

# SITE DEVELOPMENT PLAN

## SDP-15-041

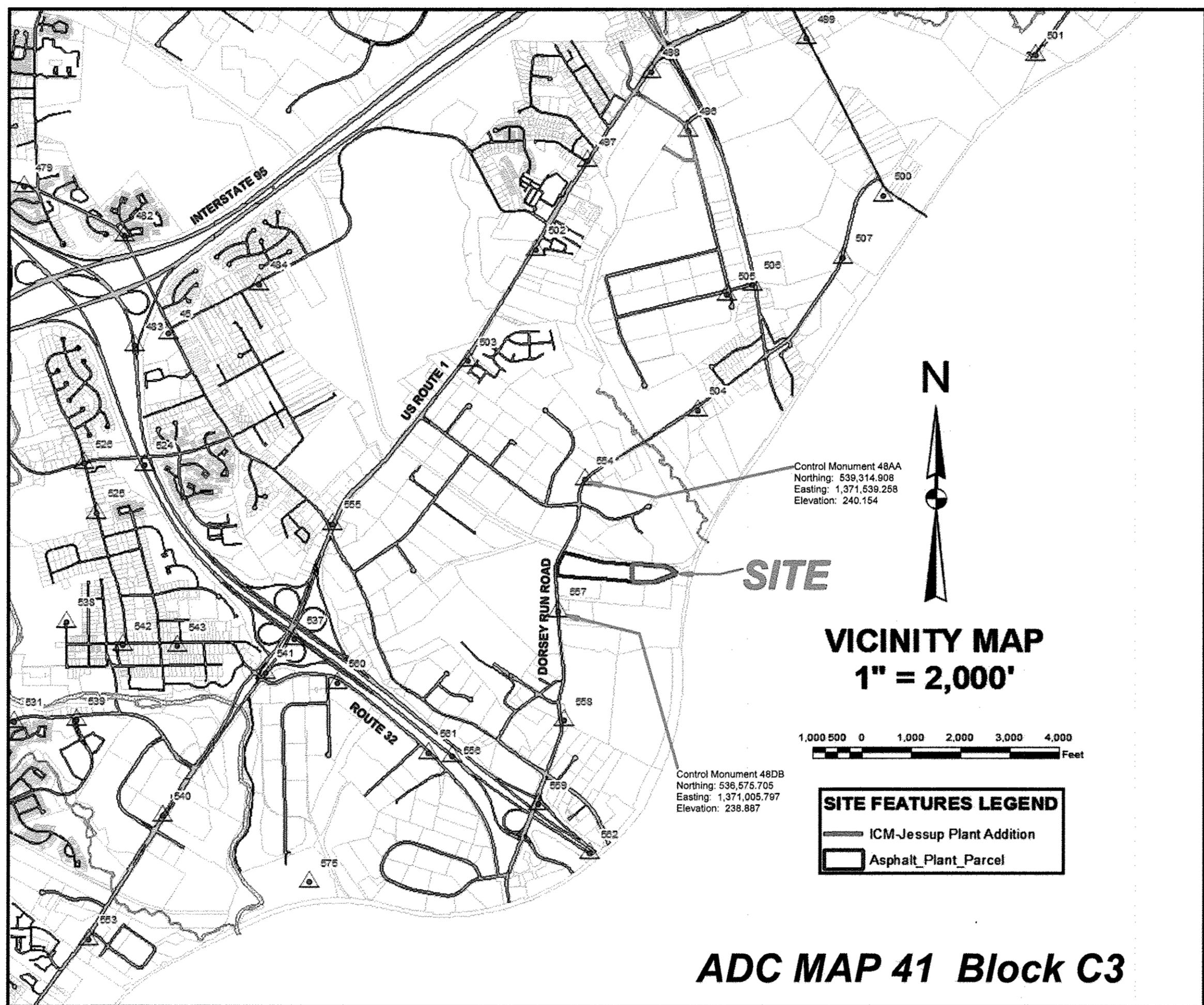
for

# ICM-JESSUP ASPHALT PLANT ADDITION

### GENERAL NOTES

#### (NON-RESIDENTIAL SITE DEVELOPMENT PLAN)

- All Construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
- The contractor or developer shall notify the Department of Public Works/Bureau of Engineering, Construction Inspection Division, at (410)-313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to performing any excavation work.
- Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- All Plan dimensions are to face of curb unless otherwise noted.
- The existing topography shown hereon for design purposes was compiled by Quantum Spatial from aerial photography from 01/08/2014 using procedures that meet accuracy standards for 1" = 50' scale mapping. The base topography datum was reported to be NAD83/NAVD88 and was provided to SECI by our client for use on this project. Additional topography used in conjunction with the Flood Study performed in association with this project was obtained from the Howard County GIS website via direct download. The coordinates shown hereon are based upon the Maryland State Plane Coordinate System, established by Network GPS methods. Howard County monuments Nos. 48AA and 48DB are closest to the site.
- Water is public, but is not planned for the site at this time.
- Sanitary Sewer is public, but is not planned for this site at this time.
- No utilities, either underground or overhead are known to exist on the site.
- No permanent structures or buildings are proposed for this site.
- Stormwater Management, ESD to the MEP, is provided by two linked Submerged Gravel Wetlands designed in compliance with the Maryland Stormwater Regulations and the Maryland Stormwater Design Manual as amended. The proposed use meets the criteria for a "Hot Spot" designation, and the practices will be used to minimize infiltration. No additional management is required. The "Hot Spot" designation is shown on M&E 15-039.
- The following easements and natural resource features located on the adjoining asphalt plant property to which this site is to be appended and upon which some minor improvements are proposed were obtained by computation using data shown on a Final Plat prepared by Geosman-Pedersen, Inc. (GPI) entitled "Jessup Asphalt Plant, Parcel A, Property of Jessup Asphalt Partners, LP, Liber 10085 Folio 523" recorded among the land records of Howard County as Plat 19398 on 09/20/2007.
  - Public 100-YR Flood Plain, Drainage and Utility Easements;
  - Forest Conservation Easements;
  - Wetland Limits and 25' Buffers;
  - 50' Stream Buffers;
  - 20' Water Easements;
  - Stormwater Management Easement.
- No attempt was made to field verify the location of any easements per se.
- The Asphalt Plant Site is also subject to an approved site plan SDP-07-012 of the same name prepared by GPI. Natural Resources shown on the Final Plat and Site Plan were determined by GPI.
- No Traffic Study is required for this proposed use and access is strictly through other lands of Jessup Asphalt Partners, LP, specifically from Dorsey Run Road via the entrance to and through the travelway within the Asphalt Plant Site.
- No outdoor lighting is proposed for this project.
- A water truck shall be available at all times for dust suppression.
- A new water connection is to be installed to service the addition.
- Related files: F-08-031, Plat 19398, SDP-07-012, ECP-15-008, & F-15-090.
- The Asphalt Plant property and this addition are to be consolidated into a single parcel to remedy a flaw in the subdivision of this parcel. As a consequence, the common line between the two parcels will be extinguished per plat 223,033, DPZ File # F-15-090.
- The forest conservation easement labeled "Credited Retention, Forest Conservation Easement #4, 0.18 acres" as it appears on the referenced Final Plat #19398 prohibits access to the addition parcel and poses a severe hardship for the proposed use. As such, this plan calls for this easement to be relocated within a proposed forest conservation easement, credited retention area designated on the addition parcel in an area of similar forest composition and structure, but mostly higher value within natural resource buffers along the stream.
- The Forest Conservation easements have been established to fulfill the requirements of Section 16.1200 of the Howard County Code and Forest Conservation Act. No clearing, grading or construction is permitted within the forest conservation easement; however, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.
- The Forest Conservation obligation for this project is 0.69 acres of on-site retention, 1.01 acres of reforestation and 0.18 acres of abandonment and replacement of Forest Conservation Easement #4 as shown on Plat No. 19398 (F-08-031). The requirement has been met by 0.69 acres of on-site retention and 2.38 acres of off-site retention at the Mill Creek mitigation bank (SDP-15-035). No Surety is required to be posted with the Developer's Agreement.
- This plan has been prepared in accordance with the provision of Section 16.124 of the Howard County Code and Landscape Manual Financial surety in the amount of \$1,800 for 6 shade trees (\$300/ea.) shall be posted with the Developer's Agreement under this site development plan.
- No Wetlands/Wetland buffers are located within the proposed limits of disturbance. The intermittent stream 50' buffer is not located within the proposed LOD. Two small areas designated for grade adjustment and slope protection amounting to less than 15 sq. ft. and 100 sq. ft., respectively intrude into the determined flood plain with no loss in storage volume or retained forest.
- No parking per se is either required or provided. No buildings are proposed as the purpose of the development is for storage of recycled asphalt product and asphalt shingles.
- The Environmental Concept Plan (ECP-15-008) was approved JUNE 19, 2015.
- The subject property is zoned M-2 per the October 6, 2013 Comprehensive Zoning Plan.
- This plan is subject to the Amended Fifth Edition of the Subdivision and Land Development Regulations (Council Bill 45-2003). Development or construction of this site must comply with setback and buffer regulations in effect at the time of submission of the site development plan, waiver petition application or building/grading permit.
- A Wetland Delineation for this property was prepared by Stephens Environmental Consulting, Inc. on August 5, 2014. A Forest Stand Delineation for this property was prepared by Stephens Environmental Consulting, Inc. on August 3, 2014.
- In accordance with Section 16.115(c)(2) of the Subdivision and Land Development Regulations, disturbance to the floodplain is prohibited unless authorized by DPZ upon the advice of the SRC agencies. It has been determined that the stormwater management outlet disturbance within the floodplain is supported by HSCD and DED and is deemed necessary. No waivers are required.
- The request for a Design Manual Waiver per Howard County Design Manual Volume III, section 2.4(C), and Volume IV, Detail R-2.01, to allow the use of 10' of recycled bituminous concrete millings (BCM) as a top course over 8" of GAB in lieu of HMA per Detail R-2.01 was approved by the Development Engineering Division per the letter dated September 23, 2015.
- The request for a waiver, (WP-16-132, ICM-Jessup Addition, pertaining to SDP -15-041) from Section 16.156(i) & (j) of the Subdivision and Land Development Regulations was approved May 17, 2016. The deadline to post all monies and or file appropriate surety for the required developer's agreements and submit the site development plan to the Department of Planning and Zoning was extended to August 15, 2016.



ADC MAP 41 Block C3

### LEGEND-EXISTING, 50-SCALE SURVEY & MAPPING

- Ultimate Development 100YR Flood Plain
- Existing 50' Stream Buffer
- Existing Stream Bank
- Existing Non-Tidal Wetland Line
- Existing 25' Non-Tidal Wetland Buffer Line
- Intermittent Stream
- Contour-Major
- Contour-Major, approximate
- Contour-Minor
- Contour-Minor, approximate
- Tree Line
- Subcatchment Boundary
- Subwatershed Boundary
- PROPERTY BOUNDARY
- FSD Stand Divisions
- Tc Flow-Path
- USDA NRCS Digital Soils-Imported

- Plot 1
- HA-1
- Wetland Flag with Label
- Spot Elevation
- >15% Slopes Shading

### LEGEND-RECORD FEATURES from: Plat 19398/F-08-031

- Forest Conservation Easement (FCE)
- 100 Year Flood Plain
- 25 feet wide Non-Tidal Wetlands Buffer
- 50 feet wide Stream Buffer
- Non-Tidal Wetlands
- Stormwater Easement
- Centerline of Stream-Surveyed (GPI)

### LEGEND-PROPOSED, 50-SCALE

- Proposed Contour-Major w/ Label
- Proposed Contour-Minor w/ Label
- Proposed Gravel Access Road
- Proposed RAP/RAS Storage Area(s)
- CL 2.5'x2.5'x5' Integral Concrete Block Wall
- Proposed Curb, 8"
- Proposed LOD
- Proposed Subcatchment
- Proposed SGW Berm Crest (173.5')
- Proposed SGW Pool Crest (172.5')
- Surface Water Flow Direction
- Proposed Tree Line

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

Signature: Michael A. Nawrocki  
 Date: 7/3/2017  
 Print Name: MICHAEL A. NAWROCKI  
 License No. 9780  
 MD P.E. No. 9780

### SDP SHEET INDEX

SHEET NO.	DRAWING TITLE
1	[SDP COVER SHEET] SITE DEVELOPMENT PLAN
2	[SDP-SITE PLAN] SITE DEVELOPMENT PLAN
3	[SW-1] STORMWATER MANAGEMENT PLAN
4	[SW-2: SGW] STORMWATER MANAGEMENT DETAILS
5	[SW-3: DETAILS] STORMWATER MANAGEMENT DETAILS
6	[EX-1] EXISTING CONDITIONS & PRE-DEVELOPMENT DRAINAGE AREA MAP
7	[SW-3] POST-DEVELOPMENT DRAINAGE AREA MAP
8	[ES-1] INITIAL EROSION AND SEDIMENT CONTROL PLAN
9	[ES-2] FINAL EROSION AND SEDIMENT CONTROL PLAN
10	[ES-3] SEDIMENT CONTROL DETAILS AND NOTES
11	[ES-4] SEDIMENT CONTROL DETAILS AND NOTES
12	[ES-5] SEDIMENT CONTROL DETAILS AND NOTES
13	[ES-6] SEDIMENT CONTROL DETAILS AND NOTES
14	[ES-7] FINAL EROSION AND SEDIMENT CONTROL PLAN
15	[FCP/LND-1] FOREST CONSERVATION AND LANDSCAPE PLAN
16	[FCP/LND-2] FOREST CONSERVATION & LANDSCAPE NOTES AND DETAILS

PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland.

Signature: Michael A. Nawrocki  
 Date: 7/3/2017  
 Print Name: MICHAEL A. NAWROCKI  
 License No. 9780  
 Expiration Date: 03/23/2018



### AS-BUILT

#### LEGEND-E & S CONTROL

- SSF: Pipe Outlet (for Super Silt Fence)
- SF: Super Silt Fence
- A-1: Silt Fence
- A-1: Earth Dike
- PDS-1: Perimeter Dike/Swale
- ST-1: Pipe Outlet Sediment Trap (with Trap Number)
- Limit of Disturbance
- Stabilized Construction Entrance
- TSOS: Temporary Stone Outlet Structure
- 175: Temporary E&S Control Structure Major Contour
- 174: Temporary E&S Control Structure Minor Contour
- Standard Inlet Protection
- GP: Gabion Inlet Protection
- ROP: Rock Outlet Protection (I, II, or III as labeled)
- Limit of Disturbance

ADDRESS CHART	
LOT/PARCEL #	STREET ADDRESS
PAR A/ 0248-0008-0191	8375 Dorsey Run Road, Jessup MD 20794-9000

PERMIT INFORMATION CHART			
Subdivision Name	Section/Area	N/A	Lot/Parcel No.
Jessup Asphalt Partners			PAR A/ 191
Plat # or L.P. Ord #	Zoning	Tax Map No.	Elect. District
223033	M-2	48	0
			Census tract
			609901
Water Code	Sewer Code	4150000	
B02			

### SITE ANALYSIS SUMMARY

Total Project Area	19.1339 acres +/-
Area of Plan Submission	833,472 SF +/-
Total Disturbed Area	4.05 acres +/-
Present Zoning	M-2
Proposed Use	Recycled Asphalt Product (RAP)
Gross Floor Area	N/A
Total Number of Units	N/A
Floor Area Ratio	N/A
Building Coverage of Site	N/A
Maximum Number of Employees or tenants	N/A
Number of Parking Spaces Required	N/A
Number of Parking Spaces provided	N/A
Area of Recreational Open Space	N/A

#### PROPOSED STORMWATER MANAGEMENT SUMMARY

Total Disturbed Area	4.05 acres +/-
Total ESD Contributing Area including Offsite	4.53 acres +/-
Total Onsite Impervious surface existing	0.00 acres +/-
Total Onsite Impervious Surface Proposed	3.030 acres +/-
Total offsite contributing Impervious Area	0.492 acres +/-
Grand Total ESDV contributing Impervious surface	3.512 acres +/-
Overall % Impervious Surface	77.44%
Underlying Soils = 20% B (SAB), 80% D (Pa & UD)	
RCN woods	72.6
Target Pe	1.86"
ESD Runoff Depth Ob.	1.86"
Total Treatment Volume required for ESD to the MEP	23,105 cu. ft.
Forebay size	2,301 cu. ft.
Proposed Practice(s)	Submerged Gravel Wetlands (2)
Total Storage Provided by both SGWs	29,874 cu. ft.
SGW-1 Forebay, 16.4% of contributing flow required storage	379 cu. ft.
SGW-1 Forebay storage provided	1,287 cu. ft.
SGW-2 Forebay 83.6% of contributing area required storage	1,931 cu. ft.
SGW-2 Forebay storage provided	1,975 cu. ft.
SGW-1 + SGW-2 manifolded treatment capacity	29,874 cu. ft.
Has ESD to the MEP been met	YES!

**STEPHENS**  
 Environmental Consulting, Inc.  
 www.StephensENV.com  
 P.O. Box 485  
 North East MD 21901  
 P: (302) 286-0406  
 F: (410) 658-7298

### SITE DEVELOPMENT PLAN FOR ICM-JESSUP ADDITION

8375 DORSEY RUN ROAD  
 COUNCIL DISTRICT 2,  
 HOWARD COUNTY, MARYLAND 20794

#### SITE DATA

Owner/ Developer: Jessup Asphalt Partners, LP  
 Owner/ Developer Address: 838 Lancaster Avenue, Malvern, PA 19355  
 Owner/ Developer Phone #: 1-800-999-1018  
 Premises Address: 8375 Dorsey Run Road, Jessup, MD 20794-9386  
 DPZ Plat File #: F-15-090  
 Plat #: SDP-07-012, F-08-031, ECP-15-008  
 Related DPZ File References: Liber 15628 Folio 00006  
 Deed Reference: 19 13394-1, acres +/-  
 Lot Area: Map 0048 Grid 0008 Parcel 0191 PAR A  
 Tax Parcel:  
 Zoning: M-2, Heavy Manufacturing  
 Election District: Sixth  
 Water Supply: Public available  
 Wastewater Disposal: Public available  
 Datum: NAD83/ NAVD88

#### PROPOSED DEVELOPMENT BASIC DATA

Proposed future use: Recycled Asphalt Product (RAP) Storage  
 Proposed Structures/Buildings: None  
 Proposed Parking: None  
 Proposed water service: None  
 Proposed sanitary sewer service: None  
 Proposed Stormwater Management: (2) Submerged Gravel Wetlands  
 Total Disturbed Area: 4.05 Acres +/-  
 Total Impervious Area: 3.030 acres +/-  
 Type of Impervious surface: compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes. No disturbance of wetlands/Waters of the US or associated buffers is proposed.

Access to the property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794

#### APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: [Signature]  
 Chief-Development Engineering Division  
 Date: 7-14-16

#### APPROVED: DIVISION OF LAND DEVELOPMENT

Signature: [Signature]  
 Director  
 Date: 7-25-16

#### PROJECT BENCH MARKS

Benchmark #1: GPI CIRF EI: 204.19 (NAVD 88)  
 N637203.66 E1371118.89 (NAD83)  
 Located 5' North and 41' and 66' East of the Benchmark Building #477  
 Benchmark #109: CIRF-GPI EI: 188.98 (NAVD 88)  
 N637374.18 E1372250.88 (NAD 83)  
 Located on westerly side of SWM Pond  
 Benchmark #1209: CIRF EI: 189.48 (NAVD 88)  
 N637298.87 E1373462.29 (NAD 83)  
 Located at easternmost property corner

#### APPROVED: FOR PUBLIC WATER FOR PUBLIC SEWERAGE SYSTEMS

Signature: [Signature]  
 County Health Officer, Howard County Health Department  
 Date: 7/11/16

Drawn By: WES Reviewed By: MAN Last Updated 09/30/2015

FILENAME: SHEET\_01-Cover.pcs

FILE PATH: S:\2015\_PROJECTS\H528\PCD\_SDP\_Rev02

#### DESIGN PROFESSIONAL'S CERTIFICATION

I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License Number 9780, Expiration Date 03/23/2018

Signature: Michael A. Nawrocki  
 Date: 06/09/2016

#### REVISIONS

Rev. #	Date	By	Comments/Reference
1	07/20/2015	WES	per Howard County Comments
2	09/30/2015	WES	per Howard County Comments
3	05/02/2016	WES	per DED, Technically Complete letter
4	06/08/2016	WES	added note 33 per Waiver Approval
5	06/29/2017	WES	added as-built map

## SHEET 1 SDP COVER SHEET SDP-15-041



**SITE DEVELOPMENT  
PLAN  
FOR  
ICM-JESSUP ADDITION**

**8375 DORSEY RUN ROAD  
COUNCIL DISTRICT 2,  
HOWARD COUNTY, MARYLAND 20794**

**SITE DATA**

Owner/ Developer: Jessup Asphalt Partners, LP  
Owner/ Developer Address: 638 Lancaster Avenue  
Malvern, PA 19355  
Owner/ Developer Phone #: 1-800-999-1018  
Premises Address: 8375 Dorsey Run Road  
Jessup, MD 20794  
Plat #: F-15-090  
Plat Reference: **19398-F-0801**  
Related DPZ File References: SDP-07-012, F-08-031, ECP-15-008  
Deed Reference: Liber 15628 Folio 00006  
Lot Area: 19,1139 acres +/-  
Tax Parcel: Map 0048 Grd 0008 Parcel 0191 PAR 4  
Zoning: M-2, Heavy Manufacturing  
Election District: Sixth  
Water Supply: Public available  
Wastewater Disposal: Public available  
Datum: NAD83/ NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**

Proposed future use: Recycled Asphalt Product (RAP) Storage  
Proposed Structures/Buildings: None  
Proposed Parking: None  
Proposed water service: None  
Proposed sanitary sewer service: None  
Proposed Stormwater Management: (2) Submerged Gravel Wetlands  
Total Disturbed Area: 4.05 Acres +/-  
Total Impervious Area: 3.03 acres +/-  
Type of Impervious surface: compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes.  
No disturbance of wetlands/ Waters of the US or associated buffers is proposed.

Access to the property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794

**APPROVED: HOWARD CO. DEPARTMENT OF PLANNING AND ZONING**  
*Chad Clark* 7/14/16  
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

*Victor Salame* 7-21-16  
CHIEF-DIVISION OF LAND DEVELOPMENT DATE  
*William J. Jaffe* 7-25-16  
DIRECTOR DATE

**PROJECT BENCH MARKS**

Benchmark #1: GPI CIRF El: 204.19 (NAVD 88)  
N537203.68 E1371118.59 (NAD83)  
Located 8' North and +/- and 66' East of the  
Bakermark Building #6477

Benchmark #109: CIRF-GPI El: 188.96 (NAVD 88)  
N537374.18 E1372250.88 (NAD 83)  
located on westerly side of SWM Pond

Benchmark #1209: CIRF El: 188.48 (NAVD 88)  
N537296.07 E1373402.29 (NAD 83)  
Located at easternmost property corner

Drawn By: WES Reviewed By: MAN Last Updated 04/02/2015  
FILENAME: SHEET\_02  
FILE PATH: S:\2015\_PROJECTS\1528\PCS-SDP\_Rev02

**DESIGN PROFESSIONAL'S CERTIFICATION**

I Herby Certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License Number 9780, Expires 03/31/2018

*Michael A. Nawrocki* 06/09/2016  
Michael A. Nawrocki, PE 9780 Date

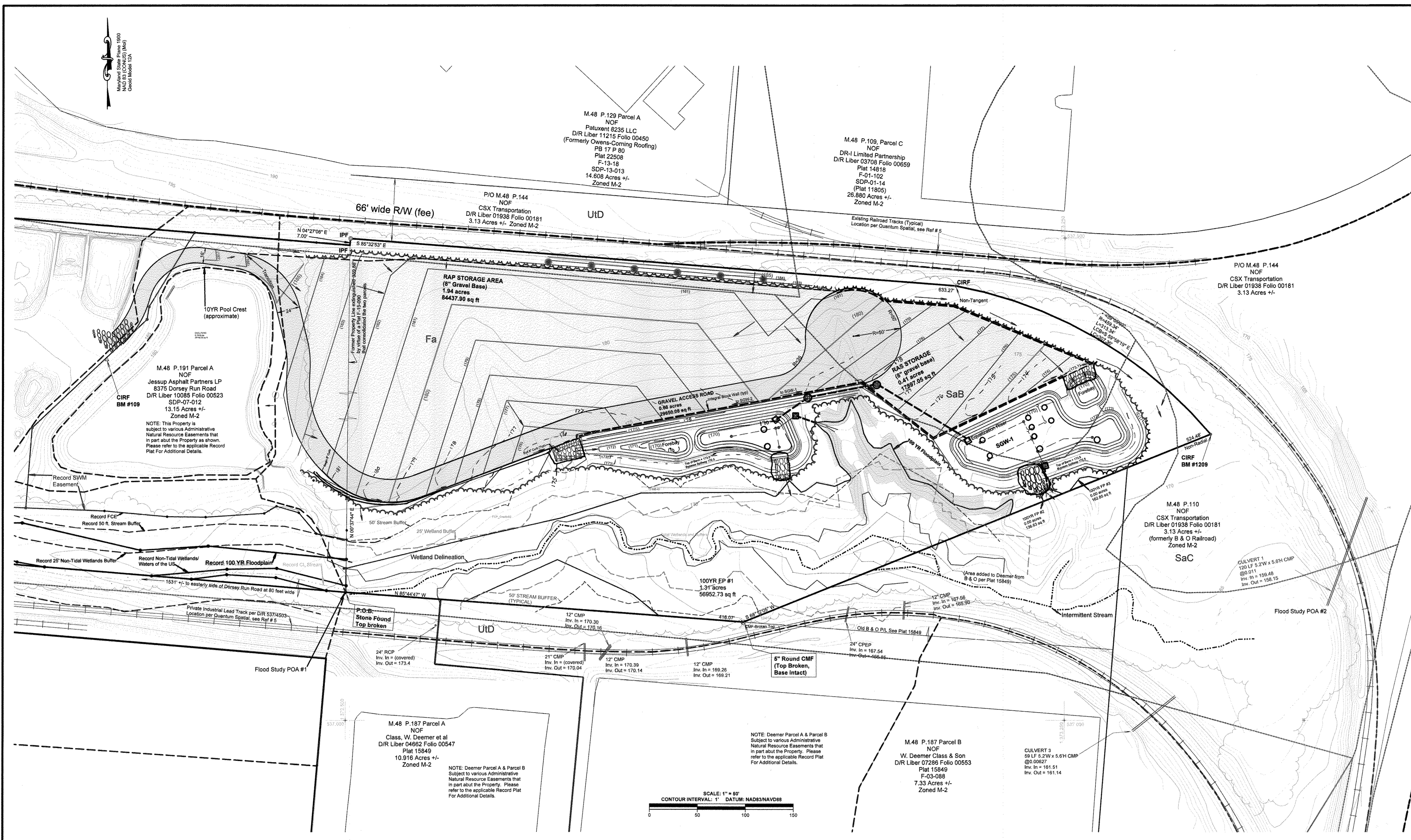
**REVISIONS**

Rev. #	Date	By	Comments/Reference
1	07/16/2015	WES	per Howard County DPZ Comments
1	10/05/2015	WES	per Howard County DPZ Comments
2	04/02/2017	WES	added as-built info

**AS-BUILT**

**AS-BUILT STORMWATER MANAGEMENT:**  
2 CONNECTED SUBMERGED GRAVEL WETLANDS (SGW-1 & SGW-2)  
SGW-1: FOREBAY STORAGE: 1,723 CU. FT +/-  
SGW STORAGE: 19,710 CU. FT. +/-  
TOTAL STORAGE: 21,433 CU. FT. +/-  
SGW-2: FOREBAY STORAGE: 1,207 CU. FT. +/-  
SGW STORAGE: 10,042 CU. FT. +/-  
TOTAL STORAGE: 11,249 CU. FT. +/-  
GRAND TOTAL STORAGE/TREATMENT CAPACITY = 32,682 CU. FT.  
ESD to the MEP is met

**SHEET 2**  
**SDP-2**  
**SDP-15-041**



**LEGEND-EXISTING, 50-SCALE SURVEY & MAPPING**

- Ultimate Development 100YR Flood Plain
- Existing 50' Stream Buffer
- Existing Stream Bank
- Existing Non-Tidal Wetland Line
- Existing 25' Non-Tidal Wetland Buffer Line
- Intermittent Stream
- Contour-Major
- Contour-Minor, approximate
- Tree Line
- Subcatchment Boundary
- Subwatershed Boundary
- PROPERTY BOUNDARY
- FSD Stand Divisions
- Tc Flow-Path
- USDA NRCS Digital Soils-Imported
- Utd
- >15% Slopes Shading

**LEGEND-PROPOSED, 50-SCALE**

- Proposed Contour-Major w/ Label
- Proposed Contour-Minor w/ Label
- Proposed Gravel Access Road
- Proposed RAP/IRAS Storage Area(s)
- CL 2.5'x2.5'x5' Integral Concrete Block Wall
- Proposed Curb, 8"
- Proposed LOD
- Proposed Subcatchment
- Proposed SGW Berm Crest (173.5')
- Proposed SGW Pool Crest (172.5')
- Surface Water Flow Direction
- Proposed Tree Line
- Proposed Landscape Tree

**LEGEND-RECORD FEATURES from: Plat 19398/F-08-031**

- Forest Conservation Easement (FCE)
- 100 Year Flood Plain
- 25 feet wide Non-Tidal Wetlands Buffer
- 50 feet wide Stream Buffer
- Non-Tidal Wetlands
- Stormwater Easement
- Centerline of Stream-Surveyed (GPI)

**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.  
*Michael A. Nawrocki* 7/3/2017  
SIGNATURE DATE  
MICHAEL A. NAWROCKI  
PRINT  
License No. 9780  
Expiration Date: 03/31/2018



**PROPOSED STORMWATER MANAGEMENT:**  
2 CONNECTED SUBMERGED GRAVEL WETLANDS (SGW-1 & SGW-2)

SGW-1: FOREBAY STORAGE: 1287 CU. FT +/-  
SGW STORAGE: 19,101.21 CU. FT. +/-  
TOTAL STORAGE: 20,388 CU. FT. +/-

SGW-2: FOREBAY STORAGE: 1,974 CU. FT. +/-  
SGW STORAGE: 7,510 CU. FT. +/-  
TOTAL STORAGE: 9,485 CU. FT. +/-

GRAND TOTAL STORAGE/TREATMENT CAPACITY = 29,874 CU. FT.  
REQUIRED ESDV = 23,105 CU. FT.  
Required ESDV Storage above surface = 17,329 CU. FT.

