

Developers Certification:
 "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 Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will 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."
 C.A.M. [Signature] 1-25-88
 Secretary of Developer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
 [Signature] 5/27/88
 Chief, Land Development Division Date
 [Signature] 6/5/88
 Chief, Bureau of Highways Date
 [Signature] 6-2-88
 Chief, Bureau of Engineering Date
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING.
 [Signature] 6/28/88
 Chief, Division of Community Planning and Land Development Date



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 must provide the Howard Soil Conservation District with a red-lined "as built" of the pond within 30 days of completion."

[Signature] 1-22-88
 Signature of Engineer Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
 Approved: [Signature] 5/19/88
 Howard S.C.D. 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] 5/19/88
 U.S. Soil Conservation Service Date

TRAP #4 SOST ST.V
 D.A. = 0.8 Ac.
 Storage Required = 1440cf
 Storage Provided = 1440cf
 Depth = 3'
 Top of Stone Crest = 567.0
 Bottom Elev. = 563.0
 Clean Out Elev. = 564.5
 Bottom Dimensions = 24'x10'

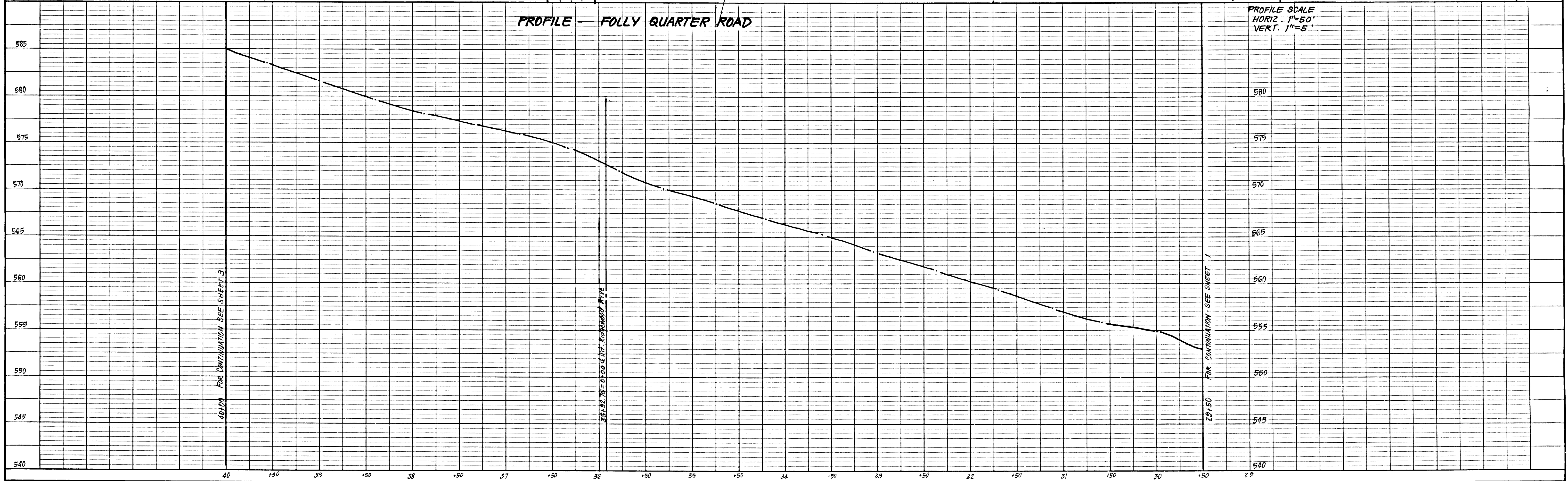
TRAP #5 SOST ST.V
 D.A. = 3.5 Acres
 Storage Required = 35(180) = 6300cf
 Storage Provided = 9300 cf
 Depth = 4'
 Top of Stone Crest = 571.0
 Bottom Elev. = 566.0
 Clean Out Elev. = 568.0
 Bottom Dimensions = 37'x27'

FOR CONTINUATION
 SEE SHEET 4

CENTERLINE CURVE DATA

PC to PT STATIONS	RADIUS	Δ	ARC	TAN	CHORD & BEARING
PC 28+45.47 to PT 34+41.97	1440.00'	23° 44' 02"	596.50'	302.50'	592.24' N 55° 05' 23" W

