: ZSUB
PLAN ORIGINATION DATE: 07-08-16
PLAN LAST REVISED: 03-10-20
PLAN SCALE: 1" = 150'
PROJECT NUMBER: 1866
SHEET NUMBER: 01 OF 30

THE CROSSROADS GROUP, LLC
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Phone: 484-860-3242

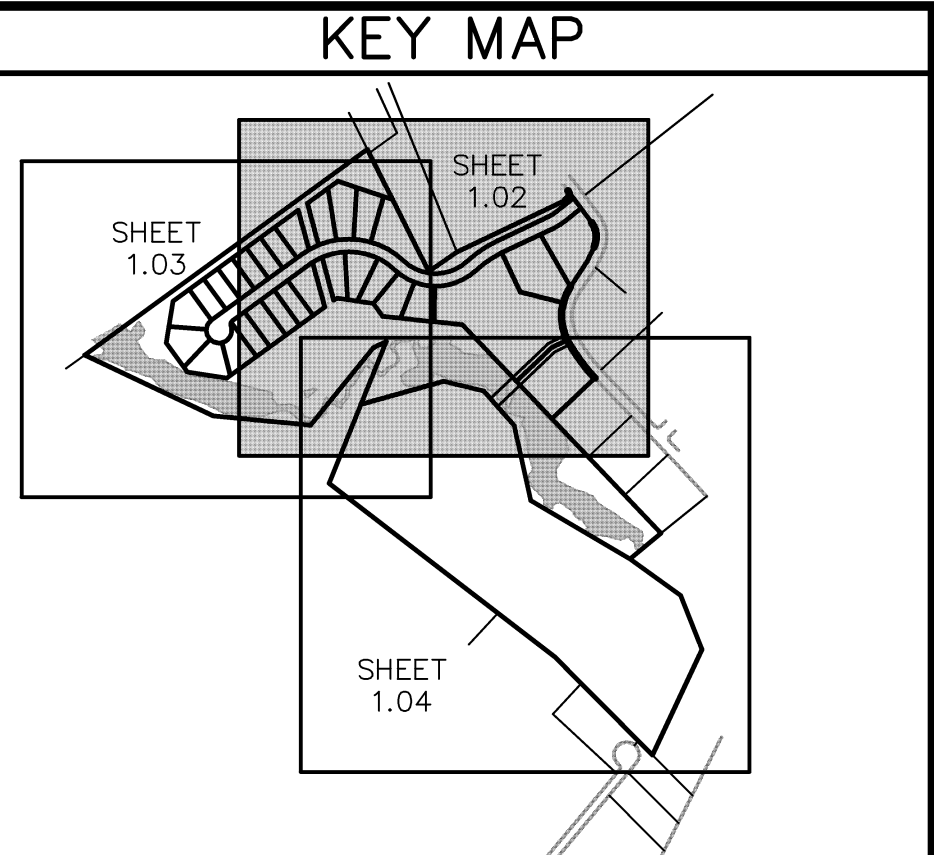
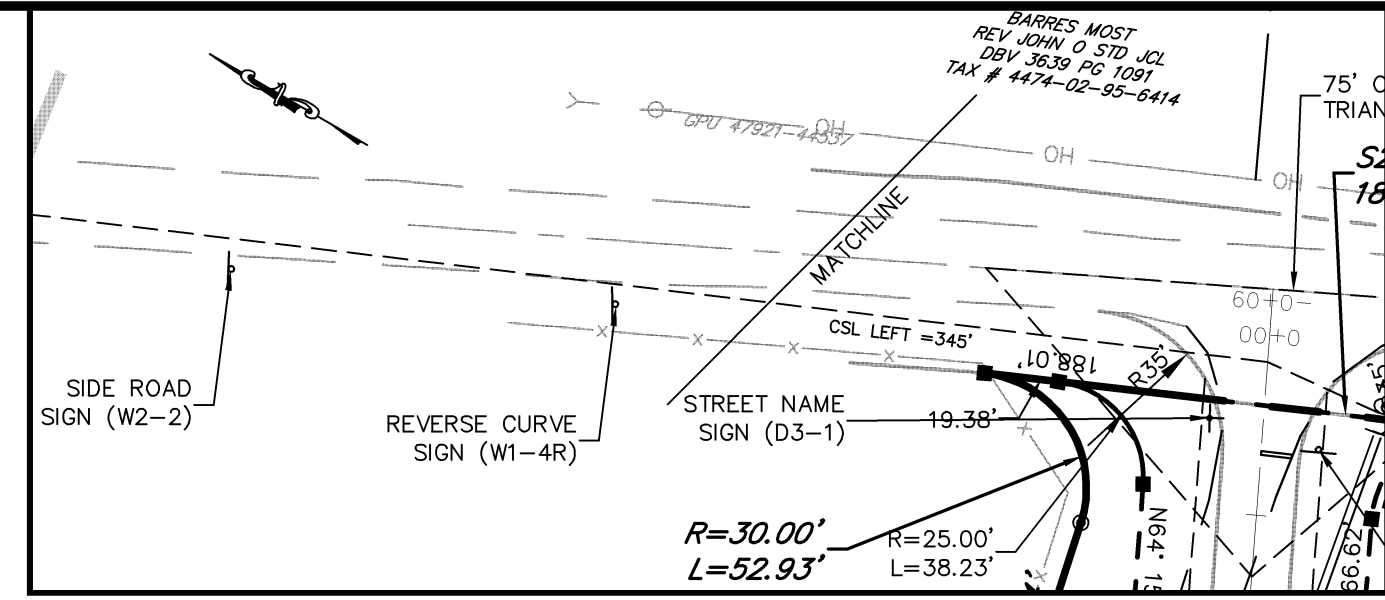
MASTER SUBDIVISION PLAN
PREPARED BY THE
WALNUT ACRES
PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
SITE SITUATION
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

EXISTING FEATURES

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- EXISTING GUIDELINE
- EXISTING METLANDS
- EXIST-DECIDUOUS
- EXIST-EVERGREEN
- EXIST-HEADWALL
- LIGHT POST
- SIGN
- STREET SIGN
- UTILITY-POLE
- WELL
- IP
- BOUND

PROPOSED FEATURES

- PROPOSED BUILDING - SETBACK LINE
- PROPOSED LOT - PARCEL LINE
- PROPOSED EASEMENT - LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED ROAD CENTERLINE
- PROPOSED ROAD EDGE (PAVED/NO CURB)
- PROPOSED ROAD SHOULDER
- PROPOSED ROAD PAVEMENT MARKINGS
- PROPOSED SEWER MAIN - PIPING
- PROPOSED SEWER LATERAL
- PROPOSED STORM SEWER - PIPING
- PROPOSED DRIVEWAY
- PROPOSED DEED RESTRICTION - LINE
- CLEAR SIGHT TRIANGLE
- PROPOSED SANITARY FORCE MAIN
- PROPOSED PHASE LINE
- PROPOSED BUFFER
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- PROPOSED UTILITY POLE
- PROPOSED HEADWALL/ENDWALL
- PROPOSED INLET
- PROPOSED STORM MANHOLE
- PROPOSED SANITARY MANHOLE LABEL
- PROPOSED STORM SEWER LABEL
- PROPOSED WELL



- SURVEY NOTES**
1. BOUNDARY LINE AND ADJOINING PARCEL OWNERS TAKEN FROM EXISTING DEEDS AND PLANS OF RECORD AS WELL AS A BOUNDARY SURVEY PERFORMED BY THE CROSSROADS GROUP, LLC, IN SEPTEMBER OF 2015. THIS PLAN HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND EXISTING EASEMENTS MAY EXIST.
 4. EXISTING BOUNDARY AND TOPOGRAPHY PROVIDED BY THE CROSSROADS GROUP, LLC, ON SEP. 08, 2015. OTHER OFFSITE (ADJONER) SURFACE INFORMATION SUPPLEMENTED BY GOOGLE MAPS AND PASDA (PENNSYLVANIA SPATIAL DATA ACCESS).
 5. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88) (COMPUTED USING GEOID 12B)
 6. HORIZONTAL DATUM: NORTH AMERICAN DATUM 1983 (NAD83) STATE PLANE COORDINATES (SOUTH) ESTABLISHED BY GPS STATIC SESSION SUBMITTED TO OPUS.
 7. EXISTING WETLANDS WERE DELINEATED BY DELVAL SOIL & ENVIRONMENTAL CONSULTANTS, INC. ON SEPTEMBER 11, 2015 AND FIELD LOCATED BY THE CROSSROADS GROUP, LLC, IN OCTOBER OF 2015.
 8. LIMITS OF THE 100-YEAR FLOODPLAIN HAVE BEEN GRAPHICALLY LOCATED FROM FEMA NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP FM4201100145G, EFFECTIVE JULY 03, 2012. NO FLOODPLAIN STUDY HAS BEEN PERFORMED.
 9. LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS AND SIZES ARE BASED ON UTILITY MARK-OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE ASBUILT PLANS AND UTILITY MARKOUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES.
 10. CREP BUFFER RIPARIAN LIMITS, AS SHOWN PER REFERENCE PLANS/ CONSERVATION MAP / SOILS MAP - T9336, PREPARED BY NATURAL RESOURCES CONSERVATION SERVICE, DATED 7-6-16.

Parcel Table

PARCEL	Area
LOT 1	41,113 AC.
LOT 2	25,210 AC.
LOT 3	28,967 AC.
LOT 4	22,023 AC.
LOT 5	18,722 AC.
LOT 6	15,010 AC.
LOT 7	15,010 AC.
LOT 8	15,010 AC.
LOT 9	15,010 AC.
LOT 10	15,010 AC.
LOT 11	15,657 AC.
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LOT 14	23,736 AC.
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LOT 16	16,425 AC.
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LOT 19	16,377 AC.
LOT 20	21,996 AC.
LOT 21	19,344 AC.
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LOT 23	19,898 AC.
LOT 24	23,447 AC.
LOT 25	22,107 AC.
LOT 26	196,035 AC.
LOT 27	60,822 AC.
LOT 28	52,105 AC.
LOT 29	70,546 AC.
LOT#30	1,097,146 AC.

ACT 121 NOTIFICATION

THE UNDERGROUND UTILITY LINE PROTECTION LAW (ACT 81 ANDROS ACT 287 OF 1974)
 SITE SERIAL NO. 20152802884/20152812965

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF THE SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT 121 OF 2008, AS AMENDED BY ACT 181 OF 2006, ACT 198 OF 2004, ACT 187 OF 1996, ACT 172 OF 1986 AND ACT 287 OF 1974, CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-942-1776, NO LESS THAN 3, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.

THE CROSSROADS GROUP, LLC
 www.thecrossroadsgroup.com
 18500 Pottsville Pike, Suite A
 Harrisburg, PA 17126
 Phone: 484-660-3742

PROFESSIONAL PART OF THE SUBDIVISION PLAN

WALNUT ACRES

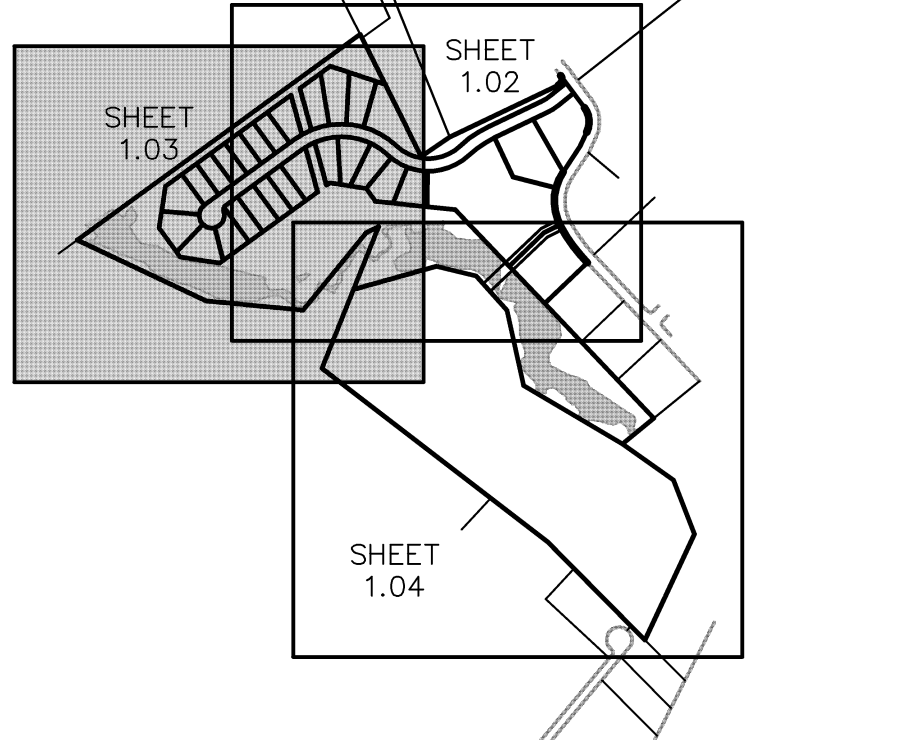
PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER: JDH
 DRAWING FILE NAME: ZSUB
 PLAN ORIGINATION DATE: 07-08-16
 PLAN LAST REVISED: 03-10-20
 PLAN SCALE: 1" = 50'
 PROJECT NUMBER: 1866
 SHEET NUMBER: 02 OF 30

EXISTING FEATURES

KEY MAP

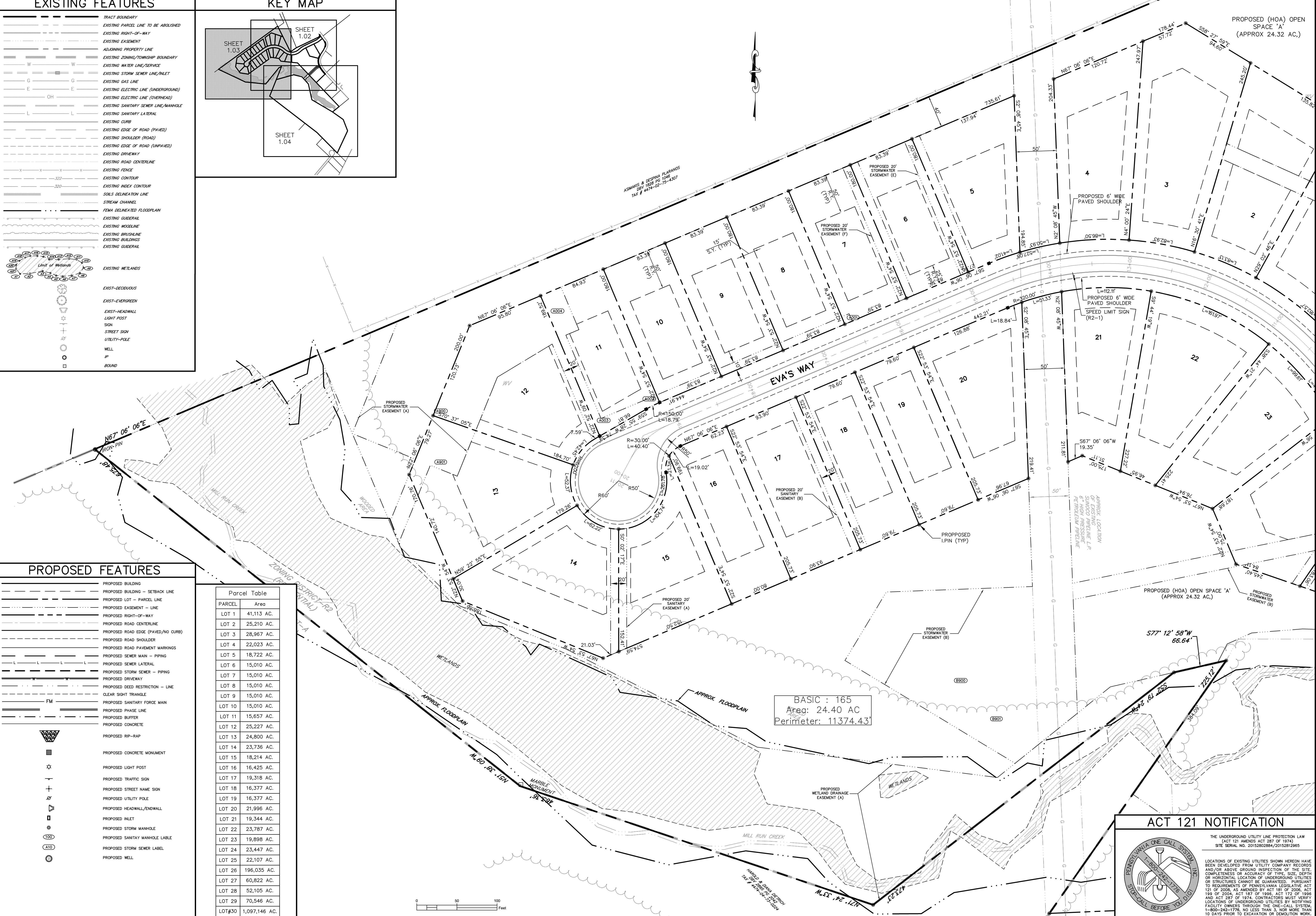
- TRACT BOUNDARY
- EXISTING PARCEL LINE TO BE ABOLISHED
- EXISTING RIGHT-OF-WAY
- EXISTING EASEMENT
- ADJOINING PROPERTY LINE
- EXISTING ZONING/TOWNSHIP BOUNDARY
- EXISTING WATER LINE/SERVICE
- EXISTING STORM SEWER LINE/INLET
- EXISTING GAS LINE
- EXISTING ELECTRIC LINE (UNDERGROUND)
- EXISTING ELECTRIC LINE (OVERHEAD)
- EXISTING SANITARY SEWER LINE/MANHOLE
- EXISTING SANITARY LATERAL
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- EXISTING SHOULDER (ROAD)
- EXISTING EDGE OF ROAD (UNPAVED)
- EXISTING DRIVEWAY
- EXISTING ROAD CENTERLINE
- EXISTING FENCE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- SOILS DELINEATION LINE
- STREAM CHANNEL LINE
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- EXISTING GULLERLINE
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PROPOSED FEATURES

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BASIC : 165
 Area: 24.40 AC
 Perimeter: 11374.43'

PROPOSED (HOA) OPEN SPACE 'A' (APPROX 24.32 AC.)

ACT 121 NOTIFICATION

THE UNDERGROUND UTILITY LINE PROTECTION LAW (ACT 121 ANDROS ACT 287 OF 1974) SITE SERIAL NO. 20152802884/20152812965

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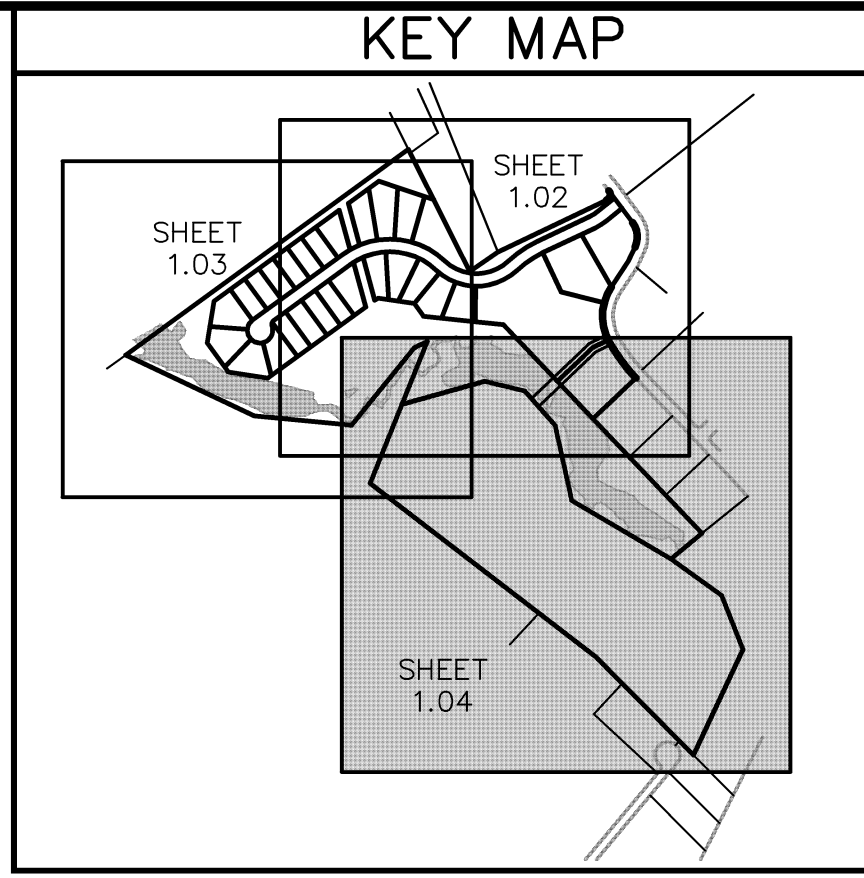
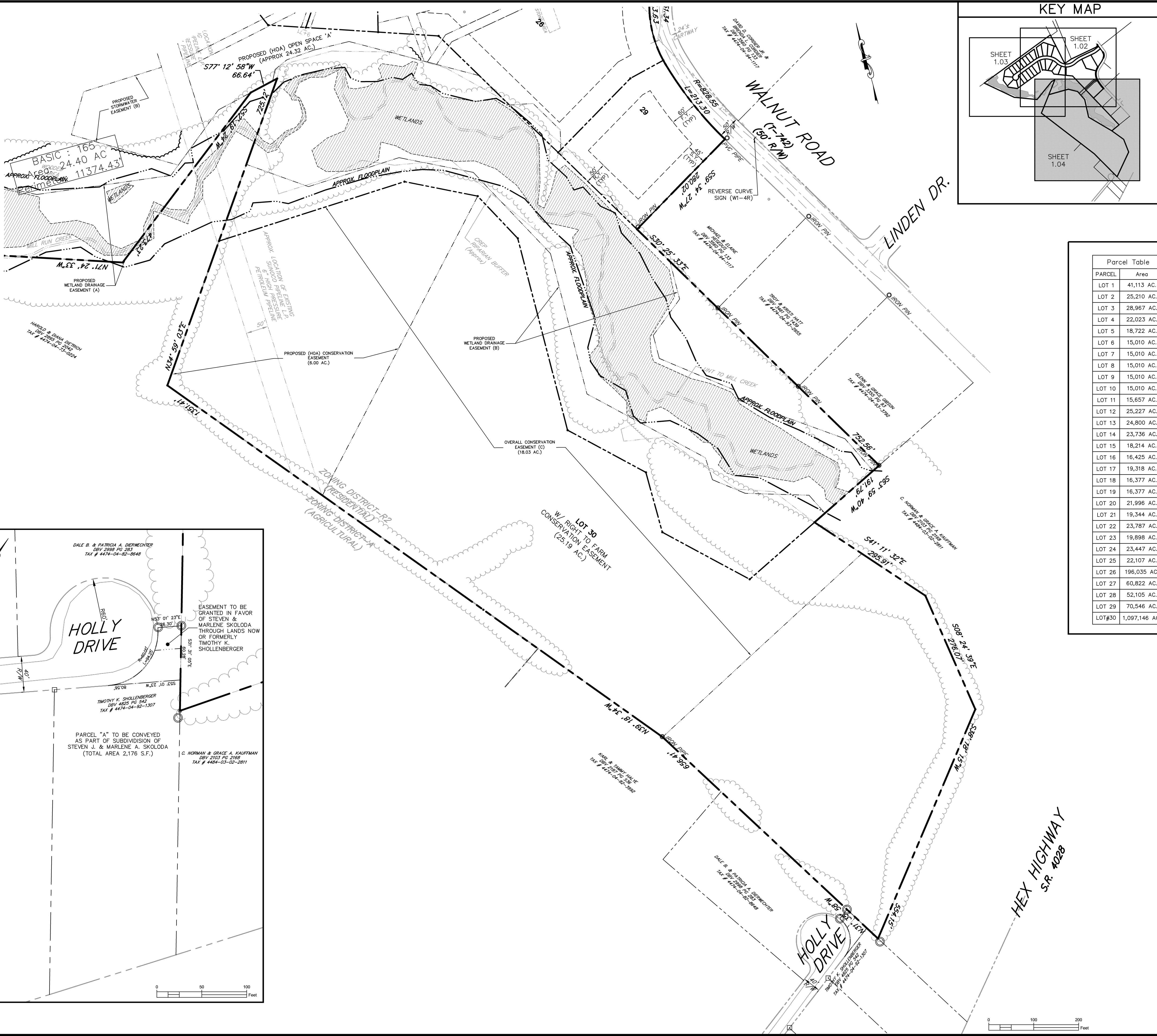
THE CROSSROADS GROUP, LLC
 www.thecrossroadsgroup.com
 18500 Pottsville Pike, Suite A
 Harrisburg, PA 17122
 Phone: 484-860-3242

STEVEN J. & MARLENE A. SKOLODA
 WALNUT ACRES
 SUBDIVISION PLAN 2
 PREPARED FOR: STEVEN J. & MARLENE A. SKOLODA
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER: JDH
 DRAWING FILE NAME: ZSUB
 PLAN ORIGINATION DATE: 07-08-16
 PLAN LAST REVISED: 03-10-20
 PLAN SCALE: 1" = 50'
 PROJECT NUMBER: 1866
 SHEET NUMBER: 03 OF 30

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP INDICATING 'ISSUED FOR CONSTRUCTION'. WE SHALL ASSUME NO LIABILITY FOR CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.

ENGINEERS' CERTIFICATION
 SURVEYORS' CERTIFICATION



EXISTING FEATURES

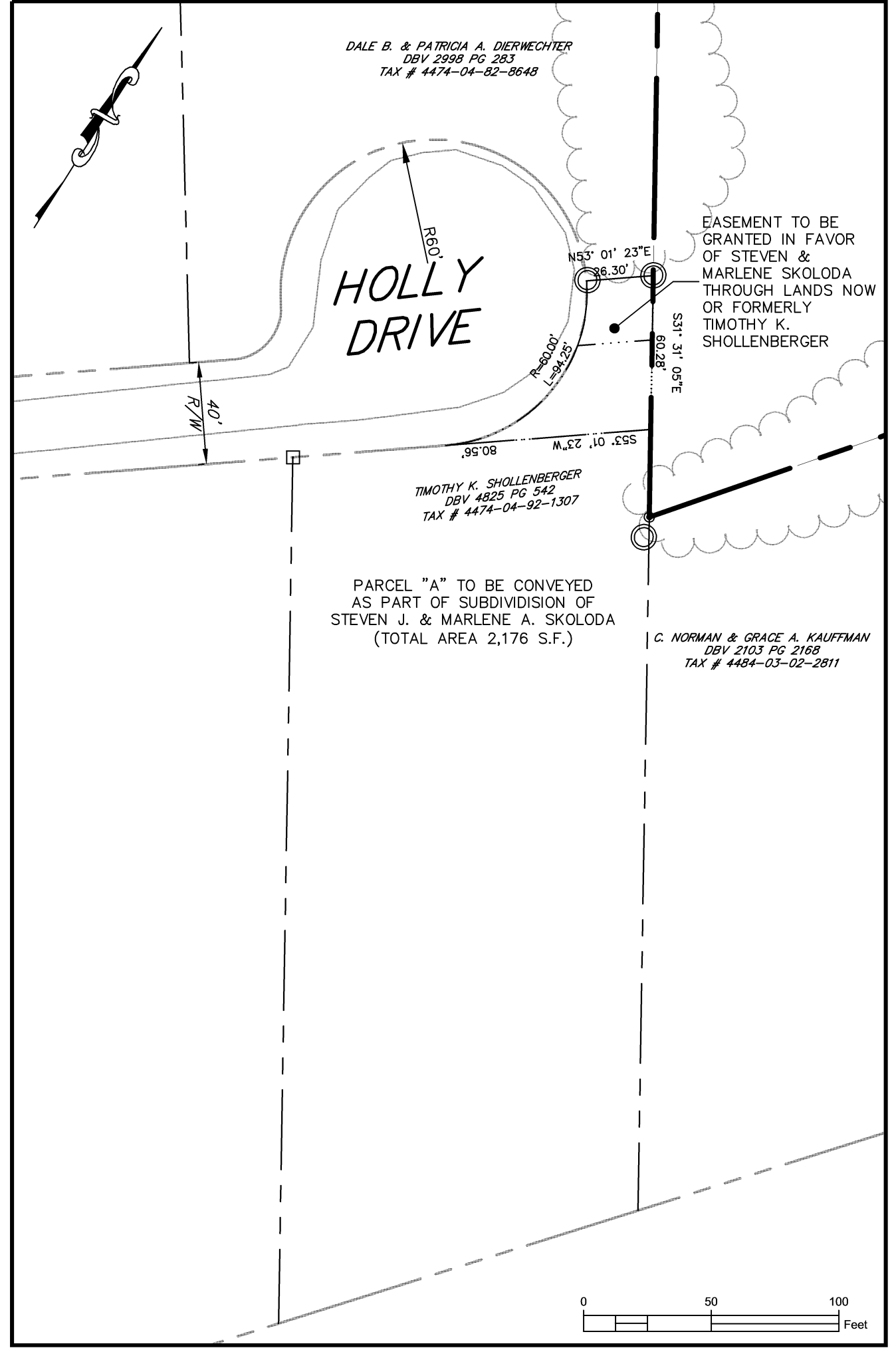
	TRACT BOUNDARY
	EXISTING PARCEL LINE TO BE ABOLISHED
	EXISTING RIGHT-OF-WAY
	EXISTING EASEMENT
	ADJOINING PROPERTY LINE
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PROPOSED FEATURES

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	PROPOSED WELL



ENGINEERS' CERTIFICATION

INSURANCE CERTIFICATION

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The Crossroads GROUP, LLC
www.thecrossroadsgroup.com
18500 Pottsville Pike, Suite A
Hamburg, PA 15526
Phone: 484-660-3742

SUBDIVISION PLAN 3
PREPARED AS PART OF THE
WALNUT ACRES
PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
SITE SITUATION
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER: JDH
DRAWING FILE NAME: ZSUB
PLAN ORIGINATION DATE: 07-08-16
PLAN LAST REVISED: 03-10-20
PLAN SCALE: 1" = 100'
PROJECT NUMBER: 1866
SHEET NUMBER: 04 OF 30

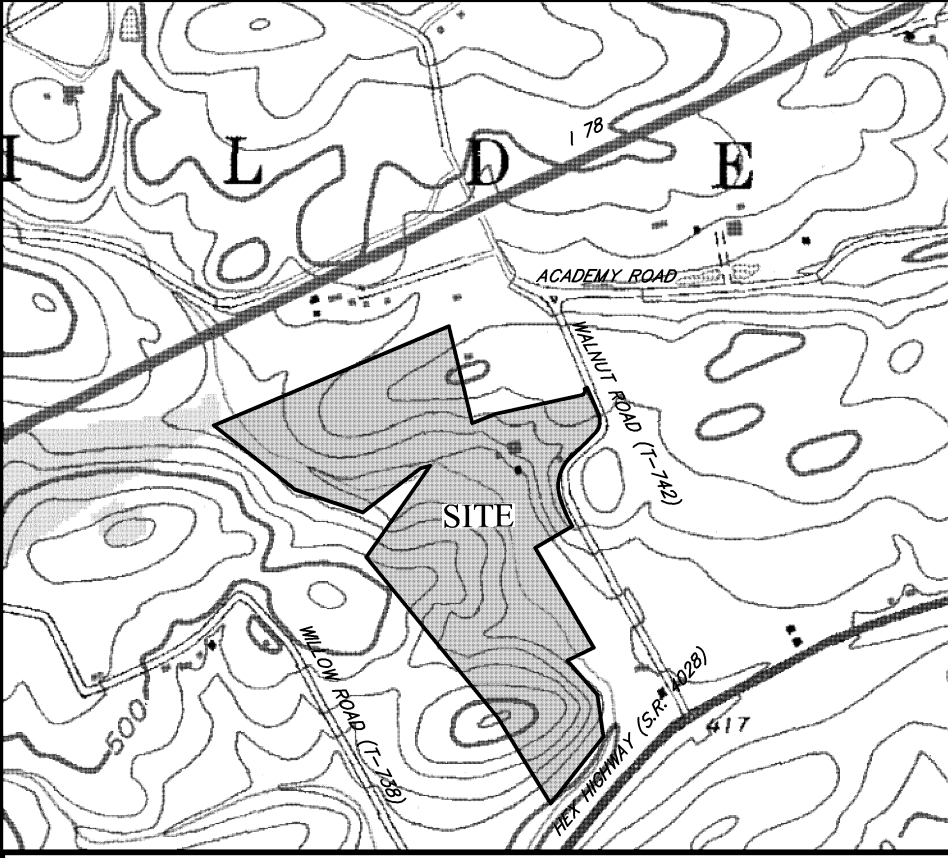
ACT 121 NOTIFICATION

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SITE SERIAL NO. 20152802884/20152812965

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PAENSYLVANIA ONE CALL SYSTEM, INC.
STOP CALL BEFORE YOU DIG

SITE LOCATION MAP 1"=800'



SOILS DATA

SOILS DATA OBTAINED FROM A SOIL SURVEY OF BERKS COUNTY, PENNSYLVANIA, ISSUED SEP 15, 2014.

B1B - BEDINGTON BERKS COMPLEX, 3 TO 8 PERCENT SLOPES
LIMITATIONS - MODERATE CORROSION OF CONCRETE, MODERATE CORROSION OF STEEL, PIPING, SEEPAGE

B6B - BERKS WEIKERT COMPLEX, 3 TO 8 PERCENT SLOPES
LIMITATIONS - MODERATE CORROSION OF CONCRETE, DEPTH TO HARD BEDROCK, DEPTH TO SATURATED ZONE

B6C - BERKS WEIKERT COMPLEX, 8 TO 15 PERCENT SLOPES
LIMITATIONS - MODERATE CORROSION OF CONCRETE, MODERATE CORROSION OF STEEL, DEPTH TO HARD BEDROCK, DEPTH TO SATURATED ZONE

C0C - CALVIN KUNESVILLE CHANNERY SILT LOAMS, 8 TO 15 PERCENT SLOPES
LIMITATIONS - MODERATE CORROSION OF CONCRETE, DEPTH TO HARD BEDROCK, SLOPE, DEPTH TO SATURATED ZONE, PIPING, SEEPAGE

S2B - COMLY SILT LOAM, 3 TO 8 PERCENT SLOPES
LIMITATIONS - MODERATE CORROSION OF CONCRETE, HIGH CORROSION OF STEEL, DEPTH TO SATURATED ZONE

Ho - HOLLY SILT LOAM
LIMITATIONS - HIGH CORROSION OF STEEL, PONDING, FLOODING, DEPTH TO SATURATED ZONE, PIPING

Me - MIDDLEBURY SILT LOAM
LIMITATIONS - MODERATE CORROSION OF CONCRETE, HIGH CORROSION OF STEEL, FLOODING, DEPTH TO SATURATED ZONE, PIPING

WeD - WEIKERT BERKS COMPLEX, 15 TO 25 PERCENT SLOPES
LIMITATIONS - MODERATE CORROSION OF CONCRETE, MODERATE CORROSION OF STEEL, SLOPE, DEPTH TO HARD BEDROCK, DEPTH TO SATURATED ZONE, PIPING, SEEPAGE

SOILS DATA CONT'D

RESOLUTIONS:
CORROSION OF CONCRETE/STEEL - CONCRETE/STEEL MAY NEED TO BE WRAPPED IN CORROSION RESISTANT MATERIAL.
SEEPAGE/PIPING - SUITABLE CLAY MATERIAL MAY NEED TO BE IMPORTED FOR CONSTRUCTION OF BASIN BERM AND KEY TRENCH
DEPTH TO SATURATED ZONE - U-DRAIN MAY BE REQUIRED FOR ANY SPRINGS ENCOUNTERED. PUMPED WATER FILTER BAG MAY BE NEEDED DURING EXCAVATIONS

SURVEY NOTES

- BOUNDARY LINE AND ADJOINING PARCEL OWNERS TAKEN FROM EXISTING DEEDS AND PLANS OF RECORD AS WELL AS A BOUNDARY SURVEY PERFORMED BY THE CROSSROADS GROUP, LLC, IN SEPTEMBER OF 2015. THIS PLAN HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND EXISTING EASEMENTS MAY EXIST.
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NO.	REVISION	DATE
A	REVISION PER CLIENT REVIEW	07/14/15
B	REVISION PER CLIENT REVIEW	07/14/15
C	REVISION PER CLIENT REVIEW	07/14/15
D	REVISION PER CLIENT REVIEW	07/14/15
E	REVISION PER CLIENT REVIEW	07/14/15
F	REVISION PER CLIENT REVIEW	07/14/15
G	REVISION PER CLIENT REVIEW	07/14/15
H	REVISION PER CLIENT REVIEW	07/14/15

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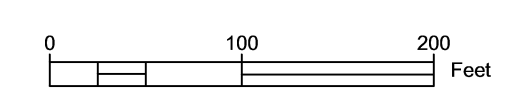
EXISTING RESOURCE AND SITE ANALYSIS MAP
PREPARED AS PART OF THE
WALNUT ACRES
PROJECT FOR
STEVEN J. & MARLENE A. SKOLODA
SITE SITUATE IN
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER	JDH
DRAWING FILE NAME	XFPL
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISION	07-06-18
PLAN SCALE	1" = 100'
PROJECT NUMBER	1866
SHEET NUMBER	05 OF 30

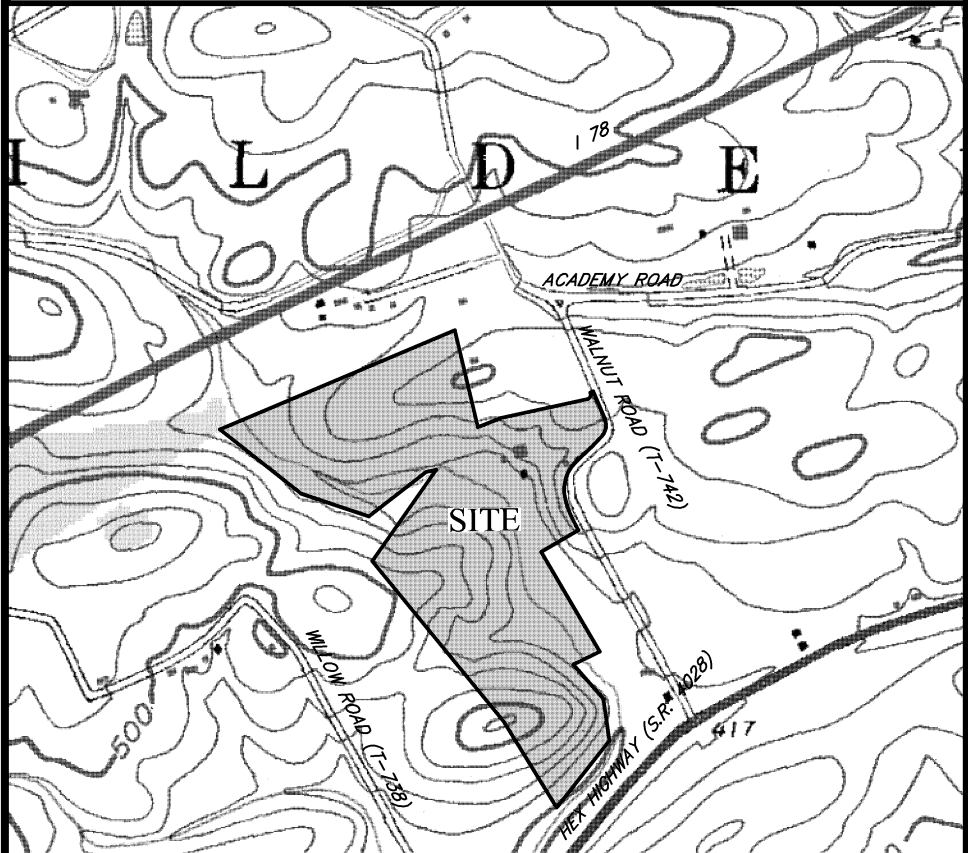


EXISTING FEATURES

TRACT BOUNDARY	EXISTING EDGE OF ROAD (PAVED)
EXISTING PARCEL LINE TO BE ABOLISHED	EXISTING SHOULDER (ROAD)
EXISTING RIGHT-OF-WAY	EXISTING EDGE OF ROAD (UNPAVED)
EXISTING EASEMENT	EXISTING DRIVEWAY
ADJOINING PROPERTY LINE	EXISTING ROAD CENTERLINE
EXISTING ZONING/TOWNSHIP BOUNDARY	EXISTING FENCE
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EXISTING STORM SEWER LINE/MALET	EXISTING INDEX CONTOUR
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LIGHT POST	EXISTING WETLANDS
SIGN	EXIST-DECIDUOUS
STREET SIGN	EXIST-EVERGREEN
UTILITY-POLE	STEEP SLOPES > 25%
IP	SOIL PROBE LOCATION
BOUND	
EXIST-HEADWALL	



SITE LOCATION MAP 1"=800'



CONSTRUCTION NOTES

- STORM SEWER**
- UNLESS OTHERWISE NOTED, ALL STORM SEWER INLETS SHALL BE PENNDOT TYPE "M" AND SHALL CONFORM TO PENNDOT PUBLICATION 408 (LATEST EDITION).
 - UNLESS OTHERWISE NOTED, ALL STORM SEWER PIPING SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) PIPE AND SHALL CONFORM TO PENNDOT PUBLICATION 408 (LATEST EDITION).
 - UNLESS OTHERWISE NOTED, ALL CONCRETE "D" ENDWALLS SHALL CONFORM TO PENNDOT PUBLICATION 408 (LATEST EDITION). THE TOP OF WALL ELEVATION FOR ALL ENDWALLS SHALL CONFORM TO THESE STANDARDS FOR THE ASSOCIATED PIPE SIZE. IN THE EVENT THAT A HIGHER TOP OF WALL ELEVATION IS NECESSARY FOR GRADING, THE "SPECIAL" TOP OF WALL ELEVATION SHALL BE NOTED ON THE PLANS.
 - ALL STORM SEWER LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE. PIPE SLOPES ARE CALCULATED BASED ON THIS LENGTH.
 - ALL LOTS SHALL BE PROPERLY GRADED TO ENSURE PROPER DRAINAGE AWAY FROM HOUSES TO THE NEAREST INLET OR WATERCOURSE WITHOUT PONDING OR OBSTRUCTION. A MINIMUM OF 2% SLOPE SHALL BE PROVIDED ON ALL GRASSED AREAS.
- SANITARY SEWER:**
- ALL MATERIALS AND DETAILS OF CONSTRUCTIONS, INSTALLATION PROCEDURES, AND REQUIREMENTS WITH RESPECT TO SANITARY SEWERAGE FACILITIES SHALL BE IN ACCORDANCE WITH THE TILDEN TOWNSHIP STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR SANITARY SEWER EXTENSIONS (LATEST EDITION).
 - AN 18-INCH VERTICAL CLEARANCE OR A 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ALL SANITARY SEWER AND WATER MAINS. WHERE IMPOSSIBLE TO MAINTAIN A 10-FOOT HORIZONTAL CLEARANCE, AN 18-INCH VERTICAL CLEARANCE MUST BE MAINTAINED.
 - ALL GRAVITY SANITARY SEWER PIPING SHALL BE 8" DIA. P.V.C. SDR-35 PIPE CONFORMING TO ASTM D-3034 SPECIFICATIONS. LATERALS SHALL BE 4" DIA. P.V.C. SDR-35 PIPE AND SHALL EXTEND FIVE (5) FEET BEYOND THE RIGHT-OF-WAY (OR EASEMENT, WHERE APPLICABLE) AND SHALL BE CAPPED. ALL SANITARY SEWER LATERALS SHALL BE LAID ON A SLOPE OF NOT LESS THAN 1/4" INCH PER FOOT WITH A MINIMUM COVER OF 48 INCHES.
 - ALL PROPOSED SANITARY SEWER MANHOLES LOCATED IN UNPAVED AREAS SHALL BE PROVIDED WITH WATERTIGHT FRAMES AND COVERS SET EIGHTEEN INCHES ABOVE FINISHED GRADES.
 - ALL SANITARY SEWER LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE. PIPE SLOPES ARE CALCULATED BASED ON THIS LENGTH.
 - GRAVITY SANITARY SEWER SERVICE WILL BE PROVIDED TO THE FIRST FLOOR ELEVATION OF EACH DWELLING. BASEMENT SANITARY SEWER SERVICE WILL NOT BE PROVIDED UNLESS OTHERWISE NOTED.
 - ALL CONCRETE ENCASUREMENT SHALL BE SHOWN ON THE DRAWINGS AND NO OTHER ENCASUREMENT SHALL BE INSTALLED WITHOUT THE WRITTEN APPROVAL OF THE DESIGN ENGINEER, AS WELL AS WRITTEN APPROVAL OF THE AUTHORITY ENGINEER. ALL ENCASUREMENTS SHALL EXTEND TO THE NEXT JOINT BEYOND THE MINIMUM DISTANCE REQUIREMENT.
 - A MINIMUM OF EIGHTEEN (18) INCHES OF VERTICAL CLEARANCE IS REQUIRED BETWEEN ALL UTILITIES AND THE SANITARY SEWER LINES. THIS INCLUDES STREET LATERALS.
 - NO TREE OR BUSH SHALL BE PLACED WITHIN 10 FEET OF A SANITARY SEWER MAIN OR LATERAL.
- GENERAL CONSTRUCTION:**
- THIS PLAN CONTAINS PRELIMINARY INFORMATION PERTAINING TO UNDERGROUND UTILITIES WHICH IS FOR GENERAL INFORMATION ONLY, AND MAY NOT BE BASED ON AN ACTUAL SUBSURFACE LOCATION SURVEY. ALL SUBSURFACE INFORMATION SHOWN ON THESE PLANS NEEDS TO BE VERIFIED BY THE PLAN USER. THE PREPARER OF THIS PLAN ASSUMES NO RESPONSIBILITY FOR AND MAKES NO REPRESENTATION OR WARRANTIES AS TO THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES OR OTHER UNDERGROUND FEATURES. THE PLAN USER SHALL EXECUTE A PA ONE CALL PRIOR TO ANY EXCAVATION ON THE SITE.
 - A MINIMUM VERTICAL CLEARANCE OF 18 INCHES SHALL BE PROVIDED AT ALL UTILITY CROSSINGS. WHERE 18 INCHES OF CLEARANCE CAN NOT BE OBTAINED, THE LOWER UTILITY LINE SHALL BE CONCRETE ENCASED FOR A LENGTH OF 20 FEET, CENTERED ABOUT THE CROSSING.
 - ALL CONSTRUCTION SHALL CONFORM TO TILDEN TOWNSHIP STANDARDS AND SPECIFICATIONS OR PENNDOT PUBLICATION 408 (LATEST EDITION), WHICHEVER IS APPLICABLE.
 - GAS, ELECTRIC AND CABLE TELEVISION FACILITIES FOR ALL LOTS SHALL BE PROVIDED BY UNDERGROUND SERVICE.
 - HANDICAPPED RAMPS SHALL BE LOCATED AT ALL INTERSECTIONS OR WHERE OTHERWISE NOTED AND INSTALLED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AS LAST AMENDED.
 - TOPSOIL SHOULD BE REMOVED FROM ALL AREAS OF CONSTRUCTION AND STORED SEPARATELY. PRIOR TO BULK EXCAVATION UPON COMPLETION OF CONSTRUCTION, THE TOPSOIL SHOULD BE REDISTRIBUTED ON THE SITE UNIFORMLY.
 - NO PLANTINGS OR STRUCTURES SHALL BE PERMITTED WITHIN ANY EASEMENTS. ALL EASEMENT AREAS SHALL BE MAINTAINED AS LAWN AREA BY THE PROPERTY OWNER.
 - BASEMENTS ARE PROPOSED FOR ALL UNITS. NO SUMP PUMPS SHALL DISCHARGE DIRECTLY ONTO DRIVEWAYS, SIDEWALKS, STREETS OR INTO THE SANITARY SEWER COLLECTION SYSTEM. ANY WATER ORIGINATING FROM SUMP PUMPS AND ROOF DRAINS SHALL BE COLLECTED AND DISCHARGED EITHER INTO THE PROPOSED STORM SEWER SYSTEM OR TO THE REAR YARD OF THE DWELLING (WITH APPROPRIATE OVERLAND DRAINAGE).
 - ALL CONTRACTORS SHALL BE RESPONSIBLE TO INSURE THAT ALL TRENCH EXCAVATIONS BE ADEQUATELY STABILIZED AND ACCESSED IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REQUIREMENTS, INCLUDING ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS / CODES OF SAFE PRACTICE AND PROCEDURES.
 - CONTRACTOR SHALL PRE-TEST DESIGN DEPTHS FOR ALL BMP'S PRIOR TO INSTALLING RELATED STRUCTURES OR PERFORMING BULK EXCAVATION (REFER TO THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN FOR ALL BMP AND ASSOCIATED STRUCTURE LOCATIONS). MINOR ADJUSTMENTS MAY BE NECESSARY DURING CONSTRUCTION DUE TO UNKNOWN SITE CONDITIONS. IF NECESSARY, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY FOR FURTHER EVALUATION. ALL FIELD CHANGES MUST BE REVIEWED AND APPROVED BY THE MUNICIPALITY AND/OR AGENCY HAVING JURISDICTION.
 - ALL MATERIALS AND DEBRIS FROM DEMOLITION ACTIVITY SHALL BE HAULED OFFSITE TO AN APPROVED LANDFILL. ALL RELATED APPROVALS AND HAULING PERMITS SHALL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR. NO DEBRIS SHALL BE INCINERATED, BURIED OR DISPOSED OF ON SITE.
 - ANY SPRINGS/GROUND WATER ENCOUNTERED DURING ROADWAY CONSTRUCTION SHALL BE OUTLETTED BY U-DRAIN TO THE NEAREST STORM SEWER FACILITY OR WATERCOURSE. U-DRAIN PLACEMENT MUST BE REVIEWED AND APPROVED BY THE TOWNSHIP/BOROUGH PRIOR TO INSTALLATION AND/OR AS DIRECTED BY THE TOWNSHIP/BOROUGH ENGINEER OR ASSIGNED REPRESENTATIVE.

NO.	REVISIONS	DATE
A	REVISION PER CLIENT REVIEW	08/14/15
B	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS	03/10/16
C	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS	03/10/16
D	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS	03/10/16
E	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS	03/10/16
F	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS	03/10/16
G	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS	03/10/16
H	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS	03/10/16
I	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS	03/10/16
J	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS	03/10/16

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP INDICATING "ISSUED FOR CONSTRUCTION". WE SHALL ASSUME NO LIABILITY FOR CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.

The Crossroads GROUP, LLC
 www.thecrossroadsgroup.com
 18580 Pottsville Pike, Suite A
 Hamburg, PA 15026
 Phone: 484-660-3242

ACT 121 NOTIFICATION

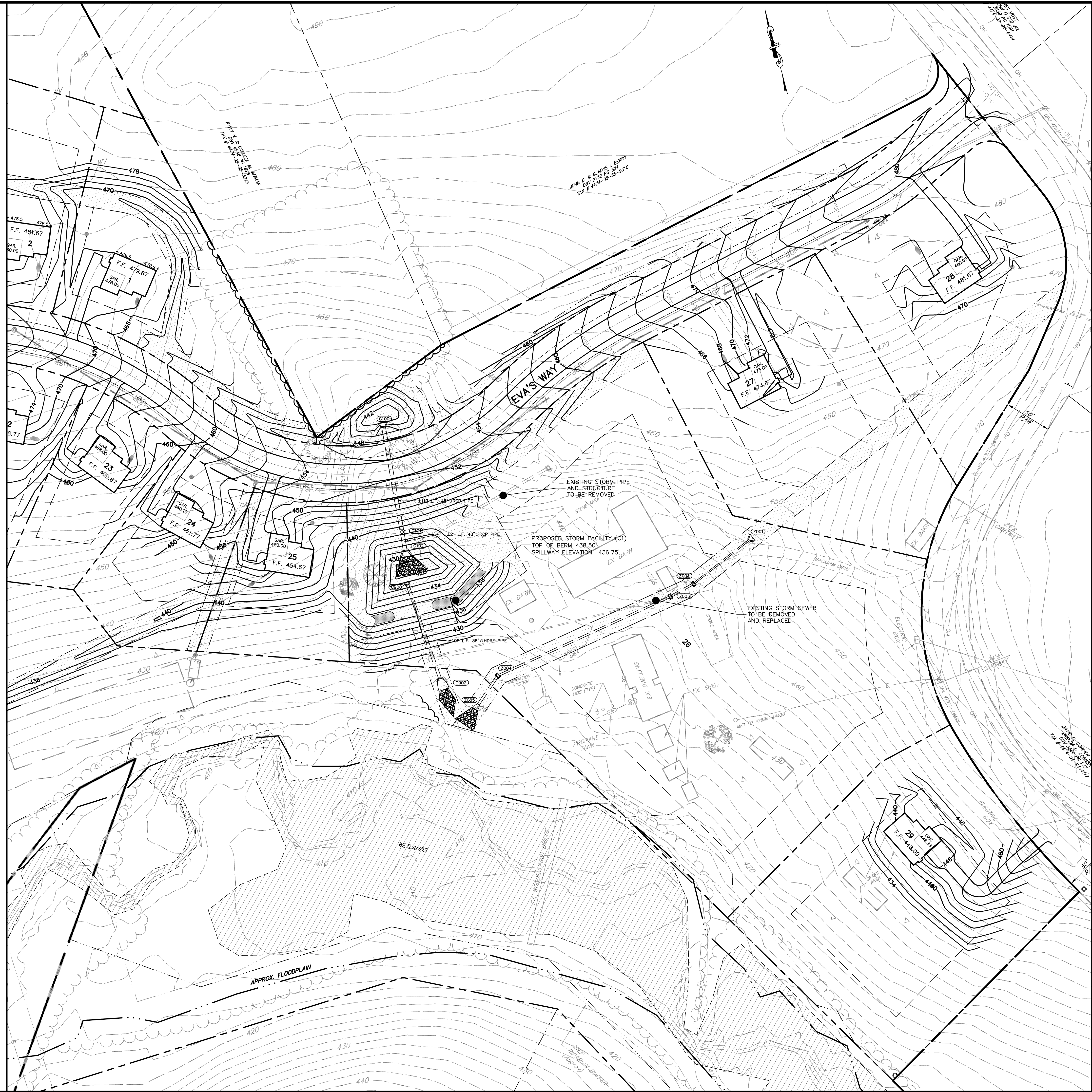
THE UNDERGROUND UTILITY LINE PROTECTION LAW (ACT 121 AMENDED ACT 287 OF 1974) SITE SERIAL NO. 20152802884/20152812965

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT 121 OF 2004, ACT 187 OF 1996, ACT 172 OF 1996 AND ACT 287 OF 1974, CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-942-1776, NO LESS THAN 3, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.