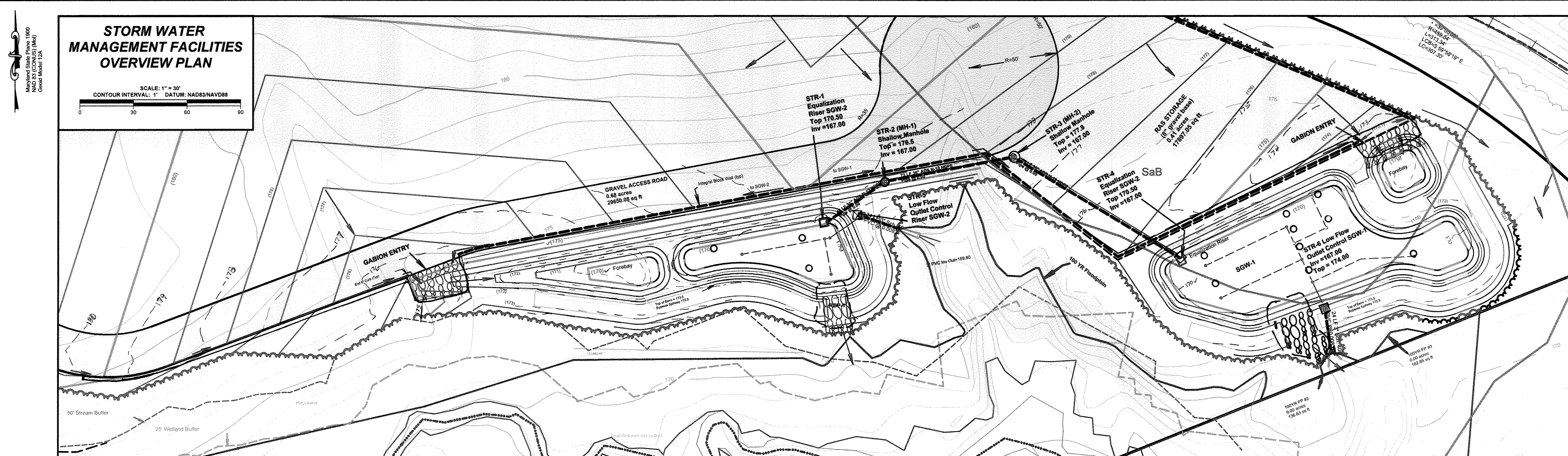
ESD to the MEP is met.

**HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.**  
*Michael A. Nawrocki* MD P.E. NO. 9780  
SIGNATURE  
MICHAEL A. NAWROCKI  
PRINT NAME  
7/3/2017  
DATE

**AS-BUILT**

**AS-BUILT STORMWATER MANAGEMENT:**  
2 CONNECTED SUBMERGED GRAVEL WETLANDS (SGW-1 & SGW-2)  
SGW-1: FOREBAY STORAGE: 1,723 CU. FT +/-  
SGW STORAGE: 19,710 CU. FT. +/-  
TOTAL STORAGE: 21,433 CU. FT. +/-  
SGW-2: FOREBAY STORAGE: 1,207 CU. FT. +/-  
SGW STORAGE: 10,042 CU. FT. +/-  
TOTAL STORAGE: 11,249 CU. FT. +/-  
GRAND TOTAL STORAGE/TREATMENT CAPACITY = 32,682 CU. FT.  
ESD to the MEP is met





**STORMWATER MANAGEMENT PLAN FOR ICM-JESSUP ADDITION**  
8375 DORSEY RUN ROAD  
COUNCIL DISTRICT 2,  
HOWARD COUNTY, MARYLAND 20794

**SITE DATA**

Owner/ Developer:	Jessup Asphalt Partners, LP
Owner/ Developer Address:	638 Lancaster Avenue Malvern, PA 19355
Owner/ Developer Phone #:	1-800-996-1015
Premises Address:	8375 Dorsey Run Road Jessup, MD 20794
Plat #:	F-15-090
Plat Reference:	<b>SDP-15-041</b>
Related DPZ File References:	SDP-07-012, F-08-031, ECP-15-008
Deed Reference:	Liber 16628 Folio 00006
Lot Area:	19.1139 acres +/-
Tax Parcel:	Map 0048 Grid 0006 Parcel 0191 PAR 4
Zoning:	M-2, Heavy Manufacturing
Election District:	Sixth
Water Supply:	Public available
Wastewater Disposal:	Public available
Datum:	NAD83/ NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**

Proposed future use:	Recycled Asphalt Product (RAP) Storage
Proposed Structures/Buildings:	None
Proposed Parking:	None
Proposed Water Service:	None
Proposed sanitary sewer service:	None
Proposed Stormwater Management:	(2) Submerged Gravel Wetlands
Total Disturbed Area:	4.05 Acres +/-
Total Impervious Area:	3.03 Acres +/-
Type of Impervious surface:	compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes.

No disturbance of wetlands/ Waters of the US or associated buffers is proposed.

Access to the property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794

**APPROVED: HOWARD CO. DEPARTMENT OF PLANNING AND ZONING**

*Michael A. Nawrocki* 7/3/2017  
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

*Michael A. Nawrocki* 7-25-16  
CHIEF-DIVISION OF LAND DEVELOPMENT DATE

*Michael A. Nawrocki* 7-25-16  
DIRECTOR DATE

**PROJECT BENCH MARKS**

Benchmark #1:	GPI CIRC E1: 204.19 (NAVD 88)
N537203.66:	E1371118.59 (NAD83)
Location:	at North and W- and 60' East of the Bakermark Building #8477
Benchmark #109:	CIRF-GPI E1: 188.96 (NAVD 88)
N537374.18:	E1372250.88 (NAD 83)
Location:	located on westerly side of SWM Pond
Benchmark #1209:	CIRF E1: 169.48 (NAVD 88)
N537296.07:	E1373402.29 (NAD 83)
Location:	located at easternmost property corner

**I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLAN AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.**

*Michael A. Nawrocki* 7/3/2017  
SIGNATURE DATE

*Michael A. Nawrocki* 7/3/2017  
PRINT NAME DATE

Drawn By: WES Viewed By: MAN Last Updated: 02/21/2015  
FILENAME: SHEET\_03  
FILE PATH: S:\2014\_PROJECTS\1528\PCS\_SDP\_Rev01

**DESIGN PROFESSIONAL'S CERTIFICATION**

I Herby Certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License Number 9780, Expires 03/31/2018

*Michael A. Nawrocki* 06/09/2016  
Michael A. Nawrocki, PE #9780

**REVISIONS**

Rev. #	Date	By	Comments/Reference
1	07/18/2015	WES	per Howard County DPZ Comments
2	07/27/2017	WES	added as-built info

**Stratigraphic Log With Well Construction**  
PROJECT NAME: ICM-Jessup Acquisition  
PROJECT NO: 1528  
BORING NO: HA-G1  
START DATE: 08-12-2015  
FINISH DATE: 08-12-2015  
WEATHER: Clear, Cloudy  
TOTAL DEPTH: 6  
REMARKS: Core County

Depth (ft)	Soil Description
0-1	SS with medium to fine sand, cohesive, slightly plastic, soft, very moist
1-2	SS with medium to fine sand with silty, trace of clay, cohesive, plastic, slightly silty, soft
2-3	Yellow-brown, dense, silty, clay, fine sand with silty, trace of clay, cohesive, plastic, very moist
3-4	Fine grained, plastic, very silty
4-5	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
5-6	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
6-7	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
7-8	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
8-9	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
9-10	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
10-11	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
11-12	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
12-13	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
13-14	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
14-15	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
15-16	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
16-17	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
17-18	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
18-19	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
19-20	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
20-21	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
21-22	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
22-23	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
23-24	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
24-25	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
25-26	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
26-27	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
27-28	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
28-29	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
29-30	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
30-31	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
31-32	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
32-33	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
33-34	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
34-35	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
35-36	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
36-37	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
37-38	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
38-39	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
39-40	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
40-41	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
41-42	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
42-43	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
43-44	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
44-45	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
45-46	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
46-47	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
47-48	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
48-49	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
49-50	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
50-51	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
51-52	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
52-53	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
53-54	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
54-55	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
55-56	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
56-57	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
57-58	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
58-59	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
59-60	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
60-61	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
61-62	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
62-63	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
63-64	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
64-65	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
65-66	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
66-67	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
67-68	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
68-69	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
69-70	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
70-71	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
71-72	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
72-73	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
73-74	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
74-75	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
75-76	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
76-77	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
77-78	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
78-79	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
79-80	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
80-81	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
81-82	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
82-83	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
83-84	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
84-85	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
85-86	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
86-87	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
87-88	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
88-89	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
89-90	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
90-91	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
91-92	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
92-93	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
93-94	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
94-95	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
95-96	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
96-97	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
97-98	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
98-99	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
99-100	SS with medium to fine sand, cohesive, plastic, slightly silty, soft

**Stratigraphic Log With Well Construction**  
PROJECT NAME: ICM-Jessup Acquisition  
PROJECT NO: 1528  
BORING NO: HA-G2  
START DATE: 08-12-2015  
FINISH DATE: 08-12-2015  
WEATHER: Clear, Cloudy  
TOTAL DEPTH: 6  
REMARKS: Core County

Depth (ft)	Soil Description
0-1	SS with medium to fine sand, cohesive, slightly plastic, soft, very moist
1-2	SS with medium to fine sand with silty, trace of clay, cohesive, plastic, slightly silty, soft
2-3	Yellow-brown, dense, silty, clay, fine sand with silty, trace of clay, cohesive, plastic, very moist
3-4	Fine grained, plastic, very silty
4-5	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
5-6	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
6-7	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
7-8	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
8-9	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
9-10	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
10-11	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
11-12	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
12-13	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
13-14	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
14-15	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
15-16	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
16-17	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
17-18	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
18-19	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
19-20	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
20-21	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
21-22	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
22-23	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
23-24	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
24-25	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
25-26	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
26-27	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
27-28	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
28-29	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
29-30	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
30-31	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
31-32	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
32-33	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
33-34	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
34-35	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
35-36	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
36-37	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
37-38	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
38-39	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
39-40	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
40-41	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
41-42	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
42-43	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
43-44	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
44-45	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
45-46	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
46-47	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
47-48	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
48-49	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
49-50	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
50-51	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
51-52	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
52-53	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
53-54	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
54-55	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
55-56	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
56-57	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
57-58	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
58-59	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
59-60	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
60-61	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
61-62	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
62-63	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
63-64	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
64-65	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
65-66	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
66-67	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
67-68	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
68-69	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
69-70	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
70-71	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
71-72	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
72-73	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
73-74	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
74-75	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
75-76	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
76-77	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
77-78	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
78-79	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
79-80	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
80-81	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
81-82	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
82-83	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
83-84	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
84-85	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
85-86	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
86-87	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
87-88	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
88-89	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
89-90	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
90-91	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
91-92	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
92-93	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
93-94	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
94-95	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
95-96	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
96-97	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
97-98	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
98-99	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
99-100	SS with medium to fine sand, cohesive, plastic, slightly silty, soft

**Stratigraphic Log With Well Construction**  
PROJECT NAME: ICM-Jessup Acquisition  
PROJECT NO: 1528  
BORING NO: HA-G3  
START DATE: 08-12-2015  
FINISH DATE: 08-12-2015  
WEATHER: Clear, Cloudy  
TOTAL DEPTH: 6  
REMARKS: Core County

Depth (ft)	Soil Description
0-1	SS with medium to fine sand, cohesive, slightly plastic, soft, very moist
1-2	SS with medium to fine sand with silty, trace of clay, cohesive, plastic, slightly silty, soft
2-3	Yellow-brown, dense, silty, clay, fine sand with silty, trace of clay, cohesive, plastic, very moist
3-4	Fine grained, plastic, very silty
4-5	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
5-6	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
6-7	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
7-8	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
8-9	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
9-10	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
10-11	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
11-12	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
12-13	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
13-14	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
14-15	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
15-16	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
16-17	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
17-18	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
18-19	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
19-20	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
20-21	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
21-22	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
22-23	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
23-24	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
24-25	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
25-26	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
26-27	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
27-28	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
28-29	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
29-30	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
30-31	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
31-32	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
32-33	SS with medium to fine sand, cohesive, plastic, slightly silty, soft
33-34	



**STORMWATER  
MANAGEMENT  
DETAILS  
FOR  
ICM-JESSUP ADDITION**  
8375 DORSEY RUN ROAD  
COUNCIL DISTRICT 2,  
HOWARD COUNTY, MARYLAND 20794

**SITE DATA**

Owner/ Developer: Jessup Asphalt Partners, LP  
Owner/ Developer Address: 638 Lancaster Avenue, Malvern, PA 19355  
Owner/ Developer Phone #: 1-800-995-1016  
Premises Address: 8375 Dorsey Run Road, Jessup, MD 20794  
Plat DPZ File #: F-15-090  
Plat Reference: (2) 2808-0-0991  
Related DPZ File References: SDF-07-012, F-08-031,  
ECP-15-008  
Deed Reference: Liber 15628 Folio 00006  
Lot Area: 19.1339 acres +/-  
Tax Parcel: Map 0048 Grd 0008 Parcel 0191 PAR A  
Zoning: M-2, Heavy Manufacturing  
Election District: Sixth  
Water Supply: Public available  
Wastewater Disposal: Public available  
Datum: NAD83/ NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**

Proposed future use: Recycled Asphalt Product (RAP) Storage  
Proposed Structures/Buildings: None  
Proposed Parking: None  
Proposed water service: None  
Proposed sanitary sewer service: None  
Proposed Stormwater Management: (2) Submerged Gravel Wetlands  
Total Disturbed Area: 4.05 Acres +/-  
Total Impervious Area: 3.03 Acres +/-  
Type of Impervious surface: compacted gravel base, no pavement  
The site is designated a "Hot Spot" for stormwater management purposes.  
No disturbance of wetlands/ Waters of the US or associated buffers is proposed.

Access to the property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794.

**APPROVED: HOWARD CO. DEPARTMENT OF PLANNING AND ZONING**

*Michael A. Nawrocki* 7-24-16  
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE  
*Michael A. Nawrocki* 7-25-16  
DIRECTOR DATE

**PROJECT BENCH MARKS**

Benchmark #1: GPI CIRF El. 204.19 (NAVD 88)  
N537203.66 E1371118.59 (NAD83)  
Located 5' North and 4' and 66' East of the Benchmark Building #477  
Benchmark #109: CIRF-GPI El. 188.96 (NAVD 88)  
N537374.18 E1372280.88 (NAD 83)  
Located on westerly side of SWM Pond  
Benchmark #120B: CIRF El. 169.48 (NAVD 88)  
N537286.67 E1373402.29 (NAD 83)  
Located at easternmost property corner

Drawn By: WES Reviewed By: MAN Last Updated 07/21/2015  
FILENAME: SHEET\_04  
FILE PATH: S:\2014\_PROJECTS\1528\PCS\_SDP\_Rev01

**DESIGN PROFESSIONAL'S CERTIFICATION**

I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License Number 9780, Expiration Date 03/31/2019

*Michael A. Nawrocki* 06/09/2016  
Michael A. Nawrocki, PE #9780 Date

**REVISIONS**

Rev. #	Date	By	Comments/Reference
#1	02/21/2015	WES	
#2	02/21/2015	WES	per Howard County Comments

**SHEET 4**  
**SW-2**

**INSPECTION CRITERIA AND FREQUENCY**

- FIRST YEAR POST-CONSTRUCTION INSPECTION**  
Inspection frequency should be after every major storm in the first year following construction. The following actions should be taken:
- Inspect to be certain system drains within 24-72 hrs (within the design period, but also not so quickly as to minimize stormwater treatment).
  - Water plants as necessary during the first growing season.
  - Re-vegetate poorly established areas as necessary.
  - Treat diseased vegetation as necessary.
  - Inspect soil and repair eroded areas, especially on slopes quarterly.
  - Check inlets, outlets, and overflow spillway for blockage, structural integrity, and evidence of erosion.

- POST-CONSTRUCTION INSPECTION (after Year 1)**  
The inspection frequency should be at least every 6 months after the first year, as per USEPA Good House-Keeping Requirements. Inspection frequency can be reduced to annual following 2 years of monitoring that indicates the rate of sediment accumulation is less than the cleaning criteria listed below. Inspections should focus on:
- Checking the filter surface for dense, complete, root mat establishment across the wetland surface. Thorough revegetation with grasses, forbs, and shrubs is necessary. Unlike bioretention, where mulch is commonly used, complete surface coverage with vegetation is needed.
  - Checking the gravel wetland surface for standing water or other evidence of riser clogging, such as discolored or accumulated sediments.
  - Checking the sedimentation chamber or forebay for sediment accumulation, trash, and debris.
  - Inspect to be certain the sedimentation forebay drains within 24 to 72 hrs.
  - Checking inlets, outlets, and overflow spillway for blockage, structural integrity, and evidence of erosion.

**CLEANING CRITERIA FOR SUBMERGED GRAVEL WETLAND COMPONENTS**

**Cleaning Criteria for Sedimentation Forebay:** Sediment should be removed from the sedimentation chamber (forebay) when it accumulates to a depth of more than 12 inches (30 cm) or 10 percent of the pretreatment volume. The sedimentation forebay should be cleaned of vegetation if persistent standing water and wetland vegetation becomes dominant. The cleaning interval is approximately every 4 years. A dry sedimentation forebay is the optimal condition while in practice this condition is rarely achieved. The sedimentation chamber, forebay, and treatment cell outlet devices should be cleaned when drawdown times exceed 60 to 72 hours. Materials can be removed with heavy construction equipment, however this equipment should not track wetland surface. Revegetation of disturbed areas as necessary. Removed sediments should be dewatered (if necessary) and disposed of in an acceptable manner.

**Cleaning Criteria for Gravel Wetland Treatment Cells:** Sediment should be removed from the gravel wetland surface when it accumulates to a depth of several inches (>10 cm) across the wetland surface. Materials should be removed with rakes rather than heavy construction equipment to avoid compaction of the gravel wetland surface. Heavy equipment could be used if the system is designed with dimensions that allow equipment to be located outside the gravel wetland, while a backhoe shovel reaches inside the gravel wetland to remove sediment. Removed sediments should be dewatered (if necessary) and disposed of in an acceptable manner.

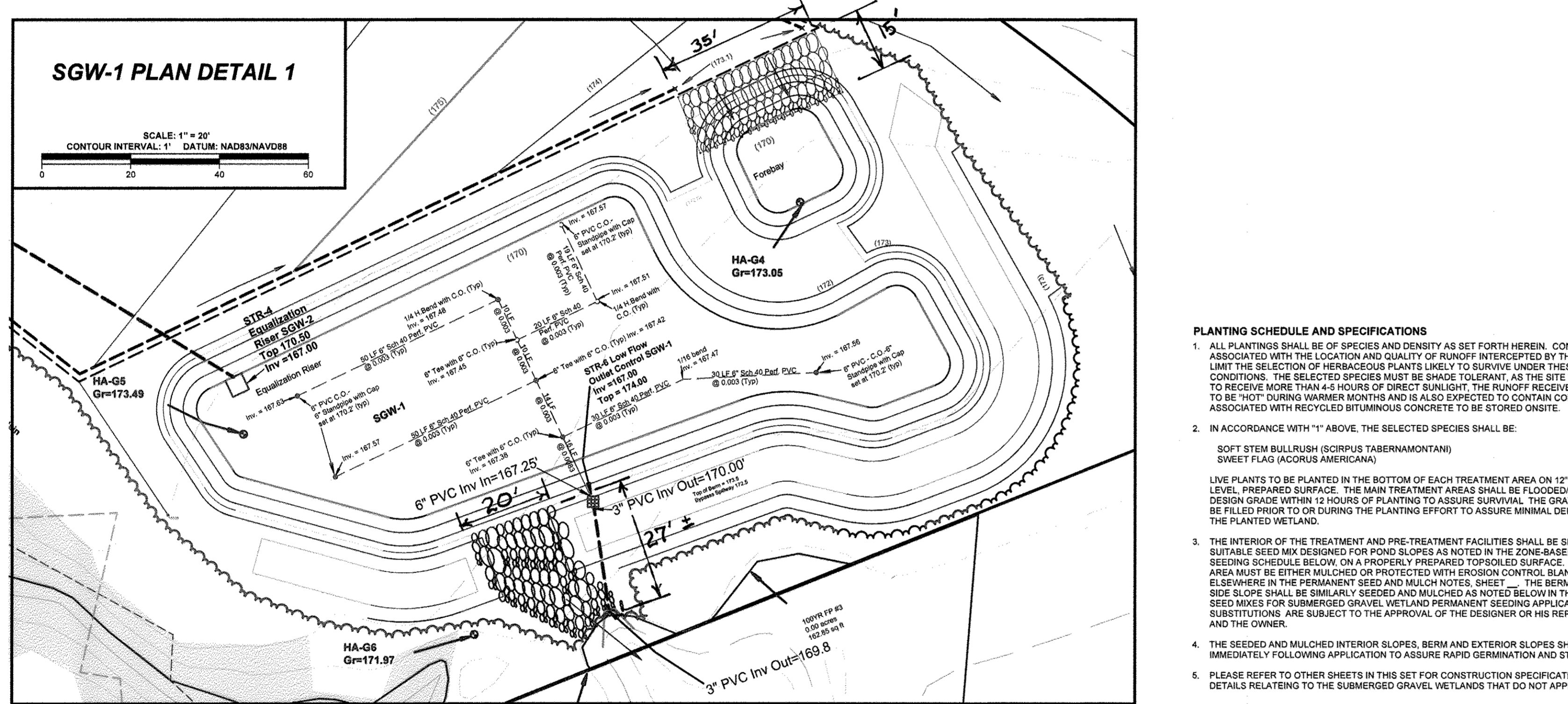
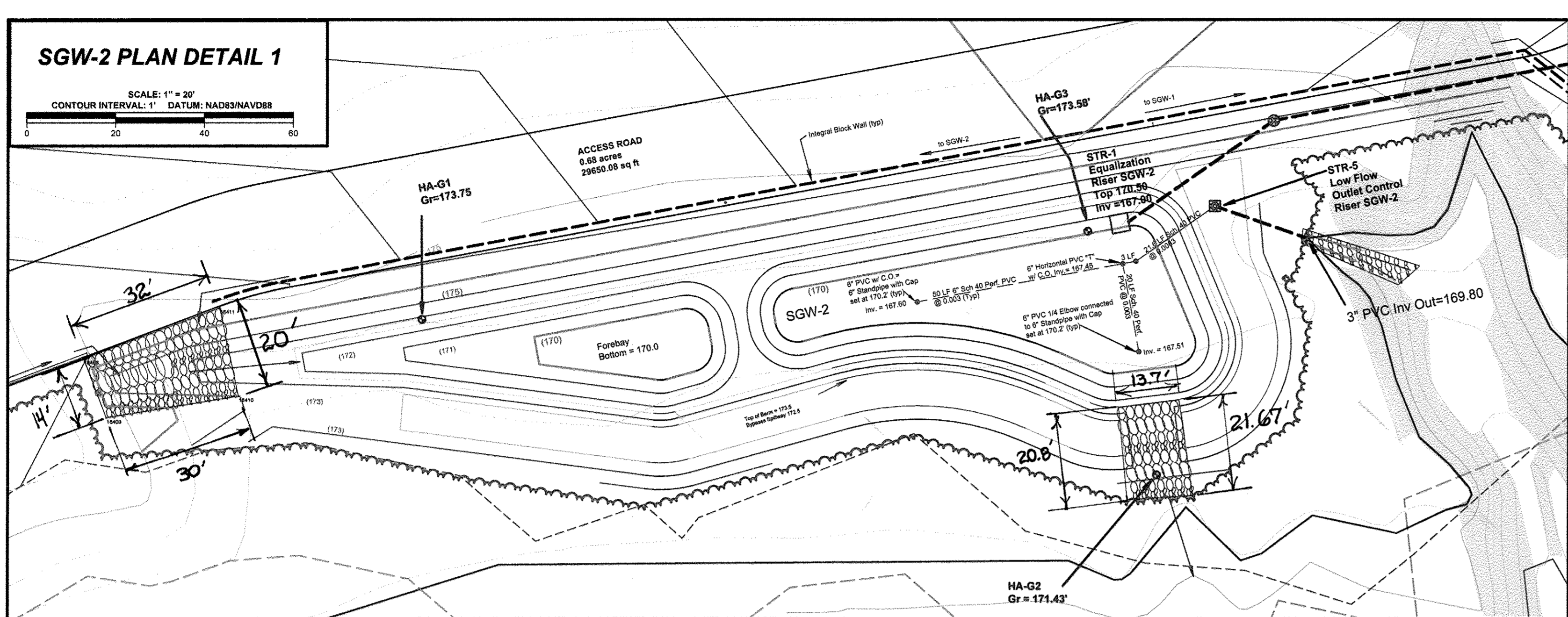
**Draining and Flushing Gravel Wetland Treatment Cells:** For maintenance it may be necessary to drain or flush the treatment cells. The optional drains will permit simpler maintenance of the system if needed. The drains need to be closed during standard operations. Flushing of the risers and horizontal subdrains is most effective with the entire system drained. Flushed water and sediment should be collected and properly disposed.

**OPERATION AND MAINTENANCE SCHEDULE FOR SUBMERGED GRAVEL WETLANDS UNDERGROUND STORMWATER MANIFOLD SYSTEMS**

- THE UNDERGROUND STORMWATER MANAGEMENT FACILITY IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN ITS OPERATION AND FUNCTION.
- THE UNDERGROUND STORMWATER MANAGEMENT FACILITY, EQUALIZATION PIPE SYSTEM AND LOW FLOW OUTLETS SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER ESPECIALLY SEVERE STORM EVENTS.
- WHEN SEDIMENT ACCUMULATION OF MORE THAN 2" IS OBSERVED OR ANY DEBRIS THAT MIGHT OBSTRUCT THE OUTFLOW IS OBSERVED, THE FACILITY SHALL BE CLEANED.
- THE FACILITY SHALL BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES NOTIFYING THEM OF THE SPILL AND CLEANUP OPERATION.
- THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND STORMWATER MANAGEMENT FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL OR LIQUID.
- THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX (6) MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SUBMERGED GRAVEL WETLANDS sgw-1 & 2.**

- DURING THE FIRST YEAR OF OPERATION, THE OWNER SHALL INSPECT THE FACILITY AFTER EVERY HEAVY STORM AND REPLACE VEGETATION AS NEEDED.
- THE OWNER SHALL REMOVE SEDIMENT ACCUMULATED IN THE PRE-TREATMENT AREAS AS NECESSARY.
- SIGNS OF UNEVEN FLOW WITHIN THE WETLAND MAY MEAN THAT THE GRAVEL OR UNDERDRAIN IS CLOGGED. THE GRAVEL OR UNDERDRAIN SHALL BE REMOVED, CLEANED, AND REPLACED, AS NEEDED.
- THE OWNER SHALL ENSURE A DENSE STAND OF WETLAND VEGETATION IS MAINTAINED THROUGH THE LIFE OF THE FACILITY AND REPLACE VEGETATION AS NEEDED.
- THE OWNER SHALL ENSURE THE INLETS AND OUTLETS TO EACH GRAVEL WETLAND CELL ARE FREE FROM DEBRIS.
- THE OWNER SHALL ENSURE REPAIR EROSION AT INFLOW POINTS AND ENSURE FLOW SPLITTERS ARE FUNCTIONAL TO PREVENT STORMWATER FROM BYPASSING THE FACILITY.