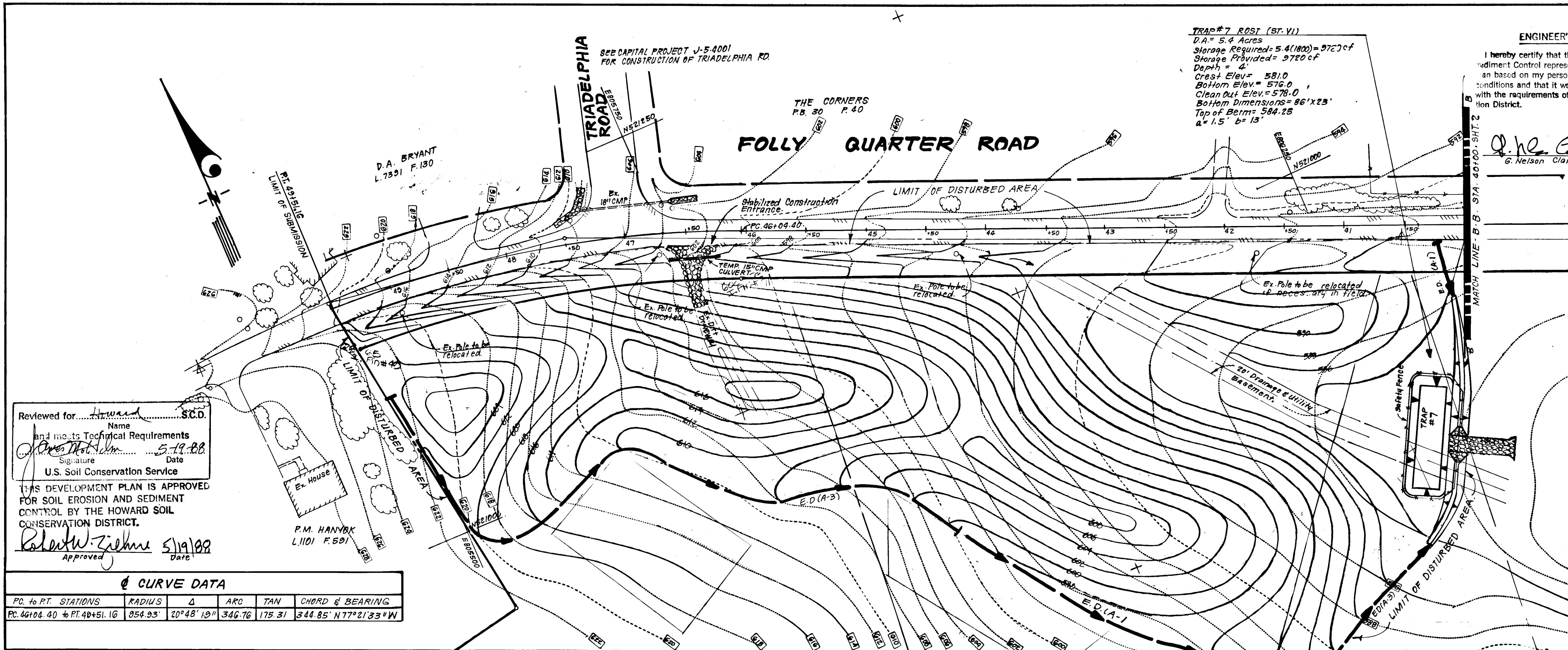
PROFILE - FOLLY QUARTER ROAD



PROFILE SCALE
 HORIZ. 1"=50'
 VERT. 1"=5'

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AS-BUILT
 Nov. 1988

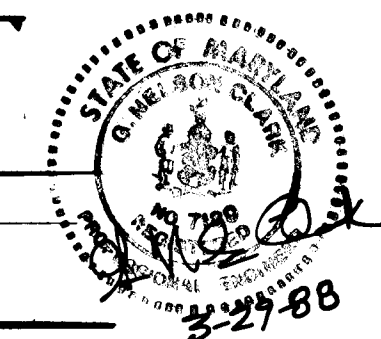


TRAP #7 ROSE (ST. VI)
 D.A. = 5.4 Acres
 Storage Required = 5.4(1800) = 9720 CF
 Depth = 4'
 Crest Elev = 581.0
 Bottom Elev = 576.0
 Clean Out Elev = 578.0
 Bottom Dimensions = 36' x 23'
 Top of Basin = 584.25
 a = 1.5' b = 13'

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.

G. Nelson Clark
 G. Nelson Clark
 Date 3-29-88



DEVELOPER'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.

Robert W. Zilmer
 Signature of Developer/Builder
 Date 1-25-88

Reviewed for *Howard* S.C.D.
 and meets Technical Requirements
Robert W. Zilmer 5-12-88
 Signature Date
 U.S. Soil Conservation Service
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Robert W. Zilmer 5/19/88
 Approved Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Ronald C. Seaman 5/27/88
 Chief, Land Development Division
Shirley W. Hildebrand 6/8/88
 Chief, Bureau of Highways
William J. Kelly 6-8-88
 Chief, Bureau of Engineering
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
James R. Smith 6/28/88
 Chief, Division of Community Planning & Land Development

