

**WORCESTER TOWNSHIP PLANNING COMMISSION MEETING
REMOTE MEETING
THURSDAY, DECEMBER 10, 2020, 7:30 PM**

CALL TO ORDER by Chair Sherr at 7:30 PM

ATTENDANCE

PRESENT:	TONY SHERR	[X]
	BOB ANDORN	[X]
	MICHELLE GREENAWALT	[X]
	MICHAEL HOLSONBACK	[X]
	LEE KOCH	[X]

1. November 12 Meeting Minutes – Ms. Greenawalt motioned to approve the November 12, 2020 meeting minutes. There was no public comment. Mr. Koch seconded the motion. By unanimous vote the motion was approved.
2. 3425 Stumphall – (LD 2020-05) – Tim Woodrow, Engineer for the applicant, provided an overview of the proposed subdivision.

Chair Sherr commented on the proposed subdivision, perc testing, and the requested waivers.

Joe Nolan, Township Engineer, commented on the proposed plans and his review letter.

Ms. Greenawalt commented on the requested waivers

Mr. Andorn commented on the on-lot septic.

Mr. Andorn motioned to recommend preliminary/final plan approval to the Board of Supervisors, conditioned upon the applicant complying with the items addressed in the review letters, second by Ms. Greenawalt. By unanimous vote the motion was approved.

3. Environmental Ordinance Review – Andrew Raquet, Codes Director, provided an overview of the MCPC memo.

Chair Sherr commented on methods for reviewing the ordinances.

Joe Nolan commented on his review letter and preparing an additional review letter.

4. January 28, Planning Commission Meeting Agenda – At its January 28 meeting the Planning Commission may review existing township ordinances and subdivision applications LD 20-04 & LD 20-06

Andrew Raquet provided an overview of the agenda for the January 28 planning commission meeting.

PUBLIC COMMENT

- There was no public comment.

ADJOURNMENT

There being no further business before the Planning Commission, Chair Sherr adjourned the meeting at 8:02 PM.

Respectfully Submitted:

Andrew R. Raquet
Codes Director

DRAFT

NOTARY CERTIFICATION

COMMONWEALTH OF PENNSYLVANIA:
COUNTY OF MONTGOMERY
ON THE DAY OF 20... BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED KNOWN TO ME OR SATISFACTORILY PROVEN TO BE THE PERSON(S) WHOSE NAME IS SUBSCRIBED WITHIN THE INSTRUMENT, AND ACKNOWLEDGED THAT HE EXECUTED THE SAME FOR THE PURPOSES THEREIN CONTAINED.

NOTARY PUBLIC COMMISSION EXPIRATION DATE

OWNER ACKNOWLEDGEMENT

UNDERSIGNED, HAS LAID OUT UPON MY LAND SITUATE IN COUNTY, PENNSYLVANIA, CERTAIN LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLANS WHICH ARE INTENDED TO BE RECORDED.

OWNER DATE

OWNER

TOWNSHIP SUPERVISORS' CERTIFICATION

APPROVED THIS DAY OF BY THE BOARD OF SUPERVISORS OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

ATTEST:

SIGNATURE, CHAIRMAN

DATE SIGNED

SIGNATURE, SECRETARY

DATE SIGNED

PLANNING COMMISSION CERTIFICATION

REVIEWED THIS DAY OF BY THE PLANNING COMMISSION OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

ATTEST:

SIGNATURE

DATE SIGNED

WORCESTER TOWNSHIP ENGINEER'S REVIEW

REVIEWED BY THE WORCESTER TOWNSHIP ENGINEER THIS DAY OF

TOWNSHIP ENGINEER'S SIGNATURE

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THE PLAN SHOWN AND DESCRIBED HEREON, AS WELL AS ALL OTHER DRAWINGS WHICH ARE A PART OF THE PLAN SET, ARE TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE DOUGLASS TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE, AND WERE PREPARED BY ME OR UNDER MY DIRECTION FOR WHICH I ACCEPT FULL RESPONSIBILITY, AND REPRESENTS A FIELD SURVEY PERFORMED BY ME OR UNDER MY DIRECTION. THE EXISTING PERMETER MONUMENTS SHOWN HEREON HAVE BEEN LOCATED AS PART OF THE SURVEY AND ALL OTHER PROPOSED PERMETER MONUMENTS SHALL BE SET.

DATE SURVEYOR

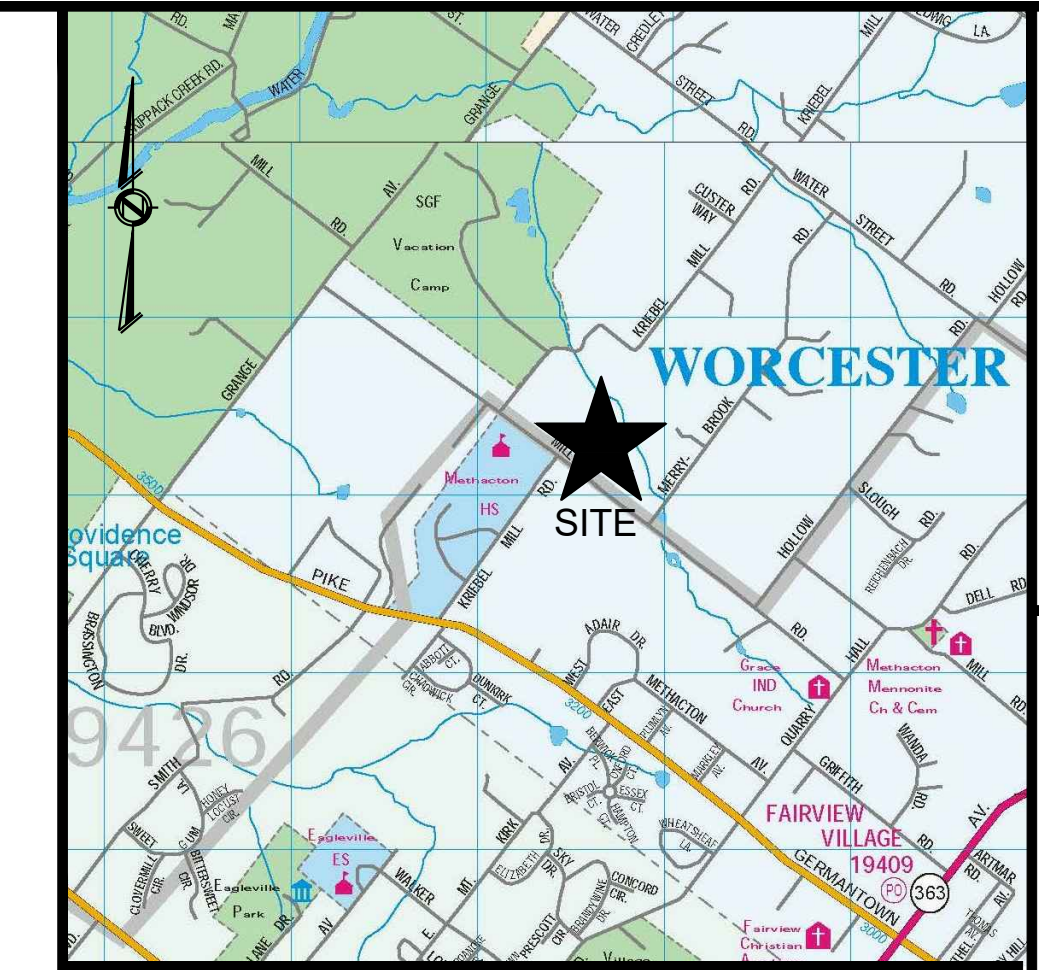
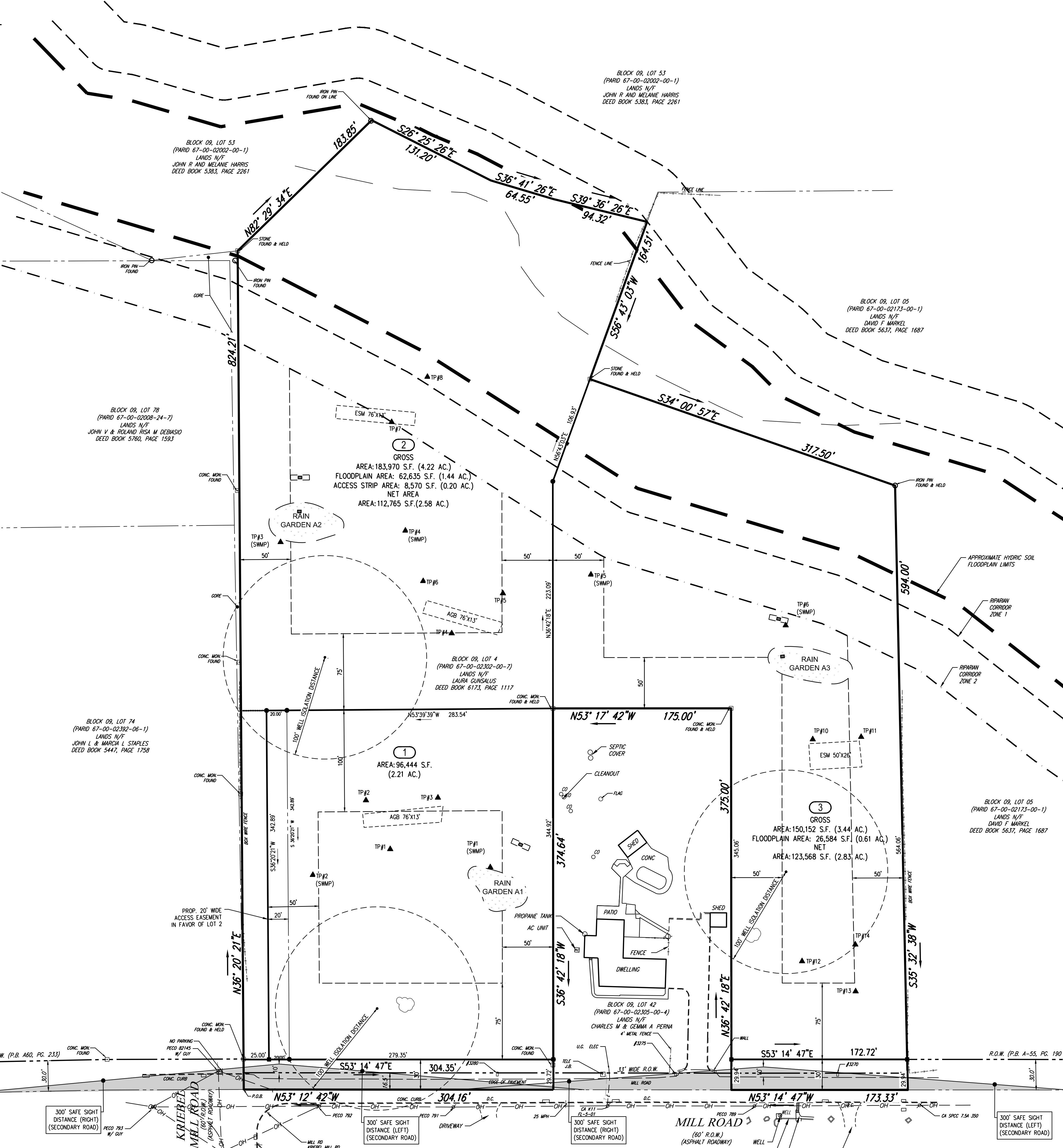
APPLICANT'S ENGINEER'S CERTIFICATION

I, ROLPH GRAF, A PENNSYLVANIA PROFESSIONAL ENGINEER, HEREBY CERTIFY THAT THE SUBDIVISION AND/OR LAND DEVELOPMENT SHOWN HEREON COMPLIES WITH ALL APPLICABLE REGULATIONS INCLUDING, BUT NOT LIMITED TO, THE TOWNSHIP ZONING AND SUBDIVISION & LAND DEVELOPMENT REGULATIONS.

P.E.

RECORD PLAN LEGEND

- EXISTING PROPERTY LINE
LEGAL RIGHT-OF-WAY
EXISTING CENTERLINE
EXISTING EASEMENT
EXISTING EASEMENT TO BE REMOVED
ULTIMATE RIGHT-OF-WAY
PROPOSED LOT LINE
PROPOSED CENTERLINE
PROPOSED STORMWATER BASIN
PROPOSED BUILDING SETBACK
PROPOSED MONUMENT
PROPOSED IRON PIN



GENERAL NOTES

- 1. OWNER: LAURA GUNSALUS
2. APPLICANT: JD CONTRACTORS, LLC
3. THIS PLAN REFERENCES A SURVEY BY: NAVARRO & WRIGHT CONSULTING ENGINEER, INC.
4. PROPERTY KNOWN AS BLOCK 09, LOT 4 (PARC 67-00-02302-00-7) AS IDENTIFIED ON THE OFFICIAL TAX MAPS OF MONTGOMERY COUNTY, WORCESTER TOWNSHIP, COMMONWEALTH OF PENNSYLVANIA.
5. AREA TO TITLE LINE = 444,760 S.F. OR 10.21 AC.
6. ZONING DATA: DATA TAKEN FROM THE WORCESTER TOWNSHIP ZONING ORDINANCE DISTRICT CLASSIFICATION - AGR - AGRICULTURAL DISTRICT PROPOSED USE: RESIDENTIAL DEVELOPMENT

Table with 3 columns: CRITERIA, REQUIRED, PROPOSED. Rows include MIN. AVERAGE LOT AREA, MIN. LOT WIDTH, MIN. FRONT YARD, MIN. SIDE YARD, MIN. REAR YARD, MAX. BUILDING COVERAGE, MAX. IMPERVIOUS, MAX. BUILDING HEIGHT.

- 7. THE LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES SHOWN ON THIS PLAN ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS AND ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION IN ACCORDANCE WITH PENNSYLVANIA ACT 38, "ONE CALL" SYSTEM. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.
8. THE EXISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THE FIELD SURVEY.
9. THIS PROPERTY SUBJECT TO RESTRICTIONS, COVENANTS AND/OR EASEMENTS, WRITTEN OR IMPLIED.
10. ELEVATIONS ARE BASED UPON (NAVD 88) DATUM ESTABLISHED ONSITE UTILIZING GLOBAL POSITIONING SYSTEM DATA COLLECTION.
11. ENCROACHMENTS AND VAULTS, IF ANY, BELOW SURFACE NOT SHOWN HEREON.
12. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER OR GRAF ENGINEERING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN. ENGINEER RESERVES THE RIGHT TO CORRECT THESE DRAWINGS.
13. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
14. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS. SERVICE SIZES TO BE DETERMINED BY ARCHITECT.
15. THE ULTIMATE RIGHT-OF-WAY ALONG ALL PUBLIC ROADS IS HEREBY OFFERED FOR DEDICATION TO THE GOVERNING AUTHORITY.
16. NOTHING SHALL BE PLACED, PLANTED, SET, OR PUT WITHIN 10 FEET AWAY FROM STORM SEWER STRUCTURES AND PIPES BUT SHALL BE MAINTAINED AS LAWN.
17. ALL STORMWATER RUNOFF GENERATED BY THIS PROJECT WILL FLOW TO SKIPPACK CREEK.
18. LOT PINS HAVE BEEN SHOWN ON THIS RECORD PLAN AT ALL LOT CORNERS AND CHANGES OF DIRECTION. MARKERS SHALL BE PERMANENTLY LOCATED AND SHALL BE AT LEAST FIVE-EIGHTHS (5/8) INCH METAL PIN WITH A MINIMUM LENGTH OF TWENTY-FOUR (24) INCHES, LOCATED IN THE GROUND TO FINISHED GRADE.
19. ALL WATER, SEWER, GAS, ELECTRIC, AND COMMUNICATION MAINS AND SERVICES SHALL BE INSTALLED UNDERGROUND. ELECTRIC AND COMMUNICATION LINES SHALL BE INSTALLED A MINIMUM OF THREE (3) FEET DEEP.

RECORDER OF DEEDS

RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS, MONTGOMERY COUNTY, PENNSYLVANIA IN THE PLAN BOOK PAGE ON THE DAY OF 20...

MCPC No. PROCESSED AND REVIEWED. REPORT PREPARED BY MONTGOMERY COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE. CERTIFIED ON THIS DATE

CALL BEFORE YOU DIG! PENNSYLVANIA LAW REQUIRES... 1-800-242-1776

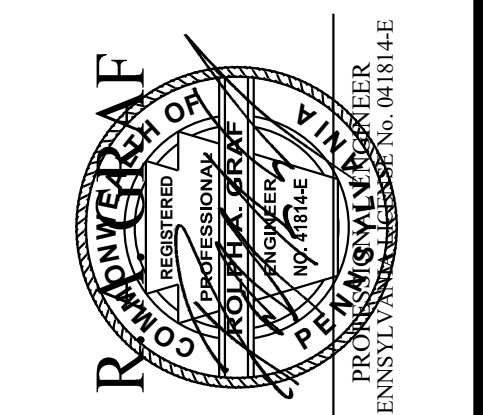
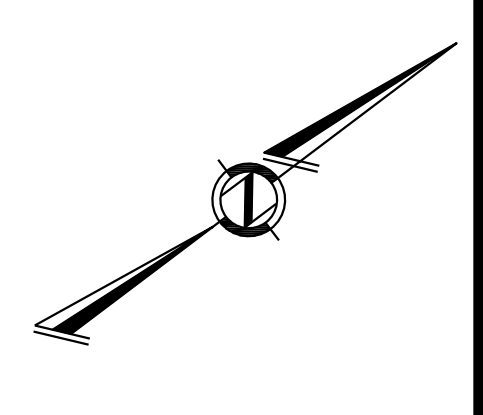


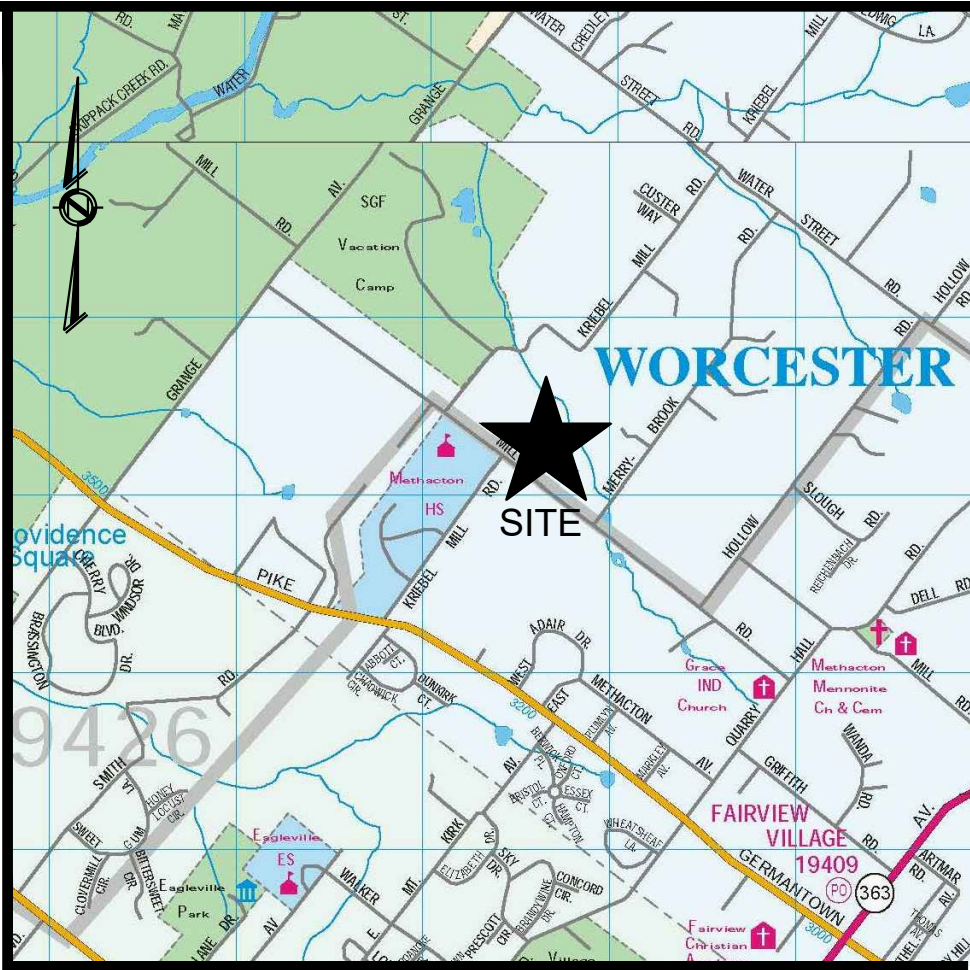
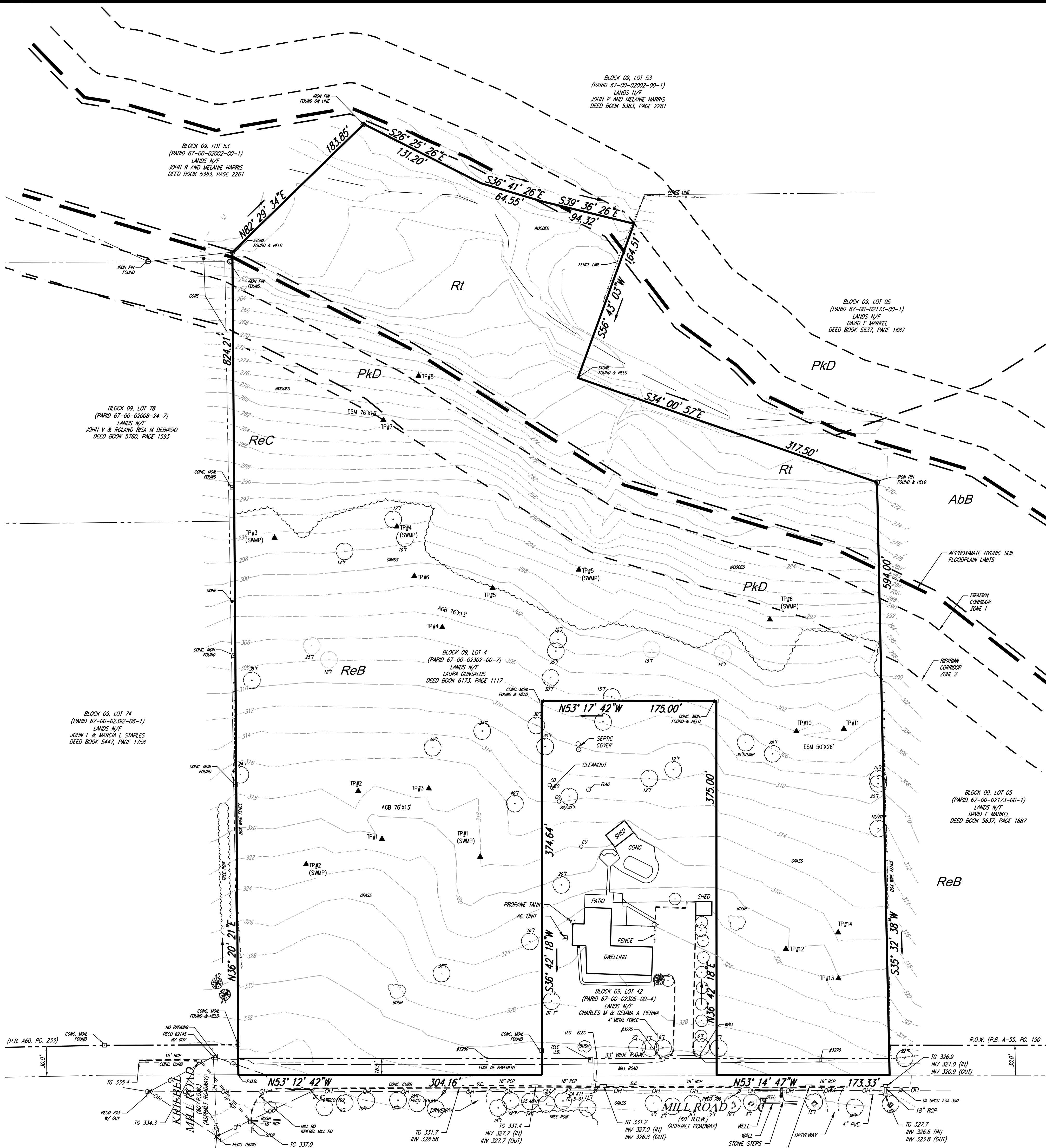
Table with columns: BY, COMMENT, DATE, REV. Rows for MFC, JDF, and other project participants.



