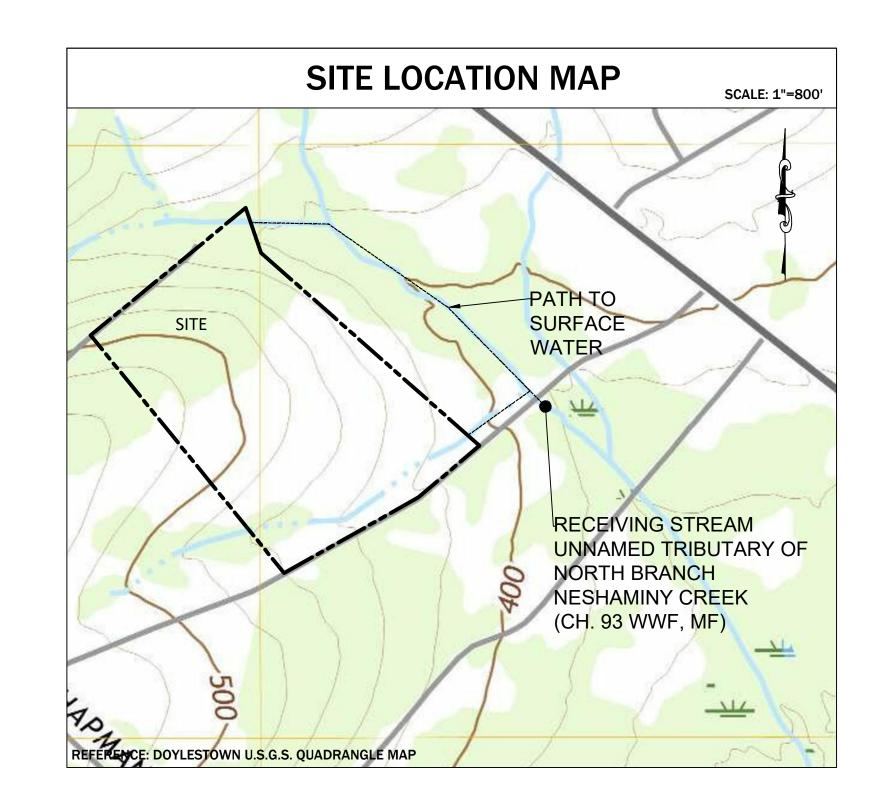
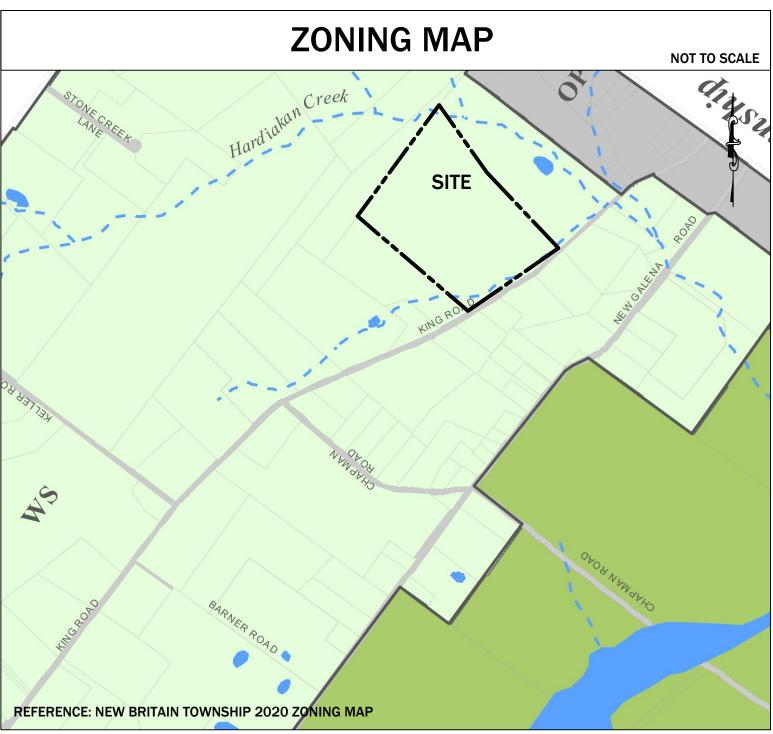
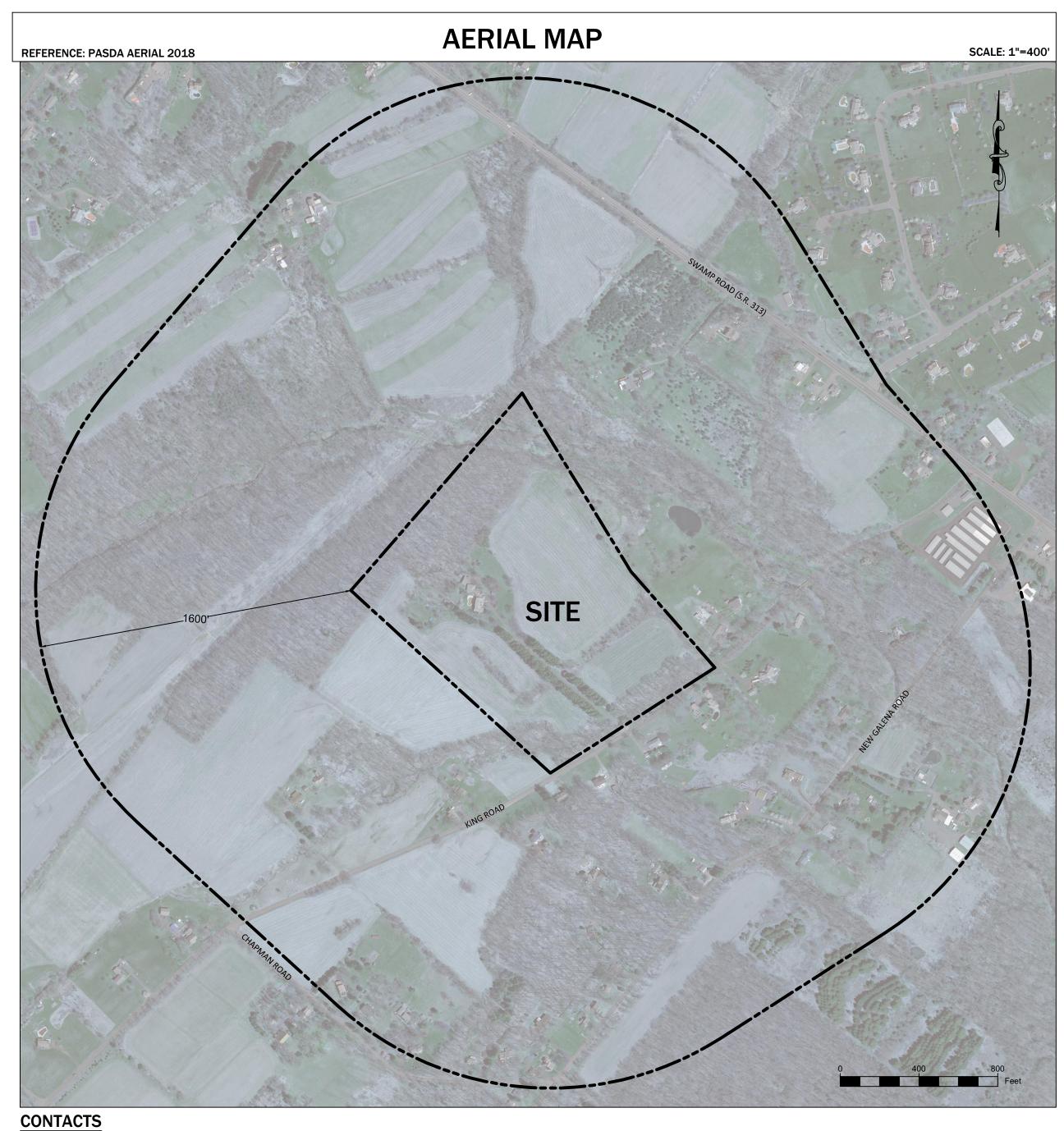
PRELIMINARY AND FINAL LAND DEVELOPMENT AND MAJOR SUBDIVISION PLANS

THE ESTATES AT HILL TOP

TMP # 26-004-030 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA







CONTACTS
TOWNSHIP
NEW BRITAIN TOWNSHIP
207 PARK AVENUE
CHALFONT, Pa 18914
PHONE: (215)-822-1391

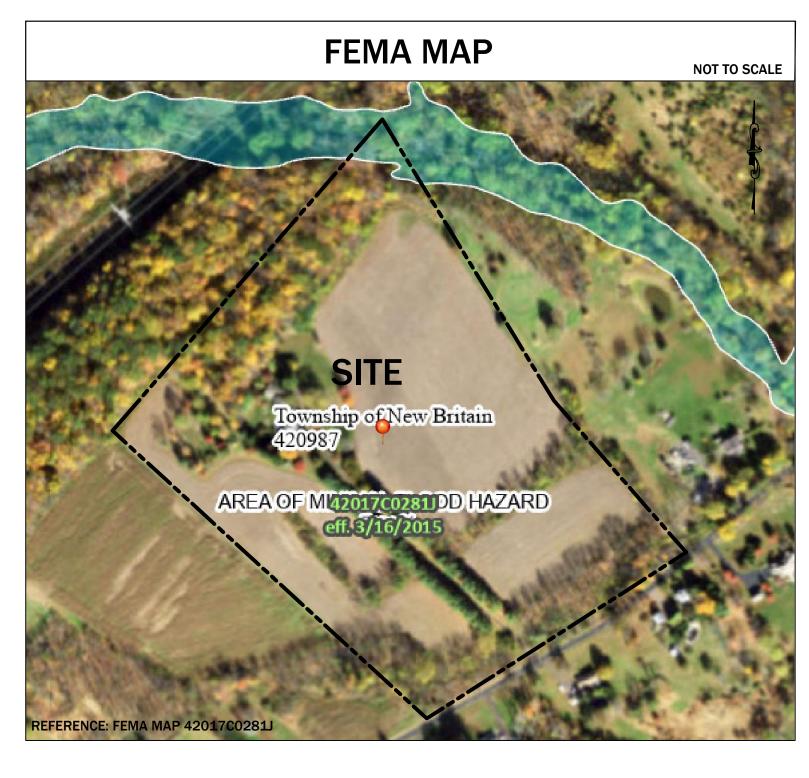
TOWNSHIP ENGINEER
GILMORE & ASSOCIATES, Inc
65 EAST BUTLER AVENUE, SUITE 100
NEW BRITAIN, PA 18901
PHONE: 215 345 4330

TOWNSHIP PUBLIC WORKS DEPARTMENT 207 PARK AVENUE CHALFONT, PA 18914 PHONE: (215)-822-1391 COUNTY PLANNING COMMISSION
BUCKS COUNTY PLANNING COMMISSION
THE ALMSHOUSE NESHAMINY MANOR CENTER
1260 ALMSHOUSE ROAD
DOYLESTOWN, PA 18901
PHONE: 215-345-3400

ELECTRIC AND GAS
PHILDELPHIA ELECTRIC COMPANY
BUCKS/MONT REGION CONTRACTOR AND
BUILDER SERVICES
400 PARK AVENUE
WARMINSTER, PA 18974
PHONE: (215) 956-3270
FAX: (215) 956-3240

WARMINSTER SERVICE BUILDING
400 PARK AVE.,
WARMINSTER, PA 18974
ELECTRIC PHONE: (215) 956-3270
NEW ELECTRIC PHONE: (215) 956-3010
ELECTRIC EMERGENCY: (800) 841-4141
GAS PHONE: (800) 454-4100
NEW GAS PHONE: (800) 454-4100
GAS EMERGENCY: (800) 841-4141
GAS EMERGENCY: (800) 841-4141

COUNTY CONSERVATION DISTRICT
BUCKS COUNTY CONSERVATION
DISTRICT
1456 FERRY ROAD, SUITE 704
DOYLESTOWN, PA 18901
PHONE: 215-345-7577



		DRAWING LIST	
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	LAST REVISED DATE
1	C0.0	COVER SHEET	12/15/2023
2	C0.1	EXISTING CONDITIONS PLAN	12/15/2023
3	C0.2	AERIAL MAP	12/15/2023
4	C0.3	EXISTING RESOURCE AND SITE ANALYSIS PLAN	12/15/2023
5*	C1.0	RECORD SITE PLAN	12/15/2023
6	C2.0	GRADING, DRAINAGE AND UTILITY PLAN	12/15/2023
7	C2.1	CONSTRUCTION DETAILS	12/15/2023
8	C3.0	EROSION AND SEDIMENT CONTROL PLAN	12/15/2023
9	C3.1	EROSION AND SEDIMENT CONTROL DETAILS	12/15/2023
10	C3.2	EROSION AND SEDIMENT CONTROL DETAILS	12/15/2023
11*	C4.0	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	12/15/2023
12	C4.1	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS	12/15/2023
13	C5.0	TRUCK TURN & PROFILE PLAN	12/15/2023
14	C6.0	LANDSCAPING PLAN	12/15/2023
15	C6.1	LANDSCAPING DETAILS	12/15/2023

^{*} DENOTES PLAN TO BE RECORDED

APPLICANT/ EQUITABLE OWNER

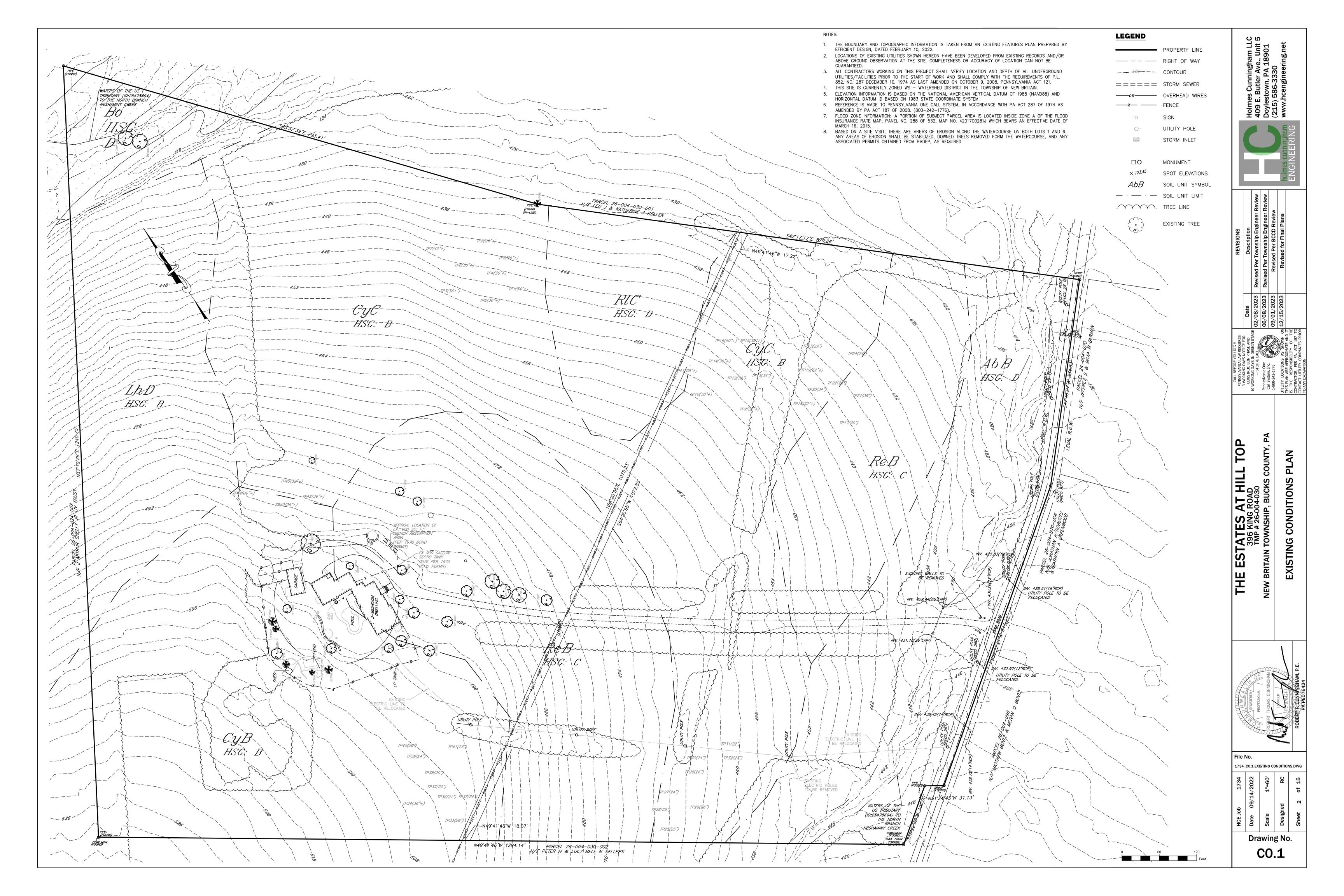
CASADONTI HOMES, INC. P.O. BOX 5, CHALFONT, PA 18914

PREPARED BY:



HOLMES CUNNINGHAM LLC 409 EAST BUTLER AVENUE UNIT 5 DOYLESTOWN, PA 18901 (215) 586-3330

REVISED:	12/15/2023
REVISED:	09/01/2023
REVISED:	06/08/2023
REVISED:	02/08/2023
DATE:	09/14/2022
PROJECT #	_# 1734
DRAWING	# C0.0
SHEET	1 OF 15





	RESOURCE PRO	TECTION STANDARDS			
Resource	Min. Required Protection Ratio	Total Area of Land in Resource	Required Resource Protection Land	Actual Resource Protection Land	Actual Protection Ratio
	%	(Ac.)	(Ac.)	(Ac.)	%
Watercourses	100%	1.052	1.052	0.000	N/A
Floodplains	100%	0.569	0.569	0.569	100%
Floodpain (Alluvial) Soils	100%	0.933	0.933	0.933	100%
Wetlands	100%	0.000	0.000	0.000	N/A
Wetlands Margin	80%	0.000	0.000	0.000	N/A
Riparian Buffer	100%	3.154	3.154	3.154	100%
Lakes and Ponds	100%	0.000	0.000	0.000	N/A
Woodlands (CR, WS, SR-1, SR-2, and RR Zoning Districts)	80%	11.729	9.383	11.099	95%
Agricultral Soils	50%	31.614	15.807	20.794	66%
Steep Slopes 8%-15%	60%	18.272	10.963	13.419	73%
Steep Slopes 15%-25%	70%	2.132	1.492	1.996	94%
Steep Slopes 25%+	85%	0.460	0.391	0.443	96%

	Soils Legend				
<u>Type</u>	<u>Name</u>	Depth to Bedrock	Depth to Seasonal High Water Table	<u>HSG</u>	Hydric Soil
AbB	Abbotstown silt loam, 3 to 8 percent slopes	40"-60"	6"-18"	D	No
Во	Bowmansville-Knauers silt loams, 0 to 3 percent slopes	72"-99"	0"-18"	C/D	No
СуВ	Culleoka-Weikert channery silt loams, 3 to 8 percent slopes	20"-40"	>80"	В	No
CyC	Culleoka-Weikert channery silt loams, 8 to 15 percent slopes	20"-40"	>80"	В	No
LhD	Lansdale loam, 8 to 25 percent slopes, extremely stony	42"-72"	>80"	В	No
ReB	Readington silt loam, 3 to 8 percent slopes	40"-60"	18"-36"	С	No
RIC	Realville channery silt loam, 8 to 15 percent slopes	20"-40"	6"-36"	D	No
order to resolve the groundwate	ils found within the project limits have varying limitations includin or limitation, any standing water should be pumped through a sedir is rippable. If rock is not rippable, blasting will be required. All bla	nent filter bag. To	resolve the bedrock li	mitation, the contract	or shall determine

- 1. THE BOUNDARY AND TOPOGRAPHIC INFORMATION IS TAKEN FROM BOUNDARY & TOPOGRAPHIC PLAN PREPARED BY EFFICIENT DESIGN, DATED FEBRUARY 10, 2022. 2. AERIAL PHOTOGRAPHY TAKEN FROM PASDA AERIAL PHOTOGRAPHS 2018.
- 3. THE PROPOSED DEVELOPMENT IS TO BE SERVED BY ON-LOT WELL AND SEPTIC SYSTEMS.
- 4. THE PROPERTY IS PARTIALLY WITHIN ZONE A FLOOD HAZARD AS PER FEMA PANEL 42017C0281J REVISED MARCH 16, 2015.
 5. TOPOGRAPHICAL INFORMATION IS BASED UPON VERTICAL DATUM NAVD 88 AND HORIZONTAL DATUM PA83—S.

