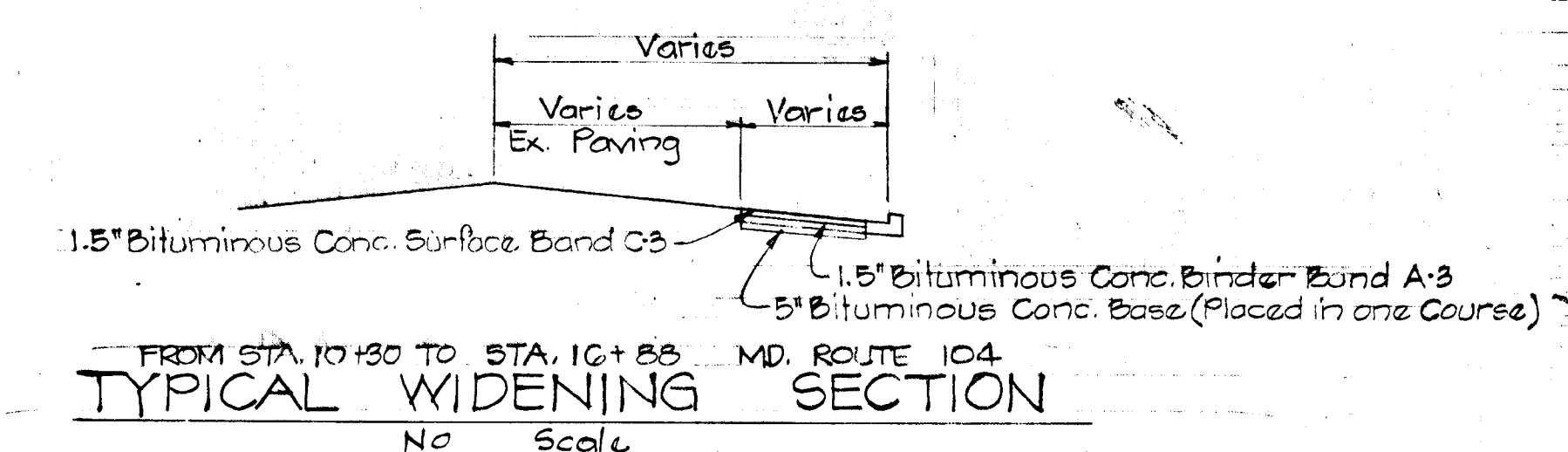
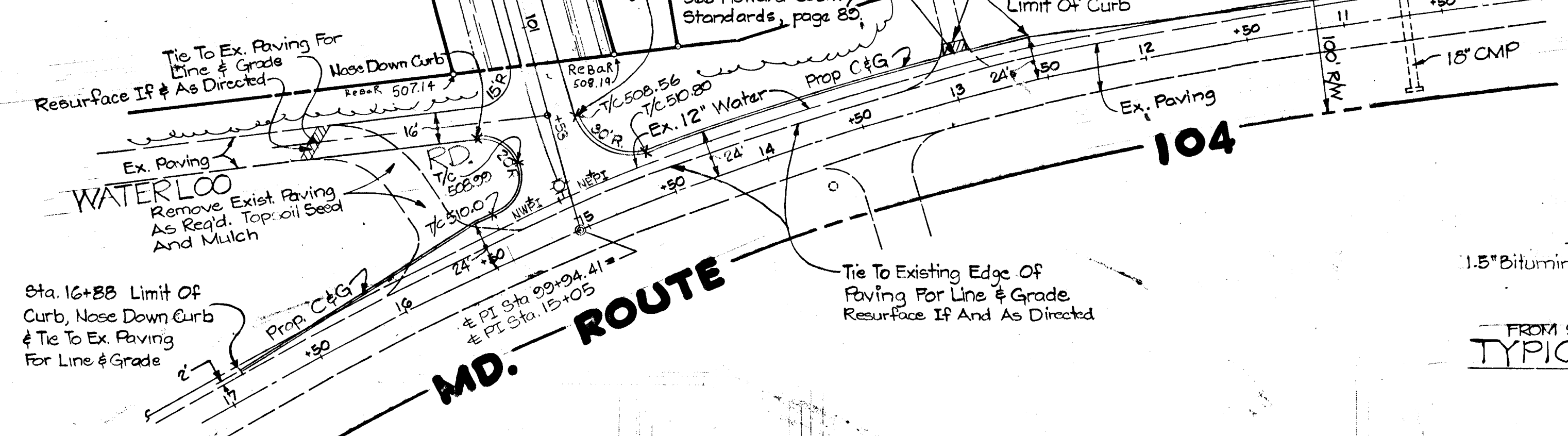
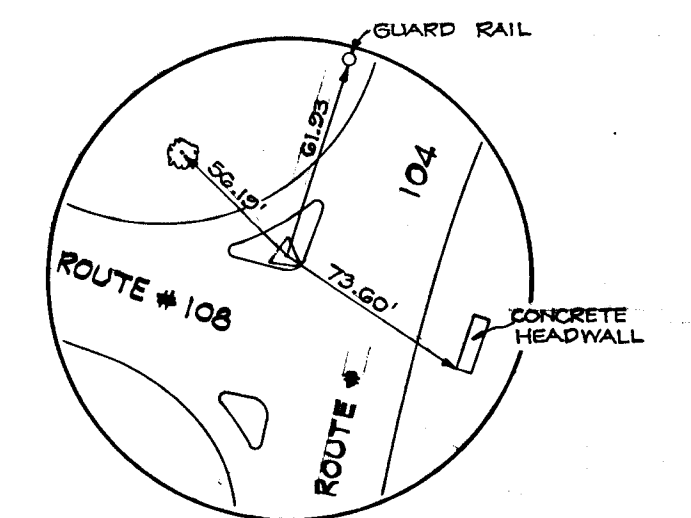
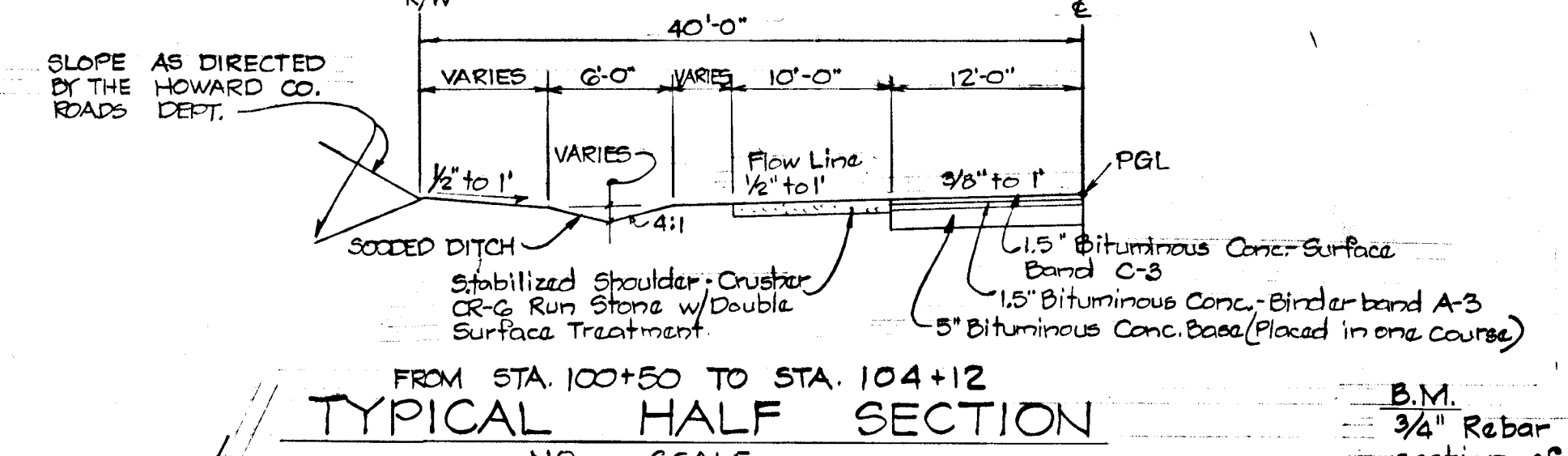


For Continuation of Plan & Profile
See Sheet 2 of 6 Dwa #

Prop. 4' Sidewalk
Prop. 24' Paving
Future 44' Paving
80' R/W

WATERLOO WAY
OAK RUN

Curve Data:
Sta. 99+24.41 to 111+90.41
 $\Delta = 03^\circ 58' 46''$
 $R = 17,139.48'$
 $L = 1,190.41'$
 $T = 525.44'$
CHORD = 539° 53' 30" E 1,190.17'



