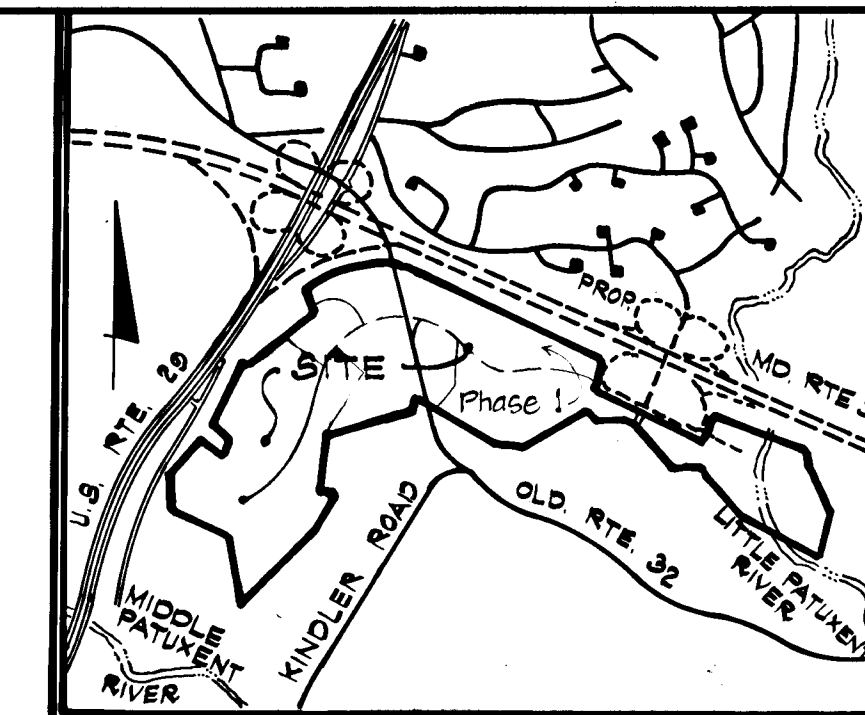


# RIVERS CORPORATE PARK

## SECTION 1, AREA 2

### 6TH. ELECTION DISTRICT

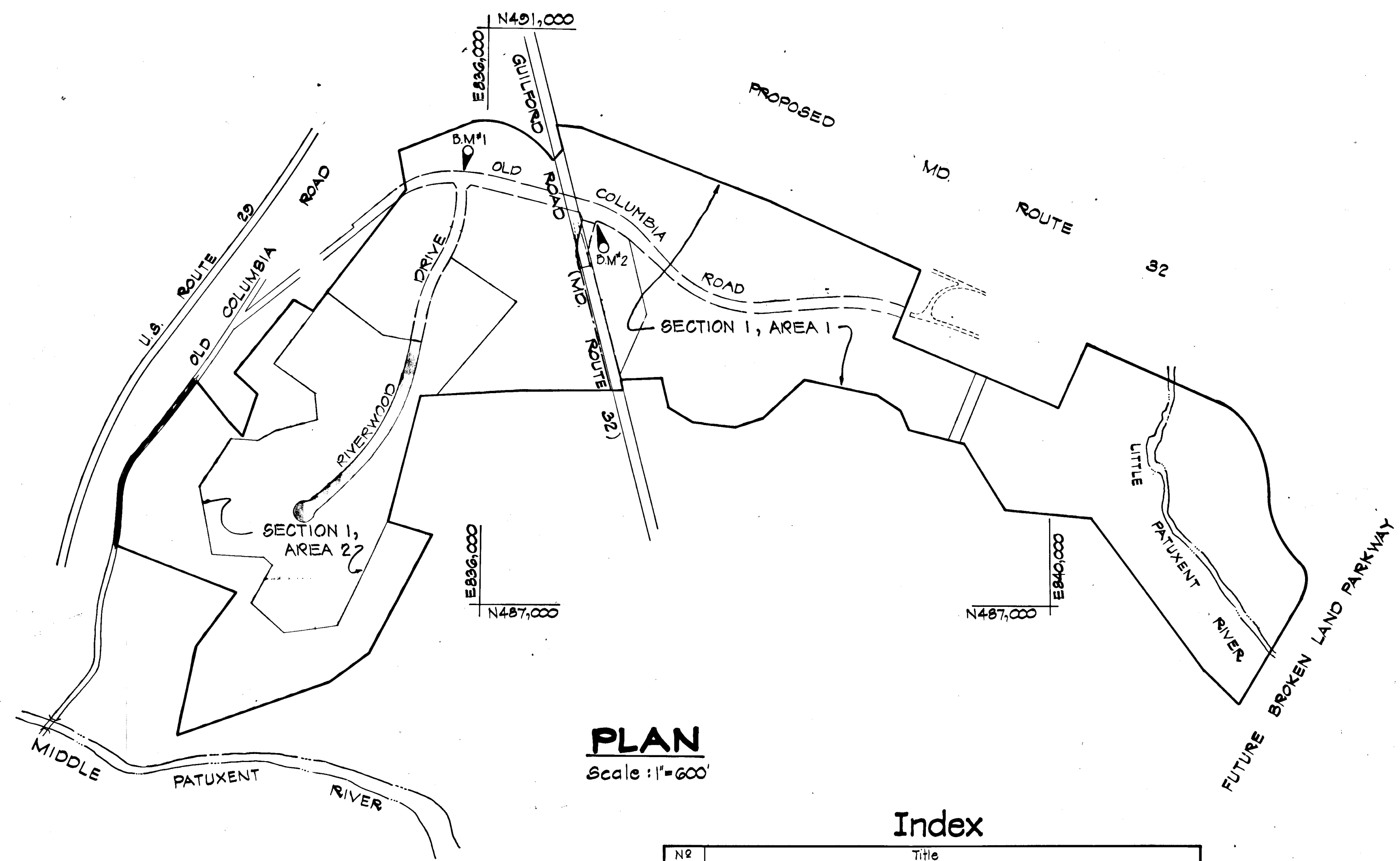
# HOWARD COUNTY, MARYLAND



**VICINITY MAP**  
Scale: 1" = 2000'

**GENERAL NOTES**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL - VOLUME IV, "STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION".
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES, WHERE DIRECTED BY THE ENGINEER, A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES AT LEAST THREE DAYS BEFORE STARTING WORK SHOWN ON THIS/THESE DRAWINGS:
  - STATE HIGHWAY ADMINISTRATION .....: 531-5533
  - BALTO. GAS AND ELECTRIC CO. (Underground Electric Distribution) Customer Service .....: 685-0123
  - BALTO. GAS AND ELECTRIC CO. (Underground Gas Distribution) Customer Service .....: 685-0123
  - ENGINEERING "DAMAGE CONTROL" .....: 234-5621
  - "MISS UTILITY" .....(1) 559-0100
  - CHESAPEAKE AND POTOMAC (C & P) TELEPHONE COMPANY .....: 725-9976
  - AMERICAN TELEPHONE AND TELEGRAPH Cable Location Division .....: 393-3553
  - COLONIAL PIPELINE COMPANY .....: 781-4641
  - BUREAU OF UTILITIES HOWARD COUNTY .....: 992-2366
- ALL STORM DRAIN BEDDING SHALL BE CLASS 'C' UNLESS OTHERWISE NOTED.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1971 REVISED EDITION.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS. 60' RIGHT-OF-WAY, 35 M.P.H.
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM 1929.
- STORM WATER MANAGEMENT SHALL BE PROVIDED BY INDIVIDUAL PARCELS.
- = TREE
- THE LOCATION, TYPE AND NUMBER OF TREES SHOWN ON THIS PLAN ARE TENTATIVE AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMMODATE FIELD CONDITIONS AND BUILDERS' LANDSCAPE PROGRAM. BOND RELEASE IS CONTINGENT UPON SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, AS APPROVED BY THE OFFICE OF PLANNING AND ZONING.



**PLAN**  
Scale: 1" = 600'

**Index**

Nº	Title
1	Title Sheet
2	Detail Sheet
3	Riverwood Drive Plan & Profile ~ From Cul-De-Sac to Sta 05+00
4	Riverwood Drive Plan & Profile ~ Sta 05+00 to Limit of Construction Sta 73+51.02
5	Old Columbia Road Plan & Profile
6	Storm Drain Outfall from Riverwood Dr. Sta 64+50 & from Cul-De-Sac
7	Storm Drain Profiles
8	Drainage Area Map
9	Drainage Area Map
10	Sediment Control Details

Nº	BENCH MARKS Description	Elevation
BM#1	Old Columbia Road - Sta. 81+20.30' Left - Conc. Mon. 2B40 N489908.22 E835943.93	Top El. 392.27
BM#2	Old Columbia Road - Sta. 90+70.34' Right - Conc. Mon. 1986 N489553.51 E836824.07	Top El. 364.41

DEPARTMENT OF PUBLIC WORKS	
<i>G.S. Robinson</i>	7-30-84
Chief, Bureau of Engineering	Date
DEPARTMENT OF PLANNING AND ZONING	
<i>William M. ...</i>	7-26-84
Chief, Div. of Land Develop. and Zoning Admin.	Date

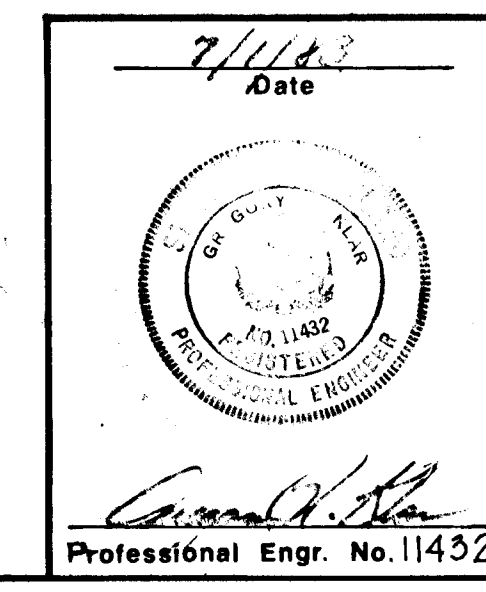
9-6-83	1	HOWARD COUNTY COMMENTS
Date	No	Revision Description
RIVERS CORPORATE PARK		
Section 1, Area 2		
6th Election District - Howard County, Maryland		
Owner and Developer		
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
THE ROUSE COMPANY		
Columbia, Maryland		

**CENTURY ENGINEERING, INC.**  
CONSULTING ENGINEERS - PLANNERS  
TOWSON, MARYLAND 21204

AREA TAX MAP 41 AND 42

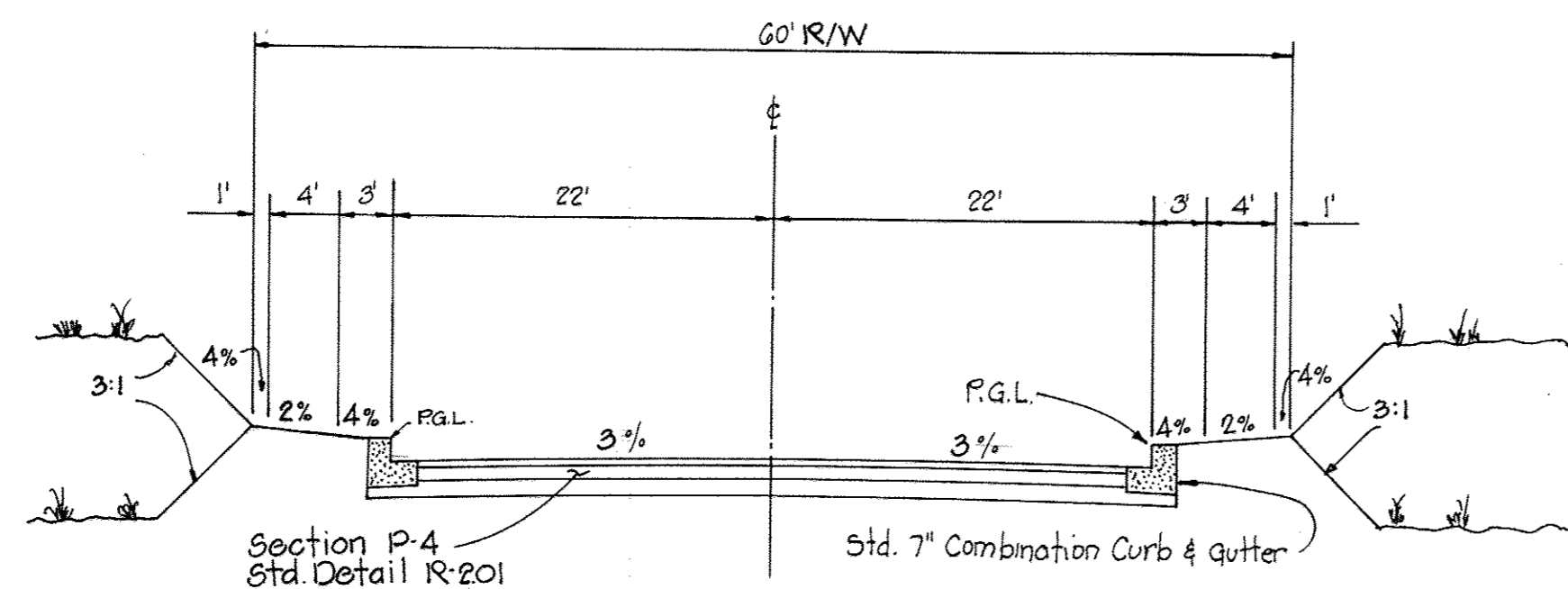
TITLE TITLE SHEET

Des By G.R.K.	Scale 1" = 100'	Proj No 0461
Drn By T.P.D.	Date 10/9/1981	Drawing No. 1 OF 10
Chk By J.W.R.	Approved	