Site Capacity Calculations		
	Area (SF)	Area (AC)
Gross Site Area Determined by Actual On-site Survey	1,495,537	34.333
Existing Streets Ultimate Rights-of-Way	22,837	0.524
Existing Utility Rights-of-Way or Easements	17,721	0.407
Existing Preservation Easements	0	0.000
Land Not Contiguous	0	0.000
Land Shown on Previous Subdivision Reserved for Open Space, Protection, etc.	0	0.000
Land in a Different Zoning District from Primary Use	0	0.000
Base Site Area	1,454,979	33.402

	Land Shown on Previous Subdivision Reserved for Open Space, Protection, etc.			0	0.000	
	Land in a Different Zoning District from Primary Use			0	0.000	
	Base Site Area			1,454,979	33.402	
	Resource Protection Land					
_	Natural Resource	Protection Ratio	Acres of Land in Resources	Resource Protection Land (AC)	Proposed Resource Protection Land (AC)	
	Watercourses	1.00	1.05	1.05	1.05	
_	Riparian Buffer	1.00	1.53	1.53	1.53	
	Floodplain	1.00	0.57	0.57	0.57	
	Floodplain (Alluvial) Soils	1.00	0.03	0.03	0.03	
_	Wetlands	1.00	0.00	0.00	0.00	
	Lakes and Ponds	1.00	0.00	0.00	0.00	
_	Steep Slopes 25%+	0.85	0.42	0.36	0.44	
	Woodlands	0.80	8.15	6.52	6.52	
	Steep Slopes 15-25%	0.70	0.30	0.21	2.00	
_	Steep Slopes 8-15%	0.60	12.18	7.31	13.42	
9	Total Land with Resource Restrictions			24.2	24	
	Total Land with 1.00 Protection Ratio Restrictions			3.18		
	Total Resource Protection Land Required			17.58		
4	Tatal Passing Protestion Land Provided			40.54		

	Net Buildable Site Area Calculations		
	Base Site Area	33.40	Ac.
	Subtract Required Open Space	3.18	Ac.
	Net Buildable Site Area	30.22	Ac.
_	Density Calculations		
`	Net Buildable Site Area	30.22	Ac.
	Multiply by Maximum Density	N/A	
	Number of Dwelling Units Permitted	N/A	
	Impervious Surface Calculations		
	Base Site Area	33.40	Ac.
	Multiply by Maximum Impervious Surface Ratio	0.20	

LEGEND
208 EXISTING CONTOUR
DISTURBANCE LINE
ULTIMATE RIGHT-OF-WAY
STREAM/ WATERCOURSE
FLOODPLAIN
WOODLANDS
RIPARIAN CORRIDOR BUFFER
STEEP SLOPES 8%-15%
STEEP SLOPES 15%-25%
STEEP SLOPES 25%+
TrB SOIL TYPE
AGRICULTURAL SOILS

Site Capacity Calculations		
	Area (SF)	Area (AC)
Gross Site Area Determined by Actual On-site Survey	1,495,537	34.333
Existing Streets Ultimate Rights-of-Way	22,837	0.524
Existing Utility Rights-of-Way or Easements	17,721	0.407
Existing Preservation Easements	0	0.000
Land Not Contiguous	0	0.000
Land Shown on Previous Subdivision Reserved for Open Space, Protection, etc.	0	0.000
Land in a Different Zoning District from Primary Use	0	0.000
Base Site Area	1,454,979	33.402
Para and Participated		

Natural Resource	Protection Ratio	Acres of Land in Resources	Resource Protection Land (AC)	Proposed Resource Protection Land (AC
Watercourses	1.00	1.05	1.05	1.05
Riparian Buffer	1.00	1.53	1.53	1.53
Floodplain	1.00	0.57	0.57	0.57
Floodplain (Alluvial) Soils	1.00	0.03	0.03	0.03
Wetlands	1.00	0.00	0.00	0.00
akes and Ponds	1.00	0.00	0.00	0.00
Steep Slopes 25%+	0.85	0.42	0.36	0.44
Woodlands	0.80	8.15	6.52	6.52
Steep Slopes 15-25%	0.70	0.30	0.21	2.00
Steep Slopes 8-15%	0.60	12.18	7.31	13.42
otal Land with Resource Restrictions	•		24.2	24
Total Land with 1.00 Protection Ratio Restrictions			3.1	8
Total Resource Protection Land Required			17.5	58
Total Resource Protection Land Provided			19.5	54
otal Disturbed Resources			4.7	0
0	pen Space Calculations	3		
Base Site Area			33.40	Ac.
Multiply by Minimum Open Space Ratio			0.00	
Standard Minimum Open Space			0.00	Ac.
Required Open Space (Greater of 100% Protection Land or M	in Open Space)		3.18	Ac.
Net Bui	ildable Site Area Calcul	ations	'	
Base Site Area			33.40	Ac.
Subtract Required Open Space			3.18	Ac.

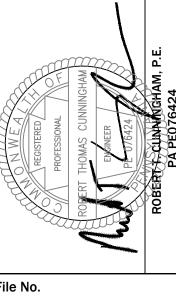
LEGEND
208 EXISTING CONTOUR
DISTURBANCE LINE
ULTIMATE RIGHT-OF-WAY
STREAM/ WATERCOURSE
FLOODPLAIN
WOODLANDS
RIPARIAN CORRIDOR BUFF
STEEP SLOPES 8%-15%
STEEP SLOPES 15%-25%
STEEP SLOPES 25%+
TrB soil type
AGRICULTURAL SOILS

Holmes Cu 409 E. Butl Doylestowr (215) 586- www.hceng
s cunningham INEERING



	-				2	
NEVISIONS	Description	evised Per Township Engineer Review	evised Per Township Engineer Review	Revised Per BCCD Review	Revised for Final Plans	

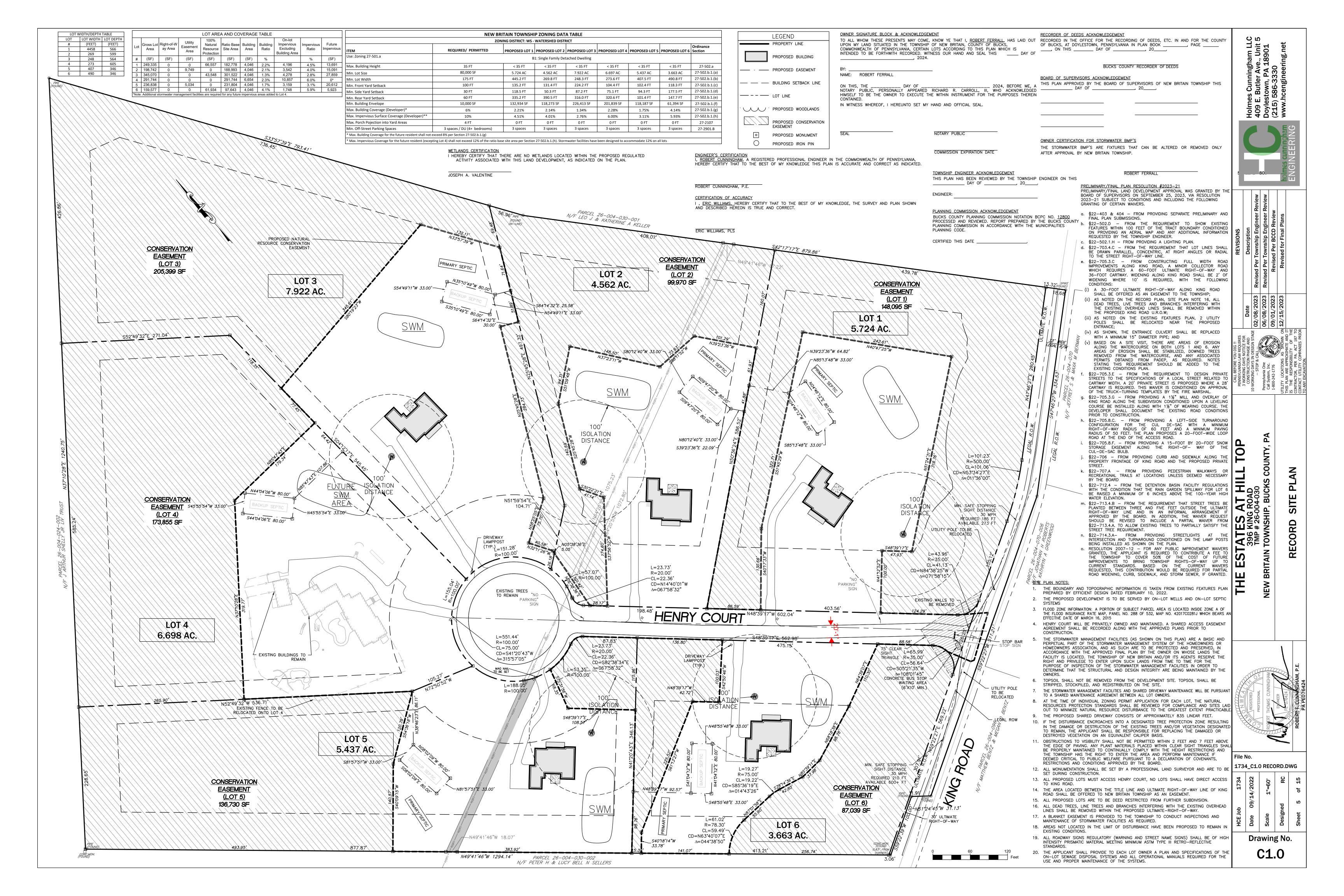
Desc	Revised Per Towns	Revised Per Towns	Revised Per	Revised for	
Date	02/08/2023	06/08/2023	09/01/2023	SHOWN ON 12/15/2023	
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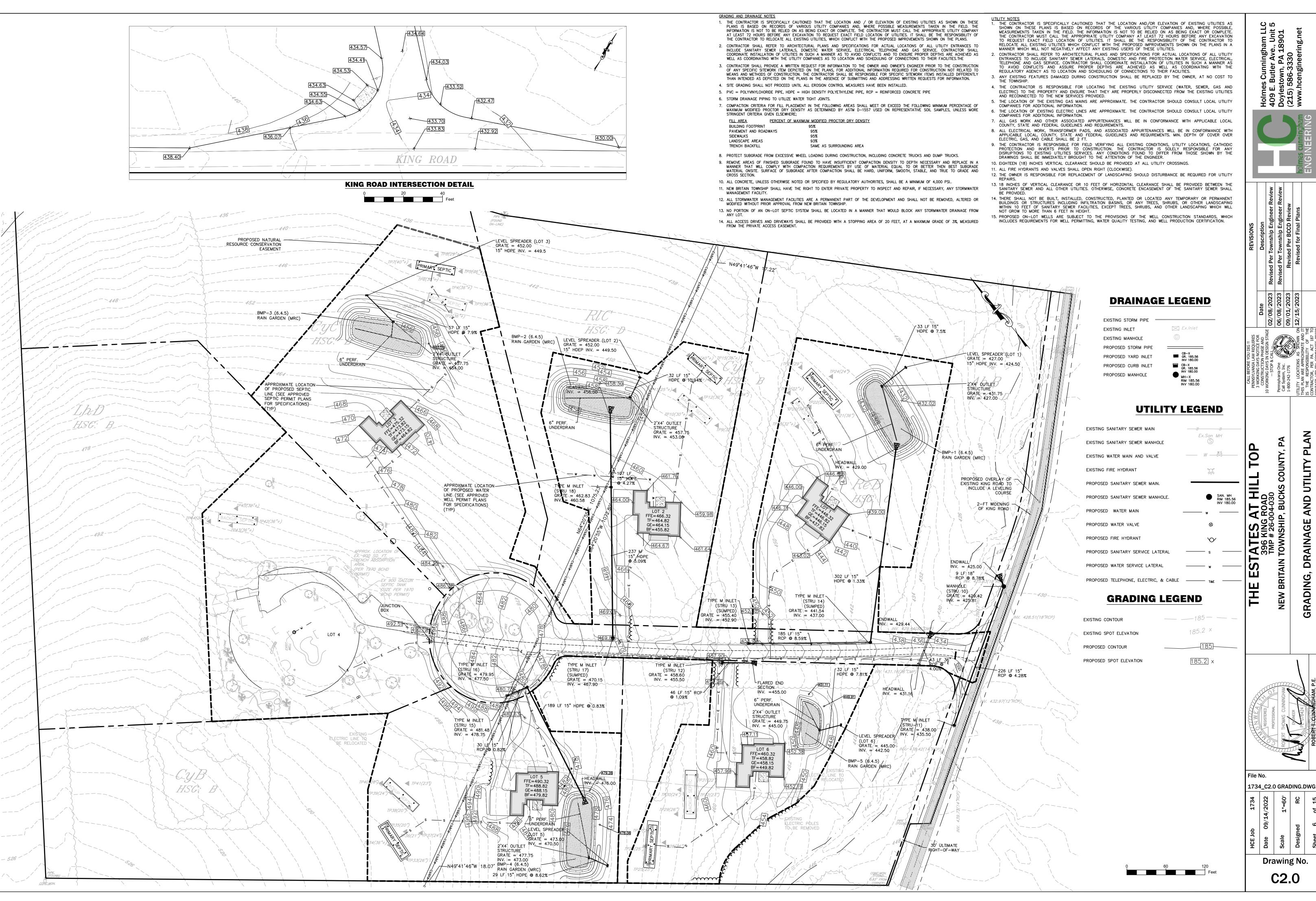


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1734	09/14/2022	1"=80'	EC	of 15
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HCE Job	Date	Scale	Designed	Sheet

Drawing No. CO.3

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			loodplain (Alluvial) Soils
		/(//~~	Vetlands
	35-57-30 to the contract of th	(⁽⁰⁾)	akes and Ponds
		- ' \	teep Slopes 25%+
			Voodlands
WINT OF	430		teep Slopes 15-25%
LIMIT. OF	25' RIPARIAN-CORRIDOR ZONE 1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	teep Slopes 8-15%
SOILS/			otal Land with Resource Restrictions
	50' RIPARIAN CORRIDOR ZONE 2		otal Land with 1.00 Protection Ratio Restriction
	136. 197-LEO J & KATHERING -001		otal Resource Protection Land Required
	OH-INE)		otal Resource Protection Land Provided
	States States	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	otal Disturbed Resources
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	N49'41'46"W 17.22"	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	ase Site Area
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	lultiply by Minimum Open Space Ratio
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		R	equired Open Space (Greater of 100% Protection
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			ubtract Required Open Space
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		8-8-8-17-11 Nr. 1 \	ase Site Area
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	25') RIPARIAN CORRIDOR ZONE 1		20d
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	192-		
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1734_C2.0 GRADING.DWG

- 1.5" SUPERPAVE ASPHALT MIXTURE DESIGN, 9.5 mm MIX, PG 64-22, HMA WEARING COURSE, 3.0 TO 10.0 MILLION ESALS, SRL-M
- 2 4.5" SUPERPAVE ASPHALT MIXTURE DESIGN, 25 mm MIX, PG 64-22, HMA BASE COURSE, 3.0 TO 10.0 MILLION ESALS
- 3 6" 2A MODIFIED STONE SUBBASE (MATCH EXISTING IF GREATER)

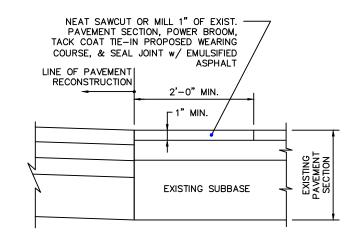
NOTE: NEW ROADS SHALL COMPLY WITH THE ABOVE SPECIFICATION

TYPICAL ROADWAY WIDENING SECTION DETAIL FOR RESIDENTIAL AND LOCAL ROADS

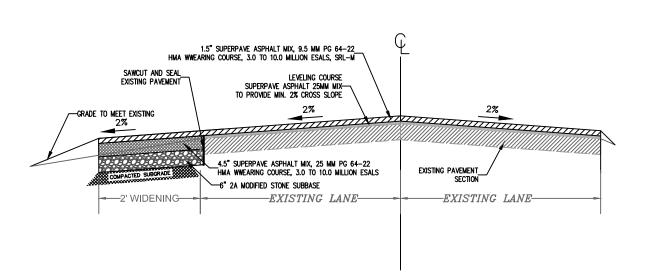
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA



GILMORE & ASSOCIATES, INC **ENGINEERING & CONSULTING SERVICES**



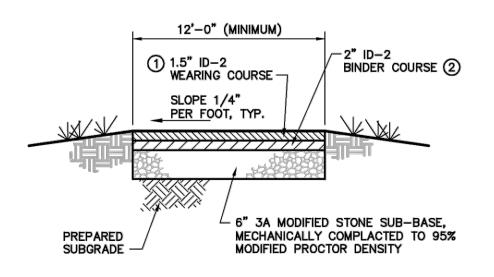
PAVEMENT TIE-IN



KING ROAD WIDENING DETAIL

<u>NOTES</u>

- 1. AS SHOWN ON SHEET C1.0, THE FULL WIDTH OF KING ROAD ALONG THE PROJECT FRONTAGE IS PROPOSED TO BE OVERLAID.
- 2. KING ROAD IS PROPOSED TO BE WIDENED BY 2 FEET.
- 3. NO CURBING OR PAVEMENT BASE DRAIN IS PROPOSED.



