

**AGENDA**  
**EAST GOSHEN TOWNSHIP**  
**CONSERVANCY BOARD MEETING**

1580 Paoli Pike, 2<sup>nd</sup> Floor  
August 9, 2023 - 7:00 PM

1. CALL TO ORDER / PLEDGE OF ALLEGIANCE / MOMENT OF SILENCE
2. APPROVAL OF MINUTES
  - a. **7/12/2023**
3. **Presentation by CRC Watersheds Association**
4. CHAIRMAN'S REPORT
5. Tree City USA
  - a. **Any Maintenance Tasks**
6. Educational Workshops
  - a. **New ideas for the Fall**
7. OLD BUSINESS:
  - a. **KEGB Signs**
  - b. **Winter grass plantings at Matlack**
8. NEW BUSINESS:
9. SUBDIVISION / LAND DEVELOPMENT REVIEW
  - a. **1010 Hershey Mill Road/Millstone Meadows**
10. VARIANCES/CONDITIONAL USES – None
11. LIAISON REPORTS
12. CORRESPONDENCE

13.	<del>Date</del> DATE OF IMPORTANCE	<i>Meeting</i>	<i>Time</i>
	August 10	Pipeline Task Force	5:30pm
	August 14	Municipal Authority	7:00pm
	August 15	Board of Supervisors	7:00pm
	August 17	Futurist Committee	7:00pm
	August 22	Planning Commission	7:00pm
	August 26	Community Day	5:00pm
	August 28	ESAC	6:30pm
	September 4	Township Office Closed	
	September 5	Board of Supervisors	7:00pm
	September 7	Park & Rec Commission	7:00pm
	September 11	Municipal Authority	7:00pm
	September 13	Conservancy Board	7:00pm
	September 14	Pipeline Task Force	5:30pm
	September 19	Board of Supervisors	7:00pm
	September 21	Futurist Committee	7:00pm
	September 25	ESAC	6:30pm

**AGENDA**  
**EAST GOSHEN TOWNSHIP**  
**CONSERVANCY BOARD MEETING**  
1580 Paoli Pike, 2<sup>nd</sup> Floor  
August 9, 2023 - 7:00 PM

- 14. BOARD MEMBER CONCERNS
- 15. PUBLIC COMMENT
- 16. ADJOURNMENT

**DRAFT**  
**EAST GOSHEN TOWNSHIP**  
**CONSERVANCY BOARD MEETING**  
**July 12, 2023**

The East Goshen Township Conservancy Board held a regularly scheduled meeting on Wednesday, July 12, 2023 at 7:00 p.m. at the Township Building. Members in attendance are indicated in **BOLD**:

**Sandra Snyder, Chairman**

Dan Flynn, Vice Chairman

Erich Meyer

Scott Sanders

**Walter Wujcik**

**Karen Martynick**

Matthew McGeehan

Others present were:

**Michele Truitt, Township Supervisor**

**Ashley Nowak, Office Administrator**

Eunice Alexander, Goshen Tree Tenders

**Call to Order**

Sandy called the meeting to order at 7:00 p.m.

**Pledge of Allegiance & Moment of Silence**

Sandy led those present in the Pledge of Allegiance and then asked for a moment of silence to remember our troops and first responders.

**Minutes**

The minutes of the June 14, 2023 meeting were approved as amended.

**Chairman's Report**

None

**Tree City USA**

Ashley reported that nothing needs to be done.

**Educational Workshops**

Sandy feels that a date needs to be selected so notice can be sent out early. Ashley emailed the available dates for the meeting room. There were about 14 in Sept, Oct and Nov. It was decided to have a planning meeting on Wednesday August 9. Come with ideas for topics and speakers. Karen commented that September would be good so people could still do plantings for the spring. Sandy will send the Board members an email.

**Old Business**

1. Supplee Valley Planting – No discussion

1 2. Beaver Dams – All of the beavers have been relocated and the dams were breached.  
2 Public Works has placed cameras in the area and are checking for beavers.

3  
4 3. Street Tree Ordinance - Michele lead a discussion about the Street Tree Ordinance. We  
5 need to define what street trees are, the township's past and current practices and figure  
6 out how to notify the residents. Mark Miller has been asked to take an inventory of all  
7 current street trees. In the past, for safety reasons, if a fire truck or trash truck can't get  
8 down the street, PW would trim them. Also ,any trees in the PECO right of way are trimmed  
9 by PECO. Trees in open space easements need to be defined. Now that we are a Tree City  
10 we need to see if they have any reference to street trees.

11  
12 **New Business**

13 1. Summer schedule - The Board will meet on August 9<sup>th</sup> to discuss the Education  
14 Workshop.

15 2. Matlack Florist – Michele mentioned that the open space area with the retention basin is  
16 Township property. She suggested planting grasses to help retain the water and make it  
17 look better.

18  
19 **Subdivision/Land Development Review**

20 1. 1010 Hershey Mill Road – Sandy will send a letter stating that the Board needs a  
21 detailed landscape plan to review. The copies of the plan they received were not  
22 adequate for landscape review. Stormwater Management was discussed.

23  
24 **Liaison Reports** - None

25  
26  
27 **Any Other Matter** - None

28  
29  
30 **Board Member Concerns** - None

31  
32 **Public Comment**- None

33  
34 **Adjournment**

35 There being no further business, Walter moved to adjourn the meeting. Karen seconded the  
36 motion. The meeting was adjourned at 8:40 p.m. The next meeting will be Wednesday,  
37 August 9, 2023 at 7:00 pm.

38  
39 Respectfully submitted,

40  
41  
42  
43 Ruth Kiefer, Recording Secretary

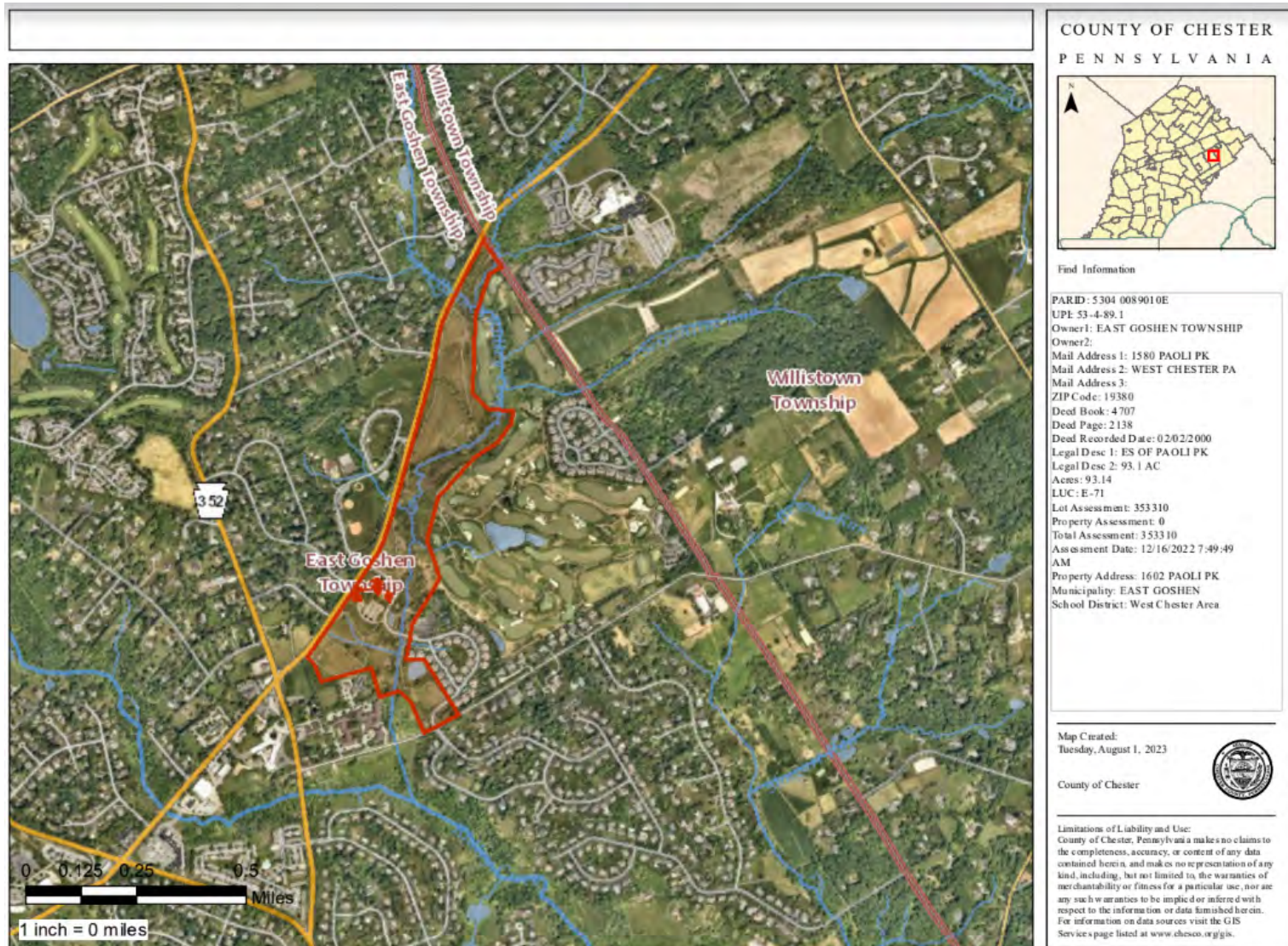
## **Applebrook Park**

### **Sample Site Packet**

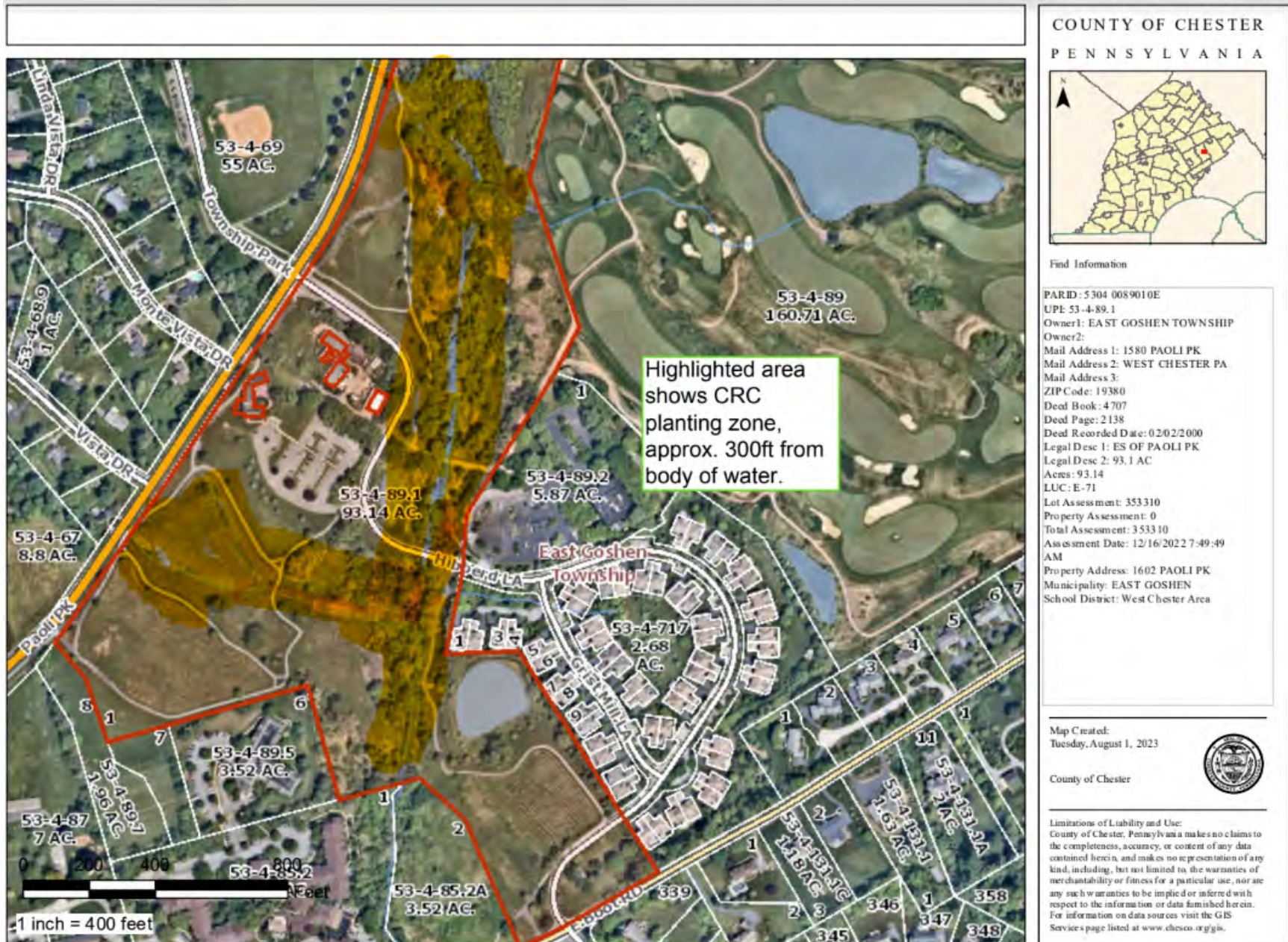
Please note that this packet was created to act as a sample, and no details are final.

Planting Site Maps	2
Sample Budget	5
Sample Planting and Maintenance Plan	6
Timeline	7

## Planting Site Maps













## Sample Budget

Item Description		Units	Unit Cost	Total
<b>Cost of Materials</b>				
	<b>Native trees</b>	125	\$ 40.00	\$ 5,000.00
	5-7' native trees, carefully selected to match the needs of the particular riparian buffer site			
	<b>Tree Protection &amp; Mulch</b>			\$ 2,500.00
	Wire fence for tree cages, tree guards, stakes, ties, and mulch			
<b>Transportation Cost</b>				\$ 300.00
	Truck usage/mileage, plant delivery			
<b>Staff Services</b>				\$ 2,500.00
	Project Manager, Tree Planting Coordinator, Director of Volunteerism; covers strategic planning of planting plan, acquiring of plant and protective material, site preparation, event coordination, and more			
<b>Overhead Expenses</b>				\$ 1,545.00
	Percentage to cover the overhead and surrounding costs of the tree planting and CRC's work			
<b>Totals</b>				<b>\$ 11,845.00</b>

\* The above costs are being sponsored by a private funder. Future replacements, if necessary, are to be funded by the Landowner.

## Sample Planting and Maintenance Plan

Applebrook Park, East Goshen Township  
September or October 2023 Riparian Buffer Planting

**Coordinates:** 40.00302389946552, -75.53720452299197

**Site Address:** 1602 Paoli Pike, West Chester, PA 19380

**Site Ownership:** East Goshen Township

**County:** Chester County

**Watershed:** Ridley Creek Watershed

### Planting Plan

CRC will plant about 125 trees, ranging in container size, and protect with a 5'-6' circumference wire cage, or a 4' tall tree tube, with a wooden stake to hold in place. Depending on tree form, some trees may receive a plastic tree tube, 4' ft in height, with a tree stake holding the tube in place. In addition, CRC uses a wood chip mulch for ground cover around our plantings to maintain nutrients and moisture of the newly planted trees.

The trees to be planted include:

- Common species CRC plants: Red Maple, Silver Maple, Serviceberry, River Birch, Redbud, White Fringe Tree, Flowering Dogwood, Sweetbay Magnolia, Sycamore, Swamp White Oak, Pin Oak,...

### Maintenance Plan

Staff of the Landowner will periodically maintain the site, including removal of overgrowth or invasive species as needed. CRC staff and volunteers will review the site on an ongoing basis to determine whether planting needs are being appropriately managed or if CRC will need to hold a volunteer event to conquer any larger needs for removal or cutting. In addition, CRC will review the status of the plants, deer caging, and stakes to ensure they are still viable.

Throughout the ensuing years (3+), Landowner staff will be responsible for review and maintenance of the site and the planting, including invasive removal and herbicide application as necessary. CRC staff, Tree Advisory Committee members, and volunteers will visit the site regularly to identify any outstanding needs as well, which may lead to greater intervention.

### **Budget**

See above. We will compare prices and quality from various nurseries, so as to pay the least amount in total.

## **Timeline**

- **May-June 2023** – identify site and needs
- **July-August 2023**– Create planting plan map, coordinate approval with Landowner, and prepare the site to give volunteers access to the area. Create a final planting plan with coordination of the Landowner, including Landowner signature.
- **Early September 2023** - reserve and order plants and materials
- **Middle September 2023** – Engage corporate/community volunteers for the tree planting.
- **October 2023**– utilize corporate and citizen volunteers to plant, stake, cage, mulch, and remove invasive plants
- **Throughout 2023 and 2024**– CRC Volunteers and staff periodically visit the area and manage as needed.
- **2024-2026** – CRC staff to review the site and adjust/make arrangements as needed



## **RIPARIAN BUFFER INSTALLATION AGREEMENT**

**Site Address: 1602 Paoli Pike, West Chester, PA 19380**

**Landowner: East Goshen Township**

**Project Grantee: Chester Ridley Crum Watersheds Association (CRC)**

This agreement, dated \_\_\_\_\_, between East Goshen Township (Landowner) and Chester Ridley Crum Watersheds Association (CRC) allows the CRC and/or its Partners to undertake community & watershed forestry planting activities on land owned by East Goshen Township (Landowner) in Chester County, Commonwealth of Pennsylvania.

In signing this agreement, East Goshen Township (Landowner) grants to the CRC, or its designees, the authority to complete the activities described in Appendix "A." The site plan drawings included in Appendix "A" show existing site conditions and work to be completed.

East Goshen Township (Landowner) agrees to maintain the community & watershed forestry practice depicted in Appendix "A" under this agreement for at least twenty-five (25) years.

Appendix "B" identifies estimated planting costs and donations of supplies or equipment from the CRC and its Partners to East Goshen Township (Landowner) for carrying out these activities.

East Goshen Township (Landowner) grants the CRC and its Partners vehicular and equipment access to the site with 48 hours prior notice to conduct project-related activities such as site analysis and design, installing trees, shrubs, and other vegetative cover, inspecting completed work, maintenance, and monitoring for at least 25 years.

East Goshen Township (Landowner) do not have to be present unless otherwise requested by the project manager.

East Goshen Township (Landowner) retain all rights to control trespass and retain all responsibility for taxes, assessments, granting of right-of-way, control and eradication of noxious weeds, and other incidences of ownership.

East Goshen Township (Landowner) agrees that all design and project implementation will be managed by the CRC or its representatives.

East Goshen Township (Landowner)'s stewardship activities are described in Appendix "A." In the event that a natural circumstance, beyond the control of East Goshen Township (Landowner), damages the constructed or installed components of the project, East Goshen Township (Landowner) will not be required to repair these damages.

East Goshen Township (Landowner) agrees to ensure that trees and shrubs planted in the project area are not cut, removed, mowed or otherwise disturbed, for at least 25 years, and the materials used to protect these plantings remain in place for their full recommended useful life.

East Goshen Township (Landowner) shall notify the CRC in writing, prior to the implementation of any action, if (1) East Goshen Township (Landowner) ever proposed to convert facilities constructed, rehabilitated, or improved under this Agreement, (2) if the facility ever becomes obsolete and East

Goshen Township (Landowner) decides to destroy or remove the plantings, or (3) East Goshen Township (Landowner) proposed to sell off lands developed, rehabilitated or improved with these funds.

East Goshen Township (Landowner) must obtain the CRC's written consent in order to modify the original site plan. This agreement may be modified at any time by mutual consent of the parties.

