SOIL EROSION & SEDIMENT POLLUTION CONTROL NOTES

1.) THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL STRUCTURES. ADDITIONAL FACILITIES OF MEASURES SHALL BE INSTALLED WHERE NECESSARY OR WHERE DIRECTED BY EITHER THE TOWNSHIP OR THE MONTGOMERY COUNTY CONSERVATION DISTRICT AS CONSTRUCTION PROGRESSES.

2.) THE EQUITABLE OWNER/CONSTRUCTION MANAGER IS RESPONSIBLE FOR ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROLS AND SITE STABILIZATION. THE EQUITABLE OWNER/CONSTRUCTION MANAGER SHALL ASSIGN ONE INDIVIDUAL TO BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL FACILITIES AND MEASURES.

3.) THE PERMITTEE AND/OR THE CONTRACTOR SHALL NOTIFY THE MONTGOMERY COUNTY CONSERVATION DISTRICT THREE (3) DAYS PRIOR TO THE START OF EARTHMOVING ACTIVITY AND WHEN EARTHMOVING ACTIVITIES CEASE.

4.) AFTER EACH RAIN STORM EVENT, ALL TEMPORARY SEDIMENTATION CONTROL FACILITIES SHALL BE INSPECTED, CLEANED AND REPAIRED AS NECESSARY.

5.) SHOULD UNFORSEEN EROSIVE CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED RUNOFF AND/OR SEDIMENT DISPLACEMENT. STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE AND OTHER MULCHES SHALL BE HELD IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.

6.) THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64, EROSION AND CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL RESOURCES, SUB-PART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.

7.) PROTECTION TO THE EXISTING TREES AND SHRUBS SHALL BE TAKEN BY THE CONTRACTOR TO ELIMINATE UNNECESSARY DAMAGE.

8.) THE CONTRACTOR SHALL DELINEATE, IN THE FIELD, AREAS OF DISTURBANCE AS SHOWN ON THE PLANS.

9.) DUMP SITES WHERE EXCESS EXCAVATED MATERIAL IS TO BE HAULED MUST BE COVERED UNDER MCCD APPROVED SEDIMENT AND EROSION CONTROL PLANS (FOR THAT SPECIFIC ACTIVITY) PRIOR TO ANY DUMPING / EARTH DISTURBANCE ON SAID SITE.

10.) THE SWAMP CREEK CHAPTER 93 STREAM CLASSIFICATION IS TSF. SITE ULTIMATELY DRAINS TO SWAMP CREEK.

11.) SLOPES 3':1' AND GREATER SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS.

SEQUENCE OF CONSTRUCTION

ANTICIPATED CONSTRUCTION START : SEPTEMBER 2005
ANTICIPATED CONSTRUCTION COMPLETION : SEPTEMBER 2006

1.) INSTALL STONE CONSTRUCTION ENTRANCE, PERIMETER SILT FENCING AND INLET PROTECTION ON EXISTING INLETS WITHIN LIMIT OF DISTURBANCE.

2.) CONSTRUCT BOTH TEMPORARY SEDIMENT BASIN #1A AND #1B (TO TEMPORARY GRADES), PERMANENT OUTLET STRUCTURE (OS1), DISCHARGE PIPE (OS1-IN38), PIPE RUNS EW4-EW5 AND EW3-EW6, AND TRASH RACKS. SEDIMENT BASIN BERM SHALL BE STABILIZED IMMEDIATELY.

3.) STRIP SITE, COMMENCE EARTHWORK ACTIVITY. RUNOFF FROM EARTH MOVING ACTIVITY SHALL BE DIRECTED TO THE TEMPORARY SEDIMENT BASINS. AS SITE REACHES SUB-GRADE, CONTRACTOR SHALL ALTERNATIVE DISTURBED AREAS TO MINIMIZE EROSION.

4.) CONTRACTOR SHALL COMMENCE INSTALLATION OF ENDWALLS, STORM WATER PIPING (INCLUDING CULVERT BENEATH BIKE PATH) AND APPURTENANCES AS REQUIRED. COMMENCE CONSTRUCTION OF PERMANENT SWALES BEHIND LOTS 10-16.RUNOFF SHALL BE DIRECTED TO TEMPORARY SEDIMENT BASIN. INSTALL APPROPRIATE EROSION CONTROL MEASURES FOR CONSTRUCTION OF BUILDINGS.

5.) INITIATE INSTALLATION OF ON-SITE IMPROVEMENTS INCLUDING UNDERGROUND UTILITIES, BUILDING AND CURBING. ONLY INLETS INDICATED ON THE PLAN SHALL BE EQUIPPED WITH INLET PROTECTION IMMEDIATELY UPON INSTALLATION.

