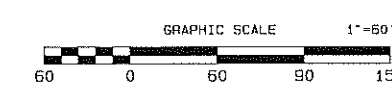
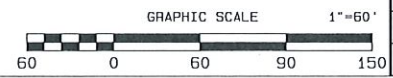
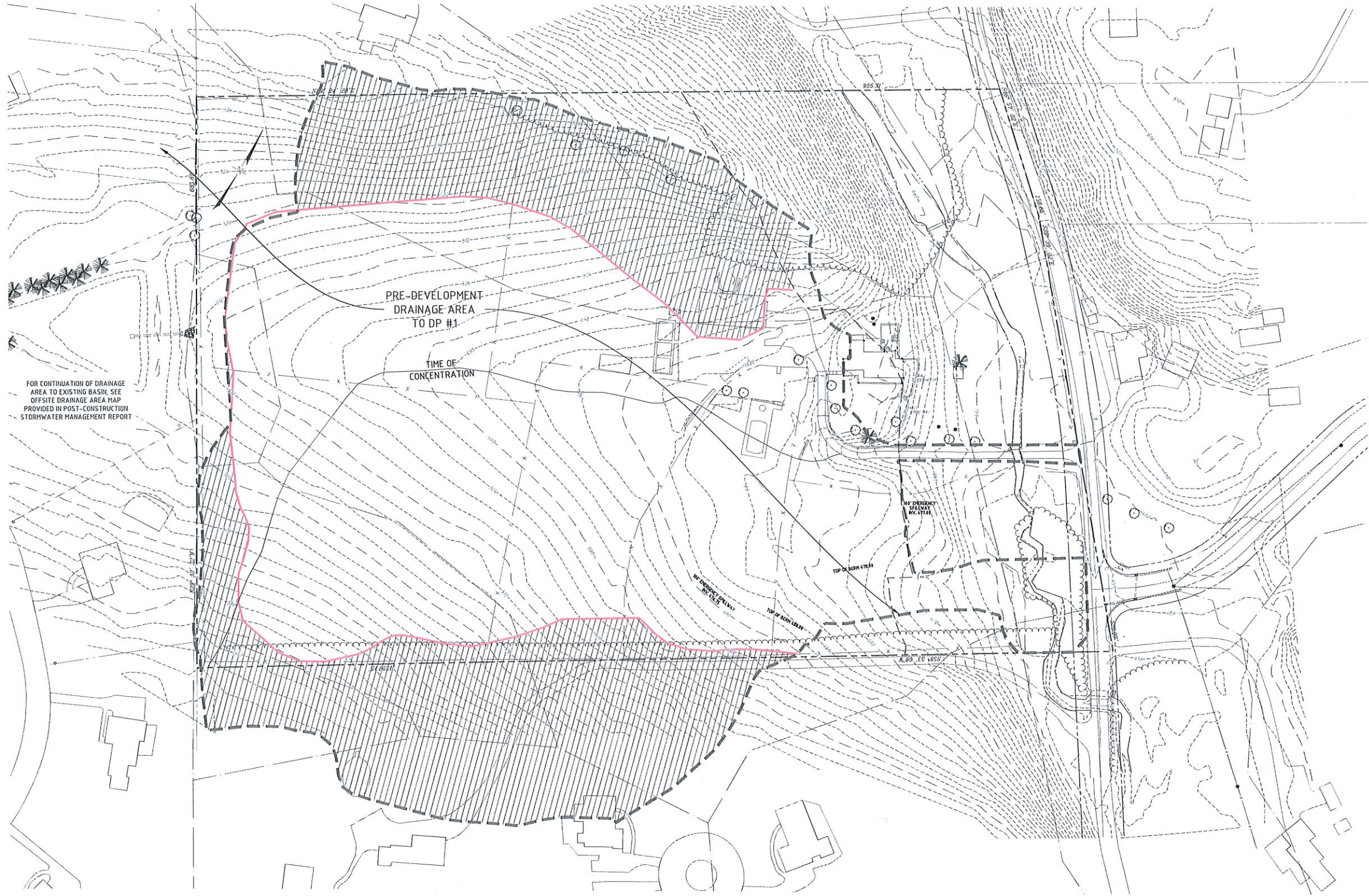



FOR CONTRIBUTION OF DRAINAGE
AREA TO EXISTING BASIN, SEE
OFFSITE DRAINAGE AREA MAP
PROVIDED IN POST-CONSTRUCTION
STORMWATER MANAGEMENT REPORT

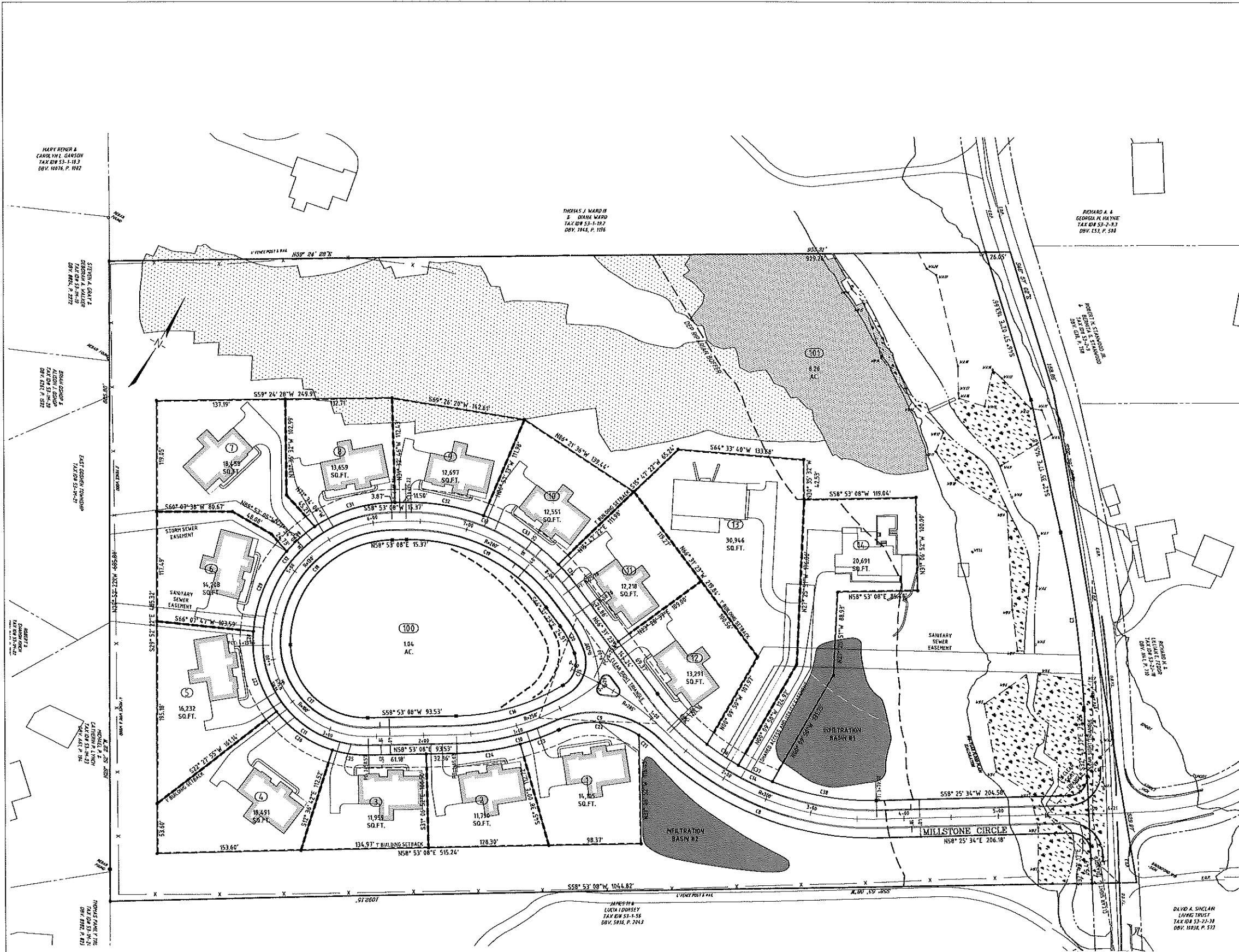


2815 PENN AVENUE WEST LAWN, PA 610-927-4242		2815 PENN AVENUE WEST LAWN, PA 610-927-4242	
MICHAEL GUAN HARTMAN ENGINEER P. 00000000		MICHAEL GUAN HARTMAN ENGINEER P. 00000000	
MILLSTONE MEADOWS STORM WATER MANAGEMENT PLANS POST-DEVELOPMENT -- SUBBASIN		MILLSTONE MEADOWS STORM WATER MANAGEMENT PLANS POST-DEVELOPMENT -- SUBBASIN	
CLIENT: GROVE MEADOW DEVELOPERS LLC LOCATION: EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA DATE: APRIL 20, 2023		CLIENT: GROVE MEADOW DEVELOPERS LLC LOCATION: EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA DATE: APRIL 20, 2023	
DESIGNED BY: M.D. HARTMAN		DESIGNED BY: M.D. HARTMAN	
CHECKED BY: M.D. HARTMAN		CHECKED BY: M.D. HARTMAN	
DATE: 11/15/22		DATE: 11/15/22	
SCALE: 1" = 60'		SCALE: 1" = 60'	
SHEET: 2 of 3		SHEET: 2 of 3	
PROJECT: 22-001-F-D-12.2		PROJECT: 22-001-F-D-12.2	
REVISIONS		REVISIONS	
NO.	DATE	DESCRIPTION	BY
1	7/25/23	REVISED PER TOWNSHIP REVIEW LETTERS	MCH
THIS DRAWING AND ALL INFORMATION AND WORK PRODUCT REPRESENTED BY AND CONTAINED HEREIN, IS THE SOLE AND EXCLUSIVE PROPERTY OF M. D. HARTMAN & ASSOCIATES, INC. (MHA). NO PART OF THIS DRAWING OR INFORMATION MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE EXPRESS WRITTEN PERMISSION OF M. D. HARTMAN & ASSOCIATES, INC. COPYRIGHT, 2023, BY M. D. HARTMAN & ASSOCIATES, INC.		THIS DRAWING AND ALL INFORMATION AND WORK PRODUCT REPRESENTED BY AND CONTAINED HEREIN, IS THE SOLE AND EXCLUSIVE PROPERTY OF M. D. HARTMAN & ASSOCIATES, INC. (MHA). NO PART OF THIS DRAWING OR INFORMATION MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE EXPRESS WRITTEN PERMISSION OF M. D. HARTMAN & ASSOCIATES, INC. COPYRIGHT, 2023, BY M. D. HARTMAN & ASSOCIATES, INC.	



"MILLSTONE MEADOWS" STORM WATER MANAGEMENT PLANS PRE-DEVELOPMENT		2815 PENN AVENUE WEST LAWN, PA 610-927-4242		Enterprises		REVISED PER TOWNSHIP REVIEW LETTERS		MDH	
CLIENT: GROVE MEADOW DEVELOPERS LLC LOCATION: EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA DATE: APRIL 20, 2023		DESIGNED BY: M.D. HARTMAN PERMITTED BY: M.D. HARTMAN SCALE: 1" = 60' SHEET: 3 of 3 FILE NO: 22-001-F-D-12.3		SEAL: 		1 7/25/23		MDH	
								<small>THIS DOCUMENT CONTAINS ALL INFORMATION AND WORK PRODUCT PREPARED BY AND FOR THE CLIENT. IT IS THE SOLE PROPERTY OF THE CLIENT. THE INFORMATION CONTAINED HEREIN IS FOR THE CLIENT'S USE ONLY AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE EXPRESS WRITTEN PERMISSION OF ENTERPRISES, INC. COPYRIGHT, 2023, BY ENTERPRISES, INC. ALL RIGHTS RESERVED.</small>	





PROPERTY LINE CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	CH. BEARING & DIST.
C1	1.16'	775.00'	000°45'00"	N64°53'10"W 116'
C2	189.43'	1088.00'	009°52'01"	S37°39'10"E 189.29'
C4	318.2'	28.00'	001°00'51"	S12°51'09"W 28.57'
C7	36.41'	28.00'	087°07'45"	S78°02'49"E 27.57'
C8	263.44'	320.00'	017°10'55"	N82°00'37"E 256.06'
C9	168.62'	89.00'	020°31'10"	N76°10'31"E 162.82'
C10	112.55'	270.00'	023°54'44"	N64°57'16"E 111.65'
C11	188.50'	128.00'	010°00'00"	S78°16'52"E 187.71'
C17	235.62'	158.00'	009°00'00"	S13°53'08"W 212.13'
C13	209.62'	220.00'	051°35'29"	S86°10'53"W 201.78'
C14	269.03'	280.00'	055°03'03"	S85°57'04"W 258.80'
C15	38.37'	28.00'	078°27'05"	S19°14'35"E 36.68'
C16	120.04'	250.00'	029°54'11"	S43°56'02"E 108.68'
C17	175.66'	88.00'	009°00'00"	N76°10'31"E 113.14'
C18	172.79'	108.00'	009°00'00"	N10°53'01"E 155.56'
C19	171.50'	188.00'	051°35'29"	N88°10'53"E 165.09'
C20	32.74'	110.00'	017°03'15"	S57°58'45"E 32.62'
C21	28.56'	81.00'	013°14'14"	S81°01'28"E 28.52'
C22	88.86'	88.00'	057°20'01"	N67°41'25"E 85.39'
C23	44.03'	270.00'	009°28'36"	N38°41'42"E 43.98'
C24	68.42'	270.00'	014°31'42"	N57°37'34"E 68.24'
C25	36.75'	128.00'	018°30'10"	N64°08'13"E 38.58'
C26	73.47'	128.00'	035°04'37"	S15°04'24"E 72.32'
C27	76.28'	128.00'	036°25'01"	S48°19'28"E 75.00'
C28	15.18'	158.00'	005°47'57"	S18°10'54"E 15.18'
C29	14.53'	158.00'	016°04'25"	S67°15'42"E 14.53'
C30	48.00'	158.00'	015°16'44"	S18°25'51"W 39.89'
C31	85.91'	158.00'	032°44'54"	S42°28'41"W 84.74'
C32	84.05'	220.00'	021°53'27"	S67°09'48"W 83.51'
C33	96.05'	220.00'	005°00'53"	N86°43'04"W 95.29'
C34	215.2'	220.00'	001°41'15"	N70°22'00"W 215.50'
C35	75.33'	280.00'	015°25'44"	N74°14'13"W 75.17'
C36	48.14'	280.00'	008°12'48"	S88°03'36"W 48.10'
C37	48.04'	280.00'	008°12'48"	S85°43'44"W 48.10'
C38	113.36'	280.00'	023°11'44"	S76°01'28"W 112.59'

LEGEND

EXISTING LIGHT STANDARD

EXISTING CURB

PROPOSED CURB

SOIL LINE

RIPIARIAN BUFFER

WETLAND DELINEATION

EXISTING WETLANDS

EXISTING STREET SIGN

EXISTING FEATURES ARE LABELED WITH SLANTED TEXT

EXISTING DECIDUOUS TREE

EXISTING CONIFEROUS TREE

EXISTING EDGE OF WOODS

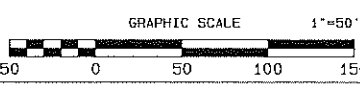
PROPOSED CONCRETE MONUMENT

PROPOSED IRON PIN (1/2")

