

INDEX OF SHEETS

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LEGEND

	EX. TREES
	EXIST. MAJOR CONTOUR
	EXIST. MINOR CONTOUR
	PROP. MAJOR CONTOUR
	PROP. MINOR CONTOUR
	EXIST. PROPERTY LINE
	WETLANDS
	ORANGE SAFETY FENCE
	LIMIT OF DISTURBANCE
	SILT FENCE
	SUPER SILT FENCE
	SILT DIVERSION FENCE
	TPS TEMPORARY PUMPING STATION
	SOILS BOUNDARY
	SAVE TREE
	REMOVE TREE
	TRY TO SAVE TREE
	IMBRICATED STONE TOE PROTECTION
	LIVE STAKE ZONE
	RIPARIAN ZONE
	BUFFER ZONE
	0%-14.99% SLOPES
	15.0%-24.99% SLOPE
	>25.0% SLOPES
	EXISTING FLOODPLAIN
	PROPOSED FLOODPLAIN
	EX. WATER LINE
	EX. SEWER LINE
	EX. STORM DRAIN
	EX. OVERHEAD ELECTRIC
	EX. UNDERGROUND CABLE TV
	EX. UNDERGROUND TELEPHONE
	EX. GAS LINE

SITE DEVELOPMENT PLAN

VILLAGE OF HICKORY RIDGE

SECTION 3, AREA 7, LOT 73

STREAM RESTORATION

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT D-1126

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 JUNE 15TH, INCLUSIVE. STREAM CLASSIFICATION: USE I-P.
- CONTRACTOR SHALL CONTINUALLY MONITOR WEATHER FORECASTS DURING WORK ACTIVITIES AND SCHEDULE WORK DURING FAVORABLE CONDITIONS.
- 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 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOT STORE EQUIPMENT, MATERIALS AND/OR SUPPLIES BEYOND THE ORANGE FENCING 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, A VIDEOTAPE AND PHOTOGRAPHS OF THE CHANNEL FROM THE PROPOSED UPSTREAM LIMIT OF WORK TO THE EXISTING FOOTBRIDGE SHALL BE TAKEN BY THE CONTRACTOR. THE PHOTOGRAPHS AND VIDEOTAPE SHALL ALSO INCLUDE THE PROPOSED CONSTRUCTION ACCESS ROUTE AND MATERIAL STORAGE AREAS. THE CONTRACTOR SHALL ALSO TAKE PHOTOGRAPHS AND VIDEOTAPE OF THE SAME AREA UPON COMPLETION OF CONSTRUCTION AND STABILIZATION. THE VIDEOTAPE AND PHOTOGRAPHS SHALL BE TURNED OVER TO THE COUNTY PROJECT MANAGER.
- 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.
- ANY PORTION OF TREES THAT ARE REMOVED SHALL BE REMOVED FROM THE SITE.
- IN AREAS WHERE CONSTRUCTION TRAFFIC MUST DRIVE WITHIN THE CRITICAL ROOT ZONE OF A TREE TO REMAIN, THE CONTRACTOR SHALL PLACE WOOD MATS TO DISTRIBUTE THE LOAD OF THE CONSTRUCTION VEHICLES.
- THE EXISTING RIP RAP IN THE CHANNEL SHALL BE RE-USED TO THE EXTENT PRACTICAL AS DIRECTED BY THE ENGINEER TO MEET THE STONE SPECIFIED FOR THE RELOCATED CHANNEL.
- THERE MAY BE SEVERAL LOCATIONS WHERE CONSTRUCTION VEHICLES MUST SQUEEZE BETWEEN TWO EXISTING TREES TO REMAIN. HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS SHALL BE NOTIFIED AND SHALL DETERMINE THE EXACT COURSE OF ACTION TO BE FOLLOWED.
- PRIOR TO BEGINNING ANY CONSTRUCTION, CONTRACTOR SHALL ARRANGE FOR HOUSE INSPECTIONS/PHOTOGRAPHS TO DOCUMENT EXISTING CONDITIONS PRIOR TO CONSTRUCTION. HOWARD COUNTY PROJECT MANAGER WILL MAKE INITIAL CONTACT WITH AFFECTED HOMEOWNERS TO DISCUSS THE NEED FOR THE INSPECTIONS. INSPECTION SHALL INCLUDE INSIDE AND OUTSIDE OF HOUSES.

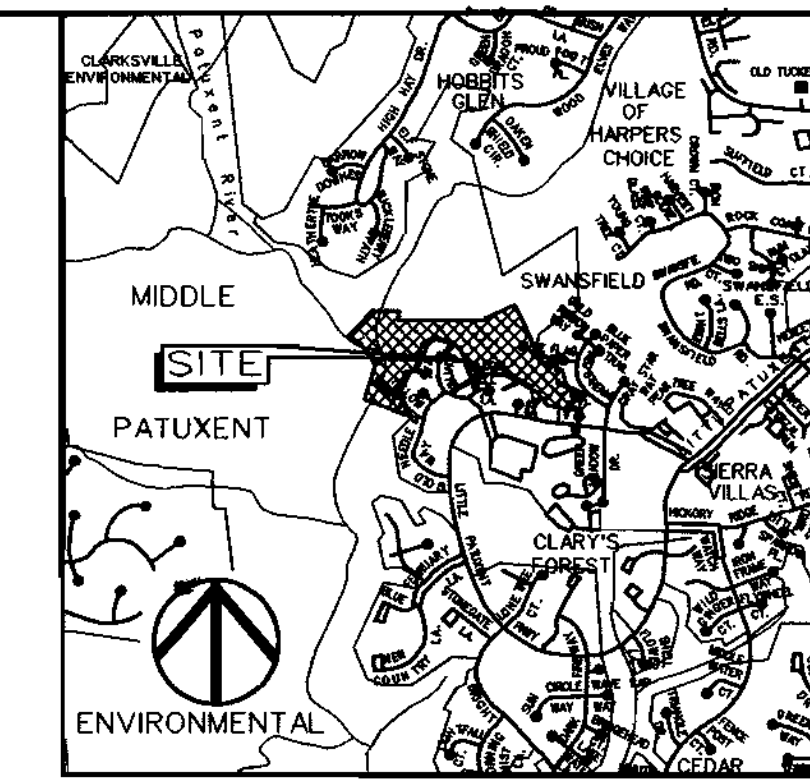
LOT/PARCEL	STREET ADDRESS
73/399	12009 YELLOWBELL LANE

BENCHMARK DATA

TRAV YB-1
PROPERTY BAR W/CAP
N 502585.174
E 828180.763

TRAV YB-2
PROPERTY BAR W/CAP
N 502628.367
E 828070.985

TBM 2
II-CUT ON RIM OF SS MH
ELEV. -357.21



VICINITY MAP
Scale: 1" = 2000'

GENERAL NOTES

- THE SUBJECT PROPERTY IS ZONED NT PER THE 10/18/93 COMPREHENSIVE ZONING PLAN.
- THE DEPARTMENT OF PLANNING AND ZONING HAS DETERMINED THAT THE DISTURBANCE WITHIN THE FLOODPLAIN, STREAM, AND WETLANDS IS ESSENTIAL IN ORDER TO CONSTRUCT THIS PROJECT.
- THIS PLAN IS PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- THERE ARE NO BURIAL GROUNDS OR CEMETERY SITES LOCATED ON THE PROJECT SITE.
- REFERENCE NUMBERS OF OTHER APPROVED PLANS: SDP 86-28c and F 85-06, VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 7.
- THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BECAUSE THE SITE IS PART OF A PLANNED UNIT DEVELOPMENT WHICH HAS PRELIMINARY DEVELOPMENT PLAN APPROVAL BEFORE 12/31/92.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- TRAFFIC CONTROL SHALL BE PROVIDED DURING CONSTRUCTION. HOWARD COUNTY STANDARD DETAIL TE-11 SHALL APPLY.
- 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. BENCHMARKS SHOWN HEREON WERE PROVIDED BY HOWARD COUNTY SURVEY DIVISION.
- WATER IS PUBLIC.
- SEWER IS PUBLIC.
- STORMWATER MANAGEMENT IS NOT REQUIRED FOR THIS PROJECT SINCE THE PROJECT WILL NOT ADD IMPERVIOUS AREA NOR WILL IT CHANGE THE EXISTING HYDROLOGY OF THE SITE.
- EXISTING UTILITIES ARE BASED ON FIELD SURVEYS AND AVAILABLE RECORD DRAWINGS.
- THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY KCI TECHNOLOGIES, INC., DATED AUGUST 2003 AND WAS APPROVED IN JANUARY, 2004.
- THE WETLANDS DELINEATION FOR THIS PROJECT WAS PERFORMED BY KCI TECHNOLOGIES, INC. IN SEPTEMBER 2002.
- TOPOGRAPHIC SURVEY OF THE SITE WAS PERFORMED BY AB CONSULTANTS, INC. IN OCTOBER 2002.
- A JOINT PERMIT APPLICATION HAS BEEN SUBMITTED TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR THIS PROJECT. (TRACKING NUMBER 200361132)
- 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. THE CONTRACTOR MUST VERIFY SUCH INFORMATION TO HIS OWN SATISFACTION.
- SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE ENGINEER SHALL BE NOTIFIED 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.
- EXISTING MACADAM PATHWAY DISTURBED BY THE PROPOSED WORK SHALL BE RECONSTRUCTED AS PER THE DETAIL SHOWN HEREON.
- THE PROPOSED PROJECT IS LOCATED BEHIND 12019 YELLOWBELL LANE.

SITE ANALYSIS DATA CHART

- TOTAL PROJECT AREA: 29.35 ACRES (1,278,486 SF).
- DISTURBED AREA: 0.38 ACRES (16,550 SF).
- PRESENT ZONING DESIGNATION: NT
- SITE IS LOCATED IN MIDDLE PATUXENT ENVIRONMENTAL AREA.
- PROPOSED USE FOR THE SITE: STABILIZE EXISTING BANK/CHANNEL EROSION.
- OPEN SPACE ON SITE: 29.35 ACRES AND 100% OF GROSS AREA.
- APPLICABLE DPZ FILE REFERENCES: SDP 86-28c and F 85-06 VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 7.

NO.	REVISIONS DESCRIPTION	DATE

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

www.kci.com

VILLAGE OF HICKORY RIDGE
 SECTION 3, AREA 7, LOT 73
 STREAM RESTORATION
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7100 OAKLAND MILLS ROAD
 COLUMBIA, MD 21046-1877
 (410) 313-4846

TITLE SHEET

SCALE: AS SHOWN
DATE: 3-4-04
KCI JOB NO.: 01-01128.e
CAPITAL PROJECT NO.: D-1126
PERMIT ISSUE:
CONSTRUCTION ISSUE:

1

SHEET NO.: 1 OF 9

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Michael Morrison 4/17/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Candy Hanant 4/20/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mark Wright 4/20/04
DIRECTOR DATE

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL*
VILLAGE OF HICKORY RIDGE	SECTION 3, AREA 7	73/399
PLAT* or L/P	GRID *	ZONING
4718/41	4	NT
TAX MAP NO.	ELECT. DISTR.	CENSUS TRACT
35	05	6053.0
WATER CODE	SEWER CODE	

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Jan V. Oke 3/12/04
DIRECTOR OF PUBLIC WORKS DATE

John O'Hara 3/10/04
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE

Howard C. Saltzman 3/17/04
CHIEF, STORMWATER MANAGEMENT DIVISION DATE

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

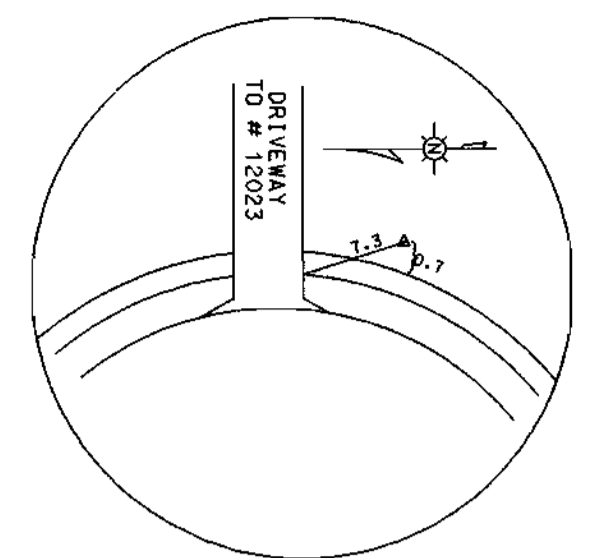
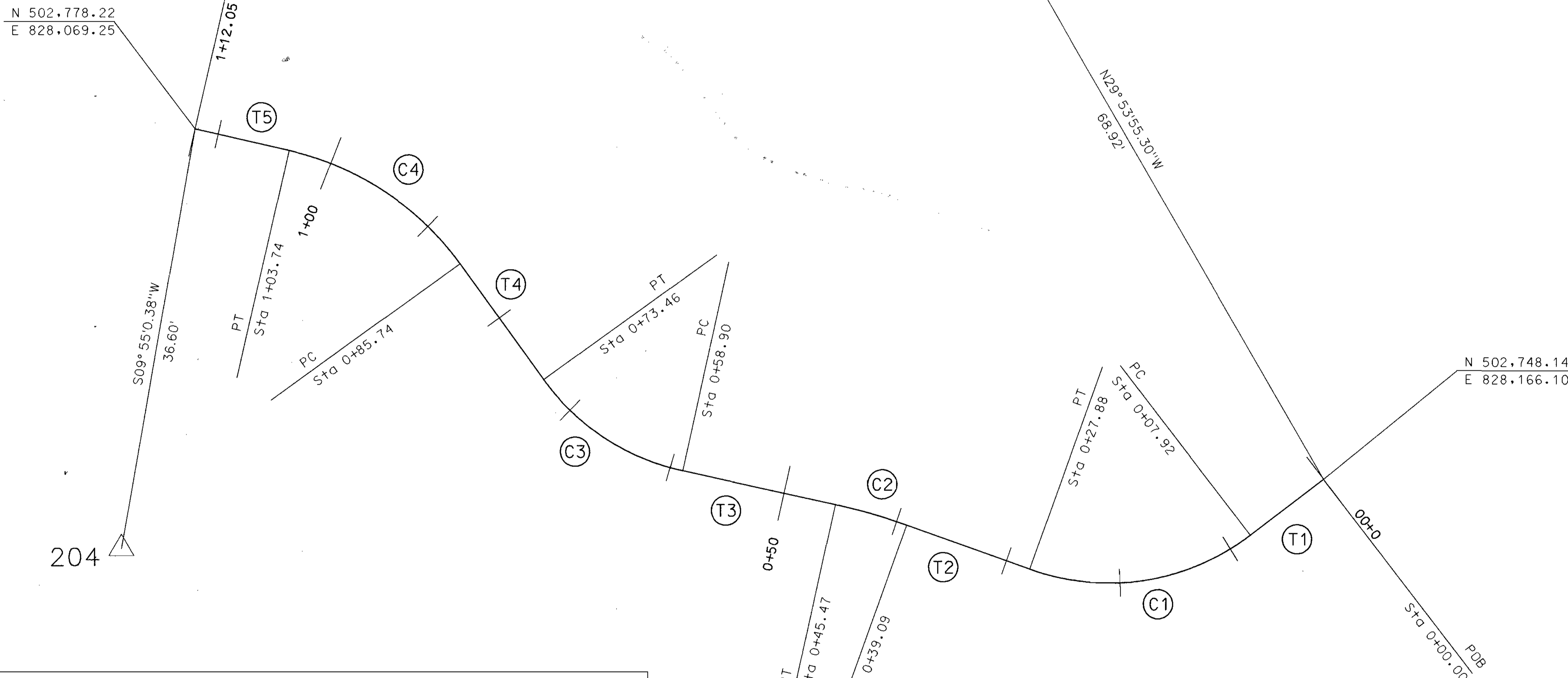
George J. Carlin 3-23-04
DIRECTOR OF RECREATION AND PARKS DATE

10 NORTH PARK DRIVE
HUNT VALLEY, MD 21030
PHONE: (410) 316-7800
FAX: (410) 316-7817
www.kci.com

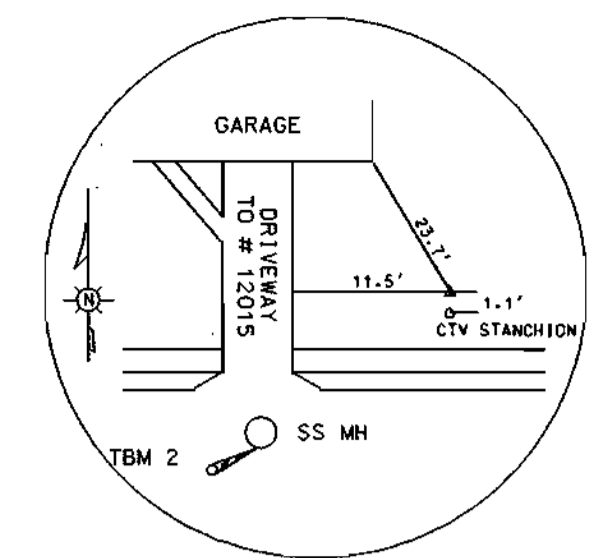
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 By: Kevin Johnson, Division: Environmental Engineering
 FILE: m:\2001\0101128.e\Drawings\1101128.dgn

TANGENT DATA		
TANGENT NO.	BEARING	DISTANCE
T1	S 52° 34' 39" W	7.92'
T2	N 70° 14' 01" W	11.21'
T3	N 77° 32' 42" W	13.43'
T4	N 35° 49' 17" W	12.28'
T5	N 77° 05' 11" W	8.30'

N 502,778.22
E 828,069.25



TRAV YB-1
PROPERTY BAR W/CAP
N 502585.174
E 828180.763



TRAV YB-2
PROPERTY BAR W/CAP
N 502528.367
E 828070.985

TBM 2
1'-CUT ON RIM OF SS MH
ELEV. = 357.21

CURVE DATA					
CURVE NO.	RADIUS	LENGTH	DELTA	TANGENT	CHORD BEARING
C1	20.00'	19.96'	57° 11' 21"	10.90'	S 81° 10' 19" W 19.14'
C2	50.00'	6.38'	07° 18' 41"	3.19'	N 73° 53' 22" W 6.38'
C3	20.00'	14.56'	41° 43' 25"	7.62'	N 56° 41' 00" W 14.24'
C4	25.00'	18.01'	41° 15' 54"	9.41'	N 56° 27' 14" W 17.62'

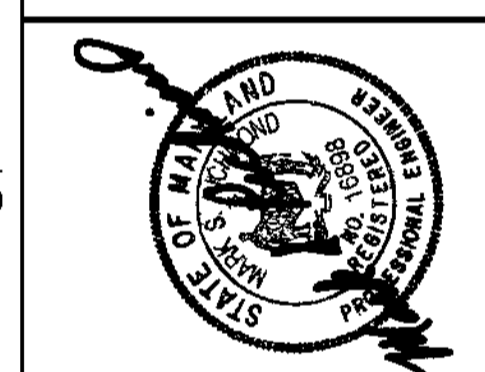
TRAVERSE COORDINATE LIST			
PT #	NORTHING	EASTING	ELEVATION
200	502807.881	828131.751	350.833
204	502742.160	828062.942	343.758

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
 [Signature] 4/19/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE
 [Signature] 4/20/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 [Signature] 4/24/04
 DIRECTOR DATE

NO.	REVISIONS DESCRIPTION	DATE

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

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VILLAGE OF HICKORY RIDGE
SECTION 3, AREA 7, LOT 73
STREAM RESTORATION
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
780 OAKLAND MILLS ROAD
COLUMBIA, MARYLAND 21046-1877
(410) 326-4660

