#### INDEX OF SHEETS

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3	STREAM DETAILS
4	PROFILES & DETAILS
5	EROSION & SEDIMENT CONTROL PLAN
6	EROSION & SEDIMENT CONTROL NOTES
7	EROSION & SEDIMENT CONTROL DETAILS
8	LANDSCAPE PLAN
9	LANDSCAPE NOTES & DETAILS
10	LANDSCAPE NOTES & DETAILS
11	MAINTENANCE OF TRAFFIC

LEGEND	
LIMITS OF DISTURBANCE	LOD
EXISTING CONTOUR	
PROPOSED CONTOUR	
100-YEAR FLOODPLAIN	·
PROPERTY LINE	101.43' N89° 40'02''W
WETLAND LINE	
WATERS OF U.S.	
WETLAND BUFFER	WB WB -
FENCE	XXXXX
SEWER LINE	SSSS
SEWER MANHOLE	\$
STORM DRAIN	
EX. TREE	
EX. TREE TO BE REMOVED	X
CONSTRUCTION BASELINE	
STONE TOE PROTECTION	
STABILIZED CONSTRUCTION ENTRANCE	CONCEPTION OF THE PARTY OF THE
ORANGE SAFETY FENCE	— 0SF —
SANDBAG DIVERSION	
PUMP	⊗PUMP
SILT BAG DEWATERING DEVI	CE FB
PROPOSED STORM DRAIN	
DISCHARGE HOSE	CANANINA CANTINNIA COMUNICA CANANINA, CANANINA CANANA
EXISTING ROAD/ PARKING LOT	
EXISTING WOODS	
STANDARD INLET PROTECTIO	
PAVEMENT REMOVAL AREA	
RIPRAP PROTECTION	

### GENERAL NOTES

- 1. THE SUBJECT PROPERTIES ARE ZONED R-20. 2. THE DISTURBANCES WITHIN THE 100-YEAR FLOODPLAIN, WETLANDS, STREAM AND REQUIRED BUFFERS FOR THE PROPOSED STREAM RESTORATION PROJECT ARE CONSIDERED ESSENTIAL OR NECESSARY IN ACCORDANCE WITH SECTIONS 16.115(C) AND 16.116(C) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. 3. THIS PROJECT WILL MEET THE PURPOSE AND INTENT OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL BY ALTERNATIVE COMPLIANCE.
- 4. THERE ARE NO KNOWN BURIAL GROUNDS OR CEMETERY SITES WITHIN THE PROJECT LIMITS.
- 5. THIS PROJECT DISTURBS LESS THAN 20,000 SF., THEREFORE A FOREST CONSERVATION PLAN IS NOT REQUIRED AND THIS PLAN MEETS THE REQUIREMENTS OF THE FOREST CONSERVATION REGULATIONS.
- 6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- 7. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 24 HOURS IN ADVANCE OF ANY WORK BEING DONE.
- LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE. 9. THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE
- COORDINATE SYSTEM.
- 10. WATER IS PUBLIC. 11. SEWER IS PUBLIC.
- 12. STORMWATER MANAGEMENT IS NOT REQUIRED FOR THIS PROJECT SINCE THE PROJECT WILL RESULT IN AN OVERALL REDUCTION OF IMPERVIOUS AREA AND DISCHARGES.
- 13. EXISTING UTILITIES ARE BASED ON FIELD SURVEYS AND AVAILABLE RECORD DRAWINGS.
- 14. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH ONE FOOT CONTOUR INTERVALS PREPARED BY HOWARD COUNTY.
- 15. ALL WORK SHALL BE CONSTRUCTED ACCORDING TO THE REQUIREMENTS OF THE NONTIDAL WETLANDS AND WATERWAYS PERMIT (MDE TRACKING +201261173)
- 16. A TRAFFIC STUDY IS NOT REQUIRED FOR THIS PROJECT. 17. OBSTRUCTIONS SHOWN ON THIS DRAWING ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND KCITECHNOLOGIES, 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 VERIFY SUCH INFORMATION TO HIS OWN SATISFACTION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER,
- 18. 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.

يلا بلامة فأمر علي المارجان الرباب المقلومي الموقوع الجاجة الماجلة الماجلة فالمطالب حيادا والاستعلاقات الماحات

THIS DEVELOPMENT PLAN IS APPROVED

	Approved Howard S.C.D. Date
PARCEL® Ø387 ECT. DISTR. CENSUS TRACT Ø2	DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

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202	12-17-12
マンシ	PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THA 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. 31201, EXPIRATION DATE: JANUARY 24, 2013

	PUBLIC	- PUBLI
TION. I HEREBY CERTIFY THAT REPARED OR APPROVED BY ME,	OWNER: HOWARD COUNTY DEPARTMENT OF 6751 COLUMBIA COLUMBIA, MD 410-313-6444	GATEWAY DRIVE

SUBDIVISION NAME

WATER CODE

COLUMBIA HILLS

PERMIT INFORMATION

PLAT OF L/F GRID . ZONING TAX MAP NO. EL

96899/99212 9995 R-20 30

ECTION/ARE/

SECTION 5

SEWER CODE

PUBLIC

# DOWER DRIVE STREAM RESTORATION PROJECT HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT D-1158 **AS-BUILT**

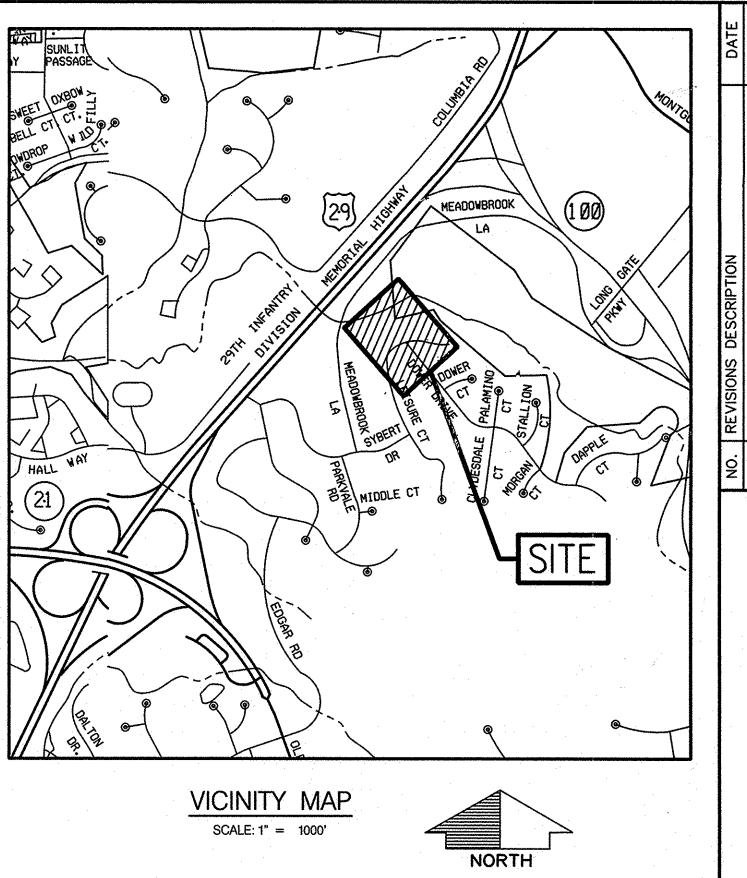
8. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT

NTY, MD

## SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT. PRIOR TO THE BEGINNING OF ANY DISTURBANCE, A VIDEO RECORDING AND PHOTOGRAPHS SHALL BE TAKEN OF THE ENTIRE PROJECT AREA.
- 2. CONTRACTOR SHALL COORDINATE A PRE-CONSTRUCTION MEETING WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO, THE COUNTY PROJECT MANAGER, THE ENGINEER, AND A REPRESENTATIVE FROM HOWARD COUNTY CONSTRUCTION INSPECTION. THE LIMIT OF DISTURBANCE SHALL BE STAKED PRIOR TO THE MEETING. TREES WITHIN LOD TO BE SAVED WILL BE MARKED AT THIS MEETING.
- 3. STREAM CLOSURE PERIOD IS FROM MARCH 1ST THROUGH JUNE 15TH, INCLUSIVE, OF ANY GIVEN YEAR.
- STREAM CLASSIFICATION: USE I-P. 4. NOTIFY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S NONTIDAL WETLANDS AND WATERWAYS INSPECTIONS AND COMPLIANCE DIVISION AT LEAST FIVE WORKING DAYS PRIOR TO ANY DISTURBANCE WITHIN WATERS OF THE U.S. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FIVE WORKING DAYS PRIOR TO ANY WORK BEING DONE.
- 5. CONSTRUCT ORANGE SAFETY FENCE ALONG THE PERIMETER OF THE LOD.
- 6. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
- 7. CLEAR AND GRUB ONLY THOSE AREAS NECESSARY TO INSTALL PUMP-AROUND PRACTICE. INSTALL PUMP-AROUND PRACTICE, INCLUDING SAND BAG DIVERSION.
- WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB REMAINING WORK AREA AS NEEDED TO CONSTRUCT IN-STREAM RESTORATION FROM DOWNSTREAM TO UPSTREAM.
- 9. COMPLETE RESTORATION OF CHANNEL. CONSTRUCT STEP POOLS AND RIPRAP STONE TOE PROTECTION FROM DOWNSTREAM TO UPSTREAM. REMOVE PUMP-AROUND PRACTICE. STABLIZE ALL DISTURBED AREAS.
- 10. INSTALL INLET PROTECTION.
- 11. USING A FLAGGING OPERATION, MAINTAIN TRAFFIC ALONG DOWER DRIVE, AND INSTALL THE 24-INCH RCP, 1-1, AND THE 15-INCH RCP. RECONSTRUCT ROADWAY AND PAVE AREAS DISTURBED BY THE INSTALLATION OF THE STORM DRAIN. THIS WORK SHALL ONLY BE CONDUCTED WITH 72 HOURS OF FORECASTED DRY WEATHER. ALL DISTURBED AREAS FOR INLET AND STORM DRAIN CONSTRUCTION SHALL BE STABILIZED AT THE END OF THE DAY. ROADWAY SHALL BE REPAIRED TO ALLOW SAFE TRAFFIC USE AT THE END OF EACH WORKDAY. INLET PROTECTION SHOWN ON PLANS SHALL BE INSTALLED IF REQUIRED BY THE ENGINEER.
- 12. REMOVE PAVEMENT AS SHOWN ON THE GRADING PLAN.
- 13. INSTALL PLANTINGS. WHEN VEGETATION IS ESTABLISHED, AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE REMAINING SEDIMENT CONTROLS.
- 14. CONDUCT FINAL "AS-BUILT" SURVEY OF CONSTRUCTED PROJECT AND SUBMIT "AS-BUILT" PLANS TO THE DEPARTMENT OF PUBLIC WORKS, STORMWATER MANAGEMENT DIVISION, WITHIN 30 DAYS OF COMPLETING CONSTRUCTION.

ENGINEER'S CERTIFICATE	
"ICERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT"	PRACTICAL AND WORKABLE PLAN PREPARED IN ACCORDANCE WITH
P.E. • 31201	12-17-12
SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) JAMES TOMLINSON, P.E.	DATE
DEVELOPER'S CERTIFICATE	
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCOR AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT AND THE CONTROL OF SEDIMENT AND EROSION BEFORE THE BEGINNING OF THE PROJEC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT"	CONSTRUCTION PROJECT WILL PPROVED TRAINING PROGRAM FOR
Howard E Saltman	12/18/12
SIGNATURE OF DEVELOPER (PRINT NAVE BELOW SIGNATURE)	DATE

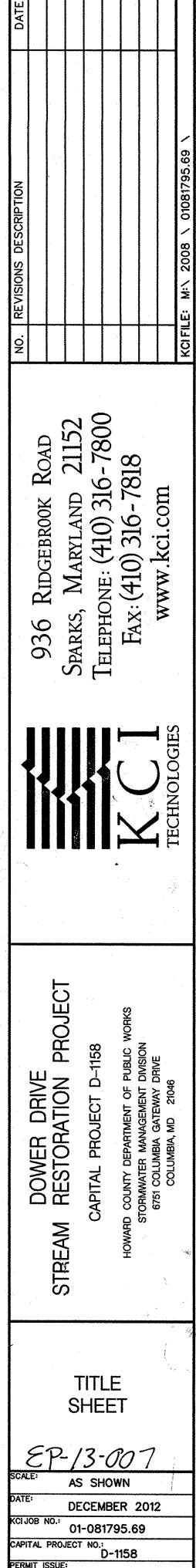


## SPECIAL CONTRACTOR NOTES

- 1. 100-YEAR FLOODPLAIN BOUNDARY IS SHOWN ON THE PLANS.
- STOCKPILING OF ANY MATERIAL WILL BE LIMITED. EXPOSED MATERIALS WILL BE PROTECTED PRIOR TO ANY STORM.
- 3. IN-STREAM WORK IS PROHIBITED FROM MARCH 1ST TO JUNE 15TH, INCLUSIVE. STREAM CLASSIFICATION: USE I-P.
- 4. CONTRACTOR SHALL CONTINUALLY MONITOR WEATHER FORECASTS DURING WORK ACTIVITIES AND SCHEDULE WORK DURING FAVORABLE CONDITIONS.
- 5. THE CONTRACTOR SHALL EXERCISE CARE IN ACTIVITIES INVOLVING EITHER CUT AND FILL OR GRADING IN THE VICINITY OF TREES THAT ARE TO REMAIN AT THE CONSTRUCTION SITE. 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 DRIPLINE 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. 6. CONTRACTOR SHALL NOT STORE EQUIPMENT, MATERIALS AND/OR SUPPLIES BEYOND THE ORANGE FENCING SHOWN ON THE PLANS.
- 7. 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.
- 8. 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 OR BY THE ENGINEER.
- 9. ALL MATERIAL SHALL BE REMOVED AND DISPOSED OF OFFSITE. REMOVED TREES AND BRUSH MAY BE REDISTRIBUTED ON SITE AT THE DISCRETION OF THE ENGINEER OR HIS/HER REPRESENTATIVE.

1 (n. 1977) 1 (n. 1977)

- 10. A WAIVER PETITION (WP-13-045) FROM SECTION 16.155.(a).(1).(ii) AND SECTION 16.1201.(n) WAS APPROVED ON NOVEMBER 15, 2012. THIS WAVES THE REQUIREMENT FOR DEPARTMENT OF PLANNING AND ZONING APPROVAL OF A SITE DEVELOPMENT PLAN FOR NON-RESIDENTIAL DEVELOPMENT, AND THE DEFINITION OF 7/32 NET TRACT AREA 9/32 FOR THE PURPOSE OF CALCULATING FOREST CONSERVATION OBLIGATION. THIS WAIVER APPROVAL IS SUBJECT
  - TO THE FOLLOWING CONDITIONS: A. NO DISTURBANCE IS PERMITTED BEYOND THE LIMIT OF DISTURBANCE SHOWN ON THE WAIVER PETITION EXHIBIT WP-13-045 UNLESS IT CAN BE SUFFICIENTLY JUSTIFIED BY DPW. ALL DISTURBED AREAS MUST BE STABILZED AND REPLANTED. AS APPROPRIATE.
  - B. THE APPLICANT SHALL ACQUIRE ANY REQUIRED MDE AND/OR U.S. ARMY CORPS OF ENGINEERS PERMITS FOR DISTURBANCE WITHIN THE FLOODPLAIN, WETLANDS, STREAM AND THEIR BUFFERS, AS APPLICABLE.