PROPOSED CURB TAPER

PROPOSED HANDICAPPED RAMP

RETAINING WALL



REVIEWED PER TOWNSHIP REVIEW LETTERS

1 7/25/23

2025

2 OF 20

22-001-F-0-2.0

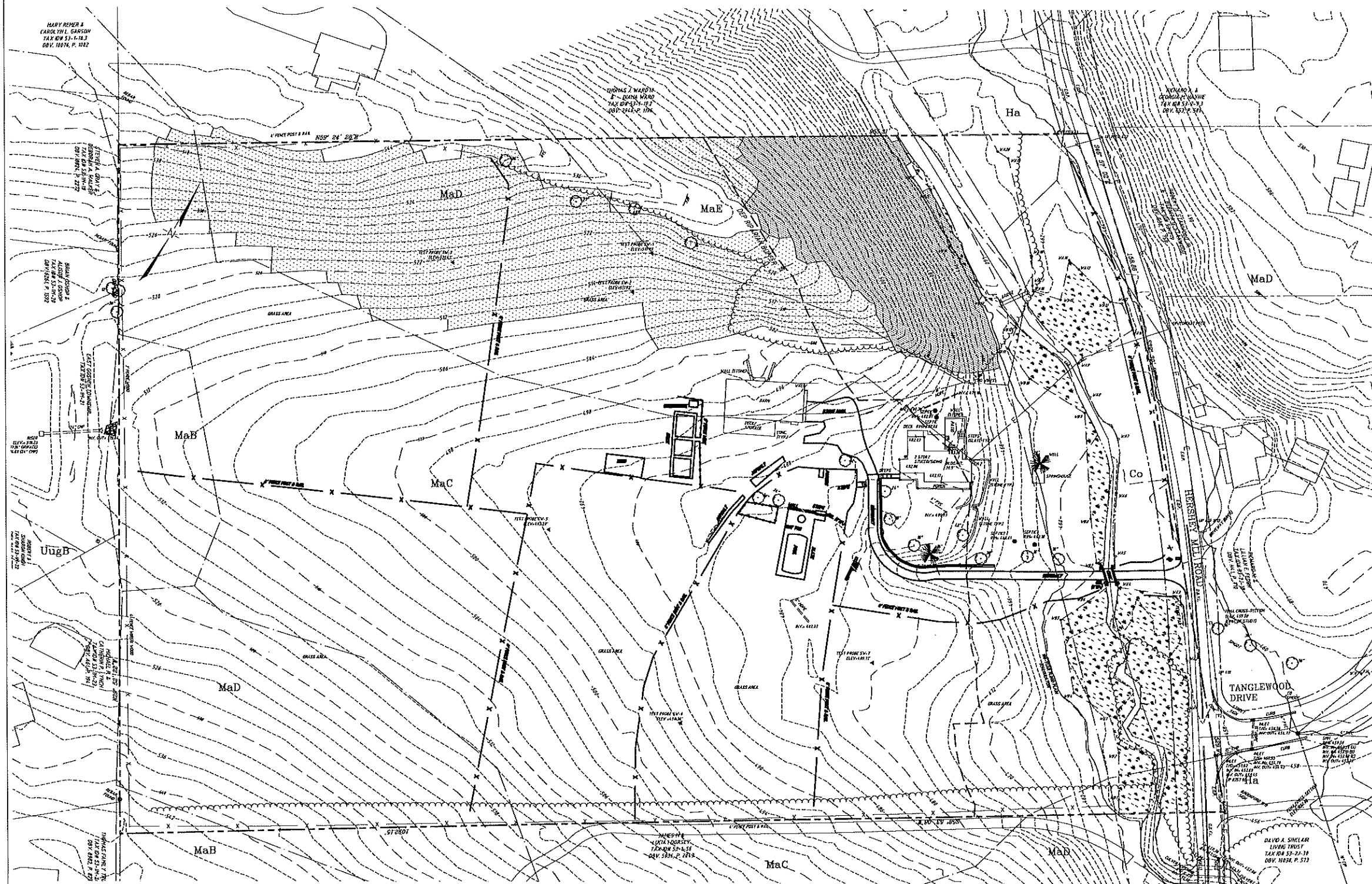
3615 PENN AVENUE
WEST LAWN, PA
610-927-4242

SEAL: MICHAEL DUANE HARTMAN
PROFESSIONAL
ENGINEER
NO. 1000000000
PA. 0000000000

"MILLSTONE MEADOWS"
PRELIMINARY/FINAL PLAN
SUBDIVISION PLAN






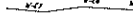











CLIENT: GROVE MEADOW DEVELOPERS LLC
LOCATION: EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA
DATE: APRIL 20, 2023

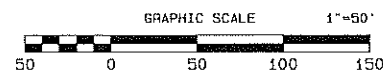
M.D.HARTMAN
M.D.HARTMAN
1" = 50'
2 OF 20


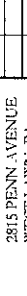


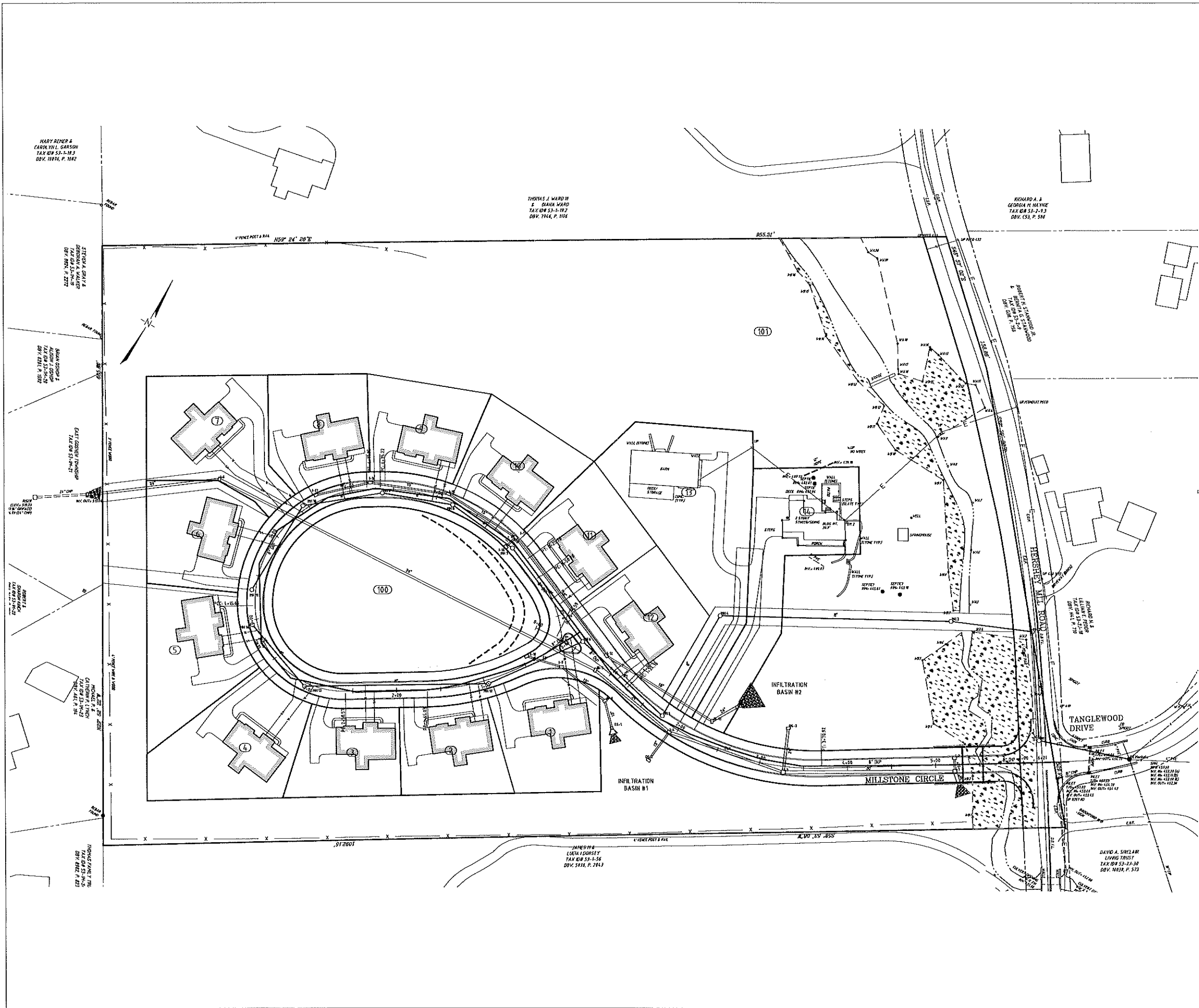
- EXISTING NOTES
1. CONTRACTOR TO DEMOLISH ALL ITEMS NECESSARY TO CONSTRUCT PROPOSED BUILDING AND SITE FEATURES WHETHER OR NOT NOTICED IN THE CONSTRUCTION DOCUMENTS. ADEQUATE AND PROPER PROTECTION SHALL BE PROVIDED TO EXISTING FEATURES NOT BEING REMOVED.
 2. EXCAVATIONS THAT ARE LEFT OPEN DURING THE DEMOLITION PROCESS SHALL BE COVERED OR FENCED OFF. THE AREA SHALL BE ADEQUATELY HAZARDED TO ENSURE WORKER AND PUBLIC SAFETY.
 3. THE CONTRACTOR IS RESPONSIBLE FOR TERMINATING ALL APPLICABLE UTILITIES WHEN ITEMS ARE BEING REMOVED IN A SAFE AND GOOD CONFORMING MANNER.
 4. UNUSABLE MATERIALS AND RUBBISH SHALL BE IMMEDIATELY REMOVED FROM THE SITE. MATERIALS TO BE REUSED WILL BE STOCKPILED IN A SAFE AND SECURE LOCATION, MATERIAL THAT REQUIRES PROTECTION FROM THE WEATHER SHALL BE STORED IN A SECURE DRY LOCATION.
 5. DAMAGE CAUSED TO EXISTING FEATURES DURING THE DEMOLITION PROCESS SHALL BE REPAIRED ACCORDING TO PREDEMOLITION CONDITIONS. IF DAMAGE CANNOT BE REPAIRED ADEQUATELY, THEN THE DAMAGED ITEM SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
 6. FEATURES SHOWN IN BOLD INDICATE ITEMS THAT MUST AT A MINIMUM BE REMOVED. ALSO SEE NOTE 1.
- EXISTING NATURAL FEATURES:
1. TOPOGRAPHY AND CONTOURS:
THE EXISTING TOPOGRAPHY AND CONTOURS HAVE BEEN SHOWN ON PLANS.
 2. SITE BACKGROUND AND DATA:
BENEFISHAW EXISTING SANITARY SEWER MAINLINE IN TANGLEWOOD DRIVE
PORT MANHOLES: 433-56
DATE/IS IS BASED ON: NA/VD DATE/OF: 1/8/11
 3. STEEP SLOPES:
THE STEEP SLOPES HAVE BEEN DELINEATED ON THE PLANS FOR 15%-25% AND GREATER THAN 25% SLOPES.
 4. WATERCOURSES, PONDS AND FLOOD HAZARD DISTRICT:
THERE IS AN EXISTING PERMANENT STREAM CHANNEL ON SITE. THE PROPOSED LAYOUT HAS LIMITED INTERFERENCE TO A ROADWAY AND THE COURSE OF THE STREAM CHANNEL. TOWARDS THE SOUTH-EASTERN CORNER OF THE SITE. THERE IS AN EXISTING STREAM CROSSING THAT SHALL BE REMOVED AS PART OF THE DEVELOPMENT. THE SITE IS LOCATED WITHIN THE FLOOD HAZARD DISTRICT "A".
 5. SOIL DATA:

Co - OCEANOGRAPHY SALT LOAM
Ga - OCEANOGRAPHY SALT LOAM
Gbb - OCEANOGRAPHY SALT LOAM TO 8 PERCENT SLOPES
Gbb - HAZARD LOAM TO 8 TO 15 PERCENT SLOPES
Hdc - HAZARD LOAM TO 15 TO 25 PERCENT SLOPES
Hdc - HAZARD LOAM TO 25 TO 35 PERCENT SLOPES
Hdc - HAZARD LOAM TO 35 TO 45 PERCENT SLOPES
Hdc - HAZARD LOAM TO 45 TO 55 PERCENT SLOPES
Hdc - HAZARD LOAM TO 55 TO 65 PERCENT SLOPES
Hdc - HAZARD LOAM TO 65 TO 75 PERCENT SLOPES
Hdc - HAZARD LOAM TO 75 TO 85 PERCENT SLOPES
Hdc - HAZARD LOAM TO 85 TO 95 PERCENT SLOPES
Hdc - HAZARD LOAM TO 95 TO 100 PERCENT SLOPES
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Hdc - HAZARD LOAM TO 560 TO 570 PERCENT SLOPES
Hdc - HAZARD LOAM TO 570 TO 580 PERCENT SLOPES
Hdc - HAZARD LOAM TO 580 TO 590 PERCENT SLOPES
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Hdc - HAZARD LOAM TO 1280 TO 1290 PERCENT SLOPES
Hdc - HAZARD LOAM TO 1

- | | |
|---|---|
|  | EXISTING CURB |
|  | EXISTING CONTOURS |
|  | EXISTING SPOT ELEVATION |
|  | SOIL LINE |
|  | RIPIARIAN BUFFER |
|  | WETLAND DELINEATION |
|  | EXISTING WETLANDS |
|  | EXISTING STREET SIGN |
|  | EXISTING FEATURES ARE LABELED WITH SLANTED TEXT |
|  | EXISTING DECIDUOUS TREE |
|  | EXISTING CONIFEROUS TREE |
|  | EXISTING EDGE OF WOODS |
|  | TO BE REMOVED |
|  | EXISTING SANITARY SEWER & MANHOLE |
|  | EXISTING WATER LINE & VALVE |
|  | 15% - 25% SLOPES |
|  | 25%+ SLOPES |



<p>"MILLSTONE MEADOWS" PRELIMINARY/FINAL PLAN EXISTING CONDITIONS AND DEMOLITION PLAN</p> <p>CLIENT: GROVE MEADOW DEVELOPERS LLC LOCATION: EAST 605-THEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA DATE: APRIL 20, 2023</p>	<p>SEAL:</p> 
<p>2815 PENN AVENUE WEST LAWN, PA 610-927-4242</p>	<p>Enterprise</p> 
<p>1 7/25/23</p>	<p>Revision Description</p>
<p>1</p>	<p>REVISED PER TOWNSHIP REVIEW LETTERS</p>
<p>MDH</p>	<p>Revised By</p>
<p>MDH</p>	<p>Revised By</p>