MASTER STORM WATER & GRADING PLAN

PREPARED AS PART OF THE
WALNUT ACRES
 PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER: JDH
 DRAWING FILE NAME: ZCI-STORM
 PLAN ORIGINATION DATE: 07-08-16
 PLAN LAST REVISED: 03-10-20
 PLAN SCALE: 1" = 100'
 PROJECT NUMBER: 1866
 SHEET NUMBER: 06 OF 30



EXISTING FEATURES

	TRACT BOUNDARY
	EXISTING PARCEL LINE TO BE ABOLISHED
	EXISTING RIGHT-OF-WAY
	EXISTING EASEMENT
	ADJOINING PROPERTY LINE
	EXISTING ZONING/TOWNSHIP BOUNDARY
	EXISTING WATER LINE/SERVICE
	EXISTING STORM SEWER LINE/INLET
	EXISTING GAS LINE
	EXISTING ELECTRIC LINE (UNDERGROUND)
	EXISTING ELECTRIC LINE (OVERHEAD)
	EXISTING SANITARY SEWER LINE/MANHOLE
	EXISTING SANITARY LATERAL
	EXISTING CURB
	EXISTING EDGE OF ROAD (PAVED)
	EXISTING SHOULDER (ROAD)
	EXISTING EDGE OF ROAD (UNPAVED)
	EXISTING DRIVEWAY
	EXISTING ROAD CENTERLINE
	EXISTING FENCE
	EXISTING CONTOUR
	EXISTING INDEX CONTOUR
	SOILS DELINEATION LINE
	STREAM CHANNEL
	FEMA DELINEATED FLOODPLAIN
	EXISTING GUTTERLINE
	EXISTING WOODLINE
	EXISTING BRUSHLINE
	EXISTING BUILDINGS
	EXISTING GUTTERLINE
	EXISTING WETLANDS
	EXIST-DECIDUOUS
	EXIST-EVERGREEN
	EXIST-HEADWALL
	LIGHT POST
	SIGN
	STREET SIGN
	UTILITY-POLE
	WELL
	IP
	BOUND

PROPOSED FEATURES

	PROPOSED BUILDING
	PROPOSED BUILDING - SETBACK LINE
	PROPOSED LOT - PARCEL LINE
	PROPOSED EASEMENT - LINE
	PROPOSED RIGHT-OF-WAY
	PROPOSED ROAD CENTERLINE
	PROPOSED ROAD EDGE (PAVED/NO CURB)
	PROPOSED ROAD SHOULDER
	PROPOSED ROAD PAVEMENT MARKINGS
	PROPOSED SEWER MAIN - PIPING
	PROPOSED SEWER LATERAL
	PROPOSED STORM SEWER - PIPING
	PROPOSED WATER MAIN - PIPING
	PROPOSED WATER LATERAL
	PROPOSED FENCE LINE
	PROPOSED CURBLINE
	PROPOSED DRIVEWAY
	PROPOSED DEED RESTRICTION - LINE
	CLEAR SIGHT TRIANGLE
	PROPOSED SANITARY FORCE MAIN
	PROPOSED PHASE LINE
	PROPOSED GARAGE
	PROPOSED BUFFER
	PROPOSED CONCRETE
	PROPOSED RIP-RAP
	PROPOSED CONCRETE MONUMENT
	PROPOSED LIGHT POST
	PROPOSED TRAFFIC SIGN
	PROPOSED STREET NAME SIGN
	PROPOSED UTILITY POLE
	PROPOSED WELL
	PROPOSED HEADWALL/ENDWALL
	PROPOSED INLET
	PROPOSED STORM MANHOLE
	PROPOSED SANITARY MANHOLE LABEL
	PROPOSED STORM SEWER LABEL

ACT 121 NOTIFICATION

THE UNDERGROUND UTILITY LINE PROTECTION LAW (ACT 121 AMENDS ACT 287 OF 1974) SITE SERIAL NO. 2015282884/20152812965

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT 121 OF 2008, AS AMENDED BY ACT 181 OF 2006, ACT 199 OF 2004, ACT 187 OF 1999, ACT 172 OF 1996 AND ACT 287 OF 1974, CONTRACTORS MUST VERIFY LOCATION OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-242-1776, NO LESS THAN 3, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.

DATE

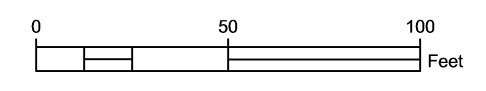
9/14/15	PLAN REVISIONS
12/23/18	REVISED PER CLIENT REVISIONS REVIEW LETTER DATED 8/16/18
03/07/17	REVISED PER TWP. ENG. AND BCD REVIEW LETTERS BOTH DATED 10/31/16
03/07/17	REVISED PER BCD REVIEW LETTER DATED 07/18/17
03/07/17	REVISED PER TWP. ENGINEERING COMMENTS AND LISTING REASON
12/08/17	REVISED PER TWP. ENGINEERING COMMENTS AND LISTING REASON
10/26/18	REVISED PER BCD REVIEW LETTER DATED 10/16/18
03/07/20	REVISED PER TOWNSHIP REVIEW LETTER DATED 10/21/17

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP. THE PLAN IS SUBJECT TO LOCAL CONSTRUCTION PERMITS. ASSUME NO LIABILITY FOR CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.

The Crossroads GROUP, LLC
 www.thecrossroadsgroup.com
 16590 Poatsville Pike, Suite A
 Hamburg, PA 19526
 Phone: 484-660-3742

PROPOSED STORMWATER & GRADING PLAN (1)
 PREPARED AS PART OF THE
WALNUT ACRES
 PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 SITE SITUATE IN
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER	JDH
DRAWING FILE NAME	ZCI-STORM
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISED	03-10-20
PLAN SCALE	1" = 50'
PROJECT NUMBER	1866
SHEET NUMBER	07 OF 30

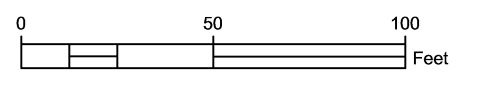
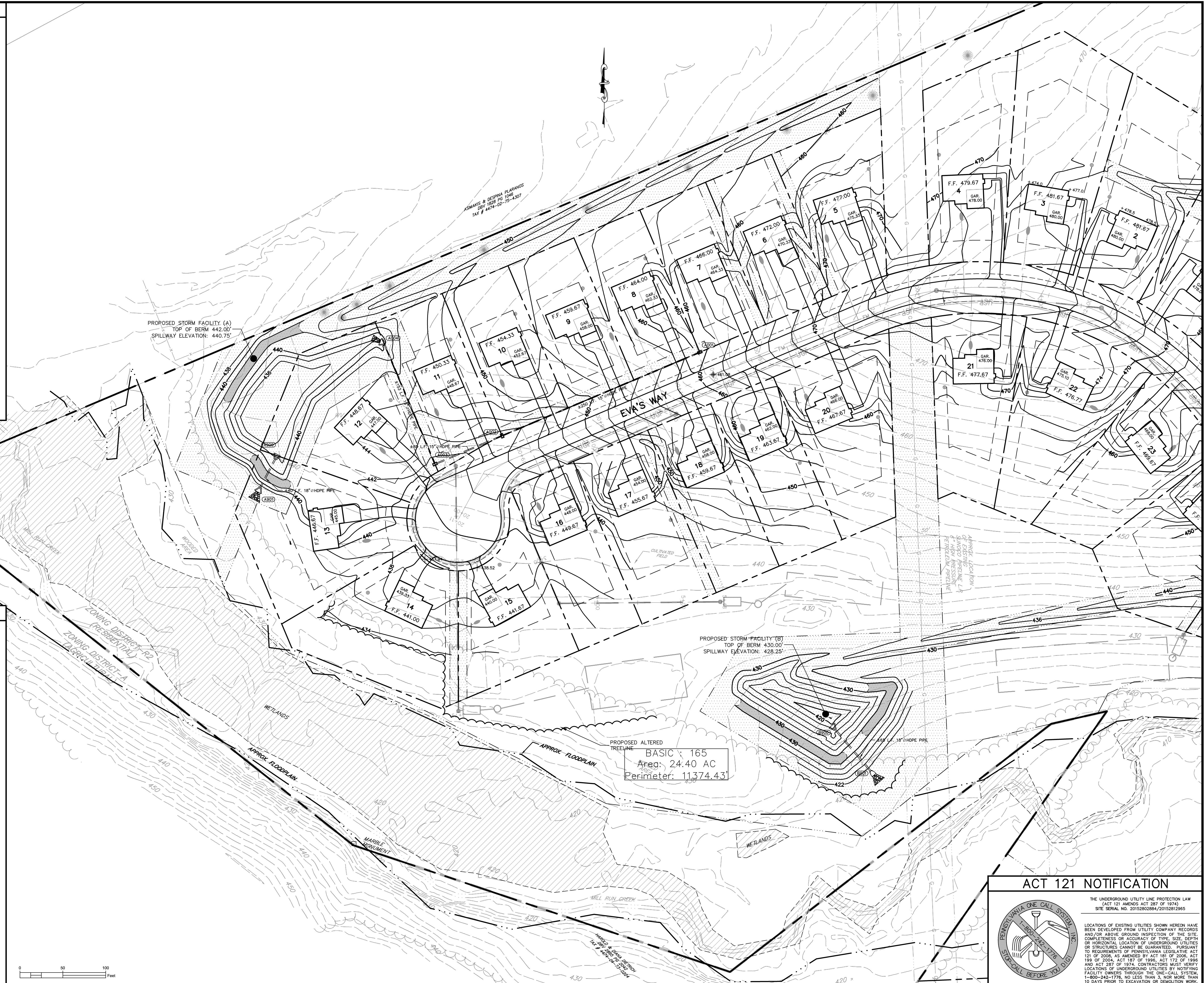


EXISTING FEATURES

	TRACT BOUNDARY
	EXISTING PARCEL LINE TO BE ABOLISHED
	EXISTING RIGHT-OF-WAY
	EXISTING EASEMENT
	ADJOINING PROPERTY LINE
	EXISTING ZONING/TOWNSHIP BOUNDARY
	EXISTING WATER LINE/SERVICE
	EXISTING STORM SEWER LINE/INLET
	EXISTING GAS LINE
	EXISTING ELECTRIC LINE (UNDERGROUND)
	EXISTING ELECTRIC LINE (OVERHEAD)
	EXISTING SANITARY SEWER LINE/MANHOLE
	EXISTING SANITARY LATERAL
	EXISTING CURB
	EXISTING EDGE OF ROAD (PAVED)
	EXISTING SHOULDER (ROAD)
	EXISTING EDGE OF ROAD (UNPAVED)
	EXISTING DRIVEWAY
	EXISTING ROAD CENTERLINE
	EXISTING FENCE
	EXISTING CONTOUR
	EXISTING INDEX CONTOUR
	SOIL DELINEATION LINE
	STREAM CHANNEL
	FEMA DELINEATED FLOODPLAIN
	EXISTING GULCH/RAIN
	EXISTING WOODLINE
	EXISTING BRUSHLINE
	EXISTING BUILDINGS
	EXISTING GUTTER/RAIN
	EXISTING WETLANDS
	EXIST-DECIDUOUS
	EXIST-EVERGREEN
	EXIST-HEADWALL
	LIGHT POST
	SIGN
	STREET SIGN
	UTILITY-POLE
	WELL
	IP
	BOUND

PROPOSED FEATURES

	PROPOSED BUILDING
	PROPOSED BUILDING - SETBACK LINE
	PROPOSED LOT - PARCEL LINE
	PROPOSED EASEMENT - LINE
	PROPOSED RIGHT-OF-WAY
	PROPOSED ROAD CENTERLINE
	PROPOSED ROAD EDGE (PAVED/NO CURB)
	PROPOSED ROAD SHOULDER
	PROPOSED ROAD PAVEMENT MARKINGS
	PROPOSED SEWER MAIN - PIPING
	PROPOSED SEWER LATERAL
	PROPOSED STORM SEWER - PIPING
	PROPOSED WATER MAIN - PIPING
	PROPOSED WATER LATERAL
	PROPOSED FENCE LINE
	PROPOSED CURBSIDE
	PROPOSED DRIVEWAY
	PROPOSED DEED RESTRICTION - LINE
	CLEAR SIGHT TRIANGLE
	PROPOSED SANITARY FORCE MAIN
	PROPOSED PHASE LINE
	PROPOSED GARAGE
	PROPOSED BUFFER
	PROPOSED CONCRETE
	PROPOSED RIP-RAP
	PROPOSED CONCRETE MONUMENT
	PROPOSED LIGHT POST
	PROPOSED TRAFFIC SIGN
	PROPOSED STREET NAME SIGN
	PROPOSED UTILITY POLE
	PROPOSED WELL
	PROPOSED HEADWALL/ENDWALL
	PROPOSED INLET
	PROPOSED STORM MANHOLE
	PROPOSED SANITARY MANHOLE LABEL
	PROPOSED STORM SEWER LABEL



DATE

9/14/15	PLAN REVISIONS
12/23/16	A. REVISION PER CLIENT REVIEWER'S REVIEW LETTER DATED 8/16/16
03/07/17	B. REVISION PER TWP. ENG. AND BCD REVIEW LETTERS BOTH DATED 12/23/16
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12/08/17	D. REVISION PER TWP. ENGINEERING COMMENTS AND LOGGING REVISION
12/08/17	E. REVISION PER BCD REVIEW LETTER DATED 10/16/17
03/10/20	F. REVISION PER TOWNSHIP REVIEW LETTER DATED 10/21/17

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The Crossroads GROUP, LLC
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 16550 Poatsville Pike, Suite A
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PROPOSED STORMWATER & GRADING PLAN (2)
 PREPARED AS PART OF THE
WALNUT ACRES
 PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER: JDH
 DRAWING FILE NAME: ZCI-STORM
 PLAN ORIGINATION DATE: 07-08-16
 PLAN LAST REVISED: 03-10-20
 PLAN SCALE: 1" = 50'
 PROJECT NUMBER: 1866
 SHEET NUMBER: 08 OF 30

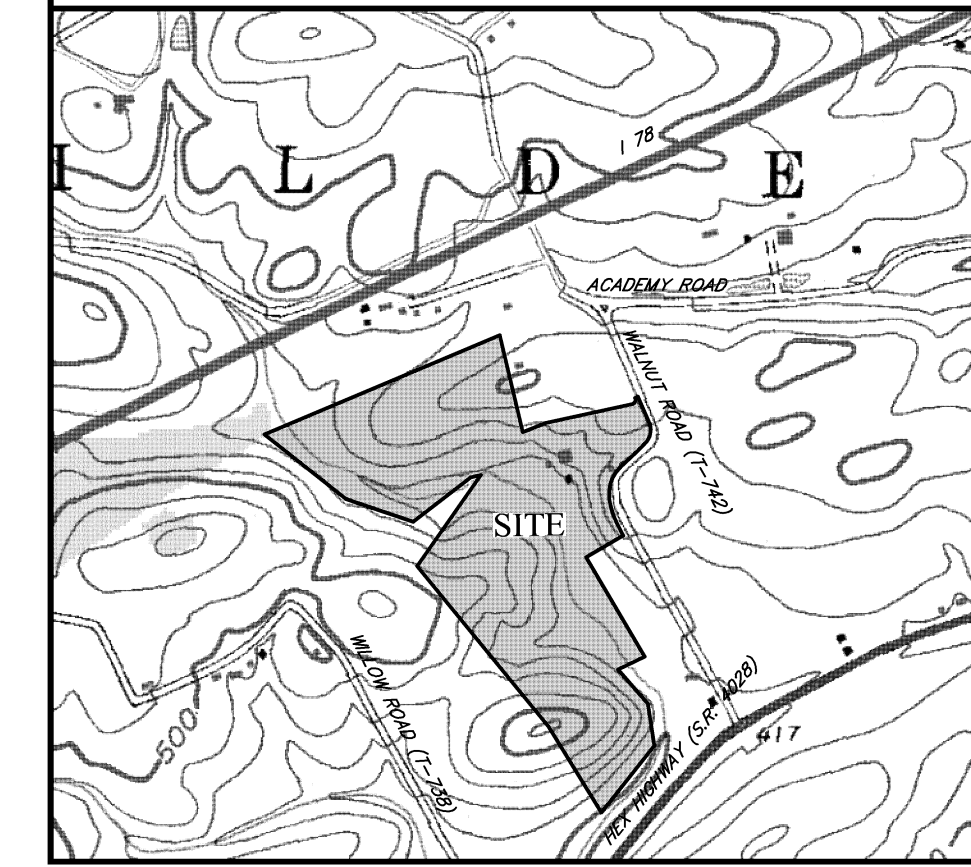
ACT 121 NOTIFICATION

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 SITE SERIAL NO. 20152802884/20152812965

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

SITE LOCATION MAP 1"=800'



CONSTRUCTION NOTES

- STORM SEWER**
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 - ALL CONCRETE ENCASUREMENT SHALL BE SHOWN ON THE DRAWINGS AND NO OTHER ENCASUREMENT SHALL BE INSTALLED WITHOUT THE WRITTEN APPROVAL OF THE DESIGN ENGINEER AS WELL AS WRITTEN APPROVAL OF THE AUTHORITY ENGINEER. ALL ENCASUREMENTS SHALL EXTEND TO THE NEXT JOINT BEYOND THE MINIMUM DISTANCE REQUIREMENT.
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NO.	REVISION	DATE
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B	REVISION PER CLIENT REVIEW	07/14/15
C	REVISION PER CLIENT REVIEW	07/14/15
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The Crossroads GROUP, LLC
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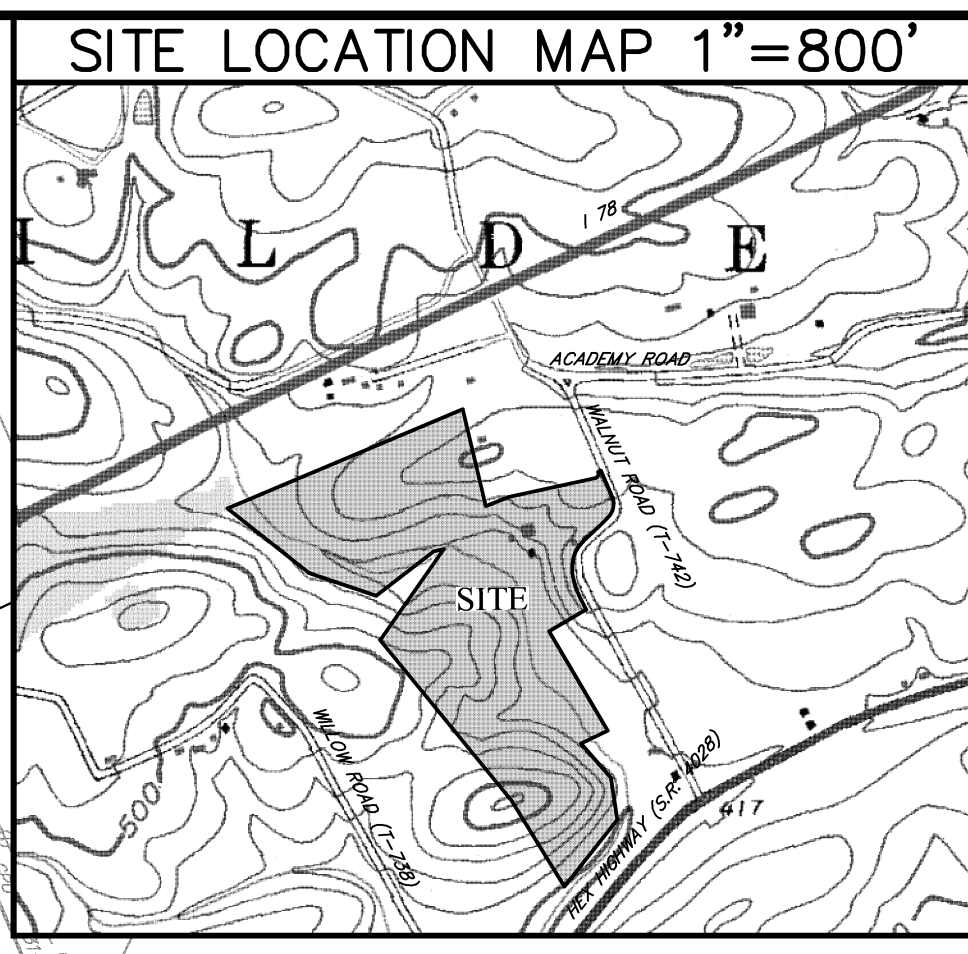
MASTER UTILITY PLAN
 PREPARED AS PART OF THE
WALNUT ACRES
 PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 SITE SITUATE IN
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER	JDH
DRAWING FILE NAME	ZCI-WATER
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISED	03-10-20
PLAN SCALE	1" = 100'
PROJECT NUMBER	1866
SHEET NUMBER	09 OF 30

LEGEND

- △ SOIL TEST PROBE LOCATION
- PROPOSED ON-LOT SINGLE FAMILY WELL
- SINGLE FAMILY ON-LOT SEWAGE SYSTEM





CONSTRUCTION NOTES

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LEGEND

- SOIL TEST PROBE LOCATION
- PROPOSED ON-LOT SINGLE FAMILY WELL
- SINGLE FAMILY ON-LOT SEWAGE SYSTEM

NO.	REVISION	DATE
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STEVEN J. & MARLENE A. SKOLODA
 SITE SITUATE IN
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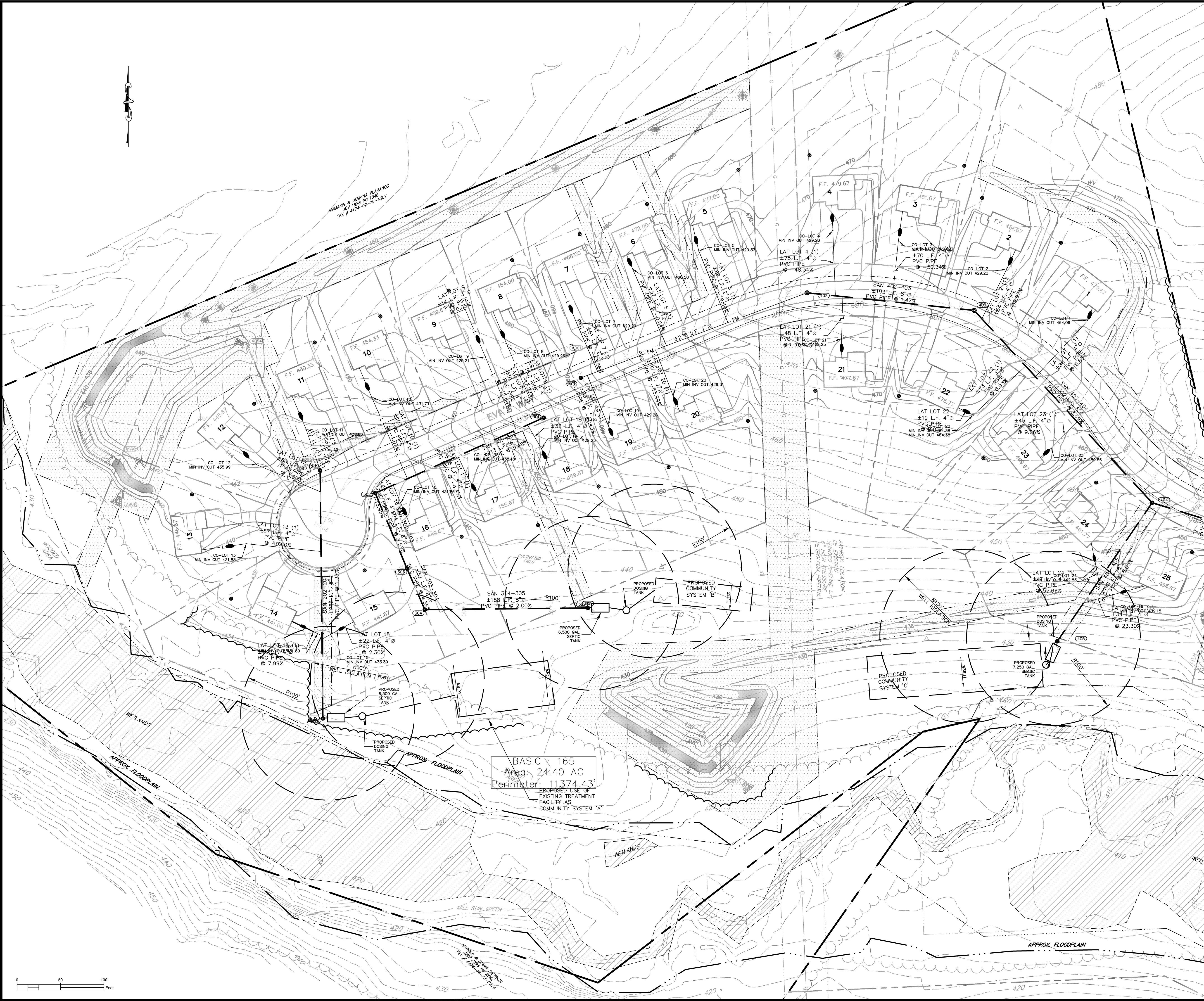
PROJECT MANAGER	JDH
DRAWING FILE NAME	ZCI-WATER
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISED	03-10-20
PLAN SCALE	1" = 50'
PROJECT NUMBER	1866
SHEET NUMBER	10 OF 30

CONSTRUCTION NOTES

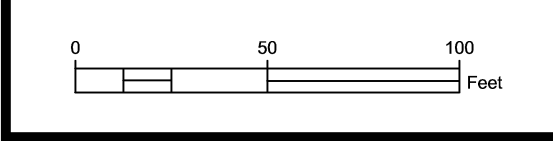
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LEGEND

- △ SOIL TEST PROBE LOCATION
- PROPOSED ON-LOT SINGLE FAMILY WELL
- SINGLE FAMILY ON-LOT SEWAGE SYSTEM



BASIC 165
Area: 24.40 AC
Perimeter: 11374.43
PROPOSED USE OF EXISTING TREATMENT FACILITY AS COMMUNITY SYSTEM 'A'



DATE: 8/14/15
12/22/16
03/10/17
09/18/17
10/25/18
01/15/19
05/02/19

PLAN REVISIONS:

- REVISION PER CLIENT REVIEW
- REVISION PER TWP. ENG. AND BOD REVIEW LETTERS BOTH DATED 10/25/16
- REVISION PER BOD REVIEW LETTER DATED 07/19/17
- REVISION PER TOWNSHIP ENGINEER LETTER DATED 07/17/17
- REVISION PER TOWNSHIP ENGINEER LETTER DATED 09/18/17
- REVISION PER BOD REVIEW LETTER DATED 09/19/18
- REVISION PER BOD REVIEW LETTER DATED 02/07/19
- REVISION PER TOWNSHIP ENGINEER LETTER DATED 05/02/19

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PROPOSED WATER & SEWER PLAN (2)
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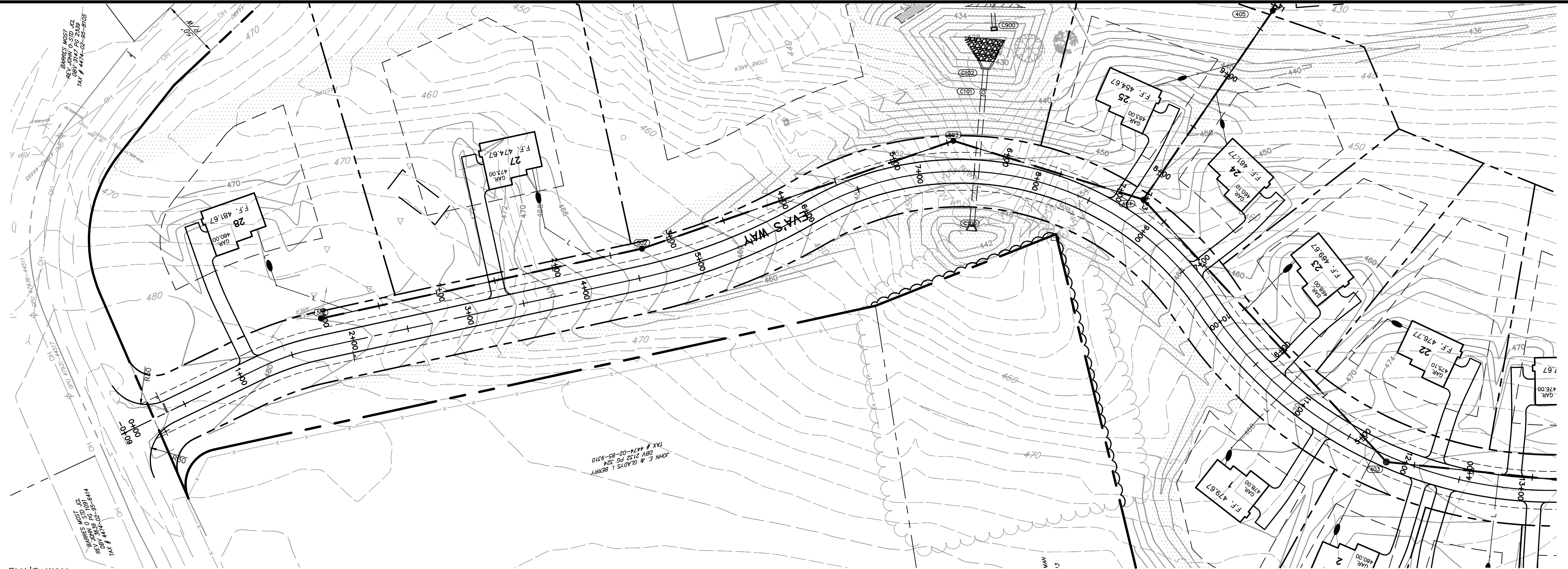
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 - ALL CONCRETE ENCASUREMENT SHALL BE SHOWN ON THE DRAWINGS AND NO OTHER ENCASUREMENT SHALL BE INSTALLED WITHOUT THE WRITTEN APPROVAL OF THE DESIGN ENGINEER AS WELL AS WRITTEN APPROVAL OF THE AUTHORITY ENGINEER. ALL ENCASUREMENTS SHALL EXTEND TO THE NEXT JOINT BEYOND THE MINIMUM DISTANCE REQUIREMENT.
 - A MINIMUM OF EIGHTEEN (18) INCHES OF VERTICAL CLEARANCE IS REQUIRED BETWEEN ALL UTILITIES AND THE SANITARY SEWER LINES. THIS INCLUDES STREET LATERALS.
 - NO TREE OR BUSH SHALL BE PLACED WITHIN 10 FEET OF A SANITARY SEWER MAIN OR LATERAL.
- GENERAL CONSTRUCTION:**
- THIS PLAN CONTAINS PRELIMINARY INFORMATION PERTAINING TO UNDERGROUND UTILITIES WHICH IS FOR GENERAL INFORMATION ONLY, AND MAY NOT BE BASED ON AN ACTUAL SUBSURFACE LOCATION SURVEY. ALL SUBSURFACE INFORMATION SHOWN ON THESE PLANS NEEDS TO BE VERIFIED BY THE PLAN USER. THE PREPARER OF THIS PLAN ASSUMES NO RESPONSIBILITY FOR AND MAKES NO REPRESENTATION OR WARRANTIES AS TO THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES OR OTHER UNDERGROUND FEATURES. THE PLAN USER SHALL EXECUTE A PA ONE CALL PRIOR TO ANY EXCAVATION ON THE SITE.
 - A MINIMUM VERTICAL CLEARANCE OF 18 INCHES SHALL BE PROVIDED AT ALL UTILITY CROSSINGS, WHERE 18 INCHES OF CLEARANCE CAN NOT BE OBTAINED, THE LOWER UTILITY LINE SHALL BE CONCRETE ENCASED FOR A LENGTH OF 20 FEET, CENTERED ABOUT THE CROSSING.
 - ALL CONSTRUCTION SHALL CONFORM TO TILDEN TOWNSHIP STANDARDS AND SPECIFICATIONS OR PENNDOT PUBLICATION 408 (LATEST EDITION), WHICHEVER IS APPLICABLE.
 - GAS, ELECTRIC AND CABLE TELEVISION FACILITIES FOR ALL LOTS SHALL BE PROVIDED BY UNDERGROUND SERVICE.
 - HANDICAPPED RAMPS SHALL BE LOCATED AT ALL INTERSECTIONS OR WHERE OTHERWISE NOTED AND INSTALLED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AS LAST AMENDED.
 - TOPSOIL SHALL BE REMOVED FROM ALL AREAS OF CONSTRUCTION AND STORED SEPARATELY, PRIOR TO BULK EXCAVATION. UPON COMPLETION OF CONSTRUCTION, THE TOPSOIL SHOULD BE REDISTRIBUTED ON THE SITE UNIFORMLY.
 - NO PLANTINGS OR STRUCTURES SHALL BE PERMITTED WITHIN ANY EASEMENTS. ALL EASEMENT AREAS SHALL BE MAINTAINED AS LAWN AREA BY THE PROPERTY OWNER.
 - BASEMENTS ARE PROPOSED FOR ALL UNITS. NO SUMP PUMPS SHALL DISCHARGE DIRECTLY ONTO DRIVEWAYS, SIDEWALKS, STREETS OR INTO THE SANITARY SEWER COLLECTION SYSTEM. ANY WATER ORIGINATING FROM SUMP PUMPS AND ROOF DRAINS SHALL BE COLLECTED AND DISCHARGED EITHER INTO THE PROPOSED STORM SEWER SYSTEM OR TO THE REAR YARD OF THE DWELLING (WITH APPROPRIATE OVERLAND DRAINAGE).
 - ALL CONTRACTORS SHALL BE RESPONSIBLE TO INSURE THAT ALL TRENCH EXCAVATIONS BE ADEQUATELY STABILIZED AND ACCESSED IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REQUIREMENTS, INCLUDING ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS / CODES OF SAFE PRACTICE AND PROCEDURES.
 - CONTRACTOR SHALL PRE-TEST DESIGN DEPTHS FOR ALL BMP'S PRIOR TO INSTALLING RELATED STRUCTURES OR PERFORMING BULK EXCAVATION (REFER TO THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN FOR ALL BMP AND ASSOCIATED STRUCTURE LOCATIONS). MINOR ADJUSTMENTS MAY BE NECESSARY DURING CONSTRUCTION DUE TO UNKNOWN SITE CONDITIONS. IF NECESSARY, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY FOR FURTHER EVALUATION. ALL FIELD CHANGES MUST BE REVIEWED AND APPROVED BY THE MUNICIPALITY AND/OR AGENCY HAVING JURISDICTION.
 - ALL MATERIALS AND DEBRIS FROM DEMOLITION ACTIVITY SHALL BE HAULED OFFSITE TO AN APPROVED LANDFILL. ALL LATERALS AND HAULING PERMITS SHALL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR. NO DEBRIS SHALL BE INCINERATED, BURIED OR DISPOSED ON SITE.
 - ANY SPRINGS/GROUND WATER ENCOUNTERED DURING ROADWAY CONSTRUCTION SHALL BE OULETTED BY U-DRAIN TO THE NEAREST STORM SEWER FACILITY OR WATERCOURSE. U-DRAIN PLACEMENT MUST BE REVIEWED AND APPROVED BY THE TOWNSHIP/BOROUGH PRIOR TO INSTALLATION AND/OR AS DIRECTED BY THE TOWNSHIP/BOROUGH ENGINEER OR ASSIGNED REPRESENTATIVE.

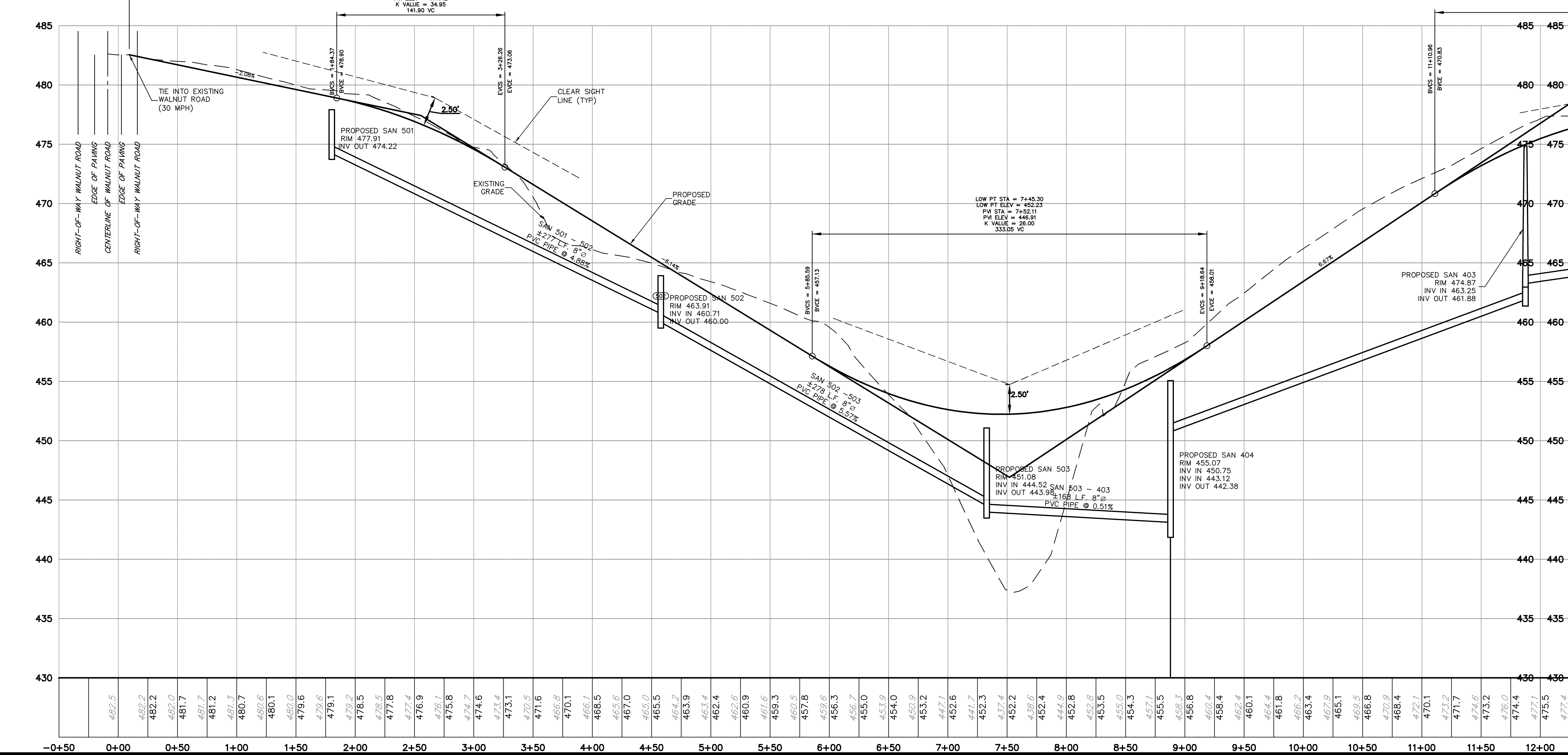
NO.	REVISION	DATE
A	REVISION PER CLIENT REVIEW	07/14/15
B	REVISION PER TOWNSHIP REVIEW	07/14/15
C	REVISION PER TWP. ENG. AND BOD REVIEW LETTERS	07/27/15
D	REVISION PER BOD REVIEW LETTER DATED	07/27/15
E	REVISION PER TOWNSHIP ENGINEER LETTER DATED	07/27/17
F	REVISION PER TOWNSHIP ENGINEER LETTER DATED	07/27/17
G	REVISION PER BOD REVIEW LETTER DATED	07/27/18
H	REVISION PER BOD REVIEW LETTER DATED	07/27/18
I	REVISION PER TOWNSHIP REVIEW LETTER DATED	07/27/17
J	REVISION PER TOWNSHIP REVIEW LETTER DATED	07/27/17

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EVA'S WAY
STA: -0+09 TO STA: 12+00
SCALE: 1"=50'

HIGH PT STA = 1+84.37
HIGH PT ELEV = 478.90
PM STA = 2+55.31
PM ELEV = 477.42
W VALUE = 34.95
141.90 VC



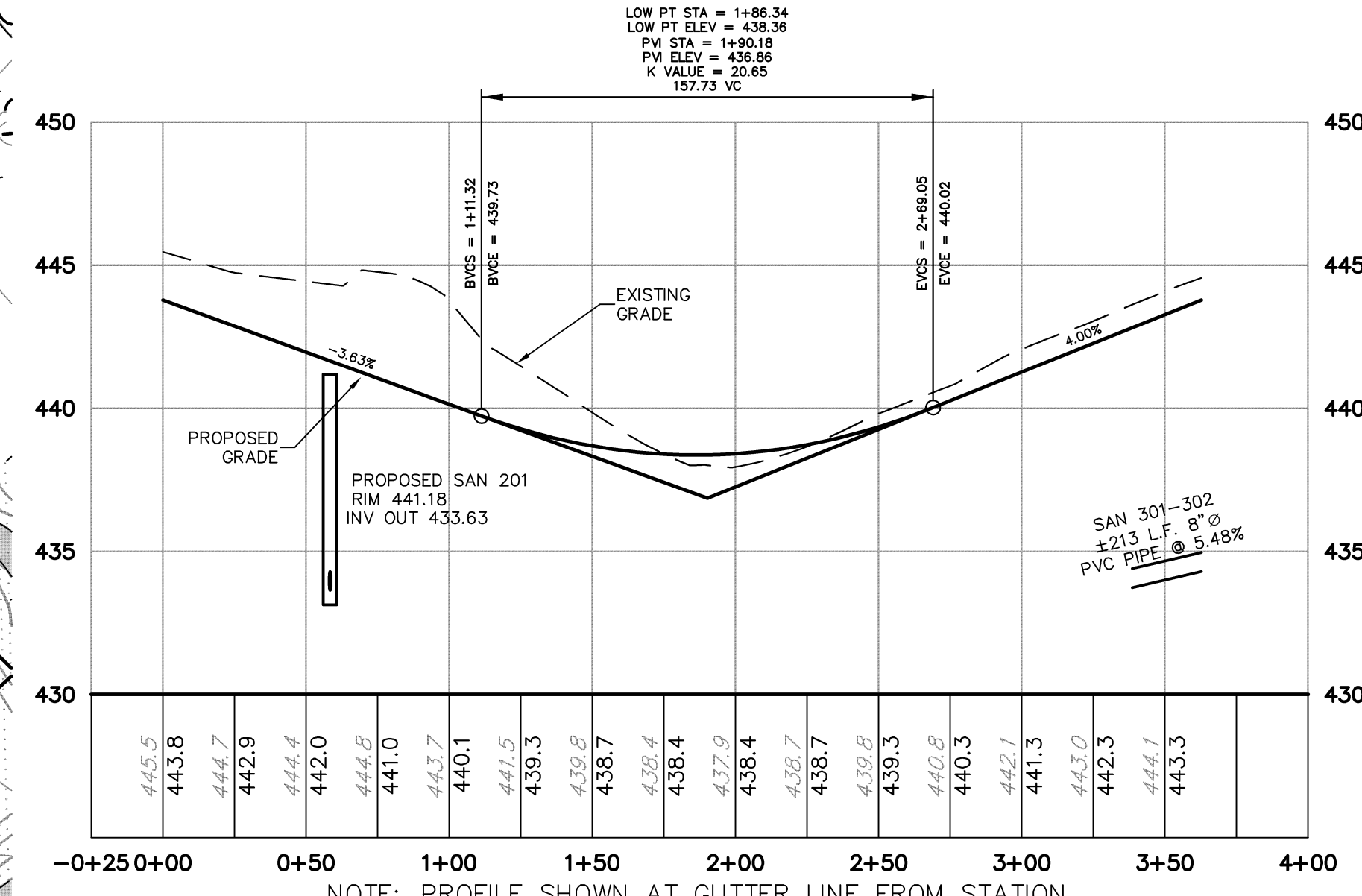
The Crossroads GROUP, LLC
www.thecrossroadsgroup.com
18500 Pottsville Pike, Suite A
Hamburg, PA 15528
Phone: 484-660-3242

ROAD PLAN AND PROFILE 1
PREPARED AS PART OF THE
WALNUT ACRES
PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
SITE SITUATION
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

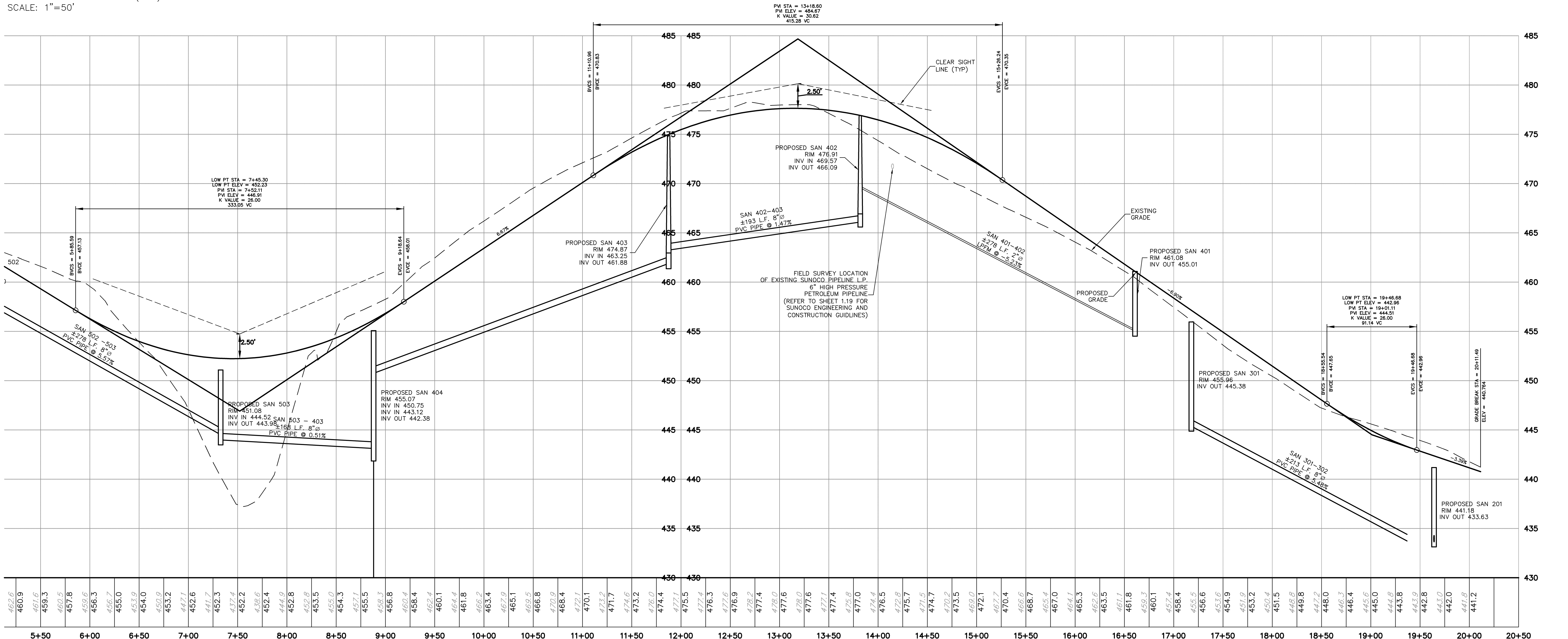
PROJECT MANAGER	JDH
DRAWING FILE NAME	PLAN-PRO
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISED	03-10-20
PLAN SCALE	H: 1"=50' V: 1"=10'
PROJECT NUMBER	1866
SHEET NUMBER	12 OF 30



ROAD EVA'S WAY
 STA:12+00 TO STA:20+00 (END)
 SCALE: 1"=50'



NOTE: PROFILE SHOWN AT GUTTER LINE FROM STATION 19+15.19 (STATION EQUALITY)



462.6	460.9	461.6	459.3	460.5	457.8	459.6	456.7	455.0	453.0	454.0	453.2	449.7	441.7	452.3	437.4	452.2	458.6	462.4	460.1	464.4	461.8	466.2	463.4	465.1	469.5	466.8	470.9	468.4	472.1	470.1	473.2	471.7	474.6	473.2	476.0	474.4	475.5	477.4	477.4	477.0	474.4	476.5	475.7	474.7	473.5	472.1	467.7	470.4	466.6	468.7	465.4	467.0	464.1	465.3	462.6	463.5	461.1	461.8	459.3	460.1	457.4	458.4	456.6	455.5	453.6	454.9	451.9	453.2	450.4	451.5	449.8	449.8	447.2	448.0	446.3	445.6	445.0	444.8	443.8	443.0	442.8	443.0	441.2
5+50	6+00	6+50	7+00	7+50	8+00	8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00	13+50	14+00	14+50	15+00	15+50	16+00	16+50	17+00	17+50	18+00	18+50	19+00	19+50	20+00	20+50																																																					

PLAN REVISIONS

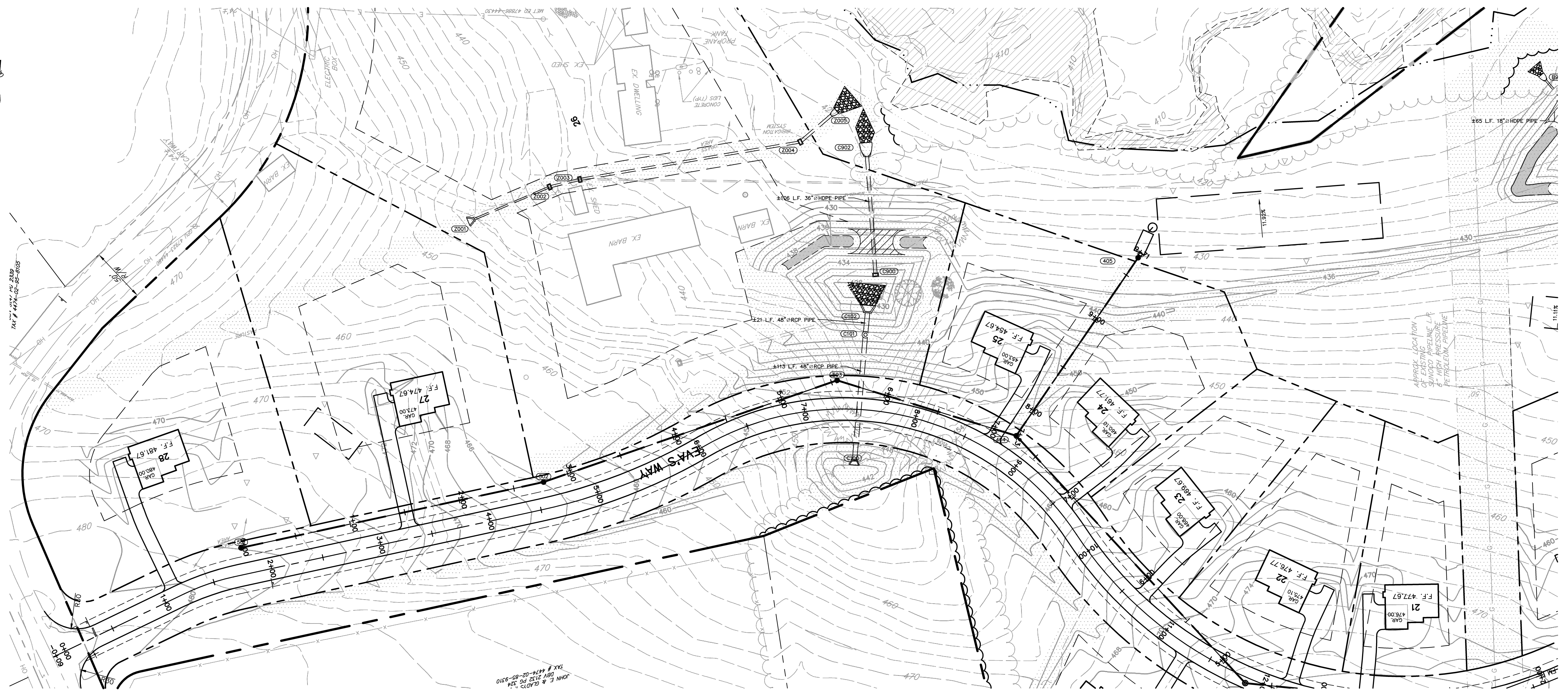
NO.	DATE	REVISION
A	8/14/15	REVISION PER CLIENT REVIEW
B	12/22/16	REVISION PER TWP. ENGINEER REVIEW LETTER DATED 12/22/16
C	03/07/17	REVISION PER TWP. ENGINEER REVIEW LETTER DATED 03/07/17
D	09/08/17	REVISION PER TWP. ENGINEER REVIEW LETTER DATED 09/08/17
E	10/25/18	REVISION PER TWP. ENGINEER REVIEW LETTER DATED 10/25/18
F	07/15/19	REVISION PER TWP. ENGINEER REVIEW LETTER DATED 07/15/19
G	07/15/19	REVISION PER TWP. ENGINEER REVIEW LETTER DATED 07/15/19

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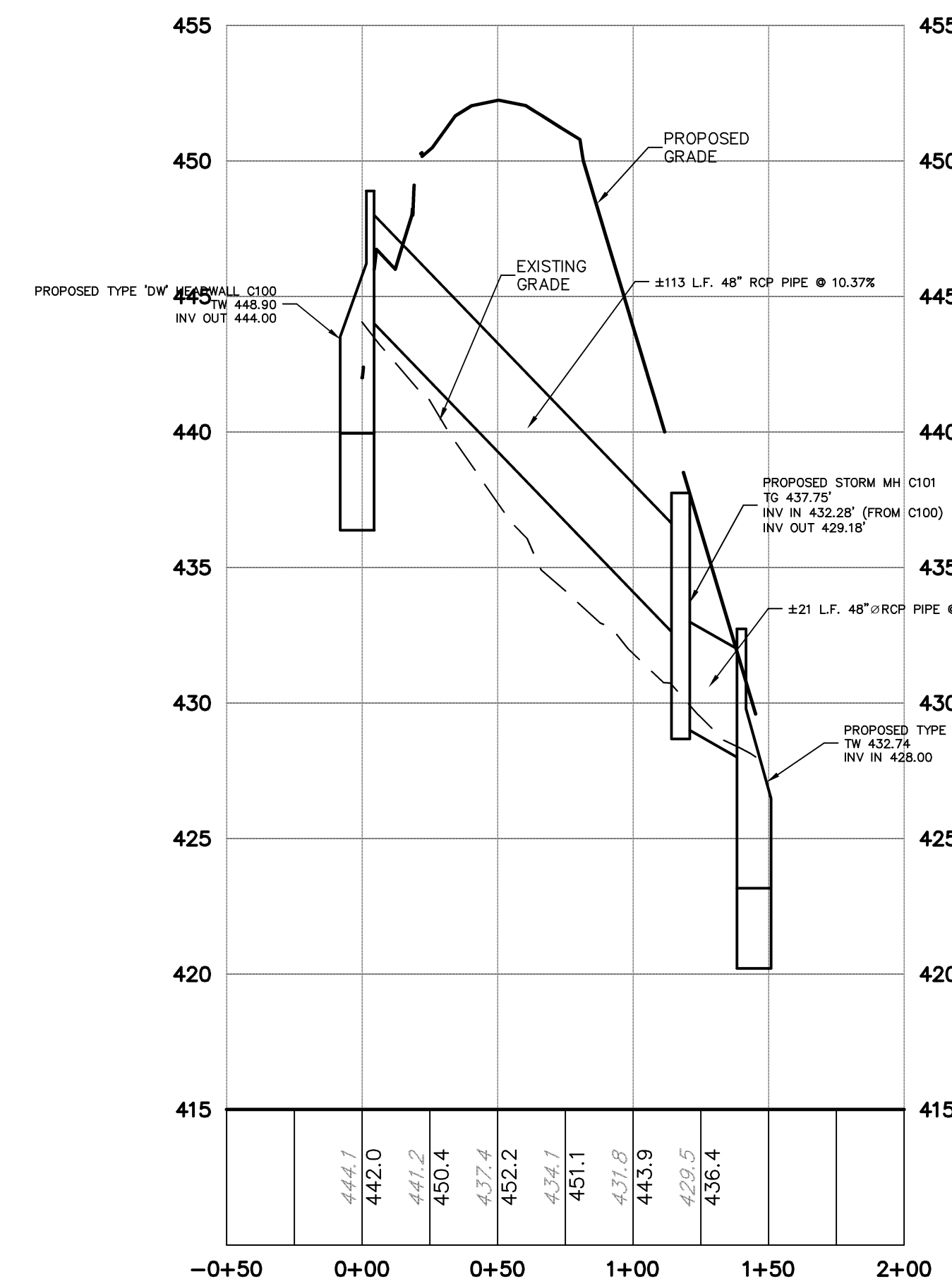
The Crossroads GROUP, LLC
 www.thecrossroadsgroup.com
 18500 Pottsville Pike, Suite A
 Hamburg, PA 15828
 Phone: 484-860-3742