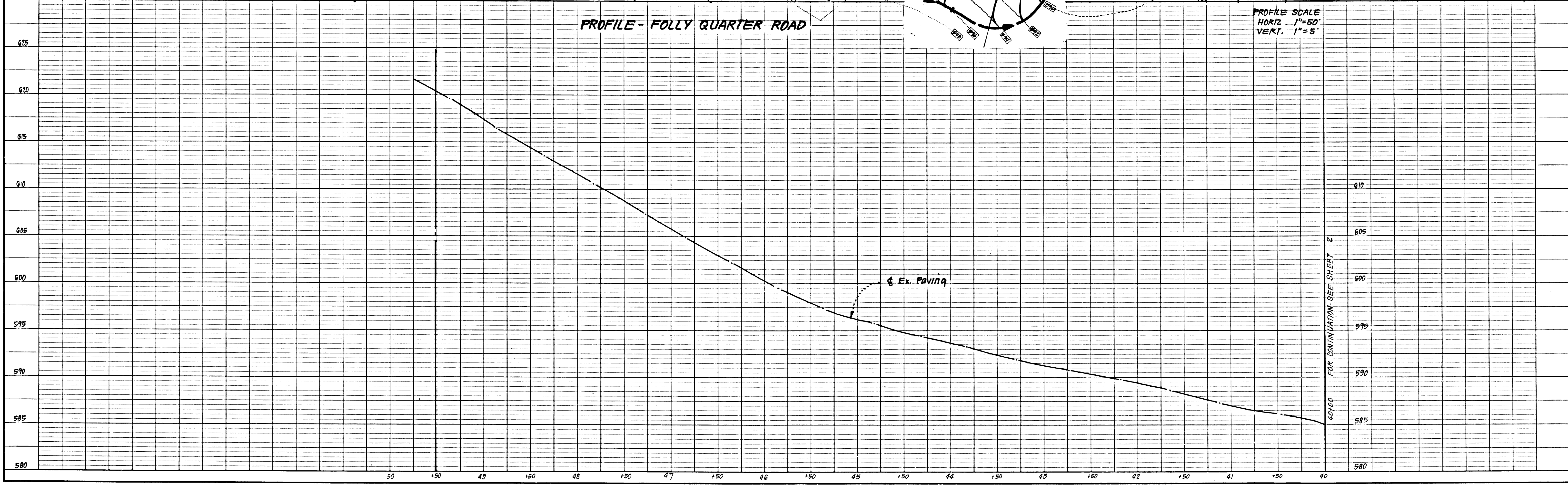
CLARK · FINEFROCK & SACKETT, INC.
 ENGINEERS PLANNERS SURVEYORS
 7135 MINSTREL WAY COLUMBIA, MARYLAND 21045 301-361-7500 Bldg. 301-621-8100 Wash.

DESIGNED	JLS	ROAD CONSTRUCTION PLANS FOLLY QUARTER ROAD	SCALE	As Shown
DRAWN	KIW	RIDGEWOOD		DRAWING 3 OF 13
CHECKED	JLS	5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		JOB NO. 87-004
DATE	1-22-88	FOR: F.A.M. EQUITIES 802 Garrett Bldg. 233 E. Redwood St. Balt. Md. 21202		FILE NO. 87-004-D

∅ CURVE DATA

PC to PT STATIONS	RADIUS	∆	ARC	TAN	CHORD & BEARING
PC 46+04.40 to PT 48+51.16	854.93'	20°48'19"	346.76	173.31	344.85' N77°21'33" W

PROFILE - FOLLY QUARTER ROAD



PROFILE SCALE
 HORIZ. 1"=50'
 VERT. 1"=5'

FOR CONTINUATION SEE SHEET 2

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RECOVERY SKETCH # 37

RECOVERY SKETCH # 55

Reviewed for Howard S.C.D.
Name
and meets Technical Requirements
Howard M. Clark 5-17-88
Signature Date
U.S. Soil Conservation Service
THIS DEVELOPMENT PLAN IS APPROVED
FOR SOIL EROSION AND SEDIMENT
CONTROL BY THE HOWARD SOIL
CONSERVATION DISTRICT.

RECOVERY SKETCH # 93

TRAP # 5 SDST. ST-V
D.A. = 3.5 Acres
Storage Required = 3.5(800) = 6300cf
Storage Provided = 6300cf
Depth = 4'
Top of Stone Crest = 571.0
Bottom Elev. = 566.0
Clean Out Elev. = 568.0
Bottom Dimensions = 8'x27'

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 this project. I also authorize persons on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."
F.A.M. EQUITIES, INC.
Howard M. Clark 5-17-88
Signature of Developer/Builder Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Franklin J. Lewis 5/27/88
Chief, Land Development Division Date
Lawrence H. Howard 6/18/88
Chief, Bureau of Highways Date
Richard R. Cole 6/21/88
Chief, Bureau of Engineering Date
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
James R. Keith 6/28/88
Chief, Division of Community Planning & Land Development Date

CLARK · FINEFROCK & SACKETT, INC.
ENGINEERS · PLANNERS · SURVEYORS
735 MINSTREL WAY COLUMBIA, MARYLAND 21045 301-381-7500 Bldg. 301-621-8100 Wash.