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Name & Position (Print)	Signature	Date
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Landowner, East Goshen Township		
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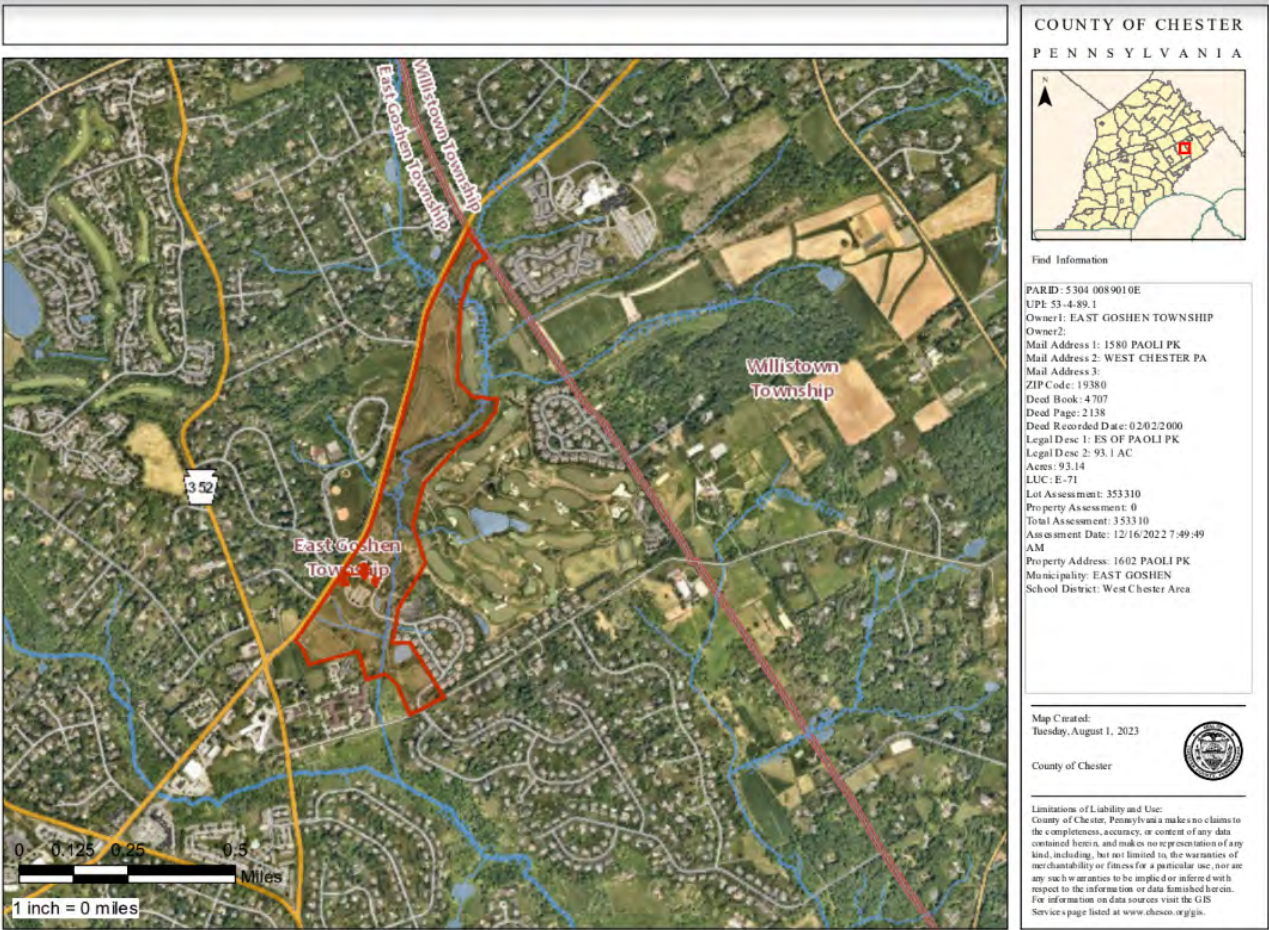
**Carly Lare**

Executive Director, Chester Ridley  
Crum Watersheds Association

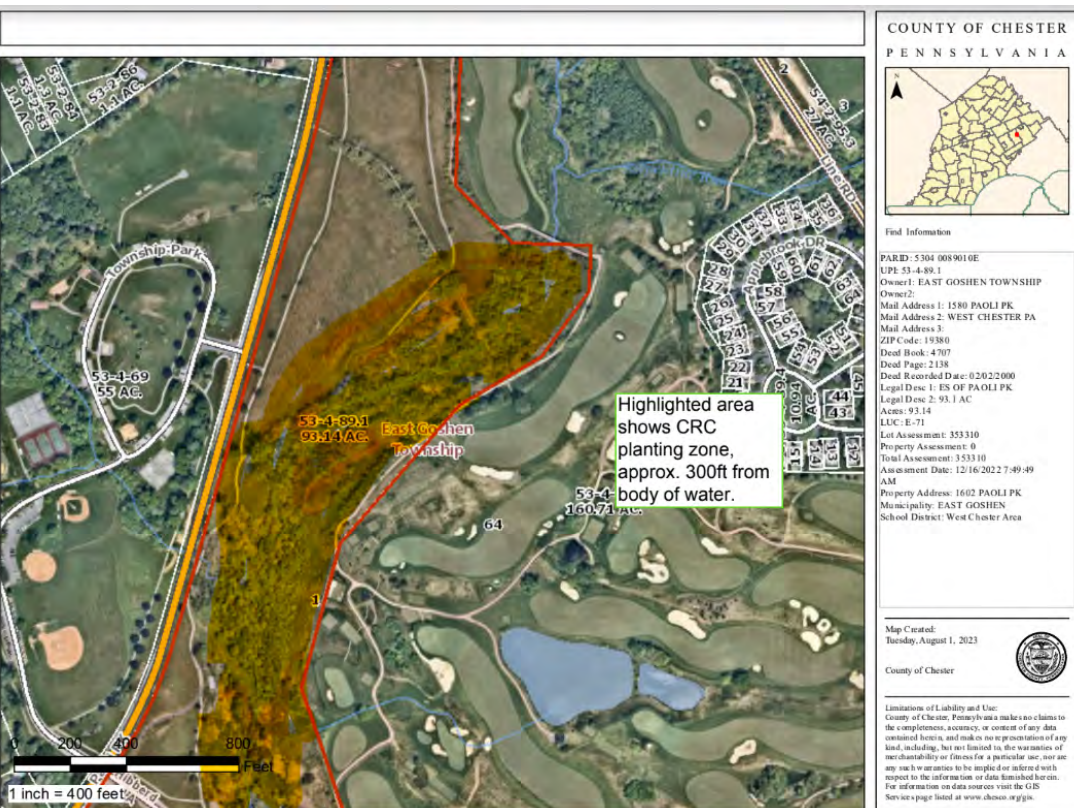
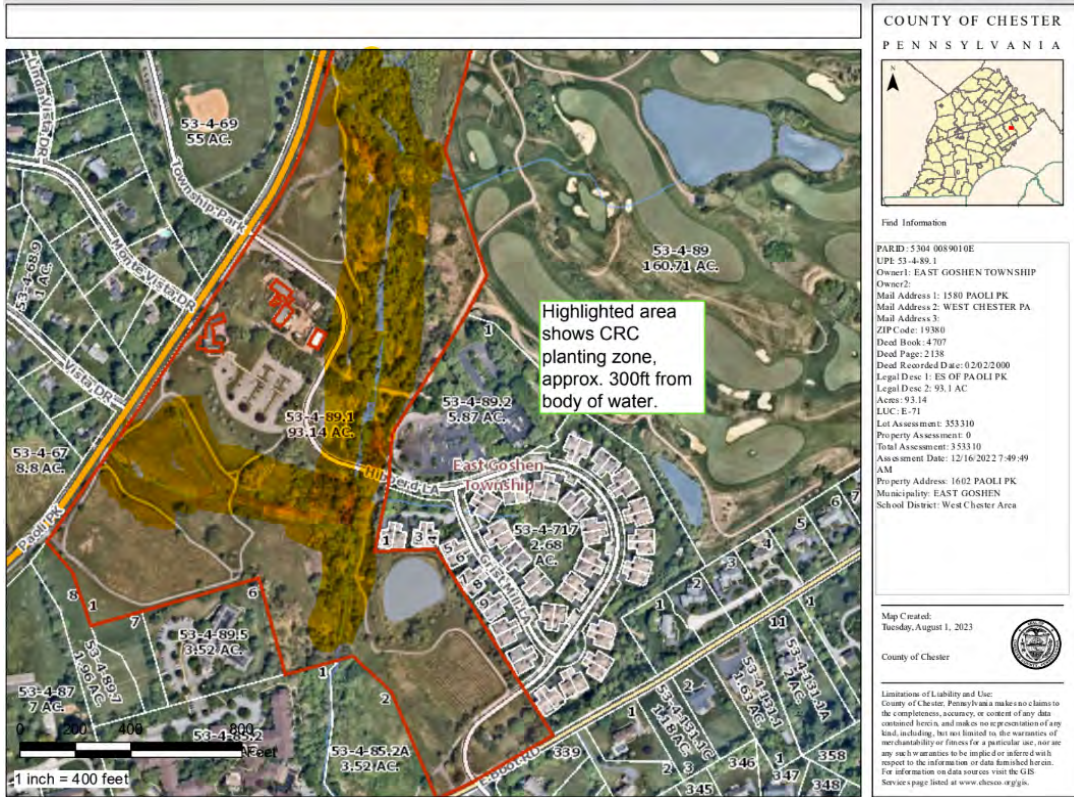
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	Signature	Date
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Appendix A: Planting Map & Planting Plan







# Sample Planting and Maintenance Plan

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## Appendix B: Budget

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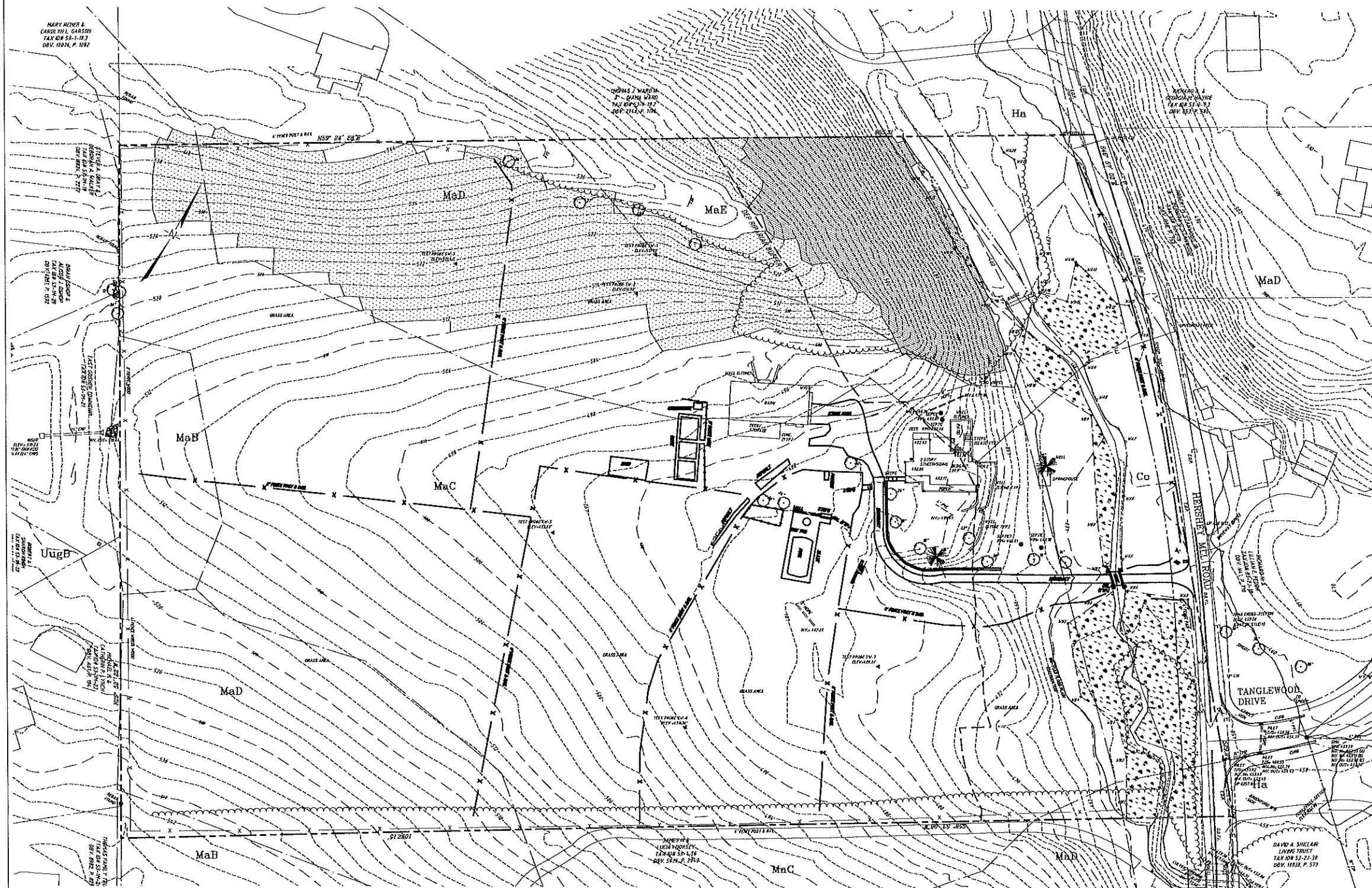










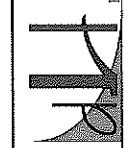


- DEMOLITION NOTES**
1. CONTRACTOR TO DEMOLISH ALL ITEMS NECESSARY TO CONSTRUCT PROPOSED BUILDING AND SITE FEATURES WHETHER OR NOT LOCATED IN THE DEMOLITION DOCUMENTS. ACQUAINTANCE WITH THE DEMOLITION SHALL BE PROVIDED TO DOWNTOWN FEATURES NOT BEING REMOVED.
  - EXCAVATIONS THAT ARE LEFT OPEN DURING THE DEMOLITION PROCESS SHALL BE COVERED OR FENCED OFF. THE AREA SHALL BE ADEQUATELY MAINTAINED TO ENSURE WORKERS AND PUBLIC SAFETY.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND REMOVING ALL APPLICABLE UTILITIES WHICH ITEMS ARE BEING REMOVED IN A SAFE AND CODE CONFORMING MANNER.
  - UNDESIRABLE MATERIALS AND RUBBISH SHALL BE IMMEDIATELY REMOVED FROM THE SITE. MATERIALS TO BE RECYCLED WILL BE STOCKPILED IN A SAFE AND SECURE LOCATION MATERIAL THAT REQUIRES PROTECTION FROM THE WEATHER SHALL BE STOCKPILED IN A SECURE DRY LOCATION.
  - DAMAGE CAUSED BY EXISTING FEATURES DURING THE DEMOLITION PROCESS SHALL BE REPAIRED AND RESTORED TO PREDEMOLITION CONDITIONS. IF DAMAGE CANNOT BE REPAIRED ADEQUATELY THE CHARGED ITEMS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
  - 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 BENCHMARK AND DATUM:  
BENCHMARK: EXISTING UTILITY SOWER MANHOLE IN TANGLEWOOD DRIVE  
TOP OF MANHOLE - 659.58  
DATUM IS BASED ON NAVD 83 DATE OF 1988
  3. STEEP SLOPES:  
THE STEEP SLOPES HAVE BEEN DELINEATED ON THE PLANS FOR 15%-25% AND GREATER THAN 25% SLOPES.
  4. WATERCOURSES, POND, AND FLOOD HAZARD DISTRICT:  
THERE IS AN EXISTING PERMANENT STREAM CHANNEL ON SITE. THE PROPOSED LAYOUT HAS LIMITED DISRUPTANCE TO A RIBBYWAY GROUND OF THE STREAM CHANNEL TOGETHER WITH 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 - ODONORUS SILT LOAM  
Ha - HAUSER SILT LOAM  
Gd - OLLIVILL SILT LOAM  
HuB - HAUSER SILT LOAM, 0 TO 10 PERCENT SLOPES  
HuC - MAJOR LOAM, 0 TO 3 PERCENT SLOPES  
HuD - MAJOR LOAM, 0 TO 5 PERCENT SLOPES  
HuE - MAJOR LOAM, 5 TO 15 PERCENT SLOPES  
HuF - MAJOR LOAM, 25 TO 75 PERCENT SLOPES  
UgB - USRAIN LAWN - UODONTENTS SCOTTS AND GREENS COMPLEX, 0 TO 4 PERCENT SLOPES
  6. GEOLOGE FORMATION:  
"OLDFARM MISSISSIPPIAN" FORMATION QUARTZ, ALBITE, MUSCOVITE, AND CHLORITE
  7. SOIL POLLUTATION TESTS:  
SOIL TEST AND PROBE LOCATIONS ARE SHOWN ON THE PLANS.
  8. WETLANDS:  
THE WETLAND INFORMATION SHOWN HEREON IS BASED ON A WETLAND DELINEATION PERFORMED BY LIBERTY ENVIRONMENTAL, INC. ON JUNE 2022
  9. EXISTING VEGETATION:  
THE SITE VEGETATION IS PREDOMINANTLY MEADOWS/PASTURE COVER, WITH AREAS OF MAINTAINED LAWN AND WOODED AREAS. THE WOODLANDS AND INDIVIDUAL TREES ARE SHOWN ON THE PLANS.
  10. EXISTING STRUCTURES AND OTHER IMPROVEMENTS:  
THE EXISTING IMPROVEMENTS ARE SHOWN ON THE PLANS
  11. HISTORIC RESOURCES:  
THE TIMOTHY CHITLING AND BARN ARE CONSIDERED HISTORIC RESOURCES AND WILL NOT BE ALTERED AS PART OF THIS PROJECT. FOR THE CONDOMINIUM USE DECISION, ANY FUTURE RESIDENTIAL REUSE OF THE HISTORIC BARN SHALL REQUIRE FURTHER APPROVALS FROM THE TOWNSHIP. PURSUANT TO THE HISTORIC PRESERVATION PROVISIONS OF THE ORDINANCE SECTIONS 24A-36.1 THROUGH 24A-36.10, DURING ITS OWNERSHIP OF THE HISTORIC BARN, THE APPLICANT SHALL ENSURE THAT IT IS WELL MAINTAINED AND DOES NOT FALL INTO DISREPAIR.
  12. EXISTING PATHS AND TRAILS:  
THERE ARE NO EVIDENCE OF PATHS OR TRAILS ON SITE.
  13. EXISTING EROSION AND SEDIMENTATION CONTROL MEASURES:  
THERE ARE NO EXISTING EROSION AND SEDIMENTATION CONTROL MEASURES ON SITE.
  14. ANY OTHER SIGNIFICANT EXISTING NATURAL OR MAN-MADE FEATURES:  
THERE ARE NO OTHER SIGNIFICANT EXISTING NATURAL OR MAN-MADE FEATURES ON SITE.
  15. DELINEATION OF THOSE PORTIONS OF THE LOT VISIBLE FROM ADJACENT PUBLIC ROADS:  
DUE TO THE SURROUNDING DEVELOPED PROPERTIES AND DOWNTOWN VEGETATION, THE VISIBILITY OF THE PROPERTY FROM HERSELEY MILL ROAD AND TANGLEWOOD DRIVE IS VERY LIMITED.

[illegible]

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

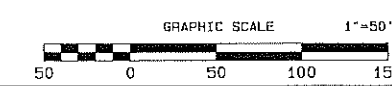
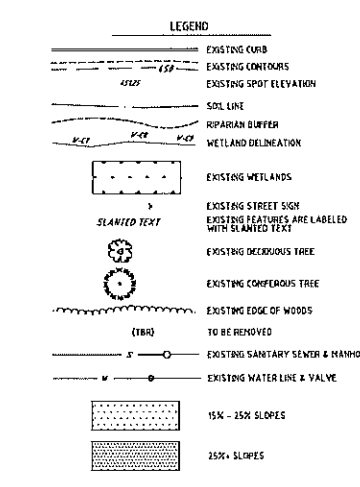
Enterprises

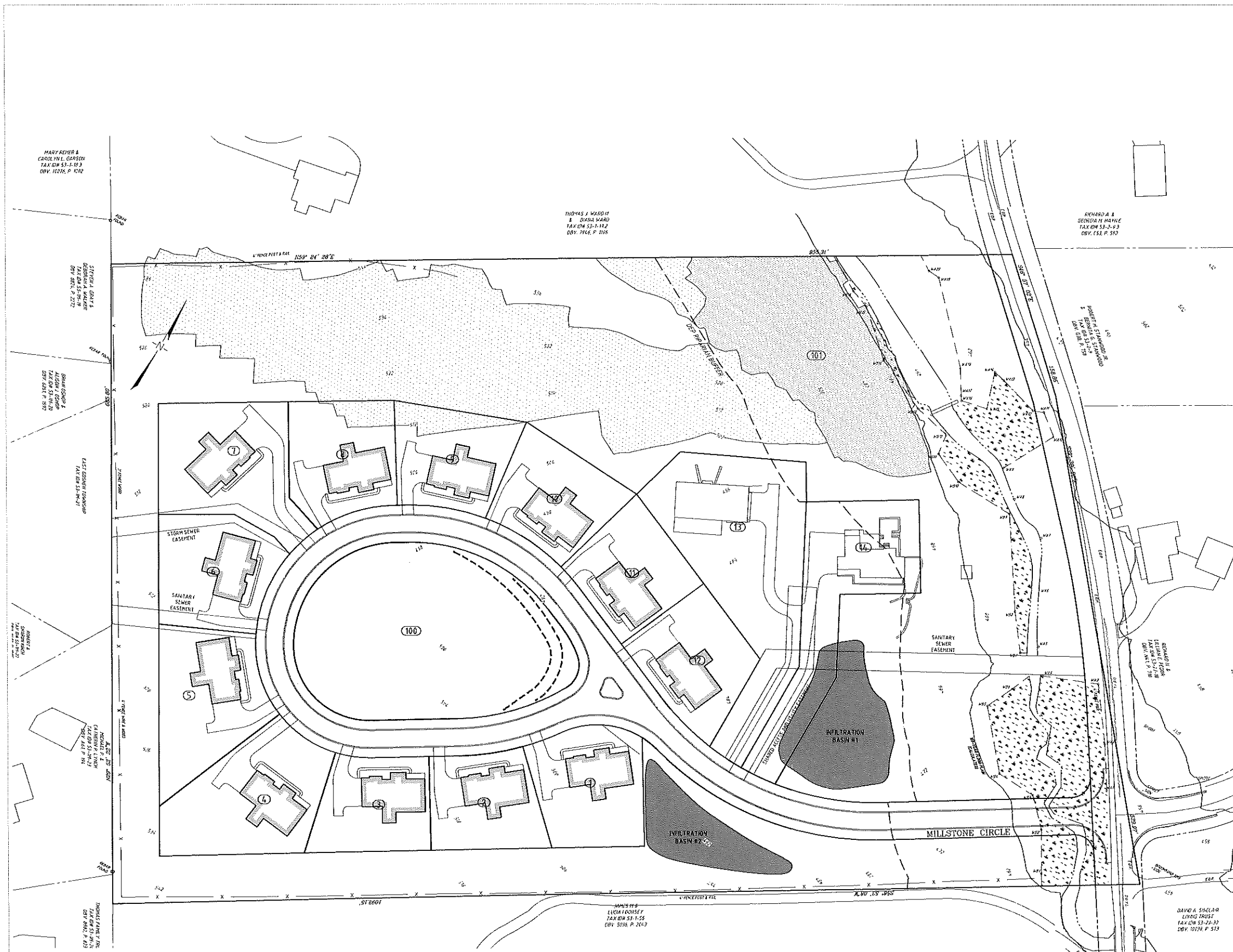


"MILLSTONE MEADOWS"  
PRELIMINARY/FINAL PLAN  
EXISTING CONDITIONS AND DEMOLITION PLAN

**COUNTY:** 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	3 OF 20
PROJECT	22-001-F-D-3.0





#### OPEN SPACE DEVELOPMENT OPTION REQUIREMENTS

**REQUIRED OPEN SPACE**


PERMETER OPEN SPACE (PARCEL 100)	8.285 ACRES
CENTRAL GREEN SPACE (PARCEL 101)	1.065 ACRES
QUALIFYING OPEN SPACE	9.250 ACRES (50.6 %)

OPEN SPACE NOTES

1. THE PROPOSED OPEN SPACE MAY NOT BE SEPARATELY SOLD, MORTGAGED, SUCH LAND BE FURTHER DEVELOPED OR SUBDIVIDED.
2. THE OPEN SPACE AREA DESIGNATED AS PARCELS 102 AND 103 SHALL BE CONSIDERED A PASSIVE OPEN SPACE.
3. THE OPEN SPACE AREA DESIGNATED AS PARCEL 101 SHALL BE CONSIDERED AN ACTIVE OPEN SPACE AREA AND AVAILABLE FOR THE COMMUNITY USE.
4. THE OPEN SPACE AREAS SHALL BE PROTECTED BY A CONSERVATION EASEMENT, OWNERSHIP AND OWNED, MANAGED AND MAINTAINED BY A HOMEOWNER'S ASSOCIATION.