LAURA GUNSALUS
PARCEL 67-00-02302-00-7
MONTGOMERY COUNTY, PENNSYLVANIA

GRAF ENGINEERING, LLC
LAND DEVELOPMENT CONSULTING
410 WEST MAIN STREET, SUITE 202
P.O. BOX 110
LANSDALE, PA 19446
TEL: (267) 263-2054

SHEET TITLE: RECORD PLAN
GUNSALUS TRACT
SCALE(H): 1" = 50' SHEET No.
SCALE(V):
DRAWN BY: LEM
CHECKED BY: RAG
DATE: 10/01/2020
PROJECT No.: G19.022 OF 5



VICINITY MAP

SURVEY NOTES

1. TOPOGRAPHICAL INFORMATION IS SHOWN FROM A FIELD SURVEY BY NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. IN FEBRUARY 2020.
2. NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. DOES NOT WARRANT THAT THE UNDERGROUND UTILITY LOCATIONS ARE COMPLETE OR EXACT. NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. HAS NOT LOCATED THE SUBSURFACE UTILITIES. THE ACTUAL LOCATIONS AND CONDITIONS SHOULD BE VERIFIED BY REPRESENTATIVES OF THE UTILITY OR UTILITIES IN QUESTION. NAVARRO & WRIGHT CONSULTING ENGINEERS, INC. WILL ASSUME NO RESPONSIBILITY FOR ACCURACY OR SUFFICIENCY OF THE DATA RELATED TO EXISTING UTILITIES. UTILITIES SHOWN HEREON WERE PLOTTED USING SURFACE FEATURES LOCATED.
3. VERTICAL DATUM IS BASED ON NAVD 88.
4. HORIZONTAL DATUM IS NAD 83 (2011) REFERENCED TO PA. STATE PLANE (SOUTH ZONE).
5. FEMA: ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

REFERENCES

1. MAP ENTITLED "MINOR SUBDIVISION/FINAL PLAN, RICHARD M. MARKLEY, 2 LOT SUBDIVISION, WORCESTER TWP, MONTGO, PA, DATED 9-15-94" PREPARED BY GRANDE ENGINEERING, RECORDED 12/5/94, AS PB A-55, PG. 1950.
2. MAP ENTITLED "FINAL PLAN OF SUBDIVISION PREPARED FOR DETWILER TRACT, SITUATED IN WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA, DATED OCT 2, 2000" PREPARED BY URWILER & WALTER INC., RECORDED 11/07/01, AS PB. A-60, PG. 233.
3. MAP ENTITLED "DEED PLOT FOR MONTGOMERY COUNTY FARMLAND PRESERVATION OF THE JOHN R & MELANIE C HARRIS PROPERTY, WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA, DATED 6/7/01" PREPARED BY BARRY ISSET & ASSOCIATES, INC.

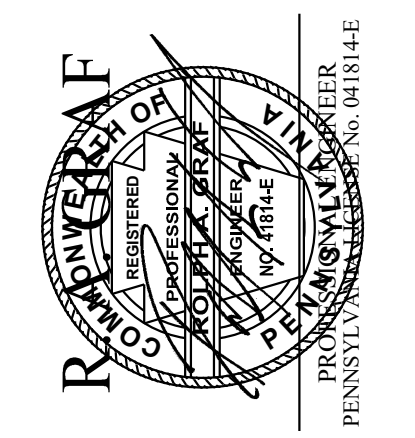
FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS LOCATED IN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN) OF THE FLOOD INSURANCE RATE MAP, MAP NO. 420010245G, WHICH BEARS A PRELIMINARY DATE OF MARCH 2, 2016. BY TELEPHONE YOU CAN CALL THE NATIONAL FLOOD INSURANCE PROGRAM AT (1-800-638-6620) TO LEARN IF THIS COMMUNITY CURRENTLY PARTICIPATE IN THE PROGRAM. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE AND AN ELEVATION CERTIFICATE MAY BE NEEDED TO VERIFY THIS DETERMINATION OR APPLY FOR A VARIANCE FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

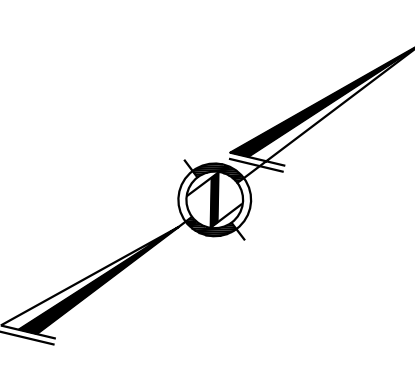
EXISTING FEATURES PLAN LEGEND

PROPERTY LINE	---	EXISTING INLET	—
EXISTING CONTOUR/ELEVATION	--- 246 ---	EXISTING MANHOLE	○
EXISTING SANITARY SERVICE	— S — S —	EXISTING UTILITY POLE	⊗
EXISTING STORM SEWER	— S — S —	EXISTING SIGN	⊕
EXISTING ELECTRIC	— E — E —	EXISTING CLEAN OUT	⊕
EXISTING WATER	— W — W —	EXISTING ELECTRIC METER	⊕
EXISTING GAS	— G — G —	EXISTING GAS METER	⊕
100YR FLOODPLAIN	---	EXISTING TREE W/TRUNK DIAMETER	⊗
RIPIARIAN CORRIDOR	---		
EXISTING STREAM/WATERS	---		
EXISTING TREELINE	---		
EXISTING TREELINE TO BE REMOVED	---		
SOIL BOUNDARY	---		
EXISTING BUILDING	---		

CALL BEFORE YOU DIG!
 PENNSYLVANIA LAW REQUIRES
 48 HOURS ADVANCE NOTICE TO
 CONSTRUCTION PHASE AND 10 WORKING
 DAYS IN DESIGN STAGE - STOP CALL
 PA1
 1-800-242-1776
 2020041052
 POC'S SERIAL NUMBER



REV.	DATE	COMMENT	BY	MFC
01	2020/12/15	PER TOWNSHIP STAFF		

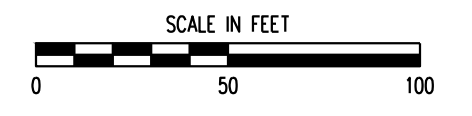


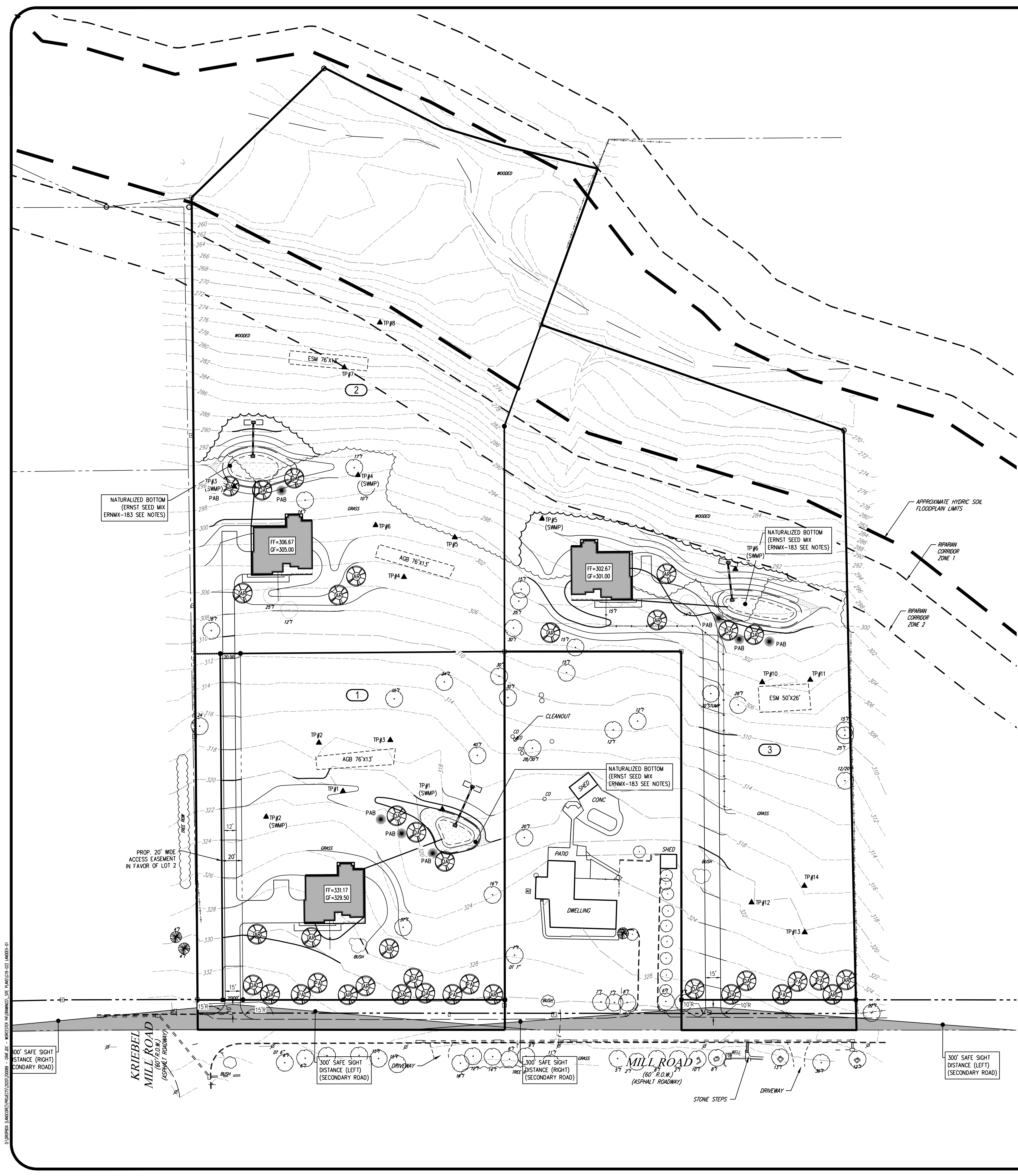
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GUNSALUS TRACT

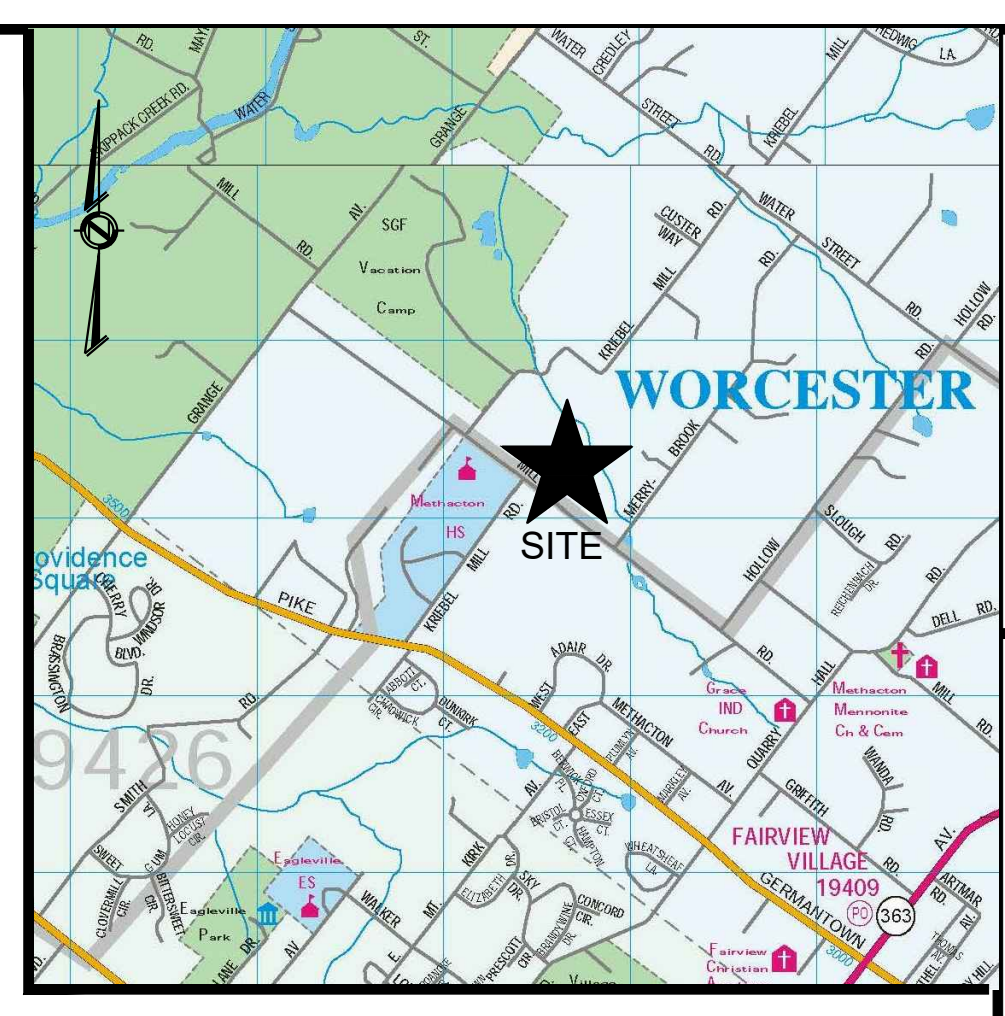
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 SCALE(V):
 DRAWN BY: LEM
 CHECKED BY: RAG
 DATE: 10/01/2020
 PROJECT No.: G19.022
 SHEET No. **2** OF 5



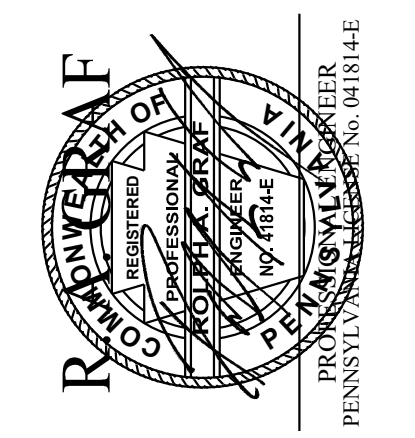


LANDSCAPE NOTES:

- EACH PROPOSED SINGLE-FAMILY DETACHED DWELLING SHALL BE PROVIDED WITH THREE (3) DECIDUOUS OR EVERGREEN TREES AS PART OF THE ON-LOT (OL) LANDSCAPE PACKAGE. ALL PROPOSED TREES MUST BE FROM WORCESTER TOWNSHIP'S RECOMMENDED PLANT LIST (SALDO 130-284) OR APPROVED EQUIVALENT.
- THE PROPOSED STORM BASINS SHALL BE VEGETATED WITH ERNST SEED MIX ERNMX-183 NATIVE DETENTION AREA MIX PER THE PLANS WHICH IS INTENDED TO COMPLY WITH SALDO SEC. 130-248.4.1.3. MAINTENANCE OF THE VEGETATION SHOULD BE CONDUCTED ACCORDING TO THE FOLLOWING:
 - FIRST GROWING SEASON MAINTENANCE - WHENEVER CANOPY (OVERALL VEGETATION) REACHES A HEIGHT OF 18"-24", USE A MOWER OR STRING TRIMMER TO TRIM THE MEADOW TO A HEIGHT OF 8". THIS WILL REDUCE COMPETITION BY FAST-GROWING WEEDS FOR SUNLIGHT, WATER, AND NUTRIENTS NEEDED BY SLOWER GROWING, PERENNIAL NATIVES. MOWING SHOULD NOT BE DONE WITH A LAWN MOWER AS THE MOWER HEIGHT WILL BE TOO LOW AND NATIVE SEEDLINGS WILL BE KILLED. IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS ARE USED ON THE SITE, MOWING SHOULD BE ABOVE THE NEW GROWTH OF THESE MATERIALS. MOWING SHOULD CEASE BY MID-SEPTEMBER. PROBLEM WEEDS SHOULD BE SPOT SPRAYED WITH AN APPROVED HERBICIDE OR HAND PULLED.
 - SECOND AND SUBSEQUENT GROWING SEASON MAINTENANCE - PRIOR TO NEW SPRING GROWTH REACHING A HEIGHT OF 2' (I.E. SHORTLY AFTER FORSYTHIA OR REDBUD BLOOMS), TRIM ANY MATERIAL STANDING FROM THE PREVIOUS YEAR CLOSE TO THE GROUND (APPROXIMATELY 2"). THIS WILL ALLOW THE SOIL TO WARM MORE QUICKLY WHICH WILL STIMULATE EMERGENCE AND GROWTH OF NATIVE SEEDLINGS. IT WILL ALSO REDUCE THE LIKELIHOOD OF THE MEADOW BEING INVADDED BY SHRUBS. IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED ON THE SITE OR SEED OF SHRUBS/TREES WERE PART OF THE MIX, THE SITE SHOULD NOT BE TRIMMED AFTER THE ESTABLISHMENT YEAR. PROBLEM WEEDS SHOULD BE SPOT SPRAYED OR HAND PULLED.
 - SPECIAL CIRCUMSTANCES SECOND GROWING SEASON - IF YOU NOTICE A HEAVY INFESTATION OF RAGWEED OR FOXTAIL IN THE SECOND GROWING SEASON, TRIM THE MEADOW TO A HEIGHT OF 8". IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED, TRIMMING SHOULD BE ABOVE OR AROUND NEW GROWTH OF THE PLANTS. TRIMMING SHOULD CEASE AFTER MID-SEPTEMBER.
 - GENERAL MAINTENANCE - IN ADDITION TO STRUCTURAL MAINTENANCE, SILTATION NEEDS TO BE REMOVED AS NEEDED. CLOSE MOWING OR EXTENSIVE CHEMICAL USE IS NOT CONDUCTIVE TO WATER QUALITY IMPROVEMENT AND WILDLIFE HABITAT.



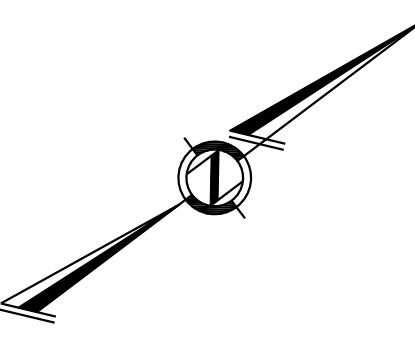
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 1-800-242-1776
 2020041052
 POKS SERIAL NUMBER



LANDSCAPE SCHEDULE:

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	PLANTING SPREAD	MIN. PLANTING HEIGHT	REMARKS
STREET TREES							
SHADE TREES							
AR	5	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	3.5" CALIPER	6-10'	10-12'	B&B
PA	7	PLATANUS X ACERFOLIA 'BLOODGOOD'	'BLOODGOOD' LONDON PLANE TREE	3.5" CALIPER	6-10'	10-12'	B&B
QA	8	QUERCUS ALBA	WHITE OAK	3.5" CALIPER	6-10'	10-12'	B&B
	20	TOTAL					
BASIN PLANTINGS							
CANOPY TREES							
QA	8	QUERCUS ALBA	WHITE OAK	3.5" CALIPER	6-10'	10-12'	B&B
	8	TOTAL					
EVERGREEN TREES							
PAB	8	PICEA ABIES	NORWAY SPRUCE	-	5-6'	8'	B&B
	8	TOTAL					
INDIVIDUAL LOT LANDSCAPING							
AR	9	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	3.5" CALIPER	6-10'	10-12'	B&B
* PLANT IN CONTINUOUS MULCHED BED.							