F-84-02

928



Zoned: New Town

Design Speed: 35 M.P.H.  
No Scale

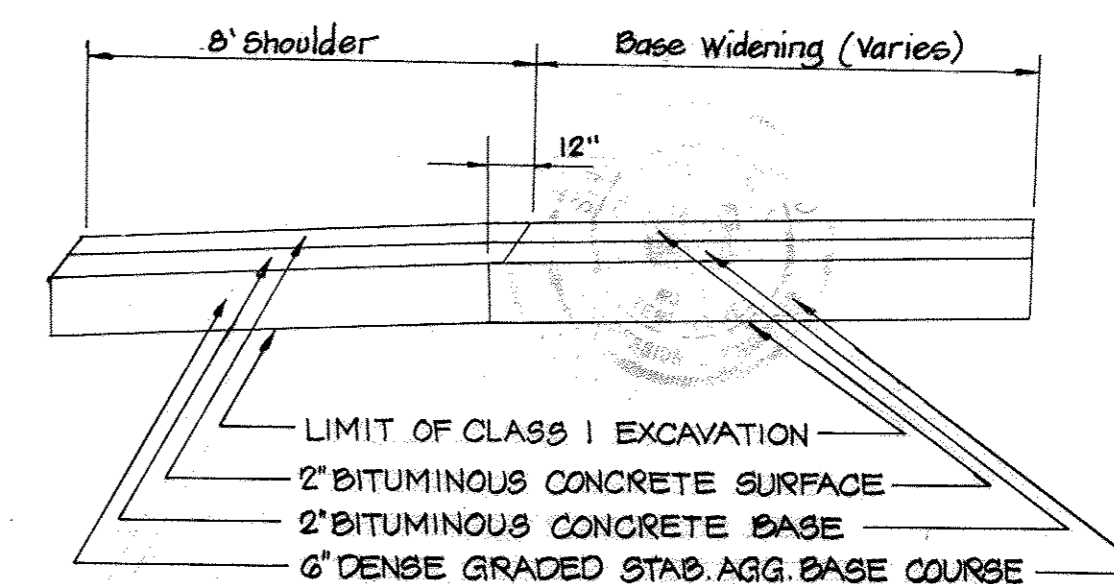
**60' R/W SECTION  
RIVERWOOD DRIVE**  
No Scale

13" PAVEMENT		- OR -		10" PAVEMENT	
1 1/2" Surface Course	1 1/2" Band C-3	Final Phase	Bituminous Concrete Surface	1 1/2" Band C-3	Final Phase
1 1/2" Binder Course	1 1/2" Band C-2	First Phase	Bituminous Concrete Binder	3 1/2" Band C-2	First Phase
5" Bituminous Base 2 Lifts	5"		Bituminous Concrete Base	5"	
5" Crusher Run Sub Base	5"			Band C-2 or C-3	

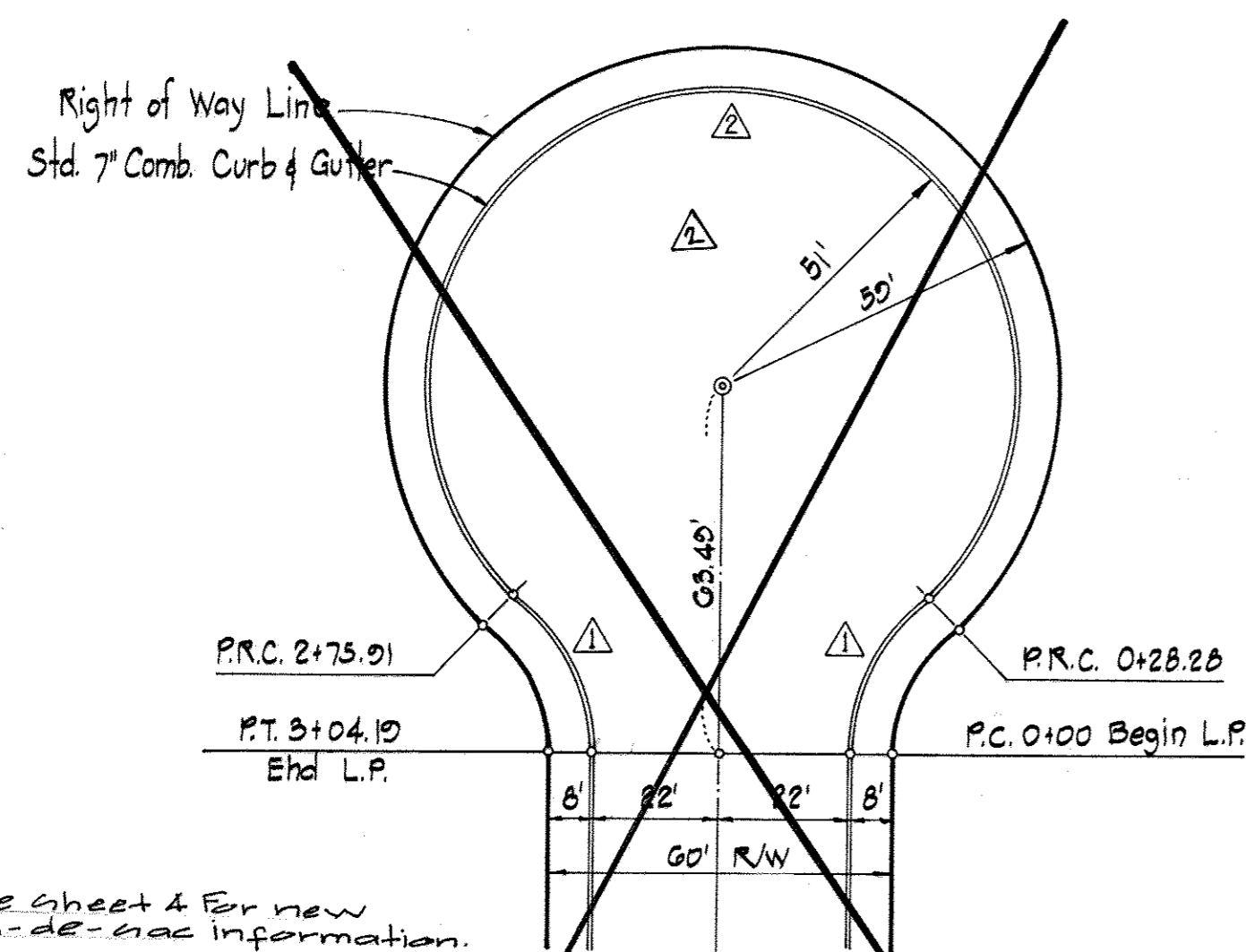
**STANDARD SECTION P-4**  
Detail - R-2.01

TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL - VOLUME III STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION ZONING: NEW TOWN

**TYPICAL PAVING SECTION  
RIVERWOOD DRIVE**  
No Scale

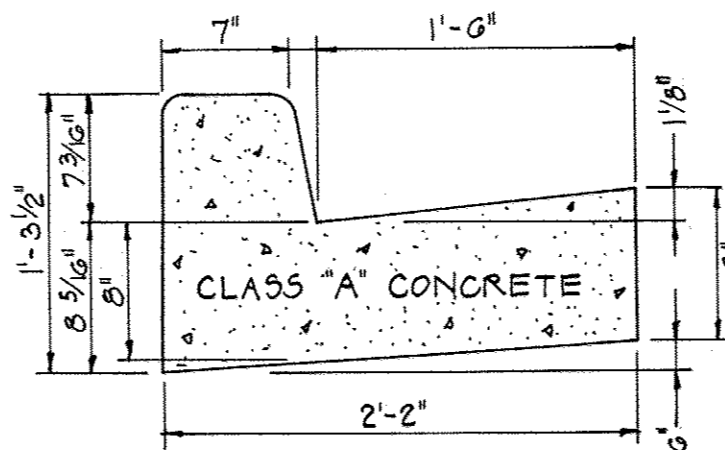


**TYPICAL PAVING SECTION  
OLD COLUMBIA ROAD**  
No Scale

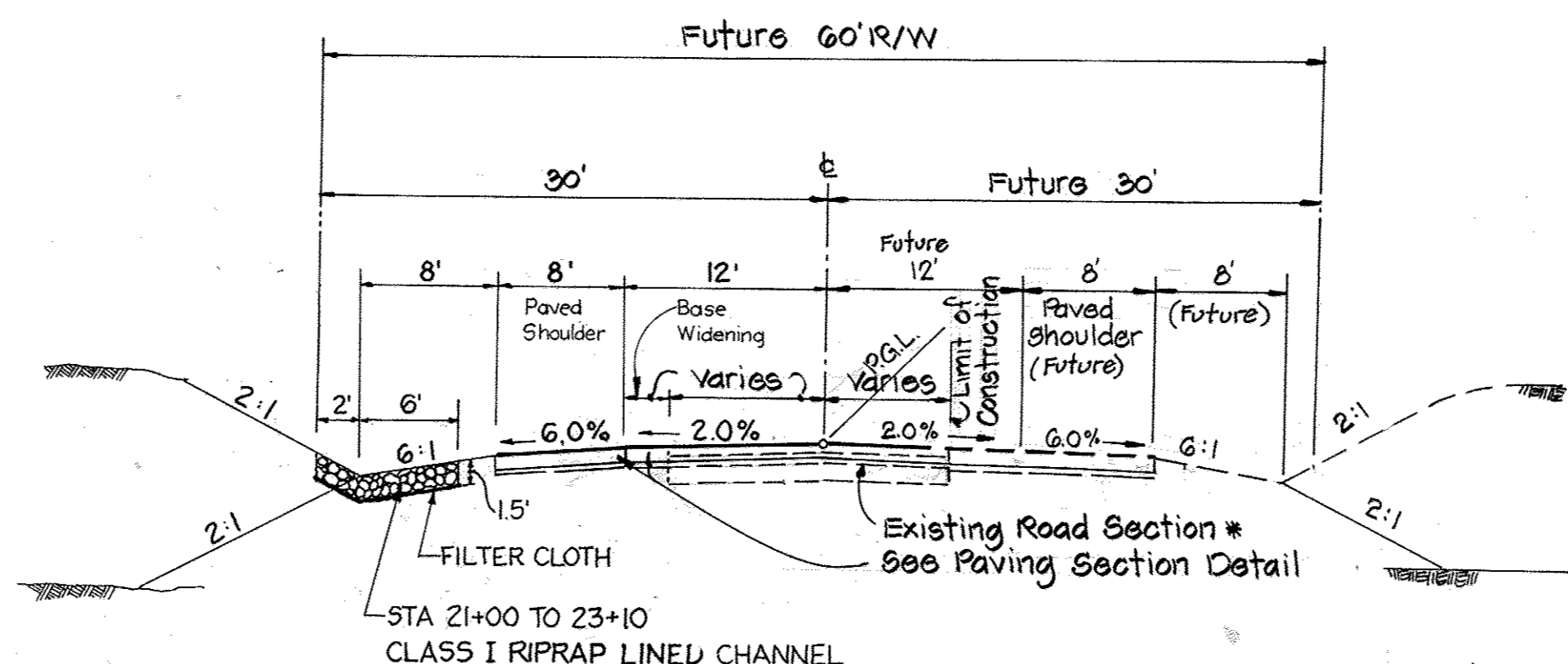


Curve	Radius	Length	Δ
△	33.00'	28.28'	43° 05' 54"
△	51.00'	247.63'	278° 11' 23"

