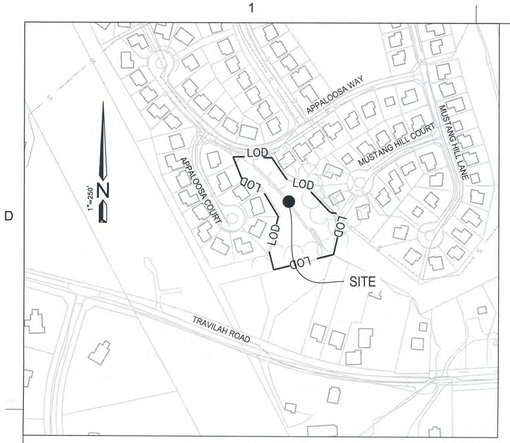
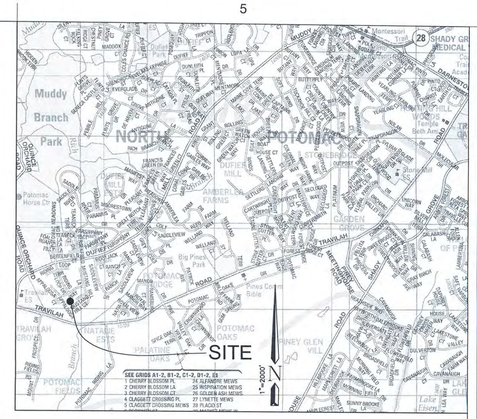
# WRE 12
## TASK ORDER 01
# POTOMAC RIDGE SWM POND "D" RETROFIT (ASSET #10891)
## STORMWATER MANAGEMENT CONCEPT
## NOT FOR CONSTRUCTION




LOCATION MAP
SCALE: 1"=250'




VICINITY MAP
SCALE: 1"=2000'
Map 5163, Grid A7
Map Copyright©Kappa LLC
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| INDEX TO DRAWINGS | | |
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| SHEET NO. | TITLE | SHEET NAME |
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TO ACCOMPANY SPECIFICATIONS INVITATION NO. XXXXX
DATED:

## MISS UTILITY

THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL UNDERGROUND UTILITIES IN THE AREA OF PROPOSED WORK ARE LOCATED PRIOR TO COMMENCING CONSTRUCTION WORK. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF CHAPTER 36A OF THE MONTGOMERY COUNTY CODE.

THE CONTRACTOR IS ALSO RESPONSIBLE FOR LOCATING ALL PRIVATE UTILITIES (NOT LOCATED BY MISS UTILITY) WITHIN M-NCPPC PROPERTY AT THEIR EXPENSE. ALL UTILITIES SHOWN ON THE PLANS ARE PROVIDED FOR INFORMATION ONLY AND SHALL BE CONSIDERED APPROXIMATE. M-NCPPC SHALL NOT BE RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. ANY UTILITIES OR OTHER UNDERGROUND FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S SOLE EXPENSE.

| BENCHMARK CHART | | | | |
|---|---|---|---|---|
| BENCHMARK | NORTHING | EASTING | ELEV. | DESCRIPTION |
| 300 | 1242801.425 | 515483.479 | 335.81' | -- |
| 301 | 1242917.173 | 515350.624 | 340.53' | -- |
| 150 | 1243038.365 | 515447.714 | 343.59' | -- |
| 151 | 1242719.019 | 515628.905 | 341.03' | -- |

## RELATED REQUIRED PERMITS

To be completed by the consultant and placed on the first sheet of the Sediment Control/Stormwater Management plan set for all projects

### IT IS THE RESPONSIBLITY OF PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF THE APPROVED SEDIMENT CONTROL PERMIT:

| TYPE OF PERMIT | REQ'D | NOT REQ'D | PERMIT NO. | EXPIRATION DATE | WORK RESTRICTION DATES |
|---|---|---|---|---|---|
| MCDPS Floodplain district | X | | | | |
| WATERWAYS/WETLAND(S) a. Corps of Engineers | X | | | | MARCH 1 - JUNE 15 |
| b. MDE | X | | | | MARCH 1 - JUNE 15 |
| c. MDE Water Quality Certification | X | | | | MARCH 1 - JUNE 15 |
| MDE Dam Safety | | X | | | |
| NPDES NOTICE OF INTENT | X | | NA | NA | DATE FILED |
| OTHERS (Please List): | | | | | |
| MCDPS R/W ACCESS | X | | | | |
| WSSC | | X | | | |

Department of Environmental Protection
Montgomery County Maryland

**SEQUENCE OF CONSTRUCTION FOR**
**POTOMAC RIDGE POND "D" (MCDEP ASSET# 10891)**
**SWM POND RETROFIT**

*Notes:*
*a. Sediment controls may be added, deleted, or field adjusted by the MCDPS Sediment Control Inspector at any time.*
*b. For all stakeouts involving grading of any kind, contractor to provide Owner and Engineer with cut sheet a minimum of 72 hours in advance of grading.*

Preconstruction

1. Prior to clearing of trees, installing sediment control measures, grading, or any other land disturbing activities, a preconstruction meeting must be conducted on-site with the:
   a) Montgomery County Department of Permitting Services (MCDPS) Sediment Control Inspector (240) 777-6210 (48 hours' notice)
   b) M-NCPPC Forest Conservation Inspector (301) 495-4581 (48 hours' notice)
   c) Owner's representative (240) 777-7789 (48 hours' notice)
   d) Engineer (301) 434-7000 (48 hours' notice)

The limits of disturbance must be field-marked prior to holding the preconstruction meeting.

Sediment Control Installation

2. Clear and grade for installation of sediment control devices only.
3. Install sediment control devices.
4. Once the sediment control devices are installed, the contractor must obtain written approval from the MCDPS inspector before proceeding with any additional clearing, grubbing, or grading.

Embankment Construction

*Notes:*
*a. Items 7-11 to be done under supervision of the professional geotechnical engineer of record.*
*b. This work can be done concurrently with items 20-25.*

5. Excavate embankment of Asset # 10891 for installation of core trench, cut-off trench, principal spillway, and filter diaphragm.
6. Remove and demolish existing principal spillway pipes and risers.
7. Install impervious cutoff trench and lower portion of filter diaphragm in excavated embankment.
8. Install twin 48" R.C.P. spillway pipes and cradle.
9. Install remaining of embankment including clay core and upper portion of filter diaphragm and toe drain pipes.
10. Install clay liner on dam embankment
11. Install principal spillway endwall
12. Grade principal spillway outfall for rip-rap and install rip-rap channel.

Riser Installation

*Note:*
*a. Items 13-19 to be done under supervision of the professional geotechnical engineer of record.*
*b. All reinforcement & formwork is to be inspected by the geotechnical engineer of record prior to closing forms.*
*c. Forms shall not be removed for seven days after pour.*
*d. All hot & cold weather connecting should be done as required per ACI-305 &306 (latest revision respectively.*
*e. This work can be done concurrently with items 20-25*

13. Excavate for riser foundation.
14. Form and pour riser foundation.
15. Install low flow pipe stub and pond drain stub.
16. Form & pour riser walls around principal spillway pipes & low flow pipe stub.
17. Form and pour top slab.
18. Install pond drain system, low flow system, riser steps, manhole cover and trash racks on riser.
19. Backfill around riser after 28 days of curing.

Pond Grading and Storm Drain Modifications

*Notes:*
*a. This work can be done concurrently with items 5-12.*

20. Excavate for realignment of 15" R.C.P. storm drain.
21. Realign 15" R.C.P. storm drain. Replace any damaged sections in-kind
22. Remove existing concrete pilot channel in the facility.
23. Install storm drain endwall (EW5)
24. Re-grade pond to its final contours.
25. Install riprap as shown on plans

Miscellaneous Repairs and Modifications

26. Install safety fencing.
27. Install all landscaping.
28. Permanently seed and stabilize the limits of disturbance.

Project Closeout

29. Obtain a punch list inspection from the Owner, Engineer, and MCDPS Sediment Control Inspector.
30. Address all punch list items to the satisfaction of the Owner, Engineer, and MCDPS sediment control inspector.
31. Hold a final inspection with the Owner and Engineer, and MCDPS Sediment Control Inspector.
32. Obtain written approval from the MCDPS Sediment Control Inspector to remove all sediment control devices.

Engineer to complete as-built survey and obtain approval of as-built drawings and final report within 60 days of completion of final inspection by MCDPS.

**MS4 SUMMARY TABLE - POND/WETLAND**

| "FACILITY ID" | FACILITY TYPE | DRAINAGE AREA (AC)1 | "CREDITED IA (AC)2" | TARGETED WQv (AC-FT) | PROVIDED WQv (AC-FT) | TARGETED CPv (AC-FT) | PROVIDED CPv (AC-FT) | TARGETED CP RELEASE RATE (CFS) | PROVIDED CP RELEASE RATE (CFS) | TARGETED ESDv (AC-FT) | PROVIDED ESDv (AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10891 | POND | 47.26 | 9.41 | 0.90 | 0.97 | 1.59 | 1.06 | 0.84 | 3.09 | 0 | 0 |

1. Drainage area is the total physical drainage area to the facility, including child facilities.
2. Credited impervious area is the currently untreated impervious area that falls within Montgomery County's MS4 jurisdiction.

**PROJECT BENEFITS**
1. Improved stormwater management through increased channel protection and water quality
2. Safety improvements to dam and basin slopes
3. Improved aesthetics through landscaping
4. Manage and maintain the 1-yr and 2-yr release rate the existing pond is providing.

SITE ADDRESS
APPALOOSA WAY
NORTH POTOMAC, MARYLAND, 20878

PROPERTY DESCRIPTION
PARCEL P, BLOCK E
L. 7472, F. 807
TAX MAP: ER62
NORTH POTOMAC, MARYLAND 20878

SEAL:
STATE OF MARYLAND · JEFFREY BRIAN SEBO · 32457 · PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE #: 32457
EXPIRATION DATE: 06/20/2014

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

STORMWATER MANAGEMENT
REVIEWED DATE
APPROVED DATE
S.M.FILE NO.

