

Reviewed for HOWARD COUNTY DEPT. OF PUBLIC WORKS
 Signature: [Signature]
 Date: 10/16/89
 U.S. Soil Conservation Service
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

John L. Roberts 10/16/89
 Approved

DEVELOPER'S/BUILDER'S CERTIFICATE
 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 County Soil Conservation District or their authorized agents, as are deemed necessary.

[Signature]
 Date: 7/17/89
 Signature of Developer/Builder



ENGINEER'S CERTIFICATE
 I hereby 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 County Soil Conservation District.

[Signature]
 Date: 6-27-89
 G. Nelson Clark

AS-BUILT
 [Signature]
 G. LACTI, SHANBERGER & LANE
 PROFESSIONAL L.S.# 10247
 SHANBERGER & LANE
 8726 TOWN & COUNTRY BLVD.
 SUITE 107
 ELLICOTT CITY, MARYLAND 21043

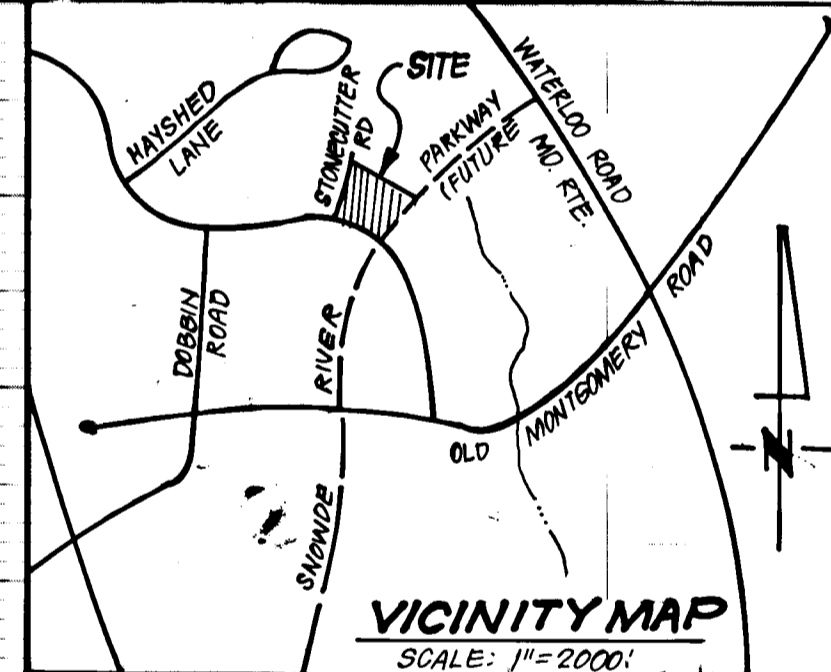
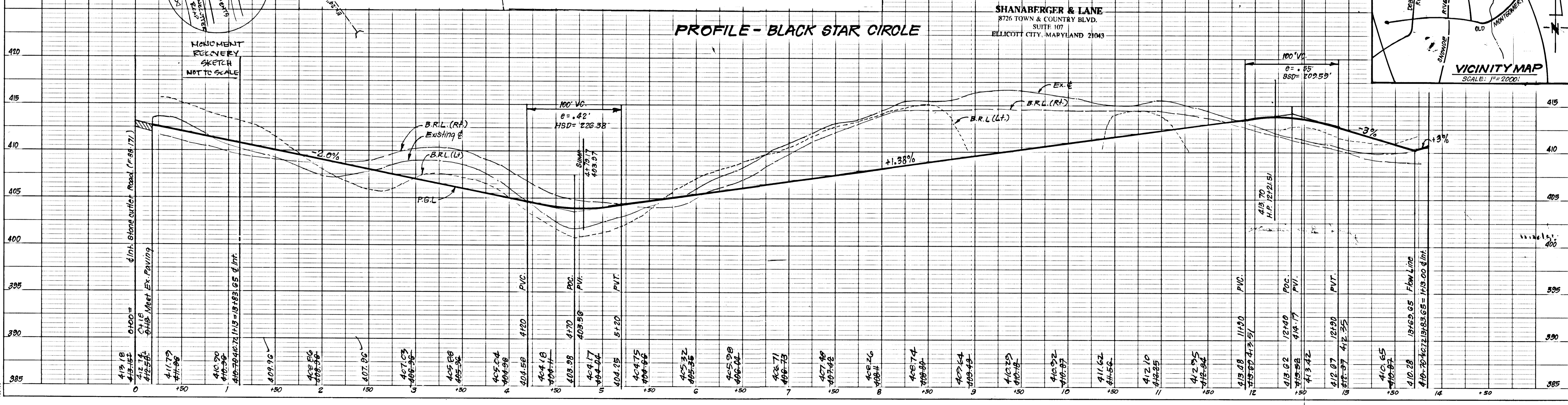
- GENERAL NOTES**
- All work shall be done in accordance with Ho. Co. Design Manual, Vol. IX Stds. and Specs. and Details for Construction, 1989 Amendments.
 - Types of storm drainage refer to the standard details of Ho. Co. & MDSHA.
 - Trench compaction for storm drains within road or street right-of-way limits shall be in accordance with "Ho. Co. Design Manual, Vol. IX" Sta. 6-2.01.
 - Information concerning underground utilities was obtained from available records but the contractor must determine the exact location and elevation of mains by digging test pits by hand, at all utility crossings, well in advance of construction.
 - All utility companies shall be notified 24 hrs. in advance of construction.
 - All traffic services, parking and signing to be done in accordance with the "Manual of Uniform Traffic Control Devices" 1984 Revised Edition.
 - Sign and Cross Vertical Curves were designed in accordance with "Ho. Co. Design Manual" Vol. III.
 - Provide Conc. Sidewalk Ramps Ho. Co. Std. Type A R.4.01 where shown in plan.
 - Design Speed: 25 mph. Coring: N.T. S.F.A.
 - The contractor or developer shall contact the Construction Inspection/Survey Division 24 hrs. in advance of commencement of work Ph. 792-7272.
 - Stormwater management is provided for on previously approved plan F.88-171.
 - No wetlands exist on this site per Wetlands Assessment prepared by Kilde Consultants, Inc.
 - Water Quality Certification #87-0316 was issued by Md. Dept. of the Environment.
 - Proposed Water & Sewer: See C-24-1989-D, Ex. See C-24-7415-D.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 11/20/89
 Chief, Land Development Division
 [Signature] 10/26/89
 Chief, Bureau of Highways
 [Signature] 11/20/89
 Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 [Signature] 11/20/89
 Chief, Division of Community Planning & Land Development

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINSTREL WAY • COLUMBIA, MD 21044 • (301) 381-7500 - BALTO. • (301) 621-8100 - WASH.