**CUL-DE-SAC FOR A 60' R/W**  
Scale: 1" = 30'

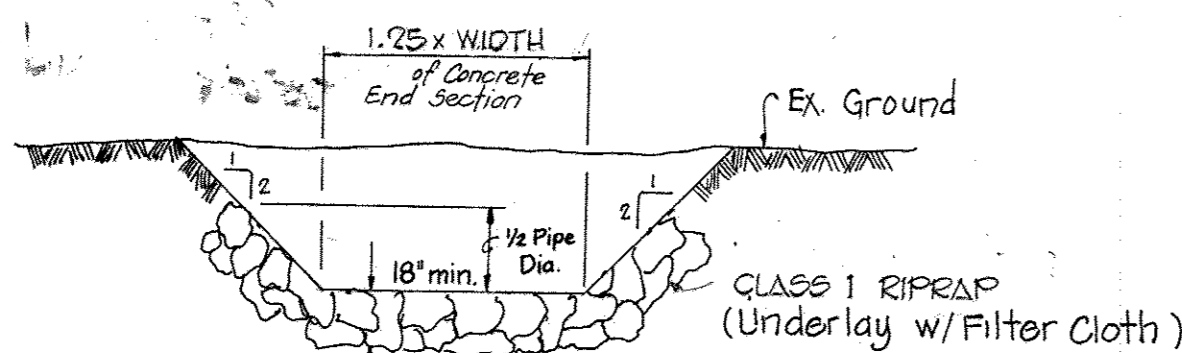


(R-3.01)  
**STD. 7" COMB. CURB & GUTTER**  
NOT TO SCALE



**60' R/W SECTION  
OLD COLUMBIA ROAD**  
No Scale

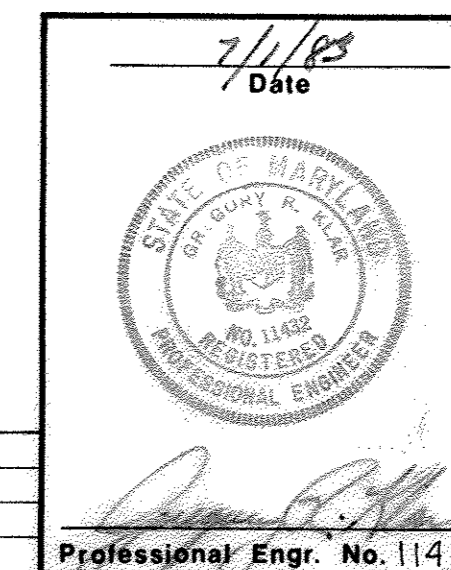
\* Existing Surface to be Scarified and Wedge Course and/or Resurface Treatment to be Applied Where Directed by Engineer.



**RIP-RAP OUTFALL CHANNEL DETAIL**  
No Scale

To be used Downstream of S-1, S-3.  
For length of channels and depth of flows, see storm drain profiles, drawing 7 of 10.

**Professional Certification**  
I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 11475, Expiration Date: May 21, 2014.



DEPARTMENT OF PUBLIC WORKS	
<i>J. W. R.</i>	7-30-84 Date
Chief, Bureau of Engineering	
DEPARTMENT OF PLANNING AND ZONING	
<i>J. W. R.</i>	7-26-84 Date
Chief, Div. of Land Develop. and Zoning Admin.	
9-6-83	1
Date	No
HOWARD COUNTY COMMENTS	
Revision Description	
RIVERS CORPORATE PARK Section 1, Area 2 6th Election District - Howard County, Maryland Owner and Developer THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION THE ROUSE COMPANY Columbia, Maryland	
CENTURY ENGINEERING, INC. CONSULTING ENGINEERS - PLANNERS TOWSON, MARYLAND 21204	
AREA	TAX MAP 41 AND 42
TITLE	DETAIL SHEET
Des By	Scale AS SHOWN
Drn By K.B.H.	Date 10/9/1981
Proj No 0481	Drawing No 2 OF 10
Chk By J.W.R.	Approved

Date	No	Revision Description	By
1-22-84	2	Remove cul-de-sac detail; add note A	GLW
			BY

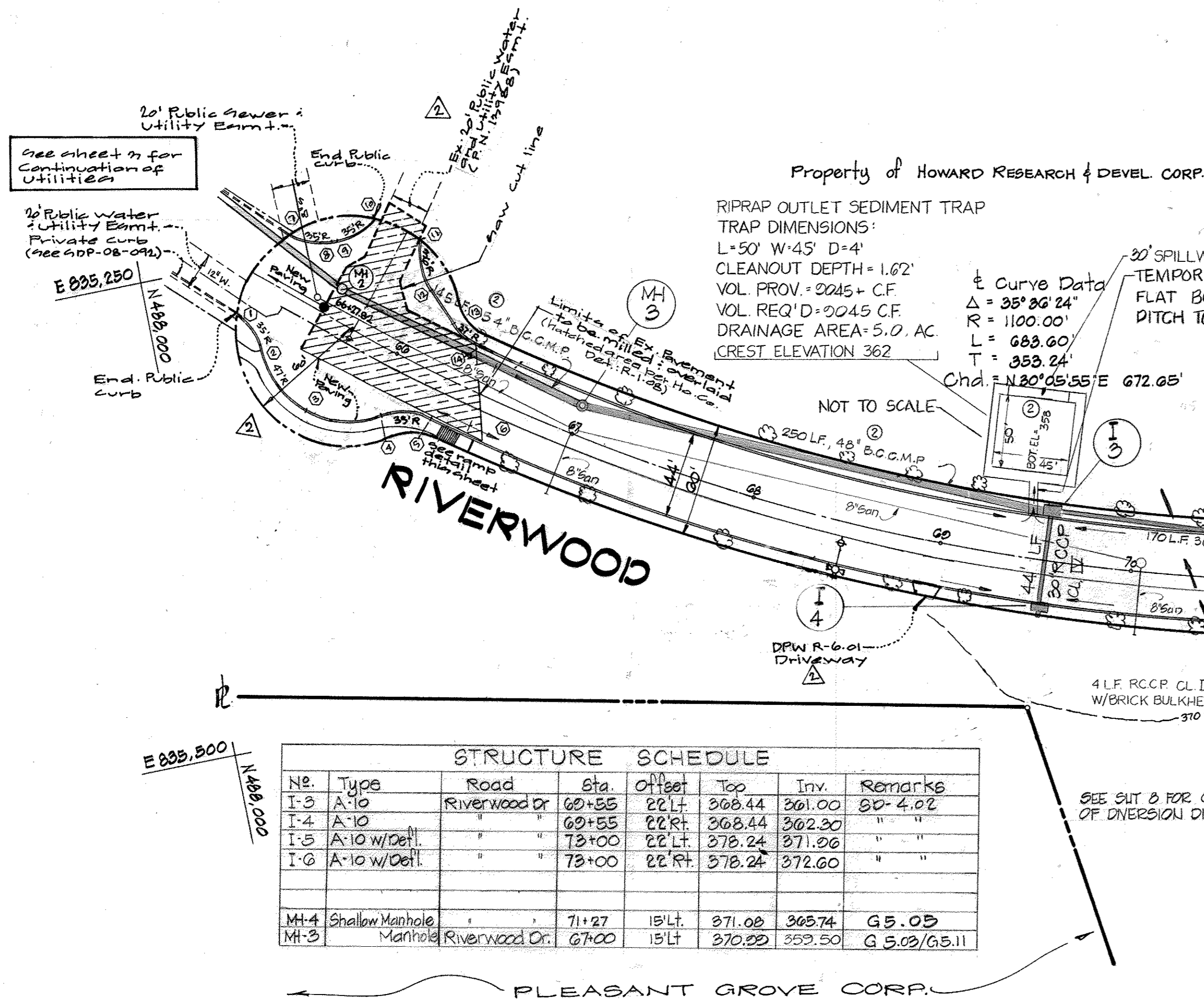
928

F-84-02



DATE	
BY	
REVISIONS	
1. SURVEYED	
2. PLOTTED	
3. ALIGNMENT CHECKED	
4. RT. OF WRT. CHECKED	
PLAN	
NOTE BOOK	
NO.	

DATE	
BY	
REVISIONS	
1. SURVEYED	
2. GRADES CHECKED	
3. STRUCTURE NOTATIONS CHKD	
PROFILE	
NOTE BOOK	
NO.	



CERTIFICATION BY THE ENGINEER:  
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

*Gregory R. Klar*  
Gregory R. Klar  
10/4/83  
Date

CERTIFICATION BY THE DEVELOPER:  
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

*Joseph H. Necker, Jr.*  
Joseph H. Necker, Jr.  
10-4-83  
Date

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

*J. Helwig*  
U.S. Soil Conservation Service  
7-25-84  
Date

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Robert Zickler*  
Howard Soil Conservation District  
7-25-84  
Date

DEPARTMENT OF PUBLIC WORKS  
*William S. Redman*  
Chief, Bureau of Engineering  
7-30-84  
Date

DEPARTMENT OF PLANNING AND ZONING  
*Shirley M. Murchman*  
Chief, Div. of Land Develop. and Zoning Admin.  
7-26-84  
Date

10-1-84	2	Changed Pipe Sizes and Types.
9-30-83	1	ADDED SEDIMENT CONTROL

RIVERS CORPORATE PARK  
Section 1, Area 2  
6th Election District - Howard County, Maryland

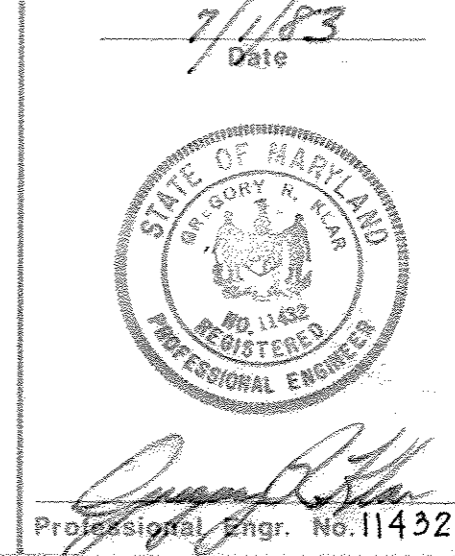
Owner and Developer  
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
THE ROUSE COMPANY  
Columbia, Maryland

CENTURY ENGINEERING, INC.  
CONSULTING ENGINEERS - PLANNERS  
TOWSON, MARYLAND 21204

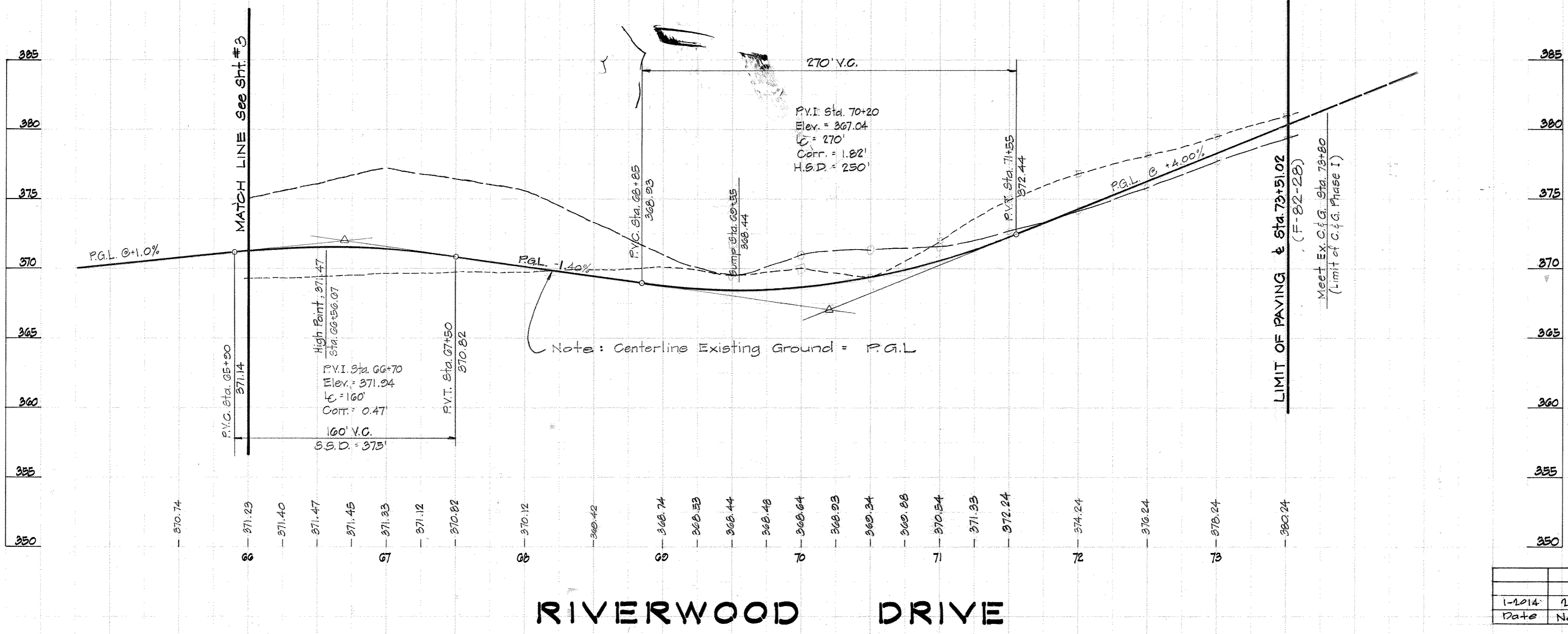
AREA  
TAX MAP 41 AND 42  
PARCELS 5, 29 AND 236