GEOMETRY SHEET

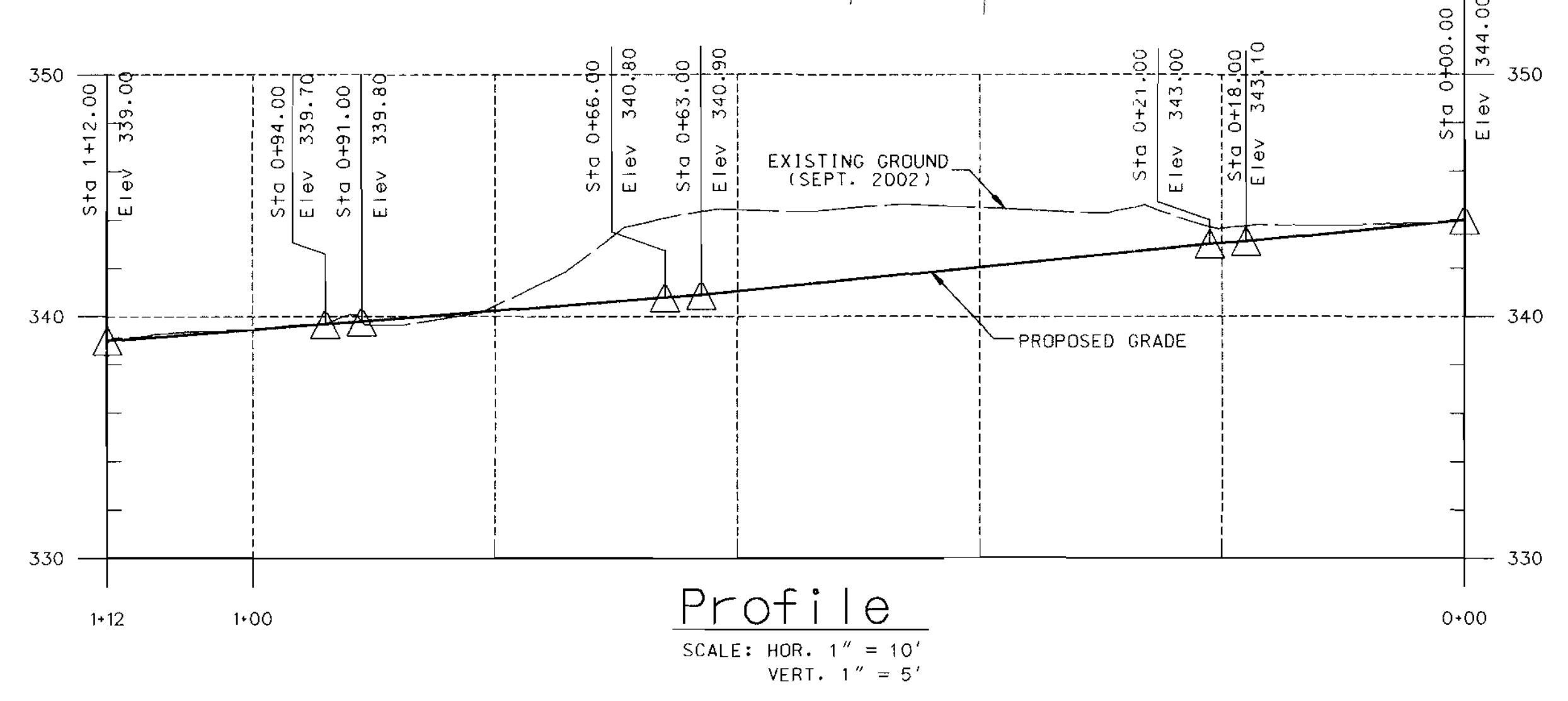
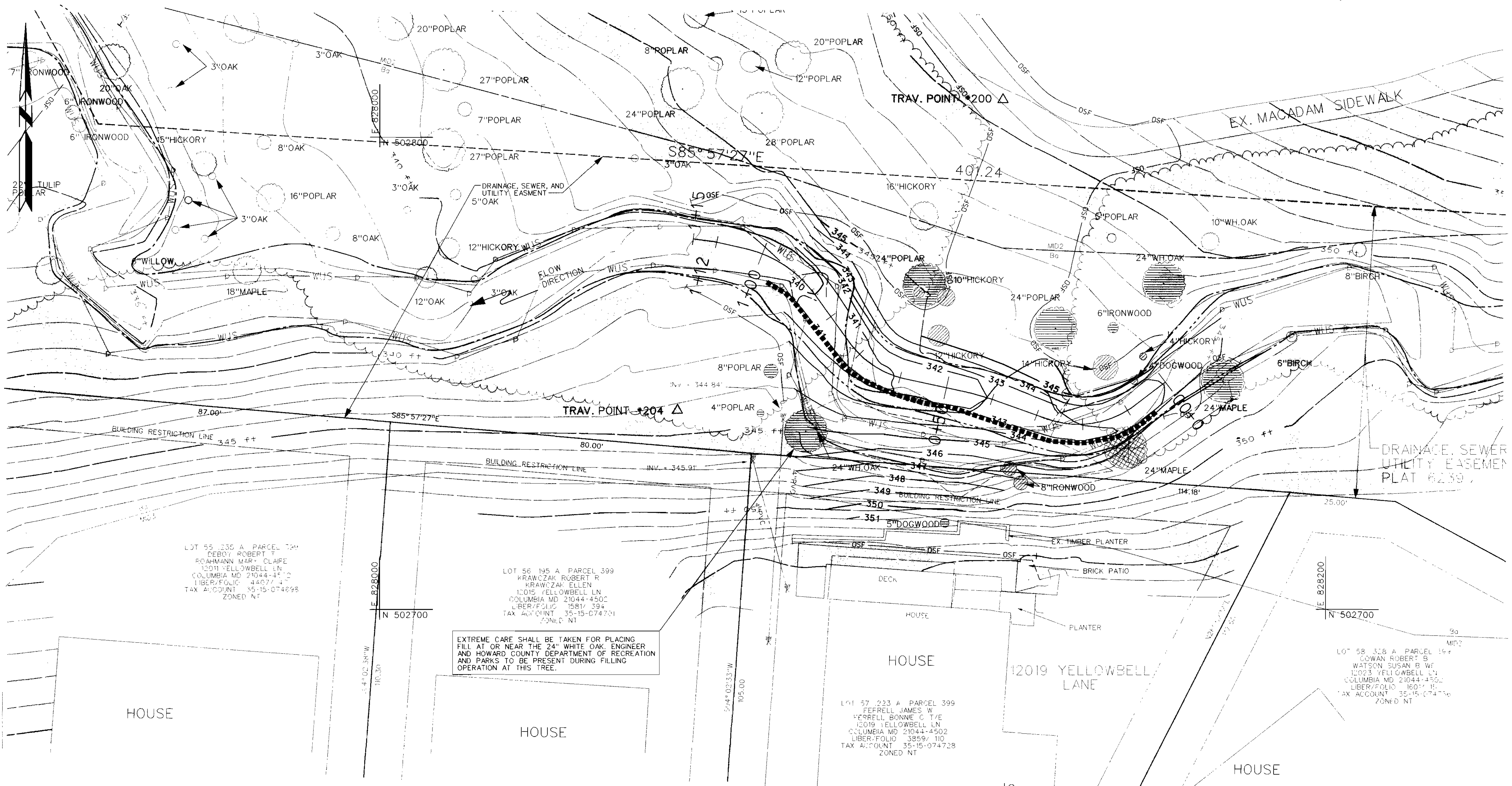
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 DATE: 3-4-04
 KCI JOB NO.: 01-01128.e
 CAPITAL PROJECT NO.: D-1126
 CONSTRUCTION ISSUE:

2

SHEET NO.: 2 OF 9

SDP-04-043

PLOTTED: 10:55 AM on Thursday, March 04, 2004
 BY: Kevin Jackson, Division of Environmental Engineering
 FILE: m:\2001\01128.e\Drawings\SDP04-043.dgn



NOTE:
 PROFILE DEPICTS CENTER LINE OF PROPOSED
 STREAM LOCATION, NOT THALWEG; REFER TO
 CROSS-SECTION SHEET 9 FOR
 CHANNEL VARIATION.

STONE TOE PROTECTION	
TYPE	STATIONING
IMBRICATED STONE TOE PROTECTION	0+14 TO 0+98

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
 DATE: 4/19/04
[Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 4/20/04
[Signature]
 DIRECTOR
 DATE: 4/20/04

NO.	REVISIONS DESCRIPTION	DATE

ENGINEERS
 PLANNERS
 SCIENTISTS
 CONSTRUCTION MANAGERS

KCI
 TECHNOLOGIES www.kci.com



VILLAGE OF HICKORY RIDGE
 SECTION 3, AREA 7, LOT 73
 STREAM RESTORATION

HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILLS ROAD
 COLUMBIA, MARYLAND 21046-1877
 (410) 313-4640

PLAN SHEET

SCALE: 1"=10'
 DATE: 3-4-04
 KCI JOB NO.: 01-01128.e
 CAPITAL PROJECT NO.: D-1128
 PERMIT ISSUE:
 CONSTRUCTION ISSUE:

PLOTTED: 09:57 AM on Thursday, March 04, 2004
 BY: Kevin Jackson, Division: Environmental Engineering
 FILE: m:\2001\01128 e\Drawings\SDP02TELL0W_10.dgn

NOTE:
DEPARTMENT OF RECREATION AND PARKS
MAY ADD TREES/SHRUBS TO CLEARED
AREAS AT A LATER DATE.

Riparian Formula Seed Mix
Complete Seed Mix to be applied at a rate of 50 LBS/AC

Total Qty	Unit	Botanical Name	Common Name	Type	Condition	Spacing/Rate	Ind. Status
0.03	Lbs	Agrostis alba	Redtop	N/A	Seed	5 Lbs/Ac-10Z	FACW
0.03	Lbs	Andropogon gerardii	Big bluestem	Warm Season	Seed	5 Lbs/Ac-10Z	FAC
0.03	Lbs	Elymus riparius	Riverbank wild rye	Cool Season	Seed	5 Lbs/Ac-10Z	FACW
0.03	Lbs	Elymus virginicus	Virginia wild rye	Cool Season	Seed	5 Lbs/Ac-10Z	FACW
0.75	Lbs	Lolium multiflorum	Annual bluegrass	N/A	Seed	25 Lbs/Ac-50Z	NI
0.03	Lbs	Panicum virgatum	Switchgrass	Warm Season	Seed	5 Lbs/Ac-10Z	FAC
0.9							TOTAL MIX

PLANTING ZONE	PLANTING SCHEDULE				
	QUANTITY	COMMON NAME	SCIENTIFIC NAME	SIZE	SPACING
LIVE STAKE ZONE	72	Silky Dogwood	Cornus amomum	36" Live Stake	18" O.C.
	72	Red-osier Dogwood	Cornus sericea	36" Live Stake	18" O.C.
	72	Arrow-wood Viburnum	Viburnum dentatum	36" Live Stake	18" O.C.
	72	Black Willow	Salix nigra	36" Live Stake	18" O.C.
	-	Seeding - Riparian Formula			Seed Entire Area
RIPARIAN ZONE	3	Arrow-wood Viburnum	Viburnum dentatum	24-36" Container	8' O.C.
	4	Winterberry	Ilex verticillata	24-36" Container	8' O.C.
	3	Ironwood	Carpinus caroliniana	5' Container	8' O.C.
	4	Red Maple	Acer rubrum	5' Container	8' O.C.
	-	Seeding - Riparian Formula			Seed Entire Area
BUFFER ZONE	3	Arrow-wood Viburnum	Viburnum dentatum	24-36" Container	8' O.C.
	3	Winterberry	Ilex verticillata	24-36" Container	8' O.C.
	3	Ironwood	Carpinus caroliniana	5' Container	8' O.C.
	3	Red Maple	Acer rubrum	5' Container	8' O.C.
	49	Japanese Spurge	Pachysandra terminalis	2 1/4" Peat Pots	4' O.C.
	-	Seeding - Riparian Formula			Seed Entire Area

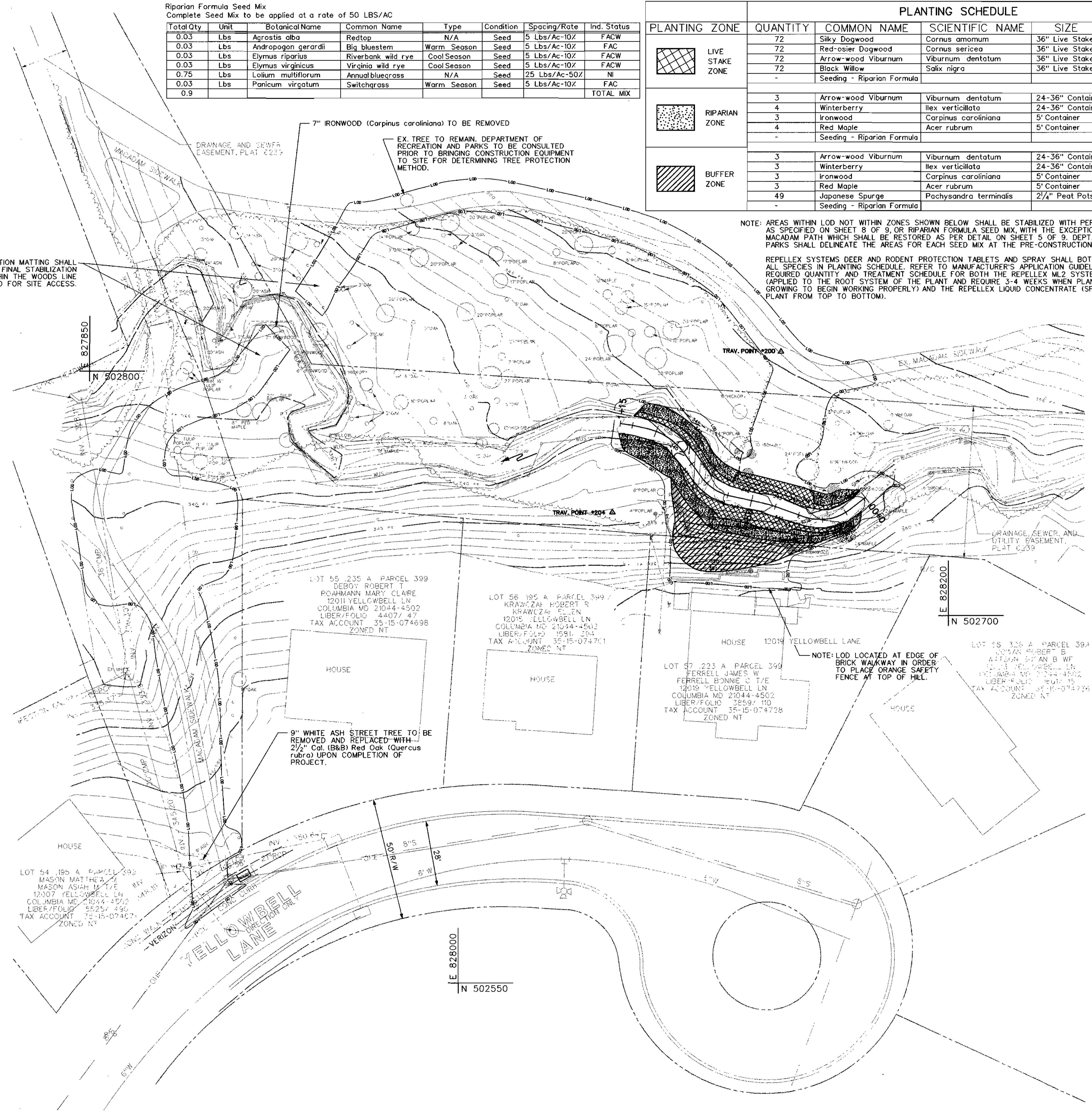
SOIL STABILIZATION MATTING SHALL BE USED AS PART OF FINAL STABILIZATION OF AREAS WITHIN THE WOODS LINE WHICH ARE DISTURBED FOR SITE ACCESS.

7" IRONWOOD (Carpinus caroliniana) TO BE REMOVED
DRAINAGE AND SEWER EASEMENT, PLAT 2257

EX. TREE TO REMAIN. DEPARTMENT OF RECREATION AND PARKS TO BE CONSULTED PRIOR TO BRINGING CONSTRUCTION EQUIPMENT TO SITE FOR DETERMINING TREE PROTECTION METHOD.

NOTE: AREAS WITHIN LOD NOT WITHIN ZONES SHOWN BELOW SHALL BE STABILIZED WITH PERMANENT SEEDING AS SPECIFIED ON SHEET 8 OF 9, OR RIPARIAN FORMULA SEED MIX WITH THE EXCEPTION OF THE EXISTING MACADAM PATH WHICH SHALL BE RESTORED AS PER DETAIL ON SHEET 5 OF 9. DEPT. OF RECREATION AND PARKS SHALL DELINEATE THE AREAS FOR EACH SEED MIX AT THE PRE-CONSTRUCTION CONFERENCE.

REPELLEX SYSTEMS DEER AND RODENT PROTECTION TABLETS AND SPRAY SHALL BOTH BE APPLIED TO ALL SPECIES IN PLANTING SCHEDULE. REFER TO MANUFACTURER'S APPLICATION GUIDELINES FOR REQUIRED QUANTITY AND TREATMENT SCHEDULE FOR BOTH THE REPELLEX ML2 SYSTEMIC TABLETS (APPLIED TO THE ROOT SYSTEM OF THE PLANT AND REQUIRE 3-4 WEEKS WHEN PLANT IS ACTIVELY GROWING TO BEGIN WORKING PROPERLY) AND THE REPELLEX LIQUID CONCENTRATE (SPRAYED ON THE PLANT FROM TOP TO BOTTOM).



NO.	REVISIONS DESCRIPTION	DATE

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

TECHNOLOGIES www.kci.com

VILLAGE OF HICKORY RIDGE
SECTION 3, AREA 7, LOT 73
STREAM RESTORATION

HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD
COLUMBIA, MARYLAND 21046-8877
(410)-313-4640

SCALE:	1"=20'
DATE:	3-4-04
KCI JOB NO.:	01-01128.e
CAPITAL PROJECT NO.:	D-1126
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	

4
SHEET NO.: 4 OF 9
SDP-04-043

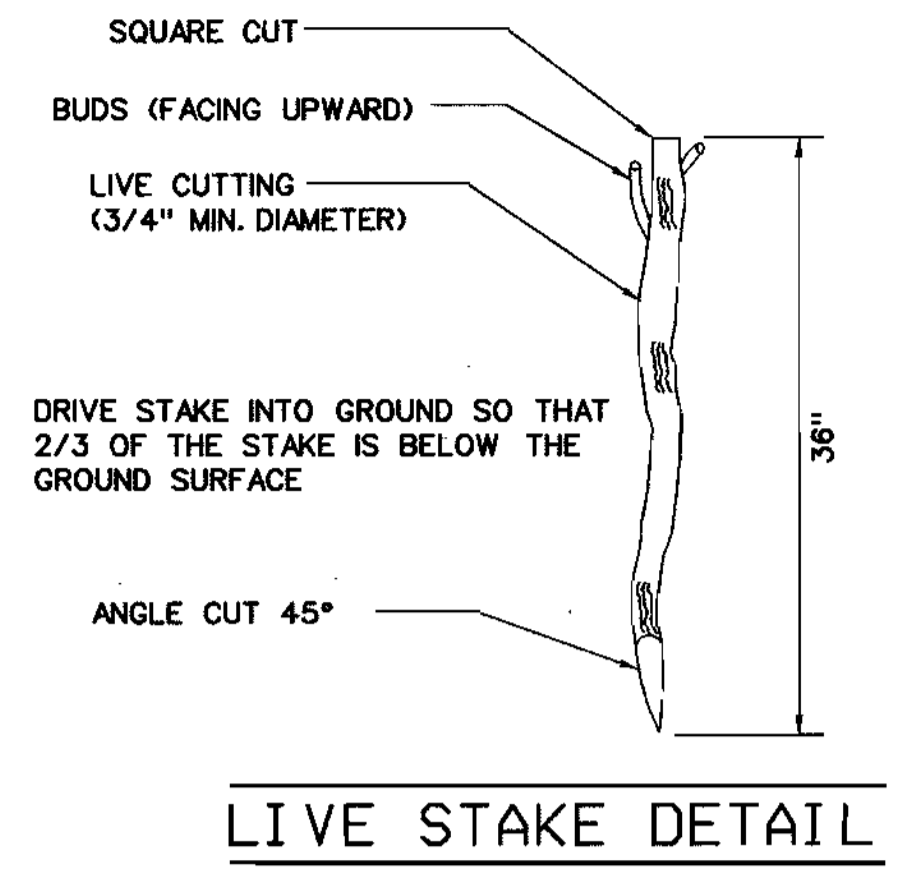
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Michael Damman 4/19/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

