

THE TOWNSHIP OF MANCHESTER

YORK COUNTY



PENNSYLVANIA

MANCHESTER TOWNSHIP PLANNING COMMISSION AGENDA WEDNESDAY JULY 29, 2026— 6:00 PM

CALL TO ORDER

APPROVAL OF MINUTES FROM JUNE 24, 2026

NEW BUSINESS:

RVW # 2026-07- 1345 Mill Creek Road- Frederick Fogelman and Teresa Shultz
Fogelman- Final Minor Subdivision Plan

OLD BUSINESS

Discussion on RVW # 2025-07- 3885 Board Road – Buffer Screening
requirement for PennTerra Engineering, Inc. (PTE) Lancaster- Office & Storage-
Preliminary/Final Subdivision & Land Development Plan

ADJOURNMENT

THE TOWNSHIP OF MANCHESTER

YORK COUNTY



PENNSYLVANIA

PLANNING COMMISSION MINUTES June 24, 2026

MEETING

The Manchester Township Planning Commission held its regularly scheduled meeting on Wednesday, June 24, 2026, at the municipal building located at 3200 Farmtrail Road, York, PA, 17406. Vice-Chairperson Stoutzenberger called the meeting to order at 6:00 p.m.

ATTENDANCE *(A) = Absent

Nicholas Hauck, Chairperson (A)
Kenneth Stoutzenberger, Vice-Chair
Bieber, Member
Brian Salsgiver, Member
Daniel Spies, Member

B.J. Treglia, Township Engineer
Michelle Madzelan, Traffic Engineer
Tim Wagner, Zoning Officer
Marita McVey, Asst. Zoning Officer

APPROVAL OF MINUTES

Upon a motion by Mr. Bieber, seconded by Mr. Spies, the planning commission approved the May 27, 2026, minutes as presented. Motion carried 4-0.

NEW BUSINESS

RVW # 2026-05: 805 & 811 Greenbriar Road - David J. & Kimberly K. Eisenhart & Estate of Wayne Fidler - Final Minor Subdivision Plan Upon a motion by Mr. Bieber, seconded by Mr. Spies, the planning commission recommended approval of RVW #2026-05, with the conditions that items 7c, 7h, and 13 in the C.S. Davidson review letter dated June 23, 2024, are addressed. The planning commission also recommended approval of waivers §22-303 to allow submission of a preliminary/final plan, §22-703 to require curbing, and §22-709 to require sidewalks.

RVW # 2026-07: 1345 Mill Creek Road - Frederick Fogelman and Teresa Shultz Fogelman - Final Minor Subdivision Plan Upon a motion by Mr. Salsgiver, seconded by Mr. Bieber, the planning commission recommended tabling RVW #2026-07 due to excessive outstanding comments. Motion passed 4-0.

RVW # 2025-07: 3885 Board Road - PennTerra Engineering, Inc. (PTE) Lancaster-Office & Storage Preliminary/Final Subdivision & Land Development Upon a motion by Mr. Stoutzenberger, seconded by Mr. Salsgiver, the planning commission recommended tabling RVW #2025-07 due to excessive outstanding comments. Motion passed 4-0.

ADJOURNMENT

With no additional business on the agenda, Vice-Chair Stoutzenberger adjourned the meeting at 6:47 p.m.

Respectfully submitted,

Marita McVey
Assistant Zoning Officer



July 20, 2026

Manchester Township
Attn: Katina Wagner
3200 Farmtrail Road
York, PA 17406

Re: Responses to Comments on the
Final Minor Subdivision Plan
Fredrick Fogelman and Teresa Shultz Fogelman
1345 Mill Creek Road
York, PA 17404
SDC Job #: 1666.1

Dear Tina:

We are resubmitting the enclosed revised plans (Dwg Shts. FSD-1 through FSD-6, last revised date 07/20/26) on behalf of Fredrick Fogelman and Teresa Shultz Fogelman. We have provided responses and revised plans based upon a Minor Subdivision Plan revised review letter prepared by C.S. Davidson, dated May 29, 2026 (revised July 1, 2026 by BJ Treglia, PE) and a Stormwater review letter prepared by C.S. Davidson dated July 14, 2026.

C.S. Davison Comments:

Zoning Ordinance:

1. The definition of street in the Manchester Township zoning ordinance is as follows *"Includes street, avenue, boulevard, road, highway, freeway, parkway, lane, alley, viaduct and any other ways used or intended to be used by vehicular traffic or pedestrians whether public or private."*

All recorded evidence found (prior recorded subdivision plans, stormwater management site plans, deeds of record, etc.) indicate that the gravel cartway we are identifying as Crooked Wind Lane is a private road, which falls under the identification of "street" by definition. Therefore, our required street frontage is met along this private road for Reconfigured Lot 171. Reconfigured Lot 171.G has sufficient frontage along Millcreek Road.

NOTE: Additionally, we have been informed via email by the Township Zoning Officer that the Township's solicitor has provided guidance that "the proposed lot does currently have access via the un-adopted portion of Crooked Wind Ln" and so he agrees the proposed lot satisfies the Ordinance requirements.

Subdivision and Land Development Ordinance:

- ~~1. Waiver A has been added to the Waiver Requests block on Sheet No. FSD-1 to waive the requirement of preliminary plan approval.~~

2. The corresponding comments have been addressed by:
 - ~~a. The plan title has been revised to reflect "Final Minor Subdivision Plan". Refer to Sheet No. FSD-1.~~
 - b. The UPI Table on Sheet No. FSD-1 has been completed with existing and proposed UPI numbers for the existing and proposed reconfigured lots.
- ~~3. The signature block for review by the township engineer has been revised to state "reviewed by". Refer to Sheet No. FSD-1.~~
4. The following comments have been addressed by:
 - a. Correspondence with DEP and Township SEO is currently on going. Planning module number(s) will be added to the plan when they are received. Refer to note #31 on Plan Sht. FSD-1.
 - ~~b. Note 13 has been added to the general notes section to state the number of required, existing, and proposed parking spaces for each parcel. Refer to the general notes section of Sheet No. FSD-1.~~
 - c. The existing and proposed address for each existing and proposed reconfigured lot have been listed on the UPI table on Sheet No. FSD-1.
5. The corresponding comments have been addressed by:
 - ~~a. The plan has been revised to show the existing setback lines and dimensions. Refer to Sheet No. FSD-2.~~
 - b. The Plan has been revised to show clear sight triangles for residential driveways being 10'x75'.
 - c. The Plan has been revised to dimension the existing structures, driveways/access drives, and parking areas. The number of required and provided parking spaces can be found in General Note 13 on Sheet No. FSD-1. The dimensions for the driveways/access drive can be found north of the "T" in the driveway, we show a dimension with a leader stating "EX. 12 FT. ± WIDE BITUMINOUS PAVED ACCESS DRIVE". The parking areas that are shown on the plan are the existing garage on the existing dwelling on the southwest of the site (3 spaces), the other parking area is shown southwest of the existing dwelling on the northern corner of the site (2 spaces). Both parking areas have been dimensioned. The number of required and provided parking spaces as listed above can be found in General Note 13 on Sheet No. FSD-1.
 - ~~d. There are no structures proposed by this plan.~~
 - ~~e. The plan has been revised to show the location of the proposed infiltration test pits. Refer to Sheet No. FSD-4.~~
 - f. The Plan has been revised to show a typical cross section for each adjacent street. Refer to Sheet No. FSD-6.



- ~~g. The plan has been revised to show the cartway and right-of-way dimensions from the centerline.~~
 - ~~h. The plan has been revised to show the existing water and on lot disposal service to the existing dwelling on the northeast corner of existing parcel 171.~~
 - ~~i. The plan has been revised to show the existing utilities that are to be removed or abandoned. Refer to Sheet No. FSD-2.~~
 - ~~j. The plan has been revised to remove or abandon any utilities that would have traversed both lots and new utilities are being shown to be installed. Therefore, no utility easements will be required.~~
 - ~~k. The plan has been revised to show the removal of a section of the existing driveway with a note stating that there is a temporary access easement along the entirety of the existing paved driveway that shall be abandoned at such a time that the alternative access is constructed and the existing section of driveway is removed. Both parcels are also owned by the same person and therefore it is our belief that an O/M agreement is not required.~~
 - l. All easements discovered in our deed research have been defined and shaded on the plans. To the best of our knowledge there is no existing access easement for the section of Crooked Wind Lane abutting the site.
6. Safe sight stopping distance measurements have been completed for the existing and proposed driveway locations. Refer to Plan Sheet FSD-6. The sight distance for the existing driveway accessing Mill Creek Road being less than the required distance is a preexisting nonconformity, and there is no intention to relocate the driveway at this time. The driveway and barn have existed this way since at least 1993 per Google Earth imagery, and the previous owner has not expressed any issues with this driveway during his ownership of the property.
- ~~7. All wells on the subject property have been shown on the plan with the required 100-foot isolation distance. All wells within a location pertinent to this project have been shown on this plan.~~
8. The corresponding comments have been addressed by:
- a. Acknowledged. An E&S plan will be submitted to the YCCD for review and approval. We request that proof of approval be a condition of approval of this Minor Subdivision.
 - b. Acknowledged. Correspondence with DEP is currently ongoing. Additionally, SDC is actively coordinating the required soils testing for this work with the Township's SEO, Patrick Buhl (tentatively scheduled for 7/22). We request that proof of approval be a condition of approval of this Minor Subdivision.
 - c. Acknowledged. Stormwater management design information for the proposed driveway connection to Westwind Lane has been provided with this subdivision plan, including a stormwater report. The intent is to address all SWM comments related to the improvements proposed by the subdivision plan as part of this Minor Subdivision approval. Proof of approval will be provided as a condition of approval of this Minor Subdivision. A note has been added to Plan Sht. FSD-4 indicating that future improvements proposed on Reconfigured Lot 171 will require the submission and approval of stormwater management site plans by the Township.



- ~~9. The plan had been revised to reflect all standard township notes requested. Refer to general notes 22-29 on Sheet No. FSD-1.~~
- ~~10. The plan has been revised to show a public sanitary sewer line connecting to an existing sanitary sewer manhole along Westwind Lane.~~
11. Acknowledged and provided.
12. Acknowledged, and provided.
- ~~13. The existing barn along Mill Creek Road and the existing shed on the northern corner of existing parcel 171 have been labeled as existing non-conformities. Refer to Sheet No. FSD-2.~~
- ~~14. The plan has been revised to show the 100-foot isolation distance for the well serving Parcel 1.B on the western corner of existing parcel 171.~~
- ~~15. Acknowledged, a letter of no objection from Texas Eastern has been included in this resubmission.~~
16. A revised stormwater management report has been completed and provided as part of this resubmission.

General Comments:

1. The stormwater drainage design has been revised to eliminate the storm pipe and associated structures from crossing the property line. Stormwater drainage from the proposed storm pipe on Residual Lot 171.G will be conveyed overland into the existing/expanded 20-foot-wide drainage easement, on Residual Lot 171, as depicted on the revised plan(s).
2. A grinder pump permit application will be filled out and submitted to the Township. A pump design will be provided for approval from the Township Engineer.
3. A Sewer Reservation Agreement will be made with the Township for Lot 171. Please provide a copy of this agreement. To date, we have not been able to procure a copy.

Traffic Comments:

1. This comment/concern has been satisfactorily addressed. With assistance from the Township's Engineer, SDC engaged in conversation with the York Area United Fire and Rescue Battalion Chief, Joseph Madzelan, to discuss the project and his initial emergency access concerns. After discussion, it was determined that the proposed driveway is accessible as designed, and there are no further concerns.

Stormwater Management Ordinance:

1. Infiltration testing is scheduled for July 22nd. Results will be provided.



2. O&M responsibilities for the SWM facilities will be the respective land owners on which the facilities are located. Stormwater facilities maintenance notes have been included on Dwg. Sht. FSD-4.
3. Acknowledged and provided. Refer to sht. FSD-1.
4. Acknowledged and provided. Refer to note on sht. FSD-1.
5. Acknowledged and provided.
6. Acknowledged. A note has been added to Plan Sht. FSD-4 (General Stormwater Note #2) requiring the developer to provide an as-built plan of the SWM BMP's once constructed.
7. Acknowledged. A signed O&M agreement for the SWM control facilities will be provided prior to final plan approval.

Please do not hesitate to contact me if you should have any questions or require additional information.

Sincerely,
SITE DESIGN CONCEPTS, INC.



James C. Prebich Jr., SIT
Project Manger

Encl.
CC: File





May 29, 2026 ~~June 23, 2026~~ BJT July 1, 2026 BJT

Katina Wagner, Zoning/Planning Officer
Manchester Township
3200 Farmtrail Road
York, PA 17406

Re: Fogelman (1345 Millcreek Rd.) Minor Subdivision Plan
Manchester Township Plan #2026-07
Engineer's Project No. 0841.3.16.72

Dear Tina:

We have reviewed the above-referenced Minor Subdivision Plan submitted by Site Design Concepts, Inc., dated May 4, 2026. We offer the following comments:

Waiver Requests

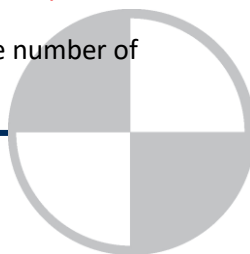
1. §22-303 – To allow the submission of a Preliminary/Final Plan.
2. §22-703.2.A – To not require the installation of concrete curb at this time.
3. §22-709.1 – To not require the installation of concrete sidewalk at this time.
4. ~~§22-410 – A waiver of TIS is not required.~~

Zoning Ordinance:

1. The minimum street front is 150', which is not being met on lot 171 (Zoning Ordinance – Attachment 1).
~~Crooked Wind Lane is not an adopted public street west of Millcreek Rd.~~

Subdivision and Land Development Ordinance:

- ~~1. A waiver of preliminary plan approval is required for proceeding immediately to final plan approval. (§22-303)~~
2. The following shall be provided on the coversheet (§22-404.1):
 - ~~a. Denote the plan title as "Final Minor Subdivision Plan".~~
 - b. Complete the UPI table prior to recording.
- ~~3. The signature block for review by the Township Engineer shall be revised from "recommended for approval" to "reviewed by". (§22-404.1.5)~~
4. The following shall be listed in the Site Data Table (§22-404.3):
 - a. Any existing or required planning module or planning exemption number(s) issued by PADEP.
 - ~~b. List the number of required, existing, and proposed parking spaces for each lot.~~
 - c. The address for each lot shall be identified.
5. The following shall be shown on all relevant plan sheets (§22-404.4)
 - ~~a. Show and dimension building setbacks on the existing conditions plan.~~
 - b. Show and dimension clear sight triangles on the proposed conditions plans. Any portion of a clear sight triangle outside of rights-of-way shall be denoted as an easement. **CSTs for residential driveways are 10'x75' (from C.L.).**
 - c. Dimension existing structures, driveways/access drives, and parking areas on the plans. The number of



required and provided parking spaces shall be identified.

- ~~d. The height of any proposed structures shall be identified.~~
- ~~e. The location of infiltration test pits shall be identified on the plans.~~
- f. Provide a typical cross-section for each adjacent street **showing the required curb and sidewalk.**
- ~~g. Cartway and right of way dimensions from the centerline shall be added to the plans.~~
- ~~h. Show the existing water and on lot disposal service to the existing dwelling on the northeast corner of existing lot 171.~~
- ~~i. Show and/or label existing water and on lot disposal services to be removed, disconnected, and/or abandoned in place.~~
- ~~j. Easement will be required for the proposed "Reconfigured Lot 171" for access and maintenance of any utility service crossing the proposed "Reconfigured Lot 171.G" i.e. underground electric (and gas if a service exists). Proposed easements shall be defined, dimensioned, and shaded on the plans.~~
- ~~k. An executed access and operation & maintenance agreement will need to be provided for the shared driveway between reconfigured lots 171 and 171.G.~~
- l. Any existing easements shall be defined and shaded on the plans. **Existing access easement for gravel driveway, labeled as "Crooked Wind Ln."?**

6. Required and proposed safe stopping sight distance calculations shall be provided on the plans for any existing and proposed driveway/access drive. (§22-404.4.30) **Sight distance (right) is less than required on Mill Creek Rd. Can driveway be relocated to accommodate safe sight distance?**

- ~~7. All on lot wells on the subject property and adjacent properties shall be shown on the plans along with required 100' isolation radius dimensioned. (§22-404.35)~~

8. Proof of the following approvals shall be provided to/obtained from the Township (§22-407.4):
- a. Soil Erosion and Sedimentation Control Approval from YCCD prior to the issuance of any building or zoning permit.
 - b. Planning Module or Planning Exemption from PADEP.
 - c. Stormwater management plan approval from the Township prior to the issuance of any building or zoning permit.

- ~~9. The following Township standard notes shall be added to the plans under "Manchester Township Standard Notes". (§22-408.5)~~

- | | |
|--|---|
| a. 1. Sidewalk & Curbing within 6 months
(request a waiver of installation) | e. 7. Authority Standards |
| b. 3. Rights of way/Easements | f. 11. "Knox" Boxes |
| c. 4. General Access | g. 15. Monuments and Markers |
| d. 5. Nonconformities | h. 16. PA One Call |

- ~~10. Public sanitary sewer exists within 1,000 ft of the proposed subdivision (Westwind Lane) therefore, a connection to public sewer is required. (§22-714.2.A)~~

11. The cover sheet shall include the owner(s)'s notarized signature prior to the Planning Commission meeting (§22-404.1.2).

12. The registered professional responsible for the creation of the plans shall sign, seal, and date the plans. (§22-406.1.4)

- ~~13. The existing shed and existing barn with the setbacks shall be noted as existing non-conformities on the plans.~~

14. The required isolation radius for the existing well serving the adjacent dwelling at the western corner of lot 171 shall be added to the plans.

~~15. Written authorization shall be provided from Texas Eastern for the proposed driveway crossing within the easement.~~

16. A stormwater management report shall be provided and approval received from the Township Engineer prior to plan approval.

General Comments:

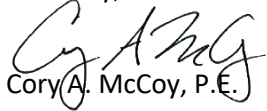
1. The proposed storm pipe system crossing the proposed property line will require an easement along with an ownership, operation & maintenance agreement.
2. Grinder permit application will be required. Pump design shall be provided and approval received from the Township Engineer.
3. Sewer Reservation Agreement will be necessary for Lot 171 for one EDU.

Traffic Comments:

1. Emergency access must be provide due to the steepness of the proposed driveway.

If you have questions related to the enclosed information or require any clarification, please feel free to contact me at our York office number or via email CAM@csdavidson.com.

Sincerely,



Cory A. McCoy, P.E.