TITLE  
RIVERWOOD DRIVE  
PLAN & PROFILE

Des By J.D.C. Scale AS SHOWN Proj No 0481  
Drn By J.D.C. Date 10/9/1981  
Chk By J.W.R. Approved

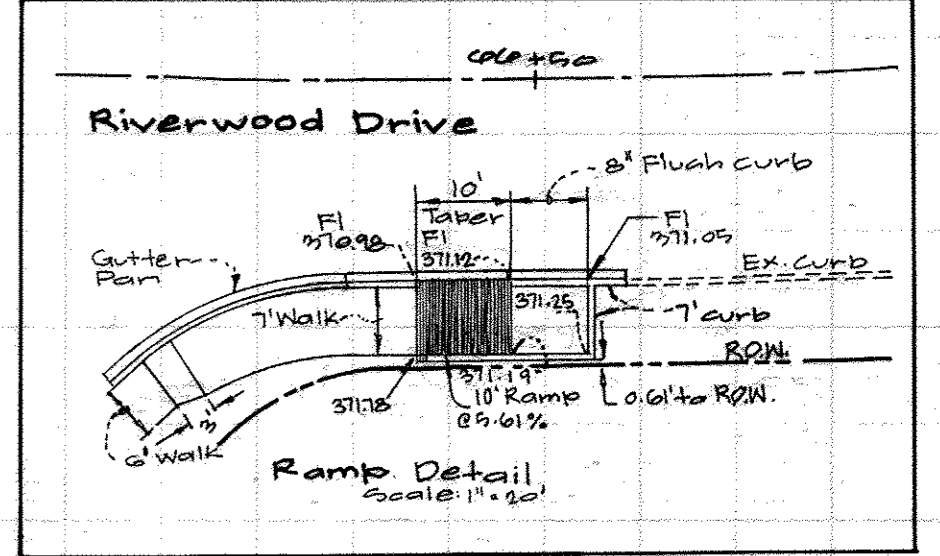


Professional Certification:  
I hereby certify that these plans were prepared or approved by me and that I am a duly licensed Professional Engineer under the laws of the State of Maryland License No. 11432. Expiration Date: May 26, 1984.



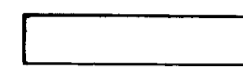


Curb Elevation Table For Cul-de-sac

Pt. No.	Station	Offset	Bot. Elev.	Top Elev.
(1)	65+16.50	11.15' RT.	370.00	370.00
(2)	65+78.00	71.73' RT.	370.15	370.75
(3)	65+72.10	47.01' RT.	370.42	371.02
(4)	65+20.97	31.73' RT.	370.80	371.40
(5)	65+30.49	21.05' RT.	370.94	371.54
(6)	65+39.29	21.11' RT.	Match Ex.	Match Ex.
(7)	65+17.94	21.03' LT.	370.04	370.64
(8)	65+40.21	20.05' LT.	370.10	370.80
(9)	65+42.68	20.99' LT.	370.22	370.82
(10)	65+55.83	57.85' LT.	370.75	371.55
(11)	65+83.49	58.98' LT.	370.74	371.74
(12)	65+21.00	37.74' LT.	370.80	371.40
(13)	65+20.30	20.98' LT.	370.92	371.62
(14)	65+16.25	21.71' LT.	Match Ex.	Match Ex.



1-2014	1	show new cul-de-sac on Riverwood Dr.	GLW
Date	No.	Revision Description	By

**LEGEND**

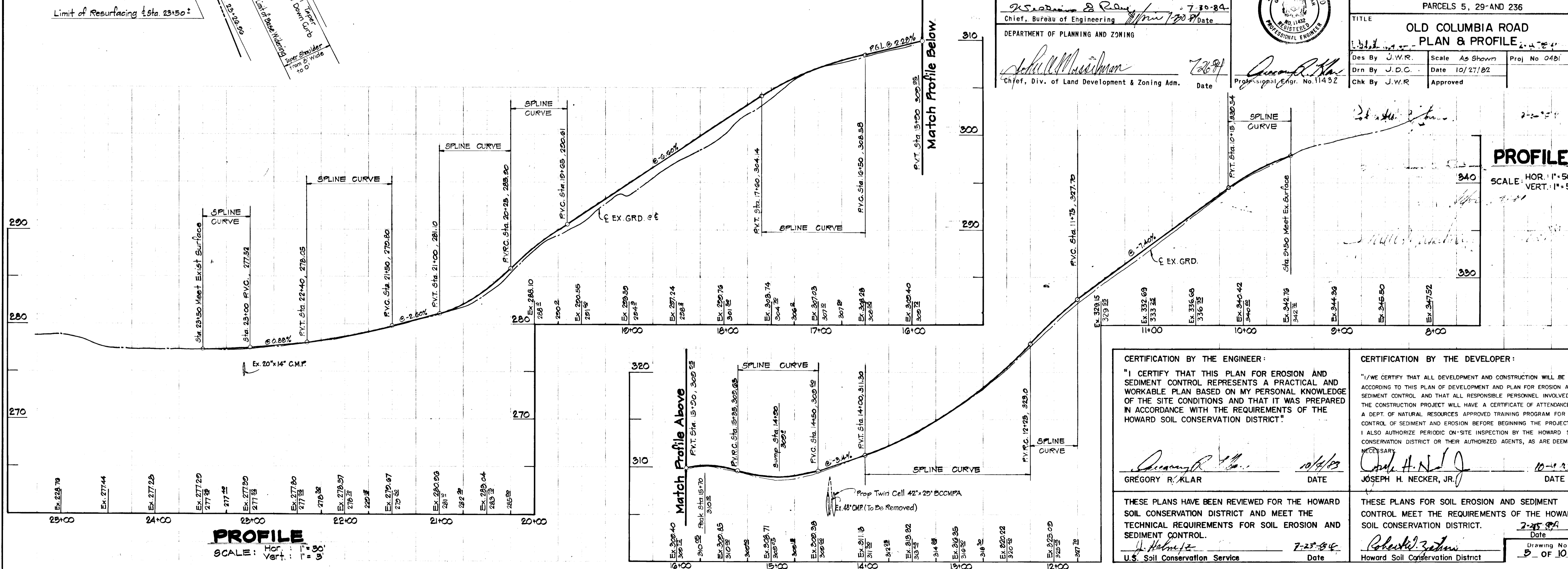
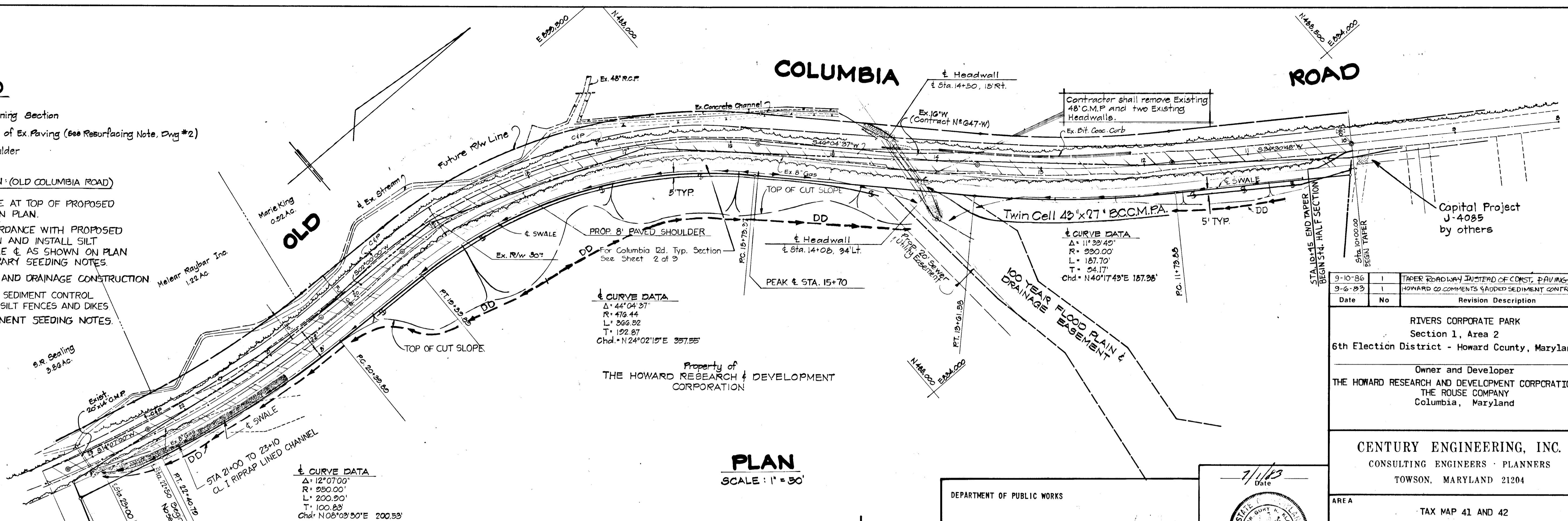
-  Base Widening Section
-  Resurface of Ex. Paving (See Resurfacing Note, Dwg #2)
-  Paved Shoulder

**SEQUENCE OF CONSTRUCTION: (OLD COLUMBIA ROAD)**

- 1- INSTALL DIVERSION DIKE AT TOP OF PROPOSED OUT SLOPE AS SHOWN ON PLAN.
- 2- ROUGH GRADE IN ACCORDANCE WITH PROPOSED TYPICAL ROAD SECTION AND INSTALL SILT FENCING 5' FROM SWALE & AS SHOWN ON PLAN. STABILIZE PER TEMPORARY SEEDING NOTES.
- 3- COMPLETE ALL PAVING AND DRAINAGE CONSTRUCTION
- 4- UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SILT FENCES AND DIKES
- 5- STABILIZE PER PERMANENT SEEDING NOTES.

DATE	
BY	
PLAN	
SURVEYED	
PLOTTED	
CHECKED	
RT. OF WAY CHECKED	
NOTE BOOK	
NO.	

DATE	
BY	
PROFILE	
SURVEYED	
PLOTTED	
CHECKED	
STRUCTURE NOTATIONS CHFD	
NOTE BOOK	
NO.	



DEPARTMENT OF PUBLIC WORKS  
 Chief, Bureau of Engineering  
 DEPARTMENT OF PLANNING AND ZONING  
 Chief, Div. of Land Development & Zoning Adm.