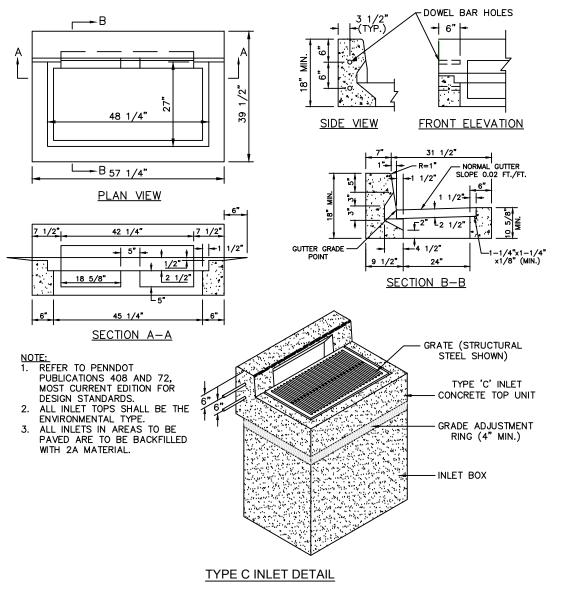
ALTERNATE SPECIFICATION

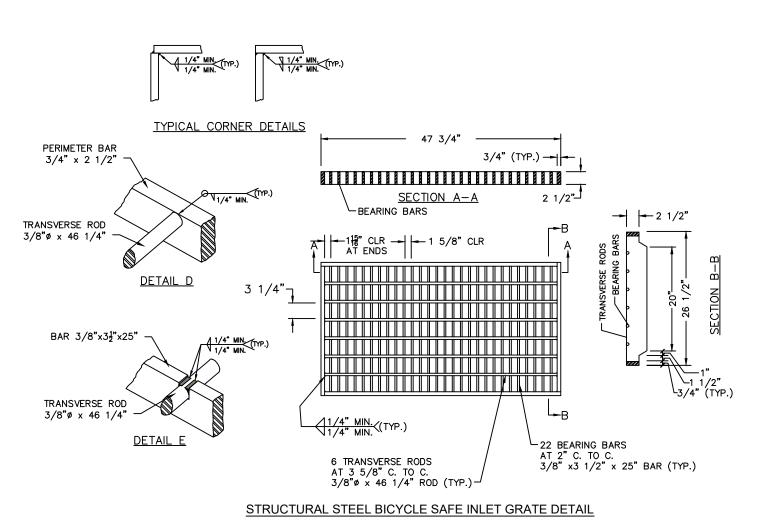
1.5" SUPERPAVE ASPHALT MIXTURE DESIGN, 9.5 mm MIX, PG 64-22, HMA WEARING COURSE, 0.3 TO 3 MILLION ESALS, SRL-M 2.0" SUPERPAVE ASPHALT MIXTURE DESIGN, 19mm MIX, PG 64-22, HMA BINDER COURSE, 0.3 TO 3 MILLION ESALS

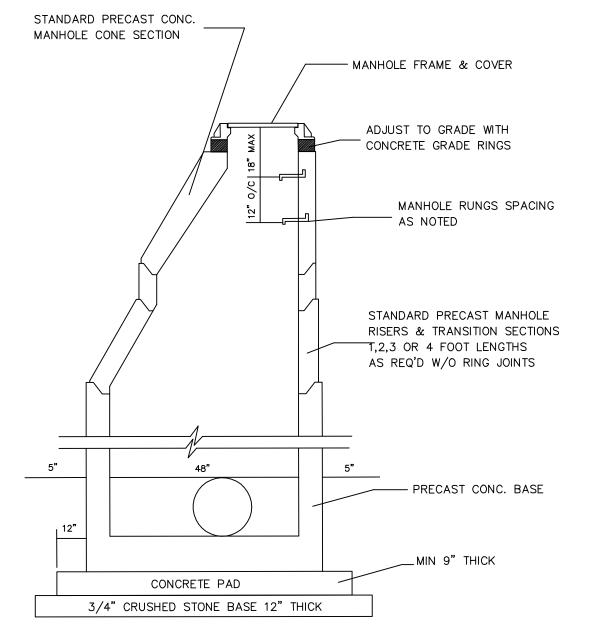
RESIDENTIAL DRIVEWAY PAVING SECTION DETAIL

NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

DOWEL BAR HOLES r⊸B







 $\begin{vmatrix} \frac{6}{1} \\ \frac{1}{1} \end{vmatrix} = 1 \frac{1}{2}$ " $\frac{2 \frac{1}{2}}{1 \frac{1}{2}}$ " $\frac{1}{1}$

45 1/4**"**

SECTION A-A

<u></u>B 57 1/4"

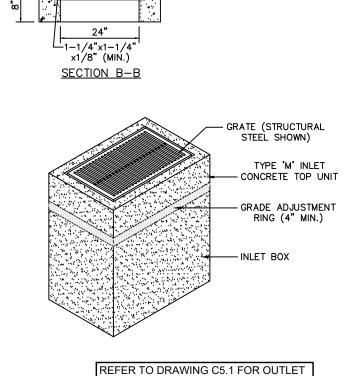
BACKFILLED WITH 2A MATERIAL.

PLAN VIEW

NOTE:
1. REFER TO PENNDOT PUBLICATIONS 408 AND 72, MOST CURRENT EDITION FOR DESIGN STANDARDS..

ALL INLET TOP SHALL BE THE ENVIRONMENT TYPE.

ALL INLET IN AREAS TO BE PAVED ARE TO BE

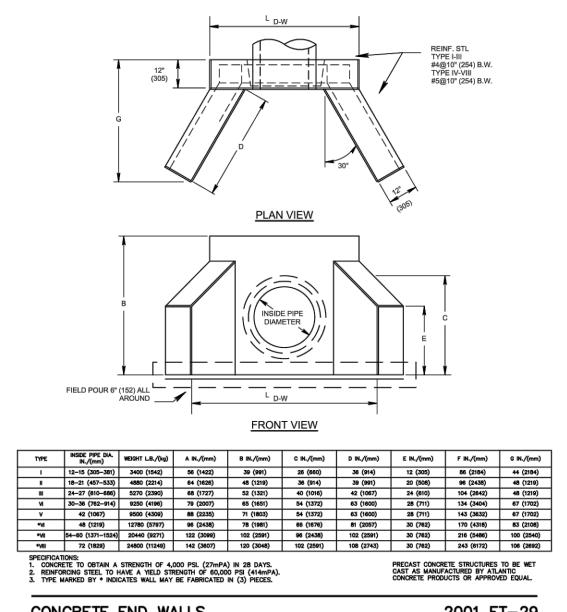


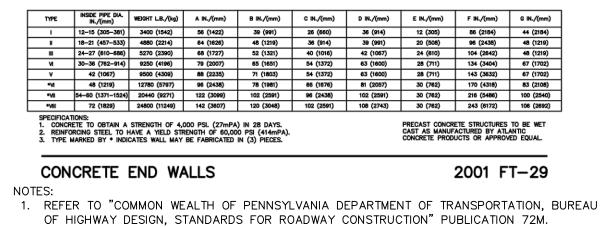
STRUCTURE DETAILS AND INFORMATION TYPE M INLET DETAIL

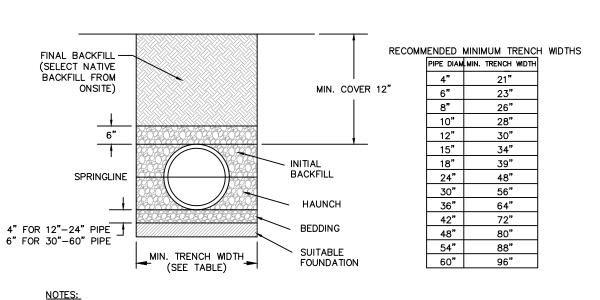
- 1. PRECAST CONCRETE MANHOLES SHALL BE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M) RC-39M, 'STANDARD MANHOLES," PRECAST MANHOLES AND MANHOLE STEPS'.
- 2. STEPS SHALL BE PROVIDED WHENEVER
- STRUCTURE EXCEEDS 4 FEET IN DEPTH. 3. STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB 172M), RC-39M.
- 4. STEP AND STEP INSTALLATION SHALL MEET ALL REQUIREMENTS OF ASTM C 478 AND C 497 FOR DIMENSIONS, LOAD RATING AND PULLOUT RESISTANCE. 5. PROVIDE FRAME AND GRATE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY
- CONSTRUCTION. CURRENT EDITION (PDT PUB 1172M) RC-39M. 'STANDRARD MANHOLES COVERS, FRAMES AND ADJUSTMENT RISERS' 6. THE CONTRACTOR SHALL PROVIDE CUT SHEETS TO ENGINEER TO REVIEW PRIOR TO
- CONSTRUCTION. 7. STORM MANHOLE COVERS SHALL HAVE THE WORD "STORM" ON THE COVER IN 2-INCH
- 8. STORM MANHOLES SHALLS BE THE ENVIRONMENT TYPE.

HIGH LETTERS.

PRECAST CONCRETE STORM MANHOLE

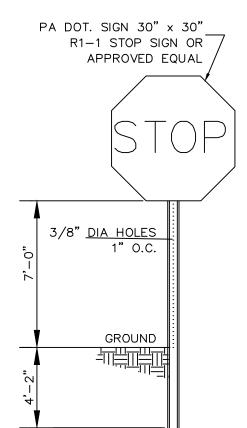






- 1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS",
- 2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A
- 4. <u>BEDDING:</u> SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm). 5. <u>INITIAL BACKFILL:</u> SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- 6. <u>MINIMUM COVER</u>: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

HDPE PIPE DETAIL





R8-3 NO PARKING SIGN OR APPROVED EQUAL

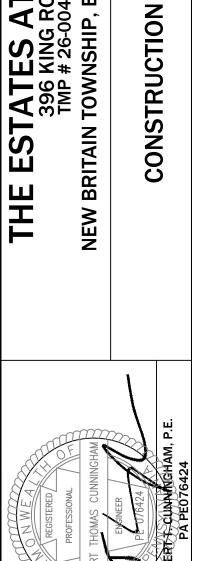
(12" X 18") ALL POSTS SHALL BE BREAKAWAY POSTS AND OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".

ALL POSTS SHALL BE EMBEDDED 4'-2" MINIMUM

- ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).
- 4. POSTS MAY BE STEEL, ALUMINUM, OR TWO-PIECE
- U-POST. 5. SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL AND
- DIRECTIONAL SIGN SHEET. 6. BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
- 7. ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ALL CURRENT AMENDMENTS.

STOP SIGN

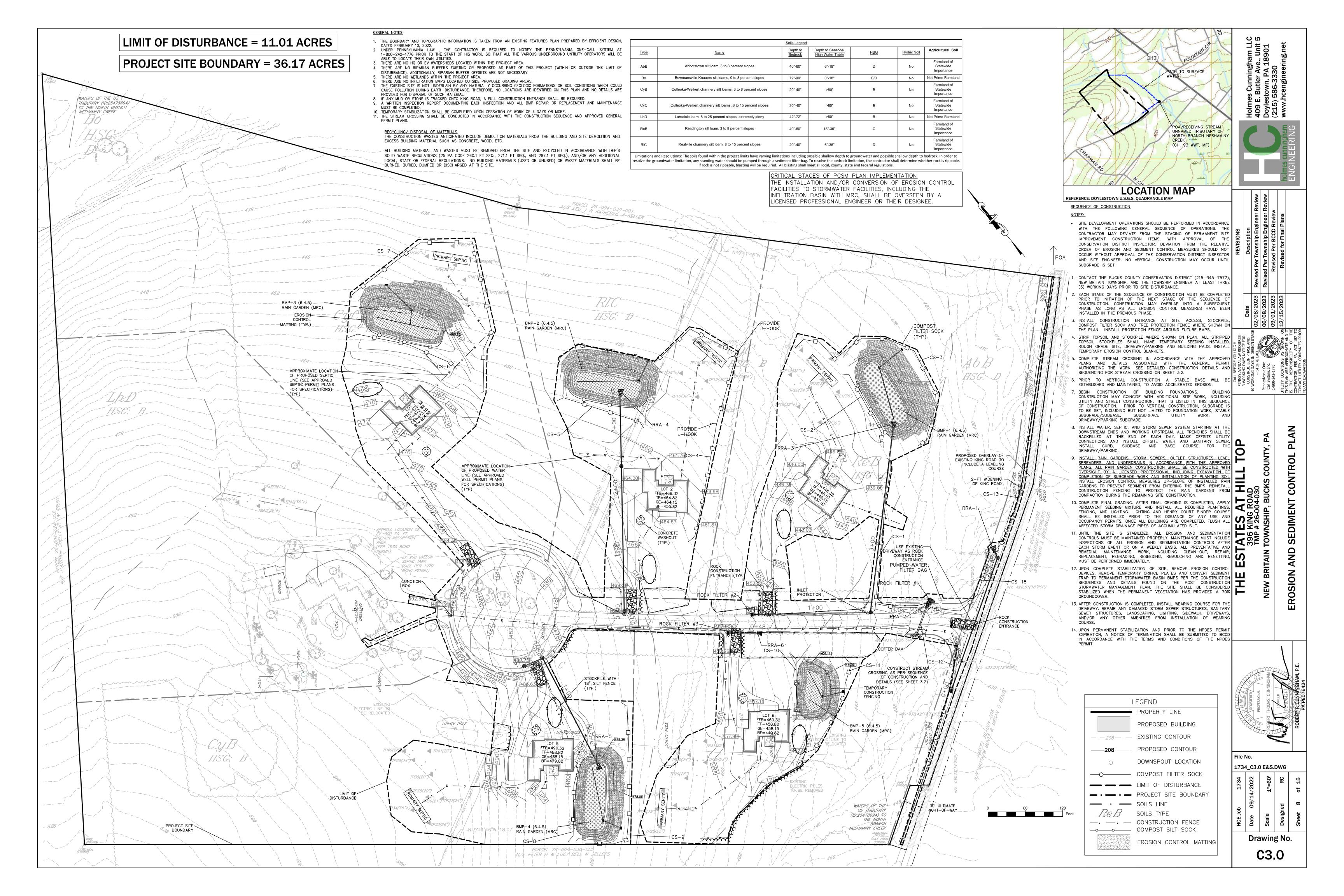
BELOW GRADE.



DETAIL

1734_C2.1 DETAILS.DWG

C2.1



IF THE SITE WILL NEED TO HAVE FILL IMPORTED FROM AN OFF SITE LOCATION, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND THE DETERMINATION OF CLEAN FILL WILL RESIDE WITH THE OPERATOR.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)

ENVIRONMENTAL DUE DILIGENCE: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

EROSION / SEDIMENT CONTROL PLAN STANDARD NOTES

STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2L:1V.

THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE BUCKS COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR LOCATIONS.

ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER UNDISTURBED AREAS.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE

PROJECT SITE AT ALL TIMES.

EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE

DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS.

AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP

CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMPS MUST BE STABILIZED IMMEDIATELY.

AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALL

INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER AND THE BUCKS COUNTY CONSERVATION DISTRICT TO A PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. AT 1-800-242-1776 TO DETERMINE ANY LINDERGROUND LITHTIES LOCATIONS

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.

DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE—DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% (PERCENT) VEGETATIVE OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

UPON THE INSTALLATION OF TEMPORARY SEDIMENT BASIN RISER(S), A QUALIFIED SITE REPRESENTATIVE SHALL CONDUCT AN IMMEDIATE INSPECTION OF THE RISER(S), WHEREUPON THE BUCKS COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING THAT THE RISER IS SEALED (WATERTIGHT).

AT STREAM CROSSINGS, A 50-FOOT BUFFER SHALL BE MAINTAINED. ON BUFFERS, CLEARINGS, SOD DISTURBANCES AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITY SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES.

UNTIL A SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE—GRADING, RE—SEEDING, RE—MULCHING AND RE—NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.

SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF ON—SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.

ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.), AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE.

SEEDING NOTES:

TEMPORARY SEEDING :

- 1. TEMPORARY SEEDING SHALL BE DONE IN AREAS WHERE NO ACTIVITY WORK WILL BE PERFORMED. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY.
- 2. DURING NON-GERMINATING PERIODS, ONLY MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. AREAS MULCHED DURING THE NON-GERMINATING PERIODS, MUST BE LIMED, FERTILIZED, SEEDED, AND MULCHED IMMEDIATELY FOLLOWING THE END OF THE NON-GERMINATING PERIODS.
- . DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEED MIXTURE.
- 4. DISTURBED AREAS WHICH ARE AT EITHER FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
- 5. TEMPORARY SEEDING STEPS:

 A. APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER, 1000 SQUARE
- FEET)
- APPLY FERTILIZER AT THE RATE OF 50-50-50 PER ACRE. WORK THE LIMESTONE AND FERTILIZER INTO THE SOIL.
- TEMPORARY SEEDING

 SEASON RATE TYPE

 MARCH 1 TO JUNE 15 1 LB./1000 SF ANNUAL RYEGRASS

 MAY 15 TO SEPT 15 1 LB./1000 SF SUDAN GRASS

UTILIZING THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE

SEPT 15 TO OCT 15 168 LB./AC WINTER RYE

E. APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER

6. ALL SEED SHALL BE LABELED, DATED AND QUALITY CONSISTENT WITH SECTION NO. 2

DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.

2. SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER PT, UNLESS OTHERWISE DIRECTED. IF SEEDING IS DONE AFTER OCTOBER 1", DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE

- 3. DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDED AS FOLLOWS:

 A. MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL
- AND TOPSOIL SHALL NOT BE SPREAD OVER FROZEN GROUND.

 B. A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AND FERTILIZER AT RATES RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST RESULTS (ONE (1)
- TEST PER 25 ACRES)). C. THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO DEPTHS OF 3 TO 4 INCHES. D. GRASS SHALL NOT BE PLANTED AFTER HEAVY RAIN OR WATERING.
- D. ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT AT THE TIME OF PURCHASE. INERT MATTER SHALL NOT EXCEED 15% AND BLUE TAG CERTIFIED SEED SHALL BE SUPPLIED WHEREVER POSSIBLE.
 E. SMOOTH AND FIRM SEED BED WITH CULTIPACKER OR SIMILAR EQUIPMENT PRIOR TO SEEDING. APPLY SEED UNIFORMLY BY BROADCASTING, DRILLING OR HYDRO SEEDING. COVER SEEDS WITH 1/2" OF SOIL WITH
- F. APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER

PERMANENT SEEDING FOR NORMAL MOWED LAWN AREAS:

 SEASON
 RATE
 TYPE

 MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1
 2 LBS./1000 SF
 KY31 TALL FESCUE AND RED TOP 12%

 OCT 1 TO MARCH 1 & JUNE 1 TO AUG 1
 2 LBS./1000 SF
 RED TOP*

((*) USE DORMANT SEED, UNIFORMLY APPLIED, WORKING INTO A DEPTH OF 1/4 INCH. THE USE OF MULCH IS REQUIRED. THE USE OF NETTING OR EROSION CONTROL MATS MAY BE REQUIRED.)