SALDO SECTION	REQUIREMENT	CALCULATIONS	LANDSCAPING REQUIRED	LANDSCAPING PROVIDED
130-28.6(4) STREET TREES	1 STREET TREE PER 25 FT ON CENTER FOR EACH SIDE OF THE STREET	MILL ROAD: 477 LF / 25 FT = 19.08 TREES	MILL ROAD: 20 TREES	MILL ROAD: 20 TREES
130-28.6(7) STORMWATER BASINS	1 SHADE TREE PER 50 LF OF PERIMETER (MAY SUBSTITUTE 2 FLOWERING TREES, 1 EVERGREEN OR 10 SHRUBS FOR UP TO 50% OF REQUIRED SHADE TREES)	RAIN GARDEN A1: 248/50 = 5.96 RAIN GARDEN A2: 206/50 = 4.12 RAIN GARDEN A3: 202/50 = 4.04	BASIN A: 6 BASIN B: 5 BASIN C: 5	BASIN A: 3 SHADE, 3 EVERGREEN BASIN B: 2 SHADE, 3 EVERGREEN BASIN C: 3 SHADE, 2 EVERGREEN
130-28.6(9) INDIVIDUAL LOT LANDSCAPING	3 DECIDUOUS OR EVERGREEN TREES PER SINGLE-FAMILY DETACHED DWELLING	3 PROPOSED DWELLINGS * 3 = 9 TREES	9 TREES	9 * TO BE PROVIDED WITH ON-LOT LANDSCAPING PACKAGE

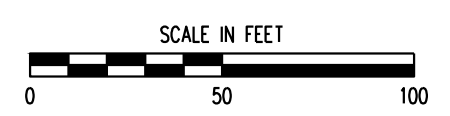


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DRAWING LEGEND

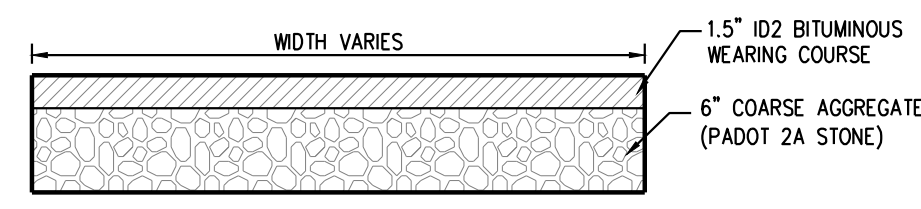
- PROPERTY LINE
- EXISTING TREELINE
- EXISTING TREELINE TO BE REMOVED
- PROPOSED TREELINE
- TREE PROTECTION FENCE
- EXISTING TREES
- PROPOSED TREES
- PROPOSED BUSH



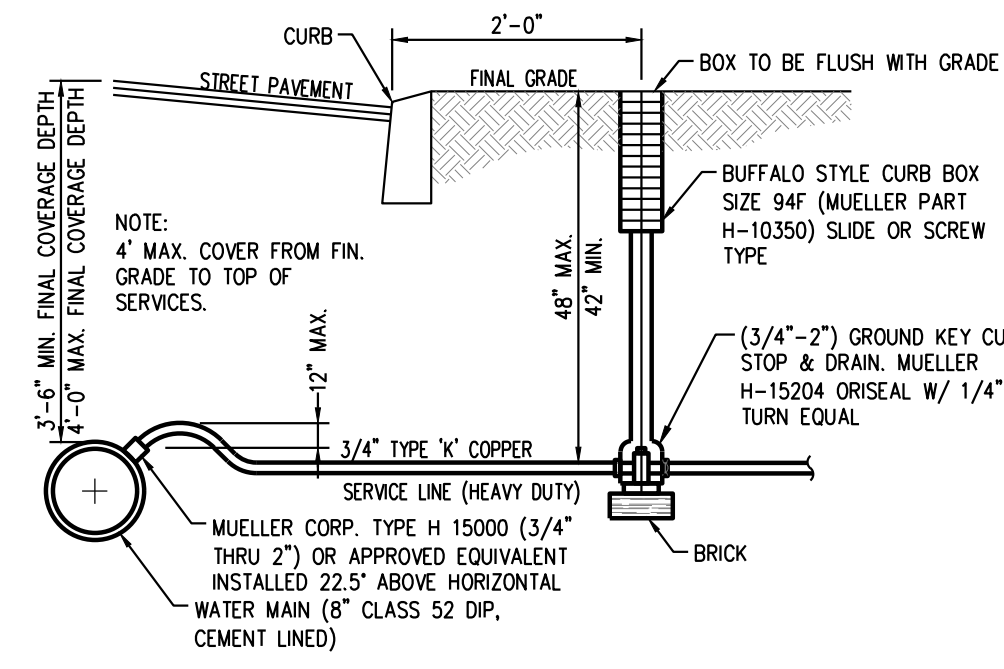
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LANDSCAPE PLAN

GUNSALUS TRACT

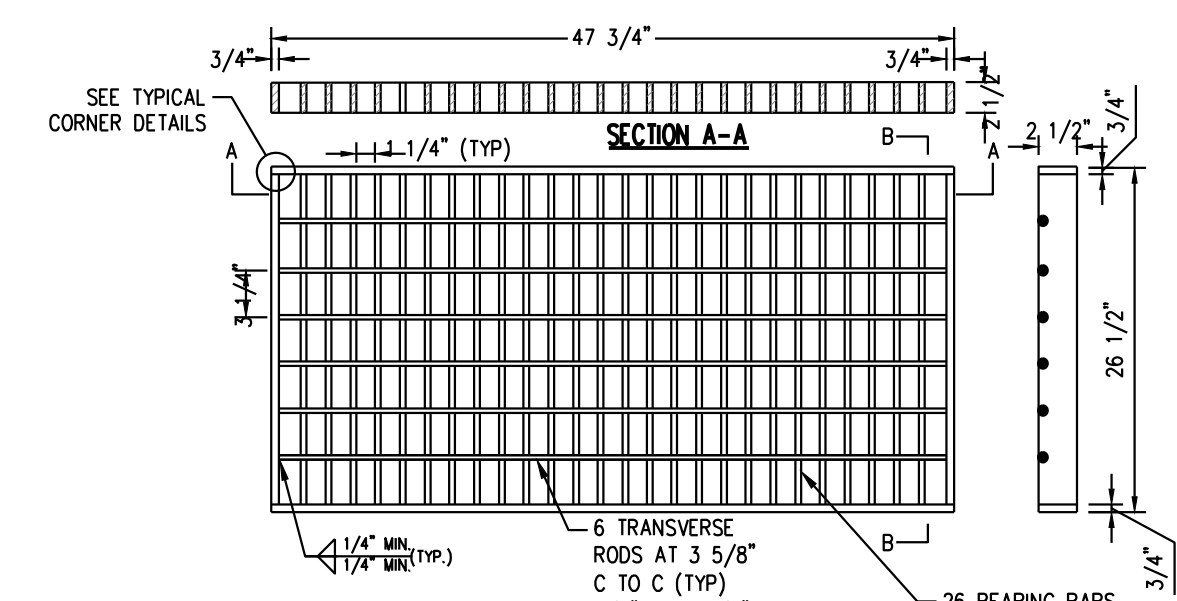
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 OF 5



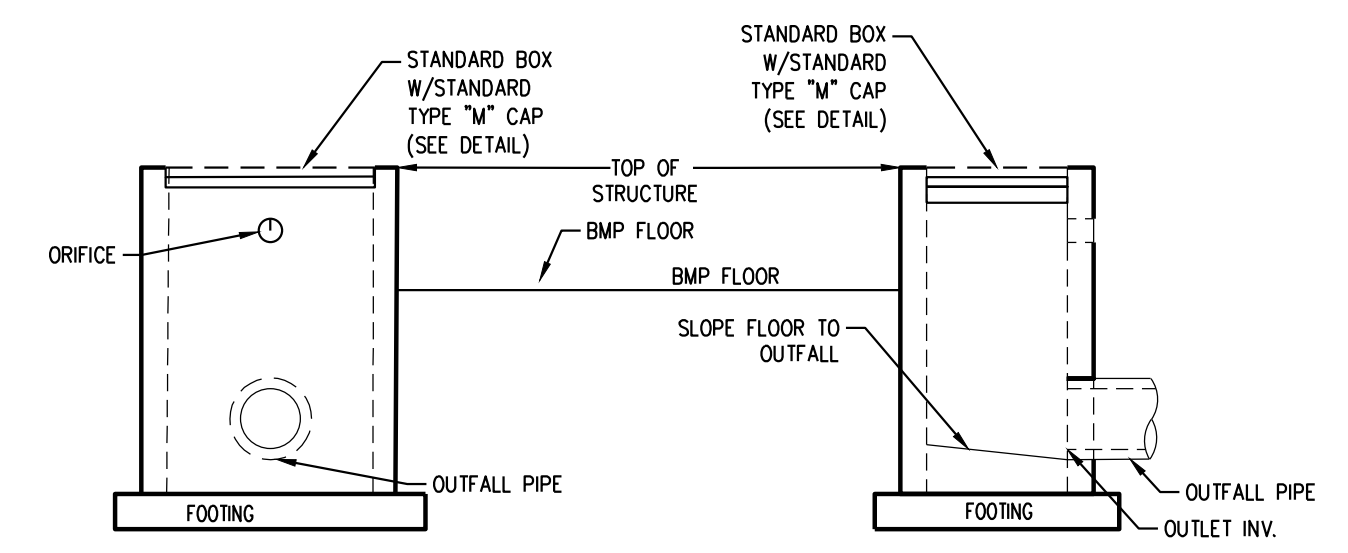
RESIDENTIAL DRIVEWAY DETAIL
N.T.S.



WATER SERVICE CONNECTION DETAIL
N.T.S.

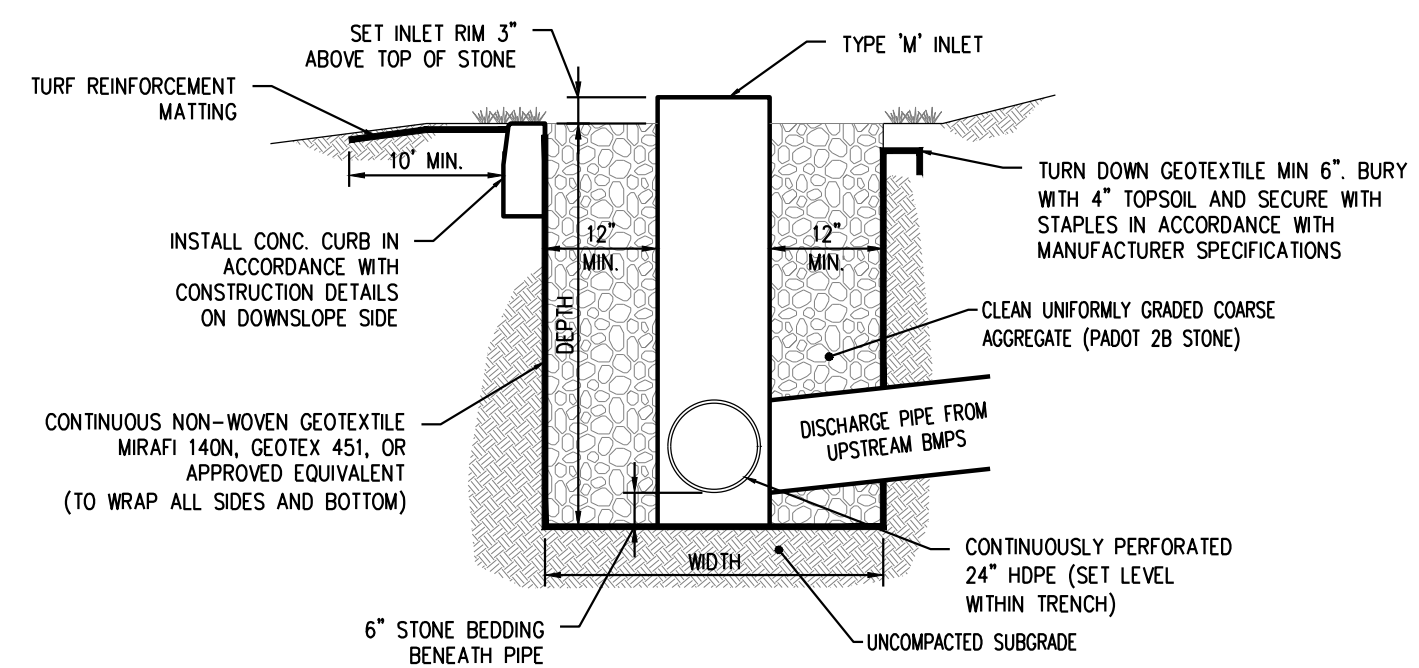


STRUCTURAL STEEL GRATE (BICYCLE SAFE)
N.T.S.



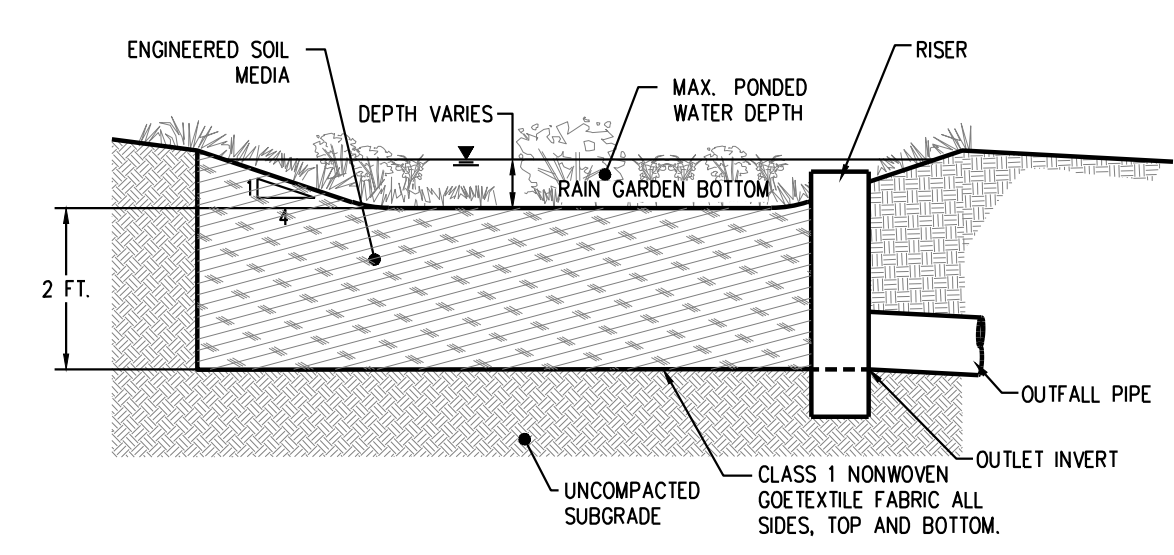
RAIN GARDEN AREA OUTLET STRUCTURE
N.T.S.

RAIN GARDEN AREA	ELEVATIONS						OUTLET STRUCTURE TYPE	OUTLET PIPE	DESIGN INFILTRATION RATE (IN/HR)
	BOTTOM	TOP OF BASIN/BERM	OCS ORIFICE	OCS ORIFICE DIAM.	OUTLET INV.	TOP OF OUTLET STRUCTURE			
1A	317.00	320.00	317.50	3 IN.	316.00	318.50	STANDARD BOX	12" HDPE	-
1B	291.00	294.00	291.50	6 IN.	290.00	292.50	STANDARD BOX	12" HDPE	-
1C	295.00	298.00	295.50	6 IN.	294.00	296.50	STANDARD BOX	12" HDPE	-

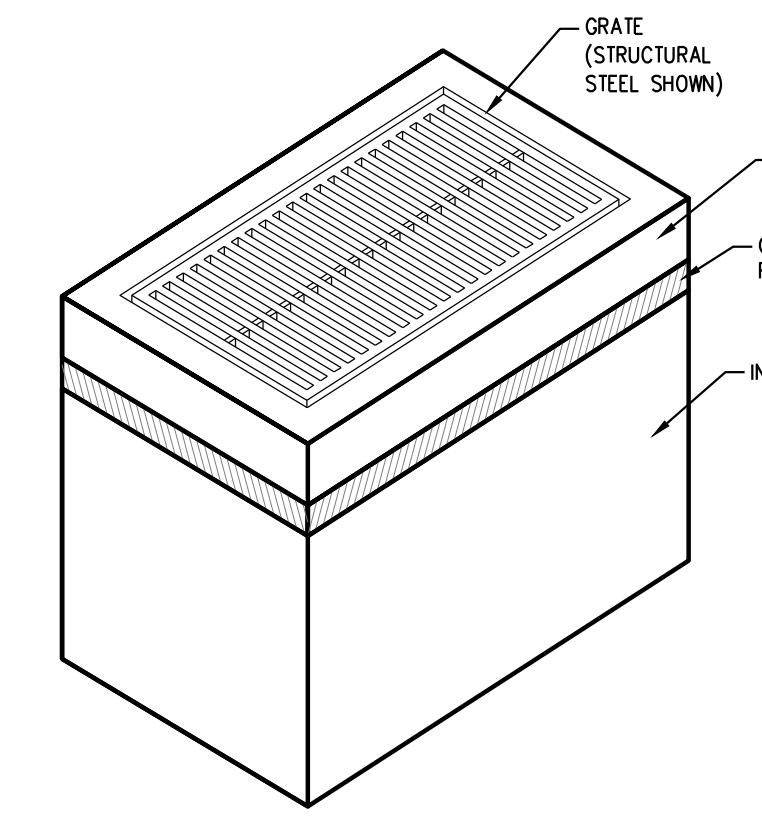


LEVEL SPREADER DETAIL
N.T.S.

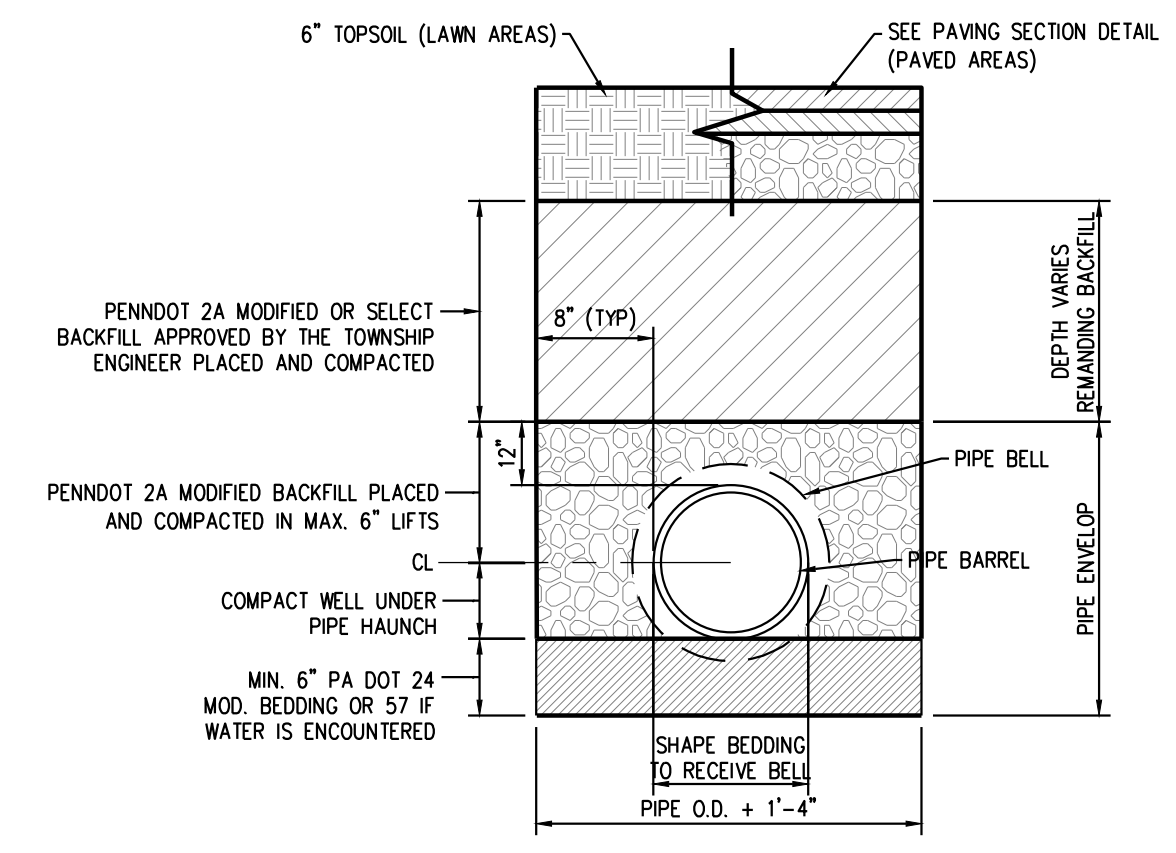
LEVEL SPREADER NO.	TURF REINFORCEMENT	TYPE 'M' INLET		STONE TRENCH			BOTTOM ELEV.
		RIM ELEV.	INV. ELEV.	WIDTH (FT)	DEPTH (FT)	LENGTH (FT)	
LS 1	P-300	316.00	314.00	3.5	3	25	314.00
LS 2	P-300	289.00	287.00	3.5	3	25	287.00
LS 2	P-300	292.00	290.00	3.5	3	25	290.00



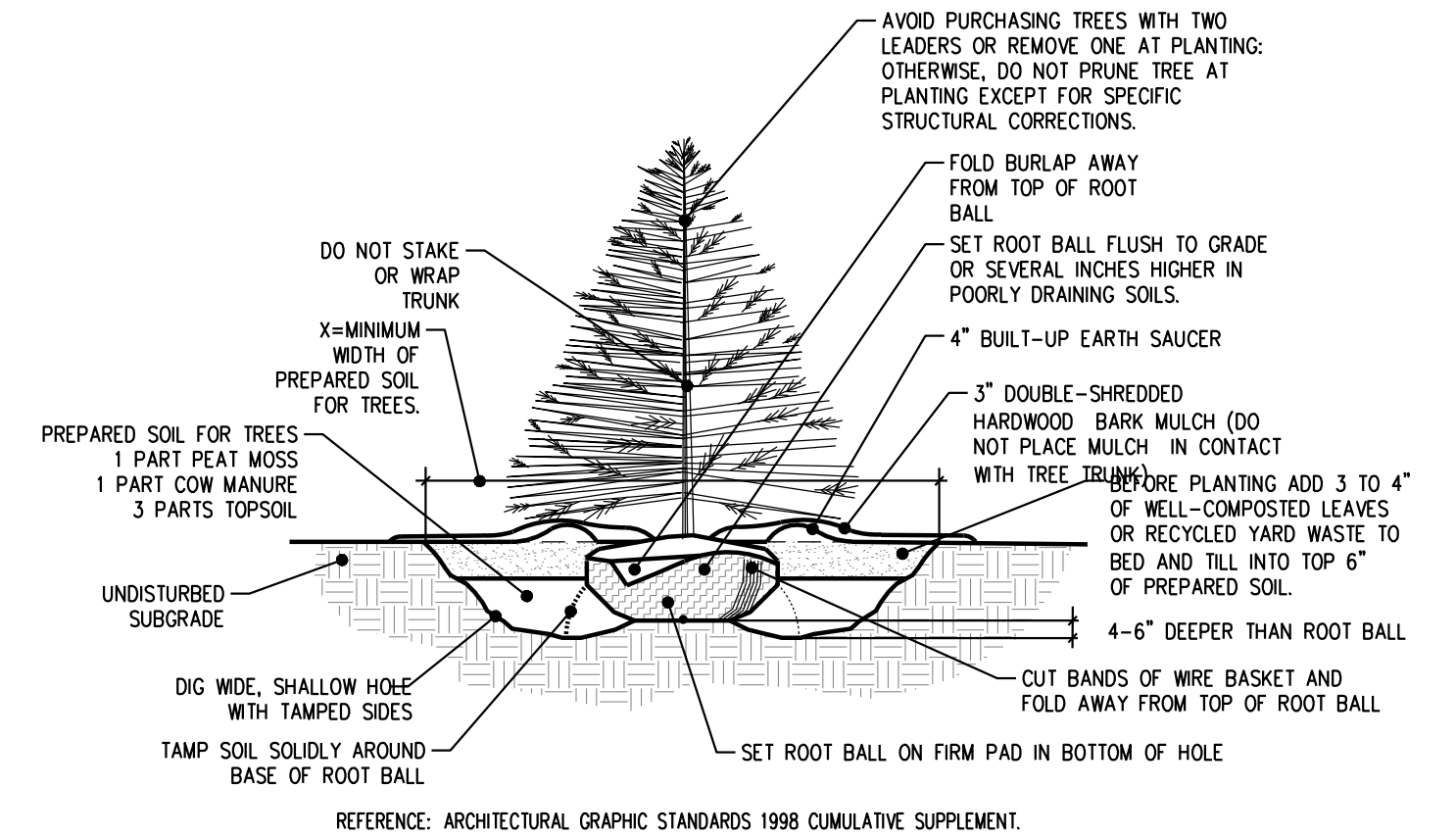
RAIN GARDEN AREA CROSS SECTION
N.T.S.