- PLANTING SCHEDULE AND SPECIFICATIONS**
- ALL PLANTINGS SHALL BE OF SPECIES AND DENSITY AS SET FORTH HEREIN. CONDITIONS ASSOCIATED WITH THE LOCATION AND QUALITY OF RUNOFF INTERCEPTED BY THE SYSTEM LIMIT THE SELECTION OF HERBACEOUS PLANTS LIKELY TO SURVIVE UNDER THESE HARSH CONDITIONS. THE SELECTED SPECIES MUST BE SHADE TOLERANT, AS THE SITE IS LIKELY TO RECEIVE MORE THAN 4-6 HOURS OF DIRECT SUNLIGHT. THE RUNOFF RECEIVED IS EXPECTED TO BE "HOT" DURING WARMER MONTHS AND IS ALSO EXPECTED TO CONTAIN CONTAMINANTS ASSOCIATED WITH RECYCLED BITUMINOUS CONCRETE TO BE STORED ONSITE.
  - IN ACCORDANCE WITH "1" ABOVE, THE SELECTED SPECIES SHALL BE:  
SOFT STEM BULLRUSH (SCIRPUS TABERNAMONTANI)  
SWEET FLAG (ACORUS AMERICANUS)  
LIVE PLANTS TO BE PLANTED IN THE BOTTOM OF EACH TREATMENT AREA ON 12" CENTERS ON LEVEL, PREPARED SURFACE. THE MAIN TREATMENT AREAS SHALL BE FLOOD-FILLED TO THE DESIGN GRADE WITHIN 12 HOURS OF PLANTING TO ASSURE SURVIVAL. THE GRAVEL BED SHOULD BE FILLED PRIOR TO OR DURING THE PLANTING EFFORT TO ASSURE MINIMAL DELAY IN FLOODING THE PLANTED WETLAND.
  - THE INTERIOR OF THE TREATMENT AND PRE-TREATMENT FACILITIES SHALL BE SEEDED WITH A SUITABLE SEED MIX DESIGNED FOR POND SLOPES AS NOTED IN THE ZONE-BASED SEEDING SCHEDULE BELOW. ON A PROPERLY PREPARED TOPSOILED SURFACE, THE SEEDING AREA MUST BE EITHER MULCHED OR PROTECTED WITH EROSION CONTROL BLANKET AS SPECIFIED ELSEWHERE IN THE PERMANENT SEED AND MULCH NOTES, SHEET \_\_\_\_\_. THE BERM AND EXTERIOR SIDE SLOPE SHALL BE SIMILARLY SEED AND MULCHED AS NOTED BELOW IN THE "RECOMMENDED SEED MIXES FOR SUBMERGED GRAVEL WETLAND PERMANENT SEEDING APPLICATIONS". ANY SUBSTITUTIONS ARE SUBJECT TO THE APPROVAL OF THE DESIGNER OR HIS REPRESENTATIVE AND THE OWNER.
  - THE SEEDED AND MULCHED INTERIOR SLOPES, BERM AND EXTERIOR SLOPES SHALL BE WATERED IMMEDIATELY FOLLOWING APPLICATION TO ASSURE RAPID GERMINATION AND STABILIZATION.
  - PLEASE REFER TO OTHER SHEETS IN THIS SET FOR CONSTRUCTION SPECIFICATIONS, NOTES AND DETAILS RELATING TO THE SUBMERGED GRAVEL WETLANDS THAT DO NOT APPEAR ON THIS SHEET.

**RECOMMENDED SEED MIXES FOR SUBMERGED GRAVEL WETLAND PERMANENT SEEDING APPLICATIONS**

**DRY-WET RIPARIAN MIX FOR SGW MAIN TREATMENT AREAS INTERIOR SIDESLOPES FROM ELEVATION 170 TO 172.5**

Quantity	Unit	Catalogue #	Item
0.3000	lb	BOUCUR02	Sideoats Grama, 'Butte'
0.2800	lb	BOUGRA01	Blue Grama, 'Bad River'
0.2800	lb	PANCLA01	Deertongue, 'Tioga'
0.0500	lb	POAPAL01	Fowl Bluegrass
0.0200	lb	HELHEL01	Oxeye Sunflower, PA Ecotype
0.0300	lb	JUNEEFF01	Soft rush
0.0200	lb	RUDHIR04	Blackeyed Susan
0.0200	lb	CHAFAS01	Partridge Pea, PA Ecotype

**SHADY AREA MIX FOR SGW BERM AND EXTERIOR DISTURBED AREAS FROM ELEVATION 172.5 INSIDE THE TREATMENT AREA TO THE BERM CREST AND DOWN THE FORESLOPE TO THE LOD**

Quantity	Unit	Catalogue #	Item
0.2000	lb	FESRUB01	Creeping Red Fescue
0.7000	lb	AGRPER01	Autumn Bentgrass, Albany Pine Bush-NY Ecotype
0.0200	lb	PANCLA01	Deertongue, 'Tioga'
0.0200	lb	CHAFAS01	Partridge Pea, PA Ecotype
0.0200	lb	PENDIG02	Tall White Beardtongue
0.0200	lb	TRACHH01	Ohio Spiderwort, PA Ecotype
0.0200	lb	RUDHIR04	Blackeyed Susan

**LOW MAINTENANCE RETENTION BASIN FLOOR MIX FOR THE SGW FOREBAY BOTTOMS AND SIDE SLOPES TO ELEVATION 173'**

Quantity	Scientific Name	Item/ Common Name
16.00%	Agrostis scabra, PA Ecotype	Ticklegrass (Rough Bentgrass), PA Ecotype
16.00%	Carex vulpinoidea, PA Ecotype	Fox Sedge, PA Ecotype
16.00%	Elymus virginicus, PA Ecotype	Virginia Wildrye, PA Ecotype
16.00%	Fuzcoellia distans, 'Tule'	Alkaligrass, 'Tule'
10.00%	Agrostis stolonifera	Creeping Bentgrass
10.00%	Panicum clandestinum (Dichanthellum c.), 'Tiog'	Deertongue, 'Tioga'
10.00%	Poa palustris	Fowl Bluegrass
3.00%	Juncus effusus	Soft Rush
2.00%	Agrostis perennans, PA Ecotype	Autumn Bentgrass, PA Ecotype
1.00%	Juncus tenuis, PA Ecotype	Path Rush, PA Ecotype

NO AS-BUILT INFO. SDP-15-041







**EXISTING CONDITIONS  
PLAN  
FOR  
ICM-JESSUP ADDITION**

**8375 DORSEY RUN ROAD  
COUNCIL DISTRICT 2,  
HOWARD COUNTY, MARYLAND 20794**

**SITE DATA**

Owner/ Developer: Jessup Asphalt Partners, LP  
Owner/ Developer Address: 638 Lancaster Avenue  
Malvern, PA 19355  
Owner/ Developer Phone #: 1-800-999-1018  
Premises Address: 8375 Dorsey Run Road  
Jessup, MD 20794  
DPZ Plat File #: F-15-090  
Plat #: **(33008-29911)**  
Deed Reference: Liber 15628 Folio 00006  
Lot Area: 19,139 acres +/-  
Tax Parcel: Map 0048 Grid 0008 Parcel 0191 PAR A  
Zoning: M-2, Heavy Manufacturing  
Election District: Sixth  
Water Supply: Public available  
Wastewater Disposal: Public available  
Datum: NAD83/ NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**

Proposed future use.....Recycled Asphalt Product (RAP) Storage  
Proposed Structures/Buildings.....None  
Proposed Parking.....None  
Proposed water service.....None  
Proposed sanitary sewer service.....None  
Proposed Stormwater Management.....(2) Submerged Gravel Wetlands  
Total Disturbed Area.....4.05 Acres +/-  
Total Impervious Area.....3.03 acres +/-  
Type of Impervious surface.....compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes.

No disturbance of wetlands/ Waters of the US or associated buffers is proposed.

Access to the property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794

**APPROVED: HOWARD CO. DEPARTMENT OF PLANNING AND ZONING**

*[Signature]* 7-14-16  
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 7-21-16  
CHIEF-DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 7-25-16  
DIRECTOR DATE

**PROJECT BENCH MARKS**

Benchmark #1: GPI CIRF El: 204.19 (NAVD 88)  
N537203.69 E1371118.59 (NAD83)  
Located 8' North and +/- and 66' East of the  
Bakermark Building #447

Benchmark #109: CIRF-GPI El: 188.36 (NAVD 88)  
N537374.18 E1372250.88 (NAD 83)  
located on westerly side of SWM Pond

Benchmark #1209: CIRF El: 169.48 (NAVD 88)  
N537296.67 E1373402.29 (NAD 83)  
Located at easternmost property corner

**NOTE: THIS PLAN WAS PREVIOUSLY  
APPROVED UNDER ECP-15-008**

Drawn By: WES Reviewed By: MAN Last Updated 07/21/2015  
FILENAME: SHEET\_6.pcs  
FILE PATH: S:\2015\_PROJECTS\1528\PCS-SDP\_Rev01

**DESIGN PROFESSIONAL'S CERTIFICATION**

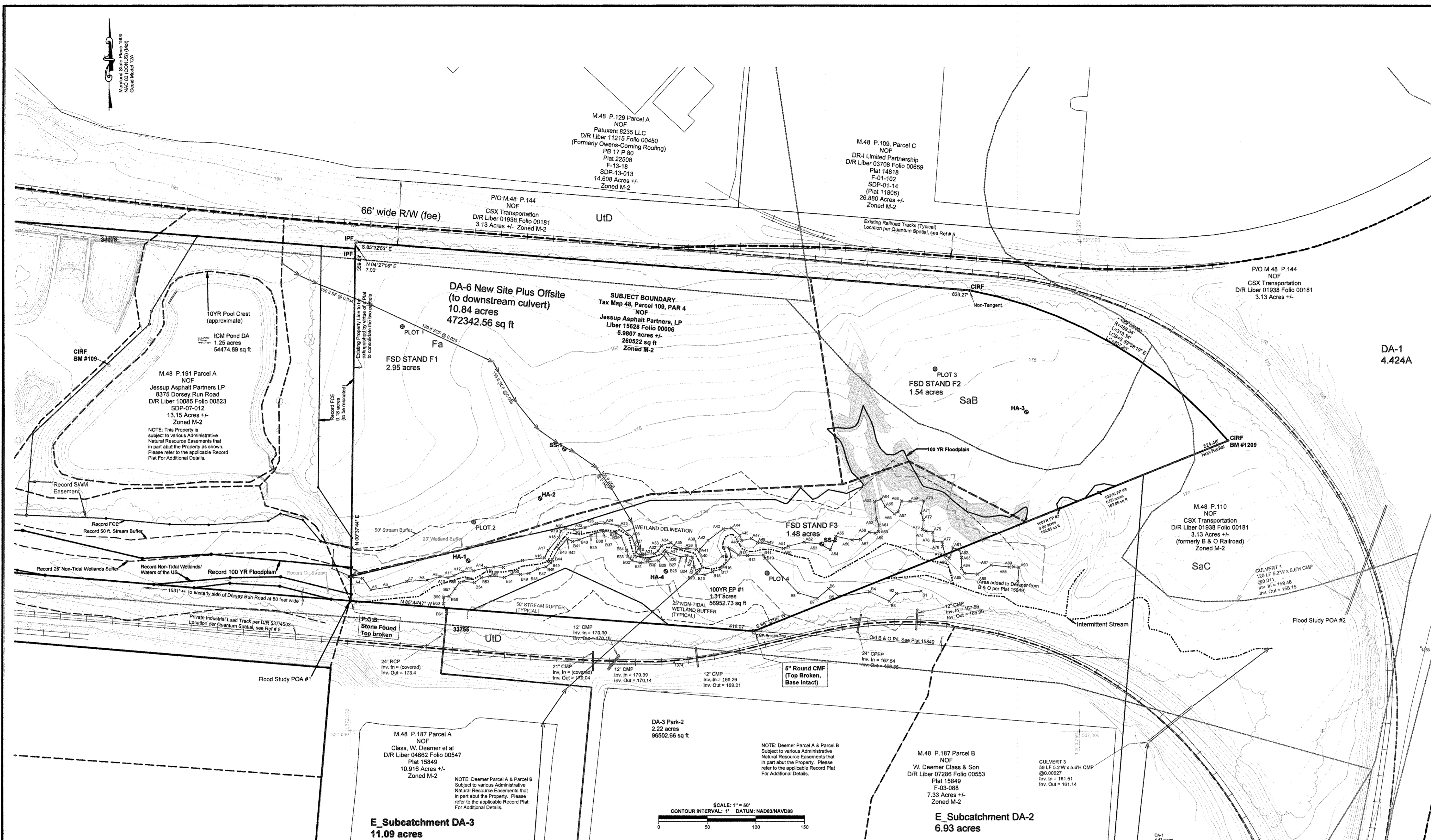
I Herby Certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License Number 9780, Expires 03/23/2018

*[Signature]* 06/09/2016  
Michael A. Newrocki, PE # 9780 Date

Rev. #	Date	By	Comments/Reference
1	07/21/2015	WES	per Howard County Comments

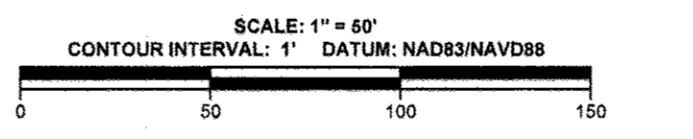
**SHEET 6**

**EX-1**



**EXISTING CONDITIONS NOTES**

- Existing Topography, tree-line and planimetric features were compiled by Quantum Spatial (45180 Business Court, Dulles Virginia 20166-5706) from aerial imagery taken on 01/08/2014. Quantum's plan states that their plan complies with the National Standard for Spatial Data Accuracy (NSSDA) for horizontal mapping scale of 1" = 50', and a contour interval of 1 foot. The datum was reported to be NAD83/NAVD88. SECI makes no warranty whatsoever regarding the data provided by others.
- This plan is based on survey work performed by SECI completed between February and June 2014 including natural resources delineated in the field. The boundary shown hereon is based on an ALTA/ACSM survey completed and published by SECI in June 2014 and is the basis for the legal description contained in the current deed referenced hereupon. SECI reserves the right to amend or revise any information contained herein should additional information become available in the future.
- The wetlands and associated buffers shown hereon are based on a wetland delineation performed by SECI in March 2014, updated July 2014. SECI surveyed the flags in the field by conventional survey methods. Please refer to the accompanying report for further information.
- The Forest Stands shown hereon are based on a Forest Stand Delineation performed by SECI in July 2014 by a Qualified Professional (Bill Stephens, PG, QP). Please refer to the accompanying report for additional information.
- The Ultimate 100-YR Flood Plain shown hereon is based on a Flood Study prepared by SECI dated July 31, 2014. Please refer to that report for additional information on the Flood Plain analysis and determination of the 100-YR Flood elevation(s).
- No Steep Slopes as defined by the Howard County Subdivision Regulations are present onsite. Slopes greater than 15%, as determined manually by scaling the topographic contours, have been shaded in light gray for the purpose of Howard County Conservation District (HCSD) review.
- Soils shown hereon were converted from the USDA NRCS digital soils file downloaded from the USDA NRCS Geospatial Gateway and were imported directly following a datum conversion to MD State Plane from the native format.
- Drainage Areas shown hereon were initially developed from an examination of the 2' contours in the Howard County contour dataset downloaded directly from Howard County's website. The most current high resolution imagery and land-use land cover data were also used in conjunction with topography. Further refinements were made based on field examination of drainage structures. The site and 98% of proposed site improvements are within drainage area "DA-6 New Site plus", the study point for which is labeled "POA #2".



**LEGEND-EXISTING,  
50-SCALE SURVEY & MAPPING**

- Ultimate Development 100YR Flood Plain
- - - Existing 50' Stream Buffer
- - - Existing Stream Bank
- - - Existing Non-Tidal Wetland Line
- - - Existing 25' Non-Tidal Wetland Buffer Line
- - - Intermittent Stream
- - - Contour-Major
- - - Contour-Major, approximate
- - - Contour-Minor
- - - Contour-Minor, approximate
- - - Tree Line
- - - Subcatchment Boundary
- - - Subwatershed Boundary
- - - PROPERTY BOUNDARY
- - - FSD Stand Divisions
- - - Tc Flow-Path
- - - USDA NRCS Digital Soils-Imported

**LEGEND-EXISTING,  
50-SCALE SURVEY & MAPPING**

- PLOT 1 FSD Stand Plot Location
- HA-1 Soil Borings/Shovel Slices-Wetland Delineation
- ✕ HA1 Wetland Flag with Label
- Spot Elevation
- >15% Slopes Shading



**NO AS-BUILT INFO SDR-15-041**



**POST-DEVELOPMENT  
DRAINAGE PLAN  
FOR  
ICM-JESSUP ADDITION**

**8375 DORSEY RUN ROAD  
COUNCIL DISTRICT 2,  
HOWARD COUNTY, MARYLAND 20794**

**SITE DATA**

Owner/ Developer: Jessup Asphalt Partners, LP  
Owner/ Developer Address: 6308 Lancaster Avenue, Malvern, PA, 19355  
Owner/ Developer Phone #: 1-800-999-1018  
Premises Address: 8375 Dorsey Run Road, Jessup, MD 20794  
Plat #: F-15-090  
Plat Reference: **SDP-07-12**  
Related DPZ File References: SDP-07-012, F-08-031, ECP-15-008  
Deed Reference: Liber 15628 Folio 00006  
Lot Area: 19.1139 acres +/-  
Tax Parcel: Map 0048 Grid 0008 Parcel 0191 PAR 4  
Zoning: M-2, Heavy Manufacturing  
Election District: Sixth  
Water Supply: Public available  
Wastewater Disposal: Public available  
Datum: NAD83/NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**

Proposed future use: Recycled Asphalt Product (RAP) Storage  
Proposed Structures/Buildings: None  
Proposed Parking: None  
Proposed water service: None  
Proposed sanitary sewer service: None  
Proposed stormwater management: (2) Submerged Gravel Wetlands  
Total Disturbed Area: 4.05 Acres +/-  
Total Impervious Area: 3.03 acres +/-  
Type of Impervious surface: compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes.  
No disturbance of wetlands/ Waters of the US or associated buffers is proposed.

Access to the property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794.

APPROVED: HOWARD CO. DEPARTMENT OF PLANNING AND ZONING  
*Michael A. Nawrocki* 7/14/16  
CHIEF DEVELOPMENT ENGINEERING DIVISION DATE

*Michael A. Nawrocki* 7-21-16  
CHIEF DIVISION OF LAND DEVELOPMENT DATE  
*Michael A. Nawrocki* 7-25-10  
DIRECTOR DATE

**PROJECT BENCH MARKS**

Benchmark #1: GPI CIRF EI: 204.19 (NAVD 88)  
N637203.86 E137111.59 (NAD83)  
Located 9' North and +/- and 60' East of the Benchmark Building #4477

Benchmark #109: CIRF-GPI EI: 188.96 (NAVD 88)  
N637374.18 E137250.88 (NAD 83)  
located on westerly side of SWM Pond

Benchmark #1209: CIRF EI: 169.48 (NAVD 88)  
N637286.67 E1373402.29 (NAD 83)  
Located at easternmost property corner

Drawn By: WES Reviewed By: MAN Last Updated 07/20/2015  
FILENAME: SHEET\_07  
FILE PATH: S:\2015\_PROJECTS\1528\PCS-SDP\_Rev01

DESIGN PROFESSIONAL'S CERTIFICATION  
I hereby Certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License Number 9760, Expires 03/31/2016

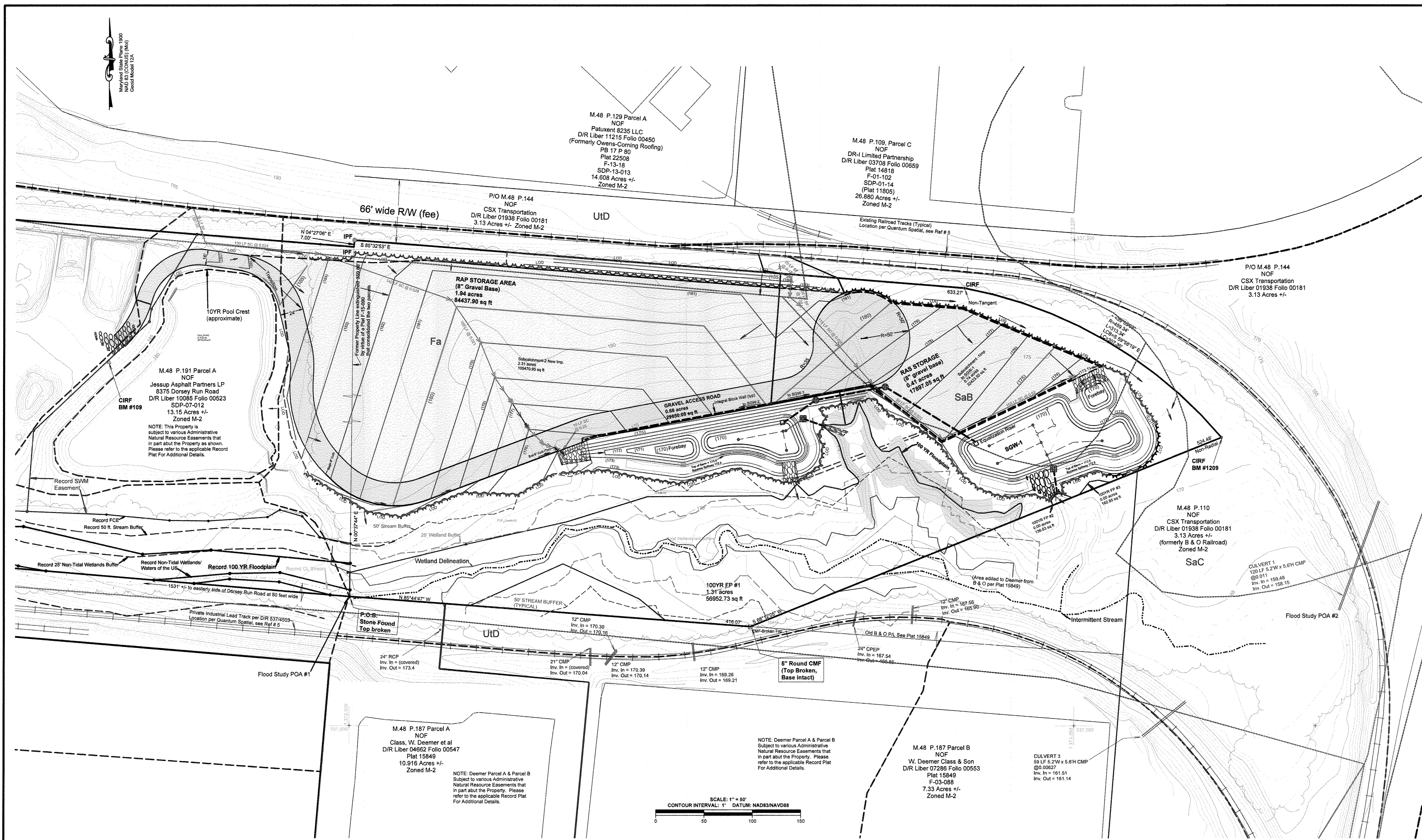
*Michael A. Nawrocki* 06/09/2016  
Michael A. Nawrocki, PE #9760  
DATE

REVISIONS			
Rev. #	Date	By	Comments/Reference
1	07/20/2015	WES	per Howard County DPZ Comments

**SHEET 7**

**SW-3**

NO AS-BUILT INFO SDP-15-041



**LEGEND-EXISTING,  
50-SCALE SURVEY & MAPPING**

- Ultimate Development 100YR Flood Plain
- Existing 50' Stream Buffer
- Existing Stream Bank
- Existing Non-Tidal Wetland Line
- Existing 25' Non-Tidal Wetland Buffer Line
- Intermittent Stream
- Contour-Major
- Contour-Major, approximate
- Contour-Minor
- Contour-Minor, approximate
- Tree Line
- Subcatchment Boundary
- Subwatershed Boundary
- PROPERTY BOUNDARY
- FSD Stand Divisions
- Tc Flow-Path
- USDA NRCS Digital Soils-Imported
- UtD
- >15% Slopes Shading

**LEGEND-PROPOSED, 50-SCALE**

- Proposed Contour-Major w/ Label
- Proposed Contour-Minor w/ Label
- Proposed Gravel Access Road
- Proposed RAP/IRAS Storage Area(s)
- CL 2.5'x2.5' Integral Concrete Block Wall
- Proposed Curb, 8"
- Proposed LOD
- Proposed Subcatchment
- Proposed SGW Berm Crest (173.5')
- Proposed SGW Pool Crest (172.5')
- Surface Water Flow Direction
- Proposed Tree Line
- Proposed Landscape Tree
- Post-Development TC Flow Path with Label and Break Points

**LEGEND-RECORD FEATURES  
from: Plat 19398/F-08-031**

- Forest Conservation Easement (FCE)
- 100 Year Flood Plain
- 25 feet wide Non-Tidal Wetlands Buffer
- 50 feet wide Stream Buffer
- Non-Tidal Wetlands
- Stormwater Easement
- Centerline of Stream-Surveyed (GPI)

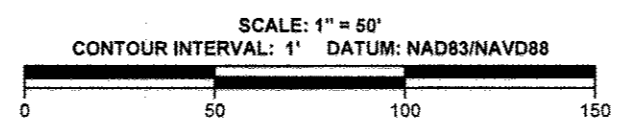
**PROPOSED STORMWATER MANAGEMENT:  
2 CONNECTED SUBMERGED GRAVEL WETLANDS (SGW-1 & SGW-2)**

**SGW-1: FOREBAY STORAGE: 1287 CU. FT +/-  
SGW STORAGE: 19,101.21 CU. FT. +/-  
TOTAL STORAGE: 20,388 CU. FT. +/-**

**SGW-2: FOREBAY STORAGE: 1,974 CU. FT. +/-  
SGW STORAGE: 7,510 CU. FT. +/-  
TOTAL STORAGE: 9,486 CU. FT. +/-**

**GRAND TOTAL STORAGE/TREATMENT CAPACITY = 29,874 CU. FT.  
REQUIRED ESDv = 23,105 CU. FT.  
Required ESDv Storage above surface = 17,329 CU. FT.**

ESD to the MEP is met.





**INITIAL  
EROSION AND  
SEDIMENT CONTROL  
for  
ICM-JESSUP ADDITION**  
8375 DORSEY RUN ROAD  
COUNCIL DISTRICT 2,  
HOWARD COUNTY, MARYLAND 20794

**SITE DATA**

Owner/ Developer:	Jessup Asphalt Partners, LP
Owner/ Developer Address:	638 Lancaster Avenue Malvern, PA 19355
Owner/ Developer Phone #:	1-800-955-1018
Premises Address:	8375 Dorsey Run Road Jessup, MD 20794
DPZ Plat File #:	F-15-090
Plat #:	SDP-07-012, F-38-031, ECP-15-008
Related DPZ File References:	Liber 15626 Folio 00006
Deed Reference:	18.1339 acres +/-
Lot Area:	Map 0048 Grid 0008 Parcel 0191 PAR A
Map Parcel:	
Zoning:	M-2, Heavy Manufacturing
Building Setbacks:	Setback.....10' Max Height.....50' plus 1'ft setback up to 100'
Water Supply:	Public available
Wastewater Disposal:	Public available
Datum:	NAD83/ NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**

Proposed future use:	Recycled Asphalt Product (RAP) Storage
Proposed Structures/Buildings:	None
Proposed Parking:	None
Proposed water service:	None
Proposed sanitary sewer service:	None
Proposed Stormwater Management:	(2) Submerged Gravel Wetlands
Total Disturbed Area:	4.05 Acres +/-
Total Impervious Area:	3.03 acres +/-
Type of Impervious surface:	compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes.

No disturbance of wetlands/ Waters of the US or associated buffers is proposed.

Access to the property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794

**Owner's/Developer's Certification**

I/We hereby certify that all development and construction and/or development will be done according to this plan and that any responsible personnel involved in the construction project will have a Certification of Attendance at a Maryland Department of the Environment approved training program for the Control of Sediment and Erosion before beginning the project.

I also authorize periodic on-site inspection by the Howard Soil Conservation District.

*Michael A. Nawrocki* *John P. Klabuta*  
Owner's/Developer's Signature Date

**A. Ross Myers** Owner  
Printed Name and Title

**Design Certification**

I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard County Soil Conservation District.

*Michael A. Nawrocki* *06/09/2016*  
Engineer's Signature Date

Michael A. Nawrocki, PE MD Registration No. 9780

This development plan is approved for erosion and sediment control by the Howard County Soil Conservation District.