[illegible]

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



Entreprises

"MILLSTONE MEADOWS"  
PRELIMINARY/FINAL PLAN  
OPEN SPACE MANAGEMENT PLAN

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

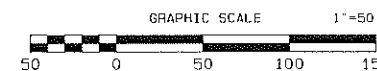
1. *Staphylococcus aureus*

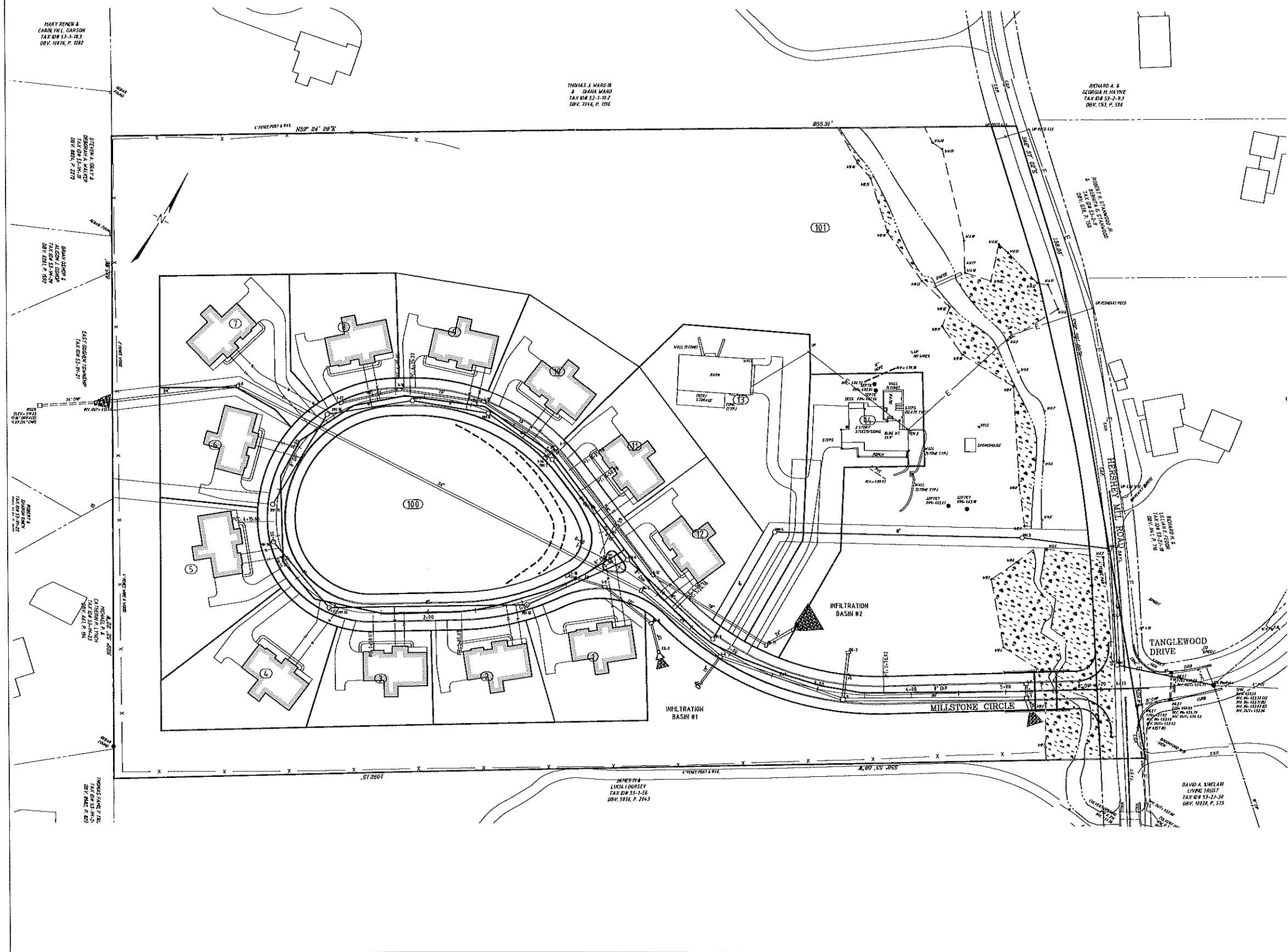
M. D. HARTMAN

1" = 50'

4 OF 20

22-001-F-D-4.0





**GENERAL CONSTRUCTION MOTIVS:**

1. ALL AREAS WHICH ARE TO BE FILLED SHALL BE COMPACTED TO A MINIMUM DENSITY OF 94% MAXIMUM DENSITY OF 98% BY THE STANDARD PROCTOR TEST (ASTM-D-1556) IN THE BUILDING, PAVED AND SIDEWALK AREAS, AND 92% IN OTHER AREAS.
2. UNDERGROUND FACILITIES HAVE BEEN LOCATED BY SURVEYS AND PLANS OF OTHERS AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL FACILITIES.
3. THE CONTRACTOR SHALL VERIFY EACH LOCATION SHOWN OR NOT SHOWN, BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL 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.
5. CONSTRUCTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH PERMIT SPECIFICATIONS PUBLICATION 408, LATEST EDITION.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE LOCAL AUTHORITY ON GOVERNING CODES, THE SCHEDULING 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.
7. THE CONTRACTOR SHALL EMPLOY AN ENGINEER AS SOON AS POSSIBLE TO EXAMINE ON GROUND BEFORE FROM THOSE SHOWN OR ON THE PLANS.
8. ALL AREAS OTHER THAN PAVED AREAS SHALL HAVE A MINIMUM DITCH OF 60 INCHES DEEP TO NOT DEEPER FROM THE EXISTING SURFACE SHALL BE SCARPED AND ALL GRASS, TREES, ROOTS AND OTHER OBSTRUCTIONS SHALL BE REMOVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL FACILITIES. ALL AREAS THAT MAY INTERFERE WITH PLANTINGS, FERTILIZOR OR MAINTENANCE OPERATIONS, SEEDS AND MULCHING SHALL BE IN ACCORDANCE WITH PERMIT PUBLICATION 408.
9. ALL SPOIL ELEVATIONS SHOWN ON THE BLUEPRINTS, THE BOTTOM CORNER, UNLESS OTHERWISE NOTED.

**UTILITY NOTES:**

1. THE CONTRACTOR SHALL PROPOSES PUBLIC WATER SUPPLY AND PUBLIC SEWER. PUBLIC WATER SHALL BE PROVIDED BY AQUA PENNSYLVANIA.
2. ALL WATER MAINS SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS, STANDARDS AND DETAILS OF AQUA PENNSYLVANIA.
3. 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 AQUA PENNSYLVANIA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL FACILITIES. ALL AREAS THAT MAY INTERFERE WITH PLANTINGS, FERTILIZOR OR MAINTENANCE OPERATIONS, SEEDS AND MULCHING SHALL BE IN ACCORDANCE WITH PERMIT PUBLICATION 408.
4. SANITARY SEWERAGE: ALL SANITARY SEWER SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS, STANDARDS AND DETAILS OF EAST GOSHEN TOWNSHIP. SANITARY SEWERAGE: ALL SANITARY SEWERS LATERALS SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS, STANDARDS AND DETAILS OF EAST GOSHEN TOWNSHIP. SHOP AND OFFICE AND ALL PROPOSED MAINS SHALL BE SUBMITTED TO EAST GOSHEN TOWNSHIP.
5. THE SANITARY SEWER SHALL BE INSTALLED AT LEAST 18 FEET HORIZONTALLY AND AT LEAST 48 INCHES DEEP FROM OTHER UTILITIES.
6. THE SANITARY SEWER MAINS AND LATERALS SHALL BE BURIED A MINIMUM OF A FEET DEEP.
7. IT IS NOT INTENDED TO PROVIDE SANITARY SEWER SERVICE TO THE BENEFITS OF THE PROPOSED DEVELOPMENT.
8. 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 SANITARY SEWER MAINS AND/OR SANITARY FACILITIES. PROPOSED AS PART OF THE PROJECT.
9. BACKFILL OF ALL UTILITY TRENCHES WITH EXISTING AND/OR PROPOSED RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, STANDARDS AND DETAILS OF EAST GOSHEN TOWNSHIP.
10. DURING CONSTRUCTION OF SEWER PROJECTS, THE CONTRACTOR SHALL BE PROHIBITED FROM UNNECESSARILY DESTROYING OR IMPROVING TREES AND VEGETATION ALONG THE STREAMBANK AND IN THE VICINITY OF THE STREAMBANK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL FACILITIES. ALL AREAS THAT MAY INTERFERE WITH PLANTINGS, FERTILIZOR OR MAINTENANCE OPERATIONS, SEEDS AND MULCHING SHALL BE IN ACCORDANCE WITH PERMIT PUBLICATION 408.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL FACILITIES. ALL AREAS THAT MAY INTERFERE WITH PLANTINGS, FERTILIZOR OR MAINTENANCE OPERATIONS, SEEDS AND MULCHING SHALL BE IN ACCORDANCE WITH PERMIT PUBLICATION 408.

Revision	Date	Description	MDH RevBy
1	7/24/23	REVISED PER TOWNSHIP REVIEW LETTERS	
<p>THIS DOCUMENT AND ALL INFORMATION AND WORK PRODUCT REPRESENTED BY AND CONTAINED HEREIN, IS THE SOLE PROPERTY OF THE STATE OF MARYLAND. IT IS TO BE KEPT IN CONFIDENTIALITY AND NOT TO BE DISCLOSED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE ARCHIVED MATERIALS AND RECORDS DIVISION. ANY REPRODUCTION OR DISSEMINATION OF THIS DOCUMENT OR ITS CONTENTS WITHOUT THE WRITTEN PERMISSION OF THE ARCHIVED MATERIALS AND RECORDS DIVISION IS PROHIBITED. ALL RIGHTS RESERVED.</p>			

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## References



SEM:



"MILLSTONE MEADOWS"  
PRELIMINARY/FINAL PLAN  
UTILITY PLAN

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

CLIENT: GROVE MEADOWS  
LOCATION: EAST GOSHEN TWP  
DATE: APRIL 20, 2023

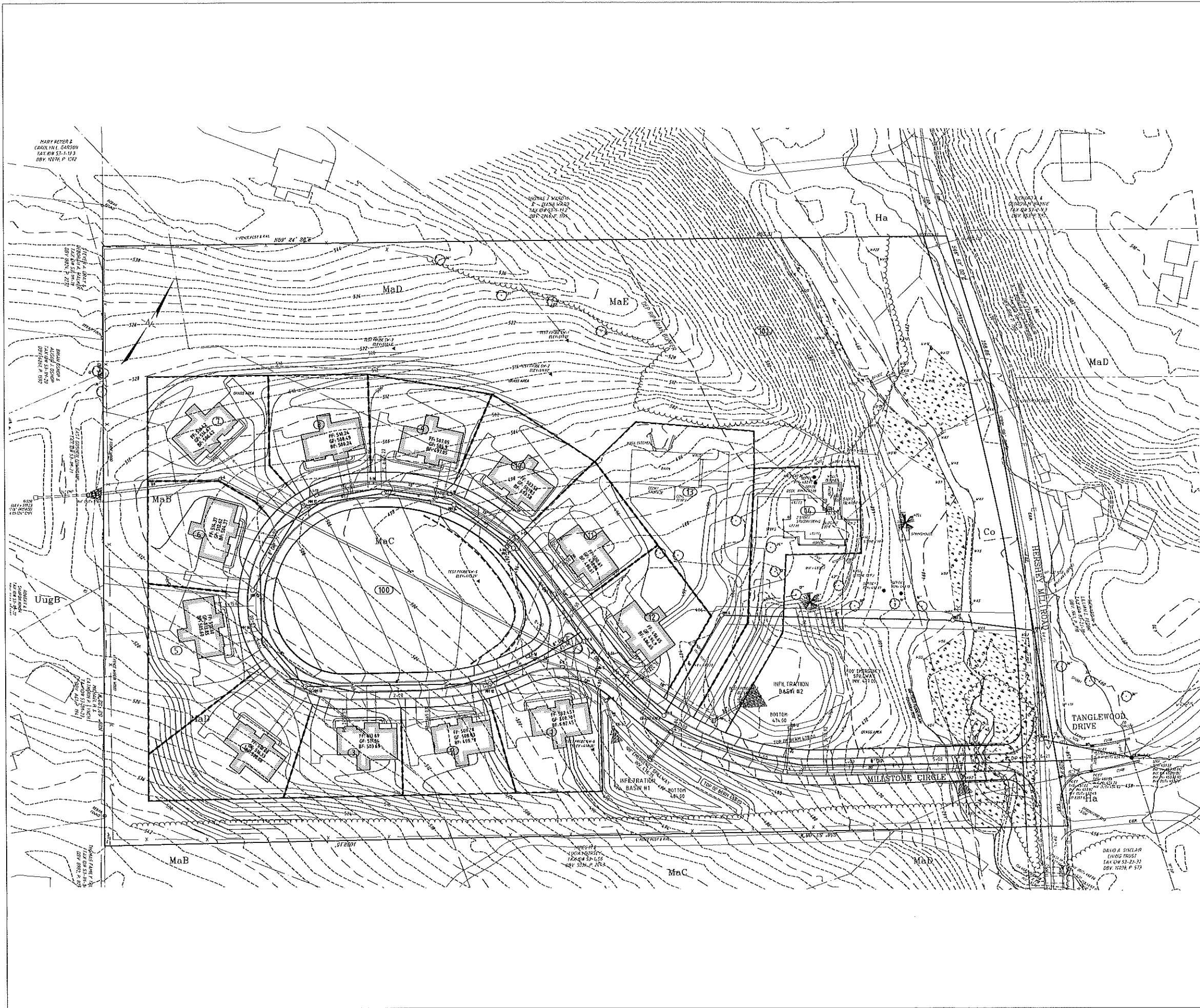
M.D. HARTMAN

M.D. HARTMAN

$$1^{\text{st}} \approx 50^{\text{th}}$$

5 OF 20

22-001 F-0-



- GENERAL CONSTRUCTION NOTES:**
- AREAS WHICH ARE TO BE FIELDED SHALL BE COMPACTED TO A MINIMUM DENSITY OF 94% MAXIMUM DENSITY AS DETERMINED BY THE MOHRE 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 REQUIREMENTS.
  - PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT SPECIFICATIONS PUBLICATION 448, 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 (6") OF TOPSOIL PRIOR TO SEEDING. THE SURFACE SHALL BE SCARIFIED 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 448.
  - 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 ROAD GRADING, BUT PRIOR TO PLACEMENT OF TOPSOIL.
  - DURING THE CONSTRUCTION OF PERMANENT STORMWATER FACILITIES, OR AS DEEMED NECESSARY BY THE PRINCIPAL 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
	SOIL 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

**GRAPHIC SCALE** 1" = 50'

50 0 50 100 150

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FOR THE CLIENT:

**"MILLSTONE MEADOWS"  
PRELIMINARY/FINAL PLAN  
GRADING PLAN**

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

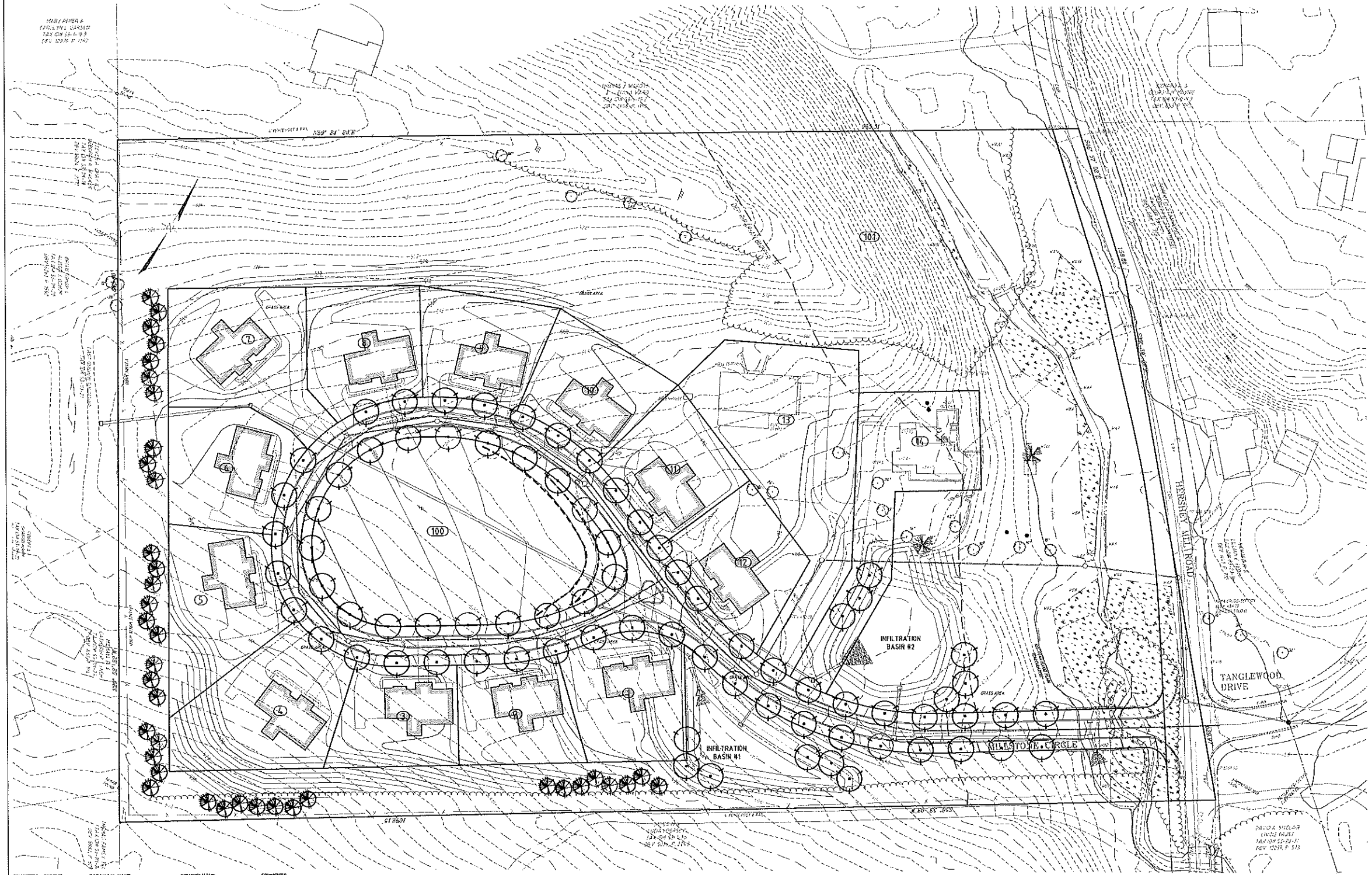
DESIGNED BY: M.D. HARTMAN  
CHECKED BY: M.D. HARTMAN  
SCALE: 1" = 50'  
SHEET: 6 OF 20  
PROJECT: 22-001-F-D-6.0

REVISIONS

NO.	DATE	DESCRIPTION
1	7/25/23	REVISED PER TOWNSHIP REVIEW LETTERS

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QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	COMMENTS
STREET TREES - DECIDUOUS TREES				
17	AR	ALER RUBRUM	RED MAPLE	3-3.5' CAL., 12-14' HT., B&B
6	BN	BETULA NIGRA	RYER BIRCH	3-3.5' CAL., 12-14' HT., B&B
11	GT	GLADSTON THACANTHUS F. INERMIS	THORNLESS HONEY LOCUST	3-3.5' CAL., 12-14' HT., B&B
15	NS	NYSSA SYLVATICA	BLACK GUM	3-3.5' CAL., 12-14' HT., B&B
19	PA	PLATANUS X ACERIFOLIA	LONDON PLANT TREE	3-3.5' CAL., 12-14' HT., B&B
19	TA	TILIA AMERICANA	AMERICAN LINDEN	3-3.5' CAL., 12-14' HT., B&B
18	TOTAL			
PERIMETER BUFFER - EVERGREEN TREES				
22	CD	CEDRUS DEODAR	DEODAR CEDAR	6-8' HT., 4-5' SP., B&B
17	ES	PRINUS STROBUS	EASTERN WHITE PINE	6-8' HT., 4-5' SP., B&B
39	TOTAL			
REFORESTATION AREA - DECIDUOUS TREES				
75	CA	CARYA OVATA	SHAGBARK HICKORY	83 CONTAINER
75	CO	CORON CANADENSIS	EASTERN REDBUD	85 CONTAINER
75	CO	CORONUS FLORIDA	FLOWERING DOGWOOD	87 CONTAINER
75	LU	LUDOVICORN TULIPIFERA	TULIP POPLAR	85 CONTAINER
75	SA	SASSAPARAS ALBORN	SASSAPARAS	82 CONTAINER
375	TOTAL			

**TREE PLANTING SUMMARY:**

**STREET TREE REQUIREMENTS:**

SECTION 105-62: 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 = 2,910'**

**REQUIRED TREES = 73**

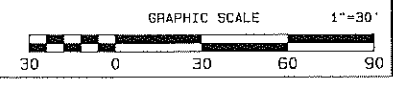
**PROVIDED TREES = 76**

**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
- EAST CONSERVATION SEEDS
- NATIVE SP. LAND AND NO. LIFE FORAGE & COVER
- HEADROW FOR (B&B) - 100'
- RE-FORESTATION AREA
- SPACIOUS BUFFER AREA
- SEE REPAIR/REPAIR MANAGEMENT PLAN FOR PLANTING SCHEDULE AND NOTES



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**"MILLSTONE MEADOWS"**  
**PRELIMINARY/FINAL PLAN**  
**LANDSCAPING PLAN**

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

1" = 30'

7 OF 20

22-001-F-D-7.1

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK.
1	7/25/23	REVISED PER TOWNSHIP REVIEW LETTERS	M.D.HARTMAN	M.D.HARTMAN

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. RECOMMENDATION 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 12 MONTHS AND LONG TERM.

QUALITY ASSURANCE

GENERAL: ALL MATERIAL MUST COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK 1 AND Z66.10 NEW STANDARDS APPLICABLE TO LANDSCAPING MATERIAL MUST BE PROVIDED AS INDICATED WITH NO SUBSTITUTIONS PERMITTED UNLESS WITH 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 CHEMICAL ANALYSIS, AND MANUFACTURERS NAME OR FURNISHED IN BULK WITH APPROPRIATE CERTIFICATES AND PROTECTED FROM DEGRADATION.

