GENERAL NOTES

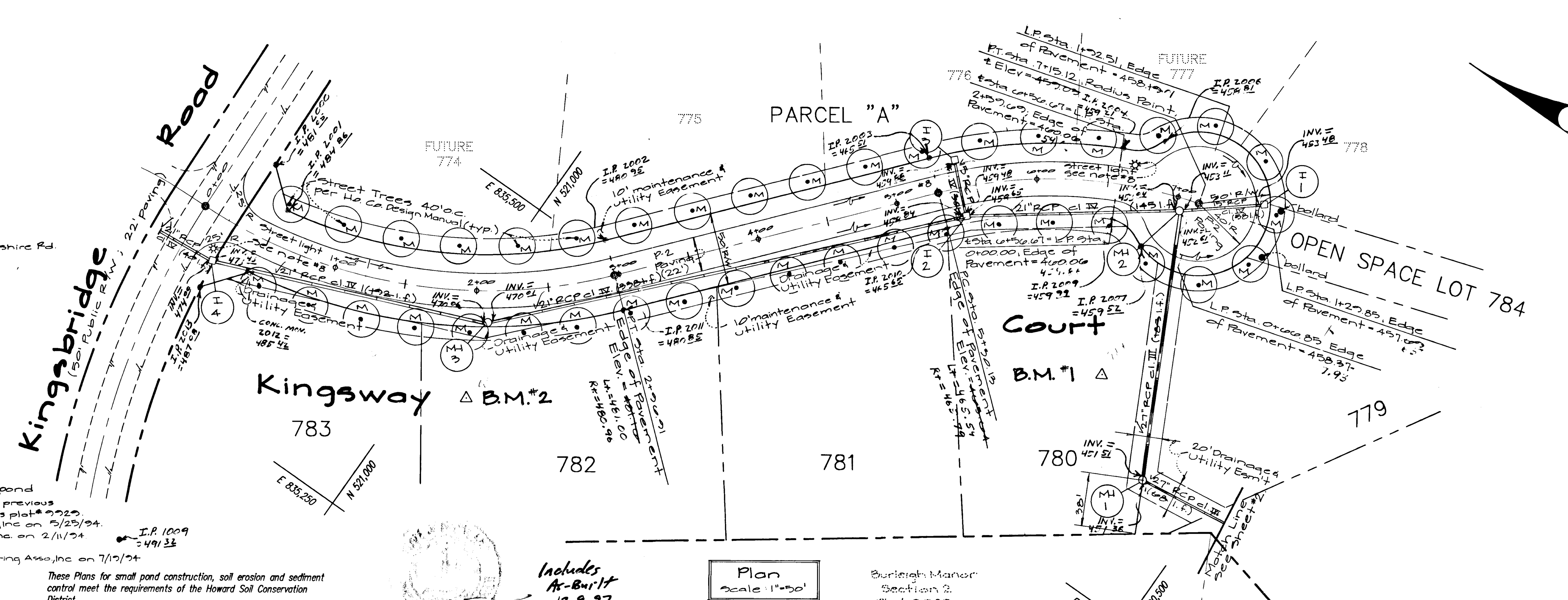
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF CONSTRUCTION INSPECTION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST (5) FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THE PLANS.

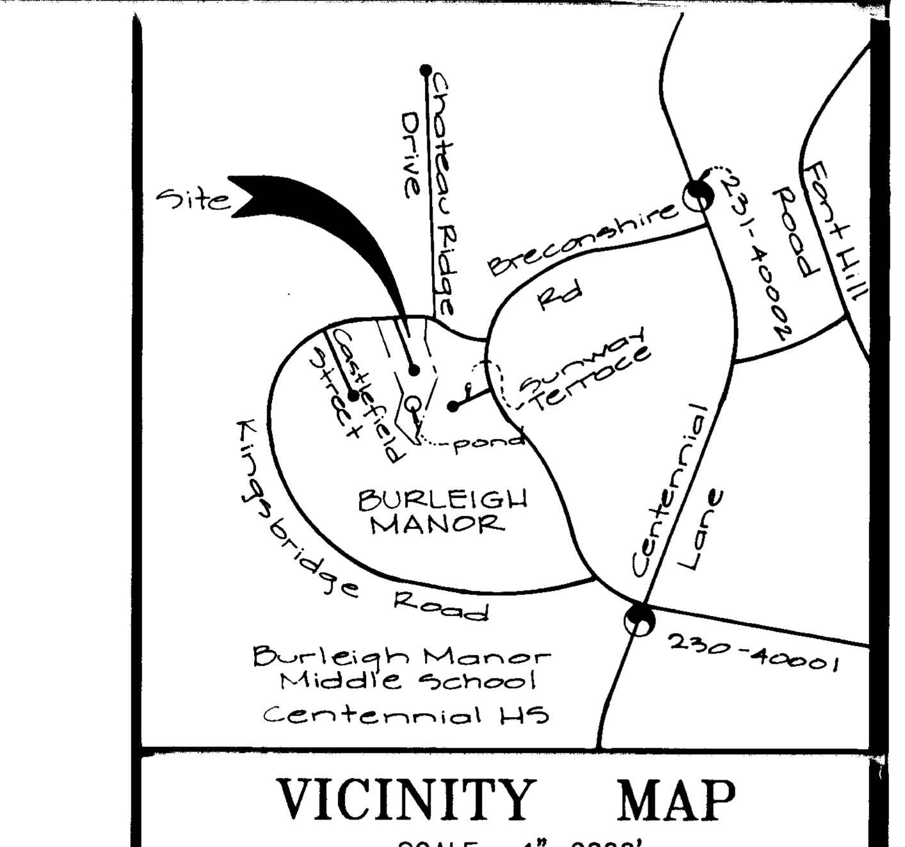
MISS UTILITY	1-800-257-7777
C&P TELEPHONE COMPANY	725-9976
HOWARD COUNTY BUREAU OF UTILITIES	313-4900
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS & ELECTRIC CO.	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533

4. PROJECT BACKGROUND:

   LOCATION: Kingsbridge Rd, 1000'± west of Breconshire Rd.
   TAX MAP 23 PARCEL: A & B ZONING: R-20
   TOTAL TRACT AREA: 22.75 Ac.
   SECTION AREA: 22.75 AC.
   NUMBER OF PROPOSED LOTS: 5
   APPROVED AND DPZ REFERENCE#: S 94-35, P 95-05

5. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
6. TOPOGRAPHY SHOWN IS AT TWO FOOT CONTOUR INTERVALS AND WAS DETERMINED BY Photogrammetric Data Services THE SURVEY WAS DONE USING AERIAL PHOTOGRAPHY, on 4/19/94.
7. HORIZONTAL AND VERTICAL CONTROLS WERE ESTABLISHED USING HOWARD COUNTY CONTROL POINTS 230-40001 AND 231-40002.
8. LIGHT POLES AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III, ROADS AND BRIDGES.
9. WATER AND SEWER FOR THIS PROJECT IS PUBLIC AND WILL BE CONSTRUCTED UNDER CONTRACT NUMBER 24-3450-D THE SYSTEM IS WITHIN THE Little Patuxent DRAINAGE AREA.
10. STORMWATER MANAGEMENT PROVIDED BY detention/retention pond
11. THE FLOODPLAIN Easement shown was taken from a previous recorded plat for this subdivision, recording ref. is plat# 9929.
12. WETLANDS DELINEATION WAS PERFORMED by Exploration Research, Inc on 5/25/94.
13. A TRAFFIC STUDY WAS performed by The Traffic Group, Inc. on 2/11/94.
14. A NOISE STUDY WAS NOT REQUIRED FOR THIS SUBDIVISION.
15. A GEOTECHNICAL REPORT WAS PREPARED BY Hillis-Carnes Engineering Asso., Inc on 7/19/94
16. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM BEST AVAILABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF CONSTRUCTION. ANY DISCREPANCIES MUST BE COMMUNICATED TO THE ENGINEER FOR POSSIBLE RE-DESIGN.
17. ALL PIPE ELEVATIONS SHOWN ARE INVERTS.





VICINITY MAP
SCALE: 1"=2000'

STREET TREE SCHEDULE				
SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	QUANTITY	REMARKS
M	Acer Saccharum - Green Mountain Sugar Maple	2"-2½" Cal.	39	B&B Heavyhead

STREET LIGHT SCHEDULE			
LOCATION	LAMP TYPE	MOUNTING	POLE TYPE
℄ Sta. 0+19, 23'R	100w High Pressure Sodium Vapor	Post top - Traditionaire	14' Black Fiberglass
℄ Sta. 6+65, 15'L	" "	" "	" "

Street Light Placement Note: A 20' min. distance shall be maintained between any trees and a light, and 5' min between a fire hydrant and a light.

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Robert W. Ziehm — Howard Soil Conservation District — Date 8/30/95

ENGINEER'S CERTIFICATE

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

[signature] — Date 2-21-95

Includes As-Built 12-9-97

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[signature] V. Pres. — Signature of Developer/Builder — Date 2-21-95

Plan
Scale: 1"=50'

Burleigh Manor Section 2 Plat 9929 (F-91-17)

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

U.S. Soil Conservation Service — Date

Approved: Howard County Dept. of Public Works
[signature] — Chief, Bureau of Highways — 9-11-95 Date

Approved: Howard County Dept. of Planning & Zoning
[signature] — Chief, Div. of Land Development & Research — 9/20/95 Date
[signature] — Chief, Development Engineering Div. — 9/5/95 Date

Bench Marks

B.M.#1 Traverse Station #904 rebar & cap, Elev. = 463.76

B.M.#2 Traverse Station #905 rebar & cap, Elev. = 487.37

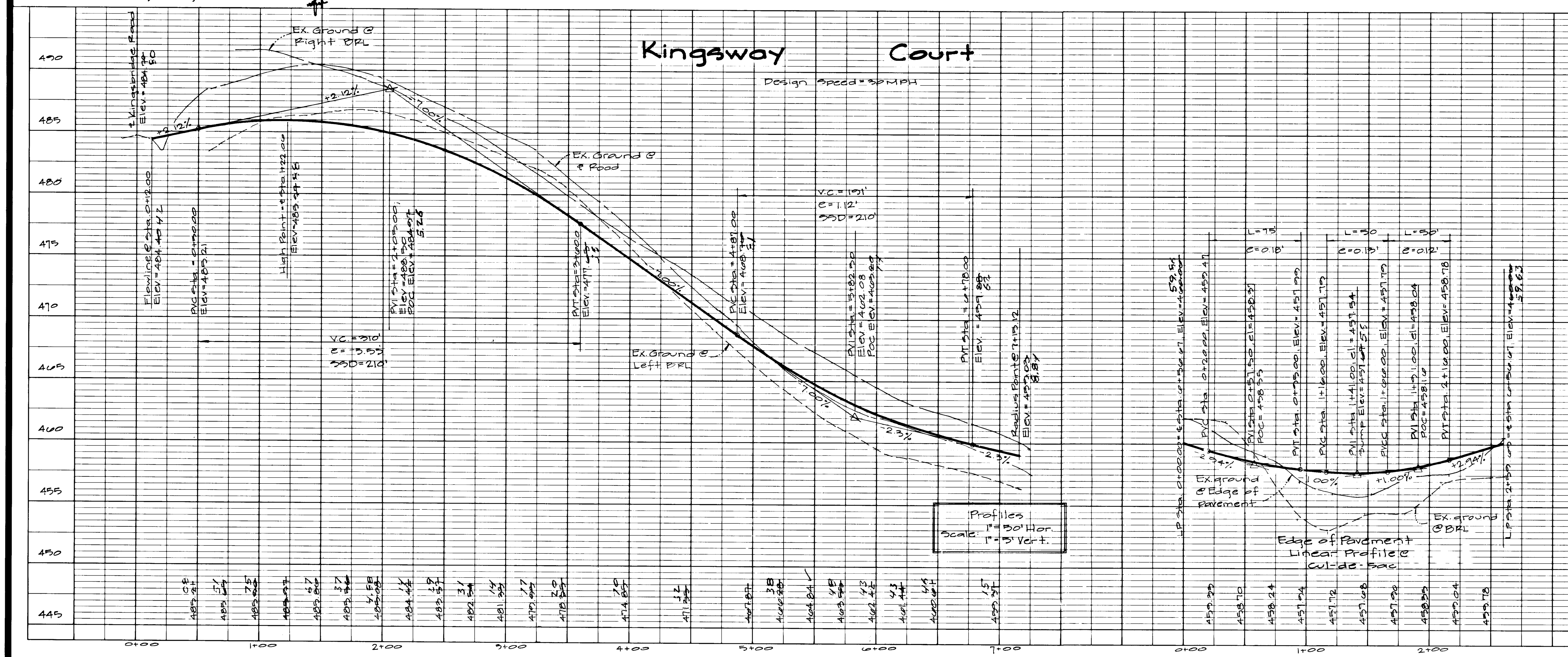
℄ CURVE DATA									
STREET NAME	P.C. STA.	P.C.C. STA.	P.T. STA.	RADIUS	ARC	TANGENT	CHORD	BEARING	DELTA
Kingsway Ct.	0+00.00	none	2+96.91	360.00'	296.91'	157.48'	288.57'	S 25°44'14" E	47°15'16"
Kingsway Ct.	5+30.13	none	7+15.12	320.00'	184.99'	95.16'	182.43'	S 32°48'11" E	33°07'22"