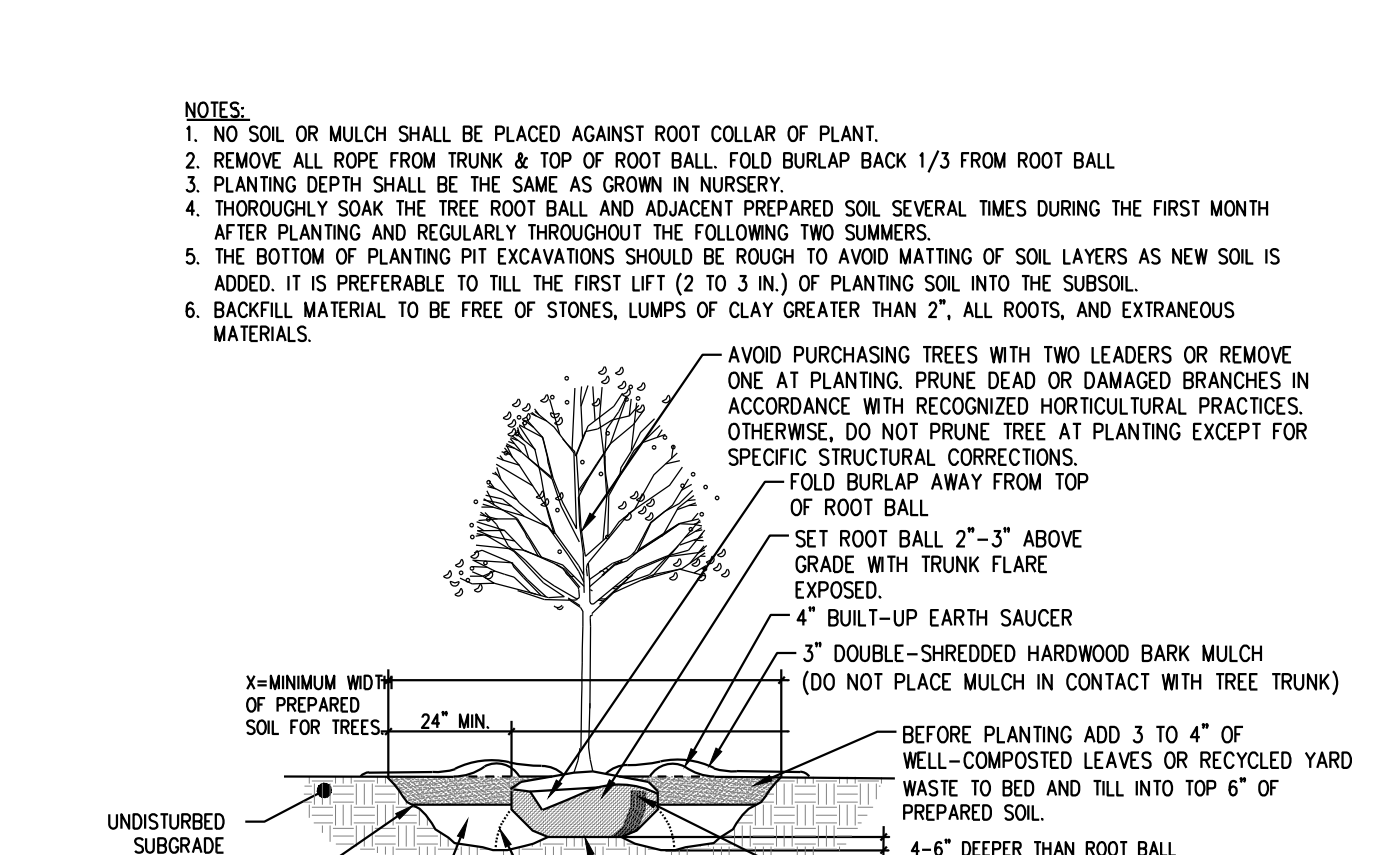
CONCRETE TOP UNIT - TYPE M
N.T.S.



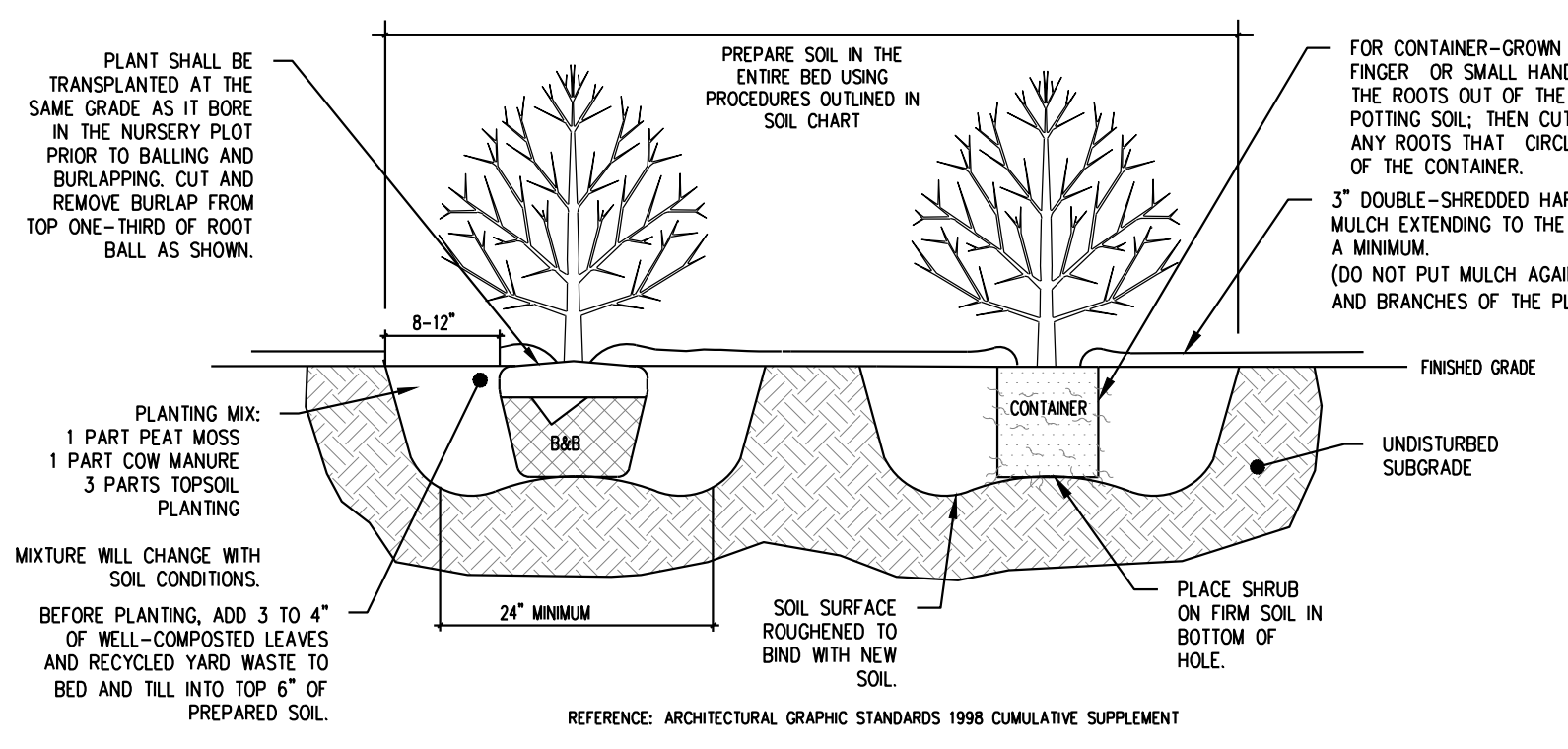
STORM SEWER BEDDING/TRENCH DETAIL
N.T.S.



EVERGREEN TREE PLANTING DETAIL
N.T.S.

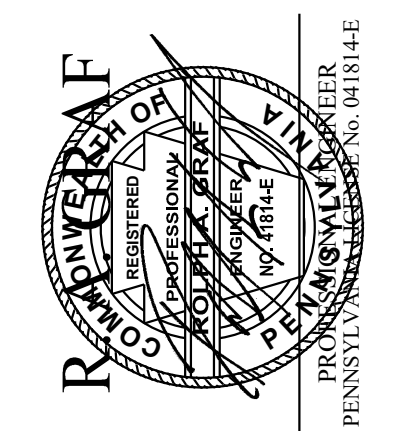


DECIDUOUS TREE PLANTING DETAIL
N.T.S.

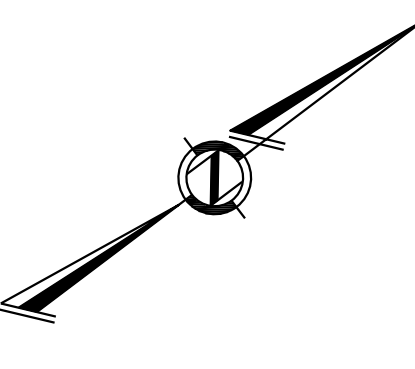


DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL
NOT TO SCALE

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



REV.	DATE	COMMENT	BY	MFC
01	2020/12/15	PER TOWNSHIP STAFF		



LAURA GUNSALUS
PARCEL 67-00-02302-00-7
WORCESTER TOWNSHIP,
MONTGOMERY COUNTY,
PENNSYLVANIA

GRAF ENGINEERING, LLC
LAND DEVELOPMENT CONSULTING
410 WEST MAIN STREET, SUITE 202
P.O. BOX 110
LANSDALE, PA 19446
TEL: (267) 263-2054

CONSTRUCTION DETAILS

GUNSALUS TRACT

SCALE(H): 1" = 50'
SCALE(V): LEM
DRAWN BY: LEM
CHECKED BY: RAG
DATE: 10/01/2020
PROJECT No.: G19.022

5

OF 5



4259 W. Swamp Road
Suite 410
Doylestown, PA 18902

www.cksenineers.com
215.340.0600

January 5, 2021
Ref: # 7543

Township of Worcester
1721 Valley Forge Road
PO Box 767
Worcester, PA 19490-0767

Attention: Tommy Ryan, Township Manager

Reference: Gunsalus Tract – Revised Subdivision Plans

Dear Mr. Ryan:

I am in receipt of revised subdivision plans for the Gunsalus Tract in Worcester Township. These plans consist of five (5) sheets, are dated October 1, 2020 with a latest revision date of December 15, 2020. The plans have been prepared by Graf Engineering, LLC for the property owner, Laura Gunsalus. The plans propose the subdivision of an existing parcel of 10.21 acres into three (3) new building lots. The property is located in AGR-Agricultural District, and the subdivision plans have been prepared in conformance with Section 150-110.2 and Section 150-110.2.A(2) which allows for the subdivision of three (3) lots of less in the conservation subdivision district by utilizing the criteria established for the AGR district. CKS Engineers, Inc. previously reviewed subdivision plans for this parcel and submitted comments in our initial review letter dated October 21, 2020. This latest plan submission was also accompanied by a letter from Graf Engineering, LLC dated December 30, 2021 responding point by point to our original review letter, and also to the McMahon Associates review letter dated November 2, 2020. I have reviewed this latest plan submission and have the following comments:

1. All of the technical comments in my October 21, 2020 letter have been adequately addressed with the plan revisions.
2. The applicant will require numerous waivers in conjunction with this subdivision plan. The applicant should submit a separate letter to the Township requesting the required waivers, and also include the waivers on the record plan. The following waivers will be required.
 - A. Section 130-17B(2) which requires driveways to be at least 40' from a roadway intersection.
 - B. Section 130-33C(2) requiring an aerial photograph of all physical features within 500' feet of the property.
 - C. Section 130-16 requiring road frontage improvements (widening) along Mill Road.

- D. Section 130-18.A, requiring installation of sidewalks along the property frontage.
- E. Section 130-18.B requiring the installation of curbing along the property frontage.

Road improvements along Mill Road maybe difficult at this time, since there is an intermediate parcel between lots 1 and 3. It is suggested that the Township consider deferring the requirements for road frontage improvements, the installation of sidewalks, and the installation of curbing. These improvements can be deferred to a later date when it makes better sense to provide improvements along the entire frontage including the intermediate lot. The granting of either the waivers or deferrals should be considered.

- 3. The applicant is reminded that a construction escrow will be required in conjunction with this project. Items to be included in the construction escrow included the three (3) rain gardens, all landscaping, and all monuments and pins. This escrow will be included in a development agreement which must be executed by the Township and the Applicant.
- 4. An Erosion and Sedimentation Control Plan must be prepared for this project. The limits of disturbance for each of the three (3) lots should be identified and indicated on the erosion and sedimentation control plan. This plan should be provided as part of the final plan set when submitted to the Township. If the total limit of disturbance exceeds one (1) acre, the applicant will be required to obtain a NPDES permit for this project.
- 5. Sheet No. 5 includes construction details for this project. This sheet includes a "water service connection detail" which should now be removed since public water is not being provided for this project.

It should be noted that the Township's traffic consultant, McMahon and Associates did submit an initial review letter, and the applicants engineer response letter did address the comments set forth in the McMahon letter. The Townships traffic consultant should review these plans and the revisions to make certain that all issues in their initial review letter are adequately addressed.

The above represents all comments on this latest plan submission. The applicants engineer should follow through with final revisions and preparation of the E & S plan and resubmit for further review and approval consideration.

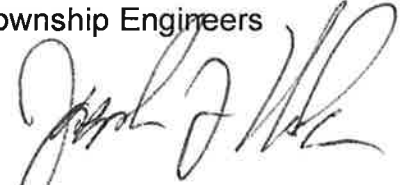
January 6, 2021

Ref: # 7543

Page 3

Please contact me if you have any questions or need any additional assistance on this project.

Very truly yours,
CKS ENGINEERS, INC.
Township Engineers

A handwritten signature in black ink, appearing to read "Joseph J. Nolan". The signature is fluid and cursive, with the first name "Joseph" being the most prominent.

Joseph J. Nolan, P.E.

JJN/paf

cc: Robert Brant, Esq., Township Solicitor
Andrew Raquet, Worcester Township
Rolph Graph, Graf Engineering, LLC
JD Contractors, LLC
File

January 13, 2021

Mr. Tommy Ryan
Township Manager
Worcester Township
1721 Valley Forge Road
P.O. Box 767
Worcester, PA 19490

RE: **Traffic Review #2 – Land Development Plans**
Gunsalus Tract (LD 2020-04)
Worcester Township, Montgomery County, PA
McMahon Project No. 820847.11

Dear Tommy:

In response to your request, McMahon Associates, Inc. (McMahon) has completed our second (2nd) traffic engineering review of the proposed Gunsalus Tract subdivision, to be located along the northern side of Mill Road to the east of Kriebel Mill Road in Worcester Township, Montgomery County, PA. It is our understanding that the proposed subdivision involves subdividing Parcel 67-00-02302-00-7 into three lots (Lots 1, 2, and 3) with a single-family home proposed to be constructed on each lot. Access to Lots 1 and 2 is proposed to be provided via a shared driveway connection to Mill Road while access to Lot 3 is proposed to be provided via individual driveway connection to Mill Road.

The following documents were reviewed and/or referenced in preparation of our traffic review:

- **Land Development Plans for Gunsalus Tract**, prepared by Graf Engineering, LLC, last revised December 15, 2020.
- **Response to Comments Letter for Gunsalus Tract**, prepared by Graf Engineering, LLC, dated December 30, 2020.

Based on our review of the submitted documents noted above, McMahon offers the following comments for consideration by the Township and action by the applicant:

1. All waivers/deferrals requested by the applicant must be included on the plans. Also, a waiver/deferral request letter must be included in subsequent submissions providing justification for the waiver/deferral requests.
2. According to **Section 130-16.C(1)** of the **Subdivision and Land Development Ordinance**, Mill Road should have a minimum cartway width of 38 feet along the site frontage. The plans currently show an approximate 25-foot cartway width along the site frontage of Mill Road, thereby not satisfying the ordinance requirement. Since roadway widening along the entire site frontage is not feasible at this time since the widening improvements would not be contiguous along the proposed lots unless also

required along the 175 feet of the parcel owned by the Perna's (Block 09, Lot 42) that the proposed subdivision surrounds, we recommend to the Board of Supervisors to consider deferring this obligation that is required of the applicant until such a time as may be required by the Township for these subdivided properties, whether under present or future land ownership, and at no cost to Worcester Township. We understand that the Planning Commission was in general support of a waiver to this requirement.

3. According to **Section 130-18.A** of the **Subdivision and Land Development Ordinance**, sidewalk should be provided along the site frontage of Mill Road. The plans do not show any sidewalk along the site frontage of Mill Road, thereby not satisfying the ordinance requirement. The applicant has requested a waiver from providing sidewalk along the site frontage of Mill Road. We understand that the Planning Commission was in general support of a waiver to this requirement. However, we recommend to the Board of Supervisors to consider deferring this obligation that is required of the applicant until such a time as may be required by the Township for these subdivided properties, whether under present or future land ownership, and at no cost to Worcester Township.
4. According to **Section 130-18.B** of the **Subdivision and Land Development Ordinance**, curbing should be provided along the site frontage of Mill Road. The plans do not show any curbing along the site frontage of Mill Road, thereby not satisfying the ordinance requirement. The applicant has requested a waiver from providing curbing along the site frontage of Mill Road. We understand that the Planning Commission was in general support of a waiver to this requirement. However, we recommend to the Board of Supervisors to consider deferring this obligation required of the applicant based on the subdivision size and that the curbing would not be contiguous along the proposed lots unless also required along the 175 feet of the parcel owned by the Perna's (Block 09, Lot 42) that the proposed subdivision surrounds. If curbing is deferred, it should be until such a time as may be required by the Township for these subdivided properties, whether under present or future land ownership, and at no cost to Worcester Township.
5. According to **Section 130-17.B(2)** of the **Subdivision and Land Development Ordinance**, driveways shall be located not less than 40 feet from street intersections. Since the driveway to Lots 1 and 2 is located less than 40 feet from the intersection of Mill Road and Kriebel Mill Road, a waiver must be requested from this ordinance requirement. It should be noted that driveway volumes for Lot 1 and 2 are expected to be minimal, therefore, we would not be opposed to the granting of this waiver.
6. According to the Township's Roadway Sufficiency Analysis, the proposed development is located in Transportation Service Area South, which has a corresponding impact fee of \$3,125 per "new" weekday afternoon peak hour trip and the applicant will be required to pay a Transportation Impact Fee in accordance with the Township's Transportation Impact Fee Ordinance. Based on Land Use Code 210 (Single-Family Detached Housing) in the Institute of Transportation Engineers publication, *Trip Generation, 10th Edition*, a single-family home on Lots 1, 2, and 3 would generate three "new" trips during the weekday afternoon peak hour resulting in a **transportation impact fee of \$9,375**.
7. Based on our review, the applicant should address the aforementioned comments, and provide revised plans to the Township and our office for further review and approval recommendations. **The applicant's engineer must provide a response letter that describes how each specific review comment has been**

addressed, where each can be found in the plan set or materials, as opposed to general responses.
This will aid in the detailed review and subsequent review timeframes.

We trust that this review letter responds to your request. If you or the Township have any questions, or require clarification, please contact me.