DESIGNED	KIWM	ROAD CONSTRUCTION PLANS	BLACK STAR CIRCLE	AS SHOWN
DRAWN	KIWM	COLUMBIA	VILLAGE OF LONGREACH	DRAWING
CHECKED	JLS	SECTION 3	AREA 2	1 OF 4
DATE	7-24-89	6TH ELECTION DISTRICT	HOWARD COUNTY, MARYLAND	JOB NO.
		FOR: The Howard Research & Development Land Company	10275 Little Pavement Parkway	88-134
		Columbia, Md. 21044		FILE NO.
				88-134-D



*** See Tree Planting Detail, Sheet 2.**

*** STREET TREE TABLE**

SYM	TYPE	SIZE	QUANT	REMARKS
(+R)	Acer Rubrum "Red Sunset"	2 1/2" CAL.	42	85 Heavy Heads
(+G)	Acer Saccharum Bonfire	" "	19	" "

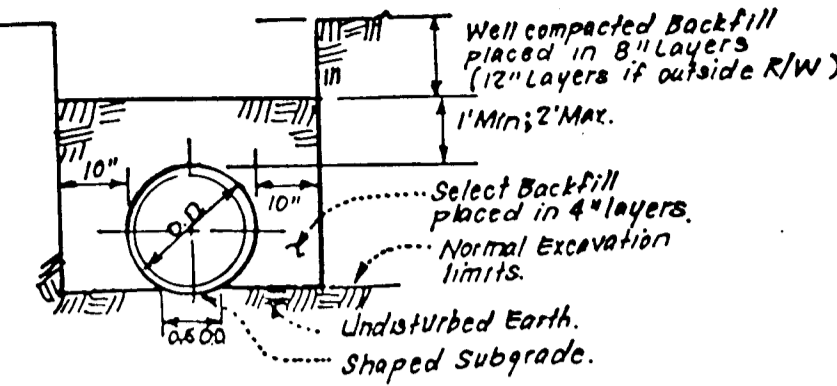
- The Contractor shall verify location of underground utilities prior to digging. Location of trees may be adjusted slightly to meet field conditions.
- The location and type of trees shown are tentative and are used for bond purposes only. The final location and variety of trees may vary to accommodate field conditions and builders landscape program. Bond release is contingent upon Section 16.131 of the Howard County Subdivision Regulations as approved by the Dept. of Planning and Zoning.

CENTERLINE CURVE DATA

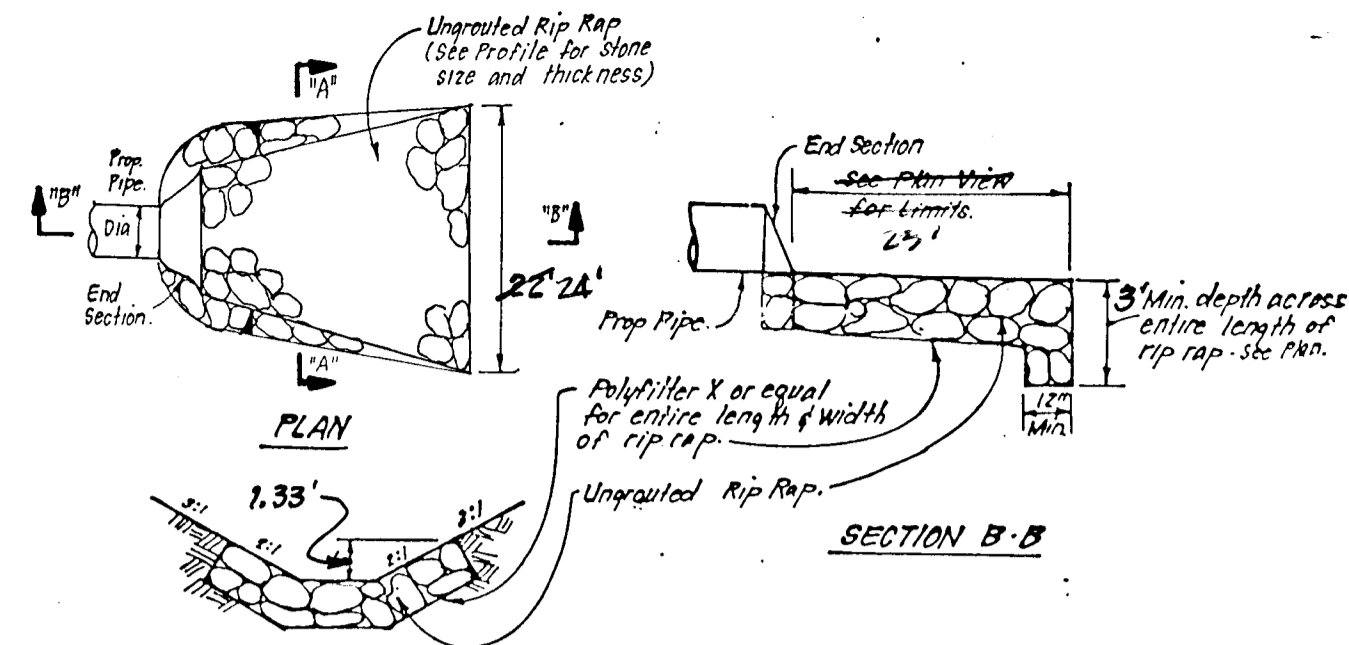
PC to PT	RADIUS	DELTA	ARC	TAN	ORD	BEARING
PC: 110.82 to PT: 216.92	270.00	31° 11' 43"	147.00	75.37	145.20	S80° 45' 37" E
PC: 513.98 to PT: 516.94	30.00	174° 09' 46"	26.36	13.51	26.86	S33° 25' 07" W
PC: 704.64 to PT: 91.20.99	125.00	67° 30' 00"	136.35	75.95	129.69	S79° 15' 00" W
PC: 918.63 to PT: 1143.61	125.00	93° 30' 00"	203.25	132.88	182.09	N70° 45' 00" W
PC: 1310.43 to PT: 1517.20	170.00	84° 21' 22"	72.27	36.49	71.73	N05° 49' 16" E

100

- Notes:
 1. For 2" of pipe see manufacturer's specs. or field measure circumference of pipe and divide by 3.14.
 2. Within road R/W, trench compaction density shall be 95% as determined A.S.H.T.O. T-100A.
 3. For conditions requiring solid sheeting or trench shields "X" shall not exceed 30'.