PERMANENT SEEDING FOR SPECIAL AREAS (SWALES, POND EMBANKMENTS, LEVEES, DIVERSION CHANNELS, ETC):

SEASON RATE TYPE

MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE 80%

NOTE: SEEDING PERIODS AND SPECIFICATIONS MAY VARY DUE TO SITE CONDITIONS AND VARIANCES FROM THE TIME THIS REPORT IS WRITTEN AND APPROVED. IT MAY BE NECESSARY TO ADAPT SEED SPECIFICATION, VARIETIES, AND QUALITIES. FOR SPECIAL CONDITIONS CONSULT "GUIDELINE FOR RECLAMATION OF SEVERELY DISTURBED AREAS", PENNSYLVANIA STATE UNIVERSITY.

- 4. FERTILIZER: A SOIL ANALYSIS IS RECOMMENDED BUT IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AT A RATE OF FOUR (4) TONS/ACRE AND 10-20-20 FERTILIZED AT A RATE OF 50 LBS. PER 1000 SF. THESE MATERIALS WILL BE UNIFORMLY APPLIED AND WORKED INTO THE TOPSOIL TO A DEPTH OF 3 TO 4 INCHES. IMMEDIATELY BEFORE SEEDING, A 1 0- 1 0- 10 FERTILIZER WILL BE WORKED INTO THE SURFACE AT A RATE OF 10 LBS. PER 1000 SF.
- 5. HYDRO SEEDING: LIME AND SEED SHALL BE AS SPECIFIED ABOVE, AND FERTILIZER SHALL BE APPLIED AT A RATE OF 40-80. CROWN VETCH SHALL BE INOCULATED AT FOUR TIMES THE MANUFACTURER'S RATE. SHOULD FERTILIZER BE APPLIED WITH THE INOCULANT, THE MIXTURE SHALL NOT REMAIN IN A SLURRY FOR MORE THAN ONE HOUR. WOOD CELLULOSE FIBER, APPLIED AT A RATE OF 35 LBS. PER 1000 SF, MAY BE APPLIED AS PART OF THE SLURRY IN LIEU OF MULCHING. SYNTHETIC MULCH BINDER, SUCH AS CURASOL, DCA-70, TERRE-TACK OR AN APPROVED EQUAL SHALL BE USED PER THE MANUFACTURER'S INSTRUCTIONS TO ANCHOR THE MULCH.
- . MULCHING: MULCHING SHALL BE APPLIED AS FOLLOWS:

 A. STRAW SHALL BE ALL DRIED AND FREE FROM UNDESIRABLE SEEDS AND COURSE MATERIAL, APPLY AT A RATE OF 115 TO 150 LBS. PER 1000 SF OR 3 TONS PER ACRE. MULCHED AREAS SHALL BE CHECKED PERIODICALLY AND IMMEDIATELY AFTER STORMS AND WIND. DAMAGED OR MISSING MULCH SHALL BE REPLACED. A TACKIFIER APPLIED AFTER STRAW IS RECOMMENDED. TACKIFIER MAY BE ASPHALT OR POLYMER SPRAY. APPLY AT A RATE RECOMMENDED BY THE MANUFACTURER WITH SUITABLE EQUIPMENT. IN LIEU OF
- MANUFACTURERS RECOMMENDATIONS APPLY AT A RATE OF .04 TO .06 GALLONS PER SQUARE YARD.

 B. NETTING / EROSION CONTROL BLANKETS THE USE AND INSTALLATION OF EROSION CONTROL BLANKETS OR NETTING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AND SHALL BE SELECTED FOR

UTILITY TRENCHING GUIDELINES:

THE PROPER APPLICATION AND CONDITIONS.

1. CONSTRUCTION REQUIREMENTS -

- A. LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
- B. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS
- C. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
- D. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING AS REQUIRED, TO A FACILITY FOR REMOVAL OF SEDIMENTS IN ACCORDANCE WITH PADEP GUIDELINES
- E. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND APPROPRIATE TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES/FACILITIES WILL BE INSTALLED. SEEDING AND MULCHING OF ALL DISTURBED AREAS WILL BE DONE AT THE FIND OF FACH WEEK
- 2. EXCEPTIONS IN CERTAIN CASES TRENCHES CANNOT BE BACKFILLED UNTIL THE PIPE IS HYDROSTATICALLY TESTED, OR ANCHORS AND OTHER PERMANENT FEATURES ARE INSTALLED IN THESE CASES, ALL OF THE REQUIREMENTS LISTED UNDER ITEM 1 WILL REMAIN IN EFFECT WITH THE FOLLOWING EXCEPTIONS:
- A. DAILY BACKFILLING OF THE TRENCH MAY BE DELAYED FOR SIX DAYS. ALL PRESSURE TESTING AND THE COMPLETE BACKFILLING OF THE OPEN TRENCH MUST BE COMPLETED BY THE SEVENTH WORKING DAY.
- B. IF DAILY BACKFILLING IS DELAYED, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS, APPROPRIATE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES/FACILITIES WILL BE INSTALLED, AND THE AREAS SEEDED AND MULCHED WITHIN THE NEXT TWO CALENDAR DAYS.

BMP MAINTENANCE

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION STABILIZATION, AND MAINTENANCE OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE PROPER CONSTRUCTION AND STABILIZATION OF PERMANENT CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN.

DURING CONSTRUCTION THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING INSPECTIONS OF THE BMPS AFTER EACH RUNOFF EVENT AS WELL AS ON A WEEKLY BASIS. THE CONTRACTOR SHALL KEEP A LOG OF ALL INPECTIONS AND MAINTENANCE PERFORMED ON THE BMPS

THE OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL PERMANENT CONTROL MEASURES.

SOIL SEDIMENT REMOVED FROM ANY TEMPORARY CONTROL MEASURE DURING REGULAR MAINTENANCE WILL BE INCORPORATED BACK INTO THE EARTHWORK AS FILL ON THE SITE. SOIL SEDIMENT MATERIAL SHALL BE DISTRIBUTED ON—SITE WITHOUT CHANGING DRAINAGE PATTERNS DURING A SPECIFIC CONSTRUCTION STAGE.

COMPOST FILTER SOCK WILL BE INSPECTED ONCE A WEEK OR AFTER EVERY STORM EVENT, WHICHEVER COMES FIRST. ANY NECESSARY REPAIRS WILL BE MADE IMMEDIATELY. ACCUMULATED SEDIMENTS WILL BE REMOVED AS REQUIRED TO KEEP THE SOCK FUNCTIONAL. DEPOSITS WILL BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK. UNDERCUTTING OR EROSION OF THE TOE ANCHOR OF THE COMPOST FILTER SOCK WILL BE REPLACED IMMEDIATELY WITH ROCK FILTER OUTLETS. ANY MANUFACTURER'S RECOMMENDATIONS WILL BE ADHERED TO FOR REPLACING COMPOST FILTER SOCK DUE TO WEATHERING.

THE CONSTRUCTION ENTRANCE WILL BE INSPECTED AT THE END OF EACH WORK DAY. THE THICKNESS WILL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSION BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON THE SITE FOR THIS PURPOSE.

AT THE END OF EACH CONSTRUCTION DAY, ANY SEDIMENT DEPOSITED ON PUBLIC ROADWAYS, WILL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. WASHING OF THE ROADWAY WITH WATER WILL NOT BE PERMITTED.

LIMITING EXPOSED EXTENT AND DURATION OF DISTURBED AREASTHE INITIAL PHASE OF THE PROPOSED PROJECT CONSISTS OF ESTABLISHING THE SOIL EROSION CONTROL MEASURES IN A SEQUENCE APPROPRIATE TOWARD LIMITING SOIL EROSION. THE EXTENT OF DISTURBED LAND HAS BEEN LIMITED TO INCLUDE ONLY THOSE AREAS REQUIRED FOR THE DEVELOPMENT OF THE SUBJECT SITE. ALL SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED. THE SEQUENCE OF CONSTRUCTION ACTIVITIES IS OUTLINED IN THE SEQUENCE OF CONSTRUCTION CONTAINED HEREIN AND ON THE DRAWINGS.

PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION

THE PROJECT PROPOSES TO MINIMIZE DISTURBANCE TO THE EXISTING VEGETATION AT THE SITE BY ONLY PROPOSING DISTURBANCE IN THE AREA WHERE NEEDED. THE SITE VEGETATION PROPOSED FOR DISTURBANCE IS MAINLY SCRUB VEGETATION AND VINES WHICH ARE CURRENTLY DETRIMENTAL TO THE

MINIMIZE SOIL COMPACTION THE PROJECT DESIGN LIMITS THE BULK/ MASS EARTHWORK TO BE PERFORMED AS MUCH AS POSSIBLE. ADDITIONALLY, SOIL COMPACTION WILL NOT BE REQUIRED OTHER THAN IN PROPOSED IMPERVIOUS AREAS.

FEATURES AND MEASURES TO MINIMIZE STORMWATER RUNOFFTEMPORARY STABILIZATION: UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED. THE DISTURBED AREAS WILL ALSO BE MULCHED WITH UNROTTED STRAW OR SALT HAY. TEMPORARY STABILIZATION MEASURES ARE SPECIFIED ON SOIL EROSION AND SEDIMENT POLLUTION CONTROL DETAIL PLANS.

PERMANENT STABILIZATION: ALL SLOPES AND DISTURBED AREAS SHALL BE STABILIZED WITH PERMANENT SEEDING AND LANDSCAPING AS SOON AS POSSIBLE AFTER THE FINAL EARTHMOVING AND CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. AREAS THAT ARE PROPOSED TO HAVE SPECIFIC LINING SHALL BE STABILIZED WITH THE SPECIFIED LINING AS SOON AS THE EARTHMOVING AND CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. TEMPORARY SOIL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL A UNIFORM EROSION RESISTANT PERENNIAL VEGETATIVE COVER OF THE DISTURBED AREA IS ESTABLISHED. PERMANENT STABILIZATION MEASURES ARE SPECIFIED ON THE EROSION AND SEDIMENT POLLUTION CONTROL DETAIL PLANS.

SOLIDS SEPARATION: PRIOR TO ANY SITE DISTURBANCE OR CONSTRUCTION ACTIVITIES, A GRAVEL BUFFER WILL BE INSTALLED AT THE EXISTING DRIVEWAYS TO SERVE AS A CONSTRUCTION ENTRANCE. IN ADDITION, FILTER FABRIC FENCING WILL BE INSTALLED AROUND THE PROJECT AREA, DOWNGRADIENT FROM ANY DISTURBANCE, TO PREVENT SEDIMENT FROM LEAVING THE SITE. FILTER FABRIC SILT FENCING WILL BE CONSTRUCTED AND WILL REMAIN OPERATIONAL UNTIL PERMANENT CONTROL MEASURES ARE IN PLACE

REE PROTECTION NOTES

LARGE TREES ON THE SOUTHERN PROPERTY LINE.

A. Prior to any site work, clearing, tree removal, grading, or construction, the tree protection area shall be delineated by the following methods:

(1) The tree protection area that is delineated on the site prior to construction shall conform to the approved development plans.

(2) Forty—eight inch high orange snow fence or other suitable fence, such as super silt fence, mounted on steel posts located 8 feet on center, shall be placed along the boundary of the tree protection area.(3) Trees being removed shall not be felled, pushed or pulled into a tree protection area or into

trees that are to be preserved.

(4) Grade changes and excavations shall not encroach upon the Tree protection area.

(5) No toxic materials, including petroleum products shall be stored less than 100 feet from a tree protection area or a watercourse. If field conditions warrant, a greater distance may be

(6) The area within the tree protection area shall not be built upon nor shall any materials be stored there either temporarily or permanently. Vehicles and equipment shall not be parked in the tree protection area.
(7) When tree stumps are located within 10 feet of the tree protection area, the stumps shall be removed by means of a stump grinder to minimize the effect on surrounding root systems.
(8) Tree roots which must be severed shall be cut by a backhoe or similar equipment aligned radially to the tree. This method reduces the lateral movement of the roots during excavation,

which if done by other methods could damage the intertwined roots of adjacent trees.

(9) Within 4 hours of any severance of roots, all tree roots that have been exposed and/or damaged shall be trimmed cleanly and covered temporarily with moist peat moss, burlap, or other biodegradable material to keep them from drying out until permanent cover can be installed.

(10) Sediment, retention, and detention basins shall not discharge into the tree protection area.

(11) Sediment, retention, and detention basins shall not be located within the tree protection

(12) Trees shall not be used for roping, cables, signs, or fencing. Nails and spikes shall not be driven into trees.

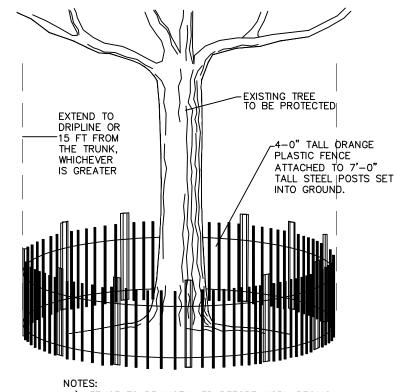
B. Protection from Grade Change.

When the original grade cannot be retained at the tree protection area line, a retaining wall shall be constructed outside the tree protection area.
 Appropriate details of the retaining wall design shall be provided.
 To ensure the survival of trees, the following methods shall be used.

(a) The top of the wall shall be four inches above the finished grade level.
(b) The wall shall be constructed of large stones, bricks, building tiles, concrete blocks, or treated wood beams not less than 6 inches by 6 inches. A means for drainage through the wall shall be provided so water will not accumulate on either side of the wall. Weep holes shall be required within any wall.

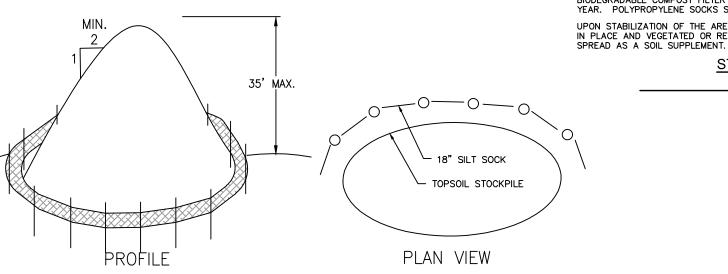
(a) Any severed roots as a result of excavation shall be trimmed so that their edges are smooth and are cut back to a lateral root if exposed.
C. Trees Damaged During Construction. Tree trunks and exposed roots damaged during construction shall be protected from further damage. Damaged branches shall be pruned according to National Arborist Association standards. All cuts shall be made sufficiently close to the trunk or parent limb without cutting into the branch collar or leaving a protruding stub. All necessary pruning cuts must be made to prevent bark from being torn from the tree and to facilitate rapid healing.
E. Tree Replacement. In the event that trees that are to be protected are

removed or damaged by accident or by violation of the tree protection requirements, trees shall be replaced on an inch for inch basis.



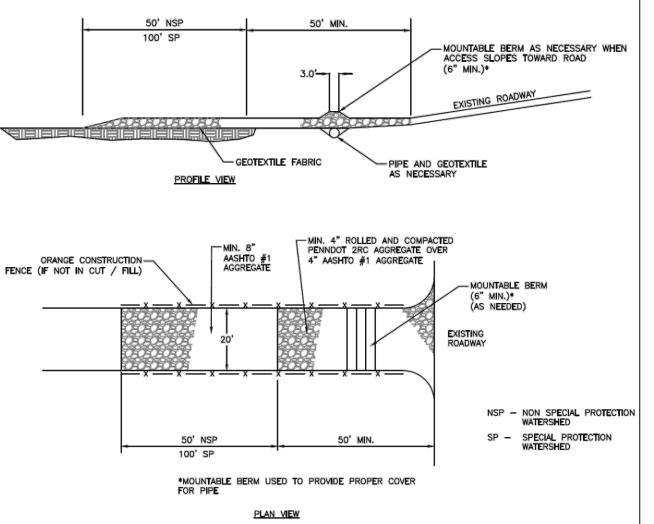
FENCE TO BE INSTALLED BEFORE WORK BEGINS.
 FENCE MUST REMAIN AND BE MAINTAINED
 THROUGH DURATION OF CONSTRUCTION.
 ORANGE CONSTRUCTION FENCE MAY BE
 SUBSTITUTED FOR SNOW FENCE.

TREE PROTECTION FENCING DETAIL



COMPOST FILTER SOCK MUST BE PLACED DOWNSLOPE OF ALL STOCKPILES. IMMEDIATELY APPLY TEMPORARY SEEDING TO AL STOCKPILES WHICH WILL REMAIN IN PLACE 20 DAYS OR MORE.