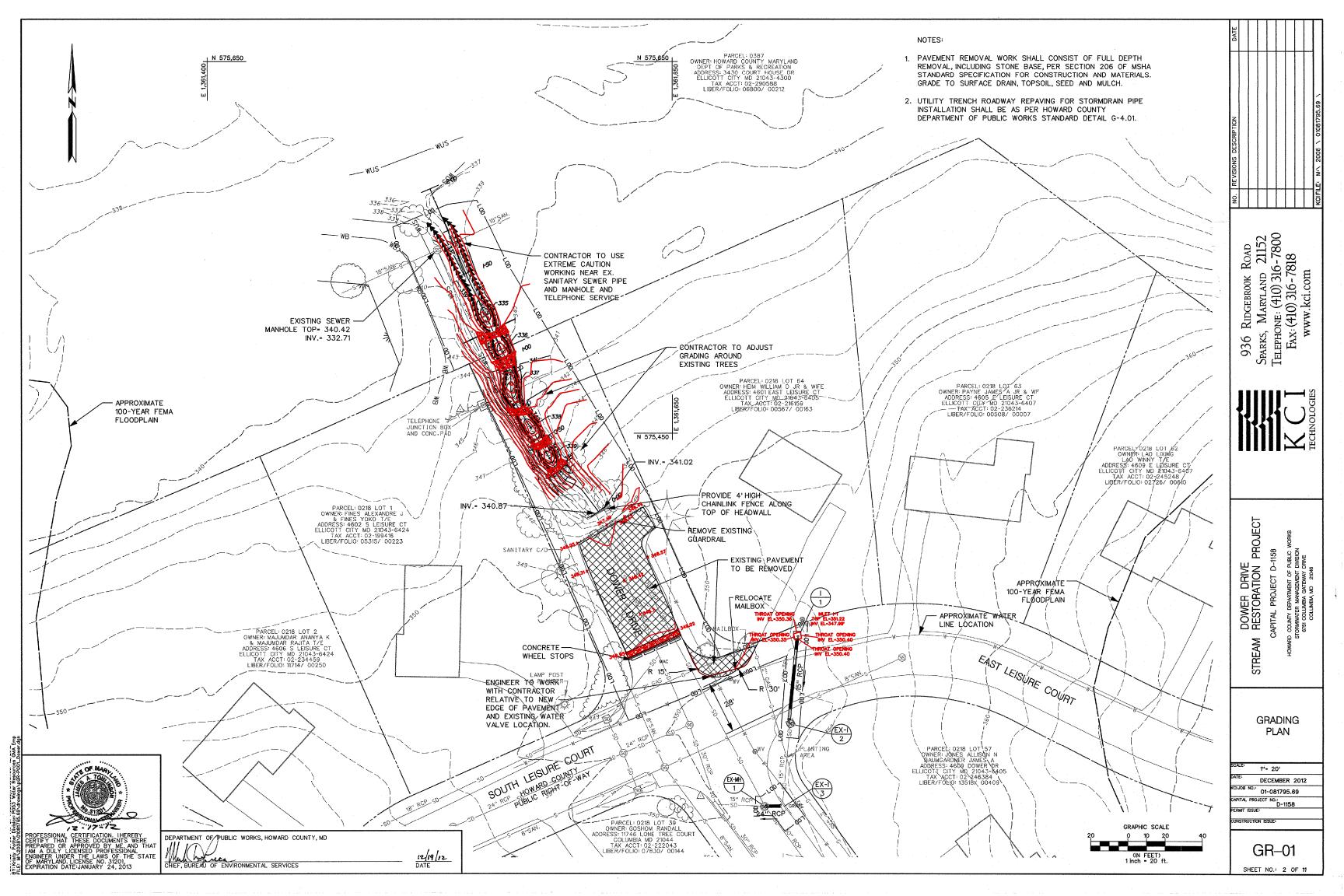


AS-BUILT DATE 05-14-2013

CONSTRUCTION ISSUE:

TI-01

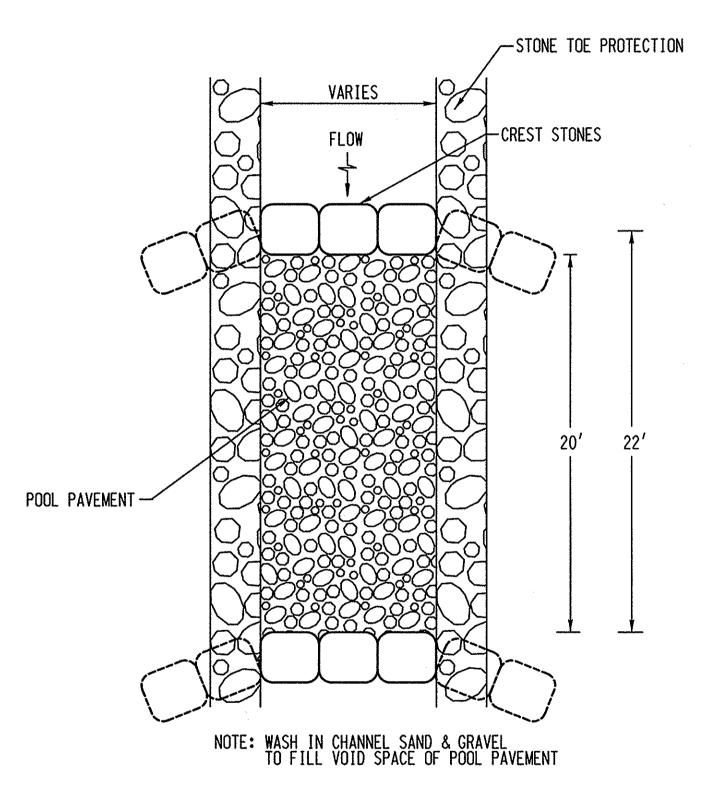
SHEET NO.: 1 OF 11



SIZES FOR S	STONE TYPES
STONE TYPE	STONE SIZE
STONE TOE PROTECTION	50% CLASS I AND 50% CLASS II
CREST STONE	3'x2'x2' MINIMUM

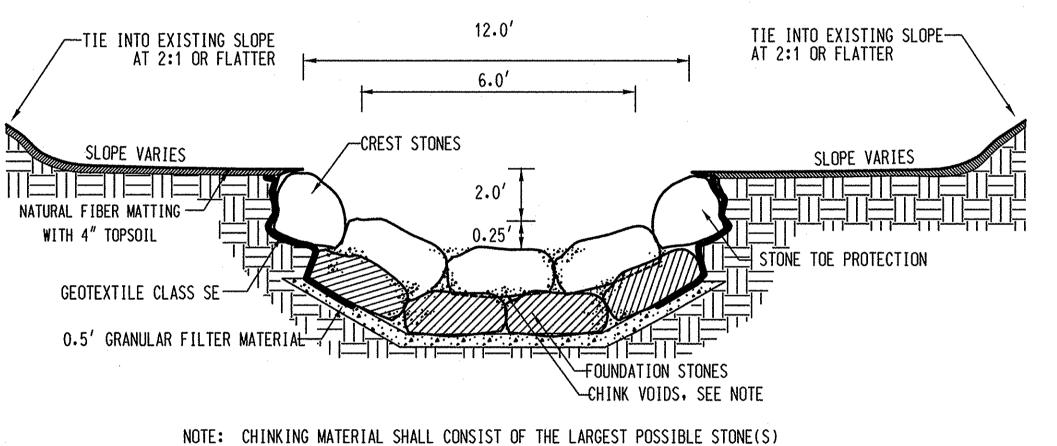
NOTE: CHANNEL BED MATERIAL SHALL BE SALVAGED WHEN POSSIBLE. ONLY FURNISH CHANNEL BED MATERIAL WHEN SALVAGED MATERIAL IS NOT AVAILABLE. ALL POOL MATERIAL SHALL BE SALVAGED ON SITE.

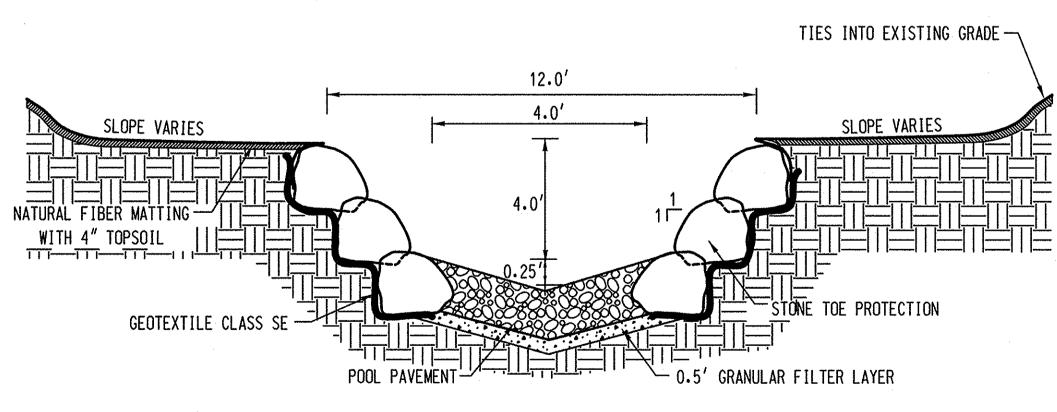
PAVEMENT
US STD SIEVE
12.2 in
9.7 in
6.0 in
4.1 in
1.4 in