*John P. Klabuta* *6/27/16*  
Signature Date

Plan is valid for 2 years from date of approval

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

*Michael A. Nawrocki* *7/14/16*  
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

*Michael A. Nawrocki* *7-21-16*  
CHIEF-DIVISION OF LAND DEVELOPMENT DATE

*Michael A. Nawrocki* *7-25-16*  
DIRECTOR DATE

**DESIGN PROFESSIONAL'S CERTIFICATION**

I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License Number 9780, Expire 02/23/2018

*Michael A. Nawrocki* *06/09/2016*  
Signature Date

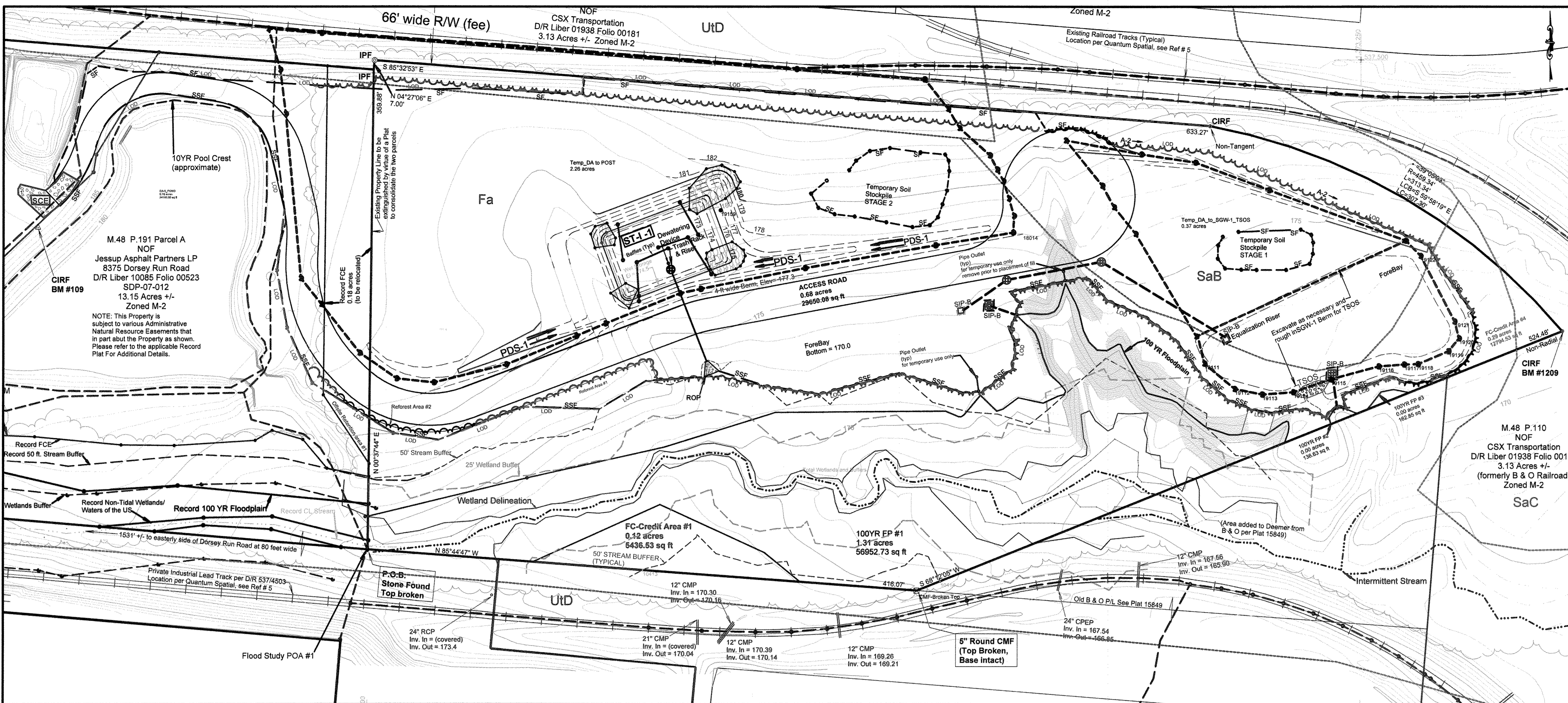
Michael A. Nawrocki, PE # 9780

Drawn By: WES Reviewed By: MAN Last Updated 08/30/2015

FILENAME: SHEET\_08.pce

**REVISIONS**

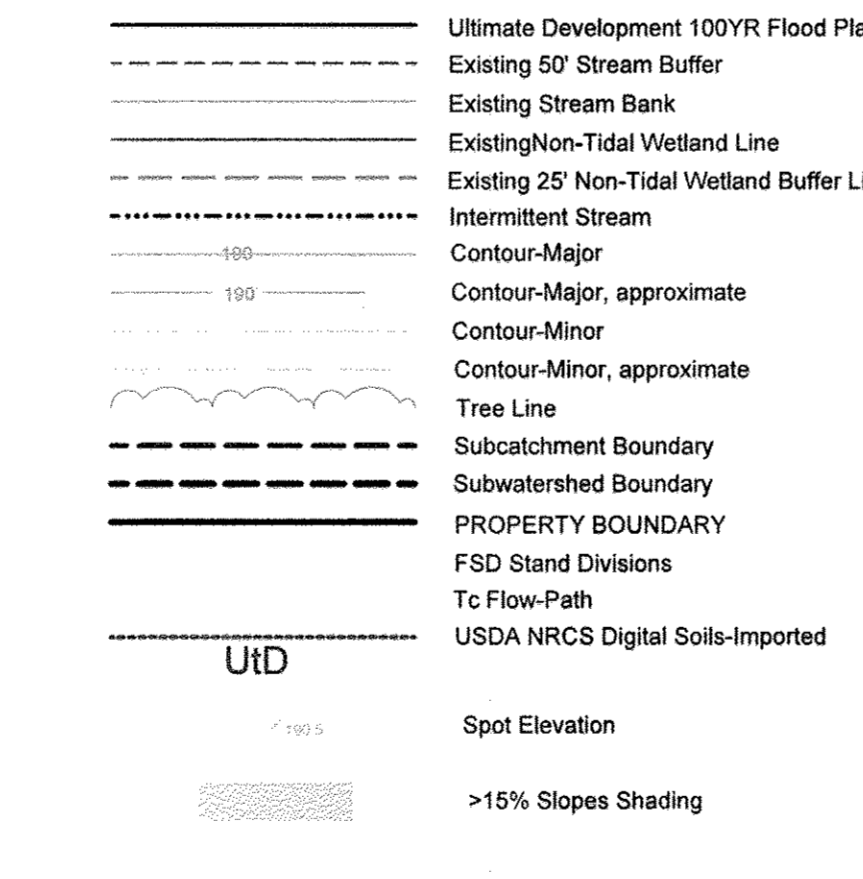
Rev. #	Date	By	Comments/Reference
1	07/21/2015	WES	per HSCD & HCDPZ Comments
2	09/30/2015	WES	per HSCD & HCDPZ Comments



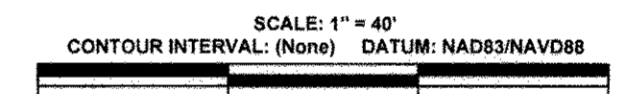
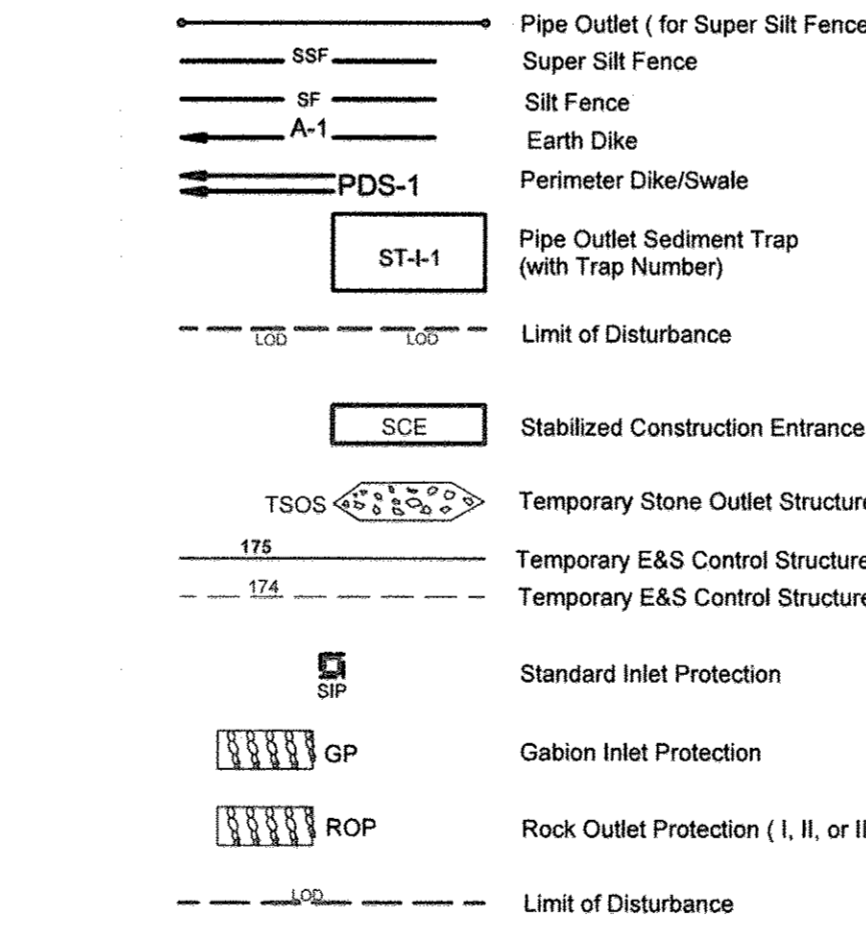
- EXISTING CONDITIONS NOTES**
- Existing Topography, tree-line and planimetric features were compiled by Quantum Spatial (45180 Business Court, Dulles Virginia 20166-6706) from aerial imagery taken on 01/08/2014. Quantum's plan states that their plan complies with the National Standard for Spatial Data Accuracy (NSDA) for horizontal mapping scale of 1" = 50', and a contour interval of 1 foot. The datum was reported to be NAD83/NAVD88. SECI makes no warranties whatsoever regarding the data provided by others.
  - This plan is based on survey work performed by SECI completed between February and June 2014 including natural resources delineated in the field. The boundary shown hereon is based on an ALTA/CSDM survey completed and published by SECI in June 2014 and is the basis for the legal description contained in the current deed referenced hereupon. SECI reserves the right to amend or revise any information contained herein should additional information become available in the future.
  - The wetlands and associated buffers shown hereon are based on a wetland delineation performed by SECI in March 2014, updated July 2014. SECI surveyed the flags in the field by conventional survey methods. Please refer to the accompanying report for further information.
  - The Forest Stands shown hereon are based on a Forest Stand Delineation performed by SECI in July 2014 by a Qualified Professional (Bill Stephens, PG, QP). Please refer to the accompanying report for additional information.
  - The Ultimate 100-YR Flood Plain shown hereon is based on a Flood Study prepared by SECI dated July 31, 2014. Please refer to that report for additional information on the Flood Plain analysis and determination of the 100-YR Flood elevation(s).
  - No Steep Slopes as defined by the Howard County Subdivision Regulations are present on-site. Slopes greater than 15%, as determined manually by scaling the topographic contours, have been shaded in light gray for the purpose of Howard County Conservation District (HCSD) review.
  - Soils shown hereon were converted from the USDA NRCS digital soils file downloaded from the USDA NRCS Geospatial Gateway and were imported directly following a datum conversion to MD State Plane from the native format.
  - Drainage Areas shown hereon were initially developed from an examination of the 2' contours in the Howard County contour dataset downloaded directly from Howard County's website. The most current high resolution imagery and land-use land cover data were also used in conjunction with topography. Further refinements were made based on field examination of drainage structures. The site and 96% of proposed site improvements are within drainage area "DA-5 New Site plus", the study point for which is labeled "POA #2".
  - RAP = Recycled Asphalt Product  
RAS = Recycled Asphalt Shingles

- SEQUENCE OF CONSTRUCTION**
- Obtain required permits. [Note: project may require standard timber harvest permit]
  - Locate and stake "Limits of Disturbance" as depicted on the plans for field inspection prior to construction. (2 - 3 days)
  - Notify the Howard County CID Inspector at least 48 hours prior to the start of construction as well as Miss Utility (800-257-7777) at least three (3) days prior to the start of any ground disturbing activities. (1 day)
  - Hold a preconstruction meeting with the appropriate agencies, engineer and owner. (1 day)
  - Install SCE, at head of access road as shown. (1/2 day)
  - Install silt fence and super silt fence as noted on plan along the LOD, clear brush, trees and vegetation as necessary to set silt fence correctly on grade. Install pipe outlets as shown. (5 days)
  - Stake Stage 1 limits of clearing (see Plan). (2 days)
  - Harvest Trees within LOD. (2 weeks)
  - Stake Sediment Trap, TSOS, Access Road, Diversion devices (PDS-1, A-2, temporary soil stockpile area #1 and RAS Storage Area limits and perimeter of SGW-1s). (1 day)
  - Clear and grub above areas for internal E & S controls installation.
  - Install sediment trap first, then install the Perimeter dike/swale leading to it, then grade road and stone using temporary grades shown. Install Earth Dike on northern side of future RAS Storage Area first, then install Temporary Stone Outlet Structure (TSOS) in future location of SGW-1. Clear and grub along the length of the equalization pipe system 10 feet either side of the centerline as shown on Sheet 3. Stabilize disturbed areas with temporary vegetative stabilization seed mix. (2 weeks)
  - Excavate SGW-1 to full depth and dewater as necessary. Clear groundwater and/or runoff may be pumped to the Equalization Pipe System to fill the pipe system for future use. Excess and sediment laden water shall be pumped through a filter bag and discharged to the adjacent swale.
  - Final grade and stone RAS storage area and bulb of Access Road, install integral block wall around northern perimeter of RAS Storage Area vegetatively stabilize disturbed open areas.
  - Decommission the TSOS outlet structure, complete construction of SGW-1 and install block wall to bring system on line. Repair/replace E & S controls as necessary until area is permanently stabilized. (1-2 weeks)
  - Clear and grub any remaining areas of the site including the RAP area and SGW-2. Excavate and dewater SGW-2 as noted for SGW-1 above, any excess soil to be removed offsite. Bring access road to final grade with stone and compact. Mass Grade and stone RAP area up to ST-1, modifying the PDS-1 and ST-1-1 as necessary to assure runoff from this portion of the site bypasses the SGW-1s (1 week)
  - Construct SGW-2 per design, place block permanent block wall along access road as per design. Stabilize areas with permanent seeding per design and mulch, continue dewatering forebay as needed until SGW-2 can be brought online.
  - Once both SGW-1s are permanently stabilized, obtain approval from approval authority to remove diversion devices, complete complete any grading and stone placement in RAP area.
  - Decommission and backfill ST-1-1. Place compacted gravel base in RAP storage area on grade, vegetate/landscape upper slope. Remove any remaining excess soil (1 week)
  - Stabilize remaining disturbed areas if any (SGW-1 margin, forest margins, etc. with permanent vegetation. (2 days)
  - Remove sediment and debris from silt fence, swales etc. as needed after any significant storms. (1 day/event)
  - Upon approval by the Howard County CID Inspector, remove any remaining temporary erosion and sediment control devices (silt fence, super silt fence, etc.) (1 week)
  - Note: Erosion Control Blanket (ECB) is required on any slopes 3:1 or greater.

**LEGEND-EXISTING,  
50-SCALE SURVEY & MAPPING**

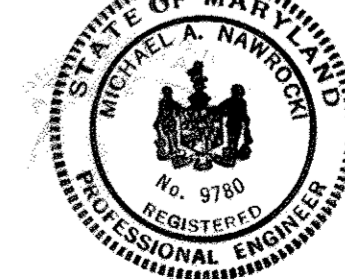


**LEGEND-E & S CONTROL**



PIPE OUTLET SEDIMENT TRAP ST-1, TRAP NO. 1

Drainage Area, Initial.....	2.5 acres +/-
Drainage Area, Final.....	2.0 acres +/-
Total Storage Required.....	9,000 cu. ft.
Total Storage Provided.....	13,315 cu. ft.
Wet Storage Required.....	4,500 cu. ft.
Wet storage Provided.....	5,370 cu. ft.
Dry Storage Required.....	4,500 cu. ft.
Dry Storage Provided.....	7,946 cu. ft.
Trap Bottom Elevation.....	173'
Trap Bottom Dimensions.....	42' x 70'
Riser Crest (Dry Storage) Elevation.....	176'
Outlet (Wet Storage) Elevation.....	174.5'
Cleanout Elevation.....	173.75'
Top of Embankment Elevation.....	177.3'
Side Slope.....	3:1 max.
Embankment Top Width.....	4' (Min)
Principal Spillway Material.....	CMP
Riser Diameter.....	33"
Barrel Diameter.....	24"
Trash Rack Diameter.....	48"
Trash Rack Height.....	18"
Anti-seep Collar Dimensions.....	42"
Outlet Protection Length.....	10 ft.
Outlet Protection Width.....	12 ft.
Outlet Protection Depth.....	





**FINAL  
EROSION AND  
SEDIMENT CONTROL  
for  
ICM-JESSUP ADDITION**  
8375 DORSEY RUN ROAD  
COUNCIL DISTRICT 2,  
HOWARD COUNTY, MARYLAND 20794

**SITE DATA**

Owner/ Developer: Jessup Asphalt Partners, LP  
Owner/ Developer Address: 638 Lancaster Avenue  
Malvern, PA 19355  
1-800-666-1118  
Owner/ Developer Phone #:   
Premises Address: 8375 Dorsey Run Road  
Jessup, MD 20794  
DPZ Plat Reference #: F-15-090  
Plat #: **23809-2-2011**  
Related DPZ File References: SDP-07-012, F-08-031, ECP-15-008  
Deed Reference: Liber 15628 Folio 00066  
Lot Area: 19,133 acres +/-  
Tax Parcel: Map 0048 Grid 0008 Parcel 01691 PAR A  
Zoning: M-2, Heavy Manufacturing  
Building Setbacks: 10'  
plus 1 ft setback up to 100'  
Water Supply: Public available  
Wastewater Disposal: Public available  
Datum: NAD83/ NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**  
Proposed future use.....Recycled Asphalt Product (RAP) Storage  
Proposed Structures/Buildings.....None  
Proposed Parking.....None  
Proposed water service.....None  
Proposed sanitary sewer service.....None  
Proposed Stormwater Management.....(2) Submerged Gravel Wetlands  
Total Disturbed Area.....4.05 Acres +/-  
Total Impervious Area.....3.03 acres +/-  
Type of Impervious surface.....compacted gravel base, no pavement  
The site is designated a "Hot Spot" for stormwater management purposes.  
No disturbance of wetlands/ Waters of the US or associated buffers is proposed.  
Access to the property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794.

**Owner/Developer's Certification**  
I/We hereby certify that all development and construction and/or development will be done according to this plan and that any responsible personnel involved in the construction project will have a Certification of Attendance at a Maryland Department of the Environment approved training program for the Control of Sediment and Erosion before beginning the project.  
I also authorize periodic on-site inspection by the Howard Soil Conservation District.  
Owner/Developer Signature: *Michael A. Nawrocki* Date: *06/09/2016*  
*A. Ross Myers* Owner  
Printed Name and Title

**Design Certification**  
I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard County Soil Conservation District.  
Signature: *Michael A. Nawrocki* Date: *06/09/2016*  
Engineer's Signature  
Michael A. Nawrocki, PE MD Registration No. 9780

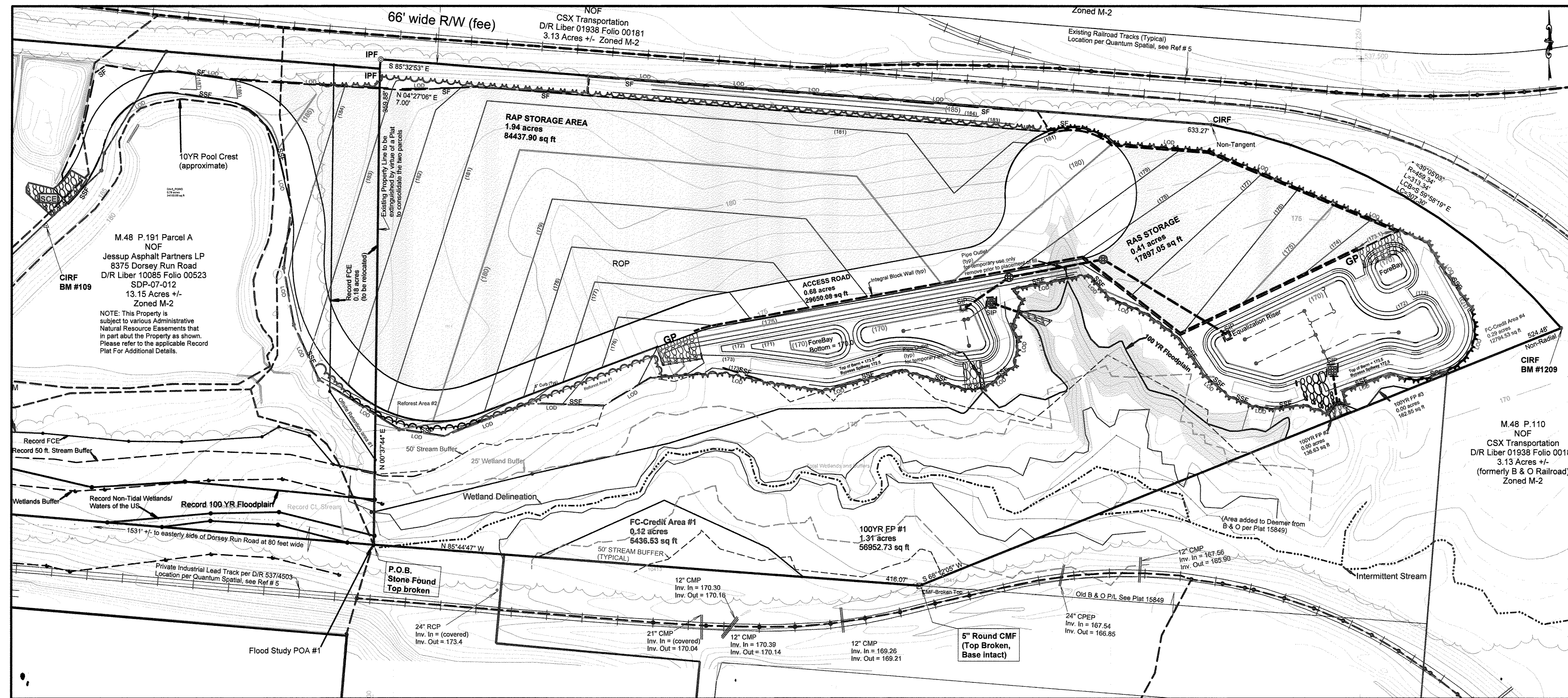
This development plan is approved for erosion and sediment control by the Howard County Soil Conservation District.  
Signature: *John R. Robinson* Date: *6/17/16*  
Plan is valid for 2 years from date of approval

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
Signature: *Michael A. Nawrocki* Date: *7-21-16*  
**CHIEF-DEVELOPMENT ENGINEERING DIVISION**  
Signature: *Michael A. Nawrocki* Date: *7-21-16*  
**CHIEF-DIVISION OF LAND DEVELOPMENT**  
Signature: *Michael A. Nawrocki* Date: *7-25-16*  
**DIRECTOR**

**DESIGN PROFESSIONAL'S CERTIFICATION**  
I Herby Certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland; License Number 9780, Expires 03/23/2016  
Signature: *Michael A. Nawrocki* Date: *06/09/2016*  
Michael A. Nawrocki, PE # 9780  
Drawn By: WES Reviewed By: MAN Last Updated 09/30/2015  
FILENAME: SHEET 09.pcs  
FILE PATH: S:\2015\_PROJECTS\1528\PCS\_SDP\_Rev02

**REVISIONS**

Rev. #	Date	By	Comments/Reference
1	07/22/2015	WES	per Howard County & HSCD Comments
2	09/30/2015	WES	per Howard County & HSCD Comments



**EXISTING CONDITIONS NOTES**

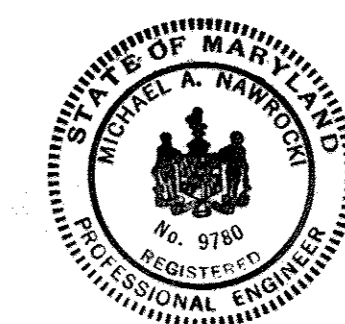
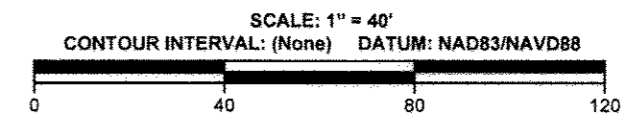
- Existing Topography, tree-line and planimetric features were compiled by Quantum Spatial (45180 Business Court, Dulles Virginia 20166-6706) from aerial imagery taken on 01/08/2014. Quantum's plan states that their plan complies with the National Standard for Spatial Data Accuracy (NSDA) for horizontal mapping scale of 1" = 50', and a contour interval of 1 foot. The datum was reported to be the NAD83/NAVD88. SECI makes no warranty whatsoever regarding the data provided by others.
- This plan is based on survey work performed by SECI completed between February and June 2014 including natural resources delineated in the field. The boundary shown hereon is based on an ALTA/ACSM survey completed and published by SECI in June 2014 and is the basis for the legal description contained in the current deed referenced hereupon. SECI reserves the right to amend or revise any information contained herein should additional information become available in the future.
- The wetlands and associated buffers shown hereon are based on a wetland delineation performed by SECI in March 2014, updated July 2014. SECI surveyed the flags in the field by conventional survey methods. Please refer to the accompanying report for further information.
- The Forest Stands shown hereon are based on a Forest Stand Delineation performed by SECI in July 2014 by a Qualified Professional (Bill Stephens, PG, QP). Please refer to the accompanying report for additional information.
- The Ultimate 100-YR Flood Plain shown hereon is based on a Flood Study prepared by SECI dated July 31, 2014. Please refer to that report for additional information on the Flood Plain analysis and determination of the 100-YR Flood elevation(s).
- No Steep Slopes as defined by the Howard County Subdivision Regulations are present onsite. Slopes greater than 15%, as determined manually by scaling the topographic contours, have been shaded in light gray for the purpose of Howard County Conservation District (HCSD) review.
- Soils shown hereon were converted from the USDA NRCS digital soils file downloaded from the USDA NRCS Geospatial Gateway and were imported directly following a datum conversion to MD State Plane from the native format.
- Drainage Areas shown hereon were initially developed from an examination of the 2' contours in the Howard County contour dataset downloaded directly from Howard County's website. The most current high resolution imagery and land-use land cover data were also used in conjunction with topography. Further refinements were made based on field examination of drainage structures. The site and 98% of proposed site improvements are within drainage area "DA-4 New Site plus", the study point for which is labeled "POA #2".
- RAP = Recycled Asphalt Product  
RAS = Recycled Asphalt Shingles

**LEGEND-EXISTING,  
50-SCALE SURVEY & MAPPING**

- Ultimate Development 100YR Flood Plain
- Existing 50' Stream Buffer
- Existing Stream Bank
- Existing Non-Tidal Wetland Line
- Existing 25' Non-Tidal Wetland Buffer Line
- Intermittent Stream
- Contour-Major
- Contour-Major, approximate
- Contour-Minor
- Contour-Minor, approximate
- Tree Line
- Subcatchment Boundary
- Subwatershed Boundary
- PROPERTY BOUNDARY
- FSD Stand Divisions
- Tc Flow-Path
- USDA NRCS Digital Soils-Imported
- Spot Elevation
- >15% Slopes Shading

**LEGEND-E & S CONTROL**

- Pipe Outlet ( for Super Silt Fence)
- Super Silt Fence
- Silt Fence
- A-1 Earth Dike
- Perimeter Dike/Swale
- ST-I-1 Pipe Outlet Sediment Trap (with Trap Number)
- Limit of Disturbance
- Stabilized Construction Entrance
- Temporary Stone Outlet Structure
- Temporary E&S Control Structure Maj
- Temporary E&S Control Structure Min
- Standard Inlet Protection
- GP Gation Inlet Protection
- ROP Rock Outlet Protection (I, II, or III as I)
- Limit of Disturbance







P.O. BOX 485 NORTHEAST, MD 21901 P: (302) 286-0406 F: (410) 656-7298

# EROSION AND SEDIMENT CONTROL NOTES & DETAILS

## for ICM-JESSUP ADDITION B & O RAILROAD ROW LAND-LOCKED COUNCIL DISTRICT 2, HOWARD COUNTY, MARYLAND 20794

### SITE DATA

Owner / Developer: Jessup Asphalt Partners, LP  
Owner / Developer Address: 638 Lancaster Avenue Malvern, PA 19355  
Premises Address: 8375 Dorsey Run Road Jessup, MD 20794-9386  
Plat DPZ File #: F-15-090  
Plat #: (2008-2331)  
Related DPZ File Reference: SDP-07-012, F-08-031, ECP-15-008  
Deed Reference: Liber 15628 Folio 00006  
Lot Area: 19,133 acres +/-  
Tax Parcel: Map 0048 Grid 0008 Parcel 0109 PAR 4  
Zoning: M-2, Heavy Manufacturing  
Election District: Sixth  
Water Supply: Public Available  
Wastewater Disposal: Public Available  
Datum: NAD83 / NAVD88

PROPOSED DEVELOPMENT BASIC DATA  
Proposed future use: Recycled Asphalt Product (RAP) Storage  
Proposed Structures/Buildings: None  
Proposed Parking: None  
Proposed Water Service: None  
Proposed Sanitary Sewer Service: None  
Proposed Stormwater Management: (2) Submerged Gravel Wetlands  
Total Disturbed Area: 4.05 Acres +/-  
Total Impervious Area: 3.93 Acres +/-  
Type of Impervious Surface: Compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes  
No disturbance of wetlands / waters of the US or associated buffers is proposed.

Access to property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Walter J. J... 7-25-16  
DIRECTOR DATE

Chief Development Engineering Division 7/14/16  
NY DATE

John J. ... 7-21-16  
CHIEF - DIVISION OF LAND DEVELOPMENT DATE

This development plan is approved for soil erosion and sediment control by the HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DISTRICT.  
John J. ... 6/27/16  
HOWARD SCD DATE

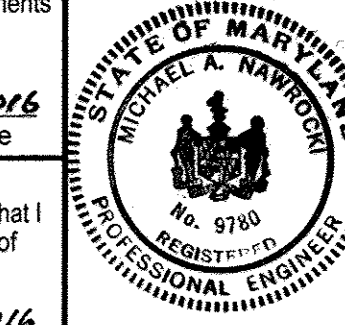
DEVELOPER'S CERTIFICATE  
I certify that all development and construction will be done according to this plan of development for sediment and erosion control, and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspections by the HOWARD SOIL CONSERVATION DISTRICT.

Michael A. Nawrocki 06/09/2016  
Date

DESIGN PROFESSIONAL'S CERTIFICATION  
I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License Number 9780, Expires 03/23/2016  
Michael A. Nawrocki, PE #9780  
Date

REVISIONS  
Rev. # Date By  
1 7-20-15 FJS Revised Site Data Notes  
2 10-1-15 FJS Revised Standard SC Notes

SHEET 10  
ES-3



**Standard Stabilization Note**  
Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:  
a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and  
b) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

### B-4.7 STANDARDS AND SPECIFICATIONS

#### HEAVY USE AREA PROTECTION

**Definition**  
The stabilization of areas frequently and intensively used by surfacing with suitable materials (e.g., mulch and aggregate).  
**Purpose**  
To provide a stable, non-eroding surface for areas frequently used and to improve the water quality from the runoff of these areas.

**Conditions Where Practice Applies**  
This practice applies to intensively used areas (e.g., equipment and material storage, staging areas, heavily used travel lanes).

- 1. A minimum 4-inch base course of crushed stone or other suitable materials including wood chips over nonwoven geotextile should be provided as specified in Section H-1 Materials.
- 2. Select the stabilizing material based on the intended use, desired maintenance frequency, and runoff control.
- 3. The transport of sediments, nutrients, oils, chemicals, particulate matter associated with vehicular traffic and equipment, and material storage needs to be considered in the selection of material. Additional control measures may be necessary to control these potential pollutants.
- 4. Surface erosion can be a problem on large vehicle use areas. In these situations, measures to reduce the flow length of runoff or erosive velocities need to be considered.

The heavy use areas must be maintained in a condition that minimizes erosion. This may require adding suitable material, as specified on the approved plans, to maintain a clean surface.