7/1/83 Date  
 PROFESSIONAL ENGINEER  
 No. 11432 REGISTERED  
 PROFESSIONAL ENGINEER

Date	No.	Revision Description
9-10-86	1	TAPER ROADWAY INSTEAD OF CONST. PAVING
9-6-83	1	HOWARD CO COMMENTS & ADDED SEDIMENT CONTROL

RIVERS CORPORATE PARK  
 Section 1, Area 2  
 6th Election District - Howard County, Maryland

Owner and Developer  
 THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 THE ROUSE COMPANY  
 Columbia, Maryland

CENTURY ENGINEERING, INC.  
 CONSULTING ENGINEERS - PLANNERS  
 TOWSON, MARYLAND 21204

AREA  
 TAX MAP 41 AND 42  
 PARCELS 5, 29-AND 236

TITLE  
 OLD COLUMBIA ROAD  
 PLAN & PROFILE

Des By J.W.R. Scale As Shown Proj No 0481  
 Drn By J.D.C. Date 10/27/82  
 Chk By J.W.R. Approved

**CERTIFICATION BY THE ENGINEER:**  
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT"

GREGORY R. KLAR  
 DATE 10/4/83

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.  
 U.S. Soil Conservation Service  
 Date 7-23-84

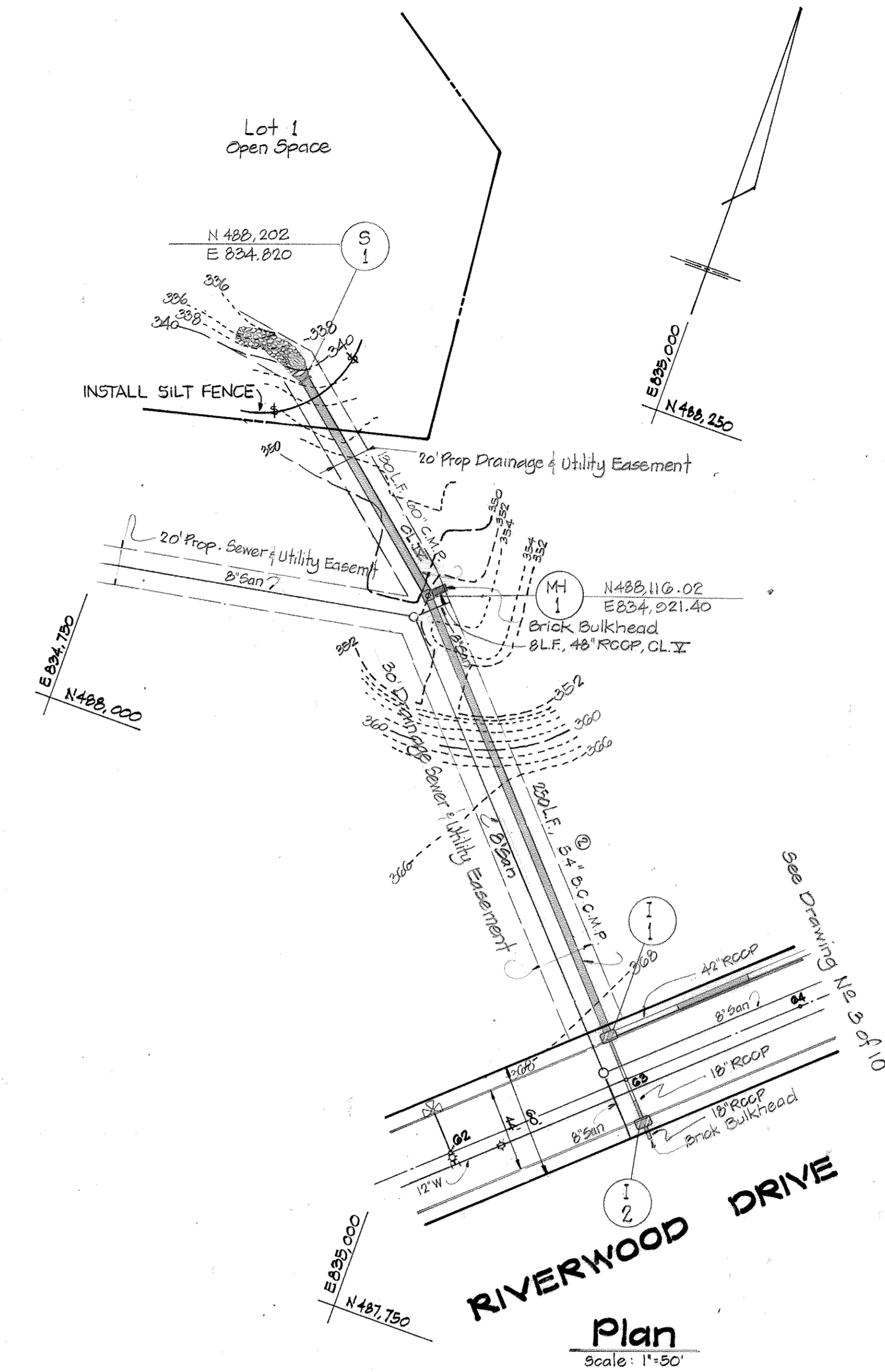
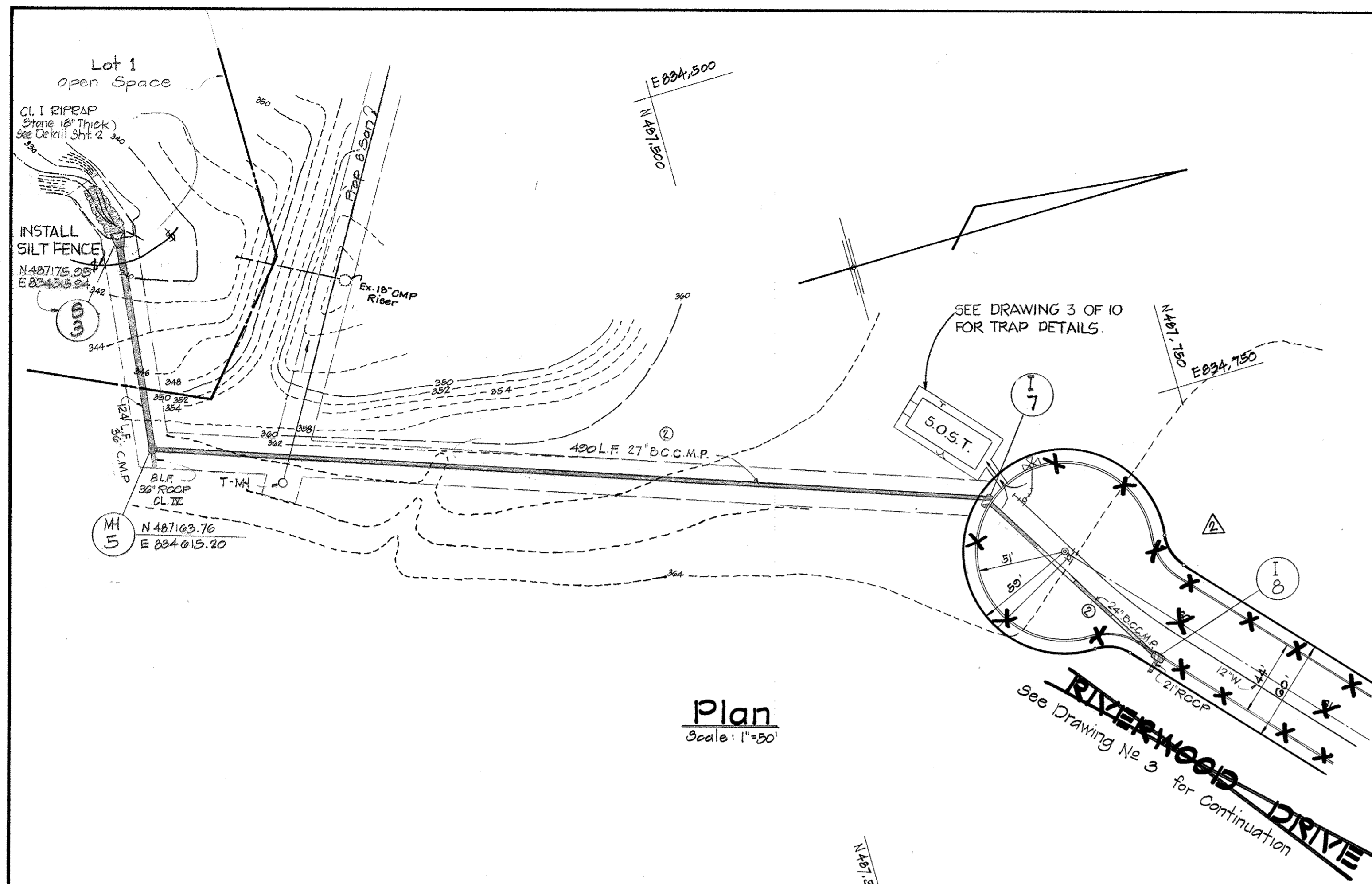
**CERTIFICATION BY THE DEVELOPER:**  
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY"

JOSEPH H. NECKER, JR.  
 DATE 10-1-83

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 Howard Soil Conservation District  
 Date 7-25-84  
 Drawing No. 5 OF 10

978

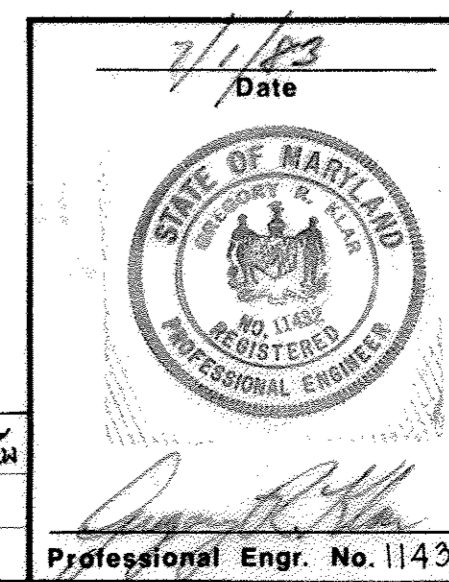
F-84-02



Structure Schedule

No	Type	Location					Remarks	Coordinate Locations	
		Road	Sta.	Offset	Top	In.			
MH-1	Brick Manhole				365.2	355.53	Ho. Co. G. 5.03	N488,110.02	E 834,921.40
MH-5	C.M.H.				302.3	352.25	Ho. Co. G. 5.31	N487,103.70	E 834,015.20
S-1	Metal End Section					337.33	Ho. Co. S.D. 5.61	N488,202	E 834,820
S-3	Metal End Section					331.57	Ho. Co. S.D. 5.61	N487,175.95	E 834,515.94

Professional Certification  
 I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 12975, Expiration Date: May 16, 2014.



No	Date	Revisions	by
2	1-20-84	SHOW Next Cut-Off Sec on Riverwood Dr.	GLN
3	12/6/84	Delete MH 5A & Changed to C.M.P.	

CERTIFICATE BY THE ENGINEER:  
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
 Gregory R. Kjar 10/27/83  
 Date

CERTIFICATE BY THE DEVELOPER:  
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."  
 Joseph H. Necker, Jr. 10-4-83  
 Date

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.  
 U.S. Soil Conservation Service 2-25-84  
 Date

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 Howard Soil Conservation District 7-25-84  
 Date

DEPARTMENT OF PUBLIC WORKS  
 Chief, Bureau of Engineering 7-20-84  
 Date

DEPARTMENT OF PLANNING AND ZONING  
 Chief, Div. of Land Develop. and Zoning Admin. 7-26-84  
 Date

Date	No	Revision Description
10-1-84	2	Changed Pipes Sizes and Types.
9-6-85	1	HOWARD CO. COMMENTS & ADDED SEDIMENT CONTROL

RIVERS CORPORATE PARK  
 Section 1, Area, 2  
 6th Election District - Howard County, Maryland  
 Owner and Developer  
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
 THE ROUSE COMPANY  
 Columbia, Maryland