STOCKPILE AREA DETAIL



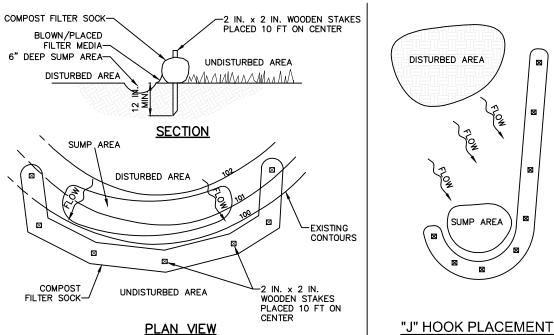
REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

ALTERNATIVE ROCK CONSTRUCTION ENTRANCE



		PLAIN VIEW	ı	0 HOOKI LAC		
COMPOST FILTER SOCK CALCULATION TABLE						
SOCK NO.	DIA. IN.	LOCATION	SLOPE PERCENT (%)	SLOPE LENGTH ABOVE BARRIER (FT)		
CFS-1	24	SE SIDE OF LOT 1 PROP. STORM PIPE	8.33	288		
CFS-2	24	W OF LOT 1 RAIN GARDEN	8.42	273		
CFS-3	24	E OF LOT 1 RAIN GARDEN	8.45	284		
CFS-4	18	E/SE OF LOT 2 RAIN GARDEN	6.25	288		
CFS-5	18	SW OF LOT 2 RAIN GARDEN	6.09	278		
CFS-6	24	SW OF LOT 3 RAIN GARDEN	8.61	383		
CFS-7	18	NE OF LOT 3 RAIN GARDEN	11.29	177		
CFS-8	24	NW OF LOT 5 RAIN GARDEN	10.10	297		
CFS-9	18	SE OF LOT 5 RAIN GARDEN	9.26	216		
CFS-10	24	NW OF LOT 6 RAIN GARDEN	7.86	280		
CFS-11	18	SE OF LOT 6 RAIN GARDEN	8.00	275		
CFS-12	18	NW OF SW WIDENING OF KING ROAD	6.65	50		
CFS-13	18	NW OF NE WIDENING OF KING ROAD	5.42	30		
CFS-18	18	NW OF NE WIDENING OF KING ROAD	5.42	30		

NOTES:

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

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

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

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

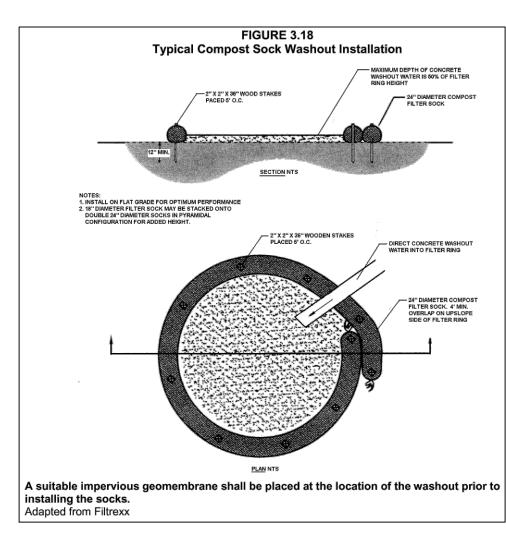
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

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

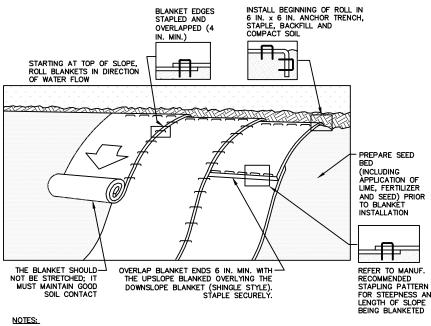
UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH

TRIBUTARY AREA.

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK



CONCRETE WASHOUT DETAIL



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

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

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

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

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

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

STANDARD CONSTRUCTION DETAIL #11-1

EROSION CONTROL BLANKET INSTALLATION

Holmes Cunningham LLC 409 E. Butler Ave., Unit 5 Doylestown, PA 18901 (215) 586-3330



Description

de Per Township Engineer Review
Revised Per BCCD Review
Revised for Final Plans

Date

02/08/2023 Revised Per Township |
06/08/2023 Revised Per Township |
09/01/2023 Revised Per BCC

PENNSTLVANIAL LAW KEQUIKES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND
0 WORKING DAYS IN DESIGN STAGE
-- STOP & CALL --- STOP & CAL

PENNSYLVANIA LAN 3 WORKING DAYS I CONSTRUCTION F 10 WORKING DAYS IN -- STOP & C. Pennsylvania One Call System, Inc. 1-800-242-1776

OSION

TATES AT HILL TOP 396 KING ROAD TMP # 26-004-030

ROBERT THOMAS CUNNINGHAM

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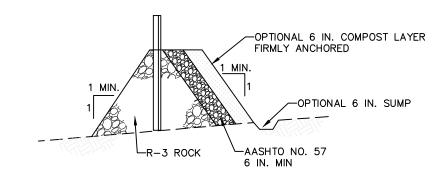
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Te Job 1734 Line 09/14/2022 CS Signed RC DWG Signed RC DWG

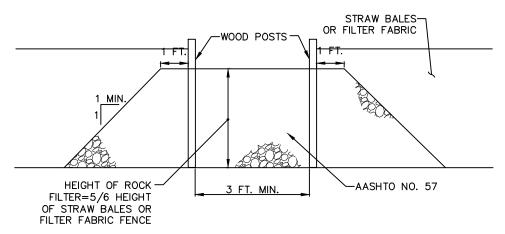
Drawing No.

C3.1

NOTES: ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS. ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY. STANDARD CONSTRUCTION DETAIL #9-3 RIPRAP APRON AT PIPE OUTLET TO AN EXISTING CHANNEL

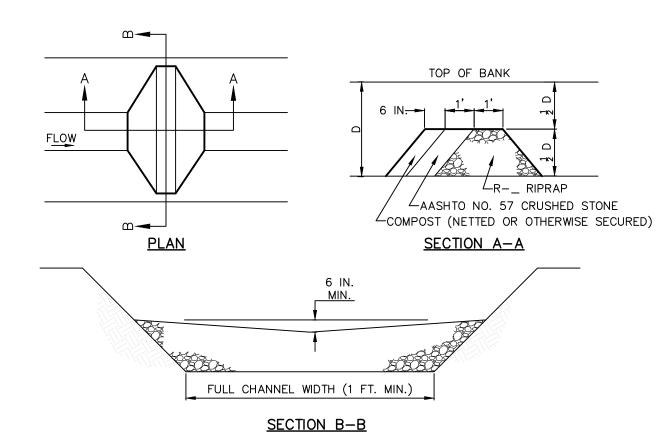


OUTLET CROSS—SECTION



<u>UP-SLOPE FACE</u>

NOTES: A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET. STANDARD CONSTRUCTION DETAIL #4-6 **ROCK FILTER OUTLET**



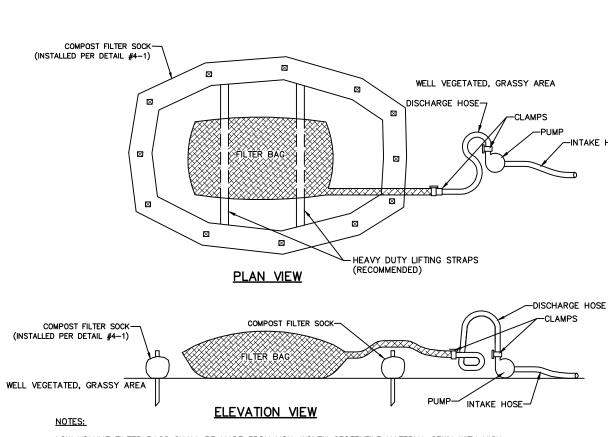
LOCATION

FOR D \geq 3 FT. - USE R-4 FOR D \geq 2 FT. TO D < 3 FT. – USE R-3 FILTER NOT APPLICABLE FOR D < 2 FT. 1 STREAM CROSSING 3.5 4 2 LOT 1 DRIVEWAY

3 LOT 6 DRIVEWAY 2 3 NOTES:

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS. IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

> STANDARD CONSTRUCTION DETAIL #4-14 ROCK FILTER

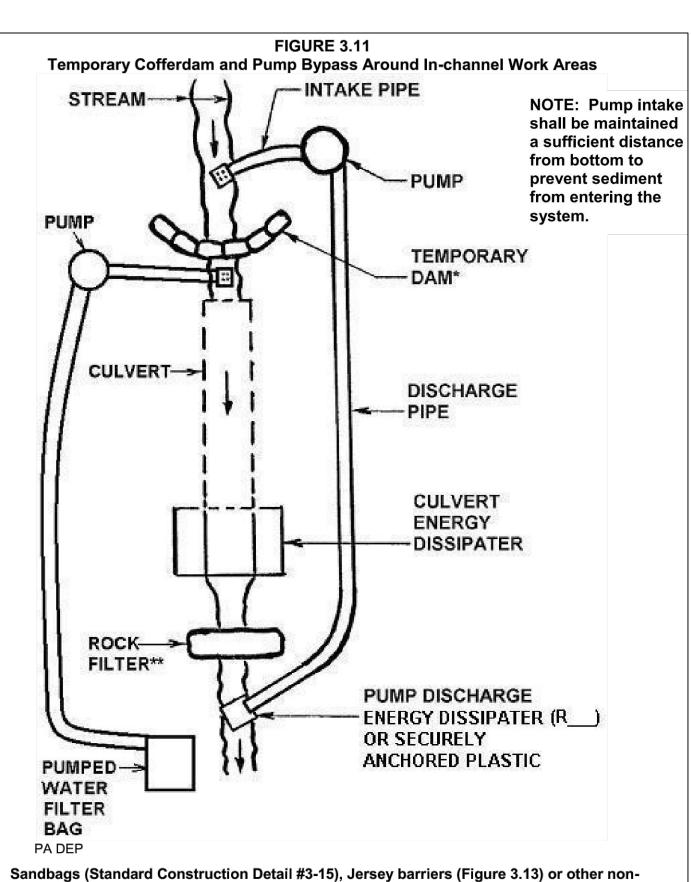


LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS. NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED. STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

WITH COMPOST FILTER SOCK



Sandbags (Standard Construction Detail #3-15), Jersey barriers (Figure 3.13) or other nonerosive material, no earth fill. Do not excavate a sump for the pump intake.

See Standard Construction Detail # 4-14. For low gradient channels, the rock filter may be replaced by an impervious cofferdam to prevent backflow into the work area. TEMPORARY COFERDAN AND BYPASS FOR STREAM CHANNEL WORK AREA

STREAM CHANNEL CULVERT REPLACEMENT SEQUENCE OF CONSTRUCTION:

1. INSTALL BYPASS PUMP AND ENERGY DISSIPATER AS SHOWN ON THE DETAIL.

2. INSTALL COFFERDAM AND ROCK FILTER IN CHANNEL. INSTALL PUMPED WATER FILTER BAG IN A LEVEL, GRASSY, STABLE AREA ADJACENT TO THE CHANNEL. 3. BEGIN EXCAVATION AND REMOVAL OF EXISTING STREAM CROSSING.

4. INSTALL PROPOSED CULVERT AS SHOWN ON THE APPROVED GENERAL PERMIT 5. STABILIZE DISTURBED AREA AS PER THE DETAILS AND NOTES SHOWN ON THE

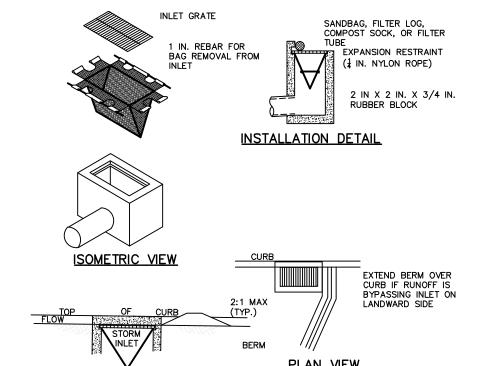
APPROVED EROSION AND SEDIMENT CONTROL PLAN. . REMOVE PUMPED WATER FILTER BAG, ROCK FILTER, AND COFFERDAM 7. REMOVE BYPASS PUMP.

BAG REMOVAL FROM RUBBER BLOCK INSTALLATION DETAIL EARTHEN BERM TO BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATION SECTION VIEW PLAN VIEW

NOTES: MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS. ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE. INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS. STANDARD CONSTRUCTION DETAIL #4-16 FILTER BAG INLET PROTECTION - TYPE M INLET



NOTES:

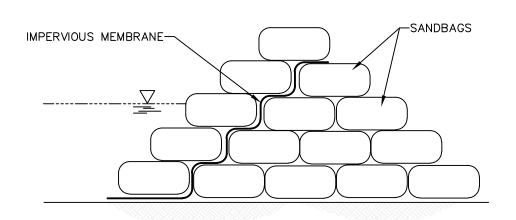
SECTION VIEW

MAXIMUM DRAINAGE AREA = 1/2 ACRE. INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

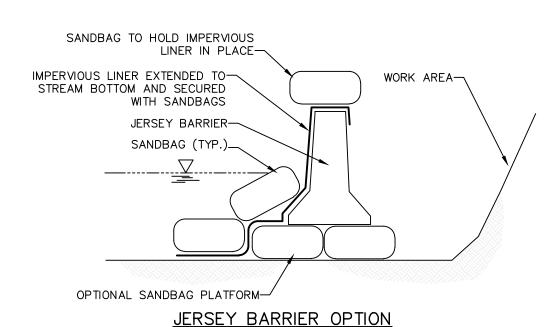
ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

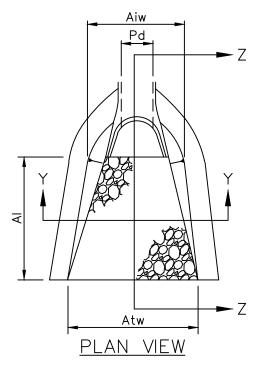
DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS. STANDARD CONSTRUCTION DETAIL #4-15 FILTER BAG INLET PROTECTION - TYPE C INLET

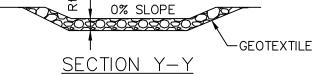


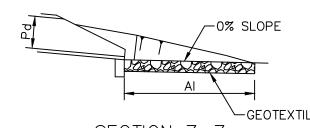
STACKED SANDBAGS OPTION



STANDARD CONSTRUCTION DETAIL #3-15 SANDBAG DIVERSION DAM OR COFFERDAM







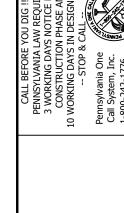
SECTION Z-Z							
	PIPE	RIPRAP		APRON			
ITLET NO.	DIA Pd (IN)	SIZE R	THICK. Rt (IN)	LENGTH AI (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)	
₹A-1	18	4	18	8	4.5	12.00	
RA-2	36	5	18	20	9.00	29.00	
8A−3	15	4	18	8	3.75	11.75	
RA−4	15	4	18	8	3.75	11.75	
RA−5	15	4	18	8	3.75	11.75	
8A−6	15	4	18	8	3.75	11.75	

REFER TO E&S STANDARD WORKSHEET 20 FOR RIP-RAP APRON SIZING INFORMATION ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-1 RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL



	SEC	TION Z	G	OPE — EOTEXTILE	
PIPE	RIP	RAP		APRON	
DIA Pd (IN)	SIZE R	THICK. Rt (IN)	LENGTH AI (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
18	4	18	8	4.5	12.00
36	5	18	20	9.00	29.00
15	4	18	8	3.75	11.75
1 -	4	40	_	7 7 5	44 75



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1734	09/14/2022	N.T.S.	RC	
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Drawing No.

C3.2



TEMPORARY SEEDING:

- TEMPORARY SEEDING SHALL BE DONE IN AREAS WHERE NO ACTIVITY WORK WILL BE PERFORMED. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED
- DURING NON-GERMINATING PERIODS, ONLY MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. AREAS MULCHED DURING THE NON-GERMINATING PERIODS, MUST BE LIMED, FERTILIZED, SEEDED, AND MULCHED IMMEDIATELY FOLLOWING THE END OF THE NON-GERMINATING PERIODS.
- DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEED MIXTURE
- DISTURBED AREAS WHICH ARE AT EITHER FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
- APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER, 1000 SQUARE FEET)
- APPLY FERTILIZER AT THE RATE OF 50-50-50 PER ACRE.
- WORK THE LIMESTONE AND FERTILIZER INTO THE SOIL. D. UTILIZING THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE

TEMPORARY SEEDING

MARCH 1 TO JUNE 15 1 LB./1000 SF ANNUAL RYEGRASS

MAY 15 TO SEPT 15 1 LB./1000 SF SUDAN GRASS SEPT 15 TO OCT 15 168 LB./AC

WINTER RYE E. APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

S. ALL SEED SHALL BE LABELED, DATED AND QUALITY CONSISTENT WITH SECTION NO. 2

PERMANENT SEEDING:

- DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
- DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE MULCHED.
- DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDED AS FOLLOWS:
- MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL AND TOPSOIL SHALL NOT BE SPREAD OVER FROZEN GROUND. B. A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AND FERTILIZER AT RATES RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST RESULTS (ONE (1) TEST PER 25 ACRES)).
- THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO DEPTHS OF 3 TO 4 INCHES. D. GRASS SHALL NOT BE PLANTED AFTER HEAVY

SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER PT, UNLESS OTHERWISE DIRECTED. IF SEEDING IS DONE AFTER OCTOBER 1",

- D. ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT AT THE TIME OF PURCHASE. INERT MATTER SHALL NOT EXCEED 15% AND BLUE TAG CERTIFIED SEED SHALL BE SUPPLIED
- SMOOTH AND FIRM SEED BED WITH CULTIPACKER OR SIMILAR EQUIPMENT PRIOR TO SEEDING. APPLY SEED UNIFORMLY BY BROADCASTING, DRILLING OR HYDRO SEEDING. COVER SEEDS WITH '/2" OF SOIL WITH SUITABLE EQUIPMENT.

APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE

PERMANENT SEEDING FOR NORMAL MOWED LAWN AREAS:

MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE

OCT 1 TO MARCH 1 & JUNE 1 TO AUG 1 2 LBS./1000 SF RED TOP*

((*) USE DORMANT SEED, UNIFORMLY APPLIED, WORKING INTO A DEPTH OF 1/4 INCH. THE USE OF MULCH IS REQUIRED. THE USE OF NETTING OR EROSION CONTROL MATS MAY BE REQUIRED.)