- GENERAL CONSTRUCTION NOTES:
- AREAS WHICH ARE TO BE FILLED SHALL BE COMPACTED TO A MINIMUM DENSITY OF 94% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-698) IN THE BUILDING, PAVED AND SIDEWALK AREAS, AND 91% IN OTHER AREAS.
 - UNDERGROUND FACILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND PLANS OF OTHERS AND THEREFORE THEIR ELEVATIONS AND LOCATIONS MUST BE CONSIDERED AS APPROXIMATE ONLY. THE VERIFICATION OF EACH FACILITY SHOWN OR NOT SHOWN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - CONTRACTOR TO VERIFY LOCATION AND FLOW OF EXISTING UTILITIES PRIOR TO INSTALLATION OF PLUMBING. ALL SERVICES TO BE CONNECTED IN ACCORDANCE WITH LOCAL CODES AND/OR UTILITY COMPANIES REQUIREMENTS.
 - PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT SPECIFICATIONS PUBLICATION 408, LATEST EDITION.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE LOCAL AUTHORITY OR GOVERNING AGENCY OF THE BEGINNING DATE OF CONSTRUCTION AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SEE THAT NO WORK IS DONE WITHOUT THE PROPER INSPECTIONS BY LOCAL AUTHORITY OR GOVERNING AGENCY.
 - CONTRACTOR TO NOTIFY ENGINEER AS SOON AS POSSIBLE IF CONDITIONS ON GROUND DIFFER FROM THOSE SHOWN ON THE PLANS.
 - ALL AREAS OTHER THAN PAVED AREAS SHALL HAVE A MINIMUM DEPTH OF SIX INCHES 10% OF TOP SOIL, PAKS TO STONE. THE SURFACE SHALL BE SCAFFERED AND CLEARED OF ALL TRASH, STUMPS, ROOTS AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
 - SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 408.
 - ALL SPOT ELEVATIONS SHOWN AT THE CORNER ARE THE BOTTOM OF CURB, UNLESS OTHERWISE NOTED.
- UTILITY NOTES:
- THIS PLAN PROPOSES PUBLIC WATER SUPPLY AND PUBLIC SEWER. PUBLIC WATER WILL BE PROVIDED BY AQUA PENNSYLVANIA.
 - ALL WATER MAINS SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS, STANDARDS AND DETAILS OF AQUA PENNSYLVANIA.
 - WATER SUPPLY: ALL WATER SERVICES, INCLUDING DOMESTIC AND FIRE PROTECTION, SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS, STANDARDS AND DETAILS OF EAST GOSHEN TOWNSHIP. SHOP DRAWINGS AND/OR CATALOG CUTS FOR ALL PROPOSED MATERIALS SHALL BE SUBMITTED TO EAST GOSHEN TOWNSHIP AS PART OF THE APPLICATION FOR A PLUMBING PERMIT.
 - SANITARY SEWERAGE: ALL SANITARY SEWER MAINS SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS, STANDARDS AND DETAILS OF THE EAST GOSHEN TOWNSHIP.
 - SANITARY SEWERAGE: ALL SEWER LATERALS SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS, STANDARDS AND DETAILS OF EAST GOSHEN TOWNSHIP. SHOP DRAWINGS AND/OR CATALOG CUTS FOR ALL PROPOSED MATERIALS SHALL BE SUBMITTED TO EAST GOSHEN TOWNSHIP.
 - THE SANITARY SEWER SHALL BE INSTALLED AT LEAST 18 INCHES HORIZONTALLY AND AT LEAST 18 INCHES VERTICALLY FROM OTHER UTILITIES.
 - THE SANITARY SEWER MAINS AND LATERALS SHALL BE BURIED A MINIMUM OF 4 FEET DEEP.
 - IT IS NOT INTENDED TO PROVIDE SANITARY SEWER SERVICE TO THE BASEMENTS OF THE PROPOSED DWELLINGS.
 - OTHER UTILITIES: ALL OTHER UTILITIES (ELECTRIC, COMMUNICATIONS, GAS, ETC) SHALL BE INSTALLED IN ACCORDANCE WITH THE UTILITY COMPANIES REQUIREMENTS AND SHALL BE INSTALLED AS TO NOT CONFLICT WITH THE WATER, SANITARY SEWER AND/OR STORM FACILITIES PROPOSED AS PART OF THIS PLAN.
 - LOCATIONS OF ALL UTILITY TRENCHES WITHIN EXISTING AND/OR PROPOSED RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, STANDARDS AND DETAILS OF EAST GOSHEN AND BE SUBJECT TO THE APPROVAL OF EAST GOSHEN TOWNSHIP OR THEIR DESIGNEE.
 - DURING CONSTRUCTION OF SEWER PROJECTS, THE CONTRACTOR SHALL BE PROHIBITED FROM UNNECESSARILY DISTURBING OR UPROOTING TREES AND VEGETATION ALONG THE STREAMBANK AND IN THE VICINITY OF THE STREAM, DUMPING OF SOIL AND DEBRIS INTO STREAMS AND/OR ON BANKS OF STREAMS, CHANGING THE COURSE OF THE STREAM WITHOUT AN EROSION/CONTROL PERMIT, LEAVING LOGS/BRANCHES IN STREAMS, LEAVING TEMPORARY STREAM CROSSINGS FOR EQUIPMENT, OPERATING EQUIPMENT IN THE STREAM, OR PUMPING SILT-LADEN WATER INTO THE STREAM.

LEGEND

- EXISTING CURB
- PROPOSED CURB
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- SOIL LINE
- EXISTING STREET SIGN
- EXISTING FEATURES ARE LABELED WITH SLANTED TEXT TO BE REMOVED
- EXISTING DECIDUOUS TREE
- PROPOSED SANITARY SEWER & MAINS
- PROPOSED STORM SEWER & CATCH BASIN
- EXISTING WATER LINE & VALVE
- PROPOSED WATER LINE & VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED GRINDER PUMP
- PROPOSED WATER LATERAL
- PROPOSED CURB TAPER

GRAPHIC SCALE 1" = 50'

50 0 50 100 150

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610-927-4242

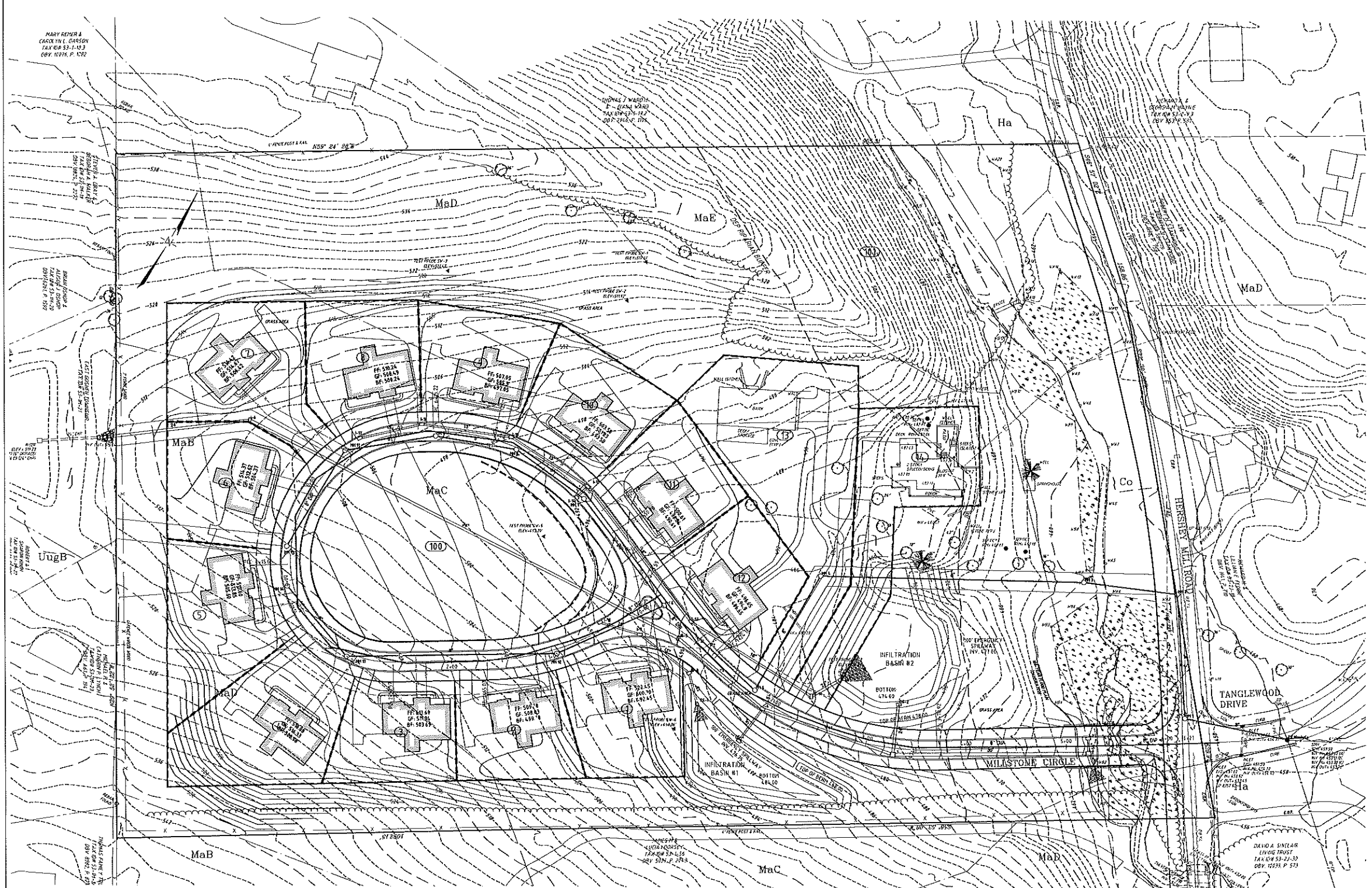
Enterprises

SEAL: MICHAEL DUAN HARTMAN
PROFESSIONAL
ENGINEER
IN PENNSYLVANIA

"MILLSTONE MEADOWS"
PRELIMINARY/FINAL PLAN
UTILITY PLAN

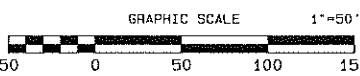
CLIENT: GROVE MEADOW DEVELOPERS LLC
LOCATION: EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA
DATE: APRIL 20, 2023

DESIGNED BY: M.D. HARTMAN
CHECKED BY: M.D. HARTMAN
SCALE: 1" = 50'
SHEET: 5 OF 20
PROJECT: 22-001-F-D-5.0

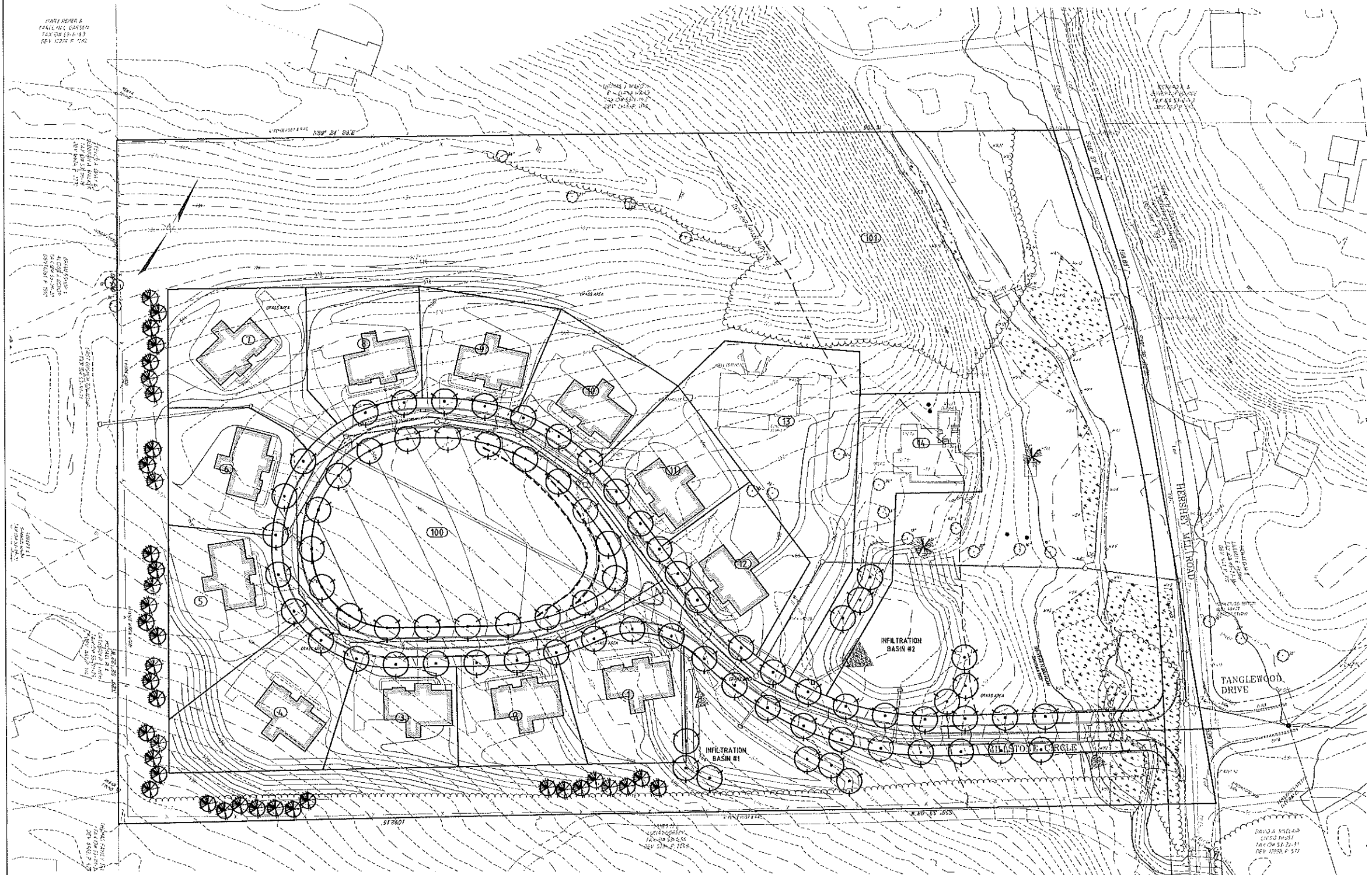


- GENERAL CONSTRUCTION NOTES:
- AREAS WHICH ARE TO BE FILLED SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-698) IN THE BUILDING, PAVED AND SIDEWALK AREAS, AND 90% IN OTHER AREAS.
 - UNDERGROUND FACILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND PLANS OF OTHERS AND THEREFORE THEIR ELEVATIONS AND LOCATION MUST BE CONSIDERED AS APPROXIMATE ONLY. THE VERIFICATION OF EACH FACILITY SHOWN OR NOT SHOWN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - CONTRACTOR TO VERIFY LOCATION AND FLOW OF EXISTING UTILITIES PRIOR TO INSTALLATION OF PLUMBING. ALL SERVICES TO BE CONNECTED IN ACCORDANCE WITH LOCAL CODES AND/OR UTILITY COMPANIES REQUIREMENT.
 - PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT SPECIFICATIONS PUBLICATION 408, LATEST EDITION.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE LOCAL AUTHORITY OR GOVERNING AGENCY OF THE BEGINNING DATE OF CONSTRUCTION AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SEE THAT NO WORK IS DONE WITHOUT THE PROPER INSPECTIONS BY LOCAL AUTHORITY OR GOVERNING AGENCY.
 - CONTRACTOR TO NOTIFY ENGINEER AS SOON AS POSSIBLE IF CONDITIONS ON GROUND DIFFER FROM THOSE SHOWN ON THE PLANS.
 - ALL AREAS OTHER THAN PAVED AREAS SHALL HAVE A MINIMUM DEPTH OF SIX INCHES 1/2" OF TOP SOIL PRIOR TO SEEDING. THE SURFACE SHALL BE SCAFFED AND CLEARED OF ALL TRASH, DEBRIS, ROOTS AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTINGS, FERTILIZING OR MAINTENANCE OPERATIONS.
 - SEEDING AND MAINTENANCE SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 408.
 - ALL SPOT ELEVATIONS SHOWN AT THE CURBLINE ARE THE BOTTOM OF CURB, UNLESS OTHERWISE NOTED.
- CONSTRUCTION INSPECTION SCHEDULE:
- AT THE COMPLETION OF PRELIMINARY SITE PREPARATION.
 - AT THE COMPLETION OF DRAIN GRADING, BUT PRIOR TO PLACEMENT OF TOP SOIL.
 - DURING THE CONSTRUCTION OF PERMANENT STORMWATER FACILITIES, OR AS DEEMED NECESSARY BY THE MUNICIPAL ENGINEER.
 - UPON COMPLETION OF PERMANENT STORMWATER FACILITIES.
 - UPON COMPLETION OF FINAL GRADING AND PERMANENT VEGETATIVE CONTROLS.