ROAD PLAN AND PROFILE 2
 PREPARED AS PART OF THE
WALNUT ACRES
 PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

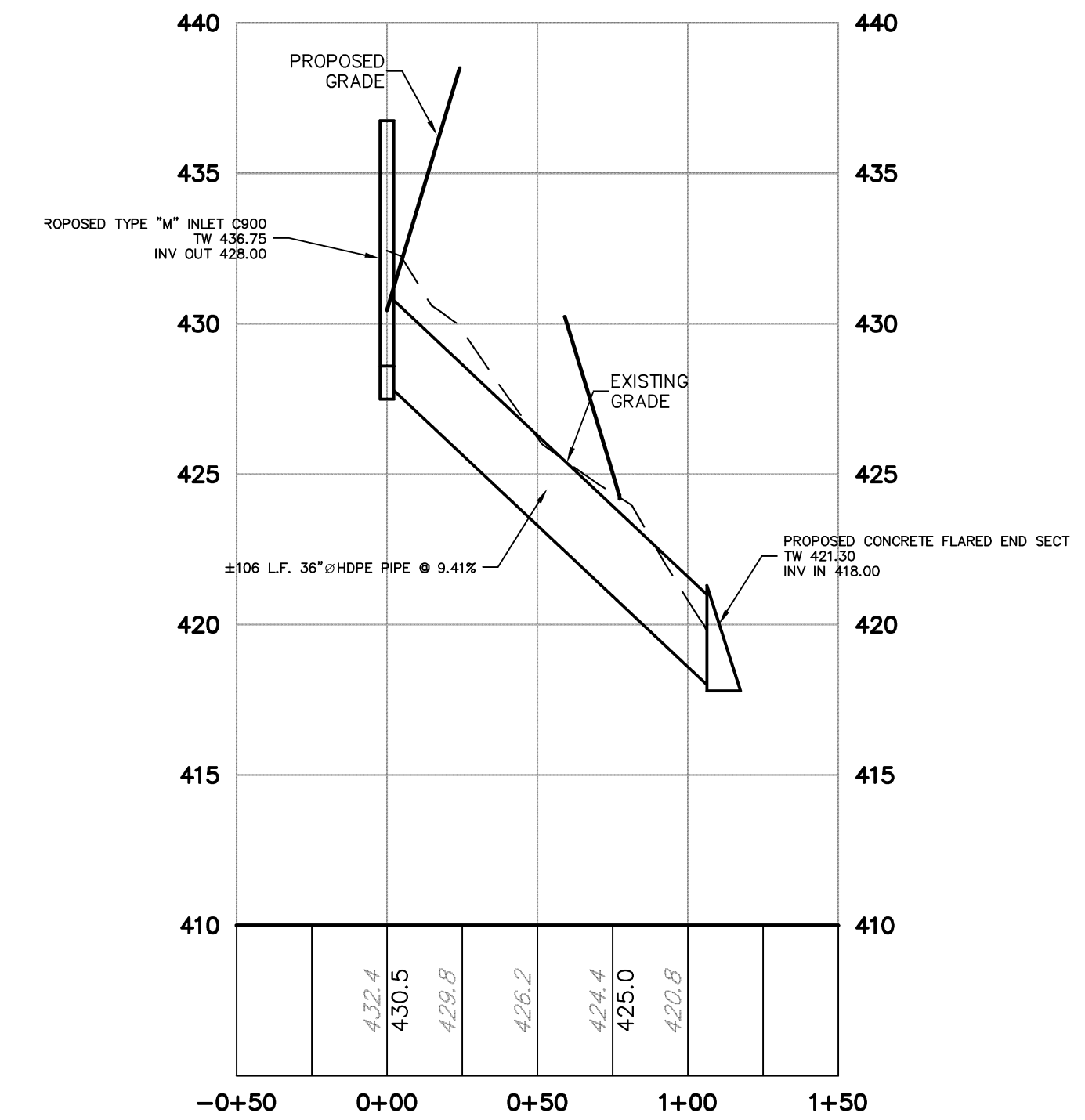
PROJECT MANAGER	JDH
DRAWING FILE NAME	PLAN-PRO
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISED	03-10-20
PLAN SCALE	H: 1"=50' V: 1"=10'
PROJECT NUMBER	1866
SHEET NUMBER	13 OF 30



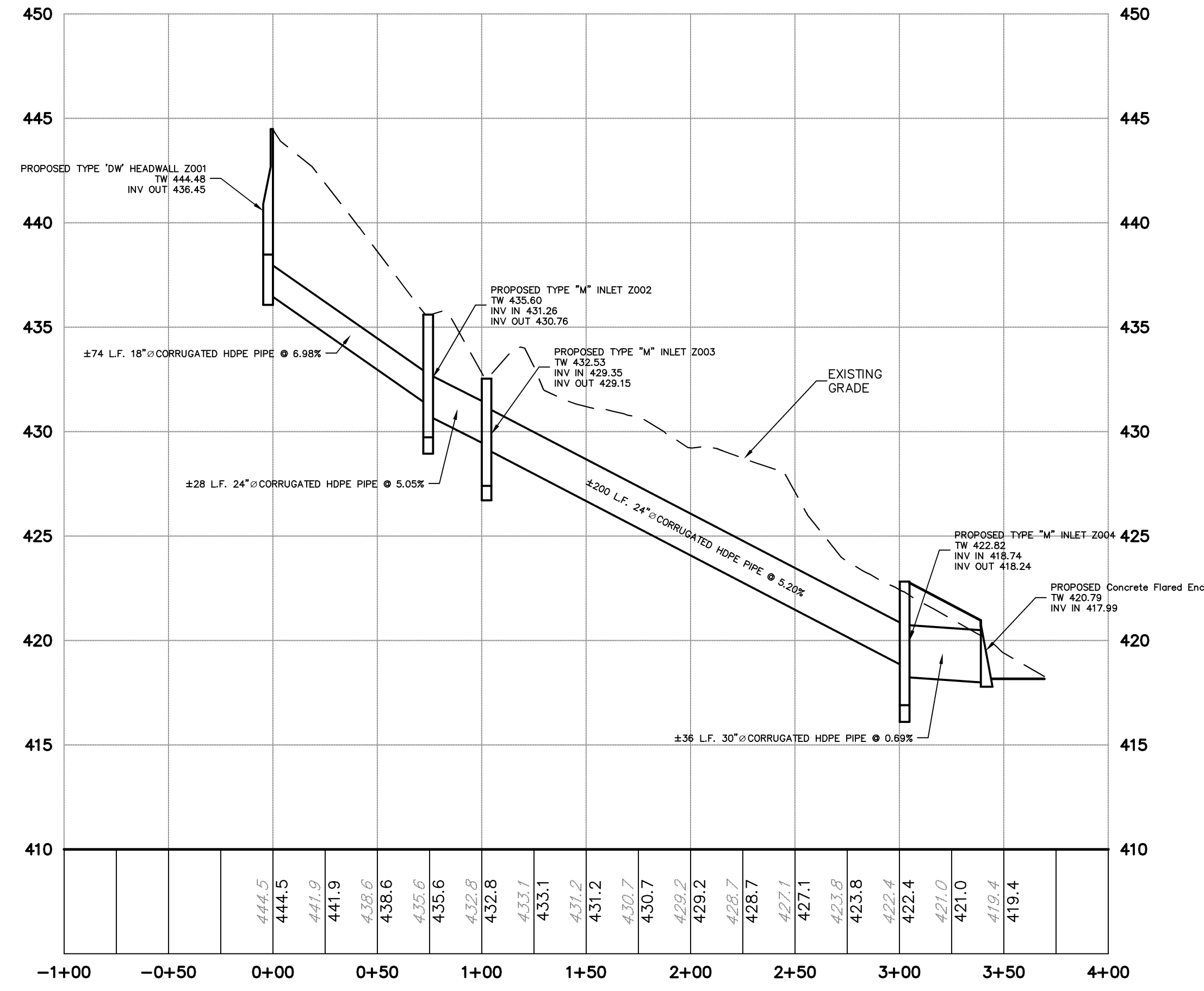
EVA'S WAY
 STA: -0+09 TO STA: 12+00
 SCALE: 1"=50'



PROFILE - STORM - C100 - C101



PROFILE - STORM - C900 - C902



PROFILE - STORM - Z001 - Z004

PLAN REVISIONS

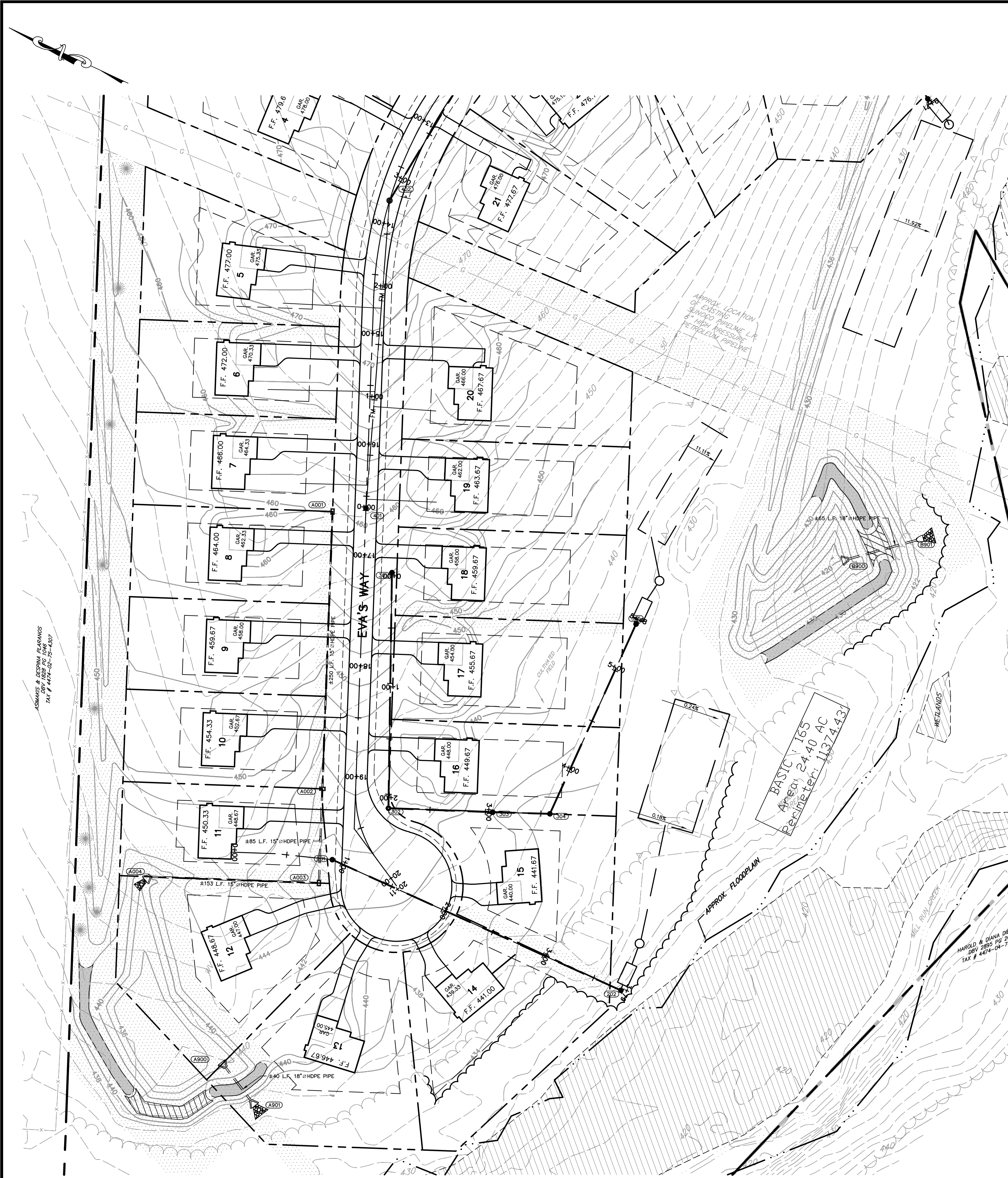
NO.	REVISION	DATE
A	REVISION PER CLIENT REVIEW	8/14/15
B	REVISION PER TWP. ENGINEER LETTER DATED 8/14/15	8/14/15
C	REVISION PER TWP. ENG. AND BCOD REVIEW LETTERS DATED 10/27/16	12/22/16
D	REVISION PER BCOD REVIEW LETTER DATED 07/18/17	03/10/17
E	REVISION PER TWP. ENGINEER LETTER DATED 07/18/17	09/18/17
F	REVISION PER TWP. ENGINEER LETTER DATED 07/18/17	09/18/17
G	REVISION PER TWP. ENGINEER LETTER DATED 07/18/17	10/25/18
H	REVISION PER BCOD REVIEW LETTER DATED 12/07/18	01/15/19
I	REVISION PER TOWNSHIP REVIEW LETTER DATED 10/25/17	09/15/23

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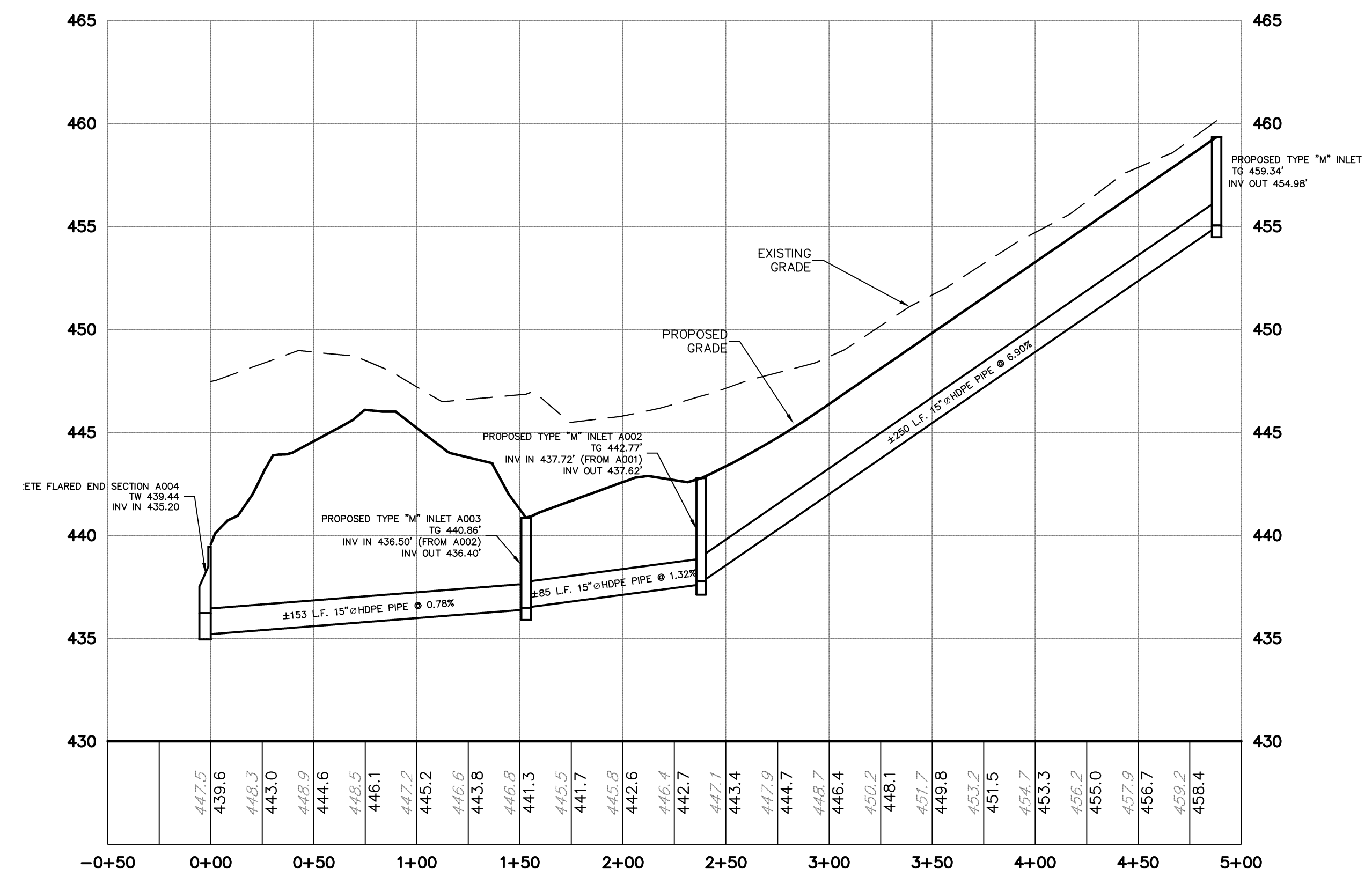
The Crossroads GROUP, LLC
 www.thecrossroadsgroup.com
 18500 Pottsville Pike, Suite A
 Hamburg, PA 15528
 Phone: 484-860-3242

PLAN PROFILE STORM 1
 PREPARED AS PART OF THE
WALNUT ACRES
 PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 SITE SITUATE IN
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

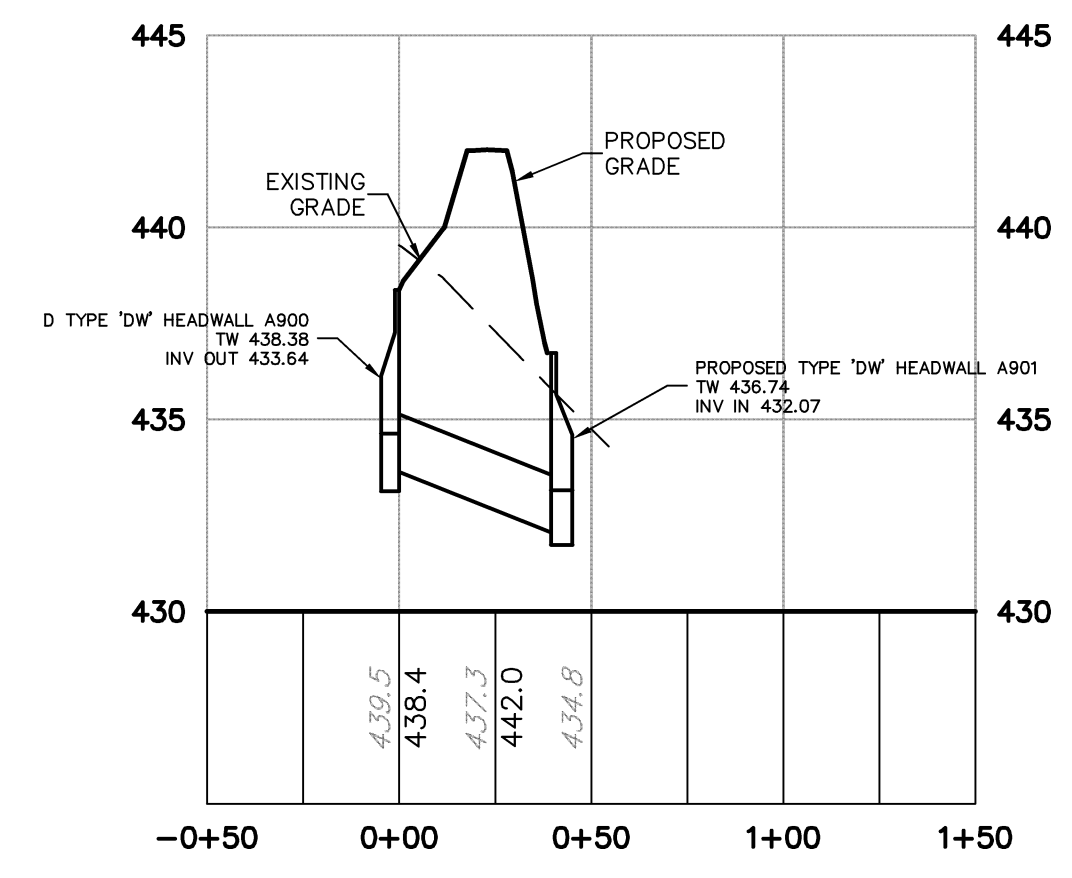
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DRAWING FILE NAME	PLAN-PRO
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISION	03-10-20
PLAN SCALE	H: 1"=50' V: 1"=10'
PROJECT NUMBER	1866
SHEET NUMBER	14 OF 30



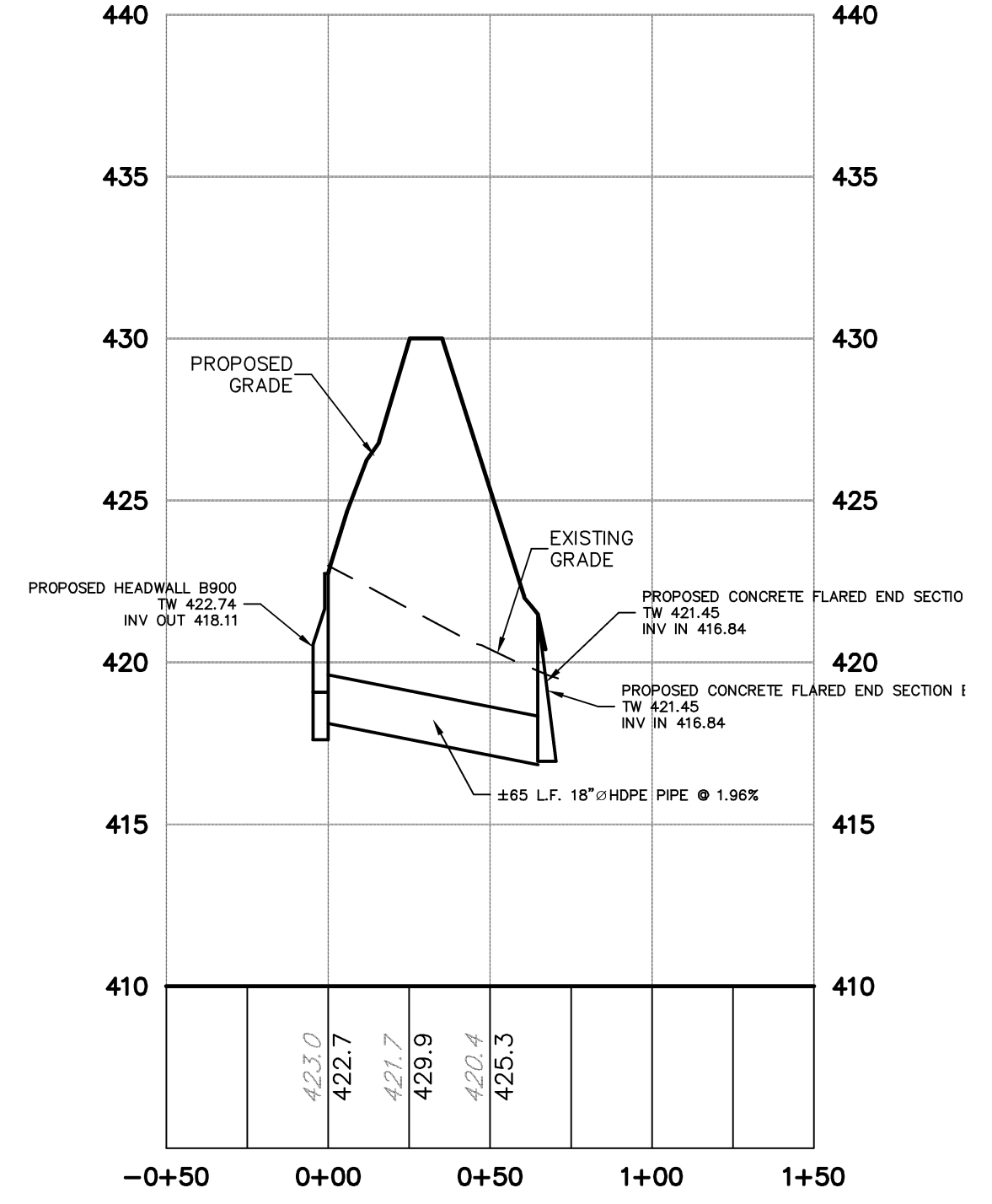
EVA'S WAY
 STA: 12+00 TO STA: 20+00 (END)
 SCALE: 1"=50'



PROFILE - STORM - A001 - A003



PROFILE - STORM - A900 - A901



PROFILE - STORM - B900 - B901

PLAN REVISIONS

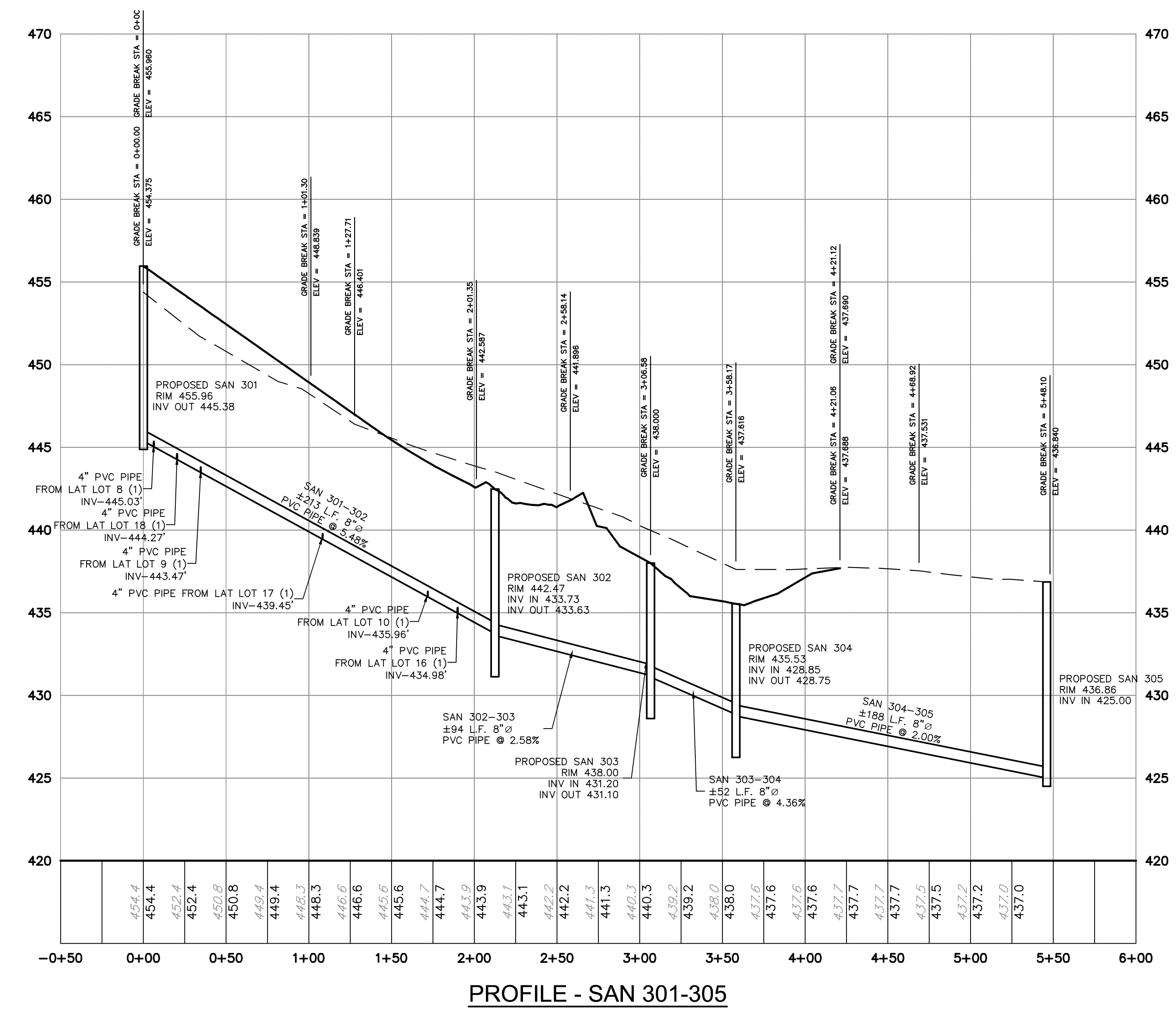
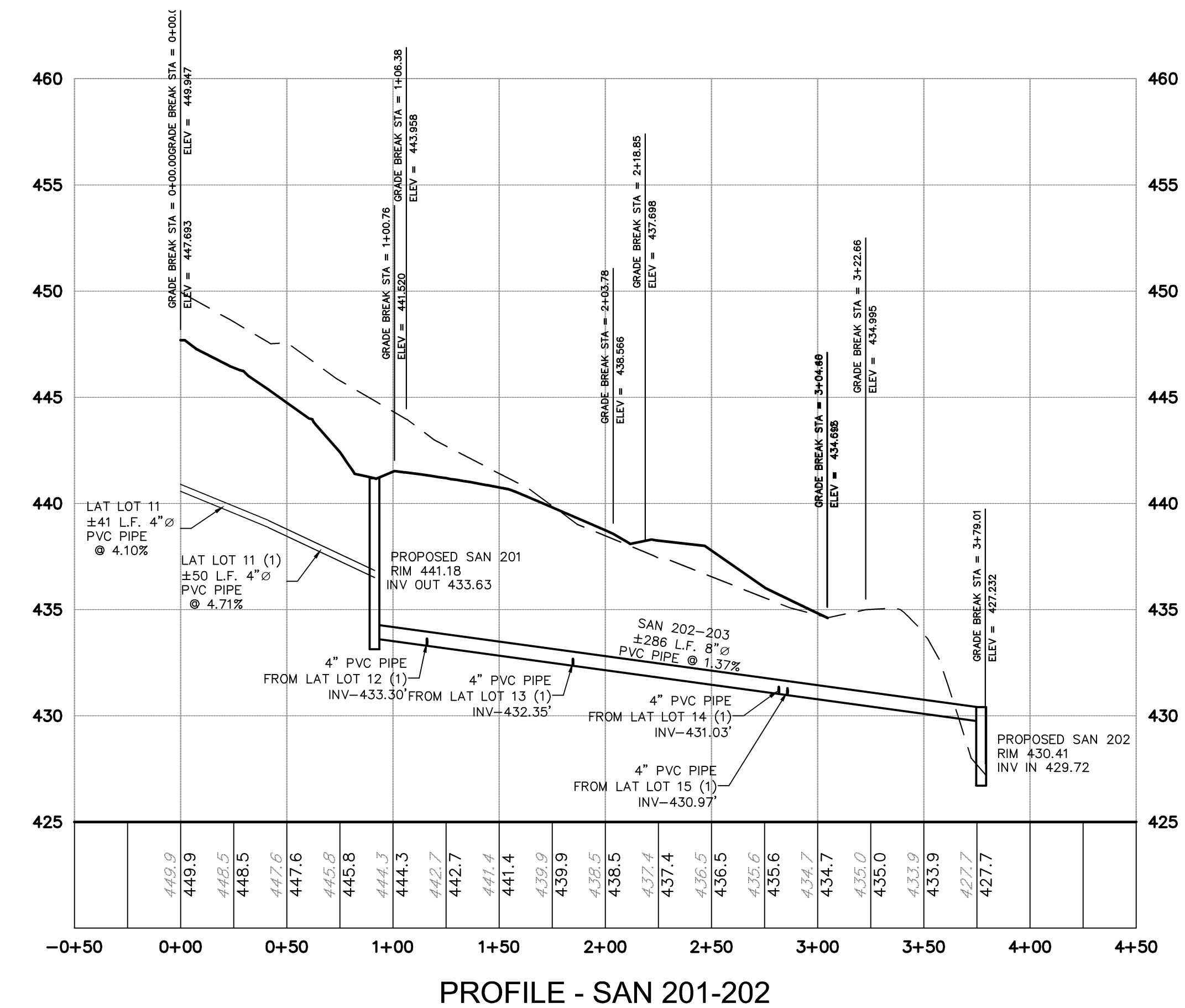
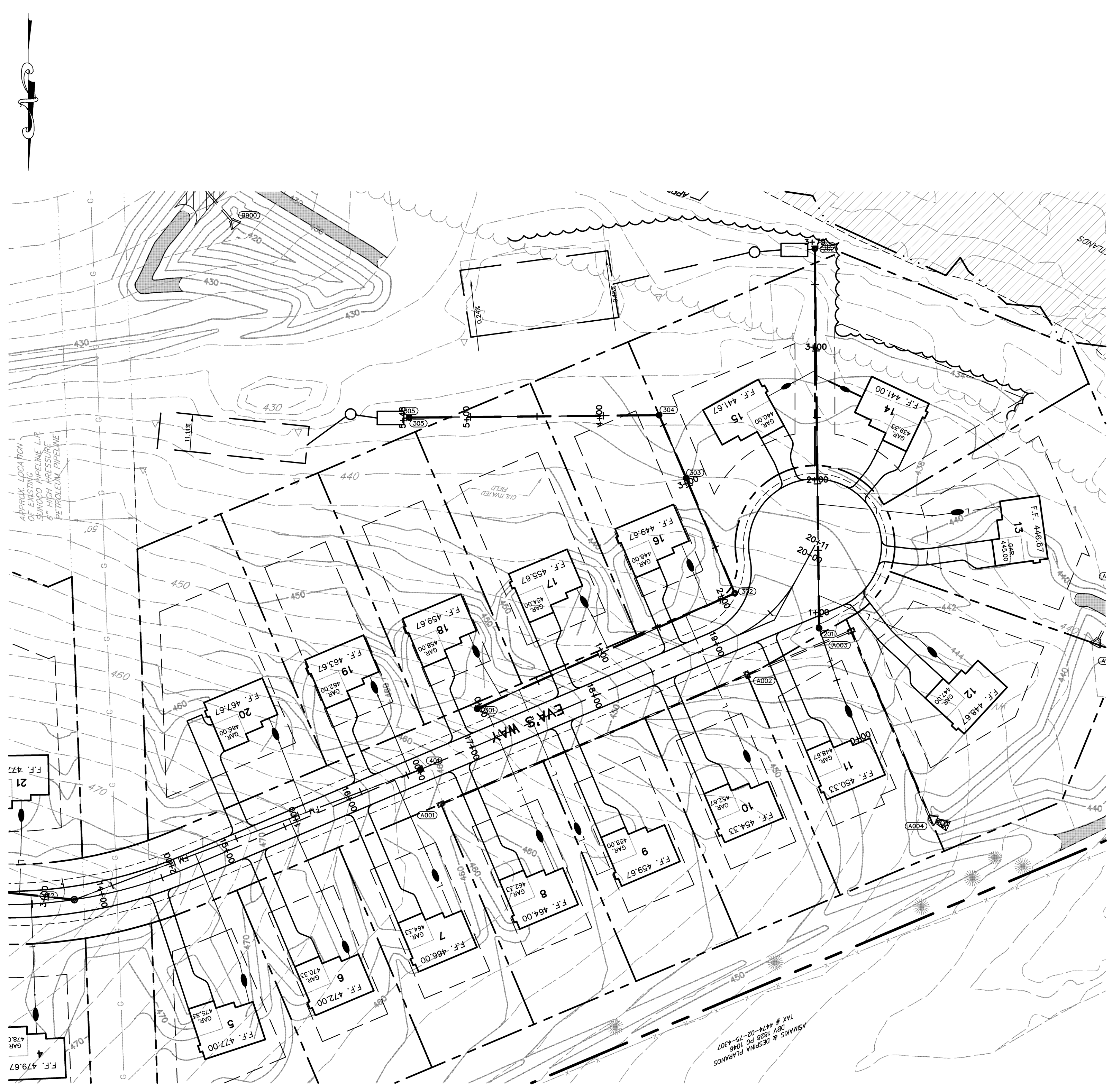
NO.	DATE	REVISION
A	8/14/15	REVISION PER CLIENT REVIEW
B	03/10/17	REVISION PER CLIENT REVIEW
C	03/10/17	REVISION PER CLIENT REVIEW
D	03/10/17	REVISION PER CLIENT REVIEW
E	03/10/17	REVISION PER CLIENT REVIEW
F	03/10/17	REVISION PER CLIENT REVIEW
G	03/10/17	REVISION PER CLIENT REVIEW
H	03/10/17	REVISION PER CLIENT REVIEW
I	03/10/17	REVISION PER CLIENT REVIEW

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The Crossroads GROUP, LLC
 www.thecrossroadsgroup.com
 18500 Pottsville Pike, Suite A
 Harrisburg, PA 17126
 Phone: 484-860-3242

PLAN PROFILE STORM 2
 PREPARED AS PART OF THE
WALNUT ACRES
 PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 SITE SITUATE IN
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER	JDH
DRAWING FILE NAME	PLAN-PRO
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISED	03-10-20
PLAN SCALE	H: 1"=50' V: 1"=10'
PROJECT NUMBER	1866
SHEET NUMBER	15 OF 30



REVISIONS

NO.	DATE	REVISION
A	8/14/15	REVISION PER CLIENT REVIEW
B	03/10/17	REVISED PER TWP. ENG. AND BOCD REVIEW LETTERS DATED 03/10/17
C	03/10/17	REVISED PER TWP. ENG. AND BOCD REVIEW LETTERS DATED 03/10/17
D	03/10/17	REVISED PER TWP. ENG. AND BOCD REVIEW LETTERS DATED 03/10/17
E	09/16/17	REVISED PER TWP. ENG. AND BOCD REVIEW LETTERS DATED 09/16/17
F	09/16/17	REVISED PER TWP. ENG. AND BOCD REVIEW LETTERS DATED 09/16/17
G	09/16/17	REVISED PER TWP. ENG. AND BOCD REVIEW LETTERS DATED 09/16/17
H	09/16/17	REVISED PER TWP. ENG. AND BOCD REVIEW LETTERS DATED 09/16/17
I	09/16/17	REVISED PER TWP. ENG. AND BOCD REVIEW LETTERS DATED 09/16/17

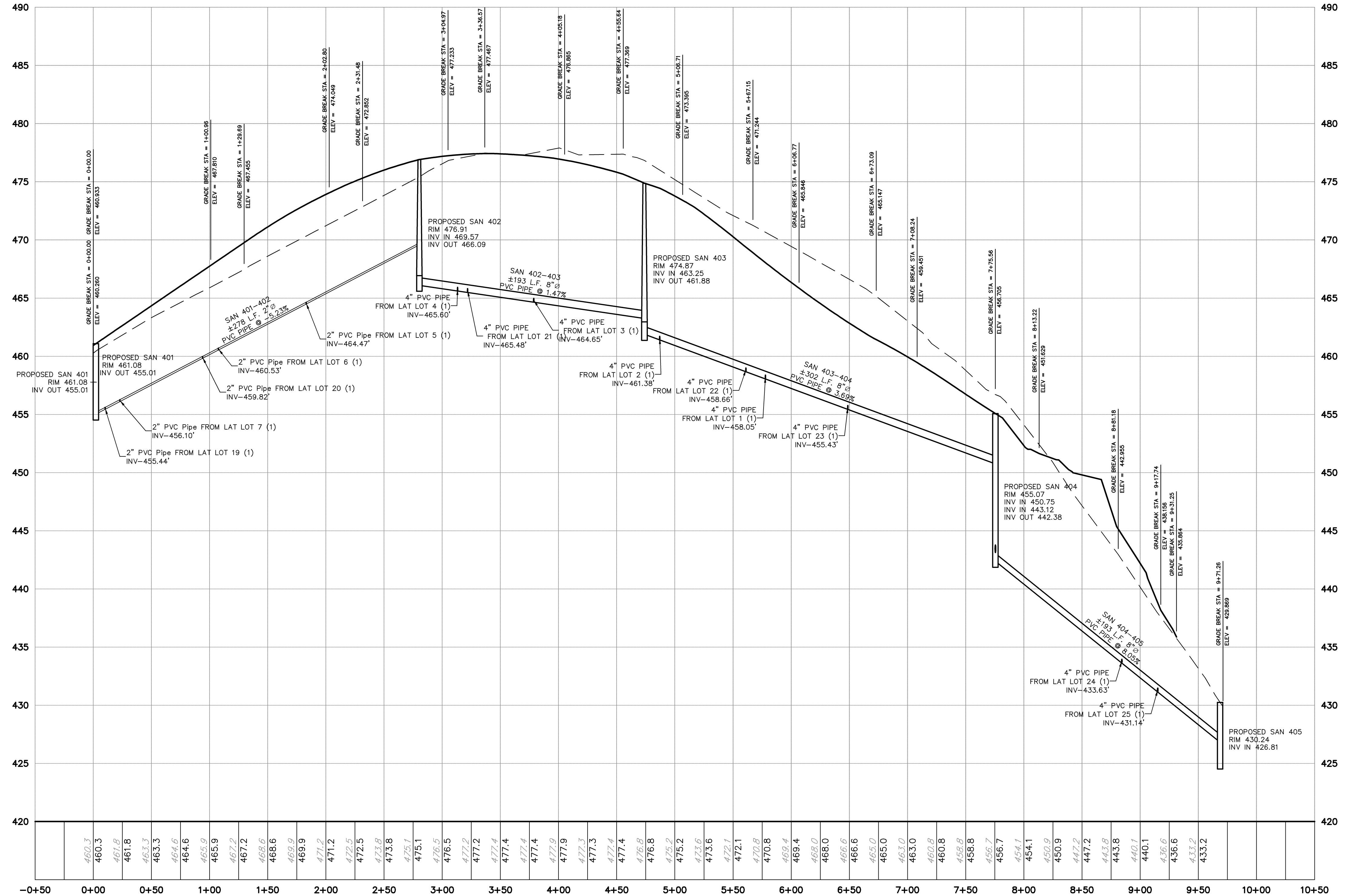
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The Crossroads GROUP, LLC

www.thecrossroadsgroup.com
18500 Pottsville Pike, Suite A
Hamburg, PA 15526
Phone: 484-860-3742

PLAN PROFILE SANITARY 1
PREPARED AS PART OF THE
WALNUT ACRES
PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
SITE SITUATION
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER: JDH
DRAWING FILE NAME: PLAN-PRO
PLAN ORIGINATION DATE: 07-08-16
PLAN LAST REVISED: 03-10-20
PLAN SCALE: H: 1"=50'
V: 1"=10'
PROJECT NUMBER: 1866
SHEET NUMBER: 16 OF 30



PROFILE - SAN 401-405

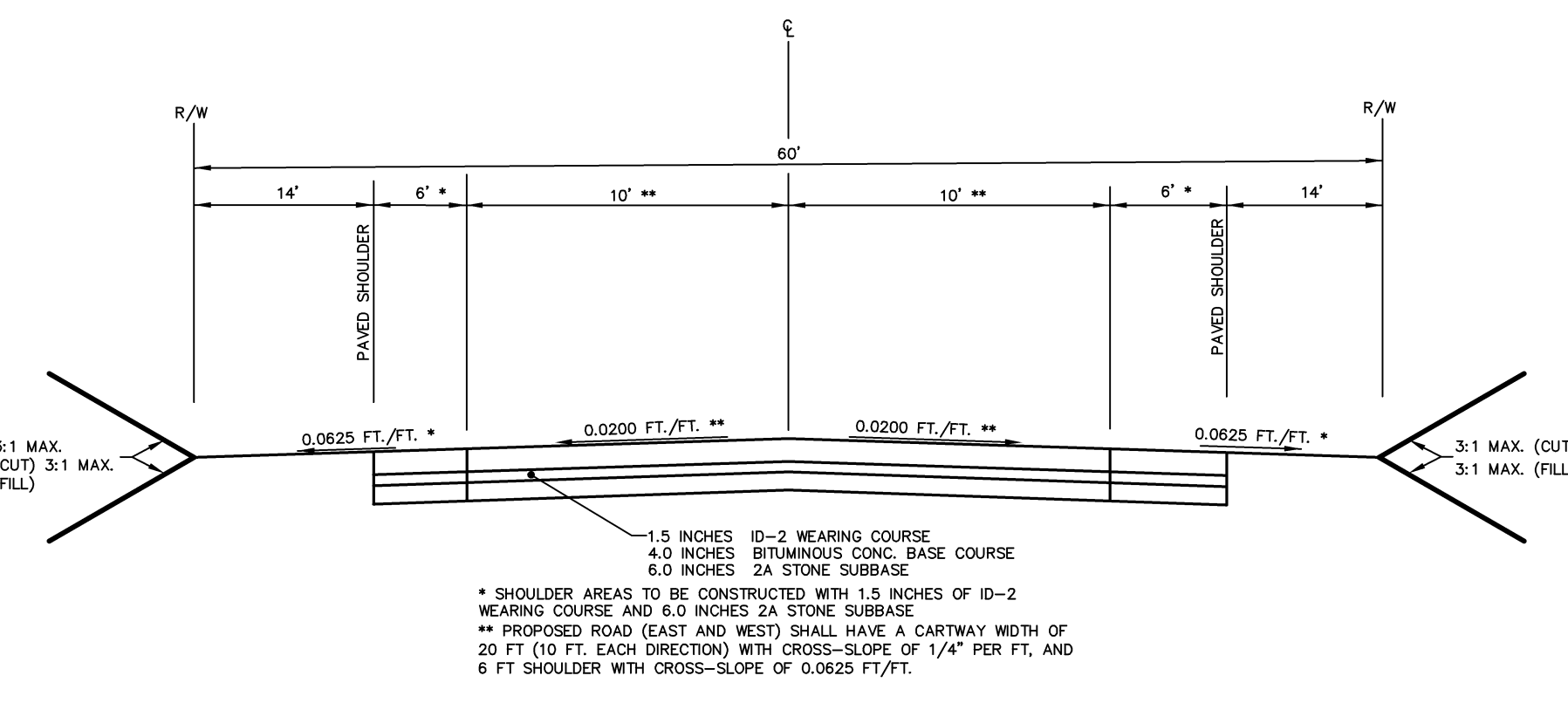
NO.	DATE	REVISIONS
A	8/14/15	REVISION PER CLIENT REVIEW
B	12/22/16	REVISION PER TWP ENGINEER LETTER DATED 12/22/16
C	03/07/17	REVISION PER TWP ENGINEER LETTER DATED 03/07/17
D	07/19/17	REVISION PER TWP ENGINEER LETTER DATED 07/19/17
E	09/06/17	REVISION PER TWP ENGINEER LETTER DATED 09/06/17
F	09/06/17	REVISION PER TWP ENGINEER LETTER DATED 09/06/17
G	10/25/18	REVISION PER TWP ENGINEER LETTER DATED 10/25/18
H	07/15/18	REVISION PER TWP ENGINEER LETTER DATED 07/15/18
I	07/15/18	REVISION PER TWP ENGINEER LETTER DATED 07/15/18

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The Crossroads GROUP, LLC
 www.thecrossroadsgroup.com
 18300 Pottsville Pike, Suite A
 Harrisburg, PA 17122
 Phone: 484-660-3742

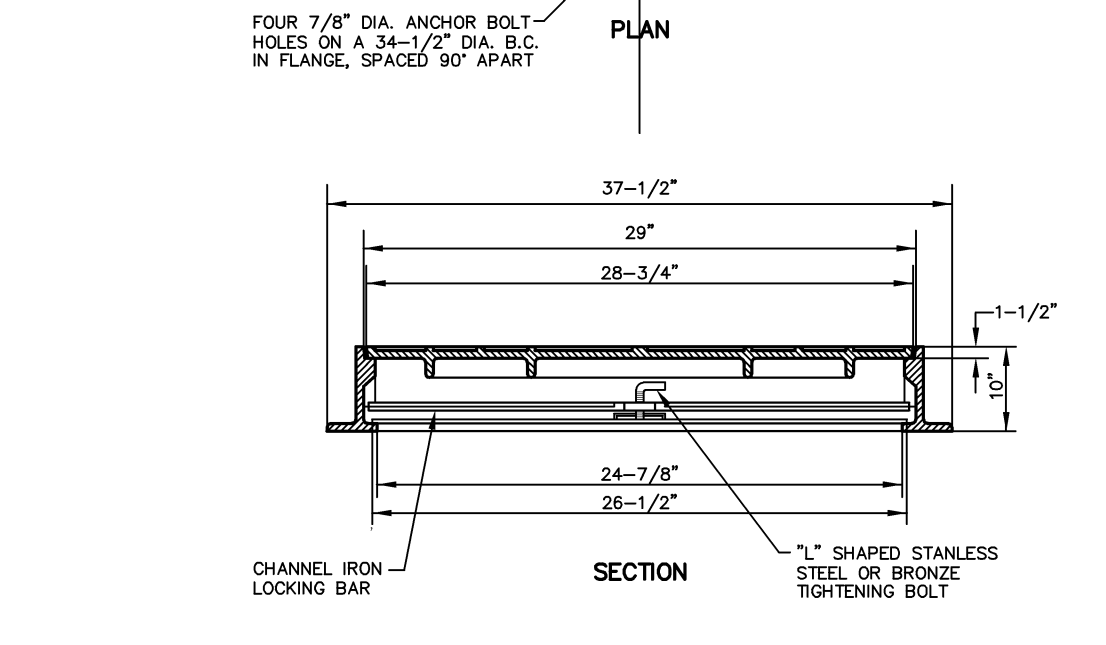
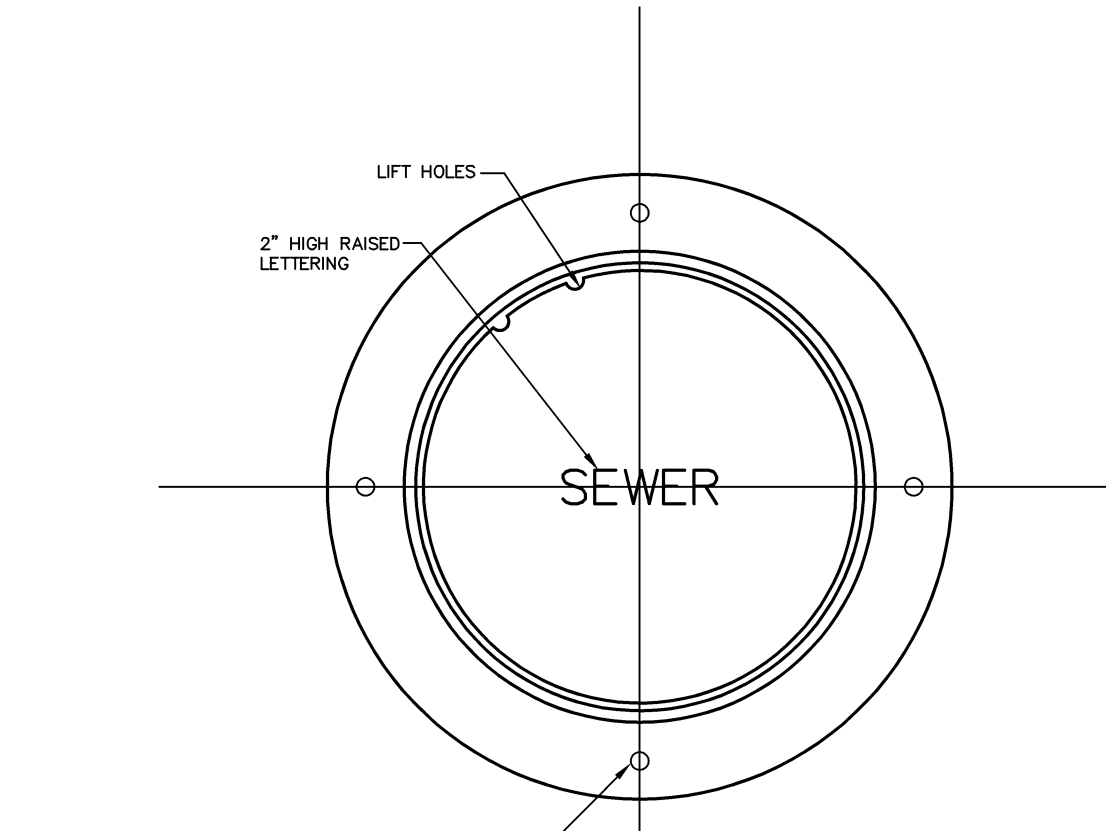
PROJECT MANAGER: **JDH**
 DRAWING FILE NAME: **PLAN-PRO**
 PLAN ORIGINATION DATE: **07-08-16**
 PLAN LAST REVISED: **03-10-20**
 PLAN SCALE: **H: 1"=50'**
V: 1"=10'
 PROJECT NUMBER: **1866**
 SHEET NUMBER: **17** OF **30**

PREPARED FOR: **WALNUT ACRES**
 PREPARED BY: **STEVEN J. & MARLENE A. SKOLODA**
 SITE LOCATED IN: **TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA**

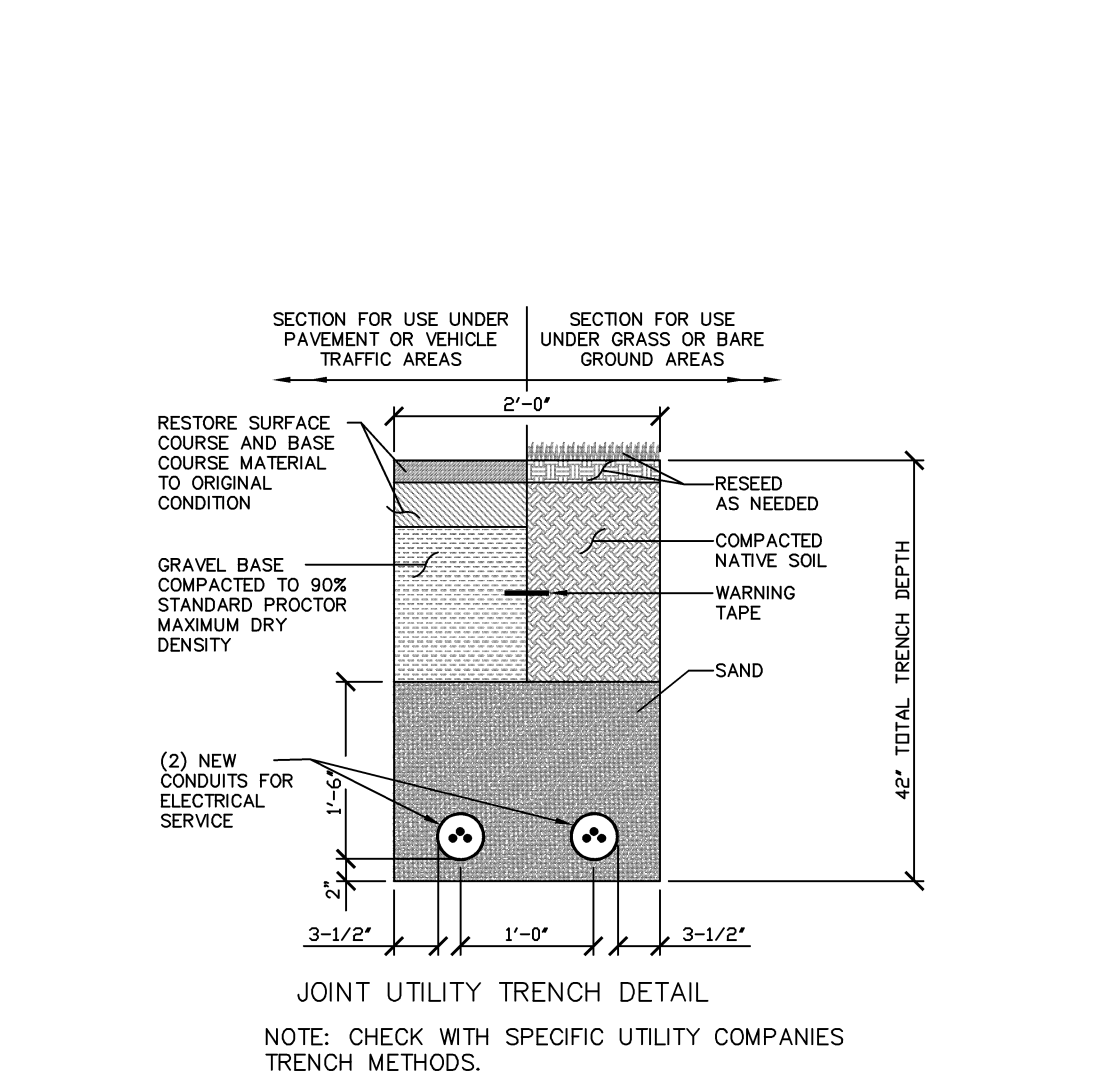


PROPOSED EVA'S WAY CROSS SECTION
N.T.S.