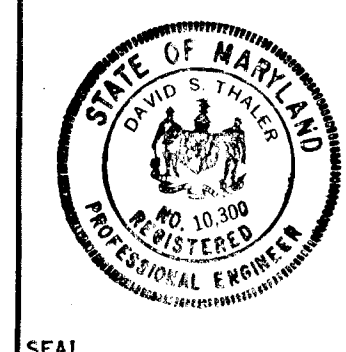
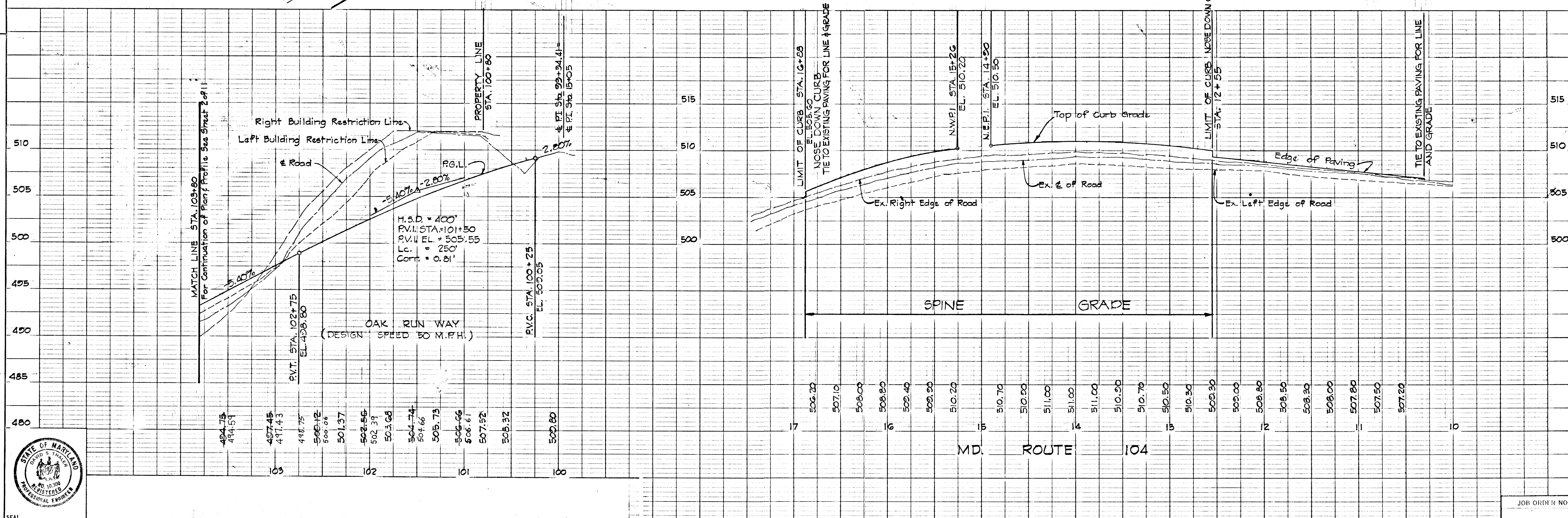
Reviewed for Howard S.C.D. and meets technical Requirements.
Winston Burdette 9-17-79
Signature Date
U.S. Soil Conservation Service

DEVELOPER'S CERTIFICATE
I Certify that all development and/or construction will be done according to this plan of development and plan for Erosion & Sediment Control, and I also authorized periodic on site inspection by the Howard Soil Conservation District or their authorized agents is as deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

The O'Brien Company
By O'Brien & Sembrally, Inc. 10/15/78
Signature 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] 10-22-79
Signature Date



DESIGNED: J.E.P. D.S. THALER & ASSOC., INC.
DRAWN: S.A.F. ENGINEER
CHECKED: W.L.D. DATE: 10/11/79 C. NO. 10,300

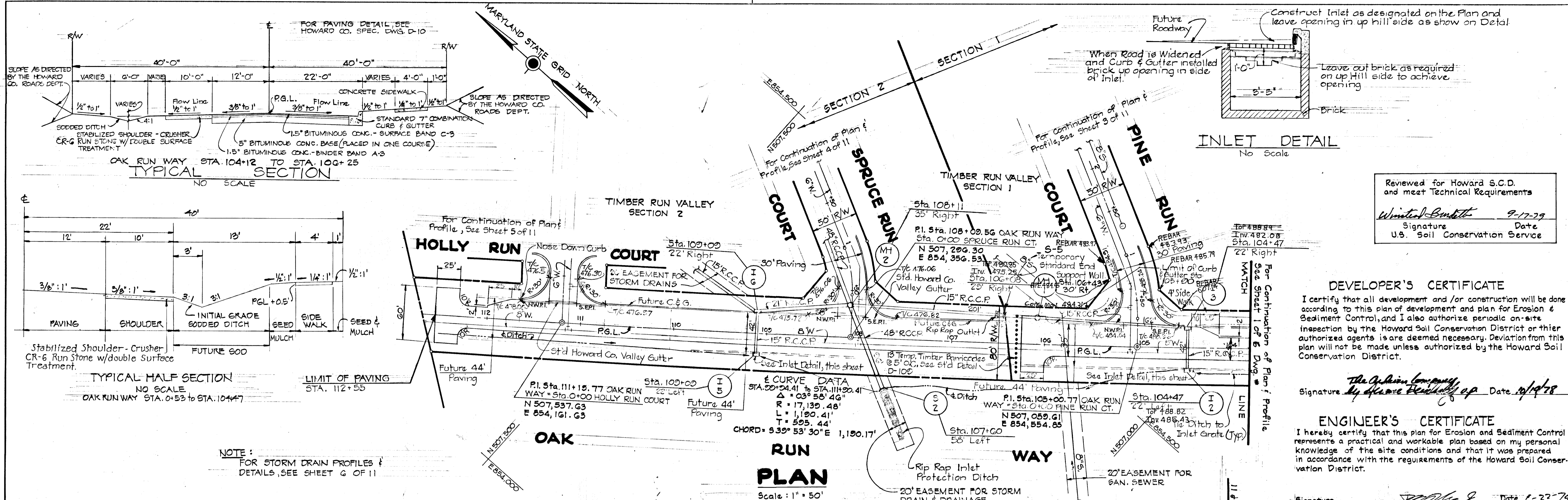
APPROVED: DEPARTMENT OF PUBLIC WORKS
W.O. Poff
CHIEF, BUREAU OF ENGINEERING
DATE: 10-26-79

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 10-27-79

SCALE: 1" = 50'
PLAN: 1" = 50'
PROFILE: HOR. 1" = 50', VERT. 1" = 5'

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
SECTION 1
OAK RUN WAY & MD. ROUTE 104
SUBDIVISION: TIMBER RUN VALLEY SECTION 1
EL. DISTRICT NO. 2
AS Bldg 2/9/81 J.C.

JOB ORDER NO. _____
SHEET 1 of 6
FILE: _____



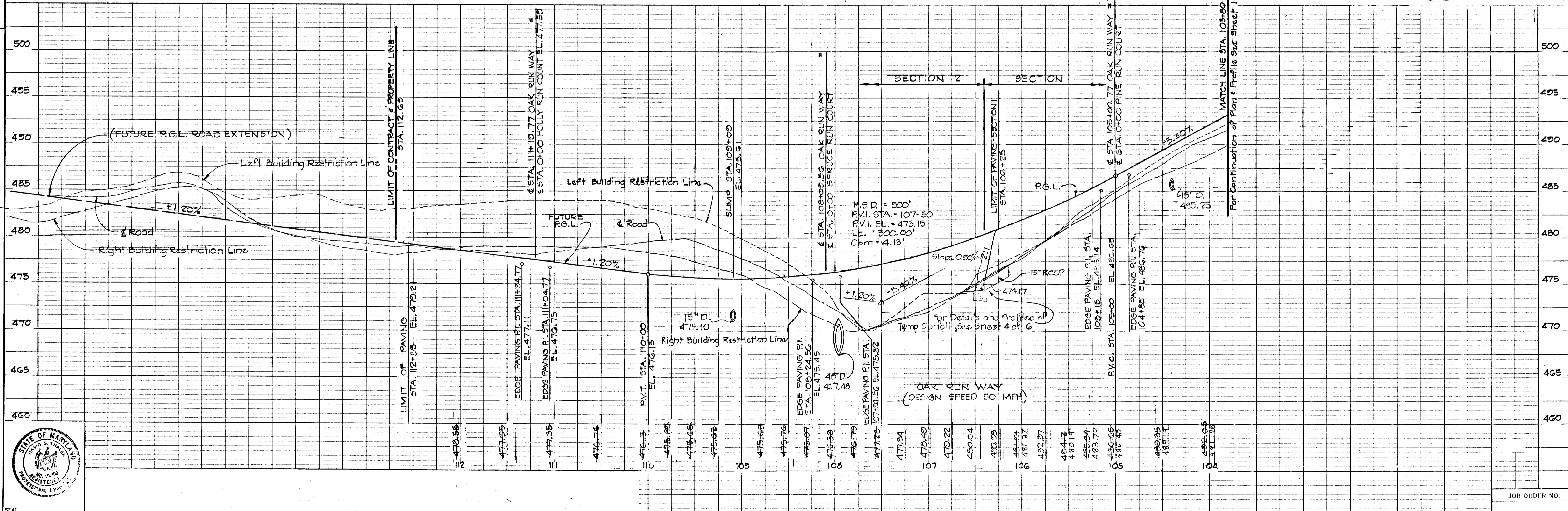
Reviewed for Howard S.C.D. and meet Technical Requirements
W. J. Smith 9-17-79
 Signature Date
 U.S. Soil Conservation Service

DEVELOPER'S CERTIFICATE
 I certify that all development and/or construction will be done according to this plan of development and plan for Erosion & Sediment Control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents is deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