CENTURY ENGINEERING, INC.  
 CONSULTING ENGINEERS - PLANNERS  
 TOWSON, MARYLAND 21204

AREA  
 TAX MAP 41 AND 42  
 PARCELS 5, 29 AND 236

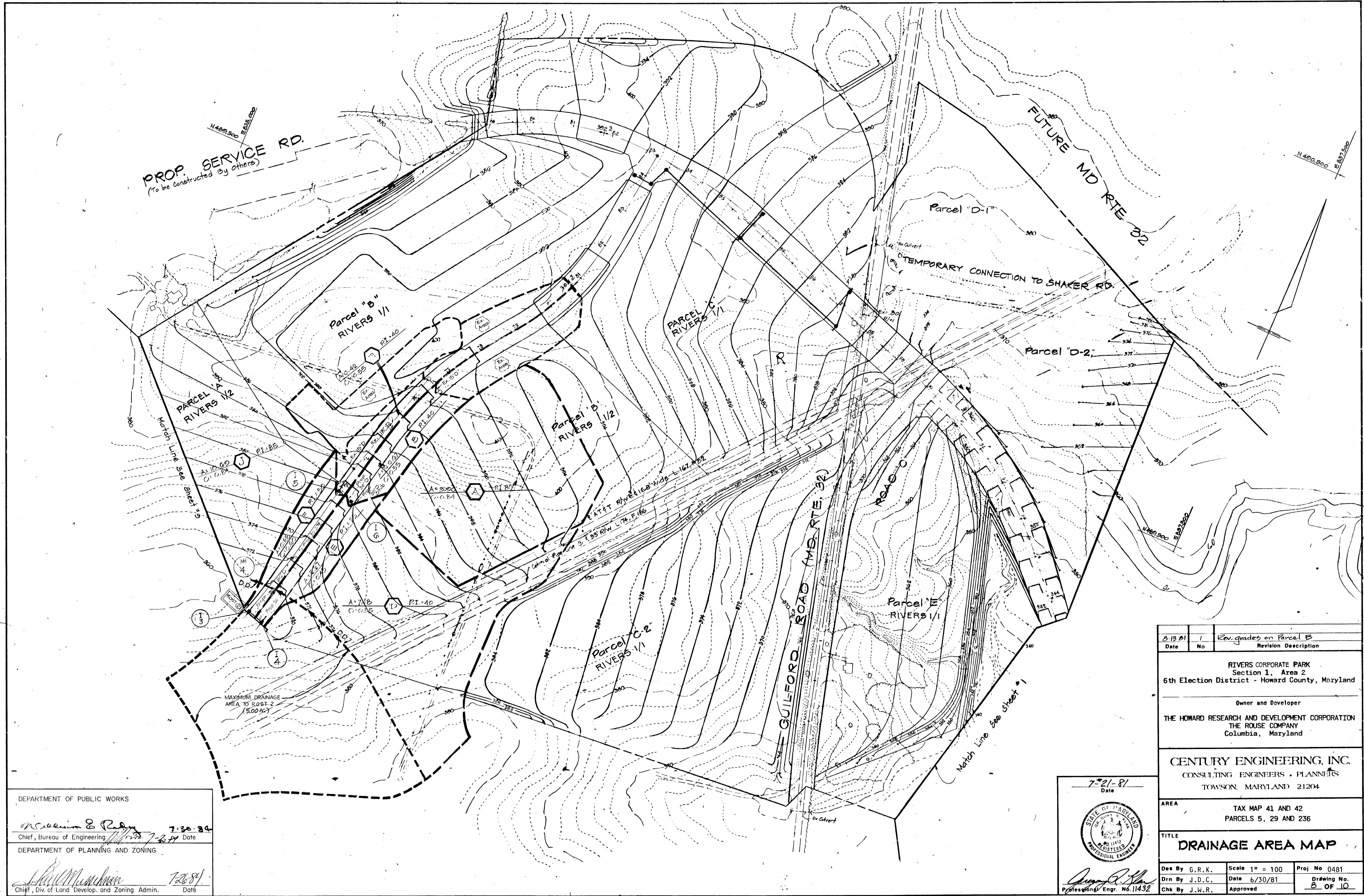
TITLE  
**STORM DRAIN OUTFALL PLAN**

Des By J.D.C.	Scale AS SHOWN	Proj No 0481
Drn By J.D.C.	Date 10/27/1981	Drawing No. 6 OF 10
Chk By J.W.R.	Approved	

F-8402

928





PROP. SERVICE RD.  
(To be constructed by others)

FUTURE MD RTE 32

TEMPORARY CONNECTION TO SHAKER RD.

MAXIMUM DRAINAGE AREA TO POST 2 (5,000 sq ft)

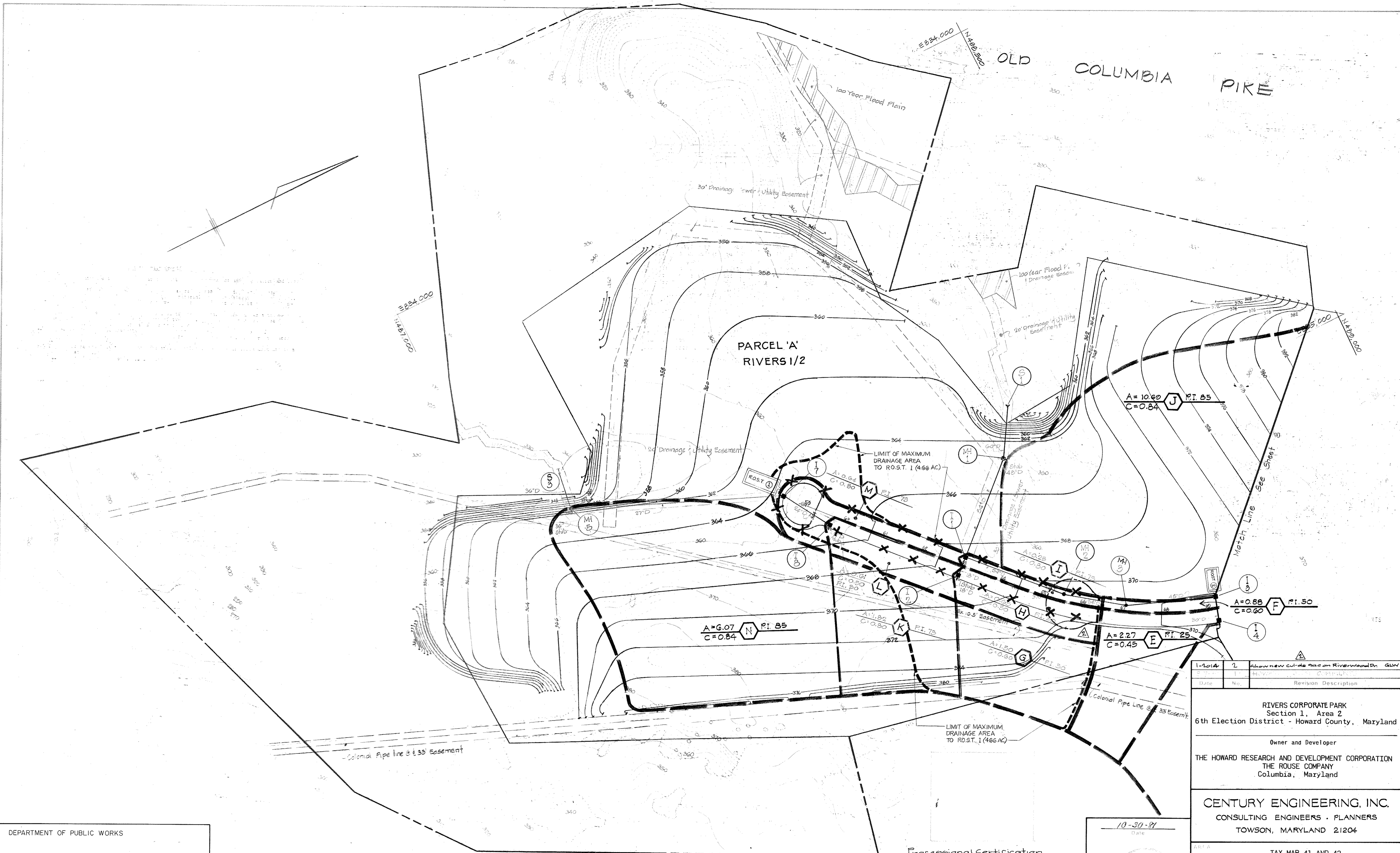
DEPARTMENT OF PUBLIC WORKS  
*G. R. K.* 7-20-81  
 Chief, Bureau of Engineering  
 DEPARTMENT OF PLANNING AND ZONING  
*J. W. R.* 7-26-81  
 Chief, Div. of Land Develop. and Zoning Admin.

7-21-81  
 Date  
  
*J. W. R.*  
 Professional Engr. No. 11432

Date	8-13-81	No	1	Revision Description	Rev. grades on Parcel B
<p>RIVERS CORPORATE PARK          Section 1, Area 2          6th Election District - Howard County, Maryland</p> <p>Owner and Developer          THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION          THE ROUSE COMPANY          Columbia, Maryland</p> <p>CENTURY ENGINEERING, INC.          CONSULTING ENGINEERS - PLANNERS          TOWSON, MARYLAND 21204</p>					
AREA	TAX MAP 41 AND 42 PARCELS 5, 29 AND 236				
TITLE	DRAINAGE AREA MAP				
Des By	G.R.K.	Scale	1" = 100'	Proj No	0481
Drn By	J.D.C.	Date	6/30/81	Drawing No.	2 OF 10
Chk By	J.W.R.	Approved			

F:84.02





DEPARTMENT OF PUBLIC WORKS  
*William B. Redig* 7-30-84  
 Chief, Bureau of Engineering Date  
 DEPARTMENT OF PLANNING AND ZONING  
*John M. ...* 7-26-84  
 Chief, Div. of Land Develop. and Zoning Admin. Date

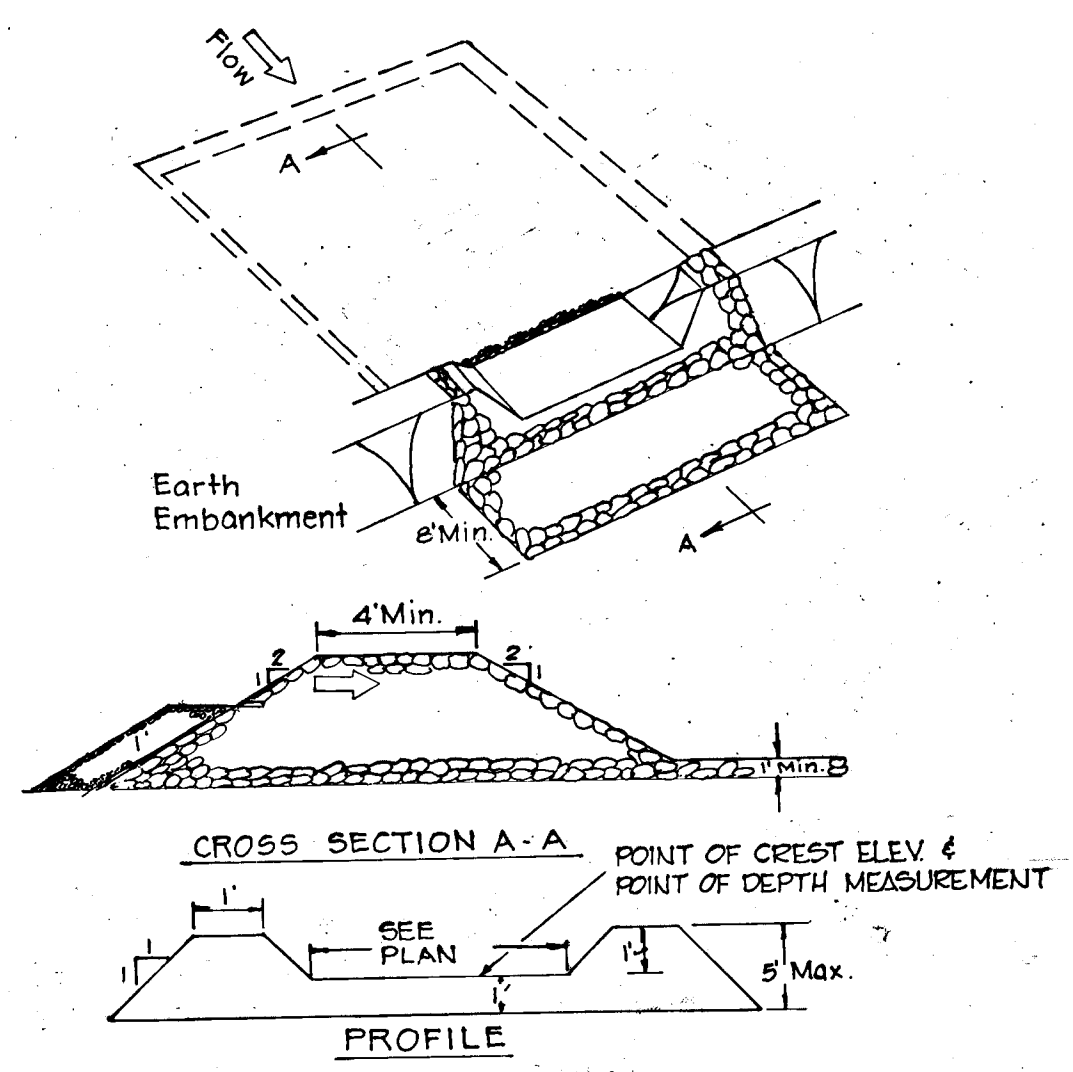
Professional Certification  
 I hereby certify that these plans were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 12976, Expiration Date: May 20, 2014.