DESIGNED	JLS	SCALE	AS SHOWN
DRAWN	K/W	DRAWING	4 OF 13
CHECKED	JLS	JOB NO.	87.004
DATE	1-22-88	FILE NO.	87.004-D

FOR: F.A.M. EQUITIES
802 Garrett Bldg.
233 E. Folly Quarter Road

ENGINEER'S CERTIFICATE

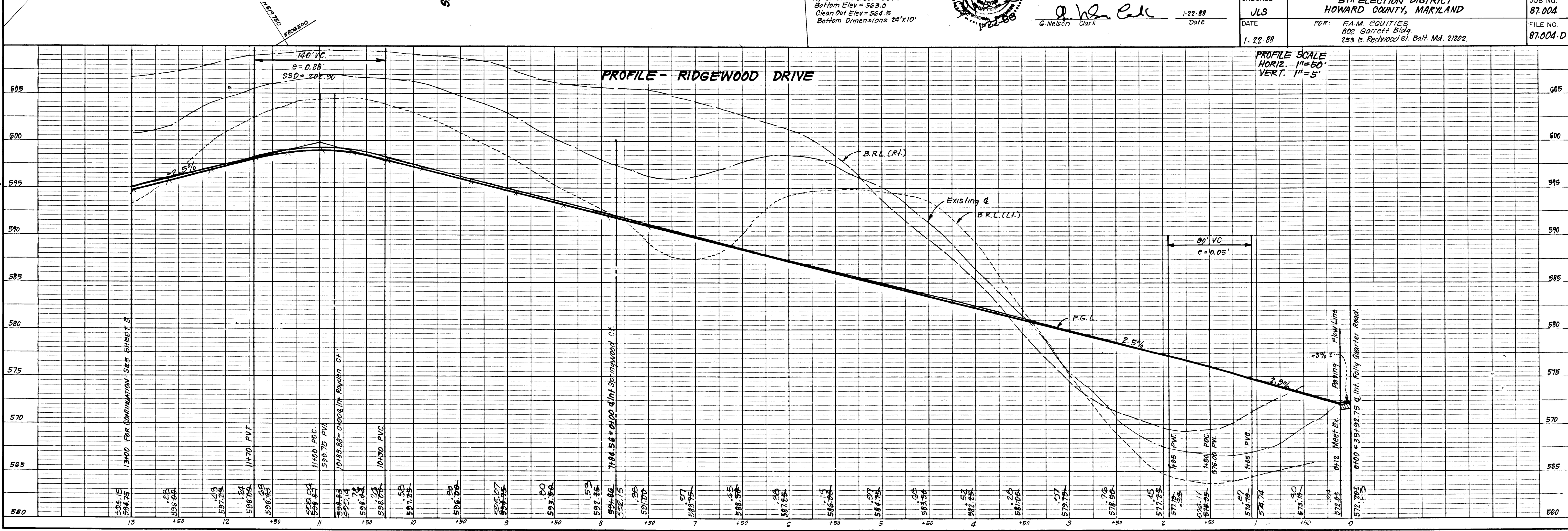
I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

G. Nelson Clark 1-22-88
Date



CENTERLINE CURVE DATA

PC to PT STATIONS	RADIUS	Δ	ARO	TAN	CHORD & BEARING
PC 0+00.54 to PCC 10136.76	850.00	29°00'00"	430.22	219.82	425.65' S36°30'00"W
PCC 10136.76 to PT 13180.19	450.00	45°00'00"	353.43	186.40	344.42' S73°30'00"W



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RECOVERY SKETCH # 80

RECOVERY SKETCH # 83

Reviewed for: Howard S.C.D.
Name
and meets Technical Requirements
Signature: [Signature]
Date: 5-19-88
U.S. Soil Conservation Service

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 personnel on site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

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

Approved: Robert V. [Signature] 5/19/88
Date

Signature of Developer/Builder: [Signature] 5-19-88
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 5/27/88
Date
[Signature] 6/18/88
Date
[Signature] 6/18/88
Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
[Signature] 6/28/88
Date

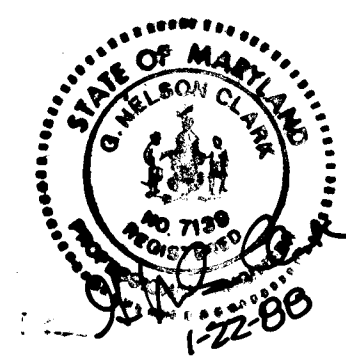
CLARK FINEFROCK & SACKETT, INC.
ENGINEERS PLANNERS SURVEYORS
7135 MINSTREL WAY COLUMBIA, MARYLAND 21045 301-381-7500 Balt. 301-621-8100 Wash.

