

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GRADING PLAN
3	EROSION & SEDIMENT CONTROL PLAN
4	EROSION & SEDIMENT CONTROL PLAN
5	EROSION & SEDIMENT CONTROL PLAN
6	EROSION & SEDIMENT CONTROL NOTES AND DETAILS
7	EROSION & SEDIMENT CONTROL NOTES AND DETAILS
8	EROSION & SEDIMENT CONTROL NOTES
9	EROSION & SEDIMENT CONTROL NOTES

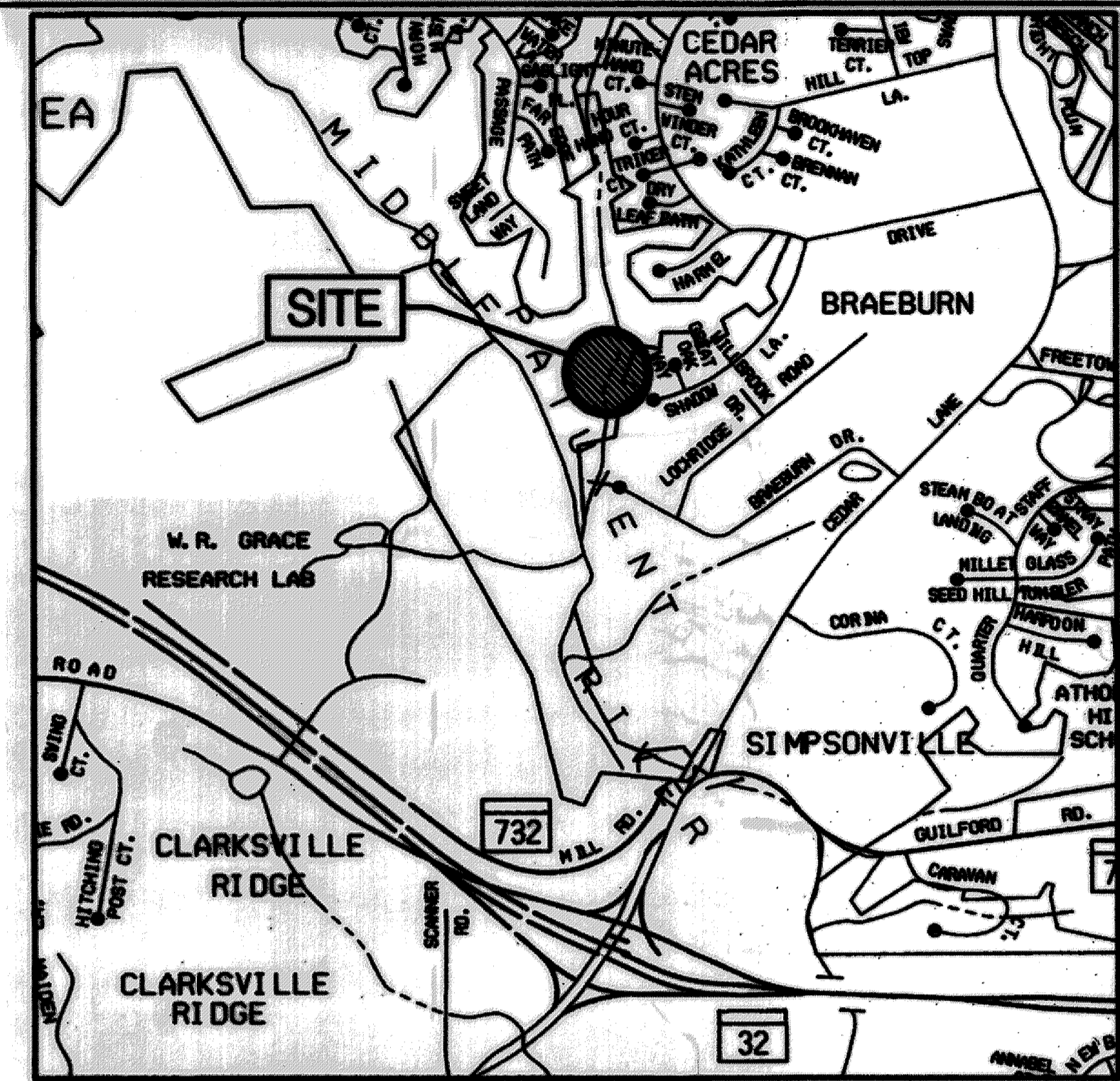
LEGEND

LIMIT OF DISTURBANCE/ORANGE SAFETY FENCE	---	LOD
EXISTING MAJOR CONTOURS	---	387
EXISTING MINOR CONTOURS	---	
PROPOSED CONTOURS	---	387
EXISTING 100 YEAR FLOODPLAIN	---	
EXISTING TREE	○	
EXISTING TREE TO BE SAVED	○	
EDGE OF TREELINE	~	
WATERS OF THE US	WUS	
EDGE OF WETLAND	~	
PROPERTY LINE	---	
EXISTING STORM DRAIN	SD	
EXISTING SEWER MANHOLE	SM	
EXISTING STORM DRAIN MANHOLE	SM	
EXISTING SEWER LINE	S	
EXISTING EDGE OF PAVEMENT	---	
EXISTING EDGE OF WATER	---	
PROPOSED EDGE OF WATER	---	
EXISTING BUILDING	▭	
PROPOSED RIPRAP PAD	▭	
SANDBAG DAM/BARRIER	▭	
PUMP AROUND AND HOSES	~	
REMOVABLE PUMPING STATION	⊠	RPS
FILTER BAG	▭	FB
SILT FENCE	---	SF
SUPER SILT FENCE	---	SSF
TEMPORARY ACCESS BRIDGE	---	
STABILIZED CONSTRUCTION ENTRANCE	---	

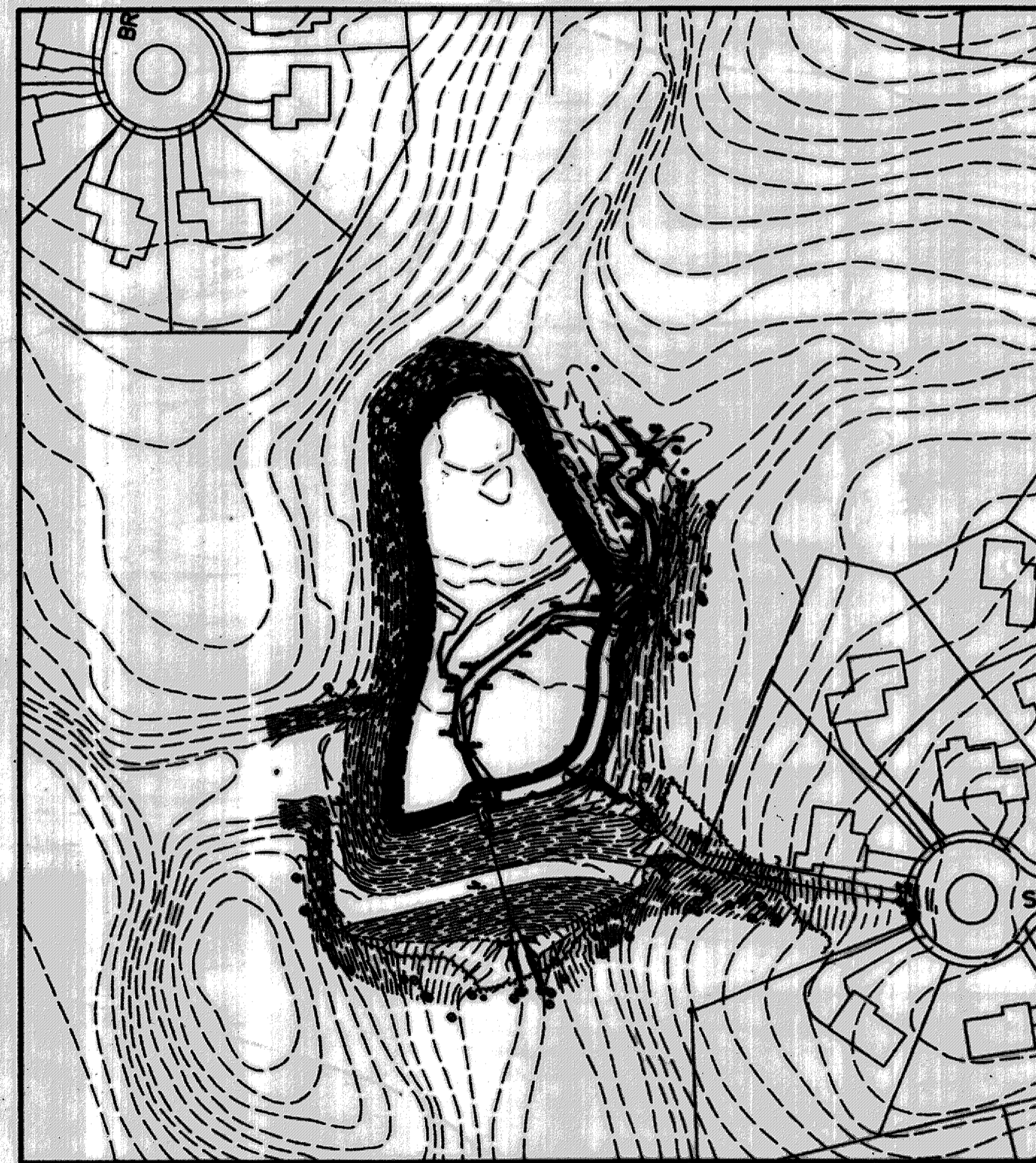
SHADOW LANE POND DREDGING

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT CA 08-29



VICINITY MAP
SCALE: 1" = 1000'
ADC MAP COORD. 15 818 X SHADOW LANE



SITE SCHEMATIC
SCALE: 1" = 100'

SPECIAL CONTRACTOR NOTES

- 100-YEAR FLOODPLAIN ELEVATION IS SHOWN ON THE PLANS.
- NO STOCKPILE OF ANY MATERIAL IS ALLOWED IN THE 100-YEAR FLOODPLAIN.
- IN-STREAM WORK IS PROHIBITED FROM MARCH 1ST TO MAY 31ST.
- THE CONTRACTOR SHALL EXERCISE CARE IN ACTIVITIES INVOLVING EITHER CUT AND FILL OR GRADING IN THE VICINITY OF TREES THAT ARE TO REMAIN. ALL EARTH CUTS AND ACTIVITIES IN THE VICINITY OF TREES TO REMAIN SHALL BE MADE IN A MANNER THAT DOES NOT DISTURB THE CRITICAL ROOT ZONE WITHIN THE ORIGINLINE OF THE TREE. PROTECTIVE ORANGE FENCING SHALL BE INSTALLED AROUND THE PERIMETER OF THE CRITICAL ROOT ZONE PRIOR TO CONSTRUCTION. THE LOCATION OF THE PROTECTIVE ORANGE FENCING SHALL BE APPROVED BY THE ENGINEER OR HIS/HER REPRESENTATIVE PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOT STORE EQUIPMENT, MATERIALS AND/OR SUPPLIES BEYOND THE LIMIT OF DISTURBANCE SHOWN ON THE PLANS.
- UPON COMPLETION OF THE WORK, BUT PRIOR TO DE-MOBILIZATION, THE CONTRACTOR SHALL REMOVE ALL REMNANTS OF CONSTRUCTION MATERIALS FROM THE SITE. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL TO OR BETTER THAN THE PRE-CONSTRUCTION CONDITIONS.
- PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES, PHOTOGRAPHS OF THE PROPOSED WORK AREA AND ACCESS SHALL BE TAKEN.
- ALL TREES TO BE REMOVED SHALL BE CUT AT THE BASE WITH A SAW AND NOT PUSHED OVER. TREE STUMPS MAY BE LEFT IN PLACE, UNLESS OTHERWISE DIRECTED ON THE PLANS.
- DREDGED SEDIMENT SHALL BE TRANSPORTED TO CUNNINGHAM'S SAND AND GRAVEL PIT LOCATED IN CROFTON, MARYLAND FOR DISPOSAL.