TRENCH COMPACTION DETAIL
NO SCALE

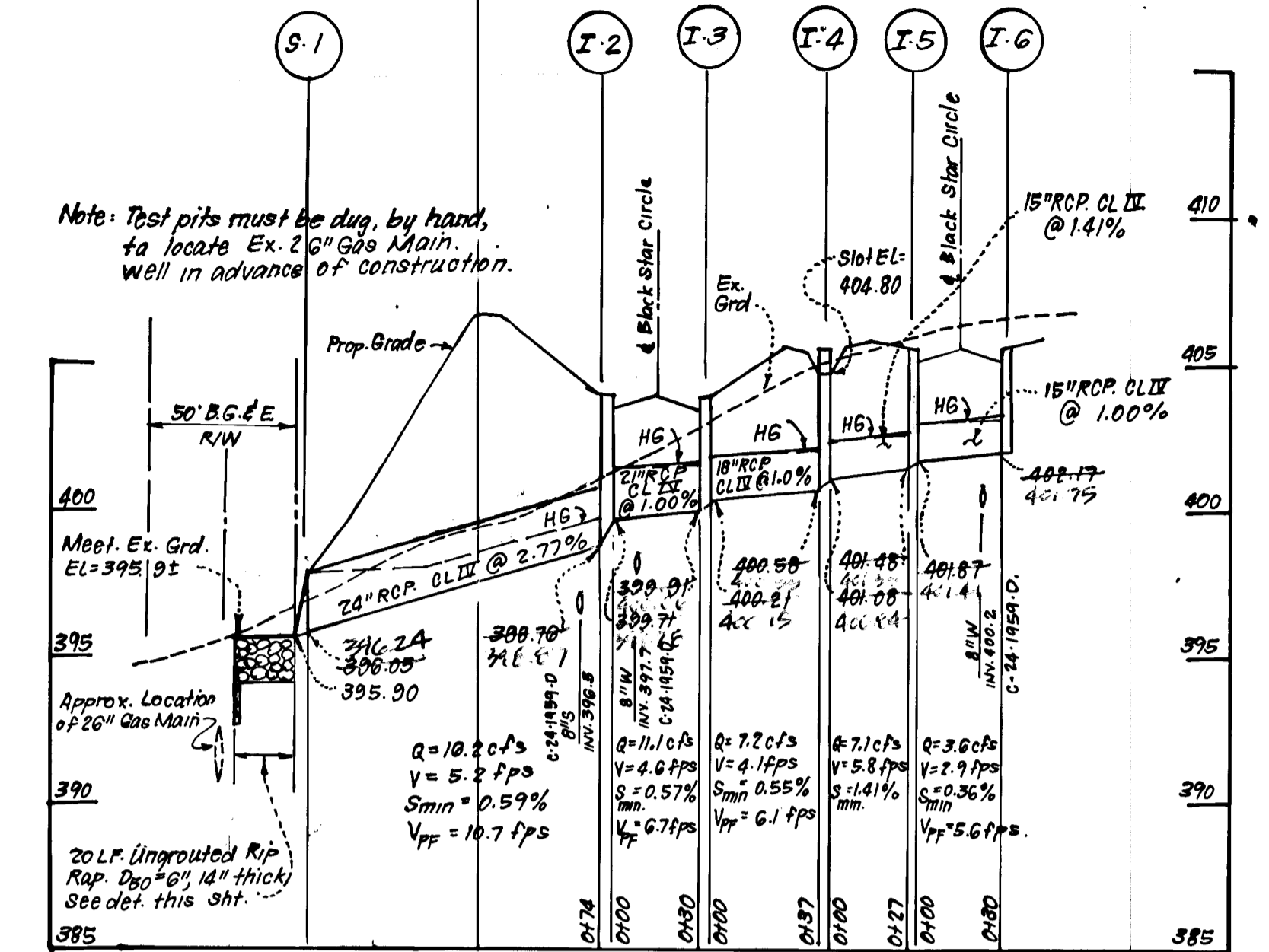


SECTION A-A
UNGRAouted RIPRAP PAVING DETAILS
NO SCALE

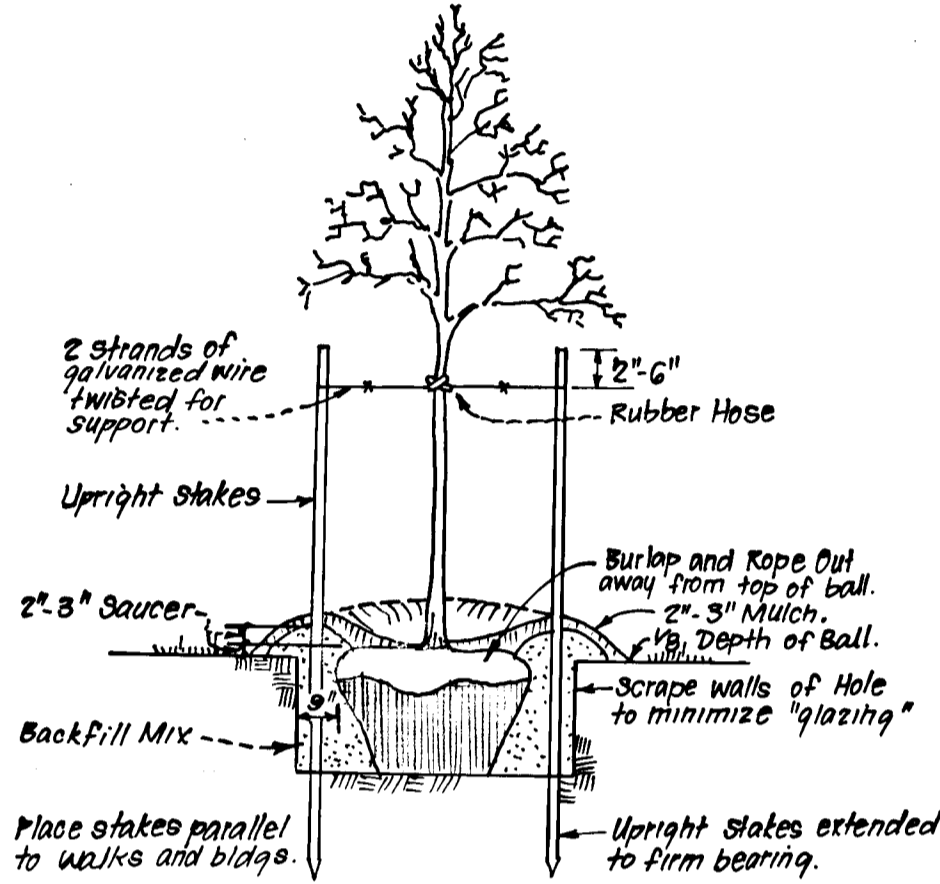
STRUCTURE SCHEDULE 4							
No.	TYPE	INV. IN	INV. OUT	TOP ELEVATION		REMARKS	LOCATION
				UPPER	LOWER		
S-1	Comp. End Section	396.05	395.80	404.20	404.20	10 Co. Blvd. SD. 5.51 24"IG	See Plan
I-2	A-10 Inlet	399.71	398.76	404.10	404.10	SD 4.02 W=2'6"	Inlet 4+80.82 B.S. Circle 14"R
I-3	A-10 Inlet	400.27	399.31	404.10	404.10	SD 4.02 W=2'6"	Inlet 4+78 Bk. St. Cir. 14"R
I-4	D Inlet	401.08	401.58	404.10	404.10	SD 4.11 2'6"IG	See Plan
I-5	A-10 Inlet	401.87	401.48	405.74	405.59	SD 4.02 W=2'6"	Inlet 6+18.00 Bk. St. Cir. 14"R
I-6	A-10 Inlet	-	402.17	405.74	405.59	SD 4.02 W=2'6"	Inlet 6+18.00 Bk. St. Cir. 14"R

Δ All Inverts are to be fully developed.

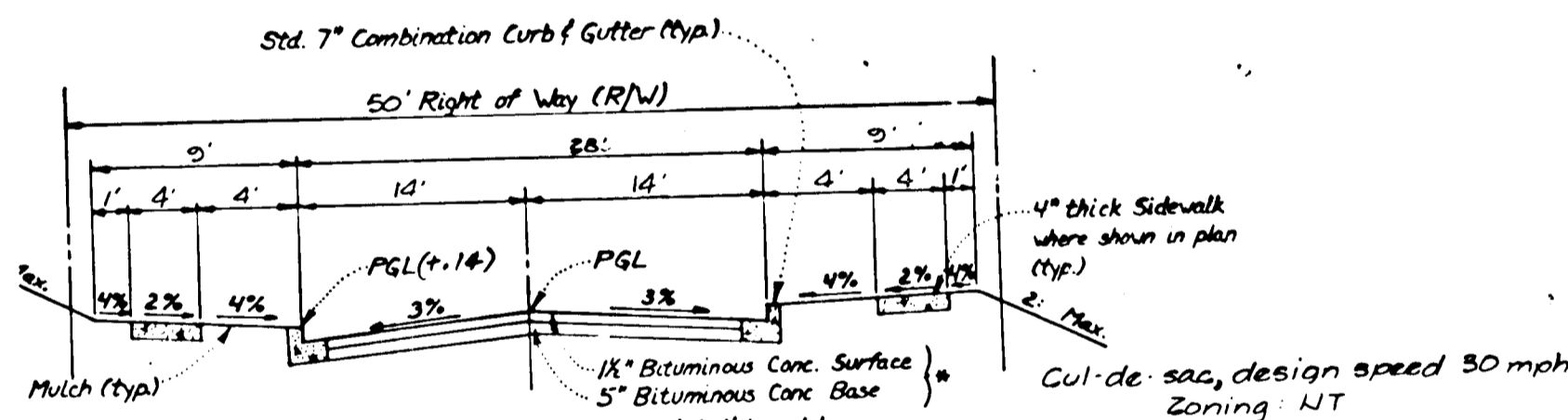
PIPE SCHEDULE		
SIZE	TYPE	LENGTH
15"	RCP CL III	57 LF
18"	RCP CL III	37 LF
21"	RCP CL III	30 LF
24"	RCP CL III	98 LF