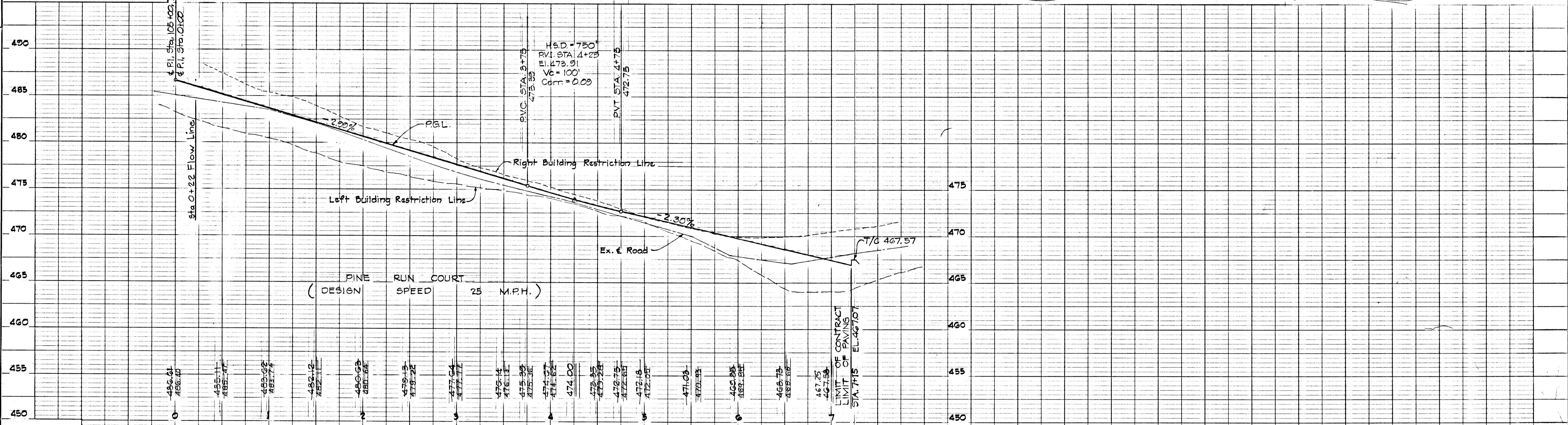
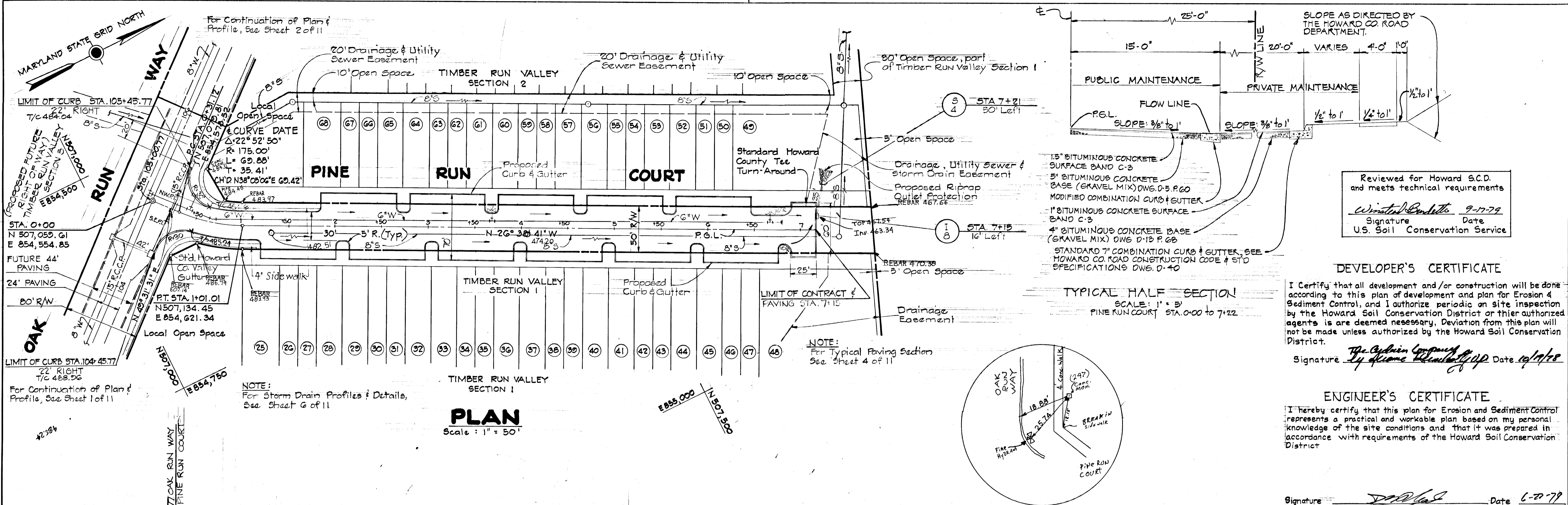
The Oak Run Company
 Signature *Myelore H. H. H. H. H.* Date *10/1/79*

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.