SOIL DELIVERY OUTSIDE SHALL BE TIED SO THAT IT WILL BE INSTALLED WITHIN 24 HOURS AFTER DELIVERY. SOIL SHALL BE PROTECTED AGAINST EROSION 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, STORAGE AND LOCATION PROTECTED FROM SUN AND WEATHER. ALL TREES AND SHRUBS SHALL NOT BE PLANTED 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 BARK AND BURLAP STOCK MUST BE FRESHLY CUT UNLESS OTHERWISE APPROVED. STOCK MUST NOT BE DRIPPED. STOCK MUST BE DELIVERED ONLY AFTER SOIL HAS BEEN PREPARED. SCHEDULE PLANT HARVEST WITH DELIVERY AND QUANTITIES SATISFIED. TREES 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, SHROUDED BARK OR OTHER SIMILAR MULCHING MATERIALS. ALL PLANT MATERIAL SHALL BE SATISFIED WATERED DURING ON SITE STORAGE.

PRODUCT 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 15TH. FALL PLANTING SHOULD OCCUR BETWEEN AUGUST 15TH AND OCTOBER 15TH. DO NOT INSTALL PLANT MATERIALS WHEN TEMPERATURES ARE BELOW 35 DEGREES FAHRENHEIT OR ABOVE 90 DEGREES FAHRENHEIT.

SEASONING: FINAL GRADES MUST BE ESTABLISHED BEFORE PLANTING TREES AND SHRUBS. LAWN MAY THEN BE INSTALLED UNLESS SPECIFIED ON THE PLANS. DEFECTIVE, LAMEN 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.

LAWN: WARRANTY LAWN: UNTIL TUSSELS VIGOROUS GROWTH FOR TWELVE (12) MONTHS LAWN NEED TO HAVE MAX COVERAGE/PAVING SEED FOR SURVIVAL.

TREES AND SHRUBS: WARRANT TREES AND SHRUBS FOR TWELVE (12) MONTHS AFTER FINAL APPROVAL BY TOWNSHIP LANDSCAPE ARCHITECT. WARRANTY SHALL UNCOVER DEATH, UNSATISFACTORY GROWTH, NEGLECTANCE, 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 MUNICIPALITY LANDSCAPE ARCHITECT.

UNSATISFACTORY MATERIAL: REPLACE UNSATISFACTORY MATERIAL WITH HEALTHY, VIGOROUS PLANTS. PLANT ONLY DURING THE SUCCESSEFUL PLANTING SEASON. AT THE DISCRETION OF THE PROJECT LANDSCAPE ARCHITECT, EITHER REPLACE MATERIALS EXHIBITING POOR QUALITY, MATERIAL CONDITION OR EXCEED THE WARRANTY COVERING SUCH MATERIALS FOR ONE FULL GROWING SEASON. ANY PLANT MATERIAL OF WHICH 50% OR MORE IS DEAD SHALL BE CONSIDERED UNSATISFACTORY. A TREE SHALL BE CONSIDERED DEAD WHEN MORE THAN 25% OF THE TREE'S MAIN LEADER HAS DIED, 25% OF THE CROWN IS DEAD, OR THE ROOT BUTTRESS (CIRCUMFERENCE IS DAMAGED). OTHER DISCREPANCY WILL BE COMPLETED AT THE END OF THE EXTENDED WARRANTY PERIOD. IF ANY, TO DETERMINE ACCEPTANCE OR REJECTION, ONLY ONE REPLACEMENT WILL BE REQUIRED AT THE END OF THE WARRANTY. EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO NEGLIGENCE OR FAILURE TO COMPLY WITH SPECIFIED REQUIREMENTS.

MAINTENANCE

LAWN: MAINTAIN LAWN FROM IMMEDIATELY AFTER PLANTING UNTIL ALL ACCEPTABLE LAWN IS ESTABLISHED. AT THE END OF THE MAINTENANCE PERIOD, LAWN SHALL BE MAINTAINED IN TEXTURE, DENSITY AND SPEED VARIETY. WATER REGULARLY AND AT SUCH TIMES AND RATES AS NECESSARY FOR OPTIMAL GROWTH AND TO AVOID WILTING, PUDDLING, BURNOUT, 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 HAND WHEN NECESSARY. IMMEDIATELY REMOVE AND TRIMMING 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 4-8 LBS. A BAG OF 10-10-10 IN SEPTEMBER AND 10-10-10 IN OCTOBER FOR COOL SEASON GRASSES. DO NOT APPLY FERTILIZER BETWEEN NOVEMBER 15TH AND MARCH 1ST. CONTROL GROWTH OF WEEDS BY APPLYING WEEDKILLS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. REMEDY ANY DAMAGE RESULTING FROM USE OF HERBICIDES.

REGRADE AND REPLANT AREAS TO CORRECT RUPTED, DAMAGE, OR INPROPERLY 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 BASIN 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/ SMALL PLANTS/ PLUGS: MAINTAIN GROUND COVERS, SMALL PLANTS AND PLUGS FROM IMMEDIATELY AFTER PLANTING THROUGH THE FOLLOWING MAINTENANCE PERIOD OF AVAILABLE PLANT GROWTH UNTIL NOT EXCEEDING 90 DAYS. 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 21 HOURS AFTER PLANTING PERIOD UNTIL PLANTS AND LAWN ARE ACCEPTED BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR IS RESPONSIBLE FOR WATERING MATERIALS SHALL BE PROVIDED AS NEEDED TO ASSURE HEALTHY PLANTS MATERIALS, TURN AND TREES.

PRODUCTS

TOPSOIL

TOPSOIL: AT SITE VERIFY VARIABILITY 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. FERTILE, AGGREGATIONAL, SOIL, TYPICAL FOR LOCALITY, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH AND TAKEN FROM A DRAIN SITE, FREE OF SUNSOIL, ROCKS LARGER THAN TWO INCHES IN DIAMETER, CLAY, TOXIC MATERIAL, PLANTS, WEEDS, AND ROOTS. NEW LINE SOIL AMENDMENTS.

LIME: FIA VERIFIED SOLOMETRIC LIMESTONE CONTAINING NOT LESS THAN 85 PERCENT TOTAL CARBONATES WITH A MINIMUM OF 30 PERCENT MAGNESIUM CARBONATES. MINIMUM 10 PERCENT PASSING A 10-MESH SIEVE AND MINIMUM 50 PERCENT A 100-MESH SIEVE.

MULCH: SHALL BE DECOMPOSED ORGANIC MATERIAL, PH SUITABLE FOR INTERCROD USE.

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

PERLITE: NUTRIENT-RICH PERLITE OF SOIL AMENDMENT GRADE.

COMMERCIAL FERTILIZER: GRAHAM OR COMMERCIAL GRADE, PH NEUTRAL, COMPOSED OF BOTH SLOW AND FAST RELEASE ELEMENTS AND CONTAINING THE FOLLOWING MINIMUM PERCENT OF AVAILABLE PLANT NUTRIENTS:  
- 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 10% PHOSPHORIC ACID, AND MINIMUM 10% SOLUBLE PRODUCTS.

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 SOON IMMEDIATELY FOLLOWING RAIN, WHEN GROUND IS TOO DRY, OR DURING WINDY PERIODS. ROLL SEEDED AREA WITH ROLLERS. IMMEDIATELY FOLLOWING SEEDING AND COVERING, APPLY EVEN LAYER OF FINE 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:

- 5% KENTUCKY BLUEGRASS
- 5% KENTUCKY 31 FESCUE
- 25% CREWING FESCUE
- 5% PERENNIAL RYE GRASS
- 5% RECREATION REDTOP

HYDROSEEDING

APPLY SEEDING SLURRY WITH A HYDRAULIC SEEDER AT A RATE OF 4 LBS. OF SEED PER 1,000 SQUARE FEET EVERY 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 FINE 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

SEATED SLURRY WEED GRASSES 1" ABOVE THE FINE APPOSTROPHIC OR GREATER WITH THE ALTE EROSION CONTROL BLANKET (DA GREEN'S BARKET). ROLL FABRIC ONTO SLOPES WITHOUT STRIPPING OR PULLING. LAY FABRIC SMOOTHLY ON SURFACE VERY TOP END OF EACH SECTION IN SIX INCH DEEP EXCAVATED TOPSOIL. TRIMMED, PROVIDE 12 INCH OVERLAP OF ADJACENT ROLLS. BACKFILL TRENCH AND BARE SMOOTH LEVEL AND AGE WITH ADJACENT SOIL. SECURE BUTSE 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 BUTCES, LAY FABRIC LAPS IN DIRECTION OF WATER FLOW. FLAP EDGES AND EDGES MINIMUM 4 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 UNIFORMELY SOUND, VIGOROUS, HEALTHY, AND FREE FROM DISEASE, SUN-SCALD, WINDBURN, ABRASION, AND HARMFUL INSECTS OR WORMY EGGS. DECIDUOUS TREES AND SHRUBS SHALL BE STRUCTURALLY DEVELOPED, UNIFORM HABIT GROWN, WITH STRAIGHT TRUNKS OR STEMS, AND FREE FROM OBJECTONABLE DEFECTS/INJURIES. CONIFEROUS EVERGREEN TREES AND SHRUBS SHALL HAVE WELL-DEVELOPED SYMMETRICAL CANNOPES WITH UNIFORM SPREAD OF BRANCHES FROM EACH PASTICULAR SPEECS OR VARIETY. PROVIDE STOCK COMPLIANT IN ALL RESPECT WITH ARI 263.1 AND IN SIZES INDICATED, MEASURED IN ACCORDANCE WITH ARI 263.1. LARGER SIZES WITH LARGER ROOTS AND ROOT CONTAMENTS 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 EXTERIOR TOP OF TWO OF SMALL BRANCHES. PRIOR TO SIZE IS NOT ACCEPTABLE. SPREAD AND FLOWERING TREES, DECIDUOUS, SHRUBS, AND CONIFEROUS EVERGREEN SHALL BE BALLED AND BURLAPPED (X48).

PLANTS

GENERAL: PROVIDE FIELD-GROWN OR ACCLIMATED CONTAINER-GROWN PLANS FROM A COMMERCIAL NURSERY, HEALTHY, VIGOROUS, OF THE SIZES INDICATED AND IN ACCORDANCE WITH ARI 263 SECTION 7, "YOUNG PLANTS".

PLUGS

GENERAL: PROVIDE FIELD-GROWN OR ACCLIMATED CONTAINER-GROWN PLANS FROM A COMMERCIAL NURSERY, HEALTHY, VIGOROUS, OF THE SIZES INDICATED AND IN ACCORDANCE WITH ARI 263 SECTION 7, "YOUNG PLANTS".

GRASS MATERIALS

SOIL: PROVIDE Viable ROOT DOKAMATI CERTIFIED TURF GRASS COMPLYING WITH ASPA SPECIFICATIONS FOR THICKNESS, SOIL, STRENGTH, PESTICIDE CONTACT, MOWED HEIGHT, TIME BETWEEN HARVEST AND TRANSPORTATION, HEAT/DISEASE, NEMATODES, INSECTS, AND WEEDS. SOO TYPE SHALL BE KENTUCKY BLUEGRASS (POA PRATENSIS). SEED MIX: 30% MOWGHT STAR KENTUCKY BLUEGRASS, 35% BRILLIANT KENTUCKY BLUEGRASS, 40% PMS KENTUCKY BLUEGRASS.

MISCELLANEOUS LANDSCAPE MATERIALS:  
DECORATIVE MULCH SHALL BE FREE OF HARMFUL MATERIALS, SUITABLE FOR TOP DRESSING OF PLANTINGS, AND CONSISTING OF DRY/FRESH FINE, COMPOSTED DOUBLE SHREDED HARDWOOD.

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

STAKING AND GUYSING MATERIALS: STAKES SHALL BE HARDWOOD LUMBER OF SIZES INDICATED, SOUND, STRAIGHT, AND FREE OF SPLITS AND KNOTS LARGER THAN 4" ON THE LEAST NOMINAL PROXIMITY TO THE PRIZE. SHARPENED AND CHAMFER EDGES OF DRYWOOD TO PREVENT SPLITTING FROM OFF-CENTER HAMMER STROKES. STAKES SHALL BE FASTENED TO TREE USING 1/2" X 2" WIDE FLAT, WOVEN POLYPROPYLENE MATERIAL SUCH AS ARBOR TIE (TM) OR USE 3" WIDE WEBBING STRAPS SECURED TO STAKES WITH GALVANIZED STEEL WIRING, MINIMUM 12 GAUGE. PROVIDE DOUBLE STAKES. DO NOT RUN ROPS THROUGH MOIST. ATTACHED LOGICALLY TO AVOID FLEXING. REMOVE STAKING MATERIAL AFTER ONE YEAR.

PLANTING SOIL

SOIL FOR PROVIDE SOIL MIX, COMPOSTING 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 CONSISTS OF 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 NEGLECT SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR.

WARNING: THE LIMITS OF THE AREAS(S) TO BE CLEARED AND GRUBBED SHALL BE MARKED BY STAKES, FLAHS, 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 50 FEET ABOVE THE GROUND.

CLEARING AND GRUBBING  
ALL TREES NOT MARKED FOR PRESERVATION AND ALL SNAGS, LOGS, BRUSH, STUMPS, SHRUBS, RUBBISH, AND SIMILAR MATERIALS SHALL BE CLEARED FROM WITHIN THE LIMITS OF THE DESIGNATED AREA, UNLESS OTHERWISE SPECIFIED. ALL STUMPS, ROOTS, AND BRUSH 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 1 FOOT BELOW THE GROUND SURFACE AT DISBURGMENT SITES AND OTHER DESIGNATED AREAS NEW LINE DISPOSAL.  
ALL MATERIALS CLEARED AND GRUBBED FROM THE DESIGNATED AREA SHALL BE DISPOSSED 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 DWP LINE UNDERneath EXISTING TREES TO REMAIN AND PREVIOUS THE SHALL BE SCARIFIED TO A DEPTH OF FOUR INCHES BEFORE PLANTING TOPSOIL. WHERE COMPACTION HAS RESULTED FROM CONSTRUCTION OPERATIONS, THE OWNER MAY REQUIRE SCARIFICATION TO A DEPTH OF 6 INCHES.

PREPARATION OF PLANTING SOILS: PRIOR TO MOWING IN DRUM TYPE MIXER OR DURING TILLAGE OPERATIONS, CLEAN TOPSOIL OF STICKS, STONES, CLAY LUMPS, VEGETABLE MATTER, AND OTHER OBJECTONABLE MATERIALS. PIT AND TREMPER BACKFILL: MIX PLANTING SITE, AND STOCKPILING AT SITE. READY FOR USE AS BACKFILL FOR PLANTING BEDS AND LAWN. OTHER MIX PLANTING SOIL BEFORE PLACING OR UNIFORM SPREAD FERTILIZER IN AND SOIL AMENDMENTS ON SURFACE OF IN PLACE TOPSOIL UNTIL THOROUGHLY BEFORE PLANTING.

PREPARATION OF BOTH PLANTING LAWN: PREPARE ONLY THOSE AREAS THAT WILL BE IMMEDIATELY PLANTED. ALLOW FOR SOO THICKNESS IN AREA TO BE STOCKED. FOR PREPARATION OF STRIPPED AREAS, TILL SUBGRADE TO A DEPTH OF AT LEAST 4 INCHES. PLACE TOPSOIL IN TWO APPROXIMATELY EQUAL LIFTS, WORKING FIRST LEFT INTO SUBGRADE BEFORE PLACING SECOND LEFT. SPREAD SECOND LEFT TO COMPLY WITH FINISHED GRADES, SLOPES, 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 OBJECTONABLE MATERIALS. PERIOD FIVE GRADE, ROLL RAKE AND DRAG LAWN AREAS CUTTING DOWN HIGH SPOTS AND FILLING LOW SPOTS CORRAL. LEAVING A SMOOTH CORRAL EVEN SOO, COMPLYING WITH REQUIRED GRADES. IF ONLY 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, RUPTED, OR SETTLED.

PREPARATION OF PLANTING BEDS: TILL PLANTING BED AREA TO A DEPTH OF AT LEAST 4 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 SIDES AND LOOSEN BOTTOM.

ALL EXCAVATED HOLES 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 DUCK, ROUNDING THE SIDES OF THE PIT AND LOOSEN SOIL IN THE BOTTOM OF THE PIT TO A DEPTH OF THREE INCHES. CONSTRUCT GOOD, TAMPED MOOD HEARD IN THE BOTTOM OF THE PIT TO SUPPORT THE PLANT AT THE PROPER LEVEL. ALL EXCAVATED SOO SOO FROM THE SITE SHALL BE MIXED WITH APPROPRIATE VOLUMES OF SOIL AMENDMENTS AS REQUIRED BY SOIL ANALYSIS LABORATORY REPORT AS INDICATED ON THE PLANS. POOR 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 PLUMB. 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 VODS. MAINTAIN PLUMB DURING BACKFILLING. WHEN BACKFILLING IS APPROPRIATELY 2/3 COMPLETE, SATURATE BACKFILL AND WATER AND REPEAT UNTIL SUBSTANTIALLY OR SATISFIED FULLY AND COMPACTED. REMAINDER OF BACKFILL AND WATER AGAIN, PROVIDE EARTH WATERING BASIN SAUCER, 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 CANNED CUTTER DESIGNED FOR THE JOB. DO NOT HARM PLANT ROOT BALL. DO NOT CUT CONTAINERS WITH SPREAD AND. B. AFTER REMOVING PLANT, SUPERFICIALLY CUT EDGE ROOTS WITH KNIFE ON THREE SIDES SET AND PLUM PLANTS. PLACE INITIAL BACKFILL AND REMOVE SIZE 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 THESE FLATS UNTIL TRANSPLANTING. THE FLATS SOIL SHALL CONTAIN SUPERFICIAL NORTONE TO SO THAT IT WILL NOT FALL APARTS. 2. GROUND COVER PLANTS: 2. GROUND COVER 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 PROPORTIONATE AMOUNT OF PLANT OR CONTAINER SOO. PLANTING SHALL BE PROPORTIONATELY APPROVED WITH WATER AFTER PLANTING UNTIL THE AREA IS SCARIFIED TO THE BALL 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.

BASIN FORM (EARTHEN WATERING) BASIN AROUND EXCAVATION AREA WITH BACKFILL HOLDING AT LEAST 2 1/2 GALLONS OF SHRUBS AND FIVE GALLONS FOR TREES. APPLY MULCH.  
ANTI-DESICCANT SPRAY: APPLY COVERING ALL PORTIONS OF PLANT IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. IF INITIAL CLEAR SPRAY DECIDUOUS TREES AND SHRUBS AT NURSERY JUST BEFORE TRANSPORTATION, AND TWO WEEKS AFTER TRANSPLANTING.

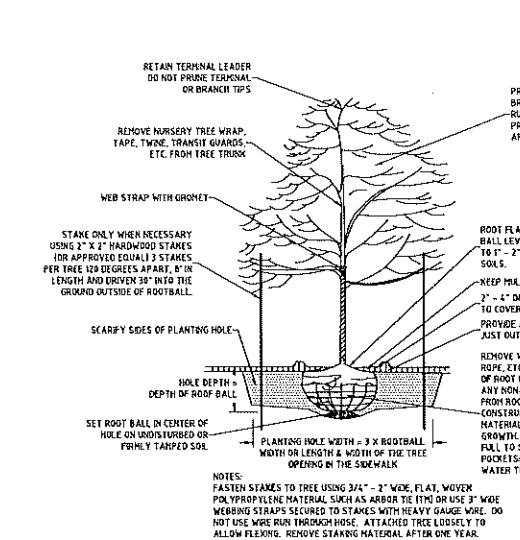
PRUNING: REMOVE DEAD OR BROKEN BRANCHES. PRUNE TO ROUTINE TYPICAL GROWTH HABIT OF PLANTS WITH AS MUCH HEIGHT AND SPREAD AS PRACTICAL. MAKE CUTS WITH SHARP INSTRUMENTS AND FLUSH WITH TRUNK AND ADJACENT BRANCH. DO NOT REMOVE LEADERS FROM TREES, STAKES AND SUPPORT OF TREES.  
BUY AND STAKE TREES THE SAME 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 SPECIFICATIONS FOR GUISING 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.

SOOING NEW LAWN:  
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 VODS. STAGGERED LATERAL JOINTS. WORK EACH SECTION 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. PROCEED WITH BELIEF. DURING FIRST WEEK, MAINTAIN SOO CONTINUALLY MOIST TO DEPTH OF FOUR INCHES BY WATERING DAILY OR MORE OFTEN, ABOUT ADOQUATE BARK FILL.