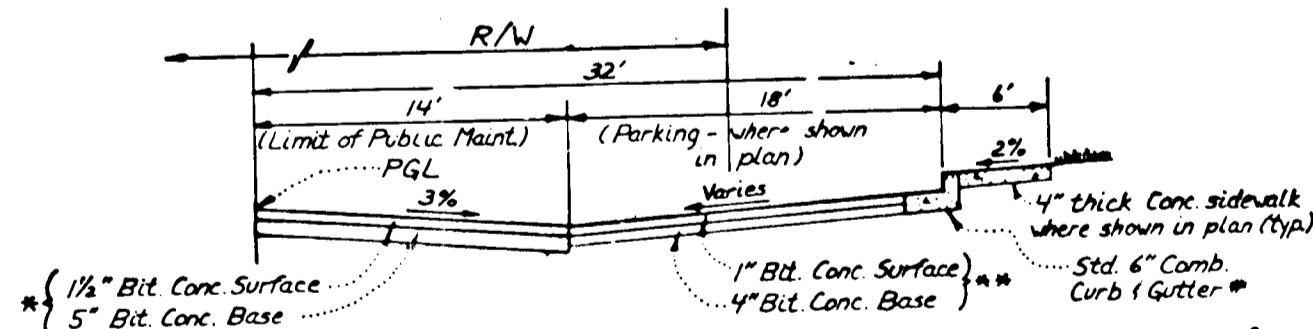
PROFILE
 SCALES: HORIZ. 1"=50'
 VERT. 1"=5'



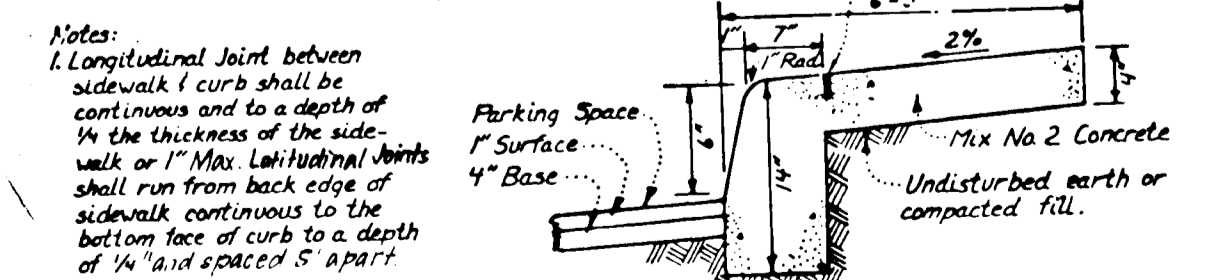
TREE PLANTING DETAIL
NO SCALE



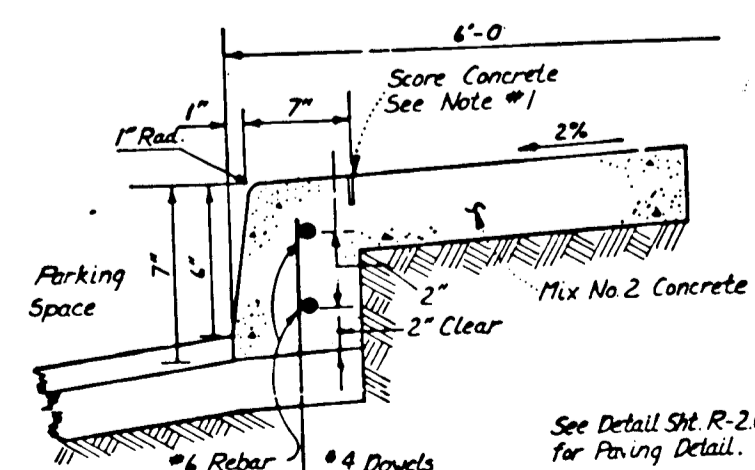
TYPICAL PAVING SECTION - PUBLIC ROADS
 BLACK STAR CIRCLE 0+00 TO 0+80.00
 BLACK STAR CIRCLE 8+21.92 TO 9+15.00
 BLACK STAR CIRCLE 10+37.69 TO 11+21.03
 NO SCALE



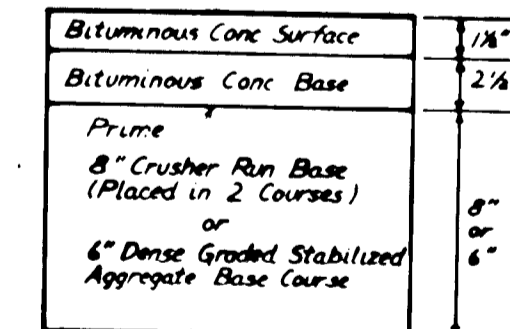
TYPICAL HALF SECTION PARKING ADJACENT TO PUBLIC ROADS
 BLACK STAR CIRCLE 0+80.00 TO 8+21.92
 BLACK STAR CIRCLE 9+15.00 TO 10+37.69
 BLACK STAR CIRCLE 11+21.03 TO 13+18.69
 NO SCALE



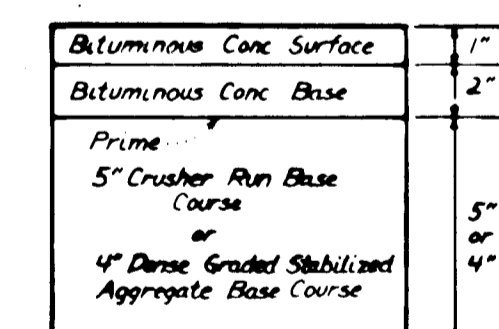
MONOLITHIC CURB & SIDEWALK - PRIVATE PARKING AREA
NO SCALE



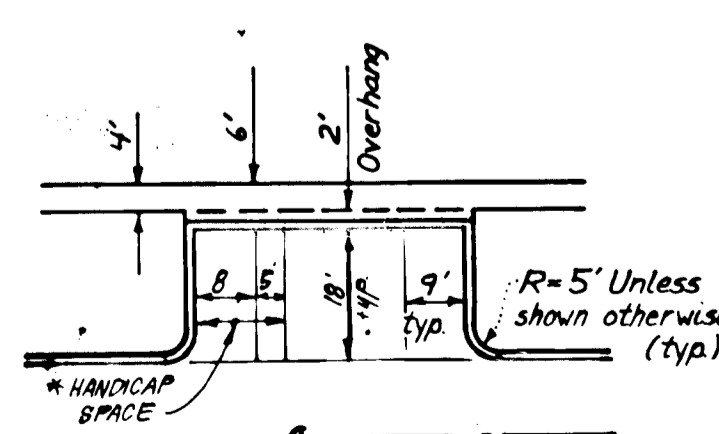
ALTERNATE SECTION
NO SCALE



ALTERNATE PAVING SECTION FOR PUBLIC ROADS (SECTION P-2)
NO SCALE



ALTERNATE PAVING SECTION FOR PARKING AREAS (SECTION P-1)
NO SCALE



TYPICAL PARKING
NO SCALE
 * Two 8' Handicap Spaces may share One 8' Aisle

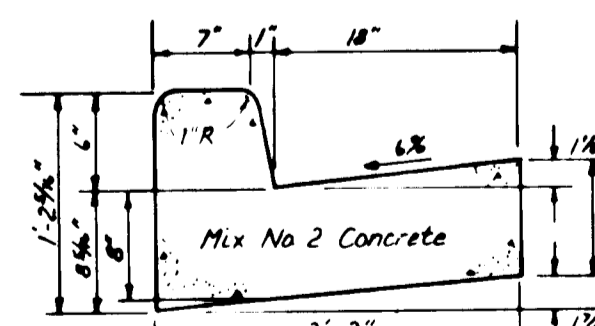
Reviewed for SHOWINGS S.C.D.
 Name: John R. Robertson
 Signature: [Signature] Date: 10/16/89
 U.S. Soil Conservation Service
 U.S. DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Approved: [Signature] Date: 10/16/89