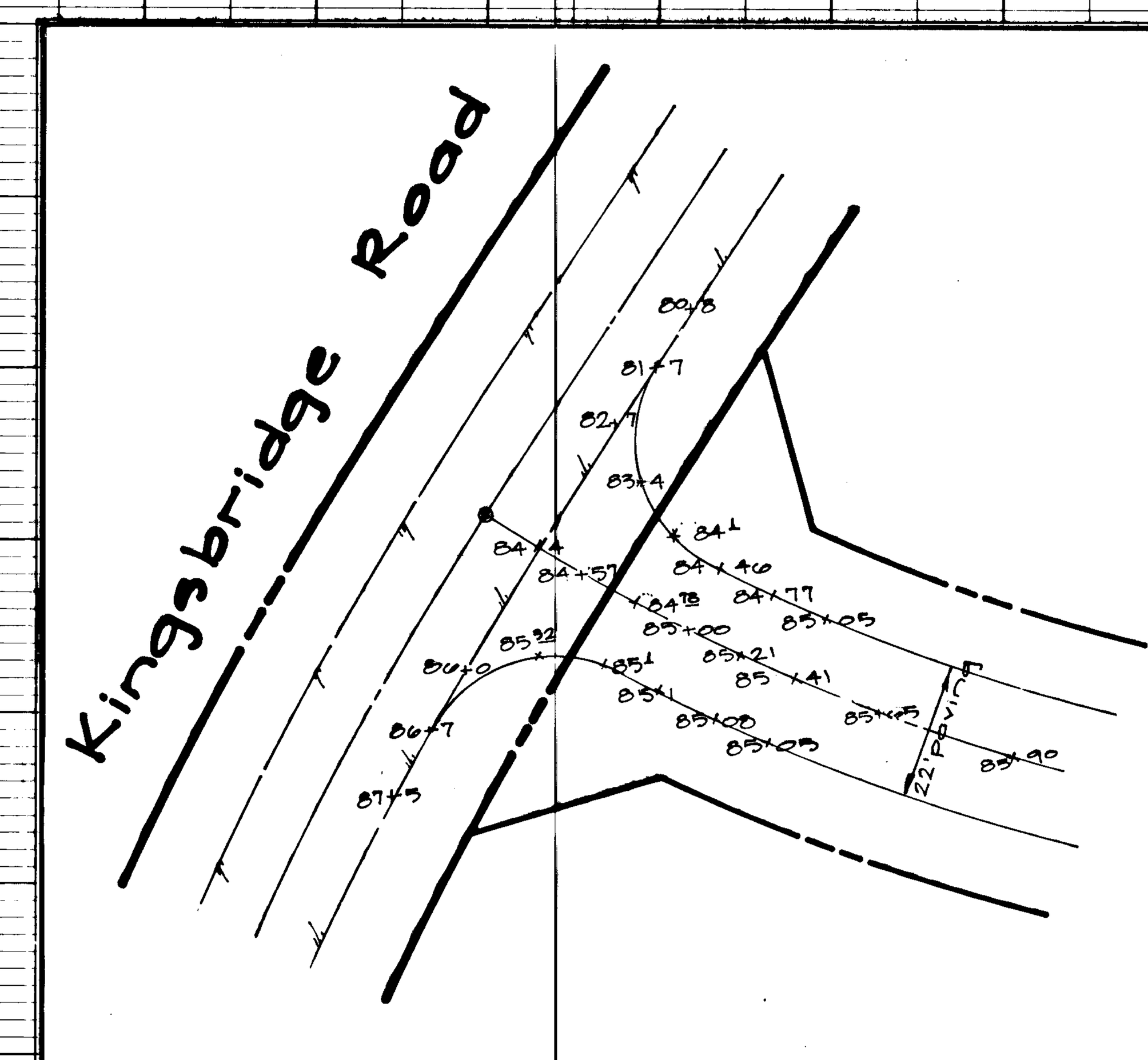
GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MARYLAND 20866
TEL: (301) 421-4024 BALT.: (410) 880-1820 NO.VA. (301) 989-2524 FAX: (301) 421-4186

DESIGNED DEV	ROAD CONSTRUCTION PLANS	SCALE 1"=50'
DRAWN CAD/MCF	**KINGSBRIDGE @ BURLEIGH MANOR** LOTS 779-784, PARCEL 'A' & PARCEL 'B'	DRAWING 1 OF 6
CHECKED DEV	ELLICOTT CITY ELECTION DISTRICT No. 2 HOWARD COUNTY, MARYLAND	ZONING R-20
DATE ~~July, 1995~~ NOV. 1997	OWNER GREENEBAUM & ROSE ASSOC., INC. 1829 REISTERSTOWN ROAD SUITE 410, WOODHOLME CENTER BALTIMORE, MARYLAND 21208 PHONE (410) 484-8400	JOB No. 94008

AS-BUILT





Paving Detail
@ Entrance
Scale: 1"=50'

F-95-117

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[signature] V. Pres — 2-21-95
Signature of Developer/Builder — Date

ENGINEER'S CERTIFICATE

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[signature] Includes A-Built 12-9-97

[signature] — 2-21-95
Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

[signature] — 8/30/95
U.S. Soil Conservation Service — Date

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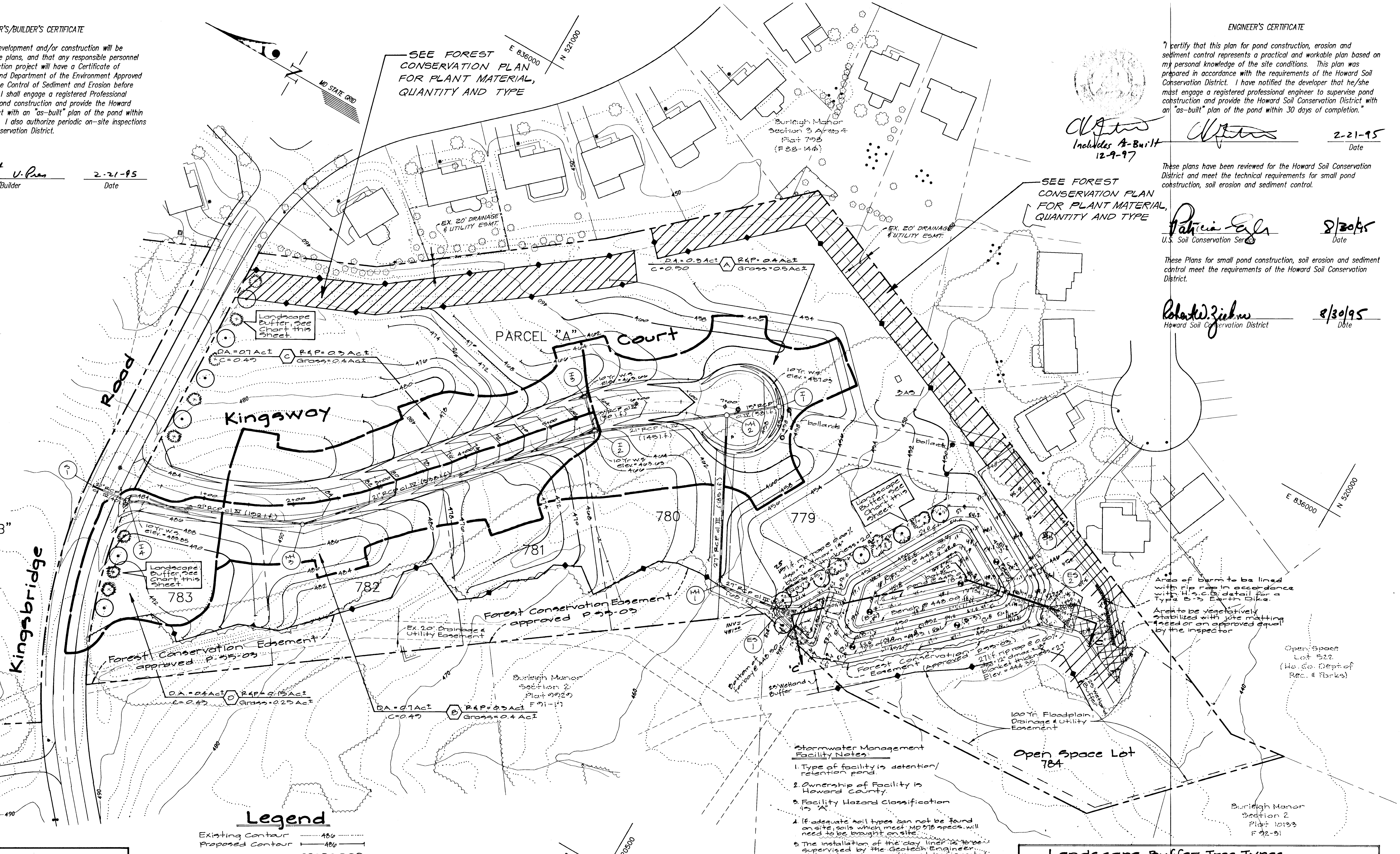
[signature] — 8/30/95
Howard Soil Conservation District — Date



Legend

Existing Contour	486
Proposed Contour	486
Existing Treeline	
Proposed Treeline	
Storm Drain Drainage Divide	
Bollard To Mark SWM Access	•
FOREST CONSERVATION EASEMENT (ULTIMATE PERMITTED L.O.D. DURING HOUSE CONSTRUCTION)	

Surety for Landscaping

Financial surety for the required landscaping has been posted as part of the Department of Public Works Developer's Agreement in the amount of $3,900.00.

NOTE: THE LANDSCAPE EDGES ON LOT 784 AND PARCEL A ARE SHOWN ON THE FOREST CONSERVATION PLAN.

Stormwater Management Facility Notes:

1. Type of facility is detention/retention pond.
2. Ownership of Facility is Howard County.
3. Facility Hazard Classification is "A".
4. If adequate soil types can not be found on site, soils which meet MD 378 specs. will need to be brought on site.
5. The installation of the clay liner is to be supervised by the Geotech Engineer. Materials being used must be inspected prior to its placement in accordance with the soil addendum.