6.) PERFORM FINAL SITE GRADING, RESPREAD TOPSOIL TO ALLOW COMPLETION OF ALL PARKING AREAS. UPON COMPLETION, PERMANENT SITE STABILIZATION SHALL BE COMPLETED. STABILIZATION SHALL INCLUDE MULCHING (3 TONS/ACRE), SEEDING/SODDING, PAVING, ETC.

7.) INSTALL FINAL BITUMINOUS PAVING AND CONCRETE.

8.) INSTALL FINAL VEGETATION INCLUDING SEED AND LANDSCAPING. CLEAR SITE OF DEBRIS AND ALL UNWANTED MATERIALS. REMOVE SILT FENCE AND ROCK FILTERS. PRIOR TO CONVERSION OF SEDIMENT BASIN TO PERMANENT STORMWATER MANAGEMENT BASIN, THE CONTRACTOR SHALL SET UP A MEETING WITH TOWNSHIP ENGINEER TO DISCUSS DETAILED PROCEEDURES FOR THE BASIN EXCAVATION, CONSTRUCTION AND CLEANOUT THAT WILL MINIMIZE COMPACTION OF THE SUBGRADE OF THE BASIN WITHOUT USE OF HEAVY CONSTRUCTION VEHICLES/EQUIPMENT INTO THE AREA OF THE BASIN. UPON STABILIZATION OF FINAL BASINS, TEMPORARY RISER AND BARREL CAN BE REMOVED AND OUTLET STRUCTURE CONVERTED TO FINAL DESIGN. DISPOSAL SHALL BE IN A SAFE AND LAWFUL MANNER.

MAINTENANCE PROGRAM

1.) SILT FENCE –

a. THE SILT FENCE INSTALLATION SHALL BE INSPECTED AFTER EACH RUNOFF EVENT. ANY AREAS OF FAILURE MUST BE CORRECTED IMMEDIATELY.
b. ACCUMULATED SEDIMENTS SHALL BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE.
c. ALL UNDERCUTTING OR EROSION OF THE TOE ANCHOR SHALL BE REPAIRED IMMEDIATELY WITH COMPACTED BACKFILL MATERIALS. IF THIS CONDITION PERSISTS AT A CERTAIN LOCATION, A ROCK FILTER OUTLET SHALL BE INSTALLED.
d. CONTRACTOR MUST ADHERE TO MANUFACTURER'S RECOMMENDATIONS FOR REPLACING SILT FENCE DUE TO WEATHERING.

2.) SWALES –

a. ALL SWALES AND CHANNELS SHALL BE MAINTAINED TO ENSURE THAT THE SPECIFIED DESIGN DIMENSIONS AND STABILIZATION ARE ADHERED TO AT ALL TIMES.

3.) STABILIZED CONSTRUCTION ENTRANCE –

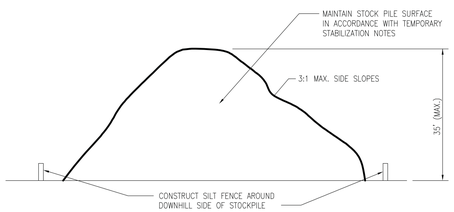
a. THE CONSTRUCTION ENTRANCE'S DIMENSIONS AND THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSION BY THE ADDITION OF ROCK WHERE NECESSARY.

4.) INLET PROTECTION –

a. INLET PROTECTION SHALL BE MAINTAINED FOLLOWING EACH RUNOFF EVENT IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.

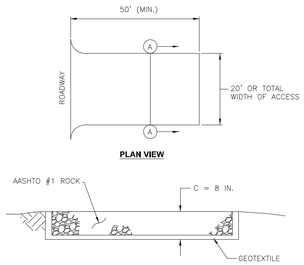
5.) GENERAL MAINTENANCE –

a. AT THE END OF EACH DAY, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. WASHING OF THE ROADWAY WITH WATER IS STRICTLY PROHIBITED.
b. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CHECKED ONCE (1) WEEKLY AND REPAIRED AS REQUIRED.

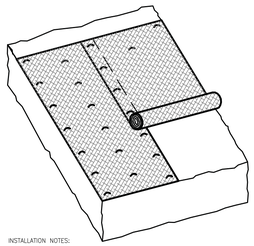


TEMPORARY STOCKPILE DETAIL
N.T.S.

STANDARD CONSTRUCTION DETAIL #16
Rock Construction Entrance



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. At the end of each construction day, all sediment deposited on paved roadways shall be removed and returned to the construction site.