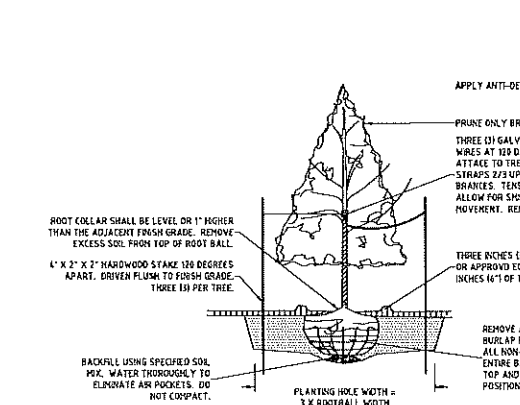
MISCELLANEOUS MATERIALS:  
DECORATIVE MULCH: APPLY A THREE INCH (3") THICK LAYER OF DOUBLE SHREDED HARDWOOD MULCH IN THE FOLLOWING AREAS: INDIVIDUAL PLANTING PITS AND PLANTING BEDS. DURING MAINTENANCE AND WARRANTY, THE CONTRACTOR IS REQUIRED TO APPLY NEW MULCH AS NECESSARY DUE TO EROSION, SETTLING, OR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

GENERAL NOTE

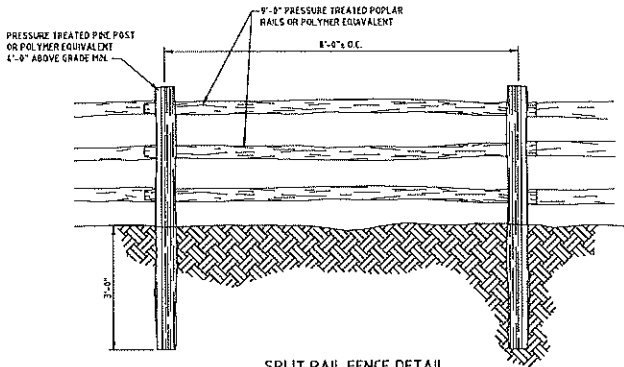
IT IS AGREED THAT THE PROFESSIONAL SERVICES OF THE DESIGN PROFESSIONAL DO NOT EXTEND TO OR INCLUDE THE REVIEW OR SITE OBSERVATION OF THE CONTRACTORS WORK, UNLESS OTHERWISE SPECIFIED AND ADDED. IT IS FURTHER AGREED THAT THE OWNER WILL HOLD HARMLESS, THEM, DEFEND THE DESIGN PROFESSIONAL FROM ANY CLAIM OR SUIT WHATS EVER 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

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



"MILLSTONE MEADOWS"  
PRELIMINARY/FINAL PLAN  
LANDSCAPING DETAILS AND NOTES

DATE: M.D. HARTMAN

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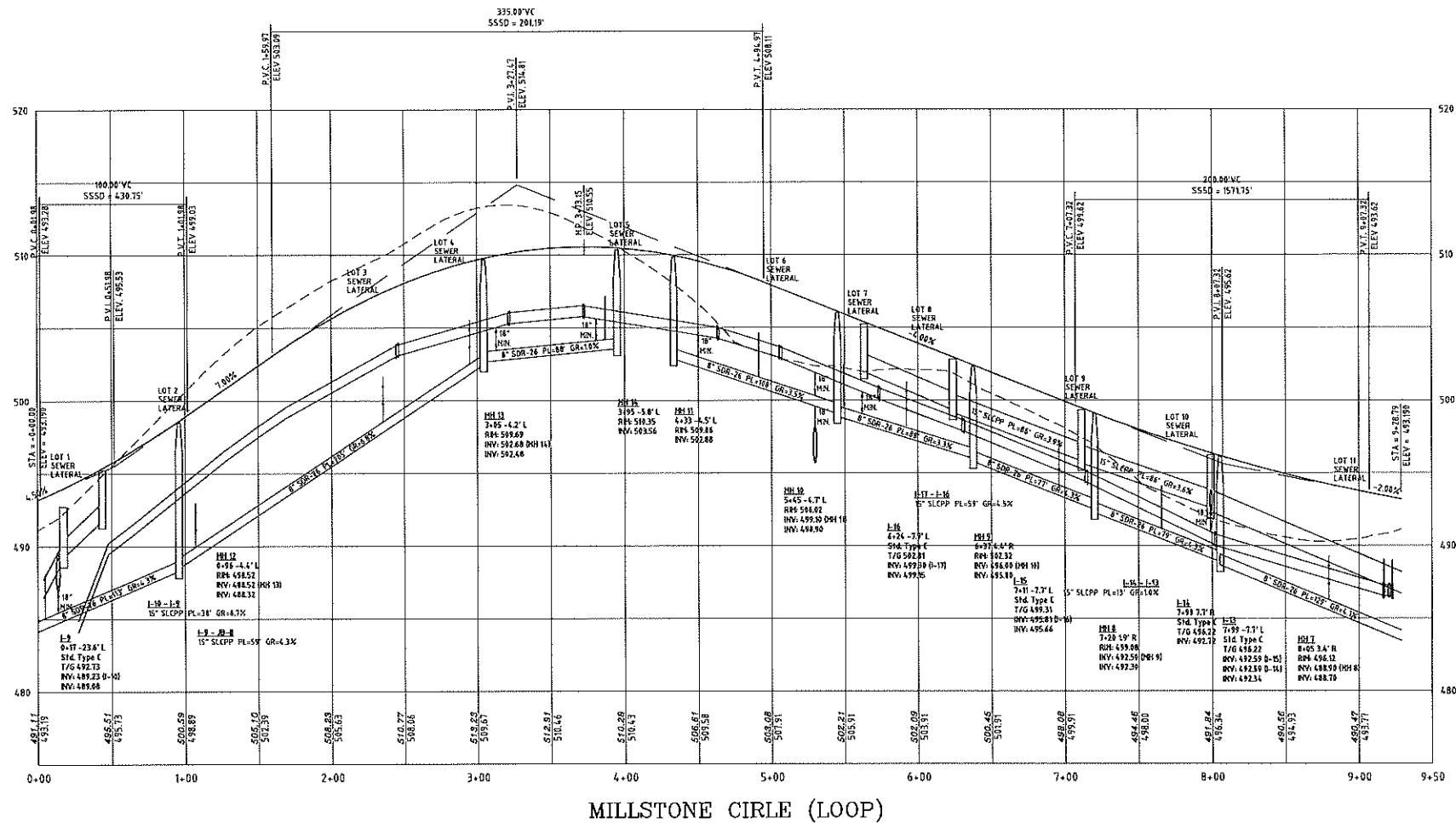
GRAPHIC SCALE 1" = 30'

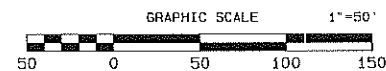
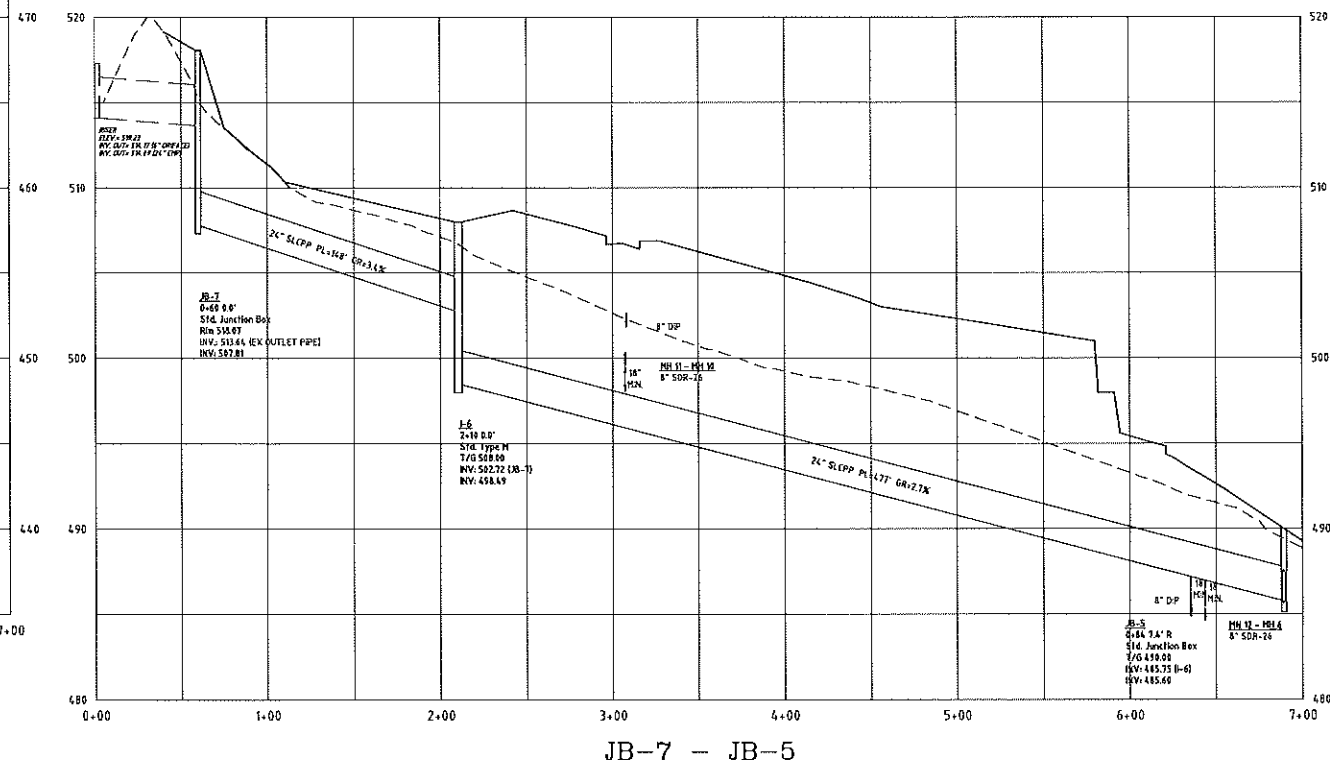
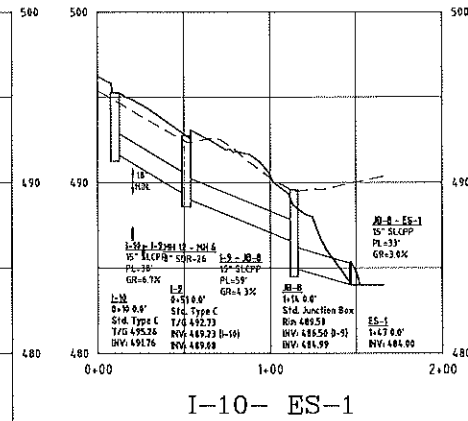
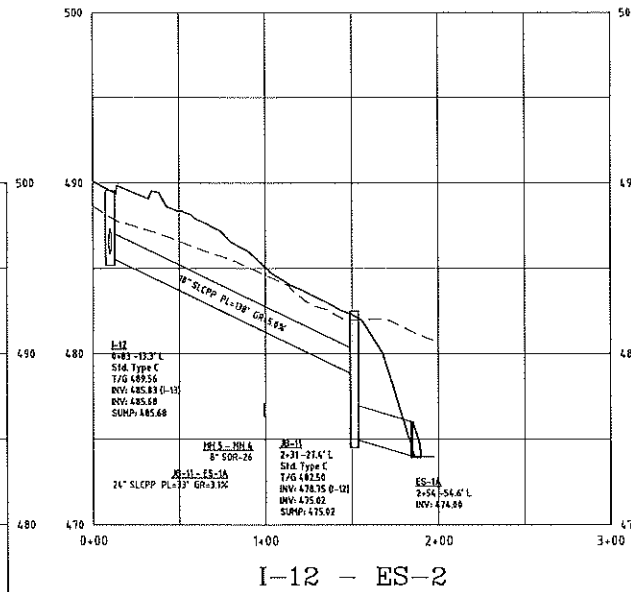
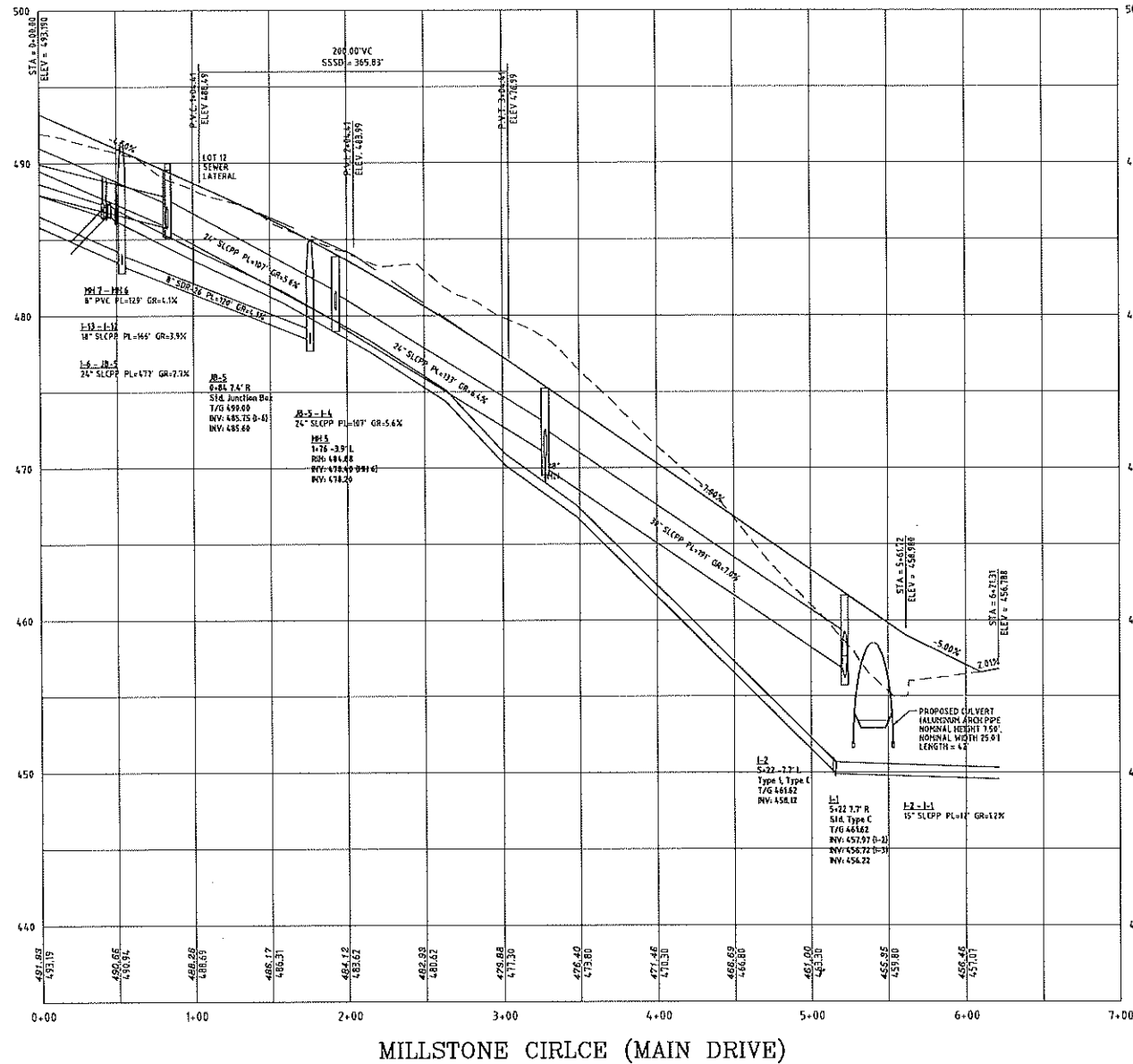
30 0 30 60 90

1" = 50'

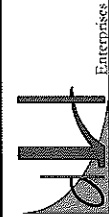
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22-001-F-D-7.2





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



"MILLSTONE MEADOWS"  
PRELIMINARY/FINAL PLAN  
PROFILES

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

DESIGNED BY: M.D. HARTMAN

DRAWN BY: M.D. HARTMAN

SCALE: 1" = 50'

SHEET: 10 OF 20

PROJECT: 22-001-F-D-8.2



RECALL NOTES



PENNSYLVANIA ACT 287, AS AMENDED BY ACT 121 REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH.

ACT 287 UNDERGROUND UTILITY PROTECTION ACT, AS AMENDED BY ACT 121

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 2018

PA ONE CALL SYSTEM INFORMATION: PENNSYLVANIA ACT 287, 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: 1-800-242-0776

ONE CALL SYSTEM SERIAL NO. NOTIFICATION BY HAVE NEWELL, INC. DATE: 10/07/22 ONE CALL SYSTEM SERIAL NUMBER: 24223103472

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.

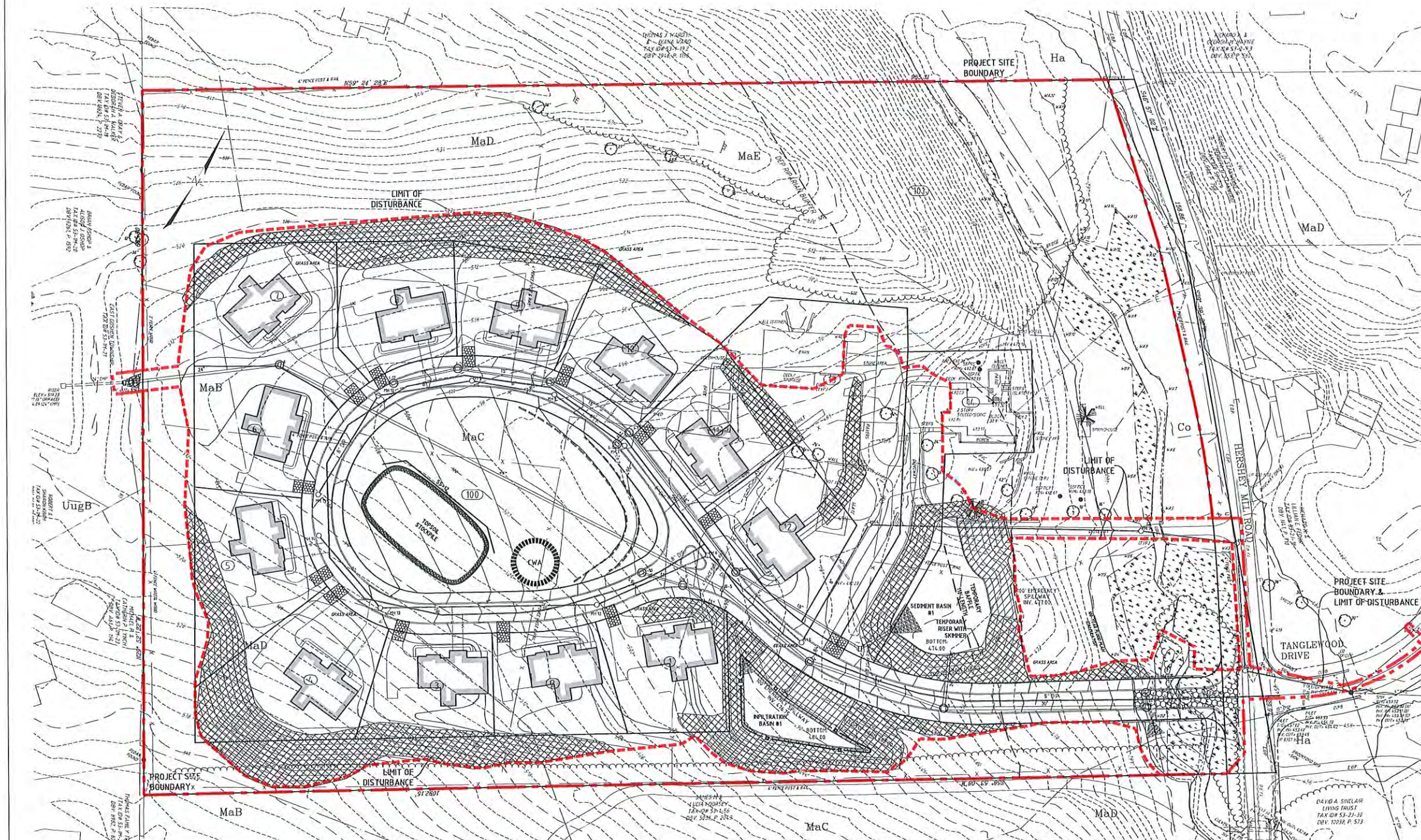
LIST OF RESPONDERS:  
AQUA PENNSYLVANIA INC.  
EAST GOSHEN TOWNSHIP  
TEXAS EASTERN TRANSMISSION LP  
COMCAST CABLE COMMUNICATIONS INC.  
PECO ENERGY  
VERIZON PENNSYLVANIA LLC

PROJECT SITE BOUNDARY AREA = 16.00 ACRES  
LIMIT OF DISTURBANCE AREA = 8.83 ACRES

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.



VICINITY MAP  
SCALE: 1"=800'

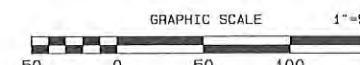


- EXISTING CURB
- PROPOSED CURB
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- SOL LINE
- EXISTING STREET SIGN
- EXISTING FEATURES ARE LABELED WITH SLANTED TEXT
- TO BE REMOVED
- EXISTING DECIDUOUS TREE

- 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

E&SPC LEGEND

- INLET FILTER PROTECTION
- 12" FILTER SILT SOX
- 12" FILTER SILT SOX
- 12" FILTER SILT SOX (UNLESS SPECIFIED)
- ROCK CONSTRUCTION ENTRANCE
- MOUNTABLE STONE FILTER BERM
- ROCK CONSTRUCTION ENTRANCE (INDIVIDUAL LOT CONTROL)
- TOPSOIL STOCKPILE WITH 12" SILT SOX (UNLESS SPECIFIED) (INDIVIDUAL LOT CONTROL)
- CONCRETE WASH AREA
- EROSION CONTROL BLANKET (NMS SITS for approved equal)
- LIMIT OF DISTURBANCE
- PROJECT SITE BOUNDARY
- PROJECT SITE BOUNDARY
- PROJECT SITE BOUNDARY
- ORANGE CONSTRUCTION SAFETY FENCING
- RIPARIAN BUFFER - 15'



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

FATIGHERS



"MILLSTONE MEADOWS"  
PRELIMINARY/FINAL PLAN  
EROSION AND SEDIMENT CONTROL PLAN

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

M.D.HARTMAN

M.D.HARTMAN

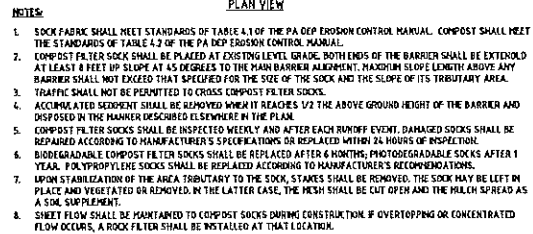
1" = 50'

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22-001-F-D-9.1







The diagram consists of two parts: a Plan View and an Elevation View. The Plan View shows a top-down perspective of the assembly. A cylindrical 'FILTER BAG' is held in place by a 'WELL' and 'VEGETATED AREA'. A 'PUMP' is connected to the filter bag via a 'DISCHARGE HOSE' and an 'INTAKE HOSE'. A 'CLAMP' is used to secure the hoses. A '3" DIAMETER CORROSE FILTER SOCK' is attached to the pump. The Elevation View shows a side profile of the assembly. The 'FILTER BAG' is shown as a horizontal cylinder. The 'PUMP' is connected to the filter bag via a 'DISCHARGE HOSE' and an 'INTAKE HOSE'. A 'CLAMP' is used to secure the hoses. A '3" DIAMETER CORROSE FILTER SOCK' is attached to the pump. The diagram is labeled 'PLAN VIEW' and 'ELEVATION VIEW'.

2) A SUITABLE MEANS OF ADDRESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME HALF FULL. WHEN THE BAGS ARE FULL, THEY SHALL BE TIED AT THE TOP AND THE FILTER BAGS THAT HAVE FAILED OR ARE FULLER BAGS SHALL BE PLACED ON STRIPS TO FACILITATE REMOVAL.

3) BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA AND DISCHARGE INTO STABLE, PROTECTED REMEDIATION AREAS. BAGS MUST NOT BE PLACED IN AN AREA TO INCREASE EROSION OR TO BE USED, BAGS MUST BE PLACED IN AN AREA TO INCREASE EROSION OR TO BE USED, BAGS MUST NOT BE PLACED ON SLOPES GREATER THAN 45 DEGREES FOR SLOPES GREATER THAN 45 DEGREES. BAGS MUST NOT BE PLACED ON SLOPES GREATER THAN 45 DEGREES. BAGS MUST NOT BE PLACED UNDER THE BAG TO REDUCE SOIL STEEPNESS.

4) THE PUMP DISCHARGE HOSE SHALL BE INSTALLED IN THE MOST INSTALLATIONS. COMPOST BAGS OR COMPOST FILTER SOCK SHALL BE INSTALLED UNDER BAGS LOCATED IN HD OR EY WATERSHEDS.

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

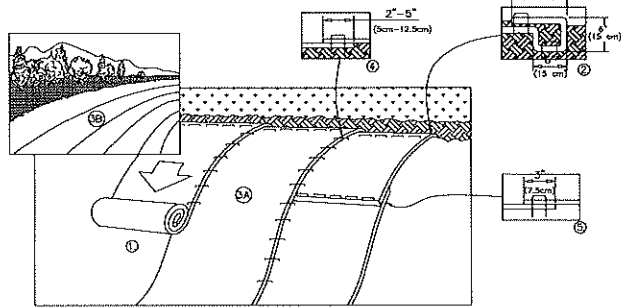
6) THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER.

7) FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL STOP.

CHANNEL NO.	SECTION	BOTTOM WIDTH B (FT)	DEPTH D (FT)	Z1 (FT)	Z2 (FT)	PERMANENT LINING	TEMPORARY LINING
VERSION	1	4.0	1.45	3.0	3.0	VEGETATED	NAG C125

### TYPICAL VEGETATED SWALES

ORGANIC MATTER CONTENT	80% - 95% DRY WEIGHT BASIS
ORGANIC PORTION	FIBROUS AND ELONGATED
PH	5.5 - 7.0
MOSTURE CONTENT	35% - 65%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 DS/M LITERS/CM MAXIMUM

[illegible]

**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. ROW CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
4. STAPLE BLANKETS TO EACH OTHER AT 8' INTERVALS USING A DOUBLE ROW OF
5. STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
6. CLOSURE END OF CHANNEL MUST BE STAPLED TO SLOPE MUST BE ANCHORED IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
7. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4' OVER THE CENTER BLANKET AND STAPLED (2' IF EXISTING MATINGS).
8. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE SCREW SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS TO USE A SECOND ROW OF STAPLES TO HOLD THE FIRST ROW OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
9. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL

The image contains two technical drawings of storm inlet structures. The top drawing is a plan view of a storm inlet. It shows a rectangular storm inlet with a 6 in. min. width and a 4 in. min. depth. A grate is placed over the inlet. To the right of the inlet is a berm with a 2:1 max. slope. A wire mesh, galvanized, 11 ga. or equivalent, 1/4 in. max. opening, is shown covering the inlet. An earthen berm stabilized with temporary or permanent vegetation is shown to the right of the berm. A pipe 15 in. dia. min. is shown entering the inlet from the left. The bottom drawing is a cross-section view of a storm inlet. It shows a rectangular storm inlet with a 6 in. min. height and a 4 in. min. width. A grate is placed over the inlet. To the right of the inlet is a berm with a 2:1 max. slope. A wire mesh, galvanized, 11 ga. or equivalent, 1/4 in. max. opening, is shown covering the inlet. An earthen berm stabilized with temporary or permanent vegetation is shown to the right of the berm. A pipe 15 in. dia. min. is shown entering the inlet from the left.

PIPE 15 IN. DIA. MIN.

4 IN. MIN.

GRATE

6 IN. MIN.

6 IN. MIN.

6 IN. MIN.

STORM INLET

WIRE MESH GALVANIZED, 11 GA. OR EQUIVALENT, 1/4 IN. MAX. OPENING

BERM

2:1 MAX.

2:1 MAX.

EARTHEN BERM STABILIZED WITH TEMPORARY OR PERMANENT VEGETATION

FLOW

BERM

2:1 MAX.

6 IN. MIN. HEIGHT

3:1

3:1

FLOW

INLET STRUCTURE

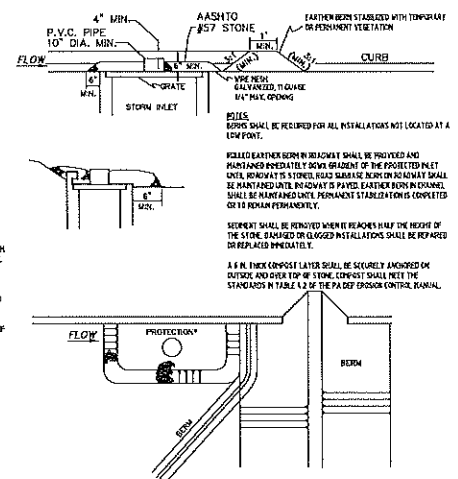
NOTES

BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.

ROADWAY EXISTING OR TO BE CONSTRUCTED SHALL BE PROTECTED AND MAINTAINED PERMANENTLY. DRAINAGE SHALL BE PROVIDED FOR THE PROTECTED INLET. BERM SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATION. BERM SHALL BE MAINTAINED UNTIL INSURANCE IS COMPLETED OR TO ROADWAY PERMANENTLY.

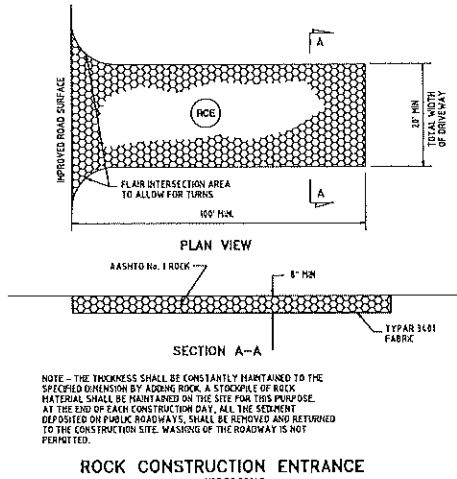
SEEDING SHALL BE REMOVED WHEN REACHES HALF THE HEIGHT OF THE STONE DAMAGED OR CLOGGED UNTIL ALL AREAS SHALL BE REPAIRED AND REVEGETATED PERMANENTLY.

A 1/4 IN. THICK CORNER LATER SHALL BE NATURALLY ANCHORED ON OUTSIDE AND TOP OF STONE CORNER SHALL MEET THE STANDARDS IN TABLE 12 OF THE PAVEMENT DESIGN CONTROL MANUAL.



INLET PROTECTION  
SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM EVENT.  
STORMWATER PLETS WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS, MUST BE PROTECTED UNTIL THE  
TRIBUTARY AREAS ARE STABILIZED.

TYPE C  
INLET PROTECTION DETAIL



NOT TO SCALE

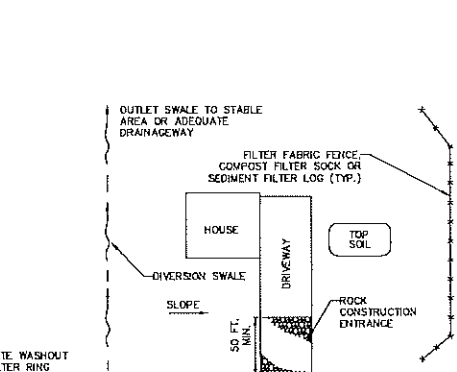


Diagram illustrating a cross-section of a filter fabric fence. The diagram shows a vertical line representing the fence, with a label "2:1 SLOPE OR FLATTER" indicating the slope of the material. A horizontal line represents the ground surface, with a label "FILTER FABRIC FENCE AS INDICATED ON PLANS" pointing to the vertical line. The diagram also shows a cross-section of the ground surface with a label "2:1 SLOPE OR FLATTER" and a vertical line representing the fence.

NOTES -

- 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



NOTES: PLAN VIEW

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

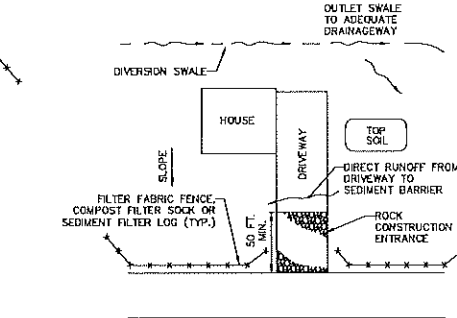
IRISLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WITH REVER GUNOFF FROM AREA

ABOVE THE LOT ARE NOT OTHERWISE DIVERTED AWAY FROM THE LOT, THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

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

DIVERSION CHANNEL MAY OUTLET TO ROADSIDE DITCH OR STORM SEWER SYSTEM, BUT NOT

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

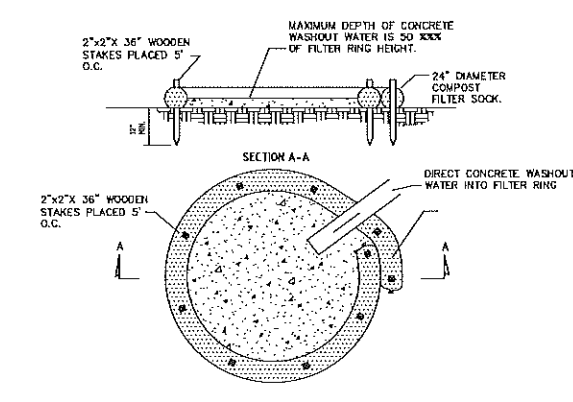


**PLAN VIEW**

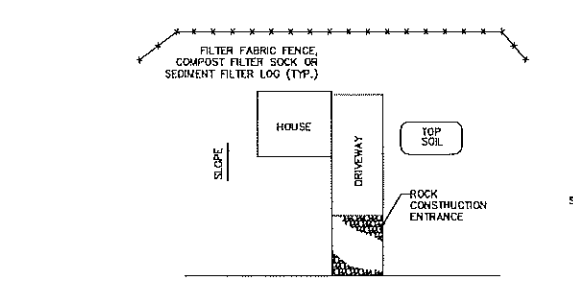
**NOTES:**

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

TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY



COMPOST SOCK CONCRETE WASHOUT DETAIL

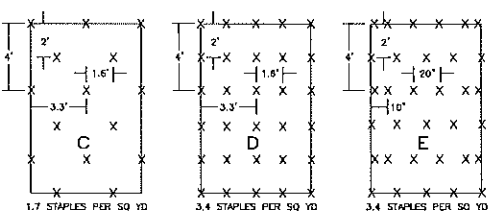


PLAN VIEW

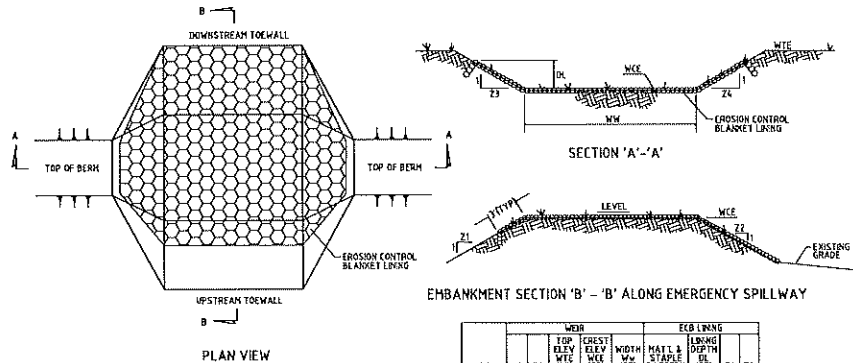
NOTES:

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

TYPICAL ON-LOT BMPs FOR LOT BELOW ROADWAY

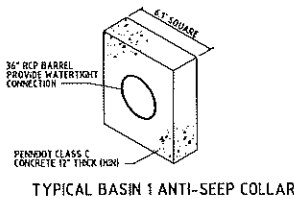


## STAPLE PATTERN GUIDE

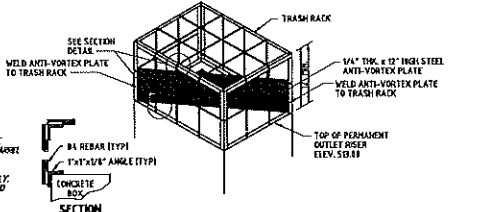


BASIN	WEIR					ECB LING				
	23	24	TOP ELEV WTC (FT)	CREST ELEV WTC (FT)	WIDTH Wt (FT)	NAIL & STAPLE PATTERN	LONG DEPTH DL (FT)	21	22	
1	3	3	515.55	516.50	75'	PSS07E	10'	3	3	

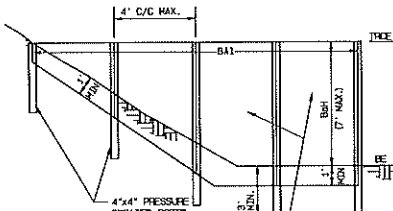
BASIN EMERGENCY SPILLWAY



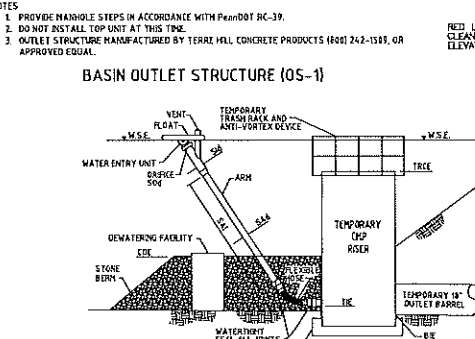
TYPICAL BASIN 1 ANTI-SEEP COLLAR



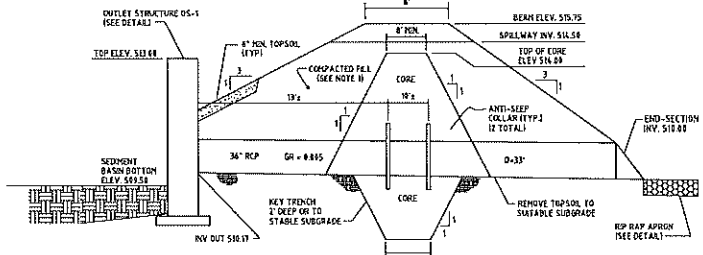
TEMPORARY TRASH RACK & ANTI-VORTEX FOR PERMANENT OUTLET STRUCTURE



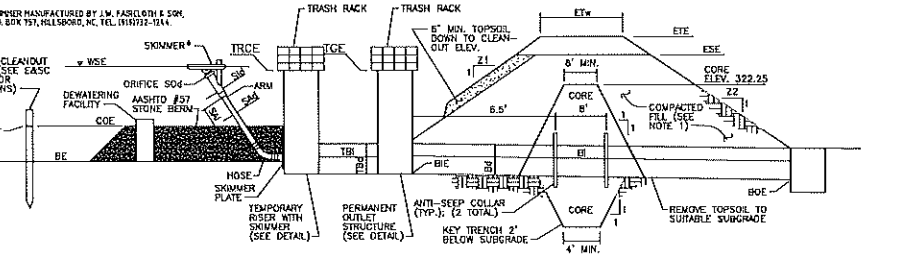
SEDIMENT BASIN PLYWOOD BAFFLE DETAIL



SEDIMENT BASIN TEMPORARY SKIMMER AND PERMANENT OUTLET STRUCTURE

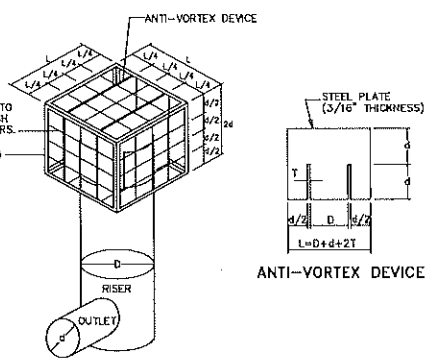


SEDIMENT BASIN #1 CROSS-SECTION

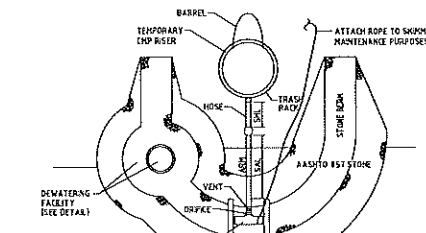


BASIN NO.			TEMPORARY RISER										BARREL					EMBANKMENT					EMERGENCY SPILLWAY		CLEANOUT		BOTTOM	
Z1	Z2	PERMANENT OUTLET STRUCTURE TOP OF GRADE ELEV. (FT.)	DIA. (IN.)	GREATEST ELEV. (FT.)	WAT'L TSG.(FT.)	LENGTH DIA. TSG.(FT.)	BARREL DIA. TSG.(FT.)	DIA. (IN.)	INLET ELEV. (FT.)	WAT'L TSG.(FT.)	LENGTH DIA. TSG.(FT.)	OUTLET ELEV. (FT.)	BOE (FT.)	EYE (FT.)	TOP WIDTH (FT.)	TOP ELEV. (FT.)	IN. ELEV. (FT.)	IN. ELEV. (FT.)	CODE (FT.)	ELEV. (FT.)	ELEV. (FT.)	ELEV. (FT.)						
1	3	513.00**	48	513.00	CMP	6	24	38	510.17	RCP	33	510.00	515.75	8	514.50	510.50	509.50											
** SEE TEMPORARY RISEN PLAN & 100' HORIZ. DIST. DETERMINED BASED ON EXISTING RISEN																												

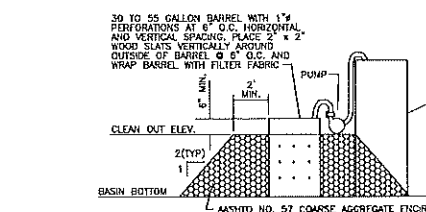
SEDIMENT BASIN CROSS-SECTION ALONG PRINCIPAL SPILLWAY



TRASH RACK AND ANTI-VORTEX DEVICE



SEDIMENT BASIN SKIMMERS & TEMPORARY CMP RISER



SEDIMENT TRAP DEWATERING FACILITY

2815 PENN AVENUE  
WEST LAWN, PA  
610-227-4242

REVISIONS



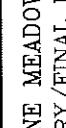
SEAL



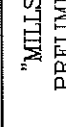
SEAL



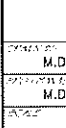
SEAL



SEAL



SEAL



SEAL

22-001-F-D-9.4



ONE CALL NOTES



PENNSYLVANIA ACT 287, AS AMENDED BY ACT 121, REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH.

ACT 287 UNDERGROUND UTILITY PROTECTION ACT, AS AMENDED BY ACT 121

ACT 287 UNDERGROUND UTILITY PROTECTION ACT, AS AMENDED BY ACT 121 OF 1986, ACT 38 OF 1991, ACT 181 OF 1998, ACT 199 OF 2004, ACT 181 OF 2005, ACT 121 OF 2010

PA ONE CALL SYSTEM INFORMATION: PENNSYLVANIA ACT 287, 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: 24223103472

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

OWNER AND APPLICANT

TROUTBROOK FARM DEVELOPERS LLC  
1071 LANCASTER AVE. SUITE 201  
BERWYN PA 19312

RECEIVING WATERCOURSE

THE RECEIVING WATERCOURSE FROM THE PROJECT AREA IS A TRIBUTARY TO RIDLEY CREEK. THE WATERCOURSE IS LOCATED ON THE PROJECT TRACT BUT OUTSIDE OF THE LIMIT OF DISTURBANCE. THE WATERCOURSE HAS A CHAPTER 93 CLASSIFICATION OF HD-CWF, HIGH QUALITY - COLD WATER FISHES. THE RECEIVING STREAM IS LISTED AS HAVING A 30:1 R-1/R-2 RATIO DUE TO URBAN RUNOFF.

RIPIARIAN BUFFER MEASUREMENT PER PENNSYLVANIA CODE SECTION 92.14(C)(2): RIPIARIAN BUFFERS MUST BE MEASURED HORIZONTALLY AND PERPENDICULARLY TO THE BANK WITH NO MORE THAN A 10% VARIATION BELOW THE HIGHEST WIDTH FROM THE NORMAL POOL ELEVATION FOR LAKE, POND OR RESERVOIR AND FROM TOP OF STREAMBANK.

PROPOSED TREE PLANTINGS: THE PROPOSED TREE PLANTINGS AND REFORESTATION AREAS AS SHOWN ON THE LANDSCAPING PLAN ARE TO BE CONSIDERED PART OF THE STORM WATER MANAGEMENT SYSTEM FOR THE PROPOSED DEVELOPMENT AND ARE NOT TO BE REMOVED WITHOUT PRIOR APPROVAL FROM EAST GOSHEN TOWNSHIP, CHESTER COUNTY CONSERVATION DISTRICT AND DEP.

SOILS LEGEND

Co - COORUS SILT LOAM  
Ha - HATBORO SILT LOAM  
GpB - GLOVELE SILT LOAM, 3 TO 8 PERCENT SLOPES  
MaB - MAJOR LOAM, 3 TO 8 PERCENT SLOPES  
MaC - MAJOR LOAM, 8 TO 15 PERCENT SLOPES  
MaD - MAJOR LOAM, 15 TO 25 PERCENT SLOPES  
MaE - MAJOR LOAM, 25 TO 35 PERCENT SLOPES  
UgB - URBAN LAND - URBAN/INDUSTRIAL/COMPLEX, 0 TO 8 PERCENT SLOPES

OWNER'S ACKNOWLEDGEMENT

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

T.R. HARTMAN  
DATE

ENGINEER'S CERTIFICATE

I, MICHAEL DUAIN HARTMAN, P.E., ON THIS DATE, HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE SWM SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE EAST GOSHEN TOWNSHIP STORMWATER MANAGEMENT ORDINANCE (ORDINANCE NO. 129-F-2013).