AS-BUILT

Landscape Buffer Tree Types

Lot N°/ Parcel	Shade Trees: Type, Quantity & Symbol		Evergreen Trees: Type, Quantity & Symbol	
	Acer Sacharum - Green Mountain Sugar Maple		Pinus Strobus - Eastern White Pine	
	required	provided	required	provided
783	2	2	3	
784	10	10	15	13
Parcel A	4	4	5	5
Totals	16 each		23 each	

Approved: Howard County Dept of Public Works
[signature] — 9-11-95
Chief, Bureau of Highways — Date

Approved: Howard County Dept. of Planning & Zoning
[signature] — 9/20/95
Chief, Div. of Land Development & Research — Date
[signature] — 9/15/95
Chief, Development Engineering Div. — Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
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TEL: (301) 421-4024 NO. VA.: (301) 989-2524 BALT: (410) 880-1820 FAX: (301) 421-4186 DES. dev DRN. mcf CHK. ckg

DATE	REVISION	BY	APP'R.
3-6-97	REV. FOREST CONS. PLANTING LOCATION	HKJ	

PREPARED FOR:
Greenebaum & Rose Associates, Inc.
1829 Reisterstown Road
Suite 410 Woodholm Center
Baltimore, Maryland 21208
Phone (410) 484-8400

Mass Grading and Landscaping Plan
Kingsbridge @ Burleigh Manor
Lots 779 - 784, Parcel A & Parcel B
Ellicott City Election District N° 2 — Howard County, Maryland

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-20	94008
DATE	TAX MAP No.	SHEET
Nov. 1997 ~~July 1995~~	23	2 of 6

F-95-117

121

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[signature] V-Pres — 2-21-95

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[signature] — 2-21-95

Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

[signature] — 8-30-95

U.S. Soil Conservation Service — Date

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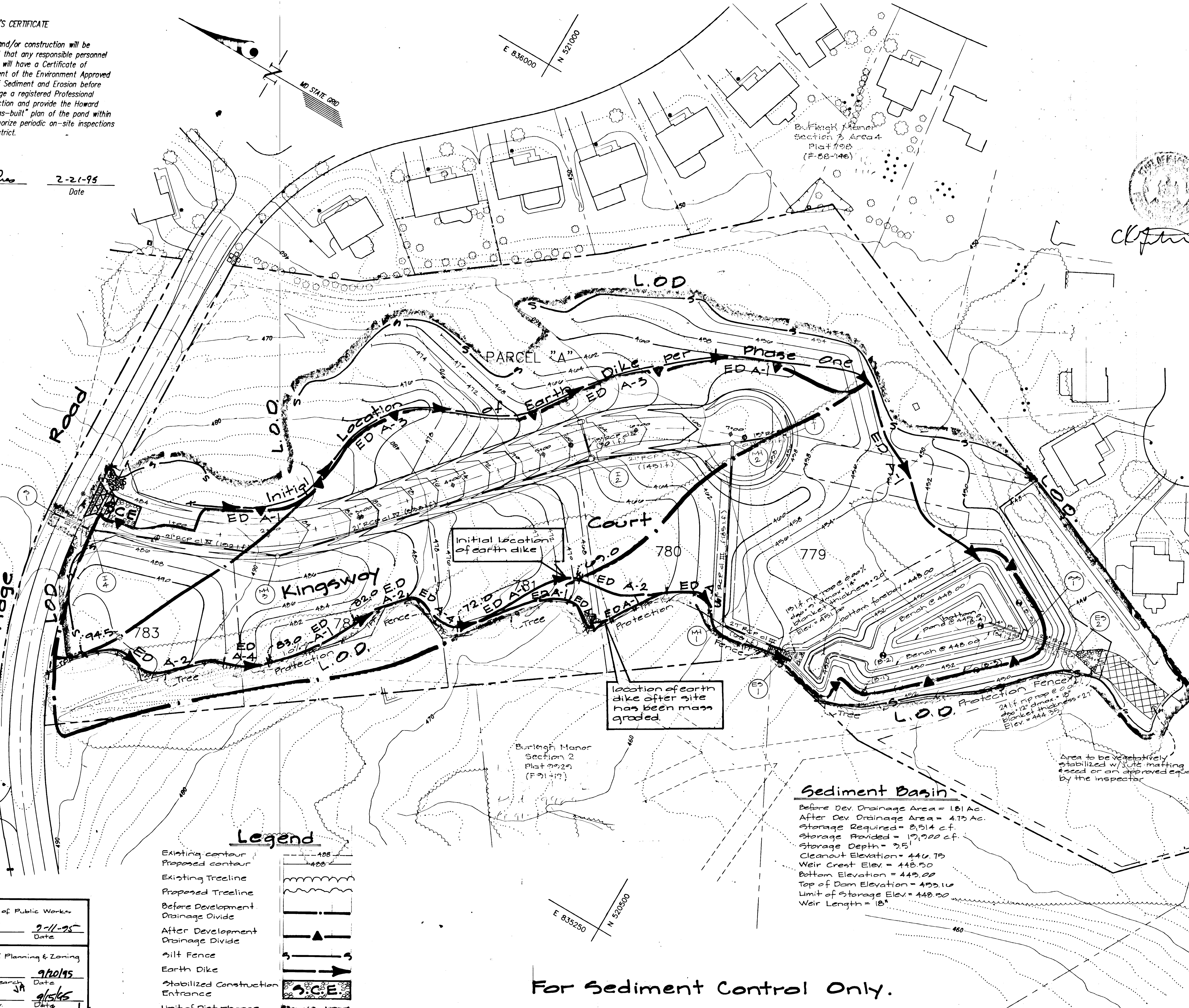
[signature] — 8-30-95

Howard Soil Conservation District — Date



Sediment Basin

Before Dev. Drainage Area = 1.81 Ac.
After Dev. Drainage Area = 4.73 Ac.
Storage Required = 8,514 c.f.
Storage Provided = 19,900 c.f.
Storage Depth = 3.5'
Cleanout Elevation = 446.75
Weir Crest Elev. = 448.50
Bottom Elevation = 443.00
Top of Dam Elevation = 453.16
Limit of Storage Elev. = 448.50
Weir Length = 18"

Legend

Existing contour	488
Proposed contour	488
Existing Treeline	
Proposed Treeline	
Before Development Drainage Divide	
After Development Drainage Divide	
Silt Fence	
Earth Dike	
Stabilized Construction Entrance	S.C.E.
Limit of Disturbance	

Approved: Howard County Dept. of Public Works

[signature] — 9-11-95

Chief, Bureau of Highways — Date

Approved: Howard County Dept. of Planning & Zoning

[signature] — 9/20/95

Chief, Div. of Land Development & Research — Date

[signature] — 9/15/95

Chief, Development Engineering Div. — Date

For Sediment Control Only.

GLW GUTSCHICK LITTLE & WEBER, P.A.				
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TEL: (301) 421-4024 NO. VA.: (301) 989-2524 BALT: (410) 880-1820 FAX: (301) 421-4186	DES. mcf	DRN. mcf	CHK. ckg	
DATE	REVISION	BY	APP'R.	

PREPARED FOR:

Greenebaum & Rose Associates, Inc.
1829 Reisterstown Road
Suite 410 Woodholm Center
Baltimore, Maryland 21208
Phone (410) 484-8400

Sediment and Erosion Control Plan

Kingsbridge @ Burleigh Manor

Lots 779 - 784, Parcel A & Parcel B

Ellicott City Election District N° 2 — Howard County, Maryland

SCALE	ZONING	G. L. W. FILE No.
1"=50'	R-20	94008
DATE	TAX MAP No.	SHEET
May, 1995	23	3 of 6

F-95-117

Sequence of Construction

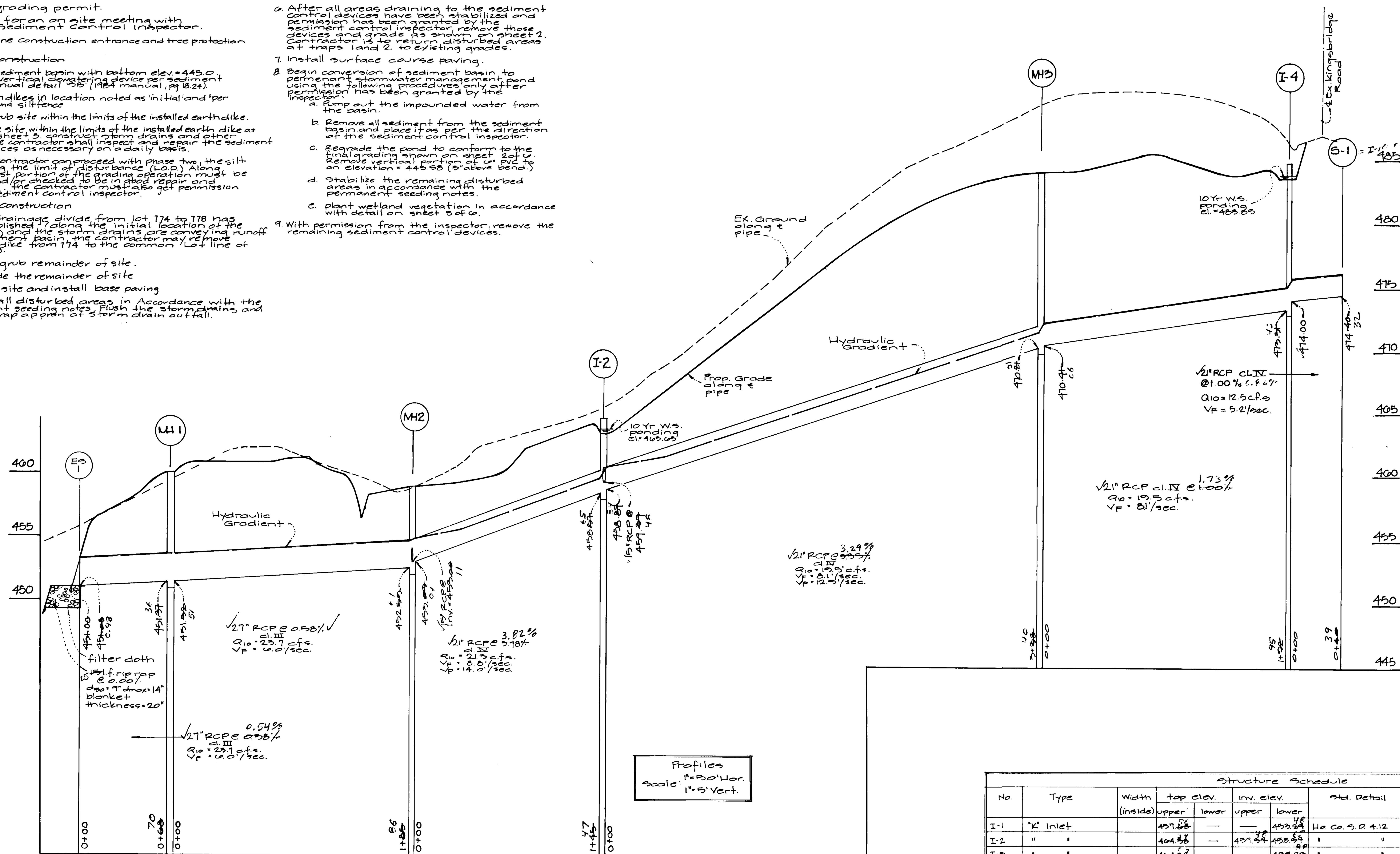
1. Obtain grading permit.
2. Arrange for an on site meeting with County Sediment Control Inspector.
3. Install Stone Construction entrance and tree protection fence