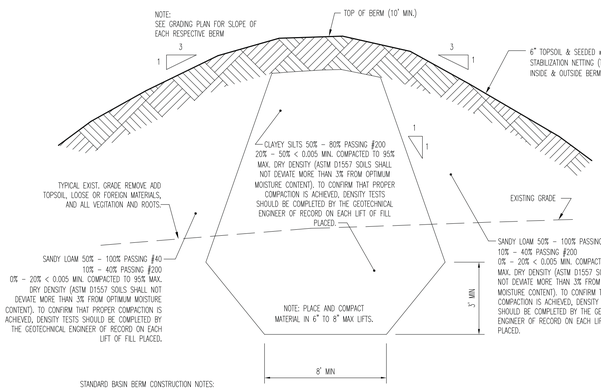
INSTALLATION NOTES:

ALL SURFACES SHOULD BE PREPARED SO THAT THE FABRIC LIES IN CLOSE CONTACT WITH THE SOIL AFTER SEEDING. FABRIC IS INSTALLED BY UNROLLING IN THE DIRECTION OF THE EXPECTED WATER FLOW. INSTALL AN ANCHOR TRENCH AT THE TOP AND BOTTOM OF THE THE SLOPE TO PREVENT WATER FROM GETTING UNDER THE EDGE OF THE FABRIC. ADJACENT FABRIC PANELS SHOULD BE OVERLAPED AT LEAST 2 INCHES. SECURE FABRIC BY PLACING SQUARE TOP SQUARES EVERY FOOT ALONG EDGES AND OVERLAPS AND ON THREE FOOT CENTERS IN BETWEEN. STAPLE SPACING MAY BE INCREASED DEPENDING ON CONDITIONS.

STAPLES – 11 GUAGE WIRE WITH AN INCH WIDE SQUARE TOP AND SIX INCH LONG LEGS.

NOTES:
1.) EROSION CONTROL MATTING SHALL BE GEO-JUTE NORTH AMERICAN GREEN SC150 OR APPROVED EQUIVALENT.
2.) ONLY WOODEN OR BIODEGRADABLE STAKES SHALL BE USED IN SECURING BLANKET MATERIAL.

EROSION CONTROL MATTING ON STEEP SLOPES
N.T.S.



STANDARD BASIN BERM CONSTRUCTION NOTES:

1.) SITE PREPARATION – AREAS UNDER THE EMBANKMENT AND ANY STRUCTURES SHALL BE CLEARED, GRUBBED AND THE TOPSOIL STRIPPED TO REMOVE TREES, EGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. IN ORDER TO FACILITATE CLEAN-OUT AND RESTORATION, THE POOL AREA WILL BE CLEARED OF ALL BRUSH NO EXCESS TREES.

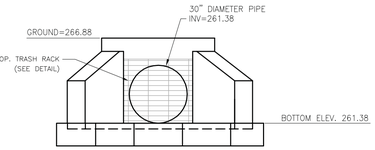
2.) CUT OFF TRENCH – A CUT-OFF TRENCH WILL BE EXCAVATED ALONG THE BERM CENTERLINE BENEATH EARTH FILL EMBANKMENTS. THE MINIMUM DEPTH SHALL BE 2 FEET. THE CUT-OFF TRENCH SHALL EXTEND TO THE TOP OF THE BANK. THE MINIMUM BOTTOM WIDTH SHALL BE 8 FEET BUT WIDE ENOUGH TO PERMIT OPERATION OF COMPACTION EQUIPMENT. THE SIDE SLOPES SHALL BE NO STEEPER THAN 1:1. COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE FOR EMBANKMENTS. THE TRENCH SHALL BE KEPT FREE OF STANDING WATER DURING THE BACKFILLING OPERATIONS.

3.) 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 MATERIAL. AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. THE FILL MATERIAL SHOULD CONTAIN SUFFICIENT MOISTURE SO THAT IT CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION. FILL MATERIAL MUST BE PLACED IN 6 TO 8 INCH LAYERS AND SHALL BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. COMPACTION MUST BE OBTAINED BY MECHANICAL SHEEP FOOT ROLLERS. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION OF 5% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLEMENT.

4.) ALL DETENTION/RETENTION BASIN EMBANKMENTS SHALL BE PLACED IN MAXIMUM OF 8 INCH LIFTS TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS ESTABLISHED BY ASTM D-1557 PTM NO. 112 OR PTM NO. 402. PRIOR TO PROCEEDING TO THE NEXT LIFT, THE COMPACTION SHALL BE CHECKED BY THE TOWNSHIP ENGINEER OR SOILS ENGINEER. THE DEVELOPER'S CONTRACTOR SHALL OBTAIN THE SERVICES OF A QUALIFIED LABORATORY OR TECHNICIAN TO CONDUCT COMPACTION TESTS ON THE LEADING AND THE TRAILING EDGE OF THE BERM ALONG WITH THE TOP OF THE BERM. ALL TESTS SHALL BE FURNISHED TO THE TOWNSHIP FOR REVIEW.