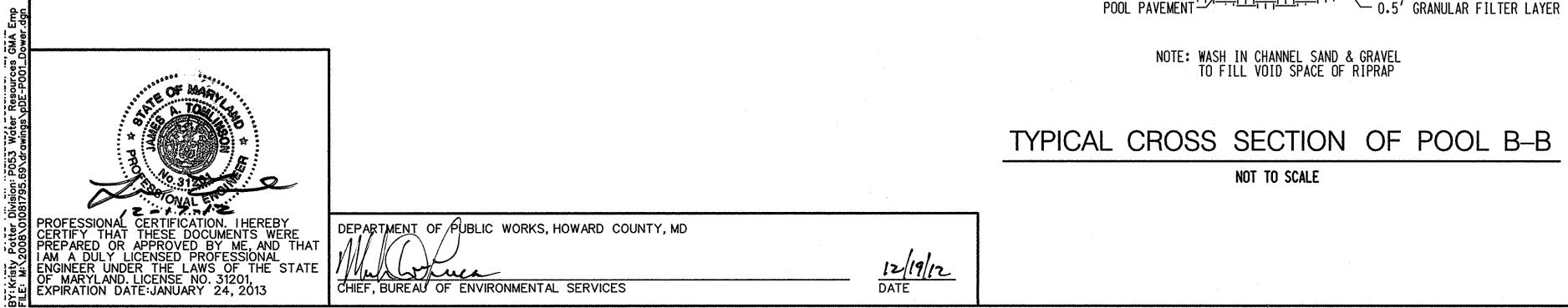


PLAN VIEW OF STEP-POOL SYSTEM

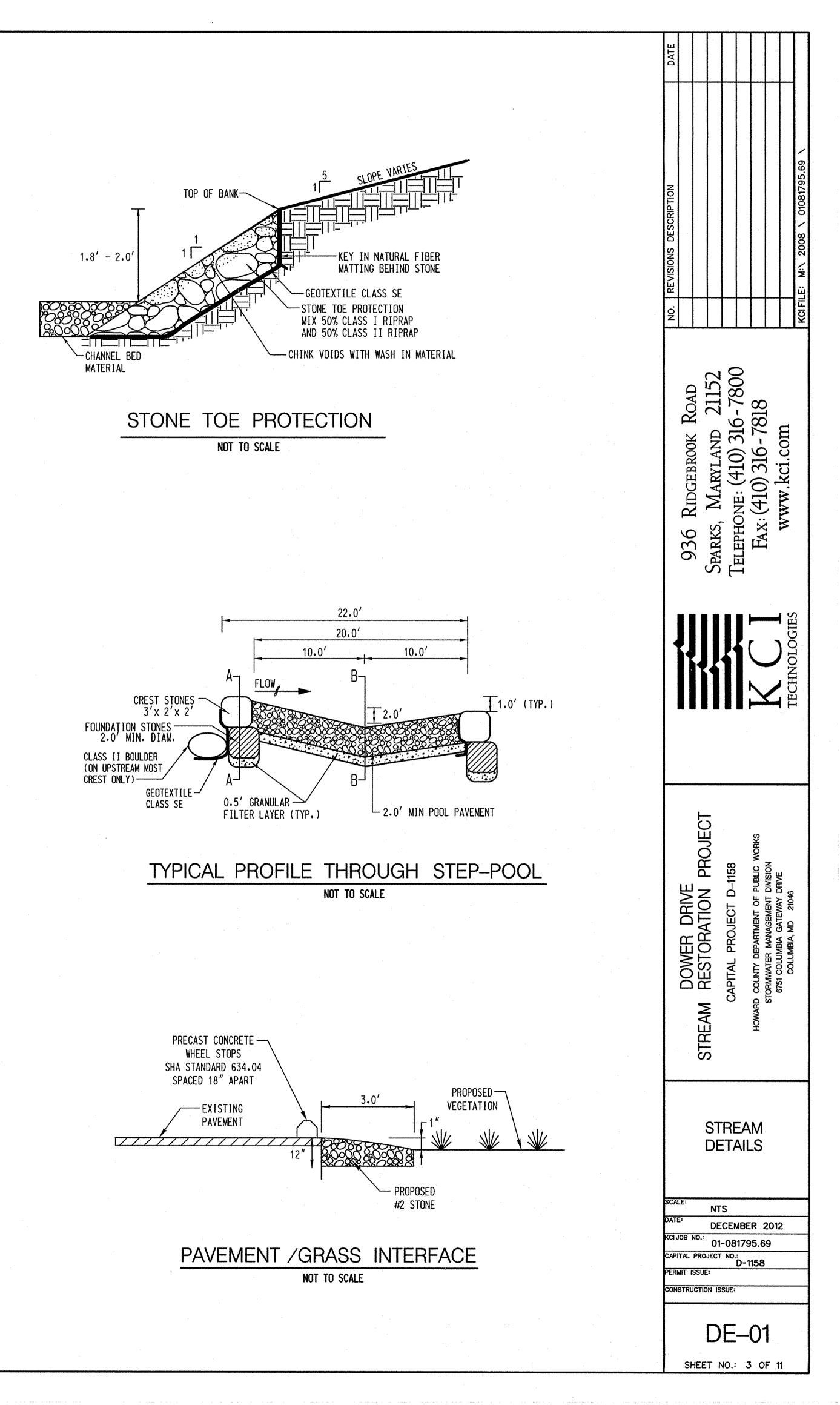
NOT TO SCALE





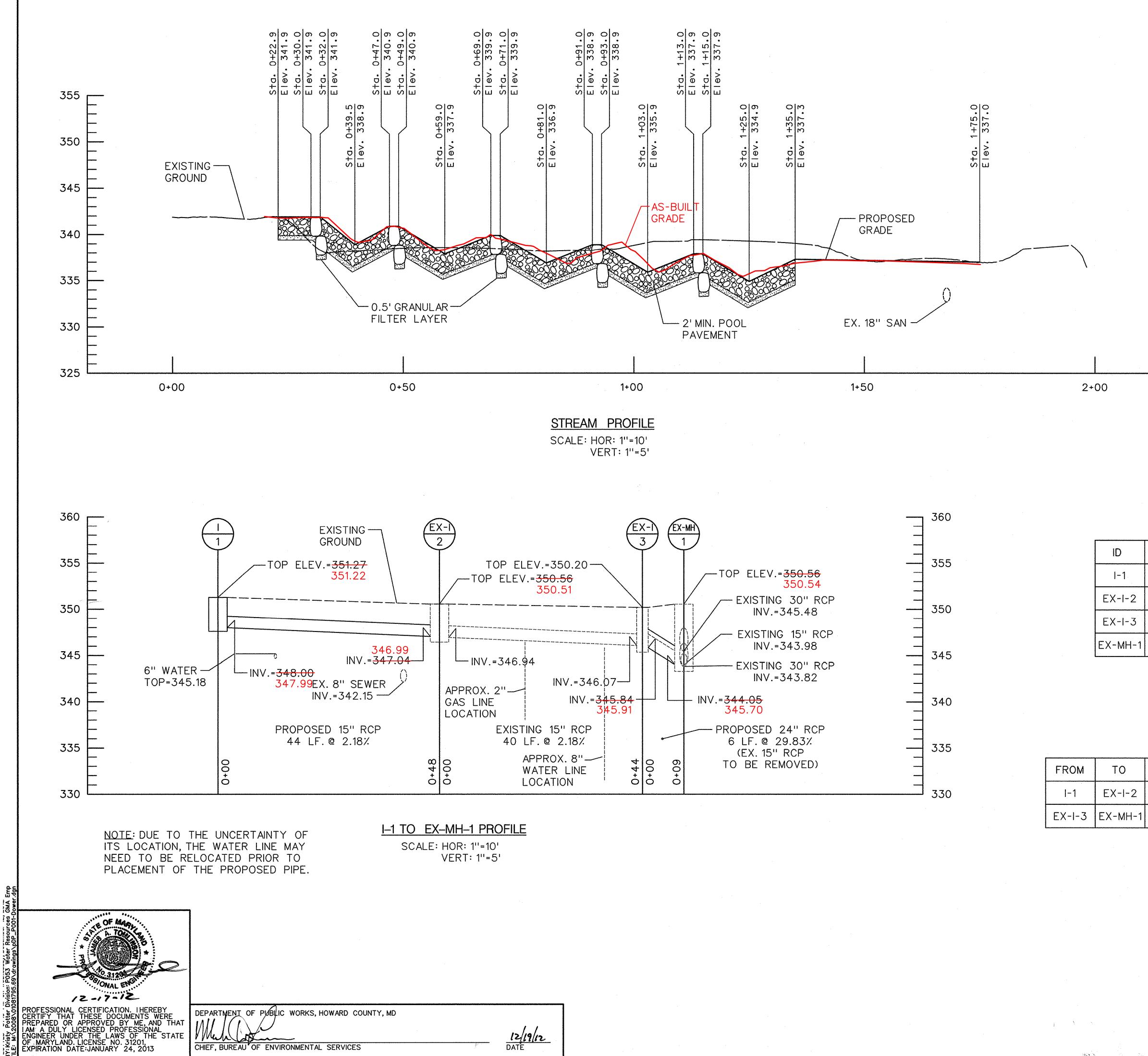


	AR FILTER TERIAL
% LESS THAN	US STD SIEVE
100	2.5 in
85-100	1.0 in
60-100	0.5 in
35-70	No. 10
20-50	No. 40
3-20	No. 200



TO SECURELY FILL THE VOID. VOIDS SHALL NOT EXCEED 2"IN DIAMETER.



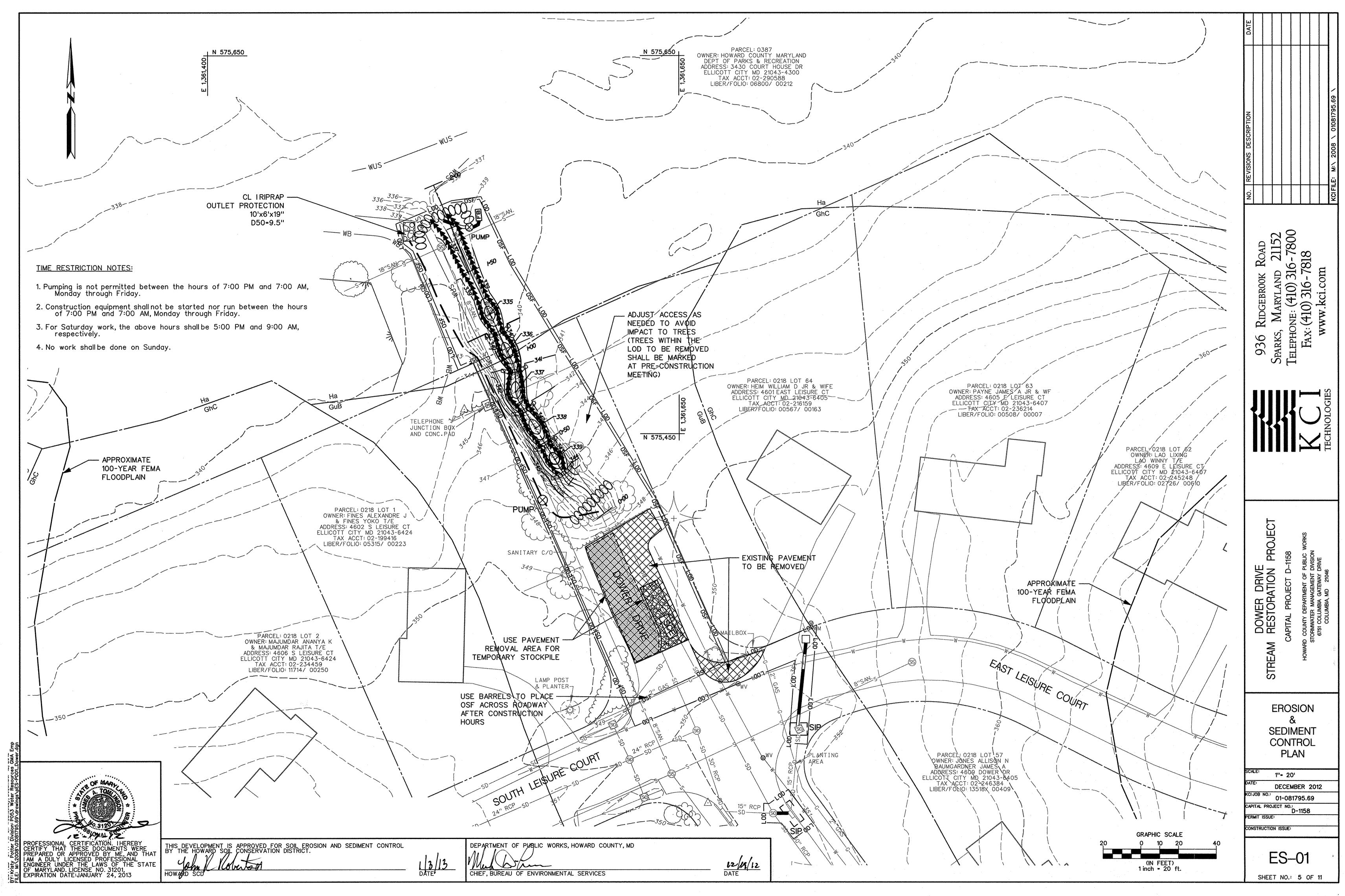


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#### 21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL Definition

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

## 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**

Purpose

I. This practice is limited to areas having 2:1 or flatter slopes

- a. The texture of the exposed subsoil/parent materialis 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 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

## 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

#### **Construction and Material Specifications**

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, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixutre of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
  - 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 subsoil is 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. Lime shall be disturbed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following proceures.
- III. For sites having disturbed areas under 5 acres:
  - i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization Section = -Vegetative Stabilization Methods and Materials.
- IV. For sites having disturbed areas over 5 acres:
  - i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
    - a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
    - b. Organic content of topsoil shall be not less than 1.5 percent by weight.
    - c. Topsoil having soluble salt content greater than 500
    - d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time as elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

## Note: Topsoil substitutes or amendments, as recommended by a gualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

parts per miniori snullitor be used

- 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". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minmum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
  - iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that my otherwise be detrimental to proper grading and seedbed preparation.

water pockets.

#### short-term 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: --- Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).

Seeding: — For periods March 1 – April 30 and from August 15 – October 15, seed with 2–1/2 bushel per acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1 - August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 ft.). For the period November 16 - February 28, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: - Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool. No asphalt emulsion shall be used for anchoring. Only a non-toxic, latex backing material is allowed.

FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

**\*\*** 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. No fertilizer or soil amendments shall be added without approval of Department of Recreation and Parks.

HOWARD SOIL CONSERVATION DISTRICT PERMANANT SEEDING NOTES

(For areas within the LOD with no designated planting area symbol use permanent seed below. For all areas denoted by symbol, see sheet 9 of 9 for permanent seeding.)

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.

following schedules:

- ureaform fertilizer (9 lbs/1000 sq. ft.)
- or disk into upper three inches of soil.

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. During the period of October 16 - February 28, protect site by: Option 1 - Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2 - Use sod. Option 3 - Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

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. No asphalt emulsion shall be used for anchoring. Only a non-toxic, latex backing material is allowed.

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

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Y: Kristy Potter Division ILE: M:\2008\01081795	IAM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 31201, EXPIRATION DATE:JANUARY 24, 2013

THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

#### HOWARD SOIL CONSERVATION DISTRICT

TEMPORARY SEEDING NOTES\*\*

#### Apply to graded or cleared areas likely to be re-disturbed where a

#### Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS

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

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. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0

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. Harrow

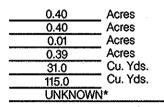
#### HOWARD COUNTY CONSERVATION DISTRICT

#### STANDARD SEDIMENT CONTROL NOTES

- 1. A minimum of 48 hours notice must be given to the Howard County Department of Public Works, Construction Inspec prior to the start of any construction (410 313-1855).
- 2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in co current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revis
- 3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other on the project site.
- 4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYAND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), te (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended for proper germination and establishment of grasses.
- 6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission obtained from the Howard County Sediment Control Inspector.
- Site Analysis: Total Area of Site Area Disturbed Area to be roofed or paved \_\_\_\_\_<u>v</u> Area to be vegetatively stabilized Total Cut

Offsite waste/borrow area location

Total Fill



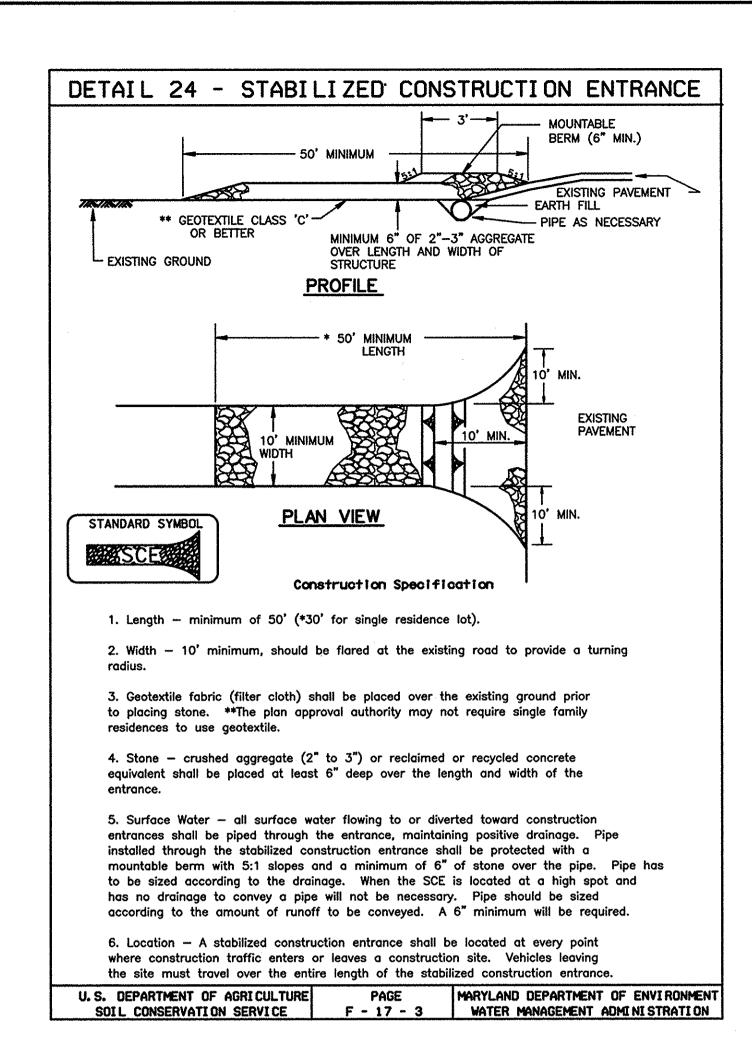
- 8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the
- 9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- 10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon con perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other build approvals may not be authorized until this initial approval by the inspection agency is made
- 11. Trenches for the construction utilities is limited to three pipe lengths or that which shall be back-filled and stabilized whichever is shorter.
- \* OFFSITE WASTE /BORROW AREA, IF NEEDED, SHALL HAVE AN APPROVED EROSION AND SEDIMENT CONTROL

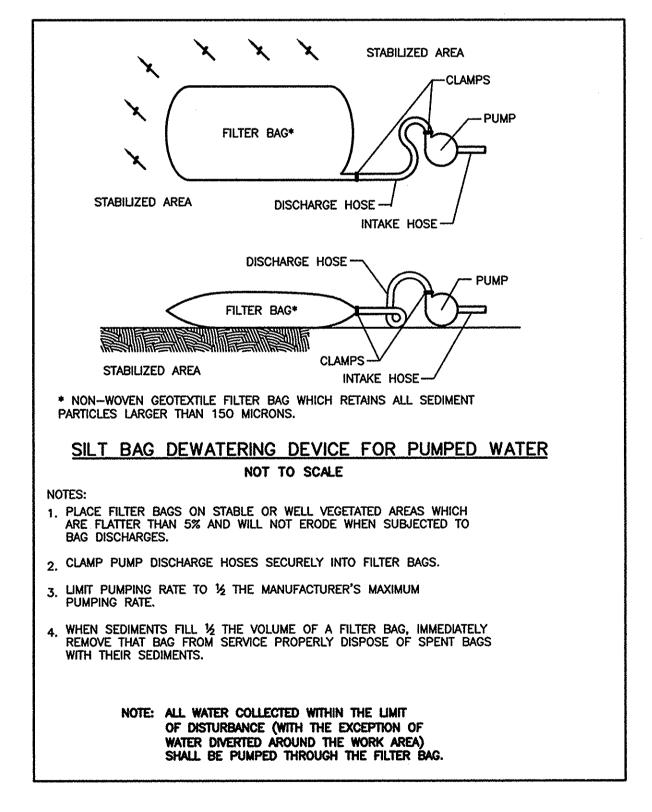
DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

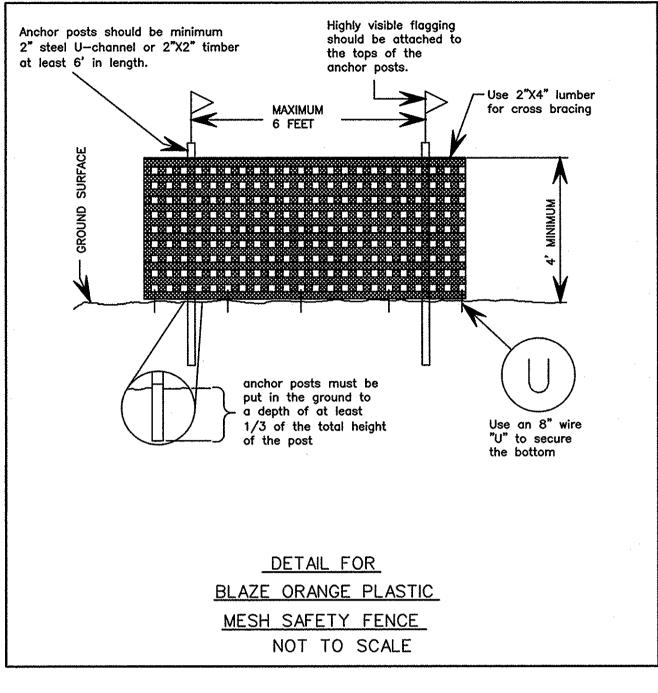
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12/19/12 DATE

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	STREAM RESTORATION PROJECT CAPITAL PROJECT D-1168 NATE PROJECT D-1168 PARKS, MARYLAND 21152 CAPITAL PROJECT D-1168 PARKS, MARYLAND 21152 PARKS, PARKS, P







FILTER BAG SPECIFICATIONS

1. FILTER BAG SHALL BE MADE OF NON-WOVEN GEOTEXTILE WITH A MINIMUM SURFACE AREA OF 225 SQUARE FEET PER SIDE.

2. ALL STRUCTURAL SEAMS SHALL BE SEWN WITH A DOUBLE STITCH USING A DOUBLE NEEDLE MACHINE WITH HIGH STRENGTH THREAD. SEAM STRENGTH SHALL WITHSTAND 100 LB/IN USING ASTM D-4884 TEST METHOD.