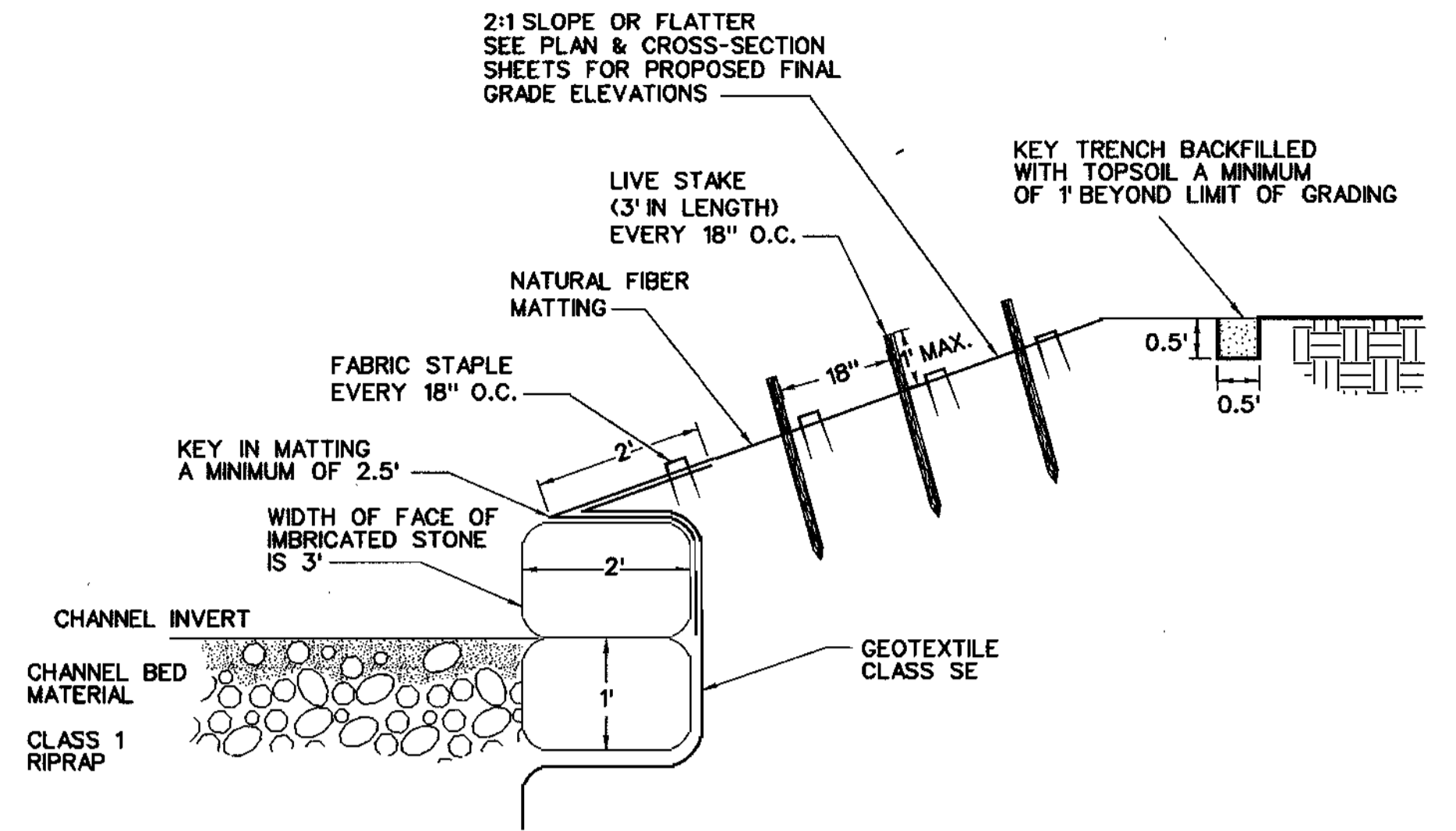
Quinn Thomas 4/14/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paula D. Gault 4/22/04
DIRECTOR DATE

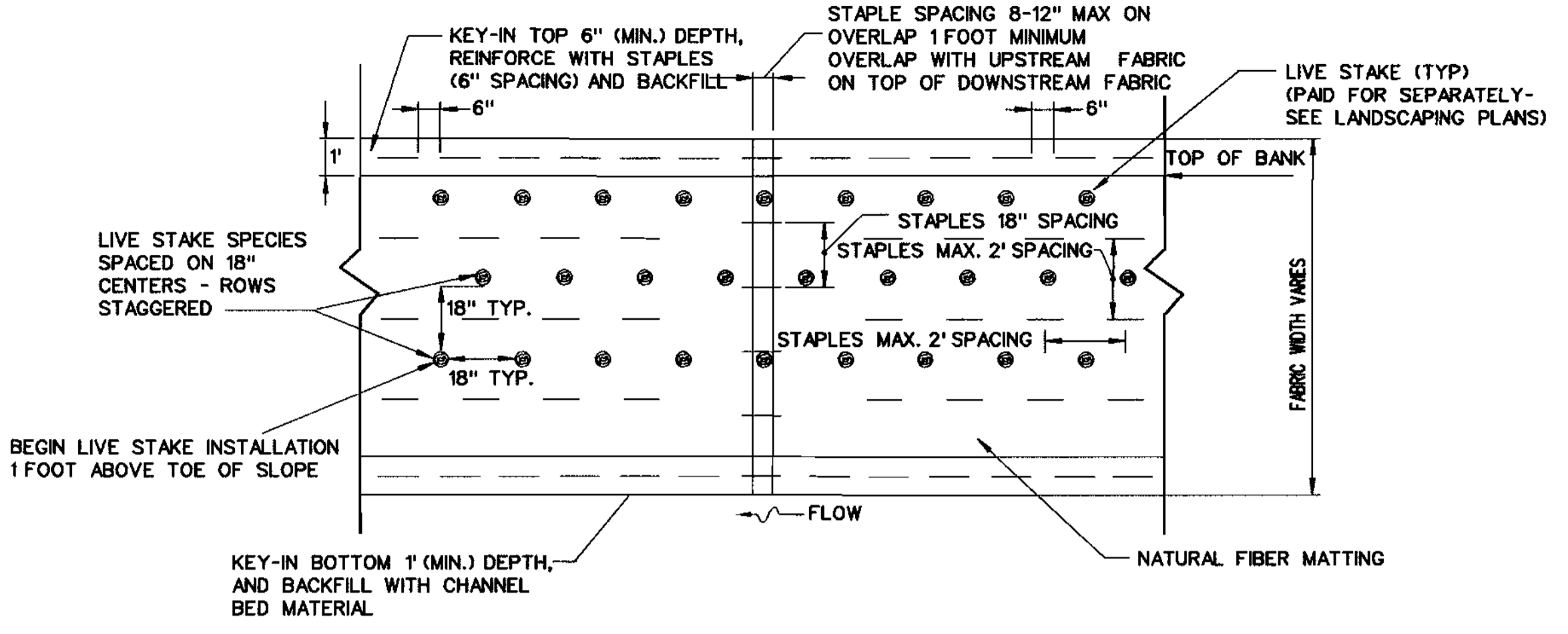
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BY: Don Smith, Division: Water Resources
FILE: m:\2001\01128.e\Drawings\SDP04-043.dwg