Sincerely,



Casey A. Moore, P.E
Executive Vice President – Corporate Operations

BMJ/MEE/CAM

cc: Andrew R. Raquet, Worcester Township Codes Director & Assistant Zoning Officer
Joseph Nolan, P.E., CKS Engineers (Township Engineer)
Robert Brant, Esq. (Township Solicitor)
Rolph Graf, P.E., Graf Engineering, LLC (Applicant's Engineer)

BOARD OF SUPERVISORS CERTIFICATION
 APPROVED THIS _____ DAY OF _____, 20____ BY THE BOARD OF SUPERVISORS
 OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

ATTEST:
 SIGNATURE, CHAIRMAN _____
 DATE SIGNED _____
 SIGNATURE, SECRETARY _____
 DATE SIGNED _____

PLANNING COMMISSION CERTIFICATION
 REVIEWED THIS _____ DAY OF _____, 20____ BY THE PLANNING COMMISSION
 OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

ATTEST:
 SIGNATURE _____
 DATE SIGNED _____

TOWNSHIP ENGINEER CERTIFICATION
 REVIEWED BY THE TOWNSHIP ENGINEER OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

TOWNSHIP ENGINEER: _____
 DATE: _____

RECORDING CERTIFICATE
 RECORDED THIS _____ DAY OF _____
 IN THE OFFICE FOR THE RECORDING OF DEEDS, ETC., IN AND FOR THE
 COUNTY OF MONTGOMERY OF NORRISTOWN, PENNSYLVANIA,
 IN PLAN FILE CASE _____, D.B. NO. _____, PAGE _____

OWNER OF RECORD:
 BETHEL DEVELOPMENT ASSOCIATES, LP, HAS LAID OUT UPON OUR LAND SITUATED IN THE
 WORCESTER TOWNSHIP, COUNTY OF MONTGOMERY, COMMONWEALTH OF PENNSYLVANIA
 CERTAIN LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLAN.

WITNESS MY HAND AND SEAL THIS _____ DAY OF _____, 20____

 GENERAL PARTNER

**COMMONWEALTH OF PENNSYLVANIA
 COUNTY OF MONTGOMERY
 NOTARY PUBLIC:**

ON THE _____ DAY OF _____, 20____ BEFORE ME, THE SUBSCRIBED, A NOTARY
 PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA RESIDING IN
 PERSONALLY APPEARED _____ TO BE THE GENERAL PARTNER
 WHO ACKNOWLEDGED _____ TO BE THAT AS SUCH
 OF BETHEL DEVELOPMENT ASSOCIATES, LP, AND THAT AS SUCH
 BEING AUTHORIZED TO DO SO _____ EXECUTED THE FOREGOING
 PLAN BY DESIGNATED LAND, THAT ALL NECESSARY APPROVAL OF THE PLAN HAS BEEN
 OBTAINED AND IS ENJOINED THEREON, AND THAT THE SAID LIMITED PARTNERSHIP DESIRES
 THAT THE FOREGOING PLAN BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND OFFICIAL SEAL THE DAY AND YEAR AFORESAID.

NOTARY PUBLIC
 MY COMMISSION EXPIRES: _____, 20____

SURVEYOR CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN REPRESENTS A SURVEY MADE BY ME, THAT THE
 MONUMENTS SHOWN HEREON EXIST AS LOCATED AND THAT ALL DIMENSIONAL
 DETAILS ARE CORRECT.

DATE _____ ROBERT M. COHRAC
 REGISTERED ENGINEER OR SURVEYOR
 (SEAL)

**ZONING
 R-175 RESIDENTIAL DISTRICT**

REQUIREMENT	EXISTING	LOT #1	LOT #2
LOT AREA - MIN.	60,000 S.F.	195,202 S.F. (NET.)	102,922 S.F.
LOT WIDTH @ BLDG. LINE - MIN.	175'	433.0'	175'
FRONT YARD (HIGHWAY) - MIN.	120'	34.1'	120'
FRONT YARD - MIN.	60'	34.1'	120'
SIDE YARD - MIN.	35'	101.5'	35'
REAR YARD - MIN.	75'	343.4'	75'
BUILDING COVERAGE - MAX.	15%	4,703 S.F. = 2.4%	15%
IMPERVIOUS COVERAGE - MAX.	20%	4,703 S.F. + 6,288 S.F. = 10,991 S.F. = 5.6%	20%
BUILDING HEIGHT - MAX.	35' (2.5 STORIES)	35' (2.5 STORIES)	35' (2.5 STORIES)
PARKING:			
OFF STREET PARKING	2 SPACES	2 SPACES	2 SPACES
SETBACKS: PARKING AREA / DRIVES	10'	10'	10'

SITE DATA

TAX PARCEL NUMBER: 67-00-03262-00-1
 TAX MAP: BLOCK 24, UNIT 54
 RECORD OWNER: BETHEL DEVELOPMENT ASSOCIATES LP
 2205 NORTH WALES RD.
 LANSDALE, PA. 19446
 SITE ADDRESS: 2625 SKIPPACK PIKE
 WORCESTER, PA. 19403
 DEED REFERENCE: D.B. 5528 PAGE 663
 SEWER: PUBLIC
 WATER: PUBLIC

ACT 287, AS AMENDED, TABLE OF CONTACTS

NORTH PENN WATER AUTHORITY 300 FORTY FOOT ROAD LANSDALE, PA. 19446
COMCAST CABLEVISION 1 APOLLO RD. PLYMOUTH MEETING, PA. 19462
COMCAST 4400 WAYNE AVE. PHILADELPHIA, PA. 19140
PECO ENERGY C/O USIC 450 S. HENDERSON RD. SUITE B KING OF PRUSSIA, PA. 19406
WORCESTER TOWNSHIP 1721 VALLEY FORGE ROAD P.O. BOX 767 WORCESTER, PA. 19490
TEXAS EASTERN / SPECTRA 560 POTTSTOWN PIKE CHESTER SPRINGS, PA. 19425
VERIZON PENNSYLVANIA LLC. 1050 VIRGINIA DRIVE FORT WASHINGTON, PA. 19034

ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DEVELOPED
 FROM EXISTING UTILITY RECORDS AND/OR ABOVE-GROUND EXAMINATION OF THE SITE.
 COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES
 OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND
 DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK, AS
 PER PENNSYLVANIA ACT 287, CONTACTED 07/28/2020. SERIAL # 20202102006.

**EQUITABLE OWNER/
 APPLICANT:**

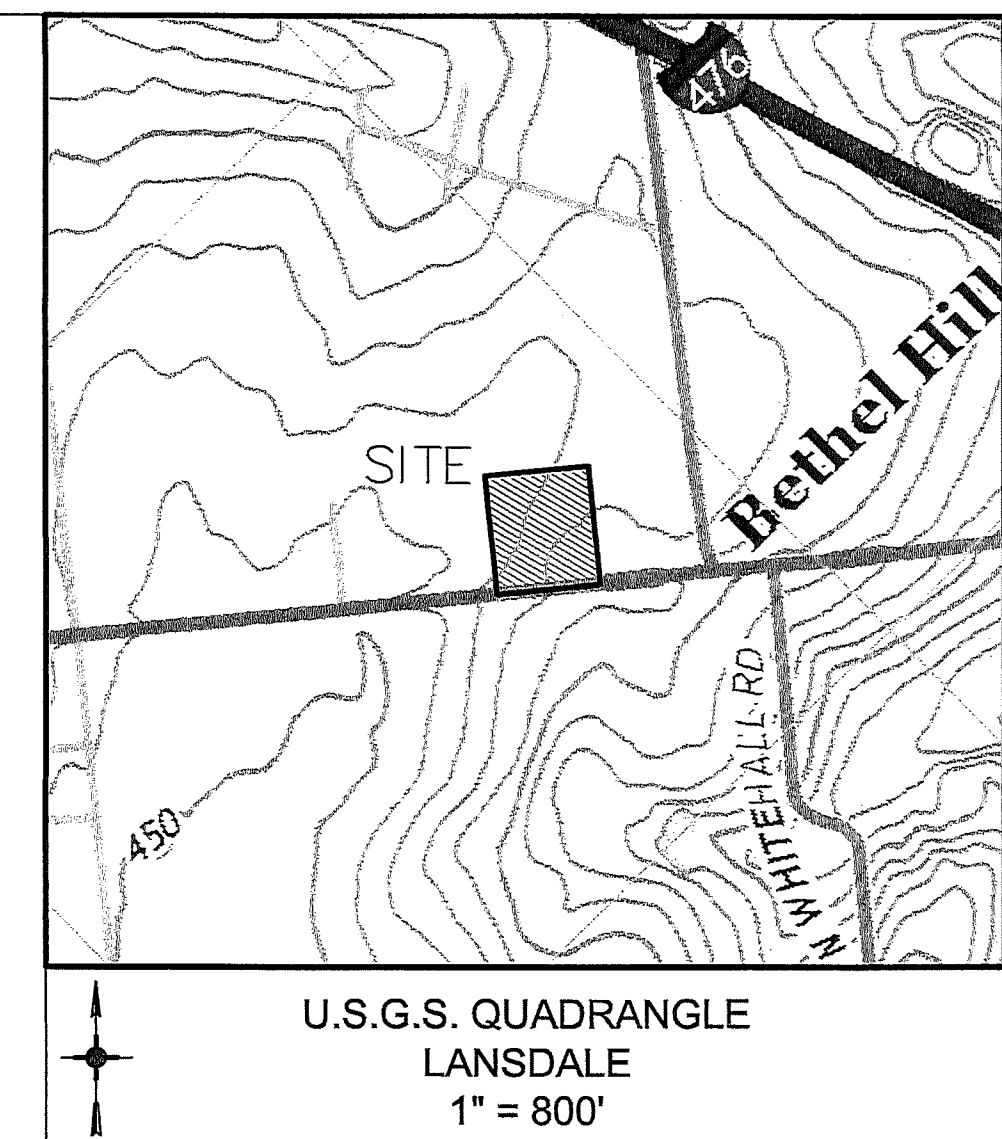
BETHEL DEVELOPMENT ASSOCIATES LP
 2205 NORTH WALES RD.
 LANSDALE, PA. 19446

MCPC No. _____

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

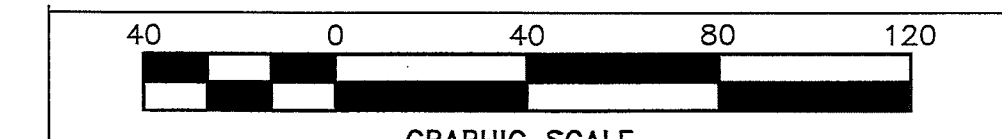
Certified this date _____

For the Director
 Montgomery County Planning Commission



GENERAL NOTES:

- BOUNDARY INFORMATION SHOWN HEREON WAS PREPARED BY CHAMBERS ASSOCIATES, INC., AND REPRESENTS THE COMPILATION OF RECORDED INFORMATION AND AN ACTUAL SURVEY COMPLETED IN JULY 2020.
- PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND PROPERTY SUBJECT TO EASEMENTS, CONDITIONS, AND RESTRICTIONS ETC. CONTAINED THEREIN, RECORDED OR UNRECORDED.
- REFERENCES- PLOT PLAN PREPARED FOR 2625 SKIPPACK PIKE BY JOSEPH M. ESTOCK DATED MARCH 17, 2017.
- TOPOGRAPHIC FEATURES SHOWN HEREON WERE PREPARED BY CHAMBERS ASSOCIATES, INC. AND REPRESENT AN ACTUAL ON-THE-GROUND SURVEY CONDUCTED IN JULY 2020.
 BENCHMARK: INLET GRATE LOCATED AT THE ENTRANCE TO THE ENCLAVE AT CENTER SQUARE ON THE SOUTHERLY SIDE OF SKIPPACK PIKE, NAV88 DATUM ELEVATION 424.95, GPS OBSERVED.
- SAID PROPERTY IS LOCATED WITHIN AN AREA HAVING A FLOOD ZONE DESIGNATION "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 42091C0262-G BEARING A MAP REVISION DATE OF MARCH 2, 2016, FOR COMMUNITY NO. 421919, WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH THE SAID PREMISES IS SITUATED.
 ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- TAXES: 2625 SKIPPACK PIKE
 T.M.P. 67-00-03262-00-1
 TAX MAP BLOCK 24 UNIT 54,
 DEED BOOK 5528 PAGE 663
- AREA GROSS 4.97 ACRES OF LAND MORE OR LESS
 NET 4.48 ACRES OF LAND MORE OR LESS.
- PROPERTY IS SERVICED BY PUBLIC SEWER AND PUBLIC WATER.
- DETAILED GRADING, EROSION AND SEDIMENT CONTROL, AND STORMWATER MANAGEMENT PLANS WILL BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION FOR LOT #2.
- EXISTING 10' WIDE DRIVEWAY TO BE WIDENED TO 18' WITH THE BUILDING PERMIT APPLICATION FOR LOT #2.
- IRON PINS TO BE SET AT ALL PROPERTY CORNERS.
- THERE ARE NO STEEP SLOPES LOCATED ON THE PROPERTY.

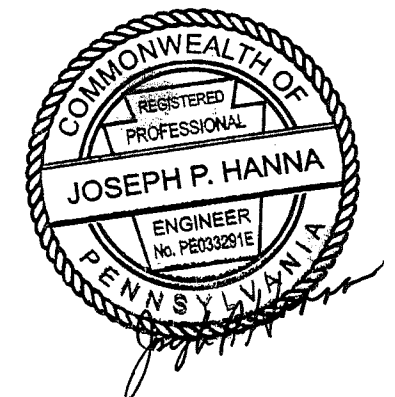


NO.	DATE	DESCRIPTION	BY
		2625 SKIPPACK PIKE MINOR SUBDIVISION PLAN	

PREPARED FOR
BETHEL DEVELOPMENT ASSOCIATES, LP.
 WORCESTER TOWNSHIP
 MONTGOMERY COUNTY
 PENNSYLVANIA

Chambers Associates, Inc.
 Consulting Engineers and Surveyors
 2962 Skippack Pike P.O. Box 678
 Worcester, PA 19490-0678
 484-991-8187

SCALE	DATE	JOB	DRAWING NO.
1"=40'	12-1-20	160-012	SHEET 1 of 1
MANAGER:	JPH	DRAWN BY:	JAS



SUBMITTED BY: [Name] DATE: [Date] TIME: [Time] DRAWING NO.: [Number] SHEET NO.: [Number] TOTAL SHEETS: [Total]



4259 W. Swamp Road
Suite 410
Doylestown, PA 18902

www.cksenineers.com
215.340.0600

December 14, 2020
Ref: # 7545

Township of Worcester
PO Box 767
1721 Valley Forge Road
Worcester, PA 19490-0767

Attention: Tommy Ryan, Township Manager

Reference: 2625 Skippack Pike - Minor Subdivision

Dear Mr. Ryan:

I am in receipt of the Township's memorandum dated December 4, 2020 requesting my review of the proposed preliminary/final plan subdivision for 2625 Skippack Pike. This plan has been submitted as a minor subdivision plan in conformance with Section 130-35.1, "Minor Plan Submission" of the Township Subdivision and Land Development Ordinance. The plan consists of one (1) sheet, has been prepared by Chambers Associates, Inc., and is dated December 1, 2020. The plan has been prepared for the Bethel Development Associates LP, of Worcester Township.

The plan proposes the subdivision of an existing parcel containing 195,202 square feet (net) into two (2) lots. Lot 1 will contain the existing dwelling on the property. Lot 2 is proposed to be a future building lot. This property is in the R-175 Residential Zoning District as set forth in Worcester Township Code. I have reviewed this plan for conformance with the code requirements and offer the following comments:

1. The proposed lot line to subdivide the existing property has created a zoning violation for the existing garage. Section 150-177A(2) states that either attached or detached garages in the zoning district shall be located within the building envelope. The existing garage is only 13.8' from the proposed subdivision line. Based on the zoning ordinance, this distance must be at least 35'. The applicant should determine how it wishes to address this violation.
2. Lot 1 contains a "proposed 25' utility and access easement". It is assumed that the access easement is being provided for a shared driveway with proposed Lot 2. If that is the case, then there will need to be an agreement between Lots 1 and 2 in conjunction with maintaining the common drive area.

December 14, 2020

Ref: # 7545

Page 2

3. The applicant should consider relocating the common drive to line up with the existing exit road from the reserve at Worcester project directly across the street. This would eliminate the offset in the existing driveway and improve traffic flow.
4. The applicant should also add the required site distance triangle on the plans. There appears to be landscaping at the front of the property that could inhibit site distance onto Skippack Pike.
5. The plans show an existing sewer lateral that was constructed as part of the Reserve at Worcester project. This lateral is shown crossing through proposed Lot 2 with a proposed sanitary sewer easement, and connecting to the existing stone house. The plans also show a stub and cap for future connection of the sewer lateral for Lot 2. Since two (2) lots will be utilizing the same lateral, there should be a written agreement to address the joint maintenance responsibilities of the lateral.
6. This project will be provided with both public water and public sewer. Public sewer shall be from Worcester Township, and public water shall be from the North Penn Water Authority . The applicant will need to obtain a letter indicating willingness to serve from the North Penn Water Authority.
7. The plan as proposed shows no improvements on Lot 2. It is anticipated that this would be used for construction of a future house. In conjunction with that building permit, a full-plot plan of Lot 2 should be prepared to show the proposed location of the house, the grading of the lot, and all associated facilities including utilities, and the access driveway. Also, the applicant should address stormwater in conjunction with the stormwater management ordinance.
8. The plans are showing no public improvements. The applicant will need to request waivers from the Township in conjunction with required improvements for a subdivision. These waivers include road frontage improvements (130-16), sidewalks along all road frontages (130-18.A), curbing along all streets or road frontages (130-18.B), and landscaping requirements (130-28). The Township may want certain Landscaping included as part of this subdivision.

The applicant should request waivers for these improvements and also add the waivers to the subdivision plan.
9. The plans show the proposed placement of concrete monuments at several locations along the property frontage. The monuments must be set prior to plan recording, or an escrow will be required to cover the placement cost. Any landscaping that might be required would also need to be part of that escrow.

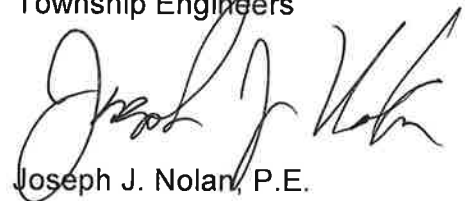
December 14, 2020

Ref: # 7545

Page 3

The above represents all initial comments on this plan submission. The applicant's engineer should address the comments and resubmit for further review and consideration. Please contact me if you have any questions or need any additional assistance with this subdivision.

Very truly yours,
CKS ENGINEERS, INC
Township Engineers



Joseph J. Nolan, P.E.

JJN/paf

cc: Robert Brant, Esq., Township Solicitor
Joseph Hannah, P.E., Chambers Engineers, Inc.
Bethel Development Associates, LP
File

December 14, 2020

Mr. Tommy Ryan
Township Manager
Worcester Township
1721 Valley Forge Road
P.O. Box 767
Worcester, PA 19490

RE: **Traffic Review #1 – Residential Subdivision Plans**
2625 Skippack Pike (LD 2020-06)
Worcester Township, Montgomery County, PA
McMahon Project No. 820978.11

Dear Tommy:

In response to the Township's request, McMahon Associates, Inc. (McMahon) has completed our initial traffic engineering review of the proposed subdivision, to be located at 2625 Skippack Pike (S.R. 0073) in Worcester Township, Montgomery County, PA. It is our understanding that the proposed subdivision involves subdividing Parcel 67-00-03262-00-1 into two lots (Lots 1 and 2). Based on a phone call from the applicant's site engineer, we understand that the existing single-family home will remain on Lot 1 and there is no plan or development currently proposed for Lot 2. Access to Lot 1, and the future development on Lot 2, is proposed to be provided via the existing driveway to Lot 1 along Skippack Pike (S.R. 0073) which will be widened from 10 feet to 18 feet in width.

The following document was reviewed and/or referenced in preparation of our traffic review:

- Subdivision Plan for 2625 Skippack Pike, prepared by Chambers Associates, Inc., dated December 1, 2020.

Based on our review of the submitted document noted above, McMahon offers the following comments for consideration by the Township and action by the applicant:

1. As part of the Reserve at Center Square residential development (directly across Skippack Pike from this parcel), a new access road across from the subject parcel was recently constructed. Additionally, Skippack Pike (S.R. 0073) has been widened to provide a separate right-turn lane into the Reserve access and a two-way-center-left-turn lane along Skippack Pike (S.R. 0073) from Berks Road to east of the Reserve at Center Square site. Consideration should be given to providing better access management along Skippack Pike (S.R. 0073) in the vicinity of the site, therefore, it is recommended that the existing driveway along Skippack Pike (S.R. 0073) should provide joint access to both Lots 1 and 2 and be shifted further to the east from its existing location, if at all feasible, in order to provide safer turning movements in this area and align directly opposite the eastern local road access of the Reserve at Center Square residential development.
2. Sight distance lines and measurements must be provided on the plan for the existing driveway to 2625 Skippack Pike (S.R. 0073) as required by **Section 130-16.E(5)** of the **Subdivision and Land Development Ordinance**, and to satisfy PennDOT Highway Occupancy Permits. Specifically, vehicular egress sight distances looking in both directions (sight distance to the left and sight distance to the right) must be shown on the plans. If the existing

driveway is ultimately realigned to be more directly opposite the eastern local road access to the Reserve at Center Square, as recommended in Comment #1, sight distance measurements must be provided for the realigned driveway location.