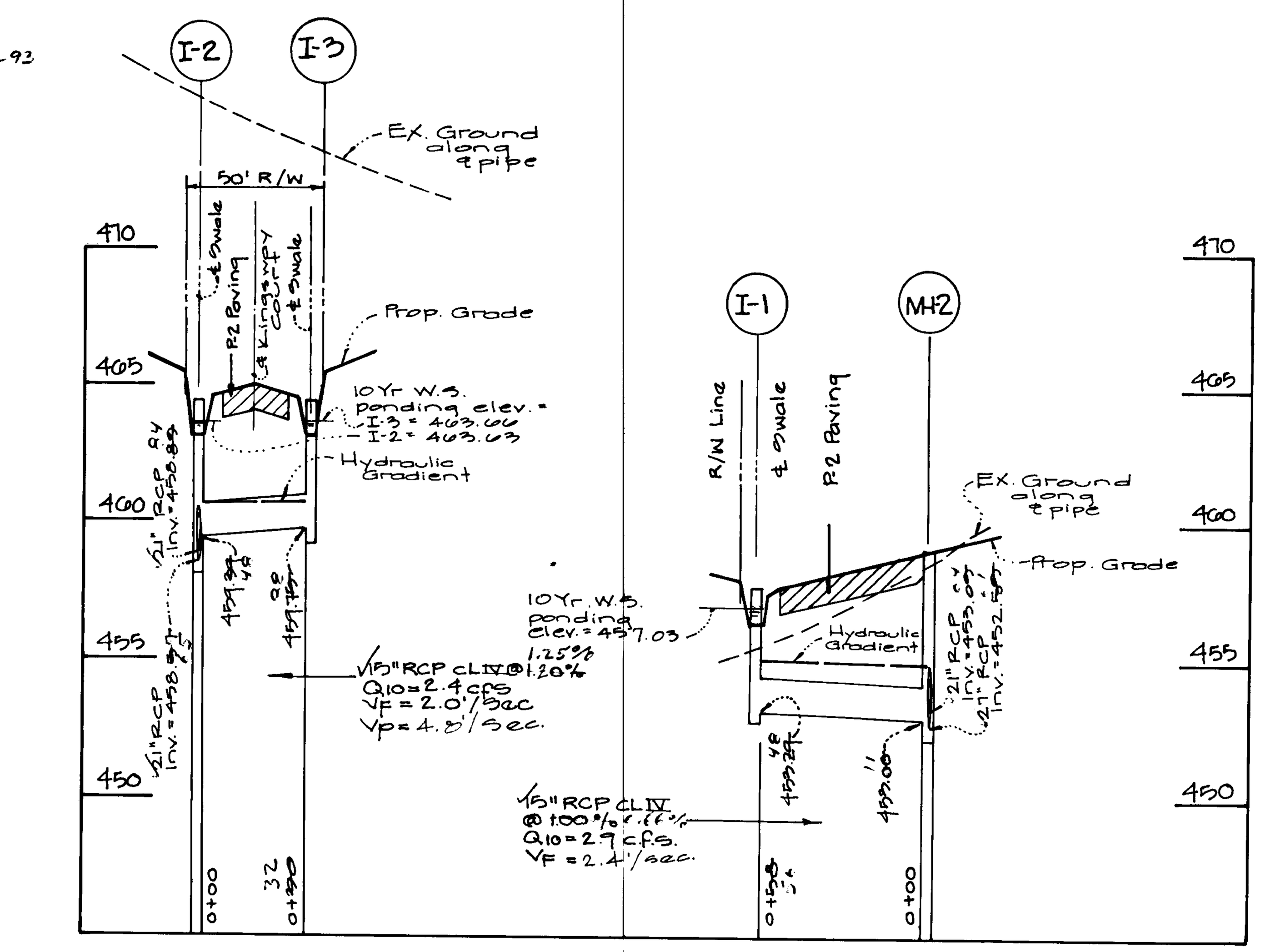
Phase one of construction

1. Construct sediment basin with bottom elev.=445.0. Construct vertical dewatering device per sediment control manual detail '5B' (1984 manual, pg 18.24).
2. Install earth dikes in location noted as 'initial' and 'per phase one' and silt fence
3. Clear and grub site within the limits of the installed earth dike.
4. Rough grade site within the limits of the installed earth dike as shown on sheet 3. construct storm drains and other utilities. The contractor shall inspect and repair the sediment control devices as necessary on a daily basis.
5. Before the contractor can proceed with phase two, the silt fence along the limit of disturbance (L.O.D.) Along western most portion of the grading operation must be installed and/or checked to be in good repair and functioning. the contractor must also get permission from the sediment control inspector.

Phase Two of Construction

1. Once the drainage divide from lot 774 to 778 has been established (along the initial location of the earth dike) and the storm drains are conveying runoff to the sediment basin, the contractor may remove the earth dike from 774 to the common Lot line of lots 777 & 778.
2. Clear and grub remainder of site.
3. rough grade the remainder of site
4. Fine grade site and install base paving
5. Stabilize all disturbed areas in Accordance with the permanent seeding notes. Flush the storm drains and install rip rap appron at storm drain outfall.
6. After all areas draining to the sediment control devices have been stabilized and permission has been granted by the sediment control inspector, remove those devices and grade as shown on sheet 2. Contractor is to return disturbed areas at traps 1 and 2 to existing grades.
7. Install surface course paving.
8. Begin conversion of sediment basin to permenant stormwater management pond using the following procedures only after permission has been granted by the inspector:
   a. Pump out the impounded water from the basin.
   b. Remove all sediment from the sediment basin and place it as per the direction of the sediment control inspector.
   c. Regrade the pond to conform to the final grading shown on sheet 2 of 6. Remove vertical portion of 6" PVC to an elevation = 445.58 (3" above bend.)
   d. Stabilize the remaining disturbed areas in accordance with the permanent seeding notes.
   e. plant wetland vegetation in accordance with detail on sheet 5 of 6.
9. With permission from the inspector, remove the remaining sediment control devices.





Pipe Schedule

size	class	length
15"	cl IV	88 l.f.
21"	cl IV	715 l.f.
27"	cl III	253 l.f.

Operations and Maintenance Guidelines
(to be performed by Ho. Co. D.P.W)

Operations:

1. Owner shall keep accurate records of inspections and maintenance type repairs. These records should also include a copy of the "as-built" plans and small pond summary sheet.
2. Owner shall make a visual inspection of the facility at least twice a year. Once in the summer after the facility has been mowed and during the winter when the vegetation is inactive. Additional inspections shall be made during and after extreme rainfalls.
3. During the extreme weather or rainfall events, the owner shall check for overtopping, seepage, or dam failure. In order to avoid overtopping, either place sandbags on top of the embankment or lower the water elevation by using a dewatering device.
4. If a severe problem develops, the owner shall contact a Professional Engineer to assess the problem and make a suggestion to remedy the situation. The Howard Soil Conservation District or Maryland Dam Safety Division shall be contacted before major repairs are made.

Maintenance

During the semi-annual visual inspections, the following items must be checked and documented by the owner:

I. Spillways and Outlet Device

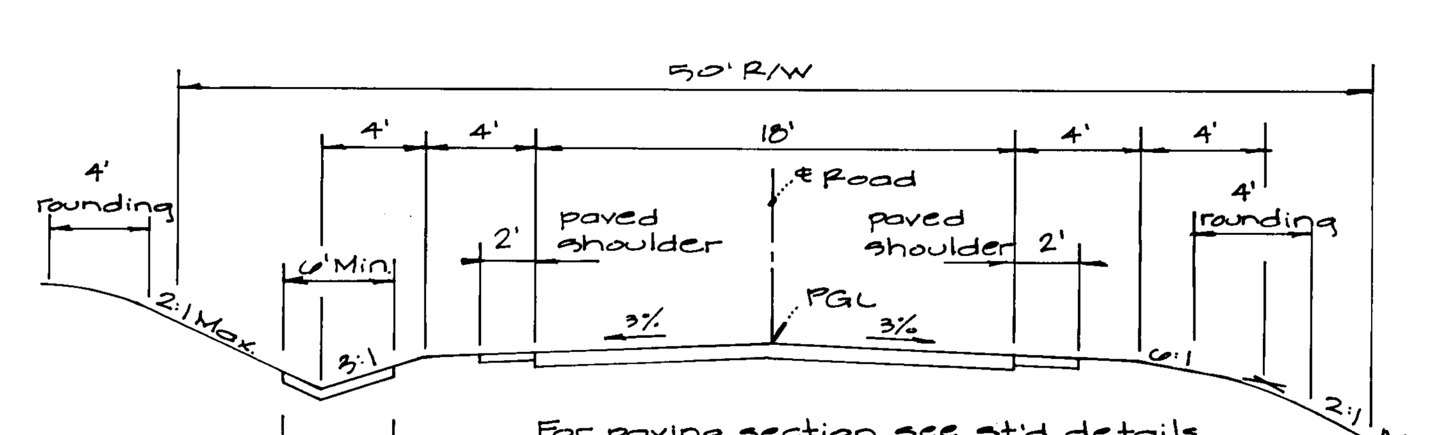
1. Pipes – check for sagging, misalignment, gaps at joints, cracks, leaks, and wear along inside surface of pipes. Also remove any blockages.
2. Trash Racks – inspect and replace if necessary. Actual time for removal of trash racks should be limited. Trash racks shall be painted once a year.
3. Concrete Surfaces – check for cracks or any other signs of failure.
4. Forbay and Spillway – check for stone deterioration or loss and spillway failure.
5. Rip Rap Outlet – check for stone deterioration or stone loss.
6. Dewatering Device – remove blockages.

II. Embankments

1. Vegetation – proper vegetative cover is required on all embankments. The owner shall follow proper seeding specifications for reseeding.
2. Trees and Brush – trees and brush shall be removed from the embankment. Stumps can be removed using silvicide.
3. * Mowing – mowing is necessary to control the establishment of woody growth and to maintain the vegetative cover. The embankment, a 25-foot wide (except in wetland/stream buffers) strip adjacent to the toe, upstream and downstream of the embankment, and the area within 50 feet of the control structures need to be mowed. Mowing shall be done at least once a year (mid to late summer) but may be done more often.
4. Seepage – the following warning signs should be looked for when inspecting for seepage problems: cracks (longitudinal and vertical), soft spots or boggy areas on downstream embankment, seepage along downstream toe of embankment.
5. Stability – large cracks, slides, sloughing and excessive settlement are signs of embankment instability and a need for repair. Repairs must be approved by Howard Soil Conservation District.
6. Rodents – check for burrows, which can lead to seepage, and remove rodents when encountered.

* If, for aesthetic reasons, the homeowners want the facility mowed and cleared of debris more than once a year, they must provide for the service by a private company.

Structure Schedule									
No.	Type	Width (inside)	top elev. upper	top elev. lower	inv. elev. upper	inv. elev. lower	Std. Detail	Locations	Remarks
I-1	'K' Inlet		457.56 (457.68)	—	—	453.48 (453.29)	Ho. Co. S.D. 4.12	L.P. Sta. 1+41.72-	
I-2	" "		464.34 (464.38)	—	459.48 (459.34)	458.55 (458.57)	" "	¢ 5+46 Kingsway Court 17' Rt.	
I-3	" "		464.37 (464.38)	—	—	459.88 (459.75)	" "	¢ 5+46 " " 17' Rt.	
I-4	" "		484.77 (484.75)	—	474.00	473.45 (473.34)	" "		
MH 1	St'd. MH	4'-0"	459.77 (460.00)	—	451.51 (451.52)	451.36 (451.37)	Ho. Co. G.5.01	See Plan	
MH 2	" "	4'-0"	459.68 (459.04)	—	453.04 (453.09)	452.61 (452.59)	" "	¢ 7+04 Kingsway Court 9' Rt.	
MH3	" "	4'-0"	484.12 (484.00)	—	470.66 (470.44)	470.61 (470.24)	" "	¢ 2+08 Kingsway Court 22' Rt.	
ES-1	End Section	—	453.28	—	450.98 (451.03)	451.00	Ho. Co. S.D. 5.51	See Plan	



For paving section see st'd details

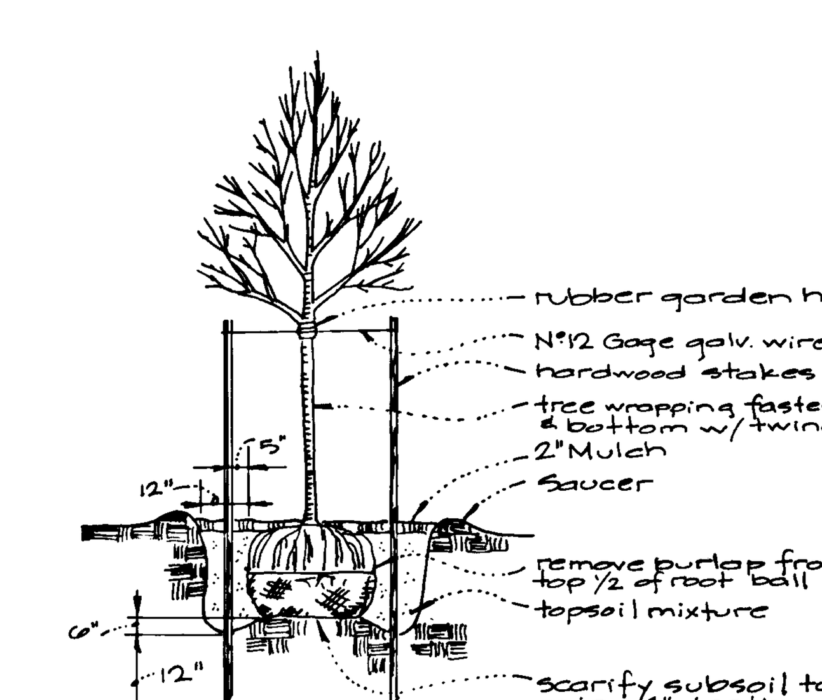
Notes:
1. Ditch lining treatment shall be either Tall Fescue or Kentucky Bluegrass.
2. The ditch lining and cross section have been designed in accordance with the storm drainage design manual. If field conditions require any deviation from these plans, the contractor shall contact the engineer for modifications, which will require approval the HCDPW.