SEDIMENT CONTROL TECHNICAL REQUIREMENTS:
REVIEWED DATE
APPROVED DATE

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

ADMINISTRATIVE REQUIREMENTS:
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| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

MR. CRAIG CARSON 240-777-7713
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE
ROCKVILLE, MD 20850

CPJ Associates

DESIGNED BY: SEB
DRN BY: GC
CKD BY: JBB
SUBMITTED BY: JBB
PLOT SCALE: 1
PLOT DATE: 1/21/2014
SIZE: ANSI D
FILE NAME: 01-EC-04.DWG
DATE: JAN., 2014
TASK ORDER NO.: 12-01
CONTRACT NO.:
FILE NUMBER:

TASK ORDER 12-01
POTOMAC RIDGE SWM POND RETROFIT
(ASSET #10891) - NOT FOR CONSTRUCTION
DARNESTOWN (6TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

COVER SHEET

SHEET NO. 1 OF 12
CV-01


Attached Xrefs:

## MASTER LEGEND

- EXISTING CONTOURS — 452
- EXISTING INDEX CONTOURS — 450
- PROPOSED CONTOURS — 452
- PROPOSED INDEX CONTOURS — 450
- EXISTING STORM DRAIN PIPE — EX. 36" C.M.P.
- PROPOSED STORM DRAIN PIPE — 36" C.M.P.
- PROPOSED LIMITS OF DISTURBANCE — LOD — LOD
- DRAINAGE DIVIDE
- DRAINAGE FLOWPATH POINT — A
- FLOWPATH
- TIME OF CONCENTRATION POINT
- LAND USE/LAND COVER BOUNDARY LINE — LU — LU
- EXISTING SOIL DIVIDE
- SOIL TYPE DEMARCATION — 2B
- 100 YEAR FLOOD PLAIN
- 1 YEAR WATER SURFACE ELEV.
- 10 YEAR WATER SURFACE ELEV.
- 100 YEAR WATER SURFACE ELEV.
- PROPOSED/EXISTING RIPRAP
- WOOD FENCE
- EX. SEWER LINE (BASED UPON WSSC PLANS) — SEW — SEW
- EXISTING PROPERTY LINE
- EXISTING SWM EASEMENT
- PROPOSED SWM EASEMENT

- CONSTRUCTION SAFETY FENCE — XX — XX — XX
- EX. WATER LINE (BASED UPON WSSC PLANS) — W — W — W
- EX. SEWER MANHOLE — S
- EX. STORMDRAIN MANHOLE — D
- EX. LIGHT POLE
- EX. SIGN
- EX. FIRE HYDRANT
- EX. TREE TO BE REMOVED
- EX. TREE TO REMAIN
- SUMP PIT — SP
- PUMP
- FILTER BAG — FB
- SILT FENCE ON PAVEMENT — SFOP — SFOP — SFOP
- STAGING/STOCKPILE AREA
- ORANGE BLAZE SAFETY FENCE — OX — OX — OX
- STRUCTURAL LABEL — HW
- HEADWALL/ EMZ WALL
- TRAVERSE POINT — 642
- STABILIZED CONSTRUCTION ENTRANCE — SCE
- DRAINAGE SLOPE — 3:1
- SILT FENCE — SF — SF — SF
- SUPER SILT FENCE — SSF — SSF — SSF

## MASTER LIST OF ABBREVIATIONS

| | | |
|---|---|---|
| Ac. | - | ACRE(S) |
| ACI | - | AMERICAN CONCRETE INSTITUTE |
| ASTM | - | AMERICAN SOCIETY FOR TESTING MATERIALS |
| ℄ | - | CENTERLINE |
| C/C | - | CENTER-TO-CENTER |
| CF | - | CUBIC FEET |
| cfs | - | CUBIC FEET PER SECOND |
| CL | - | CLASS |
| C.M.P. | - | CORRUGATED METAL PIPE |
| CPv | - | CHANNEL PROTECTION VOLUME |
| D | - | DEPTH |
| DA | - | DRAINAGE AREA |
| D50 | - | 50TH PERCENTILE OF DIAMETER |
| D.I.P. | - | DUCTILE IRON PIPE |
| EX. | - | EXISTING |
| f.p.s. | - | FEET PER SECOND |
| FT | - | FEET |
| GALV. | - | GALVANIZED |
| H.D.P.E. | - | HIGH DENSITY POLYETHYLENE |
| HGL | - | HYDRAULIC GRADE LINE |
| HSG | - | HYDROLOGIC SOIL GROUP |
| INV. | - | INVERT |
| L | - | LENGTH OF CURVE (CURVE DATA) |
| L.F. | - | LINEAR FEET |
| MCDPS | - | MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES |
| MDE | - | MARYLAND DEPARTMENT OF THE ENVIRONMENT |
| MH | - | MANHOLE |
| MNCPPC | - | MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMMISSION |
| MSHA | - | MARYLAND STATE HIGHWAY ADMINISTRATION |
| NTS | - | NOT TO SCALE |
| RCN | - | RUNOFF CURVE NUMBER |
| R.C.P. | - | REINFORCED CONCRETE PIPE |
| S.S. | - | SIDE SLOPE |
| S.W.M. | - | STORMWATER MANAGEMENT |
| T | - | TANGENT (CURVE DATA) |
| Tc | - | TIME OF CONCENTRATION |
| TYP. | - | TYPICAL |
| V | - | VELOCITY |
| WQv | - | WATER QUALITY VOLUME |
| Ø | - | DIAMETER |

STATE OF MARYLAND — JEFFREY BRIAN BLAND — 32457 — PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION
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LICENSE #: 32457

EXPIRATION DATE: 06/20/2014

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STORMWATER MANAGEMENT

REVIEWED DATE

APPROVED DATE

S.M.FILE NO.

SEDIMENT CONTROL TECHNICAL REQUIREMENTS:

APPROVED DATE

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

ADMINISTRATIVE REQUIREMENTS:

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Department of Environmental Protection — Montgomery County Maryland

| MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|
| | | | |

| MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|
| | | | |

MR. CRAIG CARSON 240.777.7713
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE
ROCKVILLE, MD 20850

CPJ Associates

DESIGNED BY: SEB
DWN BY: GC
CKD BY: JBB
SUBMITTED BY: JBB
DATE: JAN., 2014
TASK ORDER NO.: 12-01
CONTRACT NO.:
FILE NUMBER:
PLOT SCALE: AS SHOWN
PLOT DATE: 1/21/2013
SIZE: ANSI D
FILE NAME: 01-EC-04.DWG

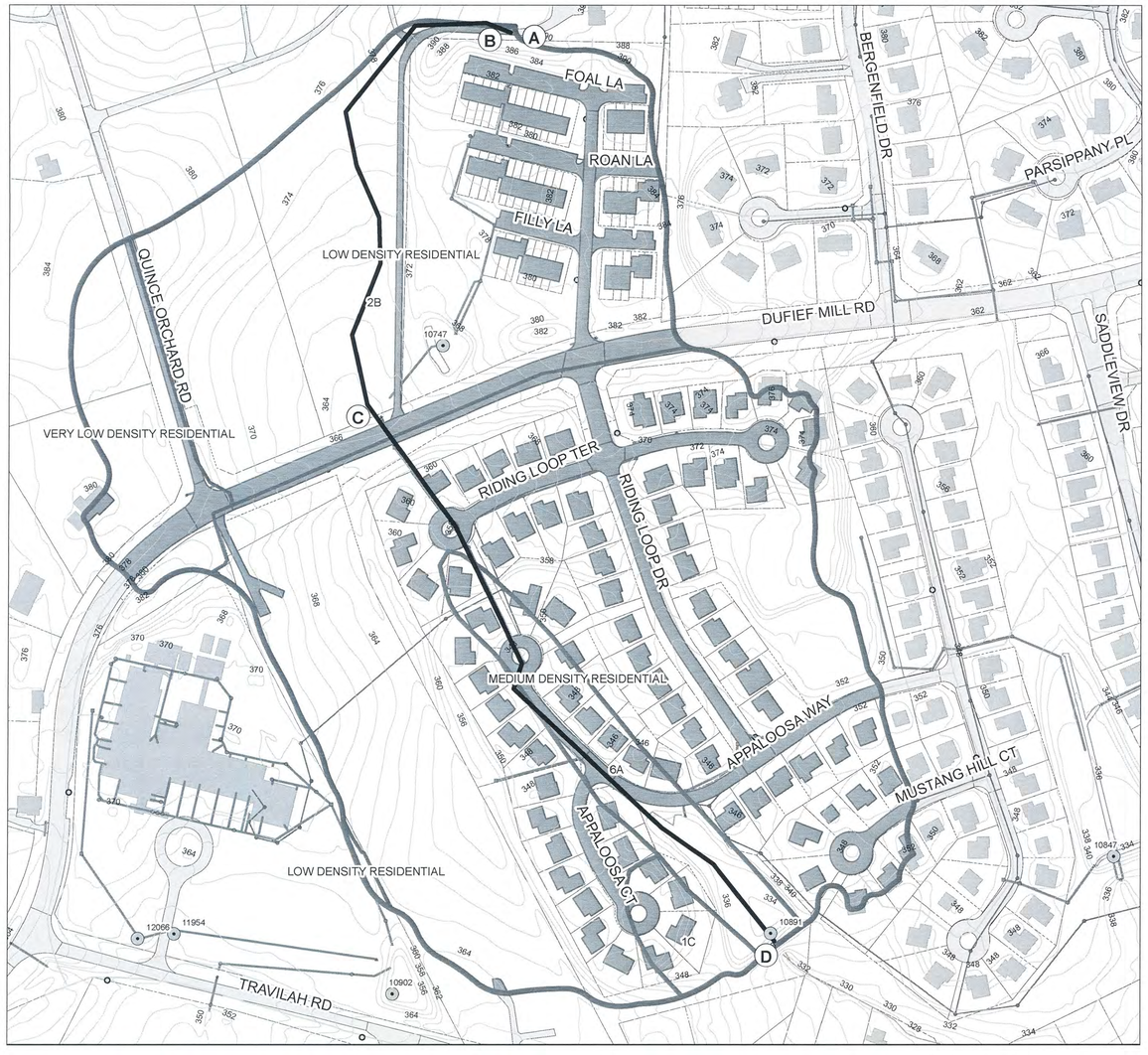
TASK ORDER 12-01
POTOMAC RIDGE SWM POND RETROFIT
(ASSET #10891) - NOT FOR CONSTRUCTION
DARNESTOWN (6TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

MASTER LEGENDS AND ABBREVIATIONS

SHEET NO. 2 OF 12

ML-01

Attached Xrefs:




GRAPHIC SCALE

100 0 50 100 200

SCALE: 1" = 100'

| HYDROLOGIC SUMMARY | | |
|---|---|---|
| NAME | POTOMAC RIDGE SWM POND 'D' | |
| MCDEP ASSET | 10891 | |
| DRAINAGE AREA | 47.26 | ACRES |
| RCN | 73 | |
| TIME OF CONCENTRATION | 0.206 | HOURS |

| LAND USE / SOILS COMPOSITION | | |
|---|---|---|
| LAND USE/HYDROLOGIC SOIL GROUP | B | D |
| VERY LOW DENSITY RESIDENTIAL | 2.85 | N/A |
| LOW DENSITY RESIDENTIAL | 15.57 | N/A |
| MEDIUM DENSITY RESIDENTIAL | 26.17 | 2.67 |

| FLOW PATH SUMMARY | | | | | |
|---|---|---|---|---|---|
| SEGMENT / PARAMETER | FLOW TYPE | LENGTH | SLOPE | VELOCITY | SURFACE |
| A to B | SHEET FLOW | 50 LF | 2.00% | N/A | GRASS-RANGE SHORT |
| B to C | SHALLOW CONCENTRATED | 560 LF | 3.90% | N/A | UNPAVED |
| C to D | OPEN CHANNEL | 1360 LF | N/A | 6.0 fps | STORM DRAIN |

N

## Legend

- Drainage Divide
- TOC Flow Path
- TOC Point of Interest
- 2 Foot Contours

STATE OF MARYLAND
JEFFREY BRIAN BLASS
PROFESSIONAL ENGINEER
07/24/2014

PROFESSIONAL CERTIFICATION
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STORMWATER MANAGEMENT

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APPROVED DATE

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Montgomery County Maryland

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|---|---|---|---|---|---|---|---|

DESIGNED BY: SEB
DWN BY: GC
CKD BY: JBB
SUBMITTED BY: JBB
PLOT SCALE: 1"=100'
PLOT DATE: 4/5/2013
SIZE: ANSI D
FILE NAME: 01-EC-04.DWG
DATE: JAN., 2014
TASK ORDER NO.: 12-01
CONTRACT NO.:
FILE NUMBER:

MR. CRAIG CARSON 240-777-7713
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE
ROCKVILLE, MD 20850

CPJ Associates

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MONTGOMERY COUNTY, MARYLAND

DRAINAGE AREA MAP

SHEET NO.
3 OF 12

DA-01

Attached Xrefs:

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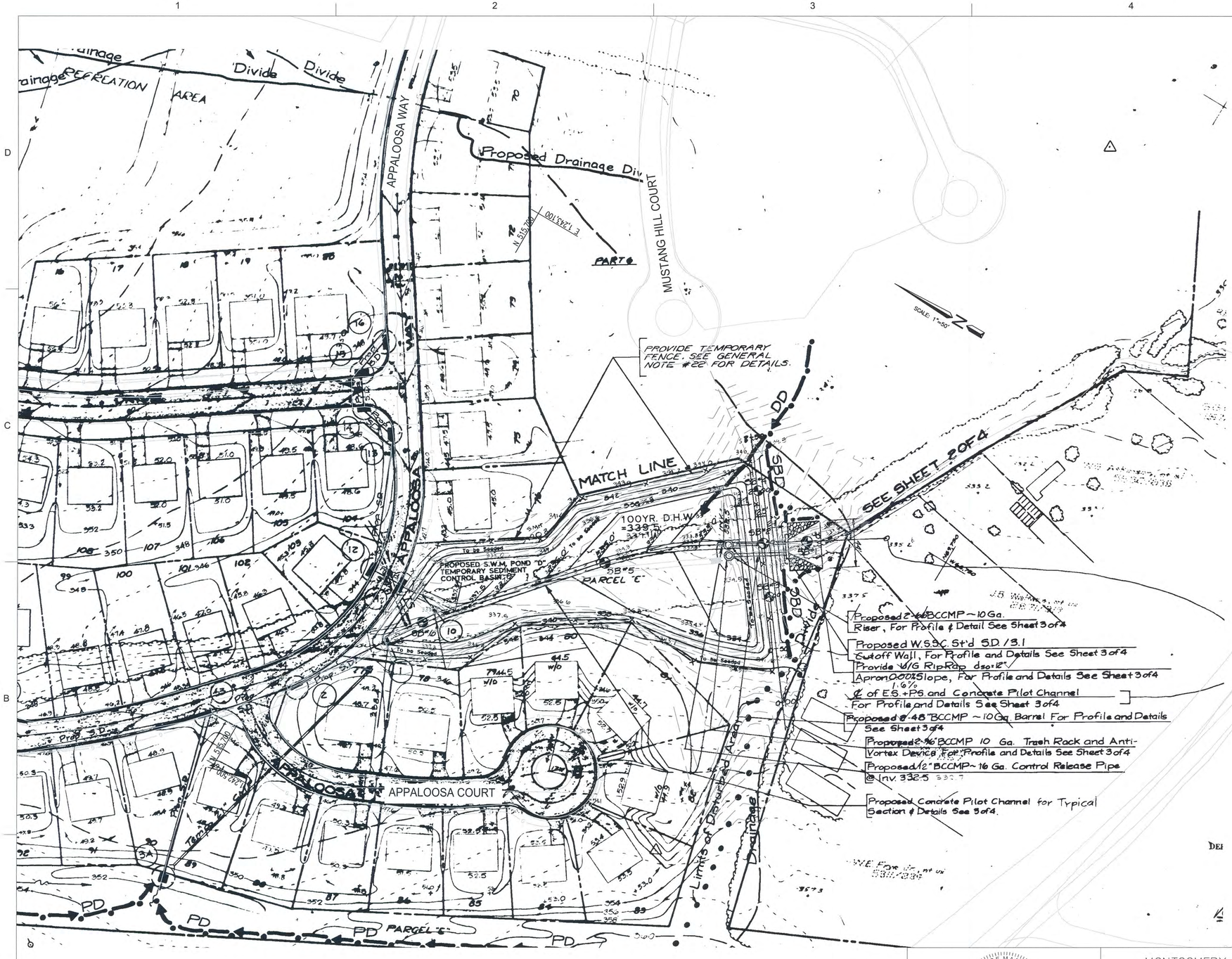


| EXISTING POND ROUTING ASSET # 10891 | | | |
|---|---|---|---|
| FREQUENCY | PEAK DISCHARGE (cfs) | | POND WSEL (ft) |
| | INFLOW | OUTFLOW | |
| 1-YEAR | 35.72 | 30.45 | 334.71 |
| 2-YEAR | 59.18 | 52.74 | 335.14 |
| 10-YEAR | 147.03 | 130.13 | 336.16 |
| 100-YEAR | 255.61 | 201.90 | 337.64 |

| SWM REQUIREMENT VS. PROVIDED CAPACITY | | | |
|---|---|---|---|
| DESCRIPTION | UNIT | REQUIRED | PROVIDED |
| WATER QUALITY STORAGE VOLUME | Ac-ft | 0.90 | 0 |
| CHANNEL PROTECTION VOLUME | Ac-ft | 1.59 | 0.15 |
| CHANNEL PROTECTION RELEASE RATE | cfs | 0.84 | 30.45 |

| EXISTING POND DATA FOR ASSET # 10891 | |
|---|---|
| DESCRIPTION | ELEVATION |
| POND BOTTOM | 331.78 |
| PERMANENT POOL | N/A |
| TOP OF DAM | 340.00 |

GRAPHIC SCALE

50 0 25 50 100

SCALE: 1" = 50'

STATE OF MARYLAND
JEFFREY BRIAN BLASS
01/21/2014
PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION
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STORMWATER MANAGEMENT

REVIEWED DATE

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Montgomery County Maryland

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DESIGNED BY: SEB
DWN BY: GC
CKD BY: JBB
SUBMITTED BY: JBB
PLOT SCALE: 1"=50'
PLOT DATE: 4/5/2013
SIZE: ANSI D
FILE NAME: 01-EC-04-S4.DWG
DATE: JAN. 2014
TASK ORDER NO.: 12-01
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MR. CRAIG CARSON 240-777-7713
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
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DARNESTOWN (6TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

AS-BUILT PLAN

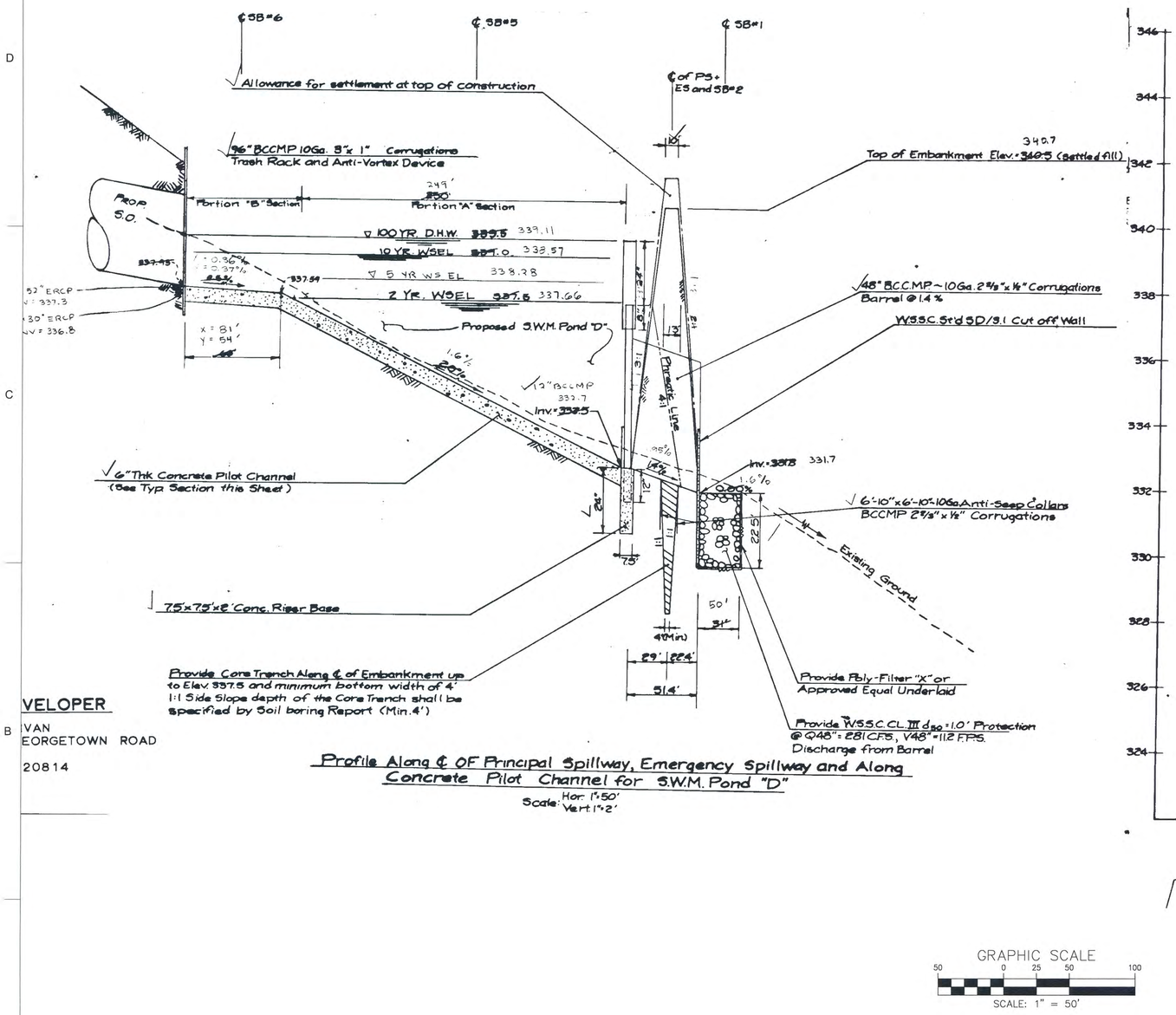
SHEET NO.
4 OF 12

EC-01

Attached Xrefs:

Last Saved 1/21/2014 Last Plotted 1/21/2014 12:58 PM Sheet N:\43030\DWG\01-EC-04-S4

N:\43030\DWG\01-EC-04-S4.dwg, 1/21/2014 12:57:44 PM, 1:1

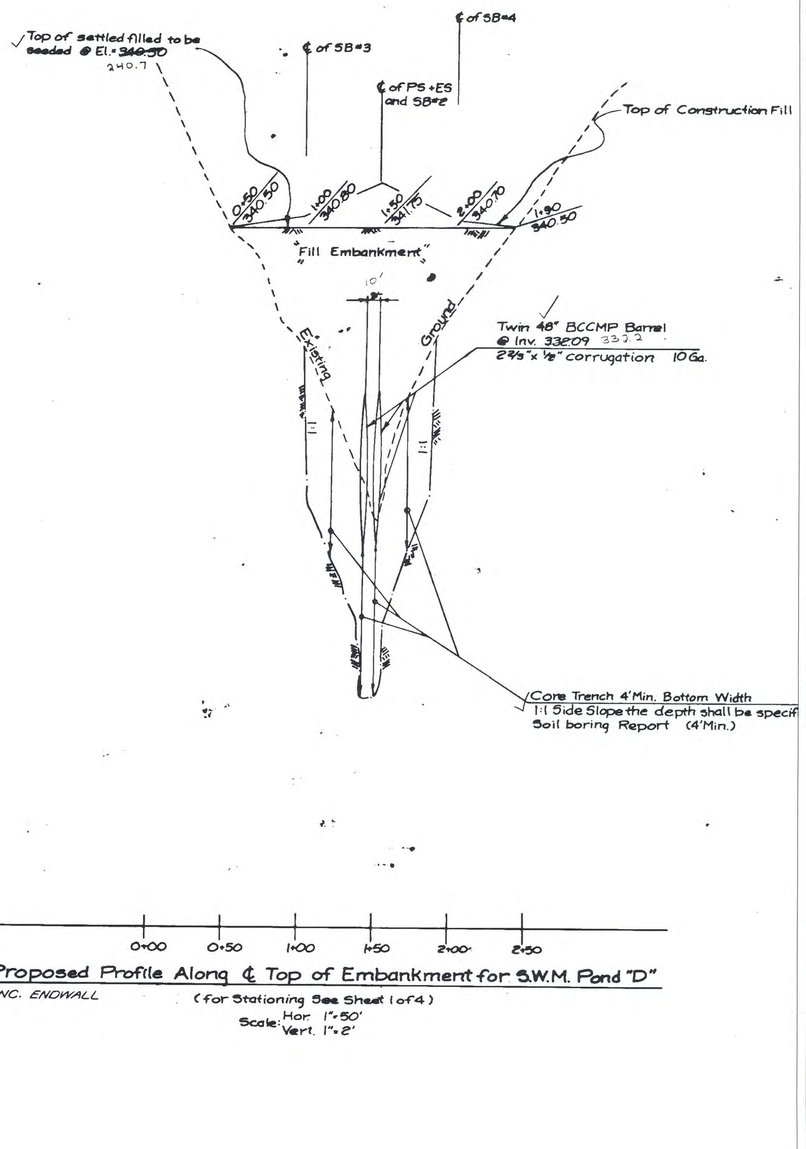



VELOPER
VAN
EORGETOWN ROAD
20814

Provide Core Trench Along ℄ of Embankment up to Elev. 337.5 and minimum bottom width of 4' 1:1 Side Slope depth of the Core Trench shall be specified by Soil boring Report (Min. 4')