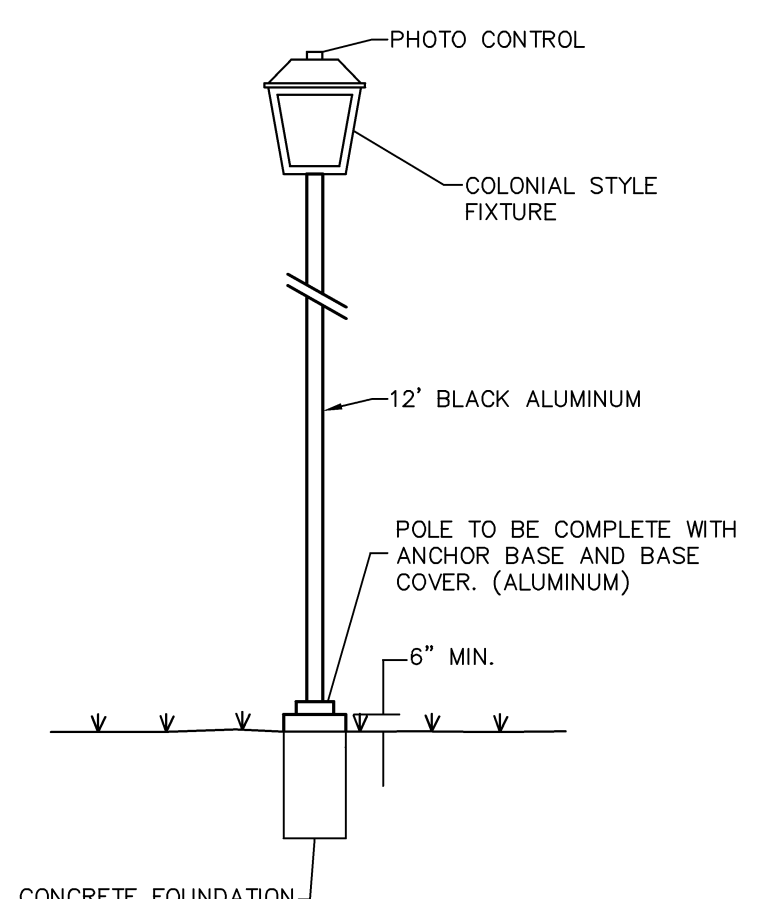
* PAVING DETAIL FOR SECTION OF PROPOSED ROAD, STARTING AT PC BY ACCESS TO WALNUT ROAD



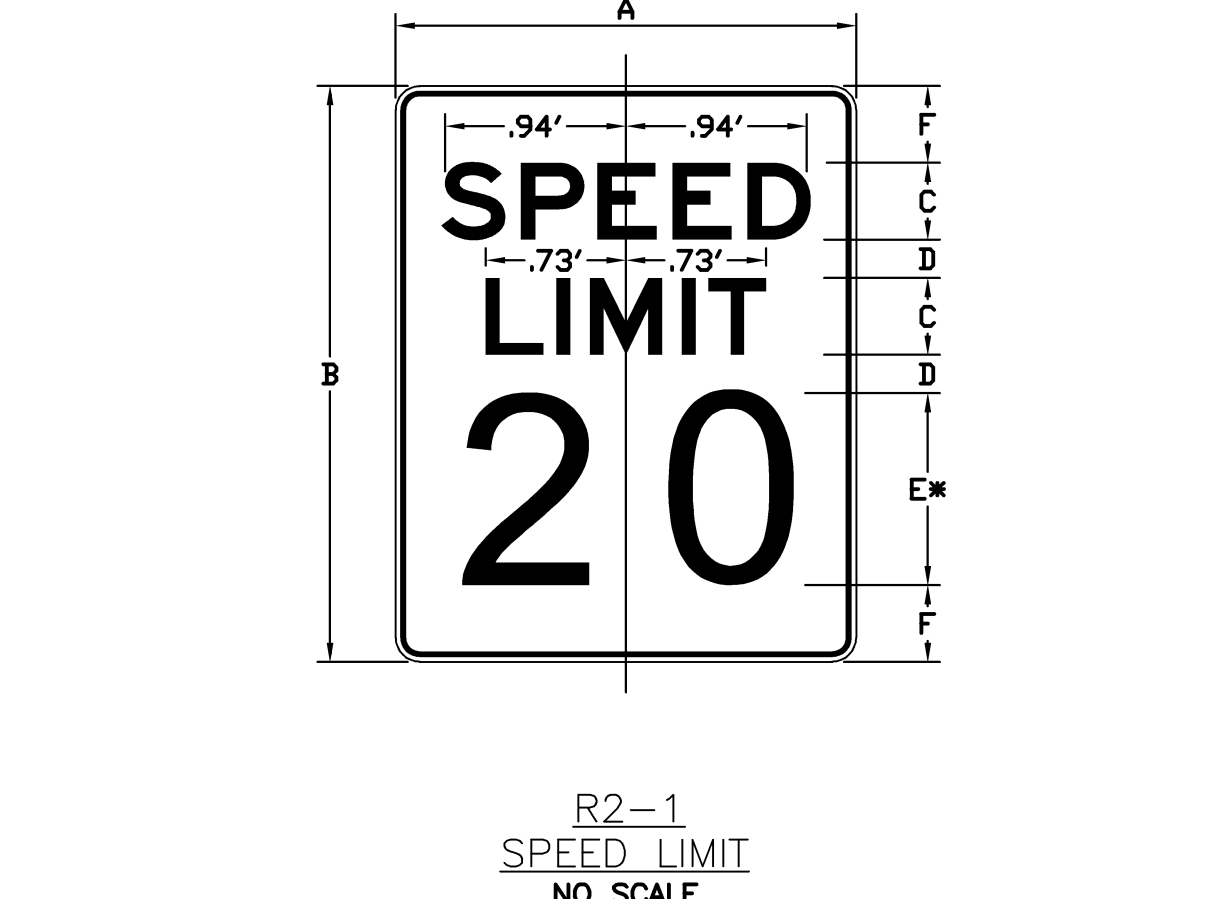
WATERTIGHT MANHOLE FRAME AND COVER



NOTE: CHECK WITH SPECIFIC UTILITY COMPANIES TRENCH METHODS.



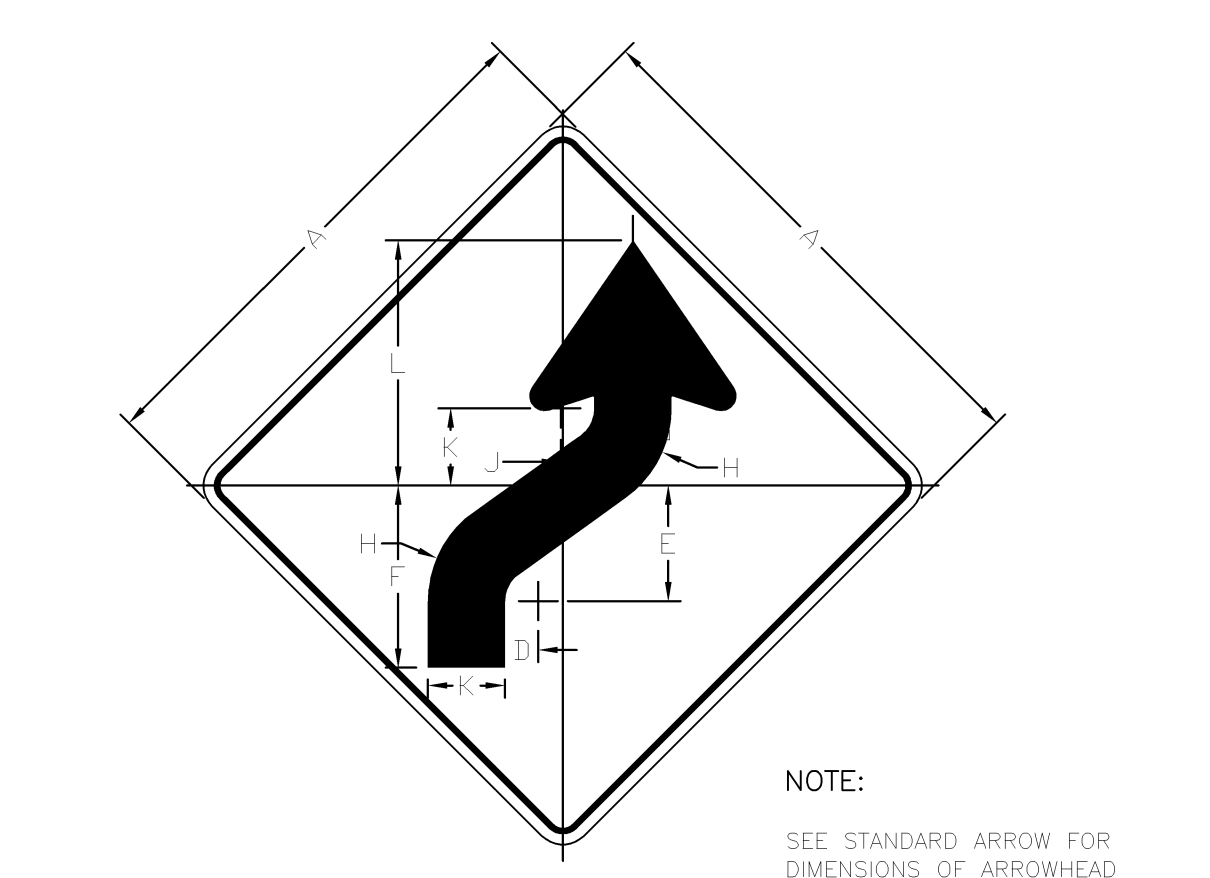
STREET LIGHT DETAIL
N.T.S.



DIMENSIONS IN INCHES

SIGN SIZE A X B	C	D	E	F	G	H	MARGIN	BORDER	BLANK STD.
24' X 30'	4E	2	10E	4	9.6	7.3	0.4	0.6	B5-3024

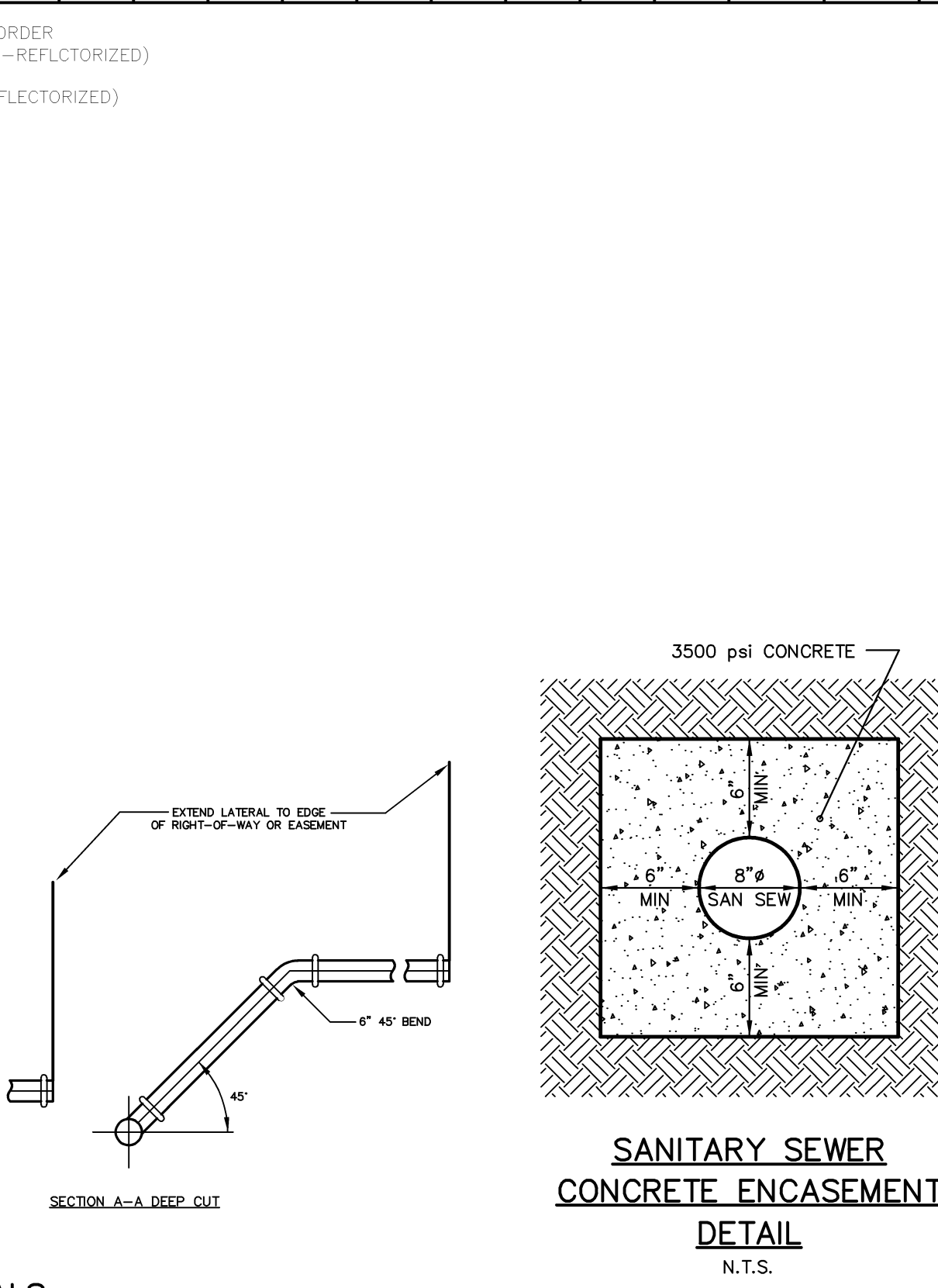
* OPTICALLY SPACE NUMERALS ABOUT VERTICAL CENTERLINE
COLORS: LEGEND AND BORDER - BLACK (NON-REFLECTORIZED)
BACKGROUND - WHITE (REFLECTORIZED)



DIMENSIONS (IN)

SIGN SIZE A X A	B	C	D	E	F	G	H	J	K	L	MARGIN	BORDER	BLANK STD.
30' x 30'	4	3.3	1.4	6.6	10.4	1.9	6.3	0.1	4	14	0.4	0.8	B3-30
48' x 48'	6.3	5.2	2.2	10.6	16.6	3	10	0.2	7	22.6	0.8	1.2	B3-48

COLOR: ARROW AND BORDER - BLACK (NON-REFLECTORIZED)
BACKGROUND - YELLOW (REFLECTORIZED)



LATERALS
N.T.S.

NOTE: SNOW EMERGENCY SIGNAGE SHALL BE PLACED THROUGHOUT THE PROPOSED DEVELOPMENT AT THE DIRECTION OF THE TOWNSHIP ENGINEER.



STREET NAME SIGN (D3-1)
N.T.S.

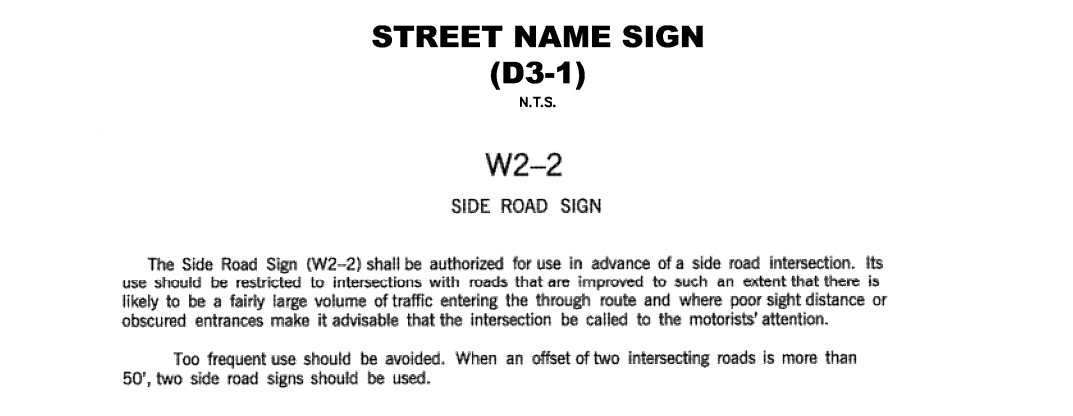
W2-2
SIDE ROAD SIGN

SIGN SIZE AxB	C	D	E	F	G
900X200	150*	25	100*	75	35

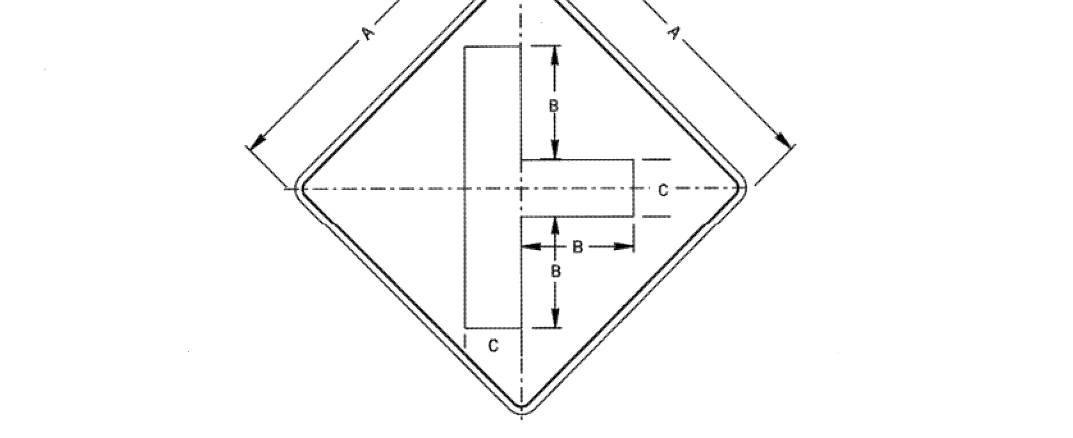
*CHOOSE STANDARD ALPHABET SERIES FOR BEST FIT

LEGEND: WHITE (REFLECTORIZED)
BACKGROUND: GREEN (REFLECTORIZED) OR BLACK (NON-REFLECTORIZED)
OR
LEGEND: BLACK (NON-REFLECTORIZED)
BACKGROUND: WHITE

STREET NAME SIGNS SHALL CONFORM TO PENN DOT PUBLICATION 408 SPECIFICATIONS AND PUBLICATION 236, HANDBOOK OF APPROVED SIGNS, SIGN D3-1 (AS MODIFIED)



APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *John C. Row* Date: 02-29-12
Chief, Traffic Engineering and Permits Section
Bureau of Maintenance and Operations



DIMENSIONS - mm (IN)

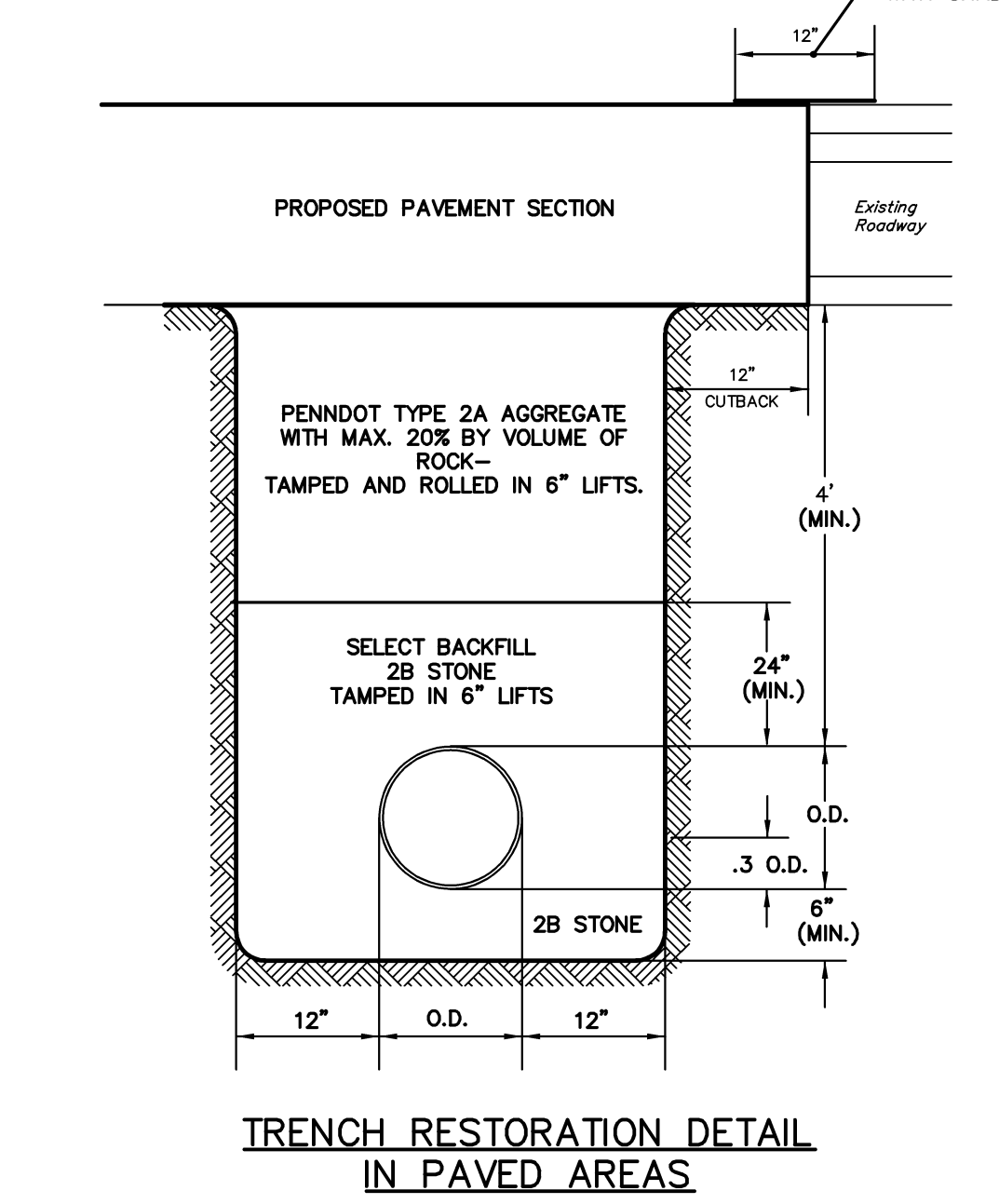
SIGN SIZE A x B	B	C	D	E	F	G	MARK-TO-BORDER	BLANK STD.
750 x 750	150	100	14	133	253	361	25	B5-750
1200 x 1200	225	150	21	205	380	541	38	B5-1200

*REDUCE SPACING 40%

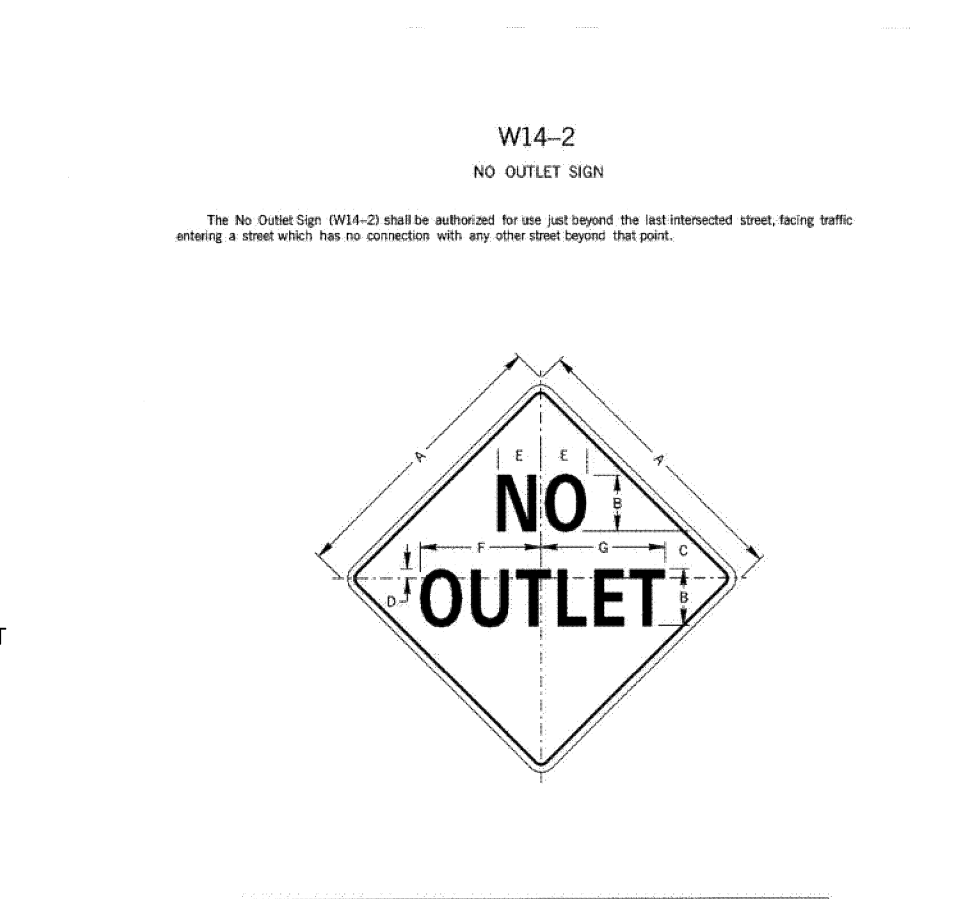
APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *John C. Row* Date: 02-29-12
Chief, Traffic Engineering and Permits Section
Bureau of Maintenance and Operations



TRENCH RESTORATION DETAIL IN PAVED AREAS



TRENCH RESTORATION DETAIL IN UNPAVED AREAS

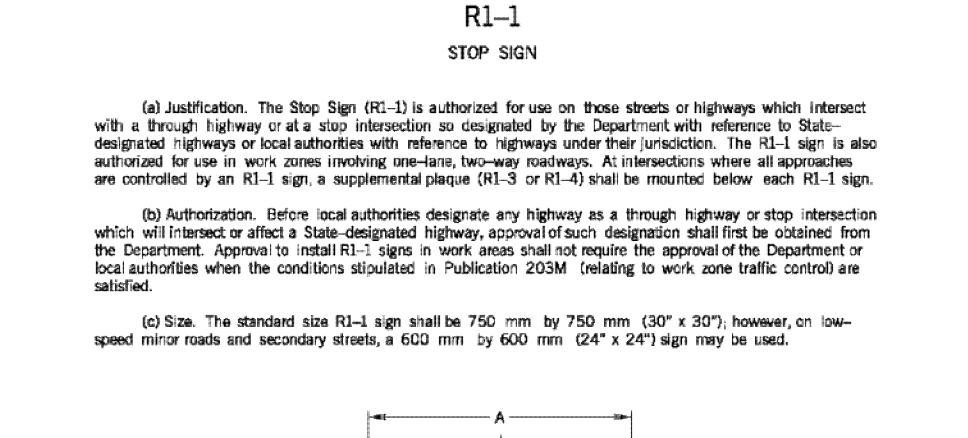


DIMENSIONS - mm (IN)

SIGN SIZE A x B	B	C	D	E	F	G	MARK-TO-BORDER	BLANK STD.
750 x 750	150	100	14	133	253	361	25	B5-750
1200 x 1200	225	150	21	205	380	541	38	B5-1200

*REDUCE SPACING 40%

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *John C. Row* Date: 02-29-12
Chief, Traffic Engineering and Permits Section
Bureau of Highway Safety and Traffic Engineering



DIMENSIONS - mm (IN)

SIGN SIZE A x A	B	C	D	E	F	G	MARK-TO-BORDER	BLANK STD.
600 x 600	200	200	254	15	15	15	15	B1-600
1200 x 1200	400	400	508	30	30	30	30	B1-1200

*REDUCE SPACING 40%

APPROVED FOR THE SECRETARY OF TRANSPORTATION
By: *John C. Row* Date: 01-03-06
Chief, Traffic Engineering and Permits Section
Bureau of Highway Safety and Traffic Engineering

REVISIONS

NO.	DATE	DESCRIPTION
A	8/14/15	REVISION PER CLIENT REVIEW
B	12/22/16	REVISION PER CLIENT REVIEW
C	03/07/17	REVISION PER TWP. ENGS. AND BOD REVIEW LETTERS DATED 02/07/16
D	03/07/17	REVISION PER TWP. ENGS. AND BOD REVIEW LETTERS DATED 02/07/16
E	09/08/17	REVISION PER TWP. ENGS. AND BOD REVIEW LETTER DATED 07/17/17
F	09/08/17	REVISION PER TWP. ENGS. AND BOD REVIEW LETTER DATED 07/17/17
G	10/26/18	REVISION PER BOD REVIEW LETTER DATED 09/16/18
H	07/15/19	REVISION PER BOD REVIEW LETTER DATED 02/07/19
I	05/02/20	REVISION PER TOWNSHIP REVIEW LETTER DATED 02/07/19

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP INDICATING 'ISSUED FOR CONSTRUCTION'. WE SHALL ASSUME NO LIABILITY FOR CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.

The Crossroads GROUP, LLC
www.thecrossroadsgroup.com
18300 Pottsville Pike, Suite A
Hamburg, PA 15528
Phone: 484-860-3242

CONSTRUCTION DETAILS - GENERAL SITE
PREPARED AS PART OF THE
WALNUT ACRES
PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
THE SITE LAYOUT
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER: JDH
DRAWING FILE NAME: ZDET
PLAN ORIGIN DATE: 07-08-16
PLAN LAST REVISED: 03-10-20
PLAN SCALE: N.T.S.
PROJECT NUMBER: 1866
SHEET NUMBER: 18 OF 30

SUNOCO ENGINEERING AND CONSTRUCTION GUIDLINES

- NOTES PROVIDED ON THIS PAGE WERE PROVIDED BY SUNOCO LOGISTICS.
- PIPE LINE WAS FIELD LOCATED BY THE CROSSROADS GROUP LLC ON AUGUST 01, 2018 ONLY AT THE LOCATION OF THE PROPOSED ROAD CROSSING.
- PIPELINE EXCAVATION WAS UNDER THE DIRECT SUPERVISION OF A SUNOCO FIELD REPRESENTATIVE.
CONTACT: DEBRA GROWLEY – DEBRAGROWLEY@SUNOCOLOGISTICS.COM



ENGINEERING AND CONSTRUCTION GUIDELINES For working near the pipeline right-of-way and pipeline

1.0 ENGINEERING GUIDELINES

SPLP constructs, repairs, operates and maintains its pipelines in compliance with current U.S. Department of Transportation (DOT) regulations, industry and company standards for safe operations. Should Encroaching Party propose plans that infringe on SPLP's rights or affect SPLP's ability to meet these requirements, modifications to the pipeline or plans will be required. The cost of all such modifications shall be borne by the Encroaching Party. The following guidelines apply to Encroaching Party and any contractors, agents and/or representatives it uses for construction activities conducted in SPLP's right-of-way and/or affecting SPLP's pipelines:

- In order to maintain immediate and unimpeded access to the pipeline, NO trees, shrubs, permanent structures (i.e. buildings, decks, sheds, swimming pools, inlets, drainage structures, hydrants, poles, etc.) bodies of water shall be placed within the pipeline right of way.
- The depth earth cover over the pipelines shall be maintained and never changed in any manner without the express written consent of SPLP. In some cases additional cover may be required.
- In areas where the pipeline currently has less than three feet (3') of cover, no grade cuts will be allowed. Cover over the pipeline shall be increased to a minimum of three (3) feet if there are proposed "improvements" over the pipeline or within the pipeline right-of-way. Proposed road crossings have additional requirements.
- Proposed grading which will place the pipeline at depths greater than seven feet (7') shall require a SPLP Engineering Department written approval.
- In areas where building are proposed within fifty feet (50') of the pipeline facility, vertical cover over the pipeline should be increased to a minimum of four feet (4'), (maximum of seven feet(7')).
- The creation of steep slopes within the pipeline right of way that will hinder our access and maintenance shall be avoided. Maximum slope of 5 to 1 within the ROW
- The creation of storm water outfalls or other water management controls which would make the pipeline right-of-way more susceptible to erosion shall be avoided or mitigated. Proposed gabions and rip rap structures must adhere to the vertical one foot (1') vertical clearance requirement. Geotextile protection may also be required.
- Drainage swales shall maintain a minimum of three feet (3') of vertical clearance between O.D. of the pipeline and the bottom of the swale. Additional protection may be required in order to minimize erosion susceptibility over the existing pipeline and across its associated right of way.
- No fences will be allowed on the ROW without SPLP's prior written approval. Fences shall be easily removable and not to obstruct the view of the ROW for inspection purposes. No Masonry, brick, or stone fences will be allowed. Fences that are perpendicular to the pipeline(s) shall include a gate sixteen feet (16') in width for equipment to pass through. Fence posts shall not be placed within 5 feet of the pipeline(s). Fences that are parallel to the pipeline(s) shall be located outside the pipeline(s) ROW.
- Proposed residential driveway crossings shall be designed to provide a minimum of three feet (3') (maximum of 7 feet) of vertical clearance between the O.D. of the pipeline and the finished surface. Exceptions must be approved by SPLP's Engineering Department.

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ENGINEERING AND CONSTRUCTION GUIDELINES For working near the pipeline right-of-way and pipeline

- Proposed driveway/road crossings should be designed to be as perpendicular to the pipeline as possible. Proposed crossings of angles less than 30 degrees will not be accepted.
- Proposed commercial entrance crossings shall be designed to provide a minimum of four feet (4'), (maximum of seven feet (7') of vertical clearance between the O.D. of the pipeline and the finished surface.
- Proposed road ditches shall be designed to provide a minimum of three feet (3') (maximum of 7 feet) of vertical cover above the top of the pipeline and the bottom of the ditch.
- Road under-drains shall maintain a two foot (2') or greater minimum vertical clearance from the top of the pipeline.
- Construction of parking lots over the pipeline(s) shall not be permitted without SPLP's prior written approval in an Encroachment Agreement releasing SPLP from any and all future damages to the parking lot due to pipeline maintenance and repair.
- Structures such as guide rails, concrete paving, sidewalks, curbing, etc. shall be designed in a manner that would facilitate their removal in the event of pipeline maintenance or an emergency repair.
- Proposed crossings by utilities or underground structures shall be designed to pass under the pipeline unless otherwise approved by SPLP's Engineering Department.
- Proposed utilities shall cross as perpendicular to the pipeline as possible
- All underground facilities or structures crossing the pipeline shall maintain a two foot (2') minimum vertical clearance between the O.D. of the pipeline and the proposed utility structure.
- Utility crossings of the pipeline shall be shown on profile with field verified pipeline depths and proposed clearances clearly labeled.
- Power Cable Installations**
 - Secondary Crossings (less than 440 Volts):**
Must be installed UNDER the pipeline, (unless otherwise approved by SPLP's Engineering Department), provided the two-foot (2') minimum vertical clearance is maintained between the bottom of the pipeline and the top of the conduit. The cable must be placed in conduit for the width of the right-of-way and a drive post with an electric company marker shall be placed on each side of the pipeline right-of-way.
 - Primary Crossings (greater than 440 volts):**
Must be installed UNDER the pipeline, (unless otherwise approved by SPLP's Engineering Department), with a minimum two-foot six-inch (2'6") vertical clearance between the pipeline O.D. and the top of the conduit. The cable shall be placed in conduit for the width of the pipeline right-of-way. The conduit shall be protected by pouring of 2000 psi concrete, dyed red, into the ditch for a minimum distance of five feet (5') on both sides of the pipeline. The concrete must span the width of the ditch. A minimum two-foot (2') vertical clearance must be maintained between the O.D. of the pipeline and the top of the concrete.
 - For all electrical crossings, a drive post with an electric company marker shall be placed and maintained on each side of the pipeline right-of-way.

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ENGINEERING AND CONSTRUCTION GUIDELINES For working near the pipeline right-of-way and pipeline

1.22 Open Trench Fiber Optic Mainline Cable Installations

- The cable must be installed UNDER the pipeline with a minimum two-foot six -inch (2'6") vertical clearance between the bottom of the pipeline O.D. and the top of the fiber optic cable.
- Fiber optic cables must be encased in six inches (6") of concrete, dyed orange, for a minimum distance of five feet (5') on both sides of the pipeline. The concrete must span the width of the ditch.
- Fiber optic company markers must be installed and maintained at the crossing location on both sides of the pipeline right-of-way.
- For bored or HDD installations see SXL Construction Guidelines section 2.7

1.23 Cathodic Protection:

- Cathodic protection is employed to control corrosion on SPLP pipelines and other facilities. Cathodic protection may have a detrimental (interference) effect on adjacent and crossing metallic structures.
- Possible detrimental cathodic protection effects should be evaluated by the owner/developer with appropriate mitigative actions taken if these effects are found to be an issue for the owner/developer facility. Mitigation of detrimental effects from cathodic protection is possible by using non-metallic structure materials, loose barrier coatings, bonded coatings and/or bonded coatings with cathodic protection. However, it is best to consult with those knowledgeable in the field of cathodic protection and cathodic protection interference mitigation to determine what is best for the owner/developer structure and configuration.
- If cathodic protection is planned for the owner/developer structure, the SPLP One Call Engineering Department must be notified to allow our corrosion control personnel to install appropriate test facilities and evaluate possible detrimental cathodic protection effects on the SPLP facilities.

1.24 Proposed Residential Development

- Submit a full set of plans, including detail sheets, whereby SPLP's easement is depicted through the proposed development.
- Proposed residential layout shall be designed not to impede access along the SPLP right of way.
- Designated equipment crossing locations must be identified and prior to construction a list of equipment types and weights must be supplied so that stress calculations can be completed to ascertain what type of protection over the pipeline right of way will be required to allow the crossings.
- Proposed landscaping, utilities, drainage, grading and roadways and means of excavation, compaction, blasting, and rock removal within the development must comply with all restrictions stated in this document.

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ENGINEERING AND CONSTRUCTION GUIDELINES For working near the pipeline right-of-way and pipeline

- Encroaching Party shall incorporate SPLP's Engineering and Construction Guidelines contained, herein, into any of the Encroaching Parties design and construction drawings issued "FOR BID purpose". All plan drawings issued either "FOR BID" or "For Construction" will display the following statement on the drawings in areas around SPLP's pipeline(s).

WARNING: HIGH PRESSURE PIPELINE(S)

No Excavation or Construction in this area without contacting the State One Call Center and Sunoco Pipeline L.P. at 1-888-786-3260

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ENGINEERING AND CONSTRUCTION GUIDELINES For working near the pipeline right-of-way and pipeline

2.0 CONSTRUCTION GUIDELINES

The following guidelines apply to Encroaching Party and any contractors, agents and/or representatives it uses for construction activities conducted in SPLP's right-of-way and/or affecting SPLP's pipeline(s).

- State Law requires contractor and excavation companies contact the State One Call Center, prior to any excavation activity as required by your State Law. The nationwide telephone number for the State One Call Center is "811".**
- Encroaching Party shall conduct their activities in compliance with SPLP's Construction/Design Guidelines as well as any applicable agreement in place with Encroaching Party
- The continued integrity of SPLP's pipelines and the safety of all individuals in the area of proposed work are of the utmost importance. Therefore, Encroaching Party shall meet with SPLP's operations and emergency representatives prior to construction. SPLP's on-site representative shall require discontinuation of any work that, in their opinion, endangers the operation or safety of personnel, pipelines, or facilities.
- Notification shall be given to SPLP at least 10 days before the start of construction. A schedule of activities for the duration of the project shall be made available at that time to facilitate the scheduling of SPLP's work site representative. Any Encroaching Party schedule changes shall be provided to SPLP immediately.
- Encroaching Party shall not commence work within SPLP's right of way or within twenty-five feet of a SPLP pipeline or appurtenance(s) without a SPLP representative being present.
- No construction equipment will be allowed on the right of way unless approval to do so has been obtained from SPLP and the appropriate protection has been put in place to protect the pipeline and its right of way.
- During installation of underground utilities or facilities that will utilize drilling, boring, or HDD the following must be adhered to:**
 - Pot hole and expose the pipeline(s) to verify depth with hydro-vacuum machine (with and SPLP representative on site).
 - Excavation of the boring and receiving pits shall be outside the right of way.
 - Each bore to be a minimum of three (3') from the bottom of the pipeline to top of proposed utility. For HDD installation the completed drilled bore shall be a minimum of five feet (5') below the bottom of the pipeline(s).
 - Each bore shall cross existing pipeline as close to perpendicular (90 degrees) as possible.
 - During pilot hole boring procedure, boring subcontractor is to be aware of the depth of the boring bit head as it passes under the pipeline with metal detector type device.
 - Bore shall extend the entire width of the pipeline right of way.
 - Backfill and compact pot hole and bore pits.
 - Install above ground cable markers at each side of the ROW/easement.
 - Boring profile is to be available to SPLP upon request.

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ENGINEERING AND CONSTRUCTION GUIDELINES For working near the pipeline right-of-way and pipeline

- No "Non-Explosive" seismic testing or construction equipment with steady state vibrator, intermittent vibrator, or thumper sources shall be conducted within 150 feet of SPLP's pipeline without SPLP written approval.
- No blasting shall be allowed within 300 feet of SPLP's facilities without a blast plan review by SPLP and written approval. Notification of blasting shall be given to SPLP including a complete blasting plan. At a minimum the blasting plan shall include a drawing with blast pattern, distance from orientation with respect to the pipeline. It must include spacing between holes, rows, amount of explosives in each hole, manufacturer, and associated energy release ratio. A pre-blast meeting shall be conducted by the organization responsible for blasting. SPLP requires a signed and executed blasting indemnification agreement before authorized permission to blast can be given. A written emergency plan shall be provided by the organization responsible for blasting.
- No materials or equipment are to be stored within the existing pipeline right-of-way without SPLP's prior written approval.
- No leach beds, wells, cesspools or sewer systems will be permitted within the SPLP ROW.
- A SPLP inspector must be onsite during any work within the pipeline right-of-way.**

Note: CONTACTING SPLP DIRECTLY DOES NOT EXONERATE YOU OF THE LEGAL OBLIGATION TO NOTIFY YOUR STATE ONE CALL CENTER. Please call 811 before you dig!

DIG SAFELY!

- Call before you dig.
- Wait the required time for facilities to be marked.
- Respect the marks.
- Dig with care.



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ENGINEERING AND CONSTRUCTION GUIDELINES For working near the pipeline right-of-way and pipeline

Additional questions can be submitted to SXL by calling the SXL Design Review Team at 610-670-3259 or 1-888-786-3260. You can also contact local SPLP field representatives at the following numbers for Line locates and depth verifications.

EASTERN U.S. Emergency Number 800-786-7440	WESTERN U.S. Emergency Number 800-753-5531
MASSACHUSETTS East Boston (617) 568-2249	(AR, KY, LA, MI, MN, OH, TN) <i>Mid Valley Pipeline</i> Cygnet (419) 655-3313 Haynesville (318) 624-1766 Hebron (859) 371-4469 X10 Oxford (662) 234-4114 White Oak (903) 759-2382
MICHIGAN Inkster (313) 292-8850	OKLAHOMA Drumright (918) 352-5089 Enid (580) 242-6614 Maysville (405) 867-5675 Noble (405) 613-6886 Seminole (405) 382-7144
NEW JERSEY Trenton (609) 586-1522	TEXAS <i>Mag Tex Line</i> Aldine (281) 931-1021 Center (936) 240-6753 Hebert (409) 722-8432 Longview (903) 297-1311 Sourlake (409) 287-5000
NEW YORK Big Flats (607) 562-8431 Caledonia (585) 538-6160	<i>Sunoco Pipeline/West Texas Gulf</i> Blum (254) 874-5219 Breckenridge (254) 559-7526 Childress (806) 492-2350 Colo. City (325) 728-3162 Comyn (254) 893-2405 Corsicana (903) 872-2269 Hawley (325) 537-2598 Hearne (979) 280-5272 Longview (903) 295-9203 Merten (806) 665-8082 Nederland (409) 721-4403 Robert Lee (325) 453-4315 Snyder (325) 573-3502 Sourlake (409) 287-5000
OHIO <i>Operating as Sunoco Pipeline</i> Fostoria (419) 435-3789 Toledo (419) 691-4554	
<i>Operating as Inland Corporation</i> Mogadore (330) 628-1010 Lima (419) 619-2612	
PENNSYLVANIA Altoona (814) 947-8300 Fort Millin (215) 365-6501 Greensburg (724) 834-2450 Jeandale (610) 942-1906 Reading/Montello (610) 670-3250 Plymouth (570) 696-1277	

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Engineering and Construction GuidelinesREV1.8-13-15

NO.	PLAN REVISIONS	DATE
A	REVISION PER CLIENT REVIEW	8/14/15
B	REVISION PER ENGINEERING	9/23/16
C	REVISION PER TOWNSHIP ENGINEER	09/23/16
D	REVISION PER TOWNSHIP ENGINEER	09/23/16
E	REVISION PER TOWNSHIP ENGINEER	09/23/16
F	REVISION PER TOWNSHIP ENGINEER	09/23/16
G	REVISION PER TOWNSHIP ENGINEER	09/23/16
H	REVISION PER TOWNSHIP ENGINEER	09/23/16
I	REVISION PER TOWNSHIP ENGINEER	09/23/16
J	REVISION PER TOWNSHIP ENGINEER	09/23/16
K	REVISION PER TOWNSHIP ENGINEER	09/23/16

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP INDICATING "ISSUED FOR CONSTRUCTION". WE SHALL ASSUME NO LIABILITY FOR CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.



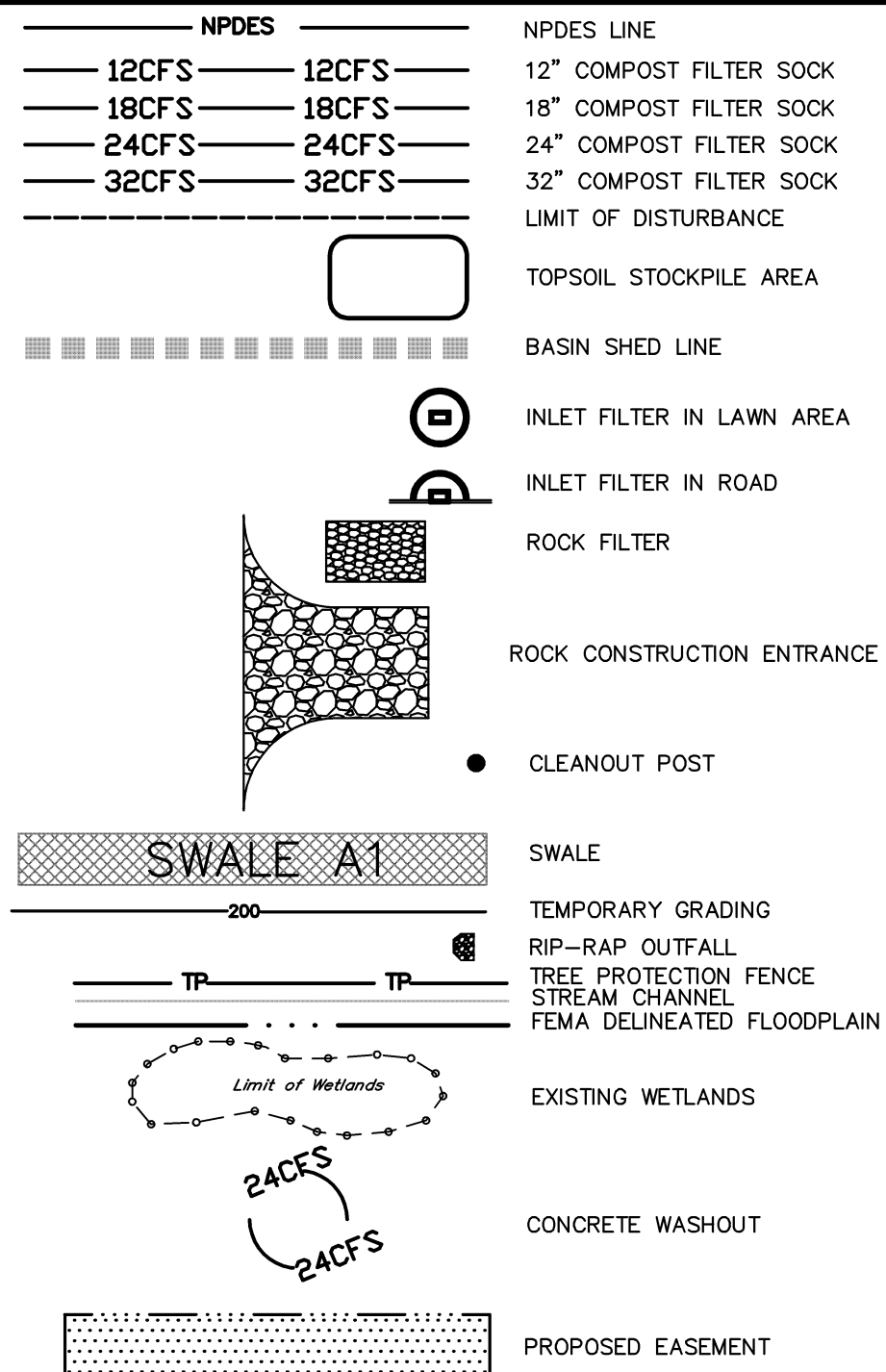
SUNOCO GAS UTILITY STANDARDS
PREPARED AS PART OF THE
WALNUT ACRES
PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER	JDH
DRAWING FILE NAME	ZUTILITY
PLAN ORIGINATION DATE	07-09-16
PLAN LAST REVISED	12-23-16
PLAN SCALE	N.T.S
PROJECT NUMBER	1866
SHEET NUMBER	1.19 OF 30

EROSION CTRL MAINT NOTES

- TO ENSURE ADEQUATE FUNCTION OF THE TEMPORARY CONTROLS, A MAINTENANCE PROGRAM SHALL BE INITIATED WHICH INCLUDES THE FOLLOWING AT A MINIMUM: ALSO, ALL MAINTENANCE DURING CONSTRUCTION AND PRIOR TO FINAL STABILIZATION OF THE SITE SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR HIS CONTRACTOR.
- ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT (E&S) PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE BERKS COUNTY CONSERVATION DISTRICT) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE DISTRICT MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL.
- CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BEST MANAGEMENT PRACTICES (BMPs) SPECIFIED BY THE CONSTRUCTION SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS PLAN.
- AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BMPs TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT AND/OR THE SOUTH-CENTRAL REGIONAL OFFICE OF DEP.
- ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN. OVER UNDISTURBED VEGETATED AREAS. DISCHARGE POINTS SHOULD BE ESTABLISHED TO PROVIDE FOR MAXIMUM DISTANCE TO ACTIVE WATERWAYS.
- UNTIL THE SITE IS STABILIZED, ALL E&S BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS AND REPAIRS AS NEEDED AFTER EACH WORKING DAY AND ON WEEK ENDS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, SEEDING, REMULCHING AND REVEGETATING MUST BE PERFORMED IMMEDIATELY. IF E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DEPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM DRAIN, OR SURFACE WATER.
- ALL SEDIMENT REMOVED FROM BMPs SHALL BE DEPOSITED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. REMOVED SEDIMENT SHALL BE SPREAD OUT WITHIN THE LIMIT OF DISTURBANCE AND IMMEDIATELY STABILIZED OR DEPOSITED IN TOPSOIL STOCKPILES.
- ALL EXCAVATION FOR UTILITY LINE INSTALLATION SHALL BE LIMITED TO THE AMOUNT THAT CAN BE EXCAVATED, INSTALLED, BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY. ALL EXCAVATED MATERIAL SHALL BE DEPOSITED ON THE UPSLOPE SIDE OF THE TRENCH.
- CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATER OR GROUNDWATER SYSTEMS.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LOADED RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS SET FORTH IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY ORIGINAL PENALTIES, AND UP TO \$25,000 IN MISEMENDANT ORIGINAL PENALTIES FOR EACH VIOLATION.
- CONCRETE WASH WATER SHALL BE HANDLED IN A MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATER OR GROUNDWATER SYSTEMS.
- UTILITY LINE TRENCH EXCAVATION:
 - A. LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
 - B. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF-CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
 - C. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
 - D. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
 - E. IMMEDIATELY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRAZED TO FINAL CONTROLS AND APPROPRIATE TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES/FACILITIES WILL BE INSTALLED. SEEDING AND MULCHING OF ALL DISTURBED AREAS SHALL BE COMPLETED IMMEDIATELY.
 - F. ALL SOIL EXCAVATED FROM TRENCH WILL BE PLACED ON THE UPSLOPE SIDE OF THE TRENCH.
 - G. SOILS EXCAVATED FROM EXISTING SURFACE LAYER SHOULD BE STOCKPILED SEPARATELY AND RETURNED AS FINAL SURFACE LAYER FOLLOWING TRENCH BACKFILLING.