GENERAL INFORMATION

- THE SUBJECT PROPERTIES ARE ZONED NT (NEW TOWN) PER AUGUST 2007 COMPREHENSIVE ZONING PLAN AND THE COMP-LITE ZONING AMENDMENTS DATED 6/4/2009.
- THE DEPARTMENT OF PUBLIC WORKS HAS DETERMINED THAT THE DISTURBANCES WITHIN THE 100-YEAR FLOODPLAIN, WETLANDS, STREAM AND REQUIRED BUFFERS FOR THE PROPOSED POND DREDGING PROJECT ARE CONSIDERED ESSENTIAL OR NECESSARY IN ACCORDANCE WITH SECTION 16.115(C) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- THERE ARE NO BURIAL GROUNDS OR CEMETERY SITES LOCATED ON THE PROJECT SITE.
- THIS PLAN MEETS THE REQUIREMENTS OF THE FOREST CONSERVATION REGULATIONS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY CONTAINED HEREIN PLUS HSWA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1000 24 HOURS IN ADVANCE OF ANY WORK BEING DONE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
- WATER IS PUBLIC.
- SEWER IS PUBLIC.
- EXISTING UTILITIES ARE BASED ON FIELD SURVEYS AND AVAILABLE RECORD DRAWINGS. CONTRACTOR TO VERIFY INFORMATION TO HIS/HER OWN SATISFACTION.
- THE WETLANDS DELINEATION FOR THIS PROJECT WAS PERFORMED BY KCI TECHNOLOGIES IN MARCH 2011.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH ONE FOOT CONTOUR INTERVALS PREPARED BY AS CONSULTANTS, INC., IN FEBRUARY 2011.
- ALL WORK SHALL CONFORM TO THE MDE BEST MANAGEMENT PRACTICES FOR WETLANDS AND WATERWAYS PERMIT APPROVED JULY 5, 2012. (MDE-20120057/12-WT-0135) AND THE CONDITIONS INCLUDED IN USAGE INDIVIDUAL PERMIT APPROVED APRIL 29, 2013 (CEMWB-OP-RW (NO DPA)/SHADOW LANE POND) 2012-00571-N021).
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- OBSTRUCTIONS SHOWN ON THIS DRAWING ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND KCI TECHNOLOGIES, INC. DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN. SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE CONTRACTOR MUST NOTIFY IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

SITE ANALYSIS DATA CHART

- TOTAL PROJECT AREA: 5.60 ACRES
- DISTURBED AREA: 2.38 ACRES
- PROPOSED USE FOR THE SITE: STORMWATER MANAGEMENT POND MAINTENANCE DREDGING
- OPEN SPACE ON SITE LOT 96: 18.2 ACRES
- APPLICABLE DPZ FILE REFERENCES: F-03-120; 05/04/1993; PARCEL NO: 7067

AS-BUILT

ENGINEER'S CERTIFICATE
I 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 COUNTY SOIL CONSERVATION DISTRICT.
Paul Wright P.E. # 39696 DATE 05/16/13

DEVELOPER'S CERTIFICATE
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION SHALL BE DONE ACCORDING TO THIS PLAN 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 THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE THE BEGINNING OF THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
Howard E. Saltzman DATE 6/6/13

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD
Paul Wright 6/16/13
Howard E. Saltzman 6/6/13

AS-BUILT CERTIFICATION
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.
Paul Wright 39696 02-25-2014
SIGNATURE PE NO. DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John V. Robertson 6/20/13
HOWARD SCD DATE

EP-12-010
PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 39696. EXPIRATION DATE: JANUARY 04, 2015

NO.	REVISIONS DESCRIPTION	DATE
AS-BUILT		02/2014

936 RIDGEBROOK ROAD
SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818
WWW.KCI.COM

KCI TECHNOLOGIES

STORMWATER AND WATERSHED MANAGEMENT
EVALUATION / DESIGN-BUILD SERVICES
SHADOW LANE
POND DREDGING
Howard County Contract # CA 08-29
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CONTRACT # 08-29

TITLE SHEET

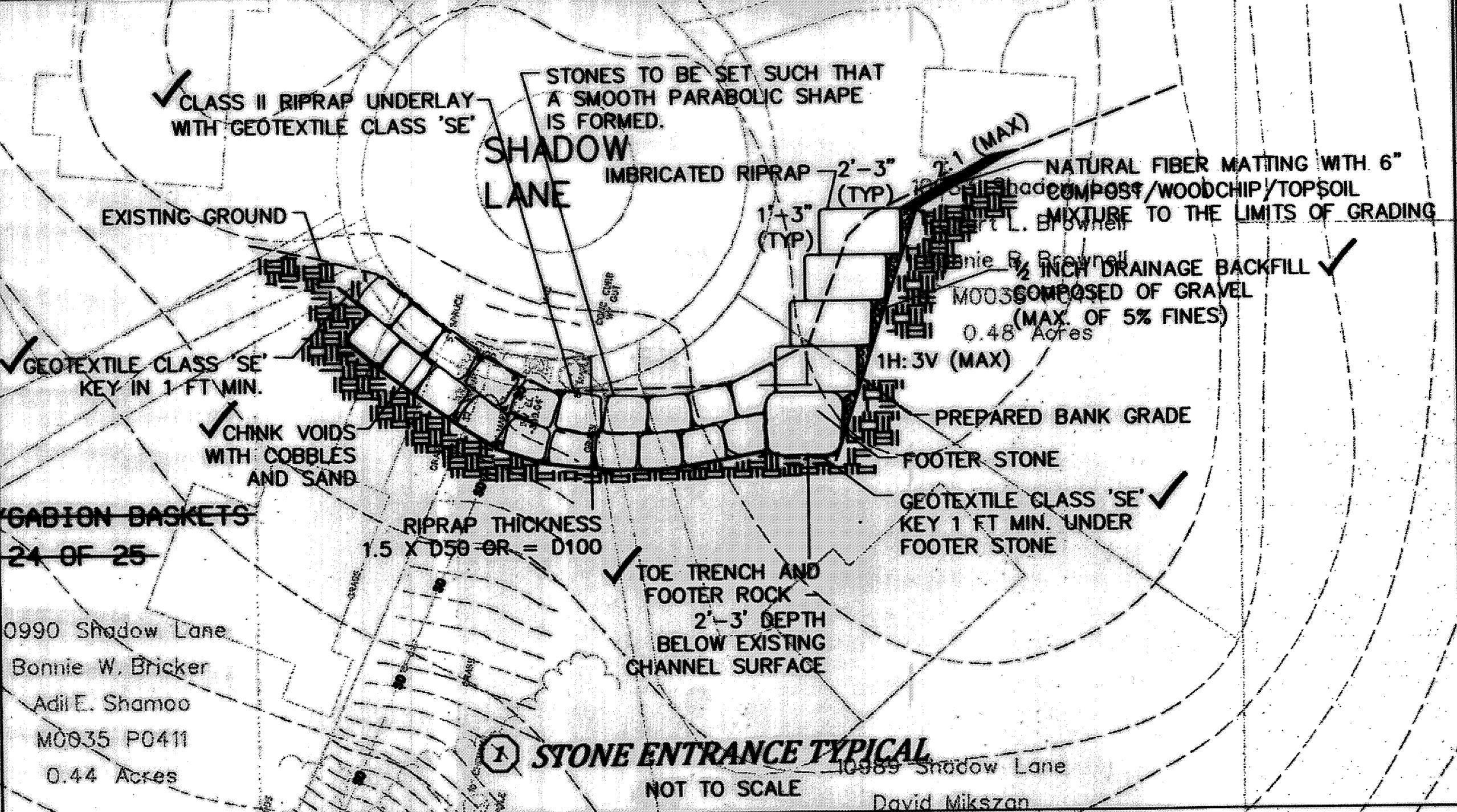
SCALE: AS SHOWN
DATE: MAY 2013
PROJECT NO.: 01-081795.52
CAPITAL PROJECT NO.: CA 08-29
CONSTRUCTION ISSUE

SHEET NO.: 1 OF 9

① EXISTING STONE ENTRANCE STRUCTURE/GABION BASKETS REMOVED AND NEW STONE ENTRANCE INSTALLED. (SEE TYPICAL, THIS SHEET)

EXISTING STONE ENTRANCE STRUCTURE/GABION BASKETS (SEE AS-BUILT PLAN F-03-120 SHEET 24 OF 25 DATED 5/4/1993 FOR DETAIL)

② STONE ENTRANCE TYPICAL NOT TO SCALE



PERMANENT WET STORAGE VOLUME- 3.62 AC:FT
 ✓ PERMANENT
 W.S.E. 288.67

POND/BOTTOM
 ELEV 285.25-
 285.00

12 FT. WIDE
 AQUATIC BENCH

19" CLASS I RIPRAP
 UNDERLAY WITH
 GEOTEXTILE CLASS 'SE'

LEGEND

EXISTING MAJOR CONTOURS	---	387
EXISTING MINOR CONTOURS	---	
PROPOSED CONTOURS	---	387
EXISTING 100 YEAR FLOODPLAIN	---	
EXISTING TREE	○	
EDGE OF TREELINE	---	
WATERS OF THE US	---	WUS
EDGE OF WETLAND	---	
PROPERTY LINE	---	
EXISTING STORM DRAIN	---	
EXISTING SEWER MANHOLE	○	
EXISTING STORM DRAIN MANHOLE	○	
EXISTING SEWER LINE	---	
EXISTING EDGE OF PAVEMENT	---	
EXISTING EDGE OF WATER	---	
PROPOSED EDGE OF WATER	---	
EXISTING BUILDING	□	

11885 Bright Passage
 Richard P. Dean
 Carroll Dean
 M0035 P0412
 0.52 Acres

3430 Court House Drive
 Howard County Maryland
 M0035 P0411
 18.2 Acres

11884 Bright Passage
 William Rollow
 Geri Rollow
 M0035 P0412
 0.45 Acres

6448 Lochridge Road
 Braeburn Community Association Inc.
 M0035 P0090
 6.3 Acres

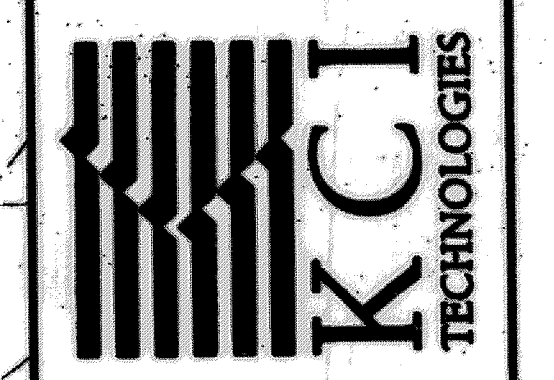
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 John L. Roberts
 HOWARD SCD
 DATE 6/24/13

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD
 [Signature]
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES
 DATE 6/11/13

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 [Signature]
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 39696. EXPIRATION DATE: JANUARY 04, 2015

NO.	REVISIONS DESCRIPTION	DATE
1	EXISTING GABION BASKETS REMOVED	11/2013
2	EXISTING STONE ENTRANCE INSTALLED	11/2013
3	AS-BUILT	02/2014