10-30-81  
 Date  
*Gregory R. ...*  
 Professional Engineer No. 11432

1-2014	2	Show new Columbia Road on Riverwood Dr. GW
Date	No.	Revision Description
<b>RIVERS CORPORATE PARK</b> Section 1, Area 2 6th Election District - Howard County, Maryland  Owner and Developer <b>THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION</b> THE ROUSE COMPANY Columbia, Maryland  <b>CENTURY ENGINEERING, INC.</b> CONSULTING ENGINEERS - PLANNERS TOWSON, MARYLAND 21204  TAX MAP 41 AND 42 PARCELS 5, 29 AND 236  <b>DRAINAGE AREA MAP</b>		
Des. By	G.R.K.	Scale 1" = 100'
Drn. By	K.B.H.	Date 10-30-81
Proj. No.	0481	Drawing No.
Chk. By	J.W.R.	Approved
		2 OF 10

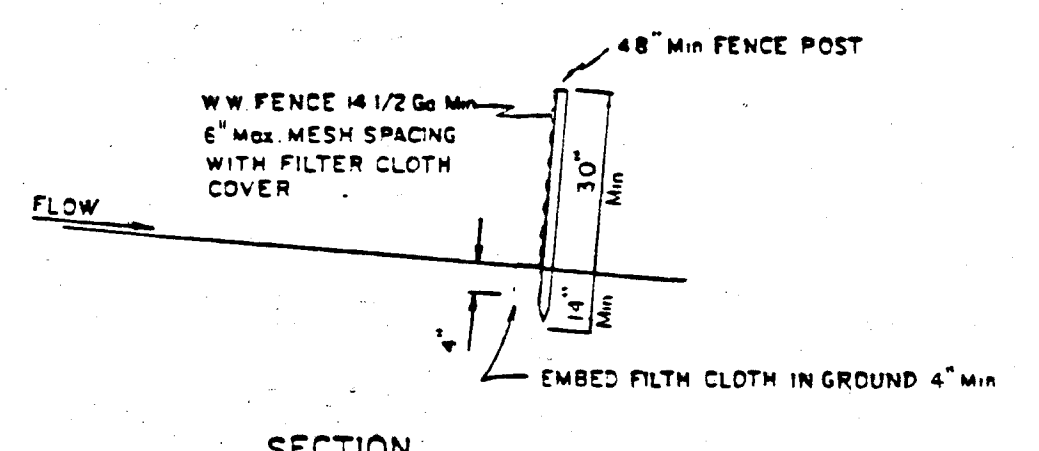
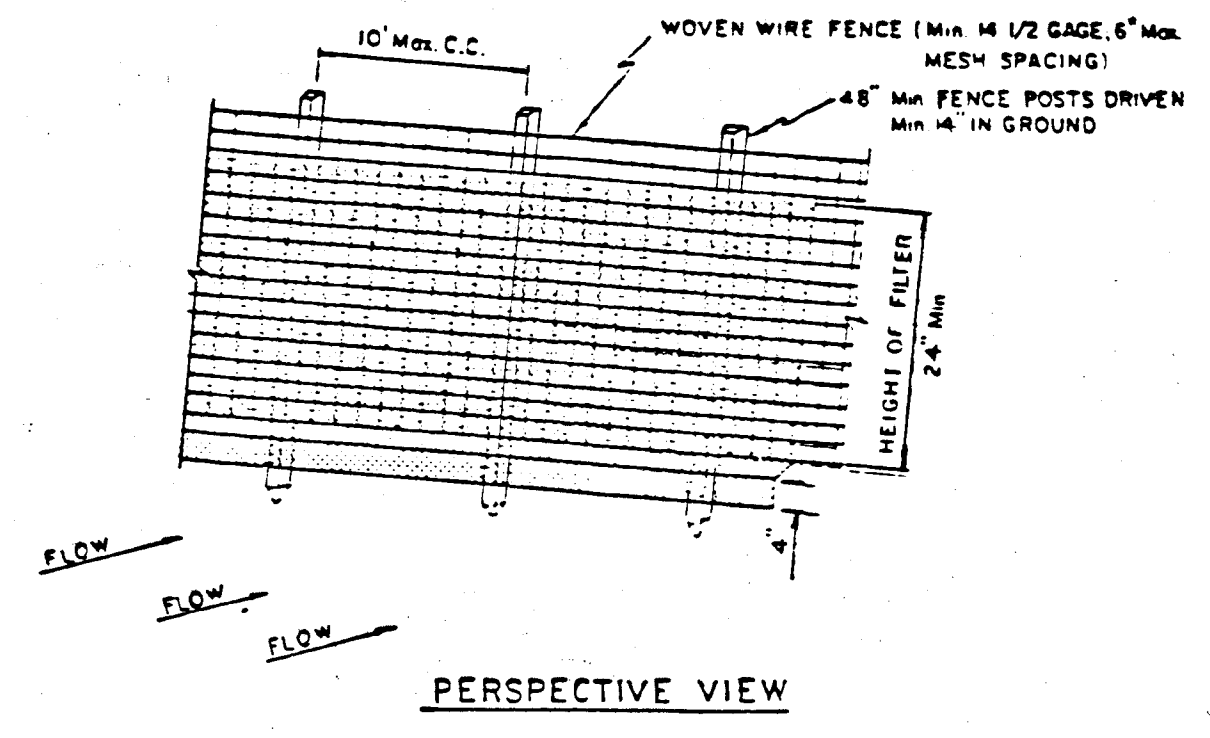
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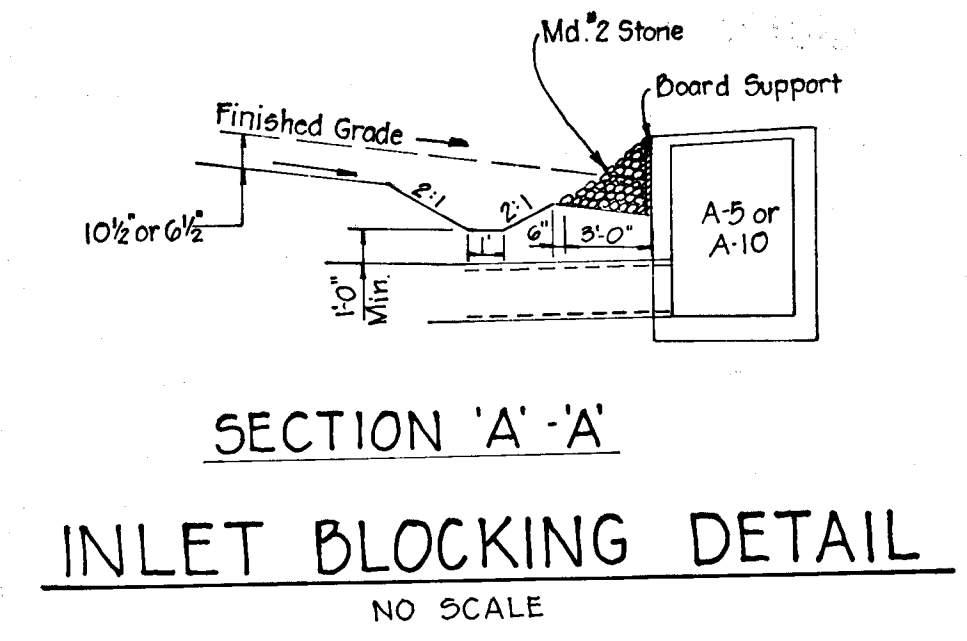
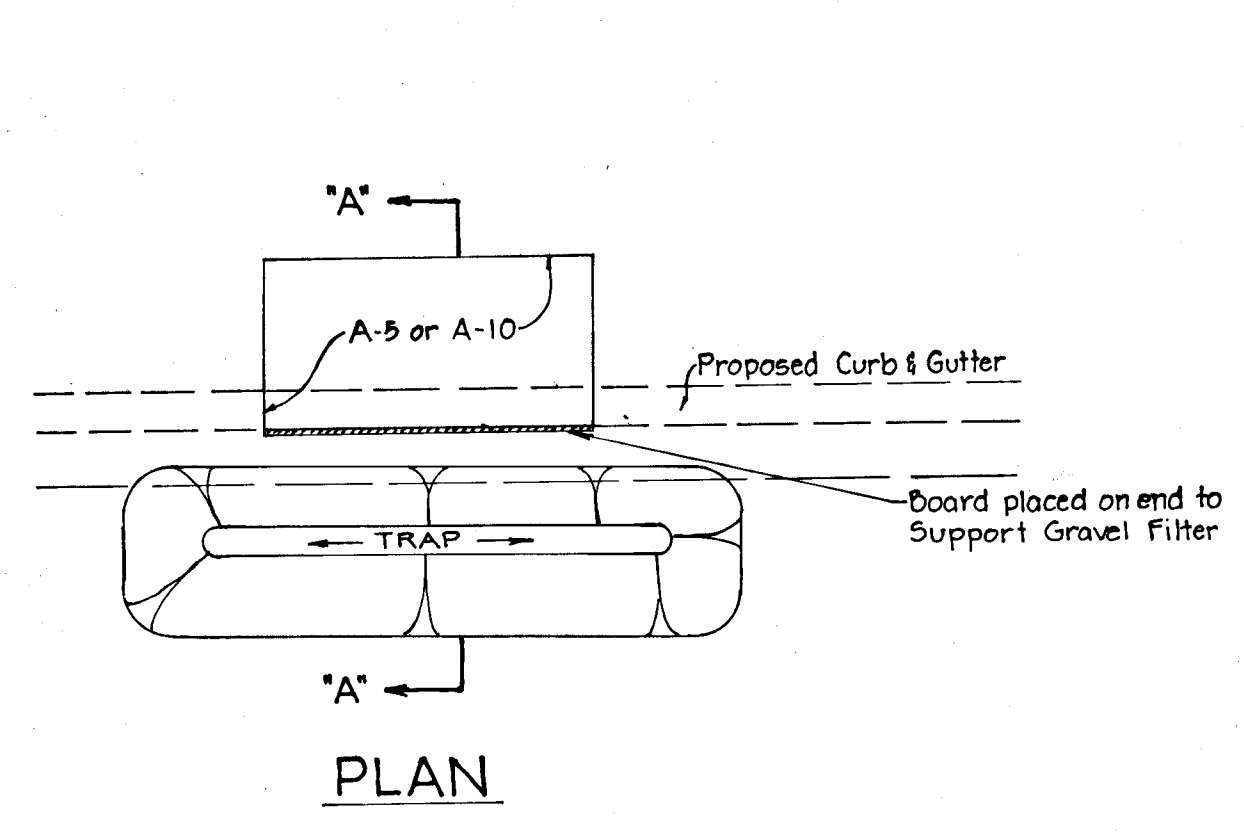
- Construction Specifications**
- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
  - The fill material for the embankment shall be free of roots or other woody vegetation as well as over sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
  - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
  - The structure shall be inspected after each rain and repairs made as needed.
  - Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
  - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
  - All cut and fill slopes shall be 2:1 or flatter.
  - The stone used in the outlet shall be small riprap 4" - 7", with a 1" thickness of #2-A crushed stone placed on the up-grade side of the small riprap.
  - Drainage area less than 5 acres.