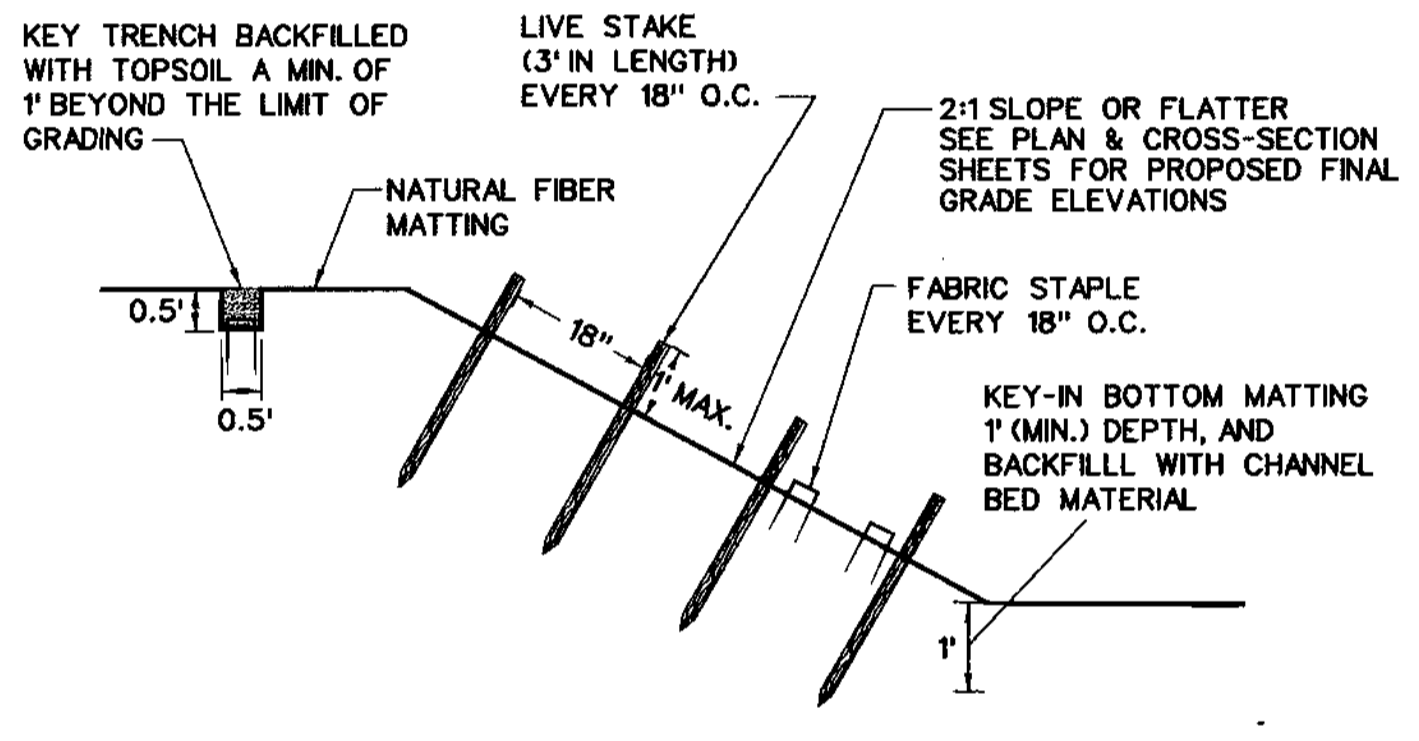
LIVE STAKE DETAIL



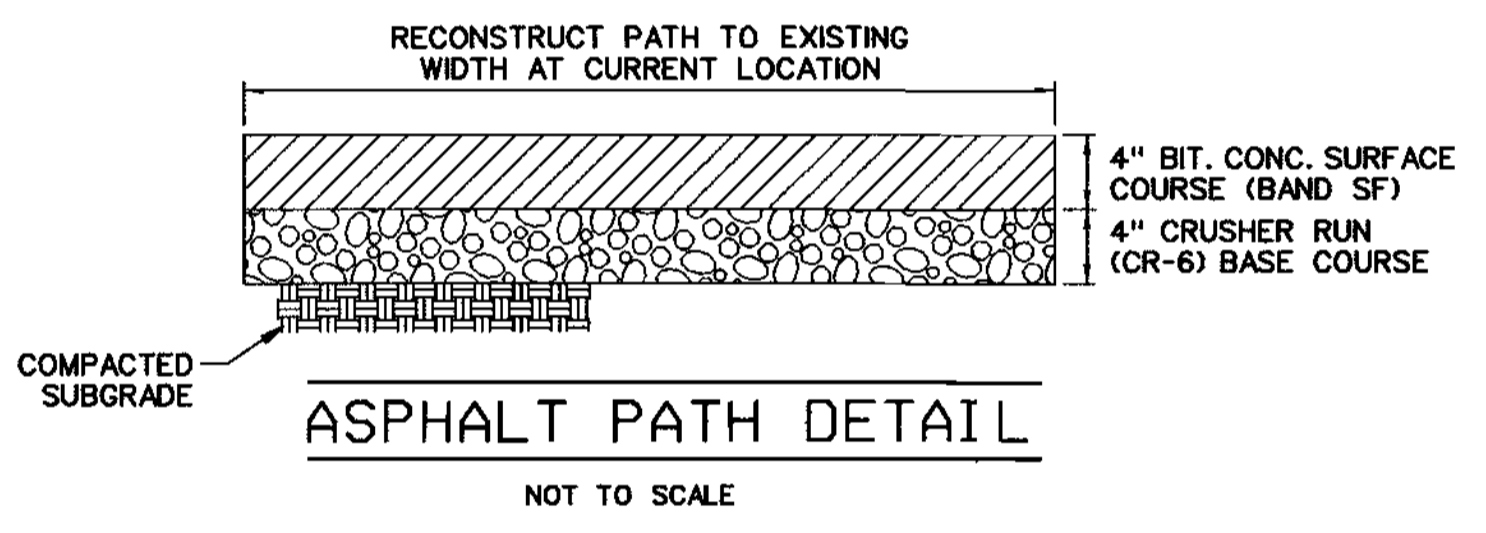
IMBRICATED STONE TOE CROSS SECTION VIEW



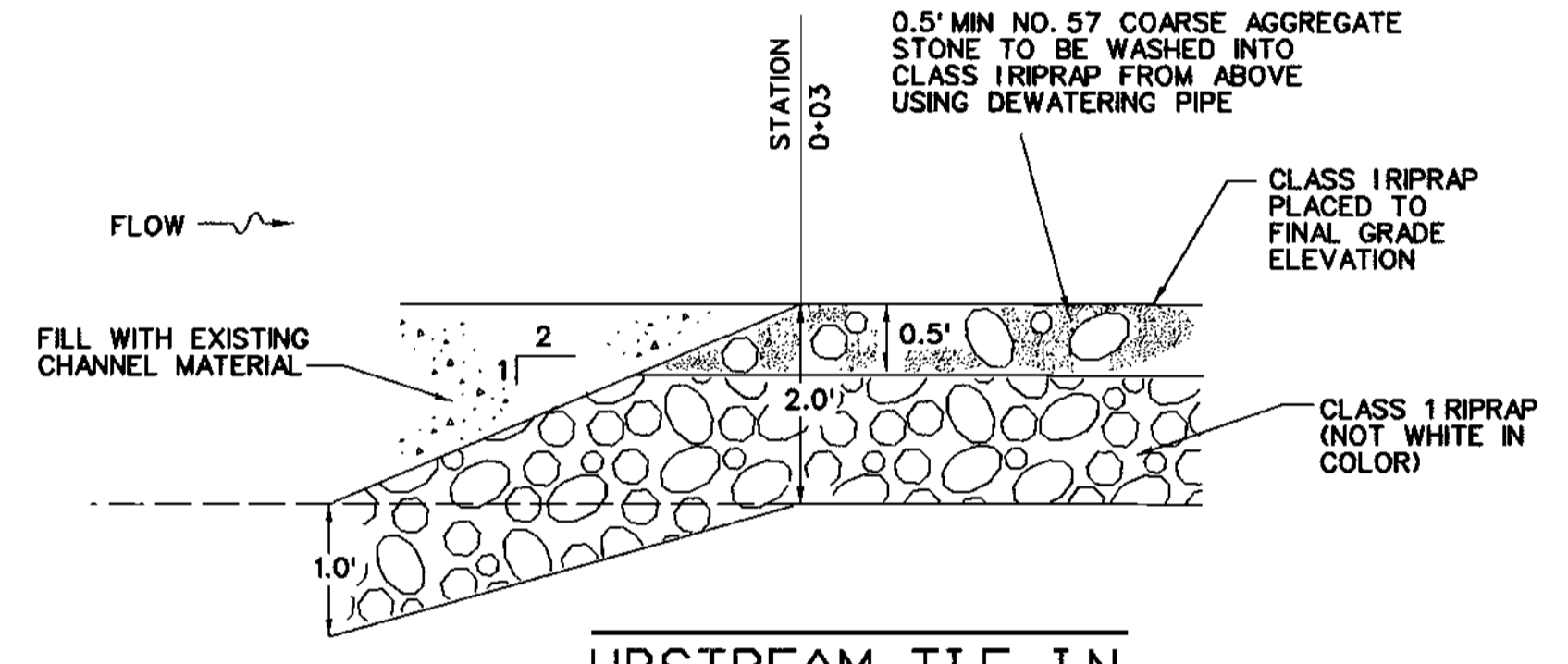
NATURAL FIBER MATTING WITH LIVE STAKES & STONE TOE PROTECTION



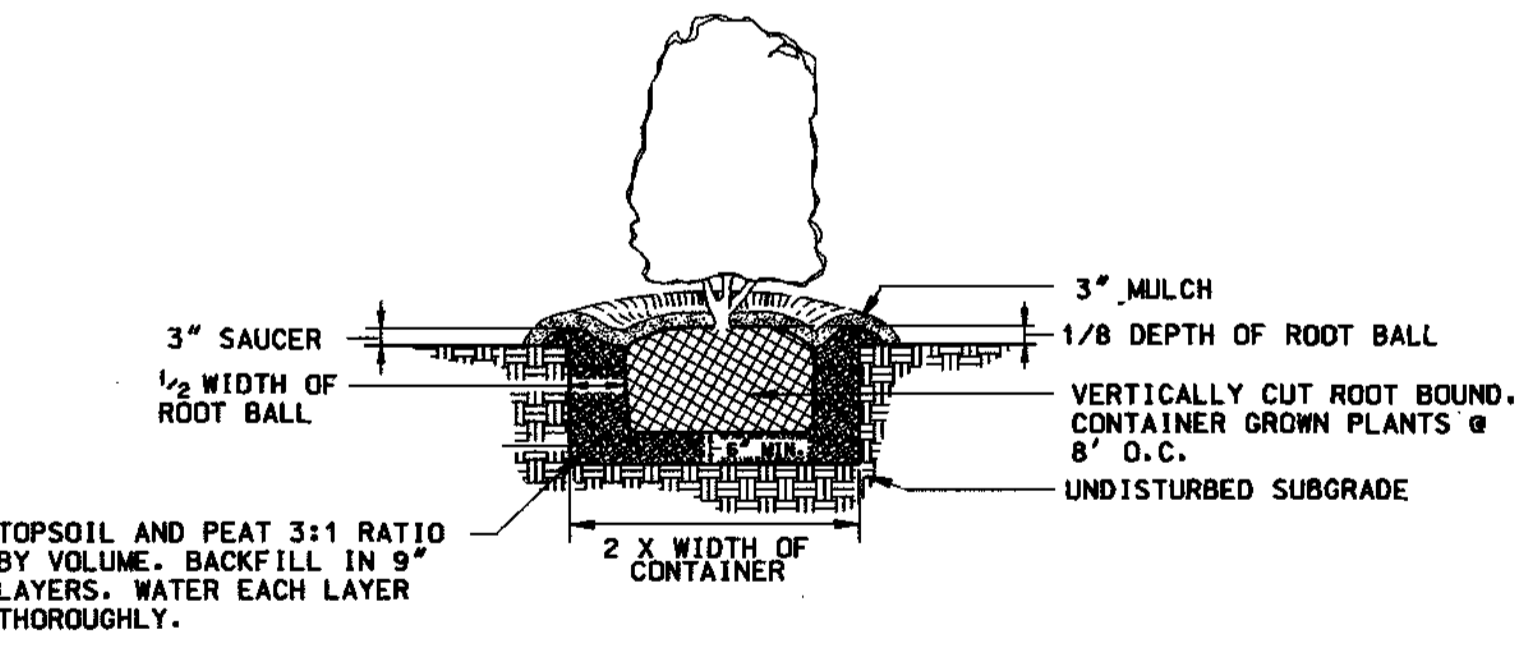
NATURAL FIBER MATTING WITH LIVE STAKES



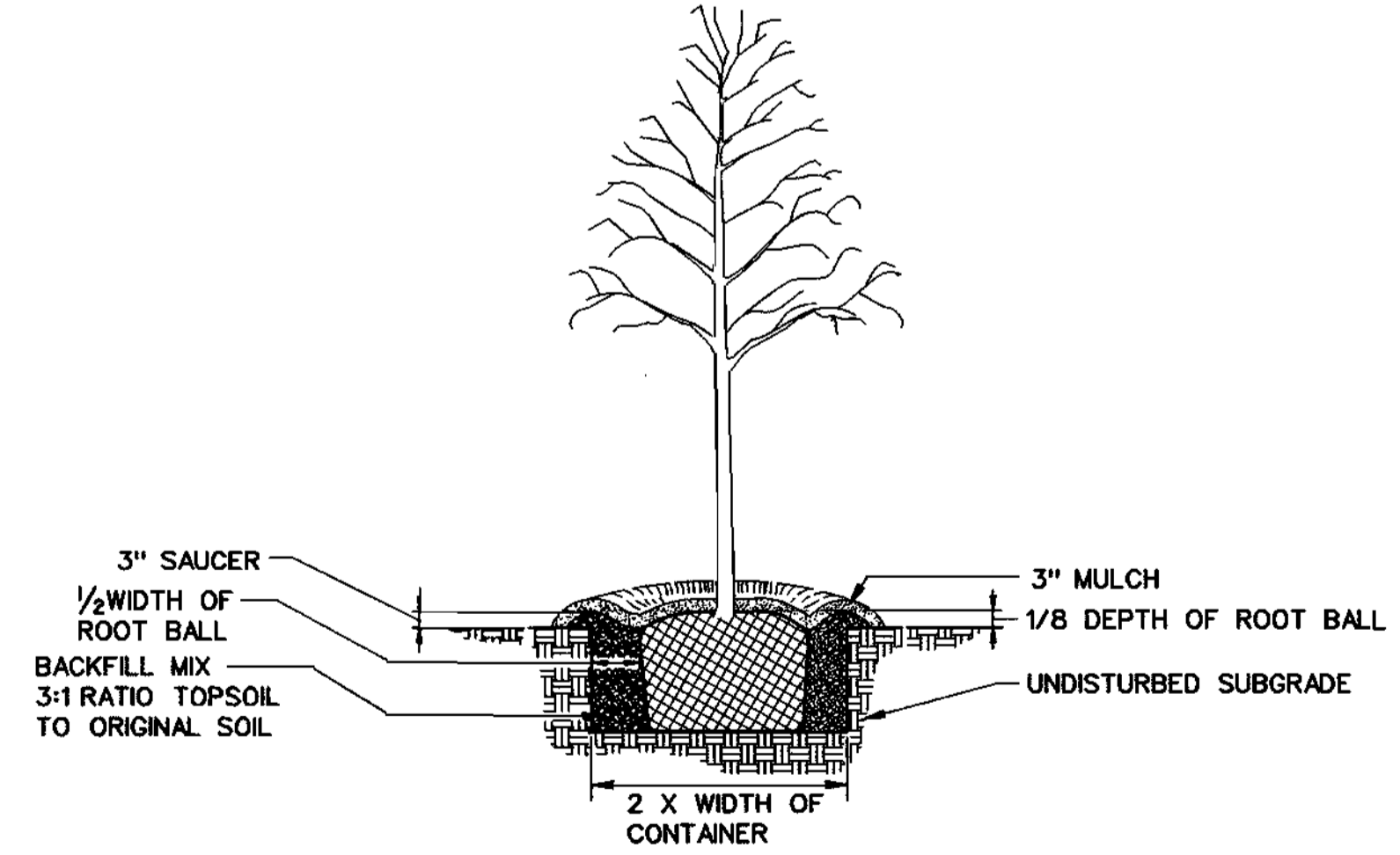
ASPHALT PATH DETAIL



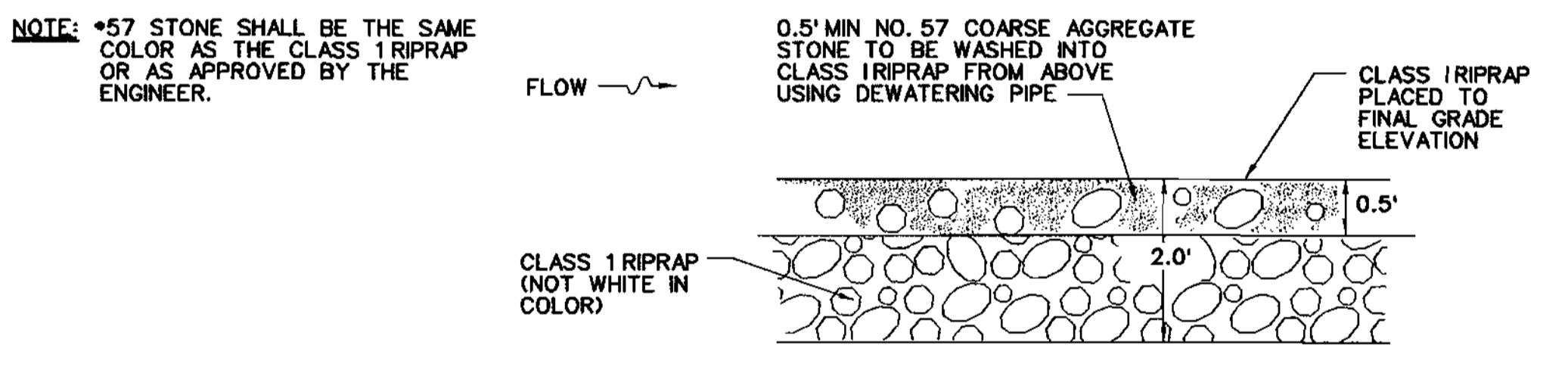
UPSTREAM TIE-IN



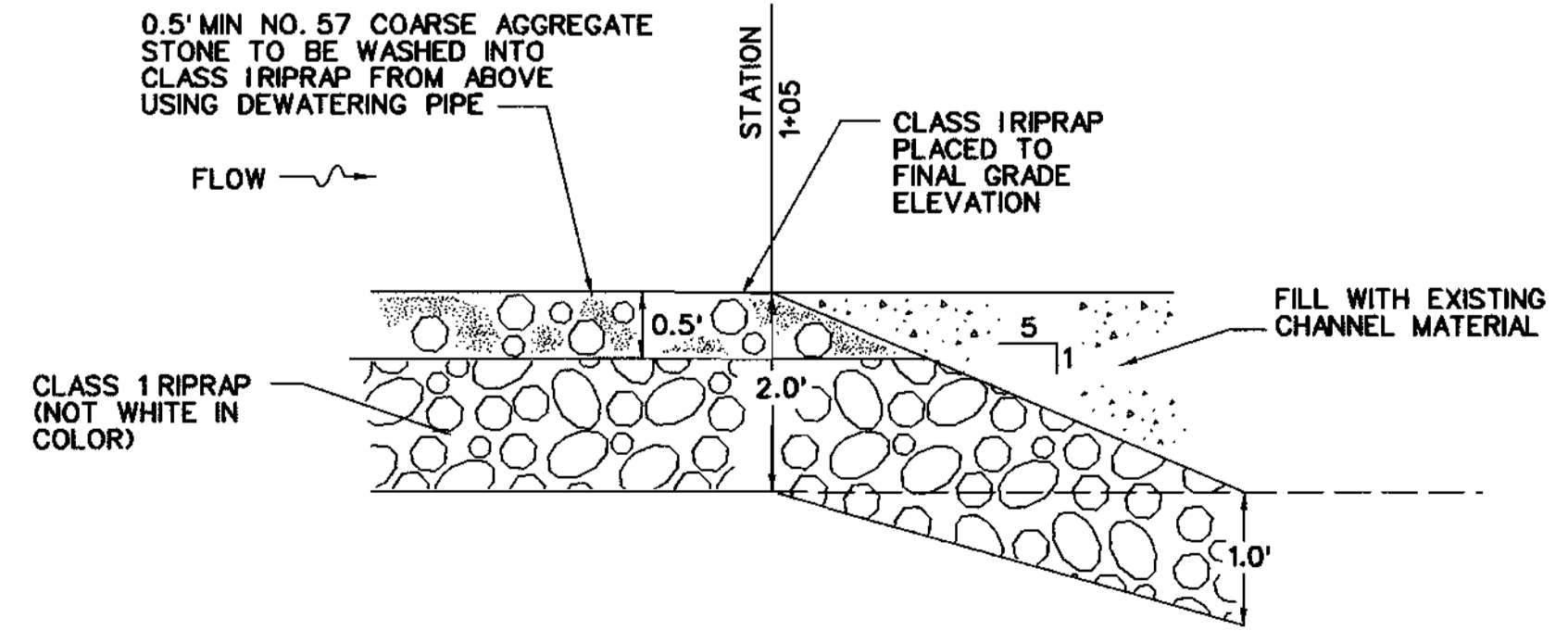
SHRUB PLANTING DETAIL



DECIDUOUS TREE PLANTING DETAIL



CHANNEL BED FILL



DOWNSTREAM TIE-IN

NO.	REVISIONS DESCRIPTION	DATE

ENGINEERS
 PLANNERS
 SCIENTISTS
 CONSTRUCTION MANAGERS
KCI
 TECHNOLOGIES
 www.kci.com

VILLAGE OF HICKORY RIDGE
SECTION 3, AREA 7, LOT 73
STREAM RESTORATION
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILLS ROAD
 COLUMBIA, MARYLAND 21046-1877
 (410) 303-6660

DETAIL SHEET

SCALE:	AS SHOWN
DATE:	3-4-04
KCI JOB NO.:	01-01128.e
CAPITAL PROJECT NO.:	D-1126
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	