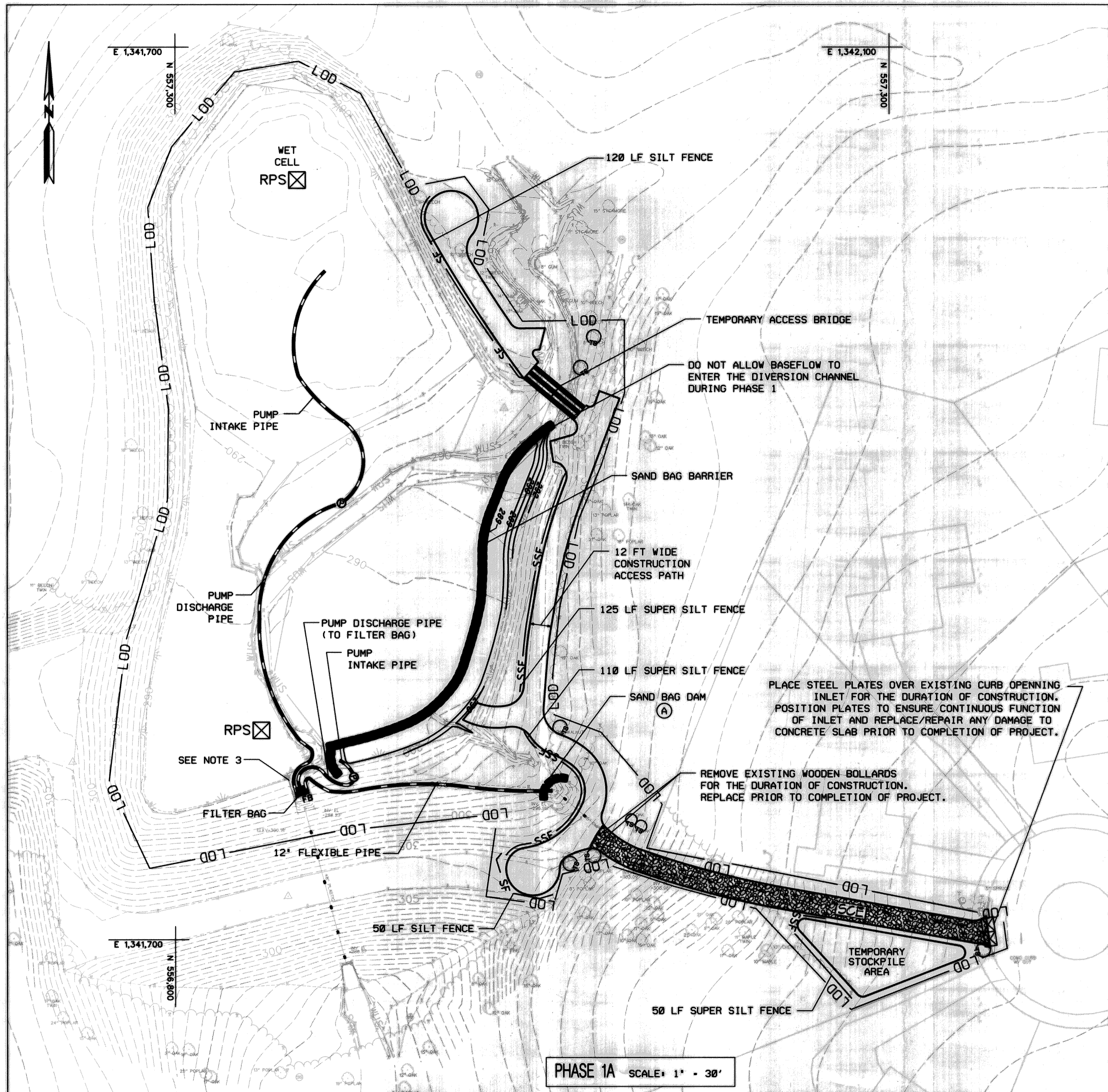
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 SPARKS, MARYLAND 21152
 TELEPHONE: (410) 316-7800
 FAX: (410) 316-7818
 www.kci.com



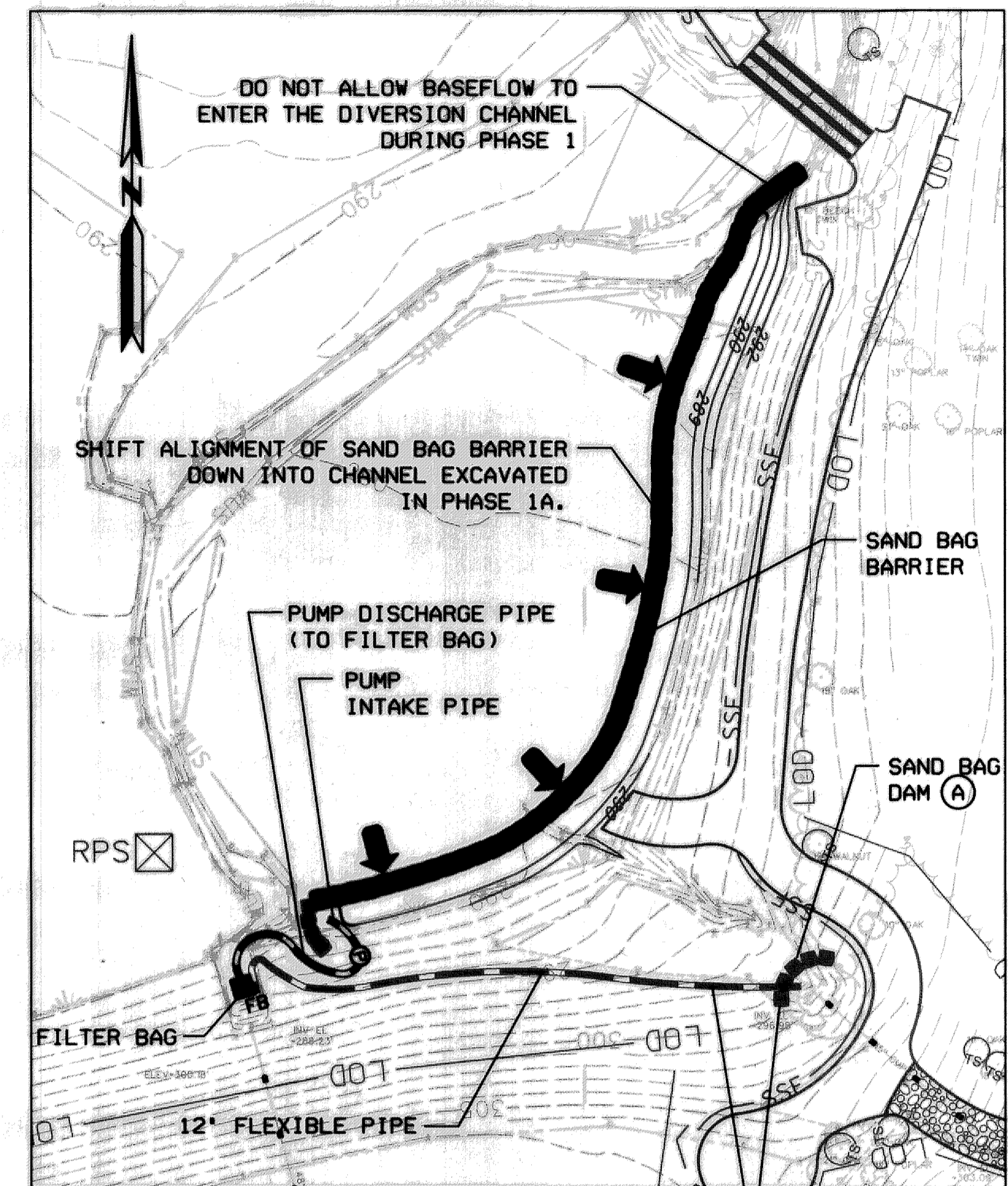
STORMWATER AND WATERSHED MANAGEMENT
 EVALUATION / DESIGN-BUILD SERVICES
 SHADOW LANE
 POND DREDGING
 Howard County Contact # CA 08-9
 Howard County Department of Public Works
 100 COLLEGE PARK DRIVE
 COLLEGE PARK, MD 20740

SHADOW LANE
 GRADING
 PLAN

SCALE	1" = 30'
DATE	MAY 2013
PROJECT NO.	01-081795.52
SUBJECT	CA 08-29
CONSTRUCTION SHEET	
SHEET NO.	2 OF 9



PHASE 1A SCALE: 1" = 30'



PHASE 1B SCALE: 1" = 30'

ONCE PHASE 1A IS COMPLETED, REMOVE SAND BAG DAM (A) AND 12' FLEXIBLE PIPE.

LEGEND

LIMIT OF DISTURBANCE/ORANGE SAFETY FENCE	LOD
EXISTING MAJOR CONTOURS	367
EXISTING MINOR CONTOURS	
PROPOSED CONTOURS	387
EXISTING 100 YEAR FLOODPLAIN	
EXISTING TREE	
EXISTING TREE TO BE SAVED	
EDGE OF TREELINE	
WATERS OF THE US	WUS
EDGE OF WETLAND	
PROPERTY LINE	
EXISTING STORM DRAIN	
EXISTING SEWER MANHOLE	
EXISTING STORM DRAIN MANHOLE	
EXISTING SEWER LINE	
EXISTING EDGE OF PAVEMENT	
EXISTING EDGE OF WATER	
EXISTING BUILDING	
RIPRAP PAD	
SANDBAG DAM/BARRIER	
PUMP AND HOSES	
REMOVABLE PUMPING STATION	
FILTER BAG	
SILT FENCE	SF
SUPER SILT FENCE	SSF
TEMPORARY ACCESS BRIDGE	
STABILIZED CONSTRUCTION ENTRANCE	

NOTES

1. RELOCATE SAND BAGS AS NECESSARY TO FACILITATE GRADING WHERE PHASES OF CONSTRUCTION TIE TOGETHER.
2. FLEXIBLE INTAKE AND DISCHARGE PIPES MAY BE SHIFTED WITHIN THE LOD AS NEEDED TO ALLOW ACCESS TO WORK AREAS.
3. PLACE ALL DISCHARGE PIPES, DRAINS, AND FILTER BAG ON CONCRETE SLAB IN FRONT OF RISER.
4. ALL CONSTRUCTION AREAS SHALL BE DEMARCATED BY PLACING ORANGE CONSTRUCTION FENCING AT THE LOD BOUNDARY LINE.
5. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
6. ADDITIONAL SEDIMENT CONTROLS ARE TO BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 39696. EXPIRATION DATE: JANUARY 04, 2015

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

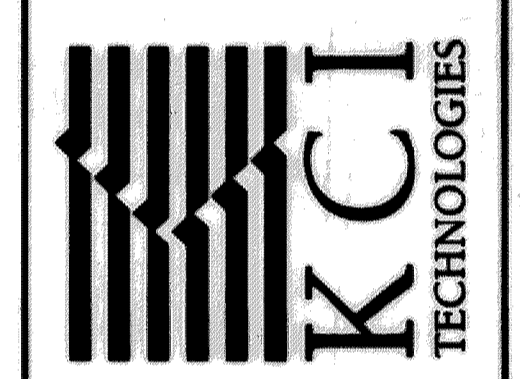
DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

John R. Ruppel
DATE: 6/28/13

William B. Ruppel
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES
DATE: 6/10/13