MICHAEL DUAIN HARTMAN, P.E., D.C. NO. 0000000000  
DATE

PROJECT SITE BOUNDARY AREA = 16.00 ACRES  
LIMIT OF DISTURBANCE AREA = 8.83 ACRES



VICINITY MAP  
SCALE: 1"=800'

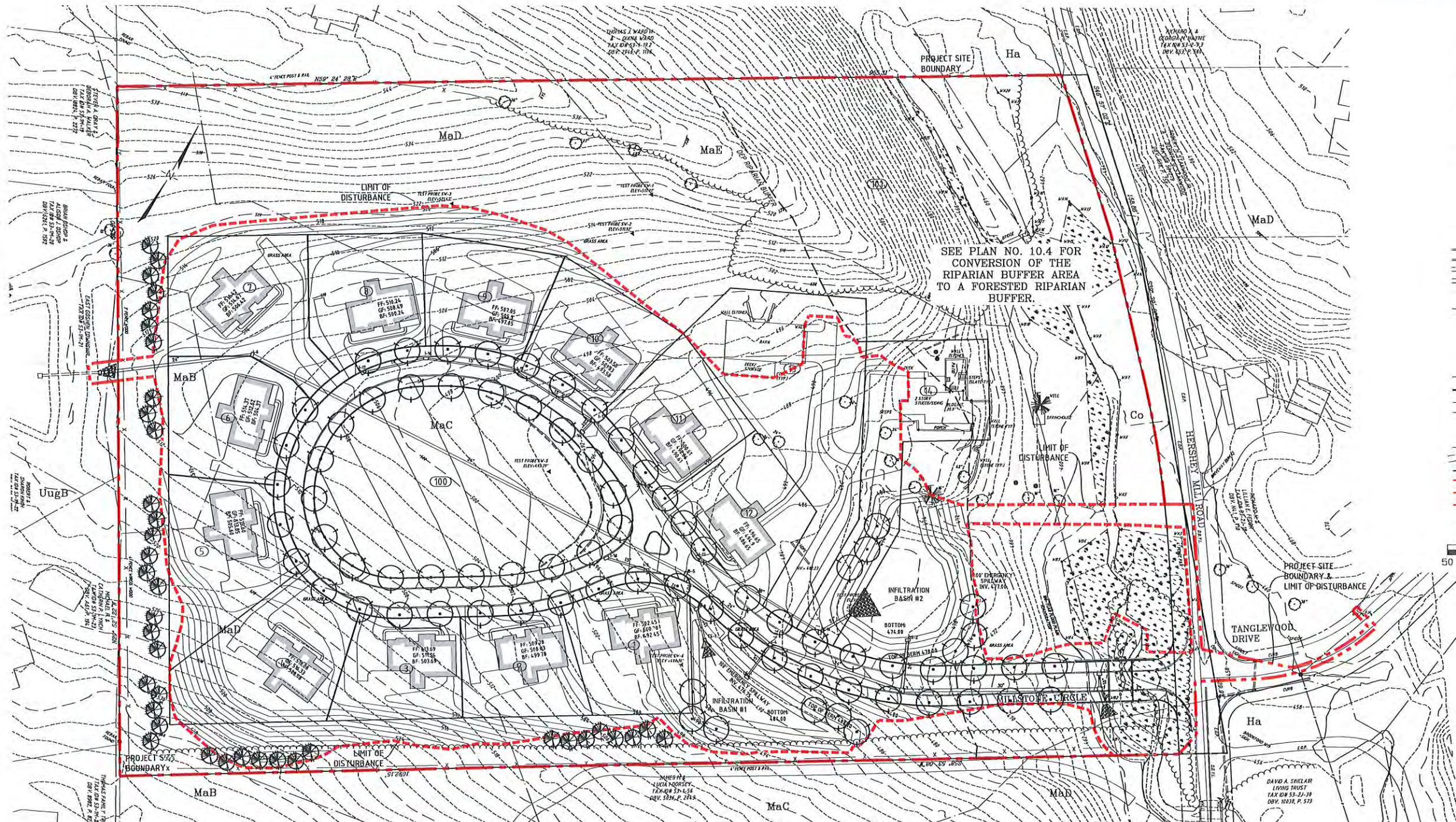
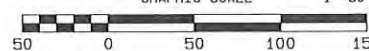
PCSM HATCH LEGEND

- INFILTRATION BASIN
- REFORESTATION/LANDSCAPE RESTORATION
- AMENDED SOILS
- RIPIARIAN BUFFER
- FORESTED RIPIARIAN BUFFER CONVERSION AREA

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 & HANDHOLE
- PROPOSED STORM SEWER & CATCH BASIN
- EXISTING WATER LINE & VALVE
- PROPOSED WATER LINE & VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED GRINDER PUMP
- PROPOSED WATER LATERAL
- PROPOSED TRAIL NETWORK (PAVED)
- RIPIARIAN BUFFER
- PROJECT SITE BOUNDARY
- PROJECT SITE BOUNDARY & LIMIT OF DISTURBANCE
- LIMIT OF DISTURBANCE
- DRAINAGE AREA TO BMP

GRAPHIC SCALE 1"=50'



SEE POST-DEVELOPMENT DRAINAGE AREA PLAN  
CONTINUATION OF DRAINAGE AREA TO  
INFILTRATION BASIN #1

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

ENGINEERING



SEAL  
MICHAEL DUAIN HARTMAN  
ENGINEER  
PA. REG. NO. 0000000000

"MILLSTONE MEADOWS"  
PRELIMINARY/FINAL PLAN  
POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

DATE: 04/20/2023

CLIENT: GROVE MEADOW DEVELOPERS LLC

LOCATION: EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

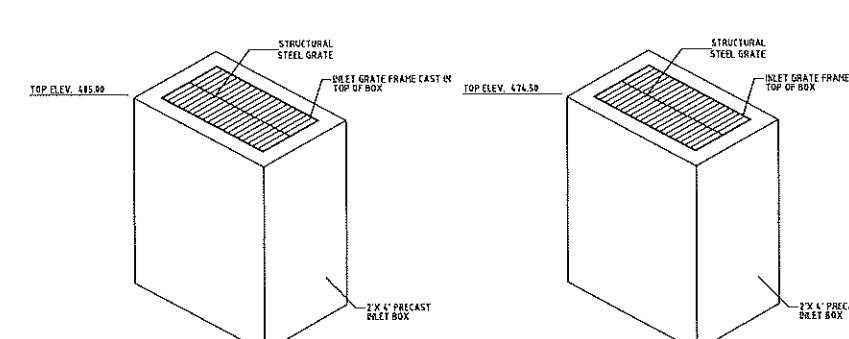
DATE: 04/20/2023

SCALE: 1" = 50'

SHEET: 15 OF 20

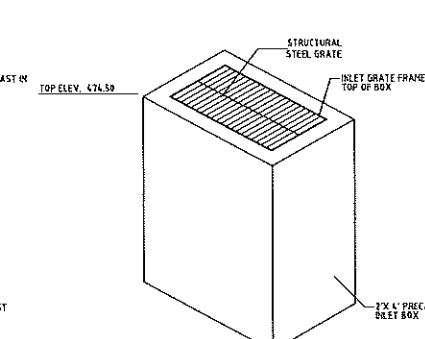
FILE NO: 22-001-F-D-10.1





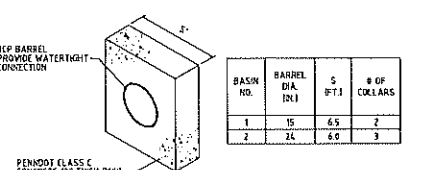
NOTES:  
1. PROVIDE HANDHOLE STEPS IN ACCORDANCE WITH PENNDOT RC-39.  
2. OUTLET STRUCTURE MANUFACTURED BY TERRE HILL CONCRETE PRODUCTS (H40) 242-1559, OR APPROVED EQUAL.

INFILTRATION BASIN OUTLET STRUCTURE (OS-1)

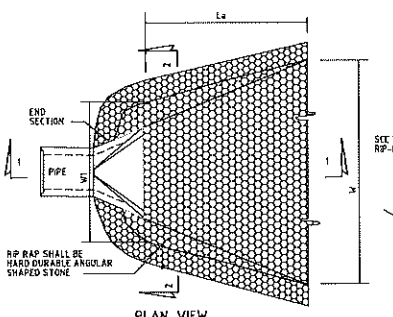


NOTES:  
1. PROVIDE HANDHOLE STEPS IN ACCORDANCE WITH PENNDOT RC-39.  
2. OUTLET STRUCTURE MANUFACTURED BY TERRE HILL CONCRETE PRODUCTS (H40) 242-1559, OR APPROVED EQUAL.

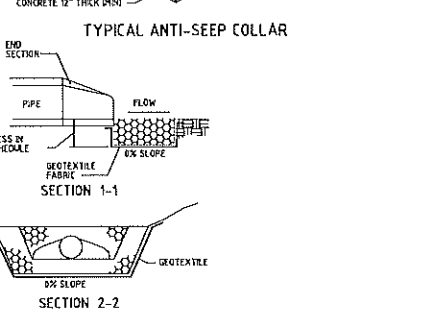
INFILTRATION BASIN OUTLET STRUCTURE (OS-2)



TYPICAL ANTI-SEEP COLLAR



PLAN VIEW

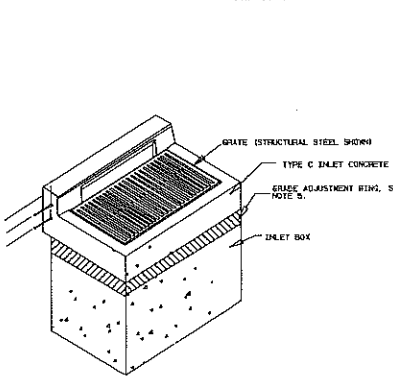


SECTION 2-2

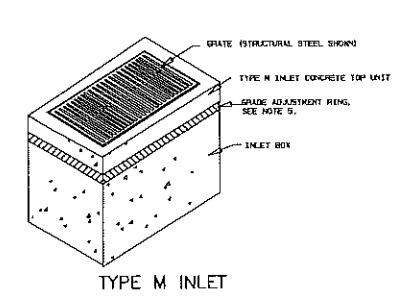
PERCENT PASSING (SQUARE OPENING)	R-8	R-7	R-6	R-5	R-4	R-3
100						
75						
50						
25						
10						
5						
2						
1						
0						

RIP RAP CHART	PPE DIA. (IN)	L <sub>1</sub> (FT)	L <sub>2</sub> (FT)	M (FT)	H (FT)	PERCENT CLASSIFICATION
ES-1	36	27.00	27.00	9.25	9.25	R-4
ES-2	24	12.00	12.00	6.00	6.00	R-4

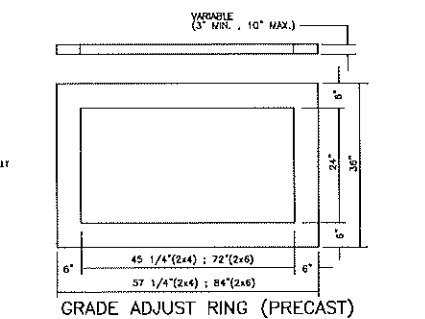
RIP RAP APRON DETAIL



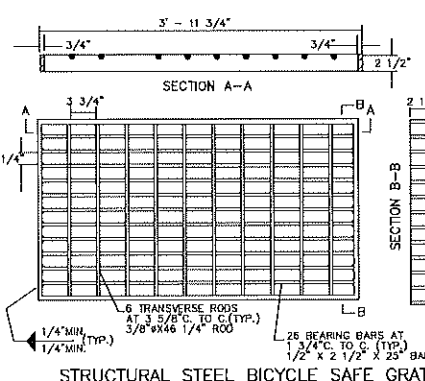
TYPE C INLET



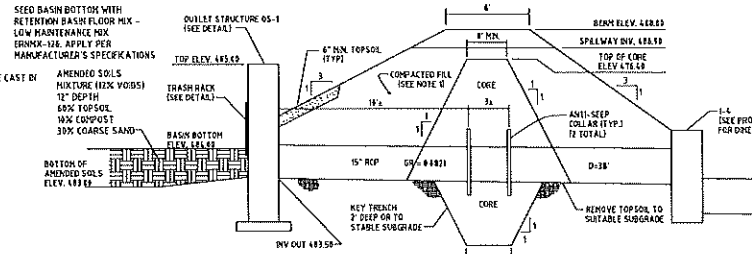
TYPE M INLET



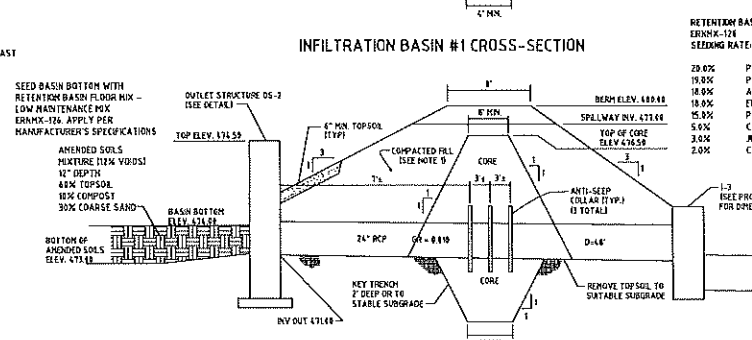
GRADE ADJUST RING (PRECAST)



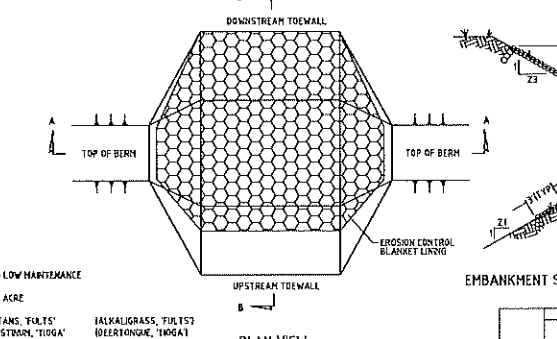
STRUCTURAL STEEL BICYCLE SAFE GRATE



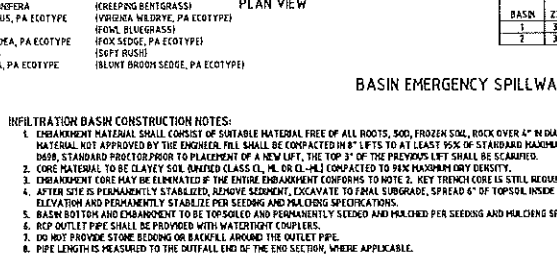
INFILTRATION BASIN #1 CROSS-SECTION



INFILTRATION BASIN #2 CROSS-SECTION

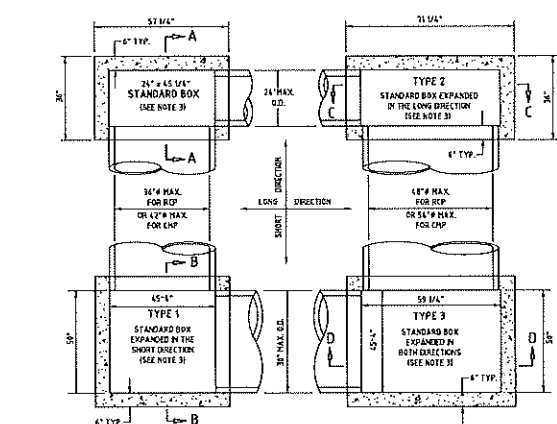


PLAN VIEW

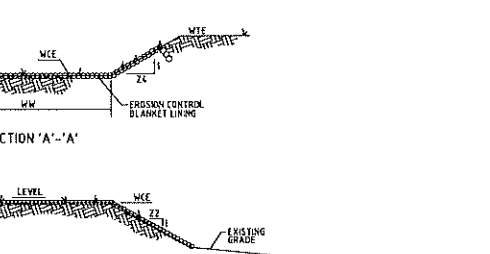


BASIN EMERGENCY SPILLWAY

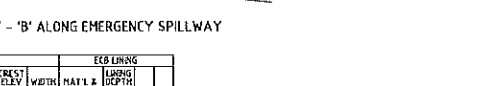
INFILTRATION BASIN CONSTRUCTION NOTES:  
1. EMBANKMENT MATERIAL SHALL BE SUITABLE MATERIAL FREE OF ALL ROOTS, SOIL, FROZEN SOIL, ROCK OVER 4" IN DIAMETER, AND ANY OTHER MATERIAL NOT APPROVED BY THE ENGINEER. FILL SHALL BE COMPACTED IN 8" LIFTS TO AT LEAST 95% OF STANDARD MAXIMUM DRY DENSITY PER ASTM D698, STANDARD PROCTOR PRIOR TO PLACEMENT OF A NEW LIFT. THE TOP 3" OF THE PREVIOUS LIFT SHALL BE SCAMPED.  
2. CORE MATERIAL TO BE CLAYEY SOIL, BAKED CLASS C, M, OR CL-LL, COMPACTED TO 95% STANDARD MAXIMUM DRY DENSITY.  
3. EMBANKMENT CORE MAY BE ELIMINATED IF THE ENTIRE EMBANKMENT CONFORMS TO NOTE 2. KEY TRENCH CORE IS STILL REQUIRED.  
4. AFTER SITE IS PERMANENTLY STABILIZED, REMOVE SEDIMENT, EXCAVATE TO FINAL SUBGRADE, SPREAD 6" OF TOPSOIL INSIDE BASIN BELOW CLEANOUT ELEVATION AND PERMANENTLY STABILIZE PER SEEDING AND MULCHING SPECIFICATIONS.  
5. BASIN BOTTOM AND EMBANKMENT TO BE TOP SOILED AND PERMANENTLY SEEDING AND MULCHING SPECIFICATIONS.  
6. RIP OUTLET PIPE SHALL BE PROVIDED WITH WATER TIGHT COUPLERS.  
7. DO NOT PROVIDE STONE BEDDING OR BACKFILL AROUND THE OUTLET PIPE.  
8. PIPE LENGTHS MEASURED TO THE OUTLET END OF THE END SECTION, WHERE APPLICABLE.



PRECAST CONCRETE BOXES FOR STORM INLETS AND JUNCTION BOXES



SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D



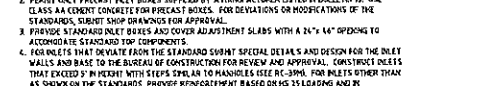
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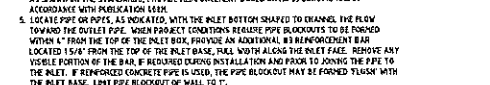
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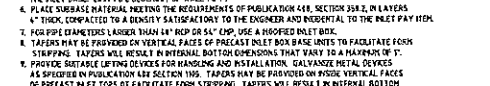
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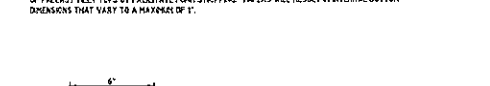
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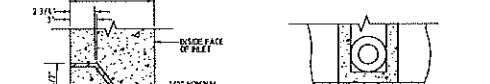
SECTION I-I



SECTION J-J



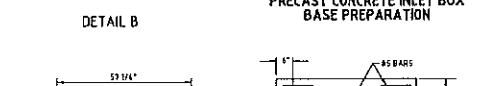
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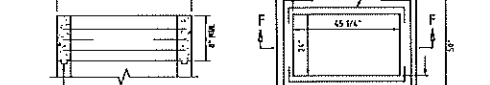
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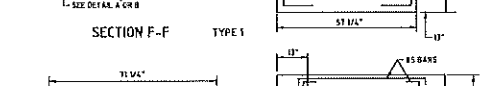
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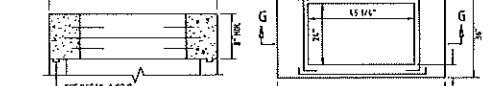
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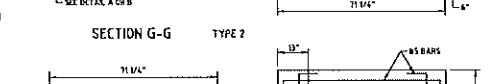
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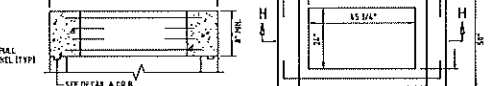
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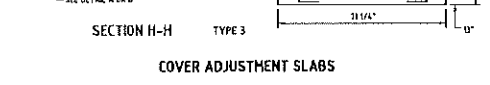
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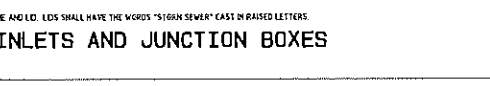
SECTION R-R



SECTION S-S



SECTION T-T



SECTION U-U

FOUNTAINBLE OWNER AND APPLICANT

GROVE MEADOW DEVELOPERS LLC  
101 LANCASTER AVE. SUITE 201  
BERWYN PA 19312

GENERAL NOTES

- THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BMP'S. ADDITIONAL SOIL TESTING MAY BE REQUIRED PRIOR TO THE INSTALLATION OF INFILTRATION BMP'S TO ENSURE PROPER LOCATION AND FUNCTION. A LICENSED PROFESSIONAL KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF STORMWATER BMP'S, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.
- IF UNFAVORABLE CONDITIONS HAVE BEEN ENCOUNTERED DURING THE INSTALLATION OF THE SEEPAGE/INFILTRATION SYSTEMS (IE, GROUNDWATER AND/OR BEDROCK, ETC), THE OWNER/ENGINEER SHOULD BE NOTIFIED AND THE PROPOSED INFILTRATION SYSTEM SHOULD BE RELOCATED TO A MORE SUITABLE LOCATION ON THE PROPERTY.
- THE ANTICIPATED WASTES ARE GENERAL CONSTRUCTION WASTES. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 3401 ET SEQ., 2311 ET SEQ., AND 3311 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.
- THE PROPOSED TREE PLANTINGS ARE TO BE CONSIDERED PERMANENT BMP'S AND ARE NOT TO BE REMOVED WITHOUT PRIOR CONSENT BY THE TOWNSHIP, CHESTER COUNTY CONSERVATION DISTRICT AND THE DEPARTMENT.
- THE EXISTING FLOW PATTERNS TO DISCHARGE POINTS 2 THROUGH 4 ARE TO BE MAINTAINED AND NOT ALTERED BETWEEN THE LIMIT OF DISTURBANCE AND THE PROJECT SITE BOUNDARY. ANY EROSION CAUSED BY DISCHARGES FROM BMP'S WITHIN THE SITE WILL BE REPAIRED AND STABILIZED.
- IN THE EVENT OF FAILURE OF THE PROPOSED BMP'S, THE PERMITTEE SHALL CONSULT A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE CAUSE OF THE FAILURE AND REMEDIATIVE MEASURES. FAILURE OF THE BMP'S IS DEFINED AS FOLLOWS:  
BMP 6.4.2. INFILTRATION BASIN - DRAINAGE OF COLLECTED WATER TAKES LONGER THAN 72 HOURS AFTER A STORM EVENT  
BMP 6.4.3. SURFACE INFILTRATION BED - DRAINAGE OF COLLECTED WATER TAKES LONGER THAN 72 HOURS AFTER A STORM EVENT
- TO ENSURE THAT THE EXISTING FLOW PATTERNS ARE NOT ALTERED AND MAINTAINED, THE OUTLETS FROM THE PROPOSED BMP'S HAVE BEEN LOCATED A MINIMUM OF 15' FROM THE PROJECT SITE BOUNDARY.