CAM/AJS/dmg

Copy: B.J. Treglia, P.E. Manchester Township via email: b.treglia@mantwp.com

File

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GENERAL NOTES

1. THE PURPOSE OF THIS FINAL MINOR SUBDIVISION PLAN IS TO DEPICT A PROPOSED RECONFIGURATION OF PARCELS 171 AND 171.G, AS WELL AS, DEPICT A PROPOSED PRIVATE DRIVEWAY AND CONNECTION TO THE PUBLIC SANITARY SEWER SYSTEM ON RECONFIGURED LOT 171.G IN MANCHESTER TOWNSHIP, YORK COUNTY.
2. PARCEL INFORMATION:
UNIFORM PARCEL IDENTIFIER: 36-000-LH-0171.00-00000
DEED REFERENCE: DEED/RECORD BOOK TBD, PAGE TBD
PLAN REFERENCE: PLAN/RECORD BOOK GG, PAGE 3607
PLAN REFERENCE: PLAN/RECORD BOOK SS, PAGE 760
PLAN REFERENCE: PLAN/RECORD BOOK 2256, PAGE 7576
PLAN REFERENCE: PLAN/RECORD BOOK NN, PAGE 66
UNIFORM PARCEL IDENTIFIER: 36-000-LH-0171.00-00000
DEED REFERENCE: DEED/RECORD BOOK TBD, PAGE TBD
PLAN REFERENCE: PLAN/RECORD BOOK NN, PAGE 66
3. EXISTING LAND TRACT(S) ARE ZONED:
PARCEL 171: A, AGRICULTURAL
PARCEL 171.G: A, AGRICULTURAL AND RL, RESIDENTIAL LOW DENSITY
4. ADJACENT LAND TRACT(S) ARE ZONED:
NORTH: A, AGRICULTURAL
SOUTH: RL, RESIDENTIAL LOW DENSITY
EAST: A, AGRICULTURAL AND RL, LOW DENSITY RESIDENTIAL
WEST: A, AGRICULTURAL
5. EXISTING LAND TRACT(S) USE:
PARCEL 171: TWO (2) SINGLE-FAMILY DETACHED DWELLINGS
PARCEL 171.G: VACANT LOT
- PROPOSED LAND TRACT(S) USE:
RECONFIGURED LOT 171.G: SINGLE-FAMILY DETACHED DWELLING
RECONFIGURED LOT 171: TWO (2) SINGLE-FAMILY DETACHED DWELLINGS (ONE EXISTING AND ONE FUTURE)
A. STORMWATER MANAGEMENT SITE PLAN MUST BE SUBMITTED TO AND APPROVED BY MANCHESTER TOWNSHIP PRIOR TO ISSUANCE OF A BUILDING PERMIT AND CONSTRUCTION OF THE PROPOSED FUTURE DWELLING ON PROPOSED PARCEL 171.G.
6. EXISTING PARCEL 171 IS SERVED BY AN EXISTING ON-LOT WATER SUPPLY WELL AND AN EXISTING ON-LOT SANITARY SEWAGE DISPOSAL SYSTEM. EXISTING PARCEL 171.G IS NOT CURRENTLY SERVED BY ANY WATER SUPPLY OR A SANITARY SEWAGE DISPOSAL SYSTEM.
RECONFIGURED LOT 171.G WILL BE SERVED BY A PROPOSED ON-LOT WATER SUPPLY WELL AND A PROPOSED CONNECTION TO AN EXISTING PUBLIC SANITARY SEWAGE DISPOSAL SYSTEM. RECONFIGURED LOT 171 WILL BE SERVED BY A CONNECTION TO AN EXISTING ON-LOT WATER SUPPLY WELL AND A CONNECTION TO AN EXISTING ON-LOT SANITARY SEWAGE DISPOSAL SYSTEM.
- THE FOLLOWING DIMENSIONAL REQUIREMENTS ARE BASED UPON THE A, AGRICULTURAL ZONING REQUIREMENTS, (AS A MAJORITY OF THE IMPROVEMENTS TAKE PLACE IN THIS ZONE.)
7. MINIMUM REQUIRED LOT AREA: 47,500 S.F. (1.090 AC.)
EXISTING LOT AREA:
PARCEL 171: 599,963 S.F. (13,773 AC.) GROSS
598,457 S.F. (13,533 AC.) NET
PARCEL 171.G: 370,005 S.F. (8,494 AC.) GROSS
367,014 S.F. (8,425 AC.) NET
- PROPOSED LOT AREA:
RECONFIGURED LOT 171.G: 259,099 S.F. (5,948 AC.) GROSS
257,608 S.F. (5,914 AC.) NET
RECONFIGURED LOT 171: 710,869 S.F. (16,319 AC.) GROSS
698,863 S.F. (16,044 AC.) NET

8. MINIMUM REQUIRED LOT WIDTH: 150 FT. (AT STREET FRONTAGE)
EXISTING LOT WIDTH (ALONG MILLCREEK ROAD): PARCEL 171: 354 FT.
(ALONG WESTWIND LANE): PARCEL 171.G: 100 FT.
(ALONG CROOKED WIND LANE): PARCEL 171: 558 FT.
PROPOSED LOT WIDTH (ALONG MILLCREEK ROAD): RECONFIGURED LOT 171.G: 354 FT.
(ALONG WESTWIND LANE): RECONFIGURED LOT 171.G: 50 FT.
RECONFIGURED LOT 171: 50 FT.
PROPOSED LOT WIDTH (ALONG CROOKED WIND LANE): RECONFIGURED LOT 171.G: 285 FT.
RECONFIGURED LOT 171: 273 FT.
9. MINIMUM REQUIRED SETBACKS:
PRINCIPAL BUILDINGS & STRUCTURES:
FRONT: 50 FT.
SIDE: 50 FT.
REAR: 50 FT.
10. MAXIMUM ALLOWABLE BUILDING HEIGHT: 35 FT. (PRINCIPAL BLDGS./STRUCTURES).
EXISTING LOT COVERAGE:
PARCEL 171: 10% (57,555 S.F./598,457 S.F.)
PARCEL 171.G: 0% (251 S.F./367,014 S.F.)
- PROPOSED LOT COVERAGE:
RECONFIGURED LOT 171.G: 7% (20,182 S.F./257,608 S.F.)
RECONFIGURED LOT 171: 7% (45,466 S.F./698,863 S.F.)
12. MAXIMUM ALLOWABLE BUILDING COVERAGE: 20%
EXISTING BUILDING COVERAGE:
PARCEL 171: 4% (23,970 S.F./598,457 S.F.)
PARCEL 171.G: 0% (251 S.F./367,014 S.F.)
- PROPOSED BUILDING COVERAGE:
RECONFIGURED LOT 171.G: 2% (4,676 S.F./257,608 S.F.)
RECONFIGURED LOT 171: 3% (19,545 S.F./698,863 S.F.)
13. PARKING REQUIREMENTS:
BASIC DWELLING
ANALYSIS = 2 SPACES PER DWELLING UNIT
PARCEL 171:
TOTAL REQUIRED NO. OF SPACES = 4
EXISTING NO. OF SPACES = 0
PROPOSED NO. OF SPACES = 0
PARCEL 171.G:
TOTAL REQUIRED NO. OF SPACES = 0
EXISTING NO. OF SPACES = 0
PROPOSED NO. OF SPACES = 0
RECONFIGURED LOT 171.G:
TOTAL REQUIRED NO. OF SPACES = 2
EXISTING NO. OF SPACES = 0
PROPOSED NO. OF SPACES = 0
RECONFIGURED LOT 171:
TOTAL REQUIRED NO. OF SPACES = 2
EXISTING NO. OF SPACES = 0
PROPOSED NO. OF SPACES = 0

14. PROJECT SITE IS NOT LOCATED WITHIN A MAPPED 100 YEAR FLOOD PLAIN BASED UPON A REVIEW OF THE FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWNSHIP OF MANCHESTER, COMMUNITY NUMBER 42031, PANEL 0193, SUFFIX F, MAP NUMBER 42133C0193F, EFFECTIVE DATE: DECEMBER 16, 2015.
15. SITE PROPERTY LINE IS BASED ON AN ACTUAL FIELD SURVEY BY SITE DESIGN CONCEPTS, INC., COMPLETED IN MARCH, 2026.
16. EXISTING SITE FEATURES AND TOPOGRAPHIC INFORMATION IS BASED ON AN ACTUAL FIELD SURVEY BY SITE DESIGN CONCEPTS, INC., COMPLETED IN MARCH, 2026, AND SUPPLEMENTED WITH PUBLICLY AVAILABLE AERIAL PHOTOGRAPHS AND LIDAR DATA OBTAINED FROM THE PENNSYLVANIA SPATIAL DATA ACCESS WEBSITE.
17. THIS PROPERTY WAS SURVEYED AND THIS PLAN WAS PREPARED USING DEEDS AND PLANS OF RECORD WITHOUT THE BENEFIT OF A TITLE SEARCH. THIS SURVEY IN NO WAY GUARANTEES, WARRANTS OR IMPLIES THAT THE PROPERTY IS NOT AFFECTED BY RIGHTS-OF-WAY, EASEMENTS, RESTRICTIONS, ETC. WHICH MAY BE DISCOVERED BY A COMPLETE "TITLE SEARCH".
18. SITE PROPERTY BOUNDARY LINE BEARINGS DEPICTED HEREON ARE SHOWN BASED UPON THE NORTH AMERICAN DATUM OF 1983 (NAD83) SOUTH ZONE, REALIZATION NA2011, EPOCH 2010.00 AND ESTABLISHED BY USING GPS TECHNOLOGY.
19. SITE BENCH MARK:
TOP OF MAG NAIL (SET) ON THE SOUTHEASTERN SIDE OF THE EXISTING ACCESS DRIVE, APPROXIMATELY 400 FT. FROM MILLCREEK ROAD, ELEV. = 407.08. VERTICAL ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM FROM 1988 (NAVD 88 DATUM) AND ESTABLISHED BY USING GPS TECHNOLOGY.
20. CLEAR SIGHT TRIANGLE REQUIREMENTS:
150 FT. ALONG CENTERLINE OF ARTERIAL STREETS.
100 FT. ALONG CENTERLINE OF COLLECTOR & LOCAL STREETS.
75 FT. ALONG CENTERLINE OF STREETS FOR DRIVEWAYS.
NO BUILDING OR STRUCTURE IS PERMITTED WITHIN CLEAR SIGHT TRIANGLE. HOWEVER, OBSTRUCTIONS AND PLANTINGS LESS THAN TWO (2) FEET IN HEIGHT SHALL BE PERMITTED.
21. THE NATIONAL WETLANDS INVENTORY MAP DEPICTS NO EXISTING WETLAND AREAS ON THIS SITE.
22. THE OWNERS, HEIRS, ASSIONS OR SUCCESSORS IN THE TITLE AGREE THAT THEY SHALL INSTALL AT THE OWNERS EXPENSE CONCRETE CURBING, CONCRETE SIDEWALK, OR BOTH CONCRETE CURBING AND CONCRETE SIDEWALK TO TOWNSHIP AND/OR STATE SPECIFICATIONS WITHIN SIX MONTHS FROM THE RECEIPT OF CERTIFIED NOTIFICATION FROM THE TOWNSHIP.
23. THE OWNER SHALL NOT CONSTRUCT, PLANT, OR MAINTAIN ANY STRUCTURES, FENCES, TREES, SHRUBBERY, ETC., WITHIN THE SANITARY SEWER, STORMWATER, OR UTILITY RIGHTS-OF-WAY/EASEMENT IN ORDER TO ENSURE A FREE AND CLEAR ACCESS TO ALL FACILITIES, BITUMINOUS PAVING, COMINGLING OF SANITARY SEWER, STORMWATER OR UTILITIES, OR A CHANGE IN GROUND CONTOURS WITHIN THE RIGHT(S)-OF-WAY/EASEMENT WILL BE PERMITTED ONLY WITH WRITTEN CONSENT OF THE TOWNSHIP.
24. THE OWNER HEREBY GRANTS MANCHESTER TOWNSHIP OR ITS REPRESENTATIVE A GENERAL ACCESS EASEMENT ACROSS THE ENTIRE LOT FOR ACCESS TO THE PUBLIC SEWER, SAMPLING MANHOLES, AND ANY STORMWATER MANAGEMENT FACILITIES.
25. ANY NONCONFORMING BUILDING OR STRUCTURE IS DESTROYED OR DAMAGED BY REASON OF WINDSTORM, FIRE, FLOOD, EXPLOSION OR OTHER ACT OF GOD OR PUBLIC ENEMY TO AN EXTENT OF MORE THAN 50% OF ITS FAIR MARKET VALUE AT THE TIME OF THE CASUALTY SHALL NOT BE REBUILT, RESTORED, OR REPAIRED EXCEPT IN CONFORMANCE OF THE PROVISIONS OF THE MANCHESTER TOWNSHIP ZONING ORDINANCE (CHAPTER 27).
26. ALL WORK SHALL CONFORM TO THE MANCHESTER TOWNSHIP MUNICIPAL AUTHORITY'S PLAN, DESIGN AND CONSTRUCTION STANDARDS.
27. ALL NEW AND EXISTING BUILDINGS (EXCEPT ONE- AND TWO-FAMILY DWELLINGS) ARE REQUIRED TO INSTALL A BRAND ENTRY KEY BOX (SUCH AS KNIX BOX) AS REQUIRED BY THE FIRE CHIEF FOR FIRE DEPARTMENT USE ONLY IN ACCORDANCE WITH THE MANCHESTER TOWNSHIP CODE OF ORDINANCES CHAPTER 7, PART 6.
28. ANY MISSING PROPERTY CORNERS PERMANENT MONUMENTS AND MARKERS (STEEL PINS) IN ACCORDANCE WITH § 22-277 OF MANCHESTER TOWNSHIP CODE OF ORDINANCES.
29. LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS (OR WHATEVER INVESTIGATION WAS COMPLETED) AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. BY SITE DESIGN CONCEPTS, INC. CONTRACTORS SHOULD CONTACT THE PA ONE CALL SYSTEM (1-800-242-1776) PRIOR TO ANY EXCAVATION AS REQUIRED BY PA ACT 38 (1993). PA ONE CALL HAS BEEN NOTIFIED 03.16.26 - SERIAL NUMBER 20260753970.
30. THE EXISTING SECTION OF DRIVEWAY CONNECTED TO MILLCREEK ROAD LABELED AS "TO BE REMOVED," SHALL REMAIN UNTIL SUCH TIME THAT THE NEW DRIVEWAY ACCESS TO RECONFIGURED LOT 171.G IS CONSTRUCTED. UNTIL SAID TIME WHEN THE NEW ACCESS IS CONSTRUCTED AND THE EXISTING DRIVEWAY IS REMOVED, THERE SHALL BE A TEMPORARY ACCESS EASEMENT (THE WIDTH OF THE EXISTING DRIVEWAY) ON THE EXISTING DRIVEWAY (FROM MILLCREEK ROAD TO THE PROPOSED PROPERTY LINE) THAT TRANSFERS RECONFIGURED LOT 171 FOR THE BENEFIT OF RECONFIGURED LOT 171.G.
31. PA DEP SANITARY SEWER PLANNING: ALTHOUGH PRIOR RECORDED SUBDIVISION PLANS DEPICT PERC AND PROBE TESTING LOCATIONS ON BOTH RECONFIGURED PARCELS PROPOSED BY THIS PLAN, NO EVIDENCE OF APPROVED PA DEP SEWER PLANNING HAS BEEN FOUND. AS SUCH, SEWER PLANNING APPROVAL FOR THIS SUBDIVISIONS SHALL BE OBTAINED. PA DEP SANITARY SEWER PLANNING MODULE APPROVAL # _____.
32. LAND OWNER:
FREDRICK FOGELMAN AND
TERESA SHULTZ FOGELMAN
1345 MILLCREEK ROAD
YORK, PA 17404
PARCEL 171.G
2992 WESTWIND LANE
YORK, PA 17404

WAIVER REQUESTS

THE FOLLOWING WAIVER(S) FROM THE MANCHESTER TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE, CHAPTER 22, HAVE BEEN REQUESTED AND APPROVED BY THE MANCHESTER TOWNSHIP BOARD OF SUPERVISORS AT A MEETING HELD ON _____.

- A. 22-303: WHICH REQUIRES THE SUBMISSION OF A PRELIMINARY PLAN.
JUSTIFICATION: WAIVER/AMENDMENT IS REQUESTED TO SUBMIT A ONLY A FINAL MINOR SUBDIVISION PLAN FOR APPROVAL DUE TO THE SIMPLICITY OF THE PROJECT.
- B. 22-703.2.A: WHICH REQUIRES INSTALLATION OF CONCRETE CURB ALONG STREET FRONTAGES.
JUSTIFICATION: THIS IS A MINOR SUBDIVISION AND THE DEVELOPMENT IS IN AN AREA WHERE CURBS AND SIDEWALKS ARE NOT IN ANY ADJACENT SUBDIVISION OR ON ANY ADJACENT LOT. REFER TO GENERAL NOTE NO. 22 ON SHEET FSD-1.
- C. 22-709.1: WHICH REQUIRES INSTALLATION OF CONCRETE SIDEWALK ALONG STREET FRONTAGES.
JUSTIFICATION: THE DEVELOPMENT IS IN AN AREA WHERE CURBS AND SIDEWALKS ARE NOT IN ANY ADJACENT SUBDIVISION OR ON ANY ADJACENT LOT. REFER TO GENERAL NOTE NO. 22 ON SHEET FSD-1.

MANCHESTER TOWNSHIP ENGINEER REVIEW

REVIEWED BY THE MANCHESTER TOWNSHIP ENGINEER.

TOWNSHIP ENGINEER _____ DATE _____

MANCHESTER TOWNSHIP PLANNING COMMISSION REVIEW

AT A MEETING HELD ON _____, 20_____, THE MANCHESTER TOWNSHIP PLANNING COMMISSION REVIEWED THIS PLAN.

MANCHESTER TOWNSHIP BOARD OF SUPERVISORS FINAL PLAN APPROVAL

AT A MEETING HELD ON _____, 20_____, THE MANCHESTER TOWNSHIP BOARD OF SUPERVISORS APPROVED THIS PLAN.

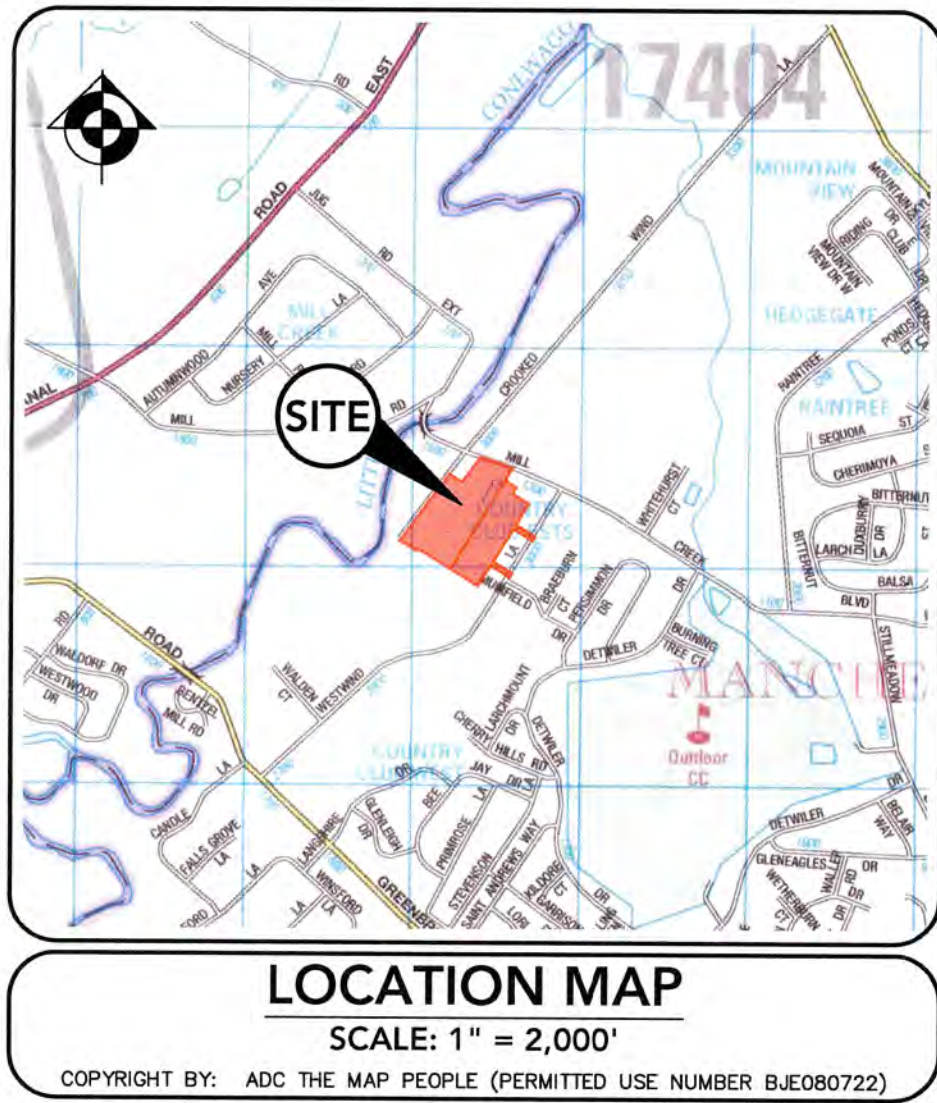
FINAL MINOR SUBDIVISION PLAN

FOR LANDS OF

FREDRICK FOGELMAN AND
TERESA SHULTZ FOGELMAN

1345 MILLCREEK ROAD
MANCHESTER TOWNSHIP, YORK COUNTY, PENNSYLVANIA

UNIFORM PARCEL IDENTIFIER		
PARCEL / LOT NO.	STREET ADDRESS	U.P.I.
171	1345 MILLCREEK ROAD	36-000-LH-0171.00-00000
171.G	2992 WESTWIND LANE	36-000-LH-0171.00-00000
RECONFIGURED LOT 171	1345 MILLCREEK ROAD	36-000-LH-0171.00-00000
RECONFIGURED LOT 171.G	2992 WESTWIND LANE	36-000-LH-0171.00-00000



FINAL MINOR SUBDIVISION PLAN
SHEET INDEX

DRAWING SHEET NO.	DRAWING TITLE
FSD-1*	TITLE SHEET
FSD-2*	EXISTING SITE CONDITIONS AND DEMOLITION PLAN
FSD-3*	FINAL MINOR SUBDIVISION PLAN
FSD-4*	SITE IMPROVEMENTS PLAN
FSD-5*	SITE IMPROVEMENTS PLAN PROFILES, DETAILS, AND NOTES
FSD-6*	SANITARY SEWER PROFILES AND STREET CROSS-SECTIONS

* INDICATES SHEETS TO BE RECORDED

LAND SURVEYOR

I HEREBY STATE THAT, TO THE BEST OF MY KNOWLEDGE, THE SURVEY AND PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE CITY OF YORK SUBDIVISION AND LAND DEVELOPMENT ORDINANCE. COPYRIGHT BY AND FOR:

ANDREW R. BARSHINGER, P.L.S.
REGISTRATION NO. SJ 074850
(AGENT FOR SITE DESIGN CONCEPTS, INC.)
7/20/26
DATE



RECORDER OF DEEDS CERTIFICATE

RECORDED IN THE OFFICE FOR RECORDING OF DEEDS, IN AND FOR YORK COUNTY, PENNSYLVANIA, IN LAND RECORD BOOK _____, PAGE _____, ON THIS _____, DAY OF _____, 20_____.

YORK COUNTY PLANNING COMMISSION

THE YORK COUNTY PLANNING COMMISSION, AS REQUIRED BY THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, ACT 247 OF 1968, AS AMENDED, REVIEWED THIS PLAN ON _____, 20_____, AND A COPY OF THE REVIEW IS ON FILE AT THE OFFICE OF THE PLANNING COMMISSION IN YOPC FILE NO. _____.
THE CERTIFICATE DOES NOT INDICATE APPROVAL OR DISAPPROVAL OF THE PLAN BY THE YORK COUNTY PLANNING COMMISSION, AND THE COMMISSION DOES NOT REPRESENT NOR GUARANTEE THAT THIS PLAN COMPLIES WITH THE VARIOUS ORDINANCES, RULES, REGULATIONS, OR LAWS OF THE LOCAL MUNICIPALITY, THE COMMONWEALTH OR THE FEDERAL GOVERNMENT.