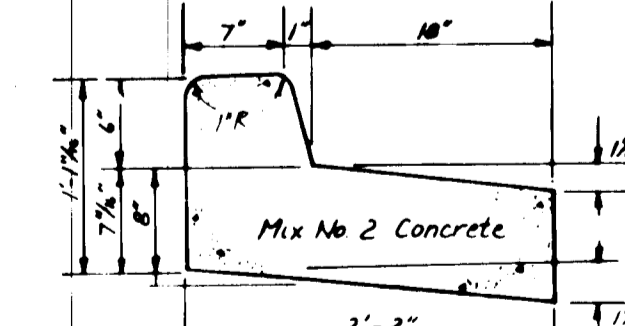
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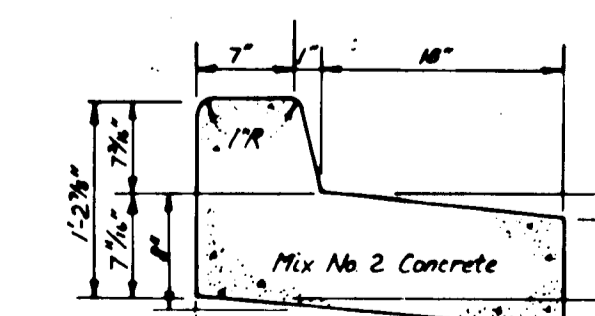
Signature of Developer/Builder: [Signature] Date: 10/16/89



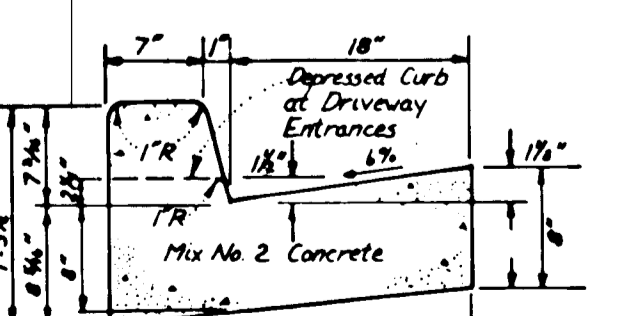
STANDARD 6" COMBINATION CURB & GUTTER
NO SCALE



REVERSE 6" COMBINATION CURB & GUTTER
NO SCALE



REVERSE 7" COMBINATION CURB & GUTTER
NO SCALE

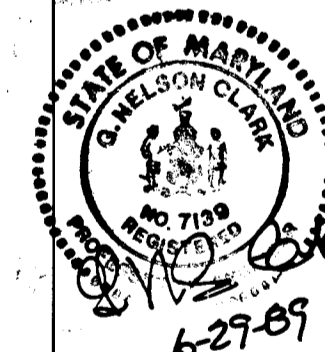


STANDARD 7" COMBINATION CURB & GUTTER
NO SCALE

AS-BUILT

Signature: [Signature]
 E. S. C. T. SHANBERGER
 PROFESSIONAL LS# 10247

SHANBERGER & LANE
 8726 TOWN & COUNTRY BLVD.
 SUITE 107
 ELLICOTT CITY, MARYLAND 21043



ENGINEER'S CERTIFICATE
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Signature: [Signature] Date: 10/16/89

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Signature: [Signature] Date: 11/20/89
 Chief, Land Development Division
 Signature: [Signature] Date: 10/26/89
 Chief, Bureau of Highways
 Signature: [Signature] Date: 11/20/89
 Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

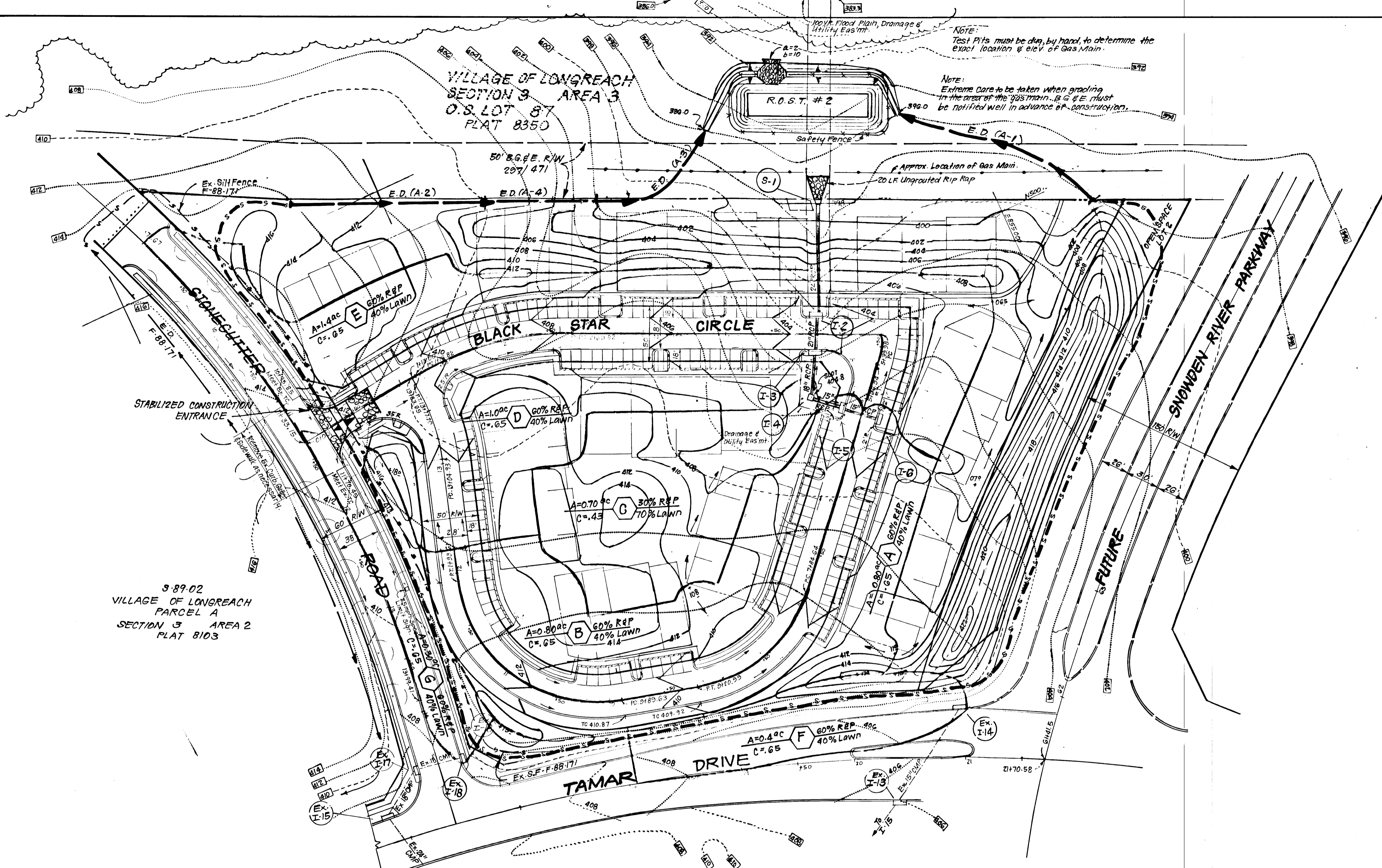
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 Chief, Division of Community Planning & Land Development