3. FILTER BAG SHALL HAVE A NOZZLE LARGE ENOUGH TO ACCOMMODATE A FOUR (4) INCH DIAMETER PUMP DISCHARGE HOSE.

4. NOZZLE SHALL BE SEALED TIGHTLY AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE TO PREVENT UNFILTERED WATER FROM ESCAPING.

5. FILTER BAG SHALL BE PLACED ON A LEVEL OR GENTLY SLOPING (5% MAXIMUM) AREA.

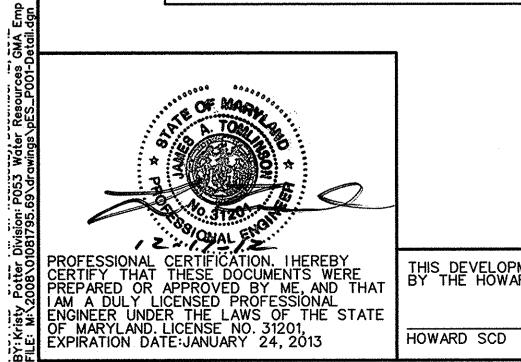
6. FILTER BAG SHALL BE PLACED UPON A BASE OF STRAW BALES OR THREE (3) INCHES OF CLEAN STONE TO PROMOTE DEWATERING THROUGH BOTTOM SURFACE OF THE FILTER BAG.

7. PUMPING RATES SHALL BE CONTROLLED TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG. AS THE BAG BECOMES FILLED WITH SEDIMENT THE PUMPING RATE SHALL BE REDUCED.

8. THE FILTER BAG SHALL BE DEWATERED, REMOVED AND DISPOSED OF UPON COMPLETION OF PUMPING OPERATIONS OR AFTER IT HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. THE DEWATERED SEDIMENT FROM THE BAG SHALL BE SPREAD IN AN UPLAND AREA AND STABILIZED WITHIN 24 HOURS.

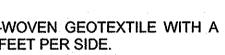
9. THE GEOTEXTILE FABRIC SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS WITH PROPERTIES DETERMINED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:

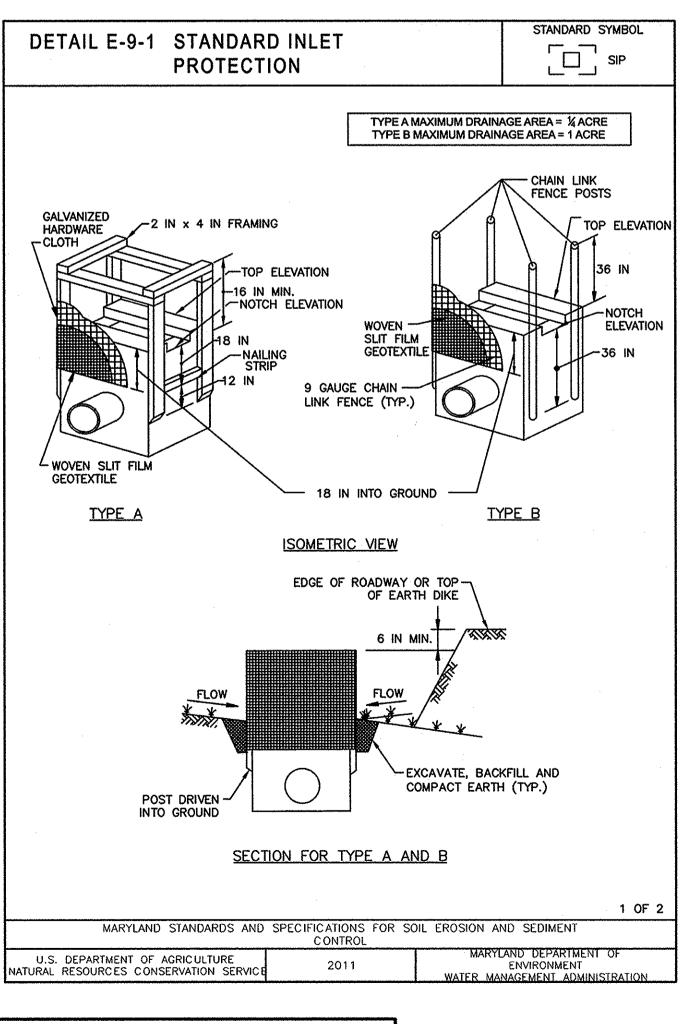
WEIGHT	10 OZ/YD	ASTM D-3776
GRAB TENSILE	210 LBS.	ASTM D-4632
PUNCTURE	150 LBS.	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT2	ASTM D-4491
PERMITIVITY (SEC)	1.3	ASTM D-4991
UV RESISTANCE	70%	ASTM D-4355
APPARENT OPENING SIZE	40-80	ASTM D-4751
(AOS)		



THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.	
John R. Robertzer	13
HOWARD SCD	DATE

DETAIL 1.2: PUMP-AROUND PRACTICE PLAN VIEW -approved dewatering device -stream diversion pumps discharge --intake hose P DEWATERING PUMP 2 flow sediment dike--sump-hole clean water dike or pool (12" to 18" deep length not to exceed that which can be 2' dia.) pumps should discharge onto a stable velocity dissipator made of rip rap or sandbags completed in one day SECTION A-A impervious sheeting-base flow+1 foot work area foot minimum CROSS SECTION OF SANDBAG DIKE REVISED NOVEMBER 2000 MARYLAND DEPARTMENT OF THE ENVIRONMENT PAGE 1.2 - 3 WATER MANAGEMENT ADMINISTRATION TEMPORARY INSTREAM CONSTRUCTION MEASURES





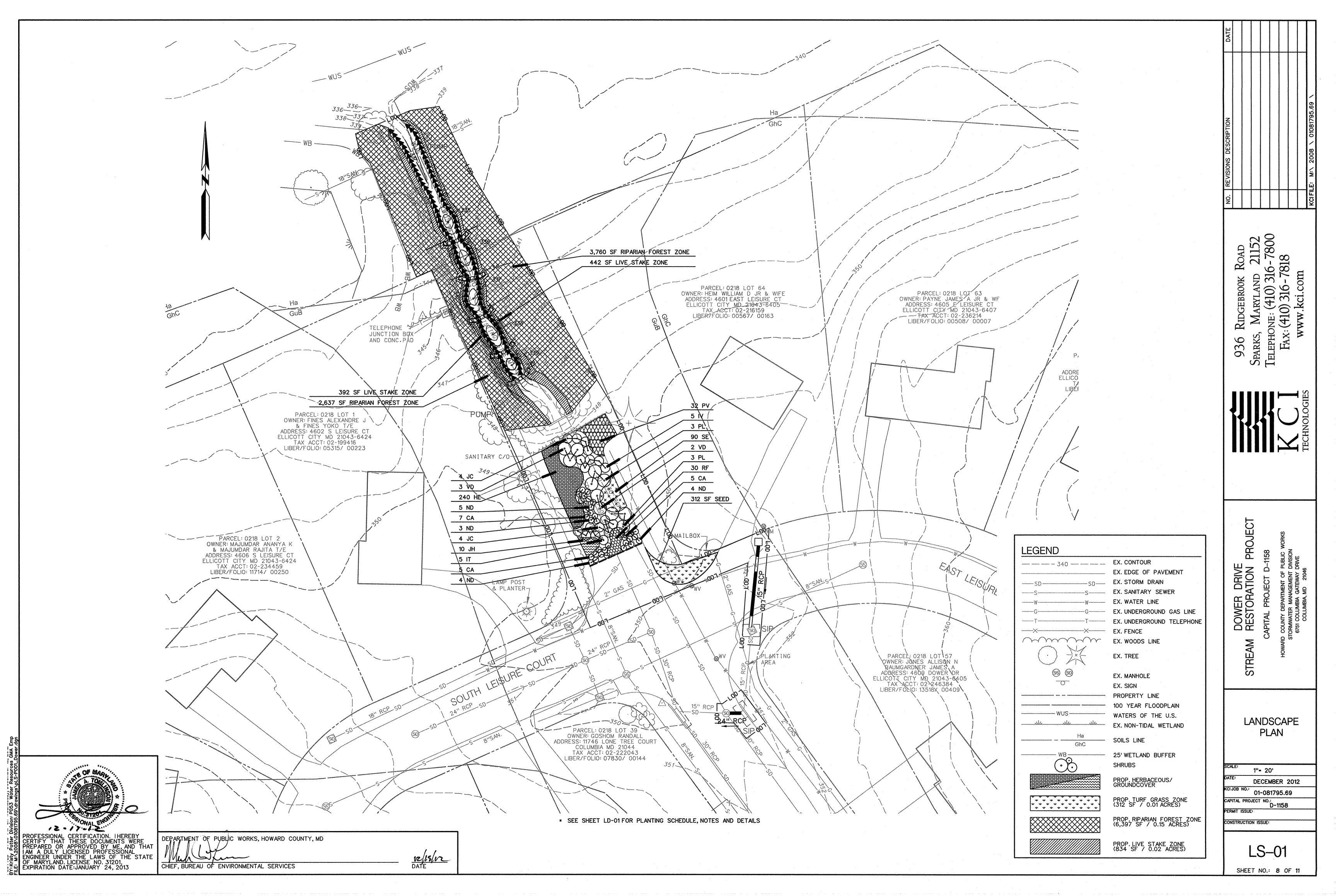
DEPARTMENT\_OF PUBLIC WORKS, HOWARD COUNTY, MD

CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

12/19/12 DATE

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LD NOT BEGIN UNTIL ALL NECESSARY EASEMENTS AND/OR RIGHT-OF-WAYS HAVE BEEN ACQUIRED. ALL EXISTING IES SHOULD BE MARKED IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ANY GE TO EXISTING UTILITIES THAT MAY RESULT FROM CONSTRUCTION AND SHOULD REPAIR THE DAMAGE AT ER OWN EXPENSE TO THE COUNTY'S OR UTILITY COMPANY'S SATISFACTION. THE CONTRACTOR SHOULD NOTIFY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT OR WMA SEDIMENT ROL INSPECTOR AT LEAST 5 DAYS BEFORE BEGINNING CONSTRUCTION. ADDITIONALLY, THE CONTRACTOR SHOULD M THE LOCAL ENVIRONMENTAL PROTECTION AND RESOURCE MANAGEMENT INSPECTION AND ENFORCEMENT ON AND THE PROVIDER OF LOCAL UTILITIES A MINIMUM OF 48 HOURS BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHOULD CONDUCT A PRE-CONSTRUCTION MEETING ON SITE WITH THE WMA SEDIMENT CONTROL CTOR, THE COUNTY PROJECT MANAGER, AND THE ENGINEER TO REVIEW LIMITS OF DISTURBANCE, EROSION AND ENT CONTROL REQUIREMENTS, AND THE SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHOULD STAKE OUT	RIPTION WORK SHOULD CONSIST OF INSTALLING A TEMPORARY PUMP AROUND AND SUPPORTING MEASURES TO DIVERT AROUND IN-STREAM CONSTRUCTION SITES. MENTATION SEQUENCE ENT CONTROL MEASURES, PUMP-AROUND PRACTICES, AND ASSOCIATED CHANNEL AND BANK CONSTRUCTION LD BE COMPLETED IN THE FOLLOWING SEQUENCE (REFER TO DETAIL 1.2): CONSTRUCTION ACTIVITIES INCLUDING THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES	DATE
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	CTOR, THE COUNTY PROJECT MANAGER, AND THE ENGINEER TO REVIEW LIMITS OF DISTURBANCE, EROSION AND ENT CONTROL REQUIREMENTS, AND THE SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHOULD STAKE OUT IMITS OF DISTURBANCE PRIOR TO THE PRE-CONSTRUCTION MEETING SO THEY MAY BE REVIEWED. THE CIPANTS WILL ALSO DESIGNATE THE CONTRACTOR'S STAGING AREAS AND FLAG ALL TREES WITHIN THE LIMIT OF RBANCE, WHICH WILL BE REMOVED FOR CONSTRUCTION ACCESS. TREES SHOULD NOT BE REMOVED WITHIN THE	SNOISI
	CONSTRUCTION SHOULD NOT BEGIN UNTIL ALL SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN LLED AND APPROVED BY THE ENGINEER AND THE SEDIMENT CONTROL INSPECTOR. THE CONTRACTOR SHOULD	
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A STARE VLOOTY OBSERTS WALE OF REAM OF SAME AS SAMEAUE.     A STARE VLOOTY OBSERTS WALE OF REAM OF SAMEAUES BOLL     A STREW TO DESCRIPTION ASSAMED AND THE ADDRESS OF A SAMEAUES DOLLARS AND AND THE ADDRESS AND ADDRESS OF A SAMEAUES DOLLARS AND ADDRESS OF A SAMEAUES AND ADDRESS AND ADDRESS OF A SAMEAUES AND ADDRESS	NG ADJACENT TO THE CHANNEL. AT THE END OF EACH WORKDAY, THE WORK AREA MUST BE STABILIZED AND PUMP AROUND REMOVED FROM THE CHANNEL. WORK SHOULD NOT BE CONDUCTED IN THE CHANNEL DURING EVENTS.	OAD 2115 8
	HE PLANS, AND STREAM FLOW SHOULD BE PUMPED AROUND THE WORK AREA. THE PUMP SHOULD DISCHARGE A STABLE VELOCITY DISSIPATER MADE OF RIPRAP OR SANDBAGS.	
	, SEDIMENT BAG, OR OTHER APPROVED SOURCE. THE MEASURE SHOULD BE LOCATED SUCH THAT THE WATER S BACK INTO THE CHANNEL BELOW THE DOWNSTREAM SANDBAG DIKE.	BR00 ILAN 316-31 Ci.cc
	LD BE AVOIDED. IF EQUIPMENT HAS TO TRAVERSE SUCH A REACH FOR ACCESS TO ANOTHER AREA, THEN TIMBER OR SIMILAR MEASURES SHOULD BE USED TO MINIMIZE DISTURBANCE TO THE CHANNEL. TEMPORARY STREAM SINGS SHOULD BE USED ONLY WHEN NECESSARY AND ONLY WHERE NOTED ON THE PLANS OR SPECIFIED. (SEE	
	ALL STREAM RESTORATION MEASURES SHOULD BE INSTALLED AS INDICATED BY THE PLANS AND ALL BANKS ED IN ACCORDANCE WITH THE GRADING PLANS AND TYPICAL CROSS-SECTIONS. ALL GRADING MUST BE	S RI S, N HON X:(4
	AFTER AN AREA IS COMPLETED AND STABILIZED, THE CLEAN WATER DIKE SHOULD BE REMOVED. AFTER THE SEDIMENT FLUSH, A NEW CLEAN WATER DIKE SHOULD BE ESTABLISHED UPSTREAM FROM THE OLD SEDIMENT FINALLY, UPON ESTABLISHMENT OF A NEW SEDIMENT DIKE BELOW THE OLD ONE, THE OLD SEDIMENT DIKE	93( Park Fa
	A PUMP AROUND MUST BE INSTALLED ON ANY TRIBUTARY OR STORM DRAIN OUTFALL, WHICH CONTRIBUTES FLOW TO THE WORK AREA. THIS SHOULD BE ACCOMPLISHED BY LOCATING A SANDBAG DIKE AT THE DOWNSTREAM	T S
	WATER SHOULD DISCHARGE ONTO THE SAME VELOCITY DISSIPATER USED FOR THE MAIN STEM PUMP AROUND. IF A TRIBUTARY IS TO BE RESTORED, CONSTRUCTION SHOULD TAKE PLACE ON THE TRIBUTARY BEFORE	
	OR STREAM. WHEN CONSTRUCTION ON THE TRIBUTARY IS COMPLETED, WORK ON THE MAIN STEM	<b>G</b>
CONSTRUCTION SPECIFICATIONS 1. USE WOVEN SUT FILL GEOTEVILE AS SPECIFIED IN SECTION H-1 MATERIALS. 2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH LEVATION. 3. FOR TYPE A USE NOMMAL 2. NCH X 4 KM CONSTRUCTION ORACE LUMBER POSTS, DRIVEN 11 FOOTS NOT THE BOOM AT EAST OWNERS OF THE MILE T PLACE MALESTER'S BETWEEN THE POSTS ON THE DOT THE THE COMPLEX THE STUDIES. THE DOTE THE MERCH AND THE FRACE MALESTER'S BETWEEN THE TOP THE DOT THE FOOTS ON THE DOT THE FOOTS ON THE DOT THE THE CONSTRUCTION ORACE LUMBER POSTS ON THE DOT THE FOOTS ON THE DOT THE FOOTS ON THE DOT THE FOOTS ON THE THE STUDIES. THE DOT THE FOOTS ON THE DOTS ON THE DOT THE FOOTS ON THE DOTS ON THE DOT THE FOOTS ON THE DOTS ON THE DO	DETAIL E-9-1 STANDARD INLET	
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	QTY	BOTANICAL NAME	COMMON NAME	SIZE	FORM	SPAC
	64	CORNUS RACEMOSA	GRAY DOGWOOD	3' LENGTH 1"-1.5" DIA.	DORMANT STEMS	2
$\square$	64	CORNUS AMOMUM	SILKY DOGWOOD	3' LENGTH 1"-1.5" DIA.	DORMANT STEMS	2
	64	ALNUS INCANA SSP. RUGOSA	SPECKLED ALDER	3' LENGTH 1"-1.5" DIA.	DORMANT STEMS	2
	64	SALIX NIGRA	BLACK WILLOW	3' LENGTH 1"-1.5" DIA.	DORMANT STEMS	2

[	QTY	BOTANICAL NAME	COMMON NAME	SIZE	FORM	SPACIN
	12	AMELANCHEIR CANADENSIS	SERVICEBERRY	3'-5' HEIGHT	3 GAL.CONTAINER	-10'
	13	BETULA NIGRA	RIVER BIRCH	5'-6' HEIGHT	5 GAL. CONTAINER	-'10
	13	ACER RUBRUM	RED MAPLE	5'-6' HEIGHT	5 GAL. CONTAINER	10'-
	13	QUERCUS BICOLOR	SWAMP WHITE OAK	5'-6' HEIGHT	3 GAL. CONTAINER	10'-
	13	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	5'-6' HEIGHT	3 GAL. CONTAINER	-10'

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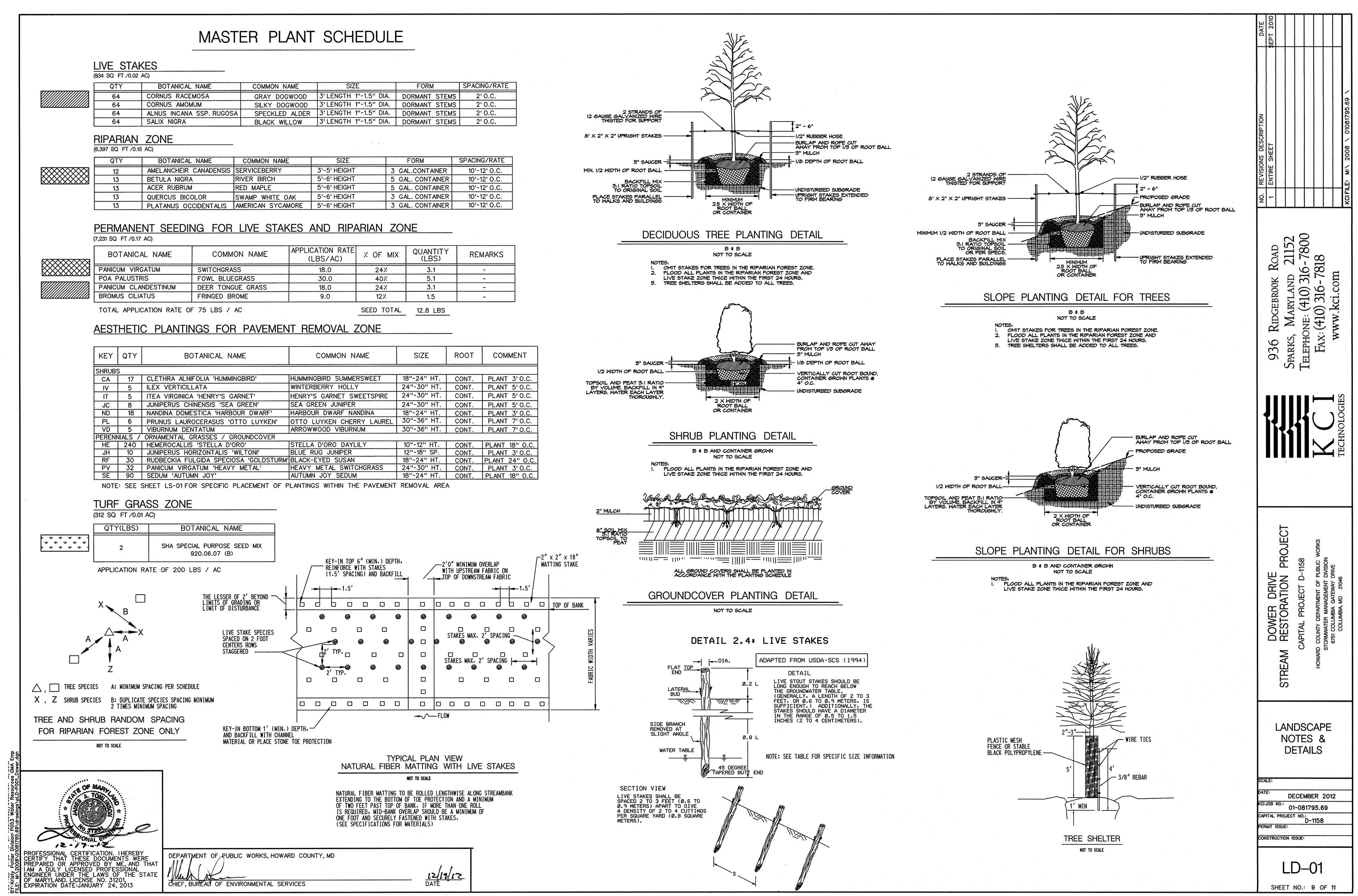
Water Resour

P053

PANICUM CLANDESTINUM DEER TONGUE GRASS BROMUS CILIATUS FRINGED BROME

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
SHRUB	S				
CA	17	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SUMMERSWEET	18"-24" HT.	CONT.
IV	5	ILEX VERTICILLATA	WINTERBERRY HOLLY	24"-30" HT.	CONT.
IT	5	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	24"-30" HT.	CONT.
JC	8	JUNIPERUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	24"-30" HT.	CONT.
ND	18	NANDINA DOMESTICA 'HARBOUR DWARF'	HARBOUR DWARF NANDINA	18"-24" HT.	CONT.
PL	6	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	OTTO LUYKEN CHERRY LAUREL	30"-36" HT.	CONT.
VD	5	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	30"-36" HT.	CONT.
PERENI	NIALS /	ORNAMENTAL GRASSES / GROUNDCOVER			
HE	240	HEMEROCALLIS 'STELLA D'ORO'	STELLA D'ORO DAYLILY	10"-12" HT.	CONT.
JH	10	JUNIPERUS HORIZONTALIS 'WILTONI'	BLUE RUG JUNIPER	12"-18" SP.	CONT.
RF	30	RUDBECKIA FULGIDA SPECIOSA 'GOLDSTURM'	BLACK-EYED SUSAN	18"-24" HT.	CONT.
PV	32	PANICUM VIRGATUM 'HEAVY METAL'	HEAVY METAL SWITCHGRASS	24"-30" HT.	CONT.
SE	90	SEDUM 'AUTUMN JOY'	AUTUMN JOY SEDUM	18"-24" HT.	CONT.
NOT					

NOTE: SEE SHEET LS-01 FOR SPECIFIC PLACEMENT OF PLANTINGS WITHIN THE PAVEMENT REMOVAL AREA



## LANDSCAPE NOTES

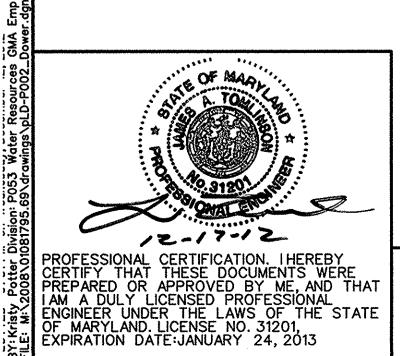
- 1. THIS PLAN IS FOR LANDSCAPE PURPOSES ONLY.
- 2. ALL PLANTING BEDS WITHIN PAVEMENT REMOVAL AREAS TO BE MULCHED WITH SHREDDED HARDWOOD BARK MULCH, 3" TYPICAL.
- 3. ALL PLANTING BEDS TO HAVE 6" TOPSOIL MINIMUM, UP TO FINISHED GRADE.
- 4. ALL LANDSCAPING SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARD DETAILS AND SPECIFICATIONS.
- 5. ALL PLANT MATERIALS SHALL BE NURSERY GROWN AND SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METROPOLITAN AREA" LATEST EDITION AND THE CONTRACT SPECIAL PROVISIONS.
- 6. THE CONTRACTOR SHALL CONTACT "MISS UTILITIY" AT 1-800-237-7777 FOR UNDERGROUND UTILITY LOCATIONS AT LEAST 72 HOURS PRIOR TO THE LANDSCAPE INSTALLATION.
- 7. ALL PLANT MATERIALS SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR FOLLOWING THE INSTALLATION COMPLETION DATE.
- 8. ANY PLANT SUBSTITUTIONS SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO ORDERING OF ANY PLANT MATERIAL.
- 9. ALL PLANTS SHALL BE IDENTIFIED IN ACCORDANCE WITH THE LATEST EDITION OF HORTUS THIRD, BY "THE STAFF OF THE HORTORIUM".
- 10. ALL NURSERY STOCK SHALL CONFORM TO AMERICAN ASSOCIATION OF NURSERYMEN, INC. STANDARDS AS DESCRIBED IN AMERICAN STANDARD FOR NURSERY STOCK, CURRENT ANSI A300 SPECIFICATIONS.
- 11. IF A CONFLICT EXISTS BETWEEN DRAWINGS (AND/OR SPECIFICATIONS), THE MORE STRINGENT SHALL APPLY. ITEMS SHOWN ON THE DRAWINGS, BUT NOT SPECIFIED, SHALL APPLY AND BE FURNISHED AND INSTALLED BY THE CONTRACTOR. IF AN ITEM IS SHOWN ON THE DRAWINGS, BUT IS NOT INCLUDED IN THE SPECIFICATIONS, PROVIDE ITEM OF A QUALITY LEVEL CONSISTENT WITH THE GENERAL QUALITY LEVEL OF THE CONTRACT REQUIREMENTS. BRING CONFLICTS BETWEEN THE DRAWINGS AND SPECIFICATIONS TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

## MINIMUM LANDSCAPE MAINTENANCE REQUIREMENTS

- 1. LAWN AREAS SHALL BE MOWED TO A HEIGHT OF 2 TO 3 INCHES AND NOT ALLOWED TO REACH A HEIGHT OF 4 INCHES BEFORE MOWING. NEVER MOW OFF MORE THAN 1/3 OF THE LEAF BLADE HEIGHT IN ANY ONE (1) MOWING.
- 2. ALL CURBS AND WALKS SHALL BE EDGED AS NEEDED.
- 3. ALL LAWN AREAS ADJACENT TO BUILDING FACES OR STRUCTURES SHALL BE TRIMMED.
- 4. A SLOW RELEASE NITROGEN BALANCED FERTILIZER WITH A 2-1-1 RATIO SHALL BE APPLIED AT A RATE OF 2 POUNDS OF NITROGEN PER 1000 SQUARE FEET IN SEPTEMBER, OCTOBER AND FEBRUARY.
- 5. LIME SHALL BE APPLIED AT THE RATE DETERMINED BY A SOILS REPORT.
- 6. IT IS RECOMMENDED THAT THE LAWN AREAS BE TREATED IN MID-MARCH TO EARLY APRIL WITH PRE-EMERGENT HERBICIDE (BETASAN) OR EQUAL APPLIED AT THE MANUFACTURER'S RECOMMENDED RATE.
- 7. A POST-EMERGENT HERBICIDE (TRIMEC) OR EQUAL IS RECOMMENDED TO BE SPRAYED ON LAWN AREAS IN THE LATE
- 8. INSECTICIDES AND FUNGICIDES ARE RECOMMENDED FOR INSECT AND DISEASE CONTROL. ALL INSECTICIDES AND
- FUNGICIDES MUST FOLLOW ALL IPM LAWS FOR SCHOOLS IN THE STATE OF MD.9. RE-SEED BARE AREAS OF LAWN AS NECESSARY. YEARLY AERATION IS RECOMMENDED.