DESIGNED: JLS SCALE: As Shown
DRAWN: KIW DRAWING: 5 OF 13
CHECKED: JLB JOB NO.: 87-004
DATE: 1-22-88 FILE NO.: 87.004-D

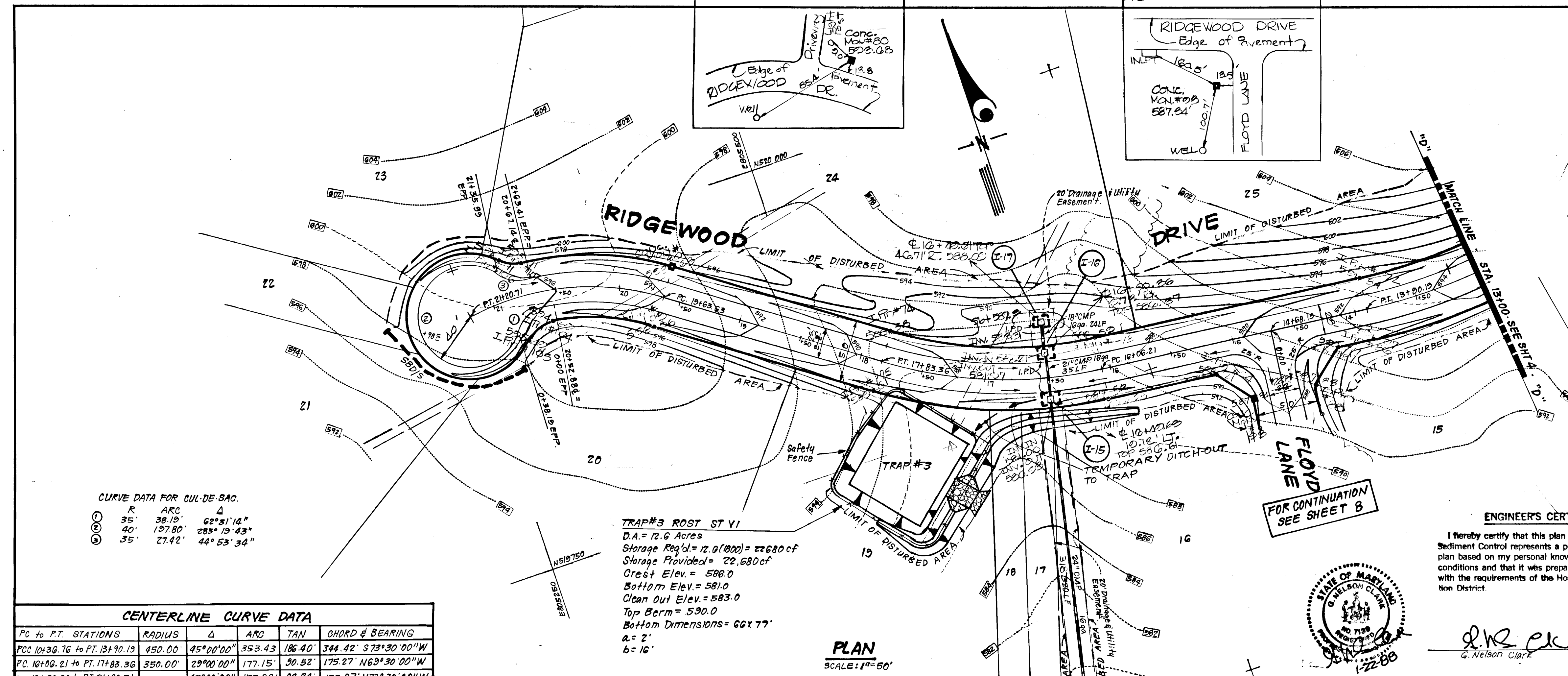
FOR: F.A.M. EQUITIES
802 Garrett Bldg.
233 E. Redwood St. Balt. Md. 21202

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] 1-22-88
Date



CURVE DATA FOR CUL-DE-SAC

R	ARC	Δ
35'	38.19'	62°31'14"
40'	137.80'	28°19'43"
35'	27.42'	44°53'34"