CLARK • FINEROCK & SACKETT, INC.
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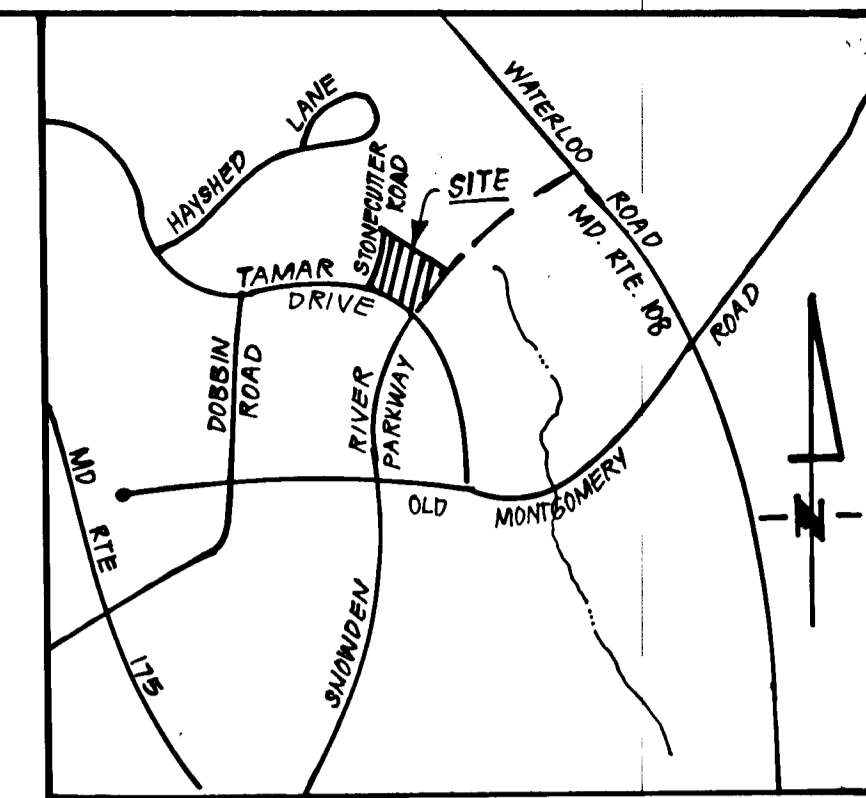
DESIGNED: [Signature]
 DRAWN: [Signature]
 CHECKED: [Signature]
 DATE: 7-24-89

ROAD CONSTRUCTION PLANS
 STORM DRAINAGE & PAVING DETAILS
COLUMBIA
 VILLAGE OF LONGREACH
 SECTION 3 AREA 2
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE: As Shown
 DRAWING: 2 OF 4
 JOB NO: 88-134
 FILE NO: 88-134-D



TRAP #1 R.O.S.T. (ST. VI)
 D.A. = 7.9 Acres
 Storage Required = 14220 CF
 Storage Provided = 14250 CF
 Depth = 5'
 Top of Stone Weir = 392.0
 Bottom Elev. = 386.0
 Clean Out Elev. = 388.5
 Top of Embankment = 396.0
 Bottom Dimensions = 100' x 20'
 a = 2.0' b = 10'
 1:1 Side Slopes



VICINITY MAP
 SCALE: 1"=2000'

LEGEND:

- Existing Contour ———— 410'
- Proposed Contour ———— 410'
- Spot Elevation ———— 410.5'
- Proposed Storm Drain ———— 15" RCP
- Earth Dike ———— ED (A-1)
- Silt Fence ———— S S S S

CONSTRUCTION SEQUENCE:

No. of Days	No. of Days
1. Obtain Permits	7
2. Install all sediment & erosion control measures	15
3. Rough Grade Site	30
4. Install Water, Sewer, Utilities and Storm Drainage	45
Temporarily end 24" RCP as shown on plan	45
5. Construct roadways and install sidewalks	45
6. Fine Grade & Permanently stabilize site	30
7. Flush all storm drains and upon approval of the sediment control inspector, remove sediment and erosion controls. Install remaining 24" RCP and complete outfall; stabilizing immediately.	10

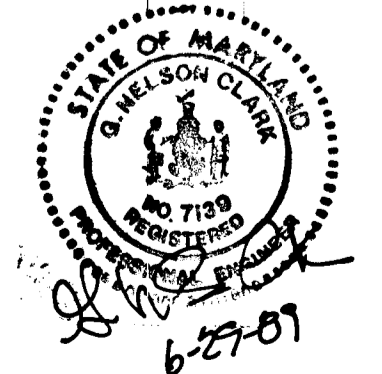
Reviewed for... S.C.D.
 Name: *John L. Robertson*
 Signature: *John L. Robertson*
 U.S. Soil Conservation Service

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 APPROVED DATE

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John L. Robertson 7-17-89
 Signature of Developer/Planner Date



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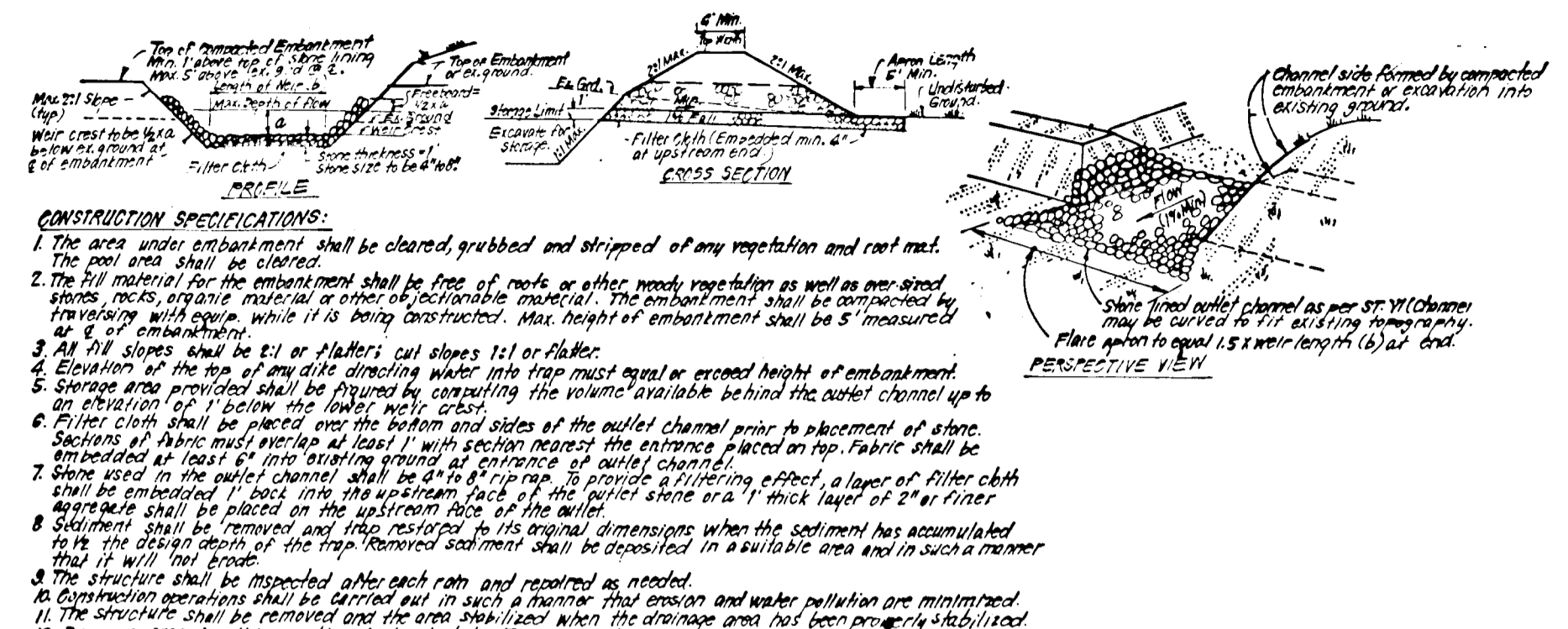
John L. Robertson 6-27-89
 G. Nelson Clark Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Paul D. ... 11/20/89
 Chief, Land Development Division Date
Francis W. Wallace 10/20/89
 Chief, Bureau of Highways Date
... 11/20/89
 Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING.
... 11/20/89
 Chief, Division of Community Planning & Land Development. Date