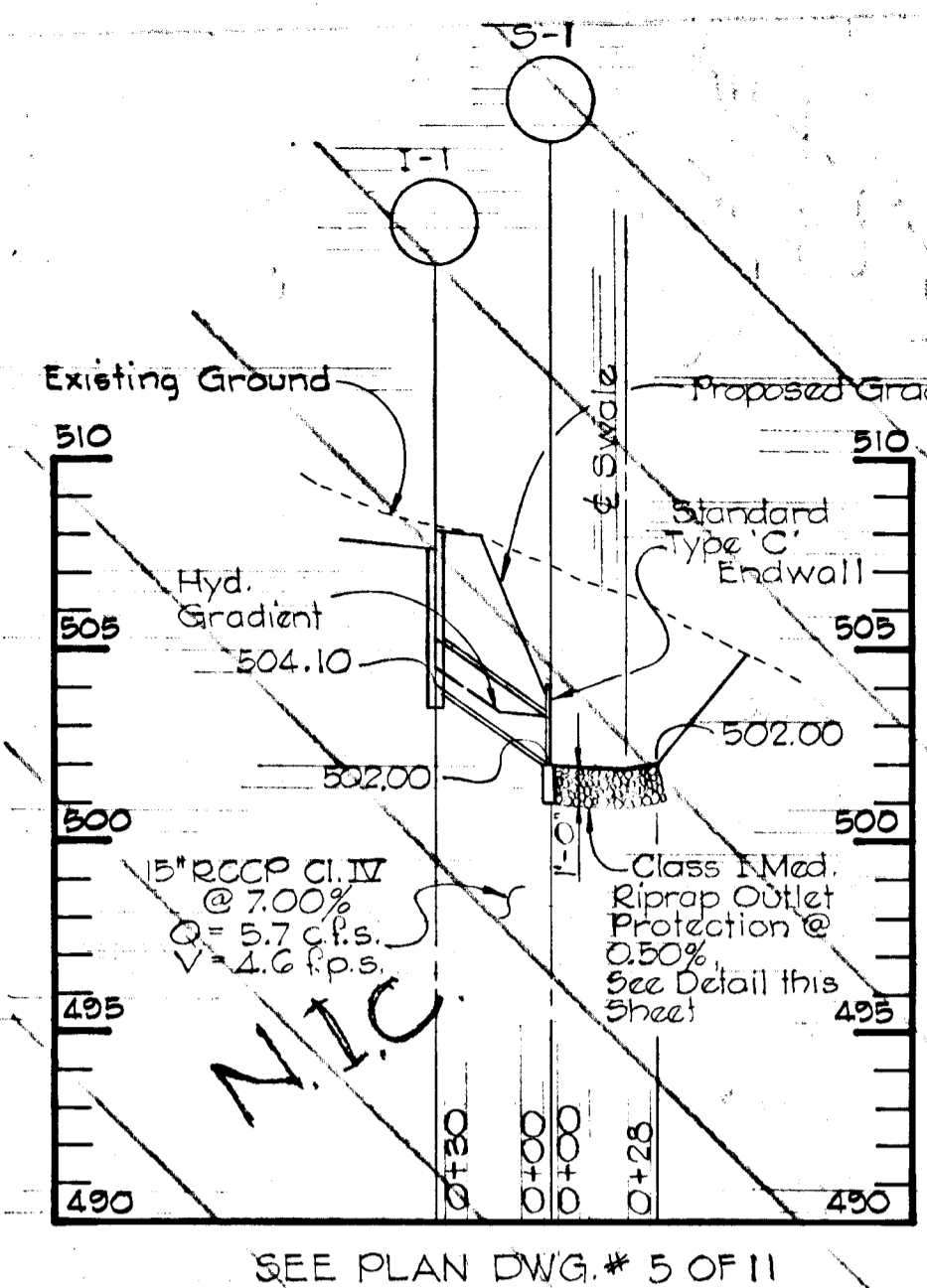
W. J. Smith Date *10-22-79*



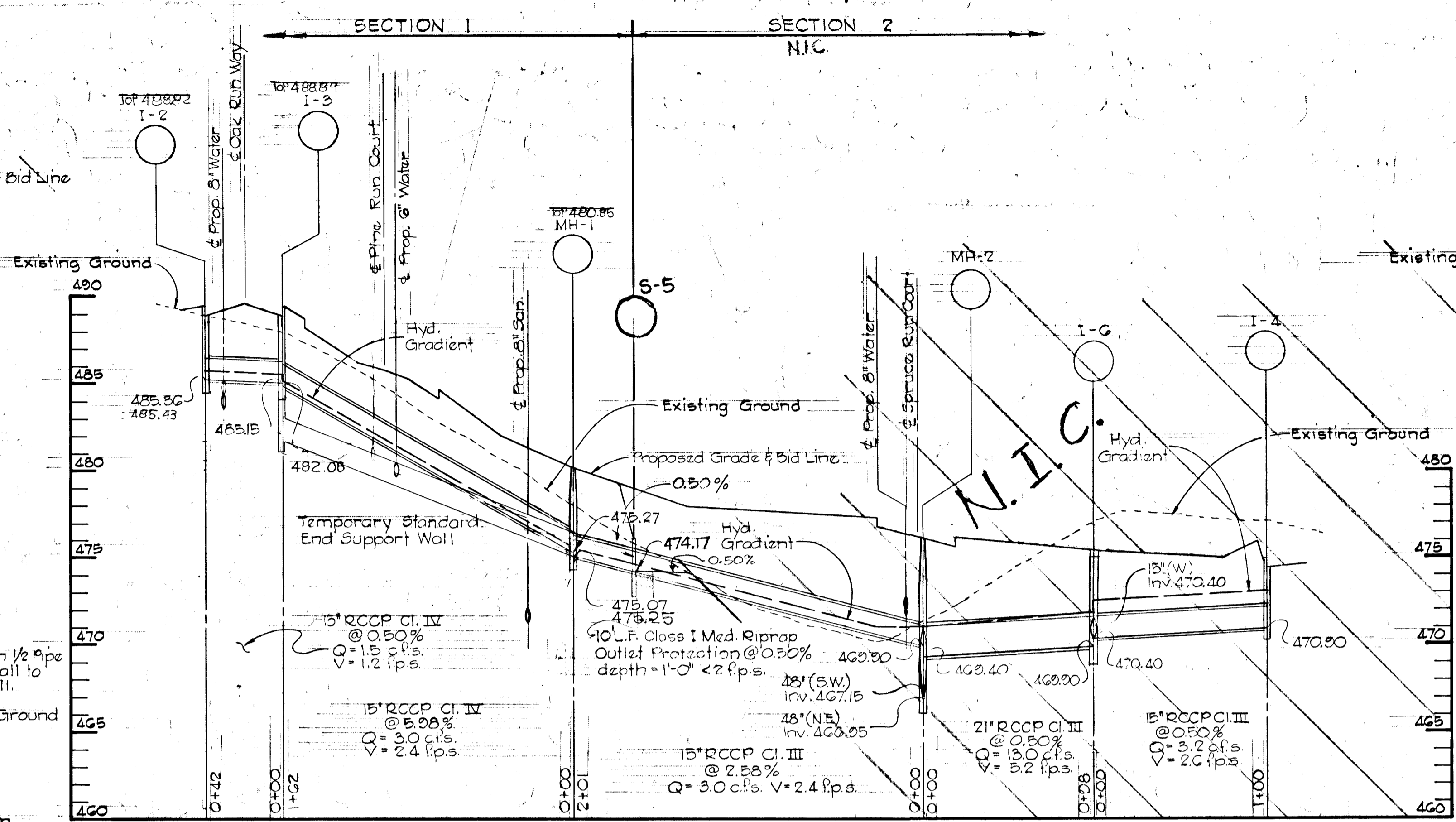
DESIGNED: J.E.P.	DS. THALER & ASSOC., INC.	APPROVED: DEPARTMENT OF PUBLIC WORKS	APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING	SCALE: 1" = 50'	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	JOB ORDER NO.
DRAWN: S.A.F.	ENGINEER: <i>W. J. Smith</i>	DATE: 10-26-79	DATE: 10-27-79	PLAN: 1" = 50'	SECTION 1	SHEET 2 OF 6
CHECKED: W.L.D.	CHIEF, BUREAU OF ENGINEERING	DATE: 10-26-79	CHIEF, DIVISION OF LAND DEVELOPMENT	PROFILE: HOR 1" = 50', VERT 1" = 5'	OAK RUN WAY	DWG. NO.
SEAL: [Professional Engineer Seal]					SUBDIVISION: TIMBER RUN VALLEY SECTION 1	FILE:
					AS BUILT 3/10/81	



	DESIGNED: J.E.P.	APPROVED: DEPARTMENT OF PUBLIC WORKS	APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING	SCALE: 1" = 50'	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS SECTION 1 PINE RUN COURT SUBDIVISION: TIMBER RUN VALLEY SECTION 1 AS BUILT	JOB ORDER NO.
	DRAWN: S.A.F.	CHIEF, BUREAU OF ENGINEERING	CHIEF, DIVISION OF LAND DEVELOPMENT	PLAN: 1" = 50' PROFILE: HOR. 1" = 50' VERT. 1" = 5'		SHEET 3 OF 6
CHECKED: W.L.D.	DATE: 9/1/79 LIC. NO. 10,300	DATE: 10-26-79	DATE: 10-28-79	FILE:		