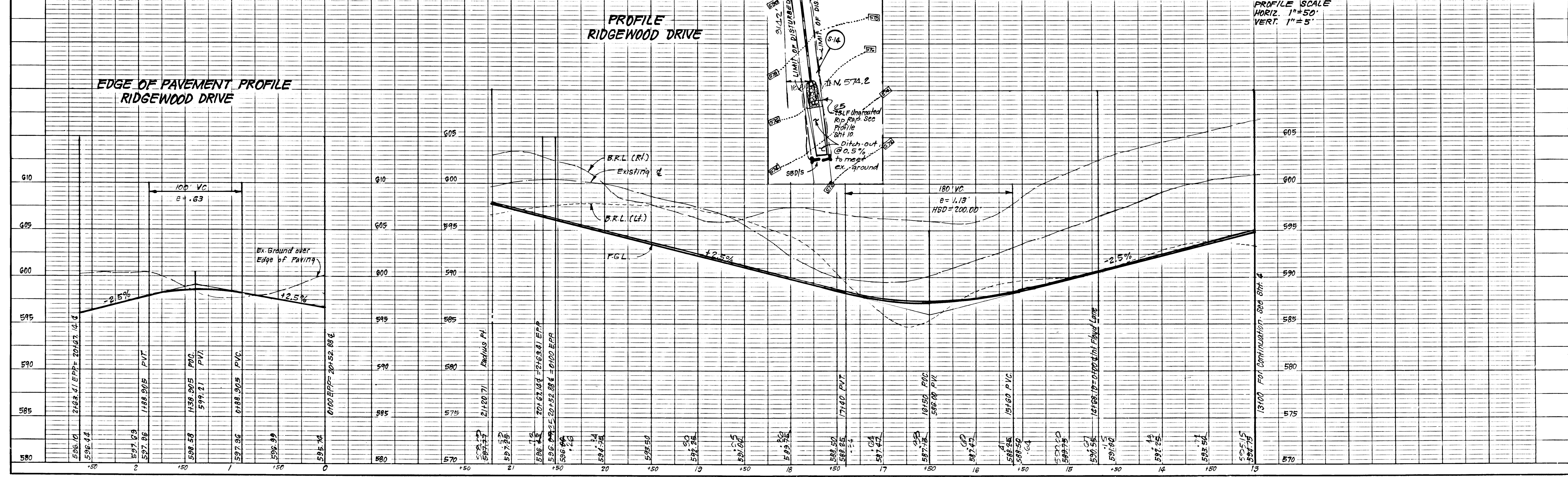
CENTERLINE CURVE DATA

PC to PT STATIONS	RADIUS	Δ	ARC	TAN	CHORD & BEARING
PC 10+36.76 to PT 13+90.13	450.00	45°00'00"	353.43	186.40	344.42' S73°30'00"W
PC 16+06.21 to PT 17+83.36	350.00	29°00'00"	177.15	30.52	175.27' N63°30'00"W
PC 19+63.63 to PT 21+20.71	200.00	45°00'00"	157.08	82.84	153.07' N71°30'00"W

TRAP #3 ROST ST VI
D.A. = 12.6 Acres
Storage Req'd = 12.0 (800) = 22680 cf
Storage Provided = 22,680 cf
Crest Elev. = 586.0
Bottom Elev. = 581.0
Clean Out Elev. = 583.0
Top Berm = 590.0
Bottom Dimensions = 60x77'
a = 2'
b = 16'

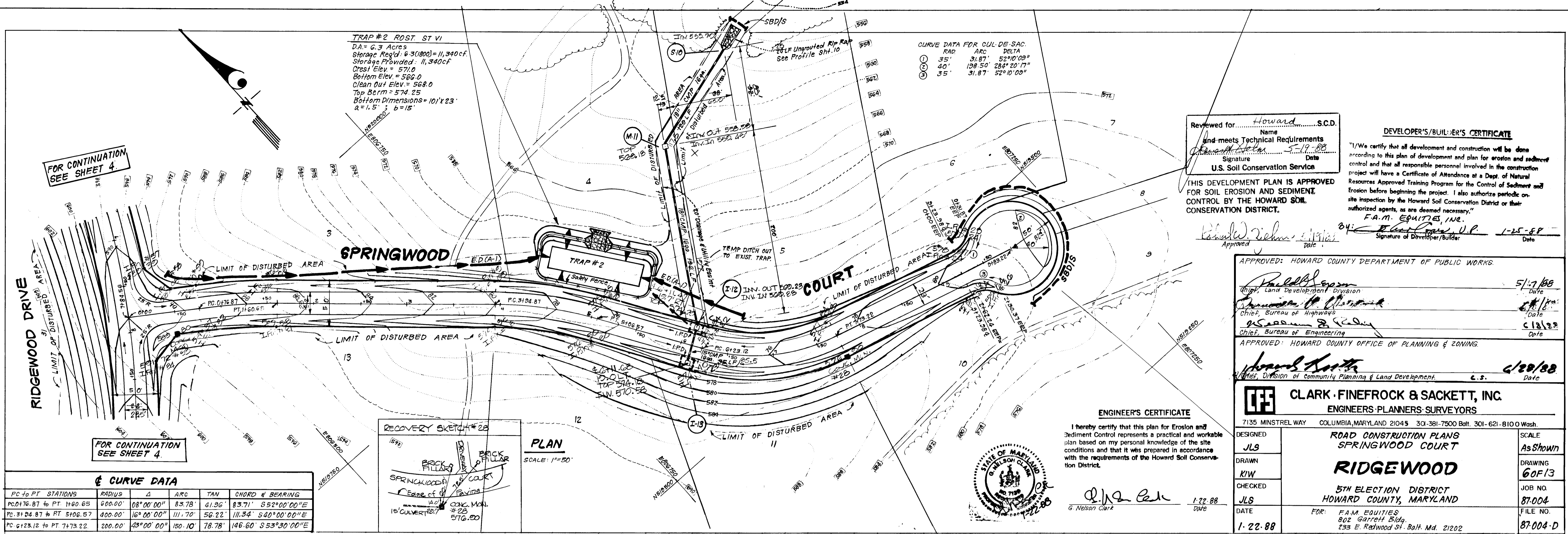
PLAN SCALE: 1" = 50'

PROFILE RIDGEWOOD DRIVE



PROFILE SCALE
HORIZ. 1" = 50'
VERT. 1" = 5'

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Curve Data

PC to PT STATIONS	RADIUS	Δ	ARC	TAN	CHORD & BEARING
PC 0176.87 to PT 1160.65	600.00	08° 00' 00"	83.78'	41.96'	83.71' S52° 00' 00" E
PC 3194.87 to PT 5106.57	400.00	16° 00' 00"	111.70'	56.22'	111.34' S40° 00' 00" E
PC 6123.12 to PT 7173.22	200.00	43° 00' 00"	150.10'	78.78'	146.60' S53° 30' 00" E

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.