Open Section-RR, RC, R-20 & R-ED Zoning

Not to Scale

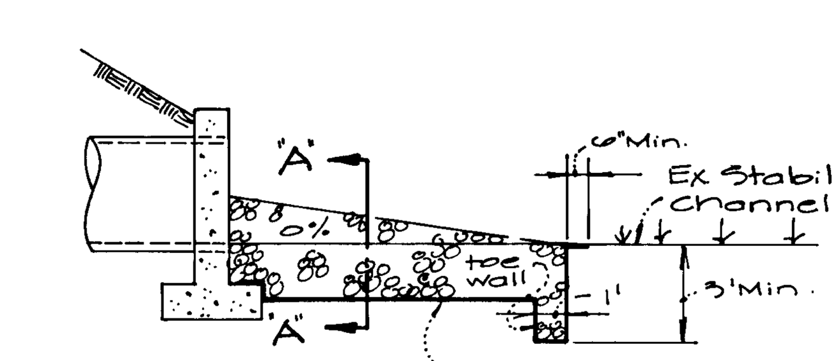
Street Name & ¢ Station Limit	Type of Traffic	A	B	C	D	R/W	Zoning	E	Design Speed	Paving Section
Kingsway Court, 0+00 to 7+15.12	cul-de-sac	—	—	—	—	50'	R-20	—	30 MPH	P-2

Includes As-Built 12-9-97



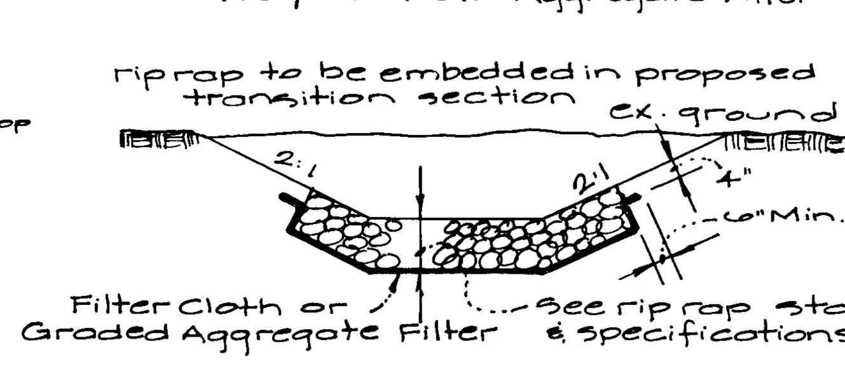
Typical Tree Guying

No Scale

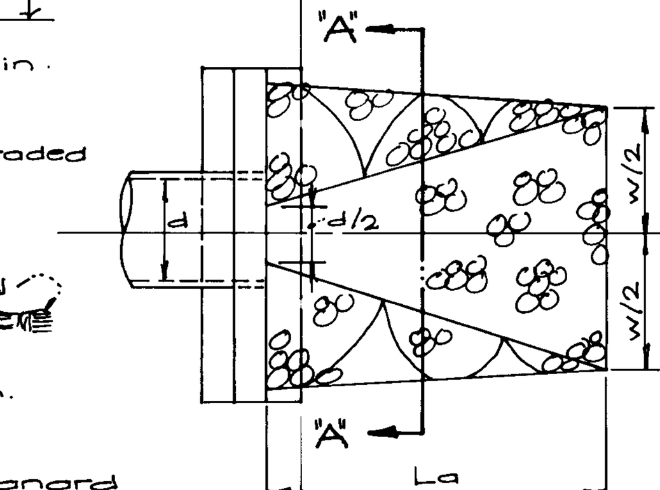


Profile View

rip rap to be embedded in proposed transition section



Section "A-A"



Plan View

Rip Rap Outlet Protection-I

Approved: Howard County Dept. of Public Works.
Chief, Bureau of Highways — 9-1-95 Date

Approved: Howard County Dept. of Planning & Zoning
Chief, Div. of Land Development & Research — 9/20/95 Date
Chief, Development Engineering Div. — 9/15/95 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD. 20866
TELEPHONE: (301)421-4024 NO.VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186

DATE	REVISION	BY	APP'R.

PREPARED FOR:
Greenebaum & Rose Asso., Inc.
1829 Reisterstown Road
Suite 410 Woodholme Center
Baltimore, Maryland 21208
Phone (410) 484-8400

Storm Drain Profiles

Kingsbridge @ Burleigh Manor

Lots 779-784, Parcel A & Parcel B

Ellicott City Election District — Howard County, Maryland

DES.: DEV	SCALE: As Shown	ZONING: R-20	G.L.W. FILE No.: 94008
DRN.: McF	DATE: Nov. 1997 (July 1995)	TAX MAP No.: 23	SHEET: 4 of 6
CHK.: CKG			

F-95-117

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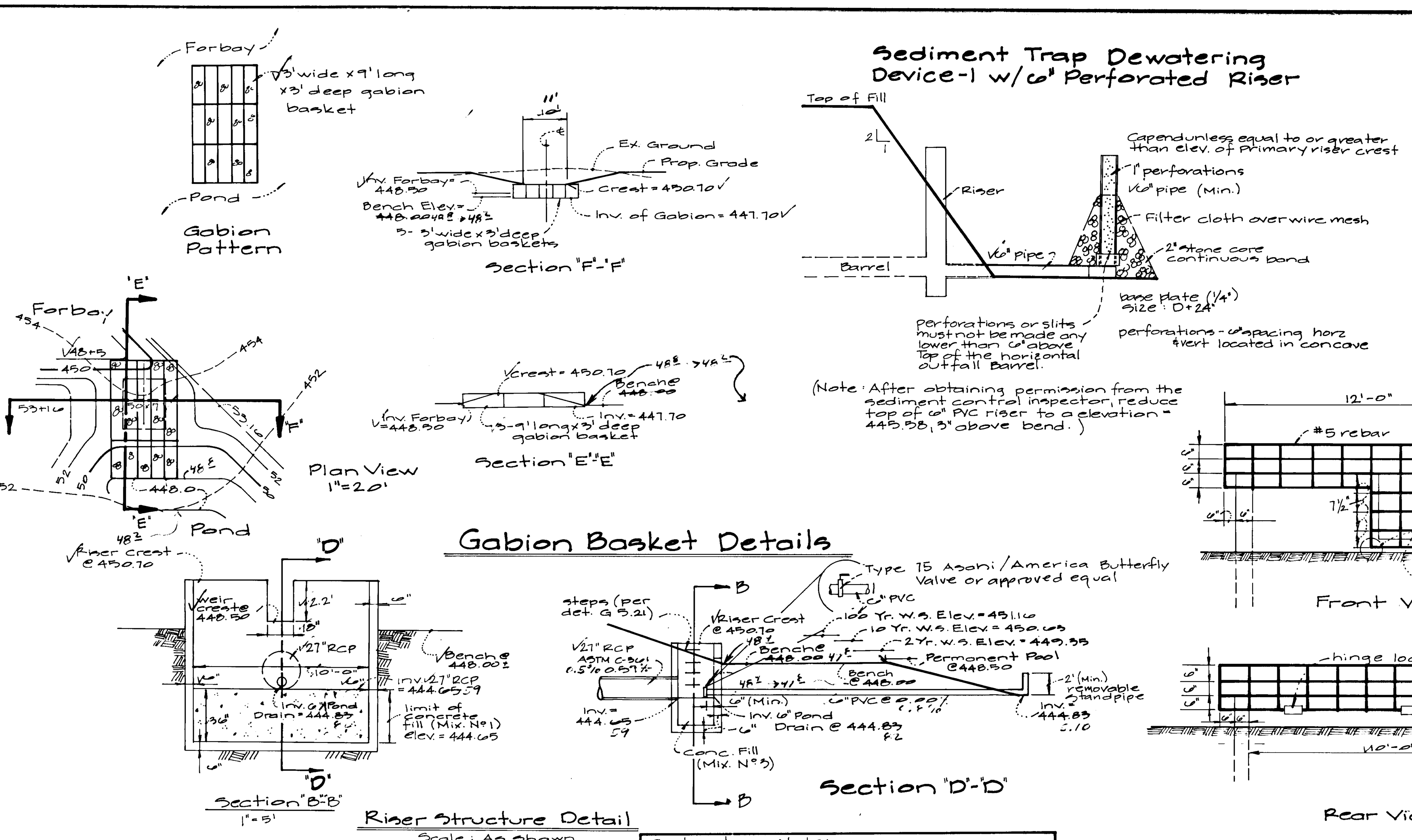
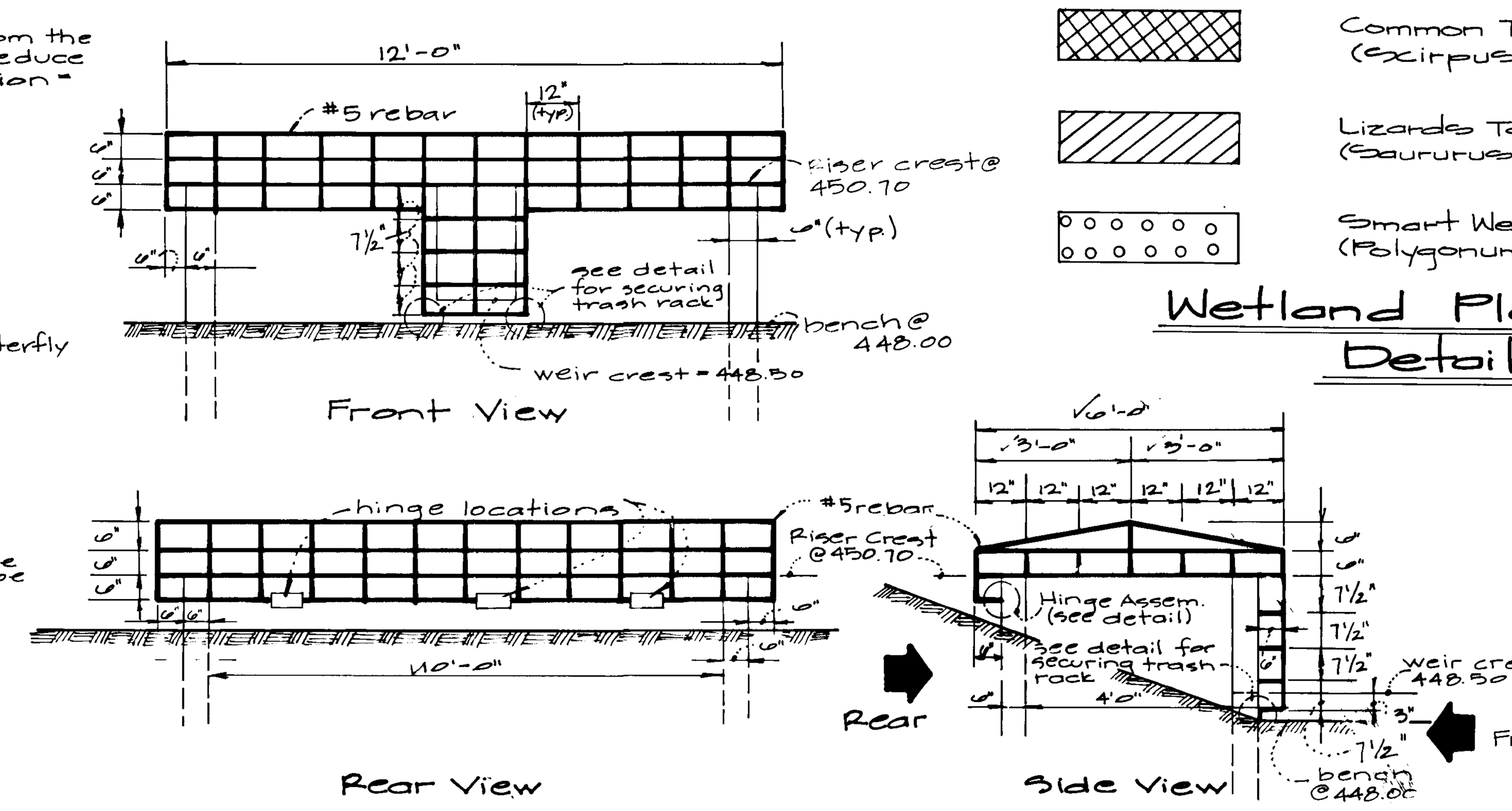
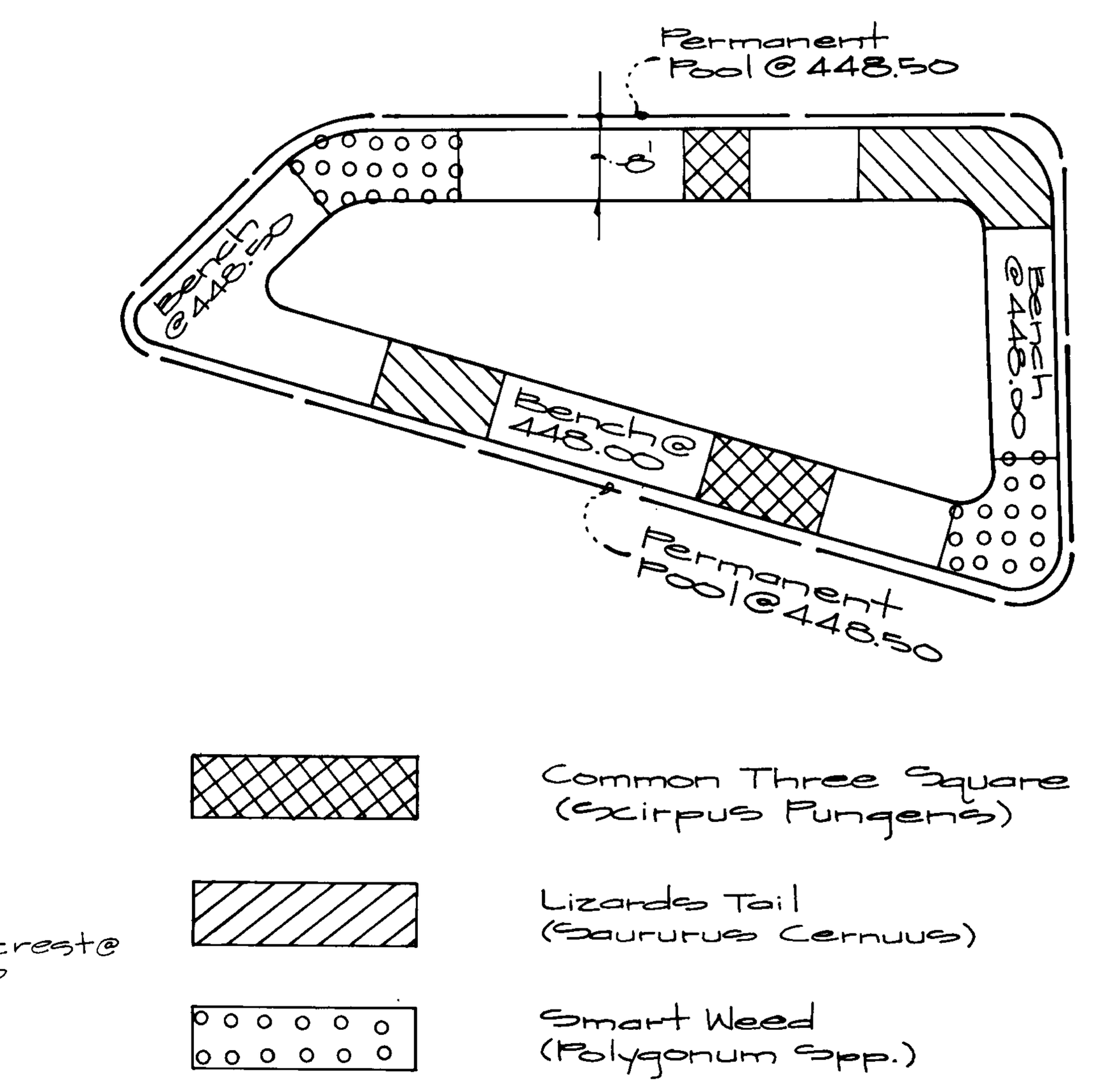
Gabion Basket Details