DIRECTOR, YORK COUNTY PLANNING COMMISSION _____ DATE _____

ENGINEER

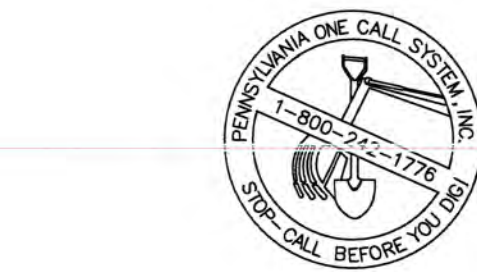
I HEREBY STATE THAT, TO THE BEST OF MY KNOWLEDGE, THE SURVEY AND PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE CITY OF YORK SUBDIVISION AND LAND DEVELOPMENT ORDINANCE. COPYRIGHT BY AND FOR:

BRADLEY E. PETERS, P.E.
REGISTRATION NO. PE 146290
(AGENT FOR SITE DESIGN CONCEPTS, INC.)
07/20/2026
DATE



CARBONATE GEOLOGY CERTIFICATION

I, BRADLEY E. PETERS, P.E., CERTIFY, TO THE BEST OF MY KNOWLEDGE BASED UPON REVIEW OF THE USDA SOIL SURVEY, THAT THE PROPOSED STORMWATER MANAGEMENT FACILITY IS NOT UNDERLAIN BY CARBONATE GEOLOGY.



SITE DESIGN CONCEPTS, INC. HAS MET THE OBLIGATIONS OF PA ACT 121 OF THE PENNSYLVANIA GENERAL ASSEMBLY IN PREPARING THIS PLAN. LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. CONTRACTOR SHOULD CONTACT THE PA ONE CALL SYSTEM (1-800-242-1776) PRIOR TO ANY EXCAVATION AS REQUIRED BY THE PA ACT 121, AS PER THE LATEST AMENDMENT OF PA ACT 287 OF 1974, EFFECTIVE OCTOBER 09, 2008.

DESIGN SERIAL NUMBER 20260753970 (MANCHESTER TOWNSHIP)

CABLE PROTECTION SERVICES INC
PO BOX 481
MIDLOTHIAN, PA 23112
DEBBIE KING
DEBBIE_KING@CABLEPS.COM
804-355-3459

COLUMBIA GAS TRANSMISSION
1700 MACCORRLE AVENUE SE
CHARLESTON, WV 25314
JOEY ERLING
JOEY_ERLING@CENERGY.COM
304-357-3468

USIC
9045 N RIVER ROAD SUITE 200
INDIANAPOLIS, IN 46240
JEFFERY TRUMBOWER
JEFFTRUMBOWER@USICLLC.COM
317-810-8254

MANCHESTER TOWNSHIP MUNICIPAL AUTHORITY
36 N DURE STREET
YORK, PA 17401
CORY MCCOY
CANYC@DAVIDSON.COM
717-540-4805

COLUMBIA GAS OF PA INC
1650 DUBIN ROAD
COLUMBUS, OH 43215
LISA COLLINS
LJCOLLINS@SOURCE.COM
614-325-5991

PENNSYLVANIA ELECTRIC CO
541 WHITE POND DRIVE
AKRON, OH 44320
MELLYSSA ADAMS
MADAMS@PSTENERGYCORP.COM
330-252-4013

VERIZON NORTH
37 W 8TH STREET
WYOMING, PA 18644
RONALD SLINSKE
RONALD.SLINSKE@VERIZON.COM
570-828-4263

TEXAS EASTERN/ENBRIDGE
2801 MARKET PLACE SUITE 400
HARRISBURG, PA 17110
RYAN LUMBATIS
RYAN.LUMBATIS@ENBRIDGE.COM
717-540-8330

CERTIFICATE OF OWNERSHIP, ACKNOWLEDGMENT
OF PLAN AND OFFER OF DEDICATION

(UPI: 36-000-LH-0171.00-00000)
(UPI: 36-000-LH-0171.00-00000)
FORM OF AFFIDAVIT
INDIVIDUALS

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF YORK

ON THIS, the 20th DAY OF July, 2026, BEFORE ME,
Heather E. Roe, the undersigned NOTARY PUBLIC, PERSONALLY
APPEARED FREDRICK FOGELMAN AND TERESA SHULTZ FOGELMAN
TO ME KNOWN OR PROVEN, BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS
THAT HE/SHE ARE THE OWNER(S) OF THE PROPERTY
SHOWN ON THIS PLAN, THAT THE PLAN THEREOF WAS MADE AT THEIR DIRECTION, THAT
HE/SHE ACKNOWLEDGE THE SAME TO BE THEIR ACT AND PLAN, THAT HE/SHE DESIRES THE
SAME TO BE RECORDED AND THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS
PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE
HEREBY DEDICATED TO THE PUBLIC USE.
IN WITNESS WHEREOF, I HERETO SET MY HAND AND OFFICIAL SEAL:

NOTARY PUBLIC
Commonwealth of Pennsylvania - Notary Seal
Heather E. Roe, Notary Public
York County
My commission expires September 19, 2027
Commission number 1236983
Member: Pennsylvania Association of Notaries
TERESA SHULTZ FOGELMAN

NOTARY STAMP SEAL

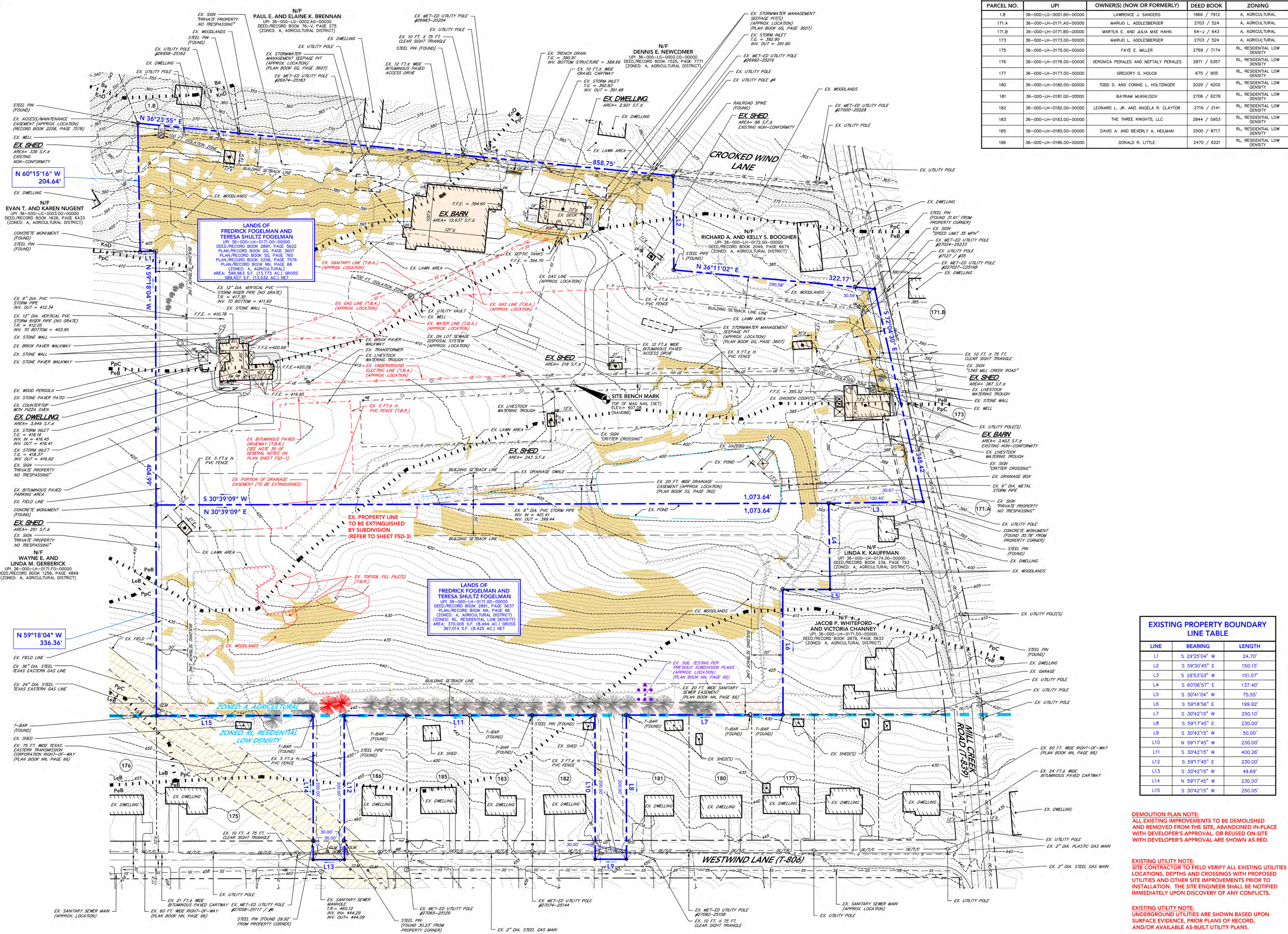
REVISIONS		COMMENTS
NO.	DATE	
1	06.15.26	REVISED PER TOWNSHIP ENGINEER AND YOPC COMMENTS
2	07.20.26	REVISED PER TOWNSHIP ENGINEER COMMENTS



TITLE SHEET
PROPOSED SUBDIVISION
FOR
FREDRICK FOGELMAN AND TERESA SHULTZ FOGELMAN
1345 MILLCREEK ROAD
MANCHESTER TOWNSHIP, YORK COUNTY, PENNSYLVANIA

SCALE		AS NOTED
DRAWN BY	JMB	
CHECKED BY	RMH/ARB	
CONTACT	JCP	
DATE	05.04.26	
FILE NAME	1666.1-FSD-1	
JOB NO.	1666.1	
SHEET NO.	FSD-1	REV.
SHT. 1 OF 6	2	

THIS DRAWING ISSUED
07.20.26
FOR REGULATORY REVIEW ONLY



REVISIONS		
NO.	DATE	COMMENTS
1	06/15/26	REVISED PER TOWNSHIP ENGINEER AND YPOC COMMENTS
2	07/20/26	REVISED PER TOWNSHIP ENGINEER COMMENTS

EXISTING SITE CONDITIONS AND DEMOLITION PLAN

PROPOSED SUBDIVISION

FOR

FREDRICK FOGELMAN AND TERESA SHULTZ FOGELMAN

1345 MILLCREEK ROAD
MANCHESTER TOWNSHIP, YORK COUNTY, PENNSYLVANIA

DEMOLITION PLAN NOTE:
ALL EXISTING IMPROVEMENTS TO BE DEMOLISHED
AND REMOVED FROM THE SITE, ABANDONED IN-PLACE
WITH DEVELOPER'S APPROVAL, OR REUSED ON-SITE
WITH DEVELOPER'S APPROVAL ARE SHOWN AS RED.

EXISTING UTILITY NOTE:
SITE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES
LOCATIONS, DEPTHS AND CROSSINGS WITH PROPOSED
UTILITIES AND OTHER SITE IMPROVEMENTS PRIOR TO
INSTALLATION. THE SITE ENGINEER SHALL BE NOTIFIED
IMMEDIATELY UPON DISCOVERY OF ANY CONFLICTS.

EXISTING UTILITY NOTE:
UNDERGROUND UTILITIES ARE SHOWN BASED UPON
SURFACE EVIDENCE, PRIOR PLANS OF RECORD,
AND/OR AVAILABLE AS-BUILT UTILITY PLANS.

SCALE		AS NOTED
DRAWN BY		JMB
CHECKED BY		RMH/ARB
CONTACT		JCP
DATE		05.04.26
FILE NAME		
1666.1-FSD-1		
JOB NO.		
1666.1		
SHEET NO.		REV.
FSD-2 SHT. 2 OF 6		2

SOILS LEGEND

PLAN LEGEND

 -650- EXISTING CONTOUR LINE
 - EXISTING 40' W/LINE
 - EXISTING GAS LINE
 -650- EXISTING SANITARY-SEWER GRAVITY LINE
 -66 EXISTING 40' W/LINE
 -66 EXISTING OVERHEAD ELECTRIC, TELEPHONE, AND CABLE LINES
 -66 EXISTING UNDERGROUND ELECTRIC LINE
 -66 EXISTING FENCE LINE
 -66 EXISTING STREAM, DRAINAGEWAY OR WATER SURFACE BOUNDARY LINE
 -66 EXISTING PROPERTY LINE
 -66 ADJONER PROPERTY LINE
 -66 EXISTING RIGHT-OF-WAY LINE
 -66 BASEMENT LINE
 -66 EXISTING CENTERLINE
 -66 BUILDING SETBACK LINE
 -66 EXISTING STORM SEWER DRAINAGE LINE
 -66 EXISTING TREE/ARSH LINE
 -66 ZONING DISTRICT BOUNDARY LINE

■	SOIL BOUNDARY LINE
—	<i>EXISTING DECIDUOUS TREE</i>
	<i>EXISTING CONIFER</i>
	<i>EXISTING SIGN</i>
○	<i>EXISTING PROPERTY CORNER (AS STATED)</i>
●	PROPERTY CORNER (NOT MONUMENTED)
□	PROPERTY CORNER – CONCRETE MONUMENT
⊗	<i>EXISTING UTILITY POLE</i>
⊙	GUY ANCHOR
⊖	<i>EXISTING CLEANOUT</i>
⊕	<i>EXISTING HOSE BIB</i>
⊗	<i>EXISTING BOLLARD</i>
⊕	<i>EXISTING PARKING SPACE COUNT</i>

 EXISTING DOWNSPOUT
 EXISTING MAIN DOOR LOCATION
 EXISTING DOCK/OVERHEAD LIFT
 EXISTING WELL
 EXISTING SANITARY SEWER MANHOLE
 EXISTING GAS METER
 EXISTING GAS LINE MARKER
 EXISTING ELECTRIC METER
 EXISTING CABLE PEDESTAL
 EXISTING TELEPHONE PEDESTAL
 EXISTING TRANSFORMER
 EXISTING ELECTRIC BOX
 SURVEY/SITE BENCH MARK

10		PARCEL DESIGNATION LABEL
OW	D.B.	DEED BOOK
	DIA.	DIAMETER
LOCATION	ELEVATION	ELEVATION
	EX	EXISTING
	F.F.	FINISHED FLOOR (ELEVATION)
MANHOLE	FT.	FEET OR FOOT
	IN.	INCHES
	INB.	INVERT
	INV.	MAILBOX
	N/F	NOW OR FORMERLY
	P.B.	PLAN BOOK
	PG.	PAGE
TAL	SPCS	STATE PLANE COORDINATE SYSTEM
	T.G.	TOP OF GRATE
	TYP.	TYPICAL
	T.B.R.	TO BE REMOVED
	T.B.A.	TO BE ABANDONED
	UPI	UNIFORM PARCEL IDENTIFIER

ITEM

GRAPHIC SCALE



(IN FEET)
1 inch = 60 ft.

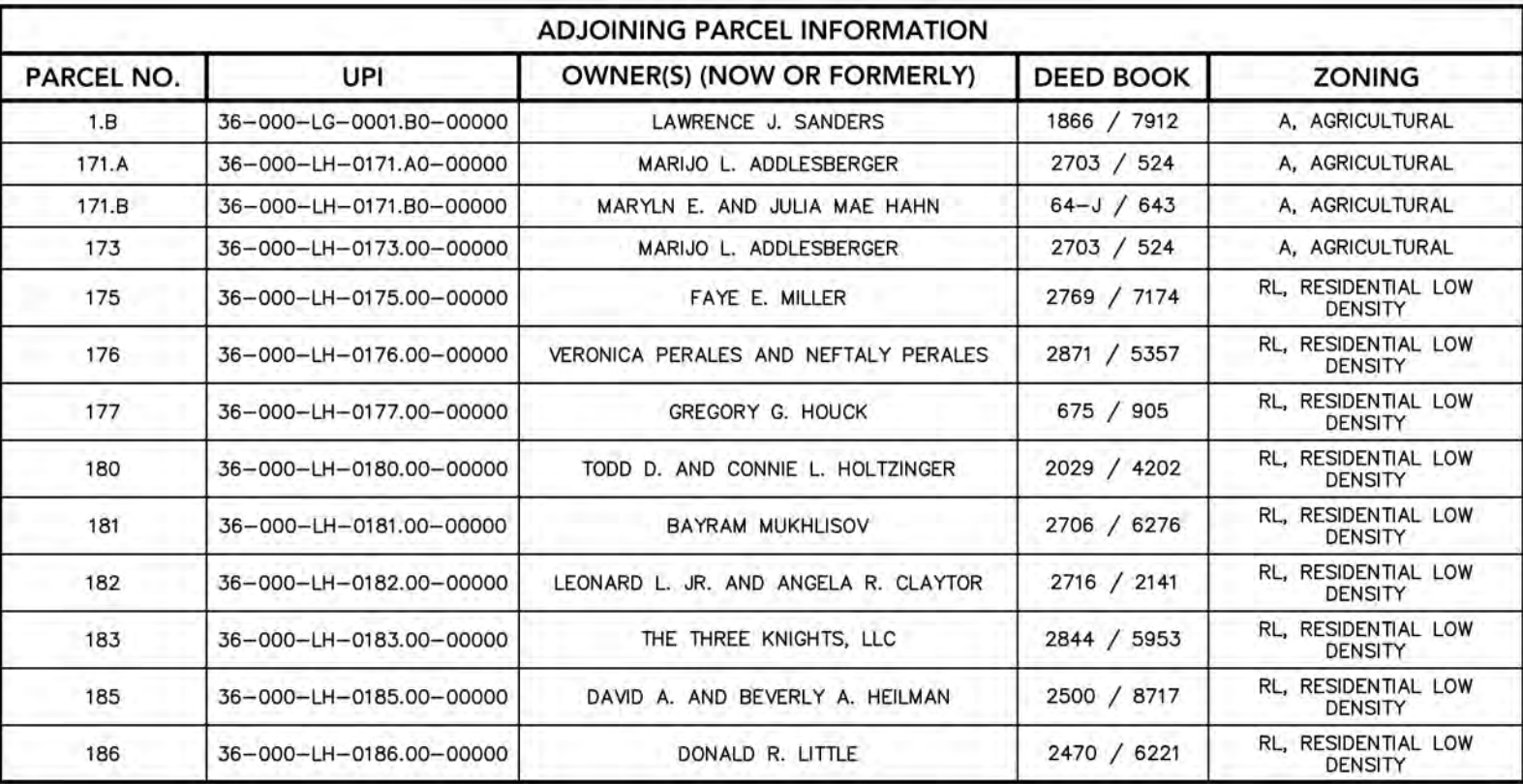
240

SOILS LEGEND

Be	BERMUDIAN SILT LOAM
KnD	KUNESVILLE CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES
LeB	LANSDALE LOAM, 3 TO 8 PERCENT SLOPES
PeB	PENN SILT LOAM, 3 TO 8 PERCENT SLOPES
PpC	PENN-LANSDALE COMPLEX, 8 TO 15 PERCENT SLOPES

	EXISTING BUILDING
	EXISTING CONCRETE
	EXISTING BRICK PAVE
	EXISTING DECK
	EXISTING GRAVEL

	EXISTING STONE PAVERS
	EXISTING TEXAS EASTERN TRANSMISSION CORPORATION RIGHT-OF-WAY
	EXISTING DRAINAGE EASEMENT
	EXISTING ACCESS/MAINTENANCE EASEMENT
	EXISTING SANITARY SEWER EASEMENT



1. THE OWNER OF THE PROPERTY ON WHICH THE STORMWATER MANAGEMENT FACILITY (SUBSURFACE TUNNEL, INFILTRATION BED 1) AND THE STORM SEWER SYSTEM (FROM THE CURB/LEAVE PAVEMENT TO FLARED END SECTION) ARE LOCATED SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE FACILITY AND THE FACILITY AND ALL GRADE SURFACES, DRAINS, INLET STRUCTURES, PIPE RUNS, VEGETATION AND OTHER PROTECTIVE DEVICES. SUCH MAINTENANCE SHALL BE DONE IN ACCORDANCE WITH THE CITY OF CHICAGO'S STANDARD SPECIFICATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR AND MAINTENANCE OF THE SOMS UNTIL RELEASED FROM THE PROJECT. THE LAND OWNER/RESPONSIBLE PARTY (AS DEFINED BELOW) SHALL MAINTAIN THE SOMS THEREAFTER.
3. UPON RELEASE OF THE CONTRACTOR FROM REPAIR AND MAINTENANCE OF THE SOMS, THE OWNER, HIS HEIRS OR ASSIGNS SHALL BE RESPONSIBLE FOR REPAIRING ANY STRUCTURAL DAMAGES OR FAILURES TO THE SOMS WHICH MAY BE THE RESULT OF A COLLISION, ACCIDENT OR MISUSE. IN THE EVENT OF STRUCTURAL DAMAGE, OWNER SHALL BE RESPONSIBLE TO MAKE NECESSARY REPAIRS AS QUICKLY AS POSSIBLE, BUT, IN ANY CASE, WITHIN A PERIOD OF 90 DAYS FOLLOWING THE DATE OF THE DAMAGE.
4. MAINTAIN AREAS DRAINING TO THE SOMS TO PREVENT SOIL WASHOUT INTO THE FACILITIES. IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. IMMEDIATELY REMOVE ALL TRASH OR OTHER LITTER.
5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC WITHIN THE INFILTRATION BASINS TO ONLY THAT IS NECESSARY FOR MOWING OR SOIL REPAIRS.
6. PROHIBIT STORAGE OF SOIL, MULCH OR HAZARDOUS MATERIALS ON THE SOMS OR FENCES THAT DRAIN TO THE SOMS.
7. THE OWNER SHALL NOT CONSTRUCT, PLANT, OR MAINTAIN ANY STRUCTURES, FENCES, TREES, SHRUBBERY, ETC. WITHIN THE SANITARY SEWER, STORM WATER OR UTILITY RIGHTS-OF-WAY/EASEMENTS, TO ENSURE A FREE AND UNHINDERED FLOW OF ALL FLOWING MEDIA THROUGH THE SANITARY SEWER, STORM WATER, OR UTILITY, OR CHANGE IN GROUND CONTOURS WITHIN THE RIGHTS-OF-WAY/EASEMENTS MAY BE PERMITTED ONLY WITH WRITTEN CONSENT OF THE MUNICIPALITY.
8. WITH INSPECTION RECORDS SHALL BE MAINTAINABLE BY THE LAND OWNER FOR NOT LESS THAN FIVE (5) YEARS AND SHALL BE MADE AVAILABLE TO THE MUNICIPALITY WITHIN FIVE (5) CALENDAR DAYS OF RECEIPT OF WRITTEN REQUEST BY THE MUNICIPALITY.
9. RESPONSIBLE PARTY: FREDERICK FOGELMAN AND TERESA SHULTZ FOGELMAN, HEIRS OR ASSIGNS.