- LEGEND
- EXISTING CURB
 - PROPOSED CURB
 - EXISTING CONTOURS
 - PROPOSED CONTOURS
 - EXISTING SPOT ELEVATION
 - PROPOSED SPOT ELEVATION
 - SOL LINE
 - EXISTING STREET SIGN
 - EXISTING FEATURES ARE LABELED WITH SLANTED TEXT TO BE REMOVED
 - EXISTING DECIDUOUS TREE
 - PROPOSED SANITARY SEWER & MANHOLE
 - PROPOSED STORM SEWER & CATCH BASIN
 - EXISTING WATER LINE & VALVE
 - PROPOSED WATER LINE & VALVE
 - PROPOSED FIRE HYDRANT
 - PROPOSED GRINDER PUMP
 - PROPOSED WATER LATERAL
 - PROPOSED CURB TAPER



2815 PENN AVENUE WEST LAWN, PA 610-927-4242		2024 ENGINEERING DESIGN & LANDSCAPE INC.		REVISIONS	
MICHAEL DUANE HARTMAN ENGINEER P. 000000000		MICHAEL DUANE HARTMAN ENGINEER P. 000000000		REVISIONS	
"MILLSTONE MEADOWS" PRELIMINARY/FINAL PLAN GRADING PLAN		GROVE MEADOW DEVELOPERS, LLC LOCALITY: EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA DATE: APRIL 20, 2023		REVISIONS	
M.D. HARTMAN		M.D. HARTMAN		REVISIONS	
1" = 50'		6 OF 20		REVISIONS	
22-001-F-D-6.0				REVISIONS	



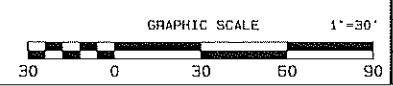
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	COMMENTS
STREET TREES - DECIDUOUS TREES				
17	AR	ACER RUBRUM	RED MAPLE	3-3.5" CAL., 12-14' HT., B&B
6	BN	BETULA NIGRA	BLACK BIRCH	3-3.5" CAL., 12-14' HT., B&B
11	QT	QUERCUS THUSCANTHUS P. INERMIS	THORNLESS HONEY LOCUST	3-3.5" CAL., 12-14' HT., B&B
15	HS	HYDRANGEA SYLVATICA	BLACK OAK	3-3.5" CAL., 12-14' HT., B&B
19	PA	PLATANUS X ACERIFOLIA	LONDON PLANETREE	3-3.5" CAL., 12-14' HT., B&B
16	TA	TILIA AMORCANIA	AMERICAN LINDEN	3-3.5" CAL., 12-14' HT., B&B
18	TOTAL			
PERIMETER BUFFER - EVERGREEN TREES				
22	CD	CELOSIS CEDAR	DEODAR CEDAR	6-8" HT., 4-5" SP., B&B
17	ES	PRUNUS STROBUS	EASTERN WHITE PINE	6-8" HT., 4-5" SP., B&B
39	TOTAL			
REFORESTATION AREA - DECIDUOUS TREES				
15	CA	CORYLIA OVATA	SHAGBARK HICKORY	03 CONTAINER
15	ER	ERIGONIA CANADENSIS	EASTERN REDBUD	05 CONTAINER
15	FL	FLORICORNIA FLORICORNIA	FLOWERING DOGWOOD	05 CONTAINER
15	LO	LEUCODENDRON TULIPIFERA	TULIP POPLAR	05 CONTAINER
15	SA	SASSAPARILLA ALABAMA	SASSAPARILLA	02 CONTAINER
75	TOTAL			

TREE PLANTING SUMMARY:
SECTION 285-60 STREET TREES SHALL BE PROVIDED AT A RATIO OF AT LEAST ONE TREE PER 40 LINEAR FEET, OR FRACTION THEREOF, OF RIGHT-OF-WAY LINE.
RIGHT-OF-WAY LENGTH = 2,991'
REQUIRED TREES = 73
PROVIDED TREES = 78

LANDSCAPING NOTES:
THE PERIMETER OF THE PROPERTY SHALL CONTAIN A TRADITIONAL POST-AND-RAIL OR EQUIVALENT FENCE THAT REUSES THE EXISTING CONCRETE POSTS, WHERE POSSIBLE.

LEGEND

- EXISTING CURB
- PROPOSED CURB
- EXISTING CONTOURS
- PROPOSED CONTOURS
- SOIL LINE
- EXISTING STREET SIGN
- EXISTING FEATURES ARE LABELED WITH SLANTED TEXT
- EXISTING DECIDUOUS TREE
- PROPOSED DECIDUOUS TREE
- PROPOSED EVERGREEN TREE
- BIORETENTION AREAS, EROSION CONTROL SEEDS, NATIVE PLANTS AND MULCH STORAGE & COVER, MEADOW MIX SEEDS - 15%
SLANTED TEXT
- RE-FORESTATION AREA
- RIPARIAN BUFFER AREA
SEE RIPARIAN BUFFER MANAGEMENT PLAN FOR PLANTING SCHEDULE AND NOTES



"MILLSTONE MEADOWS"
PRELIMINARY/FINAL PLAN
LANDSCAPING PLAN

DATE: APRIL 20, 2023

SCALE: 1" = 50'

7 OF 20

22-001-F-D-7.1

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WEST LAWN, PA
610-927-4242

Enterprises

REVIEWED PER TOWNSHIP REVIEW LETTERS

DATE: 7/25/23

BY: M.D. HARTMAN

FOR: GROVE MEADOW DEVELOPERS LLC

LOCATION: EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

DATE: APRIL 20, 2023

GENERAL PLANTING, MAINTENANCE AND OPERATION

SUBMITTALS:

TOPSOIL AND POTTING SOILS: A SOIL ANALYSIS REPORT SHALL BE SUBMITTED AND SHOWN THE PERCENTAGE OF EACH CONSTITUENT, PH, AND OTHER PERTINENT SOIL CHARACTERISTICS. RECOMMENDATIONS SHOULD INCLUDE QUANTITIES OF EACH SOIL AMENDMENT AND FERTILIZER REQUIRED TO ACHIEVE OPTIMAL SOIL CONDITIONS.

MAINTENANCE: WRITTEN MAINTENANCE INSTRUCTIONS FOR THE OWNERS USE AND REFERENCE FOR THE MAINTENANCE OF LANDSCAPING MUST BE SUBMITTED PRIOR TO ACCEPTANCE OF LANDSCAPING. THIS WILL LIST THE SCOPE OF MAINTENANCE INCLUDING INITIAL MAINTENANCE REQUIREMENTS IN MONTHS AND LONG TERM.

QUALITY ASSURANCE:

GENERAL: ALL MATERIAL MUST COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.8) NEW STANDARDS APPLICABLE TO LANDSCAPING MATERIAL MUST BE PROVIDED AS INDICATED WITH NO SUBSTITUTIONS PERMITTED WITHOUT APPROVAL FROM THE LANDSCAPE ARCHITECT.

INSPECTION: THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO INSPECT PLANNING MATERIALS AT ANY TIME FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. REGARDING, BUT NOT LIMITED TO, LATENT DEFECTS, LACK OF PROTECTION OR MAINTENANCE, AND MAY REJECT DEFECTIVE OR DAMAGED MATERIALS. REJECTED MATERIAL MUST BE IMMEDIATELY REMOVED FROM THE PROJECT SITE. CONTRACTOR SHALL SCHEDULE PLANT INSPECTION WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF ALL PLANT MATERIALS.

DELIVERY, STORAGE, AND HANDLING:

PACKAGED MATERIALS: MATERIAL MUST BE DELIVERED IN ORIGINAL UNOPENED CONTAINERS DISPLAYING WEIGHT, GUARANTEED GENERAL ANALYSIS, AND HANDICRAFTERS HAVE OR FURNISHED IN BULK WITH APPROPRIATE CERTIFICATES AND PROTECTED FROM DETEIORATION.

SOIL DELIVERY OUTSIDE SHALL BE TIED SO THAT IT WILL BE INSTALLED WITHIN 24 HOURS AFTER DELIVERY. SOIL SHALL BE PROTECTED AGAINST DRYING AND BREAKAGE.

GROUND COVERS AND PLANTS: DELIVERY SHALL BE SCHEDULED TO AVOID ON SITE STORAGE. IF PLANTING DOES NOT OCCUR ON SAME DAY AS DELIVERY, STORE AND LOCATION PROTECTED FROM SUN AND WEATHER. ALL TREES AND SHRUBS SHALL NOT BE PRUNED BEFORE DELIVERY IN ORDER TO PREVENT SHOCK. STOCK MUST BE COVERED FOR PROTECTION DURING TRANSPORTATION. STOCK SHALL BE BUNDLED TO PROTECT BRANCHES, BARK, AND OVERALL SHAPE DURING TRANSPORT. ANY BUNDLED AND BURLAP STOCK MUST BE FREELY DRIED UNLESS OTHERWISE APPROVED. STOCK MUST NOT BE DAMAGED. STOCK MUST BE DELIVERED ONLY AFTER SOIL HAS BEEN PREPARED. SCHEDULE PLANT HARVEST WITH DELIVERY AND QUANTITIES SUITABLY TIED FOR IMMEDIATE PLANTING UPON ARRIVAL. IF PLANTING CANNOT BE ACCOMPLISHED IMMEDIATELY, PROVIDE SHADE, PROTECT FROM WIND, AND PROTECT ROOT BALLS FROM DRYING OUT BY COVERING AT ALL TIMES WITH MOIST SAWDUST, WOOD CHIPS, SHREDDED BARK OR OTHER SIMILAR MULCHING MATERIALS. ALL PLANT MATERIAL SHALL BE SUITABLY WATERED DURING ON SITE STORAGE.

PROJECT CONDITIONS:

WORK COORDINATION: ALL WORK SHALL BE SCHEDULED AND COORDINATED WITH WORK OCCURRING IN OTHER SECTIONS OF THE PROJECT AND LOCAL SEASONS. ALL UNDERGROUND UTILITIES MUST BE LOCATED SO TO AVOID DAMAGE AND INJURY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS TO ANY UTILITY DAMAGES ASSOCIATED WITH EXCAVATION AND PLANTING.

THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED PRIOR TO THE BEGINNING OF PLANTING OPERATIONS. SPRING PLANTING SHOULD BE BETWEEN APRIL 15TH AND JUNE 1ST. JUNE IS THE LAST PLANTING SHOULD BE BEFORE AUGUST 30TH AND OCTOBER 15TH. DO NOT INSTALL PLANT MATERIALS WHEN TEMPERATURES ARE BELOW 35 DEGREES FAHRENHEIT OR ABOVE 90 DEGREES FAHRENHEIT.

SOILWORKING: FINAL GRADES MUST BE ESTABLISHED BEFORE PLANTING TREES AND SHRUBS. LAWN MOW THEN BE INSTALLED UNLESS SPECIFIED ON THE PLANS DIFFERENT DIFFERENTLY. EARLIER PLANTINGS MUST BE PROTECTED FROM LATER PLANTING OPERATIONS AND REPAIRS MADE TO ANY RESULTING DAMAGE OR INCONVENIENCES.

WARRANTIES:

GENERAL WARRANTY SHALL BE ADDITION TO, AND NOT A LIMITATION OF THE OTHER RIGHTS THE OWNER MAY HAVE AGAINST THE CONTRACTOR UNDER THE CONTRACT DOCUMENTS.

LAWNS: WARRANT LAWNS UNTIL TURF EXHIBITS VIGOROUS GROWTH FOR TWELVE (12) MONTHS. LAWNS NEED TO HAVE 80% COVERAGE/VISIBLE SEED FOR SURVIVAL.

TREES AND SHRUBS: WARRANT TREES AND SHRUBS FOR TWELVE (12) MONTHS AFTER FINAL APPROVAL BY TOWNSHIP LANDSCAPE ARCHITECT. WARRANTY SHALL INCLUDE DEATH, UNSATISFACTORY GROWTH, NEGLIGENCE, VANDALISM, AND/OR ACTS OF GOD. IF COMPLETION OF LANDSCAPING WORK IS MATERIALLY DELAYED BEYOND THE DATE OF SUBSTANTIAL COMPLETION, PROVIDE WARRANTY COMMENCING ON DATE OF ACCEPTANCE BY THE PROJECT LANDSCAPE ARCHITECT AND TOWNSHIP LANDSCAPE ARCHITECT.

UNSATISFACTORY MATERIAL: REPLACE UNSATISFACTORY MATERIAL WITH HEALTHY, VIGOROUS PLANTS. PLANT ONLY DURING THE SUBSEQUENT PLANTING SEASON. AT THE DISCRETION OF THE PROJECT LANDSCAPE ARCHITECT, EITHER REPLACE MATERIALS EXHIBITING POOR QUALITY, UNFAVORABLE GROWTH, OR EXTEND THE WARRANTY COVERING SUCH MATERIALS FOR ONE FULL GROWING SEASON. ANY PLANT MATERIAL OF WHICH 25% OR MORE IS DEAD SHALL BE CONSIDERED UNSATISFACTORY. A TREE SHALL BE CONSIDERED DEAD WHEN MORE THAN 25% OF THE TRUNKS MAIN LEADERS HAS DIED, 25% OF THE CROWN IS DEAD, OR THE ROOT BUTTRESS (CIRCUMFERENCE) IS DAMAGED. OTHER INSPECTION WILL BE CONDUCTED AT THE END OF THE EXTENDED WARRANTY PERIODS. IF ANY, TO DETERMINE ACCEPTANCE OR REJECTION. ONLY ONE REPLACEMENT WILL BE REQUIRED AT THE END OF THE WARRANTY, EXCEPT FOR LINES OR REPLACEMENTS DUE TO NEGLIGENCE OR FAILURE TO COMPLY WITH SPECIFIED REQUIREMENTS.

MAINTENANCE:

LAWNS: MAINTAIN LAWN FROM IMMEDIATELY AFTER PLANTING UNTIL ALL ACCEPTABLE LAWN IS ESTABLISHED. AT THE END OF THE MAINTENANCE, SODDED LAWNS SHALL BE UNIFORM IN TEXTURE, DENSITY AND SPECIES VARIETY. WATER REGULARLY AND AT SUCH TIMES AND RATES AS NECESSARY FOR OPTIMAL GROWTH AND TO AVOID WILTING, PUDDING, RUNOFF, OR EROSION. NO GRASS AT REGULAR INTERVALS. DO NOT CUT MORE THAN 1/3 OF THE GRASS BLADE AT ANYONE MOWING. TRIM EDGES AND CLIP BY 1/4 INCH WHERE NECESSARY. REMOVE CLIPPINGS AFTER MOWING AND THEREAFTER FOLLOW UP APPLICATION OF FERTILIZER FOR COOL SEASON TURF LAWN. IF THE SEATING WAS DONE IN THE FALL, FERTILIZER SHALL BE APPLIED NO LATER THAN NOVEMBER 15TH FOR SEED SOON IN SPRING. DO NOT APPLY AFTER JUNE 1ST. APPLY 1/2-1/3 LBS. A SQ. YD. IN OCTOBER FOR COOL SEASON GRASSES. DO NOT APPLY FERTILIZER BETWEEN NOVEMBER 15TH AND MARCH 1ST. CONTROL GROWTH OF WEEDS BY APPLYING HERBICIDES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REDUCED ANY DAMAGE RESULTING FROM USE OF HERBICIDES.

REGRADE AND REPLANT AREAS TO CORRECT BUTTED, DAMAGE, OR IMPROPERLY GRADED AREAS.

TREES AND SHRUBS: MAINTAIN TREES AND SHRUBS FROM IMMEDIATELY AFTER PLANTING THROUGH THE WARRANTY. PROVIDE ALL MAINTENANCE NECESSARY TO ACHIEVE HEALTHY PLANT GROWTH SUCH AS ERODED WATERING BASINS AROUND TRUNKS IF NEEDED. ADJUST STAKES AND GUYS TO PROVIDE PROPER SUPPORT AND REPLANT TREES AND SHRUBS TO VERTICAL POSITION IF NECESSARY. APPLY INSECTICIDES OR FUNGICIDES IF NECESSARY TO PREVENT OR CORRECT INSECT INFESTATION AND DISEASE.

GROUND COVERS/SHALL PLANTS/PLUGS: MAINTAIN GROUND COVERS, SMALL PLANTS AND PLUGS FROM IMMEDIATELY AFTER PLANTING THROUGH THE WARRANTY. PROVIDE THE FOLLOWING MAINTENANCE NECESSARY TO ACHIEVE HEALTHY PLANT GROWTH: WATER REGULARLY AND ON A TIMELY BASIS, REMOVE WEEDS AND REPLACE MULCH IF NEEDED, AND SPRAY AS REQUIRED TO KEEP GROUND COVER AND SMALL PLANTS FREE OF INSECTS AND DISEASE.