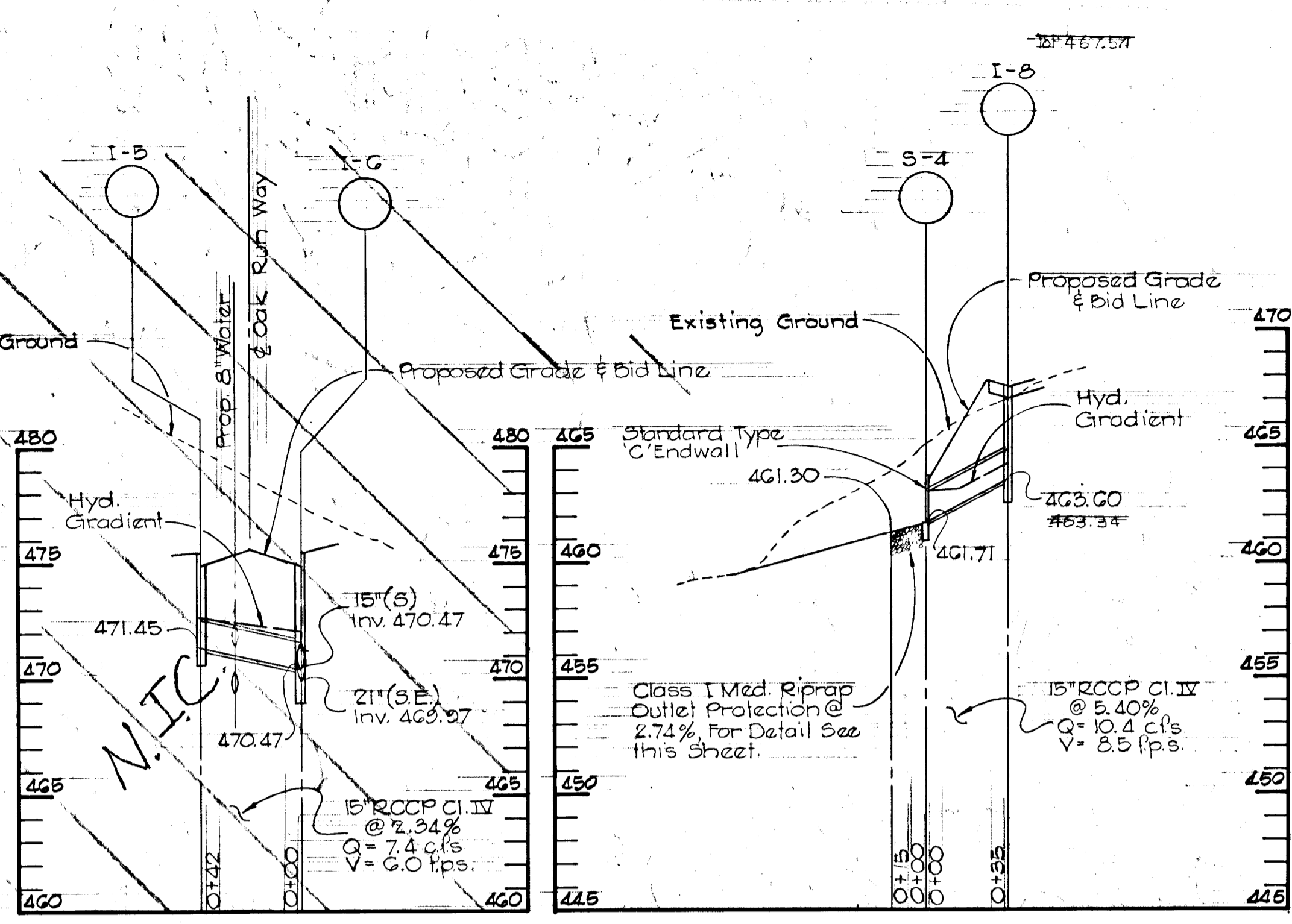


SEE PLAN DWG. # 5 OF 11



SEE PLAN DWG. # 2 OF 11

SEE PLAN DWG. # 5 OF 11



SEE PLAN DWG. # 2 OF 11

SEE PLAN DWG. # 3 OF 11

**S-1, S-3 & S-4 & S-5
OUTLET PROTECTION DETAIL**
NO SCALE

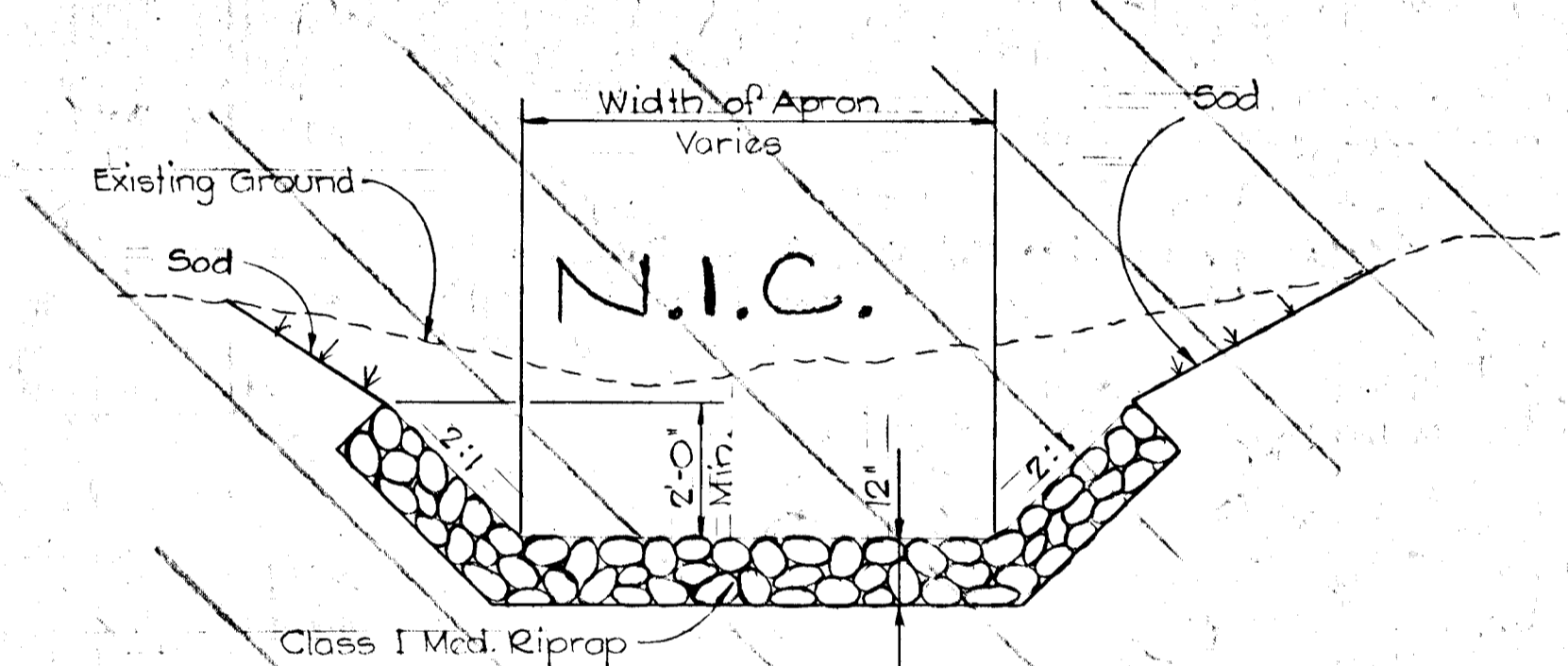
STRUCTURE SCHEDULE				
NO.	TYPE	SIZE	TOP ELEV.	INV. ELEV.
S-1	C	15"	504.00	502.00
S-2	B	48"	473.00	468.00
S-3	C	42"	460.50	455.00
S-4	C	15"	463.71	461.71
S-5	*	15"	476.17	474.17

* Temp. Std. End Support Wall

MANHOLE SCHEDULE				
NO.	TYPE	SIZE	INV. OUT.	TOP ELEV.
M-1	3/4"	36"	475.07	480.4
M-2	3/4"	48"	466.95	476.0

INLET SCHEDULE				
NO.	TYPE	Q	INV. OUT.	TOP ELEV.
I-1	A-E	1.3	464.10	507.64
I-2	WR	1.5	483.95	488.91
I-3	WR	1.5	484.95	488.91
I-4	A-E	3.2	470.60	474.43
I-5	WR	7.4	471.45	474.25
I-6	A-E	2.9	469.20	474.25
I-7	A-10	7.7	461.35	470.24
I-8	A-10	10.4	453.60	467.10

* MODIFIED DOUBLE GRATE TANDEM



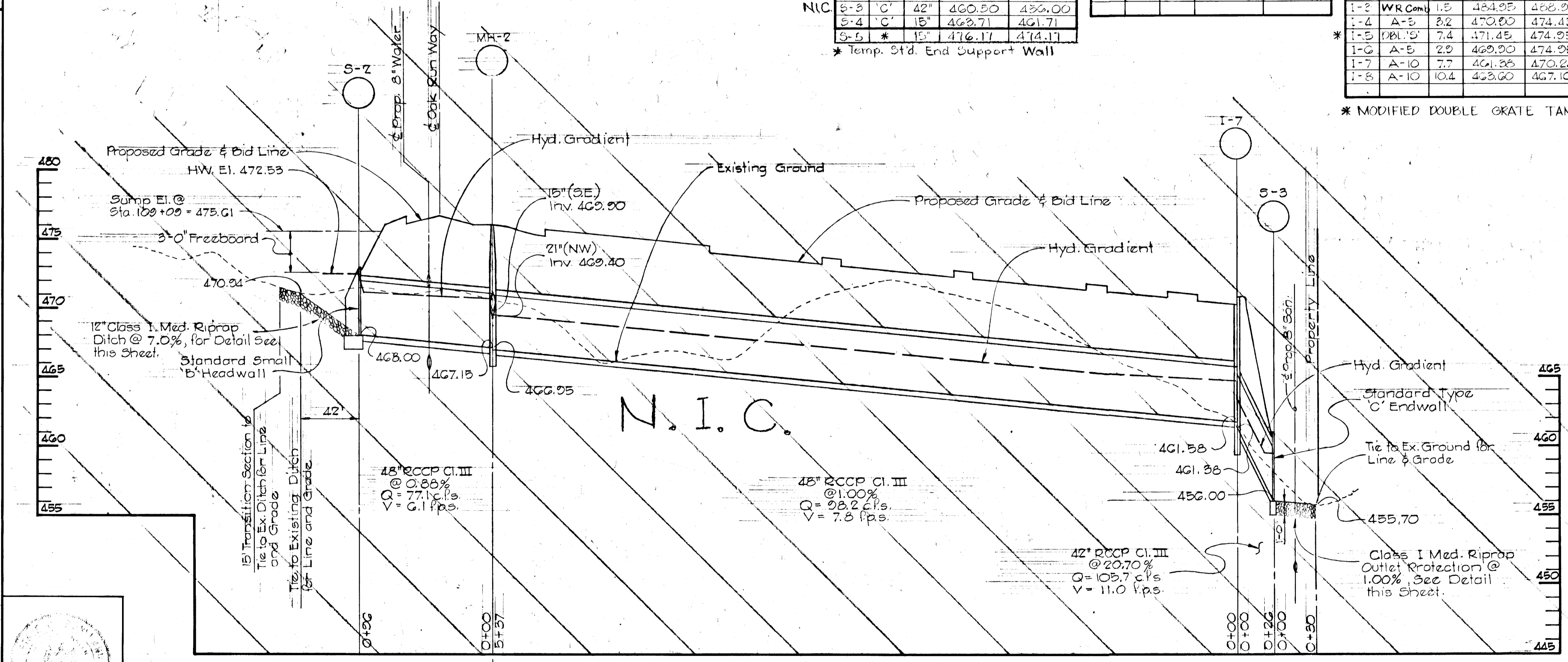
**S-2
INLET DITCH DETAIL**
NO SCALE

DEVELOPER'S CERTIFICATE
I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

Signature: *The Redwing Company*
By: [Signature] Date: 10/19/78

ENGINEERS 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: *[Signature]* Date: Nov. 10, 1978