OPERATIONS AND MAINTENANCE RESPONSIBILITIES

THE OWNER WILL BE RESPONSIBLE FOR THE BMP'S AS SHOWN ON THESE PLANS. THE OWNER SHALL INSPECT AND MONITOR THEM PERIODICALLY AND DURING SIGNIFICANT RUNOFF EVENTS TO ENSURE THEY ARE SUCCESSFULLY CARRYING OUT THEIR INTENDED FUNCTION. THE OWNER SHALL NOT DUMP DIRTY WATER, OIL, OR ANY OTHER LIQUIDS OR SOLIDS INTO THE STORM WATER CONVEYANCE SYSTEM, DETENTION PONDS OR ANY OTHER BMP'S. VEHICLES SHALL NOT BE DRIVEN ACROSS BMP'S. THE OWNER SHALL BE RESPONSIBLE FOR THE SHORT TERM AND LONG TERM OPERATION AND MAINTENANCE MEASURES FOR THE POST CONSTRUCTION STORM WATER MANAGEMENT FACILITIES.

BMP 6.4.2. INFILTRATION BASIN BIODIVERSITY ASSOCIATION

- CATCH BASINS AND INLETS UPSTREAM OF INFILTRATION BASIN SHOULD BE INSPECTED AND CLEANED AT LEAST TWO TIMES PER YEAR AND AFTER RUNOFF EVENTS.
- THE VEGETATION ALONG THE SURFACE OF THE INFILTRATION BASIN SHOULD BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS REVEALED AS SOON AS POSSIBLE.
- VEHICLES SHOULD NOT BE PARKED OR DRIVEN ON AN INFILTRATION BASIN, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY HOUSERS.
- RESPECT THE BASIN AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. MOSQUITOES SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS. SHOULD MOSQUITO REMAIN IN THE BASIN FOR LONGER THAN 72 HOURS, THE OWNER SHALL CONTACT A REGISTERED PROFESSIONAL TO DETERMINE REMEDIATIVE MEASURES.
- ALSO INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SLOPE STABILITY IN THE BEDS.
- HOW ONLY AS APPROPRIATE FOR VEGETATIVE COVER SPEEDS.
- REMOVE ACCUMULATED SEDIMENT FROM BASIN AS REQUIRED, RESTORE ORIGINAL CROSS SECTION AND INFILTRATION RATE, PROPERLY DISPOSE OF SEDIMENT.

BMP 6.4.1. PROTECT SENSITIVE/SPECIAL VALUE FEATURES

- SHALL INCLUDE NATURAL AREAS OF FLOODPLAINS, MAPPED WETLANDS, MAPPED WOODLANDS, AND NATURAL SLOPES OVER 25% AND 75%.
- MAY INCLUDE OTHER AREAS OF SIGNIFICANT NATURAL RESOURCES THAT THE APPLICANT DEMONSTRATES ARE OF SPECIAL NATURAL VALUE.
- SHALL NOT BE DISTURBED DURING PROJECT CONSTRUCTION (IE, CLEARED OR GRADED) EXCEPT FOR TEMPORARY IMPACTS ASSOCIATED WITH MITIGATION AND RESTORATION EFFORTS. UTILITY DISTURBANCE IS DISCOURAGED AND SHOULD BE KEPT TO A MINIMUM.
- SHALL BE PROTECTED BY HAVING THE LIMITS OF DISTURBANCE CLEARLY SHOWN ON ALL CONSTRUCTION DRAWINGS AND DELINEATED IN THE FIELD.
- SHALL BE LOCATED WITHIN AN ACCEPTABLE LAND PRESERVATION/PROTECTION AGREEMENT OR OTHER ENFORCEABLE INSTRUMENT, SUCH AS A DEED RESTRICTION, THAT ENSURES PERPETUAL PROTECTION OF THE PROPOSED AREAS. THE PRESERVATION AGREEMENT SHALL CLEARLY SPECIFY HOW THE NATURAL AREA SHALL BE MANAGED AND BOUNDARIES WILL BE MARKED WITH PERMANENT SURVEY MARKERS.
- MANAGED TURF IS NOT CONSIDERED AN ACCEPTABLE FORM OF VEGETATION MANAGEMENT.
- SHALL BE LOCATED ON THE DEVELOPMENT PROJECT.

PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

- UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSM BMP'S ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE.
- THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMP'S UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMP'S.
- FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMP'S AND FURTHER NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUCCESSOR GRANTEES, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER 1 802.103(d) RELATING TO PERMIT TERMINATION.
- THE PERSON RESPONSIBLE FOR PERFORMING LONG-TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON INCLUDING A CONSERVATION DISTRICT, NONPROFIT ORGANIZATION, MUNICIPALITY, AUTHORITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR PCSM BMP'S OR TO PERFORM LONG-TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE DEPARTMENT.
- A PERMITTEE OR CO-PERMITTEE THAT FAILS TO TRANSFER LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP'S LOCATED ON THE PROPERTY.

POST-CONSTRUCTION STORMWATER MANAGEMENT BMP INSPECTION AND MAINTENANCE NOTES

- NO STRUCTURES THAT ARE NOT COMPONENTS OF AN APPROVED BMP SHALL BE PERMITTED WITHIN OR ON TOP OF AN AREA DESIGNATED FOR STORMWATER INFILTRATION.
- INFILTRATION BEDS SHALL BE INSPECTED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF PENNSYLVANIA ON THE FOLLOWING BASIS:
  - ANNUALLY FOR THE FIRST FIVE (5) YEARS,
  - ONCE EVERY THREE (3) YEARS THEREAFTER.

INDIVIDUAL BMP CONSTRUCTION SEQUENCE AND CRITICAL STAGES OF IMPLEMENTATION

DURING CONSTRUCTION AND IMPLEMENTATION OF THE PROPOSED PERMANENT BMP'S, THE FOLLOWING STAGES OF CONSTRUCTION SHALL BE IMPLEMENTED UNDER THE SUPERVISOR OF A LICENSED PROFESSIONAL OR DESIGNATED INDIVIDUAL:

BMP 6.4.3. INFILTRATION BASIN

- INFILTRATION BASIN #1:
- UPON STABILIZATION OF ALL UPSLOPE DISTURBED AREAS, INITIATE CONVERSION OF THE SEDIMENT BASIN TO THE PERMANENT INFILTRATION BASIN.
  - FLUSH ACCUMULATED SEDIMENT FROM THE CONTRIBUTING STORM SEWER SYSTEM.
  - DEWATER SEDIMENT BASIN.
  - REMOVE Baffles, CLEANOUT STAKES, DEWATERING FACILITIES AND SEDIMENT RISER.
  - RIS-FALL PERMANENT OUTLET PLATE.
  - REMOVE ALL SEDIMENT FROM THE BASIN.
  - REPLACE BOTTOM 12" OF SOIL WITH RAIN GARDEN SOIL MIX AND IMMEDIATELY IMPLEMENT PERMANENT VEGETATIVE COVER. LINE BASIN BOTTOM AND SIDES WITH EROSION CONTROL BLANKET.

INFILTRATION BASIN #2:

- INITIATE INSTALLATION OF THE DISCHARGE PIPE (S-2 TO S-3), INCLUDING ANTI-SLEEP COLLARS AND DETAIL ROP-4 RAP APPROX. INSTALL PERMANENT OUTLET STRUCTURE.
- INSTALL PERMANENT OUTLET PLATE AND TRASH RACK.
- IMMEDIATELY IMPLEMENT PERMANENT VEGETATIVE COVER. LINE BASIN BOTTOM AND SIDES WITH EROSION CONTROL BLANKET.

INFILTRATION FACILITY NOTES

- AREAS TO BE USED FOR STORMWATER INFILTRATION OVERLAP "SUBJECT AREAS" SHALL BE DELINEATED WITH ORANGE SAFETY TAPES PRIOR TO START OF CONSTRUCTION.
- COMPACTION OF THE SUBJECT AREAS IS PROHIBITED. EQUIPMENT AND OTHER TRAFFIC SHALL BE PROHIBITED FROM TRAVELING OVER THE SUBJECT AREAS, EXCEPT AS PROVIDED FOR HEREIN. ONLY HAND-HELD EQUIPMENT SHALL BE USED WITHIN SUBJECT AREAS. OTHER EQUIPMENT MAY BE USED AROUND THE PERIMETER - BUT OUTSIDE OF - SUBJECT AREAS FOR PURPOSES OF EXCAVATION AND TO SUPPLY SOILS AND AGGREGATE.
- THE BOTTOM OF INFILTRATION BEDS SHALL BE SCARFED IMMEDIATELY PRIOR TO THE PLACEMENT OF THE GEOTEXTILE FABRIC OR THE LOWEST AGGREGATE SEPARATION LAYER, WHICHEVER IS IN CONTACT WITH THE SOIL SURGRADE, AT THE BOTTOM OF THE BED.
- ONLY UNIFORMLY GRADED, CLEAN AGGREGATE, FREE OF TWIGS, SLATE, CHALK, CLAY, SILT, AND VEGETATIVE MATERIAL SHALL BE USED. THE AGGREGATE SHALL HAVE A MINIMUM VPO RATIO OF 45% AND A WASH LOSS OF NO MORE THAN 5.0%. THESE VALUES APPLY TO BOTH THE AGGREGATE WITHIN THE BED AND ANY AGGREGATE USED AS A SEPARATION LAYER. THE SUPPLIER OF THE AGGREGATE SHALL PROVIDE CERTIFICATION OF THE VPO RATIO OF THE AGGREGATE DELIVERED TO THE SITE. THE DESIGN ENGINEER SHALL VERIFY THAT THE VPO RATIO MEETS OR EXCEEDS THE REQUIREMENTS OF THE DESIGN AND SUBMIT SUCH VERIFICATION TO THE TOWNSHIP.
- WHEREVER DRAINAGE FILTER FABRIC IS SPECIFIED, IT SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS, INCLUDING PIPE PENETRATIONS, AND SHALL OVERLAP A MINIMUM OF EIGHTEEN (18) INCHES.
- SUBJECT AREAS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT SHALL NOT BE ALLOWED TO BE WASHED BACK INTO SUBJECT AREAS WHEN THE BOTTOM OF THE FACILITY IS OPEN OR WHEN THE AGGREGATE IS IN PLACE AND EXPOSED. DURING SITE CONSTRUCTION, ALL INFILTRATION FACILITY COMPONENTS SHALL BE PROTECTED FROM SEDIMENTATION USING STORM INLET PROTECTION IN CONFORMANCE WITH THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DPE) (CHAPTER 92 REGULATIONS, AS AMENDED, AND THE EROSION AND SEDIMENTATION POLLUTION CONTROL MANUAL, AS AMENDED). INLET PROTECTION SHALL REMAIN UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ADEQUATE FULL STABILIZATION.
- IF SEDIMENT DOES ENTER INTO A SUBJECT AREA, THE CONTRACTOR SHALL CLEAN OUT THE SEDIMENT TO THE TOWNSHIP'S SATISFACTION. THIS MAY REQUIRE THE RECONSTRUCTION OF PORTIONS OF OR THE ENTIRETY OF THE SYSTEM.
- A MINIMUM TWO (2)-FOOT SEPARATION SHALL BE PROVIDED BETWEEN THE SEASONAL HIGH GROUNDWATER TABLE OR BEDROCK (WHICHEVER IS HIGHER) AND THE BOTTOM OF THE INFILTRATION FACILITY. IF GROUNDWATER AND/OR BEDROCK ARE ENCOUNTERED WITHIN AND/OR ABOVE THIS 2-FOOT ZONE DURING CONSTRUCTION, THE DEVELOPER, THE DESIGN ENGINEER, THE TOWNSHIP, AND THE TOWNSHIP ENGINEER SHALL BE NOTIFIED IN WRITING WITHIN TWENTY-FOUR (24) HOURS OF SUCH DISCOVERY. UPON REVIEW OF THE ACTUAL SITE CONDITIONS THE DESIGN ENGINEER SHALL SUBMIT REMEDIAL RECOMMENDATIONS.

PCSM REPORTING AND RECORDKEEPING

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

FINAL CERTIFICATION

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

"I (NAMED) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 P.S. § 1.4 (9)(4) TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORDED DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN. ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES."

THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.

THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP'S.

SOILS LEGEND

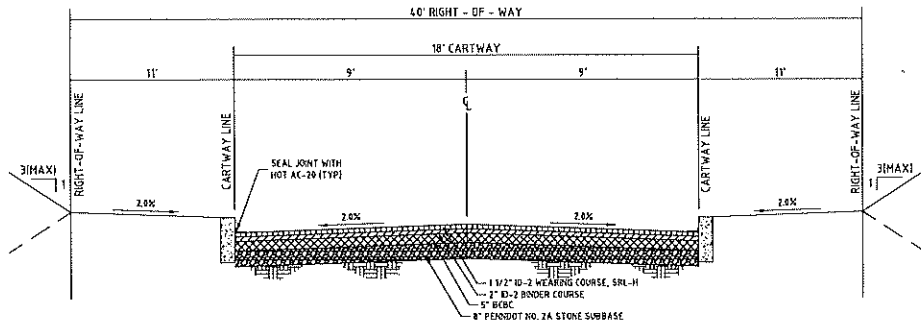
- Bs - BARE SET LOAM
- Gd - GENUINE SILT LOAM, 3 TO 8 PERCENT SLOPES
- Gr - GENUINE SILT LOAM, 15 TO 25 PERCENT SLOPES
- Hs - MAJOR LOAM, 8 TO 15 PERCENT SLOPES
- Ms - MAJOR LOAM, 25 TO 35 PERCENT SLOPES
- Ugd - URBAN LAND-UNDEVELOPED, SOILS AND GEOTECHNICAL, 8 TO 8 PERCENT SLOPES

2815 PENN AVENUE WEST LAWN, PA 610-927-4242		Entireties		1 7/25/23		REVISED PER TOWNSHIP REVIEW LETTERS		MEH		Rev By	
MICHAEL DUANE HARTMAN ENGINEER PA. PERMIT #		MICHAEL DUANE HARTMAN ENGINEER PA. PERMIT #		MICHAEL DUANE HARTMAN ENGINEER PA. PERMIT #		MICHAEL DUANE HARTMAN ENGINEER PA. PERMIT #		MICHAEL DUANE HARTMAN ENGINEER PA. PERMIT #		MICHAEL DUANE HARTMAN ENGINEER PA. PERMIT #	
"MILLSTONE MEADOWS" PRELIMINARY/FINAL PLAN PCSM DETAILS		GROVE MEADOW DEVELOPERS LLC EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA APRIL 20, 2023		M.D. HARTMAN		M.D. HARTMAN		1" = 50'		17 OF 20	
22-001-F-0-10.3											

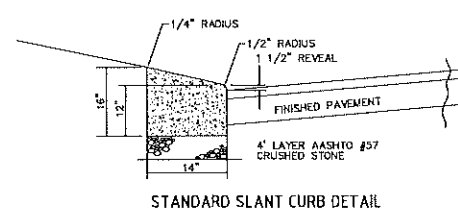




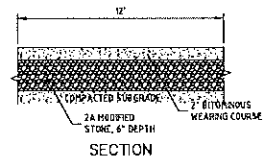




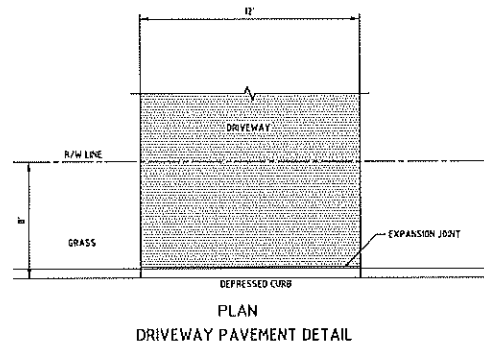
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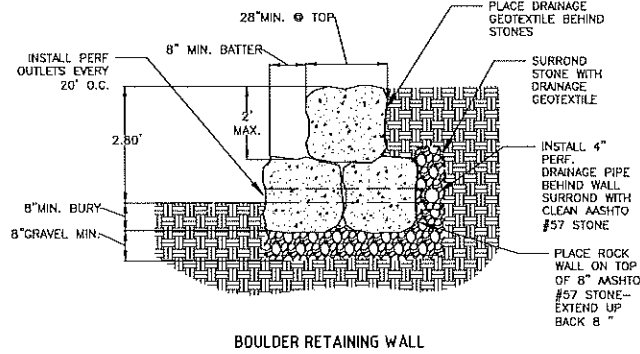
STANDARD SLANT CURB DETAIL



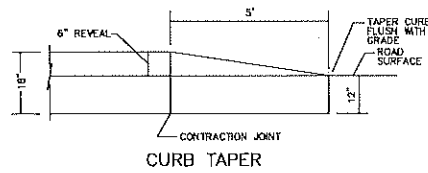
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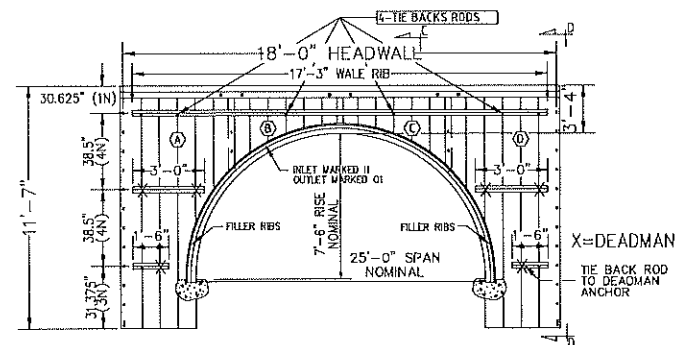
PLAN  
DRIVEWAY PAVEMENT DETAIL



BOULDER RETAINING WALL



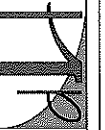
CURB TAPER



PROPOSED CULVERT (ARCH PIPE) HEADWALL ELEVATION VIEW

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

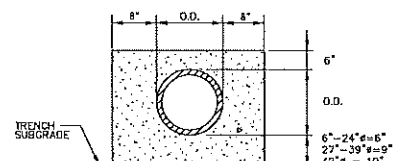
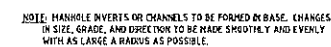
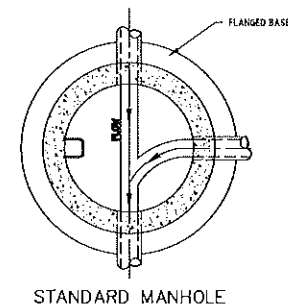
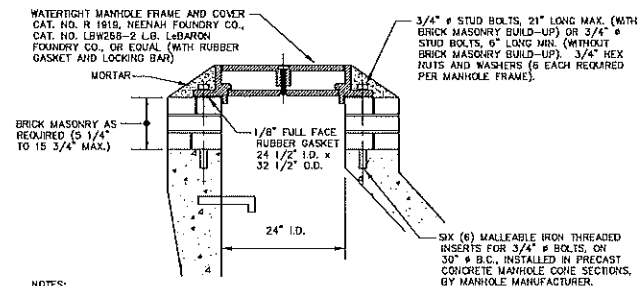
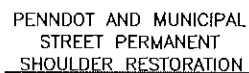
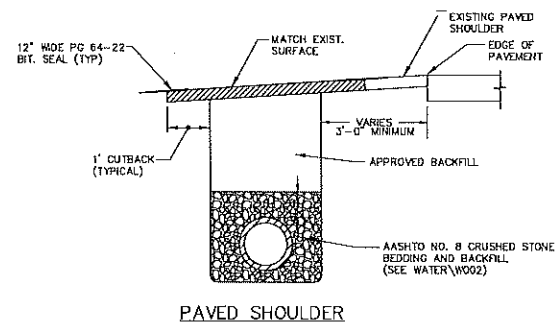
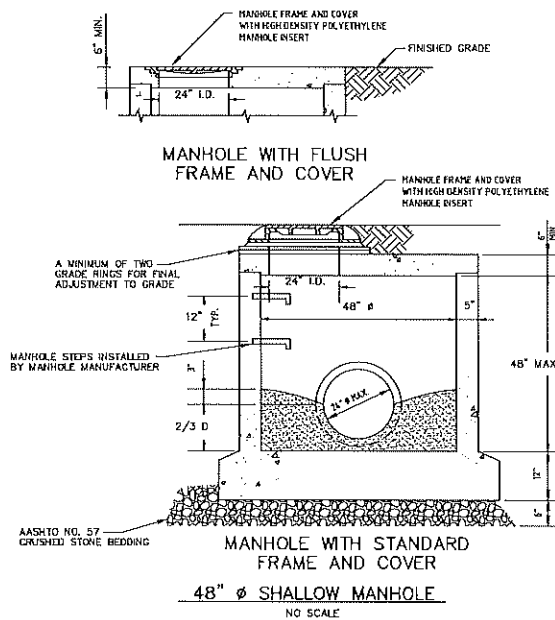
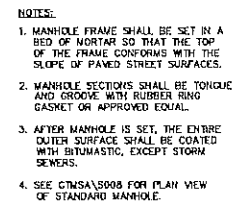
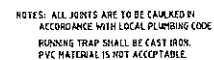
PA00000000



"MILLSTONE MEADOWS"  
PRELIMINARY/FINAL PLAN  
CONSTRUCTION DETAIL & NOTES - SITE

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: N.T.S.  
SHEET: 19 OF 20  
PROJECT: 22-001-F-D-11.1



<p><b>"MILLSTONE MEADOWS"</b></p> <p><b>PRELIMINARY/FINAL PLAN</b></p> <p><b>CONSTRUCTION DETAIL &amp; NOTES - SANITARY</b></p>		<p><b>CHECKED:</b> GROVE MEADOW DEVELOPERS LLC  <b>DATE:</b> APRIL 20, 2023</p> <p><b>APPROVED:</b> EAST GOSHEN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  <b>DATE:</b> APRIL 20, 2023</p>	
OWNER'S NAME	M.D.HARTMAN		<p>SEAL:</p>
DRAWN BY	M.D.HARTMAN		
CHECKED	N.T.S.		
DATE	20 OF 20		
PROJECT NO.	22-001-F-D-11.2		
SHEET NO.	22-001-F-D-11.2		