WATERING: ALL PLANTS SHALL BE THOROUGHLY WATERED TWICE DURING THE FIRST 24 HOURS AFTER PLANTING PERIOD UNTIL PLANTS AND LAWNS ARE ACCEPTED BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR IS RESPONSIBLE FOR WATERING. WATERINGS SHALL BE PROVIDED AS NEEDED TO ASSURE HEALTHY PLANTS MATERIALS, TURF AND TREES.

PRODUCTS:

TOPSOIL: TOPSOIL AT SITE VERIFY SUITABILITY AND QUANTITY OF TOPSOIL STOCKPILE AT SITE. IF SUFFICIENT QUANTITIES OF SUITABLE TOPSOIL ARE NOT AVAILABLE AT THE SITE, PROVIDE TOPSOIL FROM APPROVED OFF SITE SOURCES. FERTILIZER: AGRICULTURAL SOIL, TYPICAL FOR LOCALITY, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH AND TAKEN FROM A DRAIN SITE FREE OF SUBSOIL, ROCKS LARGER THAN TWO INCHES IN DIAMETER, CLAY, TOXIC MATERIALS, PLANTS, WEEDS, AND ROOTS. NEW LINE SOIL AMENDMENTS.

LIME: PULVERIZED DOLOMITIC LIMESTONE CONTAINING NOT LESS THAN 85 PERCENT TOTAL CARBONATES WITH A MINIMUM OF 30 PERCENT MAGNESIUM CARBONATES. MINIMUM 90 PERCENT PASSING A #4 MESH SIEVE AND MINIMUM 50 PERCENT A #10-MESH SIEVE.

HARSHUS SHALL BE DECOMPOSED ORGANIC MATERIAL, PH SUITABLE FOR INTENDED USE.

SAND SHALL BE CLEAN, WASH SAND, FREE OF TOXIC MATERIALS.

PERLITE: HORTICULTURAL PERLITE OF SOIL AMENDMENT GRADE.

COMMERCIAL FERTILIZER: GRANULAR COMMERCIAL GRADE, PH NEUTRAL, COMPRISED OF BOTH SLOW AND FAST RELEASE ELEMENTS AND CONTAINING THE FOLLOWING MINIMUM CONTENT OF AVAILABLE NITROGEN: 10% SOLUBLE NITROGEN, 10% PHOSPHORIC ACID, 5% SOLUBLE POTASH. TREES AND SHRUBS: 5% TOTAL NITROGEN, 10% PHOSPHORIC ACID, 5% SOLUBLE POTASH. GROUND COVERS AND PLANTS: 3% TOTAL NITROGEN, 10% PHOSPHORIC ACID, 5% SOLUBLE POTASH. LAWN: AVAILABLE NITROGEN CONTENT AS REQUIRED TO PROVIDE ONE POUND PER 1,000 SQUARE FEET AT NORMAL APPLICATION RATE. MINIMUM 14% PHOSPHORIC ACID, AND MINIMUM 10% SOLUBLE POTASH.

SEEDING: APPLY SEED AT A RATE OF 4 LBS. PER 1,000 SQUARE FEET EVERY IN TWO INTERSECTING DIRECTIONS. MAKE IN SLIGHTLY. DO NOT SEED AREAS IN EXCESS OF THAT WHICH CAN BE MULCHED THE SAME DAY. DO NOT SOW IMMEDIATELY FOLLOWING RAIN. WHEN GROUND IS TOO DRY, OR DURING WINDY PERIODS, ROLL SEEDED AREA WITH ROLLER NOT EXCEEDING 60 LBS. IMMEDIATELY FOLLOWING SEEDING AND COMPACTING, APPLY EVEN LAYER OF MULCH. MAINTAIN CLEAR OF SHRUBS AND TREES. APPLY WATER WITH A FINE SPRAY IMMEDIATELY AFTER AREA HAS BEEN MULCHED. SATURATE TO 4 INCHES OF SOIL.

SEED SPECIFICATION: TURF MIXTURE: 15% KENTUCKY BLUEGRASS, 35% KENTUCKY 31 FESCUE, 25% CREWING FESCUE, 15% PERENNIAL RYE GRASS, 5% RECYCLED RIOTOP.

HYDROSEEDING: APPLY SEEDING SLURRY WITH A HYDRAULIC SEEDER AT A RATE OF 4 LBS. OF SEED PER 1,000 SQUARE FEET EVENLY IN TWO INTERSECTING DIRECTIONS. DO NOT HYDROSEED AREAS IN EXCESS TO THAT WHICH CAN BE MULCHED ON THE SAME DAY. IMMEDIATELY FOLLOWING SEEDING, APPLY AN EVEN LAYER OF MULCH. MAINTAIN CLEAR OF SHRUBS AND TREES. APPLY WATER WITH A FINE SPRAY IMMEDIATELY AFTER THE AREA HAS BEEN MULCHED. SATURATE TO 4 INCHES OF SOIL.

SEED PROTECTION: SEEDS SHOULD BE GRAYED EXCEEDS 1 APOSTROPHE IF FIVE APOSTROPHE OR GREATER WITH THE JUTE EROSION CONTROL. BLANKET OR GREYER SMOKE, ROLL FABRIC ONTO SLOPES WITHOUT STRETCHING OR PULLING. LAY FABRIC SMOOTHLY ON SURFACE VERY TOP END OF EACH SECTION IN SIX INCH DEEP EXCAVATED TOPSOIL. TREXEN PROVIDE 10 INCH OVERLAP OF ADJACENT ROLLS. BACKFILL TRENCH AND RAKE SMOOTH, LEVEL, AND JOSE WITH ADJACENT SOIL. SECURE OUTSIDE EDGES AND OVERLAPS WITH 36 INCH INTERVALS WITH STEAKS LIGHTLY DRESSED HOT SLOPES WITH TOPSOIL. TO ENSURE CLOSE CONTACT BETWEEN FABRIC AND SOIL. AT SIDES OF DETILES, LAY FABRIC LAPS IN DIRECTION OF WATER FLOW. FLAP ENDS AND EDGES MINIMUM 6 INCHES.

SPECIFICATIONS:

TREES AND SHRUBS:

GENERAL: PROVIDE NURSERY OR PLANTATION GROWN STOCK CONFORMING TO THE AMERICAN STANDARD FOR NURSERY STOCK. ALL VEGETATION SHALL BE NURSERY GROWN, WELL-BRANCHED AND UNIFORM IN SOUND, VIGOROUS, HEALTHY, AND FREE FROM DISEASE, SUN-SCALD, WINDBURN, ABRASION, AND HARMFUL INSECTS OR INSECT EGGS. DECIDUOUS TREES AND SHRUBS SHALL BE SYMMETRICALLY DEVELOPED, UNIFORM HABIT GROWTH, WITH STRAIGHT TRUNKS OR STEMS, AND FREE FROM OR RECTRABLE IMPURITIES. CONIFEROUS EVERGREEN TREES AND SHRUBS SHALL HAVE WELL-DEVELOPED SYMMETRICAL CANNOPES WITH UNIFORM SPREAD OF BRANCHES FROM EACH PARTIAL OR SPACES OR VARIETY. PROVIDE STOCK COMPLYING IN ALL RESPECT WITH ANSI Z60.8 AND IN SIZES INDICATED, MEASURED IN ACCORDANCE WITH ANSI Z60.8 LARGER SIZES WITH LARGER ROOTS AND ROOT CONTAINMENT MAY BE FURNISHED, IF APPROVED BY THE LANDSCAPE ARCHITECT. DO NOT SPREAD OR COMPRESS BRANCHES WHEN MEASURING. MEASURE MAIN BODY OF BRANCHES DO NOT MEASURE EXTREME TIP OF TIPS OF SINGLE BRANCHES. PRUNING TO SIZE IS NOT ACCEPTABLE. SHAKE AND FLOWERING TREES, DECIDUOUS, SHRUBS, AND CONIFEROUS EVERGREEN SHALL BE BALLED AND BURLAPPED (DBA).

PLANTS:

GENERAL: PROVIDE FIELD-GROWN OR ACCLIMATED CONTAINER-GROWN PLANTS FROM A COMMERCIAL NURSERY, HEALTHY, VIGOROUS, OF THE SIZES INDICATED AND IN ACCORDANCE WITH ANSI Z60.8 SECTION 7, "YOUNG PLANTS".

PLUGS:

GENERAL: PROVIDE FIELD-GROWN OR ACCLIMATED CONTAINER-GROWN PLANTS FROM A COMMERCIAL NURSERY, HEALTHY, VIGOROUS, OF THE SIZES INDICATED AND IN ACCORDANCE WITH ANSI Z60.8 SECTION 7, "YOUNG PLANTS".

GRASS MATERIALS:

SOIL: PROVIDE VIBRILE ONLY BURNHANT CERTIFIED TURF GRASS COMPLYING WITH ASSA SPECIFICATIONS FOR THICKNESS, SIZE, STRENGTH, MOISTURE CONTENT, MOWED HEIGHT, THE BETWEEN HARVEST AND TRANSPLANTING, THATCH, DISEASE, NEMATODES, INSECTS, AND WEEDS. SOIL TYPE SHALL BE KENTUCKY BLUEGRASS (POA PRATENSIS). SEED: 100% 1/4 INCH MOUNT STAR KENTUCKY BLUEGRASS, 35% 1/4 INCH MOUNT KENTUCKY BLUEGRASS, 40% 1/4 INCH KENTUCKY BLUEGRASS.

MISCELLANEOUS LANDSCAPE MATERIALS: DECORATIVE MULCH SHALL BE FREE OF HARMFUL MATERIALS, SUITABLE FOR TOP DRESSING OF PLANTINGS, AND CONSISTING OF ONE-PHASE FREE, COMPOSTED DOUBLE SHREDDED HARDWOOD.

ANTI-DESICCANT IS A FILM FORMING AN EMULSION, PERMEABLE TO TRANSPARATION YET RETARDING TO EXCESSIVE MOISTURE LOSS.

STAKING AND GUYSING MATERIALS: STAKES SHALL BE HARDWOOD LUMBER OF SIZES INDICATED, STRAIGHT, AND FREE OF SPLITS AND KNOTS LARGER THAN 1/4 OF THE LEAST NOMINAL DIMENSION TO THE PEE. SHARPENED AND CHAMFER ENDS OF DOWNEND TO PREVENT SPLITTING FROM OFF-CENTER HAMMER STRIKES. STAKES SHALL BE FASTENED TO TREE USING 1/2" WIDE, FLAT, WOVEN POLYPROPYLENE MATERIAL, SUCH AS ARBOR TIE OF USE 3" WIDE WEAVING STRAPS SECURED TO STAKES WITH GALVANIZED 10 STEEL WIRE. MINIMUM 10 GAUGE-PROVIDE DOUBLE STAKES. DO NOT RUN WIRE THROUGH HOSE. ATTACHED LOOSELY TO ALLOW FLEXING, REMOVE STAKING MATERIAL AFTER ONE YEAR.

PLANTING SOIL: SOIL MUST PROVIDE SOIL MIX, CONSISTING OF TOPSOIL AND AMENDMENTS AS RECOMMENDED BY SOIL ANALYSIS LABORATORY REPORT.

MIXING: MIX TOPSOIL AND AMENDMENTS THOROUGHLY TO PROVIDE UNIFORM MIXTURE. USING A DRUM-TYPE MECHANICAL MIXER, POWERED ROTARY TILLER, OR OTHER MEANS ACCEPTABLE TO THE LANDSCAPE ARCHITECT.

EXECUTION:

CLEARING AND GRUBBING: THE WORK INCLUDES THE CLEARING, GRUBBING, AND DISPOSING OF TREES, SNAGS, LOGS, BRUSH, STUMPS, SHRUBS, AND RUBBISH FROM THE DESIGNATED AREAS. PROTECTION OF EXISTING VEGETATION: TREES AND OTHER VEGETATION DESIGNATED TO REMAIN UNDISTURBED SHALL BE PROTECTED FROM DAMAGE THROUGHOUT THE DURATION OF THE CONSTRUCTION. ANY DAMAGES RESULTING FROM THE CONTRACTORS OPERATIONS OR NEGLIGENCE SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR.

HARDWOOD: THE LIMITS OF THE AREA(S) TO BE CLEARED AND GRUBBED SHALL BE MARKED BY STAKES, FLAG, TREE MARKINGS, OR OTHER SUITABLE METHODS. TREES TO BE LEFT STANDING AND UNHARMED WILL BE DESIGNATED BY SPECIAL MARKINGS THAT ARE CONSPICUOUS TO PREVENTING HARM TO THE TREE AND SHALL BE PLACED ON THE TRUNK ABOUT SIX FEET ABOVE THE GROUND. CLEARING AND GRUBBING: ALL TREES NOT MARKED FOR PRESERVATION AND ALL SNAGS, LOGS, BRUSH, STUMPS, SHRUBS, RUBBISH, AND SENAP MATERIALS SHALL BE CLEARED FROM WITHIN THE LIMITS OF THE DESIGNATED AREA. UNLESS OTHERWISE SPECIFIED, ALL STUMPS, ROOTS, AND ROAD CLUSTERS THAT HAVE A DIAMETER OF 1 INCH OR LARGER SHALL BE GRUBBED OUT TO A DEPTH OF AT LEAST TWO FEET BELOW SUBGRADE FOR CONCRETE STRUCTURES AND FOOT BELOW THE GROUND SURFACE AT EXHIBITION SITES AND OTHER DESIGNATED AREAS. NEW LINE DISPOSAL: ALL MATERIALS CLEARED AND GRUBBED FROM THE DESIGNATED AREA SHALL BE DISPOSED OF AT LOCATION SHOWN ON THE DRAWINGS OR IN A MANNER SPECIFIED IN SECTION 7. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL LOCAL RULES AND REGULATIONS AND PAYMENT OF ANY AND ALL FEES THAT MAY RESULT FROM DISPOSAL AT LOCATIONS AWAY FROM THE PROJECT SITE.

LAYOUT: LAYOUT PLANNING LOCATIONS, MARKED WITH STAKES, ADJUST LOCATIONS IF REQUIRED AND OBTAIN THE LANDSCAPE ARCHITECTS APPROVAL OF LOCATIONS BEFORE PROCEEDING WITH INSTALLATION. SUBGRADES: ALL SUBGRADES UNDER PLANTING AREAS (EXCEPT FOR WITHIN AN AREA EQUAL TO THE DRP LINE UNDERNEATH EXISTING TREES TO REMAIN AND PREVIOUS SITE SHALL BE SCARPED TO A DEPTH OF FOUR INCHES BEFORE PLACING TOPSOIL. WHERE CONSTRUCTION HAS RESULTED FROM CONSTRUCTION OPERATIONS, THE OWNER MAY REQUIRE SCARPING TO A DEPTH OF 6 INCHES.

PREPARATION OF PLANTING SOILS: PRIOR TO MIXING IN DRUM TYPE MIXER OR DRUMS TILLAGE OPERATIONS, CLEAN TOPSOIL OF STICKS, STONES, CLAY LUMPS, VEGETABLE MATTER, AND OTHER OBJECTIONABLE MATERIALS. PIT AND TRENCH BACKFILL: MIX PLANTING SOIL AND STORM FOR USE AT SITE. READY FOR USE AS BACKFILL FOR PLANTING BEDS AND LAWNS, EITHER MIX PLANTING SOIL BEFORE PLACING OR UNFORMALLY SPREAD FERTILIZER IN AND SOIL AMENDMENTS ON SURFACE OF IN PLACE TOPSOIL UNTIL THOROUGHLY BEFORE PLANTING.