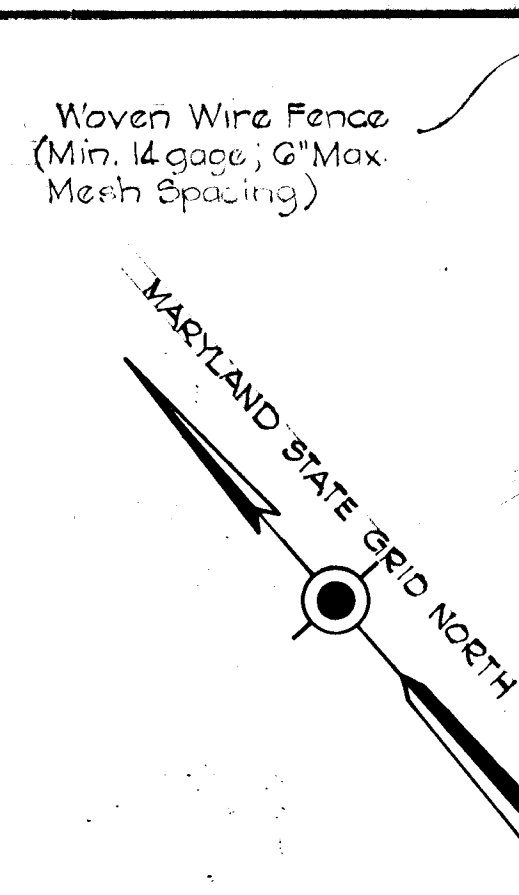
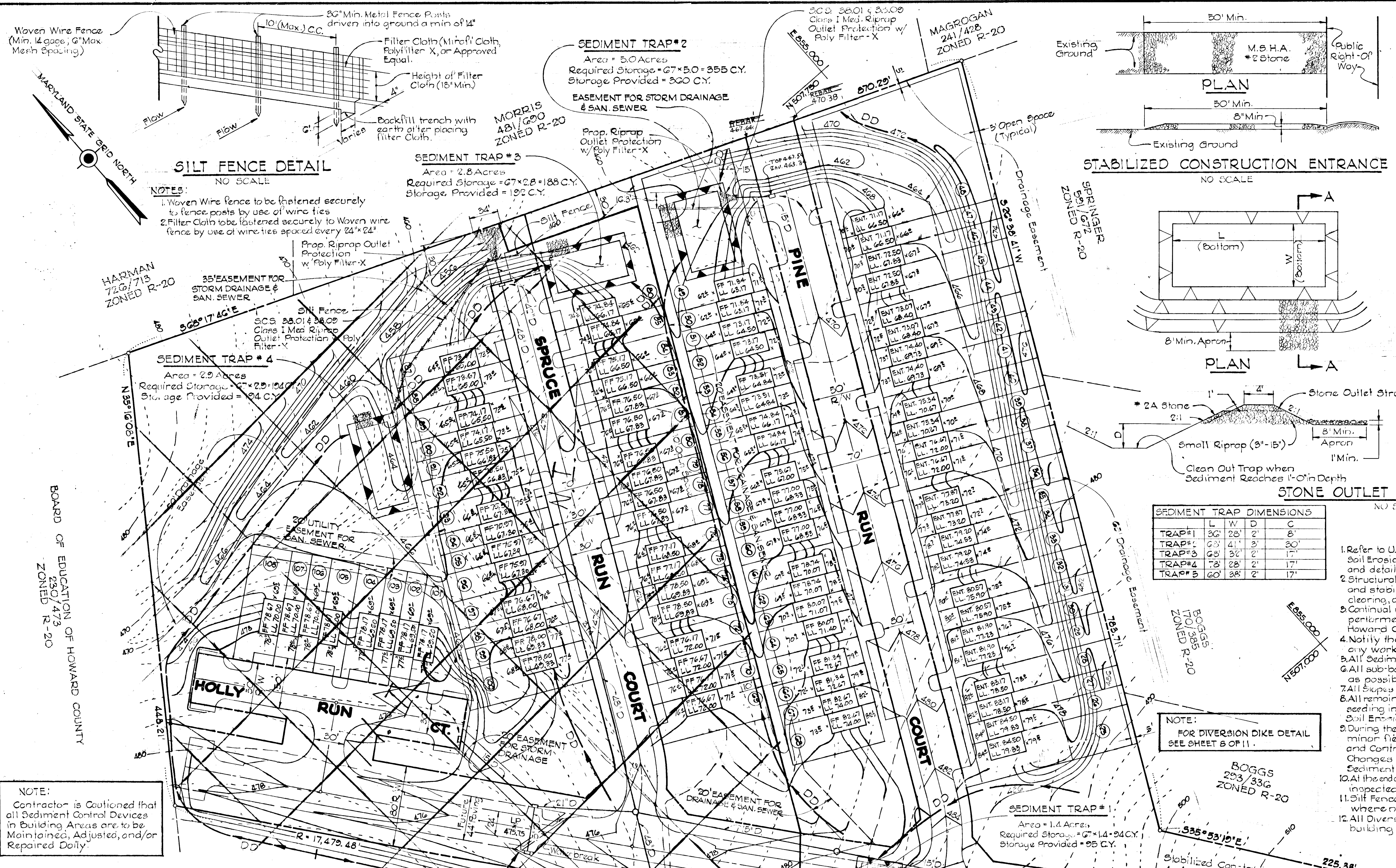


SEE PLAN DWG. # 2 OF 11

SEE PLAN DWG. # 4 OF 11

NOTE:
1. FOR PLANS AND LOCATIONS OF STORM DRAINS, SEE ROAD PLAN & PROFILES SHEETS 1 THRU 3 OF 6.

#796



SILT FENCE DETAIL
NO SCALE

NOTES:
1. Woven Wire Fence to be fastened securely to fence posts by use of wire ties
2. Filter Cloth to be fastened securely to Woven wire fence by use of wire ties spaced every 24" x 24"

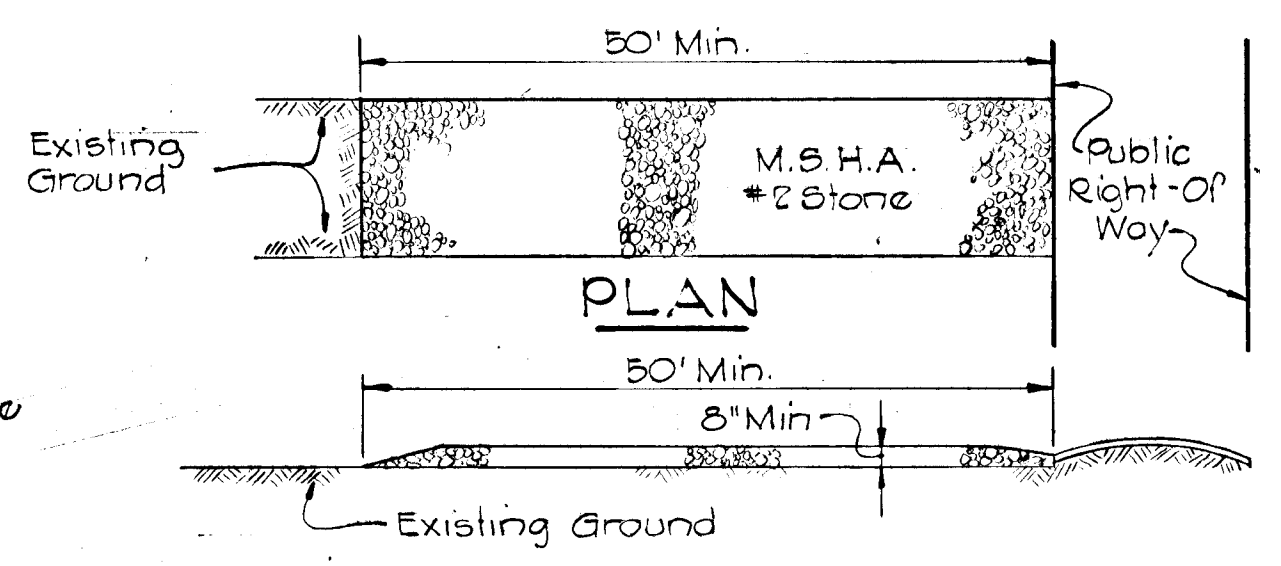
SEDIMENT TRAP #2
Area = 5.0 Acres
Required Storage = 67 x 5.0 = 335 C.Y.
Storage Provided = 300 C.Y.

EASEMENT FOR STORM DRAINAGE & SAN. SEWER

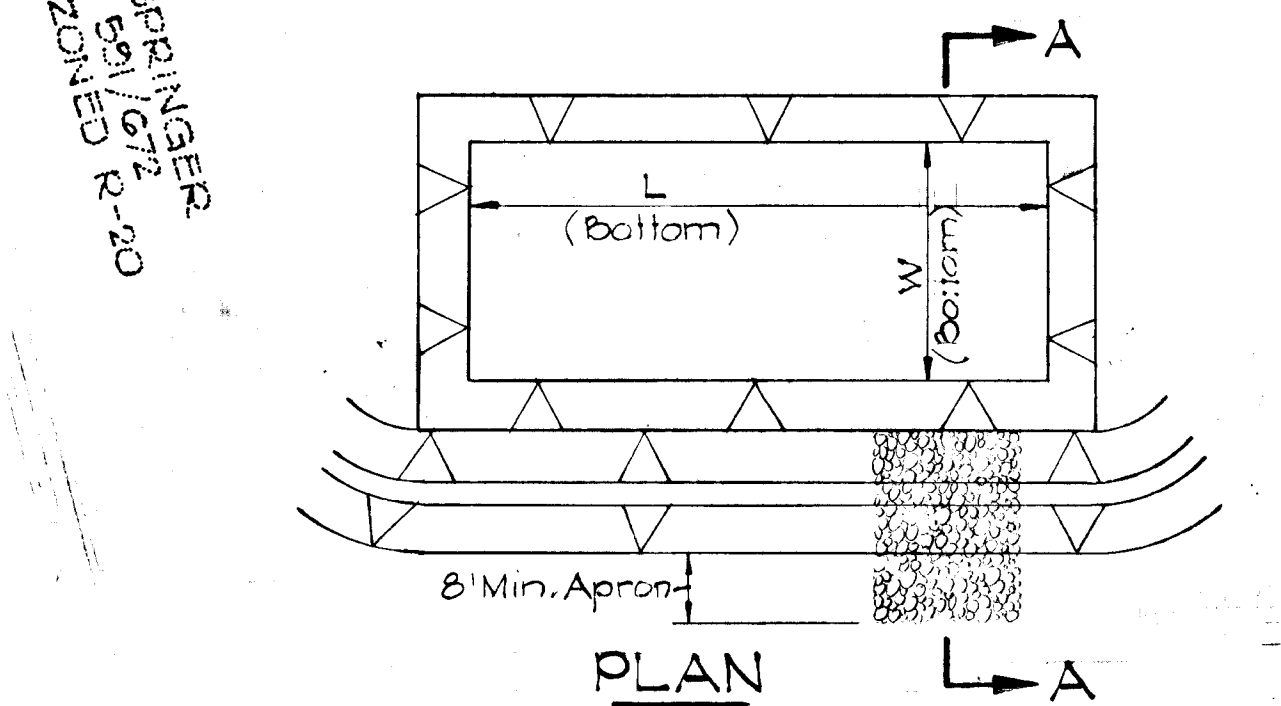
Prop. Riprap Outlet Protection w/ Poly Filter-X

SEDIMENT TRAP #3
Area = 2.8 Acres
Required Storage = 67 x 2.8 = 188 C.Y.
Storage Provided = 192 C.Y.

SEDIMENT TRAP #4
Area = 2.9 Acres
Required Storage = 67 x 2.9 = 194 C.Y.
Storage Provided = 194 C.Y.