## Profile Along ℄ OF Principal Spillway, Emergency Spillway and Along Concrete Pilot Channel for S.W.M. Pond "D"

Scale: Hor. 1"=50'
Vert 1"=2'




## Proposed Profile Along ℄ Top of Embankment for S.W.M. Pond "D"

PROPOSED CONC. ENDWALL

(for Stationing See Sheet 1 of 4)

Scale: Hor. 1"=50'
Vert. 1"=2'

GRAPHIC SCALE
50 0 25 50 100
SCALE: 1" = 50'

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE #: 32457

EXPIRATION DATE: 06/20/2014

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

| STORMWATER MANAGEMENT | SEDIMENT CONTROL TECHNICAL REQUIREMENTS: |
|---|---|
| REVIEWED DATE | |
| APPROVED DATE | APPROVED DATE |
| S.M.FILE NO. | |

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

ADMINISTRATIVE REQUIREMENTS:
REVIEWED DATE
SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

Department of Environmental Protection
Montgomery County Maryland

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|---|---|---|---|

DESIGNED BY: JBB
DWN BY: CC
SUBMITTED BY: JBB
PLOT SCALE: AS-SHOWN
PLOT DATE: 4/5/2013
SIZE: ANSI D
FILE NAME: 01-EC-04.DWG
DATE: JAN. 2014
TASK ORDER NO.: 12-01
CONTRACT NO.:
FILE NUMBER:

MR. CRAIG CARSON 240-777-7713
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE
ROCKVILLE, MD 20850

CPJ Associates

TASK ORDER 12-01
POTOMAC ROAD SWM POND RETROFIT
(ASSET #10691) - NOT FOR CONSTRUCTION
DARNESTOWN (6TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

AS-BUILT PROFILES

SHEET NO. 5 OF 12

EC-02

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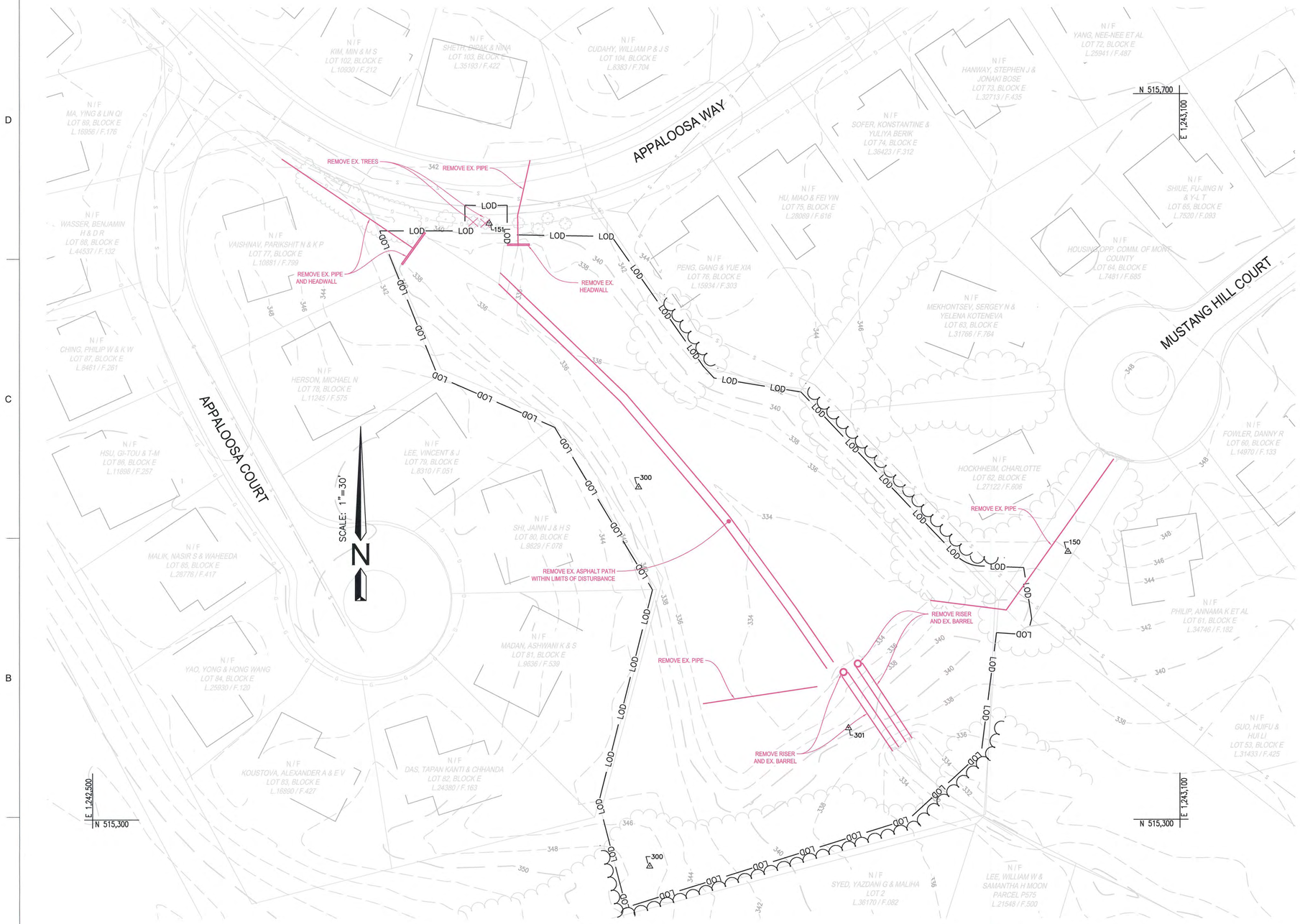
Attached Xrefs:

Last Saved 1/21/2014 Last Plotted 1/21/2014 12:54 PM Sheet N:\43030\DWG\01-EC-04




GRAPHIC SCALE

30 0 15 30 60

SCALE: 1" = 30'

## MISS UTILITY

Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

STATE OF MARYLAND
JEFFREY BRIAN BLASE
PROFESSIONAL ENGINEER
01/21/2014

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE #: 32457

EXPIRATION DATE: 06/20/2014

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

| STORMWATER MANAGEMENT | SEDIMENT CONTROL TECHNICAL REQUIREMENTS: |
|---|---|
| REVIEWED DATE | |
| APPROVED DATE | APPROVED DATE |
| S.M.FILE NO. | |

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

ADMINISTRATIVE REQUIREMENTS:

REVIEWED DATE

SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL. IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

Department of Environmental Protection
Montgomery County Maryland

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|---|---|---|---|

DESIGNED BY: SEB
DWN BY: GC
CKD BY: JBB
SUBMITTED BY: JBB
PLOT SCALE: 1"=30'
PLOT DATE: 4/5/2013
SIZE: ANSI D
FILE NAME: 01-EC-04.DWG
DATE: JAN., 2014
TASK ORDER NO.: 12-01
CONTRACT NO.:
FILE NUMBER:

MR. CRAIG CARSON 240-777-7713
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE
ROCKVILLE, MD 20850

CPJ Associates

TASK ORDER 12-01
POTOMAC RIDGE SWM POND RETROFIT
(ASSET #10891) - NOT FOR CONSTRUCTION
DARNESTOWN (6TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

GRADING AND LAYOUT PLAN

SHEET NO.
6 OF 12

GR-01

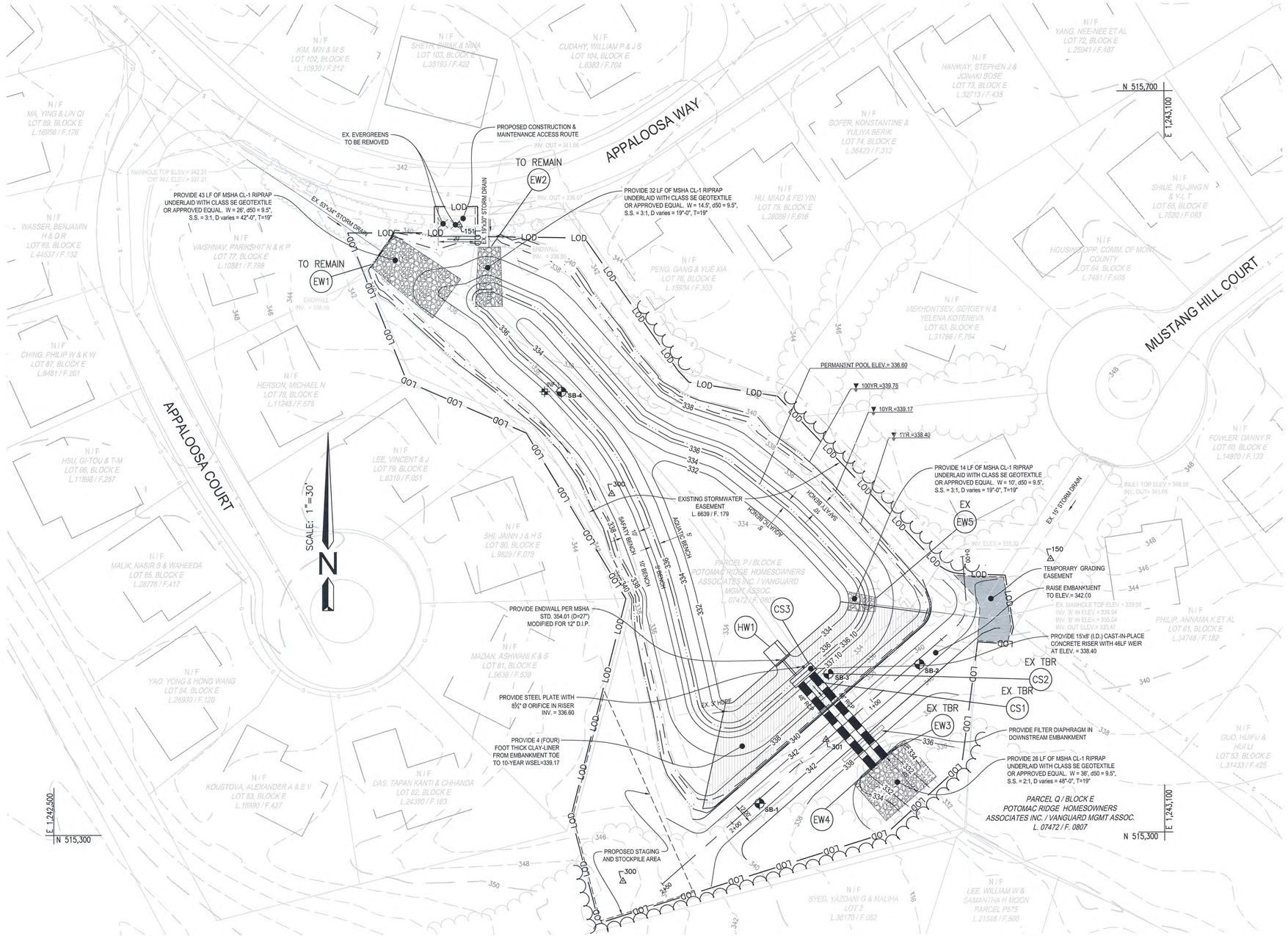
Attached Xrefs:

Last Saved 1/21/2014 Last Plotted 1/21/2014 1:40 PM Sheet N:\43030\DWG\01-EC-04

| CONCEPT POND ROUTING ASSET # 10891 | | | |
|---|---|---|---|
| FREQUENCY | PEAK DISCHARGE (cfs) | | POND WSEL (ft) |
| | INFLOW | OUTFLOW | |
| 1-YEAR | 35.72 | 3.09 | 338.40 |
| 2-YEAR | 59.18 | 30.72 | 338.56 |
| 10-YEAR | 147.03 | 135.48 | 339.17 |
| 100-YEAR | 255.61 | 239.83 | 339.76 |

| SWM REQUIREMENT VS. PROVIDED CAPACITY | | | |
|---|---|---|---|
| DESCRIPTION | UNIT | REQUIRED | PROVIDED |
| WATER QUALITY STORAGE VOLUME | Ac-ft | 0.90 | 0.97 |
| CHANNEL PROTECTION VOLUME | Ac-ft | 1.59 | 1.06 |
| CHANNEL PROTECTION RELEASE RATE | cfs | 0.84 | 3.09 |

| CONCEPT POND DATA FOR ASSET # 10891 | |
|---|---|
| DESCRIPTION | ELEVATION |
| POND BOTTOM | 332.50 |
| PERMANENT POOL | 336.60 |
| TOP OF DAM | 342.00 |




## MISS UTILITY

Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

STATE OF MARYLAND — ERNEST BRIAN RAU — No. 32457 — PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE #: 32457

EXPIRATION DATE: 06/20/2014

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

| STORMWATER MANAGEMENT | SEDIMENT CONTROL TECHNICAL REQUIREMENTS: |
|---|---|
| REVIEWED DATE | |
| APPROVED DATE | APPROVED DATE |
| S.M.FILE NO. | |

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

ADMINISTRATIVE REQUIREMENTS:

REVIEWED DATE

SEDIMENT CONTROL PERMIT NO.

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Department of Environmental Protection
Montgomery County Maryland

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

MR. CRAIG CARSON 240-777-7713
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE, 2ND FLOOR
ROCKVILLE, MD. 20850

CPJ Associates

DESIGNED BY: SEB | DRN BY: SEB | CKD BY: JBB | SUBMITTED BY: JBB
DATE: JAN. 2014 | WORK ORDER NO.: 12-01 | CONTRACT NO.: | FILE NUMBER:
PLOT SCALE: 1"=30' | PLOT DATE: 4/5/2013
SIZE: ANSI D | FILE NAME: 01-EC-04.DWG

TASK ORDER 12-01
POTOMAC RIDGE SWM POND RETROFIT
(ASSET #10891) - NOT FOR CONSTRUCTION
DARNESTOWN 6TH ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

GRADING AND LAYOUT PLAN

SHEET NO. 7 OF 12

GR-01

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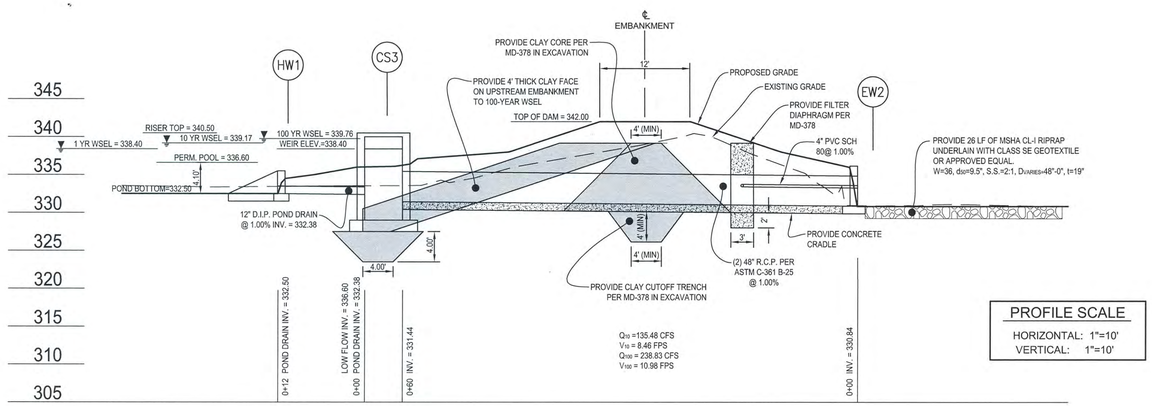
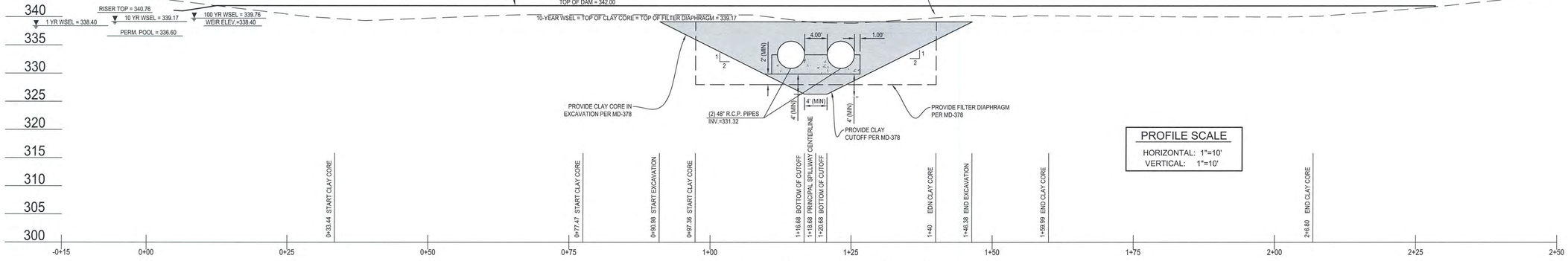
Attached Xrefs:

Last Saved 1/21/2014 Last Plotted 1/21/2014 1:57 PM Sheet N:\43030\DWG\01-EC-04




PROFILE SCALE
HORIZONTAL: 1"=10'
VERTICAL: 1"=10'

## PROFILE ALONG CENTERLINE OF PRINCIPAL SPILLWAY




PROFILE SCALE
HORIZONTAL: 1"=10'
VERTICAL: 1"=10'

## PROFILE ALONG CENTERLINE OF DAM

GRAPHIC SCALE
10 0 5 10 20
SCALE: 1" = 10'

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE #: 32457

EXPIRATION DATE: 06/20/2014

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

| STORMWATER MANAGEMENT | SEDIMENT CONTROL TECHNICAL REQUIREMENTS: | ADMINISTRATIVE REQUIREMENTS: |
|---|---|---|
| REVIEWED DATE | | REVIEWED DATE |
| APPROVED DATE | APPROVED DATE | SEDIMENT CONTROL PERMIT NO. |
| S.M.FILE NO. | | MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL. IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED. |

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Department of Environmental Protection
Montgomery County Maryland

| MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|
| | | | |

| MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|
| | | | |

DESIGNED BY: SEB
DWN BY: GC
CKD BY: JBB
SUBMITTED BY: JBB
DATE: JAN., 2014
TASK ORDER NO.: 12-01
CONTRACT NO.:
FILE NUMBER:
PLOT SCALE: AS-SHOWN
PLOT DATE: 1/21/2013
SIZE: ANSI D
FILE NAME: 01-EC-04.DWG

MR. CRAIG CARSON 240-777-7713
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE
ROCKVILLE, MD 20850

CPJ Associates

TASK ORDER 12-01
POTOMAC RIDGE SWM POND RETROFIT
(ASSET #10891) - NOT FOR CONSTRUCTION
DARNESTOWN (6TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

PROFILES

SHEET NO.
8 OF 12

PR-01

Attached Xrefs:



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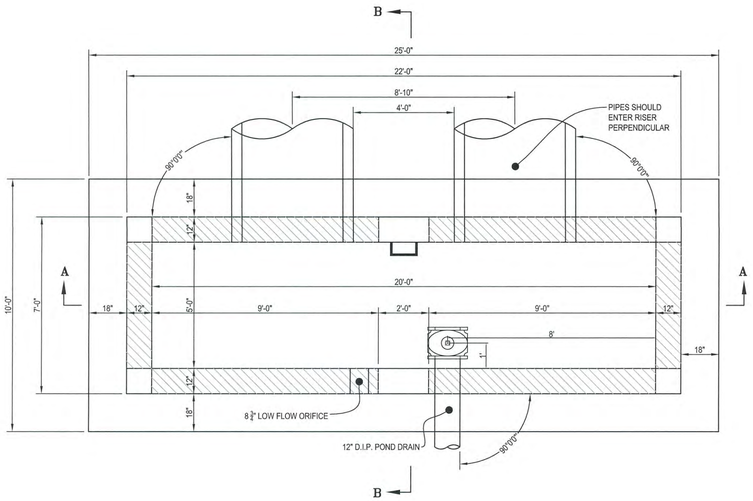
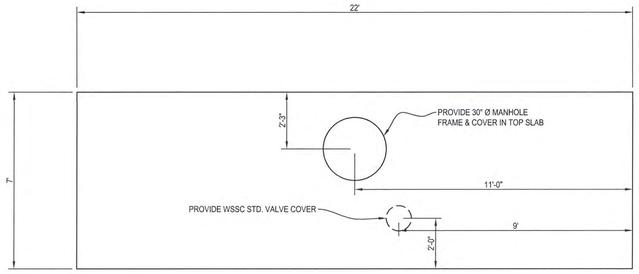
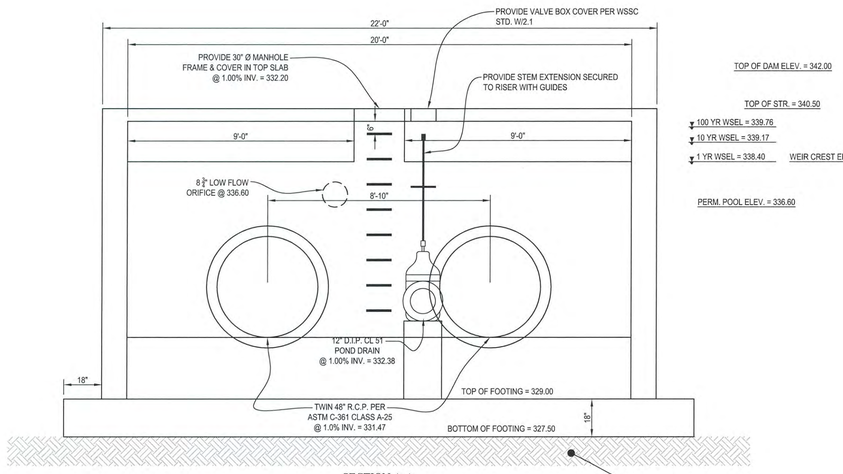