PREPARATION OF BOTH PLANTING LAWNS: PREPARE ONLY THOSE AREAS THAT WILL BE IMMEDIATELY PLANTED. ALLOW FOR SOIL THICKNESS IN AREA TO BE SODDED. FOR PREPARATION OF STOPPED AREAS, TILL SUBGRADE TO A DEPTH OF AT LEAST 4 INCHES. PLACE TOPSOIL IN TWO APPROXIMATELY EQUAL LIFTS, MOWING FIRST LIFT INTO SUBGRADE BEFORE PLACING SECOND LIFT. SPREAD SECOND LIFT TO COMPLY WITH FINISHED GRADES, GRASSES, AND ELEVATIONS REQUIRED AFTER ALLOWING FOR SETTLEMENT PERIOD TO PREPARE FOR UNCHANGED GRADES, PREPARE YET UNSTRIPPED AREAS AS FOLLOWS: REMOVE EXISTING VEGETATION INCLUDING GRASSES AND DISPOSE OF OFF-SITE, TILL THE SOIL TO A DEPTH OF AT LEAST 4 INCHES, CLEAN TOPSOIL OF STICKS, STONES, CLAY LUMPS, VEGETABLE MATTER, AND OTHER OBJECTIONABLE MATERIALS. PERIOD THE GRADE, ROLL, RAKE AND DRAG LAWN AREAS CUTTING DOWN HIGH SPOTS AND FILLING LOW SPOTS CORRA LEAVING A SMOOTH CORRA EVEN SOIL, COMPLYING WITH FINISHED GRADES. IF DRY, WATER FULL DEPTH OF TOPSOIL THOROUGHLY BUT NOT EXCESSIVELY AND ALLOW SURFACE MOISTURE TO DRY BEFORE PLANTING. JUST BEFORE PLANTING, CORRECT ANY LAWN AREAS THAT HAVE BEEN ERODED, BUTTED, OR SETTLED.

PREPARATION OF PLANTING BEDS: TILL PLANTING BED AREA TO A DEPTH OF AT LEAST 6 INCHES, CLEAR, AND ADD SOIL AMENDMENTS NECESSARY TO ACHIEVE OPTIMUM GROWING CONDITIONS UNTIL THOROUGHLY.

EXCAVATION FOR TREES AND SHRUBS: PITS, BEDS, AND TRENCHES: EXCAVATE WITH SIDE VERTICAL AND BOTTOM FLAT. THE GLAZE SIZES AND LOOSEN BOTTOM.

ALL EXCAVATED SITES SHALL HAVE VERTICAL SIDES AND SHALL BE OF A SIZE THAT IS THREE TIMES THE DIAMETER AND 1 1/2 TIMES THE DEPTH OF THE ROOT BALL FOR ALL TREES AND SHRUBS AFTER PITS ARE QUICK ROUGHING THE SIDES OF THE PIT AND LOOSEN SOIL IN THE BOTTOM OF THE PIT TO A DEPTH OF THREE INCHES. CONSTRUCT FROD - TAMPED MOOD MOUD IN THE BOTTOM OF THE PIT TO SUPPORT THE PLANT AT THE PROPER LEVEL. ALL EXCAVATED SOIL SOIL FROM THE SITE SHALL BE FILL WITH APPROPRIATE VOLUMES OF SOIL AMENDMENTS AS REQUIRED BY SOIL ANALYSIS LABORATORY REPORT AS INDICATED ON THE PLANS PRIOR USE OF PLANTING BACKFILL.

PLANTING TREES AND SHRUBS:

BALLED AND BURLAP STOCK: CUT AND REMOVE ROPE AND WIRE FROM TOP 2/3 OF ROOT BALL. SET PLANTS IN EXCAVATION WITH TOP OF BALL TO MATCH ADJACENT FINISH GRADE. ADD SOIL AS REQUIRED UNDER BALL TO ACHIEVE FLUSH. REMOVE BURLAP FROM TOP 2/3 BALL. RETAIN BURLAP ON BOTTOM OF BALL. PLACE BACKFILL IN 3-4 INCH THICK LAYERS. WORK EACH LAYER BY HAND TO COMPACT BACKFILL AND ELIMINATE VOIDS. MAINTAIN PLUMB DURING BACKFILLING. WHEN BACKFILLING IS APPROXIMATELY 2/3 OF BACKFILL, SATURATE BACKFILL AND WATER AND REPEAT UNTIL SUBSTANTIALLY ON SUITABLY FILLED AND COMPACTED. REHANDER OF BACKFILL AND WATER AGAIN, PROVIDE EARTH WATERING BASIN SAUKER, AS INDICATED ON PLANS, AND WATER STOCK.

CONTAINER GROWN PLANT/PLUGS: IMMEDIATELY BEFORE PLACING, REMOVE CONTAINER OR CAN. CONTAINER REMOVAL: A PERIOD CUT CONTAINERS ON TWO SIDES WITH A CANED CUTTER DESIGNED FOR THE JOB. B. DO NOT MAKE PLANT ROOT BALL C. DO NOT CUT CONTAINERS WITH SPADE OR AXE. D. AFTER REMOVING PLANT, SUPERFICIALLY CUT EDGE ROOTS WITH KNIFE ON THREE SIDES SET AND PLUM PLANTS. PLACE INITIAL BACKFILL AND REMOVE SIDE CONTAINER. TAKING CARE TO AVOID DAMAGE TO ROOT SYSTEM.

GROUND COVER PLANTS SHALL BE GROWN IN FLATS OR GALLON CONTAINERS AS INDICATED ON THE DRAWINGS. FLAT GROUND PLANTS SHALL REMAIN IN THOSE FLATS UNTIL TRANSPANTING. THE PLANTS SOIL SHALL CONTAIN SUFFICIENT MOISTURE TO SO THAT IT WILL NOT BE DRY AT PLANTING. 2. GROUND COVER PLANTS SHALL BE PLANTED IN STRAIGHT ROWS AND EVENLY SPACED OTHERWISE UNLESS OTHERWISE NOTED AND AT INTERVALS CALLED OUT IN THE DRAWINGS. TRIANGULAR SPACING SHALL BE USED UNLESS OTHERWISE NOTED ON THE DRAWINGS. 3. EACH ROOTED PLANT SHALL BE PLANTED WITH ITS PROPORTIONATE AMOUNT OF FLAT ON CONTAINER SOIL. PLANTING SHALL BE IMMEDIATELY SPRINKLED WITH WATER AFTER PLANTING UNTIL THE AREA IS SOAKED TO THE FULL DEPTH OF EACH HOLE. 4. CARE SHALL BE EXERCISED AT ALL TIMES TO PROTECT THE PLANTS AFTER PLANTING. ANY DAMAGE TO PLANTS BY TRAMPLING OR OTHER OPERATION SHALL BE REPAIRED IMMEDIATELY.

BASINFORM EARTHEN WATERING BASIN AROUND EXCAVATION AREA WITH BACKFILL HOLDING AT LEAST 2 1/2 SALLONS OF SHRUBS AND FIVE GALLONS FOR TREES. APPLY MULCH. ANTI-DESICCANT SPRAY: APPLY COVERING ALL PORTIONS OF PLANT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. IF FULL LEAF, SPRAY DECIDUOUS TREES AND SHRUBS AT NURSERY JUST BEFORE TRANSPORTATION, AND TWO WEEKS AFTER TRANSPORTING.

PRUNING: REMOVE DEAD OR BROKEN BRANCHES. PRUNE TO ROUTINE TYPICAL GROWTH HABIT OF PLANTS WITH AS MUCH HEIGHT AND SPREAD AS PRACTICAL. MAKE CUTS WITH SHARP INSTRUMENTS AND FLUSH WITH TRUNK AND ADJACENT BRANCH. DO NOT REMOVE LEADERS FROM TREES. STAKING AND GUYSING OF TREES:

GUY AND STAKE TREES THE SAME DAY AS PLANTING, UNLESS OTHERWISE DIRECTED. TREES SHALL BE STAKED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE SPECIFICATIONS. REFER TO DRAWINGS AND SCHEDULE FOR GUYING AND STAKING REQUIREMENTS. TREES SHALL STAND PLUMB AFTER STAKING. AT THE TIME THE STAKES ARE REMOVED, ANY HOLES LEFT BY THE STATE SHALL BE FILLED WITH TOPSOIL OF THE SAME QUALITY AS THE BACKFILL PREVIOUSLY SPECIFIED FOR PLANTING.

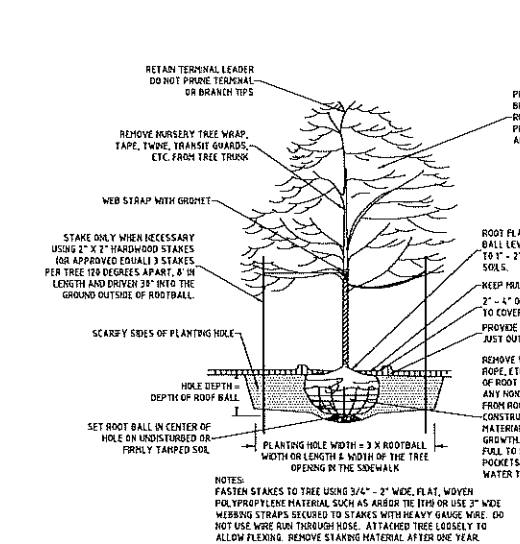
SODDING NEW LAWNS:

LAYING SOO DO NOT LAY DRIED OR BROKEN SOO. USE ONLY FRESH, PROPERLY PROTECTED SOO. LAY FIRST AND SUBSEQUENT PARALLEL ROWS IN A STRAIGHT LINE WITH TIGHTLY BUTTED JOINTS. DO NOT OVERLAY SOO OR LEAVE VOIDS. STAGGERED LATERAL JOINTS. WHEN EACH SECTION IS LAD, LIGHTLY ROLL THE ENTIRE AREA TO ENSURE CONTACT BETWEEN SOO AND SUBGRADE. WATER SOO IMMEDIATELY AFTER PLANTING TO THOROUGHLY WET THE PAD AND SUBGRADE IMMEDIATELY BELIEF. DURING FIRST WEEK, MAINTAIN SOO CONTINUALLY MOIST TO DEPTH OF FOUR INCHES BY WATERING DAILY OR MORE OFTEN, ABSENT ADEQUATE RAINFALL.

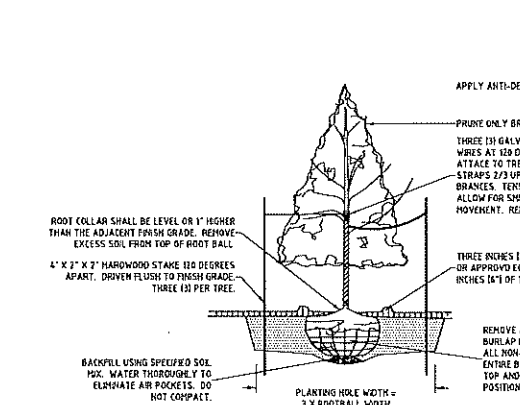
MISCELLANEOUS MATERIALS: DECORATIVE MULCH: APPLY A THREE INCH (3") THICK LAYER OF DOUBLE SHREDDED HARDWOOD MULCH IN THE FOLLOWING AREAS: INDIVIDUAL PLANTING PITS AND PLANTING BEDS. DURING MAINTENANCE AND WARRANTY, THE CONTRACTOR IS REQUIRED TO APPLY NEW MULCH AS NECESSARY DUE TO EROSION, SETTLING, OR AS REQUIRED BY LANDSCAPE ARCHITECT.

GENERAL NOTE:

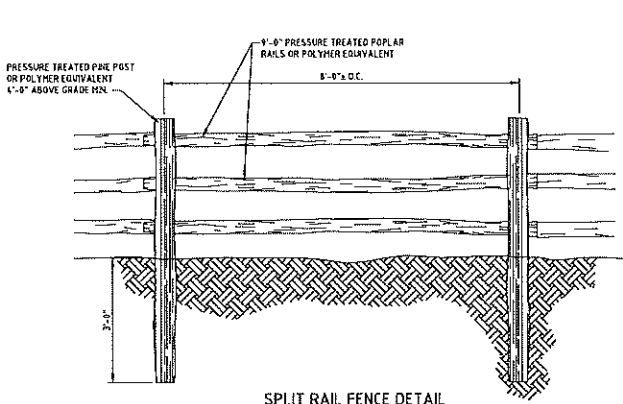
IT IS AGREED THAT THE PROFESSIONAL SERVICES OF THE DESIGN PROFESSIONAL DO NOT EXTEND TO OR INCLUDE THE REVIEW OR SITE OBSERVATION OF THE CONTRACTORS WORK, UNLESS OTHERWISE SPECIFIED AND AGREED. IT IS FURTHER AGREED THAT THE OWNER WILL HOLD HARMLESS, THEN DEFY, AND DEFEND THE DESIGN PROFESSIONAL FROM ANY CLAIM OR SUIT WHATSOEVER ARISING FROM THE CONTRACTORS PERFORMANCE OR THE FAILURE OF THE CONTRACTORS WORK TO CONFORM TO THE DESIGN PLANS AND THE CONTRACT DOCUMENTS.