NO.	REVISIONS DESCRIPTION	DATE

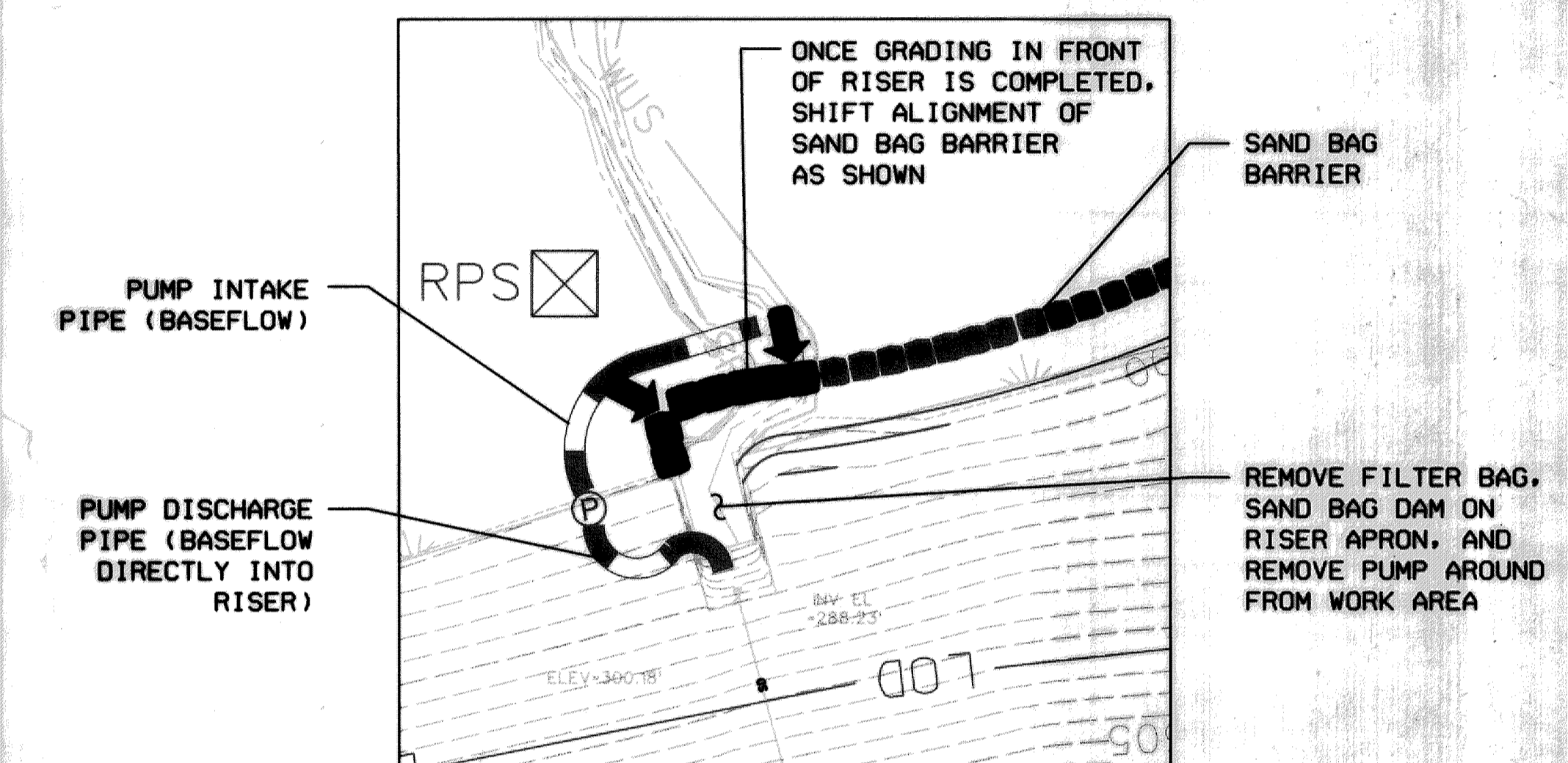
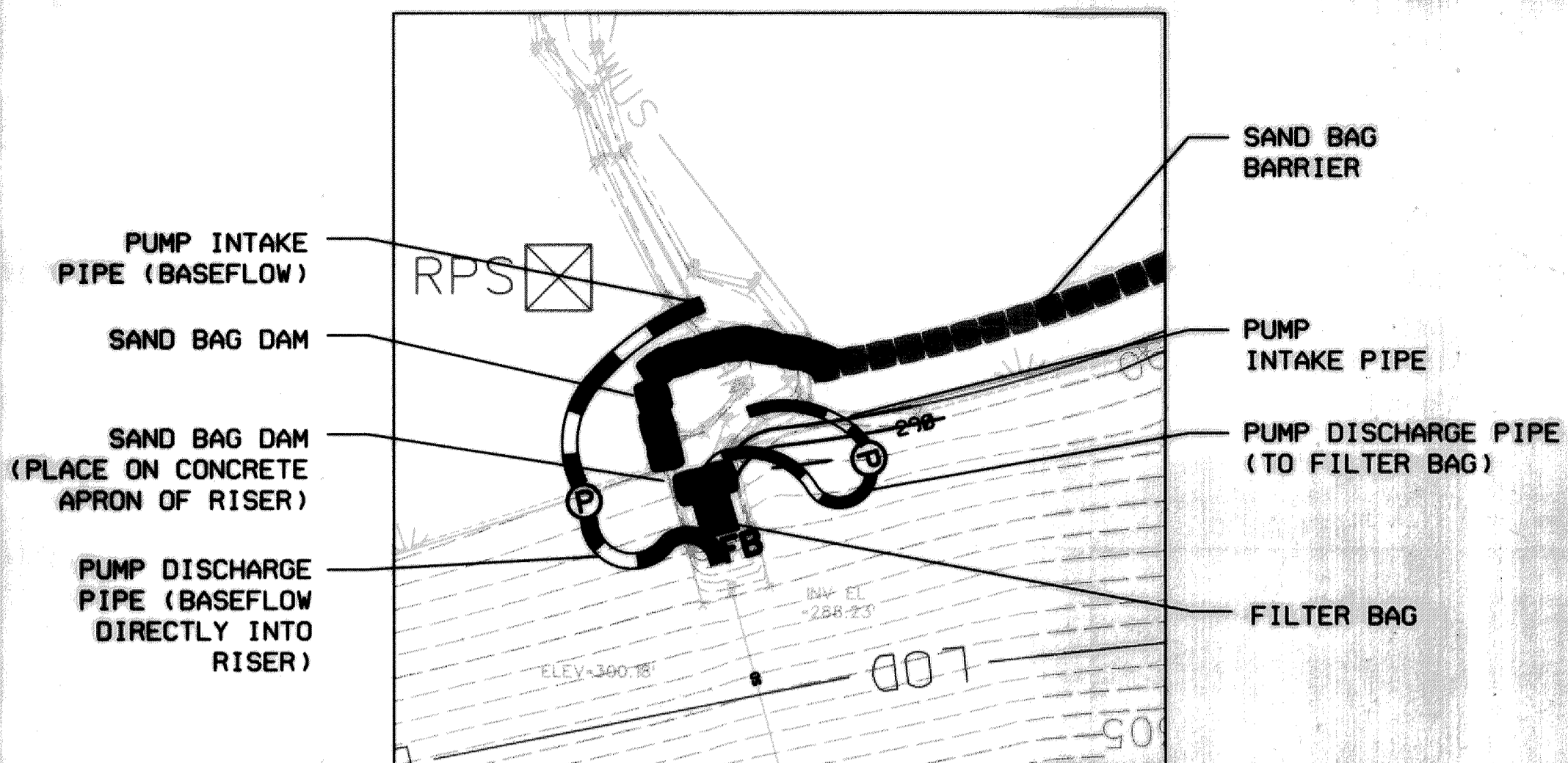
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SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818
www.kci.com



STORMWATER AND WATERSHED MANAGEMENT
EVALUATION / DESIGN-BUILD SERVICES
SHADOW LANE
POND DREDGING
Howard County Contract # CA 08-29
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL MANAGEMENT DIVISION
100 COLUMBIA AVENUE
COLUMBIA, MD 21046

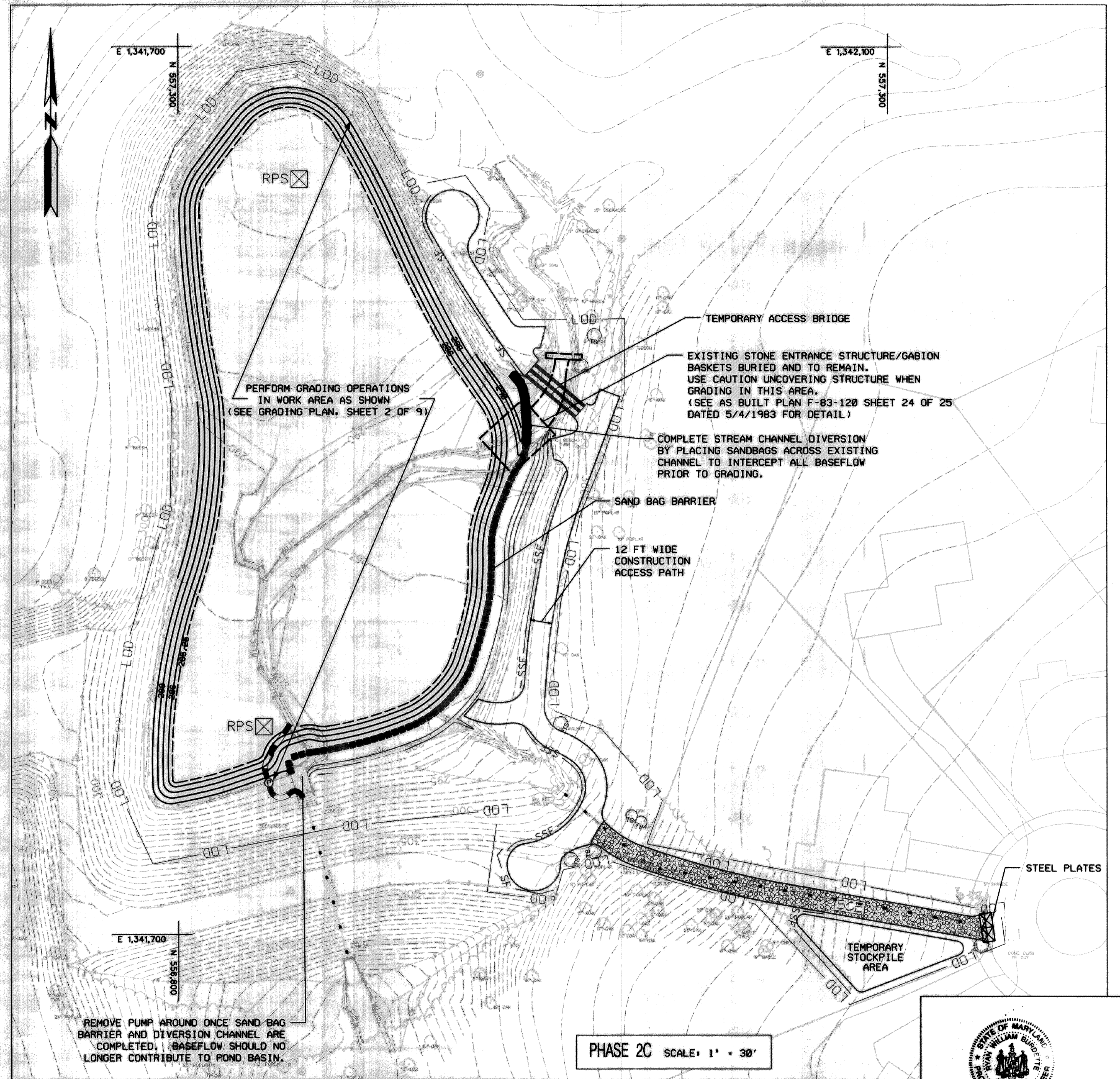
**SHADOW LANE
EROSION AND
SEDIMENT
CONTROL PLAN**

SCALE:	1" = 30'
DATE:	MAY 2013
KCI JOB NO.:	01-081795.52
CAPITAL PROJECT NO.:	CA 08-29
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	



LEGEND

LIMIT OF DISTURBANCE/ORANGE SAFETY FENCE	--- LOD	PROPOSED EDGE OF WATER	-----
EXISTING MAJOR CONTOURS	--- 387	EXISTING BUILDING	▭
EXISTING MINOR CONTOURS	---	RIPRAP PAD	▭
PROPOSED CONTOURS	--- 387	SANDBAG DAM/BARRIER	▭
EXISTING 100 YEAR FLOODPLAIN	---	PUMP AND HOSES	○
EXISTING TREE	○	REMOVABLE PUMPING STATION	⊗ RPS
EXISTING TREE TO BE SAVED	○	FILTER BAG	▭
EDGE OF TREELINE	---	SILT FENCE	▭
WATERS OF THE US	WUS	SUPER SILT FENCE	▭
EDGE OF WETLAND	---	TEMPORARY ACCESS BRIDGE	▭
PROPERTY LINE	---	STABILIZED CONSTRUCTION ENTRANCE	▭
EXISTING STORM DRAIN	---		
EXISTING SEWER MANHOLE	○		
EXISTING STORM DRAIN MANHOLE	○		
EXISTING SEWER LINE	---		
EXISTING EDGE OF PAVEMENT	---		
EXISTING EDGE OF WATER	---		



REMOVE PUMP AROUND ONCE SAND BAG BARRIER AND DIVERSION CHANNEL ARE COMPLETED. BASEFLOW SHOULD NO LONGER CONTRIBUTE TO POND BASIN.