Reviewed for: Howard S.C.D.
 Name
 and meets Technical Requirements
 Signature: [Signature] Date: 5-12-88
 U.S. Soil Conservation Service

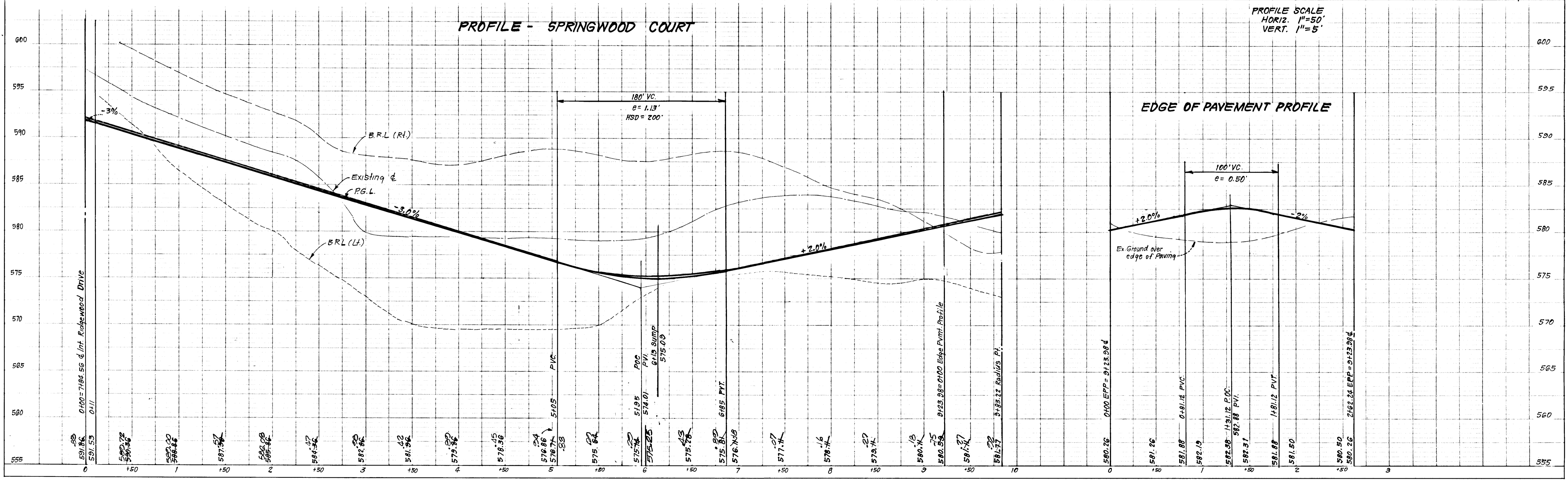
Signature of Developer/Builder: [Signature] Date: 1-25-88

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Land Development Division: [Signature] Date: 5/17/88
 Chief, Bureau of Highways: [Signature] Date: 5/18/88
 Chief, Bureau of Engineering: [Signature] Date: 5/18/88