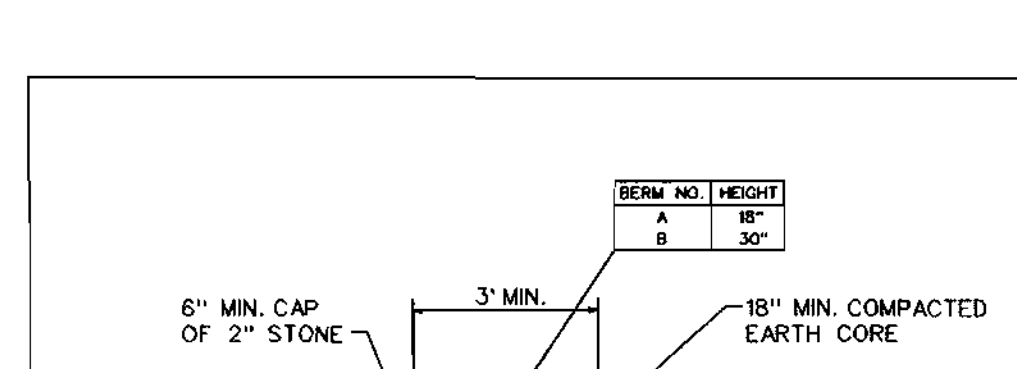
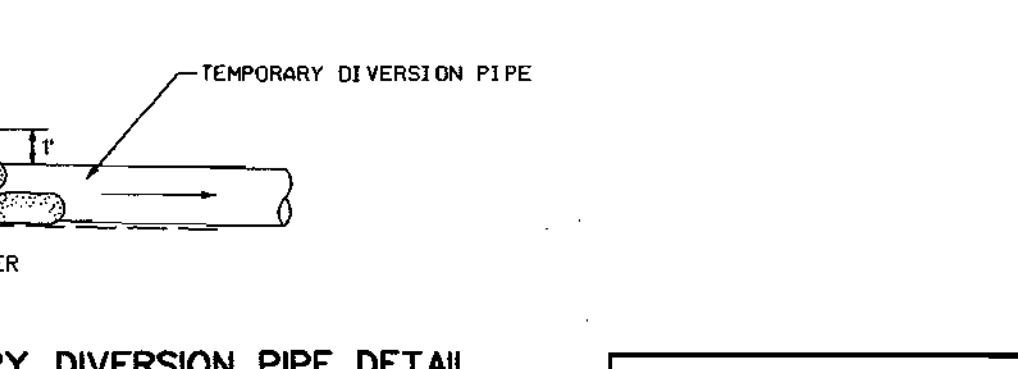
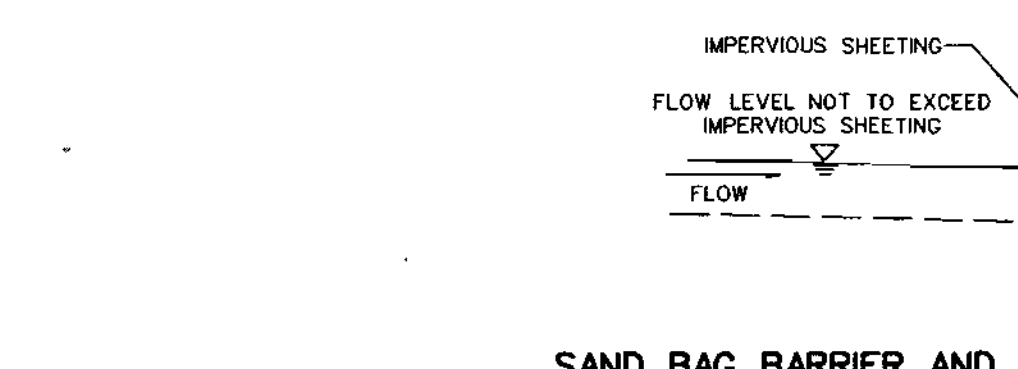
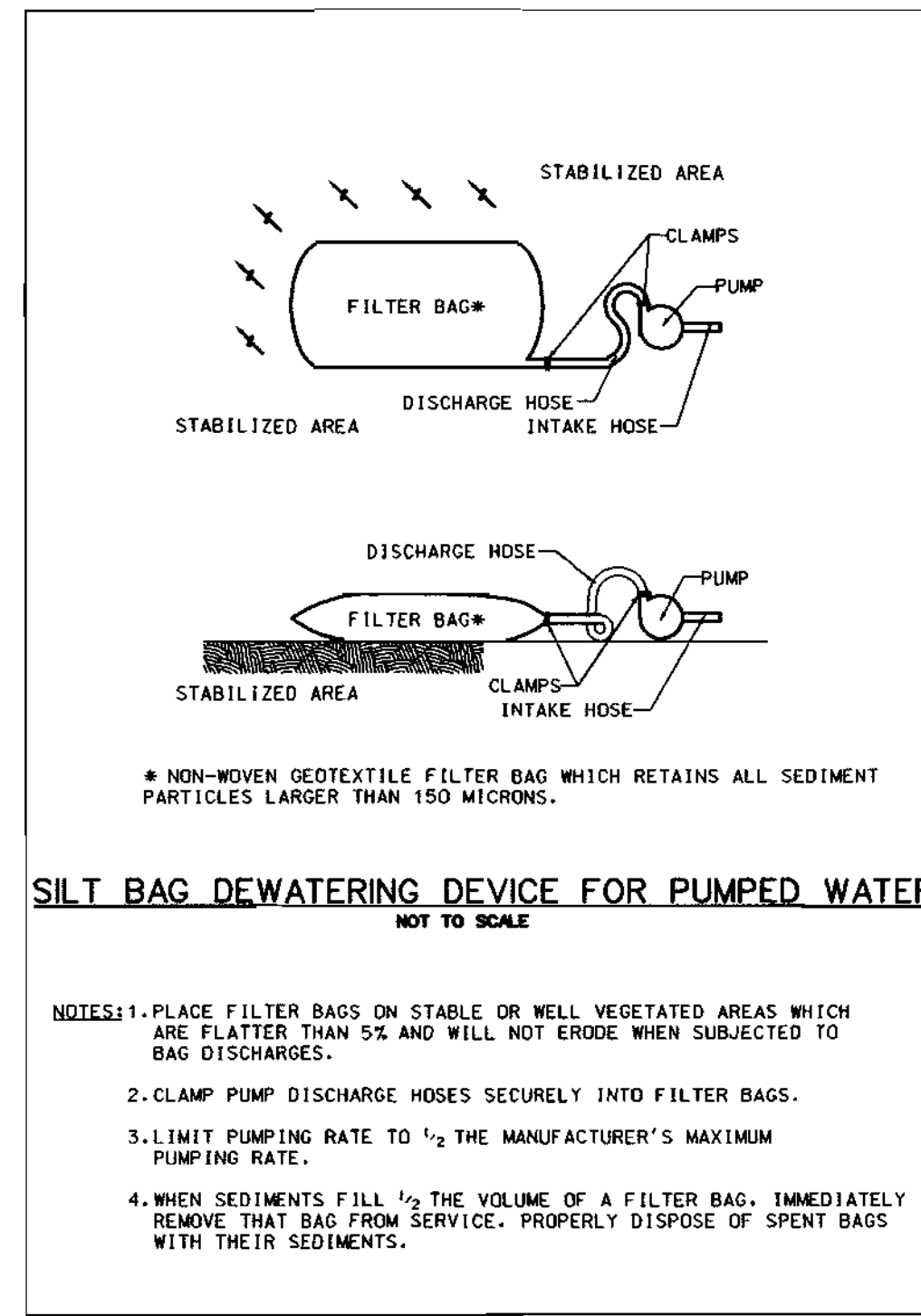
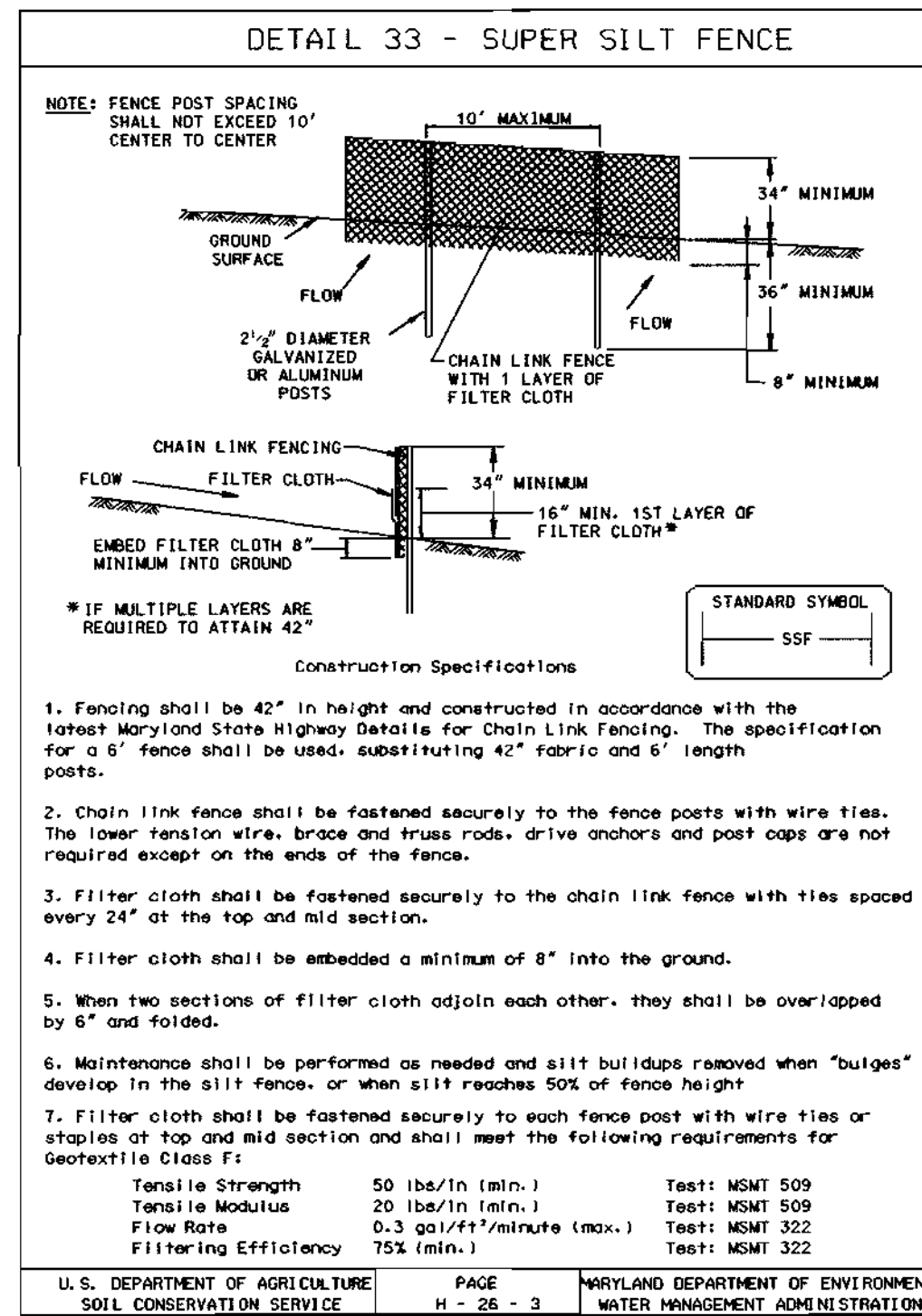
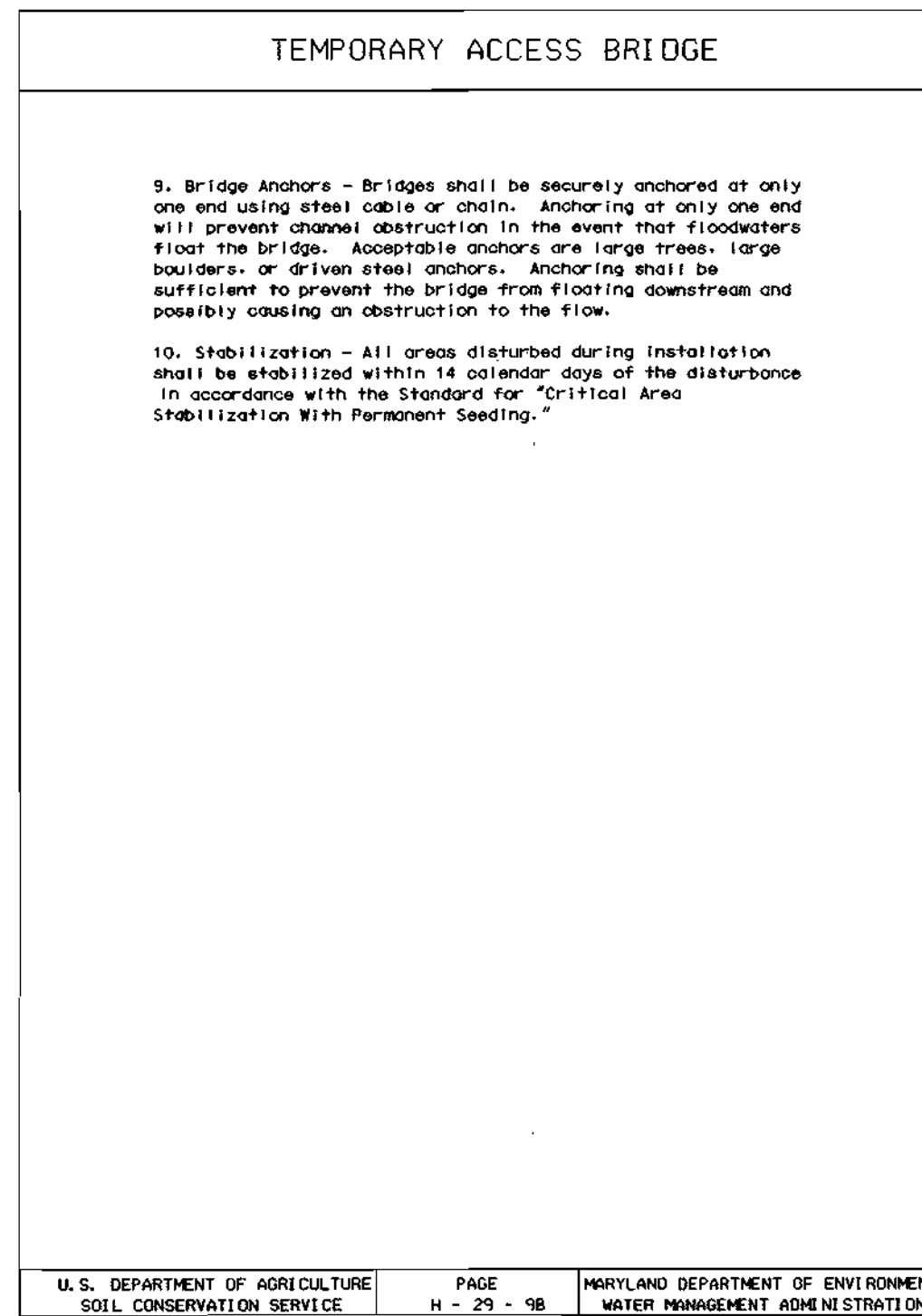
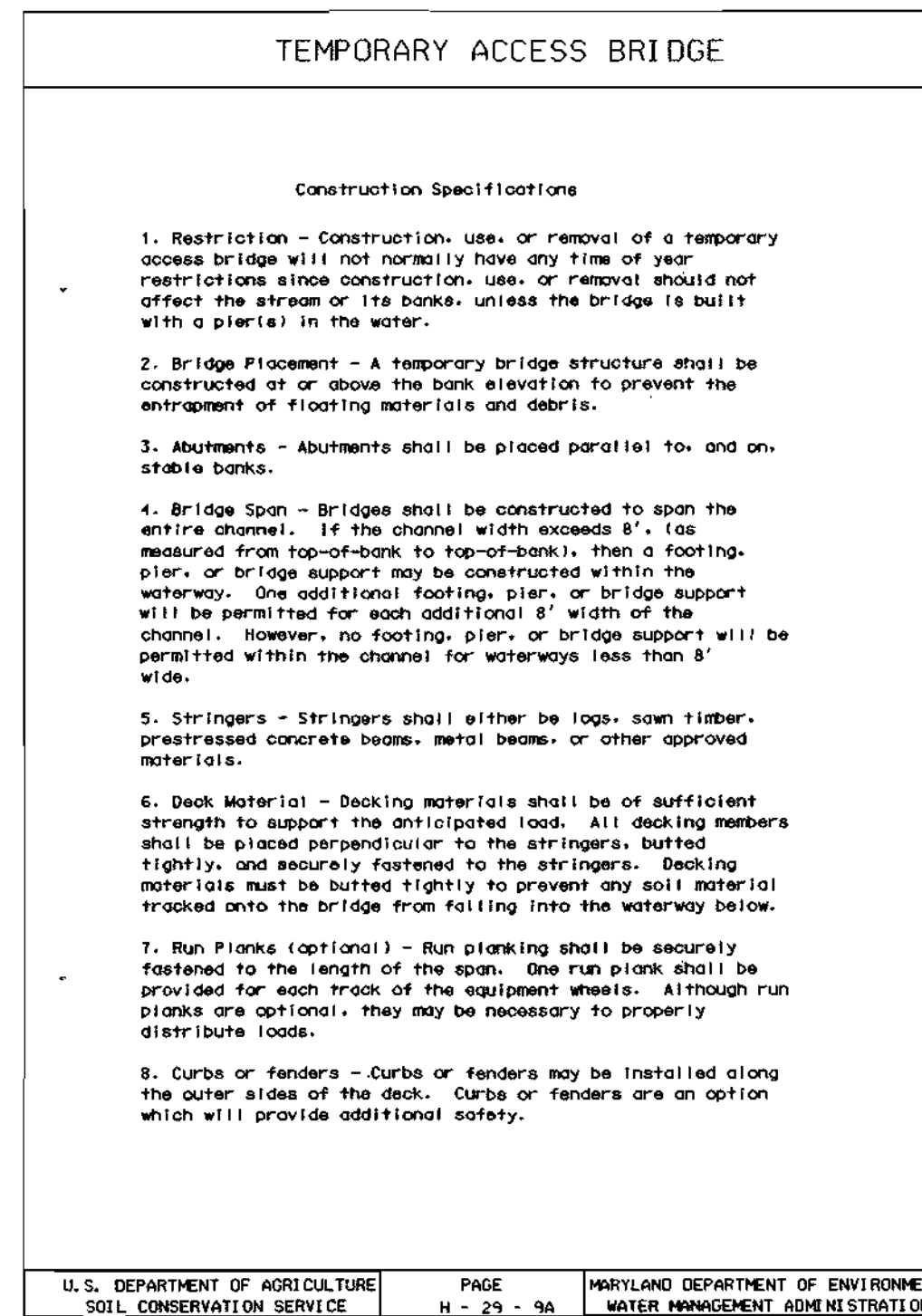
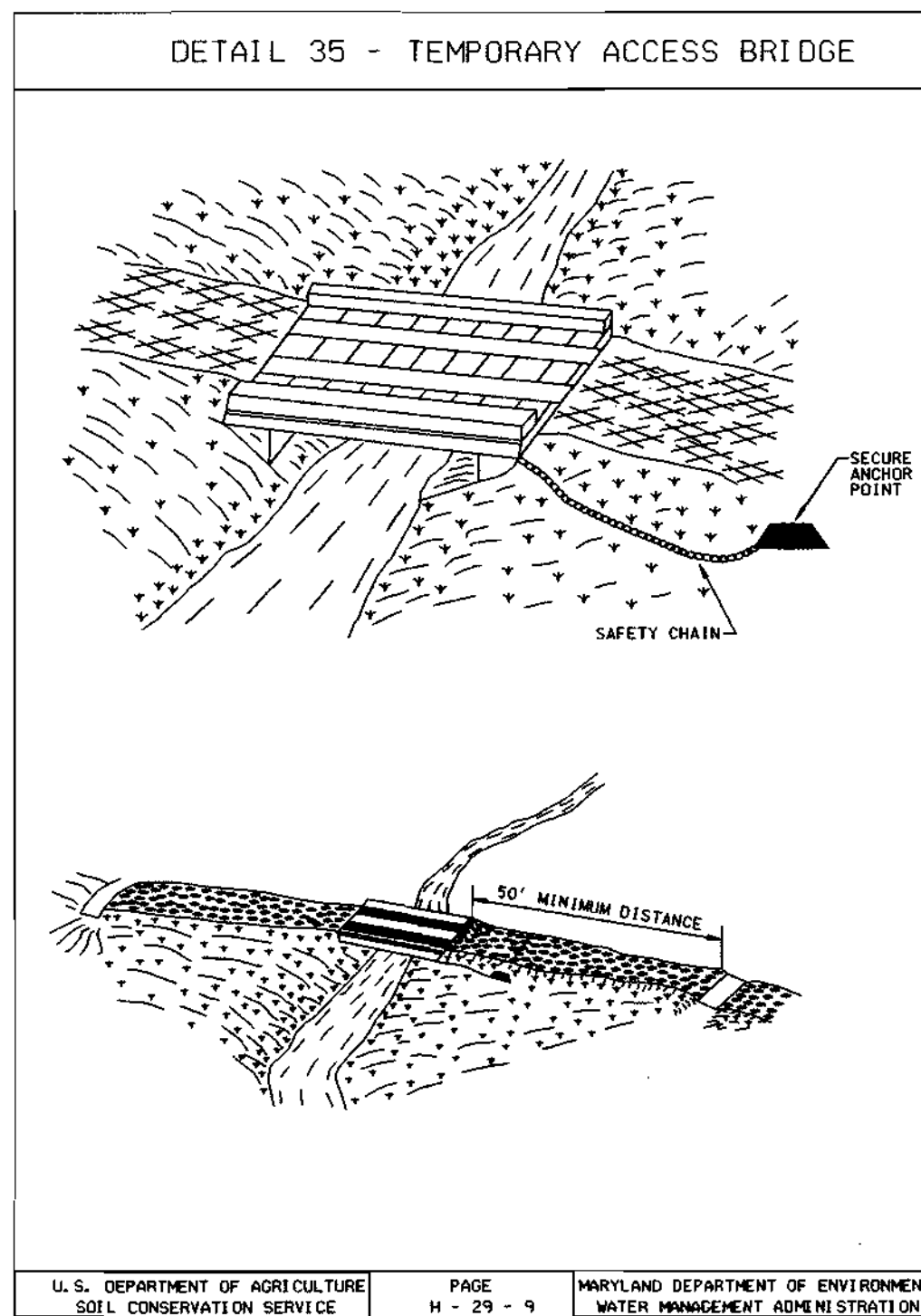
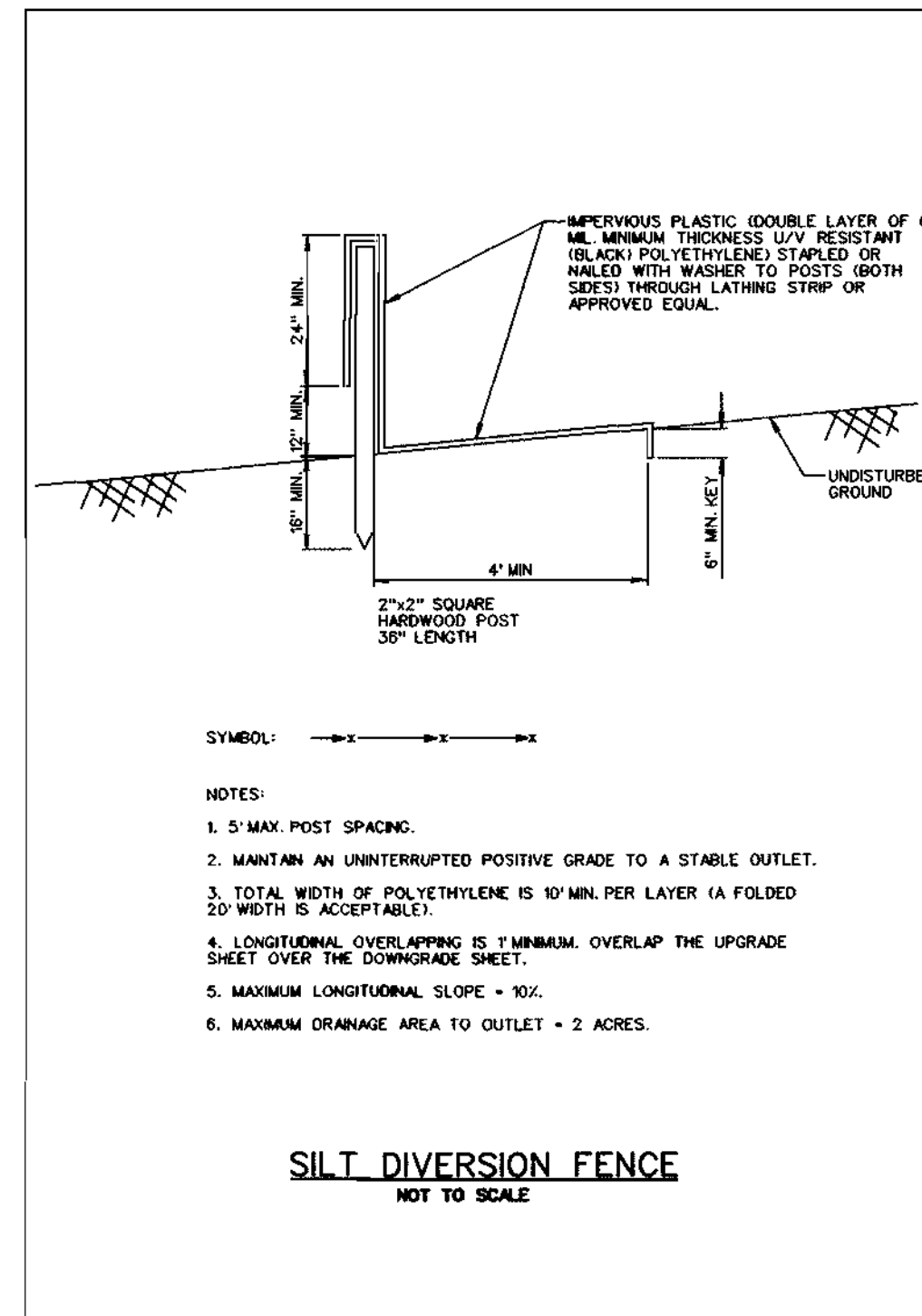
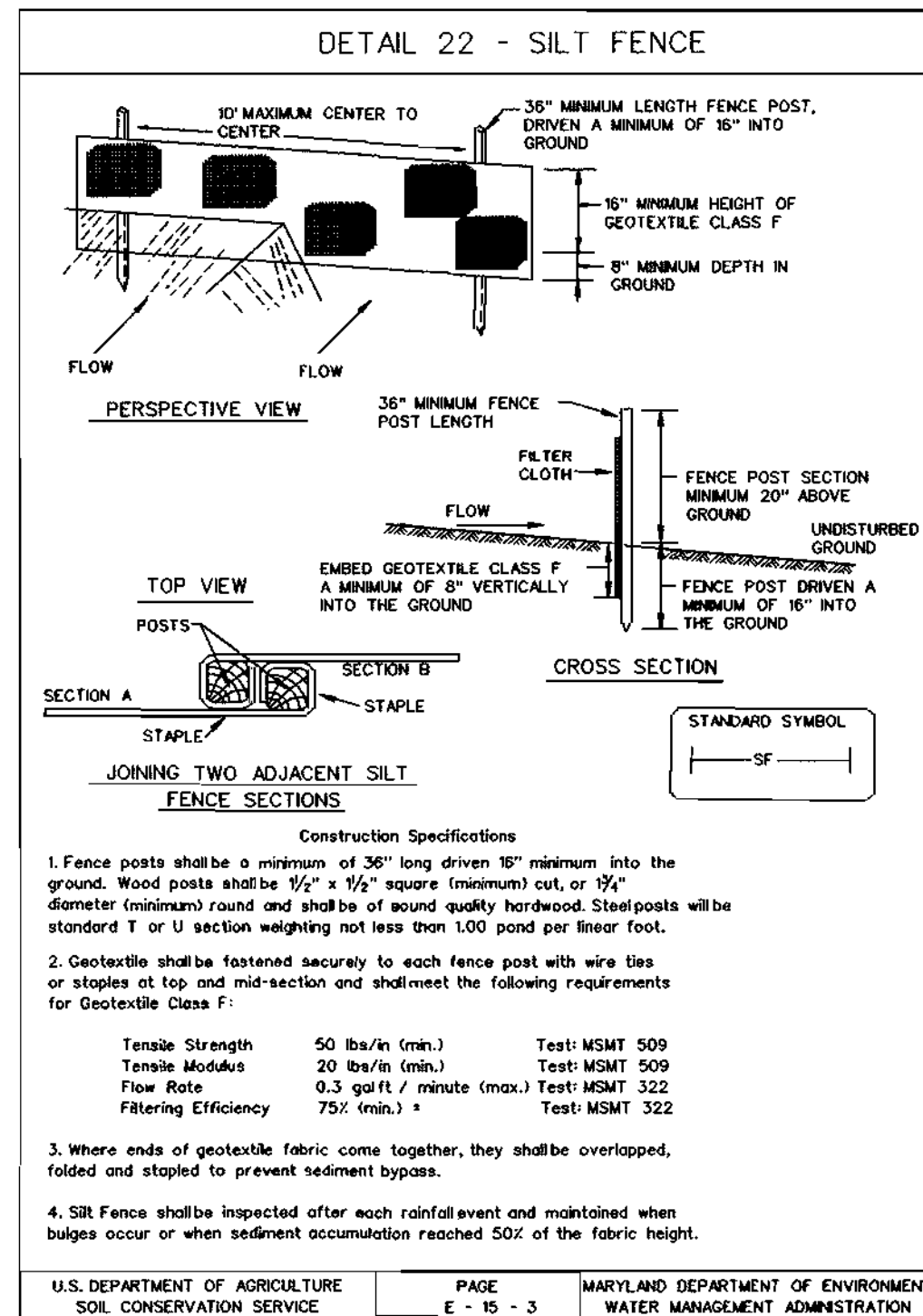
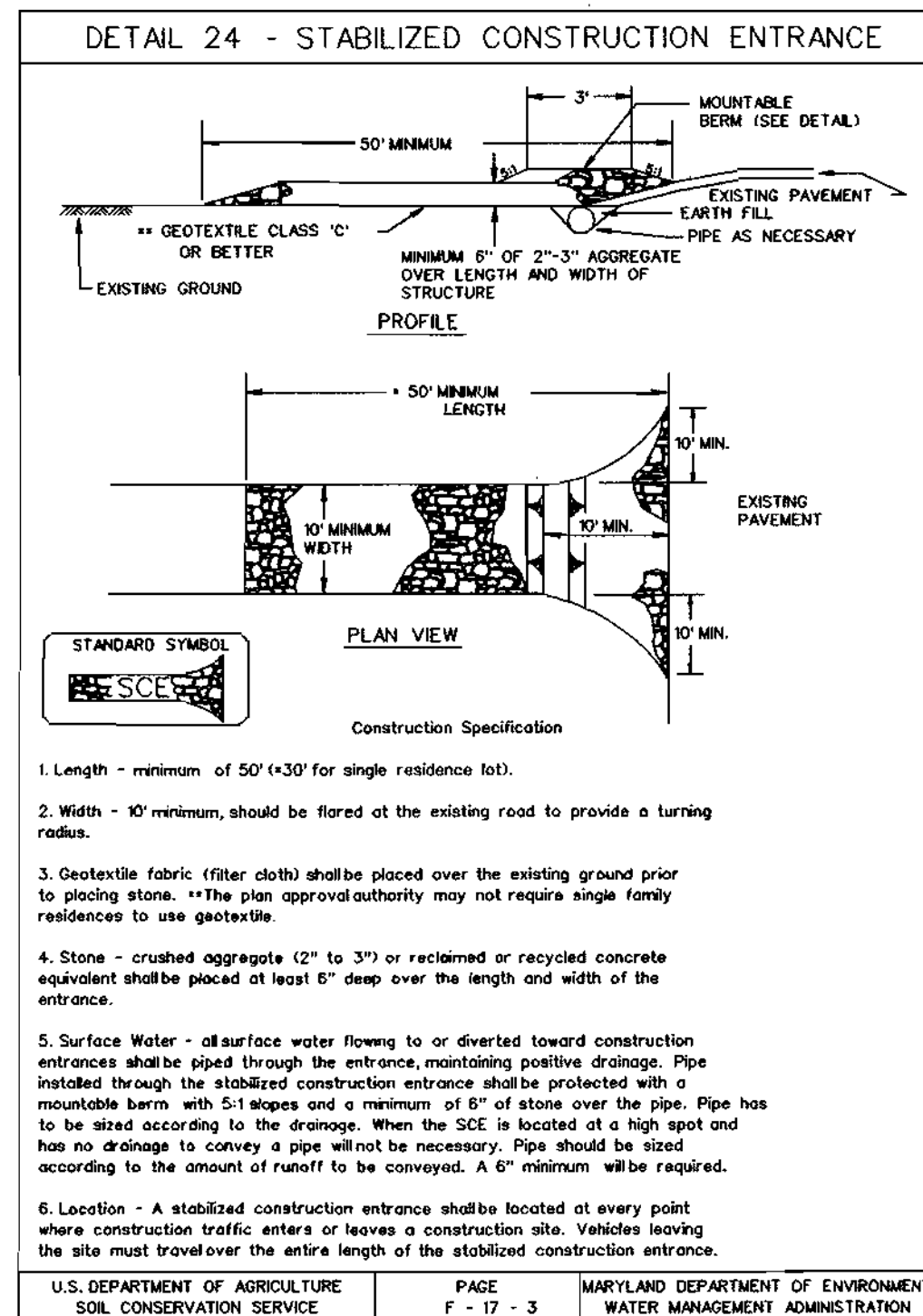
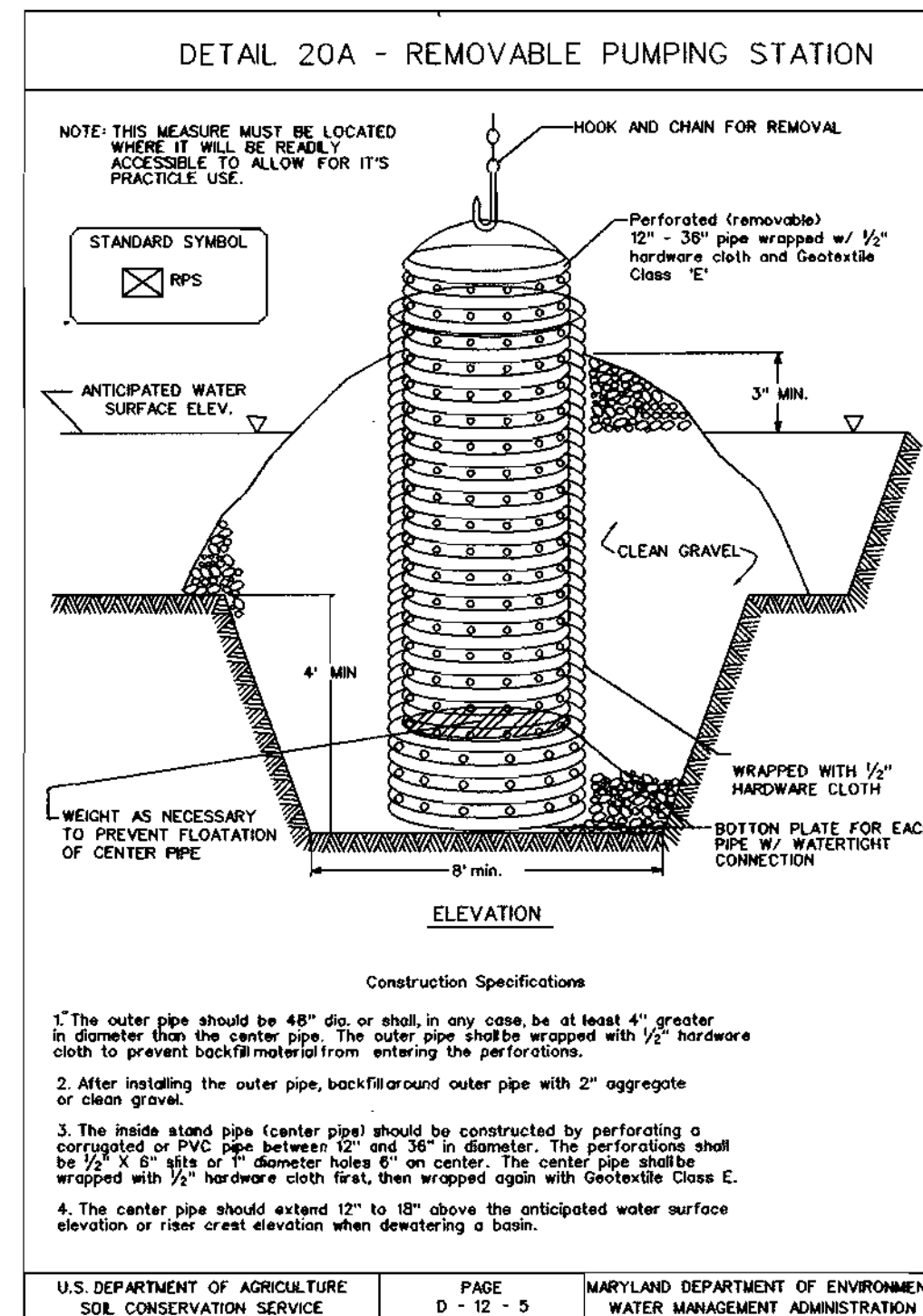
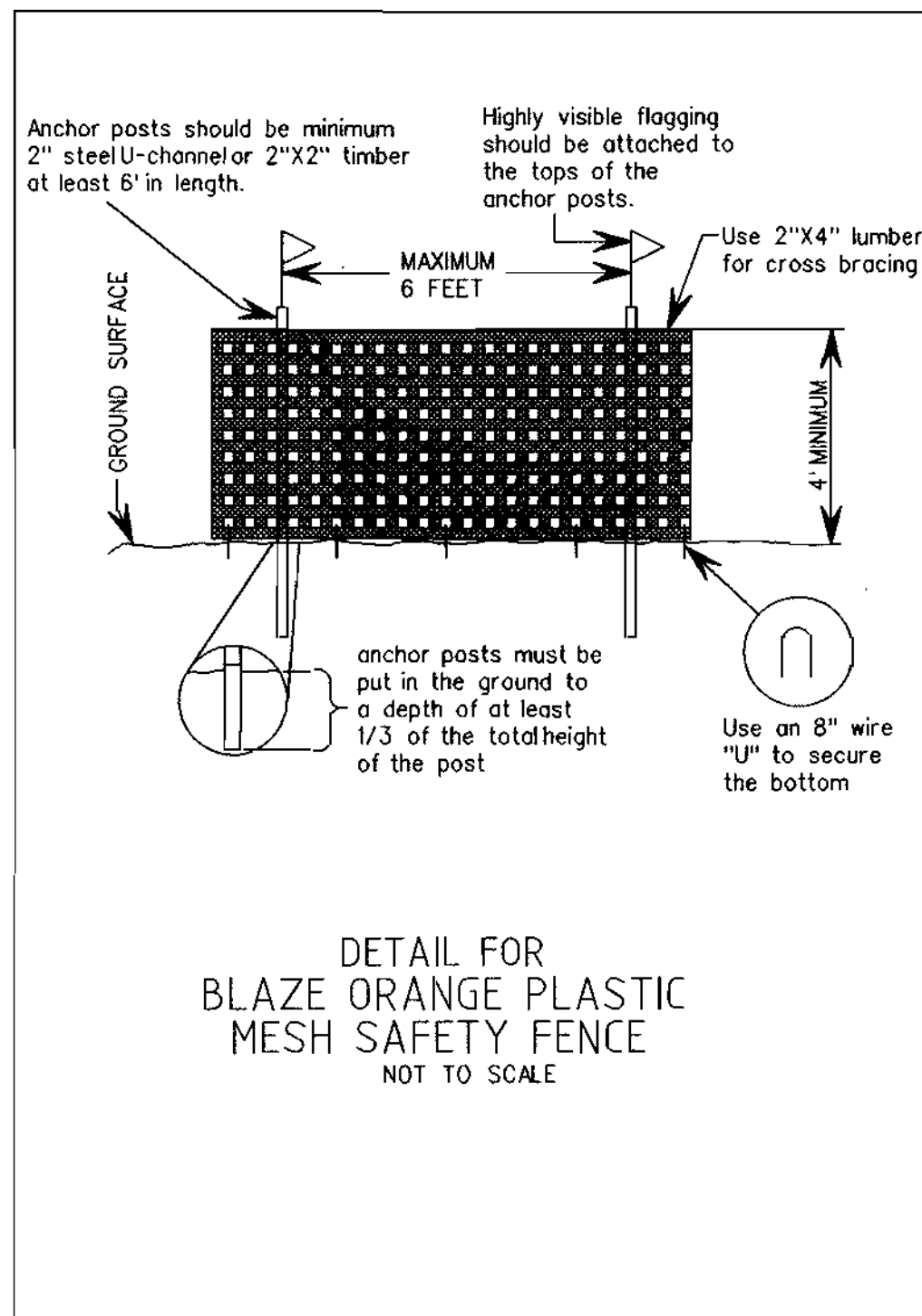
PROJECT: 10859 - AM on Thursday, March 04, 2004
 BY: Keith Johnson, Division: Environmental Engineering
 FILE: m:\2001\0101128.dwg (drawings\del)jbe.dgn