1. DETAILED PLANNING AND DESIGN, INCLUDING PROPOSED STORMWATER MANAGEMENT, ON-LOT WELL, SANITARY SEWER AND OTHER UTILITY SERVICES FOR THE FUTURE CONCEPTUAL DETACHED SINGLE FAMILY DWELLING, DRIVE AND ASSOCIATED SITE IMPROVEMENTS ON RECONFIGURED LOT 171 SHALL BE PROVIDED AS PART OF A FUTURE STORMWATER MANAGEMENT SITE PLAN TO BE SUBMITTED AND APPROVED BY MANCHESTER TOWNSHIP PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR SAID IMPROVEMENTS ON RECONFIGURED LOT 171.
2. THE DEVELOPER IS RESPONSIBLE FOR COMPLETING RECORD DRAWINGS OF ALL STORMWATER MANAGEMENT FACILITIES. THE RECORD DRAWING SHALL INCLUDE A CERTIFICATION STATEMENT FROM THE ENGINEER STATING THAT THE FACILITIES WERE BUILT TO THE APPROVED PLAN OR STATE ANY DEVIATIONS FROM THE APPROVED PLANS.

1000 JOURNAL OF CLIMATE

SITE IMPROVEMENT PLAN

PROJECT
PROPOSED SUBDIVISION
FOR
FREDRICK FOGELMAN AND TERESA SHULTZ FOGELMAN
1345 MILLCREEK ROAD
MANCHESTER TOWNSHIP, YORK COUNTY, PENNSYLVANIA

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

STEEP SLOPES OF 15%
AND GREATER

SOILS LEGEND

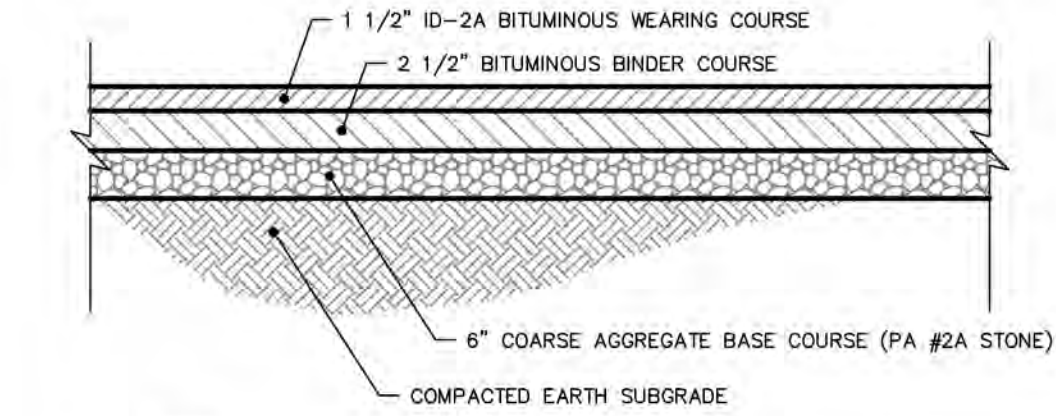
ReB BERMIUDIAN SILT LOAM
HdD KUNESVILLE CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES
LaS LANDSLOE LOAM, 3 TO 8 PERCENT SLOPES
PeB PENN SILT LOAM, 3 TO 8 PERCENT SLOPES
PcB PENN-LANDSLOE COMPLEX, 8 TO 15 PERCENT SLOPES

	EXISTING BUILDING		EXISTING TEXAS EASTERN TRANSMISSION CORPORATION RIGHT-OF-WAY
	EXISTING CONCRETE		EXISTING ACCESS/MAINTENANCE EASEMENT
	EXISTING BRICK PAVERS		EXISTING SANITARY SEWER EASEMENT
	EXISTING DECK		PROPOSED DRAINAGE EASEMENT
	EXISTING GRAVEL		PROPOSED BITUMINOUS PAVING AREA
	EXISTING STONE PAVERS		FUTURE CONCEPTUAL BUILDING AREA
	EXISTING DRAINAGE EASEMENT		FUTURE CONCEPTUAL BITUMINOUS PAVEMENT

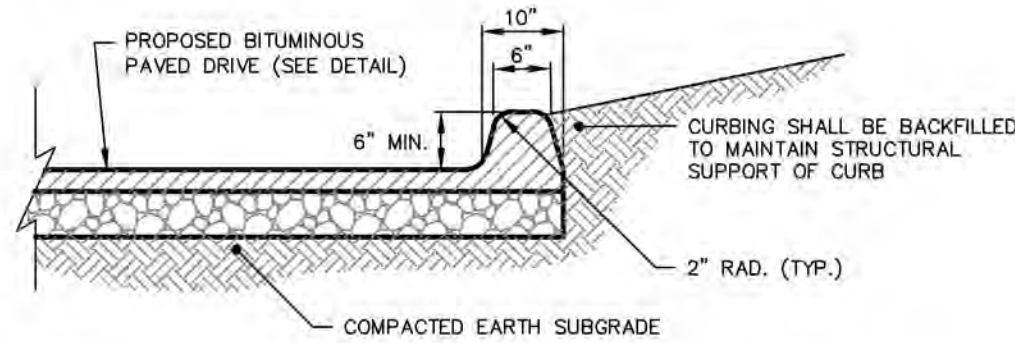
SCALE		AS NOTED
DRAWN BY		JMB
CHECKED BY		RMH/ARB
CONTACT		JCP
DATE		05.04.26
FILE NAME 1666.1-FSD-1		
JOB NO. 1666.1		
SHEET NO. FSD-4 SHT. 4 OF 6		REV. 2

PERMANENT SEEDING AND MULCHING
SPECIFICATIONS AND NOTES

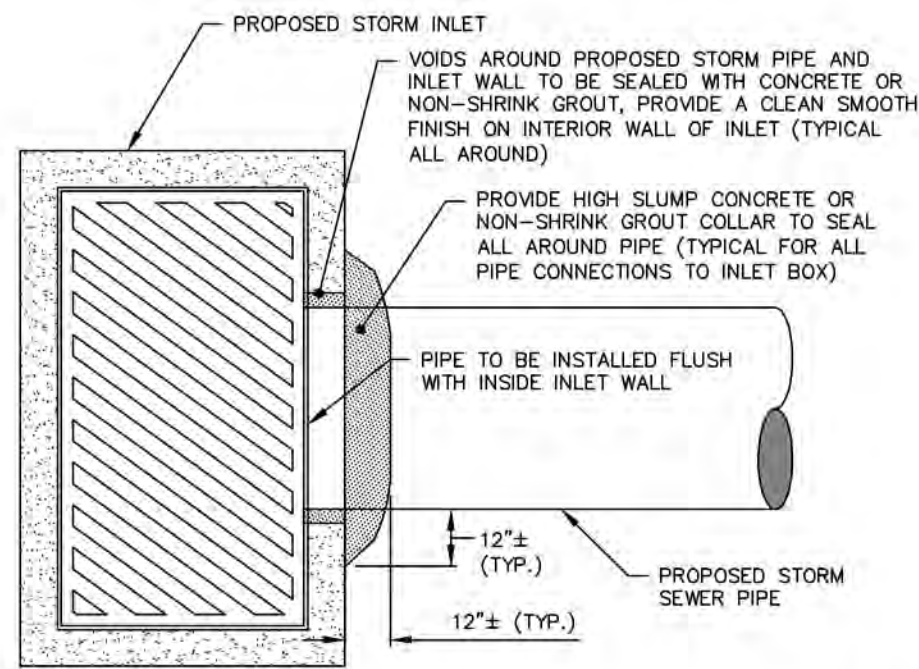
- PERMANENT GRASS OR LEGUME COVER.
- A. ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED SHALL BE COVERED WITH GRASS OR A LEGUME IN ORDER TO MINIMIZE EROSION, UNLESS ANOTHER SUITABLE GROUND COVER IS DIRECTED BY THE OWNER.
- B. MULCHING SHALL BE USED TO PROTECT SEEDING AND TO REDUCE RUNOFF. STRAW MULCH SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 3 TONS/ACRE.
- C. THE BELOW PERMANENT SEEDING MIXTURES ARE FROM THE PENN STATE AGRONOMY GUIDE. THE SEED MIXTURES SHALL CONSIST OF:
- | SEED TYPE | % BY WT. | SEEDING RATE | SEEDING DATES |
|---------------------------------|----------|-------------------|------------------------|
| LAWN MIX (USED THROUGHOUT SITE) | | | |
| KY. BLUEGRASS | 30% | 4 LBS./1,000 S.F. | MARCH 15 TO JUNE 1 |
| CREEP RED FESCUE | 55% | | AUGUST 1 TO OCTOBER 15 |
| PERENNIAL RYEGRASS | 15% | | |
- D. IN THE ABSENCE OF SOIL TEST RESULTS, FERTILIZER OF 10-20-20 AT AN APPLICATION RATE OF 1,000 LB./ACRE SHALL BE APPLIED WITH THE PERMANENT SEEDING.
- E. IN THE ABSENCE OF SOIL TEST RESULTS, LIME AT AN APPLICATION RATE OF 6 TONS/ACRE OF AGRICULTURAL GRADE LIME SHALL BE APPLIED WITH THE PERMANENT SEEDING.
- F. STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL. ABOUT 3 HOURS. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR. NOTE: CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED.