PERMANENT SEEDING FOR SPECIAL AREAS (SWALES, POND EMBANKMENTS, LEVEES, DIVERSION CHANNELS, ETC):

RATE

MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE 80% AND RYEGRASS 20%

- NOTE: SEEDING PERIODS AND SPECIFICATIONS MAY VARY DUE TO SITE CONDITIONS AND VARIANCES FROM THE TIME THIS REPORT IS WRITTEN AND APPROVED. IT MAY BE NECESSARY TO ADAPT SEED SPECIFICATION, VARIETIES, AND QUALITIES. FOR SPECIAL CONDITIONS CONSULT "GUIDELINE FOR RECLAMATION OF SEVERELY DISTURBED AREAS", PENNSYLVANIA STATE UNIVERSITY.
- FERTILIZER: A SOIL ANALYSIS IS RECOMMENDED BUT IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AT A RATE OF FOUR (4) TONS/ACRE AND 10-20-20 FERTILIZED AT A RATE OF 50 LBS. PER 1000 SF. THESE MATERIALS WILL BE UNIFORMLY APPLIED AND WORKED INTO THE TOPSOIL TO A DEPTH OF 3 TO 4 INCHES. IMMEDIATELY BEFORE SEEDING, A 1 0- 1 0- 10 FERTILIZER WILL BE WORKED INTO THE SURFACE AT A RATE OF 10 LBS. PER
- HYDRO SEEDING: LIME AND SEED SHALL BE AS SPECIFIED ABOVE, AND FERTILIZER SHALL BE APPLIED AT A RATE OF 40-80. CROWN VETCH SHALL BE INOCULATED AT FOUR TIMES THE MANUFACTURER'S RATE. SHOULD FERTILIZER BE APPLIED WITH THE INOCULANT, THE MIXTURE SHALL NOT REMAIN IN A SLURRY FOR MORE THAN ONE HOUR. WOOD CELLULOSE FIBER, APPLIED AT A RATE OF 35 LBS. PER 1000 SF, MAY BE APPLIED AS PART OF THE SLURRY IN LIEU OF MULCHING. SYNTHETIC MULCH BINDER, SUCH AS CURASOL, DCA-70, TERRE-TACK OR AN APPROVED EQUAL SHALL BE USED PER THE MANUFACTURER'S INSTRUCTIONS TO ANCHOR THE MULCH.
- MULCHING: MULCHING SHALL BE APPLIED AS FOLLOWS: STRAW - SHALL BE ALL DRIED AND FREE FROM UNDESIRABLE SEEDS AND COURSE MATERIAL, APPLY AT A RATE OF 115 TO 150 LBS. PER 1000 SF OR 3 TONS PER ACRE. MULCHED AREAS SHALL BE CHECKED PERIODICALLY AND IMMEDIATELY AFTER STORMS AND WIND. DAMAGED OR MISSING MULCH SHALL BE REPLACED. A TACKIFIER APPLIED AFTER STRAW IS RECOMMENDED. TACKIFIER MAY BE ASPHALT OR POLYMER SPRAY. APPLY AT A RATE RECOMMENDED BY THE MANUFACTURER WITH SUITABLE EQUIPMENT. IN LIEU OF MANUFACTURERS RECOMMENDATIONS APPLY AT A RATE OF .04 TO .06
- NETTING / EROSION CONTROL BLANKETS THE USE AND INSTALLATION OF EROSION CONTROL BLANKETS OR NETTING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AND SHALL BE SELECTED FOR THE PROPER APPLICATION AND CONDITIONS. SEQUENCE OF CONSTRUCTION

NOTES:

- SITE DEVELOPMENT OPERATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GENERAL SEQUENCE OF OPERATIONS. THE CONTRACTOR MAY DEVIAT FROM THE STAGING OF PERMANENT SITE IMPROVEMENT CONSTRUCTION ITEMS, WITH APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR. DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENT CONTROL MEASURES SHOULD NOT OCCUR WITHOUT APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR AND SITE ENGINEER. NO VERTICAL CONSTRUCTION MAY OCCUR UNTIL SUBGRADE IS SET.
- THE RAIN GARDENS SHALL BE INSTALLED BEFORE THE CONSTRUCTION OF ANY BUILDINGS OR SITE IMPROVEMENTS, UNLESS OTHERWISE APPROVED BY THE BOARD AND THE BUCKS COUNTY CONSERVATION DISTRICT. A PRELIMINARY BASIN AS-BUILT PLAN MUST BE SUBMITTED AND APPROVED BY THE TOWNSHIP ENGINEER PRIOR TO BEGINNING ANY BUILDING CONSTRUCTION TO CONFIRM THAT THE CONSTRUCTED VOLUMES ARE IN ACCORDANCE WITH THE DESIGN PLANS.
- CONTACT THE BUCKS COUNTY CONSERVATION DISTRICT (215-345-7577), NEW BRITAIN TOWNSHIP, AND THE TOWNSHIP ENGINEER AT LEAST THREE (3) WORKING DAYS
- PRIOR TO SITE DISTURBANCE. 2. EACH STAGE OF THE SEQUENCE OF CONSTRUCTION MUST BE COMPLETED PRIOR TO INITIATION OF THE NEXT STAGE OF THE SEQUENCE OF CONSTRUCTION. CONSTRUCTION
- MAY OVERLAP INTO A SUBSEQUENT PHASE AS LONG AS ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED IN THE PREVIOUS PHASE. . INSTALL CONSTRUCTION ENTRANCE AT SITE ACCESS, STOCKPILE, COMPOST FILTER SOCK AND TREE PROTECTION FENCE WHERE SHOWN ON THE PLAN. INSTALL
- PROTECTION FENCE AROUND FUTURE BMPS. 4. COMPLETE STREAM CROSSING IN ACCORDANCE WITH THE APPROVED PLANS AND DETAILS.
- 5. INSTALL RAIN GARDENS, STORM SEWERS, OUTLET STRUCTURES, LEVEL SPREADERS, AND UNDERDRAINS IN ACCORDANCE WITH THE APPROVED PLANS.
- 6. INSTALL EROSION CONTROL MEASURES UP-SLOPE OF INSTALLED RAIN GARDENS TO PREVENT SEDIMENT FROM ENTERING THE BMPS.
- 7. INSTALL CONSTRUCTION FENCING TO PROTECT THE RAIN GARDENS FROM COMPACTION DURING THE SITE CONSTRUCTION.
- 8. STRIP TOPSOIL AND STOCKPILE WHERE SHOWN ON PLAN. ALL STRIPPED TOPSOIL STOCKPILES SHALL HAVE TEMPORARY SEEDING INSTALLED. ROUGH GRADE SITE, DRIVEWAY/PARKING AND BUILDING PADS. INSTALL TEMPORARY EROSION CONTROL BLANKETS.
- 9. PRIOR TO VERTICAL CONSTRUCTION A STABLE BASE WILL BE ESTABLISHED AND MAINTAINED, TO AVOID ACCELERATED EROSION.
- 10. A PRELIMINARY RAIN GARDEN AS-BUILT PLAN MUST BE SUBMITTED AND APPROVED BY THE TOWNSHIP ENGINEER PRIOR TO BEGINNING ANY BUILDING CONSTRUCTION TO CONFIRM THAT THE CONSTRUCTED VOLUMES ARE IN ACCORDANCE WITH THE DESIGN PLANS.
- 11. BEGIN CONSTRUCTION OF BUILDING FOUNDATIONS. BUILDING CONSTRUCTION MAY COINCIDE WITH ADDITIONAL SITE WORK, INCLUDING UTILITY AND STREET CONSTRUCTION, THAT IS LISTED IN THIS SEQUENCE OF CONSTRUCTION. PRIOR TO VERTICAL CONSTRUCTION, SUBGRADE IS TO BE SET, INCLUDING BUT NOT LIMITED TO FOUNDATION WORK, STABLE SUBGRADE/SUBBASE, SUBSURFACE UTILITY WORK, AND DRIVEWAY/PARKING SUBGRADE.
- 12. INSTALL WATER, SEPTIC, AND STORM SEWER SYSTEM STARTING AT THE DOWNSTREAM ENDS AND WORKING UPSTREAM. ALL TRENCHES SHALL BE BACKFILLED AT THE END OF EACH DAY. MAKE OFFSITE UTILITY CONNECTIONS AND INSTALL OFFSITE WATER AND SANITARY SEWER, INSTALL CURB, SUBBASE AND BASE COURSE FOR THE DRIVEWAY/PARKING
- 13. COMPLETE FINAL GRADING. AFTER FINAL GRADING IS COMPLETED, APPLY PERMANENT SEEDING MIXTURE AND INSTALL ALL REQUIRED PLANTINGS, FENCING, AND LIGHTING. LIGHTING AND HENRY COURT BINDER COURSE SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF ANY USE AND OCCUPANCY PERMITS. ONCE ALL BUILDINGS ARE COMPLETED. FLUSH ALL AFFECTED STORM DRAINAGE PIPES OF ACCUMULATED SILT
- 14. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT OR ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY.
- 15. UPON COMPLETE STABILIZATION OF SITE, REMOVE EROSION CONTROL DEVICES, REMOVE TEMPORARY ORIFICE PLATES AND CONVERT SEDIMENT TRAP TO PERMANENT STORMWATER BASIN BMPS PER THE CONSTRUCTION SEQUENCES AND DETAILS FOUND ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN. THE SITE SHALL BE CONSIDERED STABILIZED WHEN THE PERMANENT VEGETATION HAS PROVIDED A 70% GROUNDCOVER. 16. AFTER CONSTRUCTION IS COMPLETED, INSTALL WEARING COURSE FOR THE DRIVEWAY. REPAIR ANY DAMAGED CURBING, STORM SEWER STRUCTURES, SANITARY SEWER
- STRUCTURES, LANDSCAPING, LIGHTING, SIDEWALK, DRIVEWAYS, AND/OR ANY OTHER AMENITIES FROM INSTALLATION OF WEARING COURSE. 17. UPON PERMANENT STABILIZATION AND PRIOR TO THE NPDES PERMIT EXPIRATION, A NOTICE OF TERMINATION SHALL BE SUBMITTED TO BCCD IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE NPDES PERMIT.

NOTE: AN ANNUAL REPORT SHALL BE PREPARED AND RETAINED BY THE RESPONSIBLE PARTY STATING THE FOLLOWING MAINTENANCE HAS BEEN PERFORMED.

THE HOMEOWNERS ASSOCIATION IS RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER CONVEYANCE SYSTEM, AND ALL OTHER PROPOSED BMP'S.

STORMWATER CONVEYANCE SYSTEM

• CATCH BASINS, MANHOLES AND PIPES TO BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST ANNUALLY AS WELL AS AFTER EVERY STORM EXCEEDING 1-INCH OF RAINFALI • ALL STRUCTURAL COMPONENTS MUST BE INSPECTED FOR CRACKING, SUBSIDENCE, BREACHING, WEARING, AND DETERIORATION AT LEAST ANNUALLY.

VEGETATED STORMWATER FACILITY/BASIN (MANAGED RELEASE CONCEPT): • UPGRADIENT CATCH BASINS AND INLETS SHOULD BE INSPECTED AND CLEANED ANNUALLY, OR MORE OFTEN IF HISTORICAL MAINTENANCE RECORDS SUGGEST A MORE

- . THE VEGETATION (FOR THE MRC BMP AND CONTRIBUTING DRAINAGE AREA) SHOULD BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS REVEGETATED. . CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS. MOW ONLY AS APPROPRIATE FOR VEGETATIVE SPECIES.
- . INSPECT AT LEAST TWO TIMES PER YEAR AFTER RUNOFF EVENTS GREATER THAN 0.8 INCH AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN THE DESIGN PARAMETERS (THE LICENSED PROFESSIONAL ENGINEER SHOULD CLEARLY IDENTIFY WHAT THESE PARAMETERS ARE). · AT LEAST TWO TIMES PER YEAR, OR MORE IF HISTORICAL MAINTENANCE INDICATE IT IS NECESSARY, INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET
- CONTROL STRUCTURES, EROSION, SIGNS OF WATER CONTAMINATION/SPILLS, AND INSTABILITY. LEAF LITTER NEEDS TO BE REMOVED ANNUALLY. • AS NEEDED, REMOVE ACCUMULATED SEDIMENT AS REQUIRED TO MAINTAIN INFILTRATION THROUGH THE MRCS SOIL MEDIA AND TO MAINTAIN WATER QUALITY FUNCTIONALITY. RESTORE ORIGINAL CROSS SECTION. PROPERLY DISPOSE OF SEDIMENT.
- IF POROUS PAVEMENT IS INCLUDED IN THE DESIGN, VACUUM AT LEAST TWICE PER YEAR. VACUUM SHOULD HAVE SUFFICIENT SUCTION POWER AND BE DESIGNED FOR USE WITH POROUS PAVEMENTS.
- ALL MRC BMP COMPONENTS SHOULD BE MAINTAINED AS INDICATED IN THE STORMWATER BMP MANUAL.
- TREE PLANTINGS

 TREES SHALL BE PLANTED IN ACCORDANCE WITH SPECIFICATIONS PREPARED BY THE PROJECT LANDSCAPE ARCHITECT.

 NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF FIVE YEARS FOLLOWING CONSTRUCTION. THE
- HOMEOWNER'S ASSOCIATION SHALL ENSURE THAT ESCROW FUNDS ARE AVAILABLE FOR REPLACEMENT DURING THIS TIME PERIOD. TREES SHALL BE MAINTAINED AND
- PROTECTED FOR THE PROJECT LIFE (50 YEARS). TREES SHALL BE INSPECTED ANNUALLY AND PRUNED AS NEEDED TO ENSURE HEALTHY CONDITIONS. • IF IT IS DETERMINED THAT THE TREE IS IN POOR HEALTH, A CERTIFIED ARBORIST SHALL BE CONSULTED IMMEDIATELY TO DETERMINE THE PROPER COURSE OF ACTION.

BMP SEEDING

SEED IN ERNST SEED MIX (ERNMX-180); RAIN GARDEN AREA MIX SEEDING RATE IS 20 LBS. PER ACRE WITH 30 LBS. PER ACRE GRAIN RYE (COVER CROP)

ERNMX-180 RAIN GARDEN AREA MIX

26% River Oats, PA/VA Ecotype blend (Chasmanthium latifolium (Uniola latifolia), PA/VA Ecotype blend)

17% Virginia Wildrye, PA Ecotype (Elymus virginicus, PA Ecotype) 15% Fowl Bluegrass (Poa palustris)

10% Fox Sedge, PA Ecotype (Carex vulpinoidea, PA Ecotype) 6% Purple Coneflower (Echinacea purpurea) 4% Blackeyed Susan, Coastal Plain NC Ecotype (Rudbeckia hirta, Coastal Plain NC Ecotype) 3% Zigzag Aster, PA Ecotype (Aster prenanthoides (Symphyotrichum p.), PA Ecotype)

3% Blue False Indigo, Southern WV Ecotype (Baptisia australis, Southern WV Ecotype) 3% Ohio Spiderwort, PA Ecotype (Tradescantia ohiensis, PA Ecotype)

2% Lanceleaf Coreopsis, Coastal Plain NC Ecotype (Coreopsis lanceolata, Coastal Plain NC Ecotype) 2% Wild Bergamot, PA Ecotype (Monarda fistulosa, PA Ecotype)

2% Wild Senna, VA & WV Ecotype (Senna hebecarpa (Cassia h.), VA & WV Ecotype) 2% Autumn Bentgrass, PA Ecotype (Agrostis perennans, PA Ecotype) 2% Marsh (Dense) Blazing Star (Spiked Gayfeather), PA Ecotype (Liatris spicata, PA Ecotype)

1% Early Goldenrod, PA Ecotype (Solidago juncea, PA Ecotype) 1% Oxeye Sunflower, PA Ecotype (Heliopsis helianthoides, PA Ecotype) 1% Swamp Milkweed, PA Ecotype (Asclepias incarnata, PA Ecotype)

BASIN LANDSCAPE MAINTENANCE

THIS BASIN IS DESIGNED TO BECOME NATURALIZED OVER TIME AND WILL REQUIRE LESS MAINTENANCE AS TIME

MOWING - ESTABLISH AND MAINTAIN A NO-MOW ZONE THAT ENCOMPASSES THE BASIN FLOOR AND SIDE SLOPES. MOW THE NO-MOW ZONE 1X/YEAR TO A MINIMUM HEIGHT OF 6". (ANNUALLY IN LATE APRIL/ EARLY MAY). RAKE

MOWN MATERIAL AND COMPOST OR DISPOSE OF OFF SITE. INSPECTIONS - INSPECT BASIN AND NO-MOW ZONES FOR INVASIVE SPECIES SUCH AS PURPLE LOOSESTRIFE PHRAGMITES, HONEYSUCKLE, ETC. (ANNUALLY IN JULY). IF INVASIVE SPECIES ARE FOUND REMOVE PER RECOMMENDED STANDARDS FOR SPECIFIC SPECIES FOLLOWING GUIDELINES BY PA DCNR (DEPT OF CONSERVATION & NATURAL RESOURCES).

CLEANING - REMOVE TRASH AND DEBRIS (JANUARY & APRIL)

BASIN MAINTENANCE SCHEDULE

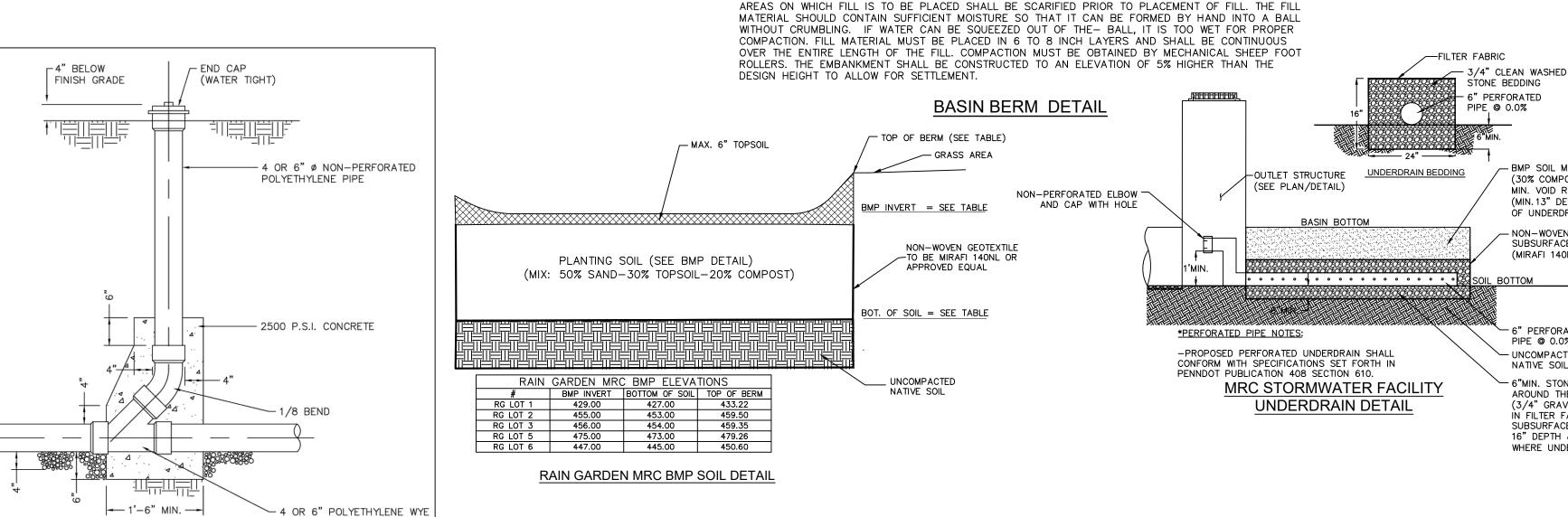
THIS BASIN IS DESIGNED TO BECOME NATURALIZED OVER TIME AND WILL REQUIRE LESS MAINTENANCE AS TIME GOES ON.

STANDARD CLEANOUT INSTALLATION DETAIL

MOWING - ESTABLISH AND MAINTAIN A NO-MOW ZONE THAT ENCOMPASSES THE BASIN FLOOR AND SIDE SLOPES. MOW THE NO-MOW ZONE 1X/YEAR TO A MINIMUM HEIGHT OF 2. CUT OFF TRENCH - A CUT-OFF TRENCH WILL BE EXCAVATED ALONG THE BERM CENTERLINE BENEATH 6". (ANNUALLY IN LATE APRIL/ EARLY MAY).