SPRING OR THE EARLY FALL. FOLLOW MANUFACTURER'S RATES AND RECOMMENDATIONS.

- 10. ALL TRASH, LITTER, AND DEBRIS SHALL BE REMOVED FROM LAWN AREAS, PARKING LOTS, AND SHRUB BEDS AS NEEDED.
- 11. MULCH ALL SHRUB BEDS AND TREES YEARLY WITH 3 INCHES OF SHREDDED HARDWOOD BARK MULCH. BARK SHOULD BE PULLED AWAY FROM THE TRUNK / ROOT COLLAR.
- 12. MULCH ALL PERENNIAL, ORNAMENTAL GRASS AND ANNUAL BEDS YEARLY WITH 2 INCHES OF SHREDDED HARDWOOD
- 13. PERMIT SHRUBS AND TREES TO GROW AND ENLARGE TO THEIR DESIGN SIZE. CONSULT PROJECT LANDSCAPE ARCHITECT
- 14. PRUNE TREES IN ACCORDANCE WITH LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN
- 15. STANDARDS TO CONFORM TO THE MOST RECENT VERSION OF THE ANSI A300 STANDARDS PART 6 -- TRANSPLANTING AND LANDSCAPE SPECIFICATIONS GUIDELINES OF THE LANDSCAPE CONTRACTORS ASSOCIATION, MARYLAND, DISTRICT OF COLUMBIA AND VIRGINIA.



BARK MULCH.

FOR DETAILS.

AREAS.

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MD

CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

### PLANTING NOTES

A. DESCRIPTION

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL PLANT MATERIALS, LABOR AND OTHER MATERIALS NECESSARY TO COMPLETE THE WORK AS SHOWN ON THE PLANS AND DETAILS.

B. MATERIALS AND METHODS

THE MATERIALS AND METHODS SHALL COMPLY WITH ALL THE REQUIREMENTS OF THE CURRENT EDITION OF THE "AMERICAN STANDARD FOR NURSERY STOCK" AS PREPARED BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND AS MODIFIED HEREIN.

C. SUBSTITUTIONS

J. TOPSOIL

12/1/12

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IF A PLANT IS FOUND NOT TO BE SUITABLE OR AVAILABLE, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE BEFORE BIDDING.

THE OWNER OR OWNER'S REPRESENTATIVE WILL SELECT A REASONABLE ALTERNATIVE, OR WILL PROVIDE ALL LANDSCAPE CONTRACTORS WITH THE SOURCE OF THE ORIGINAL. D. UTILITIES

THE LANDSCAPE CONTRACTOR SHALL VERIFY THE CORRECT LOCATION OF ANY EXISTING UNDERGROUND UTILITIES PRIOR TO ANY EXCAVAION OR PLANT INSTALLATION. THE LANDSCAPE CONTRACTOR SHALL CALL MISS UTILITY (1-800-256-7777) A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. E. PLANT MATERIAL SOURCES

THE LANDSCAPE CONTRACTOR SHALL, AT LEAST TEN (10) DAYS BEFORE BEGINNING PLANTING OPERATIONS, SUBMIT A LIST OF PLANTING MATERIAL SOURCES GIVING THE NURSERY ADDRESS AND PHONE NUMBER FOR EACH PLANT MATERIAL REQUIRED ON THE JOB.

THE TOTAL NUMBER OF PLANTS SHALL BE AS SHOWN ON THE LANDSCAPE PLAN. IF THIS TOTAL DIFFERS FROM THE PLANT SCHEDULE, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE BEFORE BIDDING. F. TIME OF PLANTING

PLANTING SEASON SCHEDULE SHALL BE IN ACCORDANCE WITH THE "AMERICAN STANDARD FOR NURSERY STOCK" AS PREPARED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANT PINES AND OAKS DURING SPRING PLANTING SEASON ONLY. G. MULCH

MULCH SHALL BE SHREDDED HARDWOOD BARK. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A ONE (1) LB. SAMPLE TO THE OWNER'S REPRESENTATIVE FOR HIS APPROVAL. MULCH SHALL BE APPLIED TO A DEPTH OF THREE (3) INCHES WITHIN 24 HOURS OF INSTALLATION OF PLANT MATERIALS.

H. TREE WRAP SHALL NOT BE UTILIZED. TREE SHELTERS SHALL BE USED ON ALL TREES PER TREE SHELTER DETAIL ON SHEET LD-01

THE LANDSCAPE CONTRACTOR SHALL PRUNE PLANT MATERIAL WITHIN TWO (2) DAYS OF INSTALLATION IN ACCORDANCE WITH THE DETAILS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

ASTM D PH RANGE 5.5 TO 7.4, 1.5 PERCENT ORGANIC MATERIAL MINIMUM, FREE OF STONES 1 INCH (25MM) OR LARGER IN ANY DIMENSION, AND OTHER EXTANEOUS MATERIALS HARMFUL TO PLANT GROWTH.

TOPSOIL SOURCE: REUSE SURFACE SOIL STOCKPILED ON THE SITE. VERIFY SUITABILITY OF SURFACE SOIL TO PRODUCE TOPSOIL MEETING REQUIREMENTS AND AMEND WHEN NECESSARY. SUPPLEMENT WITH IMPORTED TOPSOIL WHEN QUANTITIES ARE INSUFFICIENT. CLEAN TOPSOIL OF ROOTS, PLANTS, SODS, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.

SPREAD TOPSOIL 6" MINIMUM DEPTH OVER ALL LANDSCAPE AREAS. K. FERTILIZATION

SPREAD AGRICULTURAL LIME ON SOD AND SEED AREAS AT A RATE OF 45 LBS/1000 S.F. FERTILIZE SOD AND SEED AREAS WITH (5-10-10) AT A RATE OF 10 LBS/1000 S.F.

L. SEEDING

SEE EROSION AND SEDIMENT CONTROL NOTES, SHEET 6 OF 11, PERMANENT SEEDING NOTES, FOR PERMANENT SEEDING INSTRUCTIONS. M. CLEAN-UP AND RESTORATION

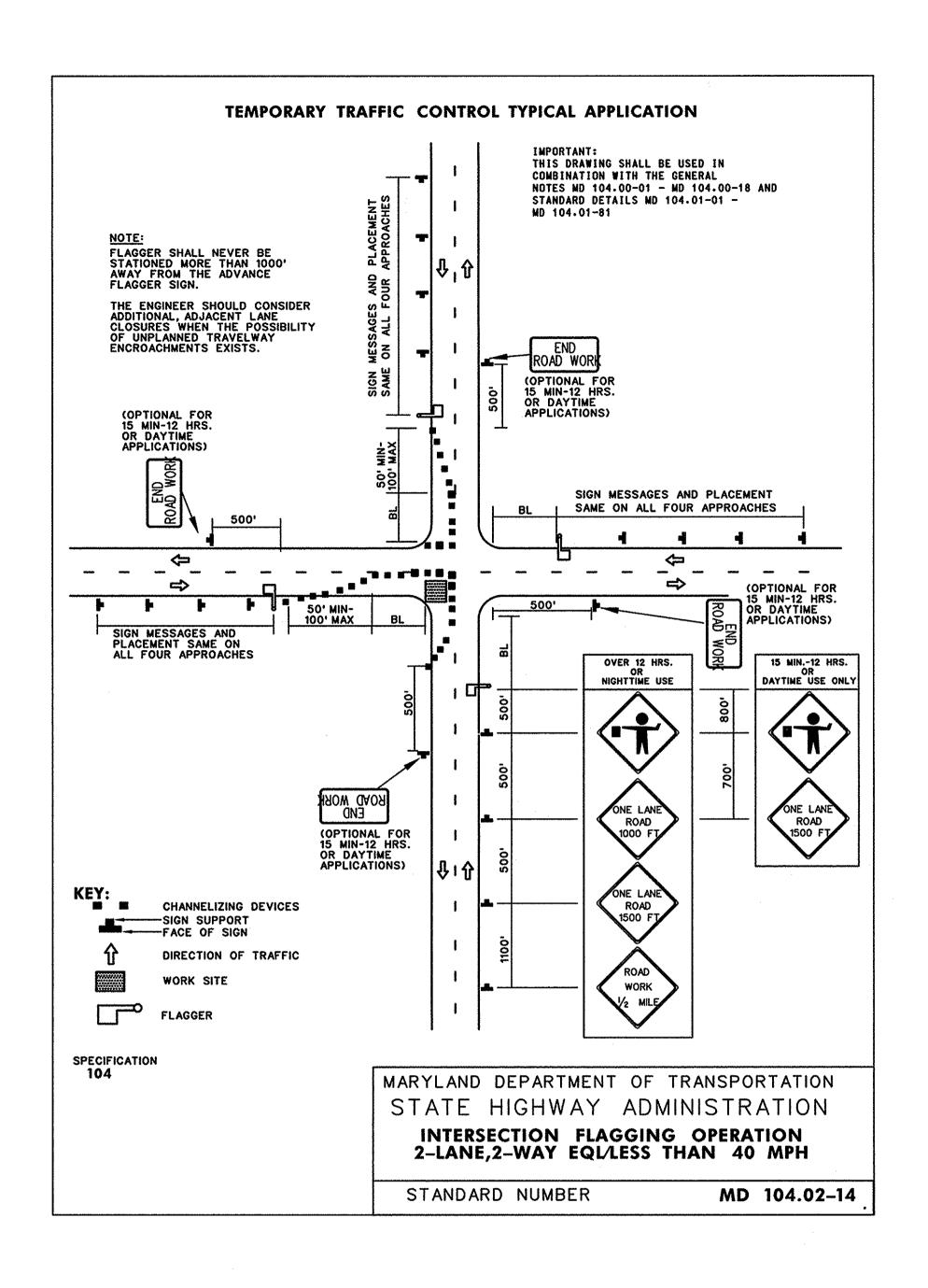
DURING THE COURSE OF PLANTING, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED, LAWN AREAS KEPT CLEAR, AND ALL REASONABLE PRECAUTIONS TAKEN TO AVOID DAMAGE OF EXISTING LAWNS, PAVING, ETC.

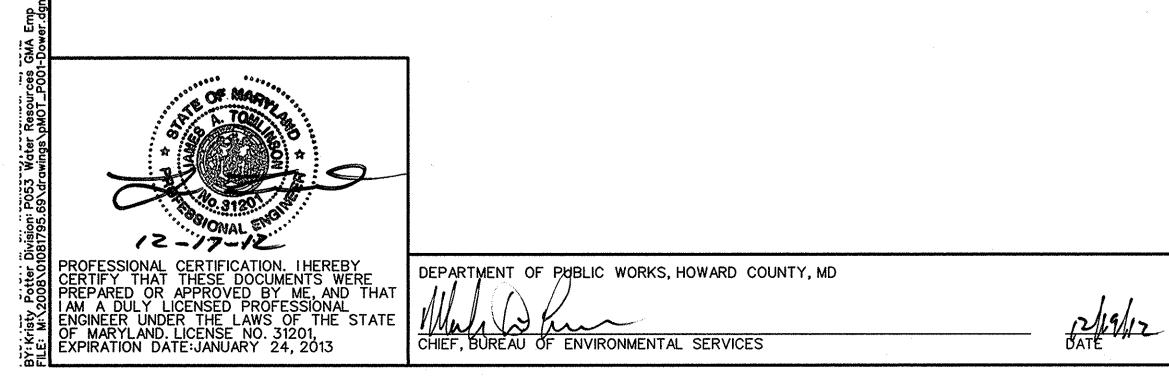
THE LANDSCAPE CONTRACTOR SHALL RESTORE TO THE ORIGINAL CONDITION ALL PAVEMENTS, SODDED AND PLANTED AREAS, STRUCTURES AND SUBSTRUCTURES, NOT SPECIFICALLY PROVIDED FOR IN THE CONTRACT, WHICH ARE DISTURBED BY THE LANDSCAPE CONTRACTOR DURING PLANTING OPERATIONS. SUCH RESTORATION SHALL BE IN A MANNER SATISFACTORY TO THE OWNER'S REPRESENTATIVE AND AT NO ADDITIONAL COST TO THE OWNER.

N. WATER

THE LANDSCAPE CONTRACTOR SHALL WATER ALL PLANTS PROMPTLY AND SHALL PROVIDE ALL EQUIPMENT NECESSARY TO TRANSPORT THE WATER FROM SOURCE ADEQUATELY AND AS OFTEN AS NECESSARY TO ENSURE PROPER PLANT GROWN AND TO KEEP THE SOIL MOIST AND IN A CONDITION SATISFACTORY TO THE OWNER'S REPRESENTATIVE. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANTS FROM THE TIME OF PLANTING UNTIL THE FINAL INSPECTION.