### B-4.1 STANDARDS AND SPECIFICATIONS

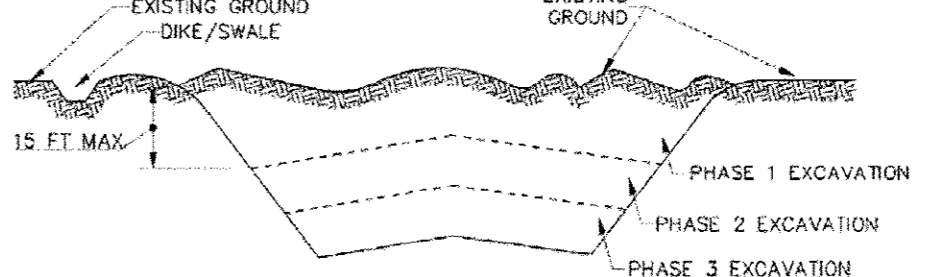
#### INCREMENTAL STABILIZATION

**Definition**  
Establishment of vegetative cover on cut and fill slopes.  
**Purpose**  
To provide timely vegetative cover on cut and fill slopes as work progresses.

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

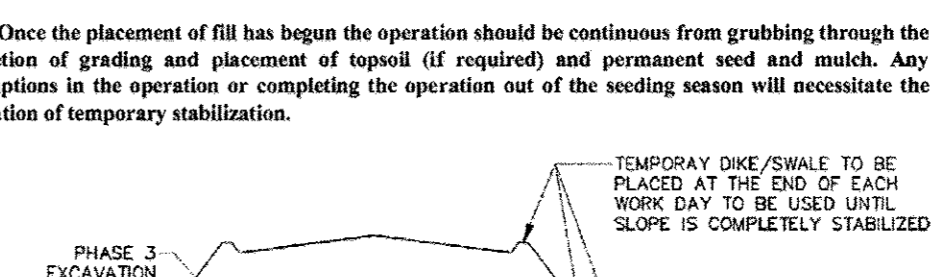
#### Incremental Stabilization - Cut Slopes

- 1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
- 2. Construction sequence example (Refer to Figure B.1):
  - a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
  - b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
  - c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
  - d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

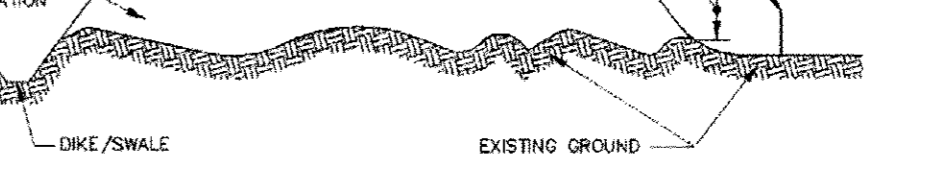


#### Incremental Stabilization - Fill Slopes

- 1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
- 2. Stabilize slopes immediately when the vertical height of a fill reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
- 3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
- 4. Construction sequence example (Refer to Figure B.2):
  - a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct site fill on low side of fill unless other methods shown on the plans address this area.
  - b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
  - c. Place Phase 1 fill, prepare seedbed, and stabilize.
  - d. Place Phase 2 fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.



Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.



Controlling the suspension of dust particles from construction activities.

- 3. **Tillage:** Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-till plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.
- 4. **Irrigation:** Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
- 5. **Barriers:** Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
- 6. **Chemical Treatment:** Use of chemical treatment requires approval by the appropriate plan review authority.

### B-4.2 STANDARDS AND SPECIFICATIONS

#### SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

**Definition**  
The process of preparing the soils to sustain adequate vegetative stabilization.  
**Purpose**  
To provide a suitable soil medium for vegetative growth.

Where vegetative stabilization is to be established.

#### Conditions Where Practice Applies

#### Criteria

- 1. Temporary Stabilization
  - a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth out left in the roughened condition. Slopes 3:1 or flatter are to be tracked with rippers running parallel to the contour of the slope.
  - b. Apply fertilizer and lime as prescribed on the plans.
  - c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
- 2. Permanent Stabilization
  - a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
    - i. Soil pH between 6.0 and 7.0.
    - ii. Soluble salts less than 500 parts per million (ppm).
    - iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: If loess will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
    - iv. Soil contains 1.5 percent minimum organic matter by weight.
    - v. Soil contains sufficient pore space to permit adequate root penetration.
  - b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
  - c. Graded areas must be topsoiled in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
  - d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

#### Topsoiling

- 1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- 2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
- 3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
  - a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
  - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish containing supplies of moisture and plant nutrients.
  - c. The original soil to be vegetated contains material toxic to plant growth.
  - d. The soil is so acidic that treatment with limestone is not feasible.
- 4. Areas having slopes steeper than 2:1 require special consideration and design.
- 5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
  - a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.
  - b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
  - c. Topsoil substrates or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

#### Mulching

- 1. Mulch Materials (in order of preference)
  - a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
  - b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
  - c. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
  - d. WCFM, including dye, must contain no germination or growth inhibiting factors.
  - e. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blitter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
  - f. WCFM material must not contain elements or compounds at concentration levels that will be phytotoxic.
  - g. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
- 2. Application
  - a. Apply mulch to all seeded areas immediately after seeding.
  - b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
  - c. Wood cellulose fiber may be used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- 3. Anchoring
  - a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
    - i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
    - ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water to a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
    - iii. Synthetic binders such as Acrylic-DLR (Agro-Tack, DCA-70, Petrosol, Terra Tex II, Terra Tack AR, or other approved equal) may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
    - iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

### B-5 STANDARDS AND SPECIFICATIONS

#### DUST CONTROL

**Definition**  
Controlling the suspension of dust particles from construction activities.  
**Purpose**  
To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

#### Conditions Where Practice Applies

#### Criteria

- 1. **Mulching:** See Section B-4.2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4.3 Seeding and Mulching, and Section B-4.4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
- 2. **Vegetative Cover:** See Section B-4.4 Temporary Stabilization.

### B-4.5 STANDARDS AND SPECIFICATIONS

#### PERMANENT STABILIZATION

**Definition**  
To stabilize disturbed soils with permanent vegetation.  
**Purpose**  
To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Exposed soils where ground cover is needed for 6 months or more.

#### Conditions Where Practice Applies

#### Criteria

- 1. General Use
  - a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
  - b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
  - c. For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency.
  - d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
- 2. Turfgrass Mixtures
  - a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
  - b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
    - i. Kentucky Bluegrass/ Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the area of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
    - ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and where turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
    - iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
    - iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the applicable local and state authorities. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 90 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
- 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- 5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

#### Soil Amendments (Fertilizer and Lime Specifications)

- 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from



**EROSION AND SEDIMENT CONTROL NOTES & DETAILS**  
 for  
**ICM-JESSUP ADDITION**  
 B & O RAILROAD ROW LAND-LOCKED COUNCIL DISTRICT 2,  
 HOWARD COUNTY, MARYLAND 20794

**SITE DATA**

Owner / Developer: Jessup Asphalt Pavers, LP  
 Owner / Developer Address: 638 Lancaster Avenue Malvern, PA 19355 1-800-999-1018  
 Premises Address: 8375 Dorsey Run Road Jessup, MD 20794-9386  
 Plat DPZ File #: F-15-090  
 Plat #: **(23808-23811)**  
 Related DPZ File Reference: SDP-07-012, F-08-031, ECP-15-008  
 Deed Reference: Liber 15628 Folio 00006  
 Lot Area: 19,1339 acres +/-  
 Tax Parcel: Map 0048 Grid 0008 Parcel 0109 PAR 4  
 Zoning: M-2, Heavy Manufacturing  
 Election District: Sixth  
 Water Supply: Public Available  
 Wastewater Disposal: Public Available  
 Datum: NAD83 / NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**  
 Proposed future use: Recycled Asphalt Product (RAP) Storage  
 Proposed Structures/Buildings: None  
 Proposed Parking: None  
 Proposed Water Service: None  
 Proposed Sanitary Sewer Service: None  
 Proposed Stormwater Management: (2) Submerged Gravel Wetlands  
 Total Disturbed Area: 4.05 Acres +/-  
 Total Impervious Area: 3.03 Acres +/-  
 Type of Impervious Surface: Compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes  
 No disturbance of wetlands / waters of the US or associated buffers is proposed.  
 Access to property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*William J. Jolin* 7-25-16  
 DIRECTOR DATE  
*John J. Jolin* 7-14-16  
 CHIEF - DEVELOPMENT ENGINEERING DIVISION DATE  
*John J. Jolin* 7-21-16  
 CHIEF - DIVISION OF LAND DEVELOPMENT DATE

This development plan is approved for soil erosion and sediment control under HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DISTRICT  
*John J. Jolin* 9/27/16  
 HOWARD SCD DATE

**DEVELOPER'S CERTIFICATE**  
 I certify that all development and construction will be done according to this plan of development for sediment and erosion control, and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspections by the HOWARD SOIL CONSERVATION DISTRICT.  
*Michael A. Nawrocki* 06/09/2016  
 Jessup Asphalt Pavers, LP Date

Drawn By: FJS Reviewed By: MAN Last Updated: 3/25/2015  
 FILENAME: ES-DET-2.DWG  
 FILE PATH: C:\CADFILES\STEPHENS\JESSUP\ES-ES-DETAILS

**DESIGN PROFESSIONAL'S CERTIFICATION**  
 I hereby certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and this plan was prepared in accordance with the requirements of the HOWARD SOIL CONSERVATION DISTRICT.

**DESIGN PROFESSIONAL'S CERTIFICATION**  
 I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License Number 9780, Expires 03/23/2018  
*Michael A. Nawrocki* 06/09/2016  
 Michael A. Nawrocki, PE #9780 Date

**REVISIONS**

Rev. #	Date	By	Revised Site Data Notes
1	7-20-15	FJS	Revised Site Data Notes

**DETAIL E-3 SUPER SILT FENCE** STANDARD SYMBOL SSF

**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 8 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USE MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL E-1 SILT FENCE** STANDARD SYMBOL SF

**CONSTRUCTION SPECIFICATIONS**

- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (\*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE. MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
- PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE. MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL E-1 SILT FENCE** STANDARD SYMBOL SF

**CONSTRUCTION SPECIFICATIONS**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1 1/2 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
- KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- REPLACE THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
- OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
- KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE** STANDARD SYMBOL SCE

**CONSTRUCTION SPECIFICATIONS**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1 1/2 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
- KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- REPLACE THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
- OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE NEXT DOWNSLOPE MAT.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL D-2 STONE CHECK DAM** STANDARD SYMBOL CD

**CONSTRUCTION SPECIFICATIONS**

- PREPARE WALES IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION C-2, STANDARDS AND SPECIFICATIONS FOR TEMPORARY WALES, OR AS SPECIFIED ON PLAN.
- PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND SIDES OF THE DAM PRIOR TO PLACEMENT OF STONE. CONSTRUCT THE CHECK DAM WITH WASHED 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) WITH SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM TOP WIDTH OF 12 INCHES. PLACE THE STONE SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS. FORM THE WEIR SO THAT TOP OF THE OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES. LINE THE UPSLOPE FACE OF THE DAM WITH A 1 FOOT THICK LAYER OF WASHED AGGREGATE (3/4 TO 1 1/2 INCH).
- SET THE HEIGHT FOR THE WEIR CREST EQUAL TO ONE-HALF THE DEPTH OF THE CHANNEL OR DITCH. TO AVOID SCOUR THE MAXIMUM HEIGHT OF THE WEIR CREST MUST NOT EXCEED 2.0 FEET.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF THE WEIR CREST. MAINTAIN LINE, GRADE, AND CROSS SECTION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION** STANDARD SYMBOL PSMC

**CONSTRUCTION SPECIFICATIONS**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
- OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE NEXT DOWNSLOPE MAT.
- KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYS AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING CHANNEL APPLICATION** STANDARD SYMBOL TSSMC

**CONSTRUCTION SPECIFICATIONS**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
- UNROLL MATTING DOWNSLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
- OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
- KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL B-4-6-A TEMPORARY SOIL STABILIZATION MATTING CHANNEL APPLICATION** STANDARD SYMBOL TSSMC

**CONSTRUCTION SPECIFICATIONS**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1 1/2 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
- KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- REPLACE THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
- OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE NEXT DOWNSLOPE MAT.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION





**EROSION AND SEDIMENT CONTROL NOTES & DETAILS**  
 for  
**ICM-JESSUP ADDITION**  
 B & O RAILROAD ROW LAND-LOCKED COUNCIL DISTRICT 2,  
 HOWARD COUNTY, MARYLAND 20794

**SITE DATA**

Owner / Developer: Jessup Asphalt Pavers, LP  
 Owner / Developer Address: 638 Lancaster Avenue, Malvern, PA 19355, 1-800-999-1018  
 Premises Address: 8375 Dorsey Run Road, Jessup, MD 20794-9386  
 Plat DPZ File #: F-15-090  
 Plat #: (2398-2991)  
 Related DPZ File Reference: SDP-07-012, F-08-031, ECP-15-008  
 Deed Reference: Liber 15628 Folio 00006  
 Lot Area: 19.1339 acres +/-  
 Tax Parcel: Map 0048 Grid 0008 Parcel 0109 PAR 4  
 Zoning: M-2, Heavy Manufacturing  
 Election District: Sixth  
 Water Supply: Public Available  
 Wastewater Disposal: Public Available  
 Datum: NAD83 / NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**  
 Proposed future use: Recycled Asphalt Product (RAP) Storage  
 Proposed Structures/Buildings: None  
 Proposed Parking: None  
 Proposed Water Service: None  
 Proposed Sanitary Sewer Service: None  
 Proposed Stormwater Management: (2) Submerged Gravel Wetlands  
 Total Disturbed Area: 4.05 Acres +/-  
 Total Impervious Area: 3.03 Acres +/-  
 Type of Impervious Surface: Compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes. No disturbance of wetlands / waters of the US or associated buffers is proposed.

Access to property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Valdis Jofis* 7-25-16  
 DIRECTOR DATE

*M. J. Jones* 7-14-16  
 CHIEF - DEVELOPMENT ENGINEERING DIVISION DATE

*K. A. Shover* 7-21-16  
 CHIEF - DIVISION OF LAND DEVELOPMENT DATE

*John R. Rosten* 6/27/16  
 HOWARD SCD DATE

DEVELOPER'S CERTIFICATE  
 I certify that all development and construction will be done according to this plan of development for sediment and erosion control, and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspections by the HOWARD SOIL CONSERVATION DISTRICT.

*C. R. My* 6/16/16  
 Jessup Asphalt Partners, LP DATE

Drawn By: FJS Reviewed By: MAN Last Updated 3/25/2015  
 FILENAME: ES-DET-3.DWG

FILE PATH: C:\CADFILES\STEPHENS\JESSUP\ES-DETAILS

DESIGN PROFESSIONAL'S CERTIFICATION  
 I hereby certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and this it was prepared in accordance with the requirements of the HOWARD SOIL CONSERVATION DISTRICT.

*Michael A. Nawrocki* 06/09/2016  
 Michael A. Nawrocki, PE #9780 Date

DESIGN PROFESSIONAL'S CERTIFICATION  
 I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License Number 9780, Expires 03/23/2018

*Michael A. Nawrocki* 06/09/2016  
 Michael A. Nawrocki, PE #9780 Date

**REVISIONS**

Rev. #	Date	By	Description
1	7-20-15	FJS	Revised Site Data Notes

**DETAIL C-2 TEMPORARY SWALE**

**FLOW CHANNEL STABILIZATION**

A-1 SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)  
 A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.  
 A-3/B-3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

**CONSTRUCTION SPECIFICATIONS**

- REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF TEMPORARY SWALE.
- ENCAVATE OR SHAPE TEMPORARY SWALE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
- STABILIZE TEMPORARY SWALE WITHIN THREE DAYS OF INSTALLATION. STABILIZE SWALES USED FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
- CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
- PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP TEMPORARY SWALE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
- UPON REMOVAL OF TEMPORARY SWALE, GRADE AREA FLUSH WITH EXISTING GROUND, WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL C-3 PERIMETER DIKE/SWALE**

**FLOW CHANNEL STABILIZATION**

PDS-1 SEED AND MULCH AND TACK (DRAINING < 1 ACRE) (NOT ALLOWED FOR CLEAR WATER DIVERSION.)  
 PDS-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD (DRAINING BETWEEN 1 AND 2 ACRES)

NOTE: THE MAXIMUM DRAINAGE AREA FOR THIS PRACTICE IS 2 ACRES.

**CONSTRUCTION SPECIFICATIONS**

- REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL, SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF DIKE/SWALE.
- EXCAVATE OR SHAPE DIKE/SWALE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
- COMPACT FILL.
- CONSTRUCT DIKE/SWALE ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
- PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
- STABILIZE DIKE/SWALE WITHIN 3 DAYS OF INSTALLATION. STABILIZE DIKE/SWALE USED FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP PERIMETER DIKE/SWALE AND POINT OF DISCHARGE FREE OF EROSION AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
- UPON REMOVAL OF DIKE/SWALE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL D-3-1 RIPRAP INFLOW PROTECTION**

**CONSTRUCTION SPECIFICATIONS**

- PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
- CONSTRUCT INFLOW CHANNEL WITH CLASS 1 RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 19 INCHES (2 x D<sub>50</sub>) AND A 1 FOOT DEEP FLOW CHANNEL INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
- INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
- BLEND RIPRAP INTO EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL D-3-2 GABION INFLOW PROTECTION**

**CONSTRUCTION SPECIFICATIONS**

- PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL GABION BASKETS.
- USE BASKETS MADE OF MINIMUM 11 GAUGE WIRE.
- CONSTRUCT GABION INFLOW PROTECTION BY ARRANGING 9 X 3 X 1 FOOT GABION BASKETS TO FORM A TRAPEZOIDAL SECTION WITH A 3 FOOT BOTTOM WIDTH, 1 FOOT MINIMUM DEPTH, 3 FOOT SIDE WALLS, AND 2:1 OR FLATTER SIDE SLOPES. FILL GABION BASKETS WITH 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REBAR OR WEIR MESH.
- INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
- INSTALL GABIONS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
- BLEND GABIONS INTO EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL D-4-1-A ROCK OUTLET PROTECTION I**

**CONSTRUCTION SPECIFICATIONS**

- RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
- PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (3/4 TO 1 1/2 INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
- EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
- CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
- WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
- CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLOGGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL E-5 FILTER BERM**

**CONSTRUCTION SPECIFICATIONS**

- PLACE BERM ON THE CONTOUR WITH ENDS TURNED UPGRADE TO PREVENT BYPASS. DO NOT EXCEED GRADES OF 5 PERCENT ALONG THE BERM FOR A DISTANCE GREATER THAN 50 FEET.
- CONSTRUCT BERM OF CLEAN WOOD CHIPS A MINIMUM SIZE OF 1X2 INCH AND A MAXIMUM OF 3X3 INCH.
- COMPACT AND SHAPE MATERIAL TO CONFORM TO DIMENSIONS SPECIFIED ON THE APPROVED PLAN.
- DO NOT PLACE UN-CHIPPED TREE PIECES, BRUSH, OR STUMPS IN THE BERM. BERM MUST BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES.
- THE BERM MAY CONTAIN UP TO 50% COMPOST MATERIAL IN ACCORDANCE WITH SECTION H-1 MATERIALS.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD WOOD CHIPS OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN THEY REACH 25% OF BERM HEIGHT.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL E-6 FILTER LOG**

**CONSTRUCTION SPECIFICATIONS**

- PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF FILTER LOG.
- FILL LOG NETTING UNIFORMLY WITH COMPOST (IN ACCORDANCE WITH SECTION H-1 MATERIALS), OR OTHER APPROVED BIODEGRADABLE MATERIAL TO DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.
- INSTALL FILTER LOGS PERPENDICULAR TO THE FLOW DIRECTION AND PARALLEL TO THE SLOPE WITH THE BEGINNING AND END OF THE INSTALLATION POINTING SLIGHTLY UP THE SLOPE CREATING A "J" SHAPE AT EACH END TO PREVENT BYPASS.
- FOR UNTRENCHED INSTALLATION BLOW OR HAND PLACE MULCH OR COMPOST ON UPHILL SIDE OF THE SLOPE ALONG LOG.
- STAKE FILTER LOG EVERY 4 FEET OR CLOSER ALONG ENTIRE LENGTH OF LOG OR TRENCH LOG INTO GROUND A MINIMUM OF 4 INCHES AND STAKE LOG EVERY 8 FEET OR CLOSER.
- USE STAKES WITH A MINIMUM NOMINAL CROSS SECTION OF 2X2 INCH AND OF SUFFICIENT LENGTH TO ATTAIN A MINIMUM OF 12 INCHES INTO THE GROUND AND 3 INCHES PROTRUDING ABOVE LOG.
- WHEN MORE THAN ONE LOG IS NEEDED, OVERLAP ENDS 12 INCHES MINIMUM AND STAKE.
- REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO A DEPTH OF 1/2 THE EXPOSED HEIGHT OF LOG AND REPLACE MULCH, REPLACE FILTER LOG IF TORN, REINSTALL FILTER LOG IF UNDERMINING OR DISLOGGING OCCURS. REPLACE CLOGGED FILTER LOGS. FOR PERMANENT APPLICATIONS, ESTABLISH AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

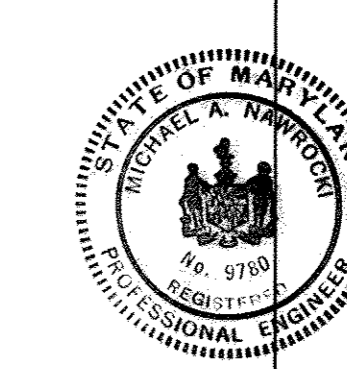
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL E-6 FILTER LOG**

**CONSTRUCTION SPECIFICATIONS**

- PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF FILTER LOG.
- FILL LOG NETTING UNIFORMLY WITH COMPOST (IN ACCORDANCE WITH SECTION H-1 MATERIALS), OR OTHER APPROVED BIODEGRADABLE MATERIAL TO DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.
- INSTALL FILTER LOGS PERPENDICULAR TO THE FLOW DIRECTION AND PARALLEL TO THE SLOPE WITH THE BEGINNING AND END OF THE INSTALLATION POINTING SLIGHTLY UP THE SLOPE CREATING A "J" SHAPE AT EACH END TO PREVENT BYPASS.
- FOR UNTRENCHED INSTALLATION BLOW OR HAND PLACE MULCH OR COMPOST ON UPHILL SIDE OF THE SLOPE ALONG LOG.
- STAKE FILTER LOG EVERY 4 FEET OR CLOSER ALONG ENTIRE LENGTH OF LOG OR TRENCH LOG INTO GROUND A MINIMUM OF 4 INCHES AND STAKE LOG EVERY 8 FEET OR CLOSER.
- USE STAKES WITH A MINIMUM NOMINAL CROSS SECTION OF 2X2 INCH AND OF SUFFICIENT LENGTH TO ATTAIN A MINIMUM OF 12 INCHES INTO THE GROUND AND 3 INCHES PROTRUDING ABOVE LOG.
- WHEN MORE THAN ONE LOG IS NEEDED, OVERLAP ENDS 12 INCHES MINIMUM AND STAKE.
- REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO A DEPTH OF 1/2 THE EXPOSED HEIGHT OF LOG AND REPLACE MULCH, REPLACE FILTER LOG IF TORN, REINSTALL FILTER LOG IF UNDERMINING OR DISLOGGING OCCURS. REPLACE CLOGGED FILTER LOGS. FOR PERMANENT APPLICATIONS, ESTABLISH AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION





**EROSION AND SEDIMENT CONTROL NOTES & DETAILS**  
 for  
**ICM-JESSUP ADDITION**  
 B & O RAILROAD ROW LAND-LOCKED COUNCIL DISTRICT 2,  
 HOWARD COUNTY, MARYLAND 20794

**SITE DATA**

Owner / Developer: Jessup Asphalt Partners, LP  
 Owner / Developer Address: 638 Lancaster Avenue Malvern, PA 19355 1-800-999-1018  
 Premises Address: 8375 Dorsey Run Road Jessup, MD 20794-9386  
 Plat DP2 File #: F-15-090  
 Plat #: (2390B-2391)  
 Related DP2 File Reference: SDP-07-012, F-08-031, ECP-15-008  
 Dead Reference: Liber 15628 Folio 00006  
 Lot Area: 19.1339 acres +/-  
 Tax Parcel: Map 0048 Grid 0008 Parcel 0109 PAR 4  
 Zoning: M-2, Heavy Manufacturing  
 Election District: Sixth  
 Water Supply: Public Available  
 Wastewater Disposal: Public Available  
 Datum: NAD83 / NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**  
 Proposed future use: Recycled Asphalt Product (RAP) Storage  
 Proposed Structures/Buildings: None  
 Proposed Parking: None  
 Proposed Water Service: None  
 Proposed Sanitary Sewer Service: None  
 Proposed Stormwater Management: (2) Submerged Gravel Wetlands  
 Total Disturbed Area: 4.05 Acres +/-  
 Total Impervious Area: 3.03 Acres +/-  
 Type of Impervious Surface: Compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes. No disturbance of wetlands / waters of the US or associated buffers is proposed.

Access to property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Stone must be composed of a well graded mixture of stone sized so that fifty (50) percent of the pieces by weight are larger than the size determined by using the charts. A well graded mixture, as used herein, is defined as a mixture composed primarily of larger stone sizes but with a sufficient mixture of other sizes to fill the smaller voids between the stones. The diameter of the largest stone in such a mixture must not exceed the respective  $d_{10}$  selected from Table H.2. The  $d_{50}$  refers to the median diameter of the stone. This is the size for which 50 percent, by weight, will be smaller and 50 percent will be larger.

Note: Recycled concrete equivalent may be substituted for all stone classifications for temporary control measures only. Concrete broken into the sizes meeting the appropriate classification, containing no steel reinforcement, and having a minimum density of 150 pounds per cubic foot may be used as an equivalent.

**H-1 STANDARDS AND SPECIFICATIONS**

**FOR MATERIALS**

Table H.1: Geotextile Fabrics

PROPERTY	TEST METHOD	MINIMUM AVERAGE ROLL VALUE <sup>1</sup>					
		WOVEN SPLIT FILM GEOTEXTILE		WOVEN MONOFILAMENT GEOTEXTILE		NONWOVEN GEOTEXTILE	
		MD	CD	MD	CD	MD	CD
Grab Tensile Strength	ASTM D-4632	200 lb	200 lb	370 lb	250 lb	200 lb	200 lb
Grab Tensile Elongation	ASTM D-4632	15%	10%	15%	15%	50%	50%
Trapezoidal Tear Strength	ASTM D-4533	75 lb	75 lb	100 lb	60 lb	80 lb	80 lb
Puncture Strength	ASTM D-6241	450 lb		900 lb		450 lb	
Apparent Opening Size <sup>2</sup>	ASTM D-4751	U.S. Sieve 30 (0.59 mm)		U.S. Sieve 70 (0.21 mm)		U.S. Sieve 70 (0.21 mm)	
Permittivity	ASTM D-4491	0.05 sec <sup>-1</sup>		0.28 sec <sup>-1</sup>		1.1 sec <sup>-1</sup>	
Ultraviolet Resistance Retained at 500 hours	ASTM D-4355	70% strength		70% strength		70% strength	

<sup>1</sup> All numeric values except apparent opening size (AOS) represent minimum average roll values (MARV). MARV is calculated as the typical minus two standard deviations. MD is machine direction; CD is cross direction.  
<sup>2</sup> Values for AOS represent the average maximum opening.

Geotextiles must be evaluated by the National Transportation Product Evaluation Program (NTEPP) and conform to the values in Table H.1.

The geotextile must be inert to commonly encountered chemicals and hydrocarbons and must be rot and mildew resistant. The geotextile must be manufactured from fibers consisting of long chain synthetic polymers and composed of a minimum of 95 percent by weight of polyolefins or polyesters, and formed into a stable network so the filaments or yarns retain their dimensional stability relative to each other, including selvages.

When more than one section of geotextile is necessary, overlap the sections by at least one foot. The geotextile must be pulled taut over the applied surface. Equipment must not run over exposed fabric. When placing riprap on geotextile, do not exceed a one foot drop height.

Table H.2: Stone Size

TYPE	SIZE RANGE	$d_{10}$	$d_{50}$	AASHTO	MIDSIZE WEIGHT <sup>1</sup>
NUMBER 5 <sup>7</sup>	3/8 to 1 1/2 inch	1/2 in	1 1/2 in	M-43	N/A
NUMBER 1	2 to 3 inch	2 1/2 in	3 in	M-43	N/A
RIPRAP <sup>2</sup> (CLASS 0)	4 to 7 inch	5 1/2 in	7 in	N/A	N/A
CLASS I	N/A	9 1/2 in	15 in	N/A	40 lb
CLASS II	N/A	16 in	24 in	N/A	200 lb
CLASS III	N/A	23 in	34 in	N/A	600 lb

<sup>1</sup> This classification is to be used on the upstream face of stone outlets and check dams.

<sup>2</sup> This classification is to be used for gabions.

<sup>3</sup> Optimum gradation is 50 percent of the stone being above and 50 percent below the midsize.

Stone must be composed of a well graded mixture of stone sized so that fifty (50) percent of the pieces by weight are larger than the size determined by using the charts. A well graded mixture, as used herein, is defined as a mixture composed primarily of larger stone sizes but with a sufficient mixture of other sizes to fill the smaller voids between the stones. The diameter of the largest stone in such a mixture must not exceed the respective  $d_{10}$  selected from Table H.2. The  $d_{50}$  refers to the median diameter of the stone. This is the size for which 50 percent, by weight, will be smaller and 50 percent will be larger.

Note: Recycled concrete equivalent may be substituted for all stone classifications for temporary control measures only. Concrete broken into the sizes meeting the appropriate classification, containing no steel reinforcement, and having a minimum density of 150 pounds per cubic foot may be used as an equivalent.