INSPECTIONS - INSPECT BASIN AND NO-MOW ZONES FOR INVASIVE SPECIES SUCH AS PURPLE LOOSESTRIFE, PHRAGMITES, HONEYSUCKLE, ETC. (ANNUALLY IN JULY). IF INVASIVE SPECIES ARE FOUND REMOVE PER RECOMMENDED STANDARDS FOR SPECIFIC SPECIES FOLLOWING GUIDELINES BY PA DCNR (DEPT OF CONSERVATION & NATURAL RESOURCES). CLEANING - REMOVE TRASH AND DEBRIS (JANUARY & APRIL) OR AS NEEDED.

NON-PERFORATED

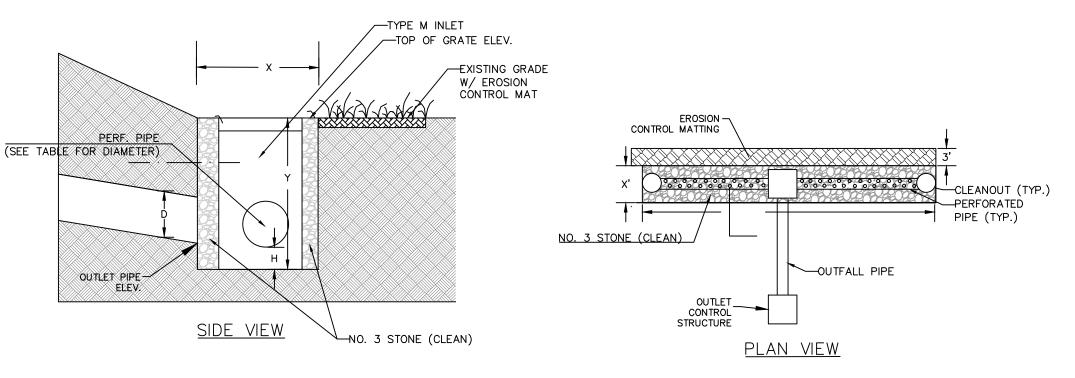


TYPICAL EXISTING GRADE.—

REMOVE TOPSOIL, LOOSE OR

VEGETATION AND ROOTS.

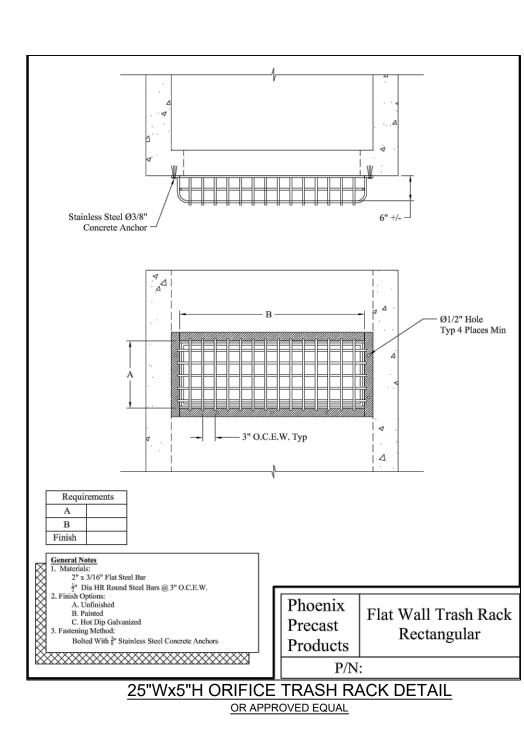
FOREIGN MATERIALS, AND ALL



SWF OUTFALL	L	D	OUTFALL PIPE ELEV.	TOP OF GRATE ELEV.	PERF. PIPE DIAMETER	н	Y	x
#	FT	IN			IN	FT	FT	FT
LOT 1	10	15	424.50	427.00	12	0.50	3.00	5.00
LOT 2	10	15	449.50	452.00	12	0.50	3.00	5.00
LOT 3	10	15	449.50	452.00	12	0.50	3.00	5.00
LOT 5	10	15	470.50	473.00	12	0.50	3.00	5.00
LOT 6	10	15	442.50	445.00	12	0.50	3.00	5.00

- CONSTRUCTION SEQUENCE FOR LEVEL SPREADER:

 1. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION AS PER THE PENNSYLVANIA EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (MARCH 2000, OR LATEST EDITION). 2. EXCAVATE LEVEL SPREADER BOTTOM TO A UNIFORM, LEVEL SUBGRADE FREE FROM ROCKS AND DEBRIS. EXCAVATION EQUIPMENT SHOULD BE PLACED
- OUTSIDE THE LIMITS OF THE LEVEL SPREADER. 3. COMPLETELY WRAP LEVEL SPREADER WITH NONWOVEN GEOTEXTILE. (IF SEDIMENT AND/OR DEBRIS HAVE ACCUMULATED IN LEVEL SPREADER BOTTOM, REMOVE PRIOR TO GEOTEXTILE PLACEMENT.) GEOTEXTILE ROLLS SHOULD OVERLAP BY A MINIMUM OF 24 INCHES WITHIN THE TRENCH. FOLD BACK AND/OR CUT EXCESS GEOTEXTILE DURING STONE PLACEMENT.
- 4. INSTALL CONTINUOUSLY PERFORATED PIPE, OBSERVATION WELLS/INLETS, AND ALL OTHER LEVEL SPREADER STRUCTURES. CONNECT INCOMING PIPES TO STRUCTURES AS INDICATED ON PLANS. 5. PLACE UNIFORMLY GRADED, CLEAN-WASHED AGGREGATE IN 6-INCH LIFTS, LIGHTLY COMPACTING BETWEEN LIFTS.
- . INSTALL EROSION CONTROL BLANKET DOWNSTREAM OF LEVEL SPREADER AND SECURE AS PER MANUFACTURER'S RECOMMENDATIONS. DO NOT REMOVE EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED. LEVEL SPEADER



CAST IRON FRAME AND GRATE

SECTION A-A

PLAN VIEW

GRATE

477 75

449.75

LOT #

6" PERFORATED

BMP SOIL MIX

OF UNDERDRAIN)

PIPE @ 0.0%*

- UNCOMPACTED

6"MIN. STONE ENVELOPE

AROUND THE UNDERDRAIN.

(3/4" GRAVEL WRAPPED

N FILTER FABRIC FOR

SUBSURFACE DRAINAGE: 16" DEPTH & 24" WIDE

WHERE UNDERDRAIN SHOWN

NATIVE SOIL

(30% COMPOST /70% TOPSOIL;

NON-WOVEN GEOTEXTILE FOR

(MIN. 13" DEPTH ABOVE THE TOP

MIN. VOID RATIO OF 30%)

SUBSURFACE DRAINAGE

ORIFICE

RACK

UNDERDRAIN

OUTLET STRUCTURE ELEVATIONS

454.00

445.00

RAIN GARDEN OUTLET STRUCTURE DETAIL

N.T.S.

(MIRAFI 140NL OR APPROVED EQUAL) LOT #2 PIPE INVERT ELEVATION: 453.00

473.00

ELEVATION B-B

TO CONSTRUCTION.

OUTLET PIPE | ORIFICE INVERT | ORIFICE SIZE (IN.)

430.00

456.00

*PERFORATED PIPE NOTES:

PUBLICATION 408 SECTION 610.

LOT #1 PIPE INVERT ELEVATION: 427.00

LOT #1 OUTLET HOLE SIZE: 0.70-INCHES

LOT #1 OUTLET HOLE ELEVATION: 428.00

LOT #2 OUTLET HOLE SIZE: 0.90-INCHES LOT #2 OUTLET HOLE ELEVATION: 454.00

LOT #3 PIPE INVERT ELEVATION: 454.00

LOT #3 OUTLET HOLE SIZE: 2-INCH LOT #3 OUTLET HOLE ELEVATION: 455.00

LOT #5 PIPE INVERT ELEVATION: 473.00

LOT #6 PIPE INVERT ELEVATION: 445.00

LOT #6 OUTLET HOLE ELEVATION: 446.00

LOT #6 OUTLET HOLE SIZE: 0.81-INCH

#5 OUTLET HOLE ELEVATION: 474.00

457.00

CONNECTIONS.

1. OUTLET STRUCTURES SHALL BE AS DETAILED IN PENNDOT STANDARDS FOR

ROADWAY CONSTRUCTION, CURRENT

EDITION RC-46M, INLETS, CONCRETE TOP

UNITS CAST-IN-PLACE AND PRECAST".

STRUCTURE EXCEEDS 4 FEET IN DEPTH

THE CONTRACTOR SHALL PROVIDE CUT

4. OUTLET PIPES MUST HAVE WATERTIGHT

5. REFER TO THE MRC BASIN UNDERDRAIN

DETAIL FOR ORIFICE AND UNDERDRAIN

476.00 25W X 5H

447.00 25W X 5H

25W X 5H 25W X 5H

-PROPOSED PERFORATED UNDERDRAIN SHALL CONFORM WITH SPECIFICATIONS SET FORTH IN PENNDOT

SHEETS TO ENGINEER TO REVIEW PRIOR

2. STEPS SHALL BE PROVIDED WHENEVER

GRATE = SEE TABLE

INVERT IN = SEE TABLE

15" OUTLET -

4" TOPSOIL SEEDED WITH

OUTSIDE BERM.) PROVIDE

NETTING (TYPICAL INSIDE &

NON-MOVABLE VEGETATION.

BANK STABILIZATION

TOP OF BERM

EXISTING GRADE-

CLAY SOILS

MAX. DRY DENSITY

(BY MODIFIED

PROCTOR)

50% - 80% pASSING #200

20% - 50% < 0.005 MIN.

COMPACTED TO 95% MAX. DRY

DENSITY (BY MODIFIED PROCTOR) ,

NOTE: PLACE AND COMPACT

MATERIAL IN 6" MAX. LIFTS./

STANDARD BASIN BERM CONSTRUCTION NOTES

1. SITE PREPARATION — AREAS UNDER THE EMBANKMENT AND ANY STRUCTURES SHALL BE CLEARED,

OBJECTIONABLE MATERIAL. IN ORDER TO FACILITATE CLEAN-OUT AND RESTORATION, THE POOL AREA

EARTH FILL EMBANKMENTS. THE MINIMUM DEPTH SHALL BE 3 FEET. THE CUT-OFF TRENCH SHALL

EXTEND TO THE RISER CREST ELEVATION. THE MINIMUM BOTTOM WIDTH SHALL BE 8 FEET BUT WIDE

EMBANKMENT - THE FILL MATERIAL SHALL BE TAKEN FROM SELECTED BORROW AREAS. IT SHALL BE

FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES ROCKS OR OTHER OBJECTIONABLE MOTERIAL.

ENOUGH TO PERMIT OPERATION OF COMPACTION EQUIPMENT. THE SIDE SLOPES SHALL BE NO STEEPER

THEN 1:1. COMPACTION REQUIREMENTS SHALL BE THE SOME AS THOSE FOR EMBANKMENTS. THE TRENCH

GRUBBED AND THE TOPSOIL STRIPPED TO REMOVE TREES. VEGETATION, ROOTS, AND OTHER

SHALL BE KEPT FREE OF STANDING WATER DURING THE BACKFILLING OPERATIONS.

WILL BE CLEARED OF ALL BRUSH AND EXCESS TREES.

COMPACTED TO 95%

15" OUTLET PIPE

INV. OUT = SEE TABLE

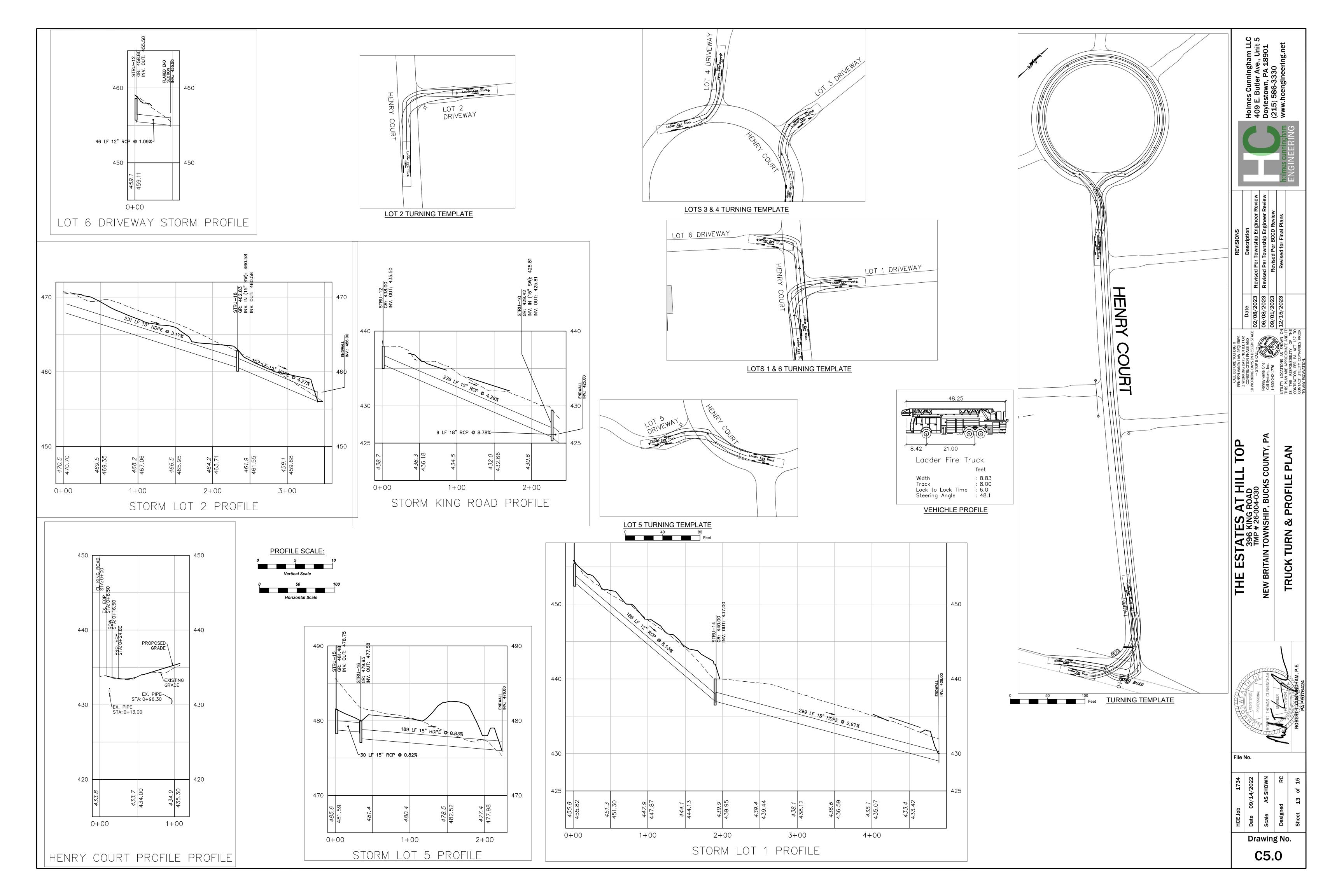


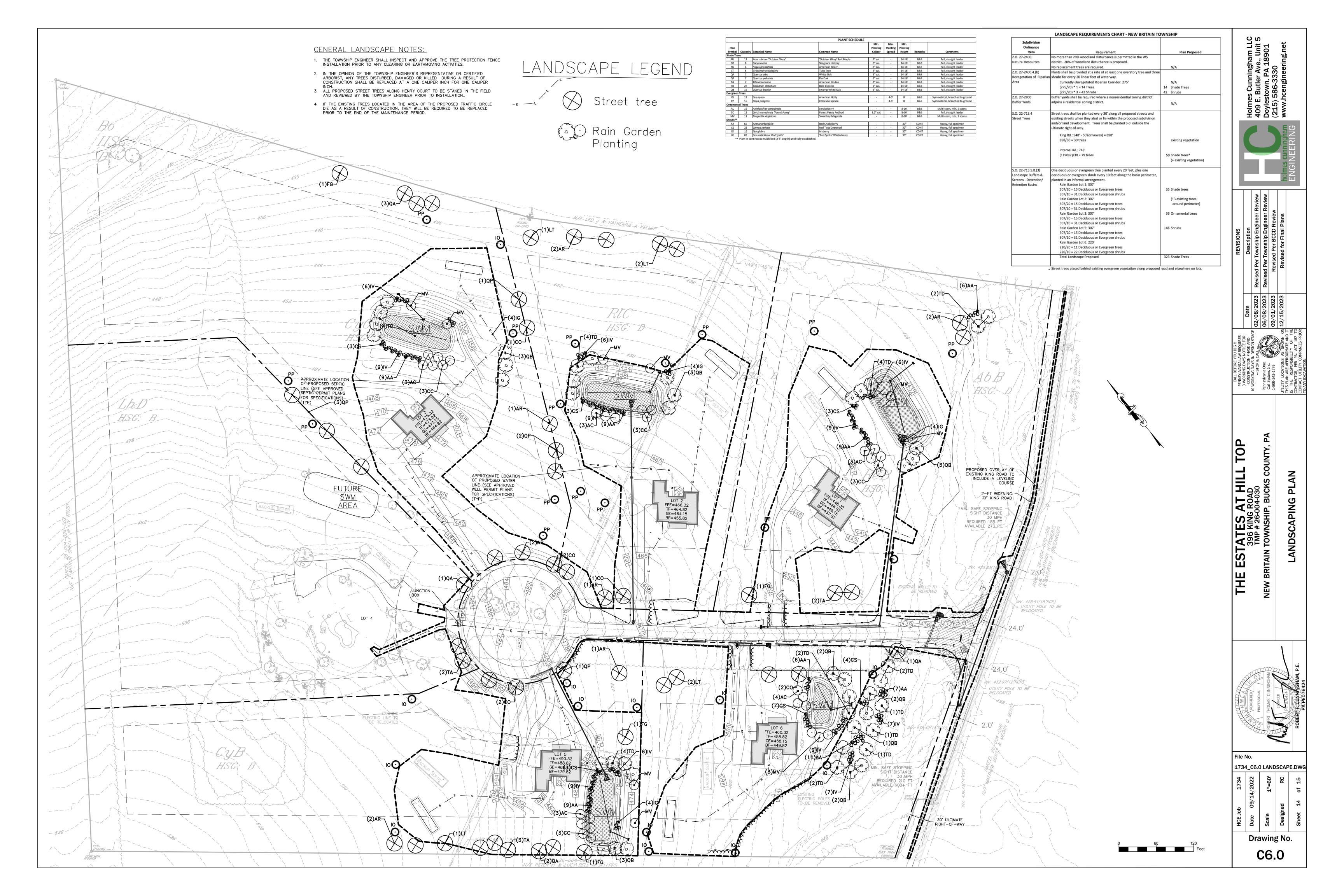
MAT

0S

STOI DETA

1734_C4.0 PCSM.DWG





PLANTING MATERIALS

- NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1942 EDITION PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT
- INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE. STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF

NURSFRYMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE

HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.