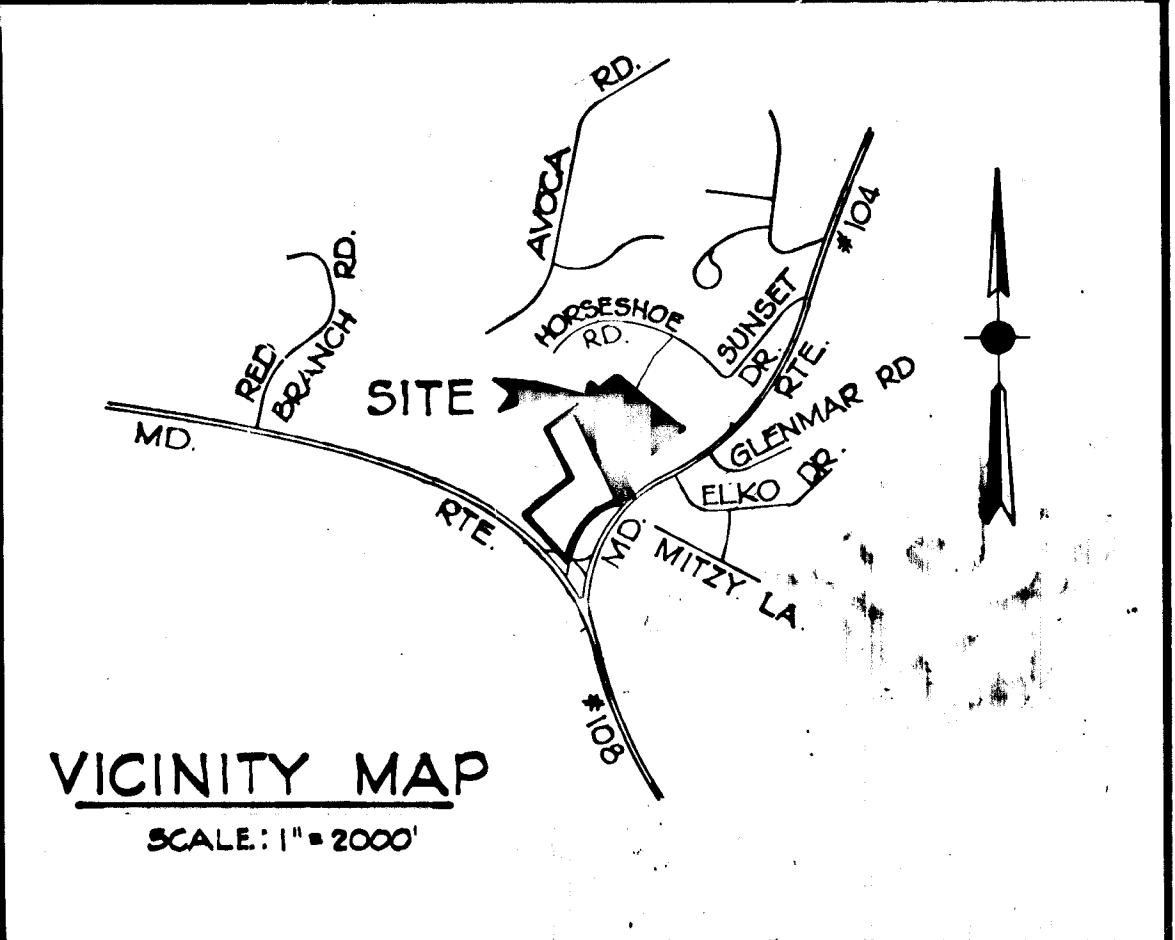
STABILIZED CONSTRUCTION ENTRANCE
NO SCALE



STONE OUTLET SEDIMENT TRAP
NO SCALE

SEDIMENT TRAP DIMENSIONS

TRAP #	L	W	D	C
TRAP #1	30'	28'	3'	8'
TRAP #2	63'	41'	3'	20'
TRAP #3	63'	32'	2'	17'
TRAP #4	78'	28'	2'	17'
TRAP #5	60'	38'	2'	17'



PERMANENT SEEDING SPECIFICATIONS

1. Lime - M.S.H.A. Section 20.05-3 @ 2500 lbs./Acres
2. Fertilizer shall be Commercial Chemical 10-10-10 @ 500 lbs./Acres, if required.
3. Seed shall be Kentucky 31 Fescue - M.S.H.A. 20.28-1 @ 60 lbs./Acres
4. Mulch - M.S.H.A. 20.29-2 or 20.29-3 @ 1 1/2 Tons./Acres
5. Asphalt binder shall be designation AE-4 or AE-3 M.S.H.A. 20.12-1 @ 1/2 Gallon./Sq. Yd.
6. All Lime, Fertilizer, Seed, Mulch and binder shall be in accordance with M.S.H.A. Sections 30.04-3 and 30.05-3

GENERAL NOTES

1. Refer to U.S.D.A. - Soil Conservation Service standards and specifications for Soil Erosion and Sediment Control in developing areas for standard details and detailed specifications of each practice specified hereon.
2. Structural Measures, such as berms, dikes, traps, basins, etc. will be installed and stabilized according to this plan prior to any other grading, clearing, or disturbances of the existing surface of the site.
3. Continual inspection and maintenance of Sediment Control facilities will be performed until permission for their removal has been obtained from the Howard County Soil Conservation Inspector.
4. Notify the Howard Co. Soil Conservation at least 48 Hours before starting any work.
5. All Sediment Control measures to be adjusted to meet field conditions.
6. All sub-base material and Storm Drain Systems to be installed as soon as possible after subgrading operations.
7. All slopes steeper than 3:1 shall be stabilized with sod as soon as possible.
8. All remaining disturbed areas, not to be paved shall be stabilized with permanent seeding in accordance with pg. 31.01 of the standards & specifications for Soil Erosion & Sediment Control in developing Areas.
9. During the layout of Sediment Control practices required on the plan, minor field adjustments can and will be made to insure the arrest and control of any sediment before it leaves the construction site. Changes in Sediment Control practices require prior approval of the Sediment Control Inspector and the Howard Co. Soil Conservation District.
10. At the end of each working day, all Sediment Control practices will be inspected or left in operational condition.
11. Silt Fence shall be periodically inspected and replaced when and where necessary as deemed by the Sediment Control Inspector.
12. All Diversion Dikes, Interceptor Swales, and water breaks in building areas are to be maintained, adjusted and/or repaired Daily.

SEQUENCE OF OPERATION

- | | |
|---------|--|
| Feb. | 1. Notify Howard Co. Department of permits and Licenses. |
| Feb. | 2. Sediment Control Inspector at least 48 hours before work begins. |
| * March | 3. Install and stabilize all Sediment Control measures. |
| April | 4. Clear and grub site and Stockpile Topsoil. |
| May | 5. Rough Grade site. |
| June | 6. Fine Grade and place sub-base on all Streets. |
| July | 7. Stabilize all disturbed soil outside of building Constr. Area. |
| Aug. | 8. Stabilize remainder of site. |
| Aug. | 9. Remove temporary Sediment Control measures and Stabilize Area after obtaining permission from Sediment Control Inspector. |

* UTILITIES MAY BE INSTALLED AFTER THIS POINT
NOTE: IF Project is stopped due to weather the entire graded site will be Mulched & Stabilized with liquid asphalt.

SEDIMENT CONTROL PLAN
SECTION I
TIMBER RUN VALLEY
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
DECEMBER 28, 1978
TAX MAP 31 PARCEL 302
LIBER 754 FOLIO 671
SHEET 5 OF 6

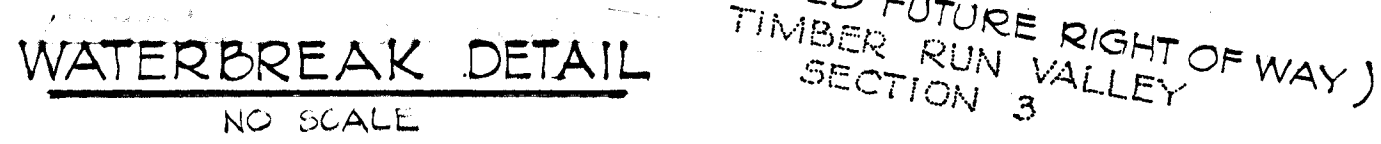
NOTE:
Contractor is Cautioned that all Sediment Control Devices in Building Areas are to be Maintained, Adjusted, and/or Repaired Daily.