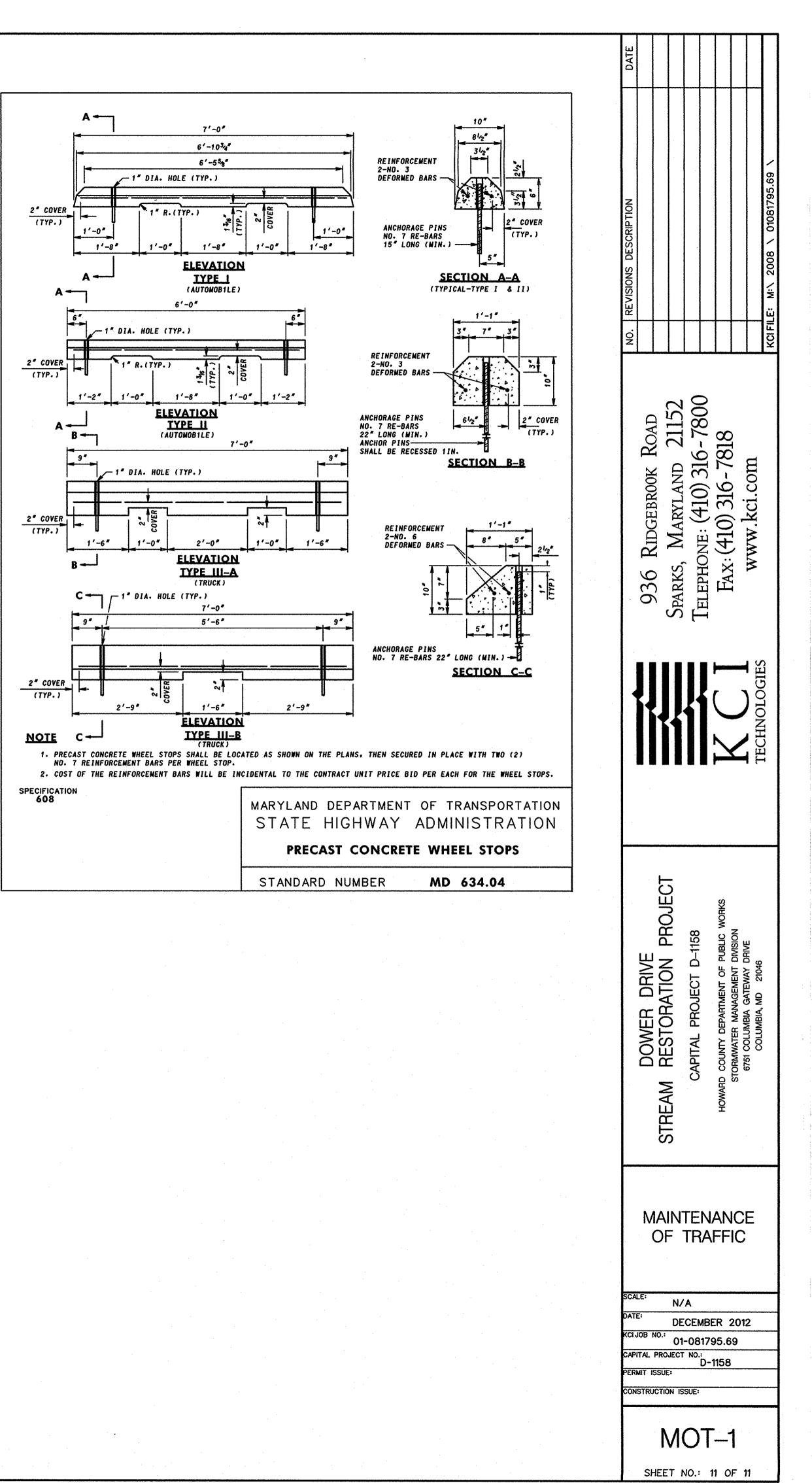
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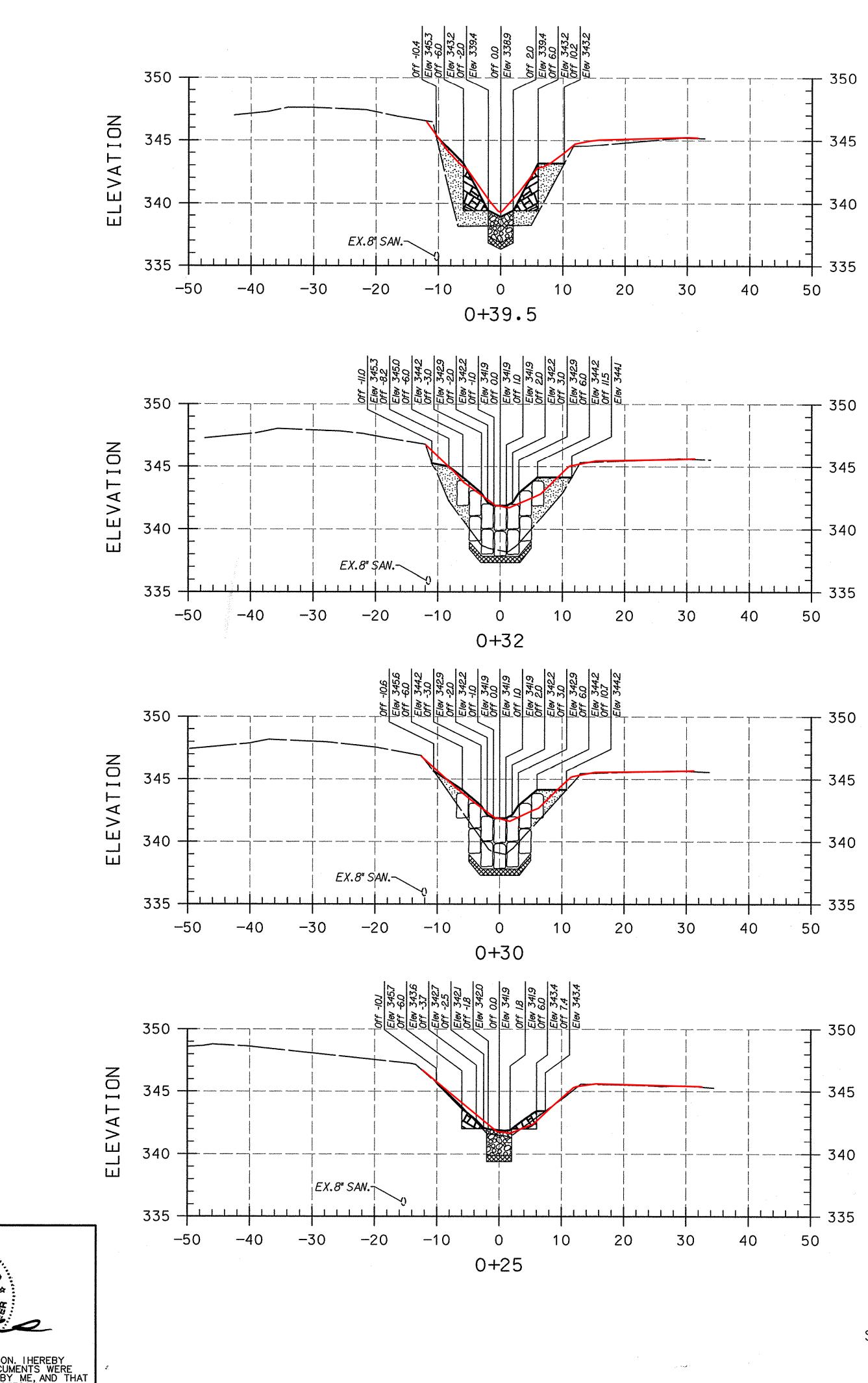


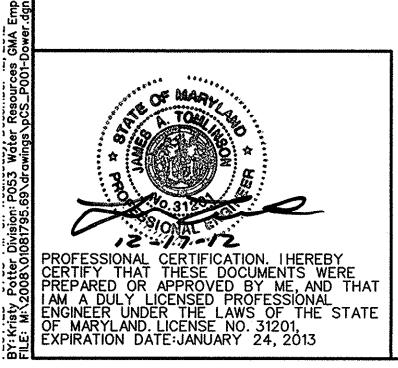


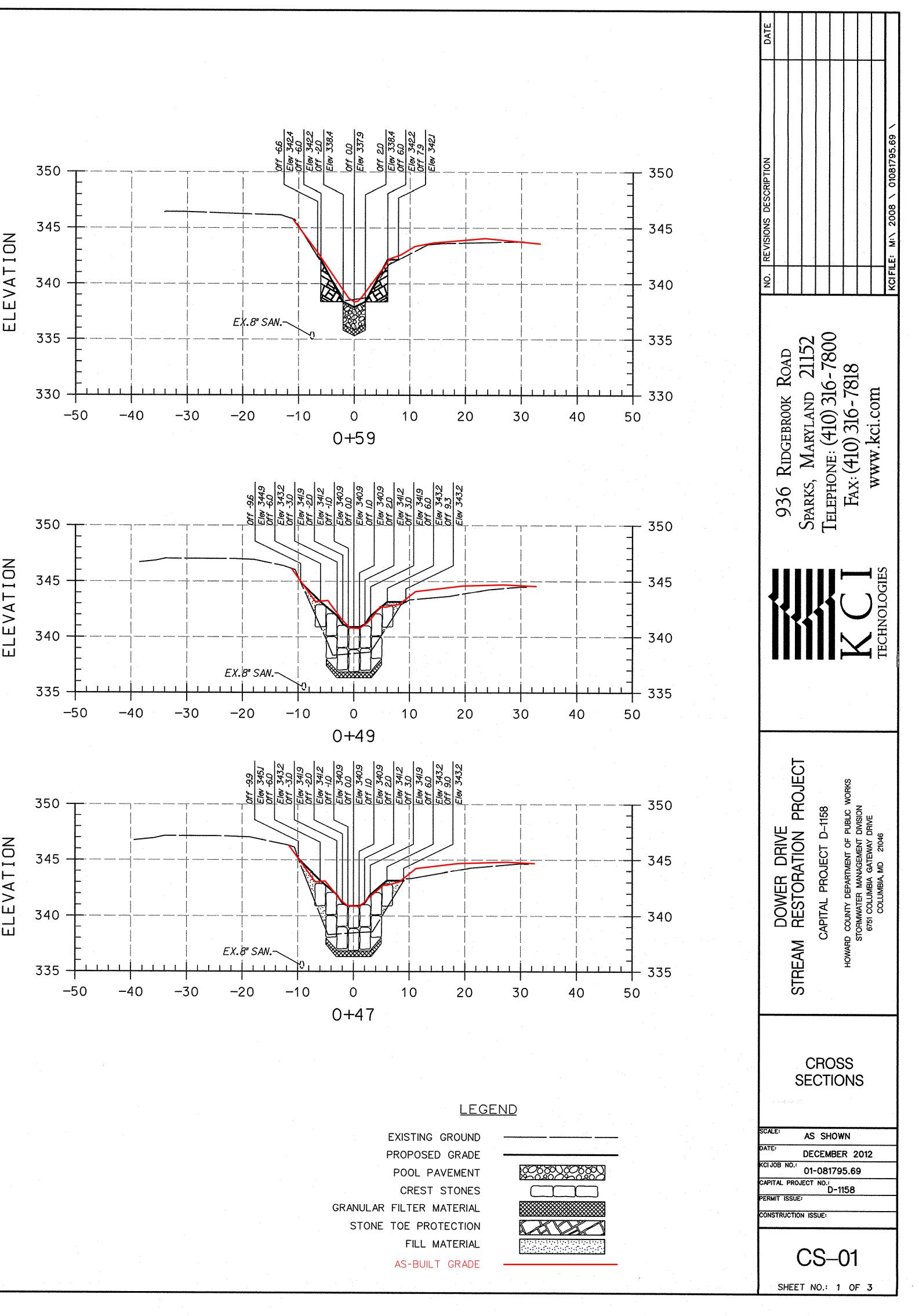
1. MAINTAIN TRAFFIC ON DOWER DRIVE AND EAST LEISURE COURT WHILE INSTALLING DRAINAGE PIPES IN ACCORDANCE WITH MDSHA STANDARD NO. MD 104.02-14 (INTERSECTION FLAGGING 2 LANE, 2 WAY).

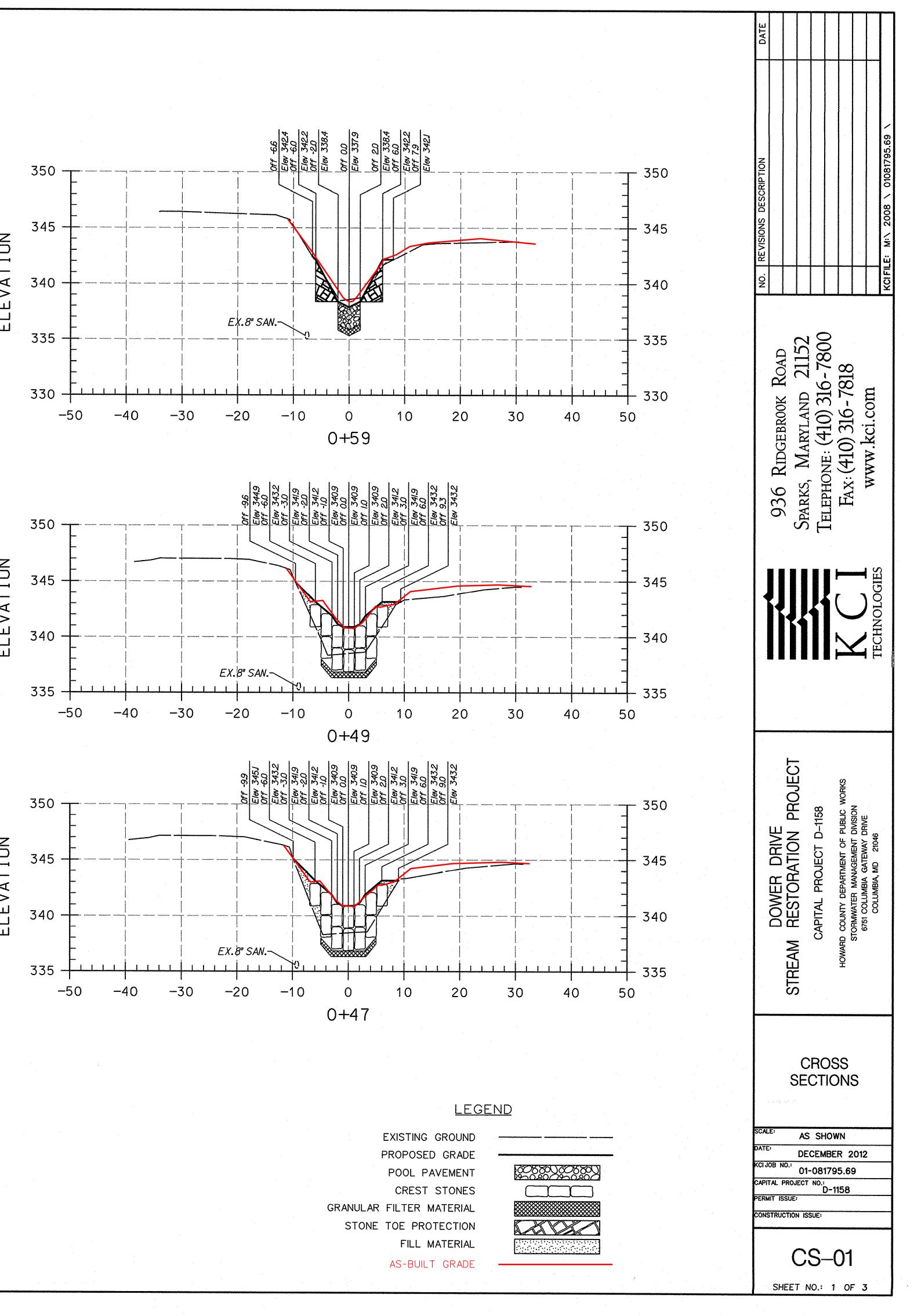
2. ALL TRAFFIC CONTROL DEVICES SHALL MEET THE REQUIREMENTS OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE MARYLAND STATE HIGHWAY BOOK OF STANDARDS.