3. According to **Section 130-18.A** of the **Subdivision and Land Development Ordinance**, sidewalk should be provided along the site frontage of Skippack Pike (S.R. 0073). The plan does not show any sidewalk along the site frontage of Skippack Pike (S.R. 0073), thereby not satisfying the ordinance requirement. Due to this being a minor subdivision, the lack of presence of sidewalk along either side of Skippack Pike (S.R. 0073) in the surrounding vicinity of the site, and lack of pedestrian destinations in the surrounding vicinity, the Board of Supervisors may wish to consider deferring this obligation until such a time as may be required by the Township for these subdivided properties, whether under present or future land ownership, and at no cost to Worcester Township. The applicant should ensure that the site frontage is free and clear of any physical obstructions and graded in such a manner so as to not prohibit the installation of sidewalk in the future.
4. According to **Section 130-18.B** of the **Subdivision and Land Development Ordinance**, curbing should be provided along the site frontage of Skippack Pike (S.R. 0073). The plan does not show any curbing along the site frontage of Skippack Pike (S.R. 0073), thereby not satisfying the ordinance requirement. We note for the Board, that there is curbing along the north side of Skippack Pike (S.R. 0073) to the east of the site, near the intersection with Bethel Road, and curbing is also present along the site frontage of the Reserve at Center Square along Skippack Pike, opposite the site. However, it should also be noted that a field view of the site confirms that grading along the subject parcel flows away from the roadway and drains down into an existing swale along the frontage and appears to collect into a stormwater system that drains to the east along Skippack Pike. Given this drainage pattern and given this is a minor subdivision, the Board of Supervisors may consider deferring this required obligation of the applicant and that the curbing would not be contiguous along the site side of Skippack Pike (S.R. 0073) to the east unless curbing is also required along the site frontage of the parcel owned by Peter Loughran (Block 24, Unit 66). If curbing is deferred, it should be until such a time as may be required by the Township for these subdivided properties, whether under present or future land ownership, and at no cost to Worcester Township.
5. Add the existing driveway width to the plans. In addition, if the existing driveway will be modified under this application, or if a new or modified access will be provided under a separate application at such time that physical improvements are constructed for Lot 2, the modified or new access must be in accordance with **Section 130-17.B (3)** of the **Subdivision and Land Development Ordinance** with respect to grades, widths, and radii at the intersection with Skippack Pike (S.R. 0073), as well as satisfy PennDOT minimum use driveway requirements for permitting.
6. Since Skippack Pike (S.R. 0073) is a State Roadway, a minimum use driveway Highway Occupancy Permit (HOP) will be required for any modifications to the existing driveway to Lot 1 and/or for any future modifications within the PennDOT Right-of-Way associated with future construction of Lot 2. Since we are recommending that the future driveway to both Lot 1 and Lot 2 be used as a shared driveway, the owners of both properties will need to apply for a joint driveway HOP permit and there should be notes on the plan indicating there is an access easement to Lot 1 for use of the shared driveway accessing Skippack Pike. The Township and our office must also be copied on all plan submissions and correspondence between the applicant and PennDOT, and invited to any and all meetings among any of these parties.
7. According to the Township's Roadway Sufficiency Analysis, the proposed development is located in Transportation Service Area North, which has a corresponding impact fee of \$3,977 per "new" weekday

afternoon peak hour trip and the applicant will be required to pay a Transportation Impact Fee in accordance with the Township's Transportation Impact Fee Ordinance. Based on Land Use Code 210 (Single-Family Detached Housing) in the Institute of Transportation Engineers publication, *Trip Generation, 10th Edition*, a single-family home on Lot 2 would generate **one "new" trip** during the weekday afternoon peak hour resulting in a **transportation impact fee of \$3,977**. However, should the Board of Supervisors consider this use and its peak hour trip generation to be a de minimus traffic-generating application, the transportation impact fee may be waived. To qualify for the exemption, the applicant must place a waiver request on their final plan and submit information to support the request for review and approval by the Board.

8. A more detailed review of the site and all transportation-related engineering elements on the plan can be conducted, as the Township deems necessary, if/when new residential development is proposed on either Lot 1 or Lot 2 and a land development plan is submitted to the Township. Additional comments may follow at that phase of the parcel development.
9. Based on our review, the applicant should address the aforementioned comments, and provide revised plans to the Township and our office for further review and approval recommendations. The applicant's engineer must provide a response letter that describes how each specific review comment has been addressed, where each can be found in the plan set or materials, as opposed to general responses. This will aid in the detailed review and subsequent review timeframes.

We trust that this review letter responds to your request. If you or the Township have any questions, or require clarification, please do not hesitate to contact me.

Sincerely,



Casey A. Moore, P.E
Executive Vice President – Corporate Operations

BMJ/CAM

cc: Andrew R. Raquet, Codes Director & Asst. Zoning Officer
Joseph Nolan, P.E., CKS Engineers (Township Engineer)
Robert Brant, Esq. (Township Solicitor)
Francis J. Hanney, PennDOT District 6-0
Susan LaPenta, PennDOT District 6-0
Brian Olszak, Montgomery County Planning Commission
Joseph Hanna, P.E., Chambers Associates, Inc. (Applicant's Engineer)

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PLANNING COMMISSION**
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WWW.MONTCOPA.ORG

SCOTT FRANCE, AICP
EXECUTIVE DIRECTOR

December 23, 2020

Mr. Tommy Ryan, Manager
Worcester Township
1721 Valley Forge Road—Box 767
Worcester, Pennsylvania 19490

Re: MCPC #20-0239-001
Plan Name: 2625 Skippack Pike
(1 lot comprising approx. 4.97 acres)
Situate: Skippack Pike and Bethel Road
Worcester Township

Dear Mr. Ryan:

We have reviewed the above-referenced subdivision plan in accordance with Section 502 of Act 247, “The Pennsylvania Municipalities Planning Code,” as you requested on December 7, 2020. We forward this letter as a report of our review.

BACKGROUND

The Applicant, Bethel Development Associates, LP, is proposing to subdivide an existing 4.97-acre residential lot into two single-family detached residential lots in the R-175 Residential District. The existing dwelling and certain out-buildings will remain on ‘Lot 1’, while it is anticipated another dwelling will be constructed on ‘Lot 2’; both lots will share an access driveway from Skippack Pike. Apart from indicating a building envelope, no improvements appear to be proposed at this time. It appears that the development will be served by public water and sewer.

RECOMMENDATION

The Montgomery County Planning Commission (MCPC) generally supports the Applicant’s proposal; however, in the course of our review we have identified issues which the Township may wish to consider prior to final approval. Our comments are as follows:



REVIEW COMMENTS

ZONING AND SALDO

1. Setbacks. As per **§150-77.A.2** of the Zoning ordinance, private garages must adhere to the required setbacks of all principal buildings in the R-175 Residential District. At present, the existing garage on Lot 1, which is proposed to remain, will be within 13.8 feet from the side lot line of Lot 2, less than the 35-foot setback required of the zoning district for principal structures. While the existing dwelling on Lot 1 is a legal nonconformity as it pertains to front yard setback and is permitted to remain, rendering a previously-conforming garage nonconforming through a subdivision is not permitted. The Applicant should alter the proposed lot lines, or otherwise rectify the situation to the satisfaction of the Township.
2. SALDO Waivers. There are several waivers to SALDO requirements which will likely be requested by the Applicant; however, a list of which has not been provided for our review, so it is unclear what waivers are being requested and what requirements have simply not been met. Significant issues such as stormwater management, vegetation removal, and planting cannot be adequately assessed without the Applicant providing them at the time of subdivision approval. The Township should require the Applicant to provide these details or otherwise provide the refined list of requested waivers.

CONCLUSION

We wish to reiterate that MCPC generally supports the Applicant's proposal, but we believe that our suggested revisions will better achieve the Township's planning objectives for residential development.

Please note that the review comments and recommendations contained in this report are advisory to the municipality and final disposition for the approval of any proposal will be made by the municipality.

Should the governing body approve a final plat of this proposal, the Applicant must present the plan to our office for seal and signature prior to recording with the Recorder of Deeds office. A paper copy bearing the municipal seal and signature of approval must be supplied for our files.

Sincerely,



Brian J. Olszak, Senior Planner
bolszak@montcopa.org - 610-278-3737

c: Bethel Development Associates, LP, Applicant
Chamber Associates, Inc, Applicant's Representative
Andrew R. Raquet, Asst. Township Zoning Officer

Attachments: 1. Reduced copy of plan
2. Aerial Map

APPENDIX

Attachment 1: Reduced Copy of Plan

BOARD OF SUPERVISORS CERTIFICATION
APPROVED THIS _____ DAY OF _____, 2020, BY THE BOARD OF SUPERVISORS OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA.

ATTEST: _____
SIGNATURE, CHAIRMAN

DATE SIGNED: _____

SIGNATURE, SECRETARY

DATE SIGNED: _____

PLANNING COMMISSION CERTIFICATION
REVIEWED THIS _____ DAY OF _____, 2020, BY THE PLANNING COMMISSION OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA.

ATTEST: _____
SIGNATURE

DATE SIGNED: _____

TOWNSHIP ENGINEER CERTIFICATION
REVIEWED BY THE TOWNSHIP ENGINEER OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA.

TOWNSHIP ENGINEER: _____
DATE: _____

RECORDING CERTIFICATE
RECORDED THIS _____ DAY OF _____, 2020, IN THE OFFICE FOR THE RECORDS OF DEEDS, ETC., IN AND FOR THE COUNTY OF MONTGOMERY OF HANOVER, PENNSYLVANIA. IN PLAN FILE CASE: _____ D.S. NO. _____ PAGE _____.

OWNER OF RECORD
BETHEL DEVELOPMENT ASSOCIATES, LP, HAS Laid Out Upon Our Land Situated in the WORCESTER TOWNSHIP, COUNTY OF MONTGOMERY, COMMONWEALTH OF PENNSYLVANIA, CERTAIN LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLAN.

WITNESS MY HAND AND SEAL THIS _____ DAY OF _____, 2020.

GENERAL PARTNER

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF MONTGOMERY
NOTARY PUBLIC

ON THIS _____ DAY OF _____, 2020, BEFORE ME, THE SUBSCRIBED, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, RESIDING IN _____, PERSONALLY APPEARED _____ TO BE THE _____ GENERAL PARTNER AND _____, BOTH KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SET FORTH IN THE FOREGOING PLAN, BEING AUTHORIZED TO DO SO BY THE WRITING OF BETHEL DEVELOPMENT ASSOCIATES, LP, AND THAT SAID ASSOCIATES, LP, BEING AUTHORIZED TO DO SO BY THE WRITING OF BETHEL DEVELOPMENT ASSOCIATES, LP, HAS Laid Out Upon Our Land Situated in the WORCESTER TOWNSHIP, COUNTY OF MONTGOMERY, COMMONWEALTH OF PENNSYLVANIA, CERTAIN LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLAN, AND THAT SAID ASSOCIATES, LP, HAS Laid Out Upon Our Land Situated in the WORCESTER TOWNSHIP, COUNTY OF MONTGOMERY, COMMONWEALTH OF PENNSYLVANIA, CERTAIN LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLAN, AND THAT SAID ASSOCIATES, LP, HAS Laid Out Upon Our Land Situated in the WORCESTER TOWNSHIP, COUNTY OF MONTGOMERY, COMMONWEALTH OF PENNSYLVANIA, CERTAIN LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLAN.

WITNESS MY HAND AND OFFICIAL SEAL, THE DAY AND YEAR AFORESAID.

NOTARY PUBLIC
MY COMMISSION EXPIRES: _____

SURVEYOR CERTIFICATION
I HEREBY CERTIFY THAT THIS PLAN REPRESENTS A SURVEY MADE BY ME, THAT THE BOUNDARIES AND DIMENSIONS SHOWN ARE TRUE AND CORRECT, AND THAT ALL DIMENSIONS, DETAILS ARE CORRECT.

DATE: _____ SURVEYOR: ROBERT M. COVINO
REGISTERED PROFESSIONAL SURVEYOR (RPS)

LOT #1 102,922 S.F.
LOT #2 92,280 S.F.

PROPOSED UTILITY & ACCESS EASEMENT
PROPOSED 20' SANITARY SEWER EASEMENT

REGULATED AREA (R.A.)
REGULATED AREA (R.A.)
REGULATED AREA (R.A.)

SKIPPACK PIKE (S.R. 0073)

GENERAL NOTES:

- BOUNDARY INFORMATION SHOWN HEREON WAS PREPARED BY CHAMBERS ASSOCIATES, INC. AND REPRESENTS THE COMPILATION OF RECORDED INFORMATION AND AN ACTUAL SURVEY COMPLETED IN JULY 2020.
- PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND PROPERTY SUBJECT TO EASEMENTS, CONDITIONS, AND RESTRICTIONS ETC. CONTAINED THEREIN, RECORDED OR UNRECORDED.
- REFERENCES TO THIS PLAN PREPARED FOR 2625 SKIPPACK PIKE BY JOSEPH H. BETCOCK DATED MARCH 17, 2017.
- TOPOGRAPHIC FEATURES SHOWN HEREON WERE PREPARED BY CHAMBERS ASSOCIATES, INC. AND REPRESENT AN ACTUAL ON-THE-GROUND SURVEY CONDUCTED IN JULY 2020.
- MARKER INLET GRATE LOCATED AT THE ENTRANCE TO THE ENCLAVE AT CENTER SQUARE ON THE SOUTHERLY SIDE OF SKIPPACK PIKE, NAD83 DATUM ELEVATION 424.5, SPDS OBSERVED.
- SAID PROPERTY IS LOCATED WITHIN AN AREA HAVING A FLOOD ZONE DESIGNATION "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA). ON FLOOD INSURANCE RATE MAP NO. 4205700604R/04 BEARING A MAP REVISION DATE OF MARCH 2, 2016, FOR COMMUNITY NO. 421919, WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH THE SAID PREMISES IS SITUATED.
- ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- TAXES: 2625 SKIPPACK PIKE T.M.P. 87-00-00282-00-1 TAX MAP BLOCK 24 UNIT 54 DEED BOOK 5628 PAGE 663
- AREA GROSS 4.97 ACRES OF LAND MORE OR LESS NET 4.48 ACRES OF LAND MORE OR LESS.
- PROPERTY IS SERVICED BY PUBLIC SEWER AND PUBLIC WATER.
- DETAILED GRADING, EROSION AND SEDIMENT CONTROL, AND STORMWATER MANAGEMENT PLANS WILL BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION FOR LOT #2.
- EXISTING 10' WIDE DRIVEWAY TO BE WIDENED TO 12' WITH THE BUILDING PERMIT APPLICATION FOR LOT #2.
- IRON PINS TO BE SET AT ALL PROPERTY CORNERS.
- THERE ARE NO STEEP SLOPES LOCATED ON THE PROPERTY.

ZONING
R-175 RESIDENTIAL DISTRICT

REQUIREMENT	EXISTING	LOT #1	LOT #2
LOT AREA - MIN.	85,000 S.F.	195,302 S.F. (NET)	92,280 S.F.
LOT WIDTH @ BLDG. LINE - MIN.	179'	483.0'	179'
FRONT YARD (SIDEWAY) - MIN.	100'	34.1'	100'
FRONT YARD - MIN.	60'	34.1'	60'
SIDE YARD - MIN.	30'	101.0'	30'
REAR YARD - MIN.	75'	363.0'	75'
BUILDING COVERAGE - MAX.	15%	4,703 S.F. + 2.4%	3,811 S.F. + 3.4%
IMPERVIOUS COVERAGE - MAX.	20%	4,703 S.F. + 2.28% S.F. +15,919 S.F. + 5.9%	3,811 S.F. + 6.88% S.F. + 8,799 S.F. + 8.5%
BUILDING HEIGHT - MAX.	30' (2.5 STORIES)	30' (2.5 STORIES)	30' (2.5 STORIES)
PARKING: OFF STREET (HARDEN) SETBACKS: PARKING AREA / DRIVES	2 SPACES 10'	2 SPACES 10'	2 SPACES 10'

SITE DATA

TAX PARCEL NUMBER: 87-00-00282-00-1
BLOCK & UNIT: BLOCK 24 UNIT 54
RECORD OWNER: BETHEL DEVELOPMENT ASSOCIATES LP
2625 SKIPPACK PIKE
WORCESTER, PA. 19383

SITE ADDRESS: 2625 SKIPPACK PIKE
WORCESTER, PA. 19383

DEED REFERENCE: D.S. 9088 PAGE 660
PUBLIC

SEWER: PUBLIC

WATER: PUBLIC

ACT 317, AS AMENDED, TABLE OF CONTACTS

NORTH PENN WATER AUTHORITY 300 NORTH FIRST ROAD LANSDALE, PA. 19445	CONCRETE CAREVERSON 1 LANSDALE RD. LANSDALE, PA. 19445
CONCRETE CAREVERSON 1 LANSDALE RD. LANSDALE, PA. 19445	CONCRETE CAREVERSON 1 LANSDALE RD. LANSDALE, PA. 19445
PROJ ENERGY C/O UIC 4300 E. HENDERSON RD., SUITE B KIND OF FORD, PA. 19406	PROJ ENERGY C/O UIC 4300 E. HENDERSON RD., SUITE B KIND OF FORD, PA. 19406
WORCESTER TOWNSHIP 107 VALLEY FORGE ROAD P.O. BOX 787 WORCESTER, PA. 19380	WORCESTER TOWNSHIP 107 VALLEY FORGE ROAD P.O. BOX 787 WORCESTER, PA. 19380
TEXAS EASTERN / SPECTRA 1400 NOTTOWAY PIKE CHESTER SPRINGS, PA. 19429	TEXAS EASTERN / SPECTRA 1400 NOTTOWAY PIKE CHESTER SPRINGS, PA. 19429
VERISON PENNSYLVANIA, LLC 1500 VIRGINIA DRIVE FORT WASHINGTON, PA. 19034	VERISON PENNSYLVANIA, LLC 1500 VIRGINIA DRIVE FORT WASHINGTON, PA. 19034

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
A WORKING DRAFT NOTICE FOR
CONSTRUCTION (NATC) AND A WORKING
DESIGN STAGE - STOP CALL
FOR SERIAL NUMBER

PA 4
1805262775 202010102006

ALL LOCATIONS OF UTILITIES SHOWN ON THE PLAN HAVE BEEN DEVELOPED FROM EXISTING ONLY RECORDS AND ARE NOT GUARANTEED TO BE THE MOST COMPLETE OR ACCURATE. LOCATION AND DEPTH OF UNRECORDED UTILITIES OR UTILITIES WHICH ARE UNRECORDED, UNDEVELOPED AND NOT SHOWN ON THE PLAN FOR PENNSYLVANIA ACT 317, CONDUCTOR'S SURVEY, SHALL BE DETERMINED BY THE CONTRACTOR.

EQUITABLE OWNER/APPLICANT:
BETHEL DEVELOPMENT ASSOCIATES LP
2625 NORTH VALLEY RD.
LANSDALE, PA. 19445

MPC No.:
PROCESSED AND REVIEWED: A report has been prepared by the Montgomery County Planning Commission in accordance with the Municipalities Planning Code.

Certified this date: _____

For the Board:
Montgomery County Planning Commission

GRAPHIC SCALE

0 40 80 120

NO.	DATE	DESCRIPTION	BY

2625 SKIPPACK PIKE
MINOR SUBDIVISION PLAN
PREPARED FOR
BETHEL DEVELOPMENT ASSOCIATES, LP.
WORCESTER TOWNSHIP
MONTGOMERY COUNTY
PENNSYLVANIA

Chambers Associates, Inc.
Consulting Engineers and Surveyors
2982 Skippack Pike P.O. Box 678
Worcester, PA 19380-0678
610-891-8187

SCALE
1"=40'
12-1-20 160-012
MANAGER: JPH

DRAWING NO.
SHEET 1 of 1
DRAWN BY: JAS

Attachment 2: Aerial Map



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JOSEPH C. GALE, COMMISSIONER



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WWW.MONTCOPA.ORG

SCOTT FRANCE, AICP
EXECUTIVE DIRECTOR

SUBJECT: Review of Worcester “Green” Conservation Ordinances

TO: Worcester Township Planning Commission

CC: Tommy Ryan, Township Manager
Stacey Crandall, Asst. Township Manager
Andrew R. Raquet, Asst. Zoning Officer; Codes Clerk

FROM: Brian J. Olszak, Senior Planner, MCPC

DATE: December 3, 2020

INTRODUCTION

At the direction of the Township Planning Commission, I have performed an analysis of Worcester’s Zoning Ordinance and Subdivision and Land Development Ordinance (SALDO) regarding “green” ordinance provisions related to natural resource protection and landscaping. As directed, I’ve analyzed these various ordinances with an eye to comparing Worcester’s standards with prevailing ordinance trends in the county and region, as well as identifying opportunities to strengthen existing protection standards. The topics I’ve reviewed included the following:

- Floodplains
- Steep slopes
- Riparian corridors
- Recommended plant species
- Street trees
- Buffers between zoning districts
- Parking lot landscaping
- Other miscellaneous conservation sections

Under each topic area, I give a brief overview of the existing regulatory framework and indicate notable code sections which the Township might consider revising.

FLOODPLAIN CONSERVATION

The Township regulates floodplain protections in the Floodplain Conservation Overlay. Almost all Montgomery County municipalities were required to update their floodplain ordinances once FEMA finalized the new floodplain maps, which went into effect in 2016. The state Department of Community and Economic Development created a model ordinance, modified by MCPC, for municipalities to use to ensure compliance with federal FEMA regulations. The Township’s ordinance is based upon this

model and, because participation in the National Flood Insurance Program (NFIP) is conditioned upon having a compliant ordinance, we generally do not recommend changes which are too substantial in nature. That being said, municipalities were permitted to make changes which were more restrictive than the model suggested. Since most of the lots in floodplain in Worcester tend to be large lots, impacts to the floodplain have largely been avoided when developed out and, in that light, Worcester may not see any appreciable gain by making significant revisions to this section. In the interest of exhausting all possible options to strengthen the ordinance, I offer the following options for the Township's consideration:

- **§150-136.B.** The regulatory flood elevation, the minimum height above the base flood elevation which new structures must be constructed in the floodplain, is 1.5 feet, higher than the 1 foot that many municipalities have. Worcester may increase this height if desired, but I'll defer to the Township Engineer whether such a change is justified.
- **§150-138.D.2** Worcester, and many other communities, permit expansions and enlargements of existing structures in the floodplain (but not the *floodway*), which are conditioned upon specific criteria, one of which is that all cumulative improvements on the property must not "increase the one-hundred-year-flood elevation more than one foot at any point." While the FEMA model ordinance framework considers this modest rise acceptable, some communities in particularly flood-prone areas, such as Cheltenham Township, have stricken these clauses from the ordinance and have replaced them with the phrase "[must not] *increase the base flood elevation at any point.*" However, since Worcester has seen few, if any, applications for development within the restricted floodplain area, making this change may not be necessary.
- **§150-139.B.3** The same instance of permitting the modest increase in the base flood elevation also appears in the conditions for granting a variance. While the variance conditions of subsections **B.5**, **B.6** and **B.7** attempt to protect properties upstream and downstream from an unacceptable rise in the flood elevation on one particular variance application, there is still the possibility that permitting small, incremental changes from several properties may accumulate, which the current variance process cannot protect against. Again, since Worcester has seen few, if any, applications for development within the restricted floodplain area, making this change may not be necessary.