LEGEND



CHAPTER 93 CLASSIFICATION

THE STORMWATER DRAINAGE FROM THIS SITE DISCHARGES TO AN UNNAMED TRIBUTARY OF MILL CREEK. BASED ON PENNSYLVANIA CODE CHAPTER 93, THE UNNAMED TRIBUTARY OF MILL CREEK IS DESIGNATED AS TP-2 WHICH IS A TROUT STOCKING FISHERY-NATURAL FISHERY.

NPDES REVIEW CHECKLIST

- 1. THERE ARE NO RIPARIAN BUFFERS REQUIRED ON THE SITE.
- 2. NO ANTIDEGRADATION ANALYSIS IS NEEDED.
- 3. THE SITE DOES NOT DISCHARGE TO AN HO OR EV WATERCOURSE.
- 4. THE PROPOSED DEVELOPMENT WILL MINIMIZE EXTENT AND DURATION OF EARTH DISTURBANCE BY ONLY DISTURBING 25% OF THE PARCEL BOUNDARY AND MINIMIZES EARTHWORK BY UTILIZING EXISTING GRADES AND MAINTAINING MINIMUM CUT AND FILL WHEREVER FEASIBLE.
- 5. THE PROPOSED DEVELOPMENT WILL MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND STABILIZATION OF STREAMS TO PREVENT EROSION AND SEDIMENTATION FROM THE SITE.
- 6. MINIMIZING SOIL COMPACTION WILL BE ACHIEVED BY ONLY DISTURBING 25% OF THE SITE.
- 7. PROTECTIVE FENCING WILL BE PLACED AROUND STORMWATER MANAGEMENT AREAS TO PREVENT HEAVY MACHINERY FROM ENTERING THOSE AREAS.
- 8. IMPERVIOUS AREA HAS BEEN MINIMIZED THROUGH USE OF A SINGLE POINT OF ACCESS. THIS REDUCES THE LENGTH OF EACH INDIVIDUAL DRIVE. THE TOTAL IMPERVIOUS AREA PROPOSED IS LESS THAN 1.2% OF THE PROPERTY BOUNDARY.
- 9. THERMAL IMPACTS HAVE BEEN AVOIDED BY MINIMIZING THE AMOUNT OF PAVED SURFACES. CONCRETE RUNOFF IN VEGETATED SWALES TO THE MAXIMUM EXTENT POSSIBLE. THE USE OF INFILTRATION BASINS, AND DISCHARGING OVERLAND BEFORE ARRIVING AT THE CHAPTER 93 RECEIVING WATERCOURSE.
- 10. THIS PLAN UTILIZES OTHER MEASURES AND CONTROLS THAT PREVENT AN INCREASE IN STORMWATER RUNOFF THROUGH SITE SPECIFIC SEQUENCING WHICH ALLOWS THE NEXT STAGE OF CONSTRUCTION TO OCCUR AFTER THE PRECEDING STAGE AND ASSOCIATED STORMWATER BMPs ARE INSTALLED. STRUCTURAL BMPs SUCH AS SWALES AND INFILTRATION BASINS ARE ALSO UTILIZED TO MINIMIZE CHANGES IN STORMWATER RUNOFF.

SOILS DATA

SOILS DATA OBTAINED FROM A SOIL SURVEY OF BERKS COUNTY, PENNSYLVANIA, ISSUED SEP 15, 2014.

RESOLUTIONS:

CORROSION OF CONCRETE/STEEL - CONCRETE/STEEL MAY NEED TO BE WRAPPED IN CORROSION RESISTANT MATERIAL.

SEEPAGE/PIPING - SUITABLE CLAY MATERIAL MAY NEED TO BE IMPORTED FOR CONSTRUCTION OF BASIN BERM AND KEY TRENCH.

DEPTH TO SATURATED ZONE - U-DRAIN MAY BE REQUIRED FOR ANY SPRINGS ENCOUNTERED. PUMPED WATER FILTER BAG MAY BE NEEDED DURING EXCAVATIONS.

SLOPES - EXCAVATIONS SHOULD BE STABILIZED TO PREVENT EROSION AND CONTRACTOR SHOULD EMPLOY PROPER CONSTRUCTION TECHNIQUES TO ENSURE SAFETY ON STEEP SLOPE AREAS.

DEPTH OF ROCK - IF BEDROCK IS ENCOUNTERED, REMOVE AS NECESSARY IN ACCORDANCE WITH THE DEPARTMENT'S WASTE MANAGEMENT AND PROJECT SPECIFICATIONS.

FROST ACTION - CONTRACTOR SHALL CONSULT PROJECT GEOTECHNICAL ENGINEER / INSPECTOR REGARDING ANY SPECIAL MEASURES TO BE TAKEN FOR EARTHWORK WHICH IS TO OCCUR DURING PERIODS OF FROST.

SOIL PH LEVELS - CONTRACTOR SHALL HAVE SOIL PH TESTED TO DETERMINE CORRECT FERTILIZER APPLICATION RATES.

FLOODING POTENTIAL - ENSURE THAT THE SITE HAS PROPER DRAINAGE.

HIGH GROUNDWATER LEVEL - CONTRACTOR SHALL EMPLOY DEWATERING TECHNIQUES AS APPROVED BY THE CONSERVATION DISTRICT. PUMPED WATER FILTER BAGS SHALL BE USED TO DEWATER UTILITY TRENCHES AND BELOW GRADE EXCAVATIONS.

EROSION - ANY EROSION THAT OCCURS THAT CANNOT BE ADDRESSED BY MEASURES FOUND IN THE PLANS THE CONTRACTOR SHALL CONTACT THE SITE DESIGN ENGINEER AND THE CONSERVATION DISTRICT.

BASIN AREAS AND EMBANKMENTS - FILL FOR BASIN EMBANKMENTS SHALL BE COMPACTED IN 8-INCH LIFTS TO 98% MAXIMUM DRY DENSITY (STANDARD PROCTOR) +/− 2% MOISTURE CONTENT PER ASTM D-1557. ANTI-SEEP COLLARS SHALL BE INSTALLED ON A BASIN DISCHARGE PIPING TO PREVENT SEEPAGE OF WATER FROM THE BASIN. CONSULT WITH SITE DESIGN ENGINEER FOR THE SPECIFIC ANTI-SEEP COLLAR SIZE REQUIREMENTS.

SOIL NAME	CUTBANKS/CAKE	CONCRETE/STEEL CORROSION	SEEPAGE	FLOODING	EARLY FERTILIZER	DEPTH TO SATURATED ZONE	PH	UNDESIRABLE PLANTS	ROCK	PIPING	POSSIBLE SOURCE OF FERTILIZER	SHRUBS/TREES	POTENTIAL SWIMMER	FLOODING	WETLANDS
Bfb	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B.lb	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B.c	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C.c	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C.cB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ho	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Me	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WeD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

STANDARD E&S NOTES

- 1. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.
- 2. COMPACTOR OF THE BMP AREA SHALL BE AVOIDED AND MINIMIZED DURING CONSTRUCTION.
- 3. E&S BMPs SHALL BE INSTALLED AND MAINTAINED DURING AND AFTER CONSTRUCTION OF THE INFILTRATION BMP. TO PREVENT SEDIMENT FROM CLOGGING OR FILLING THE POCM BMP OR STORAGE FACILITY.
- 4. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS AND IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 30 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
- 5. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARPED TO A MINIMUM DEPTH OF 3 TO 5 INCHES, OR 6 TO 12 INCHES ON COMPACTED SOILS, PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSCOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- 6. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ON ANY STAGE OR PHASE OF AN ACTIVITY, WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES EXCEEDS 60 DAYS, THE SITE SHALL BE IMMEDIATELY SEED, MULCH OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES AND ROOF FILLS NOT BE VEGETATED.
- 7. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPLETE BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED.
- 8. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS, DURING NON-OPERATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, SHALL BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- 9. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL, 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENT.
- 10. E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE BERKS COUNTY CONSERVATION DISTRICT OR DEP.

ACT 121 NOTIFICATION

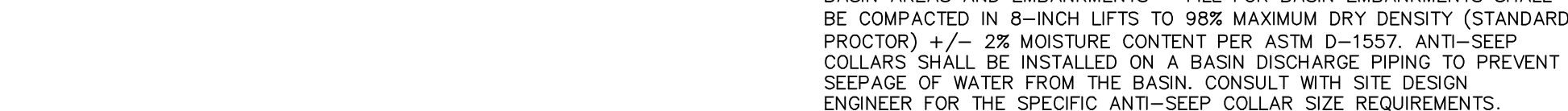
THE UNDERGROUND UTILITY LINE PROTECTION LAW (ACT 121 AMENDS ACT 287 OF 1974) SITE SERIAL NO. 201508284/2015081265

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND FOR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT 121 OF 2008, ACT 181 OF 1996, ACT 112 OF 1998 AND ACT 287 OF 1974, CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM. 1-800-242-1778. NO LESS THAN 3, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.

MATERIAL NOTES

- INDIVIDUALS RESPONSIBLE FOR EARTH DISTURBANCE ACTIVITIES MUST ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS. CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO: EXCESS SOIL MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. MEASURES SHOULD BE PLANNED AND IMPLEMENTED FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL, WHEREVER POSSIBLE. RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL.
- ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE CHAPTER 260, §§2001 ET SEQ, 271.1, AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY A COUNTY CONSERVATION DISTRICT OR DEP FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. USE OF ANALYTICAL TESTING, ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLUMPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILLS INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOIL, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL.
- IT IS RECOMMENDED THAT SOIL TESTS ARE PERFORMED TO DETERMINE ACTUAL APPLICATION RATES OF FERTILIZER AND LIME.

EROSION & SEDIMENT CONTROL PLAN



SITE LOCATION MAP 1"=800'



CONSTRUCTION SEQUENCE

- IN ORDER TO KEEP EROSION AND SEDIMENT POLLUTION DURING CONSTRUCTION TO AN ABSOLUTE MINIMUM, ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING STAGING OF EARTHMOVING ACTIVITIES. EACH STAGE SHALL BE COMPLETED BEFORE A SUBSEQUENT STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN THIS PLAN. BEFORE BEGINNING ANY EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CONTRACTOR SHALL NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT OR DEP PRIOR TO IMPLEMENTATION, AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY. ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL GOVERNMENT AGENCIES AND SEDIMENTATION CONTROL WITH THE DEPARTMENT OF THE BERKS COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION THROUGH THE ONE-CALL SYSTEM. 1-800-242-1778 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.
- THE LIMITS OF DISTURBANCE (LOD), STREAMS AND WETLANDS SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.).
- ROUGH GRADE ENTRANCE TO EVA'S WAY AND INSTALL ROCK CONSTRUCTION ENTRANCE IN ACCORDANCE WITH DETAIL TO SERVE AS ACCESS TO SITE. STABILIZE ROAD WITH 6" OF 2A MODIFIED SUB GRADE DEPENDING ON GENERAL CONSTRUCTION DETAILS.
- PLACE SILT COMPOST FILTER SOCK AS DETICED ON THE PLANS, AND DOWNSTREAM OF ALL EXCAVATED AREAS OR TOPSOIL STOCKPILES AREAS.
- 4. PER NEW NPDES REQUIREMENTS, UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPs AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CONTRACTOR SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR WALNUT TOWNSHIP.
- 5. BEGIN BULK EXCAVATION ACTIVITIES FOR PROPOSED ROAD A, INSTALL CULVERT C100-C102 WITH ROCK FILTER AS SHOWN, SEED AND STABILIZE WITH APPROPRIATE SUB-BASE. THEN INSTALL B&S A, B, C, AND C2 IN ACCORDANCE WITH PCSM STAGNO NOTES (SEE SHEETS 25-27). REFER TO BASIN SECTION DETAIL NOTES FOR BASIN MATERIAL AND CONSTRUCTION (SEE SHEET 28). ENSURE ALL CONTRIBUTING DRAINAGE AREAS HAVE ACHIEVED STABILIZATION PRIOR TO INSTALLATION OF BASINS. MAINTAIN FILTER SOCK SLOPES OF BASINS DURING ALL DISTURBANCE ON SITE. THIS IS A CRITICAL STAGE OF PCSM CONSTRUCTION, DURING WHICH A REGISTERED PE OR THEIR DESIGNEE MUST BE ON-SITE TO OBSERVE CONSTRUCTION FOR CONFORMANCE WITH DESIGN DETAILS. CRITICAL STAGE INSPECTION DOES NOT INCLUDE VERIFICATION OF ENVIRONMENTAL STUDIES, TESTING OR DEMONSTRATIONS.
- 6. THEN INSTALL SWALES A01, A02, B01, C01, C02, C03, AND C04 WITH ANY ASSOCIATED ROCK FILTERS. UPON FINAL GRADING OF SWALES THEY MUST BE STABILIZED.
- 7. CLEAR AND GRUB REMAINDER OF DISTURBED AREAS ON SITE. STRIP TOPSOIL WITH AREAS OF PROPOSED EARTHWORK AND STOCKPILE ACCORDING TO PLANS.
- 8. BEGIN CONSTRUCTION OF STORM SEWER STRUCTURES AND PIPING, INCLUDING ENDWALLS AND RIP-RAP APPROXS. STONE INLET FILTERS SHALL BE PLACED AROUND ALL INLETS THAT DO NOT DRAIN TO A SEDIMENT CONTROL FACILITY AND ALL LANE INLETS.
- 9. BEGIN BULK EXCAVATION AND CONSTRUCTION OF PROPOSED BUILDINGS (EXCAVATION OF BASEMENTS, ETC.). IF ROADWAY IS NOT STABILIZED, ACCESS TO THE CONSTRUCTED BUILDING SHALL BE THROUGH CONSTRUCTION VEHICLE ACCESS. INSTALL REMAINDER OF SWALES AS INDIVIDUAL LOTS ARE CONSTRUCTED.
- 10. INSTALL REMAINDER OF UNDERGROUND UTILITIES. REFER TO UTILITY LINE EXCAVATION MEASURES. FINISH GRADE, SEED AND MULCH EACH AREA OF DISTURBANCE IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.
- 11. NO MORE THAN 15,000 S.F. OF DISTURBED AREA CAN REACH FINAL GRADE BEFORE INITIATING SEEDING AND MULCHING OPERATIONS.
- 12. CONSTRUCT ANY REMAINING BITUMINOUS BINDER COURSES ON ROAD A.
- 13. REMOVE TEMPORARY CONTROL MEASURES AFTER UNIFORM EROSION RESISTANT PERENNIAL VEGETATION HAS BEEN ESTABLISHED THROUGHOUT THE ENTIRE DISTURBED AREA. PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF POCM BMPs IN ACCORDANCE WITH THE PCSM PLAN, OR UPON SUBMISSION OF THE NOT-Y-SCENER, SHOULD BE INITIATED. THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STABILIZATION CERTIFICATE, AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS. COMPLETION CERTIFICATES ARE REQUIRED TO OBTAIN PERMITS FOR CONSTRUCTION OF RESIDENTIAL DEVELOPMENT UNDER THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS.
- 14. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE BERKS COUNTY CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.
- 15. PER NEW NPDES REQUIREMENTS, WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE SHALL DEVELOP AND SUBMIT TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE BERKS COUNTY CONSERVATION DISTRICT A RESTORATION PLAN. THE RESTORATION PLAN SHALL BE APPROVED BY THE BERKS COUNTY CONSERVATION DISTRICT. AREAS DISTURBED DURING THE REMOVAL OF THE CONTROLS MUST BE STABILIZED. THE BERKS COUNTY CONSERVATION DISTRICT AND TILDEN TOWNSHIP SHALL BE NOTIFIED PRIOR TO REMOVAL OF ANY EROSION CONTROLS.
- 16. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE BERKS COUNTY CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.

SITE SEEDING

IF A DIFFERENT SEED MIXTURE IS TO BE USED IT MUST BE APPROVED BY THE APPROPRIATE CONSERVATION DISTRICT PRIOR TO APPLICATION. THE SEEDING MIXTURES PROVIDED BELOW ARE AVAILABLE FROM ERNST CONSERVATION SEEDS, MEADVILLE, PA, 1-800-373-3321, WWW.ERNSTSEEDS.COM.

TEMPORARY SITE SEEDING SPECIFICATIONS:

SEED MIXTURE:

BOTANICAL NAME	COMMON NAME	PERCENT (%) OF MIX BY WEIGHT
ERNST QUICK EROSION CONTROL COVER MIX	ERNM-104	
LULIUM PEREGRINUM	ANNUAL REGRASS	50.0%
LULIUM PEREGRINUM	TURF TYPE PERENNIAL REGRASS	50.0%

SEED AT 50 BULK POUNDS PER ACRE.

ADDITIVES:

	APPLICATION RATE (PER ACRE)
FERTILIZER (10-20-10)	3 TONS
LIME (HAY OR STRAW)	3 TONS

PERMANENT SITE SEEDING SPECIFICATIONS:

GENERAL SITE PREPARATION:

ELIMINATE ANY WEED GROWTH PRIOR TO SEED INSTALLATION USING AN APPROPRIATE HERBICIDE TO CONTROL UNDESIRABLE VEGETATION. SUPPLEMENT TOPSOIL WITH LEAF COMPOST MIXED THOROUGHLY INTO THE TOP 8 INCHES OF SOIL. FOR OPTIMAL SEED ESTABLISHMENT, SOIL PH SHALL BE BETWEEN 5.5 AND 6.5.

SEEDING APPLICATION:

CAREFULLY PROPORTIONING SEED FOR THE ENTIRE AREA. BROADCAST SEED INTO TWO SEPARATE APPLICATIONS BY APPLYING SEED AT HALF THE SUGGESTED RATE FOR EACH APPLICATION TO ENSURE EVEN AND ADEQUATE COVERAGE. AFTER THE FULL RATE OF SEEDING HAS BEEN ACHIEVED, FOLLOW BY ROLLING OR TRACKING SEED INTO TOP 3 INCH OF SOIL TO ACHIEVE GOOD SEED TO SOIL CONTACT. DO NOT ROLL OR TRACK THE SEED IN TOILS OR WETS. COVER WITH A LIGHT LAYER OF SALT-HAY.

SEED MIXTURE:

BOTANICAL NAME	COMMON NAME	PERCENT (%) OF MIX BY WEIGHT
ERNST RETENTION EASTERN ECOTYPE NATIVE GRASS MIX	ERNM-177	
ANDROPOGON GERMARUS	ROUNDHEAD BIG BULKESTEM	26.0%
ELYMUS VIRGIDUS	VIORNA WILD RYE	28.0%
SCHIZACHNE SCOPARUS	LITTLE PANICUM	14.0%
ECOTYPE	PA ECOTYPE	14.0%
SORGHASTRUM NUTANS	INDIAN GRASS	14.0%
PA ECOTYPE	PA ECOTYPE	14.0%
AGROSTIS PERENNANS	AUTUMN BENTGRASS	10.0%
ELYMUS CANADENSIS	CANADIAN WILD RYE	10.0%
PANICUM VIRGATUM	SHELFER SWITCH GRASS	6.0%

SEED AT 35-40 POUNDS PER ACRE OR 1 POUND PER 1,000 SQUARE FEET.

ADDITIVES:

	APPLICATION RATE (PER ACRE)
FERTILIZER (10-20-10 OR 8-24-8)	300 POUNDS
LIME (HAY OR STRAW)	3 TONS

• IT IS RECOMMENDED THAT SOIL TESTS ARE PERFORMED TO DETERMINE ACTUAL APPLICATION RATES OF FERTILIZER AND LIME

REVISIONS:

NO.	DATE	DESCRIPTION
A	8/14/15	CLIENT REVIEW
B	8/14/15	CLIENT REVIEW
C	8/22/16	REVISION PER TWP. INGS. AND BOOD REVIEW LETTERS DATED 02/25/16
D	03/07/17	REVISION PER BERKS COUNTY CONSERVATION DISTRICT LETTER DATED 02/25/16
E	06/07/17	REVISION PER TWP. INGS. AND BOOD REVIEW LETTER DATED 07/07/17
F	06/07/17	REVISION PER TWP. INGS. AND BOOD REVIEW LETTER DATED 07/07/17
G	09/28/17	REVISION PER BERKS COUNTY CONSERVATION DISTRICT LETTER DATED 09/28/17
H	09/28/17	REVISION PER BERKS COUNTY CONSERVATION DISTRICT LETTER DATED 09/28/17
I	07/19/19	REVISION PER TWP. INGS. AND BOOD REVIEW LETTER DATED 05/27/19
J	09/19/23	REVISION PER TWP. INGS. AND BOOD REVIEW LETTER DATED 09/19/23

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP INDICATING 'ISSUED FOR CONSTRUCTION'. WE SHALL ASSUME NO LIABILITY FOR CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.

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18500 Postville Pike, Suite A
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PROJECT MANAGER: JHD
DRAWING FILE NAME: ZES
PLAN ORIGINATION DATE: 07-08-16
PLAN LAST REVISED: 03-10-20
PLAN SCALE: 1" = 150'
PROJECT NUMBER: 1866
SHEET NUMBER: 21 OF 30

MASTER EROSION & SEDIMENT CONTROL PLAN
PREPARED AS PART OF THE
WALNUT ACRES
PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
THE SITE IS IN
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

LEGEND

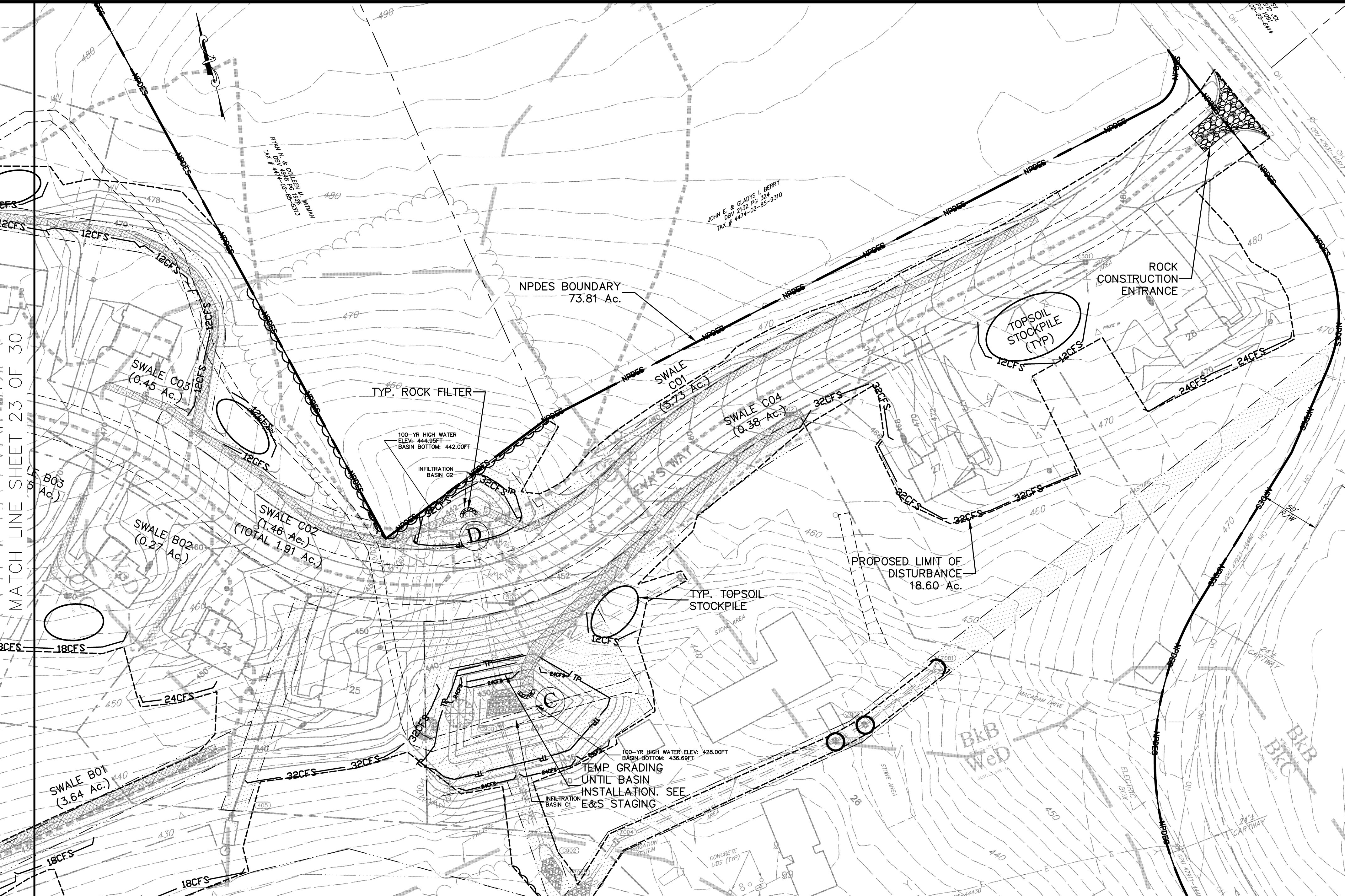
- PROPOSED BUILDING
PROPOSED BUILDING - SETBACK LINE
PROPOSED LOT - PARCEL LINE
PROPOSED EASEMENT - LINE
PROPOSED RIGHT-OF-WAY
PROPOSED ROAD CENTERLINE
PROPOSED ROAD EDGE (PAVED/NO CURB)
PROPOSED ROAD SHOULDER
PROPOSED ROAD PAVEMENT MARKINGS
PROPOSED SEWER MAIN - PIPING
PROPOSED SEWER LATERAL
PROPOSED STORM SEWER - PIPING
PROPOSED WATER MAIN - PIPING
PROPOSED WATER LATERAL
PROPOSED FENCE LINE
PROPOSED CURBLINE
PROPOSED DRIVEWAY
PROPOSED DEED RESTRICTION - LINE
CLEAR SIGHT TRIANGLE
PROPOSED SANITARY FORCE MAIN
PROPOSED PHASE LINE
PROPOSED GARAGE
PROPOSED BUFFER
PROPOSED CONCRETE
PROPOSED RP-RAP
PROPOSED CONCRETE MONUMENT
PROPOSED LIGHT POST
PROPOSED TRAFFIC SIGN
PROPOSED STREET NAME SIGN
PROPOSED UTILITY POLE
PROPOSED WELL
PROPOSED HEADWALL/ENDWALL
PROPOSED INLET
PROPOSED STORM MANHOLE
PROPOSED SANITARY MANHOLE LABEL
PROPOSED STORM SEWER LABEL
PROPOSED FIRE HYDRANT
PROPOSED STORMWATER EASEMENT
TRACT BOUNDARY
EXISTING PARCEL LINE TO BE ABOLISHED
EXISTING RIGHT-OF-WAY
EXISTING EASEMENT
ADJOINING PROPERTY LINE
EXISTING ZONING/TOWNSHIP BOUNDARY
EXISTING WATER LINE/SERVICE
EXISTING STORM SEWER LINE/INLET
EXISTING GAS LINE
EXISTING ELECTRIC LINE (UNDERGROUND)
EXISTING ELECTRIC LINE (OVERHEAD)
EXISTING SANITARY SEWER LINE/MANHOLE
EXISTING SANITARY LATERAL
EXISTING CURB
EXISTING EDGE OF ROAD (PAVED)
EXISTING SHOULDER (ROAD)
EXISTING EDGE OF ROAD (UNPAVED)
EXISTING DRIVEWAY
EXISTING ROAD CENTERLINE
EXISTING DRIVEWAY
EXISTING FENCE
EXISTING CONTOUR
EXISTING INDEX CONTOUR
SOILS DELINEATION LINE
STREAM CHANNEL
FEMA DELINEATED FLOODPLAIN
EXISTING GUIDERAIL
EXISTING WOODLINE
EXISTING BRUSHLINE
EXISTING BUILDINGS
EXISTING GUIDERAIL
EXISTING WETLANDS
EXIST-DECIDUOUS
EXIST-EVERGREEN
EXIST-HEADWALL
LIGHT POST
SIGN
STREET SIGN
UTILITY-POLE
WELL

FILL MATERIAL NOTES

IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE ON-SITE CONTRACTOR.
CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREGGED MATERIAL, USED ASPHALT AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.
CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".
ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-101 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING OF THE MATERIAL AS CLEAN FILL. A COPY OF FORM FP-101 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.
ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING BUT NOT LIMITED TO: VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY HISTORY, SANDERSON ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT REQUIRED UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".
FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MINERAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THESE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PAEOC.COM.

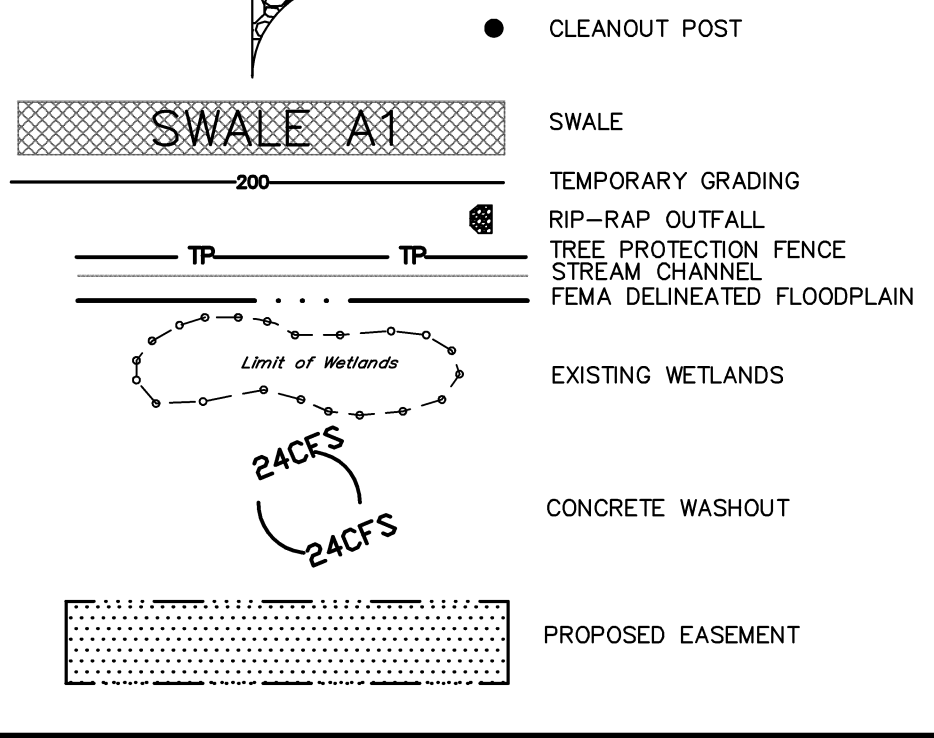
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LEGEND

- NPDES LINE
12CFS 12CFS
18CFS 18CFS
24CFS 24CFS
32CFS 32CFS
LIMIT OF DISTURBANCE
TOPSOIL STOCKPILE AREA
BASIN SHED LINE
INLET FILTER IN LAWN AREA
INLET FILTER IN ROAD
ROCK FILTER
ROCK CONSTRUCTION ENTRANCE
CLEANOUT POST
TEMPORARY GRADING
RP-RAP OUTFALL
TREE PROTECTION FENCE
STREAM CHANNEL
FEMA DELINEATED FLOODPLAIN
EXISTING WETLANDS
CONCRETE WASHOUT
PROPOSED EASEMENT



SITE SEEDING

IF A DIFFERENT SEED MIXTURE IS TO BE USED IT MUST BE APPROVED BY THE APPROPRIATE CONSERVATION DISTRICT PRIOR TO APPLICATION. THE SEEDING MIXTURES PROVIDED BELOW ARE AVAILABLE FROM ERNST CONSERVATION SEEDS, MEADVILLE PA, 1-800-373-3321, WWW.ERNSTSEEDS.COM.
TEMPORARY SITE SEEDING SPECIFICATIONS:
SEED MIXTURE: ERNST QUICK EROSION CONTROL COVER MIX: ERNKK-104
BOTANICAL NAME: COMMON NAME PERCENT (% OF MIX BY WEIGHT)
LULIUM MULTIFLORUM ANNUAL RYEGRASS 50.0%
LULIUM PERENNIS TURF TYPE PERENNIAL RYEGRASS 50.0%

PERMANENT SITE SEEDING SPECIFICATIONS:
GENERAL SITE PREPARATION: ELIMINATE ANY WEED GROWTH PRIOR TO SEED INSTALLATION USING AN APPROPRIATE HERBICIDE TO CONTROL UNDESIRABLE VEGETATION. SUPPLEMENT TOPSOIL WITH LEAF COMPOST MIXED THOROUGHLY INTO THE TOP 8 INCHES OF SOIL. FOR OPTIMAL SEED ESTABLISHMENT, SOIL PH SHALL BE BETWEEN 5.5 AND 6.5.
SEEDING APPLICATION: CAREFULLY PROPORTIONING SEED FOR THE ENTIRE AREA, BROADCAST SEED INTO TWO SEPARATE APPLICATIONS BY APPLYING SEED AT HALF THE SUGGESTED RATE FOR EACH APPLICATION TO ENSURE EVEN AND ADEQUATE COVERAGE. AFTER THE FULL RATE OF SEEDING HAS BEEN ACHIEVED, FOLLOW BY ROLLING OR TRACKING SEED INTO THE TOP 1/2 INCH OF SOIL TO ACHIEVE GOOD SEED TO SOIL CONTACT. DO NOT ROLL OR TRACK THE SEED IF SOIL IS WET. COVER WITH A LIGHT LAYER OF SALT HAY.

CONSTRUCTION SEQUENCE

- 1. THE LIMITS OF DISTURBANCE (LOD), STREAMS AND WETLANDS SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.).
2. ROUGH GRADE WITH REFERENCE TO E.V.A.'S WAY AND INSTALL ROCK CONSTRUCTION ENTRANCE IN ACCORDANCE WITH DETAIL TO SERVE AS ACCESS TO SITE. STABILIZE ROAD WITH 6" OF 2A MODIFIED SUB BASE AS DEPICTED IN GENERAL CONSTRUCTION DETAILS.
3. PLACE SILT COMPOST FILTER SOCK AS DEPICTED ON THE PLANS, AND DOWNSTREAM OF ALL EXCAVATED AREAS OR TOPSOIL STOCKPILING AREAS.
4. PER NEW NPDES REQUIREMENTS, UPON THE INSTALLATION OR STABILIZATION OF ALL PERMITS, SEDIMENT CONTROL BMPs AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.
5. BEGIN BULK EXCAVATION ACTIVITIES FOR PROPOSED ROAD A. INSTALL CULVERT C100-C102 WITH ROCK FILTER AS SHOWN, SEED AND STABILIZE (WITH AGGREGATE SUB-BASE), THEN INSTALL BASINS A, B, C1, AND C2 IN ACCORDANCE WITH PCSM STAKING NOTES (SEE SHEETS 25-27). REFER TO BASIN SECTION DETAIL NOTES FOR BASIN MATERIAL AND CONSTRUCTION (SEE SHEET 28). ENSURE ALL CONTRIBUTING DRAINAGE AREAS HAVE ACHIEVED STABILIZATION PRIOR TO INSTALLATION OF BASINS. MAINTAIN FILTER SOCK UP-SLOPE OF BASINS DURING ALL DISTURBANCE ON SITE. THIS IS A CRITICAL STAGE OF PCSM CONSTRUCTION, DURING WHICH A REGISTERED GEOR OR THEIR DESIGNEE MUST BE ON-SITE TO OBSERVE CONSTRUCTION FOR COMPLIANCE WITH DESIGN DETAILS. CRITICAL STAGE INSPECTION DOES NOT INCLUDE VERIFICATION OF ENVIRONMENTAL STUDIES, TESTING OR DELINEATIONS.
6. THEN INSTALL SWALES A01, A02, B01, C01, C02, C03, AND C04 WITH ANY ASSOCIATED ROCK FILTERS UPON FINAL GRADING OF SWALES THEY MUST BE STABILIZED.
7. CLEAR AND GRUB REMAINDER OF DISTURBED AREAS ON SITE. STRIP TOPSOIL WITHIN AREAS OF PROPOSED EARTHWORK AND STOCKPILE ACCORDING TO PLANS.
8. BEGIN CONSTRUCTION OF STORM SEWER STRUCTURES AND PIPING, INCLUDING ENDWALLS AND RP-RAP ARROWS. STONE INLET FILTER SOCKS SHALL BE PLACED AROUND ALL INLETS THAT DO NOT DRAIN TO A SEDIMENT CONTROL FACILITY AND ALL LAWN INLETS.
9. BEGIN BULK EXCAVATION AND CONSTRUCTION OF PROPOSED BUILDINGS (EXCAVATION OF BASEMENTS, ETC.). IF ROADWAY IS NOT STABILIZED, ACCESS TO THE CONSTRUCTED BUILDING SHALL BE STABILIZED FOR CONSTRUCTION VEHICLE ACCESS. INSTALL REMAINDER OF SWALES IN INDIVIDUAL LOTS ARE CONSTRUCTED.
10. INSTALL REMAINDER OF UNDERGROUND UTILITIES. REFER TO UTILITY LINE EXCAVATION MEASURES. FINISH GRADE, SEED AND MULCH EACH AREA OF DISTURBANCE IMMEDIATELY AFTER CONSTRUCTION IS COMPLETED.
11. NO MORE THAN 15,000 S.F. OF DISTURBED AREA CAN REACH FINAL GRADE BEFORE INITIATING SEEDING AND MULCHING OPERATIONS.
12. CONSTRUCT ANY REMAINING BITUMINOUS BINDER COURSES ON ROAD A.
13. REMOVE TEMPORARY CONTROL MEASURES AFTER UNIFORM EROSION RESISTANT PERENNIAL VEGETATION HAS BEEN ESTABLISHED. MINIMUM COVER DENSITY OF 70% ACROSS THE DISTURBED AREA, TO THE POINT WHERE THE SURFACE SOIL IS CAPABLE OF RESISTING EROSION DURING RUNOFF EVENTS AND STABILIZATION OF THE SITE IS COMPLETE. TO THE SATISFACTION OF THE BERKS COUNTY CONSERVATION DISTRICT. AREAS DISTURBED DURING THE REMOVAL OF THE CONTROLS MUST BE STABILIZED. THE BERKS COUNTY CONSERVATION DISTRICT AND TILDEN TOWNSHIP SHALL BE NOTIFIED PRIOR TO REMOVAL OF ANY EROSION CONTROLS.
14. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF THE DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE BERKS COUNTY CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE ERS BMPs.
15. PER NEW NPDES REQUIREMENTS, WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPs IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOTIFICATION LETTER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PROJECT CLIENT CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED ERS AND PCSM PLANS. COMPLETION CERTIFICATE IS NECESSARY TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED ERS AND PCSM PLANS.

MULCH TACKING

STRAW AND HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT BLOW/WINDLIFT. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "TAMP" THE STRAW OR HAY INTO TO SOIL. THIS METHOD IS LIMITED TO SLOPES NO STEEPER THAN 3 TO 1 AND MACHINERY SHALL BE OPERATED ON THE CONTOUR. (NOTE: COMPACTING BY TRACTORING WITH TRACK MACHINERY IS NOT ACCEPTABLE). EMULSIFIED ASPHALT CONTAINING NO SOLVENTS OR OTHER DILUTING AGENTS TOXIC TO PLANTS OR ANIMAL LIFE, UNIFORMLY APPLIED AT THE RATE OF 31 GALLONS PER 1,000 S.F. MAY BE USED TO TACK MULCH. SYNTHETIC OR CHEMICAL BINDER MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED THAT SUFFICIENT DOCUMENTATION IS SUBMITTED TO AND APPROVED BY THE TOWNSHIP AND THE CONSERVATION DISTRICT TO SHOW THAT THE MATERIAL IS NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES AND OTHERWISE ACCEPTABLE. LIGHTWEIGHT PLASTIC, FIBER OR PAPER NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURERS RECOMMENDATIONS.

ACT 121 NOTIFICATION

ACT 121 NOTIFICATION section containing project details: PROJECT MANAGER JDH, DRAWING FILE NAME ZES, PLAN ORIGIN DATE 07-08-16, PLAN LAST REVISED 03-10-20, PLAN SCALE 1" = 50', PROJECT NUMBER 1866, SHEET NUMBER 22 OF 30.

Revision table with columns for date, description, and revision number. Revisions include 'REVISION PER CLIENT REVIEW', 'REVISION PER TWP. ENG. AND BCD REVIEW', 'REVISION PER TWP. ENG. AND BCD REVIEW', 'REVISION PER TWP. ENG. AND BCD REVIEW', 'REVISION PER TWP. ENG. AND BCD REVIEW', 'REVISION PER TWP. ENG. AND BCD REVIEW', 'REVISION PER TWP. ENG. AND BCD REVIEW'.

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP INDICATING THAT ALL REQUIRED CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.

The Crossroads GROUP, LLC logo and contact information: www.thecrossroadsgroup.com, Phone: 484-660-3742, 16550 Pottsville Pike, Suite A, Hamburg, PA, 19526.

WALNUT ACRES PREPARED FOR STEVEN J. & MARLENE A. SKOLODA TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA.

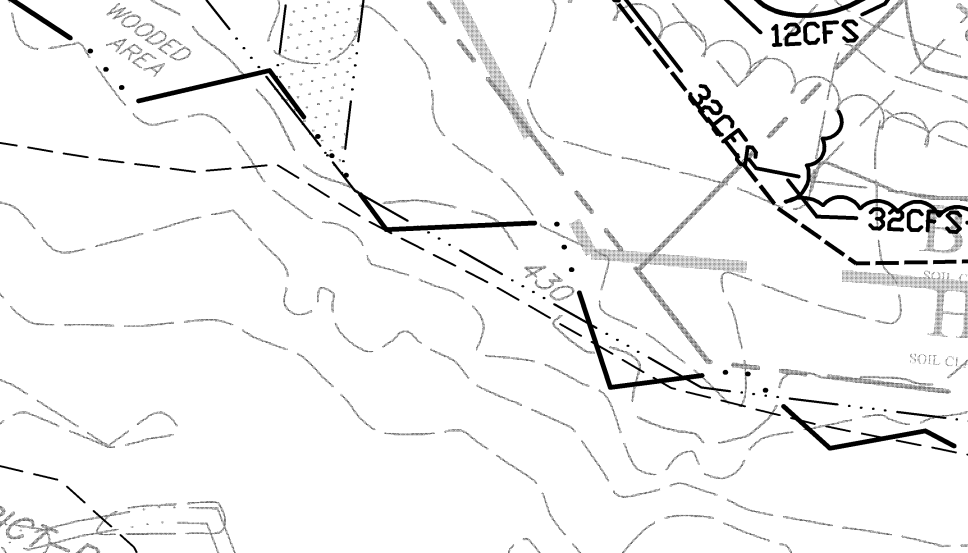
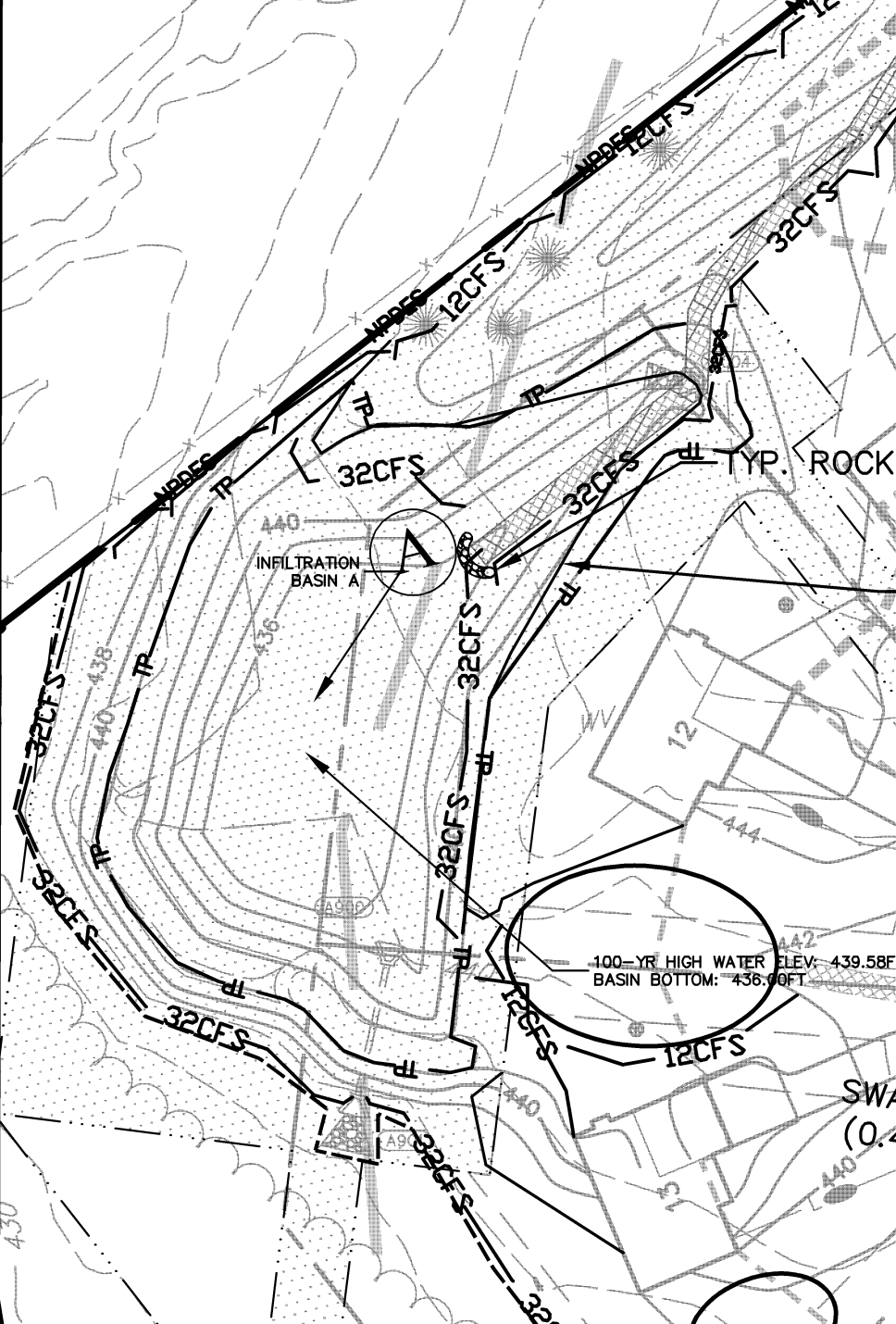
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LEGEND

PROPOSED BUILDING
PROPOSED SETBACK LINE
PROPOSED LOT - PARCEL LINE
PROPOSED EASEMENT - WAY
PROPOSED RIGHT-OF-WAY
PROPOSED ROAD CENTERLINE
PROPOSED ROAD EDGE (PAVED/NO CURB)
PROPOSED ROAD SHOULDER
PROPOSED ROAD PAVEMENT MARKINGS
PROPOSED SEWER MAIN - PIPING
PROPOSED SEWER LATERAL
PROPOSED STORM SEWER - PIPING
PROPOSED WATER MAIN - PIPING
PROPOSED WATER LATERAL
PROPOSED FENCE LINE
PROPOSED CURBLINE
PROPOSED DRIVEWAY
PROPOSED DEED RESTRICTION - LINE
CLEAR SIGHT TRIANGLE
PROPOSED SANITARY FORCE MAIN
PROPOSED PHASE LINE
PROPOSED GARAGE
PROPOSED BUFFER
PROPOSED CONCRETE
PROPOSED RIP-RAP
PROPOSED CONCRETE MONUMENT
PROPOSED LIGHT POST
PROPOSED TRAFFIC SIGN
PROPOSED STREET NAME SIGN
PROPOSED UTILITY POLE
PROPOSED WELL
PROPOSED HEADWALL/ENDWALL
PROPOSED INLET
PROPOSED STORM MANHOLE
PROPOSED SANITARY MANHOLE LABEL
PROPOSED STORM SEWER LABEL
PROPOSED FIRE HYDRANT
PROPOSED STORMWATER EASEMENT
TRACT BOUNDARY
EXISTING PARCEL LINE TO BE ABOLISHED
EXISTING RIGHT-OF-WAY
EXISTING EASEMENT
ADJOINING PROPERTY LINE
EXISTING ZONING/TOWNSHIP BOUNDARY
EXISTING WATER LINE/SERVICE
EXISTING STORM SEWER LINE/INLET
EXISTING GAS LINE
EXISTING ELECTRIC LINE (UNDERGROUND)
EXISTING ELECTRIC LINE (OVERHEAD)
EXISTING SANITARY SEWER LINE/MANHOLE
EXISTING SANITARY LATERAL
EXISTING CURB
EXISTING EDGE OF ROAD (PAVED)
EXISTING SHOULDER (ROAD)
EXISTING EDGE OF ROAD (UNPAVED)
EXISTING DRIVEWAY
EXISTING ROAD CENTERLINE
EXISTING FENCE
EXISTING CONTOUR
EXISTING INDEX CONTOUR
SOILS DELINEATION LINE
STREAM CHANNEL
FEMA DELINEATED FLOODPLAIN
EXISTING GUIDEDRAL
EXISTING WOODLINE
EXISTING BRUSHLINE
EXISTING BUILDINGS
EXISTING GUIDEDRAL
Limit of Wetlands
EXISTING WETLANDS
EXIST-DECEIDUOUS
EXIST-EVERGREEN
EXIST-HEADWALL
LIGHT POST
SIGN
STREET SIGN
UTILITY-POLE
WELL

LEGEND

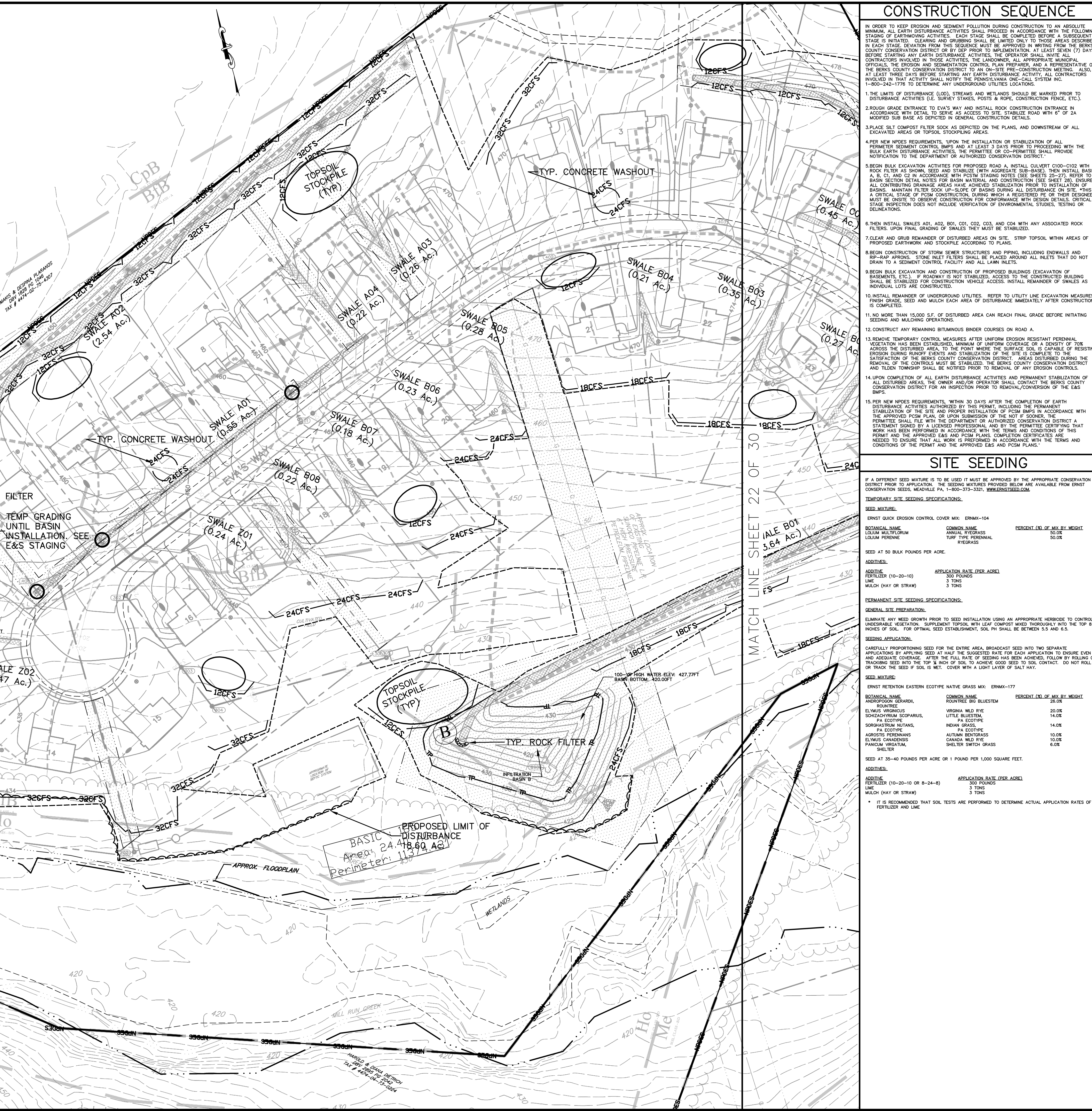
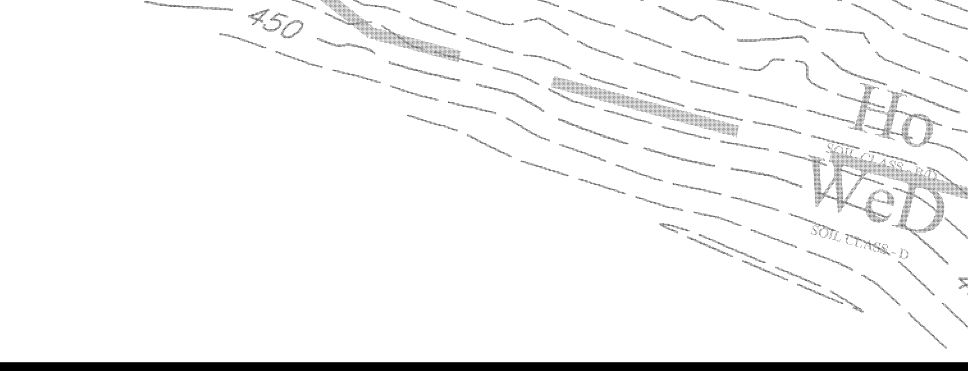
NPDES	NPDES LINE
12CFS	12" COMPOST FILTER SOCK
18CFS	18" COMPOST FILTER SOCK
24CFS	24" COMPOST FILTER SOCK
32CFS	32" COMPOST FILTER SOCK
	LIMIT OF DISTURBANCE
	TOPSOIL STOCKPILE AREA
	BASIN SHED LINE
	INLET FILTER IN LAWN AREA
	INLET FILTER IN ROAD
	ROCK FILTER
	ROCK CONSTRUCTION ENTRANCE
	CLEANOUT POST
	SWALE
	TEMPORARY GRADING
	RIP-RAP OUTFALL
	TREE PROTECTION FENCE
	STREAM CHANNEL
	FEMA DELINEATED FLOODPLAIN
	EXISTING WETLANDS
	CONCRETE WASHOUT
	Limit of Wetlands



ACT 121 NOTIFICATION

THE UNDERGROUND UTILITY LINE PROTECTION LAW (ACT 121 AMENDS ACT 287 OF 1974) SITE SERIAL NO. 20152852894/20152852965

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT 121 OF 2008, AS AMENDED BY ACT 181 OF 2009, ACT 199 OF 2004, ACT 187 OF 1996, ACT 172 OF 1996 AND ACT 287 OF 1974, CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-242-1776, NO LESS THAN 3, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.