NOTES

- RELOCATE SAND BAGS AS NECESSARY TO FACILITATE GRADING WHERE PHASES OF CONSTRUCTION TIE TOGETHER.
- FLEXIBLE INTAKE AND DISCHARGE PIPES MAY BE SHIFTED WITHIN THE LOD AS NEEDED TO ALLOW ACCESS TO WORK AREAS.
- ALL CONSTRUCTION AREAS SHALL BE DEMARCATED BY PLACING ORANGE CONSTRUCTION FENCING AT THE LOD BOUNDARY LINE.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- ADDITIONAL SEDIMENT CONTROLS ARE TO BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 BRUNSTADT

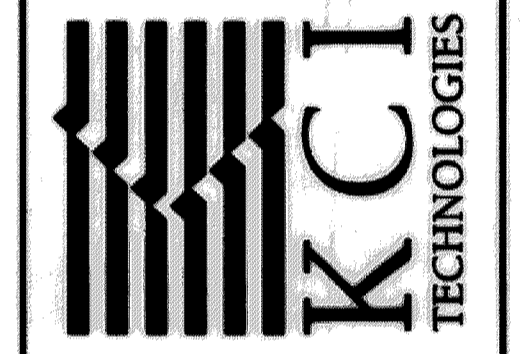
PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 39696, EXPIRATION DATE: JANUARY 04, 2015

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 John R. Robertson
 HOWARD SCD
 6/28/13
 DATE

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD
 Chief, Bureau of Environmental Services
 6/11/13
 DATE

NO.	REVISIONS DESCRIPTION	DATE

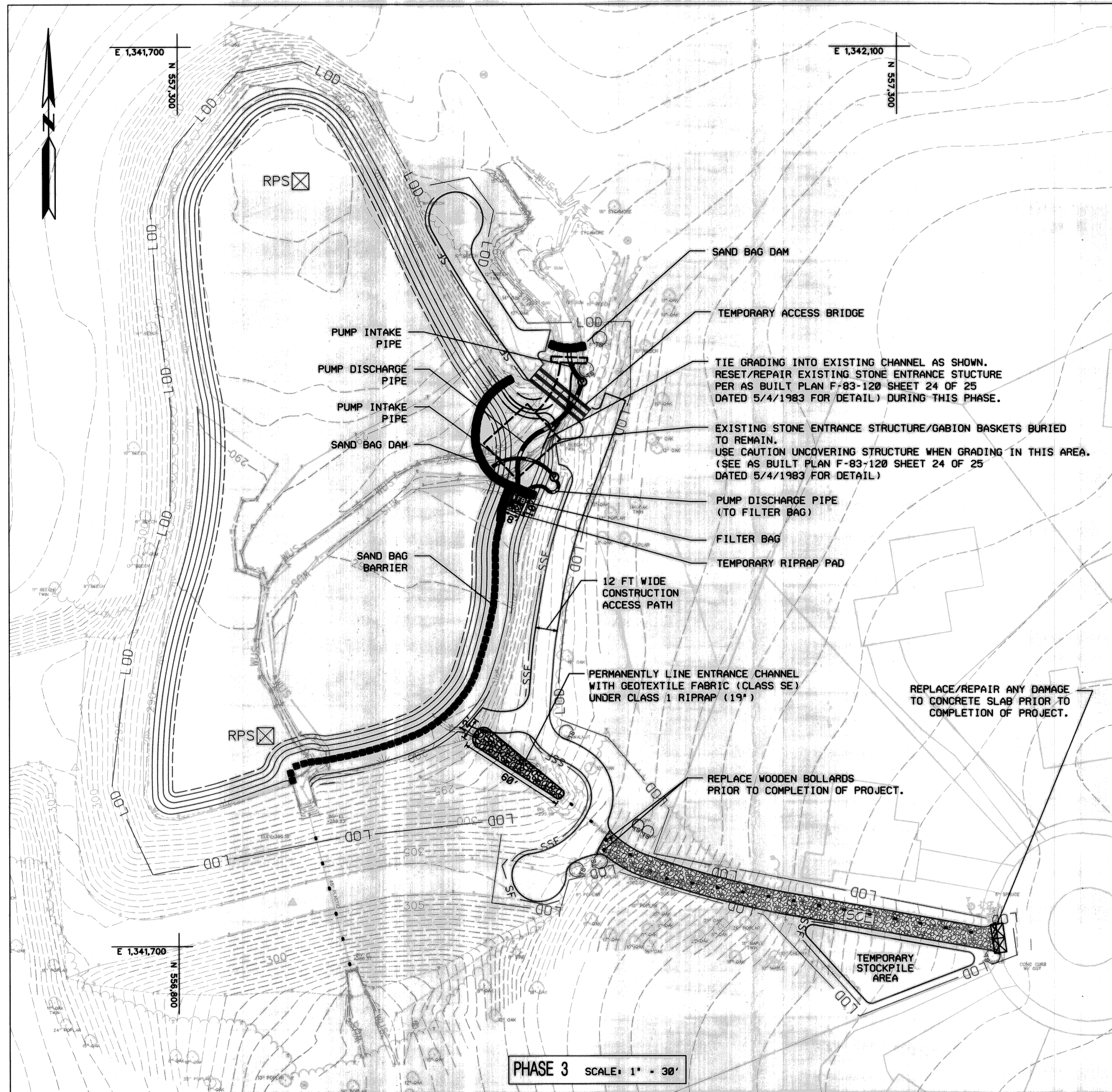
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STORMWATER AND WATERSHED MANAGEMENT
 EVALUATION / DESIGN-BUILD SERVICES
 SHADOW LANE
 POND DREDGING
 Howard County Contract # CA 08-29
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 STORMWATER MANAGEMENT DIVISION
 670 COLLEGE PARK DRIVE
 COLLEGE PARK, MD 20740

SHADOW LANE
 EROSION AND
 SEDIMENT
 CONTROL PLAN

SCALE:	AS SHOWN
DATE:	MAY 2013
KCI JOB NO.:	01-081795.52
CAPITAL PROJECT NO.:	CA 08-29
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	



PHASE 3 SCALE: 1" = 30'

NOTES

1. RELOCATE SAND BAGS AS NECESSARY TO FACILITATE GRADING WHERE PHASES OF CONSTRUCTION TIE TOGETHER.
2. FLEXIBLE INTAKE AND DISCHARGE PIPES MAY BE SHIFTED WITHIN THE LOD AS NEEDED TO ALLOW ACCESS TO WORK AREAS.
3. ALL CONSTRUCTION AREAS SHALL BE DEMARCATED BY PLACING ORANGE CONSTRUCTION FENCING AT THE LOD BOUNDARY LINE.
4. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
5. ADDITIONAL SEDIMENT CONTROLS ARE TO BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
6. BASEFLOW TO BE GRAVITY DRAINED AROUND WORK AREA FOR THE DURATION OF PHASE 3

LEGEND

LIMIT OF DISTURBANCE/ORANGE SAFETY FENCE	---	LOD
EXISTING MAJOR CONTOURS	---	387
EXISTING MINOR CONTOURS	---	
PROPOSED CONTOURS	---	387
EXISTING 100 YEAR FLOODPLAIN	---	
EXISTING TREE	○	
EXISTING TREE TO BE SAVED	○	
EDGE OF TREELINE	---	
WATERS OF THE US	WUS	
EDGE OF WETLAND	---	
PROPERTY LINE	---	
EXISTING STORM DRAIN	---	
EXISTING SEWER MANHOLE	○	
EXISTING STORM DRAIN MANHOLE	○	
EXISTING SEWER LINE	---	
EXISTING EDGE OF PAVEMENT	---	
EXISTING EDGE OF WATER	---	
PROPOSED EDGE OF WATER	---	
EXISTING BUILDING	---	
RIPRAP PAD	---	
SANDBAG DAM/BARRIER	---	
PUMP AND HOSES	⊕	
REMOVABLE PUMPING STATION	⊕	
FILTER BAG	⊕	
SILT FENCE	---	
SUPER SILT FENCE	---	
TEMPORARY ACCESS BRIDGE	---	
STABILIZED CONSTRUCTION ENTRANCE	---	

NO.	REVISIONS DESCRIPTION	DATE

936 RIDGEBROOK ROAD
 SPARKS, MARYLAND 21152
 TELEPHONE: (410) 316-7800
 FAX: (410) 316-7818
 WWW.KCI.COM



STORMWATER AND WATERSHED MANAGEMENT
 EVALUATION / DESIGN-BUILD SERVICES
 SHADOW LANE
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 Howard County Contract # CA 08-29
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 1000 COLUMBIA AVENUE
 COLUMBIA, MD 21046