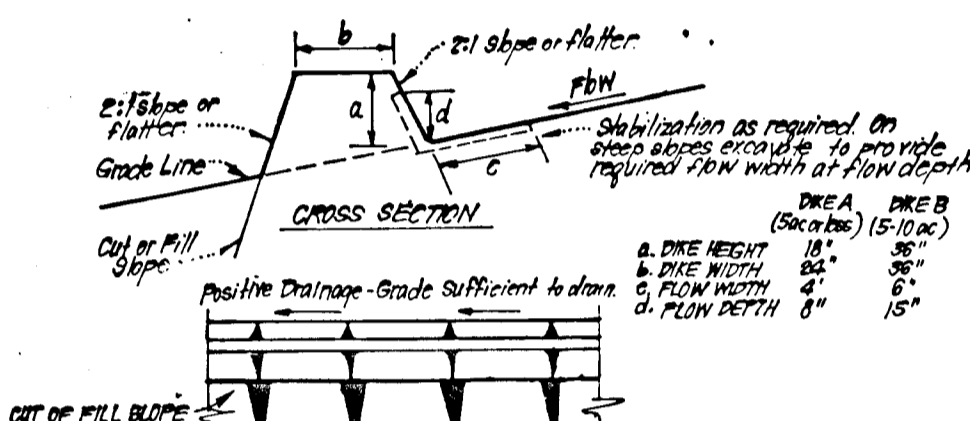
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DESIGNED	ROAD CONSTRUCTION PLANS SEDIMENT & EROSION CONTROL PLAN & DRAINAGE AREA MAP. COLUMBIA VILLAGE OF LONGREACH SECTION 3 AREA 2 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: The Howard Research & Development Land Company 10275 Little Parkway Parkway Columbia, Md. 21044	SCALE
DRAWN		As Shown
CHECKED		3 OF 4
DATE		JOB NO.
7-24-89		88-134
	FILE NO.	88-134-D



CONSTRUCTION SPECIFICATIONS:
 1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The soil area shall be cleared.
 2. The fill material for the embankment shall be free of rocks or other woody vegetation as well as any other debris, rocks, organic material or other objectionable material. The embankment shall be constructed by raking with open, while it is being constructed. Max. height of embankment shall be 5' measured at 6' of embankment.
 3. All fill slopes shall be 2:1 or flatter call slopes 1:1 or flatter.
 4. Elevation of the top of any dike directing water into trap must equal or exceed height of embankment.
 5. Storage area provided shall be located to the interior of the dike behind the outlet channel up to an elevation of 1' below the lowest water level.
 6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be unspliced at least 10' into storage area at entrance of outlet channel.
 7. Stone used in the outlet channel shall be 4" or larger. A coarse filtering effect, a layer of filter cloth shall be embedded 1' back into the upstream face of the outlet stone area 1" thick layer of 2" or finer aggregate shall be placed on the upstream face of the outlet stone area.
 8. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to the design depth of the trap. Filtered sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 9. The structure shall be inspected after each rain and repaired as needed.
 10. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
 11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
 12. Drainage area for this structure is limited to 2 acres.

RIP-RAP OUTLET SEDIMENT TRAP - ST-VI
NO SCALE

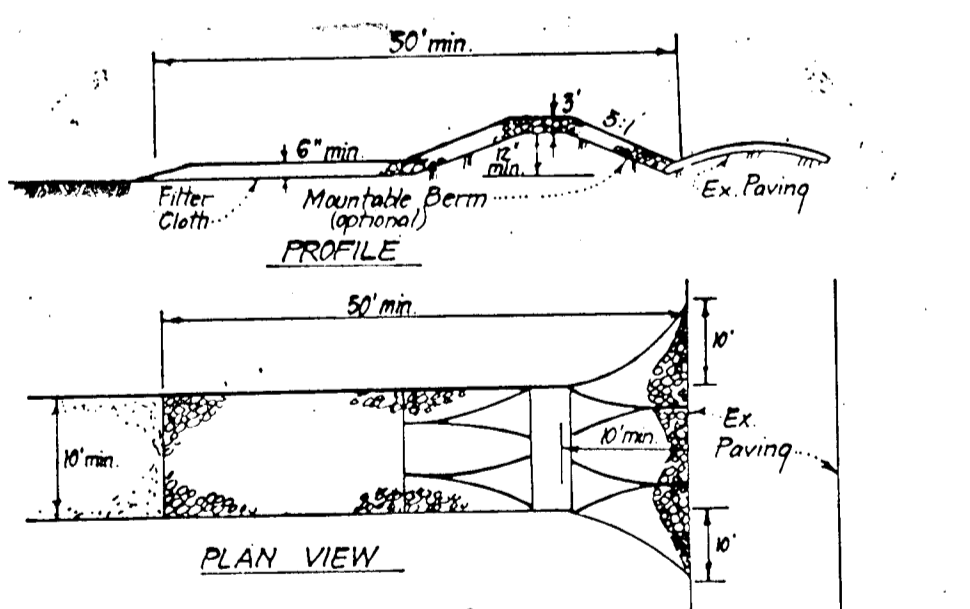


CONSTRUCTION SPECIFICATIONS:
 1. All dikes shall be constructed by earth-moving equipment.
 2. All dikes shall have positive drainage to an outlet.
 3. Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction traffic.
 4. Dike location should be adjusted as needed to utilize a stabilized site outlet.
 5. Earth dikes shall have an outlet that functions with a minimum of erosion. Rip-rap shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where dikes, the dike outlet or the drainage area above the dike are not adequately stabilized.
 6. Stabilization shall be: (A) In accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season, (B) flow channel as per chart below.

TYPE OF TREATMENT	FLOW CHANNEL STABILIZATION	
	DIKE A	DIKE B
1	0.5-3.0% Seed Straw Mulch	Seed or Straw Mulch
2	5.1-10.0% Seed Straw Mulch	Seed or Straw Mulch
3	5.1-10.0% Seed Straw or Sed. Stone	Lined Rip Rap or Sed. Stone
4	11-20.0% Lined Rip Rap or Sed. Stone	Lined Rip Rap or Sed. Stone