Contractors Note:
A detail for the steel placement within the concrete riser does not appear on this plan set. This detail will be prepared by the contractors manufacturer and provide to Howard County prior to construction





Wetland Planting Detail

Soil Boring Logs

Not to Scale

B-1

Elev.	Soil Description	Strat. depth
451.5	Surface	
449.5	Brown, moist, medium dense, sandy silt (ML)	2.0
447.0	Gray & brown, moist medium dense silty fine sand (SM-ML)	4.5
444.5	Gray and brown, moist to wet, medium dense, silty fine to coarse sand (SM) trace fine gravel	7.0
438.5	Orange-brown, moist medium dense, silty fine to coarse sand (SM)	13.0
434.5	Brown, moist to wet, loose sandy silt (ML)	17.0
	Brown & Tan, moist med. dense, silty fine to coarse sand (SM)	
430.0	Brown & Tan, moist med. silty fine to coarse sand (SM)	21.5

Boring Terminated @ 21.5

B-2

Elev.	Soil Description	Strat. depth
451.6	Surface	
449.6	Grayish brown, moist, med. dense, silty fine coarse sand (SM) (USDA: Sandy Loam)	2.0
447.1	Tan, moist, med. dense, silty fine to coarse sand (SM) (USDA: Sandy Loam)	4.5
442.1	Orange-brown, moist to wet, loose, fine to coarse sand (SM) some silt. (USDA: Sandy Loam)	9.5
438.6	Brown, moist to wet med. dense silty fine sand-sandy silt. (SM-ML) little gravel	13.0
	Brown & tan, moist to wet med. dense, silty fine to med. sand (SM) with beige silt seams	
430.1	Brown & tan moist to wet. med. dense, silty fine to med. sand (SM) w/ beige silt seams	21.5

Boring Terminated @ 21.5

B-3

Elev.	Soil Description	Strat. depth
449.2	Surface	
447.2	Brown, dry, med. dense, sandy silt (ML)	2.0
442.2	Brown & tan, moist to wet med. dense to loose, silty fine to coarse sand (SM) with silt seams	7.0
436.2	Light orange brown & white wet, loose to med. dense fine to coarse sandy silt (SM-ML)	13.0
	Beige & white, saturated med. dense to loose, coarse sand & silt (SM-ML)	
427.7	Beige & white, saturated med. dense to loose, coarse sand & silt (SM-ML)	21.5

Boring Terminated @ 21.5

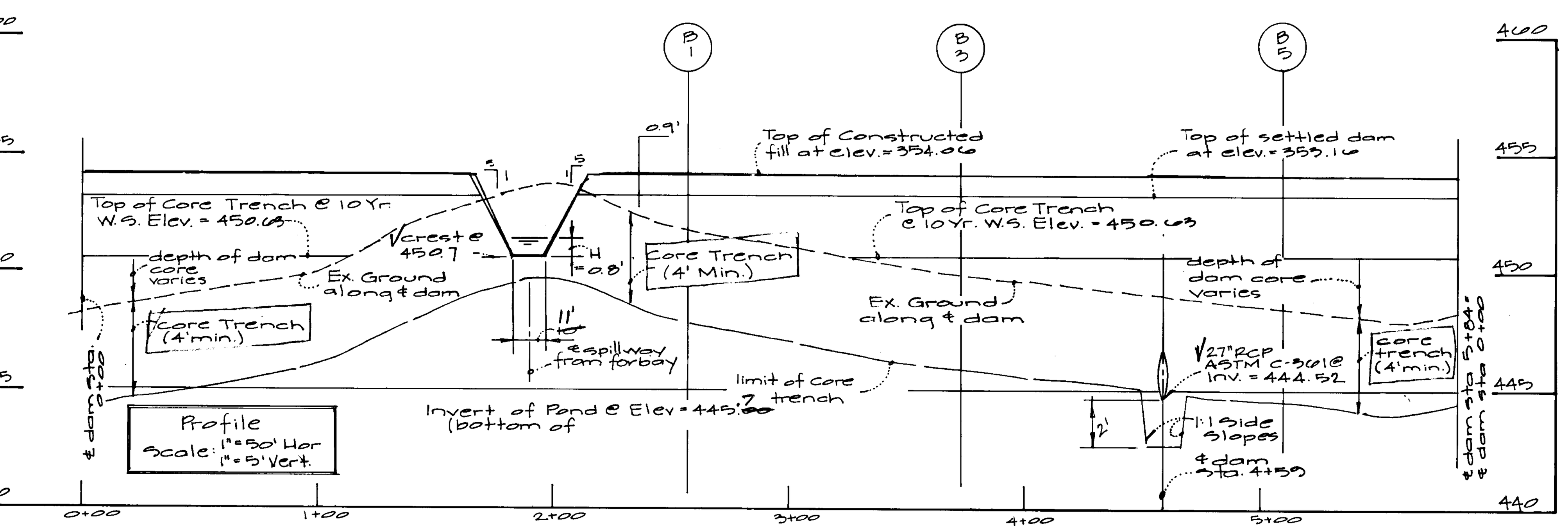
B-4

Elev.	Soil Description	Strat. depth
449.6	Surface	
447.6	Grayish brown, dry med. dense, silty fine to med. sand (SM) (USDA: Sandy Loam)	2.0
445.1	Tan & gray moist, dense silty fine to coarse sand (SM) (USDA: Sandy Loam)	4.5
436.6	Orange brown & beige moist to wet, stiff to soft silty clayey sand (SM-SC) (USDA: Sandy clay Loam)	13.0
	Orange brown & beige, wet to saturated, med. dense silty fine sand (SM-ML) with silt beams	
428.1	Orange brown beige, wet to saturated medium dense, silty fine sand (SM-ML) with silt seams	21.5

Boring Terminated @ 21.5'

B-5

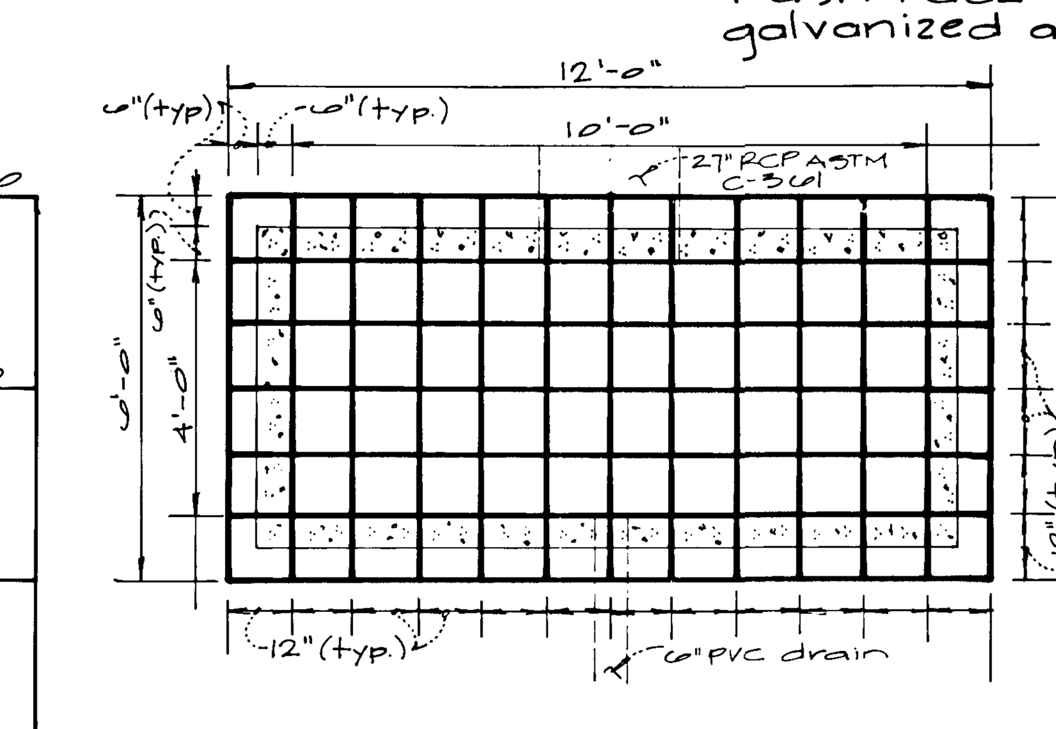
Elev.	Soil Description	Strat. depth
448.9	Surface	
446.9	Brown, dry, med. dense fine sandy silt (ML	2.0
444.4	Brown, dry, very dense silty fine to coarse sand (SM) little to some gravel	4.5
441.9	Orange Brown, moist dense, silty fine to coarse sand (SM	7.0
439.4	light orange brown, moist medium dense, fine to coarse sandy silt (ML)	9.5
435.9	Brown & tan, moist med. dense, silty fine to coarse sand (SM) some fine to coarse	13.0
	Brown & beige, moist to wet, very loose to med dense, silty fine to coarse sand sand (SM) with silt seams	
427.4	Brown & beige moist to wet very loose to med. dense, silty fine to coarse sand (SM) with silt seams	21.5