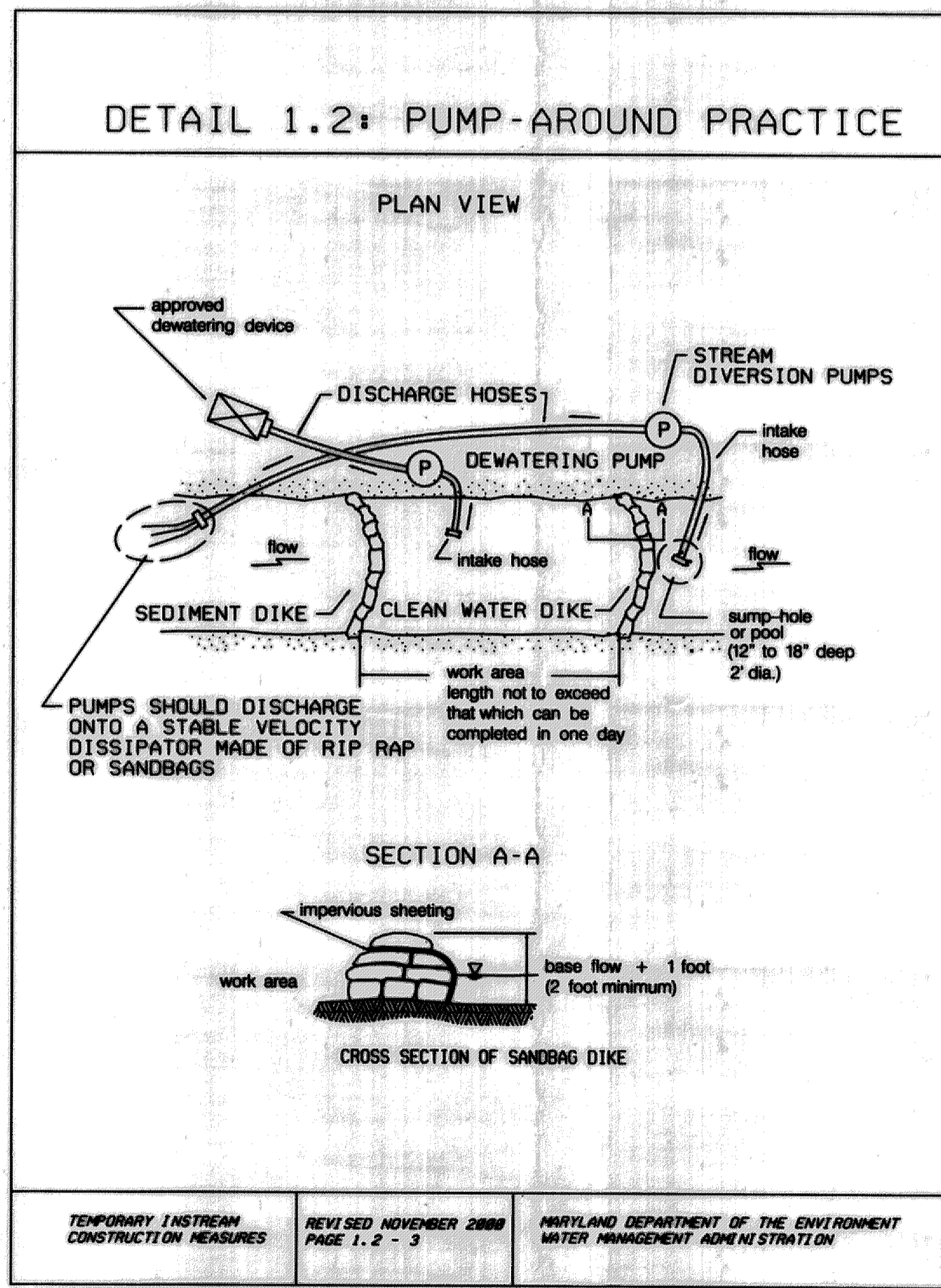
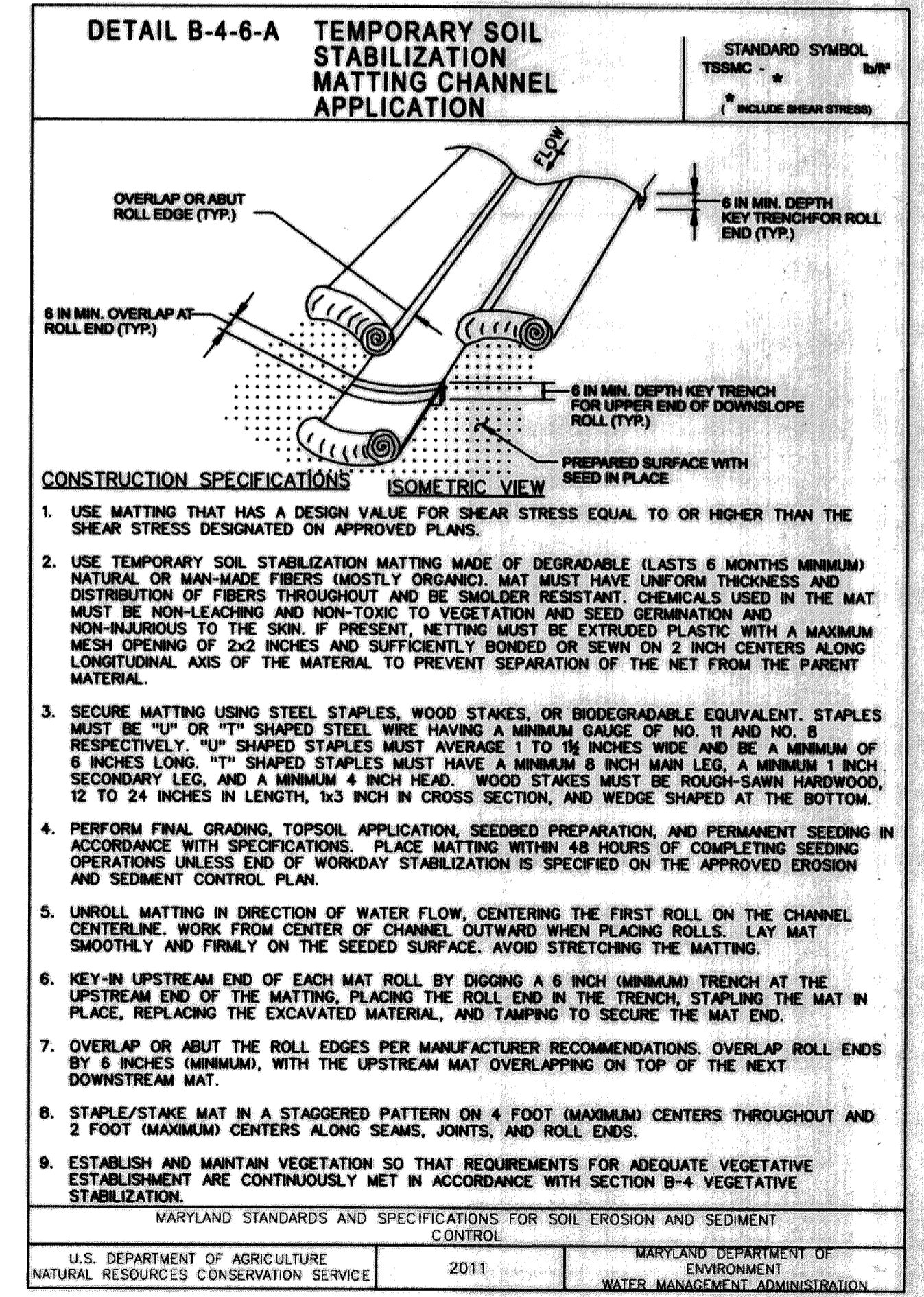
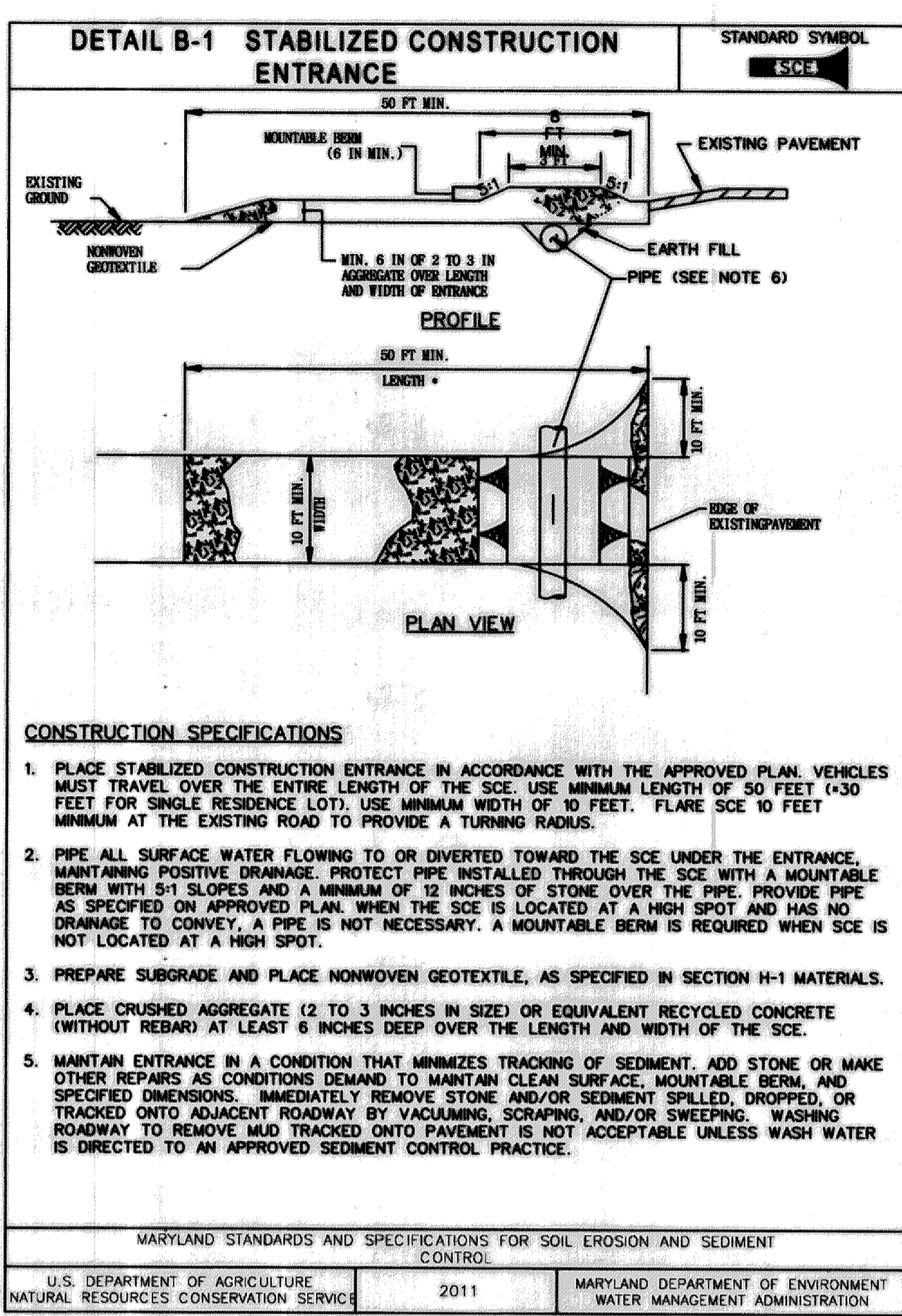
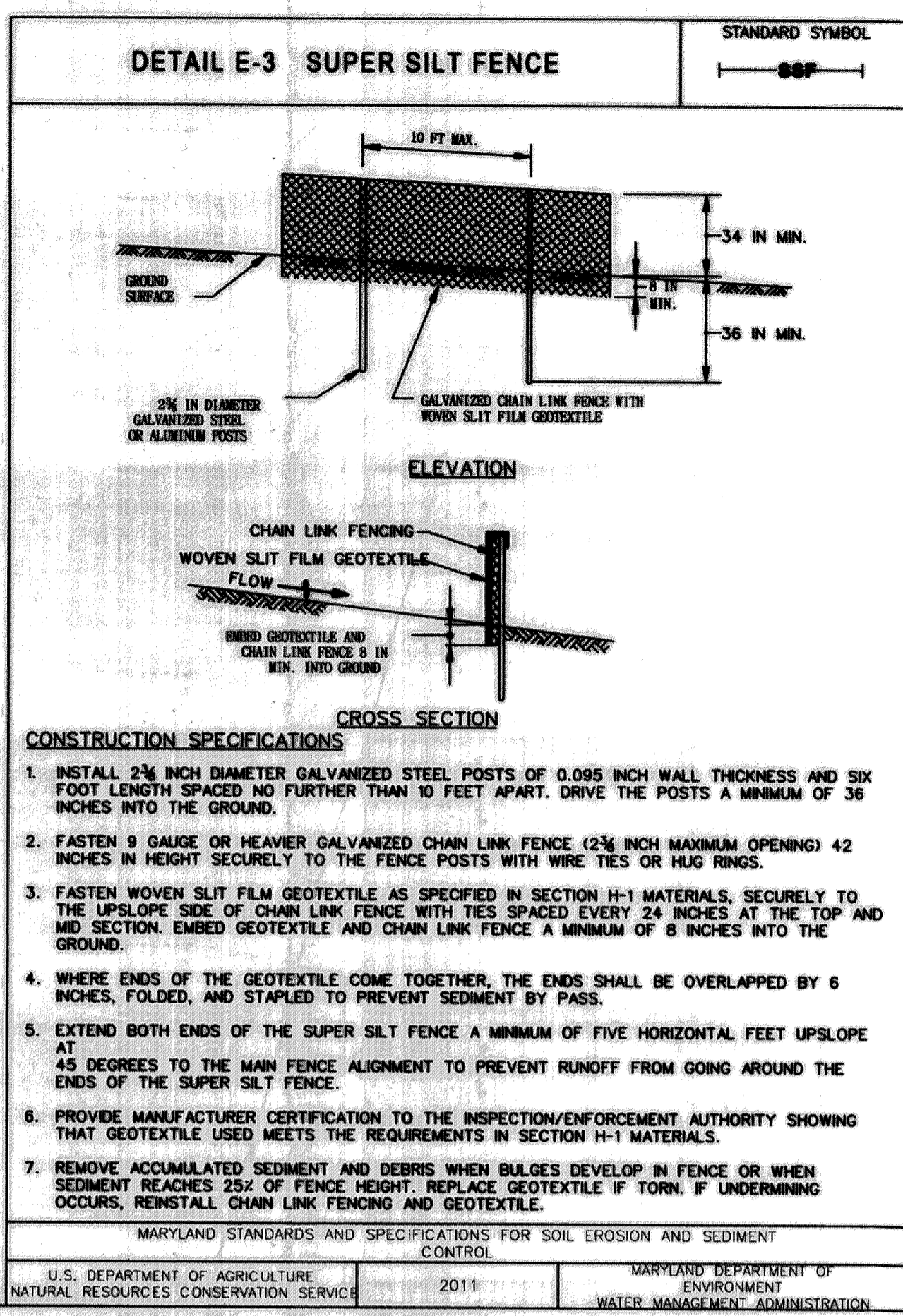
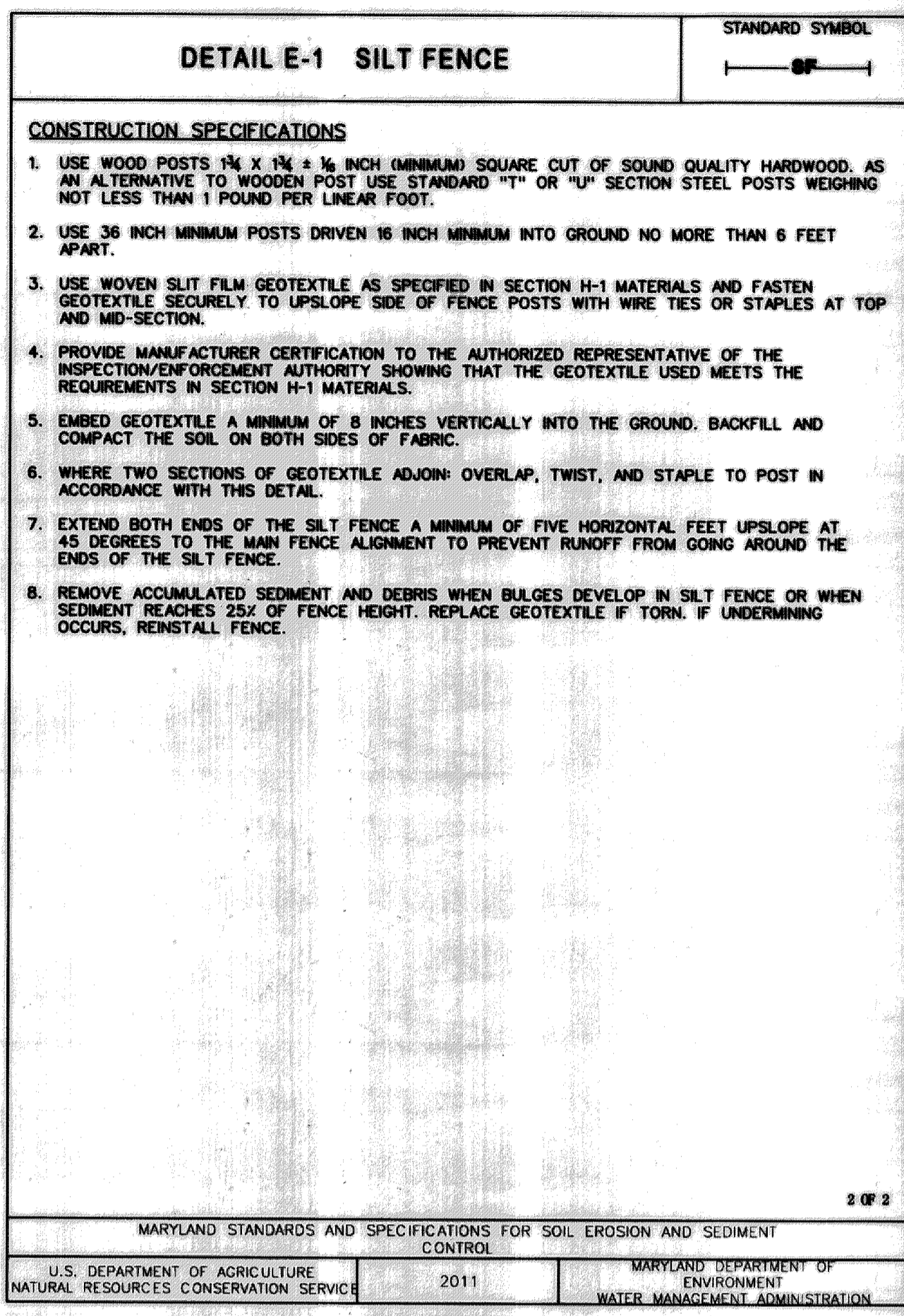
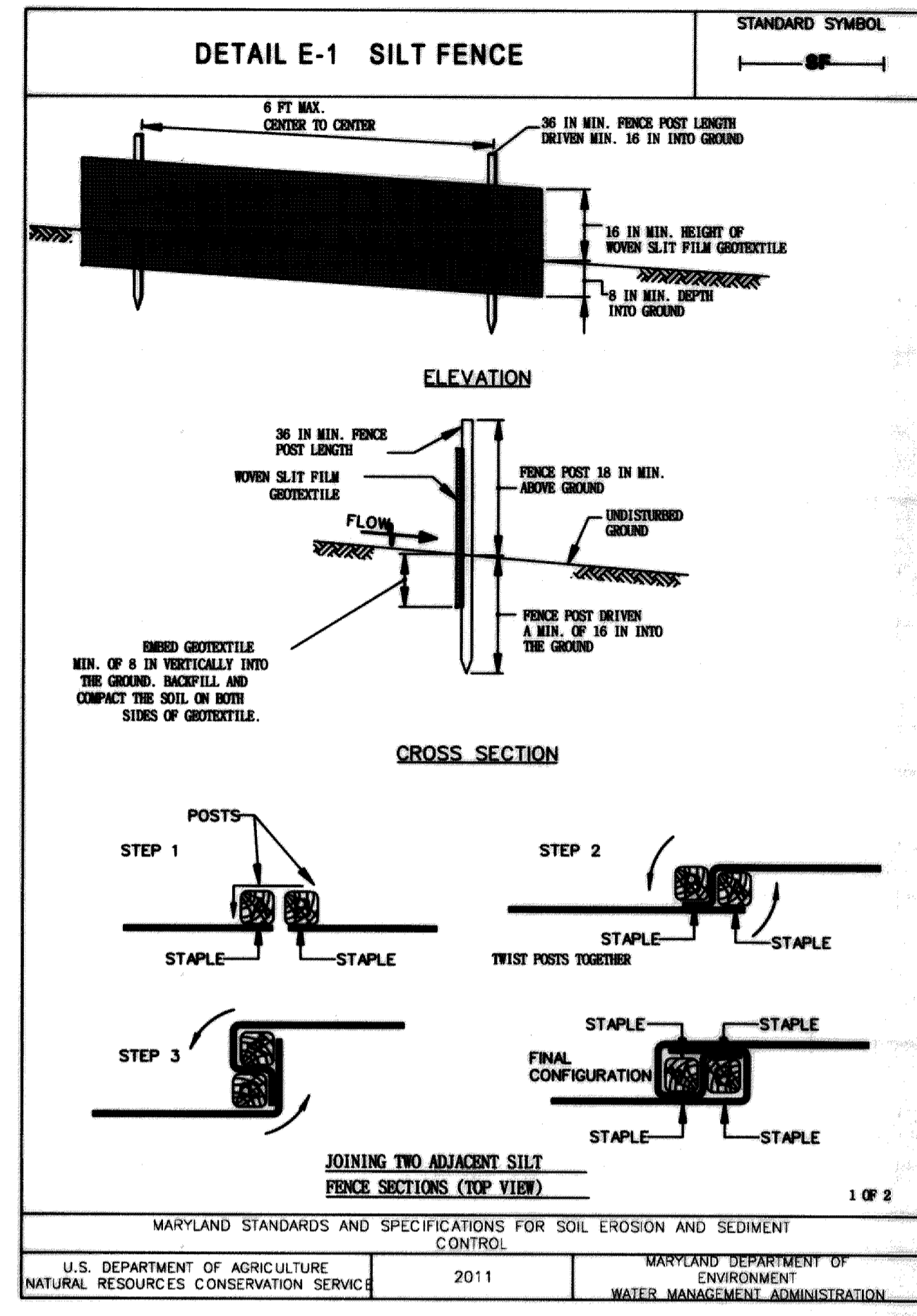
**SHADOW LANE
 EROSION AND
 SEDIMENT
 CONTROL PLAN**