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
 DATE: 4/19/04

 CHIEF, DIVISION OF LAND DEVELOPMENT H
 DATE: 4/21/04

 DIRECTOR
 DATE: 4/26/04



APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

4/19/04
 4/19/04
 4/20/04

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

4/15/04
 4/15/04

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.

Mark S. Richmond
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE)
 P.E. # 18898
 DATE: 3/4/04

DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL 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/ALS AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Steve Sharar
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE)
 DATE: 3/15/04

EROSION AND SEDIMENT CONTROL DETAILS

SCALE: N/A
 DATE: 3-4-04
 KCI JOB NO.: 01-01128.e
 CAPITAL PROJECT NO.: D-1126
 PERMIT ISSUE:
 CONSTRUCTION ISSUE:

7
 SHEET NO.: 7 OF 9
 SDP.04.043

DATE: _____

NO. REVISIONS DESCRIPTION: _____

ENGINEERS: _____
 PLANNERS: _____
 SCIENTISTS: _____
 CONSTRUCTION MANAGERS: _____

KCI TECHNOLOGIES www.kci.com

VILLAGE OF HICKORY RIDGE
 SECTION 3, AREA 7, LOT 73
 STREAM RESTORATION
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND WILDS ROAD
 COLUMBIA, MARYLAND 21046-1677
 (410) 313-4660

KCI FILE: m:\2001\01128.e\dr\drawings\EP02.rvt

TABLE 28 STONE SIZE

Table with 5 columns: NUMBER, SIZE RANGE, D 50, D 100, AASHTO, HEIGHT. Rows include NUMBER 57, RIP-RAP, CLASS I, CLASS II, CLASS III.

* THIS CLASSIFICATION IS TO BE USED ON THE INSIDE FACE OF STONE OUTLETS AND CHECK DAMS.
** THIS CLASSIFICATION IS TO BE USED WHENEVER SMALL RIP-RAP IS REQUIRED.

24.0 MATERIALS AND SPECIFICATIONS
TABLE 27 GEOTEXTILE FABRICS

Table with 4 columns: CLASS, APPARENT OPENING SIZE MM. MAX., GRAB TENSILE STRENGTH LB. MIN., BURST STRENGTH PSI MIN.

* US STD. SIEVE CW-02215 ** .50 MM. MAX. FOR SUPER SILT FENCE

THE PROPERTIES SHALL BE DETERMINED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:
- APPARENT OPENING SIZE MSMT 323

- GRAB TENSILE STRENGTH ASTM D 1682 4"x8" SPECIMEN 1"x2" CLAMPS, 12" MIN. STRAIN RATE IN BOTH PRINCIPAL DIRECTIONS OF GEOTEXTILE FABRIC.

- BURST STRENGTH ASTM D 3786

THE FABRIC SHALL BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS, AND WILL BE ROT AND MLDEW RESISTANT. IT SHALL BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS, AND COMPOSED OF A MINIMUM OF 85% BY WEIGHT OF POLYOLEPHINS, POLYESTERS, OR POLYAMIDES.

IN ADDITION CLASSES A THROUGH E SHALL HAVE A 0.01 CM/SEC. MINIMUM PERMEABILITY WHEN TESTED IN ACCORDANCE WITH MSMT 507, AND AN APPARENT MINIMUM ELONGATION OF 20 PERCENT (20%) WHEN TESTED IN ACCORDANCE WITH THE GRAB TENSILE STRENGTH REQUIREMENTS LISTED ABOVE.

SILT FENCE CLASS F GEOTEXTILE FABRICS FOR ALL SILT FENCE SHALL HAVE A 50LB./IN. MINIMUM TENSILE STRENGTH AND A 20 LB/IN MINIMUM TENSILE MODULES WHEN TESTED IN ACCORDANCE WITH MSMT 509. MATERIAL SHALL ALSO HAVE A 0.3 GAL./FT SQUARED/MIN. FLOW RATE NO SEVENTY-FIVE PERCENT (75%) MINIMUM FILTERING EFFICIENCY WHEN TESTED IN ACCORDANCE WITH MSMT 322.

GEOTEXTILE FABRICS USED IN THE CONSTRUCTION OF THE SILT FENCE SHALL RESIST DETRIORATION FROM ULTRAVIOLET EXPOSURE. THE FABRIC SHALL CONTAIN SUFFICIENT AMOUNTS OF ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 12 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120 DEGREES F.

MATERIALS SPECIFICATIONS

HOWARD SOIL CONSERVATION DISTRICT

TEMPORARY SEEDING NOTES *

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

Seeded 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 bushels/acre of annual ryegrass (3.2 lbs/1000 sq. ft.). For the period May 1 - August 14, seed with 3 lbs/acre of weeping lovegrass (0.7 lbs/1000 sq. 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.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

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.

Seeded 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. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.).

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 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 (14 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/1000sq. 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.

* 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.

SOILS COMPACTION NOTES:

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. On-site soils with a Unified Soils Classification of CL, CH, or MH or with liquid limits greater than 40 and plastic indices greater than or equal to 12 are not suitable as structural fill. If imported materials are required it should have a Unified Soils Classification of SM or more granular and less plastic and a maximum dry density of at least 105-pcf in accordance with the modified proctor test method (ASTM D-1557) or as approved by the Engineer.

Fill should 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). The moisture content of the fill should be properly controlled during placement. Filling should be placed on hillsides should be benched to prevent a sliding failure plane.

In-place density tests should 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.

SEQUENCE OF CONSTRUCTION

- 1 DAY 1. OBTAIN GRADING PERMIT.
1 WEEK 2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY WORK BEING DONE...
1 DAY 3. CONTRACTOR SHALL COORDINATE AN ON-SITE 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 AND RECREATION AND PARKS.
1 DAY 4. CONTRACTOR SHALL POST NOTIFICATION OF CLOSURE AND/OR DETOUR FOR THE EXISTING PATHWAY IN THE CONSTRUCTION AREA.
2 DAYS 5. CLEAR AND GRUB THOSE AREAS WITHIN THE LIMIT OF DISTURBANCE REQUIRED TO ESTABLISH THE PROPOSED SEDIMENT CONTROL MEASURES.
3 DAYS 6. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE, TREE PROTECTION FENCES, TEMPORARY BRIDGE, AND TEMPORARY STREAM BY-PASS PIPING. NOTE: TEMPORARY STREAM BY-PASS PIPING SHALL BE IN PLACE FOR THE MINIMUM LENGTH OF TIME NECESSARY TO PERFORM THE CHANNEL RE-LOCATION.
1 DAY 7. CONTRACTOR TO REVIEW TREE PROTECTION FENCING LOCATIONS WITH DEPARTMENT OF RECREATION AND PARKS PRIOR TO BEGINNING CONSTRUCTION.
2 WEEKS 8. RELOCATE THE CHANNEL AND CONSTRUCT THE NEW STREAM BANK.
3 DAYS 9. FINE GRADE SITE AND PERMANENTLY STABILIZE THE DISTURBED AREAS ACCORDING TO THE PLANS, INCLUDING TREE/SHRUB PLANTING.
3 DAYS 10. RECONSTRUCT MACADAM PATHWAY DAMAGED BY THE CONSTRUCTION ACTIVITIES.
2 DAYS 11. WHEN THE SITE IS STABILIZED AND WITH THE PERMISSION OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY AREAS DISTURBED BY THIS ACTIVITY.
2 DAYS 12. NOTE: LIVE STAKING SHALL BE DONE DURING THE DORMANT SEASON (DECEMBER 1 - MARCH 30, HOWEVER, THE FEBRUARY 15 - MARCH 30 TIME PERIOD IS PREFERRED.)

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 (313-1955).
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 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, by 14 days as to all other disturbed or graded areas on the project site.
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 1994 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). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow 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 for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:
Total Area of Site 29.35 Acres
Area Disturbed 0.38 Acres
Area to be roofed or paved 0 Acres
Area to be vegetatively stabilized 0.38 Acres
Total Cut 740 Cu. Yds.
Total Fill 600 Cu. Yds.
Offsite waste/borrow area location To Be Determined
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. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
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.

21.0 STANDARD AND SPECIFICATIONS

FOR TOPSOIL Definition

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 material 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 soils 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 Experiment 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 mixture 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.
ii. Topsoil must be free of plants or plant parts such as bermuda grass, quack grass, Johnsongrass, nutcase, 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 1000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
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 parts per million shall not be used.
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 qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

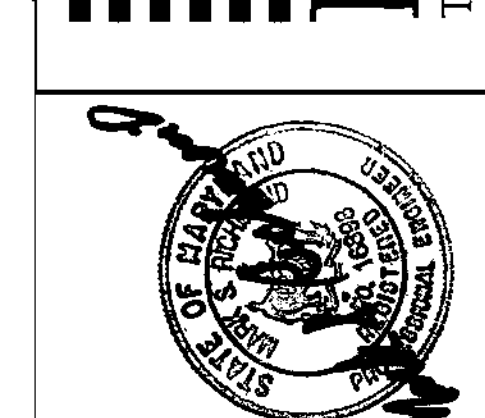
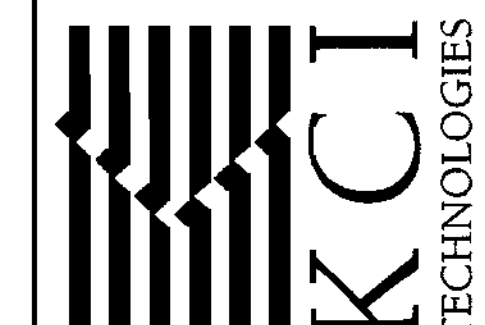
ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section - Vegetative Stabilization Methods and Materials.

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". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum 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 may otherwise be detrimental to proper sodding and seeded preparation.

Table with columns: DATE, REVISIONS DESCRIPTION, NO.

ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS



VILLAGE OF HICKORY RIDGE SECTION 3, AREA 7, LOT 73 STREAM RESTORATION
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
23400 MILLERS ROAD, COLUMBIA, MARYLAND 21046-1677
(410)-313-4640

EROSION AND SEDIMENT CONTROL NOTES

SCALE: N/A
DATE: 3-4-04
KCI JOB NO.: 01-01128.e
CAPITAL PROJECT NO.: D-1126
PERMIT ISSUE:
CONSTRUCTION ISSUE:

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Chief, Development Engineering Division MK DATE 4/19/04
Chief, Division of Land Development DATE 4/19/04
Director DATE 4/19/04

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
John Meyer DATE 4/19/04

THE DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson DATE 4/19/04

ENGINEER'S CERTIFICATE
"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"
Mark S. Richmond P.E. # 16898 DATE 3/4/04

DEVELOPER'S CERTIFICATE
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL 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"
Steve Sharav DATE 3/15/04

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GEOMETRY SHEET
3	PLAN AND PROFILE SHEET
4	LANDSCAPE PLAN
5	DETAIL SHEET
6	EROSION AND SEDIMENT CONTROL PLAN
7	EROSION AND SEDIMENT CONTROL DETAILS
8	EROSION AND SEDIMENT CONTROL NOTES
9	CROSS - SECTIONS

SITE DEVELOPMENT PLAN

VILLAGE OF HICKORY RIDGE

SECTION 3, AREA 7, LOT 73

STREAM RESTORATION

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT D-1126

LEGEND

- EX. TREES
- EXIST. MAJOR CONTOUR
- EXIST. MINOR CONTOUR
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- EXIST. PROPERTY LINE
- WETLANDS
- ORANGE SAFETY FENCE
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- SILT DIVERSION FENCE
- TPS TEMPORARY PUMPING STATION
- SOILS BOUNDARY
- SAVE TREE
- REMOVE TREE
- TRY TO SAVE TREE
- IMBRICATED STONE TOE PROTECTION
- LIVE STAKE ZONE
- RIPARIAN ZONE
- BUFFER ZONE
- 0%-14.99% SLOPES
- 15.0%-24.99% SLOPE
- >25.0% SLOPES
- EXISTING FLOODPLAIN
- PROPOSED FLOODPLAIN
- EX. WATER LINE
- EX. SEWER LINE
- EX. STORM DRAIN
- EX. OVERHEAD ELECTRIC
- EX. UNDERGROUND CABLE TV
- EX. UNDERGROUND TELEPHONE
- EX. GAS LINE

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 JUNE 15TH, INCLUSIVE. STREAM CLASSIFICATION: USE I-P.
- CONTRACTOR SHALL CONTINUALLY MONITOR WEATHER FORECASTS DURING WORK ACTIVITIES AND SCHEDULE WORK DURING FAVORABLE CONDITIONS. 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 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOT STORE EQUIPMENT, MATERIALS AND/OR SUPPLIES BEYOND THE ORANGE FENCING 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, A VIDEOTAPE AND PHOTOGRAPHS OF THE CHANNEL FROM THE PROPOSED UPSTREAM LIMIT OF WORK TO THE EXISTING FOOTBRIDGE SHALL BE TAKEN BY THE CONTRACTOR. THE PHOTOGRAPHS AND VIDEOTAPE SHALL ALSO INCLUDE THE PROPOSED CONSTRUCTION ACCESS ROUTE AND MATERIAL STORAGE AREAS. THE CONTRACTOR SHALL ALSO TAKE PHOTOGRAPHS AND VIDEOTAPE OF THE SAME AREA UPON COMPLETION OF CONSTRUCTION AND STABILIZATION. THE VIDEOTAPE AND PHOTOGRAPHS SHALL BE TURNED OVER TO THE COUNTY PROJECT MANAGER.
- 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.
- ANY PORTION OF TREES THAT ARE REMOVED SHALL BE REMOVED FROM THE SITE.
- IN AREAS WHERE CONSTRUCTION TRAFFIC MUST DRIVE WITHIN THE CRITICAL ROOT ZONE OF A TREE TO REMAIN, THE CONTRACTOR SHALL PLACE WOOD MATS TO DISTRIBUTE THE LOAD OF THE CONSTRUCTION VEHICLES.
- THE EXISTING RIP RAP IN THE CHANNEL SHALL BE RE-USED TO THE EXTENT PRACTICAL AS DIRECTED BY THE ENGINEER TO MEET THE STONE SPECIFIED FOR THE RELOCATED CHANNEL.
- THERE MAY BE SEVERAL LOCATIONS WHERE CONSTRUCTION VEHICLES MUST SQUEEZE BETWEEN TWO EXISTING TREES TO REMAIN. HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS SHALL BE NOTIFIED AND SHALL DETERMINE THE EXACT COURSE OF ACTION TO BE FOLLOWED.
- PRIOR TO BEGINNING ANY CONSTRUCTION, CONTRACTOR SHALL ARRANGE FOR HOUSE INSPECTIONS/PHOTOGRAPHS TO DOCUMENT EXISTING CONDITIONS PRIOR TO CONSTRUCTION. HOWARD COUNTY PROJECT MANAGER WILL MAKE INITIAL CONTACT WITH AFFECTED HOMEOWNERS TO DISCUSS THE NEED FOR THE INSPECTIONS. INSPECTION SHALL INCLUDE INSIDE AND OUTSIDE OF HOUSES.

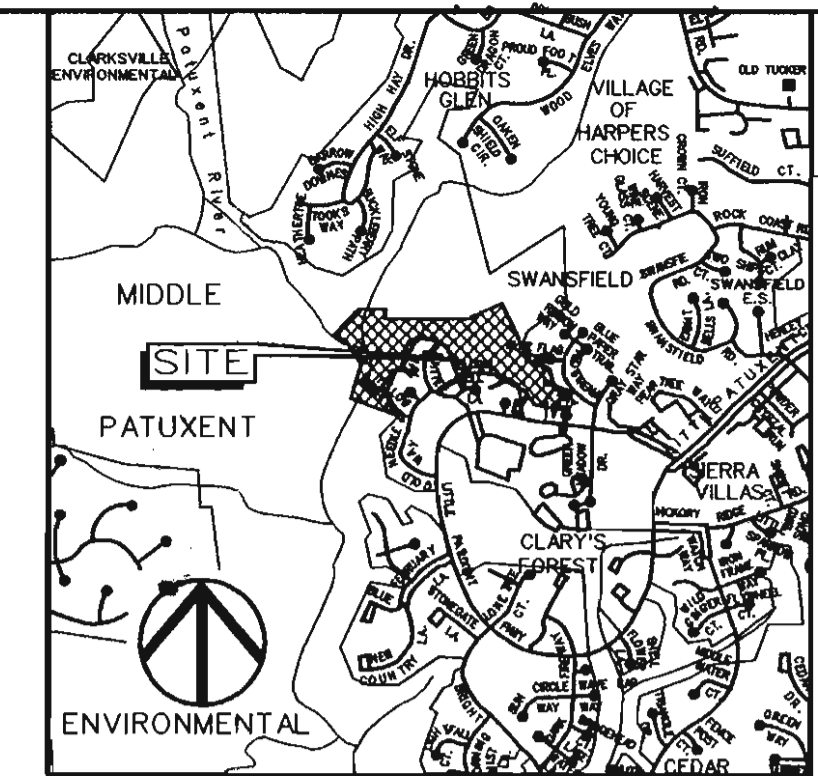
LOT/PARCEL *	STREET ADDRESS
73/399	12009 YELLOWBELL LANE

BENCHMARK DATA

TRAV YB-1
PROPERTY BAR W/CAP
N 502585.174
E 828180.763

TRAV YB-2
PROPERTY BAR W/CAP
N 502628.367
E 828070.985

TBM 2
11-CUT ON RIM OF SS MH
ELEV. -357.21



VICINITY MAP

Scale: 1" = 2000'

GENERAL NOTES

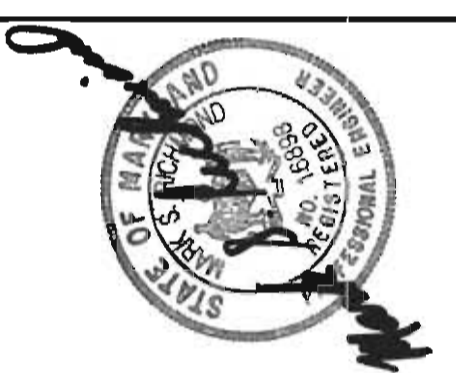
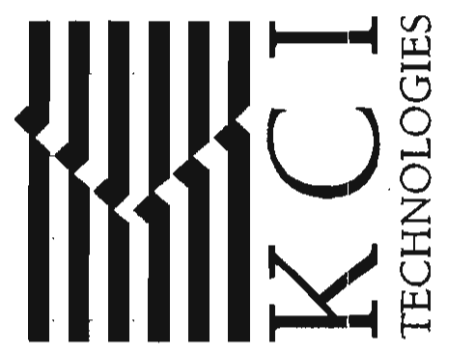
- THE SUBJECT PROPERTY IS ZONED NT PER THE 10/18/93 COMPREHENSIVE ZONING PLAN.
- THE DEPARTMENT OF PLANNING AND ZONING HAS DETERMINED THAT THE DISTURBANCE WITHIN THE FLOODPLAIN, STREAM, AND WETLANDS IS ESSENTIAL IN ORDER TO CONSTRUCT THIS PROJECT.
- THIS PLAN IS PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- THERE ARE NO BURIAL GROUNDS OR CEMETERY SITES LOCATED ON THE PROJECT SITE.
- REFERENCE NUMBERS OF OTHER APPROVED PLANS: SDP 86-28c and F 85-06, VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 7.
- THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BECAUSE THE SITE IS PART OF A PLANNED UNIT DEVELOPMENT WHICH HAS PRELIMINARY DEVELOPMENT PLAN APPROVAL BEFORE 12/31/92.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- TRAFFIC CONTROL SHALL BE PROVIDED DURING CONSTRUCTION. HOWARD COUNTY STANDARD DETAIL TE-11 SHALL APPLY.
- 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. BENCHMARKS SHOWN HEREON WERE PROVIDED BY HOWARD COUNTY SURVEY DIVISION.
- WATER IS PUBLIC.
- SEWER IS PUBLIC.
- STORMWATER MANAGEMENT IS NOT REQUIRED FOR THIS PROJECT SINCE THE PROJECT WILL NOT ADD IMPERVIOUS AREA NOR WILL IT CHANGE THE EXISTING HYDROLOGY OF THE SITE.
- EXISTING UTILITIES ARE BASED ON FIELD SURVEYS AND AVAILABLE RECORD DRAWINGS.
- THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY KCI TECHNOLOGIES, INC., DATED AUGUST 2003 AND WAS APPROVED IN JANUARY, 2004.
- THE WETLANDS DELINEATION FOR THIS PROJECT WAS PERFORMED BY KCI TECHNOLOGIES, INC. IN SEPTEMBER 2002.
- TOPOGRAPHIC SURVEY OF THE SITE WAS PERFORMED BY AB CONSULTANTS, INC. IN OCTOBER 2002.
- A JOINT PERMIT APPLICATION HAS BEEN SUBMITTED TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR THIS PROJECT. (TRACKING NUMBER 200361132)
- 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. THE CONTRACTOR MUST VERIFY SUCH INFORMATION TO HIS OWN SATISFACTION.
- SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE ENGINEER SHALL BE NOTIFIED 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.
- EXISTING MACADAM PATHWAY DISTURBED BY THE PROPOSED WORK SHALL BE RECONSTRUCTED AS PER THE DETAIL SHOWN HEREON.
- THE PROPOSED PROJECT IS LOCATED BEHIND 12019 YELLOWBELL LANE.

SITE ANALYSIS DATA CHART

- TOTAL PROJECT AREA: 29.35 ACRES (1,278,486 SF).
- DISTURBED AREA: 0.38 ACRES (16,550 SF).
- PRESENT ZONING DESIGNATION: NT
- SITE IS LOCATED IN MIDDLE PATUXENT ENVIRONMENTAL AREA.
- PROPOSED USE FOR THE SITE: STABILIZE EXISTING BANK/CHANNEL EROSION.
- OPEN SPACE ON SITE: 29.35 ACRES AND 100% OF GROSS AREA.
- APPLICABLE DPZ FILE REFERENCES: SDP 86-28c and F 85-06 VILLAGE OF HICKORY RIDGE, SECTION 3, AREA 7.

NO.	REVISIONS DESCRIPTION	DATE

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS



VILLAGE OF HICKORY RIDGE
SECTION 3, AREA 7, LOT 73
STREAM RESTORATION

HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
1780 OAKLAND MILLS ROAD
COLUMBIA, MARYLAND 21046-9877
(410) 313-4660

TITLE SHEET

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

[Signature] 4/17/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

[Signature] 4/16/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4/20/04
DIRECTOR DATE

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL*
VILLAGE OF HICKORY RIDGE	SECTION 3, AREA 7	73/399
PLAT* or L/F	GRD *	ZONING
4718/41	4	NT
TAX MAP NO.	ELECT. DISTR.	CENSUS TRACT
35	05	6053.0
WATER CODE	SEWER CODE	

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 3/18/04
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 3/17/04
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE

[Signature] 3/17/04
CHIEF, STORMWATER MANAGEMENT DIVISION DATE

DEPARTMENT OF RECREATION AND PARKS
HOWARD COUNTY, MARYLAND

[Signature] 3-23-04
DIRECTOR OF RECREATION AND PARKS DATE

KCI TECHNOLOGIES

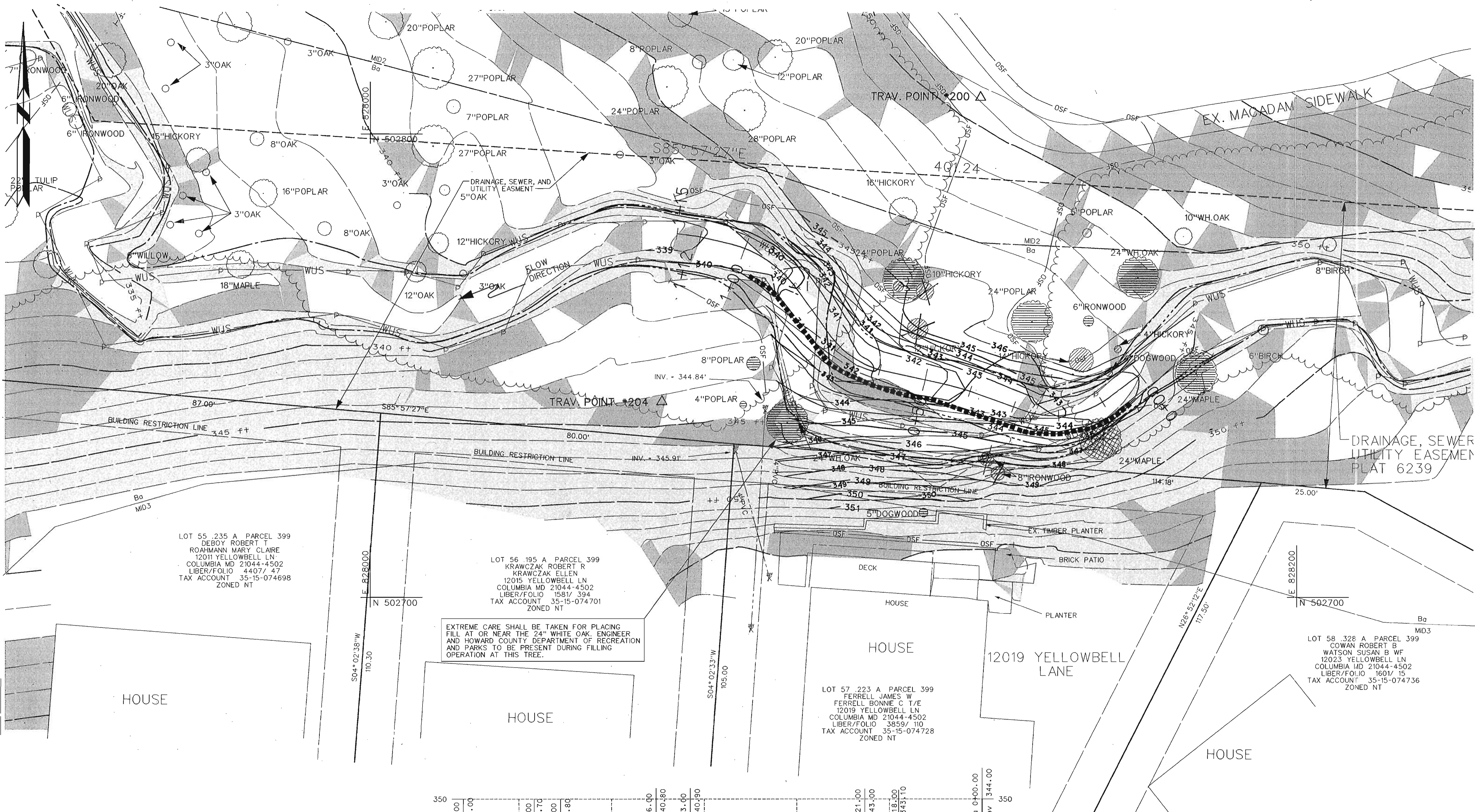
10 NORTH PARK DRIVE
HUNT VALLEY, MD 21030
PHONE: (410) 316-7800
FAX: (410) 316-7817
www.kci.com

ASBUILT 11-19-04
SHEET 1,3 AND 9

SCALE:	AS SHOWN
DATE:	3-4-04
KCI JOB NO.:	01-01128.e
CAPITAL PROJECT NO.:	D-1126
PERMIT ISSUE:	
CONSTRUCTION ISSUE:	
1	
SHEET NO. 1 OF 9	

SDP-04-043

PLOTTED: 09:45 AM on Thursday, March 04, 2004
BY: Kevin Johnson, Division: Environmental Engineering
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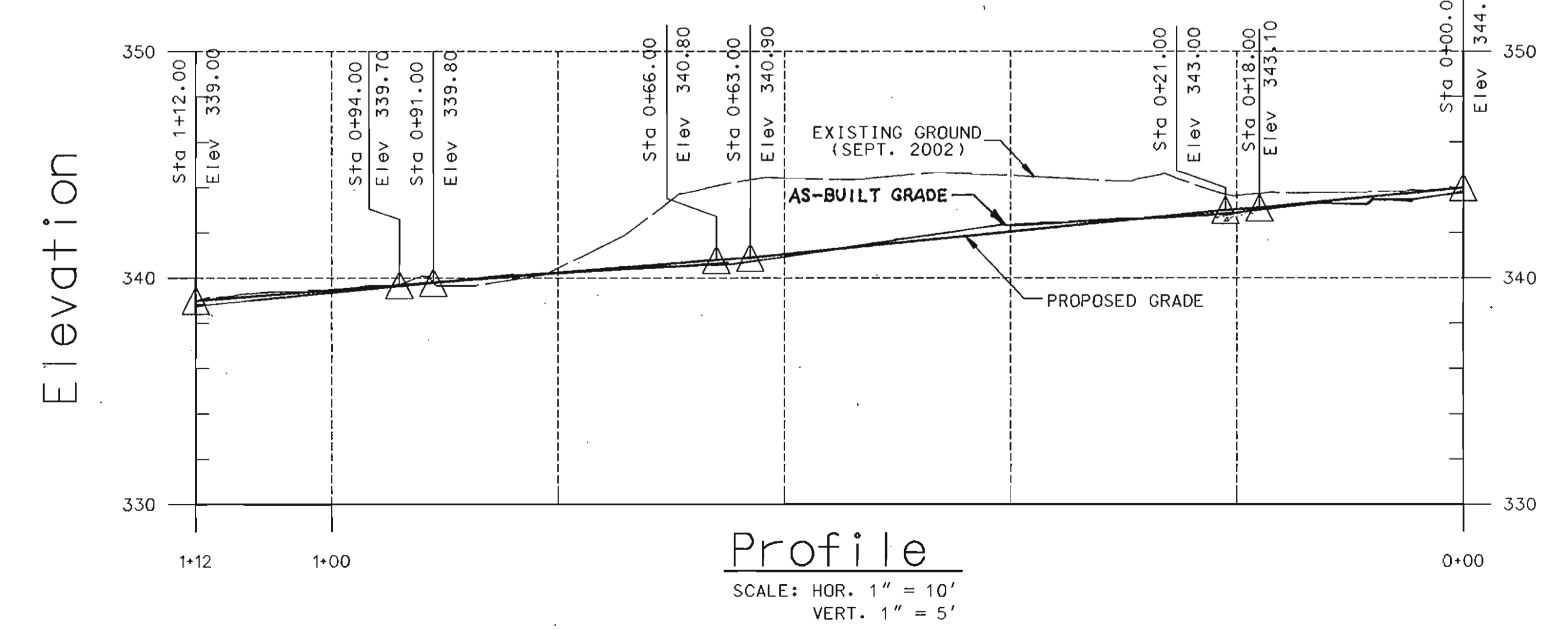


APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

[Signature] 4/19/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/19/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4/20/04
 DIRECTOR DATE



NOTE:
 PROFILE DEPICTS CENTER LINE OF PROPOSED
 STREAM LOCATION, NOT THALWEG. REFER TO
 CROSS - SECTION SHEET 9 FOR
 CHANNEL VARIATION.