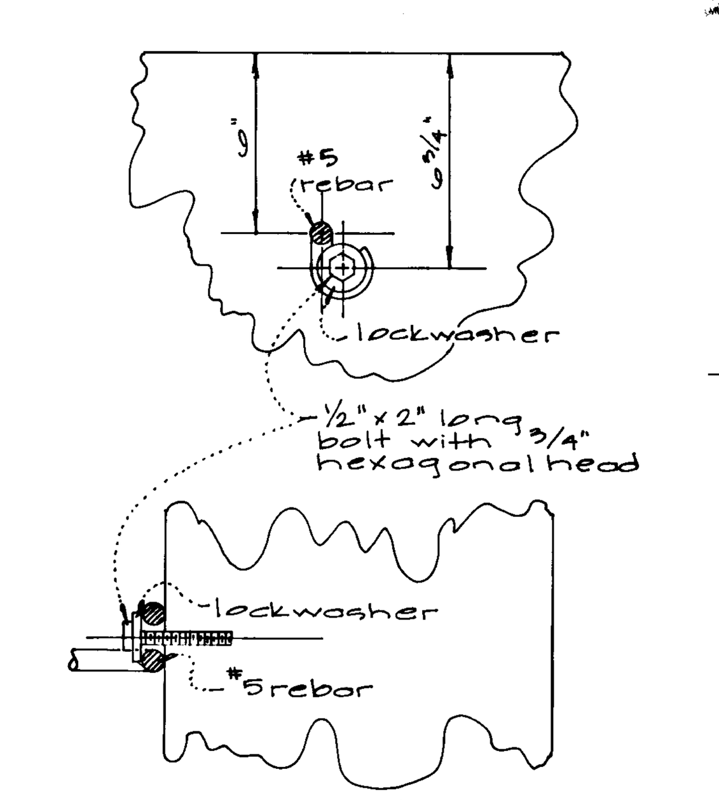
Profile along Centerline of Dam
Scale: Horz.: 1" = 50' Vert.: 1" = 5'

NOTE: [box] *INDICATES INFORMATION MEETS OR EXCEEDS PLAN REQUIREMENTS, PER GEOTECH REPORT PREPARED BY, HILLIS-CARNES DATED SEPT. 26, 1997.*

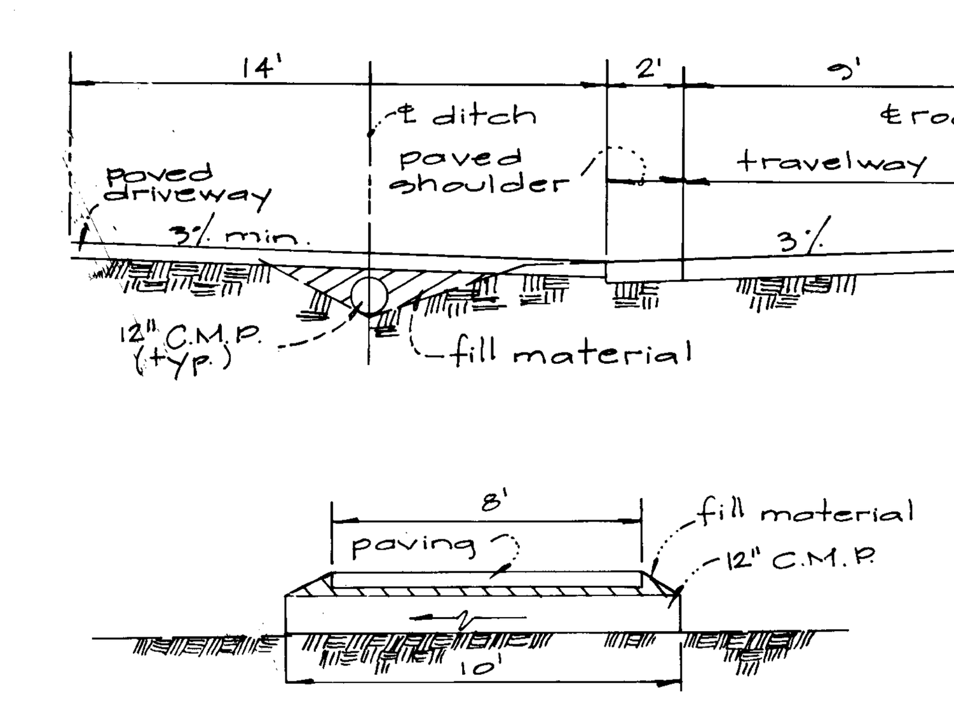
Trash rack shall be galvanized after fabrication



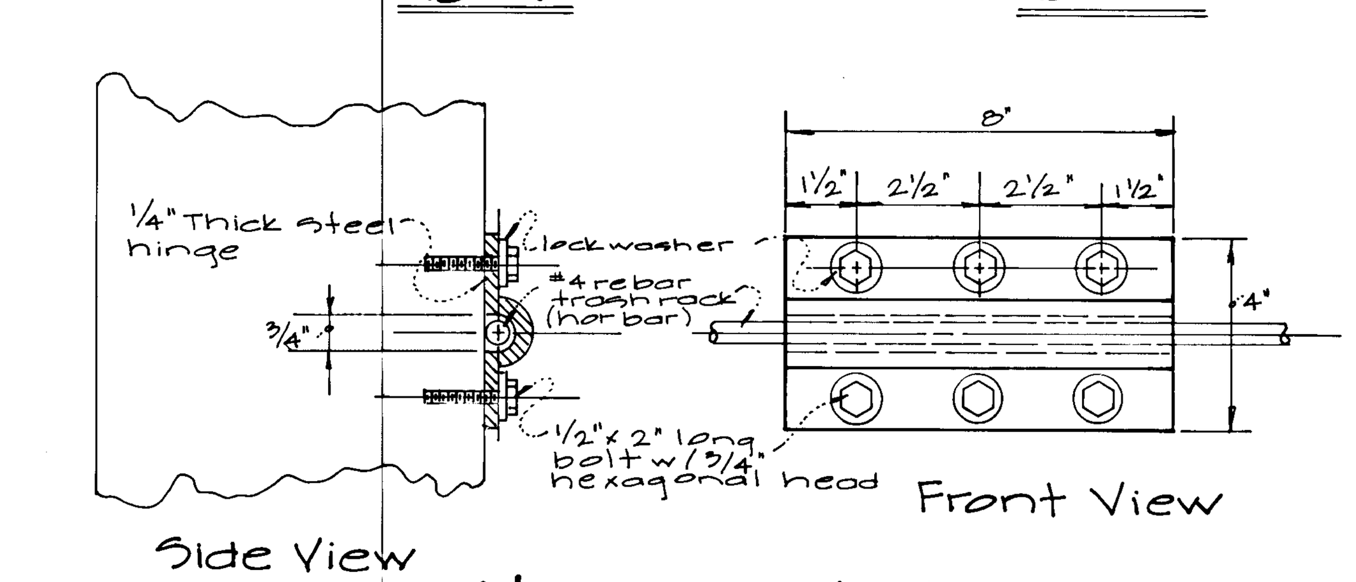
Trash Rack Details
Not to Scale



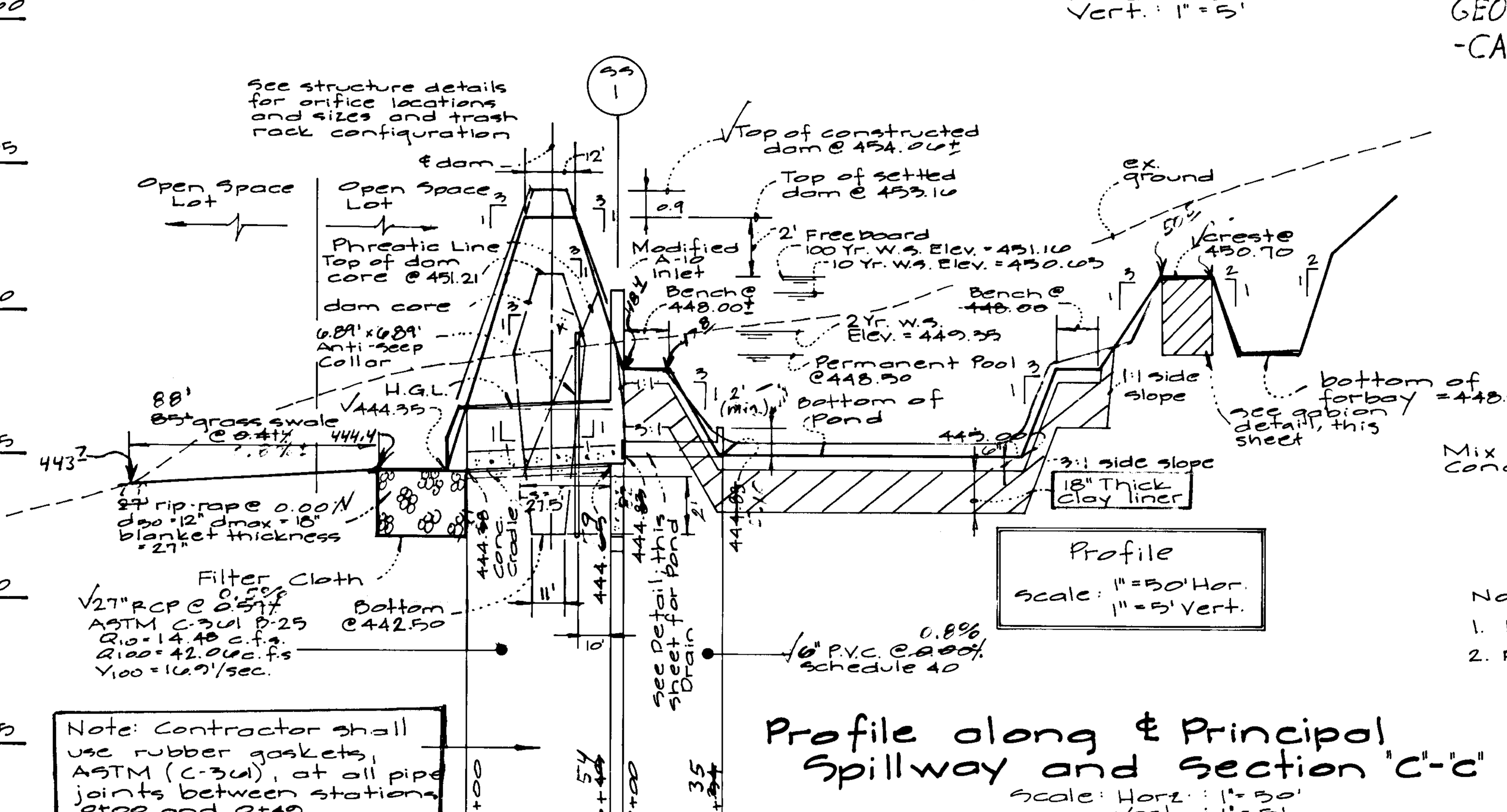
Detail for Securing Trash Rack
Not to Scale



Driveway Culvert Detail

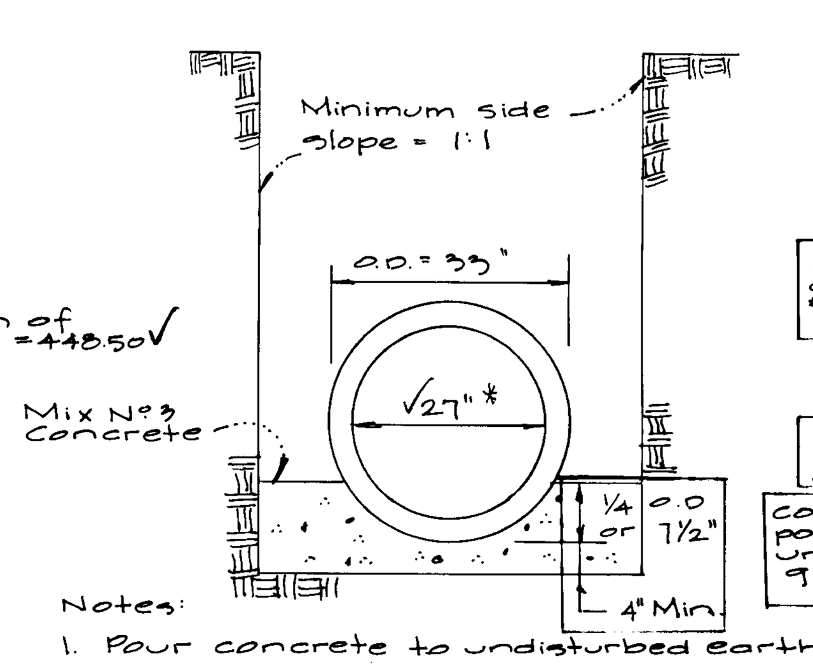


Hinge Detail
Not to Scale



Note: Contractor shall use rubber gaskets, ASTM (C-361), at all pipe joints between stations 0+00 and 0+49.