SCALE:	1" = 30"
DATE:	MAY 2013
KCI JOB NO.:	01-081795.52
CAPITAL PROJECT NO.:	CA 08-29
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	

STATE OF MARYLAND
 WILLIAM BLUETT
 PROFESSIONAL ENGINEER
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 39696, EXPIRATION DATE: JANUARY 04, 2015

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 John R. Roberts
 HOWARD SCD
 6/20/13
 DATE

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD
 Chief, Bureau of Environmental Services
 6/11/13
 DATE



Professional Certification
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 39696. EXPIRATION DATE: JANUARY 04, 2015.

John K. Roberts
HOWARD SCD

6/29/13
DATE

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HOWARD SCD

6/29/13
DATE

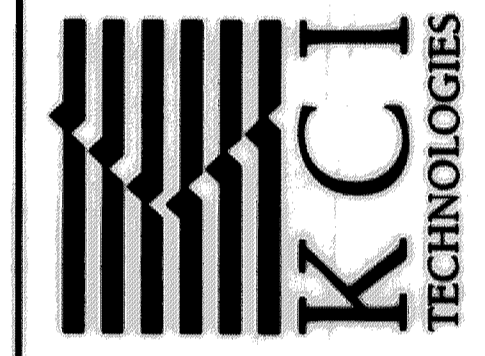
DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

Michael Dwyer
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

6/11/13
DATE

NO. REVISIONS DESCRIPTION DATE

936 RIDGEBROOK ROAD
SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818
www.kci.com



STORMWATER AND WATERSHED MANAGEMENT
EVALUATION / DESIGN-BUILD SERVICES
SHADOW LANE
POND DREDGING

Howard County Contract # CA 08-29
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL SERVICES DIVISION
8715 COLUMBIA AVE. SUITE 100
COLUMBIA, MD 21046

EROSION AND SEDIMENT CONTROL NOTES & DETAILS

SCALE: NOT TO SCALE
DATE: MAY 2013
PROJECT NO.: 01-081795.52
PERMIT ISSUE: CA 08-29
CONSTRUCTION ISSUE:

21.0 STANDARD AND SPECIFICATIONS

FOR TOPSOIL

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

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.

Conditions Where Practice Applies

- I. This practice is limited to areas having 2:1 or flatter slopes where:
a. The texture of the exposed subsoil/parent materials is not adequate to produce vegetative growth.
b. The soil materials so shallow that the rooting zone is not deep enough to support plants or furnish continuing 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.
II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that 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-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

- i. Topsoil shall 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.
ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
iii. Where the subsoils either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

Note: Topsoil substitutes 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.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

- i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4".
iv. Topsoil shall not be placed while the topsoil or subsoils in a frozen or muddy condition, when the subsoils are excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

HOWARD COUNTY CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- 1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within:
a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes greater 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.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52).

Table with 2 columns: Description and Value. Includes Total Area of Site (5.60 Acres), Area Disturbed (2.38 Acres), Area to be roofed or paved (1.07 Acres), Total Cut (7,965 Cu. Yds.), and Offsite waste/borrow area location and permit (CUNNINGHAM'S SAND AND GRAVEL PIT, CROFTON MARYLAND; Permit T.B.D.)

- 8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading.
11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.
Offsite waste/borrow site shall have an approved sediment control plan and permit.

HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES **

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1. Preferred -- Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding.
2. Acceptable -- Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding.

Seeding - For the periods March 1 - April 30, and August 1 - October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 - July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/100sq. ft.) of weeping lovegrass.

Mulching - Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool.

Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseedings.

** Contractor shall perform a soil test at the site as a first order of business. The results shall be reviewed by Department of Recreation and Parks to determine appropriate soil amendments and fertilization needs for this project.

FILL MATERIAL AND COMPACTION REQUIREMENTS:

In general, existing on-site soils free from environmental contamination, building debris, frozen, organic or wet materials and with a Unified Soils Classification of CL-ML, or more granular, with a plasticity index less than 12 can be reused as compacted fill.

Fill shall be placed in horizontal, eight-inch maximum loose lifts and compacted to at least 92 percent of the Modified Proctor maximum dry density (ASTM D-1557), or alternately the Contractor shall compact each lift a minimum of 3 to 4 passes as approved by the Engineer.

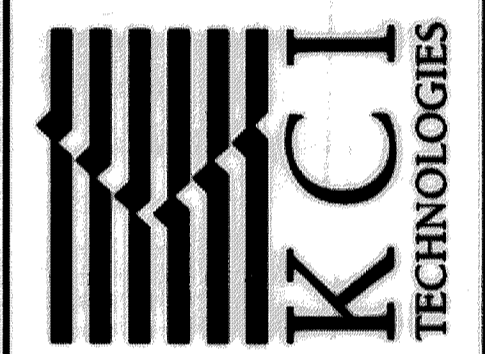
As directed by the Engineer, in-place density tests shall be performed by an engineering technician on a full-time basis under the supervision of a geotechnical engineer licensed in the State of Maryland to verify that the proper degree of compaction is being obtained.

BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

- 1. NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
3. DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.
4. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
5. REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.
6. RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
7. ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES:
* ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILIET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (UNIOLA SP.) AND/OR WHEAT (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE
* VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
8. AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
9. TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM:
A. USE I WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE DURING ANY YEAR.
B. USE III WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD OCTOBER 1 THROUGH APRIL 30, INCLUSIVE, DURING ANY YEAR.
C. USE IV WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH MAY 31, INCLUSIVE, DURING ANY YEAR.
10. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
11. CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

Table with columns: DATE, NO., REVISIONS DESCRIPTION.