CONSTRUCTION SEQUENCE

1. THE LIMITS OF DISTURBANCE (LOD), STREAMS AND WETLANDS SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.).
2. ROUGH GRADE ENTRANCE TO EAS WAY AND INSTALL ROCK CONSTRUCTION ENTRANCE IN ACCORDANCE WITH DETAIL TO SERVE AS ACCESS TO SITE. STABILIZE ROAD WITH 6" OF 2A MODIFIED SUB BASE AS DEPICTED IN GENERAL CONSTRUCTION DETAILS.
3. PLACE SILT COMPOST FILTER SOCK AS DEPICTED ON THE PLANS, AND DOWNSTREAM OF ALL EXCAVATED AREAS OR TOPSOIL STOCKPILING AREAS.
4. AFTER NEW NPDES REQUIREMENTS, UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMP'S AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OF AUTHORIZED INSPECTION DISTRICT.
5. BEGIN BULK EXCAVATION ACTIVITIES FOR PROPOSED ROAD A, INSTALL CULVERT C100-C102 WITH ROCK FILTER AS SHOWN, SEED AND STABILIZE (WITH AGGREGATE SUB-BASE), THEN INSTALL BASINS A, B, C1, AND C2 IN ACCORDANCE WITH POSTING STAKING NOTES (SEE SHEETS 29-32). REFER TO BASIN SECTION DETAIL NOTES FOR BASIN MATERIAL AND CONSTRUCTION (SEE SHEET 26). ENSURE ALL CONTRIBUTING DRAINAGE AREAS HAVE ACHIEVED STABILIZATION PRIOR TO INSTALLATION OF BASINS. MAINTAIN FILTER SOCK UP-SLOPE OF BASINS DURING ALL DISTURBANCE ON SITE. *THIS IS A CRITICAL STAGE OF POST CONSTRUCTION DURING WHICH A REGISTERED PROFESSIONAL ENGINEER MUST BE ON SITE TO OBSERVE CONSTRUCTION FOR CONFORMANCE WITH DESIGN DETAILS. CRITICAL STAGE INSPECTION DOES NOT INCLUDE VERIFICATION OF ENVIRONMENTAL STUDIES, TESTING OR DELINEATIONS.
6. THEN INSTALL SWALES A01, A02, B01, C01, C02, C03, AND C04 WITH ANY ASSOCIATED ROCK FILTERS. UPON FINAL GRADING OF SWALES THEY MUST BE STABILIZED.
7. CLEAR AND GRUB REMAINDER OF DISTURBED AREAS ON SITE. STRIP TOPSOIL WITHIN AREAS OF PROPOSED EARTHWORK AND STOCKPILE ACCORDING TO PLANS.
8. BEGIN CONSTRUCTION OF STORM SEWER STRUCTURES AND PIPING, INCLUDING ENDWALLS AND RIP-RAP APRONS. STONE INLET FILTERS SHALL BE PLACED AROUND ALL INLETS THAT DO NOT DRAIN TO A SEDIMENT CONTROL FACILITY AND ALL LAWN INLETS.
9. BEGIN BULK EXCAVATION AND CONSTRUCTION OF PROPOSED BUILDINGS (EXCAVATION OF BASEMENTS ETC.). IF ROADWAY IS NOT STABILIZED, ACCESS TO THE CONSTRUCTED BUILDING SHALL BE STABILIZED FOR CONSTRUCTION VEHICLE ACCESS. INSTALL REMAINDER OF SWALES AS INDIVIDUAL LOTS ARE CONSTRUCTED.
10. INSTALL REMAINDER OF UNDERGROUND UTILITIES. REFER TO IMMEDIATELY EXCAVATION MEASURES. SEED AND MULCH EACH AREA OF DISTURBANCE IMMEDIATELY AFTER CONSTRUCTION IS COMPLETED.
11. NO MORE THAN 15,000 SF. OF DISTURBED AREA CAN REACH FINAL GRADE BEFORE INITIATING SEEDING AND MULCHING OPERATIONS.
12. CONSTRUCT ANY REMAINING BITUMINOUS BINDER COURSES ON ROAD A.
13. REMOVE TEMPORARY CONTROL MEASURES AFTER UNIFORM EROSION RESISTANT PERENNIAL VEGETATION HAS BEEN ESTABLISHED, MINIMUM OF UNIFORM COVERAGE OR A DENSITY OF 70% ACROSS THE SITE AND PROPER INSTALLATION OF PERMITS BMP'S IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOT IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OF AUTHORIZED INSPECTION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED EKS AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED EKS AND PCSM PLANS.
14. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE BERKS COUNTY CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE EAS BMP'S.
15. PER NEW NPDES REQUIREMENTS, WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PERMITS BMP'S IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOT IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OF AUTHORIZED INSPECTION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED EKS AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED EKS AND PCSM PLANS.

SITE SEEDING

IF A DIFFERENT SEED MIXTURE IS TO BE USED IT MUST BE APPROVED BY THE APPROPRIATE CONSERVATION DISTRICT PRIOR TO APPLICATION. THE SEEDING MIXTURES PROVIDED BELOW ARE AVAILABLE FROM ERNST CONSERVATION SEEDS, MEADVILLE PA, 1-800-373-3321, WWW.ERNSTSEEDS.COM

TEMPORARY SITE SEEDING SPECIFICATIONS:

SEED MIXTURE:

ERNST QUICK EROSION CONTROL COVER MIX ERNMK-104		
BOTANICAL NAME	COMMON NAME	PERCENT (% OF MIX BY WEIGHT)
LULIUM MULTIFLORUM	ANNUAL RYEGRASS	50.0%
LULIUM PERENNIS	TURF TYPE PERENNIAL RYEGRASS	50.0%

SEED AT 50 BULK POUNDS PER ACRE.

ADDITIVES:

ADDITIVE	APPLICATION RATE (PER ACRE)
FERTILIZER (10-20-10)	300 POUNDS
MULCH (HAY OR STRAW)	3 TONS

PERMANENT SITE SEEDING SPECIFICATIONS:

GENERAL SITE PREPARATION:

ELIMINATE ANY WEED GROWTH PRIOR TO SEED INSTALLATION USING AN APPROPRIATE HERBICIDE TO CONTROL UNDESIRABLE VEGETATION. SUPPLEMENT TOPSOIL WITH LEAF COMPOST MIXED THOROUGHLY INTO THE TOP 8 INCHES OF SOIL. FOR OPTIMAL SEED ESTABLISHMENT, SOIL PH SHALL BE BETWEEN 5.5 AND 6.5.

SEEDING APPLICATION:

CAREFULLY PROPORTIONING SEED FOR THE ENTIRE AREA. BROADCAST SEED INTO TWO SEPARATE APPLICATIONS BY APPLYING SEED AT HALF THE SUGGESTED RATE FOR EACH APPLICATION TO ENSURE EVEN AND ADEQUATE COVERAGE. AFTER THE FULL RATE OF SEEDING HAS BEEN ACHIEVED, FOLLOW BY ROLLING OR TRACKING SEED INTO THE TOP 1/2 INCH OF SOIL TO ACHIEVE GOOD SEED TO SOIL CONTACT. DO NOT ROLL OR TRACK THE SEED IF SOIL IS WET. COVER WITH A LIGHT LAYER OF SALT HAY.

SEED MIXTURE:

ERNST RETENTION EASTERN ECOTYPE NATIVE GRASS MIX ERNMK-177		
BOTANICAL NAME	COMMON NAME	PERCENT (% OF MIX BY WEIGHT)
ANDROPOGON GERARDI	ROUNTREE RED BULKESTEM	28.0%
STYRA VIRGICATA	INDIANA WILD RYE	26.0%
SCHIZACHYRIUM SCOPARUS	LITTLE BLUESTEM	14.0%
SORGHASTRUM NUTANS	INDIAN GRASS	14.0%
PA ECOTYPE	PA ECOTYPE	10.0%
AUTUMN PANICUM	AUTUMN PANICUM	10.0%
ELIMUS CANADENSIS	CANADA WILD RYE	10.0%
Panicum VIRGICATA	SHELDER SWITCH GRASS	6.0%

SEED AT 35-40 POUNDS PER ACRE OR 1 POUND PER 1,000 SQUARE FEET.

ADDITIVES:

ADDITIVE	APPLICATION RATE (PER ACRE)
FERTILIZER (10-20-10 OR 8-24-8)	3 TONS
MULCH (HAY OR STRAW)	3 TONS

* IT IS RECOMMENDED THAT SOIL TESTS ARE PERFORMED TO DETERMINE ACTUAL APPLICATION RATES OF FERTILIZER AND LIME.

DATE	8/14/15
REVISION	
A	REVISION PER CLIENT REVIEW
B	REVISION PER CLIENT REVIEW
C	REVISION PER CLIENT REVIEW
D	REVISION PER CLIENT REVIEW
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F	REVISION PER CLIENT REVIEW
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I	REVISION PER CLIENT REVIEW
J	REVISION PER CLIENT REVIEW

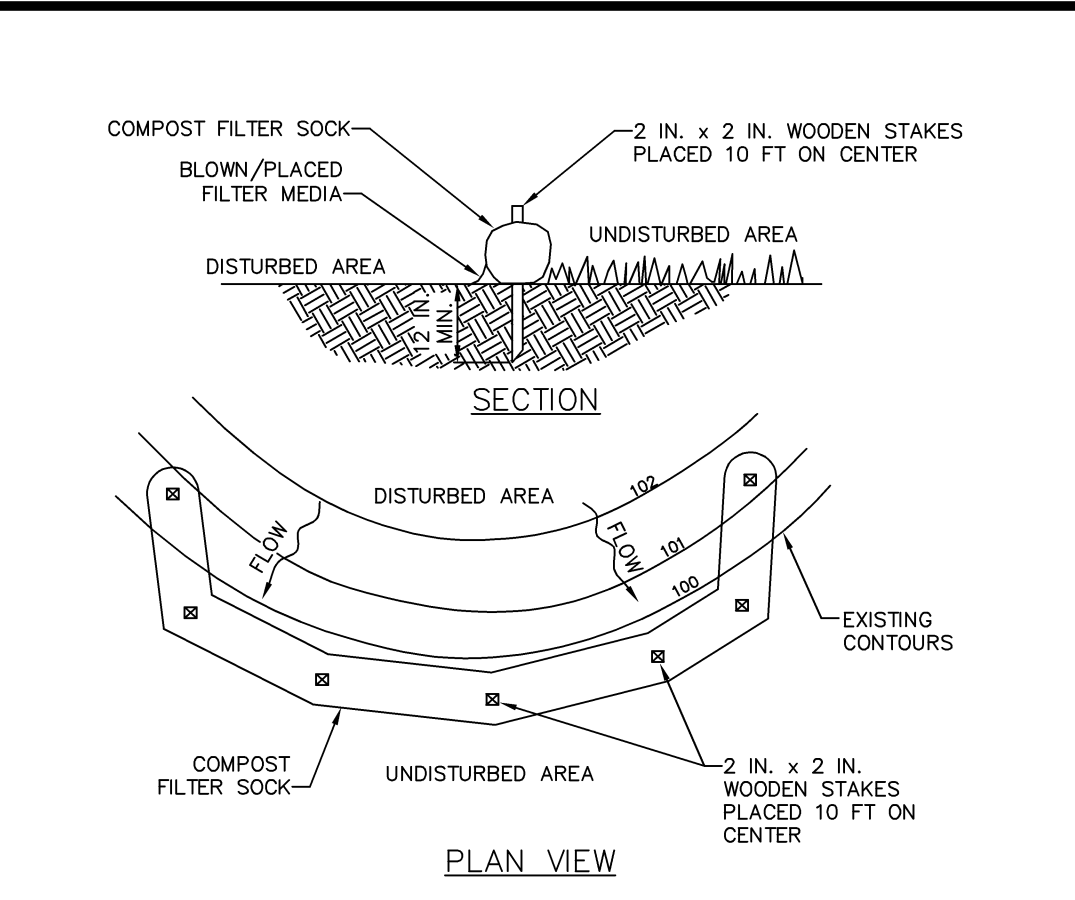
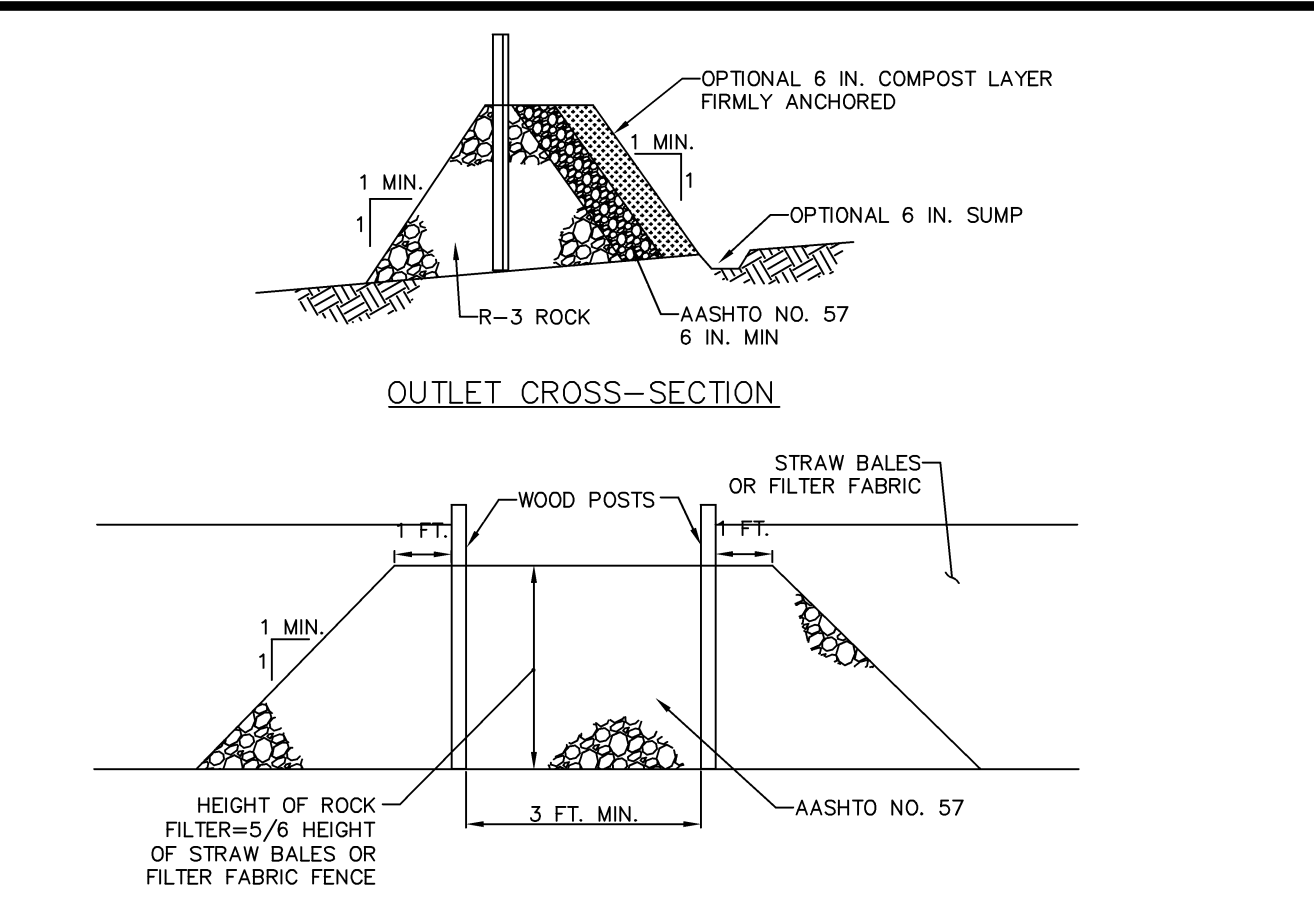
NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP INDICATING 'ISSUED FOR CONSTRUCTION'. WE SHALL ASSUME NO LIABILITY FOR CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.

The Crossroads GROUP LLC

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18500 Pottsville Pike, Suite A
Hamburg, PA 19526
Phone: 484-860-3242

EROSION & SEDIMENT CONTROL PLAN 2
PREPARED AS PART OF THE
WALNUT ACRES
PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
SITE SITUATION
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER	JDH
DRAWING FILE NAME	ZES
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISED	03-10-20
PLAN SCALE	1" = 50'
PROJECT NUMBER	1866
SHEET NUMBER	23 OF 30



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

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

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

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

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

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

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

**STANDARD CONSTRUCTION DETAIL #4-1
 COMPOST FILTER SOCK**

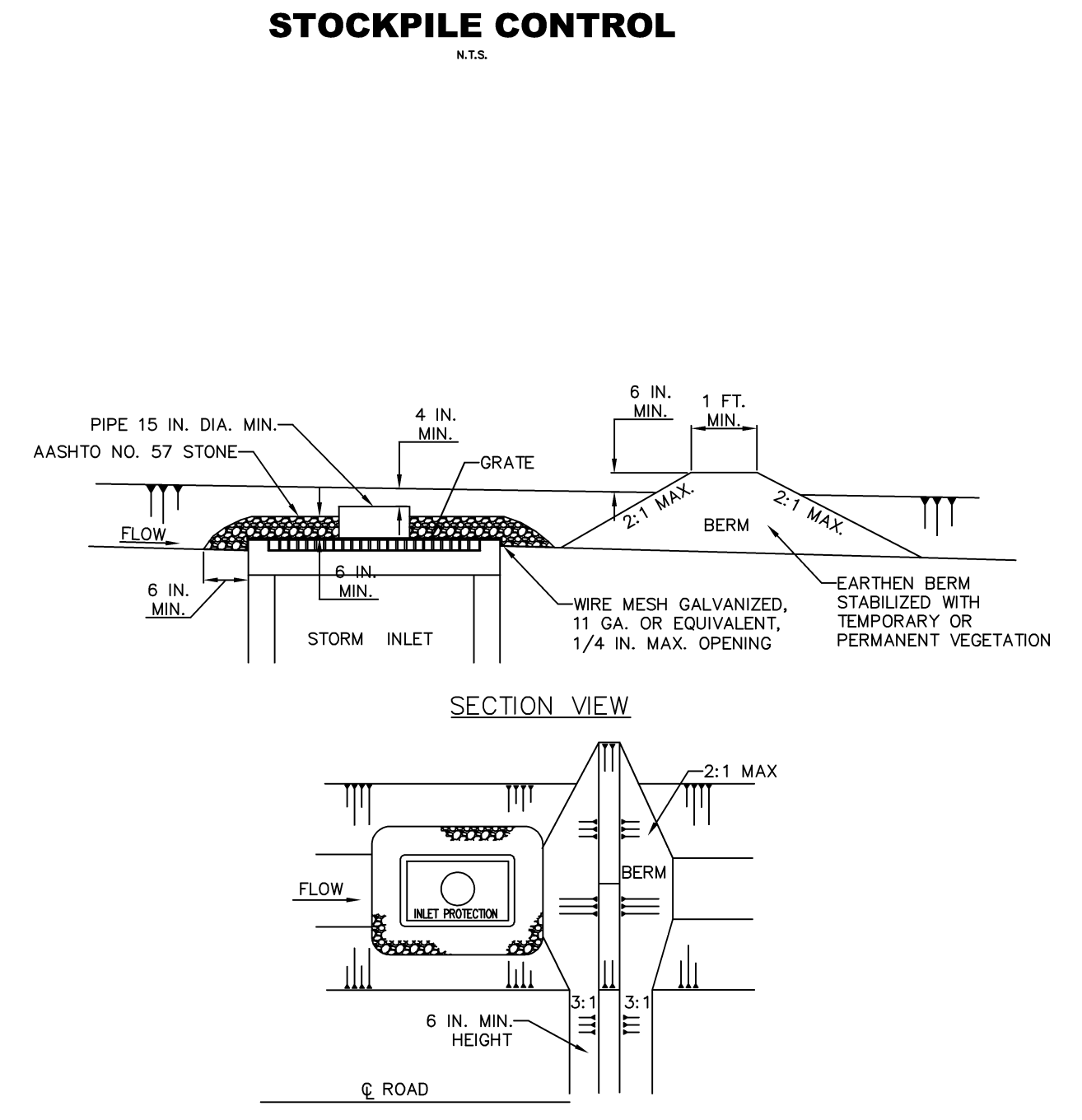
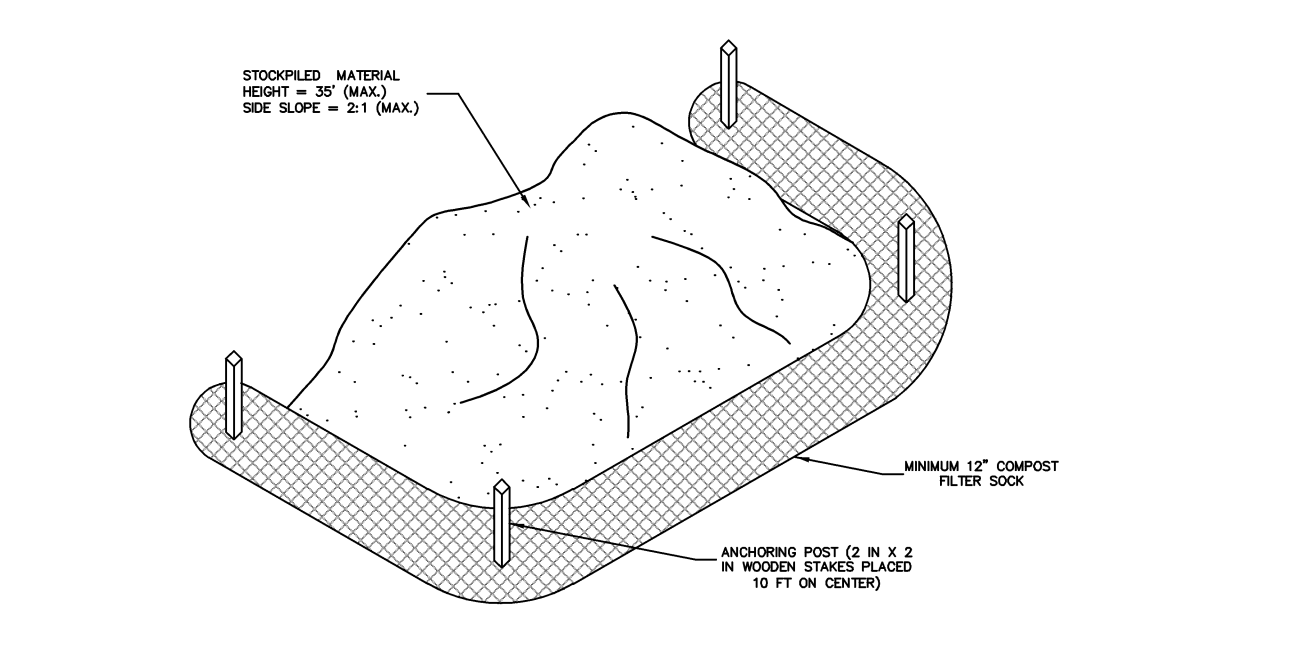
BARRIER NO.	LOCATION	SLOPE PERCENT	SLOPE LENGTH (FT)	FILTER SOCK SIZE
A	lot 29	15-20%	148	CFS 24
B	lot 29	5-10%	253	CFS 24
C	lot 27	5-10%	386	CFS 32
D	Basin C1	10-15%	225	CFS 24
E	lot 25	5-10%	317	CFS 32
F	lot 24	5-10%	249	CFS 24
G	lot 22,23	5-10%	191	CFS 18
H	lot 21	5-10%	156	CFS 18
I	South of Lots 23 & 24	15-20%	94	CFS 18
J	South of Swale B01	15-20%	85	CFS 18
K	Basin B	5-10%	297	CFS 24
L	lot 19, 20	10-15%	231	CFS 24
M	lot 18	5-10%	247	CFS 24
N	lot 15, 16	5-10%	320	CFS 32
O	lot 13, 14	5-10%	339	CFS 32
P	lot 11, 12	5-10%	185	CFS 18
Q	Basin A	5-10%	136	CFS 12
R	lot 10	5-10%	141	CFS 12
S	lots 5,6,7,8,9	5-10%	378	CFS 32
T	lot 4	5-10%	154	CFS 18
U	SWALE A02	5-10%	378	CFS 32
V	SWALE C03	5-10%	107	CFS 12
X	Basin C2	5-10%	352	CFS 32

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

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

**STANDARD CONSTRUCTION DETAIL #4-6
 ROCK FILTER OUTLET**

NOT TO SCALE



NOTES:
 INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED AT ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.

ROLLED EARTHEN BERM ON ROADWAY SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.

STONE INLET PROTECTION AND BERM FOR A TYPE M INLET CAN BE USED IN ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN. OVERFLOW PIPE AND 4 IN. HEAD. A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT THE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA. TOP OF PIPE SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADWAY IF PONDING WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC. EARTHEN BERM SHALL BE ROLLED.

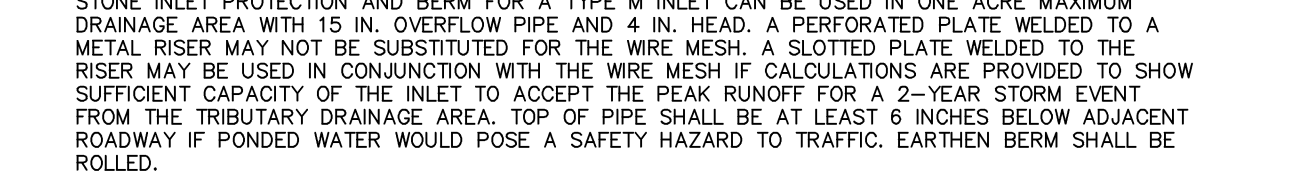
SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 IN. THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON TOP AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

**STANDARD CONSTRUCTION DETAIL #4-2
 STONE INLET PROTECTION AND BERM - TYPE M INLET**

NOT TO SCALE



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

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

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5% FOR SLOPES EXCEEDING 5% CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL. MAY BE PLACED UNDER THE BAG TO REDUCE SOLE STEEPNESS.

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

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

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

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

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

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

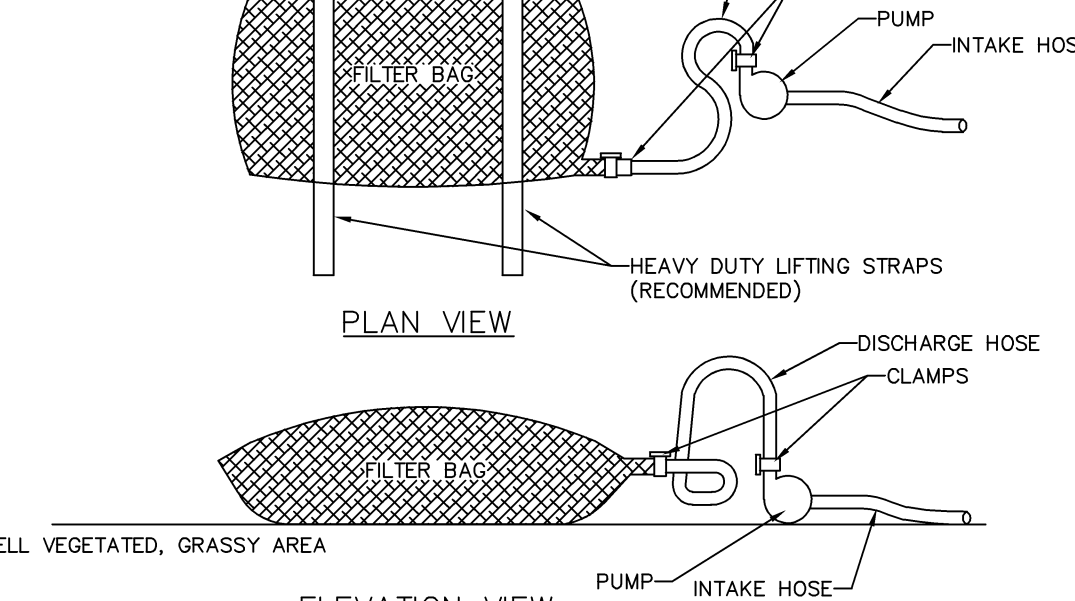
NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #4-4
 ROCK FILTER**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #11-1
 EROSION CONTROL BLANKET INSTALLATION**

NOT TO SCALE



NOTES:
 BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

**STANDARD CONSTRUCTION DETAIL #11-1
 EROSION CONTROL BLANKET INSTALLATION**

NOT TO SCALE

**TABLE 4.2
 Compost Standards**

Organic Matter Content	80% - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	98% pass through 1" screen
Soluble Salt Concentration	5.0 dS/m (mmhos/cm) Maximum

NOTES:
 ROCK FILTER SHALL BE INSTALLED AS SHOWN. FOR D ≥ 3 FT. - USE R-4 FOR D < 3 FT. - USE R-3 NOT APPLICABLE FOR D < 2 FT.

ROCK FILTER

NOT TO SCALE

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

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #3-1
 VEGETATED CHANNEL**

NOT TO SCALE

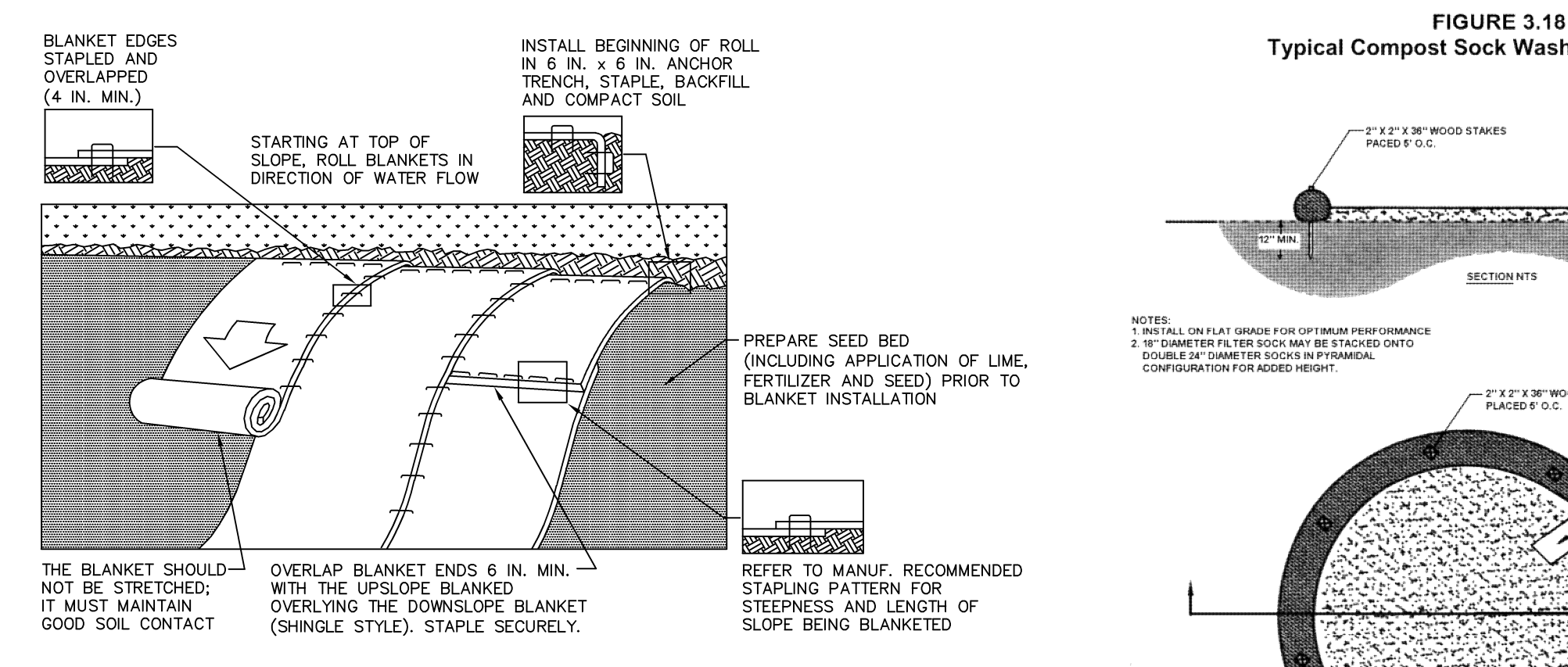
**TABLE 4.1
 Compost Sock Fabric Minimum Specifications**

Material Type	3 mil HDPE	5 mil HDPE	HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

Two-ply systems

Inner Containment Netting	3/4" X 3/4" Max. aperture size Continuously wound Fusion-welded junctures
Outer Filtration Mesh	Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch) 3/16" Max. aperture size

Sock fabrics composed of burlap may be used on projects lasting 6 months or less.



NOTES:
 SEEDS AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

**STANDARD CONSTRUCTION DETAIL #11-1
 EROSION CONTROL BLANKET INSTALLATION**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #11-1
 EROSION CONTROL BLANKET INSTALLATION**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #6-1
 ROCK CONSTRUCTION ENTRANCE**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #3-1
 VEGETATED CHANNEL**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #3-1
 VEGETATED CHANNEL**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #3-1
 VEGETATED CHANNEL**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #6-1
 ROCK CONSTRUCTION ENTRANCE**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #3-1
 VEGETATED CHANNEL**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #3-1
 VEGETATED CHANNEL**

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**STANDARD CONSTRUCTION DETAIL #3-1
 VEGETATED CHANNEL**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #6-1
 ROCK CONSTRUCTION ENTRANCE**

NOT TO SCALE

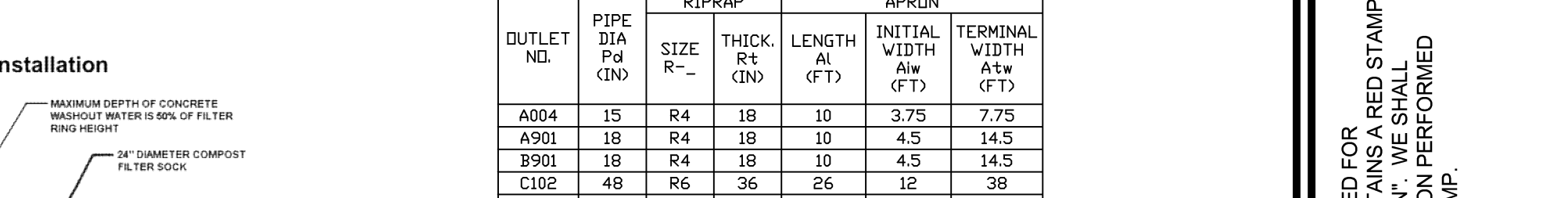
**TABLE 4.1
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Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
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Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
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Two-ply systems

Inner Containment Netting	3/4" X 3/4" Max. aperture size Continuously wound Fusion-welded junctures
Outer Filtration Mesh	Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch) 3/16" Max. aperture size

Sock fabrics composed of burlap may be used on projects lasting 6 months or less.



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

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

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

**STANDARD CONSTRUCTION DETAIL #9-2
 RIPRAP APRON AT PIPE OUTLET
 NO FLARED ENDWALL**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #9-2
 RIPRAP APRON AT PIPE OUTLET
 NO FLARED ENDWALL**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #9-2
 RIPRAP APRON AT PIPE OUTLET
 NO FLARED ENDWALL**

NOT TO SCALE

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 RIPRAP APRON AT PIPE OUTLET
 NO FLARED ENDWALL**

NOT TO SCALE

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 RIPRAP APRON AT PIPE OUTLET
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 RIPRAP APRON AT PIPE OUTLET
 NO FLARED ENDWALL**

NOT TO SCALE

**STANDARD CONSTRUCTION DETAIL #9-2
 RIPRAP APRON AT PIPE OUTLET
 NO FLARED ENDWALL**

NOT TO SCALE

DATE	REVISION
07/14/15	A REVISION PER CLIENT REVIEW
10/23/15	B REVISION PER CLIENT REVIEW
12/22/15	C REVISION PER TRM, DMS AND BOB REVIEW LETTERS BOB DATED 10/29/15
03/10/17	D REVISION PER BOB REVIEW LETTER DATED 07/19/17
08/08/17	E REVISION PER BOB REVIEW LETTER DATED 07/19/17
09/29/17	F REVISION PER TOWN ENGINEER LETTER DATED 09/18/17
10/25/17	G REVISION PER TOWN ENGINEER LETTER DATED 09/18/17
10/26/17	H REVISION PER BOB REVIEW LETTER DATED 10/18/17
01/15/18	I REVISION PER BOB REVIEW LETTER DATED 12/07/17
05/07/18	J REVISION PER TOWNSHIP REVIEW LETTER DATED 10/25/17

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP INDICATING "ISSUED FOR CONSTRUCTION". WE SHALL ASSUME NO LIABILITY FOR CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.

The Crossroads GROUP, LLC

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 18500 Pottsville Pike, Suite A
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 Phone: 484-660-3742

CONSTRUCTION DETAILS - E&S

PREPARED BY: **WALNUT ACRES**

STEVEN J. & MARLENE A. SKOLODA

18500 Pottsville Pike, Suite A
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER	JDH
DRAWING FILE NAME	ZDET
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISED	03-10-20
PLAN SCALE	N.T.S.
PROJECT NUMBER	1866
SHEET NUMBER	24 OF 30

LEGEND

- AREA OF MINIMIZED DISTURBANCE - LAWN
TOTAL AREA = 2.02721 AC.
- AREA OF MINIMIZED DISTURBANCE - MEADOW
TOTAL AREA = 15.6123 AC.
- AREA OF ROOF DISCONNECT
TOTAL AREA = 1.0469 AC.
- AREA OF IMPERVIOUS
- AREA OF BASIN SLOPES
*EROSION CONTROL MATTING (NO. 575 OR EQUIVALENT) TO BE INSTALLED
- INFILTRATION TEST #
BMP INFILTRATION RATE #/H (IN/HR)
- LIMIT OF DISTURBANCE
- NPDES - NPDES LINE
- EXISTING WETLANDS
- PROPOSED EASEMENT



GENERAL NOTES

- REFERENCE THE POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE FOR ALL BMP CALCULATIONS, AS LAST REVISED.
- ALL BMP CALCULATIONS, LAYOUT AND DESIGN ARE BASED ON CURRENT (PRE CONSTRUCTION) FIELD CONDITIONS, AS OBSERVED DURING THE FIELD TESTING. REFER TO THE PERMEABILITY TESTING REPORT PREPARED BY JB ENVIRONMENTAL FOR INFILTRATION TESTING RESULTS.
- AREAS (OR BMP'S) SHALL BE LIMITED TO LIGHT EQUIPMENT AND LOW IMPACT CONSTRUCTION ACCESS (OR AS EXPLICITLY DEFINED) WITHIN THE POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE, TO BE MONITORED BY THE SITE CONTRACTOR AT ALL TIMES. ANY CHANGES TO THESE CONDITIONS WILL IMPACT THE DESIGN OF THE BMP'S AND SHOULD BE REPORTED TO THE OWNER/APPLICANT FOR FURTHER REVIEW. NO PROVISIONS WITHIN THESE PLANS DEFINE OR GUARANTEE SITE MONITORING DURING CONSTRUCTION AND/OR POST CONSTRUCTION. ALL MONITORING AND/OR TESTING DURING AND AFTER CONSTRUCTION WILL BE THE SOLE RESPONSIBILITY OF THE OWNER/APPLICANT, OR THEIR ASSIGNED REPRESENTATIVE.
- ANY BMP ADJUSTMENTS OR MODIFICATIONS DURING CONSTRUCTION SHALL BE APPROVED BY THE OWNER/APPLICANT AND THOSE HAVING JURISDICTION. PRIOR TO MAKING FIELD CHANGES, PLAN REVISIONS WILL BE THE SOLE RESPONSIBILITY OF THE OWNER/APPLICANT, OR THEIR ASSIGNED REPRESENTATIVE.
- CLUSTER DEVELOPMENT WAS UTILIZED BY ONLY DISTURBING ONE 18.56 AC. SECTION OF THE ENTIRE 73.7 AC. PARCEL.
- THE TOTAL DISTURBED AREA WAS MINIMIZED BY ONLY DISTURBING 18.56 AC. OF THE 73.7 AC. PARCEL, AND LIMITING THE IMPERVIOUS COVER TO 18% WHICH IS BELOW THE 60% MAXIMUM DESCRIBED IN THE TILDEN TOWNSHIP ZONING ORDINANCE.

NPDES REVIEW CHECKLIST

- THERE ARE NO RIPARIAN BUFFERS REQUIRED ON THE SITE.
- NO ANTI-CORROSION ANALYSIS IS NEEDED.
- THE SITE DOES NOT DISCHARGE TO AN HQ OR EV WATERCOURSE.
- THE PSM PLAN PRESERVES THE INTEGRITY OF STREAM CHANNELS AND MAINTAINS THE PHYSICAL, BIOLOGICAL, AND CHEMICAL QUALITY BY MANAGING STORMWATER THROUGH VARIOUS BMP'S, STAGING SITE CONSTRUCTION, AND PRESERVING EXISTING WETLANDS AS NOTED IN THE PLANS.
- THE PROPOSED DEVELOPMENT WILL MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION BY MANAGING THE PEAK RATE AND VOLUME OF STORMWATER RUNOFF FROM THE SITE.
- MINIMIZING SOIL COMPACTION WILL BE ACHIEVED BY ONLY DISTURBING 20% OF THE SITE.
- PROTECTIVE FENCING WILL BE PLACED AROUND STORMWATER MANAGEMENT AREAS TO PREVENT HEAVY MACHINERY FROM ENTERING THOSE AREAS.
- IMPERVIOUS AREA HAS BEEN MINIMIZED THROUGH USE OF A SINGLE POINT OF ACCESS. THIS REDUCES THE LENGTH OF EACH INDIVIDUAL DRIVE. THE TOTAL IMPERVIOUS AREA PROPOSED IS LESS THAN 7.2% OF THE PROPERTY BOUNDARY.
- THE PSM PLAN PROVIDES MEASURES TO MINIMIZE LAND CLEARING AND GRADING BY DESIGNING THE SITE TO BALANCE CUT/FILLS TO THE FULLEST EXTENT POSSIBLE AND THE BACK INTO EXISTING GRADE AS QUICKLY AS POSSIBLE.
- THE PSM PLAN PROVIDES MEASURES TO PRESERVE WETLANDS AND EXISTING GRASSES AS SHOWN. THE PROPOSED SITE UTILIZES THE FOLLOWING PREVENTATIVE MEASURES:
 - MINIMIZE TOTAL SITE DISTURBANCE - AS A RESULT OF CLUSTERING, THE PROPOSED DISTURBED AREA IS LESS THAN 1% OF THE TOTAL TRACT AREA.
 - DISCONNECT ROOF LEADERS TO VEGETATED AREAS.
 - MINIMUM COMPACTION MEADOW AND LAWN.
 - THE USE OF STRUCTURAL BMP'S SUCH AS SWALES AND BASINS TO MINIMIZE CHANGES IN STORMWATER RUNOFF.

BASIN SEEDING NOTES

SEED SHALL BE INSTALLED AS SOON AS PERMANENT BASIN CONSTRUCTION IS COMPLETE.

SITE PREPARATION:
ELIMINATE ANY WEED GROWTH PRIOR TO SEED INSTALLATION USING AN APPROPRIATE HERBICIDE TO CONTROL UNDESIRABLE VEGETATION. SUPPLEMENT TOPSOIL WITH LEAF COMPOST MIXED THOROUGHLY INTO THE TOP 6 INCHES OF SOIL. FOR OPTIMAL SEED ESTABLISHMENT, SOIL PH SHALL BE BETWEEN 5.5 AND 6.5.

SEEDING APPLICATION:
CAREFULLY PROPORTIONING SEED FOR THE ENTIRE AREA. BROADCAST SEED IN TWO SEPARATE APPLICATIONS BY APPLYING SEED AT HALF THE SUGGESTED RATE FOR EACH APPLICATION TO ENSURE EVEN AND ADEQUATE COVERAGE. AFTER THE FULL RATE OF SEEDING HAS BEEN ACHIEVED, FOLLOW BY ROLLING OR TRACKING SEED INTO THE TOP INCH OF SOIL TO ACHIEVE GOOD SEED TO SOIL CONTACT. DO NOT ROLL OR TRACK THE SEED IF SOIL IS WET. COVER WITH A LIGHT LAYER OF SALT HAY.

MAINTENANCE:
DURING THE FIRST YEAR, WHENEVER THE VEGETATION REACHES 12 TO 18 INCHES TALL, IT SHOULD BE MOWED TO NO LESS THAN 8 INCHES BY ROTARY MOWER OR WEED EATER/LINE TRIMMER TO PREVENT WEEDS FROM GOING TO SEED. DO NOT MOW WITH A LAWN MOWER THEREAFTER. THE SEEDING AREA SHOULD BE MOWN TO THE GROUND ONCE ANNUALLY IN EARLY SPRING.

BASIN BOTTOM SEED MIX

THE FOLLOWING SEED MIX IS TO BE INSTALLED IN AREAS ON THE PLAN NOTED AS BASIN BOTTOM SEED MIX.

BOTANICAL NAME	COMMON NAME	PERCENT (%) OF MIX BY WEIGHT
ANNUAL RYE	ANNUAL RYEGRASS	30
ANDROPOGON GERARDI	BIG BLUESTEM	20
SCHIZACHYRIA SCOPARIUM	LITTLE BLUESTEM	12
SORGHASTRUM NUTANS	INDIAN GRASS	12
POA FALCATUS	FOWL BLUEGRASS	7
PANICUM VIRGATUM	SWITCHGRASS	6
TRIPSACUM DACTYLOIDES	FOXTAIL	5
EUPATORIUM PURPUREUM	JOE-PYE WEED	5
VERBENA HASTATA	BLUE VERVAIN	5

THE ABOVE SEED MIX SHALL BE INSTALLED AT THE RATE OF 45 LBS./ACRE.
SEED MIX IS AVAILABLE FROM ERNST CONSERVATION SEEDS, MEADVILLE, PA, 1-800-373-3321, WWW.ERNSTSEED.COM.

BASIN SIDE SLOPES SEED MIX

THE FOLLOWING SEED MIX IS TO BE INSTALLED IN AREAS ON THE PLAN NOTED AS BASIN SIDE SLOPE SEED MIX.

BOTANICAL NAME	COMMON NAME	PERCENT (%) OF MIX BY WEIGHT
AGROSTIS PERENNANS	ALTIMUM BENTGRASS	30
VERNONIA WILD	VERNONIA WILD	25
PANICUM CLANDESTINUM	TOGA DEER TONGUE	15
CAREX WALPURGENA	FOXTAIL	15
JUNCUS TENUIS, PA	ECOTYPEATH RUSH, PA ECOTYPE	5

THE ABOVE SEED MIX SHALL BE INSTALLED AT THE RATE OF 20 LBS./ACRE.
SEED MIX IS AVAILABLE FROM ERNST CONSERVATION SEEDS, MEADVILLE, PA, 1-800-373-3321, WWW.ERNSTSEED.COM.

MAINTENANCE NOTES

POST CONSTRUCTION STORMWATER MANAGEMENT.

A. BEST MANAGEMENT PRACTICES (BMP)
THE BMP'S SHALL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER IN PERPETUITY. THE MAINTENANCE WILL BE CONDUCTED ON A SHORT TERM AND LONG TERM SCHEDULE BY THE OWNER. A HOMEOWNER'S ASSOCIATION (HOA) WILL BE ESTABLISHED FOR BMP MAINTENANCE.

STORMWATER QUALITY HAS BEEN ADDRESSED WITH SEVERAL DEVICES. NATURALIZED SWALES, CONTAINING HIGH GRASSES, ARE UTILIZED TO CONVEY RUN-OFF TO THE STORMWATER MANAGEMENT AREA TO HELP IMPROVE WATER QUALITY PRIOR TO REACHING THE BASIN. A NATURALIZED BASIN HAS BEEN UTILIZED TO HELP TREAT THE COLLECTED RUN-OFF PRIOR TO DISCHARGING TO THE EXISTING WETLANDS.

B. MAINTENANCE

SHORT TERM MAINTENANCE:

- INSPECT BMP'S AFTER MAJOR STORM EVENTS FOR DAMAGE AND/OR EROSION ACTIVITY - REPAIR EROSION WITH THE APPROPRIATE MEASURES IMMEDIATELY.
- INSPECT BASINS AND SWALES ON A MONTHLY BASIS DURING THE GROWING SEASON FOR THE FIRST TWO YEARS TO EVALUATE PLANT ESTABLISHMENT AND MORTALITY - REPLACE DEAD PLANTS WITH SAME OR LIKE PLANTS ABLE TO ESTABLISH IN THE CULTURAL CONDITIONS PRESENT. IF NECESSARY, REPLACE PLANTS WITH A DIFFERENT SPECIES SUITABLE TO ANY MICROCLIMATIC EFFECTS THAT MIGHT DEVELOP.
- DURING THE FIRST YEAR, WHENEVER THE SEEDING AREA OF THE BASIN OR SWALES REACHES 12 TO 18 INCHES TALL IT SHOULD BE MOWED TO NO LESS THAN EIGHT INCHES BY ROTARY MOWER OR LINE TRIMMER TO PREVENT WEEDS FROM GOING TO SEED.

LONG TERM MAINTENANCE:

- EVERY YEAR FOR THE BASIN - MOW HERBACEOUS PLANTS TO THE GROUND IN EARLY SPRING.
- EVERY YEAR FOR THE BASIN - REMOVE ANY INVASIVE PLANTS THAT HAVE ESTABLISHED.
- EVERY FIVE YEARS FOR THE BASIN - REMOVE ANY SEDIMENT BUILD-UP THAT HAS OCCURRED ON THE BASIN BOTTOM.
- EVERY YEAR FOR THE NATURALIZED SWALE AREAS - PERFORM ROUTINE ANNUAL MAINTENANCE: CUT BACK DEAD HERBACEOUS PLANTS IN LATE FALL OR EARLY SPRING (DEPENDENT UPON A PLANTS ABILITY TO PROVIDE WINTER INTEREST AND ITS BENEFIT TO WILDLIFE, REMOVE UNDESIRABLE WEEDS OR INVASIVE PLANTS THAT SELF SEED INTO THE AREA AND REPLACE DISPLACED OR DECOMPOSED MULCH.
- IF THE BASIN FAILS TO DE-WATER WITHIN 72 HOURS AFTER A RAIN EVENT IT MUST BE PUMPED DRY AND CHECKED FOR COMPACTION/SILTATION.
- IN THE EVENT OF FAILURE, THE DESIGN ENGINEER MUST BE CONTACTED IMMEDIATELY TO DETERMINE THE BEST REMEDIATION FOR THE FAILED SYSTEM. FAILURE CONSTITUTES FAILURE TO DEWATER.

MINIMIZE SOIL COMPACTION-LAWN AND MEADOW
AVOID MOWING MORE THAN ONCE A WEEK, OR USE AERATOR TO AVOID COMPACTION FROM MAINTENANCE.

DISCONNECT ROOF LEADERS TO VEGETATED AREAS
EACH LOT OWNER SHALL MAINTAIN HEALTHY GRASS AT EACH ROOF DOWNSPOUT, AND INSPECT BI-ANNUALLY TO VERIFY.

DISCONNECT NON-ROOF IMPERVIOUS TO VEGETATED AREAS
EACH INDIVIDUAL LOT OWNER SHALL MAINTAIN HEALTHY GRASS IN ANY SWALE OR YARD ADJACENT TO THEIR DRIVEWAY OR THE PUBLIC ROAD, AND INSPECT BI-ANNUALLY TO VERIFY.

CLUSTER USES
OPEN SPACE IS BEING DEED RESTRICTED AND MAINTAINED BY OWNER OF LOT#30 IN PERPETUITY.

CONSTRUCTION STAGING

PRIOR TO ANY WORK, THE CONTRACTOR/DEVELOPER SHALL NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT OF THE DATE OF THE PRE-CONSTRUCTION MEETING.

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL NOTIFY ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL AND STATE AGENCIES, AND THE BERKS COUNTY CONSERVATION DISTRICT. A REPRESENTATIVE OF THE BERKS COUNTY CONSERVATION DISTRICT TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR BURIED UTILITIES LOCATION.

BEFORE IMPLEMENTING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED ERS CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE BERKS COUNTY CONSERVATION DISTRICT.

BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE OPERATOR MUST ASSURE THAT EACH SPILL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE BERKS COUNTY CONSERVATION DISTRICT AND WHICH IS BEING IMPLEMENTED AND MAINTAINED ACCORDING TO CHAPTER 102 REGULATIONS. THE OPERATOR SHALL ALSO NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT IN WRITING OF ALL RECEIVING SPILL OR BORROW AREAS WHEN THEY HAVE BEEN IDENTIFIED.

- CLEAR AREAS DESIGNATED FOR THE PROPOSED INFILTRATION BASIN. ONLY CLEAR TO THE EXTENT NECESSARY FOR INFILTRATION BASIN CONSTRUCTION. PROPOSED INFILTRATION BASIN MUST REMAIN UNDISTURBED BY HEAVY MACHINERY. ANY ASSOCIATED EXCAVATION MUST BE OUTSIDE THE DELINEATED AREA AS SHOWN ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN.
- INFILTRATION BASIN SHALL BE CONSTRUCTED AS FOLLOWS:
 - INSTALL SILT FENCE DOWNSLOPE OF THE TOPSOIL STOCKPILES AND TEMPORARILY SEED AND MULCH THE STOCKPILES AFTER STRIPPING OPERATIONS ARE COMPLETED.
 - EXCAVATE INFILTRATION BASIN AREA AFTER PERMANENT STABILIZATION HAS BEEN ACHIEVED ON ALL CONTIGUOUS DRAINAGE AREAS. PLACE COMPACTED EMBANKMENT FILL AND MULCH INSIDE/OUTSIDE OF INFILTRATION BASIN WITH EROSION CONTROL LINING. THIS IS A CRITICAL STAGE OF BASIN CONSTRUCTION DURING WHICH A DESIGNED MULCH MUST BE ON-SITE TO OBSERVE CONSTRUCTION FOR CONFORMANCE WITH DESIGN DETAILS. CRITICAL STAGE INSPECTION DOES NOT INCLUDE VERIFICATION OF ENVIRONMENTAL STUDIES, TESTING OR DELINEATIONS.
 - SPREAD EXCESS TOPSOIL AND PERMANENTLY SEED AND MULCH THE INSIDE/OUTSIDE SLOPES.

ACT 121 NOTIFICATION

THE UNDERGROUND UTILITY LINE PROTECTION LAW (ACT 121 AMENDS ACT 287 OF 1974)
SITE SERIAL NO. 20152802884/20152812865

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT 121 OF 2008, AS AMENDED BY ACT 12 OF 1998 AND ACT 287 OF 1974, CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-242-1776, NO LESS THAN 48 HOURS PRIOR TO EXCAVATION OR DEMOLITION WORK.