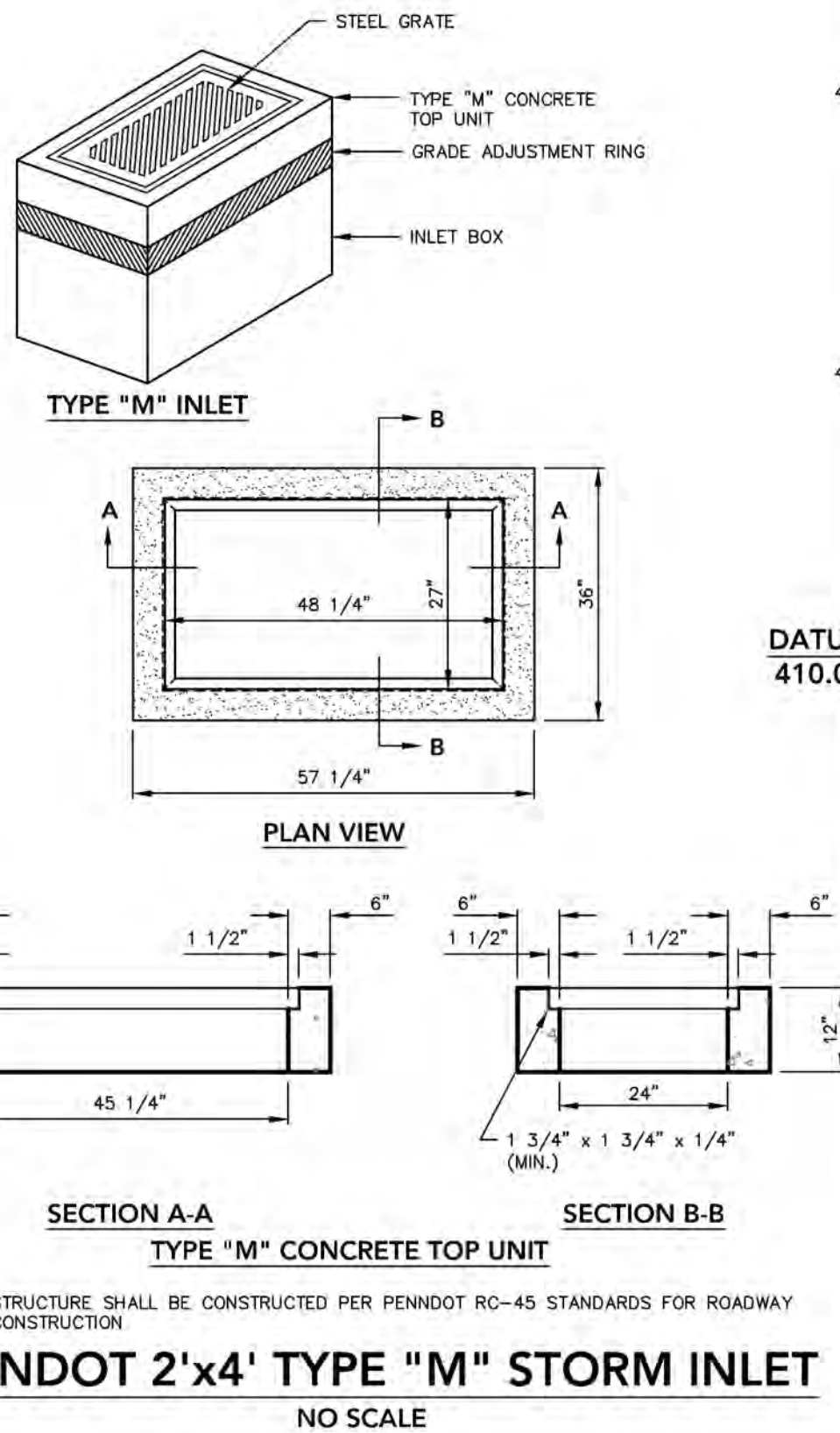
TYPICAL NORMAL DUTY BITUMINOUS
PAVING SECTION
NO SCALE



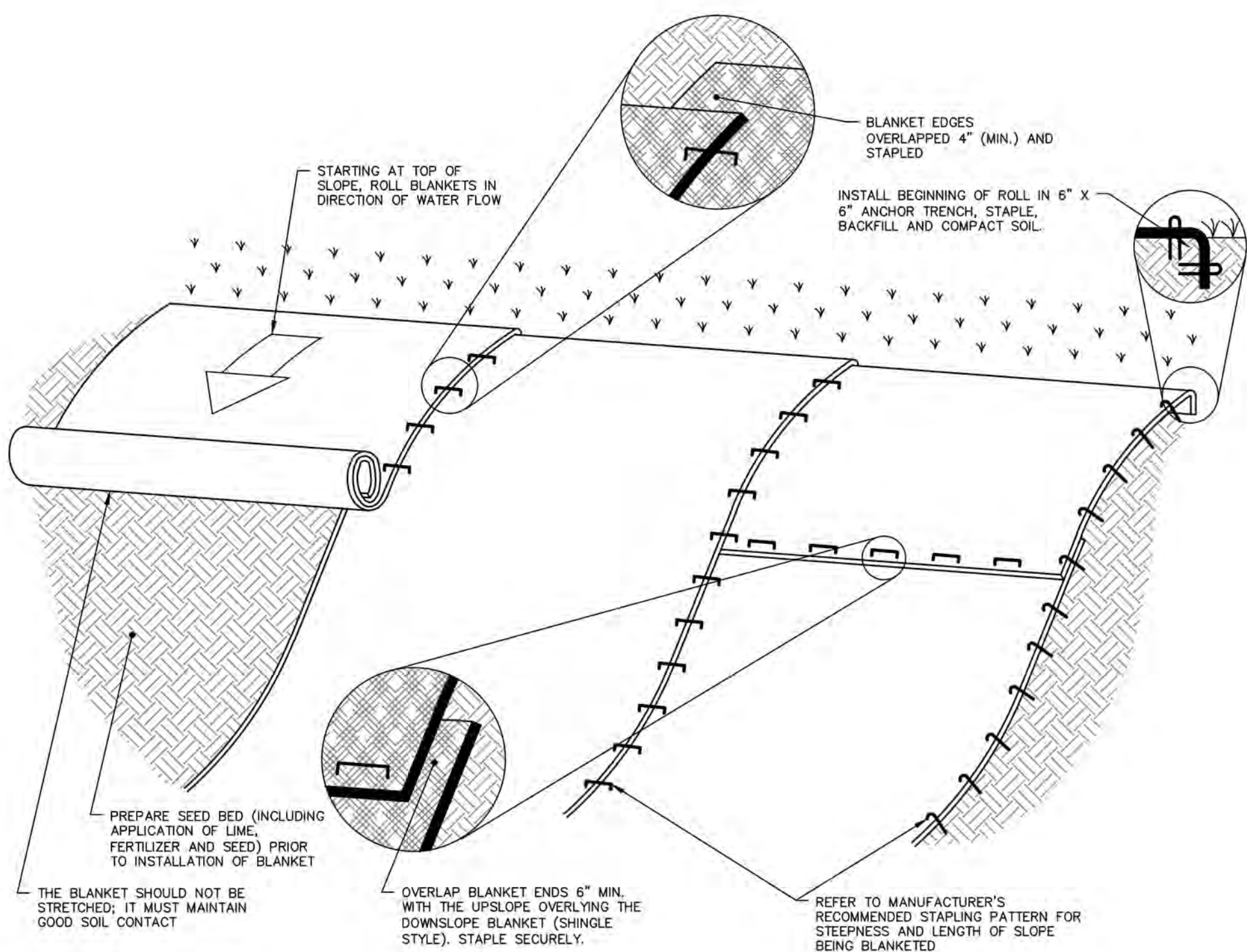
TYPICAL ROLLED BITUMINOUS CURB
NO SCALE



TYPICAL GROUTING/ENCASEMENT AT
STORM INLET/BOX PIPE CONNECTION
NO SCALE

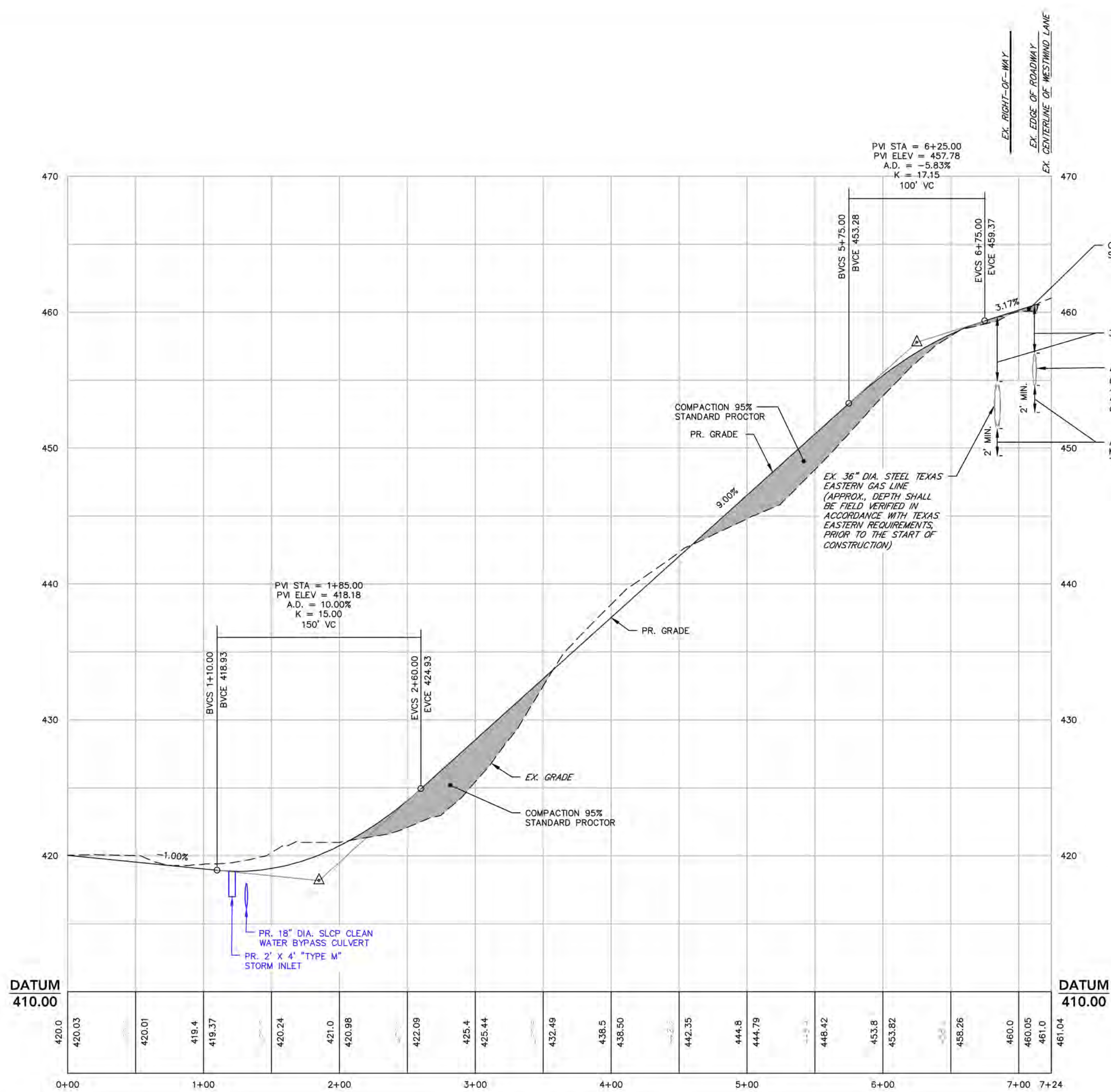


PENNDOT 2'x4' TYPE "M" STORM INLET
NO SCALE

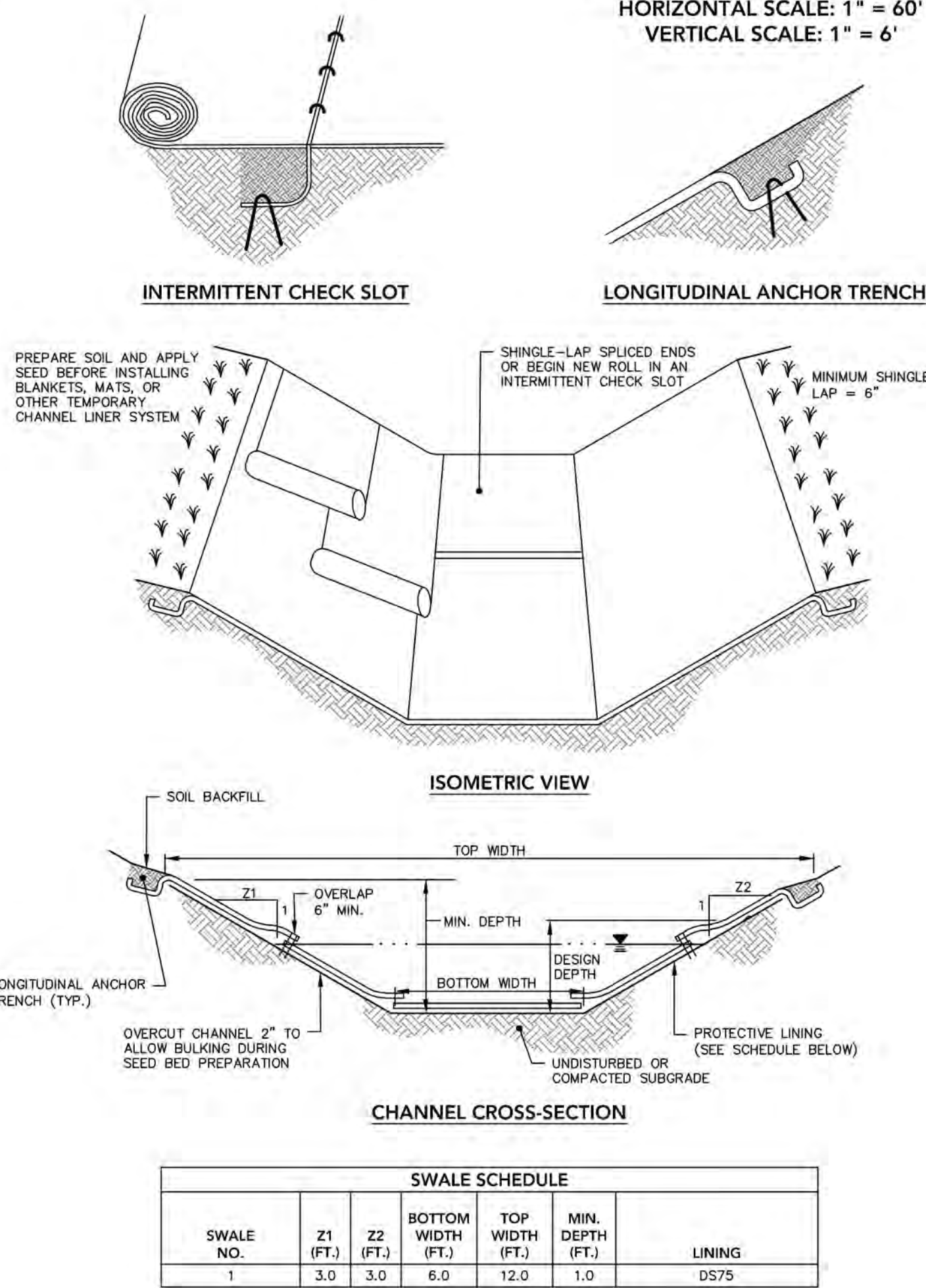


- NOTES:
- SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
 - PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
 - SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS.
 - BLANKET SHALL HAVE GOOD 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 MUST 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.
 - USE NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKET, OR AMERICAN EXCELSIOR CURLEX AS APPLICABLE, OR APPROVED EQUIVALENT.
 - MATTING ON ALL SLOPE 3:1 OR STEEPER, ALL AREAS OF CONCENTRATED FLOWS, AND ALL DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER.

TYPICAL EROSION CONTROL BLANKET INSTALLATION FOR SLOPES
NO SCALE

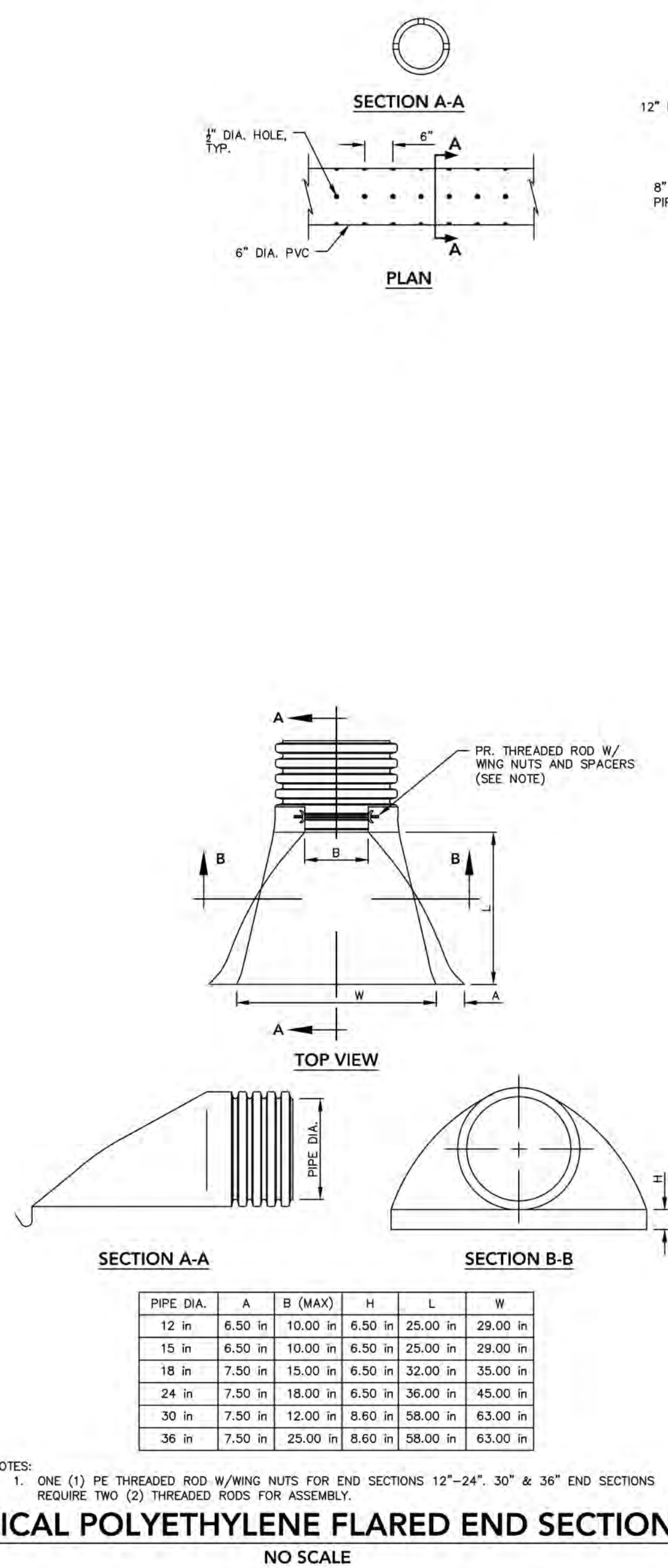


PROPOSED DRIVEWAY
CENTERLINE PROFILE
HORIZONTAL SCALE: 1" = 60'
VERTICAL SCALE: 1" = 6'

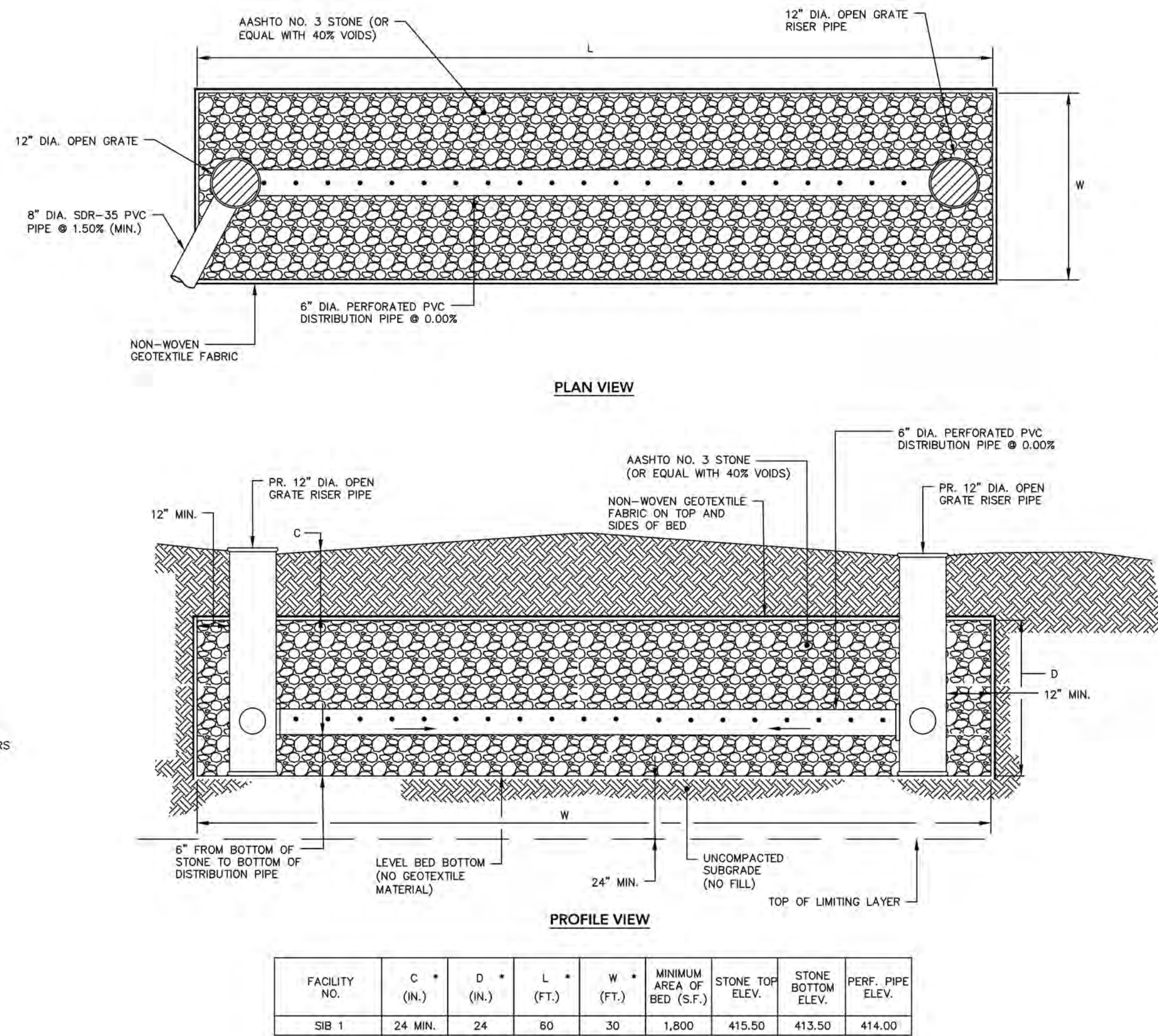


- NOTES:
- ALL GEOTEXTILE FABRIC TO BE INSTALLED/ANCHORED PER MANUFACTURER'S RECOMMENDATIONS.
 - ALTERNATIVE EROSION CONTROL MATTING MAY BE PROVIDED UPON APPROVAL OF ENGINEER AND THE COUNTY CONSERVATION DISTRICT.
 - ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.
 - CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
 - ALL CHANNELS MUST BE KEPT FREE OF OBSTRUCTIONS SUCH AS FILL GROUND, FALLEN LEAVES AND WOODY DEBRIS, ACCUMULATED SEDIMENT, AND CONSTRUCTION MATERIALS/WASTES. CHANNELS SHOULD BE KEPT MOVED AND/OR FREE OF ALL WEEDY, BRUSHY OR WOODY GROWTH. ANY UNDERGROUND UTILITIES RUNNING ACROSS/THROUGH THE CHANNEL(S) SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL(S) REPAIRED AND STABILIZED PER THE CHANNEL CROSS-SECTION DETAIL.
 - VEGETATED CHANNELS SHALL BE CONSTRUCTED FREE OF ROCK, TREE ROOTS, STUMPS OR OTHER PROJECTIONS THAT WILL IMPED EROSION CONTROL. CHANNEL SHALL BE INITIALLY OVER-EXCAVATED TO ALLOW FOR THE PLACEMENT OF TOPSOIL.

FABRIC/GRASS LINED SWALE
CROSS-SECTION AND SCHEDULE
NO SCALE 1:500



TYPICAL POLYETHYLENE FLARED END SECTION
NO SCALE



** REFER TO SITE PLAN FOR LOCATION(S), SIZE(S) AND LENGTH(S) OF PIPE(S) AND CONFIGURATION(S) OF SYSTEM(S).

- NOTES:
- ALL CLEANOUTS SHALL CONTAIN THREADED CAPS. REFER TO SITE PLAN FOR LOCATION OF INLETS, CLEANOUTS, LOCATED WITHIN ALL SUBSURFACE STONE INFILTRATION BEDS. REFER TO ENLARGED GRADING PLAN AND PROFILES FOR TOP ELEVATIONS OF INLETS AND CLEANOUTS LOCATED WITHIN THE SUBSURFACE STONE INFILTRATION BEDS.
 - DISTRIBUTION PIPES FOR SUBSURFACE INFILTRATION BED SHALL BE CONTINUOUSLY PERFORATED SMOOTH INTERIOR, WITH A MINIMUM INSIDE DIAMETER OF 6 INCHES. SLOPE PIPE SHALL MEET AASHTO M252, TYPE S OR AASHTO M294, TYPE S.

TYPICAL SUBSURFACE STONE INFILTRATION BED (S.I.B.)
NO SCALE

THIS DRAWING ISSUED
07.20.26
FOR REGULATORY REVIEW ONLY

REVISIONS		COMMENTS
NO.	DATE	
1	06.15.26	REVISED PER TOWNSHIP ENGINEER AND YCPC COMMENTS
2	07.20.26	REVISED PER TOWNSHIP ENGINEER COMMENTS



PROPOSED STORM SEWER PROFILE
CLEANWATER BYPASS CULVERT
HORIZONTAL SCALE: 1" = 60'
VERTICAL SCALE: 1" = 6'

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LAND DEVELOPMENT CONSULTANTS
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Civil Engineering • Surveying • Landscape Architecture • Land Planning • Environmental Consulting

SITE IMPROVEMENTS PLAN PROFILES, DETAILS, AND NOTES
PROPOSED SUBDIVISION
FREDRICK FOGELMAN AND TERESA SHULTZ FOGELMAN
1345 MILLCREEK ROAD
MANCHESTER TOWNSHIP, YORK COUNTY, PENNSYLVANIA

SCALE	AS NOTED
DRAWN BY	JMB
CHECKED BY	RMH/ARB
CONTACT	JCP
DATE	05.04.26
FILE NAME	1666.1-FSD-1
JOB NO.	1666.1
SHEET NO.	FSD-5
REV.	2
SHT. 5 OF 6	

APPLICANT: **FRED AND TERESA FOGELMAN** APPLICATION NO. _____

STREET: **WESTWIND LANE** LEGAL SPEED LIMIT: **35 MPH**

MEASURED BY: **JCP** DATE: **04.30.2028**

FOR DEPARTMENT USE ONLY: Safe-Running Speed: **85th Percentile Speed**

A

Diagram A illustrates the sight triangle for a proposed driveway onto Westwind Lane. The diagram shows a road with a center dashed line and edge lines. A vehicle is shown in the driver's eye position, 10 feet from the edge of the travel lane. The sight triangle is defined by the sight line and the edge of the travel lane. The diagram includes dimensions for the sight triangle: a horizontal distance of 400' and a vertical distance of +2.0' for the sight line, and a horizontal distance of 300' and a vertical distance of +4.0' for the sight line. The distance required for the sight triangle is 230'. The diagram also shows a 'DRIVER'S EYE 10'' position and a 'DISTANCE REQUIRED FSD = 242'' for the sight triangle.

THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER AT AN DRIVEWAY LOCATION CAN CONTINUOUSLY SEE ANOTHER VEHICLE APPROACHING ON THE ROADWAY.

PROPOSED DRIVEWAY ONTO WESTWIND LANE SIGHT DISTANCE MEASUREMENTS

(PROPOSED DRIVEWAY)

NO SCALE

APPLICANT	FRED AND TERESA FOLEMAN		APPLICATION NO.	
STREET	WESTWIND LANE		LEGAL SPEED LIMIT	35 MPH
MEASURED BY	BDW	DATE	06.09.2026	
FOR DEPARTMENT USE ONLY: Safe-Running Speed		85th Percentile Speed		

A

Diagram illustrating the sight triangle for a future conceptual driveway. The diagram shows a road with a 408' sight triangle for a 42.3% grade and a 408' sight triangle for a -2.0% grade. A driver's eye height of 10' is indicated. The diagram also shows the distance required for a vehicle to stop (FSD) and the edge of travel lane.

APPLICANT	FRED AND TERESA FOGELMAN			APPLICATION NO.	
STREET	CROOKED KIDNEY LANE		LEGAL SPEED LIMIT	35 MPH	
MEASURED BY	BDW/BFB		DATE	06.09.2026	
FOR DEPARTMENT USE ONLY: Safe-Running Speed			85th Percentile Speed		

APPLICANT FRED AND TERESA FOEGELMAN APPLICATION NO. _____

STREET MILL CREEK ROAD LEGAL SPEED LIMIT 35 MPH

MEASURED BY BWM/BRF DATE 06.09.2026

FOR DEPARTMENT USE ONLY: Safe-Running Speed _____ 85th Percentile Speed _____

A.

Diagram illustrating the existing driveway onto Mill Creek Road, showing sight distance measurements. The diagram includes the following details:

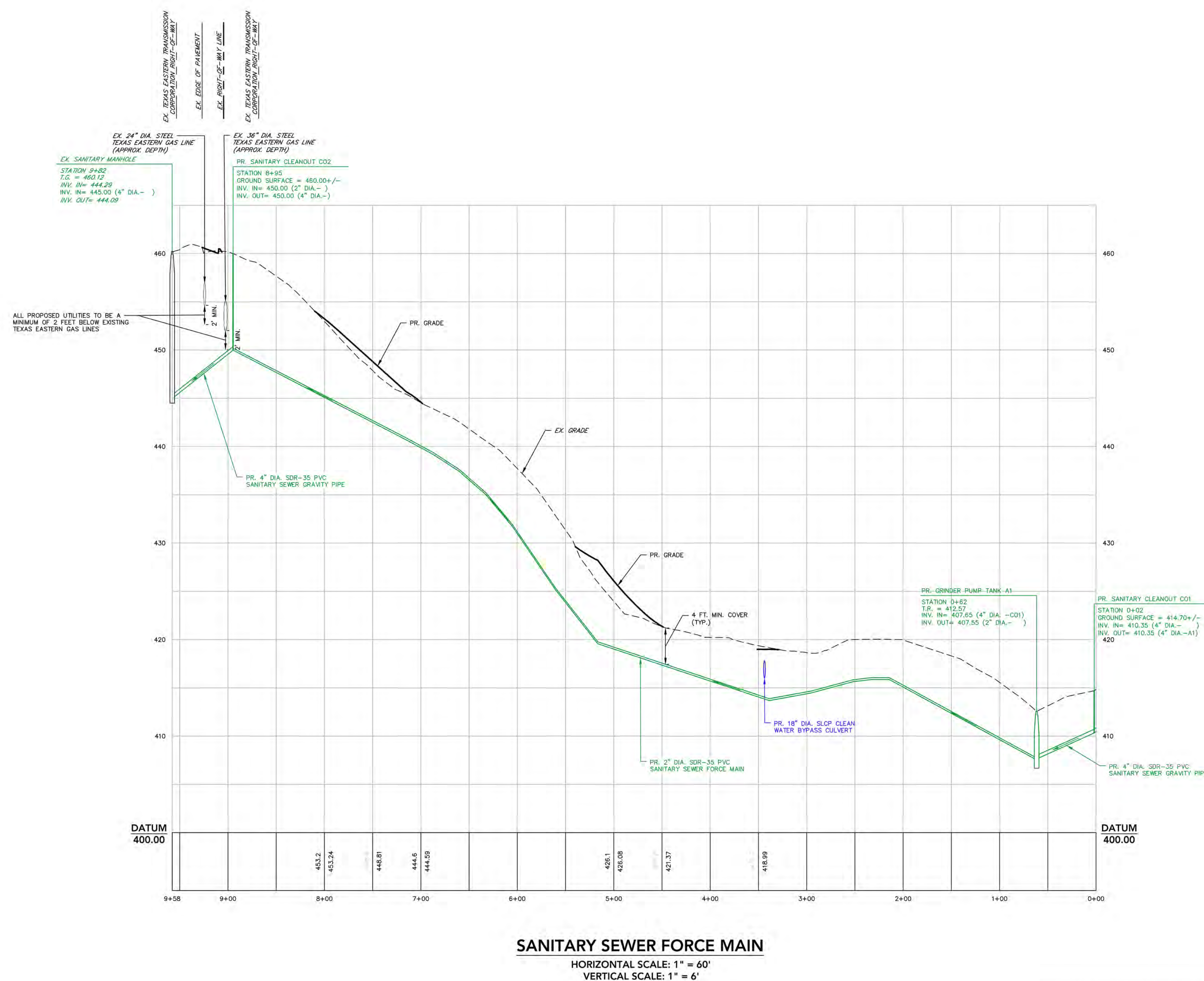
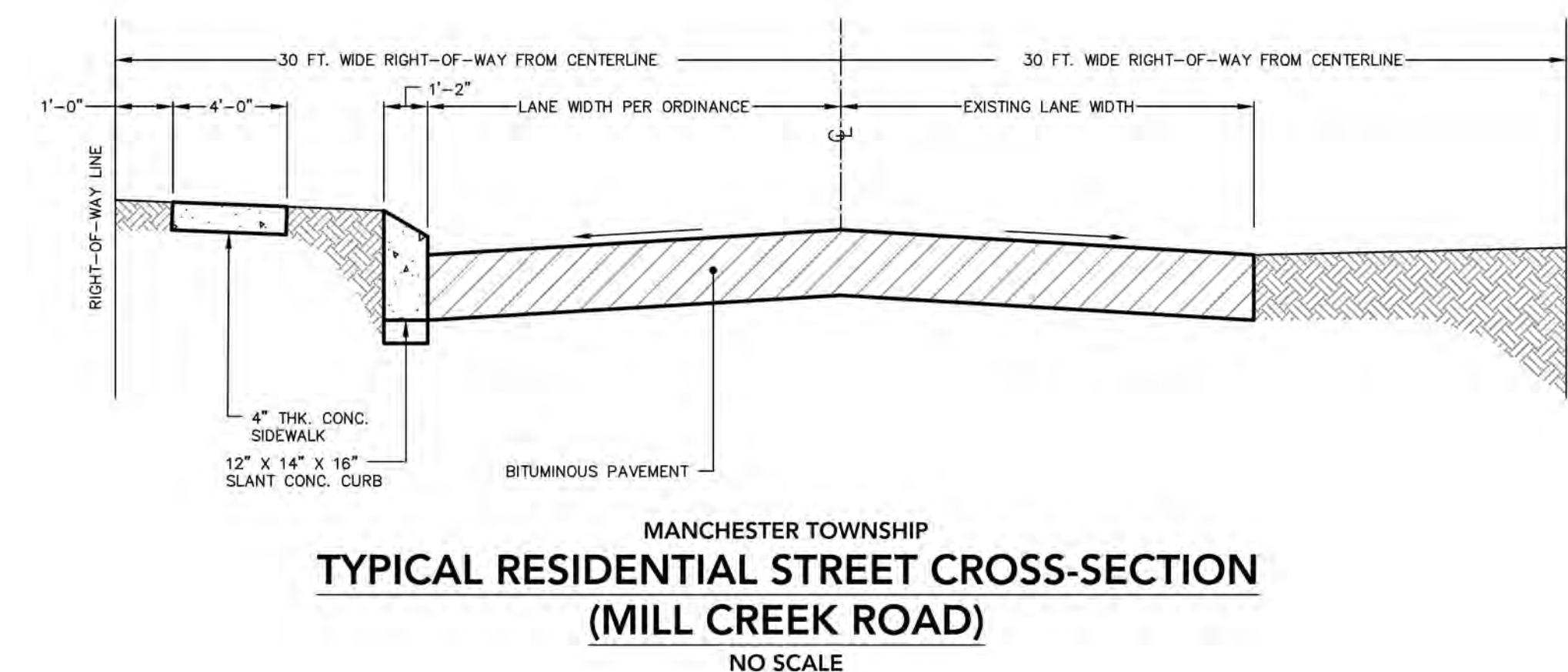
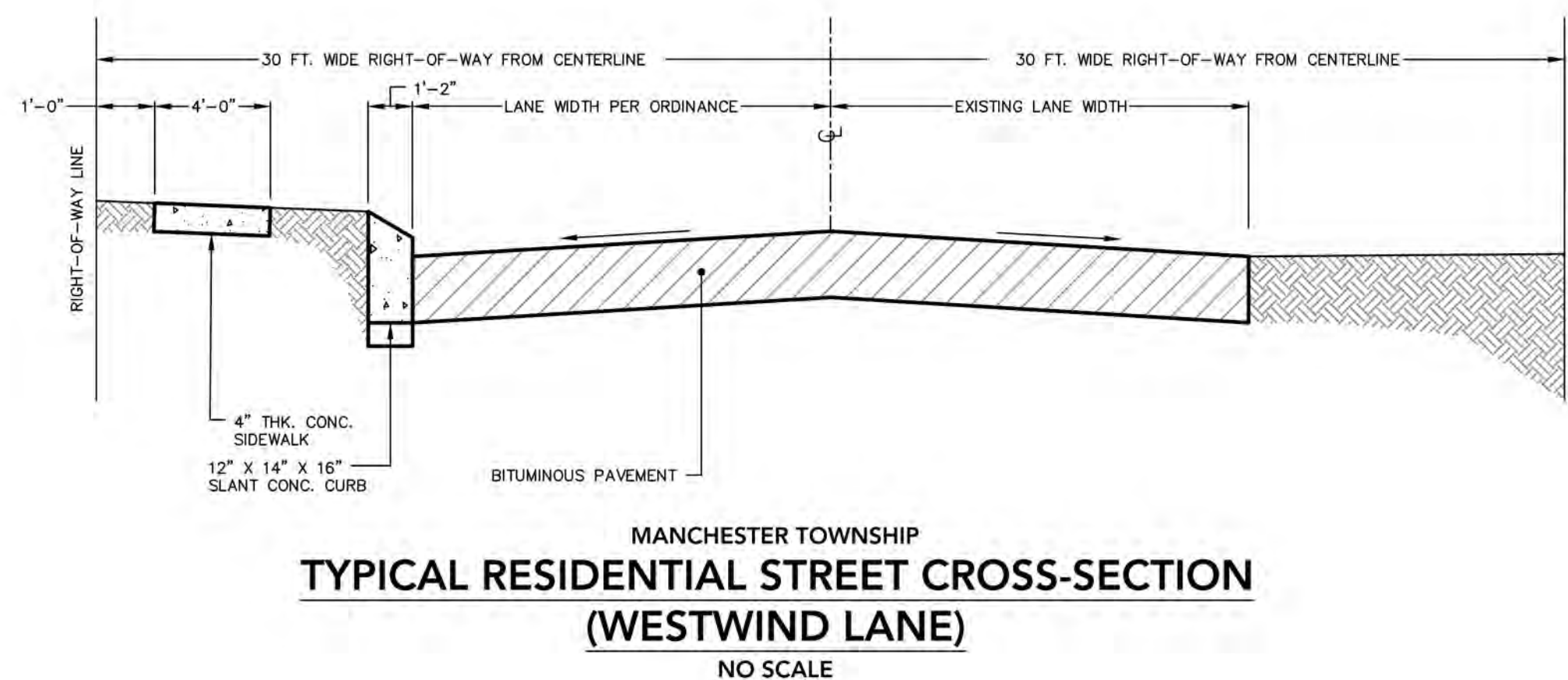
- Grade: -7.0%
- Distance Required FSD = 208'
- Distance Required FSD = 238'
- Driver's Eye 10'
- Edge of Travel Lane
- Sight Line
- 700' $\pm 7.0\%$
- 209'

THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER AT A DRIVEWAY LOCATION CAN CONTINUOUSLY SEE ANOTHER VEHICLE APPROACHING ON THE ROADWAY.

EXISTING DRIVEWAY ONTO MILL CREEK ROAD SIGHT DISTANCE MEASUREMENTS

(EXISTING DRIVEWAY)

NO SCALE



REVISIONS		
NO.	DATE	COMMENTS
1	06/15/26	REVISED PER TOWNSHIP ENGINEER AND YOPC COMMENTS
2	07/20/26	REVISED PER TOWNSHIP ENGINEER COMMENTS

--

solc

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DATE
SANITARY SEWER PROFILES AND STREET CROSS-SECTIONS
PROJECT
PROPOSED SUBDIVISION
1ST FERRA SHULTZ FOGELMAN
17345 MILLIKEN ROAD
MANCHESTER TOWNSHIP, YORK COUNTY, PENNSYLVANIA

SCALE		AS NOTED
DRAWN BY		JMB
CHECKED BY		RMH/ARB
CONTACT		JCP
DATE		05.04.26
FILE NAME		
1666.1-FSD-1		
JOB NO.		
1666.1		
SHEET NO.		REV.
FSD-6 SHT. OF 6		2

STORMWATER MANAGEMENT REPORT

FOR

PROPOSED DRIVEWAY

FOR

FREDRICK FOGELMAN AND TERESA SHULTZ FOGELMAN

**1345 Mill Creek Road
Manchester Township, York County, PA**

Prepared by:



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Civil Engineering • Surveying • Landscape Architecture • Land Planning • Environmental Consulting

SDC Project # 1666.1

June 15, 2026

REVISED July 20, 2026

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Drainage Area Map	DR-1

Stormwater Management Design and Report,
Prepared by: Jared M. Bodisch, EIT
Reviewed by: Bradley E. Peters, PE

STORMWATER MANAGEMENT NARRATIVE

Project Description

The Subject Project Site currently exists as two separate parcels; one being identified as Tax Map LH, Parcel 171, 1345 Mill Creek Road, and the other being identified as Tax Map LH, Parcel 171.G, located along Westwind Lane. Both parcels are located within Manchester Township, York County. Parcel 171 is entirely located within the A, Agricultural Zone and Parcel 171.G is primarily located within the A, Agricultural Zone with two fifty-foot wide, 200-foot long strips being located within the RL, Residential Low Density Zone. Parcel 171 is improved with two single-family detached dwellings, two barns, multiple sheds, and multiple driveways. Parcel 171.G is improved with a shed. This Stormwater Management Report will be based upon the proposed subdivision conditions and is solely for the proposed driveway and associated improvements on Reconfigured Parcel 171.G of the aforementioned subdivision.

The purpose of this Final Minor Subdivision Plan is to depict the proposed lot reconfiguration of Parcel 171 and 171.G, and a proposed paved bituminous driveway and associated improvements on Reconfigured Lot 171.G. The proposed limit of earth disturbance is less than **one (1) acre**.

In order to provide stormwater management for the impervious area, one (1) subsurface stone infiltration bed (S.I.B.) has been proposed to meet the volume control requirements of Control Guidance 2 (CG-2), per the Manchester Township's Stormwater Management Ordinance. CG-2 requires that the first two (2) inches of increased runoff from all new impervious areas be captured and treated. The total amount of runoff to be retained on site was determined to be 1,449 c.f. To capture this volume, the driveway will be graded to direct runoff into a 2'x4' Type "M" Precast Concrete Inlet which will discharge directly into the subsurface stone infiltration bed. The subsurface stone infiltration bed was designed to provide a storage/removal volume of 1,482 c.f., exceeding the required 1,449 c.f.

Existing Conditions

Existing slopes across the Site range from 3% to 25%. Based on the Soil Survey of York County, the existing Soil Series within the Site consist of Klinesville Channery Silt Loam (KnD), Penn Silt Loam (PeB) and Penn-Lansdale Complex (PpC). The area where the majority of proposed construction will take place is underlain by soils which are classified as hydrologic soil groups "B". The underlying geology is not carbonate based upon review of the USDA Soil Survey.

The prior land use over the last 50 years has been single-family detached dwelling and farm land. There has been no soil contamination to the best of our knowledge.

Downstream Watercourse Analysis

Stormwater runoff from the majority of the area of improvements sheet flows overland in a northerly direction into an existing drainage swale, that discharges into an existing pond located on Reconfigured Lot 171. The pond discharges into an existing drainage box on Reconfigured Lot 171 which discharges into the existing storm sewer culvert pipe and crosses Mill Creek Road. Runoff then flows overland in a northwesterly direction and ultimately discharges into the Little Conewago Creek. The Chapter 93 receiving water classification for this section of Little Conewago Creek is TSF (Trout Stocking Fishery), Reach Code #: 02050306001899.

Thermal Impacts to Receiving Waters

Thermal impacts will be avoided by utilizing a subsurface stone infiltration bed which will extend the retention time of the stormwater runoff on-site prior to reaching receiving waters. The majority of the proposed impervious areas are tributary to the stormwater SIB which will decrease the first flush deterioration that occurs during summer storm events when the driveway generates stormwater runoff having higher temperatures than receiving waters.

Soils information

The attached Soils Map shows the Project location and soil types. The soil types within the project area are as follows:

<u>Symbol Classification</u>	<u>Description</u>
KnD	Klinesville Channery Silt Loam, 15 to 25 percent slopes
PeB	Penn Silt Loam, 3 to 8 percent slopes
PpC	Penn-Lansdale Complex, 8 to 15 percent slopes

Soil types are classified as hydrologic soil groups 'B' and consists of various sloping areas.



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Project: Proposed Driveway Building
 SDC Project #: 1666.1
 Calculated By: JMB Date: 06.10.26

CONTROL GUIDANCE - 2 (CG-2) CALCULATIONS PER THE MANCHESTER TOWNSHIP STORMWATER MANAGEMENT ORDINANCE

STRUCTURE / FACILITY: Stone Infiltration Bed-1

Proposed impervious area (within total drainage area tributary to Stone Infiltration Bed) = 8,692 s.f.
 Capture at least the first two (2) inches of runoff from all new impervious surfaces.

REQUIRED STORAGE VOLUME CALCULATIONS:

$$8,692 \text{ s.f.} \times 2.0 \text{ in.} / 12 \text{ in./ft.} = 1,449 \text{ c.f.}$$

PROPOSED STORAGE VOLUME CALCULATIONS:

Proposed Stone Storage Volume provided (below grade): 1,440 c.f. (Refer to Calculation Below)

Bed Area = 1,800 s.f. (60 ft. x 30 ft.)

Stone Depth = 2.00

Void Space = 40%

Proposed Stone Bed Storage Volume provided (below grade): $1,800 \text{ s.f.} \times 2.0 \text{ ft.} \times 40\%$

Proposed Storage Volume provided (by infiltration): 42 c.f. (Refer to Calculation Below)

2 Hour Infiltration Volume = Bed Bottom Area $\times$ Infil. Rate $\times$ 2 hrs. $\times$ (1/12)

2 Hour Infiltration Volume = $1,800 \text{ s.f.} \times 0.14 \text{ in./hr.} \times 2 \text{ hrs.} \times (1/12)$

Total Storage Provided by Subsurface Stone Bed:

(Stone Bed Storage Volume + Infiltrated Volume)

$$\boxed{1,482 \text{ c.f.}} \geq 1,449 \text{ c.f.}$$

* Infil. Rate utilized above was assumed and will be field verified during construction.



Project: Proposed Driveway Building

SDC Project #: 1666.1

Calculated By: JMB Date: 06.10.26

DEWATERING ANALYSIS FOR: Stone Infiltration Bed-1

The following dewatering calculation has been computed for the storage area of the stone infiltration bed. The volume of water for infiltration is the entire volume of the stone bed. The area of infiltration has been taken as the bottom area for the bed. The infiltration rate used in the calculations below is based upon an assumed rate and should be verified during construction.

Data:

Facility Bottom Area = 1,800 s.f.
Infiltration Rate = 0.14 in/hr
Volume of Water to Infiltrate = 1,482 c.f.

Calculation:

$$\frac{1,482 \text{ c.f.}}{0.14 \frac{\text{in.}}{\text{hr.}} \times 12 \frac{\text{ft.}}{\text{in.}} \times 1,800 \text{ s.f.}} = 70.6 \text{ hrs.}$$

$$\frac{70.6 \text{ hr.}}{24 \frac{\text{hr.}}{\text{day}}} = 2.9405 \text{ day(s)}$$

Conclusion:

Therefore the facility dewater in 2.94 day(s), after the outlet structure has finished discharging.



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LAND DEVELOPMENT CONSULTANTS

Project: Proposed Driveway

SDC Project #: 1666.1

Calculated By: JMB

Date: 06.10.26

STORM SEWER FLOW CALCULATIONS

PIPE TYPE	SIZE (DIA.)	MANNINGS n	SLOPE (%)	FULL FLOW
PVC				(CFS)
	4"	0.011	0.5%	0.16
			1.5%	0.27
			3.0%	0.39
	6"	0.011	0.5%	0.47
			1.0%	0.66
			2.0%	0.93
	8"	0.011	1.0%	1.42
			1.5%	1.74
			4.0%	2.84
	15"	0.011	1.0%	7.60
			2.0%	10.75
			4.0%	15.21
	18"	0.011	1.0%	12.36
			1.5%	15.14
			4.0%	24.73

Pr. Swale Discharge Pipe

DA = 4.889 AC 212984 s.f.

C = 0.37

I = 7.78 (100-YEAR, 5 MINUTE)

Q = 14.07 CFS

Pr. Driveway Inlet Discharge Pipe

DA = 0.200 AC 8692 s.f.

C = 0.97

I = 7.78 (100-YEAR, 5 MINUTE)

Q = 1.51 CFS



Project: Proposed Driveway
 SDC Project #: 1666.1
 Calculated By: JMB Date: 06.11.26

1

STANDARD E&S WORKSHEET #11 CHANNEL DESIGN DATA

Channel or Channel Section	Swale No. 1 (Unveg.)	Swale No. 1 (Veg.)			
Temporary or Permanent	Perm.	Perm.			
Design Storm	100	100			
Acres (AC)	4.89	4.89			
Multiplier ¹	2.75	2.75			
Qr (Required Capacity) (CFS)	13.45	13.45			
Q (Calculated at Flow Depth d) (cfs)	13.45	13.45			
Protective Lining	DS75	Grass			
n (Manning's Coefficient) ²	0.029	0.038			
Va (Allowable Velocity) ² (FPS)	4.00	4.00			
V (Calculated at Flow Depth d) (FPS)	6.30	5.19			
Ta (Max Allowable Shear Stress) (LB/FT ²)	1.60	4.00			
Ta (Cal'c Shear Stress at Flow Depth d) (lb/FT ²)	N/A	N/A			
Channel Bottom Width (FT)	6.00	6.00			
Channel Left Side Slope (H:V)	3	3			
Channel Right Side Slope (H:V)	3	3			
D (Total Depth) (FT)	1.00	1.00			
Channel Top Width @ D (FT)	12.00	12.00			
d (Calculated Flow Depth) (FT)	0.31	0.36			
Channel Top Width @ Flow Depth d (FT)	7.86	8.16			
Bottom Width: Flow Depth Ratio	19.35	16.67			
d50 Stone Size	N/A	N/A			
A (Cross-sectional Area) (SQ.FT.)	2.13	2.59			
R (Hydraulic Radius)	0.27	0.31			
S (Bed Slope) ³ (FT/FT)	0.085	0.085			
Sc (Critical Slope) (FT/FT)	0.0192	0.0316			
0.7Sc (FT/FT)	0.0134	0.0221			
1.3Sc (FT/FT)	0.0250	0.0411			
Stable Flow	Y	Y			
Freeboard Based on Unstable Flow (FT)	N/A	N/A			
Freeboard Based on Stable Flow (FT)	0.69	0.64			
Minimum Required Freeboard ⁴ (FT)	0.50	0.50			
Design Method for Protective Lining ⁵					
Permissible Velocity (V) or Shear Stress (S)	V	V			

1. Use 1.6 for temporary channels; 2.25 for temporary channels in special protection (HQ or EV) watersheds; 2.75 for permanent channels. For Rational Method, enter "N/A" and attach E&S Worksheets 9 and 10. For TR-55 enter "N/A" and attach appropriate worksheets.
2. Adjust "n" value for changes in channel liner and flow depth. For vegetated channels, provide data for manufactured linings without vegetation and with vegetation in separate columns.
3. Slopes may not be averaged.
4. Minimum freeboard is 0.5 ft. or 1/4 total channel depth, whichever is greater.
5. Permissible velocity lining design method is not acceptable for channels with a bed slope of 10% or greater. Shear Stress lining design method is required for channels with a bed slope of 10% or greater. Shear stress lining design method may be used for any channel bed slope.