RISER DETAILS (TOP SLAB REMOVED)
SCALE: 1"=3'




TOP SLAB
SCALE: 1"=3'




TOP OF DAM ELEV. = 342.00

TOP OF STR. = 340.50

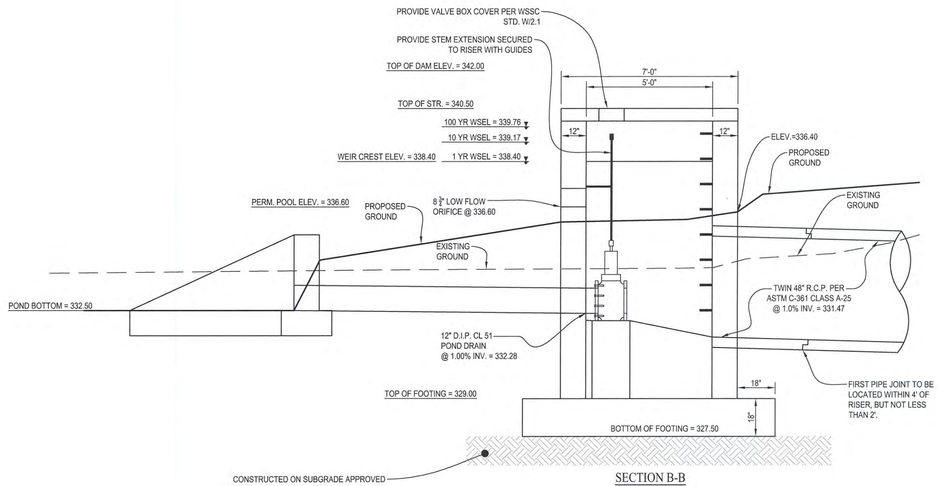
100 YR WSEL = 339.76

10 YR WSEL = 339.17

1 YR WSEL = 338.40 WEIR CREST ELEV. = 338.40

PERM. POOL ELEV. = 336.60

SECTION A-A
SCALE: 1"=3'




SECTION B-B
SCALE: 1"=3'

GRAPHIC SCALE
3 0 1.5 3 6
SCALE: 1" = 3'

## MISS UTILITY

Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

STATE OF MARYLAND
STACEY BRIAN SEED
No. 32457
PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE #: 32457

EXPIRATION DATE: 06/20/2014

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

| STORMWATER MANAGEMENT | SEDIMENT CONTROL TECHNICAL REQUIREMENTS: |
|---|---|
| REVIEWED DATE | |
| APPROVED DATE | APPROVED DATE |
| S.M.FILE NO. | |

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

ADMINISTRATIVE REQUIREMENTS:

REVIEWED DATE

SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

Department of Environmental Protection
Montgomery County Maryland

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

DESIGNED BY: SEB
DRN BY: GC
CKD BY: JBB
SUBMITTED BY: JBB
DATE: JAN., 2014
TASK ORDER NO.: 12-01
CONTRACT NO.:
FILE NUMBER:
PLOT SCALE: 1" = 3'
PLOT DATE: 1/21/2014
SIZE: ANSI D
FILE NAME: 01-EC-04.DWG

MR. CRAIG CARSON 240.777.7713
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE
ROCKVILLE, MD 20850

CPJ Associates

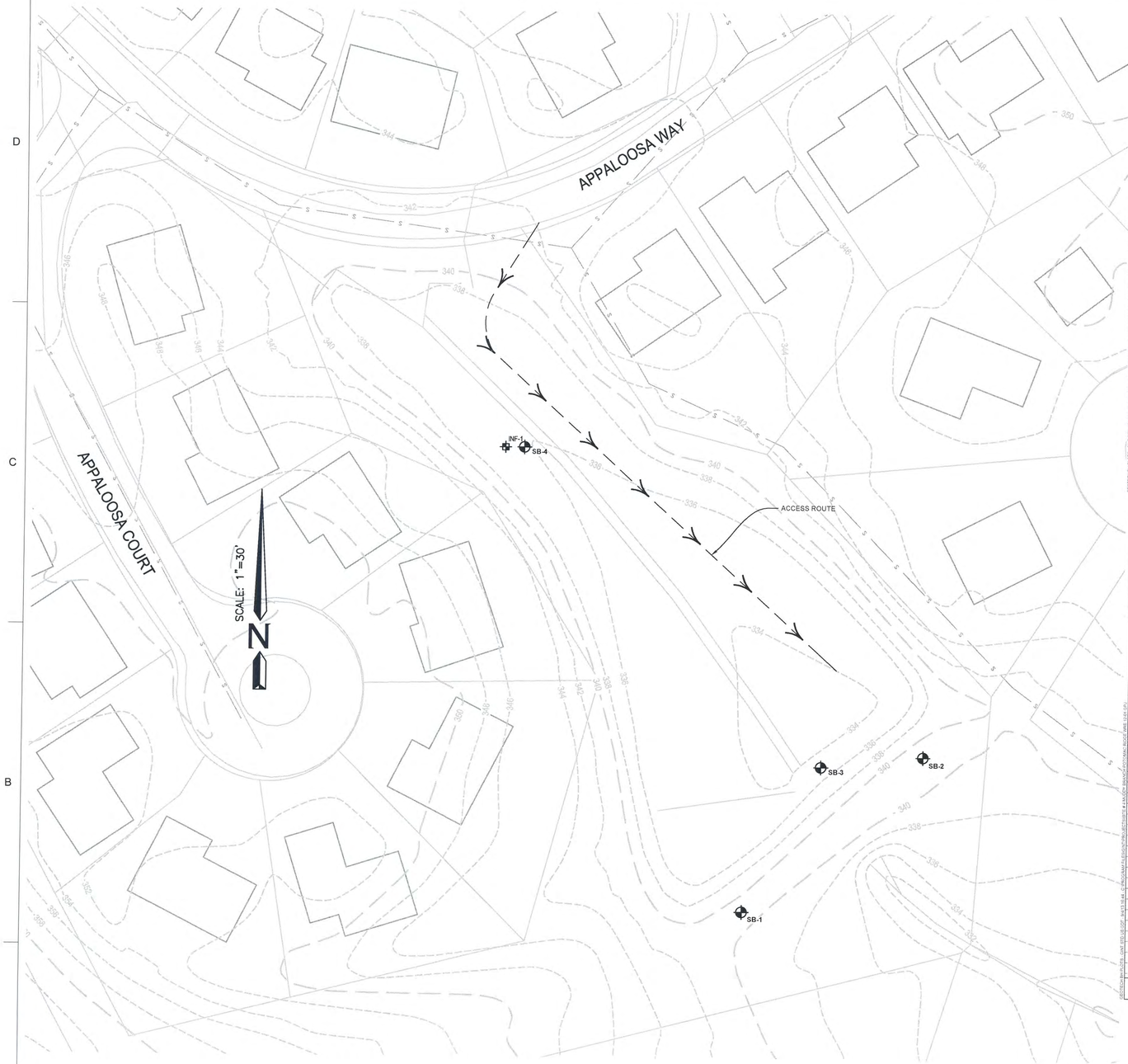
TASK ORDER 12-01
POTOMAC RIDGE SWM POND RETROFIT
(ASSET #10891) - NOT FOR CONSTRUCTION
DARNESTOWN (6TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

RISER DETAIL

SHEET NO.
9 OF 12

PR-02

Attached XrefsI




GRAPHIC SCALE
30 0 15 30 60
SCALE: 1" = 30'

## KIM — BORING NUMBER SB-1

KIM ENGINEERING, INC.
Consulting Geotechnical Engineers
Silver Spring, Maryland

PAGE 1 OF 1

CLIENT Charles P. Johnson & Associates, Inc
PROJECT NUMBER G13060BC
DATE STARTED 7/19/13 COMPLETED 7/19/13
DRILLING CONTRACTOR K.E.I.
DRILLING METHOD solid stem auger
LOGGED BY Yonas CHECKED BY RON
NOTES

PROJECT NAME Site #4 Muddy Branch Potomac Ridge WRE 12-01
PROJECT LOCATION Grey Colt Drive, Gaithersburg, MD 20878
GROUND ELEVATION HOLE SIZE 6 inches
GROUND WATER LEVELS:
AT TIME OF DRILLING 8.50 ft Caved depth at 14.66 feet
AT END OF DRILLING 11.00 ft
24hrs AFTER DRILLING 8.00 ft Caved depth at 9.33 feet

| DEPTH | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (tsf) | DRY UNIT WT. (pcf) | SPT N VALUE / PL MC LL / FINES CONTENT (%) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | | Topsoil at 5 inches | | | | | | |
| | | Red, moist, medium dense, sandy SILT (ML) with clay (FILL) | SS 1 | 61 | 6-5-6 (11) | | | |
| 2.5 | | Brown, moist, medium dense, sandy SILT (ML) with clay (FILL) | SS 2 | 50 | 4-6-6 (12) | | | |
| 5.0 | | Mottled tan, moist, dense micaceous silty SAND (SM) | SS 3 | 72 | 5-7-9 (16) | | | |
| 7.5 | | | SS 4 | 67 | 7-12-13 (25) | | | |
| 10.0 | | Mottled tan, moist, dense micaceous silty SAND (SM) | SS 5 | 61 | 17-22-21 (43) | | | |
| 12.5 | | | | | | | | |
| 15.0 | | Bottom of borehole at 15.0 feet. | | | | | | |

## KIM — BORING NUMBER SB-2

KIM ENGINEERING, INC.
Consulting Geotechnical Engineers
Silver Spring, Maryland

PAGE 1 OF 1

CLIENT Charles P. Johnson & Associates, Inc
PROJECT NUMBER G13060BC
DATE STARTED 7/19/13 COMPLETED 7/19/13
DRILLING CONTRACTOR K.E.I.
DRILLING METHOD solid stem auger
LOGGED BY Yonas CHECKED BY RON
NOTES

PROJECT NAME Site #4 Muddy Branch Potomac Ridge WRE 12-01
PROJECT LOCATION Grey Colt Drive, Gaithersburg, MD 20878
GROUND ELEVATION HOLE SIZE 6 inches
GROUND WATER LEVELS:
AT TIME OF DRILLING 9.25 ft Caved Depth at 10.75 feet
AT END OF DRILLING 10.42 ft
24hrs AFTER DRILLING 9.17 ft Caved Depth at 10.58 feet

| DEPTH | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (tsf) | DRY UNIT WT. (pcf) | SPT N VALUE / PL MC LL / FINES CONTENT (%) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | | Topsoil at 5 inches | | | | | | |
| | | Red, moist, medium dense, silty SAND (SM) with clay (FILL) | SS 1 | 67 | 5-6-8 (14) | | | |
| 2.5 | | | SS 2 | 67 | 4-5-7 (12) | | | |
| 5.0 | | Brown, moist, medium dense, silty SAND (SM) with clay (FILL) | SS 3 | 72 | 5-7-8 (13) | | | |
| 7.5 | | | | | | | | |
| 10.0 | | Mottled tan consisting of black, moist, medium dense, micaceous silty SAND (SM) | SS 4 | 72 | 6-5-9 (14) | | | |
| 12.5 | | | | | | | | |
| 15.0 | | Bottom of borehole at 13.9 feet. | SS 5 | | | | | |