STONE TOE PROTECTION	
TYPE	STATIONING
IMBRICATED STONE TOE PROTECTION	0+14 TO 0+98

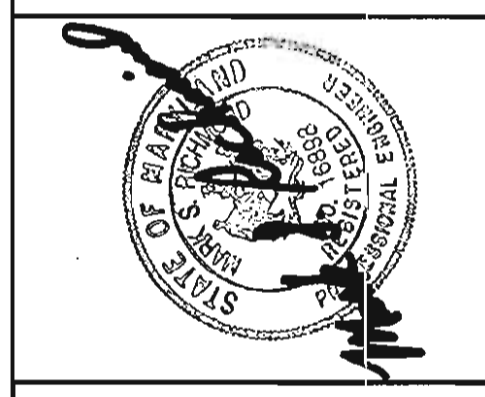
AS-BUILT GRADE

ASBUILT 11-19-04

NO.	REVISIONS DESCRIPTION	DATE

ENGINEERS
 PLANNERS
 SCIENTISTS
 CONSTRUCTION MANAGERS

KCI TECHNOLOGIES www.kci.com



VILLAGE OF HICKORY RIDGE
 SECTION 3, AREA 7, LOT 73
 STREAM RESTORATION

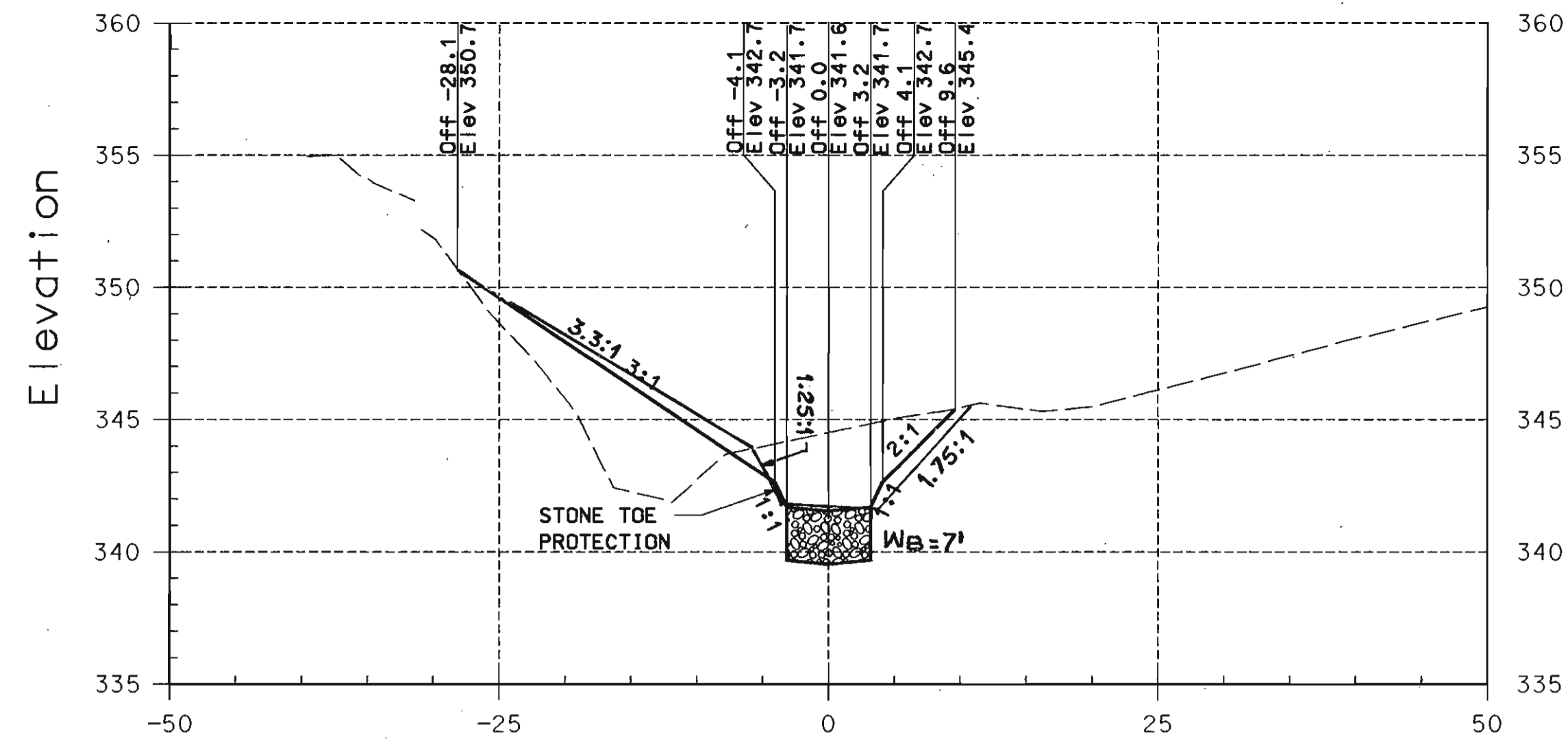
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7183 OAKLAND MILLS ROAD
 COLUMBIA, MD 21046-1877
 (410) 313-2626

PLAN SHEET

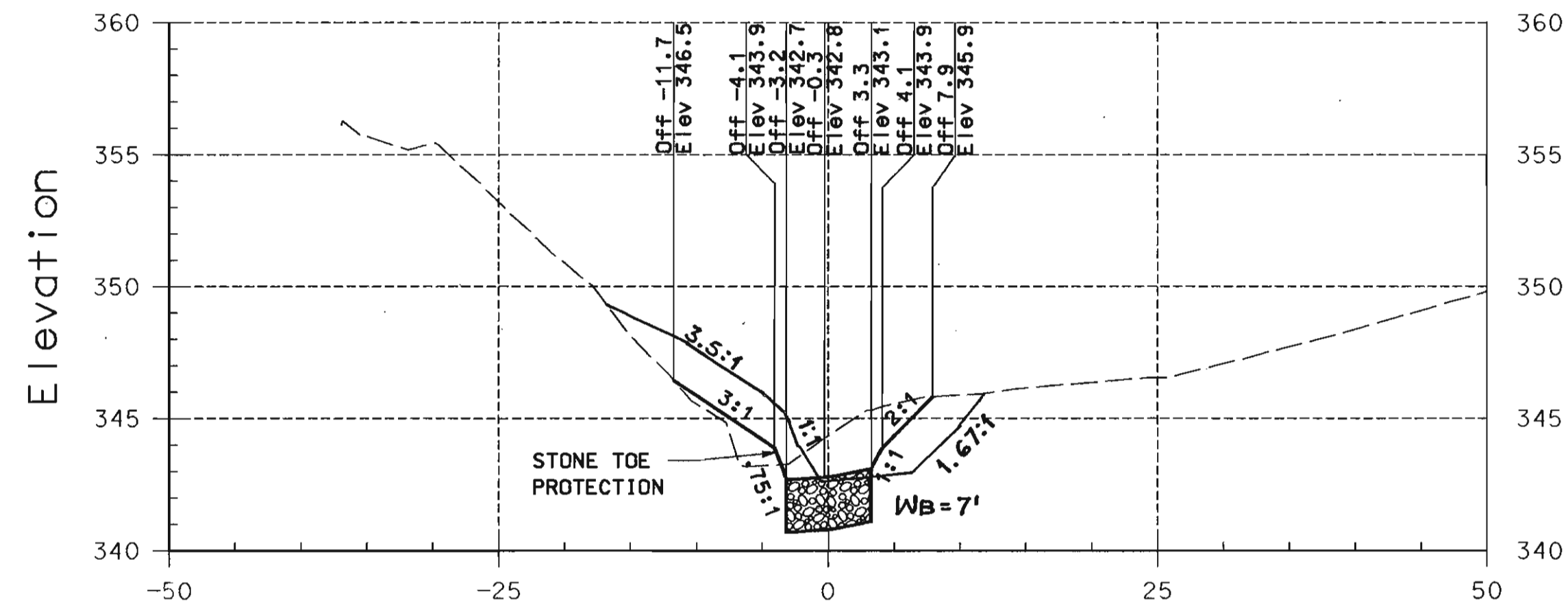
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 DATE: 3-4-04
 KCI JOB NO.: 01-01128.e
 CAPITAL PROJECT NO.: D-1126
 PERMIT ISSUE:
 CONSTRUCTION ISSUE:

3
 SHEET NO.: 3 OF 9
 SDR-04-043

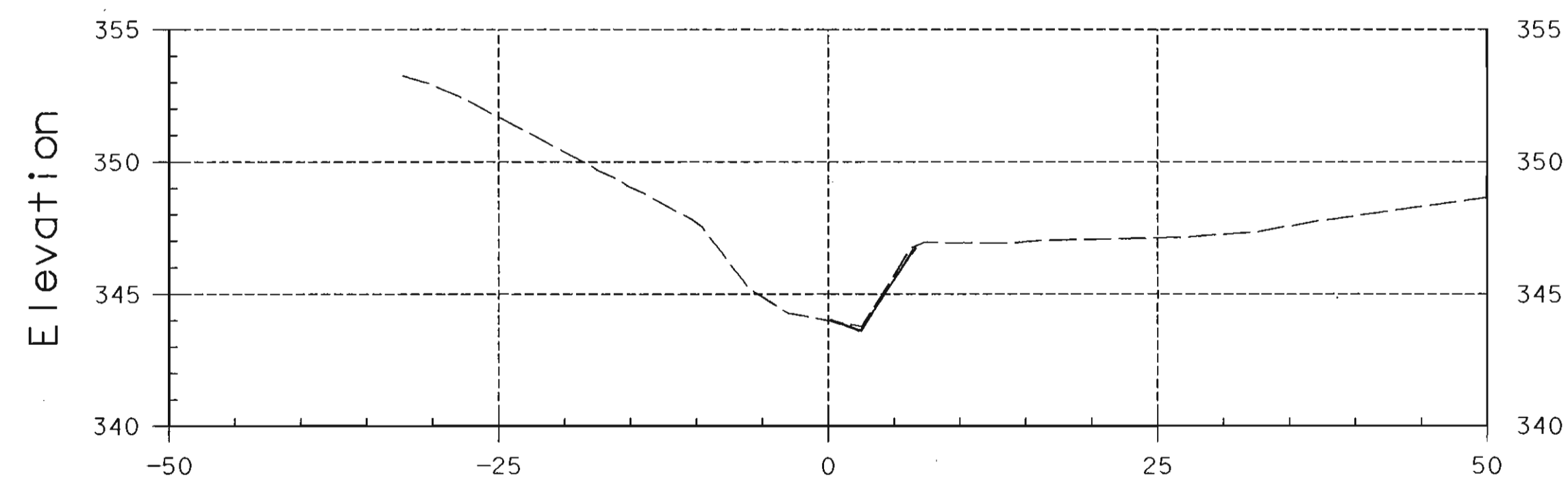
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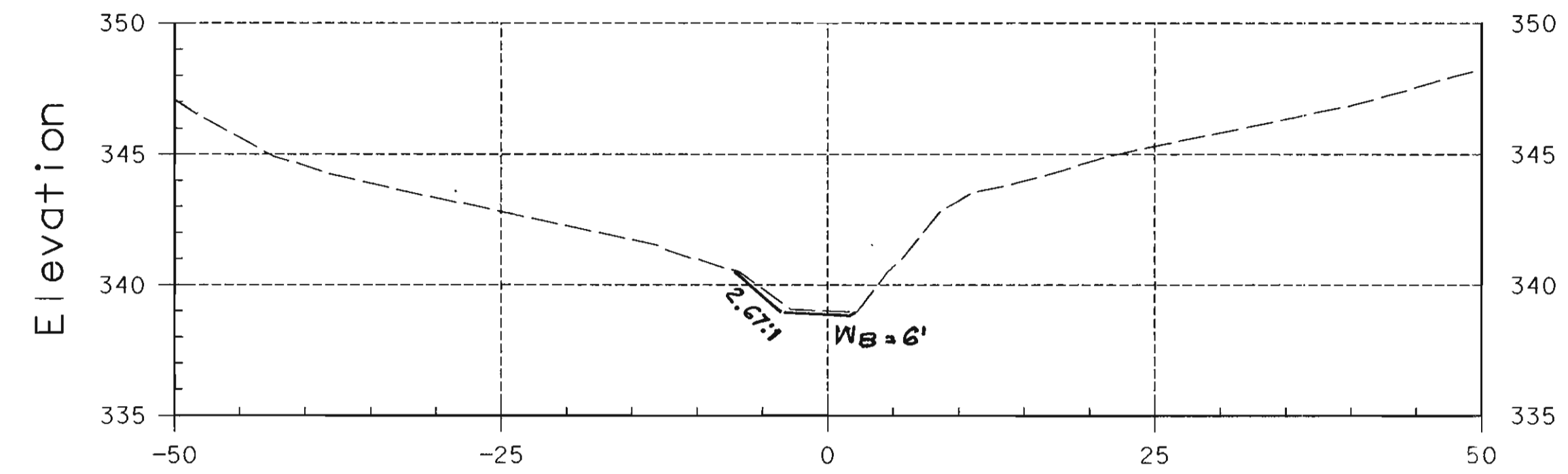


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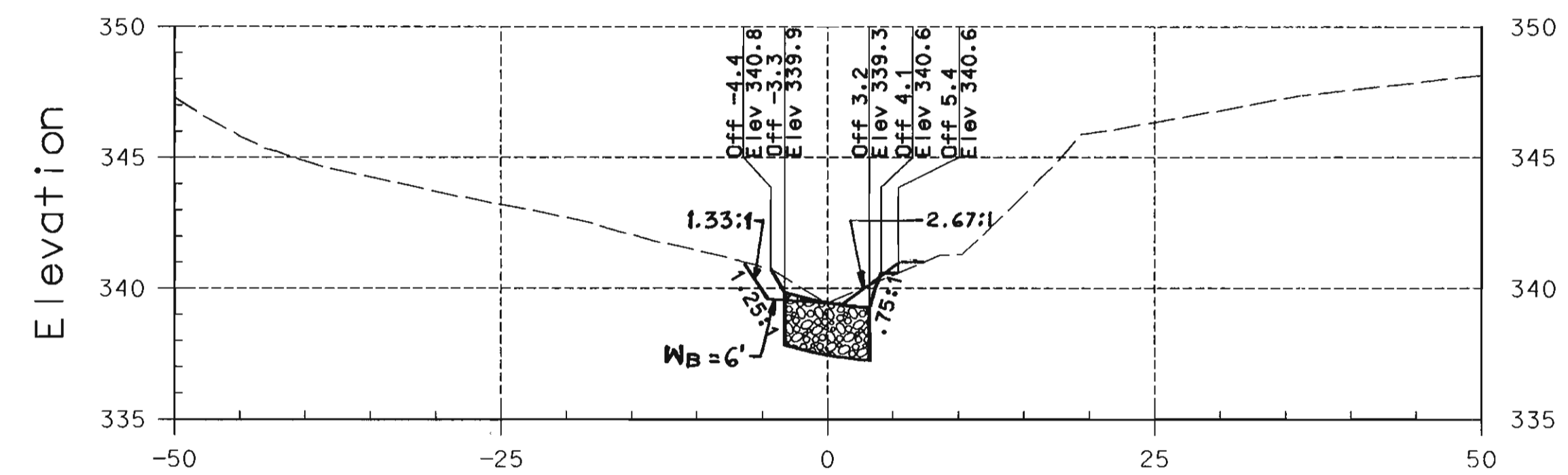


0+00

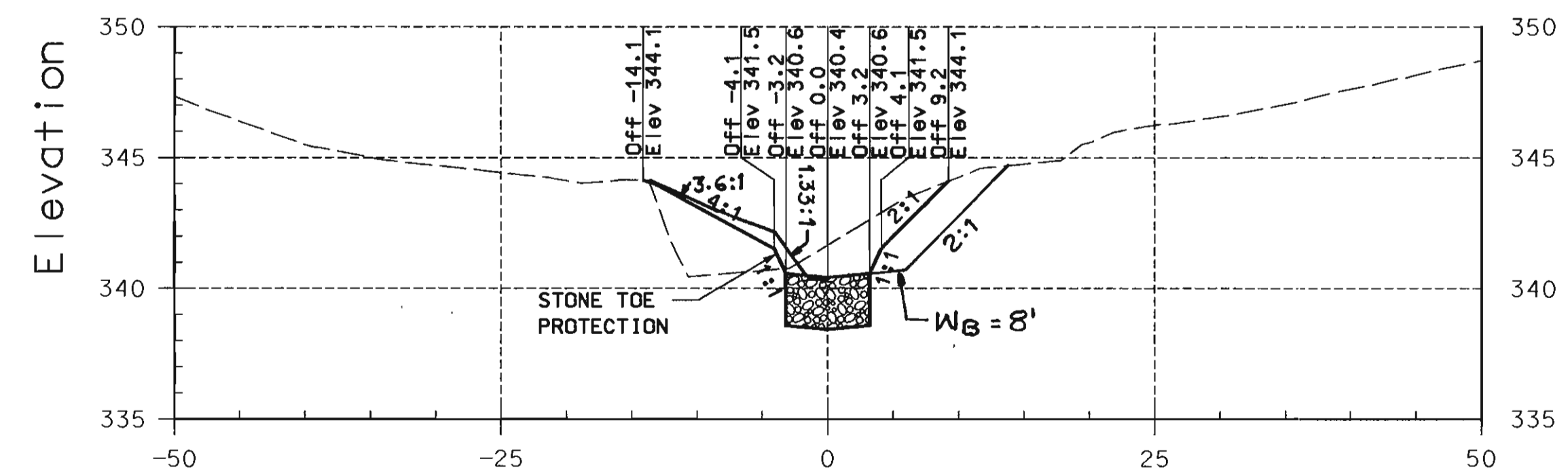
NOTE: CROSS-SECTIONS ARE DEPICTED FACING DOWNSTREAM



1+12



1+00



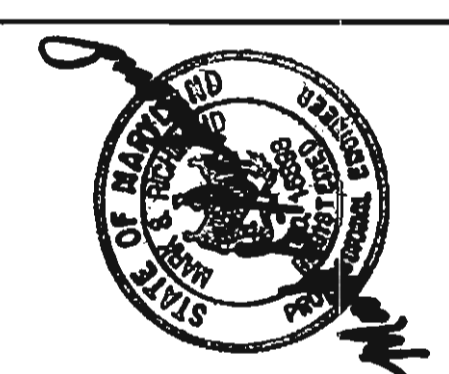
0+75

LEGEND

- EXISTING GROUND
- PROPOSED GRADE
- AS-BUILT GRADE

NO.	REVISIONS DESCRIPTION	DATE

ENGINEERS
 PLANNERS
 SCIENTISTS
 CONSTRUCTION MANAGERS
KCI
 TECHNOLOGIES
 www.kci.com



VILLAGE OF HICKORY RIDGE
 SECTION 3, AREA 7, LOT 73
 STREAM RESTORATION
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILLS ROAD
 COLUMBIA, MARYLAND 21046-6877
 (410) 313-4660

CROSS SECTIONS

SCALE:	HOR. 1"=10'	VERT. 1"=5'
DATE:	3-4-04	
KCI JOB NO.:	01-01128.e	
CAPITAL PROJECT NO.:	D-1126	
PERMIT ISSUE:		
CONSTRUCTION ISSUE:		

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
 DATE: 4/19/04
[Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT DL
 DATE: 4/20/04
[Signature]
 DIRECTOR DATE: 4/20/04

PLOTTED: 10:04 AM on Thursday, March 04, 2004
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