Table H.3: Compost

Parameters <sup>1</sup>	Acceptable Range
pH	5.0 - 8.5
Moisture content	30% - 60%, wet weight basis
Organic matter content	25% - 65%, dry weight basis
Particle size	% passing a selected mesh size, dry weight basis 3 in (75 mm), 100% passing 1 in (25 mm), 90 - 100% passing 0.75 in (19 mm), 70 - 100% passing 0.25 in (6.4 mm), 30 - 60% passing 0.04 in (1 mm), 30% min. passing
Physical contaminants (manmade inerts)	<1% dry weight basis

Adapted from AASHTO Standards Specs for Compost Filter Socks and EPA Example Compost Filter Parameters.

<sup>1</sup> Recommended test methodologies are provided in Test Methods for the Examination of Composting and Compost (TMEC, The U.S. Composting Council).



This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER'S CERTIFICATE  
 I certify that all development and construction will be done according to this plan for development for sediment and erosion control, and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspections by the HOWARD SOIL CONSERVATION DISTRICT.

Jessup Asphalt Partners, LP  
 Drawn By: FJS Reviewed By: MAN Last Updated: 3/25/2015  
 FILENAME: ES-DET-4.DWG  
 FILE PATH: C:\CADFILES\STEPHENS\JESSUP-ES/ES-DETAILS

DESIGN PROFESSIONAL'S CERTIFICATION  
 I hereby certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the HOWARD SOIL CONSERVATION DISTRICT.

Michael A. Nawrocki, 06/09/2016  
 Michael A. Nawrocki, PE #9780 Date

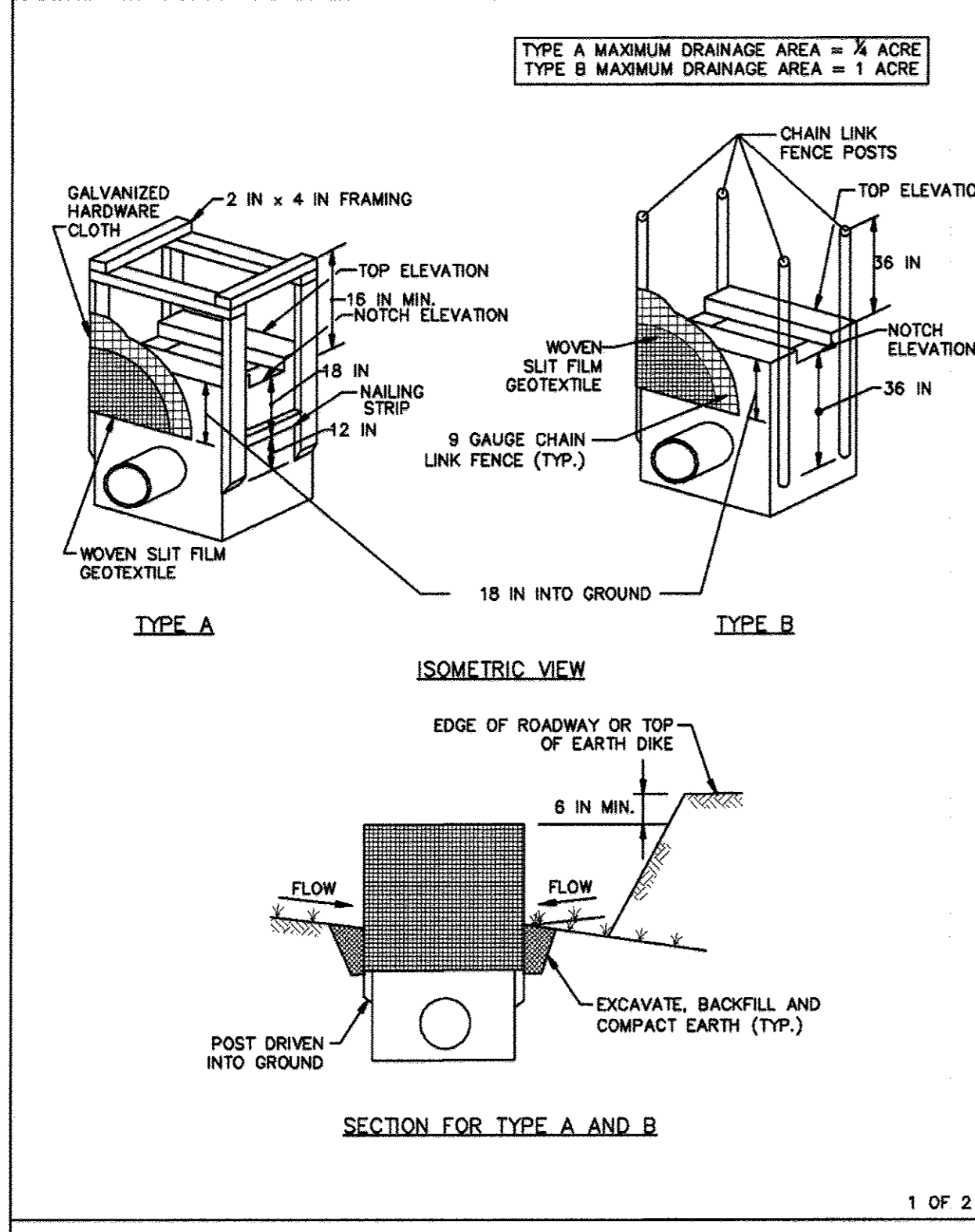
DESIGN PROFESSIONAL'S CERTIFICATION  
 I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License Number 9780, Expires 03/23/2018

Michael A. Nawrocki, 06/09/2016  
 Michael A. Nawrocki, PE #9780 Date

**REVISIONS**

Rev. #	Date	By	Revised Site Data Notes
1	7-20-15	FJS	

**DETAIL E-9-1 STANDARD INLET PROTECTION**



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

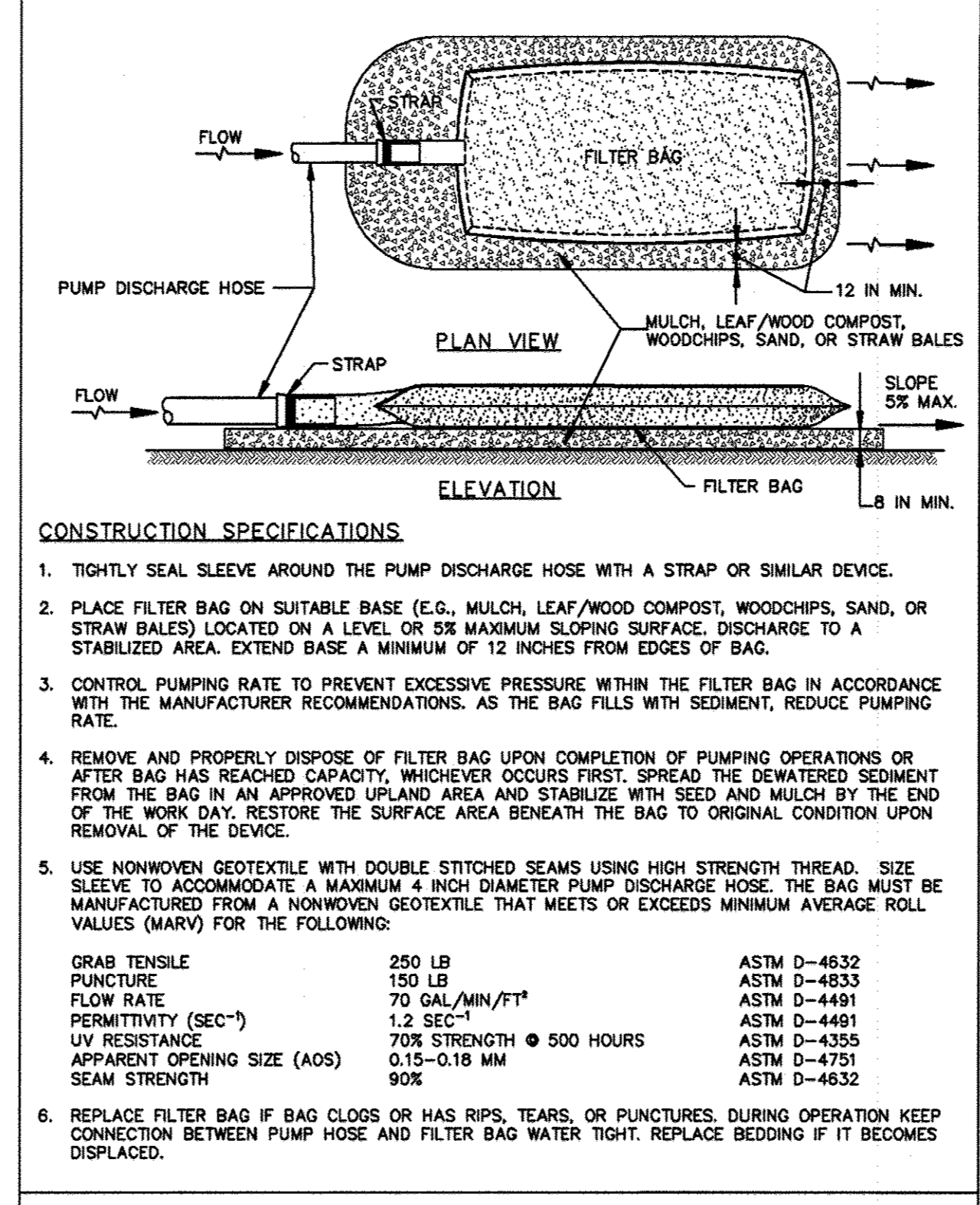
**DETAIL E-9-1 STANDARD INLET PROTECTION**

**CONSTRUCTION SPECIFICATIONS**

- USE WOVEN SPLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH 3/8 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.  
 FOR TYPE B, USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
- BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

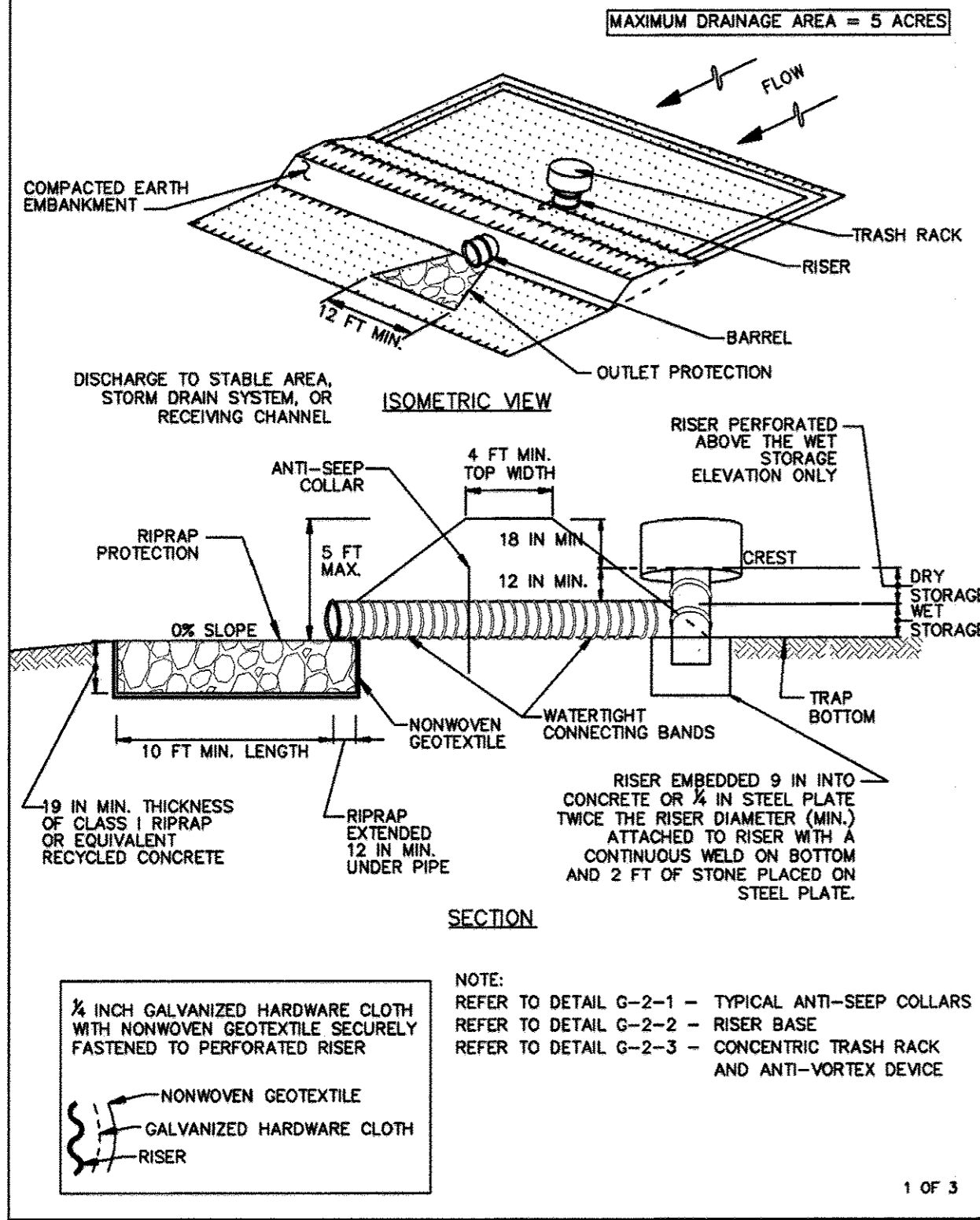
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL F-4 FILTER BAG**



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL G-1-1 PIPE OUTLET SEDIMENT TRAP ST-1**



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

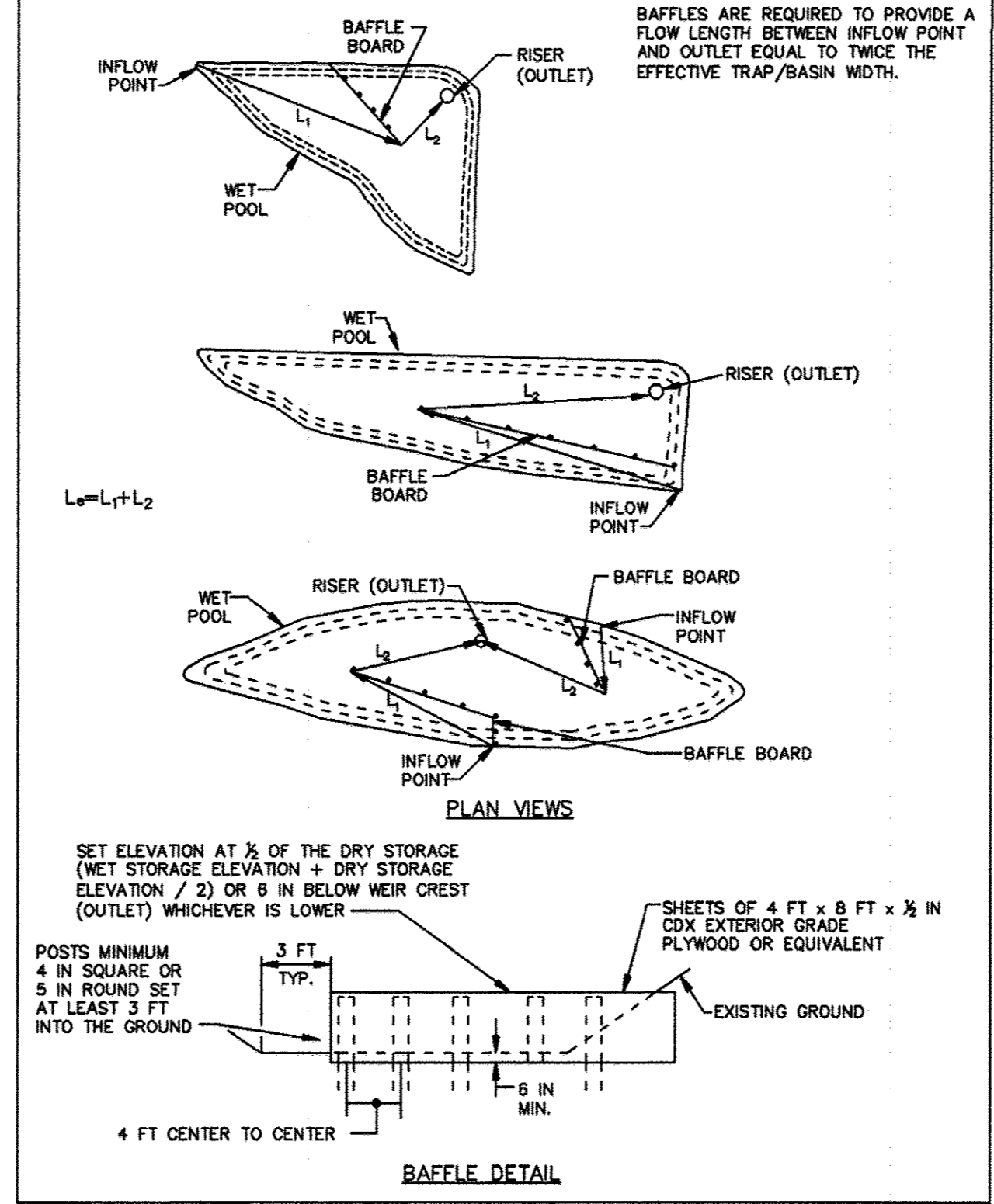
**DETAIL G-1-1 PIPE OUTLET SEDIMENT TRAP ST-1**

**CONSTRUCTION SPECIFICATIONS**

- CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.
- CLEAR, GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.
- PERFORATE THE RISER WITH 1 INCH DIAMETER HOLES SPACED 6 INCHES ON CENTER WITH THE LOWEST PERFORATIONS AT THE WET STORAGE ELEVATION OR PROVIDE A HORIZONTAL OR VERTICAL DRAW-DOWN DEVICE PERFORATED ACCORDING TO APPROVED PLAN. DO NOT PERFORATE THE RISER WITHIN 6 INCHES OF THE TOP OF THE HORIZONTAL BARREL.
- SET RISER/BARREL ASSEMBLY PRIOR TO EMBANKMENT CONSTRUCTION. MAKE ALL PIPE CONNECTIONS WATER-TIGHT. OFFSET RISER FROM EMBANKMENT TO ACCOMMODATE PLACEMENT OF THE TRASH RACK. ANCHOR THE RISER WITH EITHER A REINFORCED CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. MAKE CONCRETE BASES AT LEAST TWICE THE RISER DIAMETER AND 18 INCHES THICK WITH THE RISER EMBEDDED 9 INCHES.
- USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.
- HAND COMPACT IN 4 INCH LAYERS FILL MATERIAL AROUND THE PIPE SPILLWAY. PLACE A MINIMUM OF 2 FEET OF HAND COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
- CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE RISER CREST. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
- MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.
- WRAP THE RISER WITH 3/8 INCH GALVANIZED HARDWARE CLOTH THEN WRAP WITH NONWOVEN GEOTEXTILE. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE. EXTEND HARDWARE CLOTH AND GEOTEXTILE AT LEAST 6 INCHES ABOVE THE HIGHEST PERFORATIONS AND AT LEAST 6 INCHES BELOW THE LOWEST PERFORATIONS. OVERLAP, FOLD AND FASTEN WHERE ENDS OF GEOTEXTILE COME TOGETHER TO PREVENT GIBBS. REPLACE GEOTEXTILE AS NECESSARY TO PREVENT CLOGGING.
- USE STRAPS OR CONNECTING BANDS AT THE TOP AND BOTTOM OF THE GEOTEXTILE TO HOLD THE GEOTEXTILE AND HARDWARE CLOTH IN PLACE.
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.
- CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO THE APPROVED PLAN AND IN SUCH A MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.
- REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION (50% OF WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. KEEP POINTS OF INFLOW AND OUTFLOW AS WELL AS INTERIOR OF THE TRAP FREE FROM EROSION, AND REMOVE ACCUMULATED DEBRIS. MAINTAIN EMBANKMENTS TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. REMOVE ANY TREES, BRUSH, OR OTHER WOODY VEGETATION GROWING ON EMBANKMENT OR NEAR PRINCIPAL SPILLWAY. MAINTAIN LINE GRADE AND CROSS SECTION. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.
- WHEN DEWATERING TRAP, PASS REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL PRACTICE.
- UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL G-2-4 BAFFLE BOARDS**



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



**EROSION AND SEDIMENT CONTROL NOTES & DETAILS**  
 for  
**ICM-JESSUP ADDITION**  
 B & O RAILROAD ROW LAND-LOCKED COUNCIL DISTRICT 2,  
 HOWARD COUNTY, MARYLAND 20794

**SITE DATA**

Owner / Developer: Jessup Asphalt Partners, LP  
 Owner / Developer Address: 638 Lancaster Avenue Malvern, PA 19355 1-800-999-1018  
 Premises Address: 8375 Dorsey Run Road Jessup, MD 20794-9386  
 Plat DPZ File #: F-15-090  
 Plat #: (23808-23811)  
 Related DPZ File Reference: SDP-07-012, F-08-031, ECP-15-008  
 Deed Reference: Liber 15628 Folio 00006  
 Lot Area: 19.1339 acres +/-  
 Tax Parcel: Map 0048 Grid 0008 Parcel 0109 PAR 4  
 Zoning: M-2, Heavy Manufacturing  
 Election District: Sixth  
 Water Supply: Public Available  
 Wastewater Disposal: Public Available  
 Datum: NAD83 / NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**  
 Proposed Future Use: Recycled Asphalt Product (RAP) Storage  
 Proposed Structures/Buildings: None  
 Proposed Parking: None  
 Proposed Water Service: None  
 Proposed Sanitary Sewer Service: None  
 Proposed Stormwater Management: (2) Submerged Gravel Wetlands  
 Total Disturbed Area: 4.05 Acres +/-  
 Total Impervious Area: 3.03 Acres +/-  
 Type of Impervious Surface: Compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes. No disturbance of wetlands / waters of the US or associated buffers is proposed.

Access to property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*N. J. J.* 7-25-16  
 DIRECTOR DATE  
*Old* 7/14/16  
 CHIEF - DEVELOPMENT ENGINEERING DIVISION DATE  
*W. S.* 7-21-16  
 CHIEF - DIVISION OF LAND DEVELOPMENT DATE

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
*J. H. H.* 6/17/16  
 HOWARD SCD DATE

**DEVELOPER'S CERTIFICATE**  
 I certify that all development and construction will be done according to this plan of development for sediment and erosion control, and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspections by the HOWARD SOIL CONSERVATION DISTRICT.

*A. N.* 6/17/16  
 Jessup Asphalt Partners, LP DATE

Drawn By: FJS Reviewed By: MAN Last Updated: 3/25/2015  
 FILENAME: ES-DET-5.DWG  
 FILE PATH: C:\CADFILES\STEPHENS\JESSUP-ES\ES-DETAILS

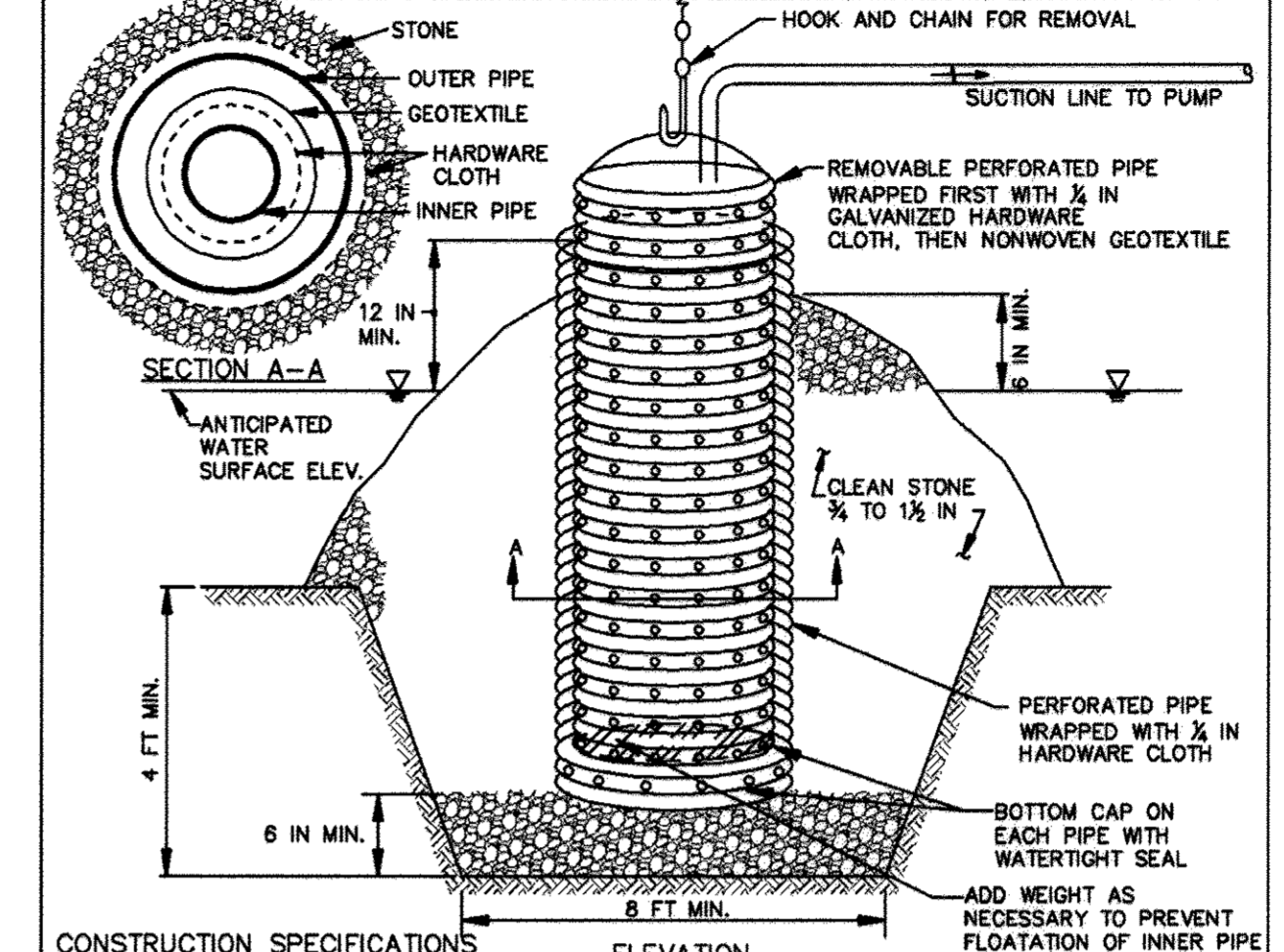
**DESIGN PROFESSIONAL'S CERTIFICATION**  
 I hereby certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the HOWARD SOIL CONSERVATION DISTRICT.