DECIDUOUS TREE PLANTING DETAIL



EVERGREEN TREE PLANTING DETAIL



SPLIT RAIL FENCE DETAIL

REVISION	DATE	BY	REASON
1	7/25/03	MDH	REVISED PER TOWNSHIP REVIEW LETTERS

2815 PENN AVENUE
WEST LAWN, PA
610-927-4242

1 inch equals 10 feet

LANDSCAPING DETAILS AND NOTES

CLIENT: GROVE MEADOW DEVELOPERS, LLC

LOCATION: EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

DATE: APRIL 2003

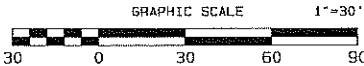
DESIGNER: M.D. HARTMAN

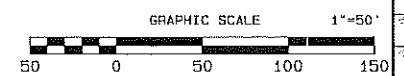
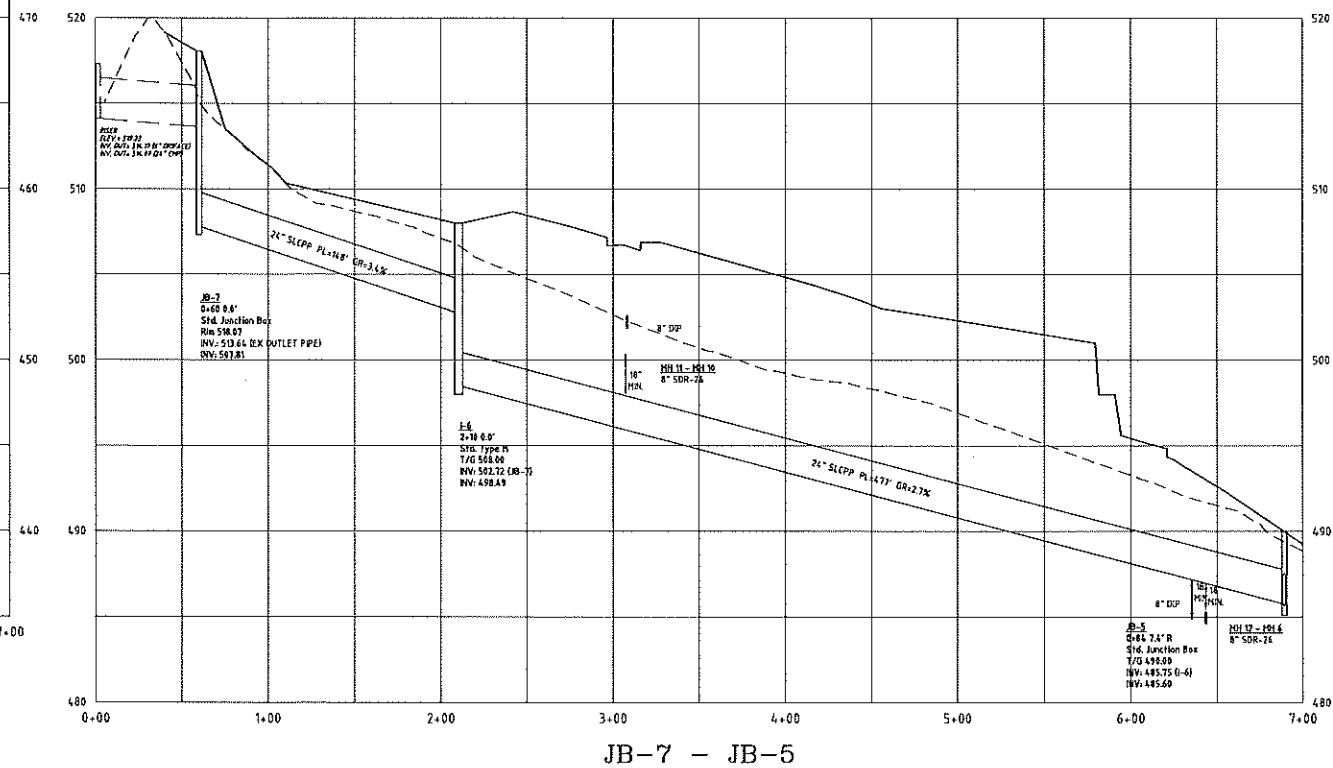
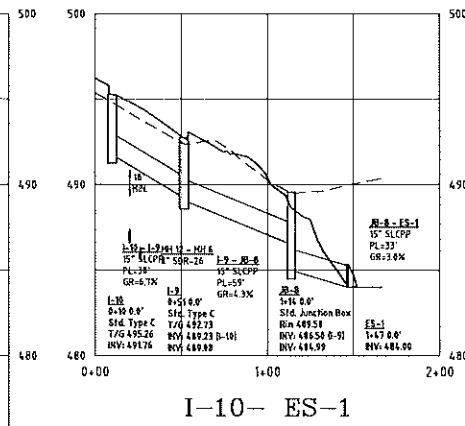
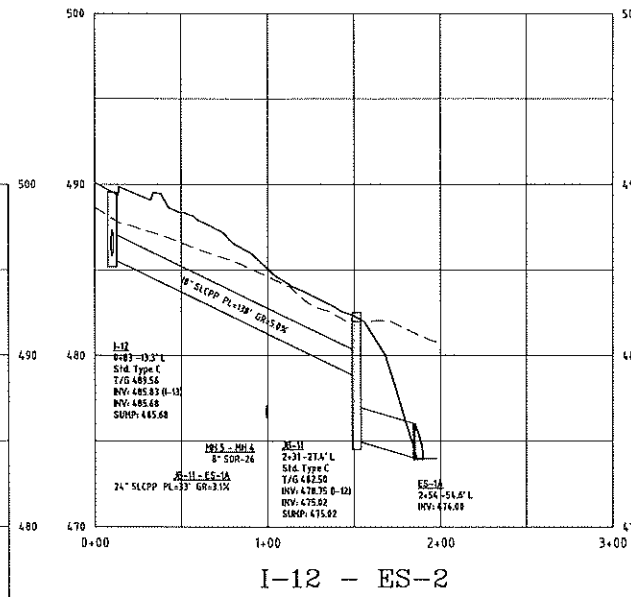
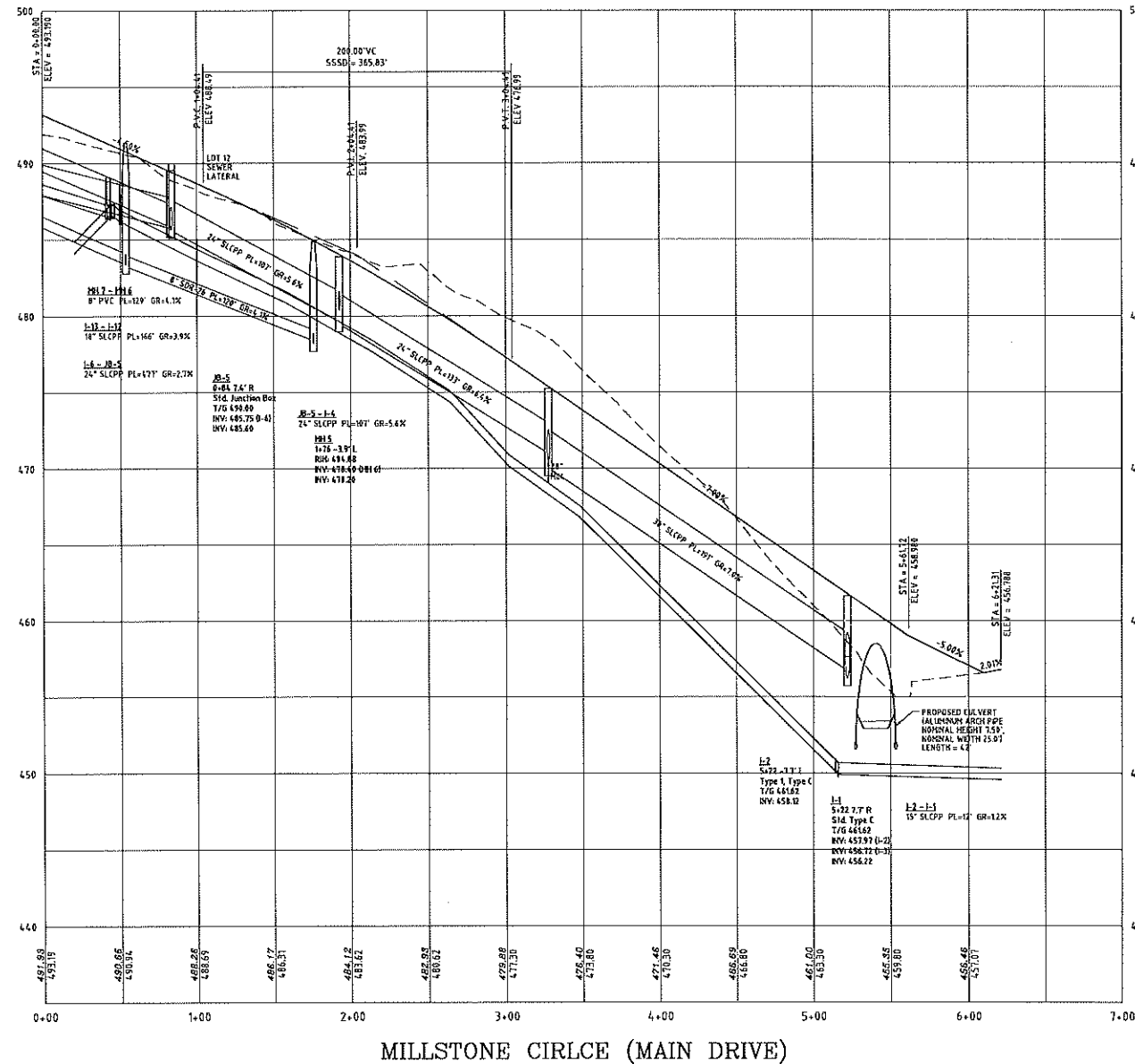
PROJECT MANAGER: M.D. HARTMAN

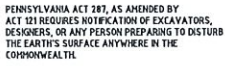
SCALE: 1\"/>

SHEET: 8 OF 20

PROJECT: 22-001-F-D-7.2







ACT 287 UNDERGROUND UTILITY PROTECTION ACT, AS AMENDED BY:
ACT 172 OF 1986, ACT 38 OF 1991, ACT 187 OF 1996,
ACT 199 OF 2004, ACT 181 OF 2006, ACT 121 OF 2008

PA ONE CALL SYSTEM INFORMATION:
PENNSYLVANIA ACT 207, AS AMENDED, REQUIRES THREE (3) WORKING DAYS NOTICE
FOR CONSTRUCTION PHASE AND FIVE (5) WORKING DAYS NOTICE IN DESIGN STAGE.
PA ONE CALL PHONE NUMBER: 1-800-242-1776

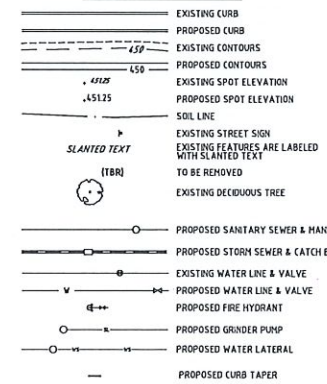
ONE CALL SYSTEM SERIAL NO. NOTIFICATION BY HAVE NEWELL, INC.
DATE: 11/07/22

ONE CALL SYSTEM SERIAL NUMBER: 20223113472

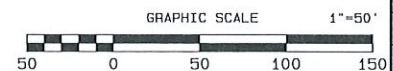
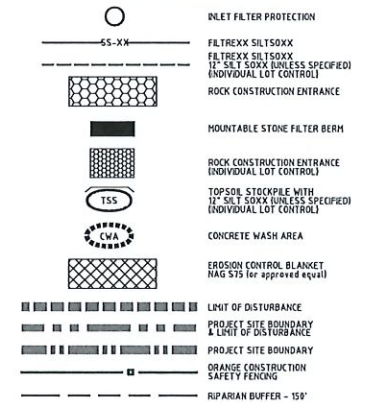
UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND WERE DETERMINED FROM VISIBLE LOCATION, ACT 287 OF 1974, AS AMENDED, UTILITY RESPONSES AND/OR BEST AVAILABLE PLAN INFORMATION.



LIST OF RESPONDERS:
AQUA PENNSYLVANIA INC
EAST GOSHEN TOWNSHIP
TEXAS EASTERN TRANSMISSION LP
COMCAST CABLE COMMUNICATIONS INC
PECO ENERGY
VERIZON PENNSYLVANIA LLC

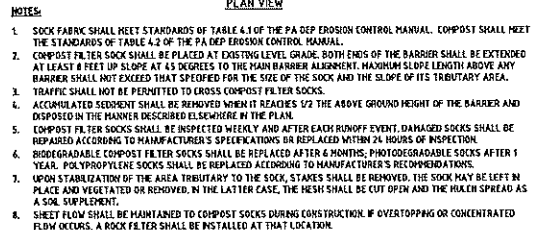
U.S. FISH AND WILDLIFE SERVICE AVOIDANCE MEASURE:
DO NOT CONDUCT THIS PROJECT/ACTIVITY WITHIN 50
FEET OF ANY STREAMS, RIVERS, CREEKS, OR
TRIBUTARIES. THIS INCLUDES BOTH PERENNIAL AND
INTERMITTENT WATERWAYS.



E&SPC LEGEND



<div>2815 PENN AVENUE WEST LAWN, PA 610-927-4242</div>		<div>SEAL:<div></div></div>		<div><div> Enterprises Engineering & Design, Inc.</div><div>a civil engineering design & management firm</div></div>		<div>Revision</div> <div>1</div>	<div>Date</div> <div>7/25/23</div>	<div>Description</div> <div>REVISED PER TOWNSHIP REVIEW LETTERS</div>	<div>MCH</div>	<div>Rev By:</div>
<div><div><div>"MILLSTONE MEADOWS" PRELIMINARY/FINAL PLAN EROSION AND SEDIMENT CONTROL PLAN</div><div><div>CLIENT: GROVE MEADOW DEVELOPERS LLC LOCATION: EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA DATE: APRIL 20, 2023</div></div></div><div><div><div>M.D.HARTMAN M.D.HARTMAN 1" = 50' 11 OF 20</div><div>22-001-F-D-9.1</div></div></div></div>										



The diagram illustrates the well vegetated area filter sock system in two views: PLAN VIEW and ELEVATION VIEW.

PLAN VIEW: This view shows the filter sock (a cylindrical mesh structure) placed over a well. The sock is secured by heavy-duty lifting straps. A discharge hose is connected to the sock, leading to a pump and an intake hose. The area around the well is labeled "WELL VEGETATED AREA".

ELEVATION VIEW: This view shows the filter sock (a mesh structure) placed over a well. The sock is secured by heavy-duty lifting straps. A discharge hose is connected to the sock, leading to a pump and an intake hose. The area around the well is labeled "WELL VEGETATED AREA".

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. MOLE. WEIGHT STRENGTH	ASTM D-4064	60 lb/in
GRAIN TENSILE	ASTM D-4632	200 lb
PUNCTURE	ASTM D-4853	110 lb
HALLEN BURST	ASTM D-3786	350 psi
UV RESISTANCE	ASTM D-4366	70%
AGE & RETAINED	ASTM D-4761	80 SOME

CHANNEL CROSS-SECTION

SEE MANUFACTURER'S LIVING INSTALLATION DETAIL FOR STAPLE PATTERNS, AND VEGETATION STABILIZATION SPECIFICATIONS FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION.

NOTE 1: HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CHANNEL POINTS AT THE CHANNEL SURFACE.

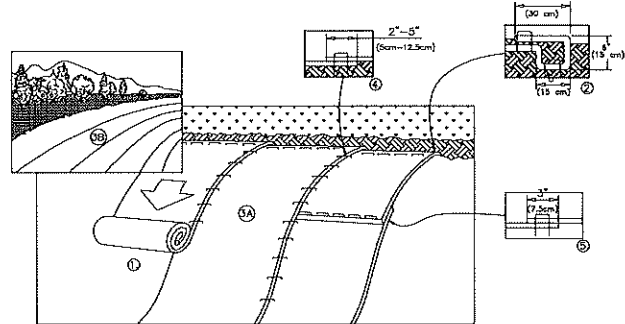
NOTE 2: IF ROCK OR OTHER LEAVES ARE ENCOUNTERED DURING SHIELD EXCAVATION, UNDERBOLT ROCK OR GRAVEL TO 18" BELOW PUMP GRADE, COVER ROCK WITH 4" OF SOIL AND 6" OF TOPSOIL.

NOTE 3: ALL CHANNELS MUST BE KEPT FREE OF OBSTRUCTIONS SUCH AS FELL GROUND, FALLEN LEAVES AND WOODY DEBRIS. IMMEDIATELY SEDIMENT, AND CONSTRUCTION MATERIALS/STAPLES CHANNELS SHOULD BE KEPT MOUND AND/OR FILL FOR 18" ABOVE CHANNEL OR MOUND FOR UTILITIES. CHANNELS SHALL BE KEPT OPEN AND CLEAR THROUGH CHANNELS SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL(S) PREPARED AND STABILIZED PER THE CHANNEL CROSS-SECTION DETAIL.

NOTE 4: VEGETATED CHANNELS SHALL BE CONSTRUCTED FREE OF ROCKS, TREE ROOTS, STUMPS OR OTHER PROJECTIONS THAT WILL OBSTRUCT THE CHANNEL. CHANNELS ARE TO BE CONSTRUCTED TO THE TOP OF THE CHANNEL. THE CHANNEL SHALL BE FULLY OVER EXCAVATED TO ALLOW FOR THE PLACEMENT OF TOPSOIL.

MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-PLAENANT POLYPROPYLENE	HEAVY DUTY MULTI-PLAENANT POLYPROPYLENE
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	800 DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIMENSIONS	12" x 18"	18" x 24"	18" x 24"	24" x 36"	24" x 36"
SHOULDER TENSILE	375#	375#	375#	440 PSI	102 PSI
STRENGTH TO TRANSDUCE		26 PSI	26 PSI		
STABILITY & ORIGINAL STRENGTH	23K AT 1000 HR.	23K AT 1000 HR.		100K AT 1000 HR.	100K AT 1000 HR.
MINIMUM FUNCTIONAL LIFESPAN	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS
TWO-PLY SYSTEMS					
HDPE BIAXIAL NET COMBIBLY WOUND FUSION-WELDED JOINTURES 24" X 36" MAX. AVAILABLE SIZE COMPOSITE POLYPROPYLENE FABRIC 24" X 36" MAX. AVAILABLE SIZE MECHANICALLY FUSED VIA REPEL PUNCH 24" X 36" MAX. AVAILABLE SIZE					
INNER CONTAINMENT NETTING OUTER FILTRATION NETS SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS AS FILLAGE MATERIALS OR LESS					

COMPOST STANDARDS	
ORGANIC MATTER CONTENT	80% - 100% DRY WEIGHT BASIS
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 7.0
MOISTURE CONTENT	35% - 55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 DS/100 ML/HOS/CM MAXIMUM



NOTES

PREPARE SLOPE BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. WHEN USING CELL-OR-SEED NOT SEED PREPARATION AREA, CELL-OR-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.

BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 12" (30cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 1" (25mm) OF BLANKET EXTENDING BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) FROM THE TOP OF THE SLOPE. STAPLES/STAKES SHOULD BE PLACED AT THE TOP OF THE SLOPE WITH AN APPROXIMATE 1" (25mm) OF STAPLE/STAKE EXTENDING BEYOND THE DOWN-SLOPE PORTION OF THE BLANKET BACK OVER SEED AND COMPACTED SOIL. STAPLE/BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.

IF THE SLOPE IS UNSTABLE, STAPLES/STAKES SHOULD BE PLACED WITH AN APPROXIMATE SIDE ANGLE TO THE SLOPE SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PLACEMENT GUIDE. WHEN USING FASTENED JOINT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED ZONES.

THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" (5cm) (10cm-12cm) overlap depending on blanket type. TO DISPOSE PROPER SEED ASSIGNMENT, PLACE THE EDGE OF THE OVERLAP APPROXIMATELY 12" (30cm) BLANKET BEING LAPPED ON TOP/UP WITH THE COLORED ZONE OF THE BLANKET BEING LAPPED ON TOP/UP.

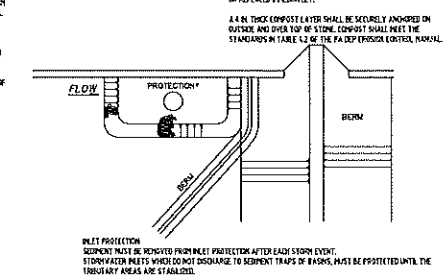
CONSECUTIVE BLANKETS SPOKE DOWN THE SLOPE MUST BE PLACED ONE OVER THE OTHER (SHINGLE STYLE) WITH AN APPROXIMATE 1-3" (5cm) OVERLAP. WHEN USING OVERLAP METHOD, STAPLES/STAKES SHOULD BE PLACED AT THE TOP OF THE SLOPE WITH AN APPROXIMATE 1" (25mm) OF STAPLE/STAKE EXTENDING BEYOND THE DOWN-SLOPE PORTION OF THE BLANKET. STAPLES/STAKES SHOULD BE PLACED TO PROPERLY SECURE THE BLANKETS.

NOTES

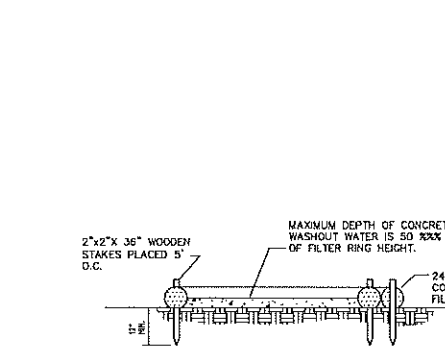
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. STAPLE BLANKET IN DIRECTION OF FLOW OF WATER ON BOTTOM OF CHANNEL.
4. PLACE BLANKETS END OVER END (SINGLE STYLE) WITH A 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
5. STAPLE BLANKET TO TOP OF CHANNEL. TOP OF CHANNEL SLOPES MUST BE ANCHORED IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. 6" WIDE SLORES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED (2" FOR C/S30 MATTING).
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOPE IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. STAPLE BLANKET TO TOP OF CHANNEL AND END OF CHANNEL. STAPLE BLANKET TO TOP OF SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
8. BLANKET END OVER END BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

[illegible]

TYPE C
INLET PROTECTION DETAIL

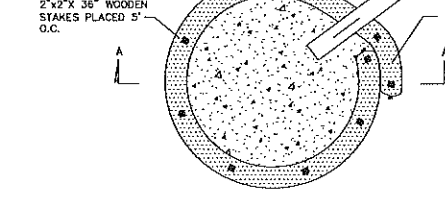


TYPE C
INLET PROTECTION DETAIL



SECTION A-A

DIRE
WAT



NOTES

1) INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.

2) 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.

3) A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT 1' WASHOUT PRIOR TO INSTALLING THE SOCKS.

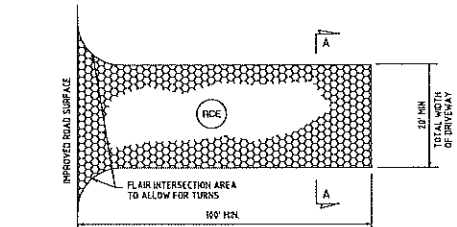
Diagram illustrating a slope stabilization system. The system includes a **HOUSE** and a **DRIVEWAY** adjacent to a **SLOPE**. The slope is stabilized by a **ROCK CONSTRUCTION** and an **EXTRA** layer. The system also features a **FILTER FABRIC FENCE**, **COMPOST FILTER SOCK**, and **SEDIMENT FILTER LOG (TYP.)**. A **TOP SOIL** layer is shown above the rock construction.

PLAN VIEW

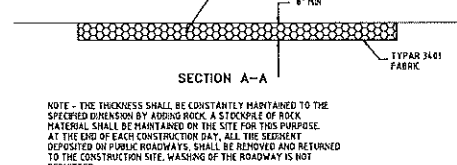
NOTES:

THE AREA DOWNSLOPE OF THE FILTER FENCE/COMPOST SOCK B.
LOG MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURB

TYPICAL ON-LOT BMPs FOR LOT BELOW ROADWAY

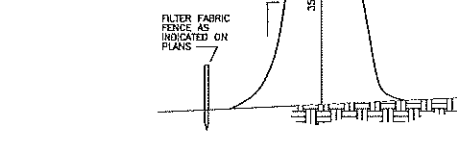


PLAN VIEW



ROCK CONSTRUCTION ENTRANCE

2:1 SLOPE OR
FLATTER



1) STOCKPILES TO BE STABILIZED IMMEDIATELY.
2) STOCKPILE HEIGHTS MUST NOT EXCEED 35'.
3) STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

TEMPORARY STOCKPILE DETAIL

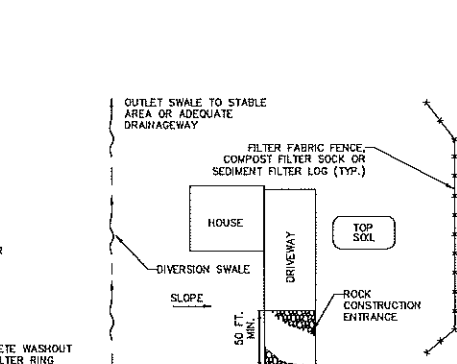


Figure 1. A schematic diagram of the experimental setup. The subject is seated in a chair, viewing a screen displaying a target. The target is a horizontal line. The subject's hand is positioned at the starting point, and the distance from the starting point to the target is indicated. The subject is instructed to move their hand towards the target. The distance from the starting point to the target is 10 cm. The subject is instructed to move their hand towards the target. The distance from the starting point to the target is 10 cm. The subject is instructed to move their hand towards the target. The distance from the starting point to the target is 10 cm.

THE AREA DOWNSLOPE OF THE FILTER FENCE/COMPOST SOCK BARRIER/SEDIMENT FILTER LO MAY NOT BE UNDER DEVELOPMENT OR OTHERWISE DISTURBED.

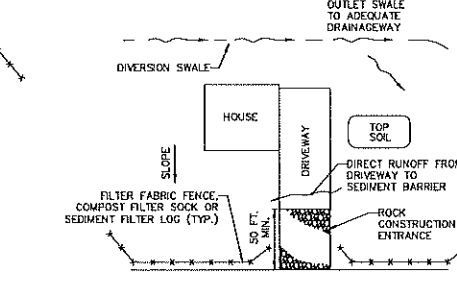
THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER RUNOFF FROM AREAS ABOVE THE LOT ARE NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LOGS. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY

IN AREAS WHERE SLOPE IS AT AN OBLIQUE ANGLE TO THE ROADWAY, BMPs SHALL BE ADJUSTED ACCORDINGLY.

DIVERSION CHANNEL, MAY OUTLET TO ROADSIDE DITCH OR STORM SEWER SYSTEM, BUT NOT ONTO STREET OR ROADWAY.

ON OF THE

TYPICAL ON-LOT BMPs FOR LOT
ALONG ASCENDING OR DESCENDING ROADWAY

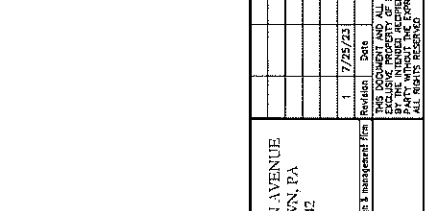
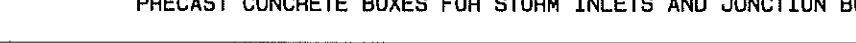
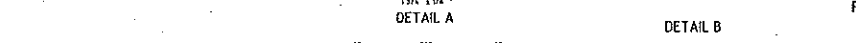
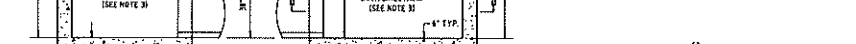
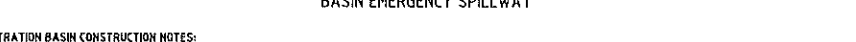
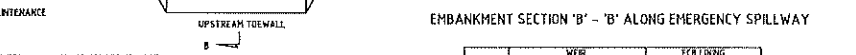
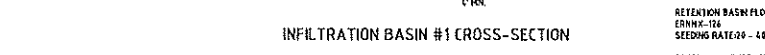
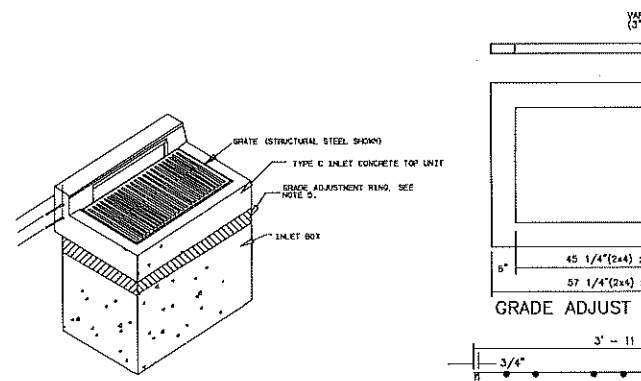
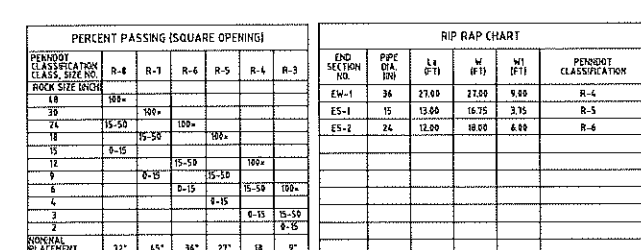
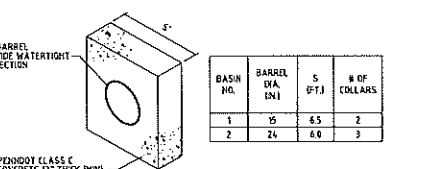
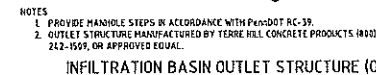


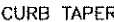
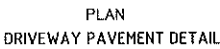
PLAN VIEW

NOTES:

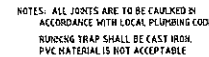
THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER THE LOT EXTENDS MORE THAN 150 FEET ABOVE THE ROADWAY OR WHERE RUNOFF FORM AREAS ABOVE THE LOT IS OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LOGGIE. THE DESIGNER AND/OR CONTRACTOR SHOULD EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A LOGGIE.

TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY



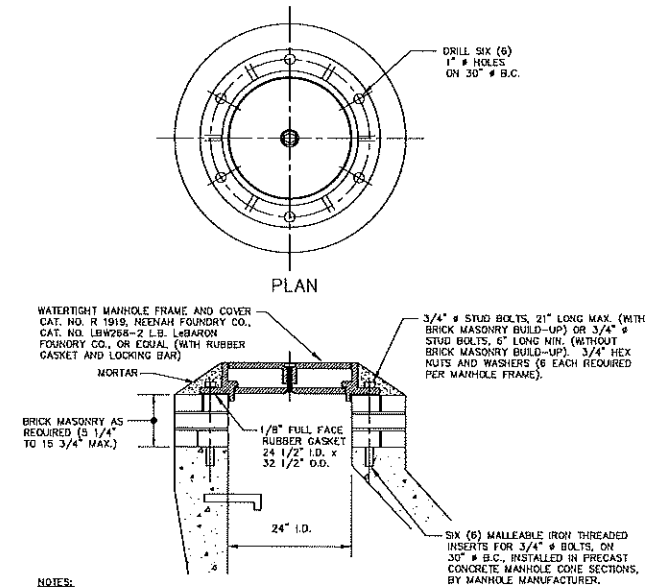


"MILLSTONE MEADOWS" PRELIMINARY/FINAL PLAN CONSTRUCTION DETAIL & NOTES - SITE		CLIENT: GROVE MEADOW DEVELOPERS LLC LOCATION: EAST 605-GEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA DATE: APRIL 20, 2023	
M.D.HARTMAN M.D.HARTMAN N.T.S. 19 OF 20		22-001-F-D-11.1	



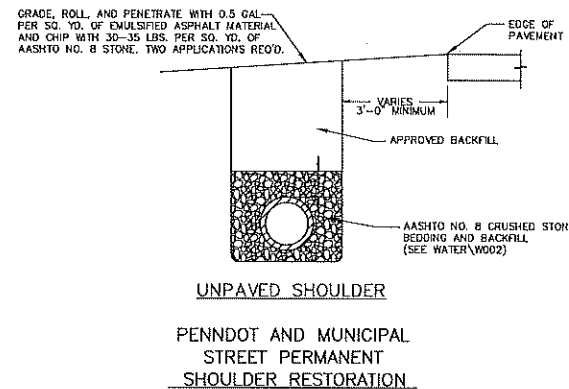
NOTES:

1. MANHOLE FRAME SHALL BE SET IN A BED OF MORTAR SO THAT THE TOP OF THE FRAME CONFORMS WITH THE SLOPE OF PAVED STREET SURFACES.
2. MANHOLE SECTIONS SHALL BE TONGUE AND GROOVE WITH RUBBER RING GASKETS OR APPROVED EQUAL.
3. AFTER MANHOLE IS SET, THE ENTIRE OUTER SURFACE SHALL BE COATED WITH BITUMASTOC.
4. ALL SEWER LINE CONNECTIONS TO MANHOLES SHALL BE MADE USING RUBBER GASKET SEALS.



NOTES:

1. A MINIMUM OF TWO COURSES OF BRICK MASONRY OR GRADE RINGS IS REQUIRED ONLY WHERE MANHOLE FRAME & COVER MUST CONFORM TO GRADE OF STREET.



FLANGED BASE

Riser

NOTE: MANHOLE INVERTS OR CHANNELS TO BE FORMED IN BASE. CHANGES IN SIZE, GRADE, AND DIRECTION TO BE MADE SMOOTHLY AND EVENLY WITH AS LARGE A RADIUS AS POSSIBLE.

STANDARD MANHOLE

MANHOLE SECTIONAL PLANS

NO SCALE

Diagram illustrating the trench subgrade dimensions and materials. The trench width is 8" on each side of the O.D. (Outer Diameter). The trench depth is 6". The trench is filled with 6"-24" ϕ 6" material. The trench is lined with 27"-39" ϕ 6" material. The trench is lined with 42" ϕ 10" material. The trench is lined with 42" ϕ 10" material.

CONCRETE ENCASEMENT DETAIL
NO SCALE