936 RIDGEBROOK ROAD SPARKS, MARYLAND 21152 TELEPHONE: (410) 316-7800 FAX: (410) 316-7818 www.kci.com



STORMWATER AND WATERSHED MANAGEMENT EVALUATION / DESIGN-BUILD SERVICES SHADOW LANE POND DREDGING

EROSION AND SEDIMENT CONTROL NOTES

Table with fields: SCALE: AS SHOWN, DATE: MAY 2013, JOB NO.: 01-081795.52, CAPITAL PROJECT NO.: CA 08-29, PERMIT ISSUE, CONSTRUCTION ISSUE.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

Chief, Bureau of Environmental Services DATE 6/11/13

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 39696 EXPIRATION DATE: JANUARY 04, 2015

GENERAL CONSTRUCTION NOTES

THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION (410)-313-1880 AND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION (410)-537-3510 AT LEAST SEVEN (7) DAYS PRIOR TO BEGINNING ANY WORK.

THE CONTRACTOR SHALL OBTAIN GRADING PERMIT AND ALL NECESSARY PERMITS FOR CONSTRUCTION (INCLUDING MDE PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY).

CONTRACTOR SHALL COORDINATE AN ON-SITE PRE-CONSTRUCTION MEETING THAT SHALL INCLUDE COUNTY PROJECT MANAGER, ENGINEER, A REPRESENTATIVE FROM MARYLAND DEPARTMENT OF THE ENVIRONMENT, AND HOWARD COUNTY CONSTRUCTION INSPECTION, BUREAU OF UTILITY.

CONTRACTOR SHALL STAKE OUT LOD AND TREE SAVES PRIOR TO PRE-CONSTRUCTION MEETING.

CONTRACTOR SHALL CAUTION THE TRUCK DRIVERS TO TAKE EXTRA PRECAUTION WHILE TRANSPORTING MATERIALS UP AND DOWN THE ACCESS ROAD AND ON THE TEMPORARY ACCESS PATHWAYS.

CONTRACTOR SHALL MINIMIZE THE IMPACT ON EXISTING TREES, WETLANDS, U.S. WATERS, EXISTING UTILITY AND OTHER EXISTING FEATURES.

ALL DREDGING OPERATIONS SHALL BE DONE IN STRICT ACCORDANCE WITH THE PUMP AROUND CRITERIA.

ALL EXCAVATED SEDIMENT SHALL BE TRANSPORTED TO AN APPROVED LOCATION OFFSITE.

SEQUENCE OF CONSTRUCTION - SHADOW LANE POND DREDGING

POST THE APPROVED GRADING PERMIT OBTAINED FROM THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS IN A CONSPICUOUS PLACE ON THE SITE FOR THE DURATION OF CONSTRUCTION.

PHASE 1

CLEAR AND GRUB AS NECESSARY TO INSTALL ACCESS PATH AND EROSION AND SEDIMENT CONTROL MEASURES WITHIN THE LIMIT OF DISTURBANCE.

INSTALL TEMPORARY ACCESS BRIDGE, STABILIZED CONSTRUCTION ENTRANCE, STEEL PLATES, SILT FENCE, SUPER SILT FENCE, AND ORANGE SAFETY FENCE USING ACCESS PATHS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. THE ACCESS PATHS SHALL BE STABILIZED WITH STONE AND PROTECTED WITH ADDITIONAL SILT FENCE AT THE INSPECTOR'S DISCRETION. WITH PERMISSION FROM THE INSPECTOR, CONTRACTOR SHALL PROCEED WITH PHASE 1.

WITH PERMISSION FROM THE INSPECTOR, CONTRACTOR SHALL PROCEED WITH PHASE 1A.

PHASE 1A

INSTALL SAND BAG DAM 'A' AND 12 "FLEXIBLE PIPE TO DIRECT THE 15" CMP STORM DRAIN OUTFALL TO THE CONCRETE APRON OF THE EXISTING RISER AS SHOWN.

SET UP THE PUMP AND HOSES TO DEWATER THE WET CELL OF THE POND. PLACE THE DISCHARGE PIPE DIRECTLY ONTO THE CONCRETE APRON OF THE EXISTING RISER AND DEWATER THROUGH A REMOVABLE PUMPING STATION OR OTHER APPROVED DEWATERING PRACTICE.

INSTALL PUMP AROUND PRACTICE AND BEGIN PLACING SAND BAG BARRIER, WORKING DOWNSTREAM TO UPSTREAM, ALONG THE EAST EDGE OF THE POND BOTTOM. UTILIZE PUMP-AROUND PRACTICE AND FILTER BAG TO DEWATER THE WORK AREA. PLACE THE FILTER BAG DIRECTLY ON THE CONCRETE APRON OF THE EXISTING RISER.

COMPLETE INSTALLATION OF SAND BAGS AND PERFORM GRADING OPERATIONS AS SHOWN ON THE PLANS FOR PHASE 1A. GRADE CAREFULLY AT THE UPSTREAM LIMIT OF SAND BAG BARRIER ALL BASEFLOW SHOULD CONTINUE THROUGH THE EXISTING PILOT CHANNEL WITHIN THE POND. DO NOT INTERCEPT THE EXISTING STREAM CHANNEL AND DO NOT ALLOW BASEFLOW TO ENTER THE SAND BAG BARRIER DURING PHASE 1A. WITH PERMISSION FROM INSPECTOR, CONTRACTOR SHALL PROCEED WITH PHASE 1B.

PHASE 1B

ONCE DIVERSION CHANNEL IS GRADED AND STABILIZED, WORKING FROM DOWNSTREAM TO UPSTREAM, SHIFT ALIGNMENT OF SAND BAG BARRIER DOWN INTO THE CHANNEL EXCAVATED IN PHASE 1A. DO NOT ALLOW BASEFLOW TO ENTER THE DIVERSION CHANNEL DURING PHASE 1B. DO NOT REMOVE THE SAND BAG DAM AND FLEXIBLE PIPE FROM THE 15" CMP OUTFALL.

ONCE SAND BAG DIVERSION BARRIER IS SHIFTED, REMOVE SAND BAG DAM 'A' AT 15" CMP OUTFALL, AND REMOVE 12" FLEXIBLE PIPE CONNECTING 15" CMP OUTFALL TO EXISTING RISER.

WITH PERMISSION FROM INSPECTOR, CONTRACTOR SHALL PROCEED WITH PHASE 2.

PHASE 2

PHASE 2A

DURING AN ANTICIPATED THREE (3) DAY PERIOD OF DRY WEATHER, SET UP THE PUMP AROUND PRACTICE AND HOSES AND PLACE SAND BAGS TO BEGIN PUMPING BASEFLOW AROUND THE WORK AREA. PLACE THE DISCHARGE PIPE DIRECTLY ONTO THE CONCRETE APRON OF THE EXISTING RISER. UTILIZE PUMP-AROUND PRACTICE AND FILTER BAG TO DEWATER THE WORK AREA. PLACE THE SAND BAGS AND FILTER BAG SETUP DIRECTLY ON THE CONCRETE APRON OF THE EXISTING RISER.

PERFORM GRADING AROUND THE RISER TO TIE THE DOWNSTREAM END OF THE DIVERSION CHANNEL AND SAND BAG BARRIER AS SHOWN FOR PHASE 2A. WITH PERMISSION FROM INSPECTOR, CONTRACTOR SHALL PROCEED WITH PHASE 2B.

PHASE 2B

ONCE GRADING AROUND THE RISER PERFORMED IN PHASE 2A IS COMPLETED AND STABILIZED, SHIFT ALIGNMENT OF SAND BAG BARRIER AS SHOWN FOR PHASE 2B. REMOVE SAND BAGS AND FILTER BAG FROM RISER APRON AND REMOVE PUMP AROUND USED TO DEWATER THE WORK AREA. CONTINUE TO PUMP BASEFLOW AROUND THE SAND BAG BARRIER DIRECTLY INTO THE RISER. WITH PERMISSION FROM INSPECTOR, CONTRACTOR SHALL PROCEED WITH PHASE 2C.

PHASE 2C

WHILE CONTINUING TO PUMP BASEFLOW AROUND THE SAND BAG BARRIER INTO THE RISER, COMPLETE STREAM CHANNEL DIVERSION BY EXTENDING THE SAND BAG BARRIER ACROSS EXISTING CHANNEL AT THE UPSTREAM END TO DIRECT ALL BASEFLOW INTO THE SANDBAG DIVERSION BARRIER.

AFTER BASEFLOW IS DIVERTED INTO THE SANDBAG BARRIER, REMOVE BASEFLOW PUMP AROUND PRACTICE INSTALLED IN PHASE 2A, PERFORM GRADING OPERATIONS SHOWN FOR PHASE 2C. UTILIZE APPROVED DEWATERING PRACTICES WITHIN THE LOD TO MAINTAIN THE POND BOTTOM AT A CONSISTENCY THAT IS SUITABLE FOR CONSTRUCTION EQUIPMENT TO PERFORM THE REQUIRED DREDGING OPERATIONS

NOTE: USE CAUTION WHEN GRADING AT THE UPSTREAM ENTRANCE OF THE FACILITY. AN EXISTING BURIED STONE ENTRANCE STRUCTURE/GABION BASKETS WILL BE PARTIALLY UNCOVERED DURING PHASE 2C. FINAL GRADING IN THE AREA OF THE EXISTING STONE ENTRANCE STRUCTURE WILL TAKE PLACE IN PHASE 3.

ONCE GRADING OPERATIONS SHOWN FOR PHASE 2C ARE COMPLETED, WITH PERMISSION FROM INSPECTOR, CONTRACTOR SHALL PROCEED WITH PHASE 3.

PHASE 3

DURING AN ANTICIPATED THREE (3) DAY PERIOD OF DRY WEATHER, PLACE SAND BAG DAM UPSTREAM OF TEMPORARY ACCESS BRIDGE AND BASEFLOW FLEXIBLE PIPE. SET UP SAND BAG DAM CONFIGURATION AS SHOWN, PUMP-AROUND PRACTICE, FILTER BAG, AND RIPRAP PAD TO ISOLATE THE PHASE 3 WORK AREA.

ONCE THE BASEFLOW DIVERSION AROUND THE WORK AREA IS COMPLETED, PERFORM GRADING AS SHOWN FOR PHASE 3 TO TIE POND BASIN INTO EXISTING STREAM CHANNEL.

UNCOVER THE EXISTING BURIED STONE ENTRANCE STRUCTURE/GABION BASKETS IN THE WORK AREA AND RESET/REPAIR/REPLACE GABION BASKET CONFIGURATION PER AS BUILT PLAN F-83-120, SHEET 24 OF 25 DATED 5/4/1983.


ONCE GRADING OPERATIONS SHOWN FOR PHASE 3 ARE COMPLETED AND STONE ENTRANCE STRUCTURE RESTORED, WITH PERMISSION FROM INSPECTOR, WORKING FROM DOWNSTREAM TO UPSTREAM, CONTRACTOR SHALL REMOVE ALL SAND BAGS, REMOVE PUMP AROUND PRACTICE AND FILTER BAG, REMOVE ANY OTHER DEWATERING PRACTICES WITHIN THE BASIN, REMOVE SILT FENCE, SUPER SILT FENCE AND TEMPORARY ACCESS BRIDGE, REPLACE WOODEN BOLLARDS, AND REPLACE/REPAIR AND DAMAGE TO THE CURB OPENING INLET LOCATED AT THE SHADOW LANE CUL-DE-SAC.

PERMANENTLY STABILIZE ANY REMAINING DISTURBED AREAS.

NO.	REVISIONS DESCRIPTION	DATE

KCIFILE: M' 2008 \ 01081795.52 \

936 RIDGEBROOK ROAD
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TELEPHONE: (410) 316-7800
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WWW.KCI.COM



STORMWATER AND WATERSHED MANAGEMENT
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Howard County Contract # CA 08-29
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENVIRONMENTAL SERVICES
601 COLUMBIA RD. ONE
COLUMBIA, MD 21046

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John K. Roberts
HOWARD SCD

6/20/13
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DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

Mark A. [Signature]
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

6/11/13
DATE



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 39696. EXPIRATION DATE: JANUARY 04, 2015