*Michael A. Nawrocki* 06/09/2016  
 Michael A. Nawrocki, PE #9780 DATE  
**DESIGN PROFESSIONAL'S CERTIFICATION**  
 I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License Number 9780, Expires 03/23/2018  
*Michael A. Nawrocki* 06/09/2016  
 Michael A. Nawrocki, PE #9780 DATE

**REVISIONS**

Rev. #	Date	By	Revised Site Data Notes
1	7-20-15	FJS	Revised Site Data Notes

**DETAIL F-1 REMOVABLE PUMPING STATION** STANDARD SYMBOL: RPS



- CONSTRUCTION SPECIFICATIONS**
- USE CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS 6 INCHES ON CENTER.
  - USE A MINIMUM 12 INCH DIAMETER INNER PIPE WITH AN OUTER PIPE A MINIMUM 6 INCHES LARGER IN DIAMETER. BOTTOM OF EACH PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
  - WRAP EACH PIPE WITH 1/2 INCH GALVANIZED HARDWARE CLOTH. ON INNER PIPE WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
  - EXCAVATE 8 FEET X 8 FEET X 4 FEET DEEP PIT FOR PIPE PLACEMENT. PLACE CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
  - SET TOP OF INNER AND OUTER PIPES MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION (OR RISER CREST ELEVATION WHEN DEWATERING A BASIN).
  - BACKFILL PIT AROUND THE OUTER PIPE WITH 3/4 TO 1 1/2 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
  - DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
  - A REMOVABLE PUMPING STATION REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, PULL OUT INNER PIPE AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

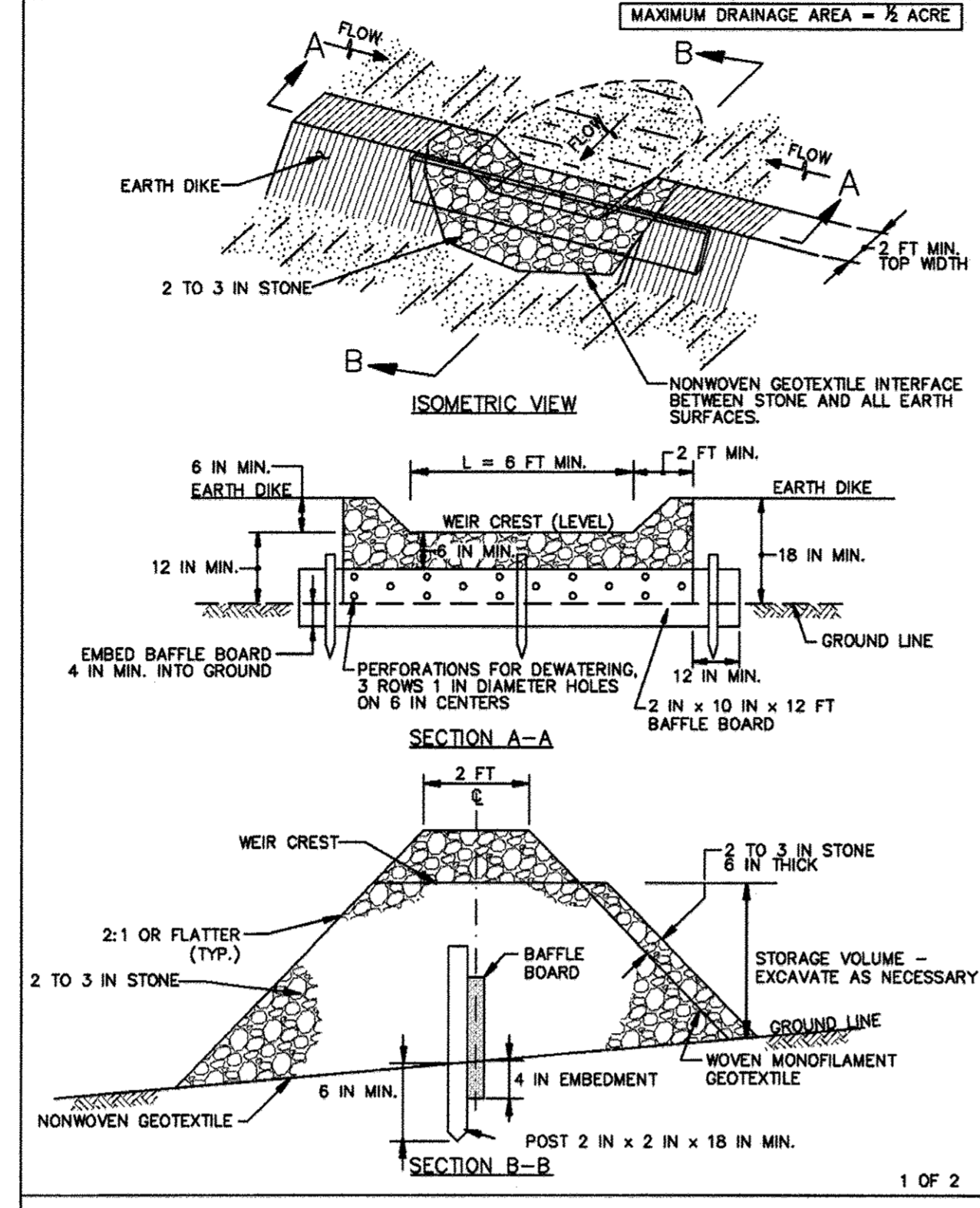
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL E-7 TEMPORARY STONE OUTLET STRUCTURE** STANDARD SYMBOL: TSOS

- CONSTRUCTION SPECIFICATIONS**
- PROVIDE STORAGE VOLUME AS SPECIFIED ON APPROVED PLANS.
  - USE NONWOVEN GEOTEXTILE ON INTERFACE BETWEEN GROUND AND STONE.
  - PERFORATE BAFFLE BOARD WITH 3 ROWS OF 1 INCH DIAMETER HOLES 6 INCHES ON CENTER, EMBED A MINIMUM OF 4 INCHES INTO GROUND, AND EXTEND BAFFLE BOARD MINIMUM OF 12 INCHES INTO EARTH DIKE.
  - USE CLEAN 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE. PLACE WOVEN MONOFLAMENT GEOTEXTILE ON UPSTREAM FACE AND COVER WITH A MINIMUM OF 6 INCHES OF ADDITIONAL STONE.
  - USE NONWOVEN AND WOVEN MONOFLAMENT GEOTEXTILES AS SPECIFIED IN SECTION H-1 MATERIALS.
  - SET WEIR CREST OF STONE 6 INCHES LOWER THAN THE TOP OF EARTH DIKE. USE MINIMUM LENGTH OF 6 FEET FOR WEIR CREST.
  - REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 6 INCHES OF WEIR CREST. REPLACE GEOTEXTILE AND STONE FACING WHEN STRUCTURE CEASES TO DRAIN. MAINTAIN LINE, GRADE, AND CROSS SECTION.
  - UPON REMOVAL OF STONE OUTLET STRUCTURE, GRADE AREA FLUSH WITH EXISTING GROUND, WITHIN 24 HOURS STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

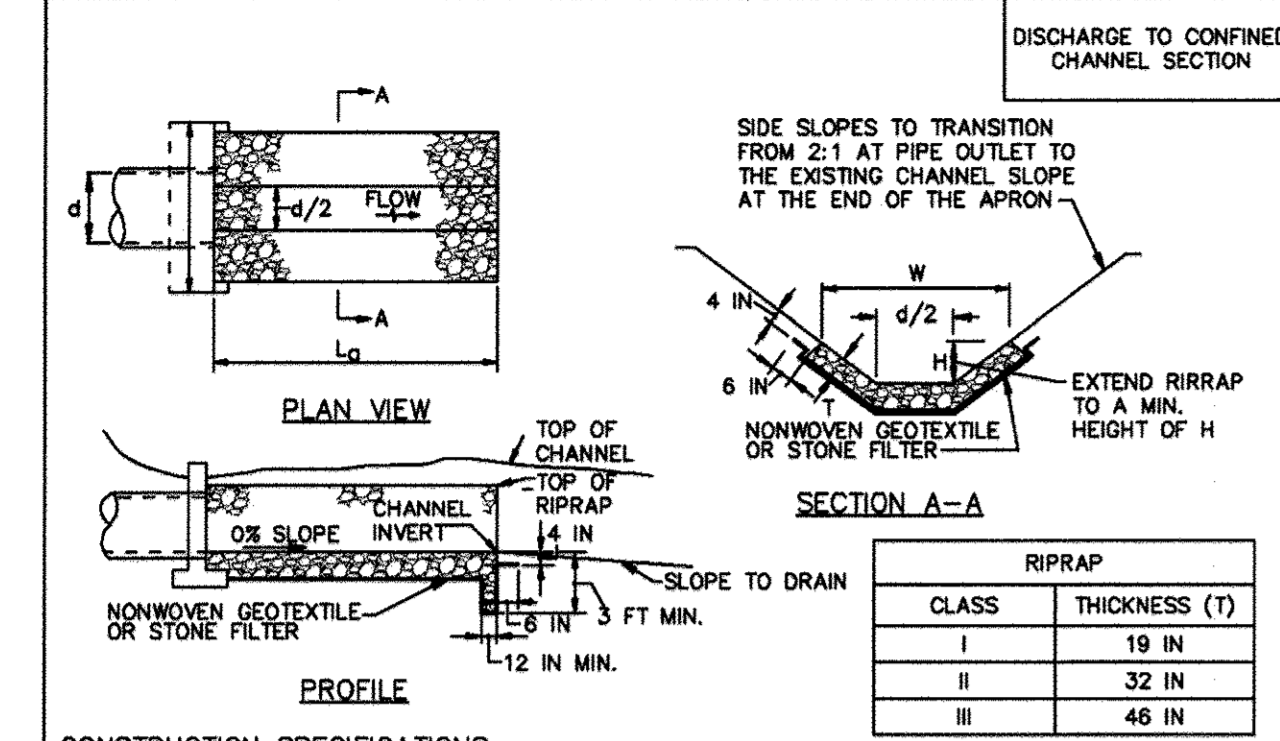
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL E-7 TEMPORARY STONE OUTLET STRUCTURE** STANDARD SYMBOL: TSOS



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

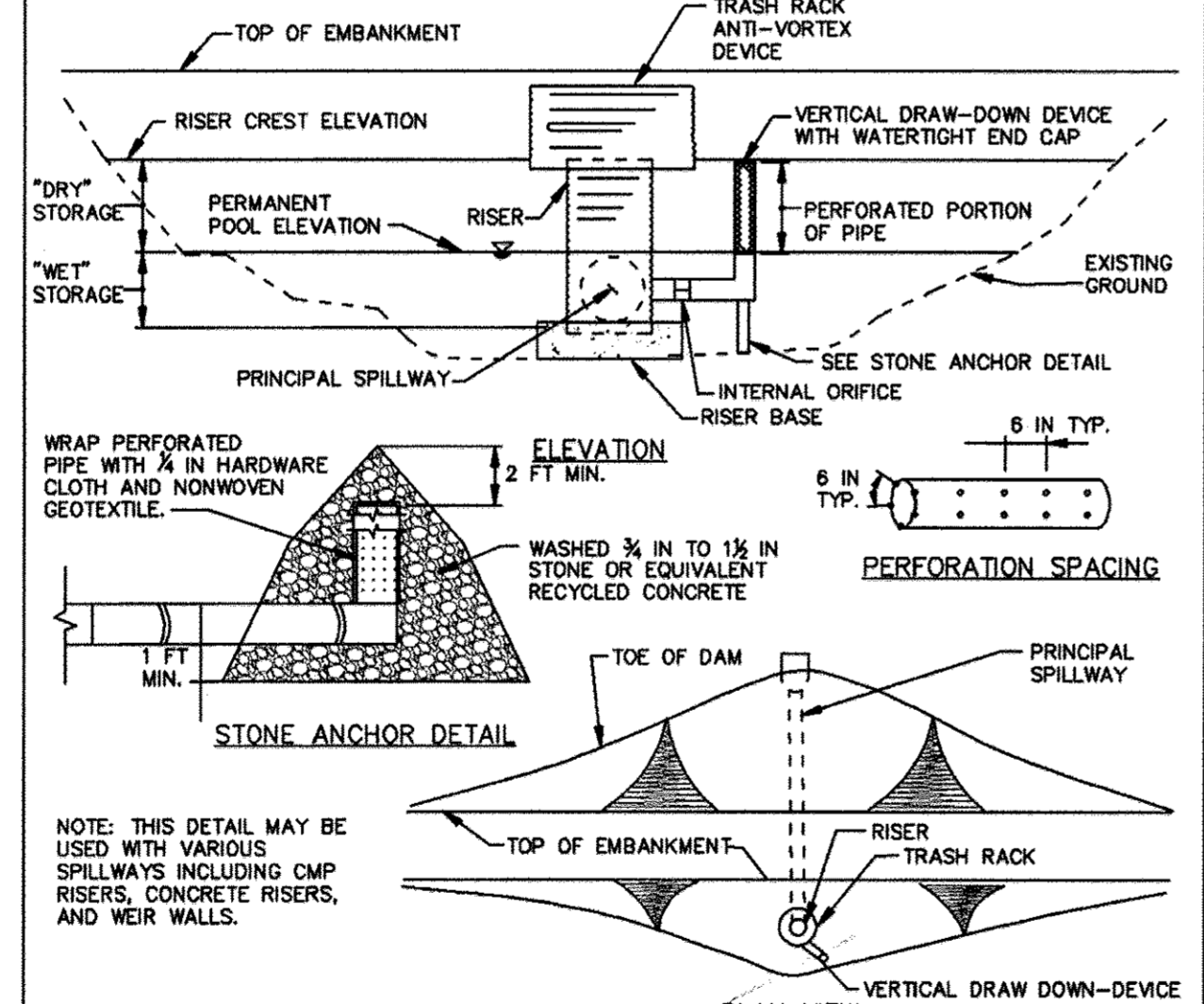
**DETAIL D-4-1-B ROCK OUTLET PROTECTION II** STANDARD SYMBOL: ROPII



- CONSTRUCTION SPECIFICATIONS**
- RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
  - USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
  - PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (3/4 TO 1 1/2 INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
  - EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
  - CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
  - WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
  - CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
  - MAINTAIN LINE, GRADE, AND CROSS SECTION, KEEP OUTLET FREE OF EROSION, REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

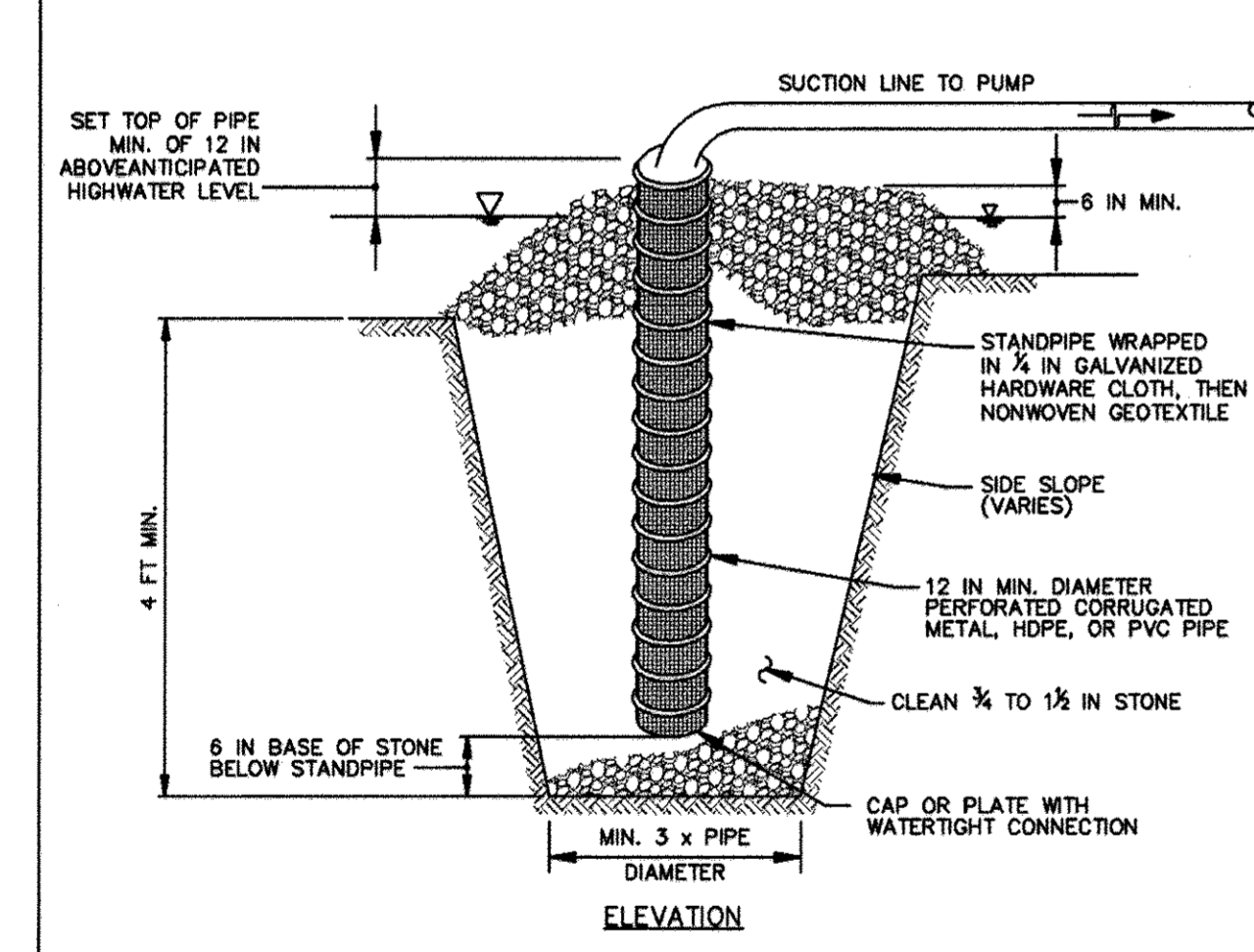
**DETAIL G-2-7 SEDIMENT BASIN SCHEMATIC VERTICAL DRAW-DOWN DEVICE** STANDARD SYMBOL: VDDO



- CONSTRUCTION SPECIFICATIONS**
- PERFORATE PIPE WITH 1 INCH DIAMETER PERFORATIONS SPACED 6 INCHES APART LONGITUDINALLY AND RADIIALLY OR IN ACCORDANCE WITH APPROVED PLAN.
  - DO NOT EXTEND PERFORATIONS IN THE DRAW-DOWN DEVICE INTO WET STORAGE.
  - WRAP THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE FIRST WITH 1/2 INCH GALVANIZED HARDWARE CLOTH, THEN WITH NONWOVEN GEOTEXTILE. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE.
  - AS AN ALTERNATE TO STONE ANCHORING, SECURE DRAW-DOWN DEVICE WITH TWO 1 INCH STEEL ANGLES SET 3 FEET MINIMUM INTO THE GROUND ATTACHED TO DRAW-DOWN DEVICE BY A 1 INCH WIDE GALVANIZED STEEL STRAP OR 12 GAUGE OR HEAVIER WIRE.
  - REMOVE SEDIMENT WHEN IT ACCUMULATES TO CLEANOUT ELEVATION (50% OF THE WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA IN A SUCH A MANNER THAT IT WILL NOT ERODE. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.

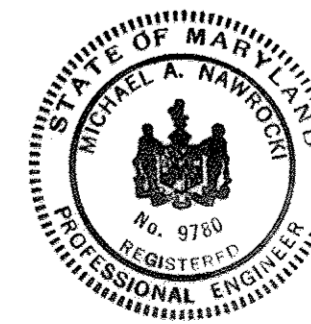
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DETAIL F-2 SUMP PIT** STANDARD SYMBOL: SP



- CONSTRUCTION SPECIFICATIONS**
- USE 12 INCH OR LARGER DIAMETER CORRUGATED METAL, HDPE, OR PVC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER. BOTTOM OF PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
  - WRAP PIPE WITH 1/2 INCH GALVANIZED HARDWARE CLOTH AND WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
  - EXCAVATE PIT TO THREE TIMES THE PIPE DIAMETER AND FOUR FEET IN DEPTH. PLACE 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
  - SET TOP OF PIPE MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
  - BACKFILL PIT AROUND THE PIPE WITH 3/4 TO 1 1/2 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
  - DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
  - A SUMP PIT REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, REMOVE PERFORATED PIPE AND REPLACE GEOTEXTILE AND STONE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION





**LANDSCAPE AND FOREST CONSERVATION PLAN FOR ICM-JESSUP ADDITION**  
8375 DORSEY RUN ROAD  
COUNCIL DISTRICT 2,  
HOWARD COUNTY, MARYLAND 20794

**SITE DATA**

Owner/ Developer: Jessup Asphalt Partners, LP  
Owner/ Developer Address: 638 Lancaster Avenue  
Malvern, PA 19355  
Owner/ Developer Phone #: 1-800-999-1018  
Premises Address: 8375 Dorsey Run Road  
Jessup, MD 20794  
Plat DPZ File #: F-15-090  
Plat #: ~~93908~~ - 23811  
Related DPZ File References: SDP-07-012, F-08-031, ECP-15-008  
Deed Reference: Liber 15528 Folio 00006  
Lot Area: 19,138 acres +/-  
Tax Parcel: Map 0048 Grid 0008 Parcel 0191 PAR 4  
Zoning: M-2, Heavy Manufacturing  
Election District: Sixth  
Water Supply: Public available  
Wastewater Disposal: Public available  
Datum: NAD83/ NAVD88

**PROPOSED DEVELOPMENT BASIC DATA**

Proposed future use: Recycled Asphalt Product (RAP) Storage Structures/Buildings  
Proposed Structures/Buildings: None  
Proposed Parking: None  
Proposed water service: None  
Proposed sanitary sewer service: None  
Proposed Stormwater Management: (2) Submerged Gravel Wetlands  
Total Disturbed Area: 4.05 Acres +/-  
Total Impervious Area: 3.03 acres +/-  
Type of Impervious surface: compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes. No disturbance of wetlands/ Waters of the US or associated buffers is proposed.

Access to the property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794.

**APPROVED: HOWARD CO. DEPARTMENT OF PLANNING AND ZONING**

*William E. Stephens* 7/14/16  
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

*William E. Stephens* 7-25-16  
CHIEF-DIVISION OF LAND DEVELOPMENT DATE

*William E. Stephens* 7-25-16  
DIRECTOR DATE

**PROJECT BENCH MARKS**

Benchmark #1: GPI CIRF EI: 204.19 (NAVD 88)  
N537203.68 E1371118.59 (NAD83)  
Located 8' North and 4' and 66' East of the  
Bakermark Building #5477

Benchmark #109: CIRF-GPI EI: 188.96 (NAVD 88)  
N537374.18 E1372250.88 (NAD 83)  
located on westerly side of SWM Pond

Benchmark #1209: CIRF EI: 168.48 (NAVD 88)  
N537296.67 E1373402.29 (NAD 83)  
Located at easternmost property corner

MD DNR QUALIFIED PROFESSIONAL'S CERTIFICATION

I hereby certify that these plans were prepared or approved by me, and that I am a Qualified Professional recognized by the MD DNR and have all the requisite training and experience to prepare Forest Conservation Plans

*William E. Stephens* 6/13/16  
William E. Stephens, P.G., C.E. Date

Drawn By: WES Reviewed By: MAN Last Updated 10/05/2015  
FILENAME: SHEET\_15.pcs  
FILE PATH: S:\2015\_PROJECTS\1528\PCS-SDP\_Rev02

Developer's/Owner's Certification

I/We Certify that the landscaping shown on these plans will be done according to the plan, Section 16.24 of the Howard County Code, and the Howard County Landscape Manual. We further certify that upon completion of a certification of landscape installation, accompanied by an executed one year guarantee of plant material, will be submitted to the Department of Planning and Zoning.

*William E. Stephens* 6/13/16  
Date

**REVISIONS**

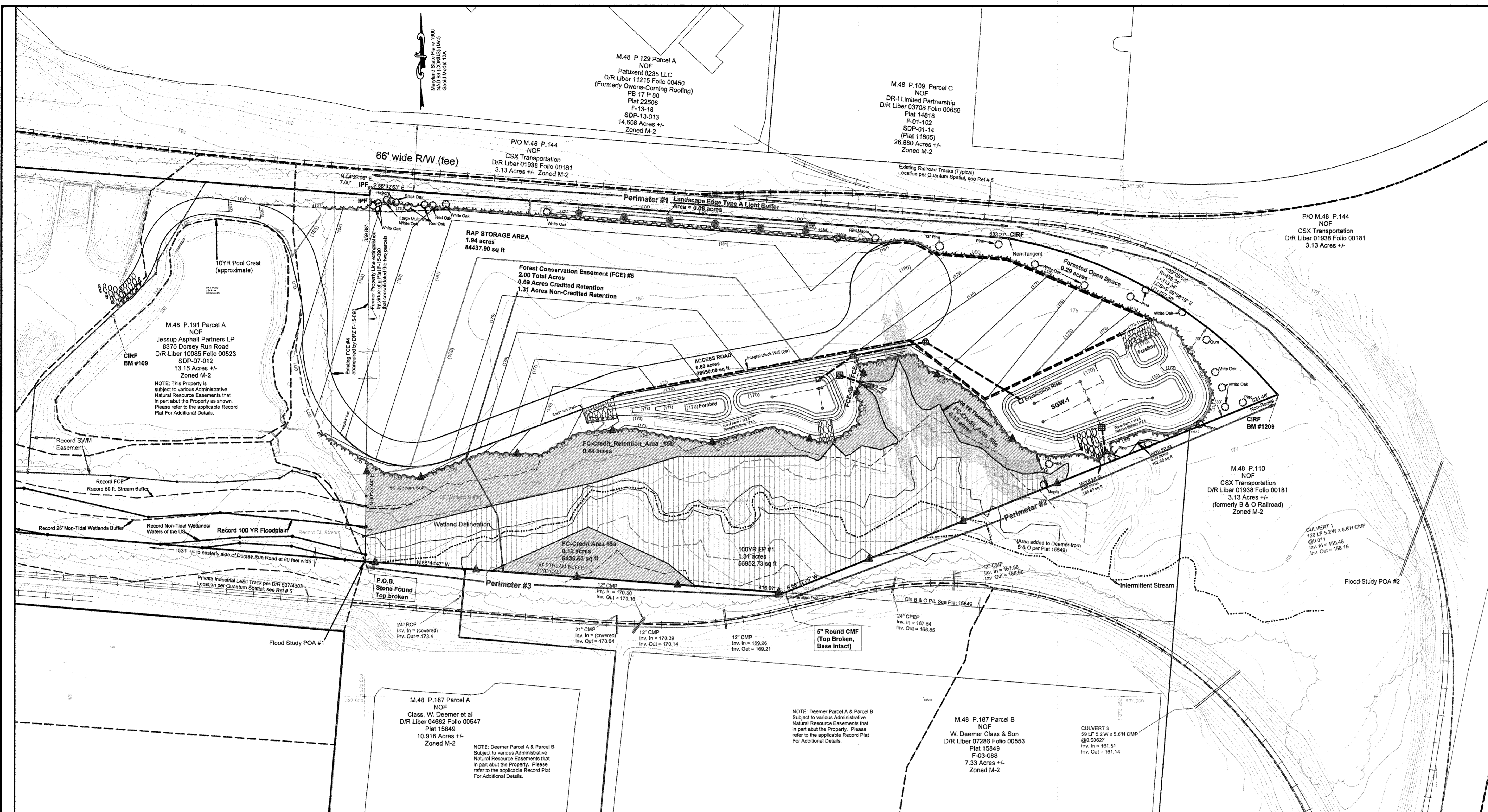
Rev. #	Date	By	Comments/Reference
1	07/18/2015	WES	per Howard County DPZ Comments
2	09/30/2015	WES	per Howard County DPZ Comments
3	05/02/2015	WES	per DED PDOX Tech Complete Letter
4	06/13/2016	WES	added AS-BUILT INFO

**SHEET 15**

**FCP/LND-1**

**SDP-15-041**

**AS-BUILT**



**LEGEND-EXISTING, 50-SCALE SURVEY & MAPPING**

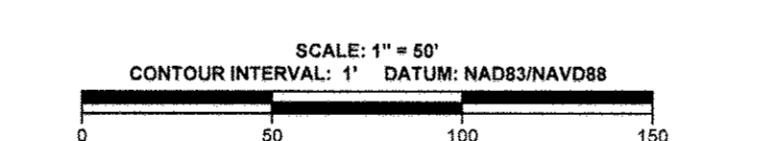
- Ultimate Development 100YR Flood Plain
- Existing 50' Stream Buffer
- Existing Stream Bank
- Existing Non-Tidal Wetland Line
- Existing 25' Non-Tidal Wetland Buffer Line
- Intermittent Stream
- Contour-Major
- Contour-Major, approximate
- Contour-Minor
- Contour-Minor, approximate
- Tree Line
- Subcatchment Boundary
- Subwatershed Boundary
- PROPERTY BOUNDARY
- >15% Slopes Shading

**LEGEND-PROPOSED, 50-SCALE**

- Proposed Contour-Major w/ Label
- Proposed Contour-Minor w/ Label
- Proposed Gravel Access Road
- Proposed RAP/RAS Storage Area(s)
- CL 2.5x2.5x6' Integral Concrete Block Wall
- Proposed Curb, 8"
- Proposed LOD
- Proposed Subcatchment
- Proposed SGW Berm Crest (173.5')
- Proposed SGW Pool Crest (172.5')
- Surface Water Flow Direction
- Proposed Tree Line
- Proposed Landscape Tree

**LEGEND-RECORD FEATURES from: Plat 19398/F-08-031**

- Forest Conservation Easement (FCE)
- 100 Year Flood Plain
- 25 feet wide Non-Tidal Wetlands Buffer
- 50 feet wide Stream Buffer
- Non-Tidal Wetlands
- Stormwater Easement
- Centerline of Stream-Surveyed (GPI)



**LEGEND-FOREST CONSERVATION FILL & SYMBOLS**

- Forest Conservation Credit Area-Retention with acreage shown
- Forest Conservation No Credit Area-Flood Plain Forest Retention with acreage shown
- Forest Conservation Area Sign
- Forest Conservation Easement Fence/ Tree Protection Fence/Super Silt Fence
- Existing Tree, >6", Landscape Credit
- Proposed Landscape Tree

**FOREST CONSERVATION WORKSHEET**

NET TRACT AREA

A. Total Tract Area = 5.98  
B. Area within 100 Year Floodplain = 1.31  
C. Net Tract Area = 4.67

Afforestation/Conservation Threshold for M-2 Zoning = 15%

D. Afforestation Threshold = 15% x "C" = 0.70  
E. Conservation Threshold = 15% x "C" = 0.70

EXISTING FOREST COVER

F. Existing Forest Cover Excluding Floodplain = 4.67  
G. Area of Forest above Conservation Threshold = 3.97

BREAK-EVEN POINT

H. Forest Retention above Threshold with no mitigation = 1.49  
I. Clearing permitted without mitigation = (F-H) = 3.18

PROPOSED FOREST CLEARING

J. Total area of forest to be cleared = 3.98  
K. Total Area of Forest to be retained = 0.69

PLANTING REQUIREMENTS

L. Reforestation for Clearing above the conservation threshold (K) < (E), (G) x 0.25 = 0.99  
M. Reforestation for clearing below the conservation threshold (K) <= (E), [2 x (E-J)] = 0.02  
N. Credit for retention above the conservation threshold N = K-E = 0.69 - 0.70 = 0  
P. Total Reforestation required (P = L + M - N) = 1.01  
Q. Total Afforestation Required = 0.00  
R. Total Planting Requirement = (R = P+Q) = 1.01

**FOREST CONSERVATION NOTES**

1. The forest conservation obligation for this project is 0.69 acres of on-site retention, 1.01 acres of reforestation and 0.18 acres for the abandonment and replacement of Forest Conservation Easement #4 as shown on Plat No. 19398 (F-08-031). The requirement has been met by 0.69 acres of on-site retention and 2.38 acres of off-site retention at the Mill Creek mitigation bank (SDP-15-035). No surety is required to be posted with the Developer's Agreement.

2. Existing Trees shown hereon are those for which Landscape Credit within the reduced buffer width is taken. Except for the buffer area along the northern property line from the northwesterly corner to the cul de sac area, those trees shown are not the only trees greater than 6" within the buffer areas. Along the northerly line, trees greater than 6" are sparse and those shown are the only trees that qualify for landscape credit.