DATE: 8/14/15

REVISIONS:

NO.	REVISION	DATE
A	REVISION PER CLIENT REVIEW	08/14/15
B	REVISION PER PLAN REVIEW	08/14/15
C	REVISION PER TIME, TMS, AND BCD REVIEW LETTERS BOTH DATED 10/27/16	10/27/16
D	REVISION PER BCD REVIEW LETTER DATED 07/19/17	07/19/17
E	REVISION PER TOWNSHIP REVIEW LETTER DATED 07/17/17	07/17/17
F	REVISION PER TOWNSHIP REVIEW LETTER DATED 07/17/17	07/17/17
G	REVISION PER BCD REVIEW LETTER DATED 10/26/18	10/26/18
H	REVISION PER BCD REVIEW LETTER DATED 10/26/18	10/26/18
I	REVISION PER TOWNSHIP REVIEW LETTER DATED 10/27/18	10/27/18
J	REVISION PER TOWNSHIP REVIEW LETTER DATED 10/27/18	10/27/18

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Hamburg, PA 15226
Phone: 484-660-3245

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PROJECT MANAGER: JDH

DRAWING FILE NAME: ZPC5MP

PLAN ORIGINATOR DATE: 07-08-16

PLAN LAST REVISED: 03-10-20

PLAN SCALE: 1" = 100'

PROJECT NUMBER: 1866

SHEET NUMBER: 25 OF 30

PREPARED BY: STEVEN J. & MARLENE A. SKOLODA

DESIGNED BY: STEVEN J. SKOLODA

TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

LEGEND

AREA OF MINIMIZED DISTURBANCE - LAWN
TOTAL AREA = 2,02721 AC.

AREA OF MINIMIZED DISTURBANCE - MEADOW
TOTAL AREA = 15,6123 AC.

AREA OF ROOF DISCONNECT
TOTAL AREA = 1,0459 AC.

AREA OF IMPERVIOUS

AREA OF BASIN SLOPES
EROSION CONTROL MATTING (NAG 575 OR EQUIVALENT) TO BE INSTALLED

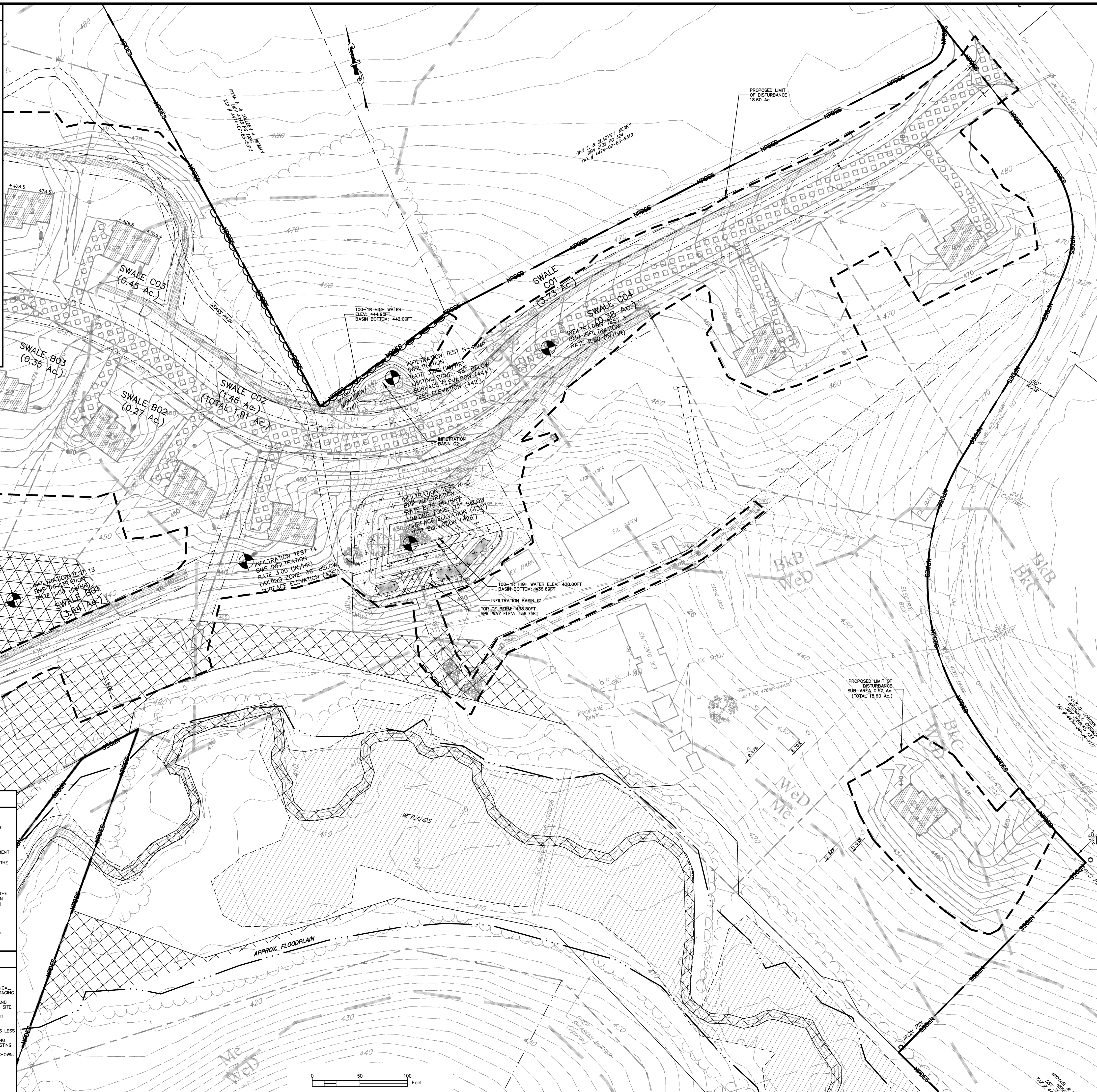
INFILTRATION TEST #
BMP INFILTRATION RATE ## (IN/HR)

LIMIT OF DISTURBANCE

NPDES - NPDES LINE

Limit of Wetlands - EXISTING WETLANDS

PROPOSED EASEMENT



GENERAL NOTES

- REFER TO THE POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE FOR ALL BMP CALCULATIONS, AS LAST REVISED.
- ALL BMP CALCULATIONS, LAYOUT AND DESIGN ARE BASED ON CURRENT (PRE CONSTRUCTION) FIELD CONDITIONS, AS OBSERVED DURING THE FIELD TESTING. REFER TO THE PERMEABILITY TESTING REPORT PREPARED BY JB ENVIRONMENTAL FOR INFILTRATION TESTING RESULTS.
- AREA(S) OF BMP(S) SHALL BE LIMITED TO LIGHT EQUIPMENT AND LOW IMPACT CONSTRUCTION ACCESS (OR AS EXPLICITLY DEFINED WITHIN THE POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE), TO BE MONITORED BY THE SITE CONTRACTOR AT ALL TIMES. ANY CHANGES TO THESE CONDITIONS WILL IMPACT THE DESIGN OF THE BMP(S) AND SHOULD BE REPORTED TO THE OWNER/APPLICANT FOR FURTHER REVIEW. NO PROVISIONS WITHIN THESE PLANS DEFINE OR GUARANTEE SITE MONITORING DURING CONSTRUCTION AND/OR POST CONSTRUCTION. ALL MONITORING AND/OR TESTING DURING AND AFTER CONSTRUCTION WILL BE THE SOLE RESPONSIBILITY OF THE OWNER/APPLICANT, OR THEIR ASSIGNED REPRESENTATIVE.
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- CLUSTER DEVELOPMENT WAS UTILIZED BY ONLY DISTURBING ONE 18.56 AC. SECTION OF THE ENTIRE 73.7 AC. PARCEL.
- THE TOTAL DISTURBED AREA WAS MINIMIZED BY ONLY DISTURBING 18.56 AC. OF THE 73.7 AC. PARCEL, AND LIMITING THE IMPERVIOUS COVER TO 18%, WHICH IS BELOW THE 65% MAXIMUM DESCRIBED IN THE TOWNSHIP ZONING ORDINANCE.

NPDES REVIEW CHECKLIST

- THERE ARE NO RIPARIAN BUFFERS REQUIRED ON THE SITE.
- A WETLANDS ANALYSIS IS REQUIRED.
- THE SITE DOES NOT DISCHARGE TO AN HO OR EV WATERCOURSE.
- THE PCSM PLAN PROVIDES THE INTENSITY OF STREAM CHANNELS AND MAINTAINS THE PHYSICAL, BIOLOGICAL, AND CHEMICAL QUALITY BY MANAGING STORMWATER THROUGH VARIOUS BMPs, STAGING SITE CONSTRUCTION, AND PRESERVING EXISTING WOODLANDS AS NOTED IN THE PLANS.
- THE PROPOSED DEVELOPMENT WILL MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION BY MANAGING THE PEAK RATE AND VOLUME OF STORMWATER RUNOFF FROM THE SITE.
- MINIMIZING SOIL COMPACTION WILL BE ACHIEVED BY ONLY DISTURBING 20% OF THE SITE. PROTECTIVE FENCING WILL BE PLACED AROUND STORMWATER MANAGEMENT AREAS TO PREVENT HEAVY MACHINERY FROM ENTERING THOSE AREAS.
- IMPERVIOUS AREA HAS BEEN MINIMIZED THROUGH USE OF A SINGLE POINT OF ACCESS, THIS REDUCES THE LENGTH OF EACH INDIVIDUAL DRIVE. THE TOTAL IMPERVIOUS AREA PROPOSED IS LESS THAN 7.2% OF THE PROPERTY BOUNDARY.
- THE PCSM PLAN PROVIDES MEASURES TO MINIMIZE LAWN CLEARING AND GRADING BY DESIGNING THE SITE TO BALANCE CUT/FILLS TO THE FULLEST EXTENT POSSIBLE AND THE BACK INTO EXISTING GRASS AS MUCH AS POSSIBLE WHEREVER FEASIBLE.
- THE PCSM PLAN PROVIDES MEASURES TO PRESERVE WOODLANDS AND EXISTING GRASSES AS SHOWN.
- THE PROPOSED SITE UTILIZES THE FOLLOWING PREVENTATIVE MEASURES:
 - A. MINIMIZE TOTAL SITE DISTURBANCE - AS A RESULT OF CLUSTERING, THE PROPOSED DEVELOPMENT WILL DISTURB LESS THAN 7% OF THE TOTAL TRACT AREA.
 - B. DISCONNECT ROOF LEADERS TO VEGETATED AREAS.
 - C. MINIMUM COMPACTION MEADOW AND LAWN.
 - D. THE USE OF STRUCTURAL BMPs SUCH AS SWALES AND BASINS TO MINIMIZE CHANGES IN STORMWATER RUNOFF.

NPDES REVIEW CHECKLIST

1. THERE ARE NO RIPARIAN BUFFERS REQUIRED ON THE SITE.

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5. THE PROPOSED DEVELOPMENT WILL MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION BY MANAGING THE PEAK RATE AND VOLUME OF STORMWATER RUNOFF FROM THE SITE.

6. MINIMIZING SOIL COMPACTION WILL BE ACHIEVED BY ONLY DISTURBING 20% OF THE SITE. PROTECTIVE FENCING WILL BE PLACED AROUND STORMWATER MANAGEMENT AREAS TO PREVENT HEAVY MACHINERY FROM ENTERING THOSE AREAS.

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8. THE PCSM PLAN PROVIDES MEASURES TO MINIMIZE LAWN CLEARING AND GRADING BY DESIGNING THE SITE TO BALANCE CUT/FILLS TO THE FULLEST EXTENT POSSIBLE AND THE BACK INTO EXISTING GRASS AS MUCH AS POSSIBLE WHEREVER FEASIBLE.

9. THE PCSM PLAN PROVIDES MEASURES TO PRESERVE WOODLANDS AND EXISTING GRASSES AS SHOWN.

10. THE PROPOSED SITE UTILIZES THE FOLLOWING PREVENTATIVE MEASURES:

- A. MINIMIZE TOTAL SITE DISTURBANCE - AS A RESULT OF CLUSTERING, THE PROPOSED DEVELOPMENT WILL DISTURB LESS THAN 7% OF THE TOTAL TRACT AREA.
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- D. THE USE OF STRUCTURAL BMPs SUCH AS SWALES AND BASINS TO MINIMIZE CHANGES IN STORMWATER RUNOFF.

BASIN SEEDING NOTES

SEED SHALL BE INSTALLED AS SOON AS PERMANENT BASIN CONSTRUCTION IS COMPLETE.

SITE PREPARATION:

ELIMINATE ANY WEED GROWTH PRIOR TO SEED INSTALLATION USING AN APPROPRIATE HERBICIDE TO CONTROL UNDESIRABLE VEGETATION. SUPPLEMENT TOPSOIL WITH LEAF COMPOST MIXED THOROUGHLY INTO THE TOP 8 INCHES OF SOIL. FOR OPTIMAL SEED ESTABLISHMENT, SOIL PH SHALL BE BETWEEN 5.5 AND 6.5.

SEEDING APPLICATION:

CAREFULLY PROPORTIONING SEED FOR THE ENTIRE AREA. BROADCAST SEED IN TWO SEPARATE APPLICATIONS BY APPLYING SEED AT HALF THE SUGGESTED RATE FOR EACH APPLICATION TO ENSURE EVEN AND ADEQUATE COVERAGE. AFTER THE FULL RATE OF SEEDING HAS BEEN ACHIEVED, FOLLOW BY ROLLING OR TRACKING SEED INTO THE TOP 8 INCH OF SOIL TO ACHIEVE GOOD SEED TO SOIL CONTACT. DO NOT ROLL OR TRACK THE SEED IF SOIL IS WET. COVER WITH A LIGHT LAYER OF SALT HAY.

MAINTENANCE:

DURING THE FIRST YEAR, WHENEVER THE VEGETATION REACHES 12 TO 18 INCHES TALL, IT SHOULD BE MOWED TO NO LESS THAN 8 INCHES BY ROTARY MOWER OR WEED EATER/LINE TRIMMER TO PREVENT WEEDS FROM GOING TO SEED. DO NOT MOW WITH A LAWN MOWER. THEREAFTER, THE SEEDING AREA SHOULD BE MOWN TO THE GROUND ONCE ANNUALLY IN EARLY SPRING.

BASIN BOTTOM SEED MIX

THE FOLLOWING SEED MIX IS TO BE INSTALLED IN AREAS ON THE PLAN NOTED AS BASIN BOTTOM SEED MIX:

BOTANICAL NAME	COMMON NAME	PERCENT (%) OF MIX BY WEIGHT
ANNUAL RYE	ANNUAL RYEGRASS	30
ANDRPODON GERARDI	BIG BLUESTEM	20
SCHIZANTHUS SCOPARIUM	LITTLE BLUESTEM	12
SORGHASTRUM NUTANS	INDIAN GRASS	12
POA PATENSIS	FOAL FESCUE	12
PANICUM VIRGATUM	SWITCHGRASS	5
TRIPLODON DACTYLOIDES	EASTERN GAMAGRASS	5
EUPATORIUM PURPUREUM	JOE-PYE WEED	5
VERBENA HASTATA	BLUE VERVAIN	5

THE ABOVE SEED MIX SHALL BE INSTALLED AT THE RATE OF 45 LBS/ ACRE.

BASIN SIDE SLOPES SEED MIX

THE FOLLOWING SEED MIX IS TO BE INSTALLED IN AREAS ON THE PLAN NOTED AS BASIN SIDE SLOPE SEED MIX:

BOTANICAL NAME	COMMON NAME	PERCENT (%) OF MIX BY WEIGHT
AGROSTIS PERENNANS	ALFALFA BENTGRASS	30
TRIPLODON DACTYLOIDES	WILD RYE	25
PANICUM CLANDESTINUM	TOGA DEER TONGUE	25
CAREX VALLINOSA	FOX SEDGE	5
JUNCUS TENNIS, PA	ECOTYPE RUSH, PA ECOTYPE	5

THE ABOVE SEED MIX SHALL BE INSTALLED AT THE RATE OF 20 LBS/ ACRE.

MAINTENANCE NOTES

POST CONSTRUCTION STORMWATER MANAGEMENT:

A. BEST MANAGEMENT PRACTICES (BMP)

THE BMPs SHALL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER IN PERPETUITY. THE MAINTENANCE WILL BE CONDUCTED ON A SHORT TERM AND LONG TERM SCHEDULE BY THE OWNER. A HOMEOWNER'S ASSOCIATION (HOA) WILL BE ESTABLISHED FOR BMP MAINTENANCE.

STORMWATER QUALITY HAS BEEN ADDRESSED WITH SEVERAL DEVICES. NATURALIZED SWALES, CONTAINING HIGH GRASSES, ARE UTILIZED TO CONVEY RUN-OFF TO THE STORMWATER MANAGEMENT AREA TO HELP IMPROVE WATER QUALITY PRIOR TO REACHING THE BASIN. A NATURALIZED BASIN HAS BEEN UTILIZED TO HELP TREAT THE COLLECTED RUN-OFF PRIOR TO DISCHARGING TO THE EXISTING WETLANDS.

B. MAINTENANCE

SHORT TERM MAINTENANCE:

- INSPECT BMP'S AFTER MAJOR STORM EVENTS FOR DAMAGE AND/OR EROSION ACTIVITY - REPAIR EROSION WITH THE APPROPRIATE MEASURES IMMEDIATELY.
- INSPECT BASINS AND SWALES ON A MONTHLY BASIS DURING THE GROWING SEASON FOR THE FIRST TWO YEARS AFTER INSTALLATION AND MORTALITY. - REPLACE DEAD PLANTS WITH SAME OR LIKE PLANTS ABLE TO ESTABLISH IN THE CULTURAL CONDITIONS PRESENT. IF NECESSARY, REPLACE PLANTS WITH A DIFFERENT SPECIES SUITABLE TO ANY MICROCLIMATIC EFFECTS THAT MIGHT DEVELOP.
- DURING THE FIRST YEAR, WHENEVER THE SEEDING AREA OF THE BASIN OR SWALES REACHES 12 TO 18 INCHES TALL IT SHOULD BE MOWED TO NO LESS THAN 8 INCHES BY ROTARY MOWER OR LINE TRIMMER TO PREVENT WEEDS FROM GOING TO SEED.

LONG TERM MAINTENANCE:

- EVERY YEAR FOR THE BASIN - MOW HERBACEOUS PLANTS TO THE GROUND IN EARLY SPRING.
- EVERY YEAR FOR THE BASIN - REMOVE ANY INVASIVE PLANTS THAT HAVE ESTABLISHED.
- EVERY FIVE YEARS FOR THE BASIN - REMOVE ANY SEDIMENT BUILD-UP THAT HAS OCCURRED ON THE BASIN BOTTOM.
- EVERY YEAR FOR THE NATURALIZED SWALE AREAS - PERFORM ROUTINE ANNUAL MAINTENANCE. CUT BACK DEAD HERBACEOUS FOLIAGE IN LATE FALL OR EARLY SPRING (DEPENDENT UPON A PLANT'S ABILITY TO PROVIDE WINTER PROTECTION AND BE BENEFIT TO WILDLIFE). REMOVE UNDESIRABLE (WEEDS) OR INVASIVE PLANTS THAT SELF SEED INTO THE AREA, AND REPLACE DISPLAYED MALNUTRISHED OR DECOMPOSED MATERIALS.
- IF THE BASIN FAILS TO WATER WITHIN 72 HOURS AFTER A RAIN EVENT IT MUST BE PUMPED DRY AND CHECKED FOR COMPACTION/SILTATION.
- IN THE EVENT OF FAILURE, THE DESIGN ENGINEER MUST BE CONTACTED IMMEDIATELY TO DETERMINE THE BEST REMEDIATION FOR THE FAILED SYSTEM FAILURE. CONSULTATIVE FAILURE TO DEWATER.

MINIMIZE SOIL COMPACTION-LAWN AND MEADOW

AVOID MOWING MORE THAN ONCE A WEEK, OR USE AERATOR TO AVOID COMPACTION FROM MAINTENANCE.

DISCONNECT ROOF LEADERS TO VEGETATED AREAS

EACH LOT OWNER SHALL MAINTAIN HEALTHY GRASS AT EACH ROOF DOWNSPOUT, AND INSPECT BI-ANNUALLY TO VERIFY.

DISCONNECT NON-ROOF IMPERVIOUS TO VEGETATED AREAS

EACH INDIVIDUAL LOT OWNER SHALL MAINTAIN HEALTHY GRASS IN ANY SWALE OR YARD ADJACENT TO THEIR DRIVEWAY OR THE PUBLIC ROAD, AND INSPECT BI-ANNUALLY TO VERIFY.

CLUSTER USE:

OPEN SPACE IS BEING DEED RESTRICTED AND MAINTAINED BY OWNER OF LOT30 IN PERPETUITY.

CONSTRUCTION STAGING

BEFORE IMPLEMENTING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENTATION 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 BERKS COUNTY CONSERVATION DISTRICT.

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENTATION CONTROL PLAN PREPARER, AND A REPRESENTATIVE OF THE BERKS COUNTY CONSERVATION DISTRICT TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776 FOR BURIED UTILITIES LOCATION.

BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE OPERATOR MUST ASSURE THAT EACH SPILL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE BERKS COUNTY CONSERVATION DISTRICT, AND WHICH IS BEING IMPLEMENTED AND MAINTAINED ACCORDING TO CHAPTER 102 REGULATIONS. THE OPERATOR SHALL ALSO NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT IN WRITING OF ALL RECEIVING SPILL OR BORROW AREAS WHEN THEY HAVE BEEN IDENTIFIED.

2. INFILTRATION BASIN SHALL BE CONSTRUCTED AS FOLLOWS:

- INSTALL SILT FENCE DOWNSLOPE OF THE TOPSOIL STOCKPILES AND TEMPORARILY SEED AND MULCH THE STOCKPILES AFTER STRIPPING OPERATIONS ARE COMPLETED.
- EXCAVATE INFILTRATION BASIN AREA AFTER PERMANENT STABILIZATION HAS BEEN ACHIEVED ON ALL CONTRIBUTING DRAINAGE AREAS. PLACE COMPACTED EMBANKMENT TILL AND LINE INSIDE/OUTSIDE OF INFILTRATION BASIN WITH EROSION CONTROL LINING. THIS IS A CRITICAL STAGE OF POST CONSTRUCTION DURING WHICH A REGISTERED GEOTECHNICAL ENGINEER MUST BE ON SITE TO OBSERVE CONSTRUCTION FOR CONFORMANCE WITH DESIGN DETAILS. CRITICAL STAGE INSPECTION DOES NOT INCLUDE VERIFICATION OF ENVIRONMENTAL STUDIES, TESTING OR DELINEATIONS.
- SPREAD EXCESS TOPSOIL AND PERMANENTLY SEED AND MULCH THE INSIDE/OUTSIDE SLOPES.

ACT 121 NOTIFICATION

THE UNDERGROUND UTILITY LINE PROTECTION LAW (ACT 121 AMENDS ACT 287 OF 1974)

SITE SERIAL NO. 20152802884/20152812965

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY'S RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT 121 OF 2008, AS AMENDED BY ACT 181 OF 2006, ACT 188 OF 2004, ACT 187 OF 1994, ACT 172 OF 1998 AND ACT 257 OF 1974, CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-242-1776 NO LESS THAN 48 HOURS, AND NO MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.

PROJECT MANAGER: JDH

DRAWING FILE NAME: ZPCSM5P

PLAN ORIGIN DATE: 07-08-16

PLAN LAST REVISED: 03-10-20

SCALE: 1" = 50'

PROJECT NUMBER: 1866

SHEET NUMBER: 26 OF 30

PLAN REVISIONS

DATE	REVISION
9/14/15	A. REVISION PER CLIENT REQUEST: REVISION LETTER DATED 8/16/15
12/23/16	B. REVISION PER TWP. ENG. AND BCOD REVIEW LETTERS BOTH DATED 12/23/16
03/07/17	C. REVISION PER BCOD REVIEW LETTER DATED 02/17/17
07/17/17	D. REVISION PER TWP. ENGINEERING COMMENTS AND LITING REASON 07/17/17
12/06/17	E. REVISION PER BCOD REVIEW LETTER DATED 12/07/17
10/26/18	F. REVISION PER BCOD REVIEW LETTER DATED 10/27/18
03/10/20	G. REVISION PER TOWNSHIP REVIEW LETTER DATED 02/01/20

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP ISSUED BY THE BERKS COUNTY CONSERVATION DISTRICT. ANY PLAN FROM PLANS NOT CONTAINING THIS STAMP.

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WALNUT ACRES

PREPARED FOR

STEVEN J. & MARLENE A. SKOLODA

SITE SITUATE IN
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

LEGEND

AREA OF MINIMIZED DISTURBANCE - LAWN
TOTAL AREA = 2.02721 AC.

AREA OF MINIMIZED DISTURBANCE - MEADOW
TOTAL AREA = 15.6123 AC.

AREA OF ROOF DISCONNECT
TOTAL AREA = 1.0459 AC.

AREA OF IMPERVIOUS

AREA OF BASIN SLOPES
EROSION CONTROL MATTING (NAG S75 OR EQUIVALENT) TO BE INSTALLED

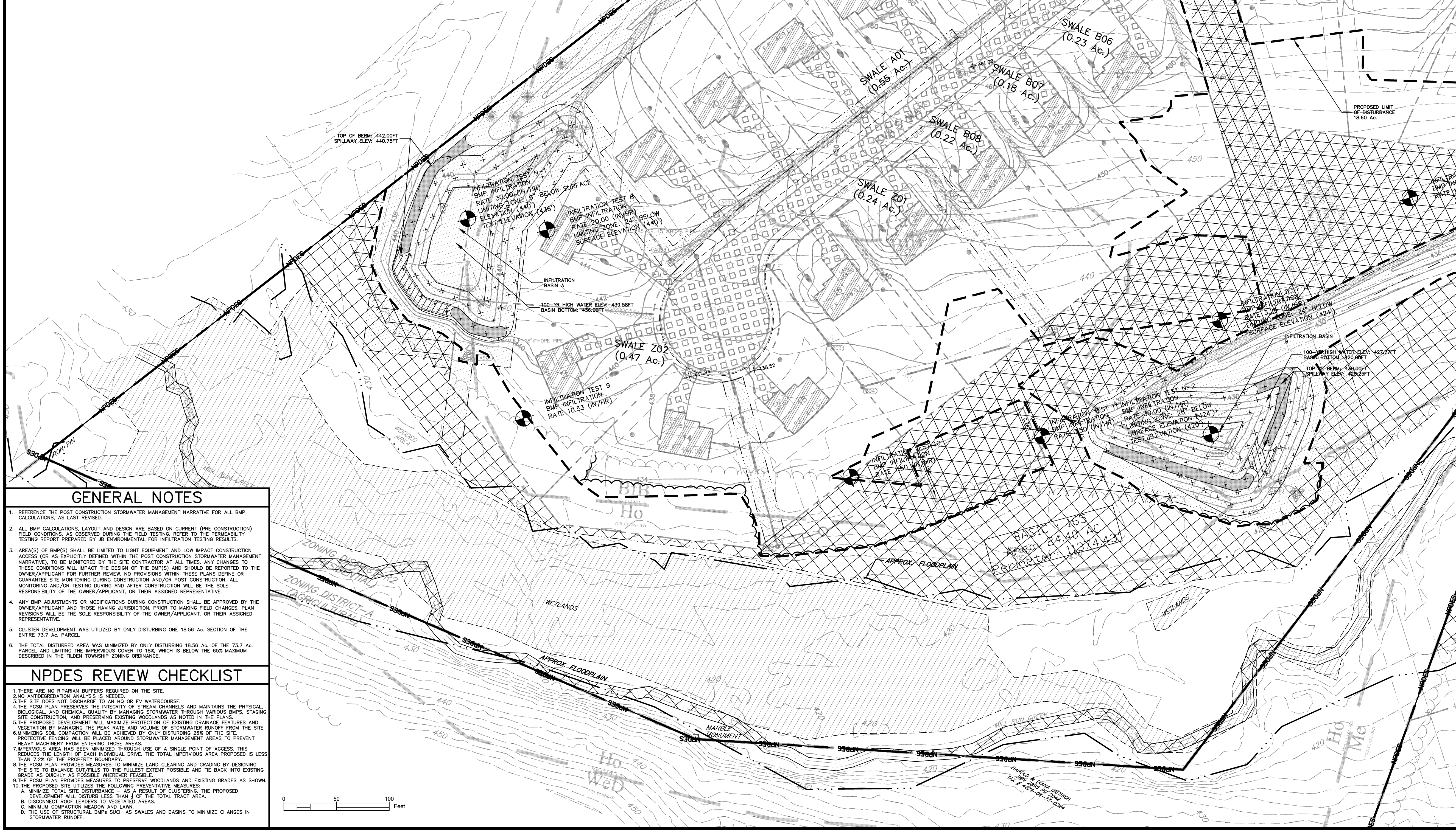
INfiltration TEST #
BMP INFILTRATION
RATE # (N/HR)

LIMIT OF DISTURBANCE

NPDES - NPDES LINE

EXISTING WETLANDS

PROPOSED EASEMENT

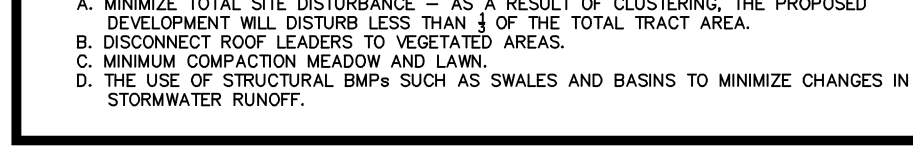


GENERAL NOTES

- REFERENCE THE POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE FOR ALL BMP CALCULATIONS, AS LAST REVISED.
- ALL BMP CALCULATIONS, LAYOUT AND DESIGN ARE BASED ON CURRENT (PRE CONSTRUCTION) FIELD CONDITIONS, AS OBSERVED DURING THE FIELD TESTING. REFER TO THE PERMEABILITY TESTING REPORT PREPARED BY JB ENVIRONMENTAL FOR INFILTRATION TESTING RESULTS.
- AREA(S) OF BMP(S) SHALL BE LIMITED TO LIGHT EQUIPMENT AND LOW IMPACT CONSTRUCTION ACCESS (OR AS EXPLICITLY DEFINED WITHIN THE POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE), TO BE MONITORED BY THE SITE CONTRACTOR AT ALL TIMES. ANY CHANGES TO THESE CONDITIONS WILL IMPACT THE DESIGN OF THE BMP(S) AND SHOULD BE REPORTED TO THE OWNER/APPLICANT FOR FURTHER REVIEW. NO PROVISIONS WITHIN THESE PLANS DEFINE OR GUARANTEE SITE MONITORING DURING CONSTRUCTION AND/OR POST CONSTRUCTION. ALL MONITORING AND/OR TESTING DURING AND AFTER CONSTRUCTION WILL BE THE SOLE RESPONSIBILITY OF THE OWNER/APPLICANT, OR THEIR ASSIGNED REPRESENTATIVE.
- ANY BMP ADJUSTMENTS OR MODIFICATIONS DURING CONSTRUCTION SHALL BE APPROVED BY THE OWNER/APPLICANT AND THOSE HAVING JURISDICTION. PRIOR TO MAKING FIELD CHANGES, PLAN REVISIONS WILL BE THE SOLE RESPONSIBILITY OF THE OWNER/APPLICANT, OR THEIR ASSIGNED REPRESENTATIVE.
- CLUSTER DEVELOPMENT WAS UTILIZED BY ONLY DISTURBING ONE 18.56 AC. SECTION OF THE ENTIRE 73.7 AC. PARCEL.
- THE TOTAL DISTURBED AREA WAS MINIMIZED BY ONLY DISTURBING 18.56 AC. OF THE 73.7 AC. PARCEL AND LIMITING THE IMPERVIOUS COVER TO 18%, WHICH IS BELOW THE 60% MAXIMUM DESCRIBED IN THE TILDEN TOWNSHIP ZONING ORDINANCE.

NPDES REVIEW CHECKLIST

- THERE ARE NO RIPARIAN BUFFERS REQUIRED ON THE SITE.
- NO ANTI-EROSION ANALYSIS IS NEEDED.
- THE SITE DOES NOT DISCHARGE TO AN HO OR EV WATERCOURSE.
- THE PCOM PLAN PRESERVES THE INTEGRITY OF STREAM CHANNELS AND MAINTAINS THE PHYSICAL, BIOLOGICAL, AND CHEMICAL QUALITY BY MANAGING STORMWATER THROUGH VARIOUS BMP'S, STAGING SITE CONSTRUCTION, AND PRESERVING EXISTING WOODLANDS AS NOTED IN THE PLANS.
- THE PROPOSED DEVELOPMENT WILL MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION BY MANAGING THE PEAK RATE AND VOLUME OF STORMWATER RUNOFF FROM THE SITE.
- MINIMIZING SOIL COMPACTION WILL BE ACHIEVED BY ONLY DISTURBING 20% OF THE SITE. PROTECTIVE FENCING WILL BE PLACED AROUND STORMWATER MANAGEMENT AREAS TO PREVENT HEAVY MACHINERY FROM ENTERING THESE AREAS.
- IMPERVIOUS AREA HAS BEEN MINIMIZED THROUGH USE OF A SINGLE POINT OF ACCESS. THIS REDUCES THE LENGTH OF EACH INDIVIDUAL DRIVE. THE TOTAL IMPERVIOUS AREA PROPOSED IS LESS THAN 7.2% OF THE PROPERTY BOUNDARY.
- THE PCOM PLAN PROVIDES MEASURES TO MINIMIZE LAND CLEARING AND GRADING BY DESIGNING THE SITE TO BALANCE CUT/FILL TO THE FULLEST EXTENT POSSIBLE AND TO BACK INTO EXISTING GRADE AS MUCH AS POSSIBLE WHEREVER FEASIBLE.
- THE PCOM PLAN PROVIDES MEASURES TO PRESERVE WOODLANDS AND EXISTING GRADES AS SHOWN.
- THE PROPOSED SITE UTILIZES THE FOLLOWING PRESERVATIVE MEASURES:
 - MINIMIZE TOTAL SITE DISTURBANCE - AS A RESULT OF CLUSTERING, THE PROPOSED DEVELOPMENT WILL DISTURB LESS THAN 1% OF THE TOTAL TRACT AREA.
 - DISCONNECT ROOF LEADERS TO VEGETATED AREAS.
 - MINIMIZE SOIL COMPACTION MEADOW AND LAWN.
 - THE USE OF STRUCTURAL BMP SUCH AS SWALES AND BASINS TO MINIMIZE CHANGES IN STORMWATER RUNOFF.



BASIN SEEDING NOTES

SEED SHALL BE INSTALLED AS SOON AS PERMANENT BASIN CONSTRUCTION IS COMPLETE.

SITE PREPARATION:
ELIMINATE ANY WEED GROWTH PRIOR TO SEED INSTALLATION USING AN APPROPRIATE HERBICIDE TO CONTROL UNDESIRABLE VEGETATION. SUPPLEMENT TOPSOIL WITH LEAF COMPOST MIXED THOROUGHLY INTO THE TOP 8 INCHES OF SOIL. FOR OPTIMAL SEED ESTABLISHMENT, SOIL PH SHALL BE BETWEEN 5.5 AND 6.5.

SEEDING APPLICATION:
CAREFULLY PROPORTIONING SEED FOR THE ENTIRE AREA. BROADCAST SEED IN TWO SEPARATE APPLICATIONS BY APPLYING SEED AT HALF THE SUGGESTED RATE FOR EACH APPLICATION TO ENSURE EVEN AND ADEQUATE COVERAGE. AFTER THE FULL RATE OF SEEDING HAS BEEN ACHIEVED, FOLLOW BY ROLLING OR TRACKING SEED INTO THE TOP 4 INCH OF SOIL TO ACHIEVE GOOD SEED TO SOIL CONTACT. DO NOT ROLL OR TRACK THE SEED IF SOIL IS WET. COVER WITH A LIGHT LAYER OF SALT HAY.

MAINTENANCE:
DURING THE FIRST YEAR, WHENEVER THE VEGETATION REACHES 12 TO 18 INCHES TALL, IT SHOULD BE MOWED TO NO LESS THAN 9 INCHES BY ROTARY MOWER OR WEED EATER/WEED TRIMMER TO PREVENT WEEDS FROM GOING TO SEED. DO NOT MOW WITH A LAWN MOWER THEREAFTER. THE SEEDED AREA SHOULD BE MOWN TO THE GROUND ONCE ANNUALLY IN EARLY SPRING.

BASIN BOTTOM SEED MIX

BOTANICAL NAME	COMMON NAME	PERCENT (%) OF MIX BY WEIGHT
ANNUAL RYE	ANNUAL RYEGRASS	30
ANDROPOGON GERARDI	BIG BLUESTEM	20
SCIZACIOTRUM SCORPIURIUM	LITTLE BLUESTEM	12
SORGHASTRUM NUTANS	INDIAN GRASS	12
POA PALUSTRIS	FOWL BLUEGRASS	8
PANICUM VIRGATUM	SWITCHGRASS	8
TRIPLODIUM DACTYLOIDES	EASTERN COTTLEGRASS	8
EUPATORIUM PURPUREUM	JOE-PYE WEED	8
VERBENA HASTATA	BLUE VERVAIN	8

BASIN SIDE SLOPES SEED MIX

BOTANICAL NAME	COMMON NAME	PERCENT (%) OF MIX BY WEIGHT
AGROSTIS PERENNANS	ALFALFA BENTGRASS	30
ELMIUS VIRGINICUS	VIRGINIA WILD RICE	25
PANICUM CLAUDEANUM	TOGA DEER TONGUE	25
CAREX VALLINOSA	POWDER MILL	20
JUNCUS TENNIS, PA	ECOTYPE RUSH, PA ECOTYPE	5

MAINTENANCE NOTES

POST CONSTRUCTION STORMWATER MANAGEMENT:

A. BEST MANAGEMENT PRACTICES (BMP)

THE BMP'S SHALL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER IN PERPETUITY. THE MAINTENANCE WILL BE CONDUCTED ON A SHORT TERM AND LONG TERM SCHEDULE BY THE OWNER. A HOMEOWNER'S ASSOCIATION (HOA) WILL BE ESTABLISHED FOR BMP MAINTENANCE.

STORMWATER QUALITY HAS BEEN ADDRESSED WITH SEVERAL DEVICES. NATURALIZED SWALES, CONTAINING HIGH GRASSES, ARE UTILIZED TO CONVEY RUN-OFF TO THE STORMWATER MANAGEMENT AREA TO HELP IMPROVE WATER QUALITY PRIOR TO REACHING THE BASIN. A NATURALIZED BASIN HAS BEEN UTILIZED TO HELP TREAT THE COLLECTED RUN-OFF PRIOR TO DISCHARGING TO THE EXISTING WETLANDS.

B. MAINTENANCE

SHORT TERM MAINTENANCE:

- A. INSPECT BMP'S AFTER MAJOR STORM EVENTS FOR DAMAGE AND/OR EROSION ACTIVITY - REPAIR EROSION WITH THE APPROPRIATE MEASURES IMMEDIATELY.
- B. INSPECT BASINS AND SWALES ON A MONTHLY BASIS DURING THE GROWING SEASON FOR THE PRESENCE OF INVASIVE PLANTS THAT ARE ABLE TO ESTABLISH IN THE CULTURAL CONDITIONS. WHERE NECESSARY, REPLACE PLANTS WITH A DIFFERENT SPECIES SUITABLE TO ANY MICROCLIMATIC EFFECTS THAT MIGHT DEVELOP.
- C. DURING THE FIRST YEAR, WHENEVER THE SEEDING AREA OF THE BASIN OR SWALES REACHES 18 INCHES TALL, IT SHOULD BE MOWED TO NO LESS THAN 9 INCHES BY ROTARY MOWER OR WEED TRIMMER TO PREVENT WEEDS FROM GOING TO SEED.

LONG TERM MAINTENANCE:

- A. EVERY YEAR FOR THE BASIN - MOW HERBACEOUS PLANTS IN EARLY SPRING.
- B. EVERY YEAR FOR THE BASIN - REMOVE ANY INVASIVE PLANTS THAT HAVE ESTABLISHED.
- C. EVERY FIVE YEARS FOR THE BASIN - REMOVE ANY PERMANENT BUILD-UP THAT HAS OCCURRED IN THE BASIN BOTTOM.
- D. EVERY YEAR FOR THE NATURALIZED SWALE AREAS - PERFORM ROUTINE ANNUAL MAINTENANCE: CUT BACK DEAD HERBACEOUS FOLIAGE IN LATE FALL OR EARLY SPRING (DEPENDENT UPON PLANT HEALTH) TO PROVIDE BETTER INTEREST AND ITS BENEFIT TO WILDLIFE. REMOVE UNDESIRABLE (WEEDS) AND INVASIVE PLANTS THAT SELF SEED INTO THE AREA AND REPLACE DISPLACED OR DECOMPOSED MULCH.
- E. IF THE BASIN FALLS TO 0.5 FEET WITHIN 72 HOURS AFTER A RAIN EVENT IT MUST BE PUMPED OUT AND CHECKED FOR COMPACTION/SATIATION.
- F. IN THE EVENT OF FAILURE, THE DESIGN ENGINEER MUST CONTACT IMMEDIATELY TO DETERMINE THE BEST REMEDIATION FOR THE FAILED SYSTEM. FAILURE CONSTITUTES FAILURE TO Dewater.

MINIMIZE SOIL COMPACTION-LAWN AND MEADOW
AVOID MOWING MORE THAN ONCE A WEEK, OR USE AERATOR TO AVOID COMPACTION FROM MAINTENANCE.

DISCONNECT ROOF LEADERS TO VEGETATED AREAS
EACH LOT OWNER SHALL MAINTAIN HEALTHY GRASS AT EACH ROOF DOWNSPOUT, AND INSPECT BI-ANNUALLY TO VERIFY.

DISCONNECT NON-ROOF IMPERVIOUS TO VEGETATED AREAS
EACH LOT OWNER SHALL MAINTAIN HEALTHY GRASS IN ANY SWALE OR YARD ADJACENT TO THEIR DRIVEWAY OR THE PUBLIC ROAD, AND INSPECT BI-ANNUALLY TO VERIFY.

CLUSTER USES
OPEN SPACE IS BEING DEED RESTRICTED AND MAINTAINED BY OWNER OF LOT#30 IN PERPETUITY.

CONSTRUCTION STAGING

PRIOR TO ANY WORK, THE CONTRACTOR/DEVELOPER SHALL NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT OF THE DATE OF THE PRE-CONSTRUCTION MEETING.

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL NOTIFY ALL CONTRACTORS INVOLVED IN THESE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS AND THE BERKS COUNTY CONSERVATION DISTRICT. A REPRESENTATIVE OF THE BERKS COUNTY CONSERVATION DISTRICT TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THESE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR BURIED UTILITIES LOCATION.

BEFORE IMPLEMENTING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENTATION 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 BERKS COUNTY CONSERVATION DISTRICT.

BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE OPERATOR MUST ASSURE THAT EACH SPILL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE BERKS COUNTY CONSERVATION DISTRICT, AND WHICH IS TO BE IMPLEMENTED AND MAINTAINED ACCORDING TO CHAPTER 102 REGULATIONS. THE OPERATOR SHALL ALSO NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT IN WRITING OF ALL RECEIVING SPILL OR BORROW AREAS WHEN THEY HAVE BEEN IDENTIFIED.

- CLEAR AREAS DESIGNATED FOR THE PROPOSED INFILTRATION BASIN. ONLY CLEAR TO THE EXTENT NECESSARY FOR INFILTRATION BASIN CONSTRUCTION. PROPOSED INFILTRATION BASIN MUST REMAIN UNDISTURBED BY HEAVY MACHINERY. ANY ASSOCIATED EXCAVATION MUST BE OUTSIDE THE DELINEATED AREA AS SHOWN ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN.
- INFILTRATION BASIN SHALL BE CONSTRUCTED AS FOLLOWS:
 - INSTALL SILT FENCE DOWN-SLOPE OF THE TOPSOIL STOCKPILES AND TEMPORARILY SEED AND MULCH THE STOCKPILES AFTER STRIPPING OPERATIONS ARE COMPLETED.
 - EXCAVATE INFILTRATION BASIN AREA AFTER PERMANENT STABILIZATION HAS BEEN ACHIEVED ON ALL CONTRIBUTING DRAINAGE AREAS. PLACE COMPACTED EXAMINATION TILL AND ONE INSIDE/OUTSIDE OF INFILTRATION BASIN WITH EROSION CONTROL LINING. THIS IS A CRITICAL STAGE OF FIRM CONSTRUCTION DURING WHICH DISTURBED OR FIRM DESIGNER MUST BE ON-SITE TO OBSERVE CONSTRUCTION FOR CONFORMANCE WITH DESIGN DETAILS. CRITICAL STAGE INSPECTION DOES NOT INCLUDE VERIFICATION OF ENVIRONMENTAL STUDIES, TESTING OR DELINEATIONS.
 - SPREAD EXCESS TOPSOIL AND PERMANENTLY SEED AND MULCH THE INSIDE/OUTSIDE SLOPES.

ACT 121 NOTIFICATION

THE UNDERGROUND UTILITY LINE PROTECTION LAW (ACT 121 AMENDS ACT 287 OF 1974)
SITE SERIAL NO. 20152802884/20152812965

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT 121 OF 2008, AS AMENDED BY ACT 181 OF 2006, ACT 198 OF 2006, ACT 197 OF 1998, ACT 127 OF 1998 AND ACT 287 OF 1974, CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-242-1776 NO LESS THAN 4, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.

PLAN REVISIONS

NO.	DATE	REVISION
1	04/14/15	REVISED PER CLIENT REQUEST REVISION LETTER DATED 04/14/15
2	05/20/15	REVISED PER TRM, ENG AND BCD REVIEW LETTERS BOTH DATED 05/15/15
3	07/07/17	REVISED PER TRM, ENG AND BCD REVIEW LETTER DATED 07/07/17
4	07/17/17	REVISED PER TRM, ENG AND BCD REVIEW LETTER DATED 07/17/17
5	07/17/17	REVISED PER TRM, ENG AND BCD REVIEW LETTER DATED 07/17/17
6	07/17/17	REVISED PER TRM, ENG AND BCD REVIEW LETTER DATED 07/17/17
7	07/17/17	REVISED PER TRM, ENG AND BCD REVIEW LETTER DATED 07/17/17
8	07/17/17	REVISED PER TRM, ENG AND BCD REVIEW LETTER DATED 07/17/17
9	07/17/17	REVISED PER TRM, ENG AND BCD REVIEW LETTER DATED 07/17/17
10	07/17/17	REVISED PER TRM, ENG AND BCD REVIEW LETTER DATED 07/17/17

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP. NO PART OF THESE PLANS IS TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. FROM PLANS NOT CONTAINING THIS STAMP.