STEEP SLOPES CONSERVATION

Regulation of steep slope disturbance is performed for two general reasons: to prevent the uncontrolled disturbance of slopes in a manner which will cause excessive erosion and unstable soils, and to protect the natural geology and ecology which steep slopes afford. Requiring any disturbance and regrading of steep slopes to be performed only through an engineered plan and the approval of the Township Engineer is considered customary across the region, which Worcester's Steep Slopes Conservation Overlay requires as well. Worcester defines steep slopes at 15% and above, with 25% and above considered especially steep, upon which most development is prohibited (**§150-146.4**). This is largely in line with how the many other county municipalities define steep slopes. A few revisions which the Township might consider include the following:

- Overall, the existing Steeps Slopes Conservation Overlay focuses largely on the avoidance of steep slopes during the land development process, particular in the "layout of developments."

However, disturbance of steep slopes can and does occur outside the land development process, such as when a single residential lot is under construction. One significant addition to address this issue could include a prohibition on vegetation removal in steep slope areas, with or without grading.

- Currently there is no limitation to how much regrading of slopes under 25% can occur on a property. While slopes below 25% may not be as environmentally sensitive as slopes greater than 25%, such slopes still provide ecological functions and potential erosion hazards worthy of protection. A potential revision in this regard could include an overall limitation on the disturbance of slopes between 15% and 25%: many municipalities limit disturbance of these types of slopes to 25% of all eligible slopes on the property by area.
- **§130-32.1.** There appears to be a discrepancy between what the Zoning and the SALDO consider steep slopes: the SALDO defines steep slopes as 10% and 18%, while the Zoning defined steep and very steep slopes as 15% and 25%. This discrepancy should be corrected.
- **§150-9.** Worcester ensures, through the “lot area calculation” standard required for all residential zoning districts, that the presence of steep slopes must be accounted for when determining the minimum lot size necessary for residential properties. This essentially requires a *greater* lot area to ensure there is usable lot area outside of steep slope areas and other sensitive land, which ultimately incentivizes their continued protection. However, it appears no such requirement is included for calculated *nonresidential* lot area. The Township may want to consider adding similar language to the creation of nonresidential lots as well, to ensure consistent conservation practices across the Township.

RIPARIAN CORRIDOR CONSERVATION

Stream corridors, as well as lakes and ponds, all maintain unique aquatic-based habitats and plant communities. Not only do these resources provide habitat, but the land-based resources abutting these water bodies provide a number of ecological benefits, including the attenuation of stormwater, streambank conservation and erosion prevention, as well as the regulation of pollutants and oxygen levels in waterways. Worcester regulates activities on the land abutting these waterways, called riparian corridors, primarily through the Riparian Corridor Conservation Overlay District (RCCD) in the Zoning ordinance. This ordinance, along with those of many municipalities in the county, uses [MCPC's Model Riparian Corridor Conservation District ordinance](#).

Worcester's ordinance is, in fact, better than many other ordinances I have come across, namely because it includes a substantial section which is left out of the Model and other existing ordinances: corridor management and replenishment. However, there are certain sections of Worcester's ordinances on this topic which might be strengthened in the following ways:

- **§150-146.6.A.2.** The Township might desire to strengthen the measured width of the corridor to be included within the district. Many municipalities, as well as the Model ordinance, provide for a Zone 1 width of 25 feet and a Zone 2 width of 50 feet, adding up to a total width of 75 feet from bankfull flow. However, since the Model was written, guidance has evolved to recommend at least a 100-foot buffer from the streambank, which could be expressed as an additional 25 feet added to the Zone 2 width. However, increasing the total buffer from 75 feet

to 100 feet may prove more onerous for affected property owners, in that additional setbacks may reduce the amount of usable land on certain properties.

RECOMMENDED PLANT SPECIES LIST

The list of recommend plant species contained within **§130-28.H** of the SALDO appears to be a good mix of native and adapted species, and otherwise appears more or less in line with the average municipality. However, there are some sections which could be improved, following current best practices, in the following ways:

- **Remove: Invasive Species.** I'd recommend the removal of the following species, which are known to be invasive in Pennsylvania and nearby states:
 - *Acer ginnala*
 - *Koelrueteria paniculata*
 - *Phellodendron amurense*
- **Remove: Pest or Disease-Prone Species.** I'd recommend the removal or clarification of the following species:
 - *Fraxinus americana* and *Fraxinus pennsylvanica var. lanceolata* (white and green ashes, respectively). The Township should remove these species due to the persistent threat of the emerald ash borer in the state.
 - *Elm species.* The Township should specify that any elms to be planted should be of a Dutch Elm Disease—resistant variety, such as *Ulmus americana 'New Harmony.'*
- **Add to Prohibited Species List.** In addition to those species already listed in **§130-28.H.6** which are prohibited, the Township may want to adopt by reference other lists established by governmental agencies, including any other plants listed in the official Federal and State Noxious Weed Laws, as well as those species listed in the Department of Conservation and Natural Resources' [Invasive Species List](#). This last list contains the most comprehensive list of any organization relevant to Pennsylvania, is more-frequently updated, and is based on DCNR's current management practices of state lands.
- **Add to Overall Recommended Plant List.** While the list of **§130-28.H** contains many good species, there is significant potential to include additional beneficial species, as well as to provide expanded guidance on recommended species for other plant categories mentioned in the SALDO but not referenced in the existing list, such as for drainage areas and detention basins. Additionally, recommended species for shrubs in **§130-28.H.4** is not currently included in the existing list. Attached to this memo is a comprehensive **List of Recommended Plants I** recently put together for another Montgomery County municipality, which was reviewed by several landscape architects and conservation professionals, which represents our most comprehensive guidance—the Township can adopt any part, or the entirety, of this list according to its preference. A particular strength of this list is that it also provides specific *cultivars*, or cultivated varieties, of tree species which have been cultivated for positive attributes, and which can make them suited for special environments, like a parking lot or a street tree.

STREET TREES

Street trees provide a number of benefits to the community, including beautification, increasing the shading of paved areas like sidewalks and streets, and providing a visual buffer between the street and buildings. Street trees are required along shared driveways, streets, and sidewalks in the Township. It appears that much of this section, **§130-28.G.4**, may have been inspired by [MCPC's Model Subdivision and Land Development Ordinance](#), which has been used in multiple municipalities across the county. However, since its publishing in 2012, our guidance has evolved, which has been complemented by a renewed interest among municipalities in encouraging street tree plantings, and the Township may wish to consider these revisions:

- **§130-28.G.2.** The wording of this section is a bit confusing: "Plantings should be selected and located where they will not create or contribute to conditions hazardous to the public's safety. Such locations include but shall not be limited to public street rights-of-way; sidewalks; underground and above ground utilities; and sight triangle areas required for unobstructed view at street intersections, as discussed in **§ 130-16E(5)**". The second sentence appears to suggest places where trees are *not* recommended, instead of recommended. The Township should consider rewriting this section to state something to the effect of: "Street trees shall not be located within **X** feet of street rights-of-way, sidewalks, underground and above ground utilities and sight triangles." Five or ten feet are common distances used which may be reasonable to use here. That being said, there are trees which are appropriate for and adapted to confined spaces, such as near sidewalk or street pavement, and areas with overhead utility wires, which the Township may wish to insist a developer use in those circumstances, instead of having no landscaping at all in those areas. Such tree species and cultivars are included in the attached **List of Recommended Plants** referenced above.
- **§130-28.G.4.b.** The first sentence of this section appears to set one standard for the *number* of trees required, but then suggests a different *spacing* requirement for primary streets "where they may be up to 50 feet on center spacing." It is not clear from a reading of this sentence whether the actual number of street trees required on primary streets is different, or if just the spacing is permitted to be flexible. The actual number of street trees required should be consistent and unambiguous, but the Township can continue to permit flexibility in the spacing of those trees. Using one tree for every 25 feet of street frontage is a common requirement. In addition, this section should explicitly clarify that the required street tree is calculated based on the frontage of both streets *and* "new sidewalks or passageways," as is referenced in Subsection 4.a.
- **§130-28.G.4.c.** As it stands, there is a minimum five-foot setback required from rights-of-ways, but no *maximum*. Measuring a street tree setback from the ultimate right-of-way, which can often extend several yards from the edge of the street pavement into a property, can be tricky—if a street tree is too far away from the street, it arguably may no longer be a *street* tree, and the benefits of shading sidewalks and streets are lost. While there are legitimate concerns about street trees heaving sidewalks or complicating road widening projects, many of these concerns can be allayed by instead installing or requiring the appropriate tree species for the space (such appropriate tree species and cultivars are included in the attached **List of Recommended Plants** referenced above). Some municipalities instead use a

“distance from the curb or cartway edge” measurement and a *maximum* setback to achieve better results, which the Township could also consider doing.

BUFFERS BETWEEN DISTRICTS

Requirements for landscape buffers are located within **§130-28.G.5** of the Township’s SALDO; however, most individual zoning districts in the Township also contain their own specific buffer requirement, which are generally limited to the specified width, or otherwise state that “a buffer is required.” The Township may wish to consider the following revisions:

- **Buffers throughout Zoning.** Buffer requirements for individual zoning districts vary widely, and can sometimes be under-prescriptive (e.g. the SC Shopping Center District does not specify a required width for the buffer) or over-prescriptive, leading to small conflicts with the buffer requirements of the SALDO. Since by law the regulations of both the SALDO and Zoning are meant to apply simultaneously, conflicts tend to be resolved, since the more restrictive regulation would tend to apply. In theory, the zoning district should stipulate the required widths of the buffer, and the SALDO should stipulate the method in which buffers across *all* zoning districts will be planted. While the provisions for buffers do vary slightly from district to district, the total impact of the Zoning and SALDO requirements—in particular the relative buffer widths and intensity of plantings required—do not radically differ from the average municipality in Montgomery County. In the future, the Township may wish to investigate the slight differences in application of buffering requirements to ensure that the same terms and conditions apply consistently throughout the zoning districts.
- **§130-28.G.5.b.1:** This section states that “Existing vegetation of appropriate species and quantities on the property can be considered in the fulfillment of these requirements.” The Township may want to consider conditioning a developer’s inclusion of existing vegetation into the required buffer plantings by requiring the removal of dead, dying, diseased and invasive trees in the existing tree masses.
- **§130-28.G.10:** This section stipulates several buffer requirements for the “RPD Rural Preservation District.” However, it appears that this district may no longer exist in the Zoning Ordinance, or may intend to apply to a newer district that may have superseded the RPD district. If this is no longer an active zoning district, then it should be repealed, applied to the successor zoning district, or applied to Conservation Subdivisions.
- **Buffering** of other site elements, such as refuse areas and other related elements appear satisfactory.

PARKING LOT LANDSCAPING

Landscaping in a parking lot serves several uses, not the least of which is beatification. However, trees and other vegetation also reduce the “urban heat island effect” of large parking lots, break up large patches of impervious surface, and ultimately improve air quality. Worcester requires the provision of landscaping within parking lots in **§130-28.G.6** of the SALDO, which also appears to have been inspired by [MCPC’s Model Subdivision and Land Development Ordinance](#). The traditional way that landscaping is usually integrated within and around parking lots through land development regulations is either through an “*x* parking islands per *y* parking spaces” scheme or “*x* trees per *y* parking spaces” metric, which is how Worcester generally does it. It has been our experience at

MCPC and the experience of several municipalities, however, that this method of parking lot landscaping tends to not worked out as well as planned. What often results is the creation of several parking islands with little to no vegetation in them at all (which instead are primarily composed of shredded hardwood mulch), and what trees do survive after the initial guaranty period are otherwise stunted and in poor health due to poor soil conditions and constricted growing conditions. Upon review of the Township’s provisions for parking lot landscaping, the Township may want to consider the following revisions:

- Overall we highly recommend applying provisions from [MCPC’s Sustainable Green Parking Lots Guidebook](#), which has taken a comprehensive approach to updating our guidance on parking lot landscaping and design. One need only look at the parking lot landscaping of Peter Went Farmstead to see the impressive benefits of such landscaping, which can even be used for stormwater management purposes. In particular, we recommend adding enhanced interior landscaping standards. I’ve created the first full implementation of this guidance in Montgomery County into another community’s recently-adopted SALDO, which can be found here: <https://ecode360.com/36416171>
- **§130-28.G.6.a.** Perimeter buffers for parking are required along property lines, rights-of-way, as well as between buildings and parking lots. These planting schemes satisfactorily add beneficial landscaping to these areas. However, we’d recommend offering additional street-buffering options for more constrained sites, such as a reduced reliance on landscaping and greater allowance for ornamental fences and walls, as well as shrubs.
- **§130-28.G.6.c.** This section provides the fundamental planting requirement for parking lot interiors. However, several terms within this section could be further defined: for instance, it is not clear how “a minimum of 10% of the [parking] area shall be devoted to landscaping” is measured, whether it is by surface area of planting islands or by number of plants. Although there is “one tree per 15 parking spaces” required, offering “lawn” as a potential landscaping option tends to be rare among municipalities, and could be reconsidered. In the *Guidebook* referenced above, and my own implementation of it linked above, the landscaping required is benchmarked at increasing percentages depending upon the size of the parking lot, and uses a “canopy and ground coverage” measurement of vegetation to ensure high-quality, beneficial landscaping is provided with adequate growing conditions, which the Township may consider using as well.
- The selection of appropriate plantings for the challenging environment of parking lots could be further encouraged by the inclusion of the relevant plant species from the attached **List of Recommended Plants** indicated for adaptability to parking lots.

OTHER CONNSERVATION SECTIONS

The Township stipulates, through the Conservation Subdivision standards within the SALDO, that certain natural resources be protected and included with the required open space of certain land developments (**§130-15.2**). The natural resources referenced in **§130-15.2** extend beyond the scope of the typical riparian, steep slope and floodplain areas for which Worcester already has established protections, and are generally not well defined. Some of these referenced natural resources include “groundwater recharge” areas, “hedgerows,” “groups of trees,” “swales,” and “springs,” among other resources. These and other resources are currently required to be incorporated into required

open spaces “to the fullest extent practicable,” according to the satisfaction of the Township. If desired, the Township could specify more clearly which of these and other resources should be protected and to what extent.

Appendix A: List of Recommended Plants

Note: Any species or cultivar listed below may be used for another purpose other than the Category under which it is listed, provided it receives the recommendation of the Township.

Street Trees:

Shade or Canopy Trees Suitable Under or Near Power Lines

Maximum height shall not exceed 25.' Trees shall be spaced at least 18' apart.

<i>Amelanchier arborea</i> 'Robin Hill'	'Robin Hill' Juneberry
<i>Amelanchier canadensis</i>	Serviceberry
<i>Carpinus caroliniana</i> 'Native Flame'	'Native Flame' American Hornbeam
<i>Cercis canadensis</i>	Eastern Redbud
<i>Cornus alternifolia</i>	Alternate-Leaf Dogwood
<i>Cornus florida</i>	Flowering Dogwood
<i>Magnolia virginiana</i>	Sweetbay Magnolia
<i>Prunus serrulata</i> "Shirotae"	Mt. Fuji Cherry
<i>Prunus subhirtella</i> "Autumnalis"	Autumn Flowering Cherry
<i>Syringa reticulata</i> "Ivory Silk"	Japanese tree lilac
<i>Syringa reticulata</i> "Summer Snow"	Japanese tree lilac
<i>Zelkova serrata</i> 'City Sprite'	City Sprite Zelkova
<i>Zelkova serrata</i> 'Schmidtlow'	Wireless Zelkova

Note: No other cultivars of *Zelkova serrata* shall be permitted under these conditions.

Street Trees:

Shade or Canopy Trees Suitable Near Paving and Parking Lot Greening (Planting Islands and Planting Strips):

Trees shall be spaced at least 20' apart.

Trees indicated with an asterisk (*) shall be spaced at least 30-40' apart.

<i>Acer saccharum</i> 'Goldspire'	'Goldspire' Sugar Maple
<i>Betula nigra</i>	River Birch
<i>Carpinus betulus</i> 'Columnaris'	Columnar European Hornbeam
<i>Carpinus caroliniana</i>	American Hornbeam
<i>Cercis canadensis</i>	Eastern Redbud
<i>Ginkgo biloba</i> 'Princeton Sentry'	Princeton Sentry Ginkgo
<i>Ginkgo biloba</i> 'Magyar'*	Magyar Upright Ginkgo*
Note: No female cultivars of <i>Ginkgo biloba</i> shall be permitted.	
<i>Gleditsia triacanthos</i> 'Inermis'*	Thornless Honey Locust*
<i>Ilex opaca</i>	American Holly
<i>Nyssa sylvatica</i>	Black Gum
<i>Platanus x acerfolia</i> 'bloodgood'*	Bloodgood London Plantree*

<i>Quercus alba</i> *	White Oak*
<i>Quercus coccinea</i> *	Scarlet Oak*
<i>Quercus imbricaria</i> *	Shingle Oak*
<i>Quercus palustris</i>	Pin Oak
<i>Quercus rubra</i> *	Red Oak*
<i>Tilia cordata</i>	Littleleaf linden
<i>Taxodium distichum</i>	Bald Cypress
<i>Zelkova serrata</i>	Zelkova

Shade or Canopy Trees Suitable for Buffers, Screens, and Natural Areas

Minimum mature height: 45' or more. Trees shall be spaced at least 30' apart, and shall be planted in minimum eight foot (8') planting strip.

<i>Acer saccharum</i>	Sugar Maple
<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple
<i>Betula nigra</i>	River Birch
<i>Carya ovata</i>	Shagbark Hickory
<i>Celtis occidentalis</i>	Common Hackberry
<i>Cercidiphyllum japonicum</i>	Katsura
<i>Cladrastis kentukea</i>	American Yellowwood
<i>Fagus grandifolia</i>	American Beech
<i>Ginkgo biloba</i> (male clones only)	Ginkgo (Male Clones Only)
<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Common Honeylocust
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Metasequoia glyptostroboides</i>	Dawn Redwood
<i>Ostrya virginiana</i>	American Hophornbeam
<i>Platanus occidentalis</i>	Sycamore
<i>Platanus x acerifolia</i> 'bloodgood'	Bloodgood London Planetree
<i>Quercus alba</i>	White Oak
<i>Quercus bicolor</i>	Swamp White Oak
<i>Quercus imbricaria</i>	Shingle Oak
<i>Quercus macrocarpa</i>	Bur Oak
<i>Quercus palustris</i>	Pin Oak
<i>Quercus phellos</i>	Willow Oak
<i>Quercus prinus</i>	Chestnut Oak
<i>Quercus robur</i>	English Oak
<i>Quercus robur</i> f. <i>fastigiata</i>	Fastigiata English Oak
<i>Quercus rubra</i>	Northern Red Oak
<i>Styphnolobium japonicum</i>	Chinese Scholar Tree
<i>Taxodium distichum</i>	Common Baldcypress
<i>Tilia americana</i>	American Linden
<i>Tilia cordata</i> 'Chancellor'	Chancellor Littleleaf Linden

<i>Tilia tomentosa</i>	Silver Linden
<i>Ulmus americana</i> 'New Harmony'	New Harmony American Elm
Note: Any other cultivar of <i>Ulmus americana</i> with a demonstrated resistance to Dutch Elm Disease shall be permitted.	
<i>Ulmus parvifolia</i> 'Emer II'	Elmer II ALLEE Lacebark Elm
<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova
<i>Zelkova serrata</i> 'Village Green'	Village Green Japanese Zelkova

Shade or Canopy Tree – Suitable for Property Lines or Buffer Strips

Minimum Mature Height – 30' or more.

<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple
<i>Acer saccharum</i>	Sugar Maple
<i>Aesculus x carnea</i>	Red Horsechestnut
<i>Betula nigra</i>	River Birch
<i>Carpinus betulus</i>	European Hornbeam
<i>Carpinus caroliniana</i>	American Hornbeam
<i>Carya ovata</i>	Shagbark Hickory
<i>Celtis occidentalis</i>	Hackberry
<i>Fagus grandifolia</i>	American Beech
<i>Ginkgo biloba</i> (male clones only)	Ginkgo (Male Clones Only)
<i>Gleditsia triacanthos</i> 'Inermis'	Thornless Honey Locust
<i>Gymnocladus dioica</i>	Kentucky Coffeetree
<i>Halesia tetraptera</i>	Carolina Silverbell
<i>Koelreuteria paniculata</i>	Panicled Goldenraintree
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Metasequoia glyptostroboides</i>	Dawn Redwood
<i>Nyssa sylvatica</i>	Black Tupelo
<i>Ostrya virginiana</i>	American Hophornbeam
<i>Oxydendrum arboretum</i>	Sourwood – (in low-pH soil only)
<i>Platanus x acerfolia</i> 'bloodgood'	Bloodgood London Plantree
<i>Quercus alba</i>	White Oak
<i>Quercus bicolor</i>	Swamp White Oak
<i>Quercus coccinea</i>	Scarlet Oak
<i>Quercus imbricaria</i>	Shingle Oak
<i>Quercus macrocarpa</i>	Bur Oak
<i>Quercus palustris</i>	Pin Oak
<i>Quercus phellos</i>	Willow Oak
<i>Quercus prinus</i>	Chestnut Oak
<i>Quercus robur</i> 'Fastigiata'	Fastigiata English Oak
<i>Quercus rubra</i>	Northern Red Oak
<i>Quercus velutina</i>	Black Oak

<i>Sassafras albidum</i>	Sassafras
<i>Taxodium distichum</i>	Common Baldcypress
<i>Tilia americana</i>	American Linden
<i>Tilia cordata</i> 'Chancellor'	Chancellor Littleleaf Linden
<i>Tilia tomentosa</i>	Silver Linden
<i>Ulmus americana</i> 'New Harmony'	New Harmony American Elm
Note: Any other cultivar of <i>Ulmus americana</i> with a demonstrated resistance to Dutch Elm Disease shall be permitted.	
<i>Ulmus parvifolia</i> 'Emer II'	Elmer II ALLEE Lacebark Elm
<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova
<i>Zelkova serrata</i> 'Village Green'	Village Green Japanese Zelkova

Ornamental Trees – Suitable Near Overhead Utility Wires, and for Property Line Buffers, Site Element Screening and Parking Lot Greening (Planting Islands and Planting Strips)

Minimum mature height – 15' or more, with maximum height of 25'.