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 Poseyville, Indiana 47633
 Tel. 800.772.2040
 >Fax 812.867.0247
 www.nagreen.com
 ECMDS v7.0

CHANNEL ANALYSIS

> > > SWALE 1

Name SWALE 1
 Discharge 13.45
 Channel Slope 0.085
 Channel Bottom Width 6
 Left Side Slope 3
 Right Side Slope 3
 Low Flow Liner
 Retardence Class C 6-12 in
 Vegetation Type Mix (Sod and Bunch)
 Vegetation Density Excellent > 95%
 Soil Type Silt Loam (SM)

Unreinforced Vegetation

Phase	Reach	Discharge	Velocity	Normal Depth	Mannings N	Permissible Shear Stress	Calculated Shear Stress	Safety Factor	Remarks	Staple Pattern
Unreinforced Vegetation	Straight	13.45 cfs	5.19 ft/s	0.36 ft	0.038	4 lbs/ft ²	1.93 lbs/ft ²	2.07	STABLE	--
Underlying Substrate	Straight	13.45 cfs	5.19 ft/s	0.36 ft	0.038	2.23 lbs/ft ²	1.65 lbs/ft ²	1.35	STABLE	--

DS75

Phase	Reach	Discharge	Velocity	Normal Depth	Mannings N	Permissible Shear Stress	Calculated Shear Stress	Safety Factor	Remarks	Staple Pattern
DS75 Unvegetated	Straight	13.45 cfs	6.3 ft/s	0.31 ft	0.029	1.6 lbs/ft ²	1.64 lbs/ft ²	0.98	UNSTABLE	D
Underlying Substrate	Straight	13.45 cfs	6.3 ft/s	0.31 ft	0.029	1.17 lbs/ft ²	1.42 lbs/ft ²	0.82	UNSTABLE	D



North American Green
 5401 St. Wendel-Cynthiana Rd.
 Poseyville, Indiana 47633
 Tel. 800.772.2040
 >Fax 812.867.0247
 www.nagreen.com
 ECMDS v7.0

ANALYSIS COMPUTATIONS

> > > [View Computation](#)

Inputs	
Channel Discharge (Q):	13,45 cfs
Peak Flow Period (H):	hours
Channel Slope (S0):	0.085 ft/ft
Bottom Width (B):	6 ft
Left Side Slope (ZL):	3 (H : V)
Right Side Slope (ZR):	3 (H : V)
Existing Channel Bend:	No
Bend Coefficient (Kb):	1
Channel Bend Radius:	
Retardance Class of Vegetation:	C 6-12 in
Vegetation Type:	Mix (Sod and Bunch)
Vegetation Density:	Excellent > 95%
Soil Type:	Silt Loam (SM)
Channel Lining Options	
DS75 Protection Type	Temporary

Basic Relationships
$A = \text{Cross sectional area, ft}^2 \text{ (m}^2\text{)} = (B * D) + (Z_L / 2 * D^2) + (Z_R / 2 * D^2)$
Where:
B = Base width of channel, ft (m)
D = Flow depth, ft (m)
Z _L = Left side bank slope (H : 1 V)
Z _R = Right side bank slope (H : 1 V)
$P = \text{Wetted perimeter, ft (m)} = B + Z_L * D + Z_R * D$
$R = \text{Hydraulic radius, ft (m)} = A / P$
$V = \text{Flow velocity, ft/s (m/s)} = Q / A$
Where:
Q = Channel discharge, cfs (cms)
$\text{Tau}_a = \text{Average bed shear stress, psf (Pa)} = 62.4 * R * S_0$
Where:
S ₀ = Gradient of channel, ft/ft (m/m)
$\text{Tau}_0 = \text{Maximum bed shear stress, psf (Pa)} = 62.4 * D * S_0$

Unvegetated Conditions Computations:
$n = \text{Manning's } n = a * \text{Tau}_a^b$
and (iteratively solved)
$n = 1.486 / Q * A * R^{(2/3)} S_0^{0.5}$
Where:
n = Manning's n
a = Product specific coefficient from performance testing
b = Product specific coefficient from performance testing

$SF_P = \text{Product factor of safety} = \tau_{TV} / \tau_{a0}$
Where:
$\tau_{TV} = \text{Permissible shear stress from testing, psf (Pa)}$
$\tau_{aP} = \text{In place permissible shear, psf (Pa)} = \tau_{aT} / \alpha * (\tau_{aS} + \alpha / 4.3)$
Where:
$\alpha = \text{unit conversion constant, 0.14 English, 6.5 Metric}$
$\tau_{aS} = \text{Permissible shear stress of soil}$
$SFL = \text{Factor of safety of installed liner} = \tau_{aP} / \tau_{a0}$

Vegetated Computations:
$n = \text{Manning's } n = \alpha * C_n * \tau_{a0}^{-0.4}$
<u>and (iteratively solved)</u>
$n = 1.486 / Q * A * R(2/3) S_0^{0.5}$
Where:
$\alpha = \text{Unit conversion constant, 0.213 English, 1.0 Metric}$
$C_n = \text{Vegetation retardance coefficient}$
$SF_P = \text{Product factor of safety} = \tau_{TV} / \tau_{a0}$
Where:
$\tau_{TV} = \text{Permissible shear stress from testing, psf (Pa)}$
$\tau_{aP} = \text{In place permissible shear, psf (Pa)} = \tau_{aS} / (1 - C_{FTRM}) * (n / n_s)^2$
Where:
$C_{FTRM} = \text{Coefficient of TRM performance derived from testing } \tau_{aS} = \text{Permissible shear stress of soil}$
$n_s = \text{Manning's of soil bed if left unprotected}$
$SFL = \text{Factor of safety of installed liner} = \tau_{aP} / \tau_{a0}$

Unreinforced Vegetation

Phase	Mannings N	Predicted flow depth (D)	Cross sectional area (A)	Wetted perimeter (P)	Hydraulic radius (R)	Flow velocity (V)	Froude number (FR)	Calculated Shear Stress	SFP/SFL
Unreinforced Vegetation	0.038	0.36 ft	2.59 ft ²	8.31 ft	0.31 ft	5.19 ft/s	1.64	1.93 lbs/ft ²	2.07 (SFL)
Underlying Substrate	0.038	0.36 ft	2.59 ft ²	8.31 ft	0.31 ft	5.19 ft/s	1.64	1.65 lbs/ft ²	1.35 (SFL)

DS75

Phase	Mannings N	Predicted flow depth (D)	Cross sectional area (A)	Wetted perimeter (P)	Hydraulic radius (R)	Flow velocity (V)	Froude number (FR)	Calculated Shear Stress	SFP/SFL
DS75 Unvegetated	0.029	0.31 ft	2.13 ft ²	7.95 ft	0.27 ft	6.3 ft/s	2.14	1.64 lbs/ft ²	0.98 (SFP)
Underlying Substrate	0.029	0.31 ft	2.13 ft ²	7.95 ft	0.27 ft	6.3 ft/s	2.14	1.42 lbs/ft ²	0.82 (SFL)



NOAA Atlas 14, Volume 2, Version 3
Location name: York, Pennsylvania, USA*
Latitude: 40.0195°, Longitude: -76.7863°
Elevation: 415 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aerals](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	3.83 (3.46-4.26)	4.56 (4.10-5.06)	5.39 (4.85-5.99)	5.99 (5.36-6.64)	6.72 (6.00-7.44)	7.25 (6.46-8.03)	7.78 (6.89-8.60)	8.26 (7.28-9.14)	8.86 (7.75-9.79)	9.31 (8.10-10.3)
10-min	3.06 (2.76-3.40)	3.64 (3.28-4.06)	4.31 (3.88-4.79)	4.78 (4.29-5.31)	5.36 (4.78-5.93)	5.77 (5.14-6.39)	6.17 (5.47-6.83)	6.55 (5.77-7.25)	7.01 (6.13-7.75)	7.34 (6.38-8.11)
15-min	2.55 (2.30-2.83)	3.05 (2.75-3.40)	3.64 (3.27-4.04)	4.04 (3.62-4.48)	4.53 (4.04-5.01)	4.88 (4.34-5.40)	5.20 (4.61-5.76)	5.50 (4.86-6.10)	5.88 (5.14-6.50)	6.14 (5.34-6.79)
30-min	1.75 (1.58-1.94)	2.11 (1.90-2.35)	2.58 (2.32-2.87)	2.92 (2.62-3.24)	3.35 (2.99-3.71)	3.67 (3.27-4.06)	3.99 (3.53-4.41)	4.29 (3.78-4.74)	4.68 (4.09-5.17)	4.97 (4.32-5.50)
60-min	1.09 (0.983-1.21)	1.32 (1.19-1.47)	1.66 (1.49-1.84)	1.90 (1.71-2.11)	2.23 (1.99-2.47)	2.49 (2.21-2.75)	2.74 (2.43-3.04)	3.00 (2.65-3.33)	3.36 (2.94-3.71)	3.63 (3.16-4.01)
2-hr	0.635 (0.573-0.706)	0.772 (0.696-0.857)	0.980 (0.881-1.09)	1.14 (1.02-1.27)	1.38 (1.23-1.52)	1.57 (1.40-1.73)	1.78 (1.57-1.96)	2.00 (1.75-2.21)	2.32 (2.01-2.56)	2.59 (2.22-2.85)
3-hr	0.462 (0.416-0.516)	0.561 (0.506-0.626)	0.712 (0.641-0.793)	0.832 (0.747-0.925)	1.00 (0.892-1.11)	1.14 (1.01-1.26)	1.29 (1.14-1.43)	1.45 (1.27-1.60)	1.68 (1.46-1.86)	1.88 (1.61-2.08)
6-hr	0.284 (0.257-0.319)	0.344 (0.310-0.386)	0.435 (0.390-0.488)	0.511 (0.457-0.572)	0.622 (0.552-0.693)	0.716 (0.631-0.797)	0.821 (0.717-0.910)	0.934 (0.808-1.04)	1.10 (0.941-1.22)	1.24 (1.05-1.38)
12-hr	0.172 (0.153-0.197)	0.207 (0.184-0.238)	0.263 (0.233-0.301)	0.311 (0.275-0.356)	0.384 (0.336-0.437)	0.448 (0.389-0.508)	0.519 (0.446-0.587)	0.599 (0.509-0.676)	0.720 (0.602-0.811)	0.826 (0.680-0.929)
24-hr	0.100 (0.092-0.109)	0.121 (0.111-0.132)	0.154 (0.142-0.169)	0.184 (0.168-0.201)	0.229 (0.208-0.249)	0.270 (0.243-0.292)	0.315 (0.281-0.340)	0.367 (0.323-0.395)	0.447 (0.386-0.479)	0.517 (0.441-0.554)
2-day	0.058 (0.053-0.064)	0.070 (0.064-0.077)	0.089 (0.082-0.099)	0.106 (0.097-0.117)	0.131 (0.119-0.144)	0.153 (0.138-0.168)	0.178 (0.158-0.195)	0.205 (0.181-0.224)	0.247 (0.214-0.270)	0.283 (0.242-0.309)
3-day	0.041 (0.038-0.045)	0.049 (0.045-0.054)	0.063 (0.058-0.069)	0.075 (0.068-0.082)	0.092 (0.084-0.101)	0.108 (0.097-0.118)	0.125 (0.112-0.137)	0.145 (0.128-0.158)	0.174 (0.152-0.190)	0.200 (0.172-0.218)
4-day	0.032 (0.030-0.036)	0.039 (0.036-0.043)	0.050 (0.046-0.055)	0.059 (0.054-0.065)	0.073 (0.066-0.080)	0.085 (0.077-0.093)	0.099 (0.089-0.108)	0.114 (0.101-0.125)	0.138 (0.120-0.150)	0.159 (0.137-0.173)
7-day	0.021 (0.020-0.024)	0.026 (0.024-0.028)	0.033 (0.030-0.036)	0.039 (0.035-0.042)	0.047 (0.043-0.052)	0.055 (0.050-0.060)	0.063 (0.057-0.069)	0.073 (0.065-0.080)	0.087 (0.077-0.095)	0.100 (0.086-0.109)
10-day	0.017 (0.016-0.019)	0.021 (0.019-0.023)	0.026 (0.024-0.028)	0.030 (0.028-0.033)	0.036 (0.033-0.040)	0.042 (0.038-0.045)	0.048 (0.043-0.052)	0.054 (0.049-0.059)	0.064 (0.056-0.069)	0.072 (0.063-0.078)
20-day	0.012 (0.011-0.012)	0.014 (0.013-0.015)	0.017 (0.016-0.018)	0.019 (0.018-0.020)	0.022 (0.021-0.024)	0.025 (0.023-0.027)	0.028 (0.026-0.030)	0.031 (0.028-0.033)	0.035 (0.032-0.038)	0.039 (0.035-0.042)
30-day	0.009 (0.009-0.010)	0.011 (0.011-0.012)	0.013 (0.013-0.014)	0.015 (0.014-0.016)	0.017 (0.016-0.019)	0.019 (0.018-0.021)	0.021 (0.020-0.023)	0.024 (0.022-0.025)	0.026 (0.024-0.028)	0.029 (0.026-0.031)
45-day	0.008 (0.007-0.008)	0.009 (0.009-0.010)	0.011 (0.010-0.011)	0.012 (0.011-0.013)	0.014 (0.013-0.015)	0.015 (0.014-0.016)	0.016 (0.015-0.017)	0.018 (0.017-0.019)	0.019 (0.018-0.020)	0.021 (0.019-0.022)
60-day	0.007 (0.007-0.007)	0.008 (0.008-0.009)	0.010 (0.009-0.010)	0.011 (0.010-0.011)	0.012 (0.011-0.013)	0.013 (0.012-0.014)	0.014 (0.013-0.015)	0.015 (0.014-0.016)	0.016 (0.015-0.017)	0.017 (0.016-0.018)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

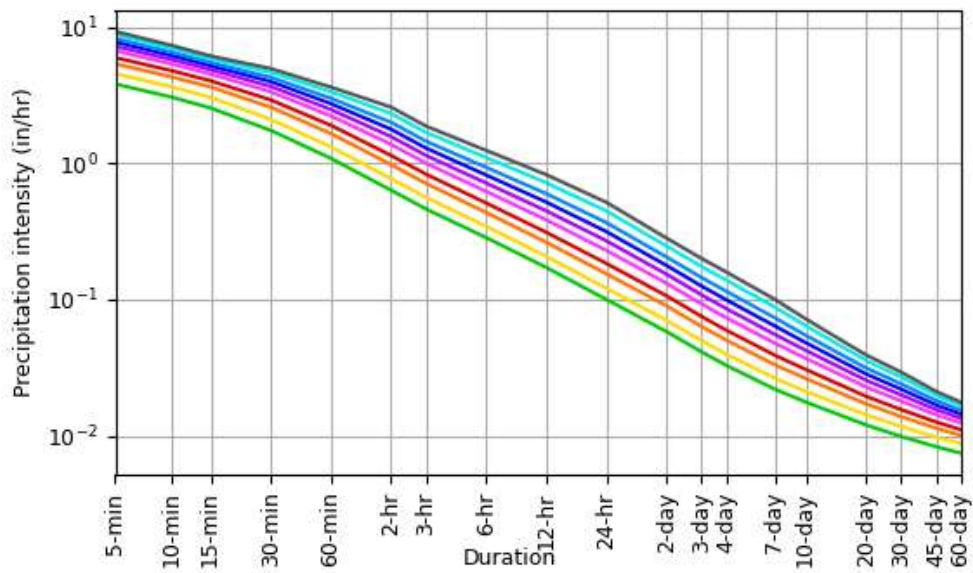
Please refer to NOAA Atlas 14 document for more information.

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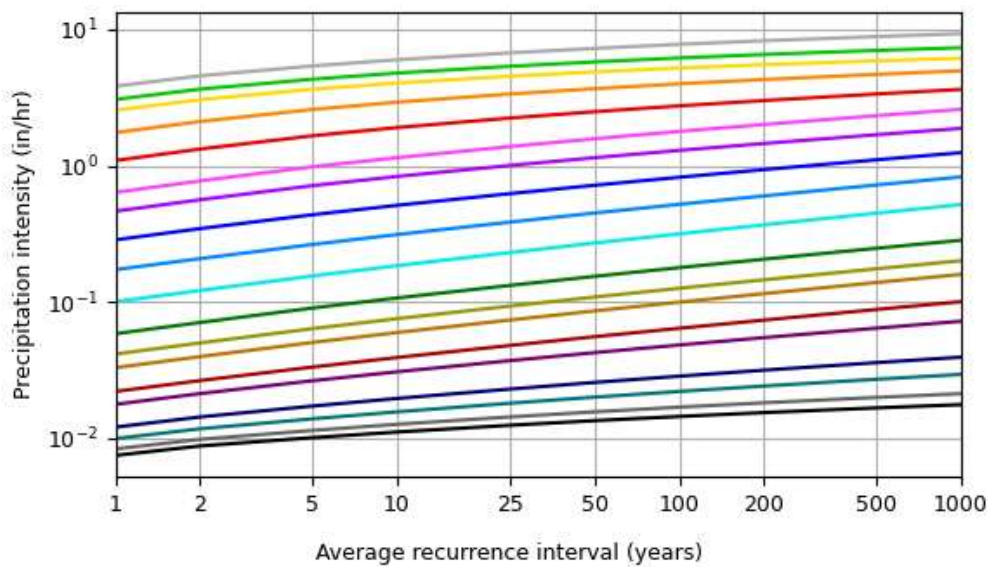
PF graphical

PDS-based intensity-duration-frequency (IDF) curves

Latitude: 40.0195°, Longitude: -76.7863°



Average recurrence interval (years)
1
2
5
10
25
50
100
200
500
1000

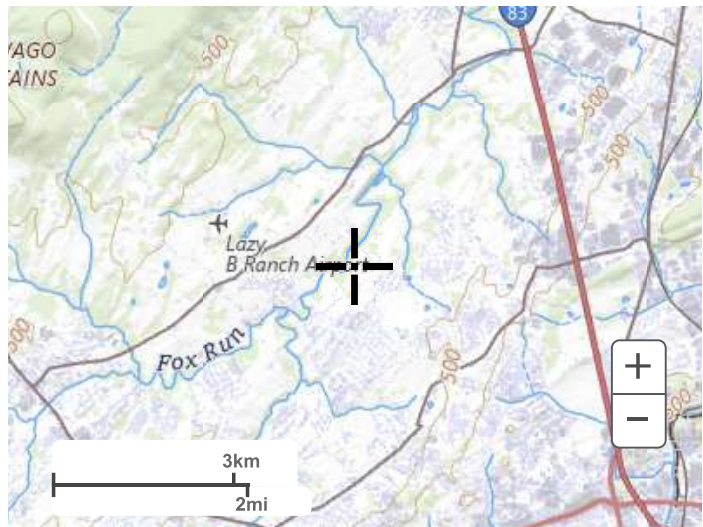


Duration	
5-min	2-day
10-min	3-day
15-min	4-day
30-min	7-day
60-min	10-day
2-hr	20-day
3-hr	30-day
6-hr	45-day
12-hr	60-day
24-hr	

NOAA Atlas 14, Volume 2, Version 3

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[Back to Top](#)**Maps & aerials****Small scale terrain**



Large scale terrain



Large scale map



Large scale aerial



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United States
Department of
Agriculture



Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for York County, Pennsylvania

1666.1 Fogelman



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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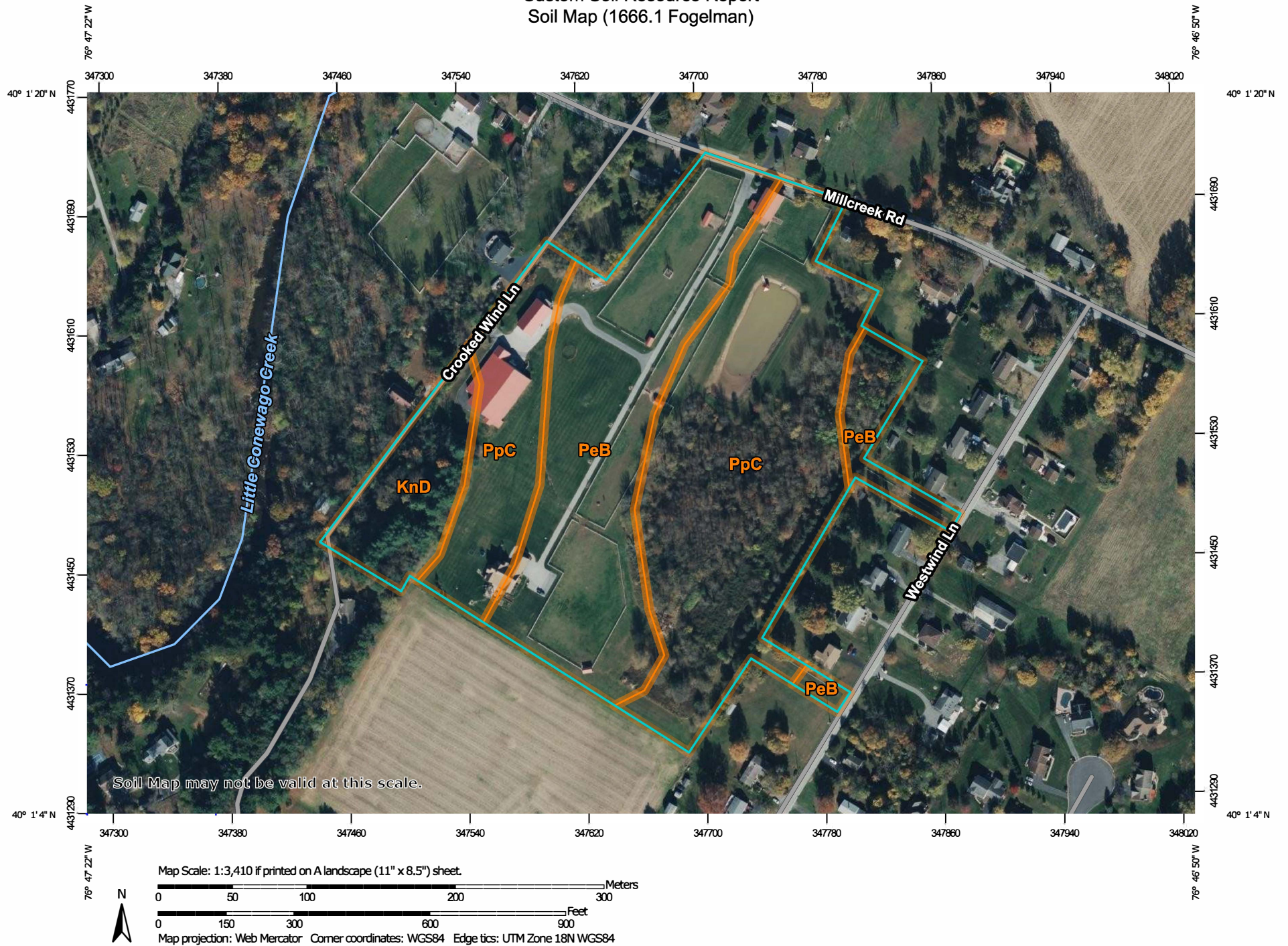
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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map (1666.1 Fogelman)