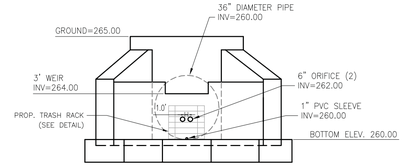
5.) ALL OUTLET PIPES THROUGH THE DETENTION BASIN BERM SHALL BE RCP WITH O-RING JOINTS.

BERM & CUTOFF TRENCH DETAIL
(FOR BERMS IN FILL CONDITION)
N.T.S.



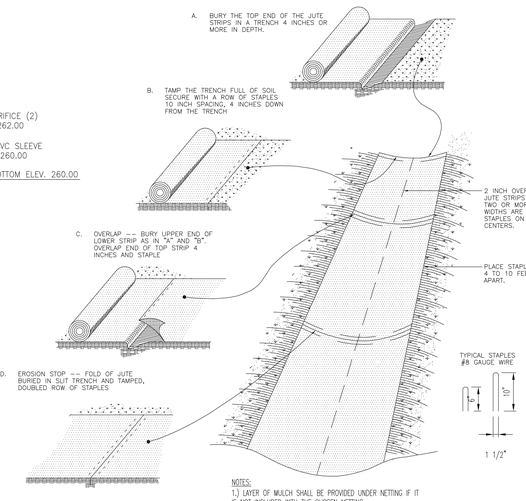
NOTE: CONTRACTOR TO SUBMIT A SHOP DRAWING OF EW3 TO DESIGN ENGINEER PRIOR TO FABRICATION.

EW3 - ENDWALL DETAIL (BASIN 1B)
N.T.S.



NOTE: CONTRACTOR TO SUBMIT A SHOP DRAWING OF EW4 TO DESIGN ENGINEER PRIOR TO FABRICATION.

EW4 - KNEE WALL DETAIL (FOREBAY)
N.T.S.

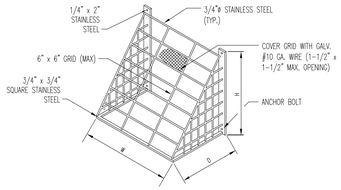


NOTES:
1.) LAYER OF MULCH SHALL BE PROVIDED UNDER NETTING IF IT IS NOT INCLUDED WITH THE CHOSEN NETTING.
2.) ONLY WOODEN OR BIODEGRADABLE STAKES SHALL BE USED IN SECURING BLANKET MATERIAL.

EROSION CONTROL BLANKET WITHIN CHANNELS
N.T.S.

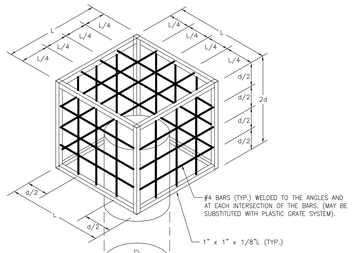
NOTES:
1. POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME THE FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWN CONTROL INSTALLATIONS. METAL "T" POSTS OR TREATED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION.
2. POSTS SHOULD BE DRIVEN INTO THE GROUND TO A DEPTH OF 1/3 OF THE HEIGHT OF THE POST. FOR EXAMPLE A 6 FOOT POST SHOULD BE AT LEAST 2 FEET IN THE GROUND.
3. SPACE POSTS EVERY 6 TO 8 FEET.
4. SECURE FENCING TO POSTS WITH NYLON CABLE TIES. WOOD STRIPS MAY ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

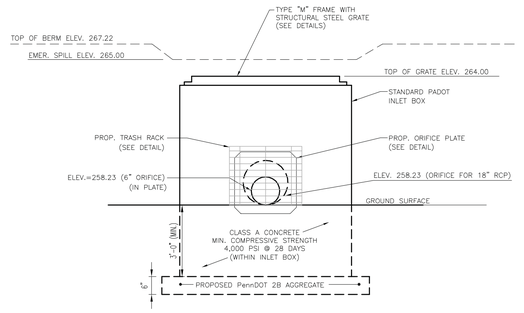
VISI PERIMETER FENCE DETAIL
(WOODLAND PROTECTION)
N.T.S.