**STONE OUTLET SEDIMENT TRAP**  
NO SCALE

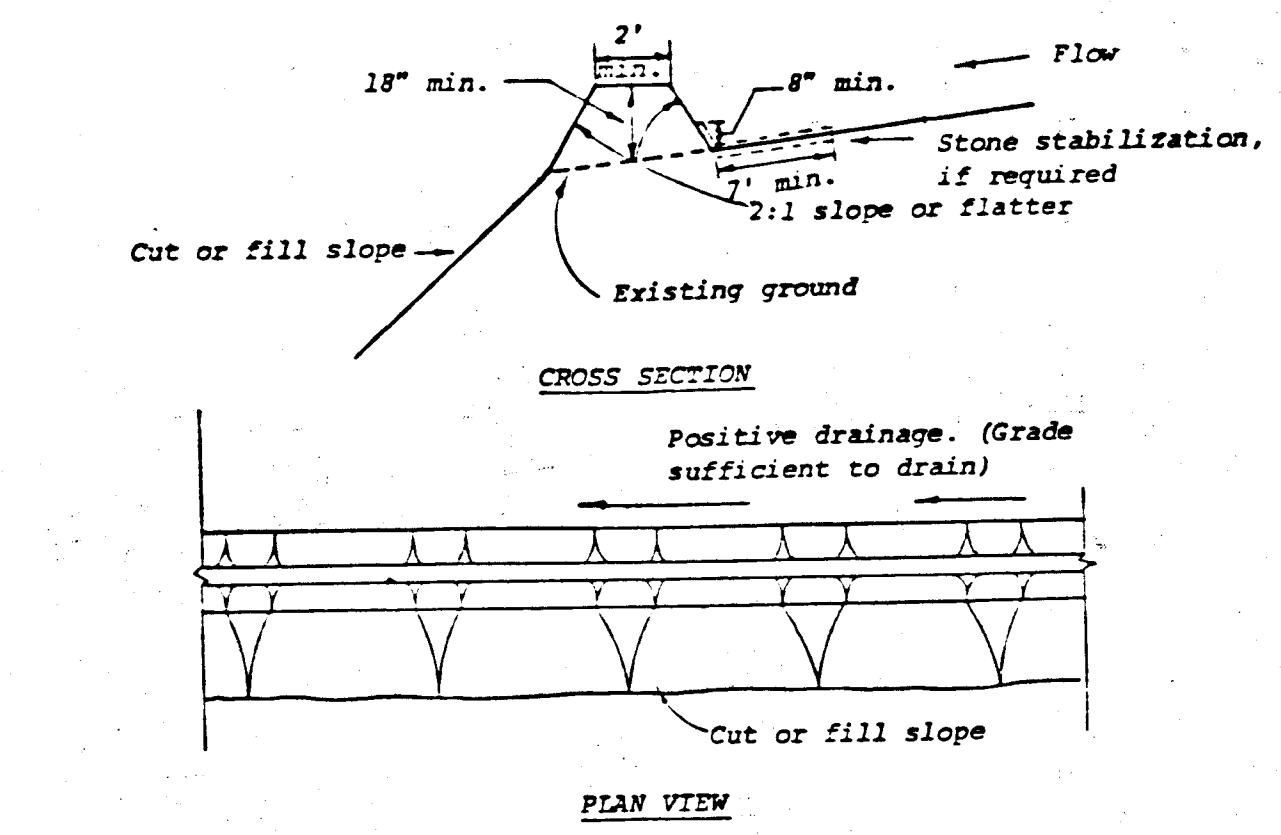


- CONSTRUCTION NOTES**
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES
  - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH WIRE TIES SPACED EVERY 24" AT TOP AND MID SECTION
- POSTS STEEL EITHER T OR U TYPE OR 2" HARDWOOD  
FENCE WOVEN WIRE 14 1/2 Gg Max 6" MESH OPENING  
FILTER CLOTH, FILTER X MIRAFI 100X, LAUREL EROSION CONTROL CLOTH BIDIM POLYFILTER X OR EQUAL
- STANDARD SYMBOL \*DRAINAGE AREA LESS THAN 1/2 ACRE

**SILT FENCE**  
NO SCALE

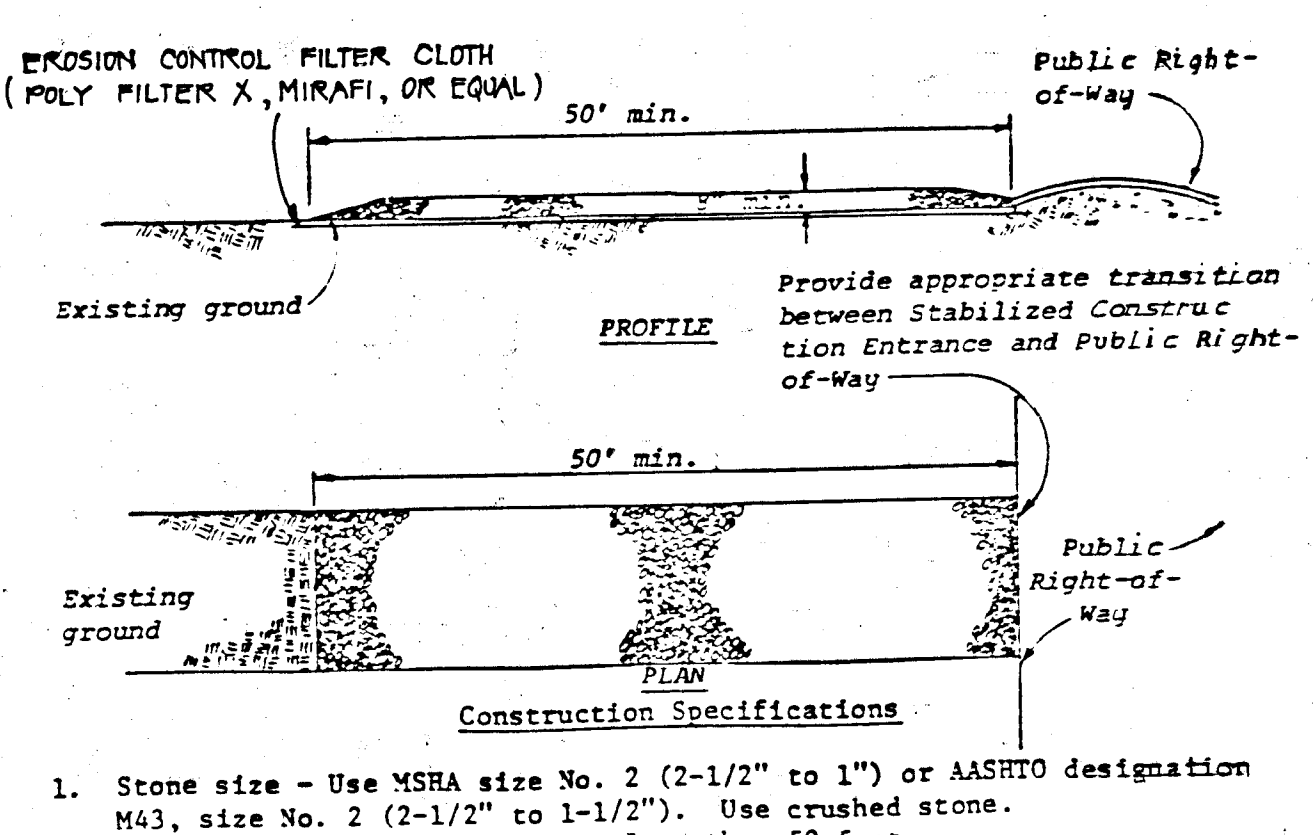


**SECTION 'A-A'**  
**INLET BLOCKING DETAIL**  
NO SCALE



- Construction Specifications**
- All dikes shall be machine compacted.
  - All diversion dikes shall have positive drainage to an outlet.
  - A. Diverted runoff from a protected or stabilized area shall outlet directly to an undisturbed stabilized area or into a level spreader or grade stabilization structure.  
B. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as a sediment trap or a sediment basin or to an area protected by any of these practices.
  - Stabilization, as specified by the plans, shall be: (1) in accordance with Standard and Specifications for Grassed Waterway, and the area to be stabilized shall be the channel (flow area); or (2) the flow area shall be lined with stone that meets MSHA size No. 2 or AASHTO M43 size No. 2 or 24 which is placed in a 3 inch thick layer and pressed into the soil. The area covered by the stone shall be as shown on the drawing above.
  - Periodic inspection and required maintenance shall be provided.

**DIVERSION DIKE**  
NO SCALE



- Construction Specifications**
- Stone size - Use MSHA size No. 2 (2-1/2" to 1") or AASHTO designation M43, size No. 2 (2-1/2" to 1-1/2"). Use crushed stone.
  - Length - As effective, but not less than 50 feet.
  - Thickness - Not less than eight (8) inches.
  - Width - Not less than full width of all points of ingress or egress.
  - Washing - When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch, or watercourse through use of sand bags, gravel, boards or other approved methods.
  - 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.

**STABILIZED CONSTRUCTION ENTRANCE**  
NO SCALE

- GENERAL NOTES**
- A MINIMUM 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (1922-2070).
  - ALL SEDIMENT CONTROL STRUCTURES WILL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
  - SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
  - ALL DISTURBED AREAS ARE TO BE DRESSED AND STABILIZED ACCORDING TO THE TEMPORARY OR PERMANENT SEEDING SCHEDULES AS SOON AS PROPER WEATHER CONDITIONS EXIST FOR THE ESTABLISHMENT OF A PERMANENT VEGETATIVE COVER.
  - SEDIMENT WILL BE REMOVED FROM TRAPS WHEN THE DEPTH REACHES THE CLEAN OUT ELEVATION SHOWN ON THE PLANS.
  - FERTILIZER AND LIME RATES MAY BE CHANGED THROUGH AUTHORIZATION BY THE HOWARD SOIL CONSERVATION DISTRICT IF SOIL TESTS DETERMINE A REDUCTION IN THE SPECIFIED RATES IS JUSTIFIED.
  - 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.
  - REFERENCES CALLED FOR ON THE SEDIMENT CONTROL CONSTRUCTION PLAN AND DETAILS ARE MADE TO THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS.

**TEMPORARY SEEDING**

- AREA TO BE SEEDDED SHALL BE RECENTLY LOOSENEED. IF THE GROUND IS PACKED, CRUSTED OR HARD, THE TOP LAYER OF SOIL SHALL BE LOOSENEED, BY RACKING OR OTHER ACCEPTABLE MEANS.
- APPLY 10-20-10 FERTILIZER (OR EQUIVALENT) AT THE RATE OF 15 LBS. PER 1000 SQ. FT.
  - WHERE SOIL IS KNOWN TO BE HIGHLY ACID, APPLY DOLOMITIC LIMESTONE AT THE RATE OF 1 TON PER ACRE.
  - WORK BOTH INTO SOIL AND SEED WITH CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER (SLURRY WILL INCLUDE SEED AND FERTILIZER) AT THE RATE OF 40 LBS. PER ACRE OF ITALIAN OR PERENNIAL RYEGRASS.
  - MULCH WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS PER ACRE AND ANCHOR WITH A CUTBACK ASPHALT OR EMULSIFIED ASPHALT AT THE RATE OF 5 GAL. PER 1000 SQ. FT.

**PERMANENT SEEDING**

- FINAL STABILIZATION WILL TAKE PLACE AS SOON AS WEATHER CONDITIONS PERMIT, AS FOLLOWS:
- APPLY DOLOMITIC LIMESTONE AT THE RATE OF 2 TONS PER ACRE (ONE TON PER ACRE IF APPLICATION OF TON PER ACRE WAS MADE FOR TEMPORARY SEEDING).
  - APPLY 0-20-20 FERTILIZER AT THE RATE OF 600 LBS. PER ACRE. NARROW OR DISC LIME AND 0-20-20 FERTILIZER INTO THE SOIL TO A MINIMUM DEPTH OF 3" LAYS OR HIGH MAINTENANCE AREAS WILL BE DRAGGED AND LEVELED WITH A YORK RAKE. AT THE TIME OF SEEDING APPLY 400 POUNDS OF 38-0-0 UREAFORM FERTILIZER AND 500 LBS. OF 30-20-20 OR EQUIVALENT FERTILIZER PER ACRE.
  - SEED WITH A MIXTURE OF CERTIFIED "MERION" KENTUCKY BLUEGRASS AT 40 LBS. PER ACRE; COMMON KENTUCKY BLUEGRASS AT 40 LBS. PER ACRE; RED FESCUE, PENNLANM OR JAMESTOWN AT 20 LBS. PER ACRE.
  - MULCH WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS PER ACRE AND ANCHOR WITH A CUTBACK ASPHALT OR EMULSIFIED ASPHALT AT THE RATE OF 5 GAL. PER 1000 SQ. FT.
  - SEED ALL SLOPES WITH A MIXTURE OF CERTIFIED KENTUCKY 31 TALL FESCUE AT 50 LBS. PER ACRE AND INOCULATED KOREAN LESPEDEZA AT 15 LBS. PER ACRE.

THESE PLANS FOR EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *Robert W. Zehn* 7-25-84  
Howard Soil Conservation District Date

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND ROADS.  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Director: *Robert W. Zehn* 7-30-84  
Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

Planning Director: *Robert W. Zehn* 7-26-84  
Chief, Div. of Land Development and Zoning Administration Date

APPROVED: FOR PUBLIC WATER AND PRIVATE SEWAGE SYSTEMS.  
HOWARD COUNTY HEALTH DEPARTMENT.

County Health Officer: \_\_\_\_\_ Date

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

*J. Helms* 7-25-84  
S. Soil Conservation Service Date

**CERTIFICATION BY THE DEVELOPER:**  
I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

*John H. Helms* 10-4-83  
Signature of Developer Date

**CERTIFICATE BY THE ENGINEER:**  
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT".

*Gregory R. Khar* 10/4/83  
Signature Date

ACCEPTED AND APPROVED FOR CONSTRUCTION BY:

OWNER: \_\_\_\_\_ DATE: \_\_\_\_\_  
CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

**SEDIMENT CONTROL DETAILS**  
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
THE ROUSE COMPANY  
Columbia, Maryland

RIVERS CORPORATE PARK  
Section 1, Area 2

6TH ELECTION DISTRICT HOWARD COUNTY, MD

OWNER & DEVELOPER  
THE HOWARD RESEARCH AND DEVELOPMENT CORP.  
THE ROUSE COMPANY  
Columbia, Maryland  
PREPARED BY  
CENTURY ENGINEERING, INC.

32 WEST ROAD  
TOWSON, MARYLAND 21204  
SCALE: AS SHOWN DRWG NO 10 OF 10