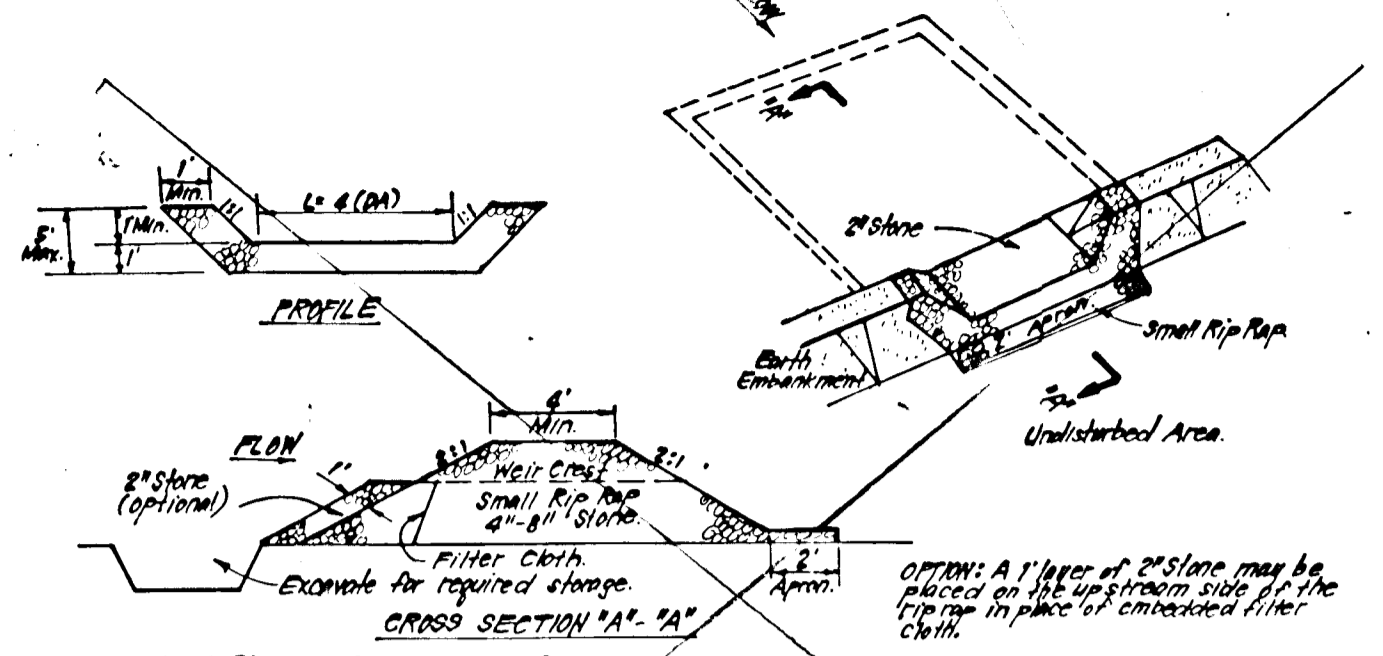
A. Stone to be 2" stone or recycled concrete equivalent, in a layer at least 3" thick and be pressed into soil with construction equipment.
 B. Rip Rap to be 4"-8" in a layer at least 8" thick, pressed into soil.
 C. Approved equivalents can be substituted for any of the above materials.
 7. Periodic inspection and required maintenance must be provided after each rain.

EARTH DIKE DETAIL (E.D.)
NO SCALE



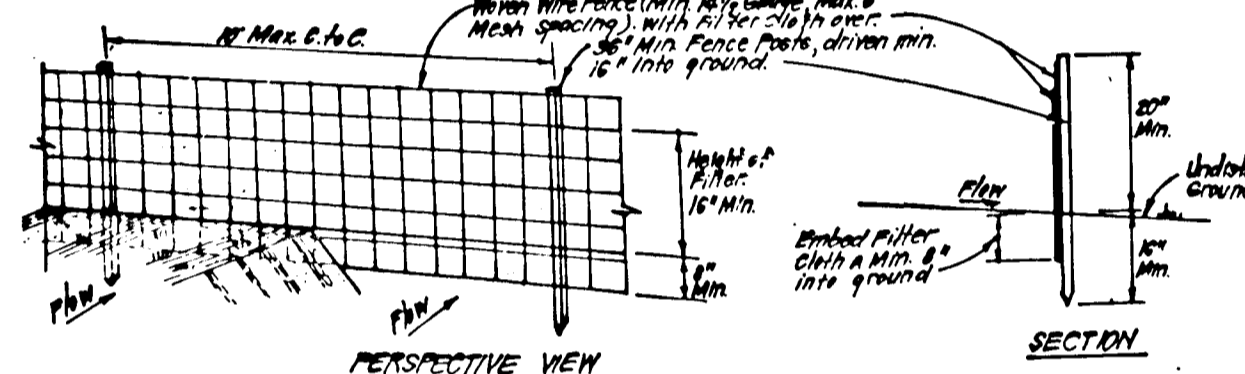
CONSTRUCTION SPECIFICATIONS:
 1. Stone size - Use 2" stone or recycled or equivalent.
 2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
 3. Thickness - Not less than six (6) inches.
 4. Width - Ten (10) foot minimum, but not less than the full width of 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 shall 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 into public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediments shall be cleaned, washed or tracked into public rights-of-way must be removed immediately.
 8. Washing - Wheels shall be cleaned to remove sediment prior to entrance into 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 maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)
NO SCALE



CONSTRUCTION SPECIFICATIONS:
 1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The soil area shall be cleared.
 2. The fill material for the embankment shall be free of rocks and other woody vegetation as well as any other debris, rocks, organic material or other objectionable material. The embankment shall be constructed by raking with open, while it is being constructed.
 3. All fill slopes shall be 2:1 or flatter call slopes 1:1 or flatter.
 4. Elevation of the top of any dike directing water into trap must equal or exceed height of embankment.
 5. Storage area provided shall be located to the interior of the dike behind the outlet channel up to an elevation of 1' below the lowest water level.
 6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be unspliced at least 10' into storage area at entrance of outlet channel.
 7. Stone used in the outlet channel shall be 4" or larger. A coarse filtering effect, a layer of filter cloth shall be embedded 1' back into the upstream face of the outlet stone area 1" thick layer of 2" or finer aggregate shall be placed on the upstream face of the outlet stone area.
 8. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to the design depth of the trap. Filtered sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 9. The structure shall be inspected after each rain and repaired as needed.
 10. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
 11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

STONE OUTLET SEDIMENT TRAP (S.O.ST) ST-V
NO SCALE



CONSTRUCTION SPECIFICATIONS:
 1. When wire fence is to be installed securely to fence posts with wire ties at 6' intervals.
 2. Filter cloth to be fastened securely to wooden wire fence with ties spaced every 6' and 1/2" into ground.
 3. When 2 sections of filter cloth overlap each other, they shall be overlapped by 6" and 1/2" into ground.
 4. Maintenance shall be performed as needed and material removed when "bluffs" develop in silt fence.
 PREPARED UNIT: Geotextile, approved equal.

SILT FENCE DETAIL (S)
NO SCALE

PERMANENT SEEDING NOTES

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

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

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:
 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding.
 Narrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform 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.
 Narrow 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 seed. 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 (10 to 90 lbs/1000 sq ft) of untreated 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, disking or other acceptable means before seeding, if not 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 24 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 seed.

Mulching: Apply 1 1/2 to 2 tons per acre (10 to 90 lbs/1000 sq ft) of untreated 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. (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, 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. 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and (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: 7.10 Acres
 Area Disturbed: 2.13 Acres
 Area to be roofed or paved: 7.88 Acres
 Area to be vegetatively stabilized: 6.12 Acres
 Total Cut: 120.15 Cu. Yds.
 Total Fill: 182.50 Cu. Yds.
 Offsite waste/borrow area location:

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 DWM 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) If houses are to be constructed on an "As-Built" basis, at least a Single Lot Sediment Control as shown below shall be implemented. N/A

12) All pipes to be blocked at the end of each day (see detail below). N/A

13) The total amount of straw bale dikes/silt fence equals 1550 L.F.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
 [Signature] Chief, Land Development Division 11/20/89 Date
 [Signature] Chief, Bureau of Highways 10/26/89 Date
 [Signature] Chief, Bureau of Engineering 11/20/89 Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING.
 [Signature] Chief, Division of Community Planning & Land Development 11/20/89 Date

CLARK • FINEPROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINISTREL WAY • COLUMBIA, MD 21046 • (301) 381-7100 - BALTO • (410) 671-8100 - WASH

DESIGNED	R/KWM	SCALE	As Shown
DRAWN	R/KWM	DRAWING	4 OF 4
CHECKED	JLS	JOB NO.	88-134
DATE	7-24-89	FILE NO.	88-134-D

FOR: The Howard Research & Development Land Company
 10275 Little Patuxent Parkway
 Columbia, Md. 21044

DEVELOPER'S/BUILDER'S CERTIFICATE

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.

[Signature] 7-17-89 Date

ENGINEER'S CERTIFICATE

I hereby 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.

[Signature] 6-29-89 Date

Reviewed for Howard S.C.D.
 [Signature] 10/16/89 Date
 U.S. Soil Conservation Service

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

[Signature] 10/16/89 Date