3. Please refer to the accompanying Landscape and Forest Conservation Details Sheet for additional information.

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS

*William E. Stephens* 6/29/17  
SIGNATURE DATE  
William E. Stephens, P.G.  
PRINT NAME



# LANDSCAPE NOTES AND DETAILS

## LANDSCAPE NOTES

- This plan has been prepared in accordance with Section 16.124 of the Howard County Code & the Howard County Landscape Manual.
- Contractor shall notify all utilities at least (5) five days before starting work. All general notes shall apply.
- Field verify underground utility locations and existing conditions before starting planting work. Contact construction manager or owner if any relocations are required.
- Plant Quantities shown on the plan list are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on the plan and those shown on the plant list, the quantities on the plan shall have precedence.
- All plant material shall be full, heavy, well formed, symmetrical, and conform to the A.A.N. Specifications. See this sheet for planting details.
- No substitution shall be made without prior approval from Howard County DPZ and the owner or his representative.
- All areas disturbed by construction activities but not otherwise planted, paved, or mulched shall be sodded or seeded in accordance with the permanent seeding specification. A minimum of 4" of topsoil shall be provided to all planting areas.
- The contractor shall notify the owner in writing if he/she encounters soil drainage conditions that may be detrimental to the growth of the plants.
- All exposed earth within the limits of planting beds shall be mulched with shredded hardwood mulch per the planting details.
- No landscape planting is allowed within public easements unless approved by the Department of Public Works, Bureau of Utilities.
- Schedule A is provided for landscape surety calculation purposes. Financial surety for the required landscaping has been posted as part of the DPZ developer's agreement in the amount of \$1,800 for the following plants:
- 6 Required shade trees at \$300/tree = \$1,800.00
- The owner, the tenant and/or their agents shall be responsible for maintenance of the required landscaping, plant materials, berms, fences, and walls. All plant materials shall be maintained in good growing condition and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- At the time of installation, all shrub and other plantings herein listed and approved for this site shall be of the proper height requirements in accordance with the Howard County Landscape Manual. Any deviation from this approved landscape plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
- For any tree designated for preservation, for which credit is given, be removed or die prior to release of bonds, the owner will be required to replace the tree with the equivalent species or with a tree which obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of 3 inches in caliper and installed as required in the Landscape Manual.

## SPECIFICATIONS: PLANT MATERIALS AND PLANTING METHODS

- Plant Materials**  
The landscape contractor shall furnish and install and/or dig, ball, burlap and transport all of the plant materials called for on drawings and/or listed in the plant schedule.

- Plant Names**  
Plant names used in the plant schedule shall conform with "AAN" Standards.

- Plant Standards**  
All plant materials shall be equal to or between the requirements of the "USA Standards for Nursery Stock" latest edition as published by the American Association of Nurserymen (hereafter referred to as "AAN Standards"). All plants shall be typical of their species and variety, shall have a normal habit of growth and shall be free quality, sound, vigorous, well-branched and with healthy, well-furnished root systems. They shall be free of disease, insect pests and mechanical injuries.

- Plant Measurements**  
All plants shall conform to the measurements specified in the plant schedule.

- Caliper measurements shall be taken six inches (6") above grade for trees up to four-inch (4") caliper and twelve (12") above grade for trees greater than four inches (4") in caliper.
- Minimum branching height for all shade trees shall be six feet (6'), maximum eight feet (8').
- Caliper height, spread and size of ball shall be generally as follows:

Caliper	Height	Spread	Size of Ball
2"-2.5"	12'-14'	6'-8'	20" Diameter
3"-3.5"	14'-16'	8'-8'	32" Diameter
3.5"-4"	14'-16'	8'-10'	30" Diameter
4"-4.5"	16'-18'	8'-10'	40" Diameter
4.5"-5"	16'-17'	10'-12'	44" Diameter
5"-5.5"	16'-20'	10'-12'	48" Diameter
5.5"-6"	18'-20'	12'-14'	52" Diameter

- All plant material shall generally average the median for the size ranges indicated above as indicated in the "AAN" Standards.

- Plant Identification**  
Legible labels shall be attached to all shade trees, minor trees, specimen shrubs and bundles or boxes of other plant material giving the botanical and common names, size and quantity of each. Each shipment of plants shall bear certificates of inspection as required by federal, state and county authorities.

- Plant Inspection**  
The owner may require, at least ten (10) days prior to the installation of any proposed plant material, to inspect all proposed plant material at the source of origin.

- Planting Methods**  
All proposed plant materials that meet the specifications in Section A are to be planted in accordance with the following methods during the proper planting seasons as described in the following:

- Planting Seasons**  
The planting of deciduous trees, shrubs and vines shall be from March 1st to June 15th and from September 15th to December 15th. Planting of evergreen material may be continued during the winter months providing there is no frost in the ground and frost-free topsoil planting mixtures are used.  
The planting of evergreen material shall be from March 10th and from August 15th to December 1st. No planting shall be done when the ground is frozen or excessively moist. No frozen or wet topsoil shall be used at any time.

- Digging**  
All plant material shall be dug, balled and burlapped (B & B) in accordance with the "AAN Standards".

- Excavation of Plant Pits**  
The landscaping contractor shall excavate all plant pits, vine pits, hedge trenches and shrub beds in accordance with the following schedule:

- Locations of all proposed plant material shall be staked and approved in the field by the landscape architect before any of the proposed plant material is installed by the landscape contractor.

- All pits shall be generally circular in outline, vertical sides, depth shall not be less than 5" deeper than the root ball, diameter shall not be less than two times the diameter of the root ball as set forth in the following schedule.

- If areas are designated as shrub beds or hedge trenches, they shall be excavated to at least 18" depth minimum. Areas designated for ground covers and vines shall be excavated to at least 12" in depth minimum.

- Diameter and depth of tree pits shall generally be as follows:

Plant Size	Root Ball	Pit Diameter	Pit Depth
2"-2.5" cal.	28"	56"	24"
3"-3.5" cal.	32"	64"	28"
3.5"-4" cal.	36"	72"	32"
4"-4.5" cal.	40"	80"	36"
4.5"-5" cal.	44"	88"	40"
5"-5.5" cal.	48"	96"	44"
5.5"-6" cal.	52"	104"	48"

- A 20% compaction figure of the soil to be removed is assumed and will be allowed in calculation of extra topsoil. The indicated pit sizes are for purposes of uniform calculation and shall not override the specified depths below the bottoms of the root balls.

## LANDSCAPE NOTES

- Staking, Guying and Wrapping**  
All plant material shall be staked or guyed, and wrapped in accordance with the following specifications:

- Stakes shall be sound wood 2" x 2" rough sawn oak or similar durable woods, or lengths minimum 7'-0" for major trees and 5'-0" minimum for minor trees.
- Wire and cable, wire shall be #10 GA Galvanized or Betherized annealed steel wire for trees over 3" caliper; provide 6/16" turn buckles, eye and eye with 4" take-up. For trees over 5" caliper, provide 3/16" 7-strand cable calcium plated steel, with galvanized "eye" thimbles of wire and hose on trees up to 3" in caliper.
- Hose, shall be new 2 ply reinforced rubber hose minimum 1/2" I.D. "Plastic Lock Ties" or "Paula's Trees Braces" may be used in place of wire and hose on trees up to 3" in caliper.
- All trees under 3" in caliper are to be planted and staked in accordance with the attached planting details.

- Plant Pruning, Edging and Mulching**  
A. Each tree, shrub or vine shall be pruned in an appropriate manner to its particular requirements, in accordance with accepted standard practice. Broken or broken branches shall be removed with clean cuts flush with the adjacent trunk or branches. All cuts over 1" in diameter shall be painted with an approved antiseptic tree wound dressing.

- All trenches and shrub beds shall be edged and cultivated to the lines shown on the drawing. The areas around isolated plants shall be edged and cultivated to the full diameter of the pit. Sod which has been removed and stacked shall be used to trim the edges of all excavated areas to the next lines of the plant pit, access, the edges of shrub areas, hedge trenches and vine pockets.

- After cultivation, all plants materials shall be mulched with a 3" layer of fine, shredded pine bark, peat moss, or another approved material over the entire area of the bed or saucer.

- Plant Inspection and Acceptance**  
The design review committee shall be responsible for inspection and all planting projects on a periodic basis to assure that all work is proceeding in accordance with the approved plans and specifications.

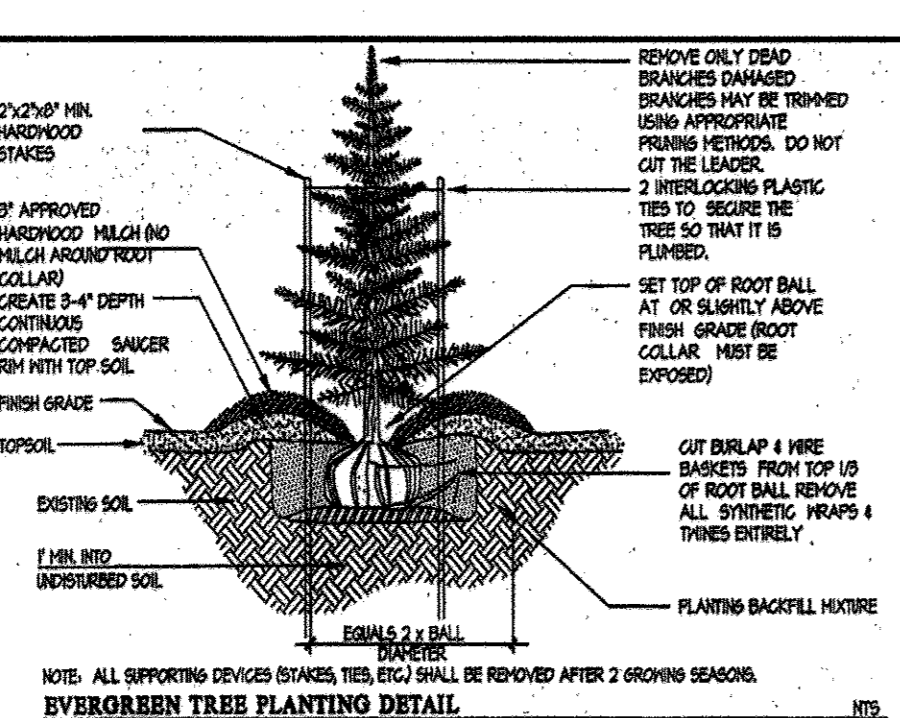
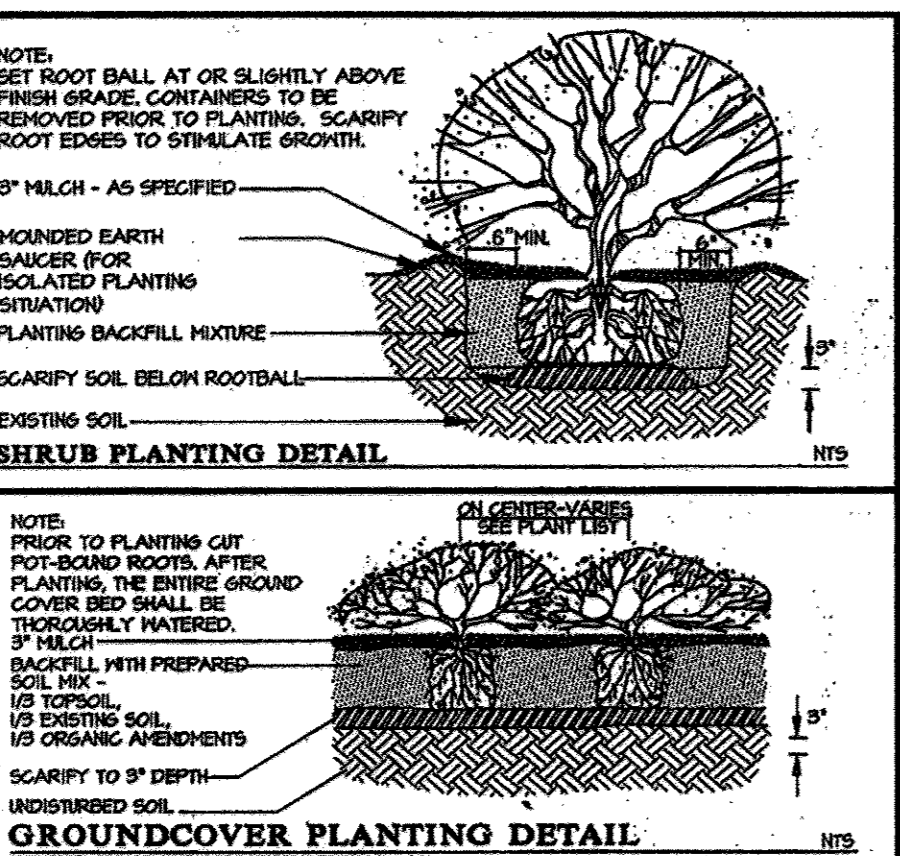
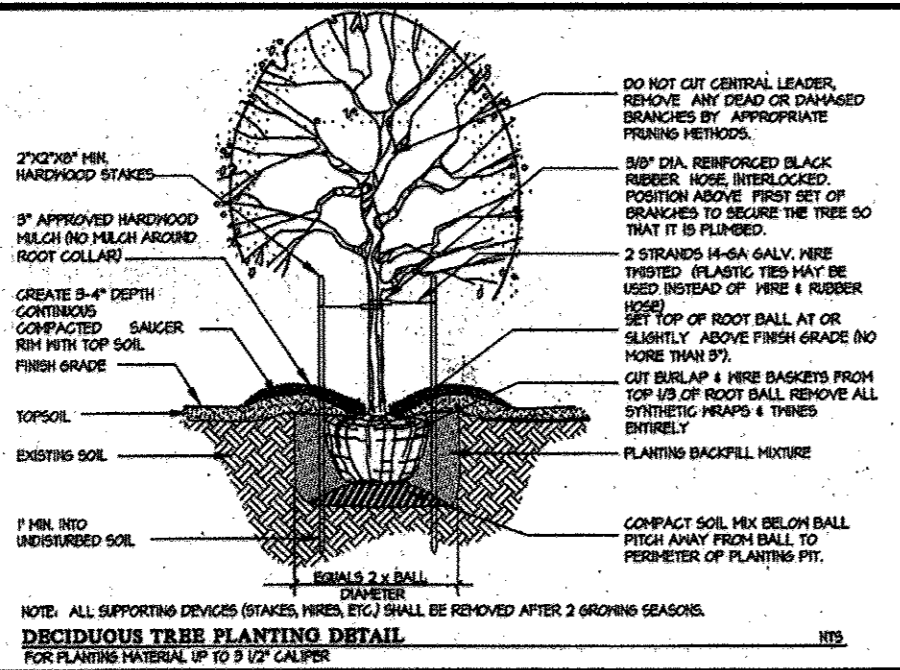
- Plant Guarantee**  
All plant material shall be guaranteed for the duration of one full growing season, after final inspection and acceptance of the work in the planting project. Plants shall be alive and in satisfactory growing condition at the end of the guarantee period.

- For this purpose, the "growing season" shall be that period between the end of the "Spring" planting season, and the commencement of the "Fall" planting season.

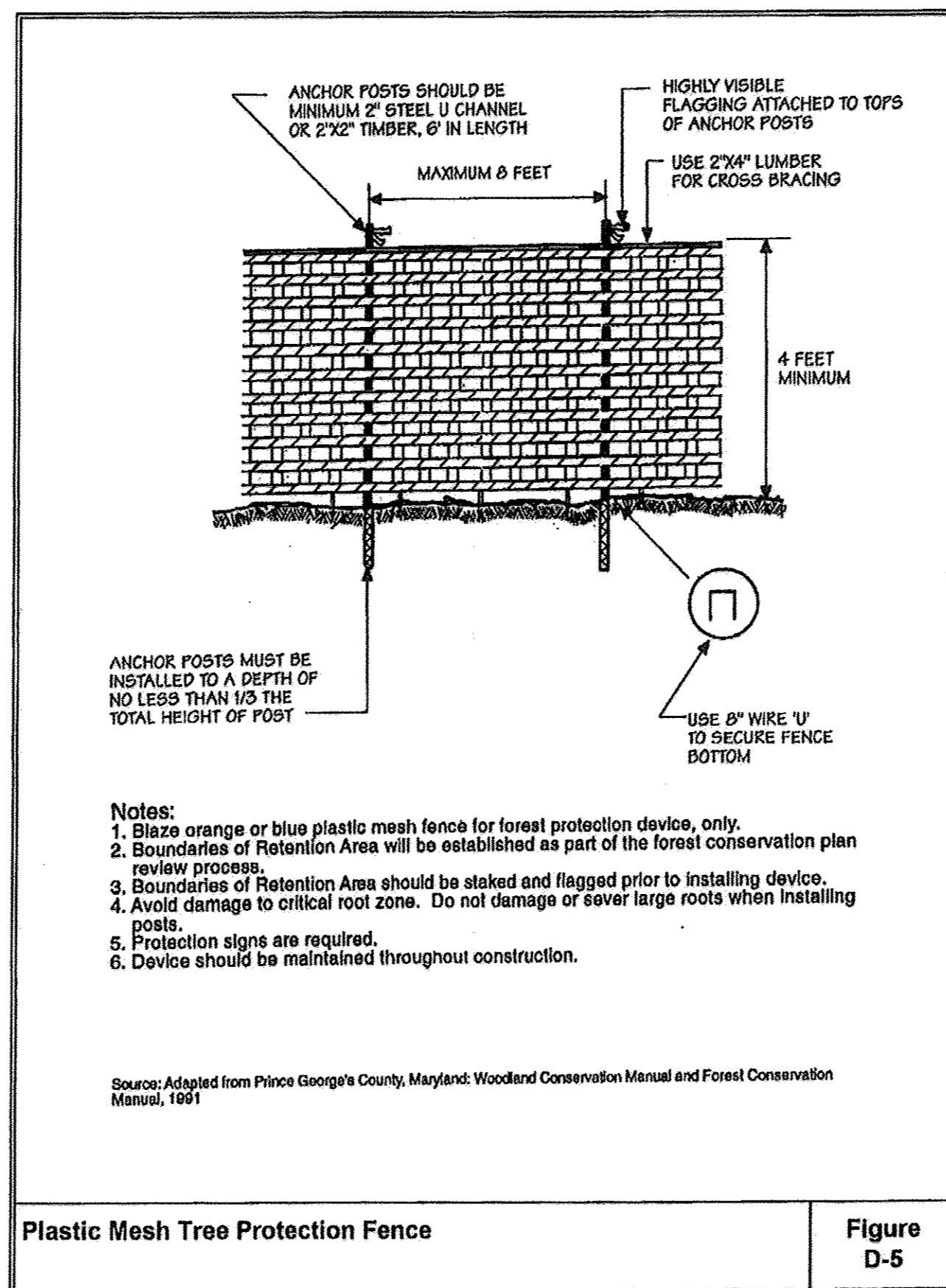
- Guarantee for planting performed after the specified end of the "Spring" planting season, shall be extended through the end of the next following "Spring" planting season.

- Sodding**  
All sodding shall be in accordance to the "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Area" latest edition, approved by the Landscape Contractors Association of Metropolitan Washington and the American Society of Landscape Architects.

- All sod shall be strongly rooted sod, not less than two years old and free of weeds, and undesirable native grasses, provide only sod capable of growth development when planted and in strips not more than 18" wide x 4' long. Provide sod composed principally of improved strain Kentucky Bluegrass, such as Columbia, Vista, or Escort.



# FOREST CONSERVATION NOTES AND DETAILS



Plastic Mesh Tree Protection Fence Figure D-5

- ### FOREST RETENTION AREAS & NOTES
- No Rare, Threatened or Endangered species were observed on this site.
  - Changes in grading and runoff within the construction/installation areas will not adversely affect the soils within the forest retention area. Sediment Control measures will redirect concentrated flow runoff to stormwater management facilities; retain sediment within the construction site, and/or redirect clean water away from construction areas.

### FOREST PROTECTION NOTES

- Forest retention areas: install blaze orange fence and retention signs before construction begins.
- Fencing shall be maintained in good condition and promptly repaired or restored as the situation warrants.
- A qualified tree care expert shall determine if root pruning is required along the limit of disturbance. Root pruning trees as required. Water any root pruned trees immediately after root pruning and monitor for signs of stress during construction.

### CONSTRUCTION PHASE

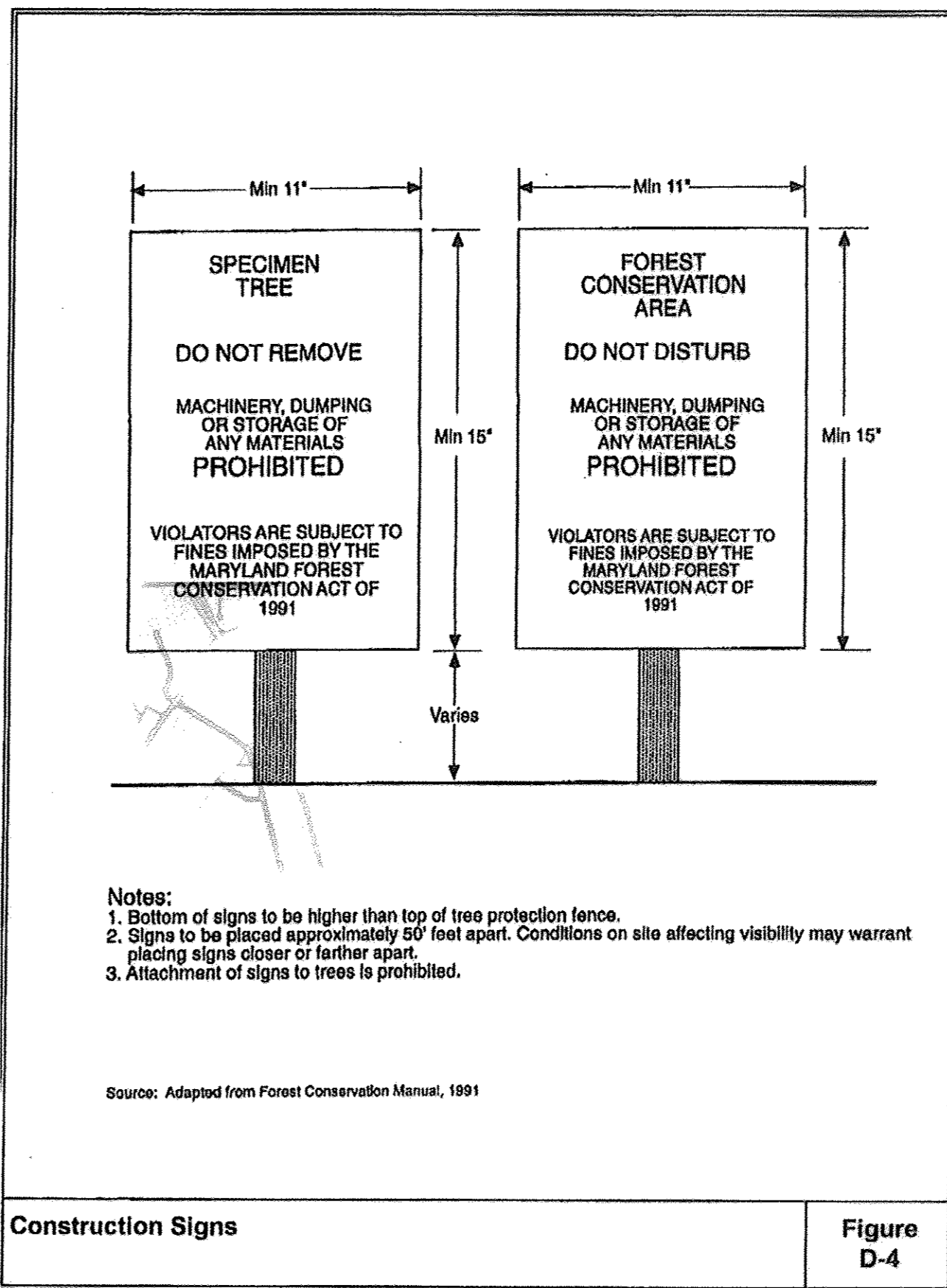
- No disturbance or dumping is allowed inside the tree retention area.
- No equipment shall be operated inside the tree retention area including tree canopies.
- In the event of drought, the protected trees shall be monitored for signs of stress and watered as needed.

### POST-CONSTRUCTION ACTIVITIES

- At the direction of a qualified tree care expert, damages to retained trees shall be repaired by the contractor.
- Fence removal and stabilization shall be as per the sediment and erosion control plan.
- Do not remove signs.

### SEQUENCE OF CONSTRUCTION - FOREST CONSERVATION

- Preconstruction meeting/site walk with contractors and other responsible parties to define protection measures to be utilized and to point out particular trees to be saved shall be conducted prior to the start of construction.
- Stake out limits of disturbance and tree protection fencing locations.
- Install tree protection fencing locations.
- Proceed with the tree removal and site improvements as per the approved sediment and erosion control plan.
- Temporary tree protection devices shall be removed after all finished grading and utility construction has occurred.
- Removal of hazardous trees (dead, diseased or those subject to wind throw) will be allowed along the edge of the forest retention easement area as well as within other saved areas. All such removals shall be noted as part of the construction sequence for this project.



Construction Signs Figure D-4

- ### NOTES:
- Bottom of signs to be higher than top of tree protection fence.
  - Signs to be placed approximately 50' feet apart. Conditions on site affecting visibility may warrant placing signs closer or farther apart.
  - Attachment of signs to trees is prohibited.

## SCHEDULE A PERIMETER LANDSCAPE EDGE (ADJACENT TO PERIMETER PROPERTIES)

Category	Perimeter #1	Perimeter #2	Perimeter #3
Landscaping Type	A	A	A
Linear Feet of Roadway	0	0	0
Frontage/Perimeter	946.61	524.48	416.07
Credit for Existing Vegetation (Yes, No, Linear Feet)	Yes 10 shade trees	Yes 3 shade + 4 Evergreen trees	Yes 416.07
Credit for Wall, Fence or Berm (Yes, No, Linear Feet)	No	No	No
Number of Plants Required			
Shade Trees	6	0	0
Evergreen Trees	0	0	0
Shrubs	0	0	0
Number of Plants Provided			
Shade Trees	6	0	0
Evergreen Trees	0	0	0
Other Trees (2:1 substitution)	0	0	0
Shrubs (10:1 substitution)	0	0	0
(Describe plant substitution credits below is needed)	see Note 1	see Note 2	

- ### NOTES:
- The spacing requirement for shade trees for Landscape Buffer A is 1/60'. All of the required trees are placed within the section where the existing vegetation will be cleared back to the property line to permit grading and adequate drainage. The effective spacing is 1/45'. Credit is taken for vegetation retained in areas not to be disturbed. Existing trees greater than 6" have been located and are shown on the plan.
  - 100% credit is taken for retained vegetation here as the majority of the edge is greater than 20 feet wide and that portion that is cleared less than 20 feet is less than 15% of the total edge length. Individual existing trees for credit is demonstrated and taken are shown.
  - Note also that the railroad grade along Perimeter #1, part of which extends onto the site, forms a substantial berm providing landscape screening. No credit is taken for this feature, but it does exist.

### RECOMMENDED TREE SELECTION FOR BUFFER A INFILL

Scientific Name	Common Name	Number of Trees	Caliper
Acer Rubrum (ony)	Red Maple (ony)	3	2.5" - 3"
Quercus rubra	Northern Red Oak	3	2.5" - 3"

Quality of all trees shall be of firs quality per note 12 hereon.

www.StephensENV.com  
P.O. Box 485  
North East MD 21901  
P: (302) 286-0406  
F: (410) 658-7298

## LANDSCAPE AND FOREST CONSERVATION DETAILS FOR ICM-JESSUP ADDITION

8375 DORSEY RUN ROAD  
COUNCIL DISTRICT 2,  
HOWARD COUNTY, MARYLAND 20794

### SITE DATA

Owner/ Developer: Jessup Asphalt Partners, LP  
Owner/ Developer Address: 638 Lancaster Avenue, Malvern, PA 19355  
Owner/ Developer Phone #: 1-800-999-1018

Premises Address: 8375 Dorsey Run Road, Jessup, MD 20794

DPZ Plat File #: F-15-090  
Plat Reference: (23008-23011)  
Related DPZ File References: SDP-07-012 F-08-031, ECP-15-008  
Deed Reference: Liber 15628 Folio 00006  
Lot Area: 19.1339 acres +/-  
Tax Parcel: Map 0048 Grid 0008 Parcel 0101 PAR A

Zoning: M-2, Heavy Manufacturing  
Election District: Sixth

Water Supply: Public available  
Wastewater Disposal: Public available

Datum: NAD83/ NAVD88

### PROPOSED DEVELOPMENT BASIC DATA

Proposed future use: Recycled Asphalt Product (RAP) Storage  
Proposed Structures/Buildings: None  
Proposed Parking: None  
Proposed water service: None  
Proposed sanitary sewer service: None  
Proposed Stormwater Management: (2) Submerged Gravel Wetlands  
Total Disturbed Area: 4.05 Acres +/-  
Total Impervious Area: 3.03 acres +/-  
Type of Impervious surface: compacted gravel base, no pavement

The site is designated a "Hot Spot" for stormwater management purposes.  
No disturbance of wetlands/ Waters of the US or associated buffers is proposed.

Access to the property is exclusively through the adjoining asphalt plant, 8375 Dorsey Run Road, Jessup, MD 20794.

### APPROVED: HOWARD CO. DEPARTMENT OF PLANNING AND ZONING

Chief-Development Engineering Division  
Director: William E. Stephens, QP  
Date: 6/10/16

### PROJECT BENCH MARKS

Benchmark #1: GPI CRF EL: 204.19 (NAVD 88)  
N53720.66 E137118.89 (NAD83)  
Located 8' North and 66' East of the Benchmark Building #474.

Benchmark #109: CRF-GPI EL: 188.96 (NAVD 88)  
N53734.18 E137225.88 (NAD 83)  
located on westerly side of SWM Pond

Benchmark #1209: CRF EL: 169.48 (NAVD 88)  
N53726.67 E137340.29 (NAD 83)  
Located at easternmost property corner

### DEVELOPER'S OWNER'S CERTIFICATION

I/we certify that the landscaping shown on these plans will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. We further certify that upon completion of a certification of landscape installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Owner/Developer's Representative: [Signature]  
Date: 6/10/16

### REVISIONS

Rev. #	Date	By	Comment/Reference
1	07/19/2015	WES	per Howard County DPZ comments

# SHEET 16

## FCP/LND-2

### SDP-15-041