STRUCTURE	OPENING	W (FT)	D (FT)	H (FT)
BASIN OUTLET (BASIN 1A)	6"	30"	30"	30"
EW4 – KNEE WALL (FOREBAY)	6" (2)	36"	36"	36"
EW3 – ENDWALL (BASIN 1B)	30"	36"	36"	36"
EW7 – ENDWALL	21"	27"	27"	27"
EW8 – ENDWALL	18"	24"	24"	24"

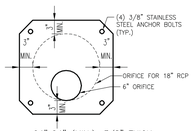
TRASH RACK/SAFETY GRATE FOR OUTLET STRUCTURES AND ENDWALLS
NOTE: TO BE INSTALLED ON ENDWALL 7 AND ENDWALL 8
N.T.S.





OUTLET STRUCTURE DETAIL (BASIN #1A)
N.T.S.

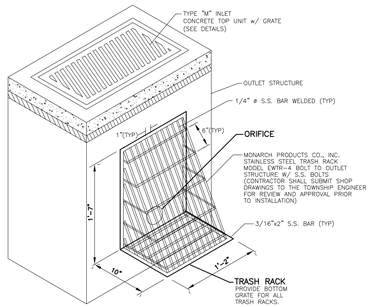
NOTE:
1. BUTYL RESIN MASTIC SEAL SHALL BE PLACED WITHIN ALL JOINTS OF THE OUTLET STRUCTURE WHEN ASSEMBLED AND BETWEEN TOP OF GRATE AND TOP OF STRUCTURE.



24"x24" (MIN.), 3/8" THICK STAINLESS STEEL ORIFICE PLATE (NEOPRENE GASKET TO BE UTILIZED)

NOTE:
NON-SHRINK GROUT SHALL BE PROVIDED ALONG ALL EDGES OF THE ORIFICE PLATE

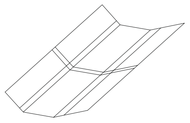
ORIFICE PLATE DETAIL
N.T.S.



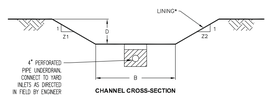
NOTE: TRASH RACKS SHALL BE INSTALLED WHEN THE SEDIMENT BASIN IS CONVERTED TO A PERMANENT STORMWATER MANAGEMENT BASIN.

TRASH RACK DETAIL
N.T.S.

STANDARD CONSTRUCTION DETAIL #1
Vegetated Channels



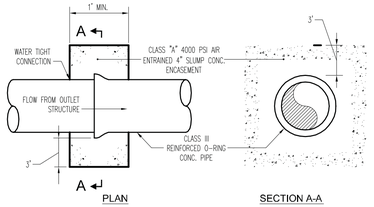
LINING INSTALLATION



CHANNEL CROSS-SECTION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	Z1 (FT)	Z2 (FT)	LINING*
LOT 12 & 13	ALL	4	1.50	3.0	3.0	NAG S150
LOT 14, 15, 16	ALL	4	1.50	3.0	3.0	NAG S150

* See Manufacturer's Lining Installation Detail for Staple Patterns, and Vegetation Stabilization Specifications for Soil Amendments, Seed Mixtures, and Mulching Information.



ANTI-SEEP COLLAR DETAIL
N.T.S.

REV.	DATE	COMMENT	BY
12	4/18/08	REV PER PADOT PLANS	VLS
11	1/17/08	REV PER ENGINEERS COMMENTS	VLS
10	9/06/07	REV PER ENGINEERS COMMENTS	JPW
9	12/15/06	REV. PER TOWNSHIP COMMENTS	LJC
8	10/19/06	REV. PER TOWNSHIP COMMENTS	LJC
7	8/30/06	REV. PER PENNDOT COMMENTS	LJC
6	3/31/06	REV. PER TOWNSHIP COMMENTS	LJC
5	1/17/06	REV. PER TOWNSHIP REVIEW COMMENTS	LJC

FINAL LAND DEVELOPMENT PLANS

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MONTGOMERY COUNTY, PENNSYLVANIA

R.D. IRONS

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NEW JERSEY LICENSE No. GE38890
DELAWARE LICENSE No. 9663
MARYLAND LICENSE No. 21379

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PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE – STOP CALL
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POCS SERIAL NUMBER

EROSION & SEDIMENT POLLUTION CONTROL DETAILS

DATE: 12/30/04	SCALE (H): AS (V): NOTED	SHEET NO: 26 OF 40
DRAWN: LGU	PROJECT No.: P03-0109.01	
CHECKED: R.D.J.	CAD I.D. #: P03-0109.01DETAILS-12	
CONSTRUCTION CHECK	DATE	REV. NO. 12