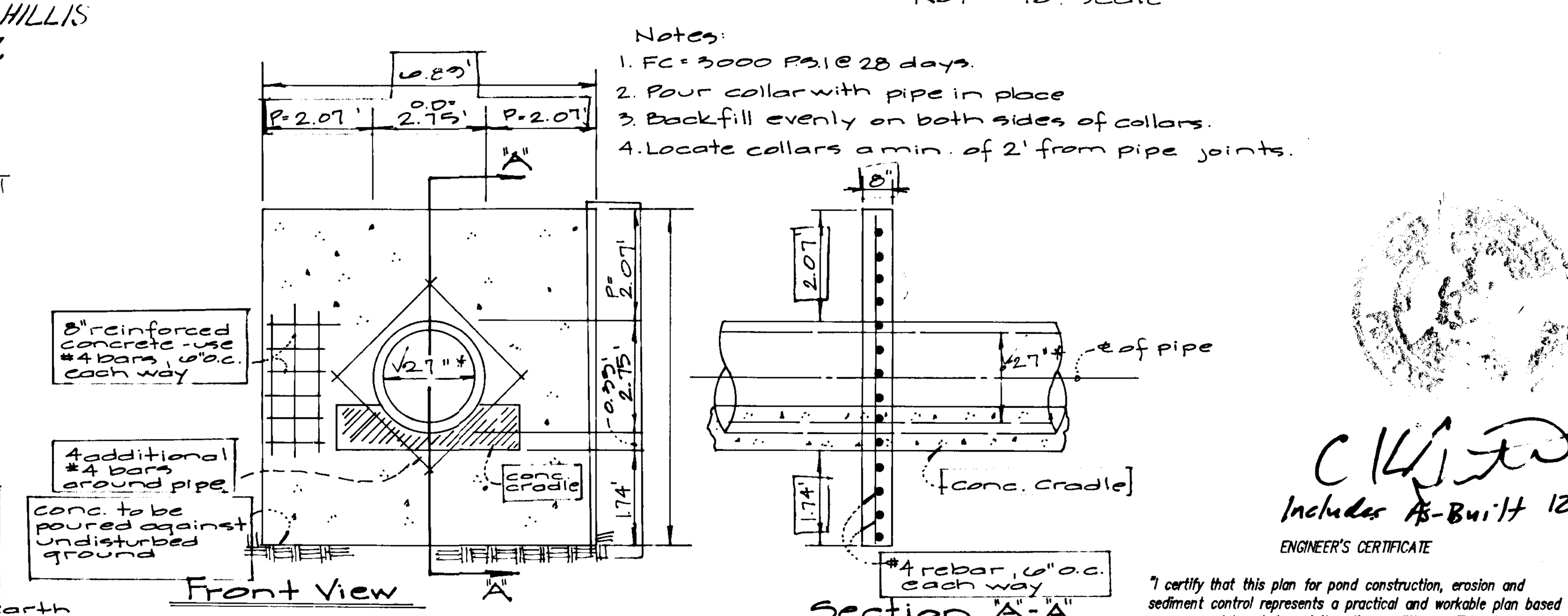
Profile along ¢ Principal Spillway and Section "C"-"C"
Scale: Horz.: 1" = 50' Vert.: 1" = 5'



Notes:
1. Pour concrete to undisturbed earth
2. Remove sheeting before pouring conc. or leave lower portion of sheeting in place

Conc. Cradle Detail
Not to Scale

Notes:
1. FC = 3000 PSI @ 28 days.
2. Pour collar with pipe in place
3. Backfill evenly on both sides of collars.
4. Locate collars a min. of 2' from pipe joints.



Anti-Seep Collar Detail
Not to Scale
(* RCP, ASTM C-361)

AS-BUILT

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Patricia Engler 8/30/95
Howard Soil Conservation District — Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Robert W. Ziehm 8/30/95
U.S. Siol Conservation Service — Date

Includes As-Built 12-9-97

ENGINEER'S CERTIFICATE

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

[signature] 2-21-95
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

[signature] V-Pres 2-21-95
Signature of Developer/Builder — Date

Approved: Howard County Dept. of Public Works
[signature] 9-11-95
Chief, Bureau of Highways HS — Date

Approved: Howard County Dept. of Planning & Zoning
Gino Zemman 9/20/95
Chief, Div. of Land Development & Research — Date
[signature] JA 9/11/95
Chief, Development Engineering Div. — Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
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DATE	REVISION	BY	APP'R.

PREPARED FOR:
Greenebaum & Rose Assoc., Inc.
1829 Reisterstown Road
Suite 410 Woodholme Center
Baltimore, Maryland 21208
Phone (410) 484-8400

Stormwater Management Profiles & Details

Kingsbridge @ Burleigh Manor
Lots 779-784, Parcel A & Parcel B
Ellicott City Election District No 2 — Howard County, Maryland

DES.: DEV	SCALE: As Shown	ZONING: R-20	G.L.W. FILE No.: 94008
DRN.: MCF	DATE: NOV., 1997 ~~July 1995~~	TAX MAP No.: 23	SHEET: 5 of 6
CHK.: CKG			

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SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designate for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservior will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservior as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in suitable location for use on the embankment and other designated areas.

Earth Fill

Material – The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankement and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankement if design and construction are supervised by a geotechnical engineer.

Placement – Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fil placement and not excavated into the embankment.

Compaction – The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by no less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill maerial shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fil material shall contain sufficient moisture so that if formed in a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench – The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment being used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with the construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality of conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operated closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe – All of the following criteria shall apply for corrugated metal pipe:

1. *Materials – (Steel Pipe) – This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Stee pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of pipe. The following coatings or an approved equal may be used: Nexon, Plasti-Cote, Bloc-Kload, and Beth-cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.*

   Materials – (Aluminum Coated Steel Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

   Materials – (Aluminum Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 and M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. *Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.*

3. *Connections – All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.*

   All connections shall use a rubber neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled and adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

   Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. *Bedding – The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with such suitable earth compacted to provide adequate support.*

5. *Backfilling shall conform to "Structure Backfill."*

6. *Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.*

Reinforced Concrete Pipe – All of the following criteria shall apply for reinforced concrete pipe:

1. *Materials – Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.*

2. *Bedding – All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.*

3. *Laying pipe – Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.*

4. *Backfilling shall conform to "Structure Backfill"*

5. *Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.*

Polyvinyl Chloride (PVC) Pipe – All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. *Materials – PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.*

2. *Joints and connections to anti-seep collars shall be completely watertight.*

3. *Bedding – The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provided adequate support.*

4. *Backfilling shall conform to "Structure Backfill."*

5. *Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.*

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications or Construction and Materials, Section 608, Mix No. 3

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

Care of Water during Construction

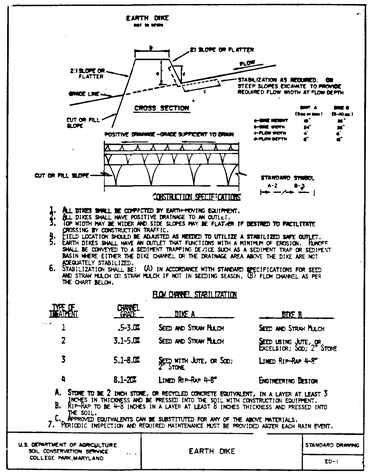
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavtions, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.



PERMANENT SEEDING NOTES

Apply to graded or cleared area 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, discing or other acceptable means before seeding (unless previously loosened).

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

1) *Preferred – Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 unreaform fertilizer (9 lbs/1000 sq ft).*

2) *Acceptable – Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.*

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 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 or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

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

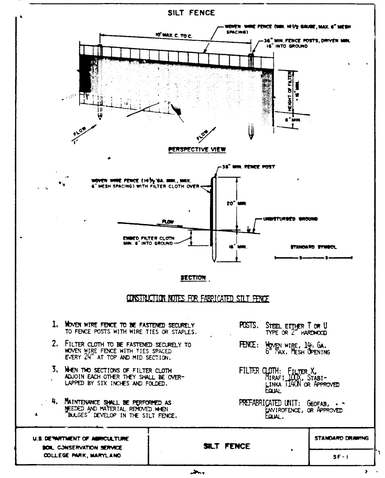
Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per 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 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 or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



SEDIMENT CONTROL NOTES

1. *A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (301) 992-2437*

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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.*

3. *Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 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. I, 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51), sod (Sec. 54), temporary seedings (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.*

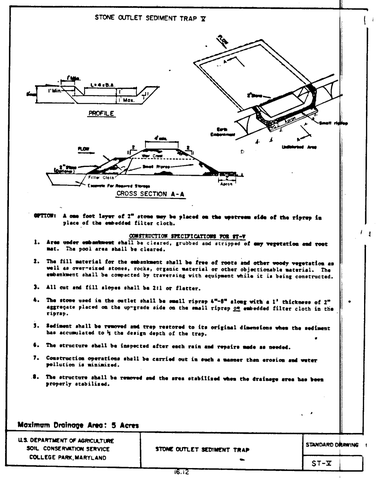
7. *Site Analysis:*

Total Area of Site	22.75	Acres
Area Disturbed	7.26	Acres
Area to be roofed or paved	0.51	Acres
Area to be vegetatively stabilized	7.41	Acres
Total Cut	11,500	Cu. Yds.
Total Fill	11,500	Cu. Yds.
Off-site waste/borrow area location:	N/A	

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 DPW Sediment Control Inspector.*

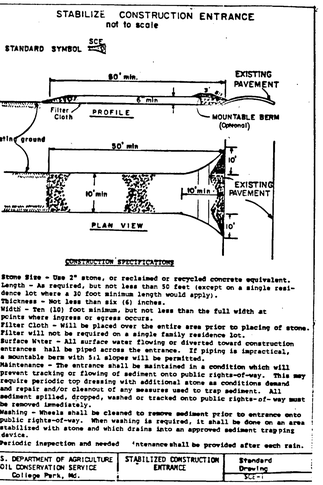
10. *On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.*



OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

CONSTRUCTION SPECIFICATIONS FOR ST-X

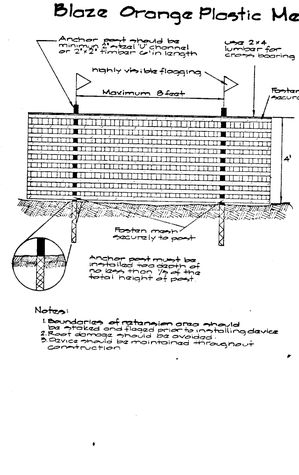
1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation, as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small riprap 4"-8" along with a 1' thickness of 2" aggregate placed on the up-grade side on the small riprap as embedded filter cloth in the riprap.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to ½ the design depth of the trap.
6. The structure shall be inspected after each rain and repairs made as needed.
7. Construction operations shall be carried out in such a manner than erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.



CONSTRUCTION SPECIFICATIONS

1. Stone Size – Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length – As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness – Not less than six (6) inches.
4. Width – Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth – Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. Surface Water – All surface water flowing or diverted toward construction entrances hall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance – The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing – Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed 'tenance shall be provided after each rain.

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE College Park, Md. | STABILIZED CONSTRUCTION ENTRANCE | Standard Drawing SCE-1



ENGINEER'S CERTIFICATE

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

2-21-95
Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

8/30/95
U.S. Soil Conservation Service — Date

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

8/30/95
Howard Soil Conservation District — Date

Includes As-Built 12497

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

2-21-95
Signature of Developer/Builder — Date

Approved: Howard County Dept. of Public Works
Chief, Bureau of Highways — 9-11-95 Date

Approved: Howard County Dept. of Planning & Zoning
Chief, Div. of Land Development & Research — 9/20/95 Date
Chief, Development Engineering Div. — 9/15/95 Date

GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD. 20866
TELEPHONE: (301)421-4024 NO.VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186

DATE	REVISION	BY	APP'R.

PREPARED FOR:
Greenebaum & Rose Associates, Inc.
10275 Reisterstown Road
Suite 410 Woodholme Center
Baltimore, Maryland 21208
Phone (410) 484-8400

Storm Water Management, Sediment Control Notes & Details

Kingsbridge @ Burleigh Manor

Lots 779 - 784, Parcel A & Parcel B

Ellicott City Election District No. 2 — Howard County, Maryland

DES.: DEV	SCALE N/A	ZONING R-20	G.L.W. FILE No. 94008
DRN.: MCF	DATE NOV. 1997 July 1995	TAX MAP No. 23	SHEET 6 of 6
CHK.: CKG			

F-95-117