- 3. NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME 15% Fowl Bluegrass (Poa palustris) SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.
- 4. THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.
- 5. THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.

- 1. REUSE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL AND TOPSOIL CRITERIA IN THIS SPECIFICATION THROUGH TESTING. CLEAN SURFACE SOIL OF ALL ROOTS, PLANTS, SOD, AND GRAVEL OVER 1" IN DIAMETER AND DELETERIOUS MATERIALS. IF ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING, THE CONTRACTOR SHALL DEMONSTRATE, THROUGH SOIL TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANS AND SPECIFICATIONS
- SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN OPSOIL AND PLANTING SOIL QUANTITIES ARE INSUFFICIENT, OBTAIN SOIL DISPLACED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. DO NOT OBTAIN FROM AGRICULTURAL LAND, BOGS, MARSHES OR CONTAMINATED SITES.
- 3. IF DEPTH OF PLANTING SOILS AND TOPSOIL IS NOT INDICATED IN PLANS OR DETAILS, A MINIMUM 18" DEPTH SHALL BE PROVIDED FOR ALL TREES AND LARGE SHRUBS; MINIMUM 12" DEPTH SHALL BE PROVIDED FOR GROUNDCOVERS, HERBACEOUS AND MEADOW OR ORNAMENTAL GRASS AREAS AND A MINIMUM 6" LAYER SHALL BE INSTALLED IN ALL LAWN SIDE SLOPE AREA = 3,690 SF AREAS. TOPSOIL AND PLANTING SOIL DEPTH INDICATED ON PLANS AND PLANTING DETAILS AND NARRATIVE SPECIFICATIONS SHALL GOVERN DEPTH WHEN PROVIDED.
- 4. WHERE PLANTING AREAS ARE PROPOSED FOR FORMER PAVED OR GRAVEL AREAS, BEDS SHALL BE EXCAVATED TO A MINIMUM 30" DEPTH AND, AT A MINIMUM, BE BACKFILLED WITH BOTTOM LAYER OF SANDY LOAM (ORGANIC CONTENT LESS THAN 2%) OVER WHICH TOPSOIL AND PLANTING SOILS WILL BE PLACED AT DEPTHS INDICATED IN PLANS, DETAILS
- 5. IF THE QUANTITY OF SOILS FROM THE SITE IS NOT ADEQUATE TO FILL PLANTING AREAS TO THE DEPTH INDICATED IN THE PLANS AND DETAILS, CONTRACTOR SHALL FURNISH PLANTING SOILS THAT ARE FREE OF BROKEN GLASS, PAINT CHIPS, PLASTIC, DELETERIOUS MATERIALS, ROOTS, WEEDS, BOULDERS, COBBLES AND GRAVEL OVER 1" IN DIAMETER AND COMPLY WITH THE FOLLOWING CRITERIA: -SOILS SHALL MEET ALL APPLICABLE SOIL REMEDIATION STANDARDS -ORGANIC CONTENT: 2-5% IN NATIVE SOILS; UP TO 10% IN AMENDED SOILS -SOLUBLE SALTS: LESS THAN 0.5 MM HOS/CM -SOIL PH: 4.5-7% TO BE AMENDED PER SOIL TEST RESULTS -PHYSICAL (SIEVE) ANALYSIS/ SOIL TEXTURE SAND: 40-60% SILT: 25-60% CLAY: 5-20%
- -NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #4 SIEVE. 6. ALL PLANTING SOILS SHALL BE SUBMITTED FOR TESTING TO THE STATE COOPERATIVE EXTENSION SERVICE, OR APPROVED EQUAL, PRIOR TO DELIVERY TO THE SITE. CONTRACTOR SHALL FURNISH SOIL SAMPLES AND SOIL TEST RESULTS TO LANDSCAPE ARCHITECT OR OWNER AT A RATE OF ONE SAMPLE PER 500 CUBIC YARDS TO ENSURE CONSISTENCY ACROSS THE TOTAL VOLUME OF PLANTING SOIL REQUIRED. TEST RESULTS SHALL EVALUATE FOR ALL CRITERIA LISTED IN THIS SPECIFICATION. IF TESTING AGENCY DETERMINES THAT THE SOILS ARE DEFICIENT IN ANY MANNER AND MAY BE CORRECTED. BY ADDING AMENDMENTS. THE CONTRACTOR SHALL FOLLOW STATED RECOMMENDATIONS FOR SOIL IMPROVEMENT AND FURNISH SUBMITTALS FOR ALL AMENDMENTS PRIOR TO
- 7. IF SOIL ORGANIC CONTENT IS INADEQUATE, SOIL SHALL BE AMENDED WITH COMPOST OR ACCEPTABLE, WEED FREE, ORGANIC MATTER. ORGANIC AMENDMENT SHALL BE WELL COMPOSTED, PH RANGE OF 6-8: MOISTURE CONTENT 35-55% BY WEIGHT 100% PASSING THROUGH 1" SIEVE; SOLUBLE SALT CONTENT LESS THAN 0.5 MM HOS/CM; MEETING ALL APPLICABLE ENVIRONMENTAL CRITERIA FOR CLEAN FILL; FREE OF BROKEN GLASS, PAINT CHIPS, PLASTIC, DELETERIOUS MATERIALS, ROOTS, WEEDS, BOULDERS, COBBLES AND GRAVEL OVER 1" IN DIAMETER
- 8. SCARIFY AND/OR TILL ALL COMPACTED SUBSOILS PRIOR TO ADDING PLANTING SOIL OR LOOSELY COMPACTED. NO SOILS SHALL BE PLACED IN A FROZEN OR MUDDY CONDITION.

DELIVERY, STORAGE, AND HANDLING

DELIVERY OF SOIL TO THE PROJECT SITE.

- 1. PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETERIORATION DURING DELIVERY, AND WHILE STORED AT SITE.
- TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSIT. DO NOT DROP OR BREAK BALLED STOCK DURING DELIVERY OR HANDLING.
- 3. ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT BALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE BALL AT THE TIME OF PLANTING, IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8" INTO THE PLANTING HOLE. WITH CONTAINER-GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO
- 4. THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY. THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE. PROTECT FROM WEATHER AND MECHANICAL DAMAGE AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.

INSTALLATION

AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE. 2. THE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY

THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY

- THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.
- 3. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE FINISHED GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT
- 4. ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING
- 5. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.
- 6. THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.
- TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMÓVED AFTER INSTALLATION
- 8. MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT

7. AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL

- 9. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH
- 10. AFTER COMPLETION OF A PROJECT, ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A SHREDDED HARDWOOD BARK OR APPROVED EQUAL MULCH THAT WILL PREVENT SOIL EROSION AND THE

GUARANTEE

1. NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF 18 MONTHS FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.

BMP SEEDING

BASIN FLOORS (FOR STORMWATER FACILITIES 1&2) SEED IN ERNST SEED MIX (ERNMX-180); RAIN GARDEN AREA MIX SEEDING RATE IS 20 LBS. PER ACRE WITH 30 LBS. PER ACRE GRAIN RYE (COVER CROP) BASIN FLOOR = 8,000 SF $(4865/43560) \times 20 = 2.5 LBS. ERNMX-180$

ERNMX-180 RAIN GARDEN AREA MIX

 $(4865/43560) \times 30 = 3.5 LBS. GRAIN RYE$

26% River Oats, PA/VA Ecotype blend (Chasmanthium latifolium (Uniola latifolia), PA/VA Ecotype blend) 17% Virginia Wildrye, PA Ecotype (Elymus virginicus, PA Ecotype) 10% Fox Sedge, PA Ecotype (Carex vulpinoidea, PA Ecotype) 6% Purple Coneflower (Echinacea purpurea) 4% Blackeyed Susan, Coastal Plain NC Ecotype (Rudbeckia hirta, Coastal Plain NC Ecotype) 3% Zigzag Aster, PA Ecotype (Aster prenanthoides (Symphyotrichum p.), PA Ecotype) 3% Blue False Indigo, Southern WV Ecotype (Baptisia australis, Southern WV Ecotype) 3% Ohio Spiderwort, PA Ecotype (Tradescantia ohiensis, PA Ecotype) 2% Lanceleaf Coreopsis, Coastal Plain NC Ecotype (Coreopsis lanceolata, Coastal Plain NC Ecotype) 2% Wild Bergamot, PA Ecotype (Monarda fistulosa, PA Ecotype) 2% Wild Senna, VA & WV Ecotype (Senna hebecarpa (Cassia h.), VA & WV Ecotype) 2% Autumn Bentgrass, PA Ecotype (Agrostis perennans, PA Ecotype) 2% Marsh (Dense) Blazing Star (Spiked Gayfeather), PA Ecotype (Liatris spicata, PA Ecotype) 1% Early Goldenrod, PA Ecotype (Solidago juncea, PA Ecotype) 1% Oxeye Sunflower, PA Ecotype (Heliopsis helianthoides, PA Ecotype) 1% Swamp Milkweed, PA Ecotype (Asclepias incarnata, PA Ecotype)

SEED IN ERNST SEED MIX (ERNMX-180); RAIN GARDEN AREA MIX SEEDING RATE IS 20 LBS. PER ACRE WITH 30 LBS. PER ACRE GRAIN RYE (COVER CROP) BASIN FLOOR = 4.865 SF

 $(4865/43560) \times 20 = 2.5 LBS. ERNMX-180$ $(4865/43560) \times 30 = 3.5 LBS. GRAIN RYE$

DETENTION BASIN & SIDE SLOPE SEEDING

BASIN SIDE SLOPES

SEED IN ERNST SEED MIX (ERNMX-181): NATIVE STEEP SLOPE MIX W/ ANNUAL RYEGRASS SFEDING RATE IS 60 LBS. PER ACRE

 $(3690/43560) \times 60 = 5.0 LBS. ERNMX-181$

ERNMX-181 NATIVE STEEP SLOPE MIX W/ ANNUAL RYEGRASS

20% Annual Ryegrass (Lolium multiflorum (L. perenne var. italicum))

4% Ticklegrass (Rough Bentgrass), PA Ecotype (Agrostis scabra, PA Ecotype)

1% Oxeye Sunflower, PA Ecotype (Heliopsis helianthoides, PA Ecotype)

18% Virginia Wildrye, PA Ecotype (Elymus virginicus, PA Ecotype) 15% Purpletop (Tridens flavus) 12% Creeping Red Fescue (Festuca rubra) 12% Indiangrass, 'Prairie View'—IN Ecotype (Sorghastrum nutans, 'Prairie View'—IN Ecotype) 5% Big Bluestem, 'Southlow'-MI Ecotype (Andropogon gerardii, 'Southlow'-MI Ecotype) 4% Autumn Bentgrass, Albany Pine Bush-NY Ecotype (Agrostis perennans, Albany Pine Bush-NY Ecotype)

2% Partridge Pea, PA Ecotype (Chamaecrista fasciculata (Cassia f.), PA Ecotype) 2% Purple Coneflower (Echinacea purpurea) 2% Blackeved Susan (Rudbeckia hirta) 1% Marsh (Dense) Blazing Star (Spiked Gayfeather), PA Ecotype (Liatris spicata, PA Ecotype)

1% Lanceleaf Coreopsis, Coastal Plain NC Ecotype (Coreopsis lanceolata, Coastal Plain NC Ecotype) 1% Wild Bergamot (Monarda fistulosa)

BASIN LANDSCAPE MAINTENANCE

THIS BASIN IS DESIGNED TO BECOME NATURALIZED OVER TIME AND WILL REQUIRE LESS MAINTENANCE AS TIME GOES ON.

MOWING - ESTABLISH AND MAINTAIN A NO-MOW ZONE THAT ENCOMPASSES THE BASIN FLOOR AND SIDE SLOPES. MOW THE NO-MOW ZONE 1X/YEAR TO A MINIMUM HEIGHT OF 6". (ANNUALLY IN LATE APRIL/ EARLY MAY). RAKE MOWN MATERIAL AND COMPOST OR DISPOSE OF OFF SITE.

INSPECTIONS - INSPECT BASIN AND NO-MOW ZONES FOR INVASIVE SPECIES SUCH AS PURPLE LOOSESTRIFE, PHRAGMITES, HONEYSUCKLE, ETC. (ANNUALLY IN JULY). IF INVASIVE SPECIES ARE FOUND REMOVE PER RECOMMENDED STANDARDS FOR SPECIFIC SPECIES FOLLOWING GUIDELINES BY

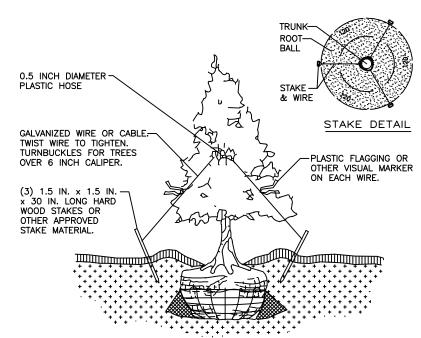
PA DCNR (DEPT OF CONSERVATION & NATURAL RESOURCES). CLEANING - REMOVE TRASH AND DEBRIS (JANUARY & APRIL)

LAWN SEED NOTES:

- 1. PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 2" DIAMETER.
- THE FOLLOWING SEED MIX SHALL BE SOWN AT THE RATES AS DEPICTED:
- RED FESCUE 1 1/2 LBS./1,000 SF
- 1 LBS./1,000 SF PERENNIAL RYEGRASS 1 1/2 LBS./1,000 SF KENTUCKY BLUEGRASS SPREADING FESCUE 1 LBS./1,000 SF
- SEED MIX SHALL BE MULCHED WITH SALT HAY OR UNROTTED SMALL GRAIN STRAW AT A RATE OF 2 TONS/AC OR 90 LBS/1,000 SF
- 4. SEEDING DATES FOR THIS MIXTURE SHALL BE AS FOLLOWS:
- SPRING: APRIL 1 MAY 31 FALL: AUGUST 16 - OCTOBER 31
- 5. GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED BY OWNER.

TREE PROTECTION NOTES:

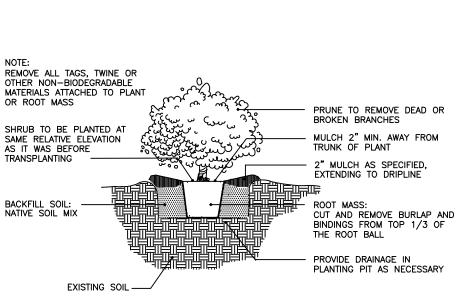
- 1. ALL EXISTING SHADE TREES WITHIN THE LIMITS OF TREE PROTECTION FENCING AND AS DIRECTED BY THE LANDSCAPE ARCHITECT SHALL BE PROTECTED THROUGHOUT THE DURATION
- 2. DEMOLITION AND GRADING WORK ADJACENT TO PROTECTED TREES SHALL BE PERFORMED BY A QUALIFIED PERSON WITH A MINIMUM OF FIVE (5) YEARS EXPERIENCE IN WORKING WITH EXCAVATION EQUIPMENT. CONTRACTOR TO PROTECT ROOT MASS AGAINST DAMAGE DURING EXCAVATION. ANY TREE ROOTS THAT ARE DISTURBED, BROKEN OR CUT SHALL BE PRUNED BACK WITH CLEAN SHARP TOOLS.
- 3. TO MINIMIZE DISTURBANCE OF VEGETATION TO REMAIN, ALL TREE STUMPS TO BE REMOVED WITHIN 10' OF TREE PROTECTION FENCE SHALL BE REMILLED USING A STUMP GRINDER.
- 4. ALL EXPOSED TREE ROOTS SHALL BE THOROUGHLY IRRIGATED ON A DAILY BASIS UNTIL BACKFILLING CAN OCCUR AS DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.
- 5. ALL WORK TO BE PERFORMED UNDER THE DIRECT SUPERVISION OF EITHER THE OWNER'S REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT. NOTIFY OWNER A MINIMUM OF 48 HOURS PRIOR TO ANY EARTHWORK / EXCAVATION WORK.

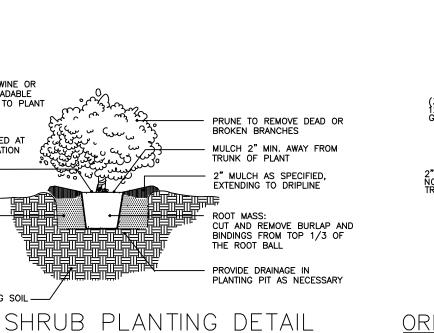


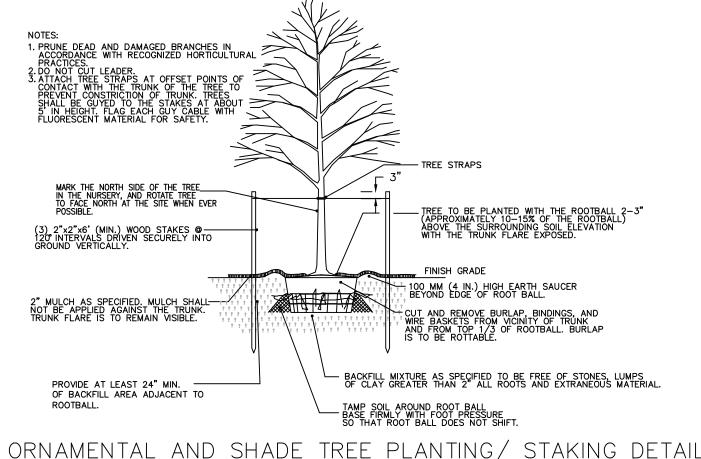
- 1. ALL STAKES SHALL BE DRIVEN OUTSIDE THE EDGE OF THE ROOT BALL. 2. ASSURE THAT THE BEARING SURFACE OF THE PROTECTIVE COVERING OF THE WIRE OR CABLE AGAINST THE TREE TRUNK IS A MINIMUM 0.5 INCH. 3. REMOVE ALL STAKING AS SOON AS THE TREE HAS GROWN SUFFICIENT ROOTS TO OVER-COME THE PROBLEM THAT REQUIRED THE TREE TO BE STAKED. STAKES SHALL BE REMOVED NO LATER THAN THE END OF THE FIRST GROWING SEASON.

- TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOMMODATE 1.5 INCH CALIPER OF TRUNK MOVEMENT. TUCK ANY LOOSE ENDS OF THE WIRE OR CABLE INTO THE WIRE WRAP SO THAT NO SHARP WIRE ENDS ARE EXPOSED.

EVERGREEN TREE STAKING DETAIL









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