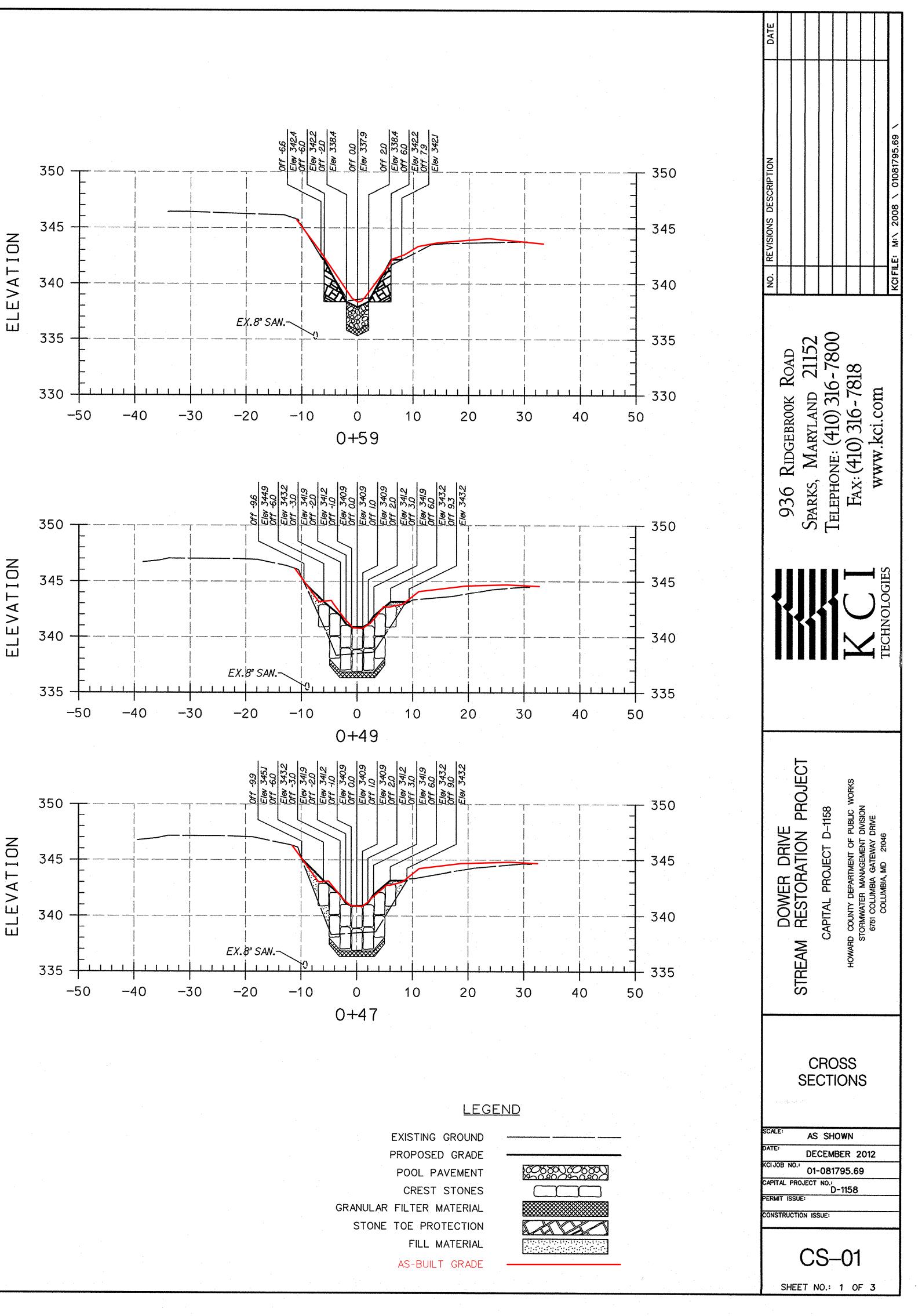




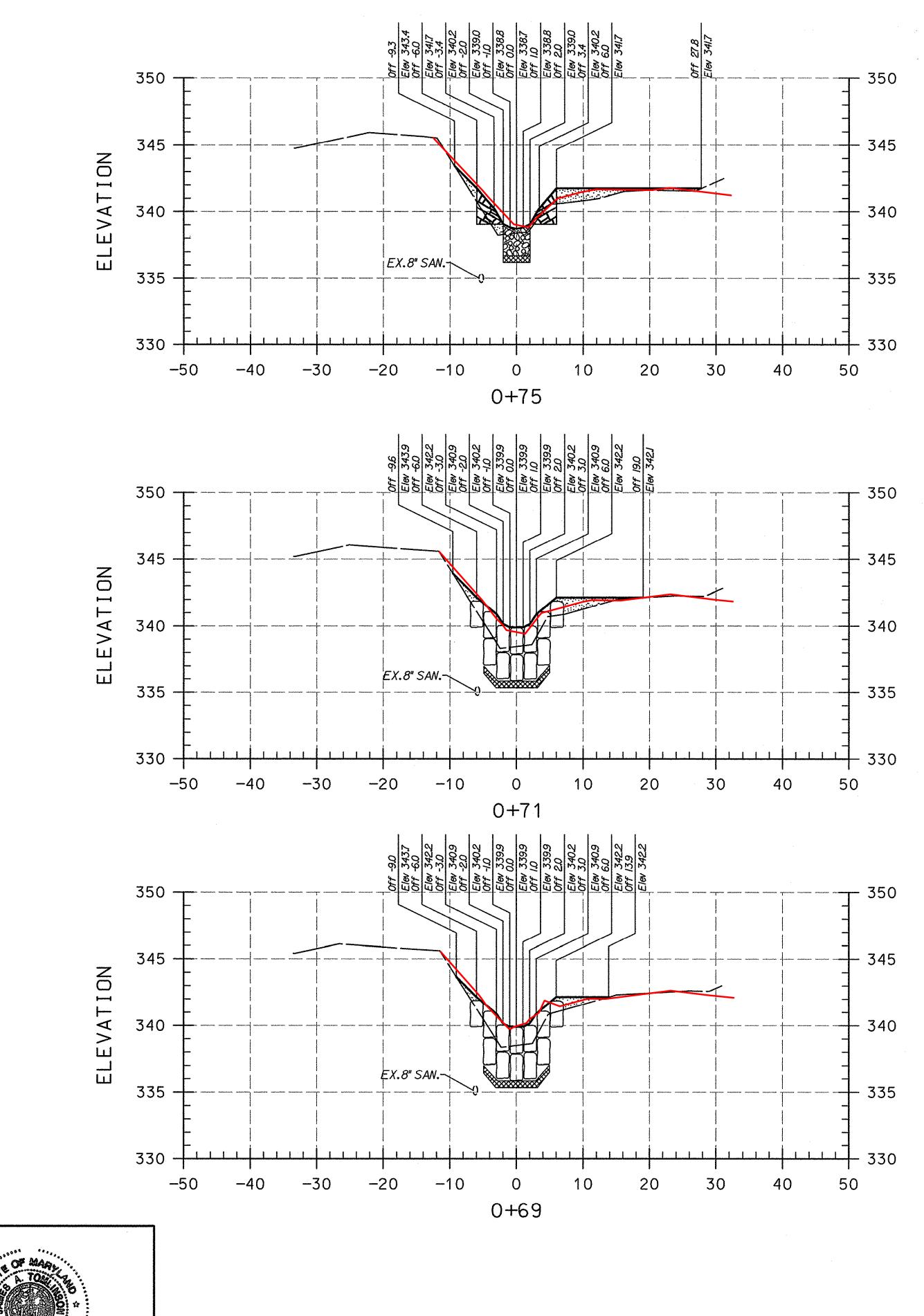


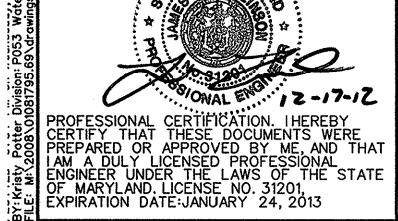






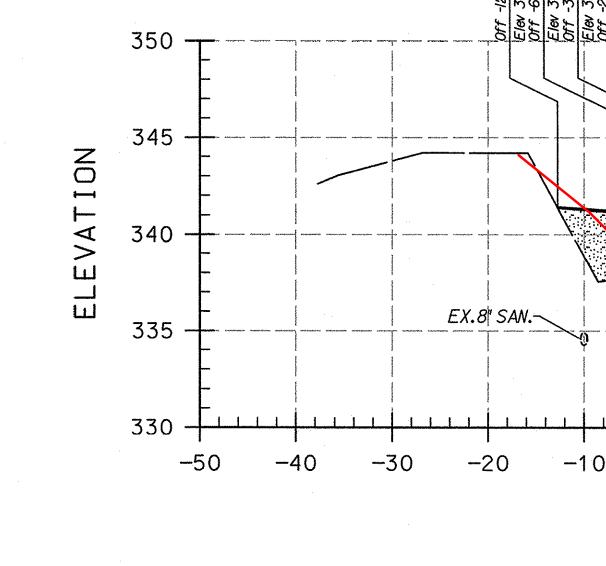
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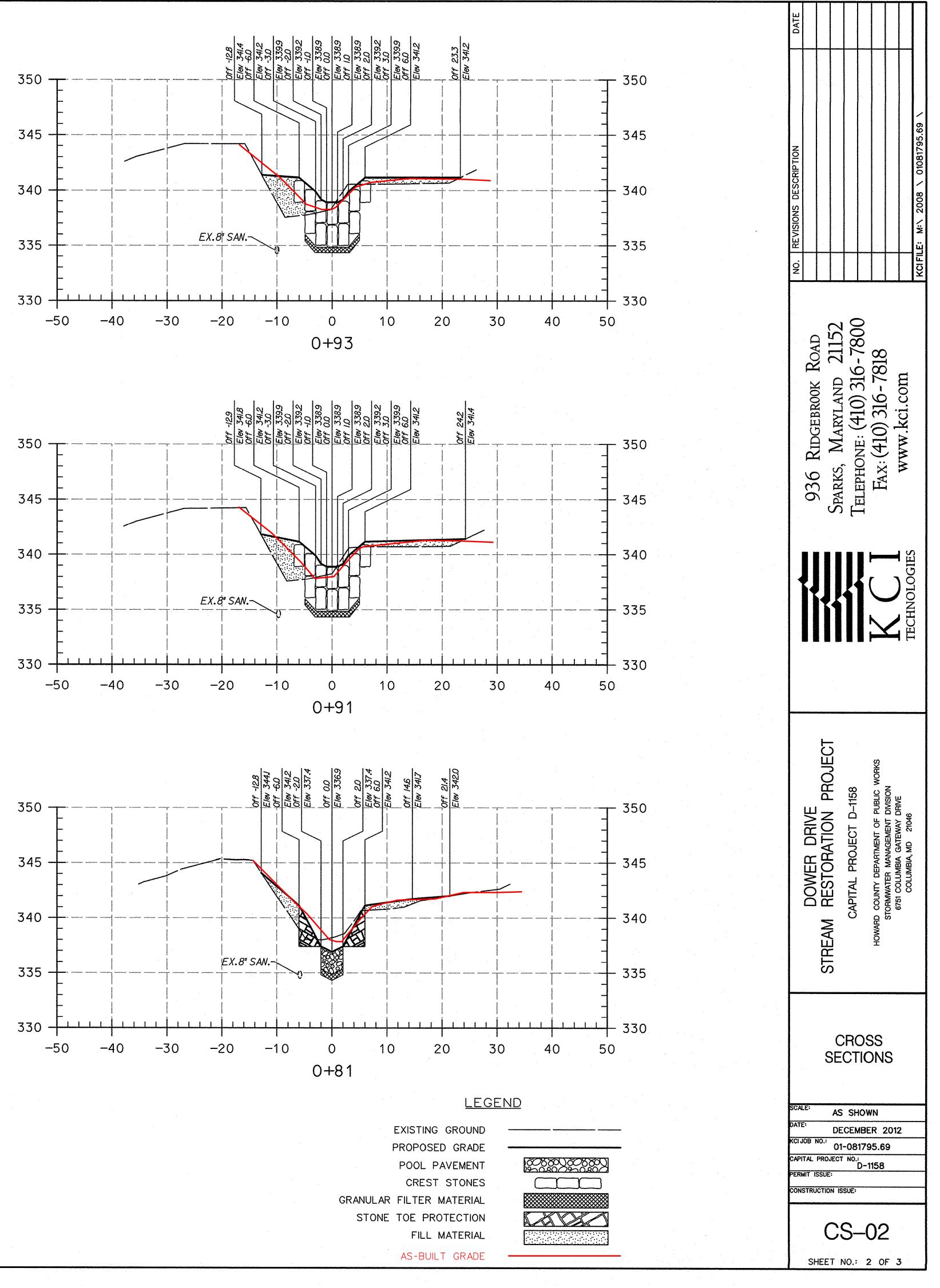


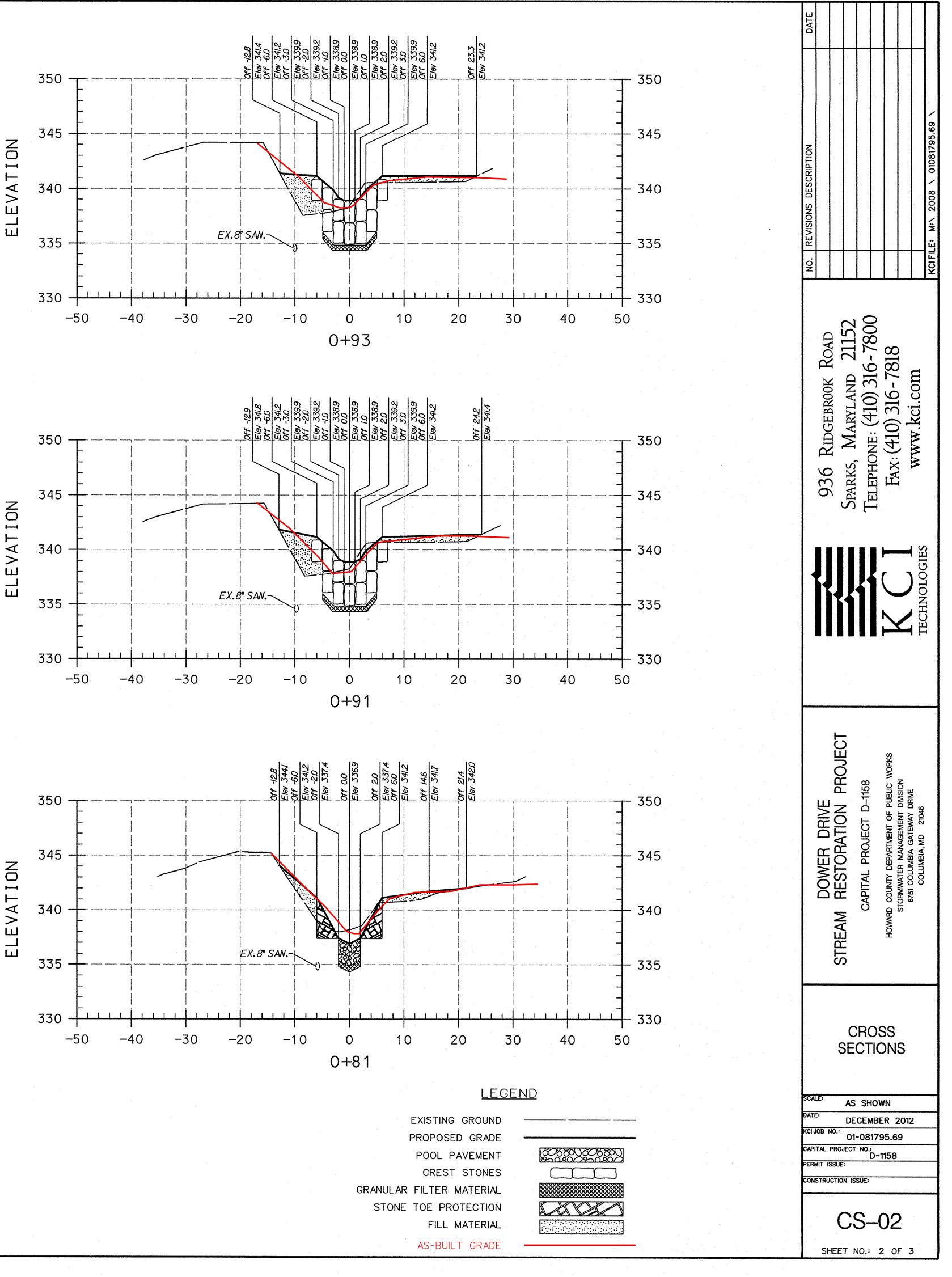


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