<i>Acer buergerianum</i>	Trident Maple
<i>Acer griseum</i>	Paperbark Maple
<i>Acer triflorum</i>	Three-flower Maple
<i>Acer truncatum</i>	Shantung Maple
<i>Amelanchier canadensis</i>	Serviceberry
<i>Carpinus caroliniana</i>	American Hornbeam
<i>Cercis canadensis</i>	Eastern Redbud
<i>Chionanthus retusus</i>	Chinese Fringe Tree
<i>Cornus alternifolia</i>	Alternate-Leaf Dogwood
<i>Cornus florida</i>	Flowering Dogwood
<i>Cornus kousa</i>	Kousa Dogwood (Cultivars)
<i>Cornus florida x Cornus kousa</i>	Rutger's Dogwood
<i>Cornus mas</i>	Cornelian Cherry Dogwood
<i>Cornus officianalis</i>	Japanese Cornel Dogwood
<i>Cotinus obovatus</i>	American Smoketree
<i>Crataegus crusgalli</i> var. <i>inermis</i>	Thornless cockspur hawthorn
<i>Crataegus laevigata</i> "Superba"	English hawthorn
<i>Crataegus x lavalleyi</i>	Lavalle hawthorn
<i>Crataegus phaenopyrum</i>	Washington hawthorn
<i>Crataegus viridis</i> "Winter King"	Winter king hawthorn
<i>Hamamelis virginiana</i>	Common Witchhazel
<i>Hamamelis mollis</i>	Chinese Hybrid Witchhazel
<i>Magnolia virginiana</i>	Sweetbay Magnolia
<i>Malus</i> "Adirondack"	Adirondack crab apple
<i>Malus</i> "Prairifire"	Prairifire crab apple

<i>Malus "Professor Sprenger"</i>	Professor Sprenger crab apple
<i>Prunus x 'Okame'</i>	'Okame' Cherry
<i>Prunus x Yeodensis'</i>	'Yeodensis' Cherry
<i>Prunus sargentii 'Spire'</i>	Columnar Sargent Cherry
<i>Prunus subhirtella var. autumnalis</i>	Higan Cherry
<i>Prunus virginiana</i>	Chokecherry
<i>Prunus virginiana "Schubert"</i>	Canada red chokecherry
<i>Syringa reticulata "Ivory Silk"</i>	Japanese tree lilac
<i>Syringa reticulata "Summer Snow"</i>	Japanese tree lilac

Large Deciduous Shrubs – Suitable for Property Line Buffers Screens

Minimum Mature Height – 15' or more

Key

W = Wet Site Tolerant

D = Dry Site Tolerant

<i>Aesculus parviflora</i>		Bottlebrush Buckeye
<i>Aronia arbutifolia</i>	W	Red Chokeberry
<i>Aronia melanocarpa</i>		Black Chokeberry
<i>Calycanthus floridus</i>	W	Common Sweetshrub
<i>Clethra alnifolia</i>		Summersweet Clethra
<i>Cornus racemosa</i>	W or D	Gray Dogwood
<i>Cornus sericea</i>		Redosier Dogwood
<i>Corylus americana</i>		American Hazelnut
<i>Diervilla sessilifolia</i>		Southern Bush-honeysuckle
<i>Forsythia 'Meadowlark'</i>		Forsythia
<i>Hamamelis vernalis</i>		Vernal Witchhazel
<i>Hamamelis virginiana</i>		Common Witchhazel
<i>Hydrangea quercifolia</i>		Oaklead Hydrangea
<i>Ilex verticillata</i>		Winterberry
<i>Philadelphus x lemoinei</i>	D	Sweet Mockorange
<i>Rhus glabra</i>		Smooth Sumac
<i>Salix caprea</i>		Pussy Willow
<i>Viburnum dentatum</i>		Arrowwood Viburnum
<i>Viburnum farreri</i>		Fragrant Viburnum
<i>Viburnum nudum "Winterthur or Brandywine"</i>		Witherod
<i>Viburnum prunifolium</i>		Blackhaw Viburnum
<i>Viburnum trilobum</i>		American Cranberrybush Viburnum

Evergreen Shrubs – Suitable for Buffers and Screens

Minimum Mature Height – Four Feet (4') or more

<i>Ilex crenata</i>	Japanese Holly
<i>Ilex glabra</i>	Inkberry (Cultivars)
<i>Juniperus communis</i>	Common Juniper
<i>Juniperus virginiana</i>	Eastern Redcedar
<i>Kalmia angustifolia</i>	Sheep Laurel
<i>Kalmia latifolia</i>	Mountain-laurel
<i>Leucothoe fontanesiana</i>	Fetterbush
<i>Leucothoe racemose</i>	Sweetbells Leucothoe
<i>Pieris floribunda</i>	Mountain Pieris
<i>Prunus laurocerasus</i>	Common Cherry Laurel
<i>Prunus laurocerasus</i> 'Otto Luyken'	'Otto Luyken' Cherry Laurel
<i>Rhododendron sp.</i> (<i>viscosum</i> , <i>vaseyi</i> , etc.)	<i>Rhodoendron and Azalea</i>
<i>Taxus sp.</i>	Yew
<i>Schipkaensis</i>	Skip Laurel
<i>Viburnum rhytidophyllum</i>	Leatherleaf Viburnum

Shrubs – Suitable for Building Foundation, Front Yard Landscaping or Parking Lot Greening (Planting Islands and Planting Strips)

<i>Baccharis halimifolia</i>	Groundsel-tree
<i>Buxus Microphylla</i>	Littleleaf Boxwood (needs winter wind protection)
<i>Clethra alnifolia</i>	Summersweet
<i>Fothergilla gardenia</i>	Dwarf Fothergilla
<i>Forsythia</i> 'Arnold Dwarf'	Arnold Dwarf Forsythia
<i>Hypericum frondosum</i> 'Sunburst'	Sunburst Golden St. Johnswort
<i>Ilex glabra</i>	Inkberry
<i>Itea virginica</i> Henry's Garnet or 'Little Henry'	Virginia Sweetspire
<i>Myrica pennsylvanica</i>	Northern Bayberry
<i>Rhus aromatica</i> 'Lo-Grow'	'Low-Grow' Aromatic Sumac
<i>Rosa hybrida</i> 'Ratko'	Double Knockout Rose
<i>Spiraea x bumalda</i> 'Goldflame'	Bumald Spiraea
<i>Viburnum dentatum</i>	Arrowwood Viburnum

Evergreen Trees – Suitable for Property Line Buffers or Screens

Minimum Mature Height – 20' or more

<i>Abies balsamea</i>	Balsam Fir
<i>Abies concolor</i>	White Fir
<i>Chameacyparis thyoides</i>	Atlantic Whitecedar
<i>Cryptomeria japonica</i>	Japanese Cedar

<i>Cupressocyparis leylandii</i>	Leyland Cypress
<i>Ilex opaca</i>	American Holly
<i>Picea abies</i>	Norway Spruce
<i>Picea glauca</i>	White Spruce
<i>Picea omorika</i>	Siberian Spruce
<i>Pinus strobus</i>	Eastern White Pine
<i>Pinus thunbergii</i>	Japanese Black Pine
<i>Pseudotsuga menziesii</i>	Douglas Fir
<i>Thuja occidentalis</i>	Eastern Arborvitae
<i>Thuja plicata</i>	Giant (Western) Arborvitae
<i>Tsuga Canadensis</i>	Canadian Hemlock

Deciduous and Evergreen Trees and Shrubs, Wildflowers and Grasses - Suitable for Wet Meadows, Edges, and Bioretention Facilities

Trees

<i>Acer rubrum</i>	Red Maple
<i>Amelanchier canadensis</i>	Serviceberry
<i>Betula nigra</i>	River Birch
<i>Carpinus caroliniana</i>	American Hornbeam
<i>Ilex opaca</i>	American Holly
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Magnolia virginiana</i>	Sweetbay Magnolia
<i>Metasequoia glyptostroboides</i>	Dawn Redwood
<i>Nyssa sylvatica</i>	Black Gum
<i>Platanus occidentalis</i>	American Sycamore
<i>Quercus bicolor</i>	Swamp White Oak
<i>Taxodium distichum</i>	Bald Cypress
<i>Thuja occidentalis cv. nigra</i>	Dark American Arborvitae
<i>Tilia Americana</i>	American Linden

Shrubs

<i>Aronia arbutifolia</i>	Red Chokeberry
<i>Aronia melanocarpa</i>	Black Chokeberry
<i>Cephalanthus occidentalis</i>	Buttonbush
<i>Clethra alnifolia</i>	Summersweet
<i>Cornus amomum</i>	Silky Dogwood
<i>Ilex verticillata</i>	Winterberry Holly (Cultivars, male & female grouped)
<i>Myrica cerifera</i>	Southern Bayberry

Note: Southern Bayberry shall not be planted near structures, as the leaves, stems and branches contain flammable aromatic compounds.

Viburnum trilobum

American Cranberrybush

Wildflowers/Perennials

Asclepias incarnata

Swamp Milkweed

Aster nova-angliae

New England Aster

Aster puniceus

Purple-stemmed Aster

Aster laevis

Smooth Aster

Daucus carota

Queen Anne Lace

Eupatorium fistulosum

Hollow Joe-pye Weed

Eupatorium dubium

Joe-pye Weed

Helenium nudiflorum

Purple-headed Sneezeweed

Hibiscus moscheutos

Swamp Rose Mallow

Impatiens capensis

Jewelweed

Impatiens pallida

Jewelweed

Iris versicolor

Blue Flag Iris

Lilium canadense

Canada Lily

Lobelia cardinalis

Cardinal Flower

Lobelia siphilitica

Blue Lobelia

Ludwigia alternifolia

Seedbox

Monarda didyma

Beebalm

Penstemon digitalis

Beardtongue

Pycnanthemum virginianum

Mountain Mint

Rudbeckia laciniata

Green-headed Coneflower

Rudbeckia triloba

Black-eyed Susan

Scirpus acutus

Hardstem Bulrush

Senecio aureus

Golden Ragwort

Solidago gigantea

Late Goldenrod

Solidago graminifolia

Lance-leaved Goldenrod

Typha latifolia

Common Cattail

Zizia aurea

Golden Alexander

Grasses

Panicum virgatum

Switchgrass

Sorghastrum nutans

Indian Grass

Tridens flavus

Red Top

Deciduous and Evergreen Trees and Shrubs, Wildflowers and Grasses - Suitable for Dry Meadows, Edges, and Stormwater Detention Basins

Trees

Acer rubrum

Red Maple

Celtis occidentalis
Gleditsia triacanthos inermis
Juniperus virginiana
Liquidambar styraciflua
Quercus bicolor
Quercus coccinea
Quercus macrocarpa
Quercus palustris
Quercus rubra
Sassafras albidum
Thuja occidentalis

Hackberry
Thornless Honey Locust
Eastern Red Cedar
Sweetgum
Swamp White Oak
Scarlet Oak
Bur Oak
Pin Oak
Red Oak (Cultivars Recommended)
Sassafras
Dark American Arborvitae

Shrubs

Comptonia peregrine
Cornus racemosa
Diervilla sessilifolia
Hamamelis virginiana
Myrica pennsylvanica
Rosa Carolina
Rhus aromatic
Rhus copallina
Rhus glabra
Rhus typhina
Viburnum lentago

Sweetfern
Gray Dogwood
Southern Bush Honeysuckle
Common Witchhazel
Northern Bayberry
Pasture Rose
Fragrant Sumac
Shining Sumac
Smooth Sumac
Staghorn Sumac
Nannyberry Viburnum

Wildflowers and Grasses

Andropogon gerardi
Andropogon scoparius
Asclepias tuberosa
Aster pilosus
Aster simplex
Carex sp.
Elymus canadensis
Monarda fistulosa
Panicum virgatum
Pycnanthemum tenuifolium
Rudbeckia hirta
Solidago nemoralis
Solidago speciosa
Sorghastrum nutans
Tridens falvus
Veronicastrum virginicum

Big Bluestem Grass
Little Bluestem Grass
Butterfly Weed
Aster
White Aster
Sedge
Canada Wild Rye
Wild Bergamot
Switchgrass
Slender Mountain Mint
Black-eyed Susan
Old Field Goldenrod
Showy Goldenrod
Indian Grass
Red Top
Culver's Root



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December 24, 2020
Ref: # 7200-57

Worcester Township
1721 Valley Forge Road
PO Box 767
Worcester, PA 19490-0767

Attention: Tommy Ryan, Township Manager

Reference: Review of Worcester "Green" Conservation Ordinances

Dear Mr. Ryan:

At the Worcester Planning Commission meeting of November 12, 2020, the members requested my review of the Montgomery County Planning Commission Memorandum Dated November 5, 2020 regarding a review of Worcester's "Green" Conservation Ordinances. This memorandum was prepared by Brian J. Olszak, Senior Planner of Montgomery County Planning Commission. I have reviewed this memorandum and the County's suggestions in conjunction with potential changes to those sections of the Township's ordinances that deal with "Green" conservation areas. Based on my review of the memorandum, I offer the following comments:

1. Floodplain Conservation: During my time as Township Engineer, I cannot remember any instance where the Township allowed construction in a floodplain. This is primarily due to the large lots which compose a majority of Township Zoning, and the development of properties with intentional avoidance of floodplain areas. The County did however recommend several changes to be considered in the floodplain conservation district.
 - a. Section 150.136.B – This section regulates the flood elevation and the minimum height above the base flood elevation for new structures constructed in the floodplain. Our ordinance requires 1 ½ feet. In most other municipalities, 1 foot is the height required. The County indicates that Worcester may increase this height if desired. Since we already are above the suggested minimum height of 1 foot, I do not think that increasing this height any further (above 1 ½ feet) is justified.
 - b. Section 150-138.D.2 - Worcester and many other communities permit expansions and enlargements of existing structures in the flood plain conditioned upon that improvement not increasing the 100-year flood elevation more than 1 foot at any point. The County is suggesting that we could make this more restrictive by not allowing any additional increase in elevation from construction in the floodplain. As I mentioned previously, it is a rare occurrence that anyone applies to do any construction in the floodplain. I do not think the 1-foot elevation increase is unreasonable and would suggest retaining that criteria. I do not think that the few instances where construction might occur would have a negative cumulative impact on the floodplain elevations in the Township.

- c. Section 150-139.B.3 - Based on my above comment, I would not make any changes to this section for the same reasons.
2. Slope Conservation: The County has confirmed that our ordinance is in line with most other ordinances in the area, in conjunction with steep slopes and how they are defined. In addition, development is prohibited in areas with slopes greater than 25%. As the County indicates, steep slopes normally come into play in the laying out of developments and subdivisions and in these cases, we can address how the steep slopes area handled. The County does indicate that there could be disturbance of steep slopes outside the land development process, such as when a single residential lot is developed. They do indicate that the Township could revise the ordinance to include prohibiting vegetation removal in steep slope areas on these single residential lots or other areas in the Township. I believe that including this type of prohibition would be beneficial since currently we have no recourse if a property owner disturbs steep slopes on a single property. I would therefore be supportive of this change.

The County also indicates that there is no limitation to how much regrading of slopes under 25% can occur on a single property. The County does recommend a potential revision which effects the slopes between 15% and 25% to limit disturbance of these areas to 25% of all slopes on the property. Again, I do not see many instances where these type of steep slopes are disturbed or regraded, but I think the County suggestion is a good one and would support limiting the disturbance of slopes between 15% and 25% to 25% of the area.

- a. Section 130-32.1 – I would recommend that the Township revise the subdivision and land development ordinance to define steep slopes as 15% and 25% to match the zoning ordinance.
- b. Section 150-9 - Worcester does limit the areas of steep slopes in lot area calculations for residential zoning districts when minimum lot sizes are calculated. The County points out that this requirement is not present for the non-residential lot areas. I would therefore be supportive of revising the lot area calculation standard to apply to both residential and non-residential lot areas.
3. Riparian Corridor Conservation: The County has indicated that Worcester's ordinance is better than many other ordinances that they have come across because it includes sections on Corridor Management and Replenishment. The County does however make certain additional recommendations to strengthen this ordinance.
- a. Section 150-146.6.A.2 – The County suggests the potential to increase zone 2 of our current riparian corridor from 50 feet to 75 feet, which would increase the total corridor from 75 feet to 100 feet. Most other ordinances that I am familiar with in other municipalities consistently define Zone 1 as 25 feet and Zone 2 as 50 feet. This could impact many properties in the Township because of the additional area required for the riparian corridor. I therefore would be reluctant to see an increase in this width at this time.

4. Recommended Plant Species List: The County suggests removing certain Invasive Species trees from the list of recommended plant species with Section 130-28H. Also, removing certain Pest or Disease prone species. I am in agreement with the County's recommended removals for our current plant list.

The County also recommends adopting by reference to Section 130-28H.6, the Department of Conservation and Natural Resources "Invasive Species List". This would keep our list updated based on the DCNR's current management practices of state land. I am not opposed to this recommendation.

The County recommends consideration of a more comprehensive plant list for Section 130-28H. They provide a ten (10) page list of recommended plant species in all landscape categories. I am not opposed to considering adopting the list in part, or in whole as a supplement to our current list.

5. Street Trees: The County has reviewed the section of the Ordinance on Street Trees and has made several recommendations.

- a. Section 130-28.G.2 – The County feels that the wording of this section is confusing in the way it is written. It has to do with where street trees are permitted and where they are no permitted. They suggest replacing the language in Section 130-16.E(5) to read "Street trees shall not be located within "X feet(5 or 10 ft is recommended) of streets rights-of-way, sidewalks, underground and above-ground utilities, and site triangles." I do not have a problem with clarifying the language in this Section with the County's recommended change.
- b. Section 130-28.G.4.b – This section sets forth the standards for the number of street trees required, but then suggests a different spacing requirement for "primary streets" where there could be up to 50 feet "on center" spacing. It is not clear if street trees are required on primary streets or if the spacing is only flexible. The County recommends calculating the number of street trees based on a standard spacing (they recommend 25' of frontage) and then using some flexibility in the location of these trees and the spacing of the trees. We currently encourage applicants to use flexibility in location of street trees. Reducing the spacing from 50' to 25' will double the number of street trees required. I am not opposed to reducing the spacing, but this will result in a larger number of street trees, which sometimes makes it difficult to locate all of the required trees in acceptable locations. In this case, the County would suggest a fee in lieu of placement of all the street trees.
- c. Section 130-28.G.4.c – This section deals with the minimum setback required from rights-of-way but does not provide a maximum set back. The thinking is if a street tree is too far away from the street, it may no longer be considered a street tree. Also, the benefits of sidewalk shading and street trees are lost. The County suggests wording to allow a flexibility in the exact placement from the curb or cart way edge and establishing a maximum setback to achieve more consistent results with the application of street trees. This does make sense and I am not opposed to setting a maximum setback on the property in order to utilize the required number of street trees.

6. Buffers Between Districts – Requirements for landscape buffers in the Township are located in Section 130-28.G.5 of Township Code. However, there are some individual zoning districts that also contain their own specific buffering requirements which are generally limited to specific lists or generally state that a buffer is required. The County makes several suggestions regarding buffers.
- a. Buffers Throughout Zoning – The County describes the application of buffers both by location and width according to specific zoning districts and suggest that there should be more uniformity throughout the zoning districts. I think this is larger issue than what may be anticipated in this review, and the County suggests that in the future, the Township may wish to investigate more uniformity in the application buffering requirements in all the zoning districts. I would agree that this is something we might want to look at in the future.
 - b. Section 130-28.G.5.b.1 – This section allows an applicant to use existing vegetation of appropriate species and quantities on properties that can be considered in fulfillment of certain landscape requirements. The County suggests that the Township may want to consider conditioning a developer or applicant's inclusion of existing vegetation by requiring the removal of dead, dying, diseased, and invasive tree species in the existing tree masses. I am in support of this condition.
 - c. Section 130-28.G.10 – This section stipulates several buffer requirements for the RPD (Rural Preservation District). The County correctly points out that this district no longer exists and suggests that the section should be repealed and or applied to another section of the ordinance, such as the conservation subdivision ordinance.
7. Parking Lot Landscaping - The County makes numerous suggestions in conjunction with parking lot landscaping. They suggested that the Township may wish to utilize the provisions in the Montgomery County Planning Commissions "Sustainable Green Parking Lot Guidebook". In addition to this, the County recommends modifying the perimeter buffering requirements for parking lots and adding additional street buffering options for more constrained sights which could permit less of a reliance on landscaping and a greater reliance for ornamental fences and walls as well as lower shrub plantings.

The County also suggests a looking at the interior parking lots and how the requirements of the ordinance allows and provides with regard to planting islands and spacing of parking lot trees.

Overall, I think this is something should be looked at in greater detail and perhaps looking at this as a separate project. I do think there are some good points, and some of the recommendations and suggestions would be beneficial to Worcester Township. I therefore think unless the planning commission wishes to place a great deal of effort on this one particular subject, that it may be beneficial to look at it in the future as a separate project.

8. Other Conservation Sections: The County references the conservation subdivision standards and protection of certain features within the required open space. They also indicate that these protections are generally not well defined. I would agree with that and am not opposed to clarifying these features and resources in order to make certain that they are protected. These features include ground water recharge areas, hedge rows, groups of trees, drainage swales, and springs and there could be additional resources added to this list as well.

The above represents all comments on the December 3, 2020 memorandum prepared by the County. Please contact me if you have any questions or need any additional assistance on any of my responses above.

Very truly yours,
CKS ENGINEERS, INC
Township Engineers



Joseph J. Nolan, P.E.

JJN/paf

cc: Stacy Crandall, Assistant Township Manager
Andrew Raquet, Assistant Zoning Officer/Codes Clerk
File