The Crossroads GROUP, LLC

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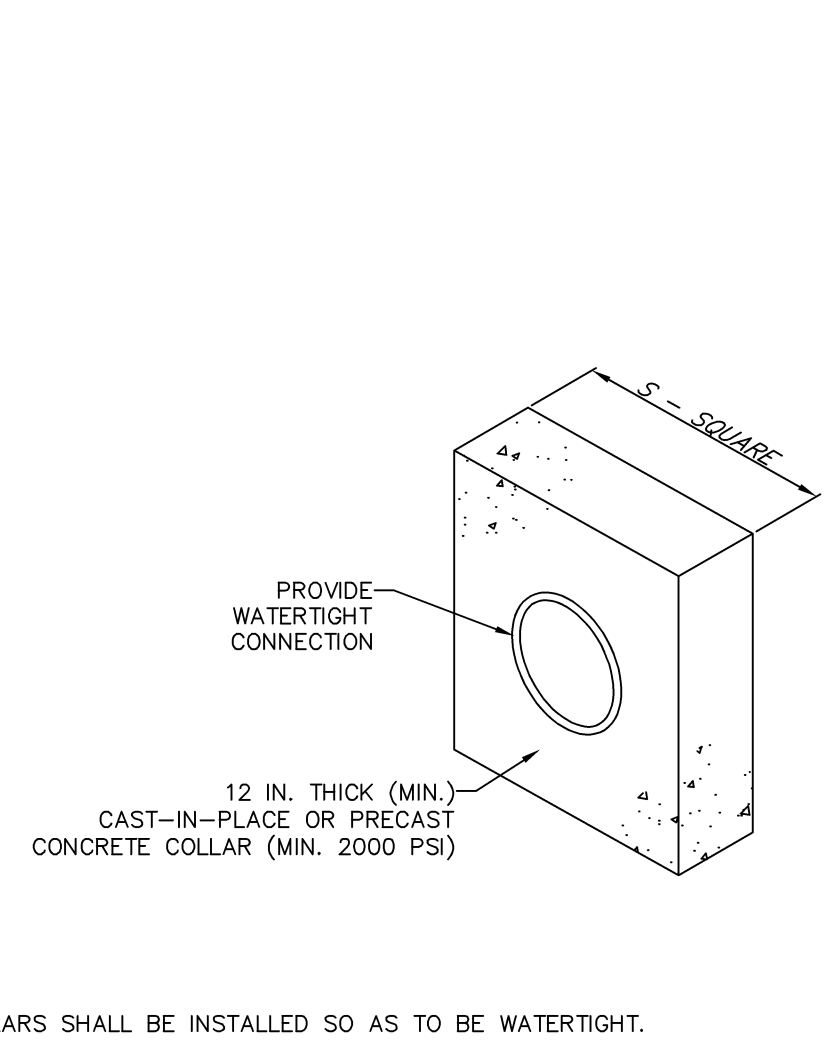
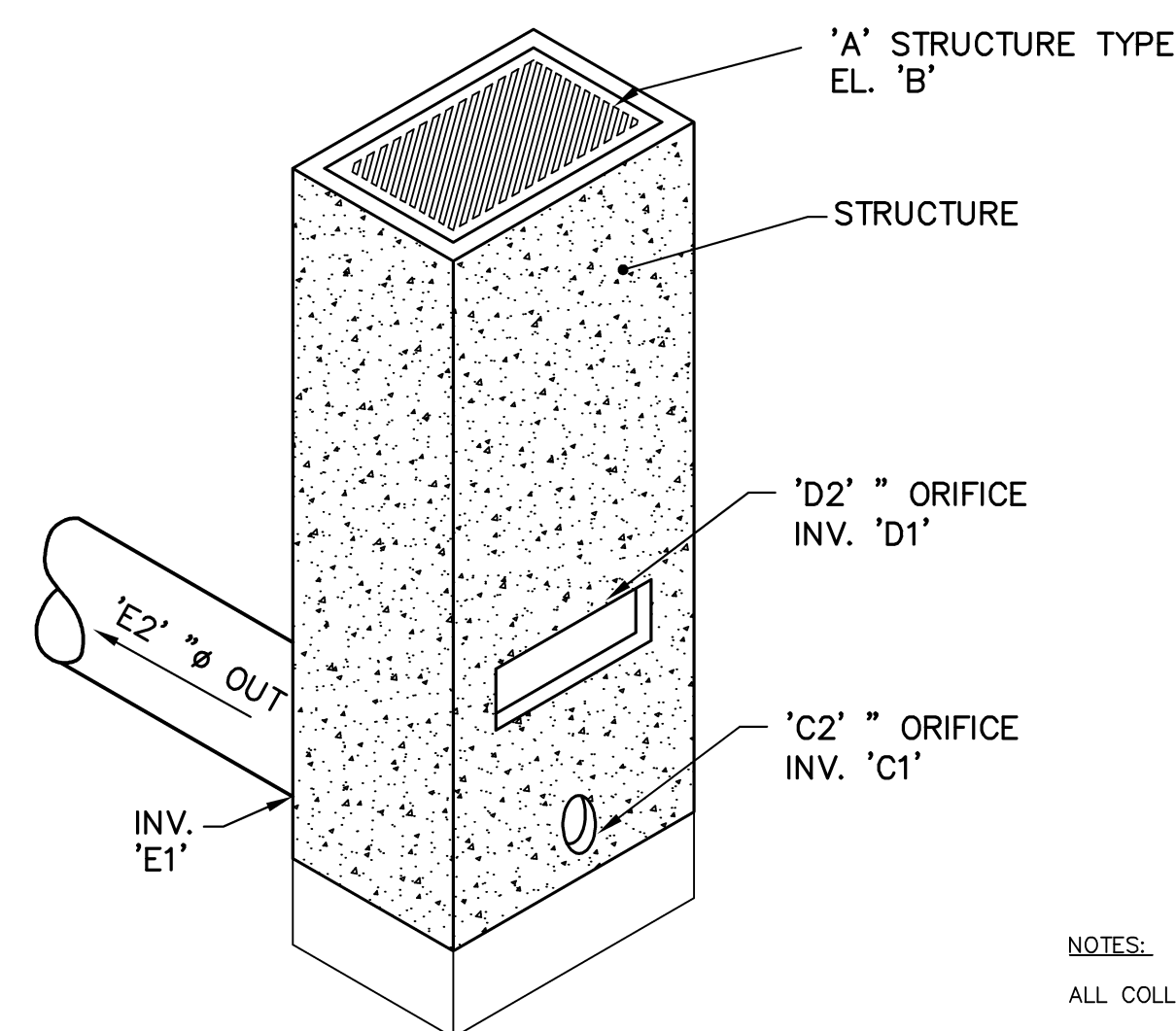
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PREPARED AS PART OF THE
WALNUT ACRES

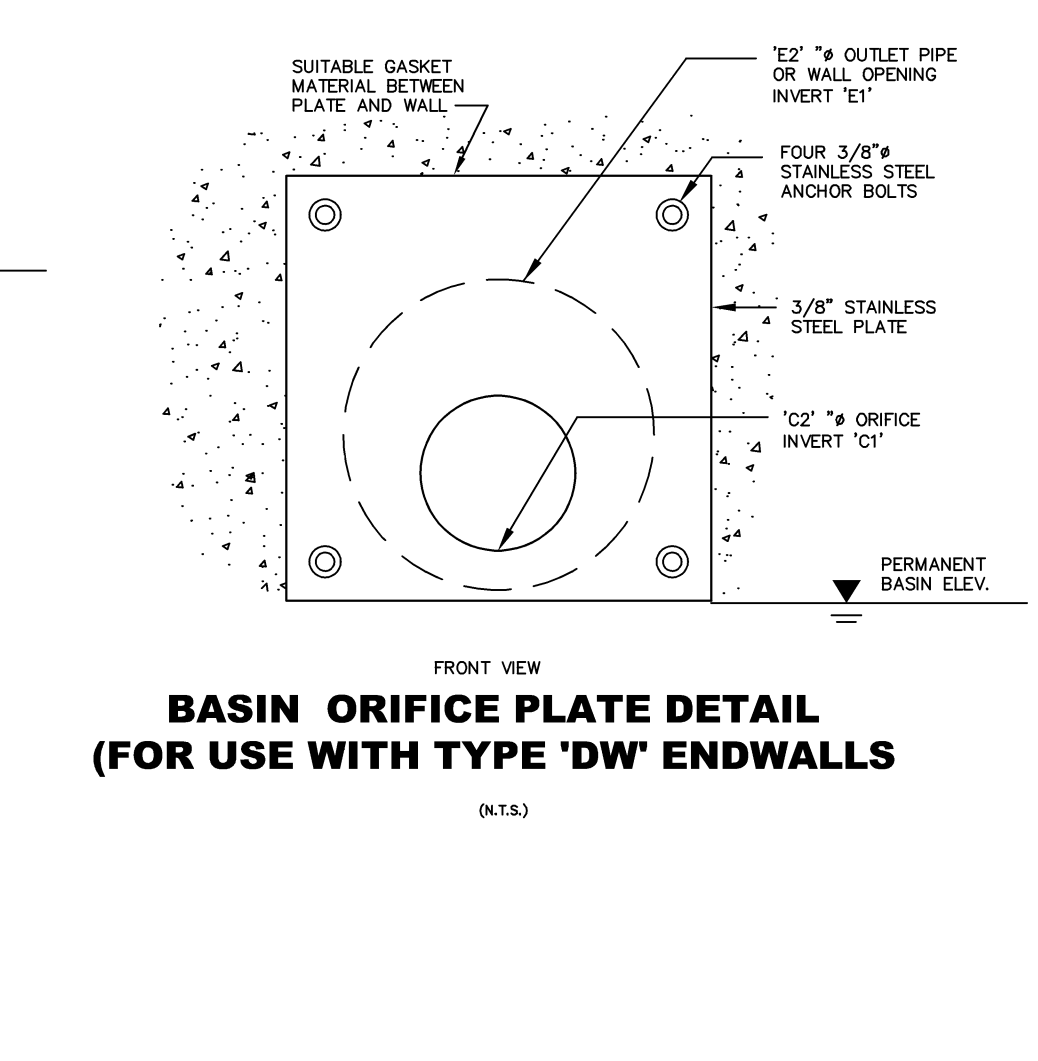
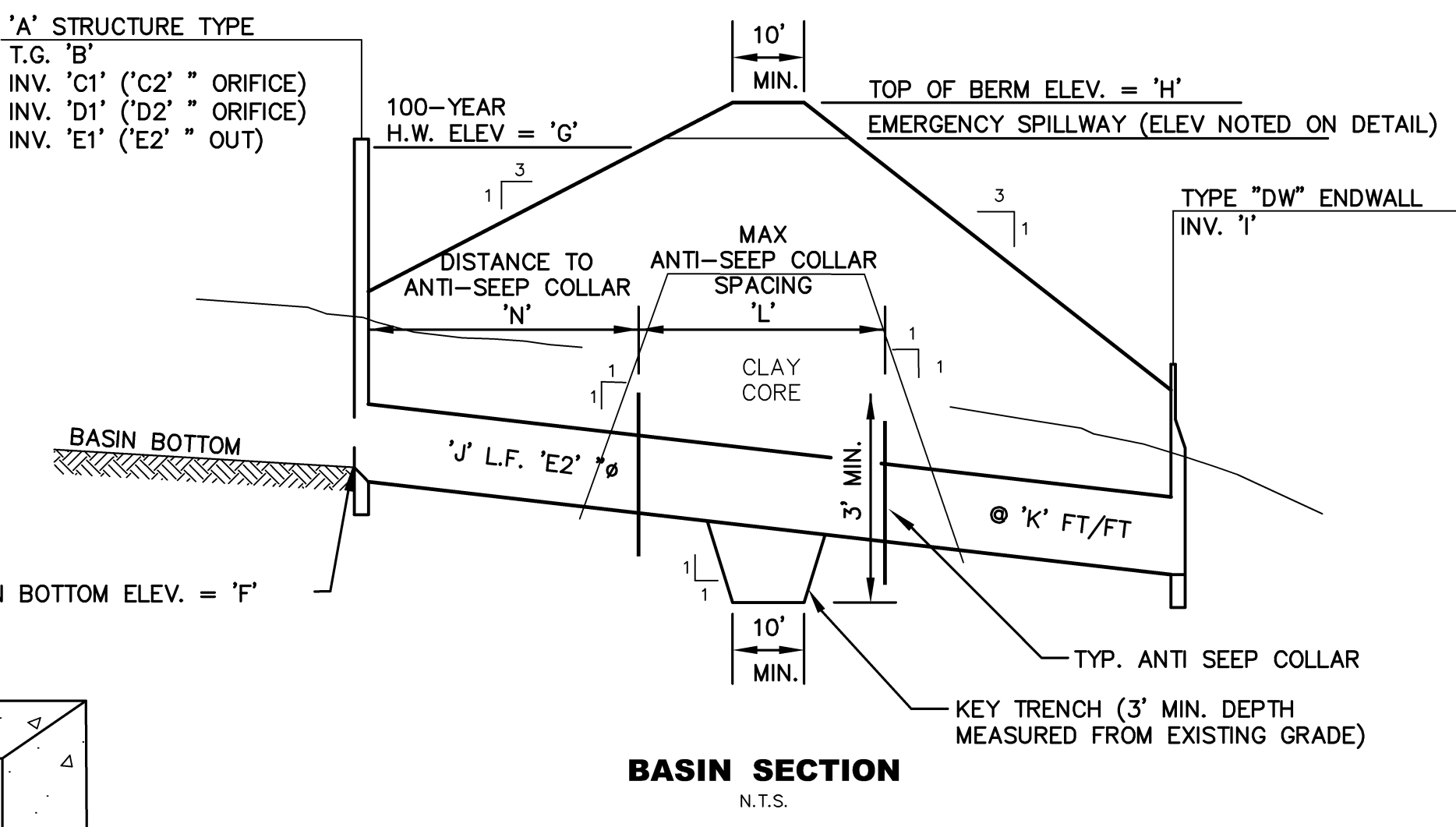
PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA

SITE #WAUAC
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

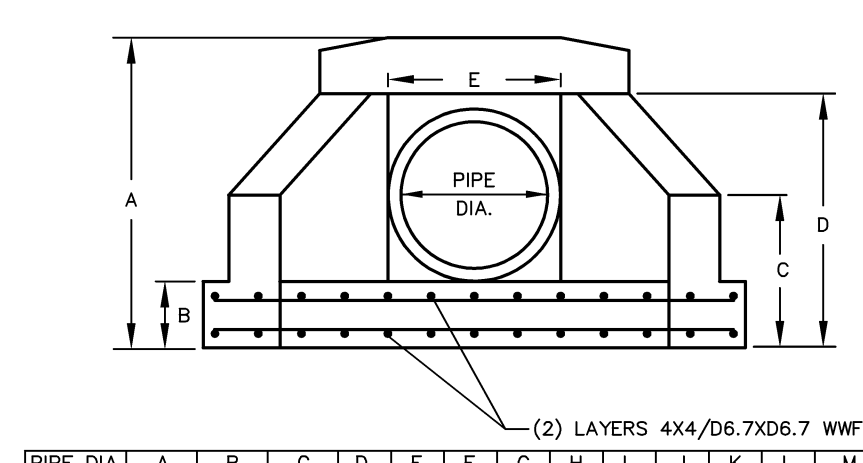
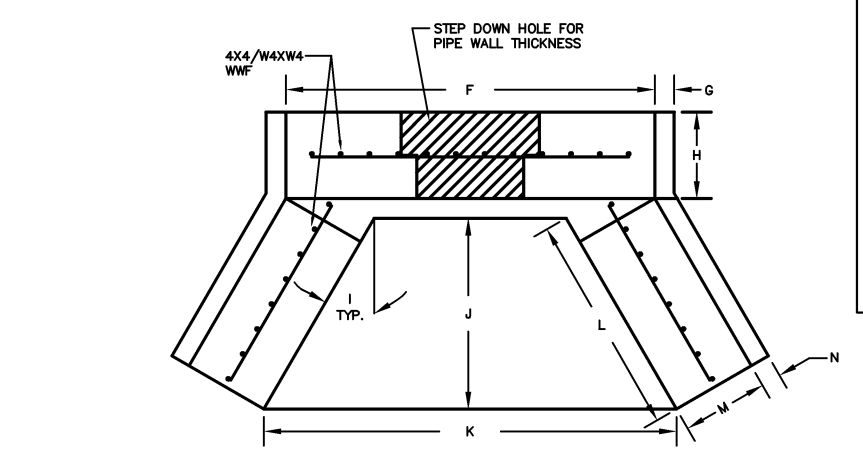
PROJECT MANAGER: JDH
DRAWING FILE NAME: ZPCSMF
PLAN ORIGINATION DATE: 07-08-16
PLAN LAST REVISED: 03-10-20
PLAN SCALE: 1" = 50'
PROJECT NUMBER: 1866
SHEET NUMBER: 27 OF 30



NOTES:
 1. A KEY TRENCH SHALL BE PROVIDED UNDER ALL EMBANKMENTS THAT REQUIRE FILL MATERIAL.
 2. CONSTRUCTION OF THE EMBANKMENTS MUST BE IN 8" LIFTS AND COMPACTED TO A DENSITY NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557.
 3. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE SUITABILITY OF IMPERMEABILITY OF SOIL FOR BERM/BASIN CONSTRUCTION, AND MUST NOTIFY THE DESIGN ENGINEER IF HE DEEMS THE SOIL UNSUITABLE. CONTRACTOR MAY NEED TO IMPORT SOIL DUE TO EXISTING SOIL CONDITIONS. IN THE CASE OF IMPORTED SOILS, CONTRACTOR MUST OBTAIN SOIL FROM AN NPDES PERMITTED SITE.
 4. OVER EXCAVATE BASIN BOTTOM 2' IF LIMITING ZONE NOT MET. BACKFILL WITH AMENDED SOIL MIX AS FOLLOWS:
 50-60% CONSTRUCTION SAND
 20-30% TOPSOIL W/ 5% CLAY
 20-30% ORGANIC MATTER
 5. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTATION OF EARTHEN FILL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 8 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS. UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.



DETENTION BASIN OUTLET DETAILS (FOR USE WITH TYPE 'M' STRUCTURE OUTFALL)

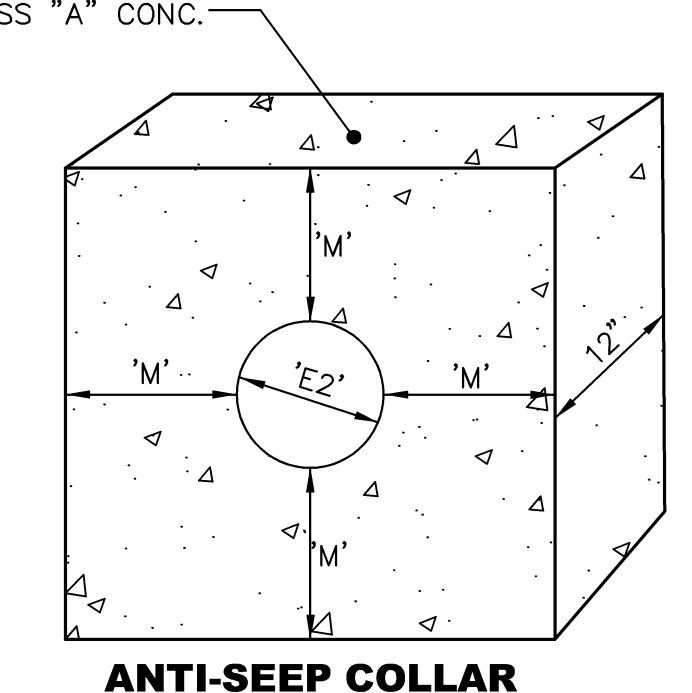


(2) LAYERS 4X4/D6.7X06.7 WWF

PIPE DIA.	A	B	C	D	E	F	G	H	J	K	L	M	N
12"-18"	46"	12"	29"	37"	54"	3"	12"	30"	22"	52"	25"	12"	3"
21"-27"	55"	12"	26"	46"	37"	66"	6"	12"	30"	26"	67"	30"	12"
30"-36"	63"	12"	24"	37"	53"	66"	6"	12"	30"	17"	67"	45"	12"
48"	83"	12"	36"	74"	56"	70"	6"	12"	30"	60"	156"	72"	6"

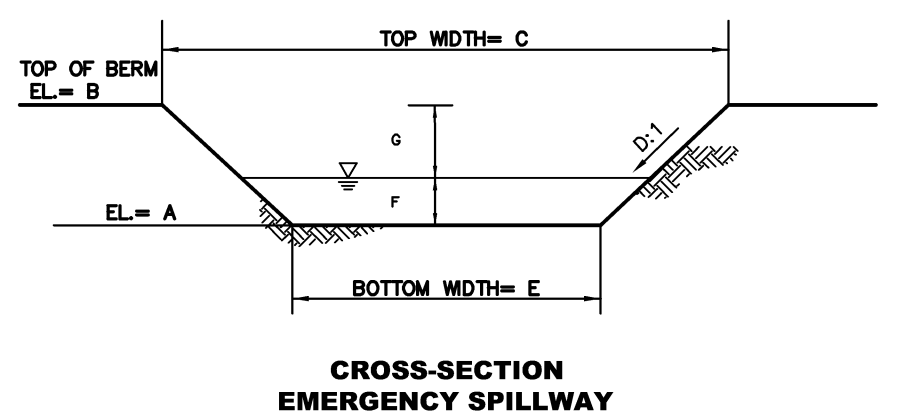
STANDARD CONSTRUCTION DETAIL #7-16 CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS

NOT TO SCALE



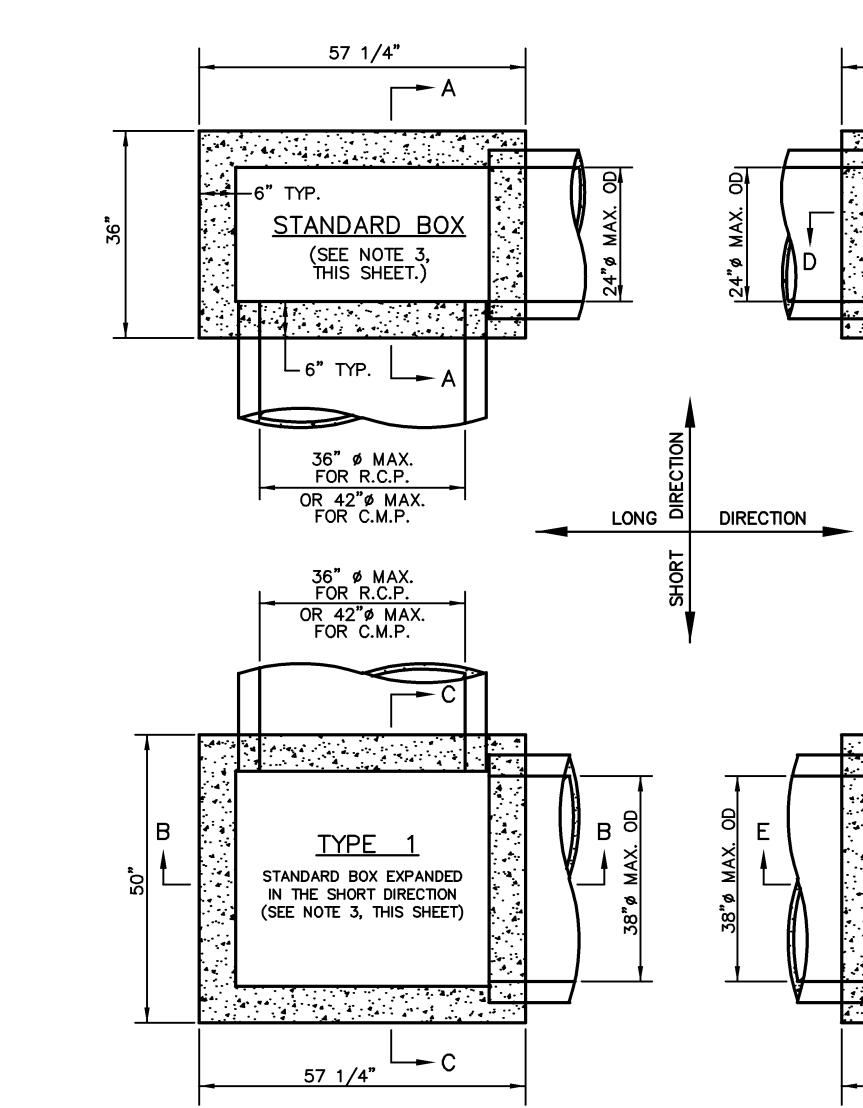
BASIN	STRUCTURE TYPE	B (E.L.)	C1 (Inv.)	C2 (Ø')	D1 (Inv.)	D2 (Ø')	E1 (Inv.)	E2 (Ø')	F (E.L.)	G (E.L.)	H (E.L.)	I (Inv.)	J (LF)	K (Ft/Ft)	L (Ft.)	M ANTI-SEEP COLLAR PROJECTION (Ft.)	N (Ft.)
A	DW ENDWALL	N/A	437.50	8"	N/A	N/A	437.00	18"	436.00	439.58	442.00	433.10	40	0.0725	9.85	1.00	9.85
B	DW ENDWALL	N/A	421.50	9"	N/A	N/A	421.00	18"	420.00	427.77	430.00	419.73	65	0.0195	23.48	2.00	25.30
C1	TYPE "M" INLET	436.75	428.00	12"	433.50	30"X36"	428.00	36"	428.00	436.69	438.50	427.47	106	0.0050	29.09	2.00	24.45
C2	Storm Sewer C1-C2	N/A	N/A	N/A	N/A	N/A	442.00	48"	442.00	444.95	N/A	420.00	134*	0.1583*	15.86	2.00	21.10

*BASIN "C2" IS A SUMPED DEPRESSION ROUTED AS A BASIN TO ENSURE PONDING DOES NOT INCREASE BEYOND EXISTING CONDITIONS. PIPE LENGTH & SLOPE ARE DERIVED ACROSS THE SEWER SECTIONS C100-C101 AND C101-C102. REFER TO PROFILE VIEW FOR INDIVIDUAL PIPE INVERT AND SLOPE INFORMATION

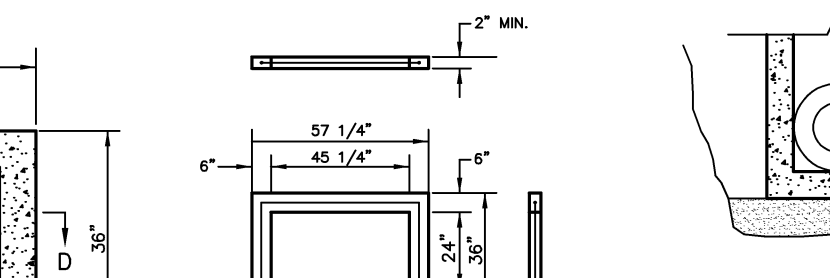


SPILLWAY NAME	A	B	C	D	E	F	G	EROSION CONTROL BLANKET
A	440.75	442	83.5	3	76	0.25	1.00	NAG S75
B	428.25	430	30.50	3	20	0.75	1.00	NAG S75
C1	436.75	438.50	48.50	3	38	0.75	1.00	NAG S75

TYPE "DW" ENDWALL



DETAIL A PRECAST CONCRETE INLET BOX BASE PREPARATION



NOTES

1. CONSTRUCT INLET BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 714
 2. PERMIT ONLY PRECAST INLET BOXES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15. USE CLASS AA CEMENT CONC. FOR PRECAST BOXES. FOR DEVIATIONS OR MODIFICATIONS OF THE STANDARDS, SUBMIT SHOP DRAWINGS FOR APPROVAL.
 3. PROVIDE STANDARD INLET BOXES AND COVER ADJUSTMENT SLABS WITH A 24"X48" OPENING TO ACCOMMODATE STANDARD TOP COMPONENTS.
 4. FOR INLETS THAT DEVIATE FROM THE STANDARD SUBMIT SPECIAL DETAILS AND DESIGN FOR THE INLET WALLS AND BASE TO THE BUREAU OF CONSTRUCTION FOR REVIEW AND APPROVAL. CONSTRUCT INLETS THAT EXCEED 100 (5') IN HEIGHT WITH STEPS SIMILAR TO MANHOLES (SEE RC-39M). FOR INLETS OTHER THAN AS SHOWN ON THE STANDARDS, PROVIDE REINFORCEMENT BASED ON PHIL 93 (HS 25) LOADING AND IN ACCORDANCE WITH PUBLICATION 408.
 5. INLET PIPE OR PIPES, AS INDICATED, WITH THE INLET BOTTOM SHAPED TO CHANNEL THE FLOW TOWARD THE OUTLET PIPE. WHEN PROJECT CONDITIONS REQUIRE PIPE BLOCKOUTS TO BE FORMED WITHIN 100 (4') FROM THE TOP OF THE INLET BOX, PROVIDE AN ADDITIONAL #10 (48) REINFORCEMENT BAR LOCATED 40 (1-5/8") FROM THE TOP OF THE INLET BOX. FULL WIDTH ALONG THE INLET FACE. REMOVE ANY VISIBLE PORTION OF THE BAR, IF REQUIRED DURING INSTALLATION AND PRIOR TO JOINING THE PIPE TO THE INLET. IF REINFORCED CONCRETE PIPE IS USED, THE PIPE BLOCKOUT MAY BE FORMED "FLUSH" WITH THE INLET BASE. LIMIT PIPE BLOCKOUT OF WALL TO 25mm (1").
 6. PLACE SUBBASE MATERIAL MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 350.2, IN 4 INCH LAYERS, COMPACTED TO A DENSITY SATISFACTORY TO THE ENGINEER AND INCIDENTAL TO THE INLET PAV. ITEM.
 7. FOR PIPE DIAMETERS LARGER THAN 36" IN THIS WALL FOR A TYPE 1, USE A MODIFIED TYPE 1 INLET BOX ON RC-34, SHEET 8 OF 9.
 8. PROVIDE CONSTRUCTION JOINTS AS REQUIRED FOR INLET BOXES THAT ARE NOT MONOLITHIC. SEE DETAILS A & B SHEET 7.
 9. TAPER MAY BE PROVIDED ON VERTICAL FACES OF PRECAST INLET BOX BASE UNITS TO FACILITATE FORM STRIPPING. TAPERS WILL RESULT IN INTERNAL BOTTOM DIMENSIONS THAT VARY TO A MAXIMUM OF 25mm (1").
 10. PROVIDE SUITABLE LIFTING DEVICES FOR HANDLING AND INSTALLATION. GALVANIZED METAL DEVICES AS SPECIFIED IN PUB. 408 SECTION 110. TAPERS MAY BE PROVIDED ON INSIDE VERTICAL FACES OF PRECAST INLET TOPS TO FACILITATE FORM STRIPPING. TAPERS WILL RESULT IN INTERNAL BOTTOM DIMENSIONS THAT VARY TO A MAXIMUM OF 25 mm (1").

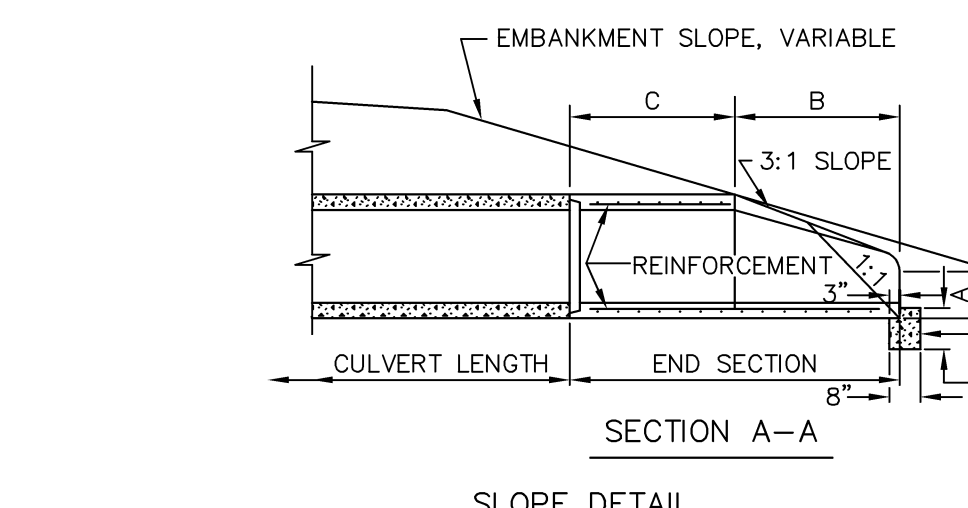
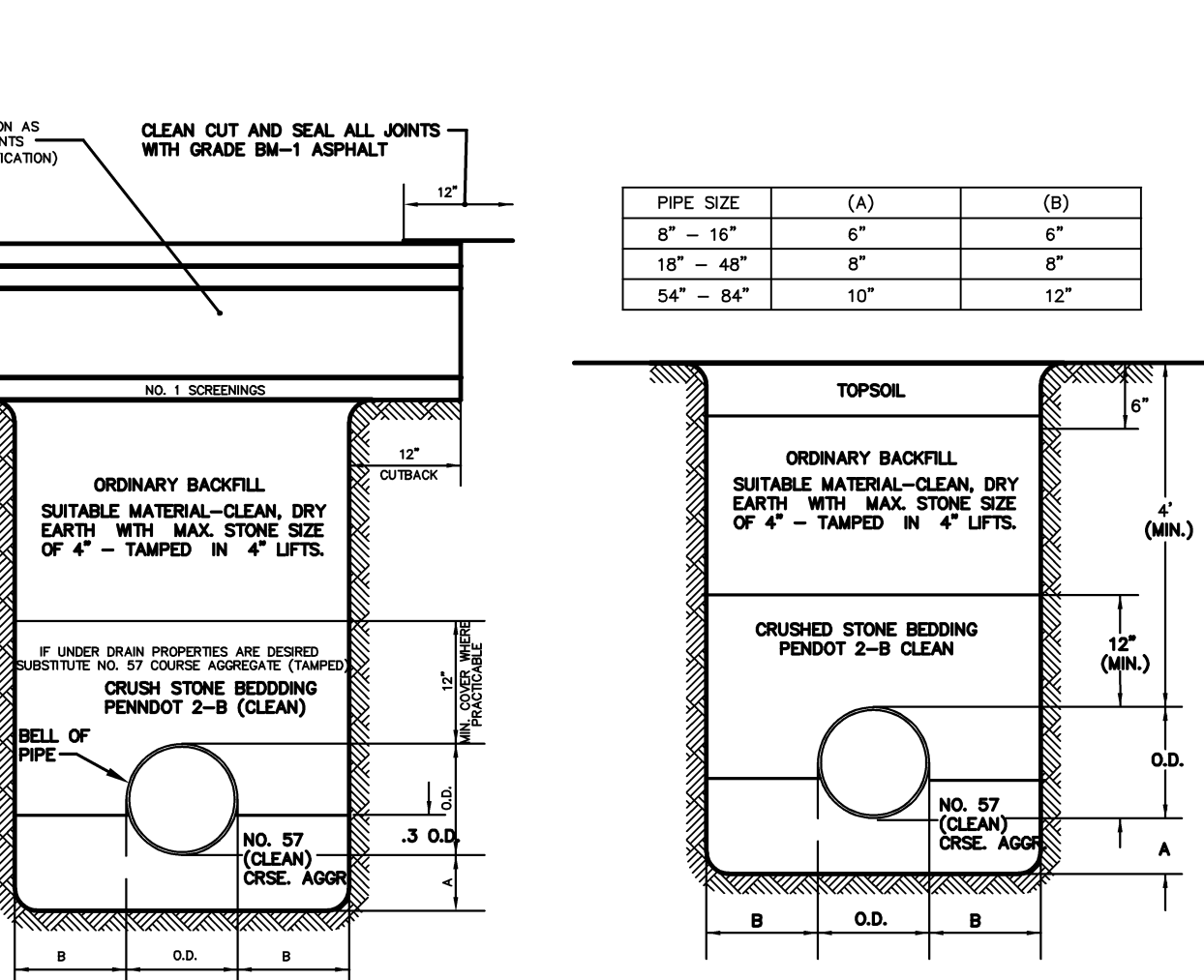
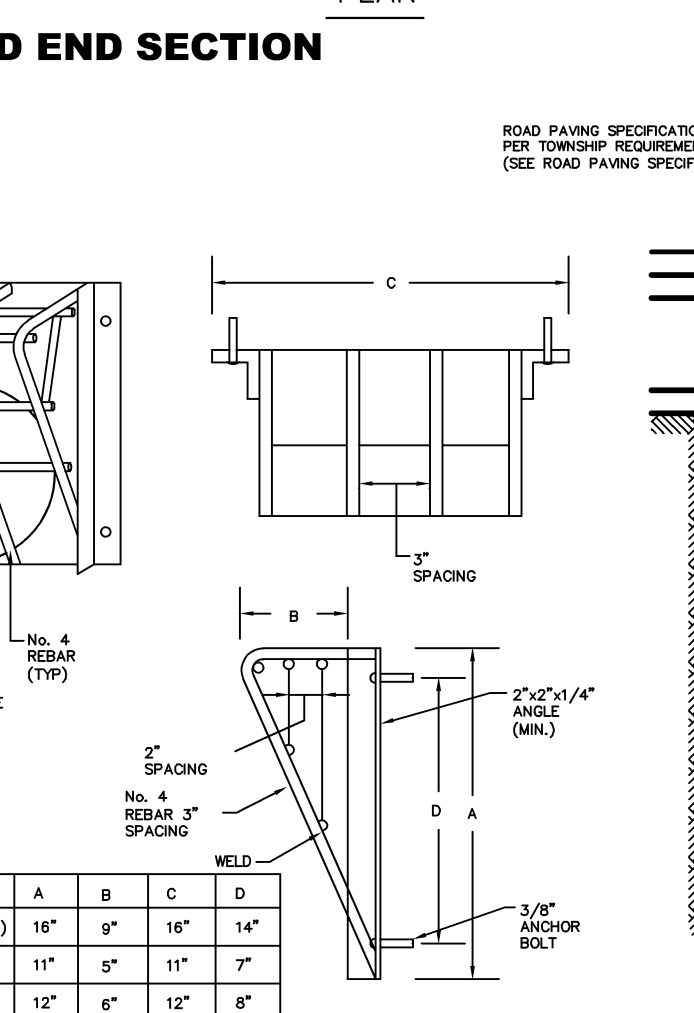
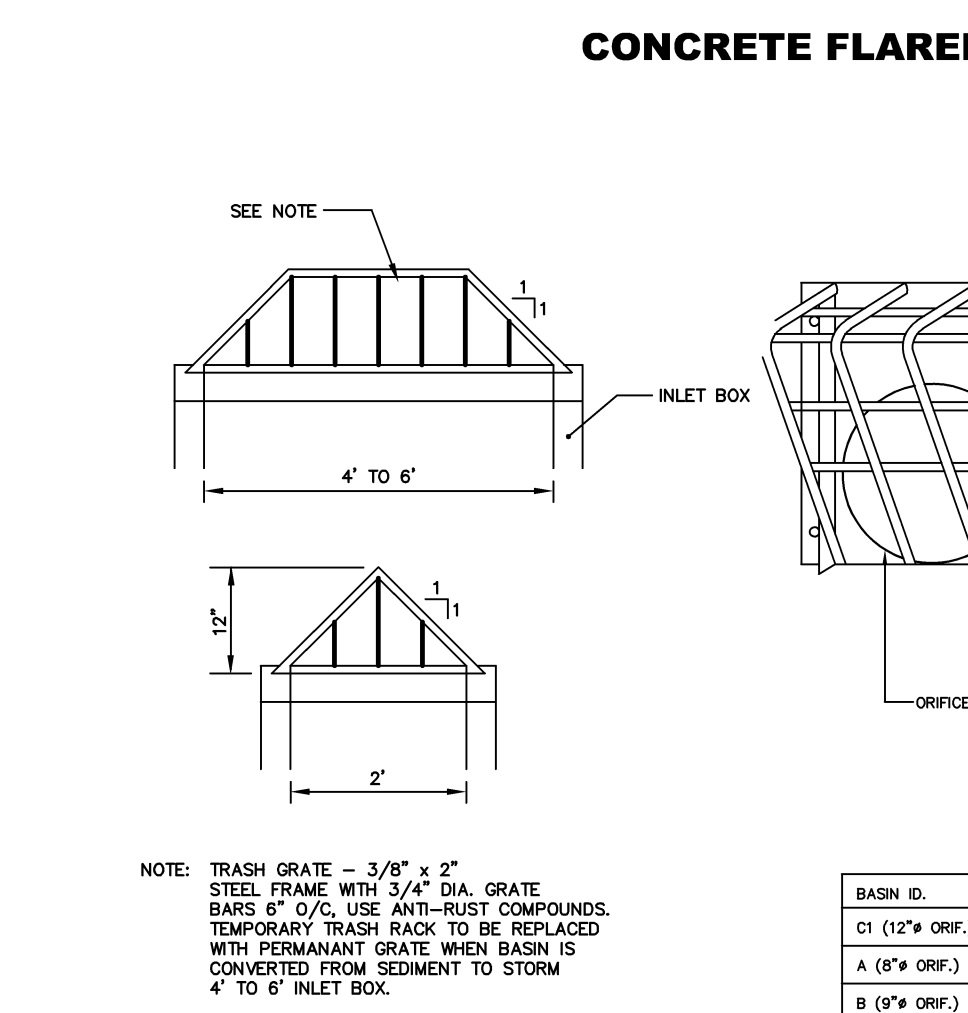
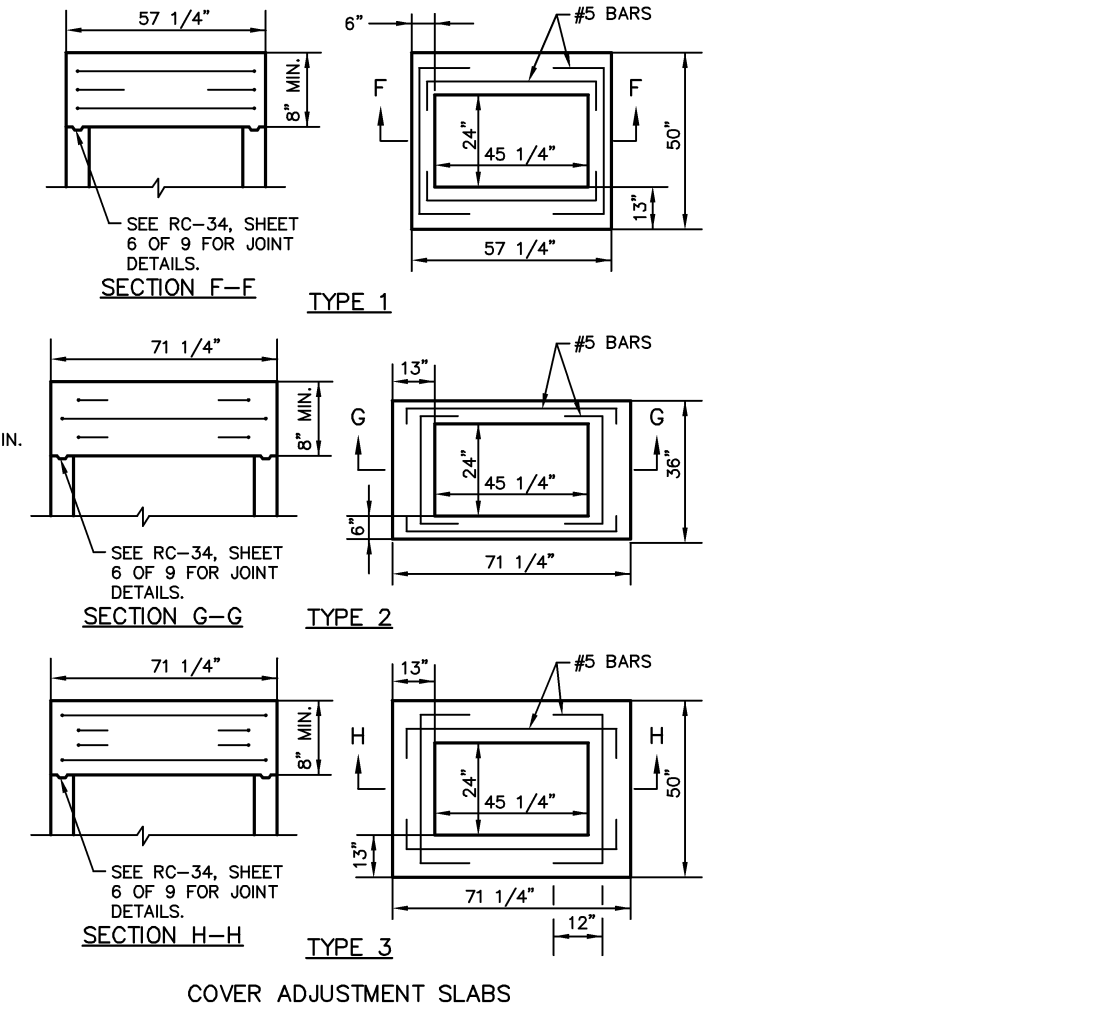
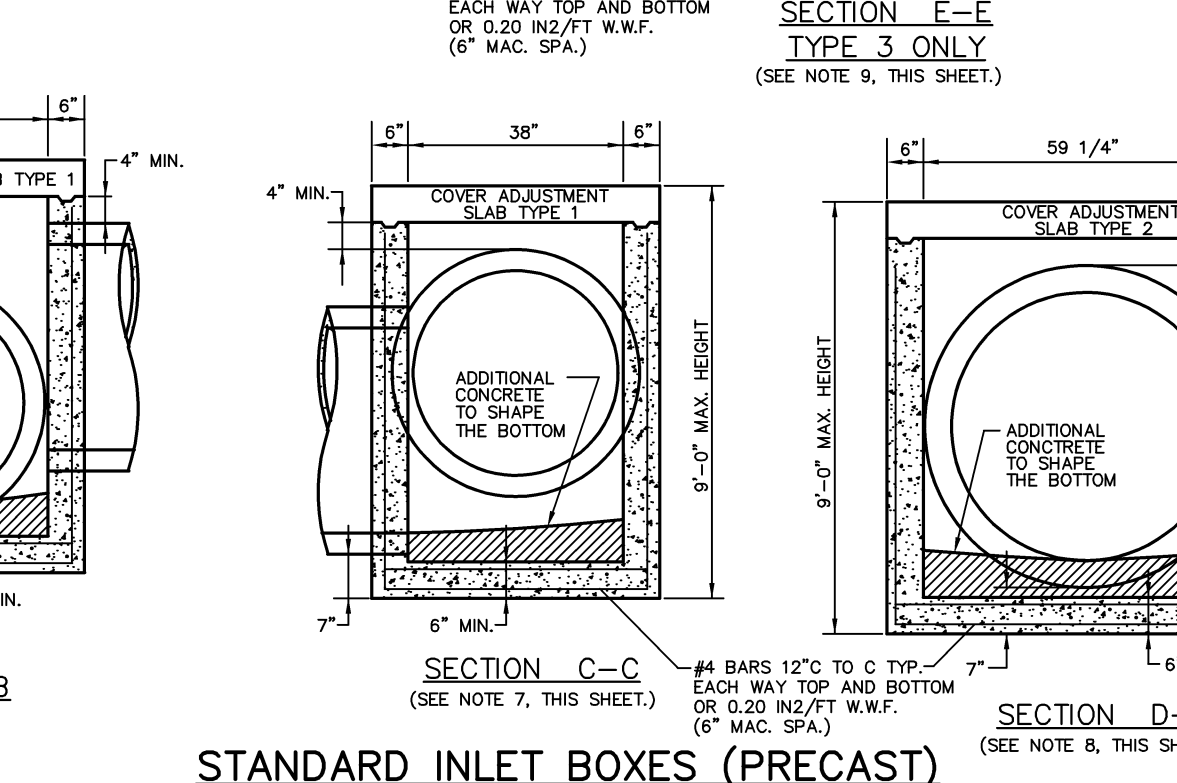
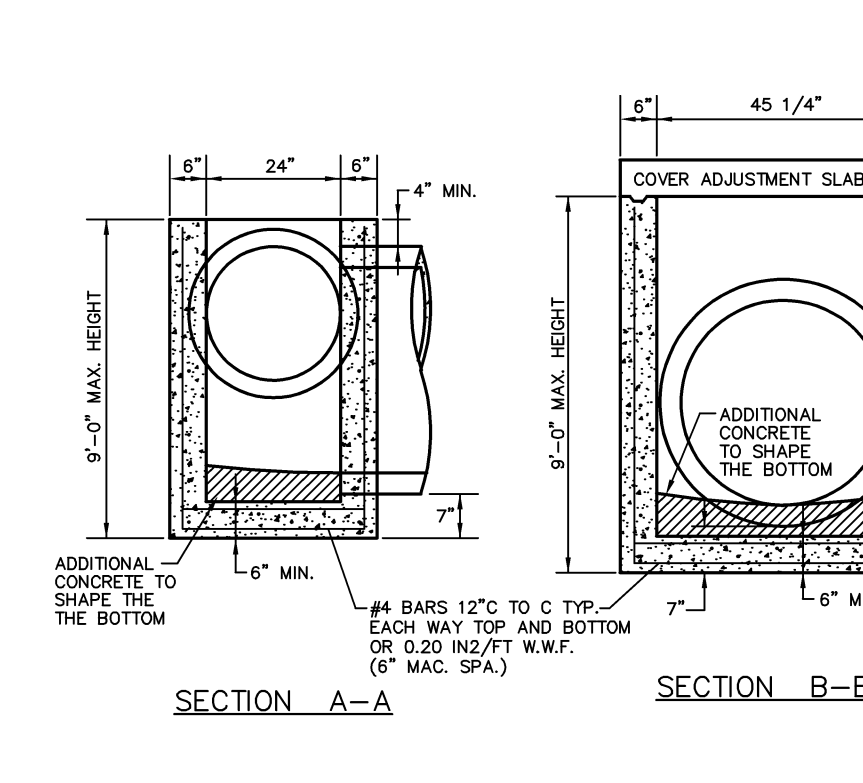
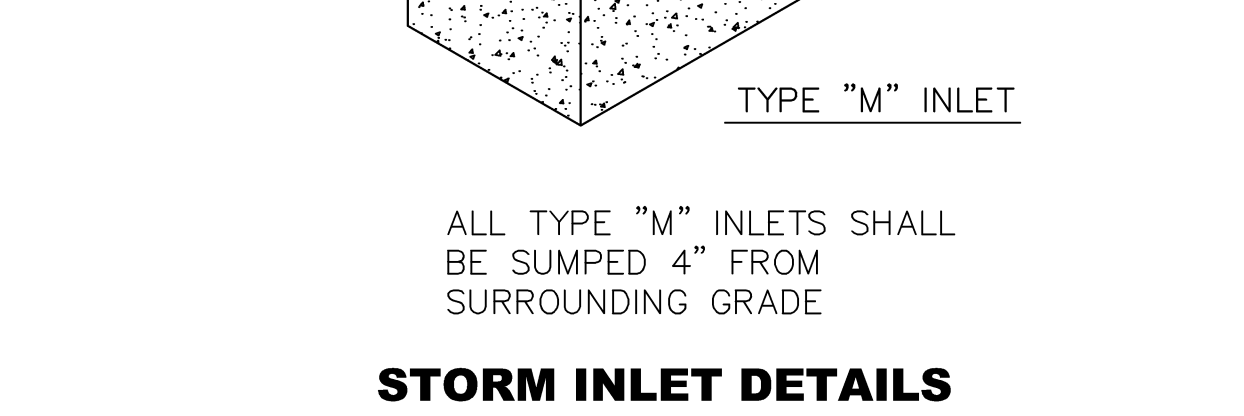
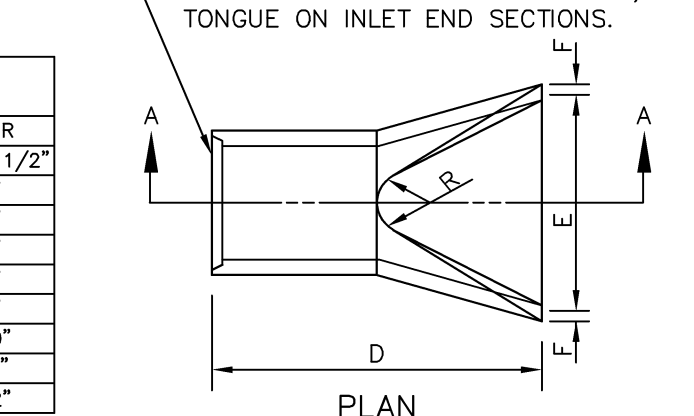
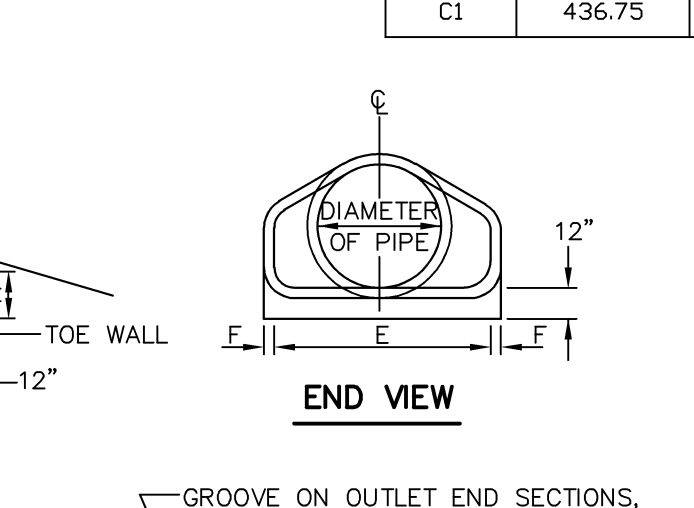


TABLE A - DIMENSIONS FOR END SECTION FOR CONCRETE PIPE

DIAM.	A	B	C	D	E	F	R
18"	9"	2'-3"	3'-10"	6'-1"	3'-0"	2 1/2"	7 1/2"
21"	9"	3'-0"	3'-1"	6'-1"	3'-6"	2 3/4"	8"
24"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3"	8"
27"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	4'-6"	3 1/4"	9"
30"	12"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3 1/2"	8"
33"	13 1/2"	4'-10 1/2"	3'-1 1/2"	6'-0"	5'-6"	3 3/4"	9"
36"	15"	5'-3"	2'-9"	6'-0"	6'-0"	4"	10"
42"	21"	5'-3"	2'-9"	6'-0"	6'-6"	4 1/2"	11"
48"	24"	6'-0"	2'-0"	6'-0"	7'-0"	5"	12"



DATE: 8/14/15
 12/22/16
 03/10/17
 09/08/17
 10/26/17
 01/09/18
 02/07/18
 03/07/18

REVISION PER CLIENT REVIEW
 A REVISION PER CLIENT REVIEW
 B REVISION PER TWP. ENG. AND BCD REVIEW LETTERS BOTH DATED 02/07/18
 C REVISION PER BCD REVIEW LETTER DATED 07/19/17
 D REVISION PER TOWNSHIP ENGINEER LETTER DATED 1/17/17
 E REVISION PER BCD REVIEW LETTER DATED 07/19/17
 F REVISION PER BCD REVIEW LETTER DATED 07/19/17
 G REVISION PER BCD REVIEW LETTER DATED 07/19/17
 H REVISION PER TOWNSHIP ENGINEER LETTER DATED 02/07/18
 I REVISION PER TOWNSHIP ENGINEER LETTER DATED 02/07/18

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP INDICATING "ISSUED FOR CONSTRUCTION". WE SHALL ASSUME NO LIABILITY FOR CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.

The Crossroads GROUP, LLC
 www.thecrossroadsgroup.com
 18500 Pottsville Pike, Suite A
 Harrisburg, PA 17328
 Phone: 484-860-3242

CONSTRUCTION DETAILS - POSTM
 PREPARED AS PART OF THE
WALNUT ACRES
 PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 DIE STATEMENT
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER: JDH
 DRAWING FILE NAME: ZDET
 PLAN ORIGINATION DATE: 07-08-16
 PLAN LAST REVISED: 03-10-20
 PLAN SCALE: N.T.S.
 PROJECT NUMBER: 1866
 SHEET NUMBER: 28 OF 30



178

LEGEND	
PRE-DEVELOPMENT DRAINAGE SHED 1 (29.24 Ac.)	SHED DELINEATION TEXT
	DRAINAGE AREA LINE
	Tc PATHS
	Tc PATH DELINEATION
	DESIGN POINT
	DESIGN POINT NOTATION

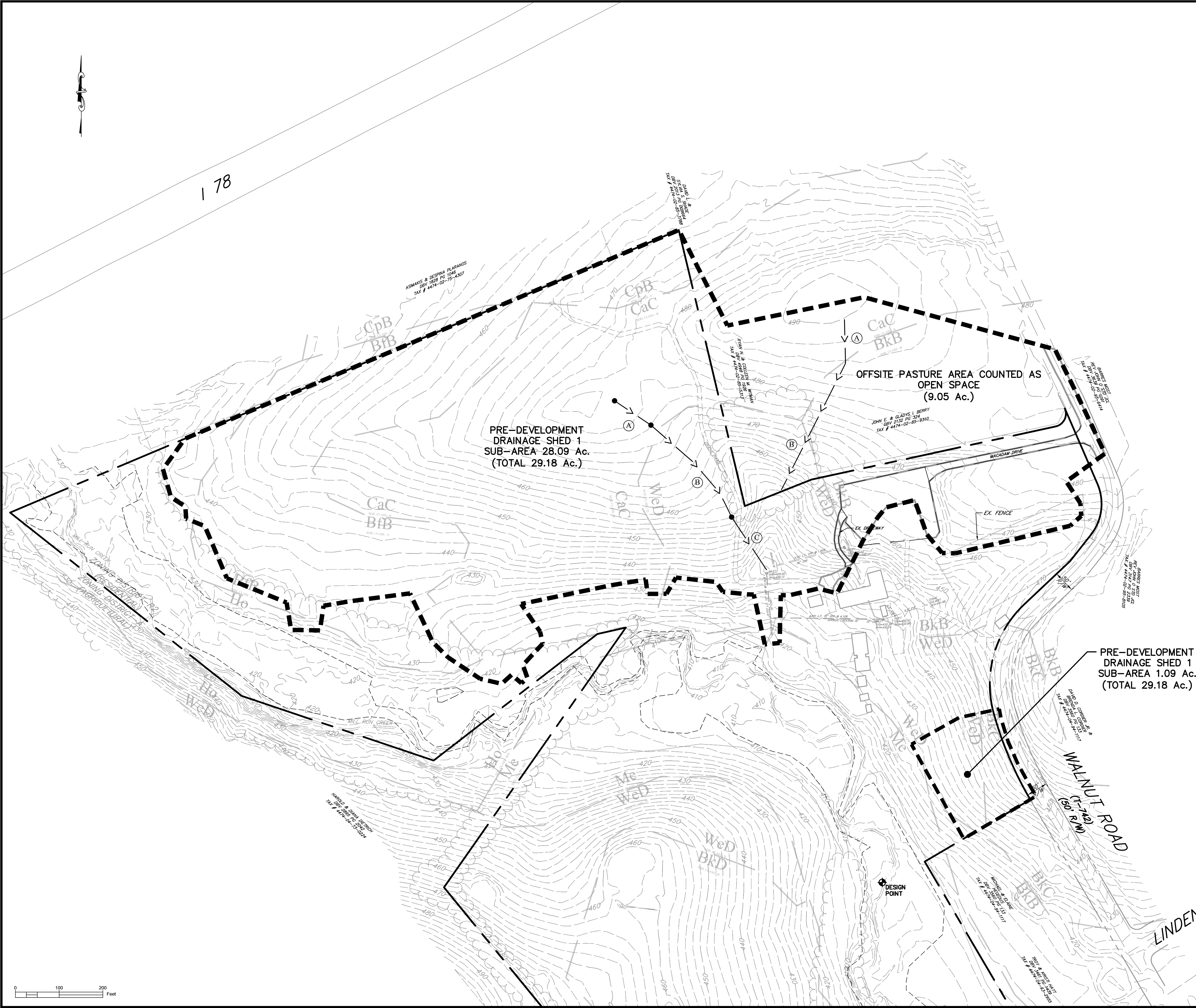
NO.	DATE	PLAN REVISIONS
A	8/14/15	REVISION PER CLIENT REVIEW
B	10/22/15	REVISION PER CLIENT REVIEW
C	12/22/15	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS BOTH DATED 10/27/15
D	03/10/17	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS BOTH DATED 03/10/17
E	09/18/17	REVISION PER TWP. ENG. AND BCD REVIEW LETTER DATED 09/18/17
F	09/18/17	REVISION PER TWP. ENG. AND BCD REVIEW LETTER DATED 09/18/17
G	10/26/18	REVISION PER TWP. ENG. AND BCD REVIEW LETTER DATED 10/26/18
H	07/15/19	REVISION PER TWP. ENG. AND BCD REVIEW LETTER DATED 07/15/19
I	07/15/19	REVISION PER TWP. ENG. AND BCD REVIEW LETTER DATED 07/15/19

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 Hamburg, PA 15528
 Phone: 484-860-3242

PRE-DEVELOPMENT DRAINAGE SHED PLAN
 WALNUT ACRES
 PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER	JDH
DRAWING FILE NAME	XSHEDS
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISED	03-10-20
PLAN SCALE	1" = 100'
PROJECT NUMBER	1866
SHEET NUMBER	29 OF 30





LEGEND	
POST-DEVELOPMENT DRAINAGE SHED 1 (1.37 Ac.)	SHED DELINEATION TEXT (POST)
	DRAINAGE AREA
	Tc PATHS
	Tc PATH DELINEATION
	DESIGN POINT DESIGN POINT NOTATION

NO.	DATE	REVISIONS
A	8/14/15	REVISION PER CLIENT REVIEW
B	10/14/15	REVISION PER CLIENT REVIEW
C	12/22/15	REVISION PER TWP. ENG. AND BCD REVIEW LETTERS BOTH DATED 10/29/15
D	03/10/17	REVISION PER TWP. ENG. AND BCD REVIEW LETTER DATED 01/18/17
E	09/08/17	REVISION PER TWP. ENG. AND BCD REVIEW LETTER DATED 1/17/17
F	09/08/17	REVISION PER TWP. ENG. AND BCD REVIEW LETTER DATED 1/17/17
G	10/26/18	REVISION PER BCD REVIEW LETTER DATED 10/16/18
H	01/15/19	REVISION PER BCD REVIEW LETTER DATED 12/07/18

NOTE: THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNLESS THE PLAN CONTAINS A RED STAMP INDICATING "ISSUED FOR CONSTRUCTION". WE SHALL ASSUME NO LIABILITY FOR CONSTRUCTION PERFORMED FROM PLANS NOT CONTAINING THIS STAMP.

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POST-DEVELOPMENT DRAINAGE SHED PLAN
 PREPARED AS PART OF THE
WALNUT ACRES
 PREPARED FOR
STEVEN J. & MARLENE A. SKOLODA
 TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

PROJECT MANAGER	JDH
DRAWING FILE NAME	ZSHEDS
PLAN ORIGINATION DATE	07-08-16
PLAN LAST REVISED	03-26-19
PLAN SCALE	1" = 100'
PROJECT NUMBER	1866
SHEET NUMBER	30 OF 30