## KIM — BORING NUMBER SB-3

KIM ENGINEERING, INC.
Consulting Geotechnical Engineers
Silver Spring, Maryland

PAGE 1 OF 1

CLIENT Charles P. Johnson & Associates, Inc
PROJECT NUMBER G13060BC
DATE STARTED 7/22/13 COMPLETED 7/22/13
DRILLING CONTRACTOR K.E.I.
DRILLING METHOD solid stem auger
LOGGED BY Yonas CHECKED BY RON
NOTES

PROJECT NAME Site #4 Muddy Branch Potomac Ridge WRE 12-01
PROJECT LOCATION Grey Colt Drive, Gaithersburg, MD 20878
GROUND ELEVATION HOLE SIZE 6 inches
GROUND WATER LEVELS:
AT TIME OF DRILLING 2.58 ft Caved Depth at 10.58 feet
AT END OF DRILLING 5.00 ft
24hrs AFTER DRILLING 1.00 ft Caved Depth at 4 feet

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (tsf) | DRY UNIT WT. (pcf) | SPT N VALUE / PL MC LL / FINES CONTENT (%) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | | Topsoil at 5 inches | | | | | | |
| | | Red, moist, loose, sandy SILT (ML) with clay and some gravel (FILL) | SS 1 | 53 | 7-4-2 (6) | | | |
| 2.5 | | Brown, moist, medium dense, silty SAND (SM) with clay | SS 2 | 83 | 2-5-12 (17) | | | |
| 5.0 | | Mottled brown, moist, dense, micaceous silty SAND (SM) | SS 3 | 58 | 14-20-15 (35) | | | |
| 7.5 | | Mottled tan, moist, dense, micaceous silty SAND (SM) | SS 4 | 50 | 9-15-12 (27) | | | |
| 10.0 | | | | | | | | |
| 12.5 | | | SS 5 | 83 | 18-43-50/5" | | | |
| | | Bottom of borehole at 14.7 feet. | | | | | | |

## KIM — BORING NUMBER SB-4

KIM ENGINEERING, INC.
Consulting Geotechnical Engineers
Silver Spring, Maryland

PAGE 1 OF 1

CLIENT Charles P. Johnson & Associates, Inc
PROJECT NUMBER G13060BC
DATE STARTED 7/22/13 COMPLETED 7/22/13
DRILLING CONTRACTOR K.E.I.
DRILLING METHOD solid stem auger
LOGGED BY Yonas CHECKED BY RON
NOTES

PROJECT NAME Site #4 Muddy Branch Potomac Ridge WRE 12-01
PROJECT LOCATION Grey Colt Drive, Gaithersburg, MD 20878
GROUND ELEVATION HOLE SIZE 6 inches
GROUND WATER LEVELS:
AT TIME OF DRILLING 4.33 ft Caved Depth at 4.67 feet
AT END OF DRILLING 2.42 ft
24hrs AFTER DRILLING 0.33 ft Caved Depth at 2.75 feet

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | SAMPLE TYPE NUMBER | RECOVERY % (RQD) | BLOW COUNTS (N VALUE) | POCKET PEN. (tsf) | DRY UNIT WT. (pcf) | SPT N VALUE / PL MC LL / FINES CONTENT (%) |
|---|---|---|---|---|---|---|---|---|
| 0 | | Topsoil at 5 inches | | | | | | |
| | | Light brown, dry, dense micaceous silty SAND (SM) | SS 1 | 72 | 6-11-22 (33) | | | |
| 2 | | Mottled dark brown, moist, very dense, silty SAND (SM) with some clay | SS 2 | 80 | 50/5" | | | |
| | | Bottom of borehole at 3.9 feet. | | | | | | |

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE #: 32457

EXPIRATION DATE: 06/20/2014

STATE OF MARYLAND — SHERRY BRIAN REED — PROFESSIONAL ENGINEER

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

STORMWATER MANAGEMENT

REVIEWED DATE

APPROVED DATE

S.M.FILE NO.

SEDIMENT CONTROL TECHNICAL REQUIREMENTS:

APPROVED DATE

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

ADMINISTRATIVE REQUIREMENTS:

REVIEWED DATE

SEDIMENT CONTROL PERMIT NO.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.

Department of Environmental Protection
Montgomery County Maryland

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

MR. CRAIG CARSON 240.777.7719
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE
ROCKVILLE, MD 20850

CPJ Associates

DESIGNED BY: SEB
DRWN BY: GC
CKD BY: JBB
SUBMITTED BY: JBB
DATE: JAN., 2014
TASK ORDER NO: 12-01
CONTRACT NO.:
PLOT SCALE: AS-SHOWN
PLOT DATE: 4/5/2013
FILE NUMBER:
SIZE: ANSI D
FILE NAME: 01-EC-04.DWG

TASK ORDER 12-01
POTOMAC RIDGE SWM POND RETROFIT
(ASSET #10891) - NOT FOR CONSTRUCTION
DARNESTOWN (6TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

SOIL BORING LOGS

SHEET NO. 10 OF 12

SB-01

Attached Xrefs:

Last Saved 1/21/2014 Last Plotted 1/21/2014 12:42 PM Sheet N:\43030\DWG\01-EC-04

| PLANTING SCHEDULE | | | | | | |
|---|---|---|---|---|---|---|
| KeyCode | Qty | Botanical Name | Common Name | Size/Cond. at Planting | Remarks | Zone(s) |
| CANOPY TREES*, UNDERSTORY TREES | | | | | | |
| AR | | Acer rubrum | Red Maple | | | 2,3,4,5 |
| CC | | Carpinus caroliniana | American Hornbeam | | | 3,4,5 |
| NS | | Nyssa sylvatica | Black Gum | | | 3,4 |
| QA | | Quercus alba | White Oak | | | 3,4,5 |
| QB | | Quercus bicolor | Swamp White Oak | | | 2,3,4,5 |
| QP | | Quercus phellos | Willow Oak | | | 3,4,5 |
| | | | | | | |
| Shrubs | | | | | | |
| CO | | Cephalanthus occidentalis | Buttonbush | | | 2,3 |
| LB | | Lindera benzoin | Spicebush | | | 3,4 |
| IV | | Ilex verticillata 'Winter Gem' | Winter Gem Winterberry | | | 3,4,5 |
| VD | | Viburnum dentatum | Arrowhead Viburnum | | | 3,4 |
| VP | | Viburnum prunifolium | Cranberrybush Vinbunum | | | 3,4 |
| * All "Trees" shall have straight, non bowing, or irregular trunks and leaders and be uniformly branched out with vibrant well developed root systems. | | | | | | |
| | | | | | | |
| Forbs (Aquatic emergents) | | | | | | |
| AI | | Aesclepias incarnata | Swamp Milkweed | | | 3 |
| AP | | Aster puniceus | Purplestem Aster | | | 2,3 |
| CC | | Carex comosa | bristly sedge | | | 2,3 |
| IVE | | iris versicolor | ble flag | | | 2,3 |
| JE | | Juncus effusus | Soft Rush | | | 2,3 |
| PC | | Pontederia cordata | Pickerelweed | | | 2 |
| | | | | | | |
| Forbes Sedges | | | | | | |
| PP | | Polygonum pensylvanicum | Pennsylvania Smartweed | | | 3 |
| RL | | Rudbeckia laciniata | Cutleaf Coneflower | | | 3 |
| SR | | Soliago rugosa | Wrinkleleaf Goldenrod | | | 3 |
| CP | | Carex pennsylvanica | Pennsylvanis Sedge | | | 3 |

## LANDSCAPE PLAN

SCALE: 1"=30'

GRAPHICAL SCALE 0 30' 60'

## HYDROLOGIC ZONE MAP

SCALE: 1"=50'

GRAPHICAL SCALE 0 50' 100'

| | HYDROLOGIC ZONES | | |
|---|---|---|---|
| | ZONE | ZONE DESCRIPTION | HYDROLOGIC CONDITIONS |
| | 1 | DEEP WATER POOL | 1'–6' DEPTH BELOW NORMAL POOL ELEVATION |
| | 2 | SHALLOW WATER BENCH (LOW MARSH) | 0"–12" DEPTH BELOW NORMAL POOL ELEVATION |
| | 3 | SHORELINE FRINGE (HIGH MARSH) | 0"–12" ELEVATION ABOVE NORMAL POOL (REGULARLY INUNDATED) |
| | 4 | RIPARIAN FRINGE | 1'–4' ELEVATION ABOVE NORMAL POOL (PERIODICALLY INUNDATED) |
| | 5 | FLOODPLAIN TERRACE | 2YR TO 10YR WATER SURFACE ELEVATION (INFREQUENTLY INUNDATED) |
| | 6 | UPLAND SLOPES | 100YR WATER SURFACE ELEVATION AND ABOVE (SELDOM/NEVER INUNDATED) |

NOTES:

1. Plant list categories reflect the primary zone each plant will tolerate. Some plants have ranges that include several zones. See planting plan for actual limits of all plant materials.
2. All areas within the LOD not receiving other specified plant material shall be seeded with the turfgrass seed mix, see specifications on Planting Plan(s).
3. Seed quantities, percentages and mixes are based on pure live seed.
4. The embankment area shall be cleared of all woody vegetation. The embankment shall remain free of woody vegetation through appropriate maintenance and regular mowing.

## LEGEND

SHADE TREE

SHRUBS

HERBACEOUS/AQUATIC EMERGENTS, FORBES

GRAPHIC SCALE 30 0 15 30 60

SCALE: 1" = 30'

GENERAL NOTES:

1. THIS PLAN SHALL ONLY BE USED FOR LANDSCAPE IMPROVEMENTS AS SHOWN. THIS PLAN SHALL NOT BE USED FOR ANY OTHER CONSTRUCTION PURPOSE. SEE THE SITE PLAN FOR SITE GRADING.
2. THE EXISTING UTILITIES SHOWN HEREON HAVE BEEN LOCATED USING INFORMATION AVAILABLE AT THE TIME THIS PLAN WAS PREPARED. PRIOR TO DIGGING, THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES VIA TEST PIT WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON THIS PLAN AND CONFIRM THAT NO CONFLICTS EXIST. ANY CONFLICTS MUST BE BROUGHT TO THE ATTENTION OF CPJ AND THE OWNER PRIOR TO STARTING CONSTRUCTION.

## MISS UTILITY

Call "Miss Utility" at 1–800–257–7777, 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36A of the Montgomery County Code.

**LANDSCAPE ARCHITECT CERTIFICATE**

I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREON IS CORRECT AND TAKEN FROM AVAILABLE PLANS AND RECORDS.