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
W.O. Patten 10-26-79
CHIEF, BUREAU OF ENGINEERING
DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER
DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR
William J. Rouse 10-27-79
CHIEF, DIVISION OF LAND DEPARTMENT
DATE

ENGINEERS
D. S. THALER & ASSOCIATES
3800 CLARKS LANE
BALTIMORE, MARYLAND 21215



WATERBREAK DETAIL
NO SCALE

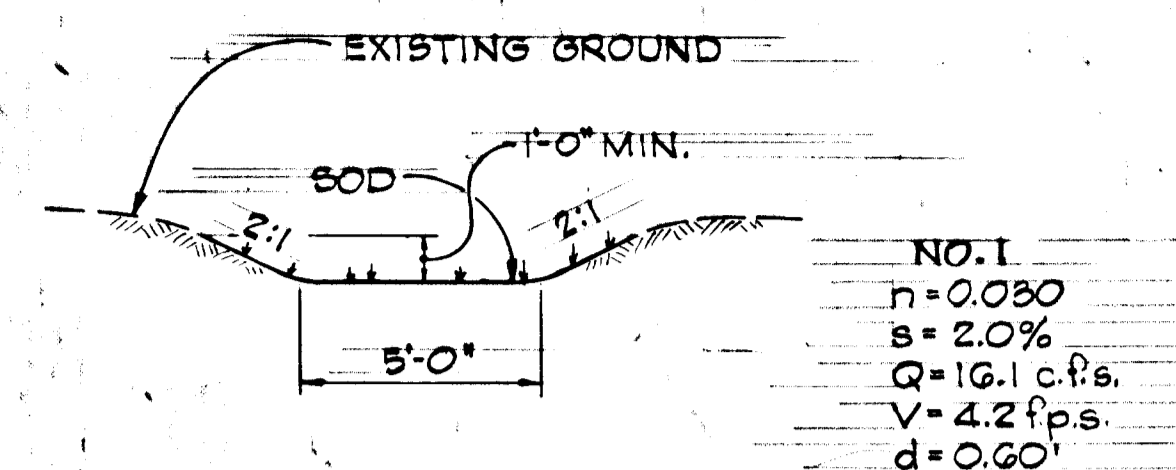
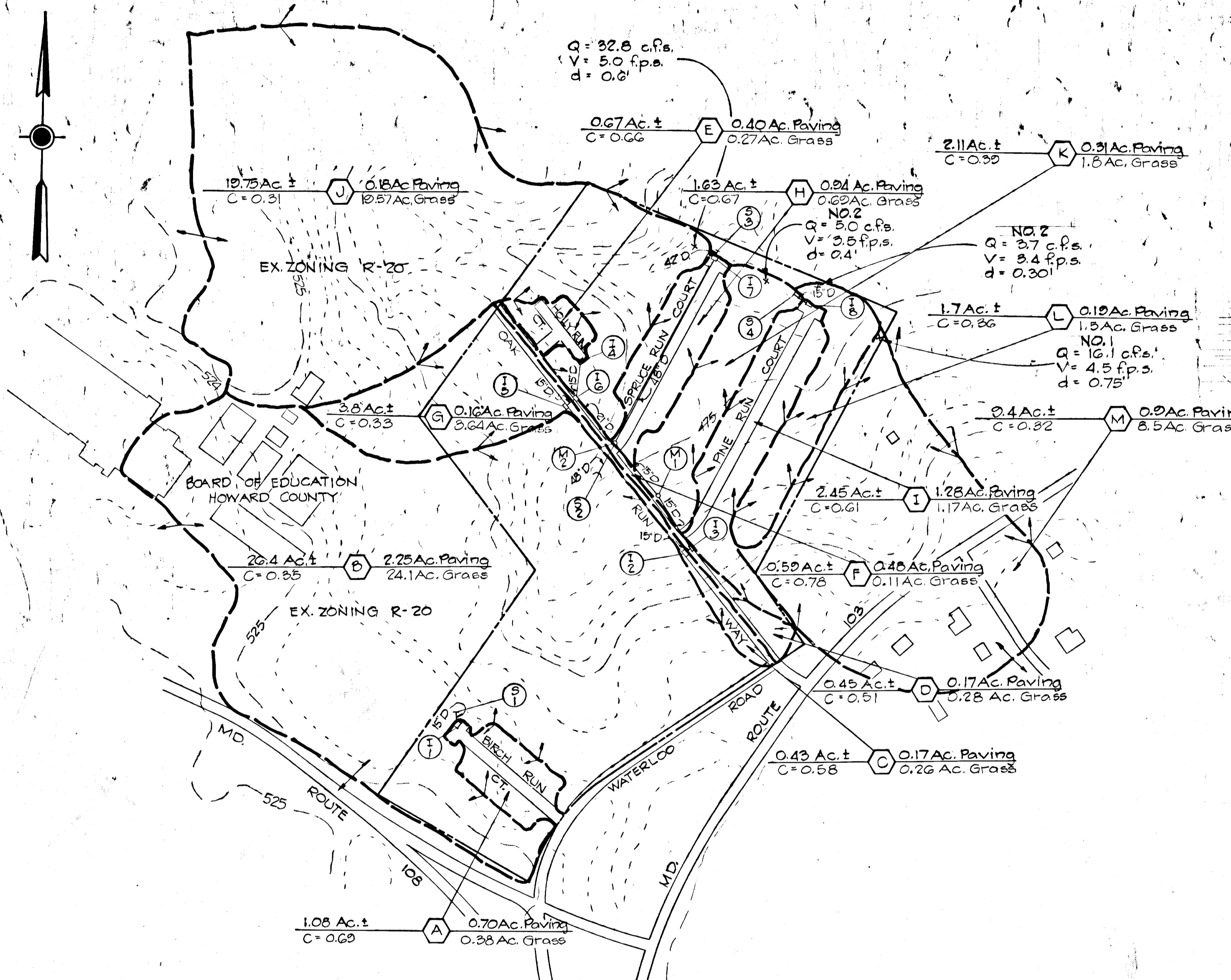
- NOTES:**
1. The waterbreak is installed 30°-45° down slope.
 2. The outlet end is open and extends beyond the surface of the road.
 3. The depth is at least 12 inches below the road surface.
 4. The inlet end extends into the side ditch or cut slope.

Reviewed for **HOWARD** S.C.D. Name
and meets Technical Requirements
Wm. J. Rouse Date 9-17-79
SPECIALIST
U.S. SOIL CONSERVATION SERVICE
DEVELOPER'S CERTIFICATION

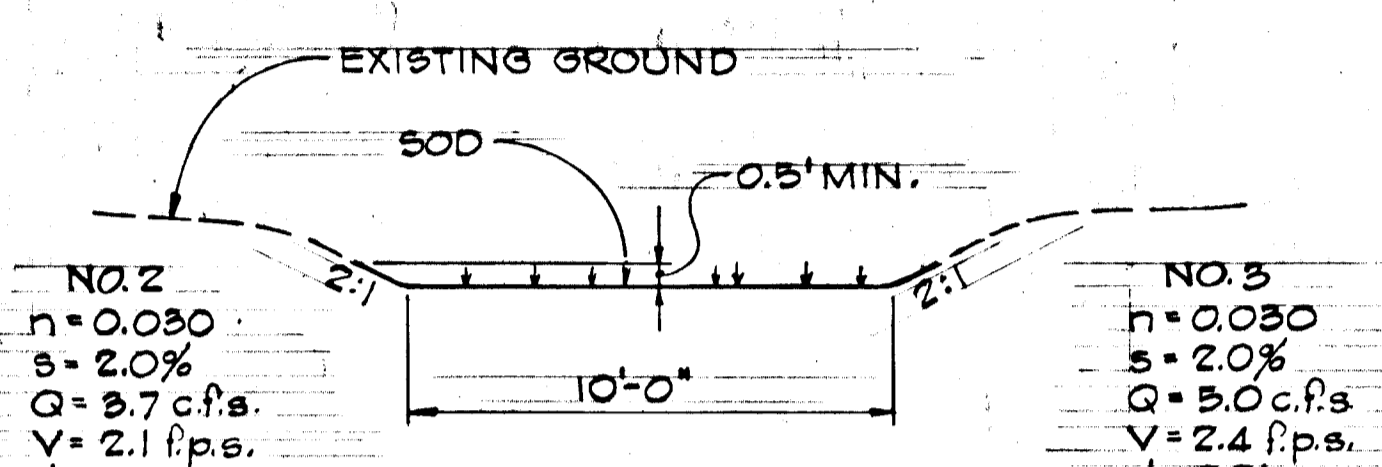
I certify that all development and construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.
Jerome Berenholz 6/23/79
Date

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
Approved *William J. Rouse* Date 4/2/79
HOWARD S.C.D.
ENGINEER'S CERTIFICATION

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.
David S. Thaler 6-22-79
Date

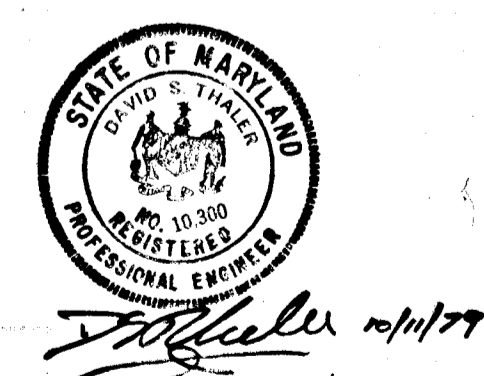


TYPICAL NO. 1 DITCH
SCALE: 1/4" = 1'-0"



TYPICAL NO. 2 DITCH
SCALE: 1/4" = 1'-0"

REFERENCE
B.P.R. HYDRAULIC DESIGN SERIES #5



ENGINEERS
D.S. THALER & ASSOCIATES, INC.
3809 CLARKS LANE
BALTIMORE, MD. 21215

APPROVED:	
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>W. O. Gilbert</i>	10-26-79
CHIEF, BUREAU OF ENGINEERING	DATE
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS	
HOWARD COUNTY HEALTH DEPARTMENT	
COUNTY HEALTH OFFICER	DATE
APPROVED: HOWARD CO. OFFICE OF PLANNING & ZONING	
PLANNING DIRECTOR	DATE
<i>Phillip Moseman</i>	10-29-79
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DRAINAGE AREA MAP
TIMBER RUN VALLEY
ELECTION DIST. #2 HOWARD COUNTY, MD.
SCALE 1" = 200' MAY 22, 1979