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: York County, Pennsylvania

Survey Area Data: Version 20, Sep 5, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 6, 2020—Nov 7, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (1666.1 Fogelman)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KnD	Klinesville channery silt loam, 15 to 25 percent slopes	2.0	9.0%
PeB	Penn silt loam, 3 to 8 percent slopes	8.3	37.8%
PpC	Penn-Lansdale complex, 8 to 15 percent slopes	11.6	53.2%
Totals for Area of Interest		21.9	100.0%

Map Unit Descriptions (1666.1 Fogelman)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

York County, Pennsylvania

KnD—Klinesville channery silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 16wx
Elevation: 300 to 1,500 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 57 degrees F
Frost-free period: 120 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Klinesville and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Klinesville

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Residuum weathered from siltstone

Typical profile

H1 - 0 to 6 inches: channery silt loam
H2 - 6 to 8 inches: very channery silt loam
H3 - 8 to 14 inches: very channery loam
H4 - 14 to 24 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: F148XY022PA - Dry, Triassic, Upland, Mixed Oak Heath / Oak-Pine Woodland, F147XY008PA - Shallow Mixed Sedimentary Upland
Hydric soil rating: No

Minor Components

Hustontown

Percent of map unit: 10 percent

Hydric soil rating: No

Basher

Percent of map unit: 2 percent

Hydric soil rating: No

PeB—Penn silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2v7gc

Landscape: Triassic uplands, piedmonts

Elevation: 70 to 950 feet

Mean annual precipitation: 38 to 53 inches

Mean annual air temperature: 43 to 57 degrees F

Frost-free period: 170 to 240 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Penn and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Penn

Setting

Landscape: Triassic uplands, piedmonts

Landform: Hills, Ridges

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Interfluvium, side slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Triassic residuum weathered from shale and siltstone and/or
triassic residuum weathered from mudstone and/or triassic residuum
weathered from sandstone

Typical profile

Ap - 0 to 10 inches: silt loam

Bt1 - 10 to 15 inches: silt loam

Bt2 - 15 to 19 inches: silt loam

Bt3 - 19 to 22 inches: channery loam

Cr - 22 to 28 inches: bedrock

R - 28 to 38 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent

Custom Soil Resource Report

Depth to restrictive feature: 20 to 27 inches to paralithic bedrock; 27 to 33 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.28 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F148XY022PA - Dry, Triassic, Upland, Mixed Oak Heath / Oak-Pine Woodland
Hydric soil rating: No

Minor Components

Reaville

Percent of map unit: 5 percent
Landscape: Piedmonts, triassic uplands
Landform: Depressions, Hills
Landform position (two-dimensional): Footslope, shoulder, backslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Klinesville

Percent of map unit: 5 percent
Landscape: Piedmonts, triassic uplands
Landform: Hills, Interfluves
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Readington

Percent of map unit: 5 percent
Landscape: Piedmonts, triassic uplands
Landform: Red shale, siltstone, & sandstone hills
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Head slope, side slope, base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

PpC—Penn-Lansdale complex, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 16z5

Landscape: Uplands

Elevation: 70 to 1,300 feet

Mean annual precipitation: 36 to 55 inches

Mean annual air temperature: 46 to 57 degrees F

Frost-free period: 130 to 200 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Penn and similar soils: 50 percent

Lansdale and similar soils: 40 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Penn

Setting

Landscape: Uplands

Landform: Hillslopes

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Nose slope, side slope

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Parent material: Residuum weathered from shale and siltstone

Typical profile

Ap - 0 to 10 inches: channery silt loam

Bt - 10 to 22 inches: channery silt loam

C - 22 to 28 inches: very channery silt loam

R - 28 to 48 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Custom Soil Resource Report

Ecological site: F148XY022PA - Dry, Triassic, Upland, Mixed Oak Heath / Oak-Pine Woodland
Hydric soil rating: No

Description of Lansdale

Setting

Landscape: Hills
Landform: Rolling hillsides
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from sandstone and/or residuum weathered from conglomerate

Typical profile

Ap - 0 to 10 inches: channery loam
Bt - 10 to 30 inches: sandy loam
C - 30 to 47 inches: channery loamy sand
R - 47 to 57 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 42 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F148XY025PA - Moist, Triassic, Upland, Mixed Oak - Hardwood - Conifer Forest
Hydric soil rating: No

Minor Components

Klinesville

Percent of map unit: 6 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluvial, nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Reaville

Percent of map unit: 4 percent
Landscape: Uplands
Landform: Red shale, siltstone & sandstone hillslopes

Custom Soil Resource Report

Landform position (two-dimensional): Summit, footslope

Landform position (three-dimensional): Interfluvial, base slope

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

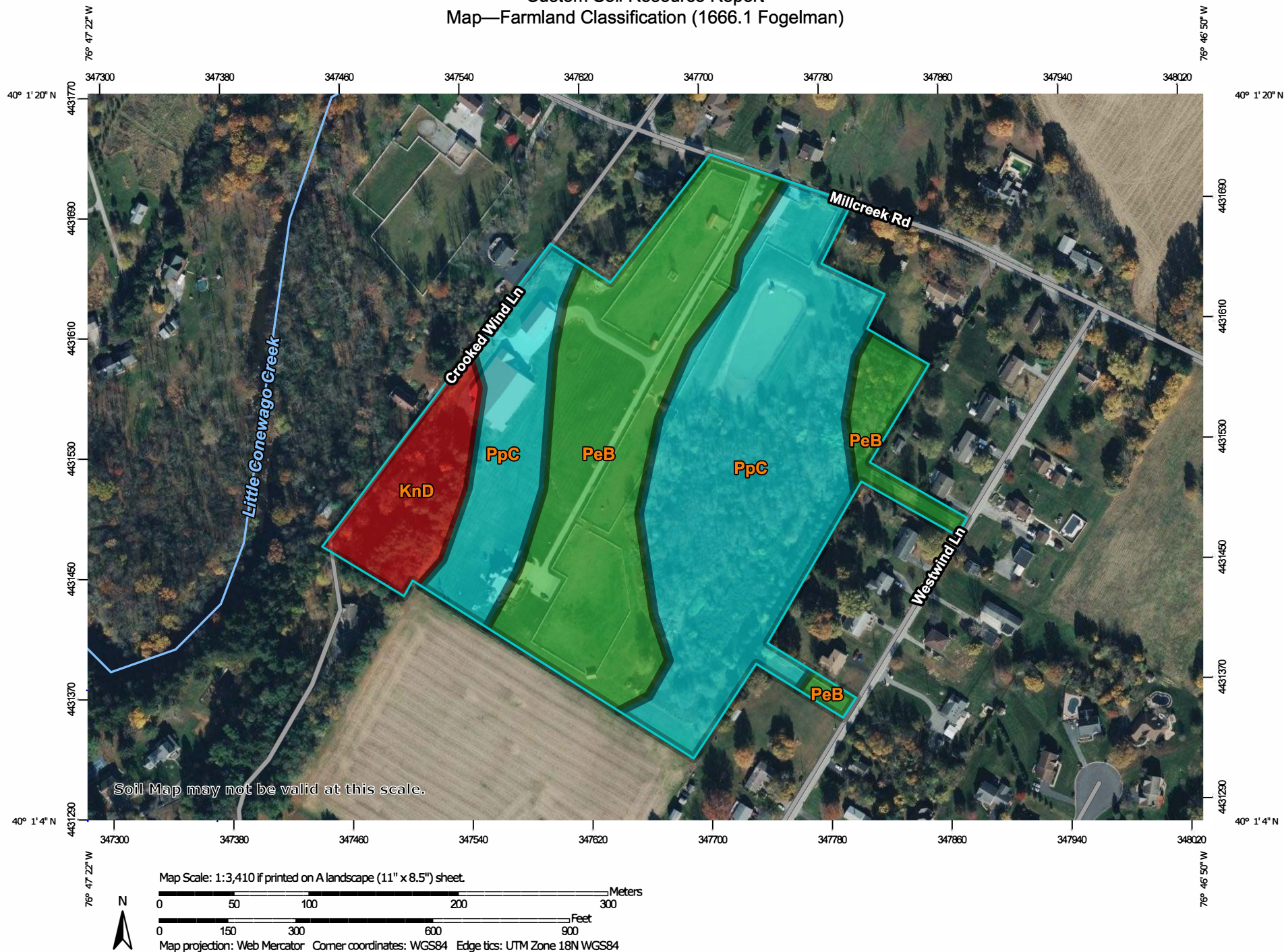
Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification (1666.1 Fogelman)

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

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Map—Farmland Classification (1666.1 Fogelman)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available

Soil Rating Lines

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

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	Prime farmland if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium		Farmland of unique importance		Prime farmland if subsoiled, completely removing the root inhibiting soil layer
	Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if irrigated and drained		Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season	Soil Rating Points			Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
	Prime farmland if irrigated and reclaimed of excess salts and sodium		Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season		Not prime farmland		Prime farmland if irrigated and reclaimed of excess salts and sodium
	Farmland of statewide importance		Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Prime farmland if drained		Farmland of statewide importance
	Farmland of statewide importance, if drained		Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if warm enough		Prime farmland if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if drained
	Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if thawed		Prime farmland if irrigated		Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
	Farmland of statewide importance, if irrigated				Farmland of local importance		Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated
					Farmland of local importance, if irrigated		Prime farmland if irrigated and drained		
							Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season		

	Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium		Farmland of unique importance	The soil surveys that comprise your AOI were mapped at 1:24,000. Warning: Soil Map may not be valid at this scale. Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale. Please rely on the bar scale on each map sheet for map measurements. Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Web Soil Survey Coordinate System: Web Mercator (EPSG:3857) Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required. This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. Soil Survey Area: York County, Pennsylvania Survey Area Data: Version 20, Sep 5, 2025 Soil map units are labeled (as space allows) for map scales 1:50,000 or larger. Date(s) aerial images were photographed: Jul 6, 2020—Nov 7, 2020 The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.
	Farmland of statewide importance, if irrigated and drained		Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season		Water Features Streams and Canals	
	Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season		Transportation Rails	
	Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if warm enough		Interstate Highways	
	Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if thawed		US Routes	
			Farmland of local importance		Major Roads	
			Farmland of local importance, if irrigated		Local Roads	
					Background Aerial Photography	

Table—Farmland Classification (1666.1 Fogelman)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KnD	Klinesville channery silt loam, 15 to 25 percent slopes	Not prime farmland	2.0	9.0%
PeB	Penn silt loam, 3 to 8 percent slopes	All areas are prime farmland	8.3	37.8%
PpC	Penn-Lansdale complex, 8 to 15 percent slopes	Farmland of statewide importance	11.6	53.2%
Totals for Area of Interest			21.9	100.0%

Rating Options—Farmland Classification (1666.1 Fogelman)

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Hydric Rating by Map Unit (1666.1 Fogelman)

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric

soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Table—Hydric Rating by Map Unit (1666.1 Fogelman)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KnD	Klinesville channery silt loam, 15 to 25 percent slopes	0	2.0	9.0%
PeB	Penn silt loam, 3 to 8 percent slopes	0	8.3	37.8%
PpC	Penn-Lansdale complex, 8 to 15 percent slopes	0	11.6	53.2%
Totals for Area of Interest			21.9	100.0%

Rating Options—Hydric Rating by Map Unit (1666.1 Fogelman)

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group (1666.1 Fogelman)

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

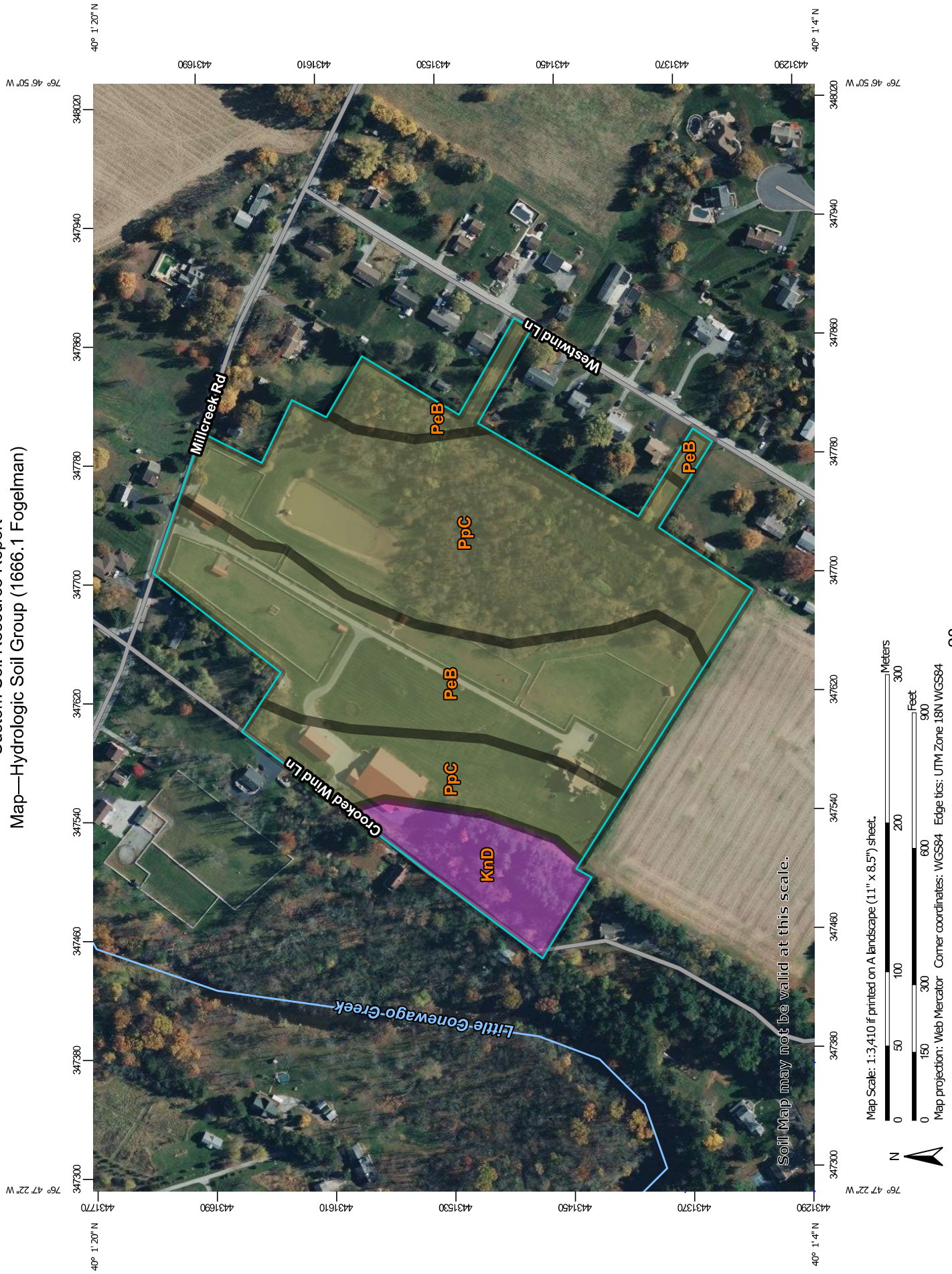
Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at

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or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

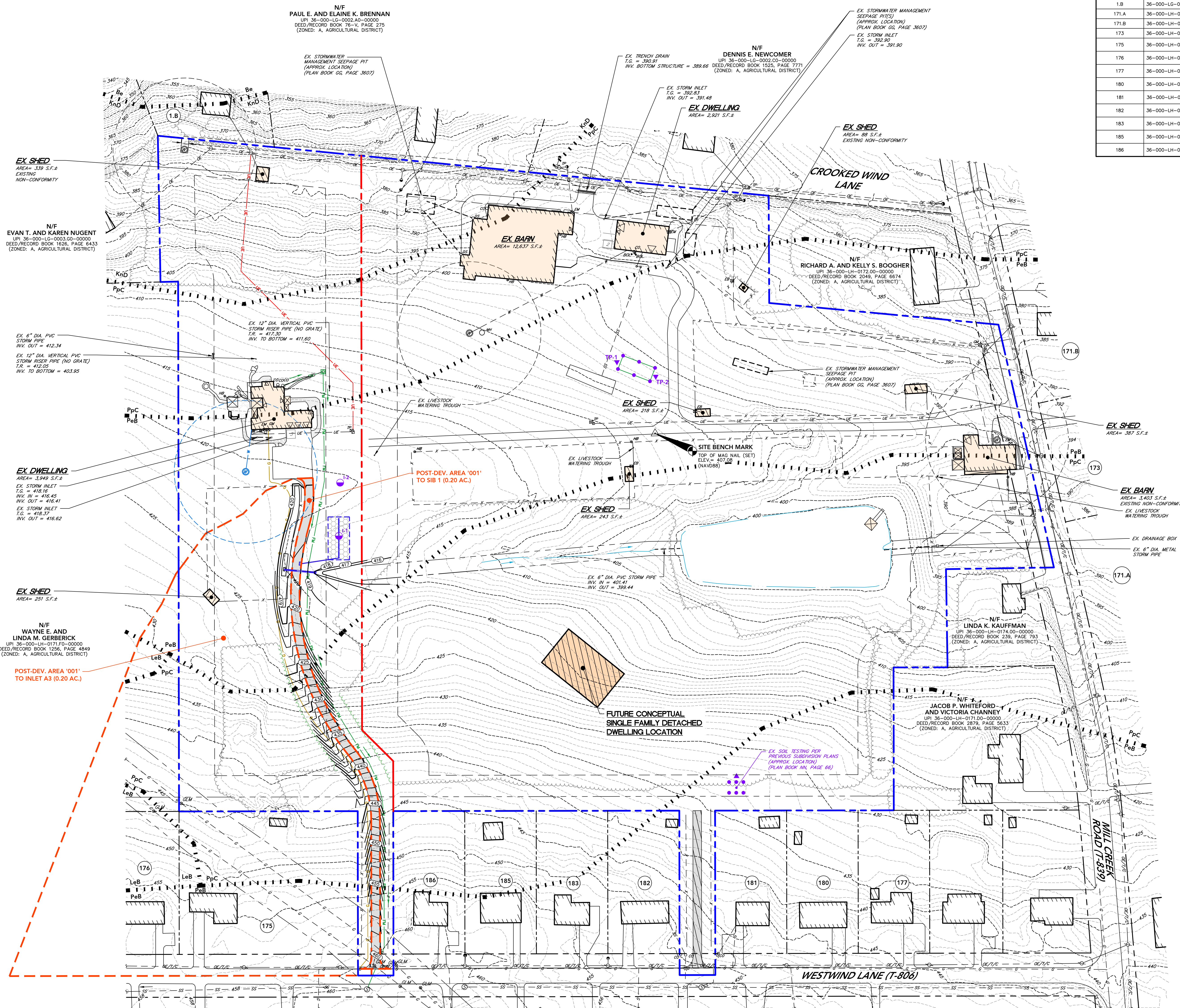
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Map—Hydrologic Soil Group (1666.1 Fogelman)



Table—Hydrologic Soil Group (1666.1 Fogelman)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KnD	Klinesville channery silt loam, 15 to 25 percent slopes	D	2.0	9.0%
PeB	Penn silt loam, 3 to 8 percent slopes	B	8.3	37.8%
PpC	Penn-Lansdale complex, 8 to 15 percent slopes	B	11.6	53.2%
Totals for Area of Interest			21.9	100.0%

Rating Options—Hydrologic Soil Group (1666.1 Fogelman)*Aggregation Method: Dominant Condition**Component Percent Cutoff: None Specified**Tie-break Rule: Higher*



REVISIONS		
NO.	DATE	COMMENTS
1	06.15.26	REVISED PER TOWNSHIP ENGINEER AND YPCR COMMENTS
2	07.20.26	REVISED PER TOWNSHIP ENGINEER COMMENTS

sdc

site design concepts
LAND DEVELOPMENT CONSULTANTS

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SCALE		AS NOTED
DRAWN BY		JMB
CHECKED BY		RMH/ARB
CONTACT		JCP
DATE		05.04.26
FILE NAME		
1666.1-FSD-1		
JOB NO.		
1666.1		
SHEET NO.		REV.
DR-1		2

- GRAPHIC SCALE
-
- (IN FEET)
1 inch = 60 ft.

MANCHESTER TOWNSHIP STEEP SLOPES LEGEND

STEEP SLOPES OF 15%
AND GREATER

SOILS LEGEND	
Be	BERMUDIAN SILT LOAM
Knd	KLINESVILLE CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES
LeB	LANSDALE LOAM, 3 TO 8 PERCENT SLOPES
PeB	PENN SILT LOAM, 3 TO 8 PERCENT SLOPES
PpC	PENN-LANSDALE COMPLEX, 8 TO 15 PERCENT SLOPES

HATCH LEGEND

- | | | | |
|--|----------------------------|--|--|
| | EXISTING BUILDING | | EXISTING TEXAS EASTERN TRANSMISSION CORPORATION RIGHT-OF-WAY |
| | EXISTING CONCRETE | | EXISTING ACCESS/MAINTENANCE EASEMENT |
| | EXISTING BRICK PAVERS | | EXISTING SANITARY SEWER EASEMENT |
| | EXISTING GRAVEL | | PROPOSED DRAINAGE EASEMENT |
| | EXISTING DECK | | PROPOSED BITUMINOUS PAVEMENT |
| | EXISTING STONE PAVERS | | FUTURE CONCEPTUAL BUILDING AREA |
| | EXISTING DRAINAGE EASEMENT | | FUTURE CONCEPTUAL BITUMINOUS PAVEMENT |