STATE OF MARYLAND ERIC JOHN STURM LICENSED LANDSCAPE ARCHITECT 755

DATE

ERIC J. STURM
REGISTERED LANDSCAPE
ARCHITECT MD. # 755

Department of Environmental Protection
Montgomery County Maryland

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
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MR. CRAIG CARSON 240-777-7713
MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION
255 ROCKVILLE PIKE
ROCKVILLE, MD 20850

CPJ Associates

TASK ORDER 12-01
POTOMAC RIDGE SWM POND RETROFIT
(ASSET #10891) - NOT FOR CONSTRUCTION
DARNESTOWN (6TH) ELECTION DISTRICT
MONTGOMERY COUNTY, MARYLAND

LANDSCAPE PLAN

SHEET NO.
11 OF 12

LP-01

# GENERAL PLANTING NOTES

1. ALL PLANT MATERIAL SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI Z60.1, LATEST EDITION.
2. ALL PLANTING SHALL BE IN ACCORDANCE WITH STANDARD AMERICAN ASSOCIATION OF NURSERYMEN PROCEDURES AND SPECIFICATIONS.
3. CONTRACTOR AND OWNER'S REPRESENTATIVE SHALL VERIFY THE CORRECT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIALS.
4. PLANT MATERIAL LOCATION TO BE STAKED IN THE FIELD AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
5. ALL PLANT BEDS AND PLANTING AREAS TO BE MULCHED TO A DEPTH OF 2" SHREDDED HARDWOOD BARK UNLESS OTHERWISE NOTED ON DRAWINGS OR SPECIFICATIONS.
6. ALL AREAS DISTURBED BY PLANTING OPERATIONS SHALL BE FINE GRADED AND SEEDED
7. OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE BEFORE MAKING ANY SUBSTITUTIONS OR CHANGES
8. ALL PLANT BEDS SHALL BE CONTAINED WITH A SPADED EDGE UNLESS OTHERWISE NOTED ON DRAWINGS
9. QUANTITIES SHOWN ON PLANT LIST ARE FOR THE CONTRACTORS CONVENIENCE ONLY AND ARE NOT GUARANTEED TO BE ACCURATE. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLAN AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL APPLY.
10. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF MONTGOMERY COUNTY, MARYLAND.
11. CONTRACTOR IS TO PROVIDE ALL MATERIALS AND LABOR INCLUDING PLANTS, PLANTER FILL MATERIALS, MULCHES, SOIL PREPARATION, DECORATIVE ITEMS, INSPECTION, AND TRANSPORTATION.
12. TOPSOIL TO A DEPTH OF 4" IN ALL AREAS TO BE SEEDED OR SODDED
13. EACH PLANTING BED AREA IS TO RECEIVE A MINIMUM OF 6" OF PREPARED SOIL CULTIVATED TO A 12" DEPTH. PREPARED SOIL SHALL BE MIXED AS FOLLOWS: 2/3 SANDY LOAM TOPSOIL FREE OF ROOTS, ROCKS, WEEDS, AND OTHER DEBRIS AND 1/3 PEAT MOSS OR APPROVED ORGANIC MULCH.
14. SOIL ADDITIVES TO BE GRANULAR FERTILIZER OF A 1:2:1 RATIO. SOIL OUTSIDE RANGE OF 5.0 - 7.0 pH SHALL BE TREATED APPROPRIATELY TO CORRECT FOR HIGH ALKALINITY OR ACIDITY.
15. THE USE OF ON-SITE TOPSOIL MUST BE APPROVED IN ADVANCE BY LANDSCAPE ARCHITECT.
16. SODDED AND SEEDED AREAS SHALL BE PROPERLY PREPARED, FINISH GRADED AND HAND ROLLED PRIOR TO SOD PLACEMENT OR SEEDING. SEEDED AREAS SHALL BE RE-SEEDED AS NECESSARY TO PROVIDE AN EVEN STAND OF SPECIFIED PLANTINGS.
17. TOPSOIL MOVED DURING THE COURSE OF CONSTRUCTION SHALL BE REDISTRIBUTED ON ALL REGRADED SURFACES PROVIDING A MINIMUM OF 4" OF EVEN COVER TO ALL DISTURBED AREAS. SUCH AREAS SHALL BE STABILIZED THROUGH SEEDING AS SHOWN.

# AREAS TO BE TOP DRESSED

A. PRIOR TO ALL SOIL PREPARATION WORK, ALL CONSTRUCTION AND PLANTING IN THE AREA SHALL HAVE BEEN COMPLETED.

B. CLEARING: PRIOR TO APPLICATION OF TOP DRESS MATERIAL, THE GROUND SURFACE SHALL BE WELL DRAINED AND CLEAR OF ALL DEBRIS OR ANY OTHER MATERIAL WHICH MAY HINDER THE PROPER APPLICATION OF SUBSEQUENT MAINTENANCE OPERATIONS.

C. PRECAUTIONS: DO NOT WORK SOIL WHILE FROZEN OR WET. DO NOT WORK SOIL IN A DUSTY CONDITION, BUT MOISTEN TO PREVENT A DUST NUISANCE.

D. AERATE ALL THE TOP DRESSED AREAS, USING A CORE REMOVING AERATOR.

E. ANY BARE AREAS LARGER THAN 1 SQ. FT. SHOULD BE RESTORED TO FINISHED GRADE WITH SCREENED COMPOSTED SEWAGE SLUDGE OR FINE GRADE TOPSOIL (SUBMIT SAMPLE FOR APPROVAL). USE EQUIPMENT AND METHODS COMMON TO SUCH WORK AND TILL SOIL TO THOROUGHLY INCORPORATE THE SCREENED COMPOSTED SLUDGE INTO EXISTING SOIL.

F. FERTILIZER: FOLLOWING THE AERATION PROCESS, APPLY A STARTER FERTILIZER EVENLY AT THE RATE OF 1 CY/1000 SQ. FT. INTO THE TOP 2 INCHES OF SOIL BY CROSS DISKING OR OTHER APPROPRIATE METHOD.

G. SOW SEED ONLY AFTER THE SCREENED SOIL AMENDMENT AND FERTILIZER HAVE BEEN APPLIED AND THOROUGHLY SETTLED BY RAINFALL OR WATERING. OVERSEED LAWN AREAS EVENLY AT A RATE OF 2 LBS/1000 SQ. FT. SEED WITH EQUIPMENT THAT PROVIDES A MULTI-DIRECTIONAL SEEDING PATTERN TO ENSURE PROPER SEEDING RATE AND UNIFORMITY OF SEEDING.

H. MULCHING: AFTER SEEDING, COVER BARE AREAS THAT HAVE BEEN REPAIRED WITH CLEAN WHEAT STRAW. A MINIMUM OF 50% OF THE SOIL SURFACE SHALL BE COVERED UNTIL GERMINATION HAS OCCURRED.

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2. THE EXISTING UTILITIES SHOWN HEREON HAVE BEEN LOCATED USING INFORMATION AVAILABLE AT THE TIME THIS PLAN WAS PREPARED. PRIOR TO DIGGING, THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES VIA TEST PIT WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON THIS PLAN AND CONFIRM THAT NO CONFLICTS EXIST. ANY CONFLICTS MUST BE BROUGHT TO THE ATTENTION OF CPJ AND THE OWNER PRIOR TO STARTING CONSTRUCTION.

## MISS UTILITY

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**SHA TURFGRASS SEED MIX**

| MIX % | SPECIES | |
|---|---|---|
| | Common Name | Scientific Name |
| 90 | tall fescue | *Schedonorus phoenix* (Scop.) Holub |
| 5 | Kentucky bluegrass | *Poa pratensis* L. ssp. *pratensis* |
| 5 | perennial ryegrass | *Lolium perenne* L. ssp. *perenne* |

**SEEDING SEASONS AND SEED MIXES**

| REGION | SEEDING SEASON - MONTH/DAY | | | |
|---|---|---|---|---|
| | Spring | Summer | Fall | Late Fall |
| | SHA Turfgrass Seed Mix | | | |
| 1 | 4/1 to 6/15 | 6/16 to 7/31 | 8/1 to 10/1 | 10/2 to 11/1 |
| 2 | 3/1 to 5/15 | 5/16 to 7/31 | 8/1 to 10/20 | 10/21 to 11/20 |
| 3 | 3/1 to 5/1 | 5/2 to 7/31 | 8/1 to 10/31 | 11/1 to 11/30 |
| 1, 2, and 3 | – | Plus Additive A or B | – | Plus Additive C |
| | Plus Additive D when seeding:<br>• Areas 30 ft and greater from the pavement edge<br>• Slopes 4:1 and steeper | | | |
| | When seeding areas within 4 miles of a State airport:<br>Areas flatter than 4:1 - Use no Additives<br>Slopes 4:1 and steeper - Use SHA Special Purpose Seed Mix in lieu of SHA Turfgrass Seed Mix | | | |
| | Additives<br>A = Weeping Lovegrass C = SHA Temporary Seed Mix<br>B = Foxtail Bristlegrass D = Sericea Lespedeza | | | |

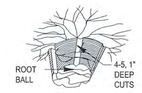
Follow Maryland State Highway Administration specifications and guidelines for turfgrass establishment and seed applications.

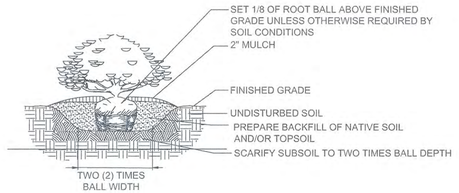
# TURFGRASS SEED DETAILS

NOT TO SCALE

NOTES:
-FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOT BALL

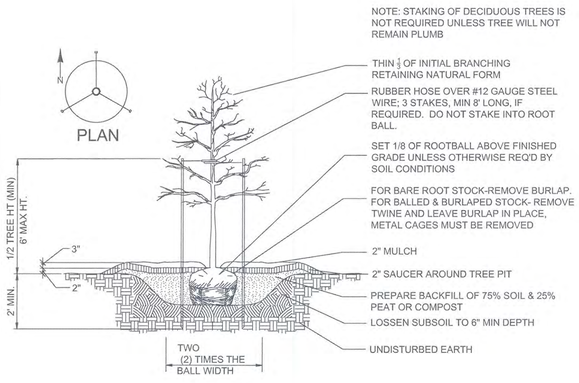
-FOR B&B SHRUBS, CUT AND REMOVE METAL CAGE, TWINE, BURLAP CAN REMAIN



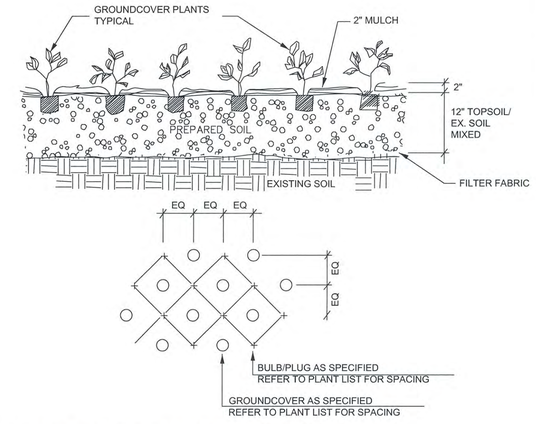

# SHRUB PLANTING DETAIL

NOT TO SCALE




# DECIDIOUS TREE PLANTING DETAIL

NOT TO SCALE




# PERENNIAL PLANTING DETAIL

NOT TO SCALE

# NOTES

1. TREES ARE NOT PERMITTED WITHIN TEN (10) FEET OF PUBLIC UTILITIES.
2. ALL REQUIRED LANDSCAPE MATERIAL INDICATED ON APPROVED PLANS WILL BE REQUIRED THROUGH THE LIFE OF THE PROJECT AND MUST BE REPLACED IF REMOVED OR DEAD AFTER IMPLEMENTATION BY THE PROPERTY OWNER.
3. NO PLANT SUBSTITUTIONS, TYPE, SIZE, OR QUANTITY DEVIATIONS FROM THE APPROVED LANDSCAPE OR BUFFER PLANS SHALL BE MADE WITHOUT PRIOR APPROVAL FROM THE MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

**LANDSCAPE ARCHITECT CERTIFICATE**

I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREON IS CORRECT AND TAKEN FROM AVAILABLE PLANS AND RECORDS.

STATE OF MARYLAND · ERIC JOHN STURM · 755 · REGISTERED LANDSCAPE ARCHITECT

DATE

ERIC J. STURM
REGISTERED LANDSCAPE ARCHITECT MD. # 755

Department of Environmental Protection
Montgomery County Maryland

| APPR. | DATE | DESCRIPTION |
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| | | |

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MONTGOMERY COUNTY, MARYLAND

LANDSCAPE DETAILS

SHEET NO. 12 OF 12

LP-02

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