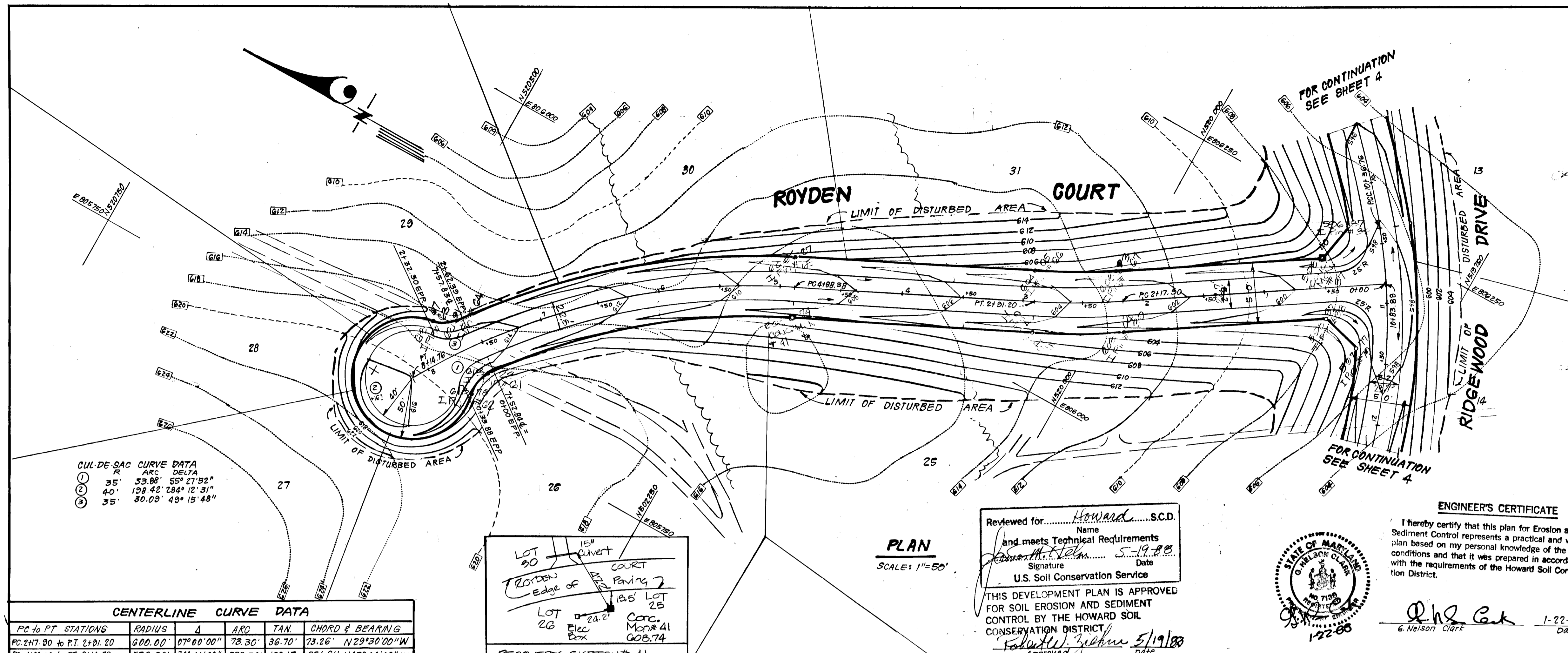
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 Chief, Division of Community Planning & Land Development: [Signature] Date: 6/28/88

CLARK FINEFROCK & SACKETT, INC.
 ENGINEERS-PLANNERS-SURVEYORS
 7135 MINSTREL WAY COLUMBIA, MARYLAND 21045 301-381-7500 Balt. 301-621-8100 Wash.

DESIGNED	JLS	ROAD CONSTRUCTION PLANS SPRINGWOOD COURT	SCALE As Shown
DRAWN	KIW	RIDGEWOOD	DRAWING 60F13
CHECKED	JLS	5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 87-004
DATE	1-22-88	FOR: F.A.M. EQUITIES 802 GARDEN Bldg. 235 E. Redwood St. Balt. Md. 21202	FILE NO. 87-004-D



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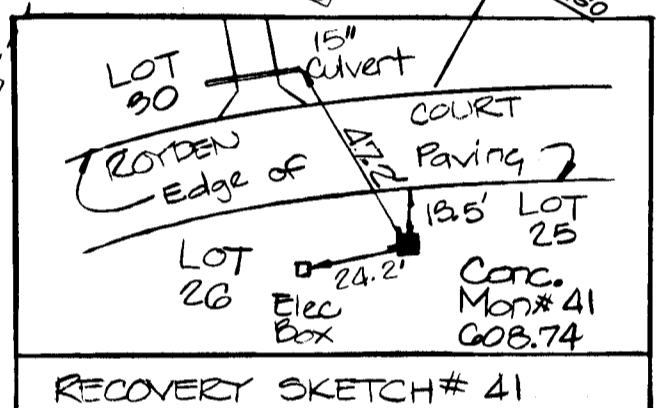


CUL-DE-SAC CURVE DATA

R	ARC	DELTA
35'	33.84'	55° 27' 39"
40'	128.42'	284° 12' 31"
35'	30.03'	48° 15' 48"

CENTERLINE CURVE DATA

PC to PT STATIONS	RADIUS	Δ	ARC	TAN	CHORD & BEARING
PC 217.30 to PT 2191.20	600.00'	07° 00' 00"	73.30'	36.70'	73.26° N 29° 30' 00" W
PC 4188.38 to PT 814.76	550.00'	34° 00' 00"	326.38'	168.15'	321.61° N 43° 00' 00" W



PLAN
SCALE: 1"=50'

Reviewed for Howard S.C.D.
Name
and meets Technical Requirements
Robert M. Sackett 5-19-88
Signature Date
U.S. Soil Conservation Service
THIS DEVELOPMENT PLAN IS APPROVED
FOR SOIL EROSION AND SEDIMENT
CONTROL BY THE HOWARD SOIL
CONSERVATION DISTRICT
Robert M. Sackett 5/19/88
Approved 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.
G. Nelson Clark 1-22-88
Date

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."
By: F.A.M. Equities, Inc. U.P. 1-25-88
Signature of Developer/Builder Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Robert M. Sackett 5/27/88
Chief, Land Development Division Date
William W. Westcott 6/8/88
Chief, Bureau of Highways Date
Robert M. Sackett 6/22/88
Chief, Bureau of Engineering Date
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
Robert M. Sackett 6/22/88
Chief, Division of Community Planning & Land Development L.S. Date

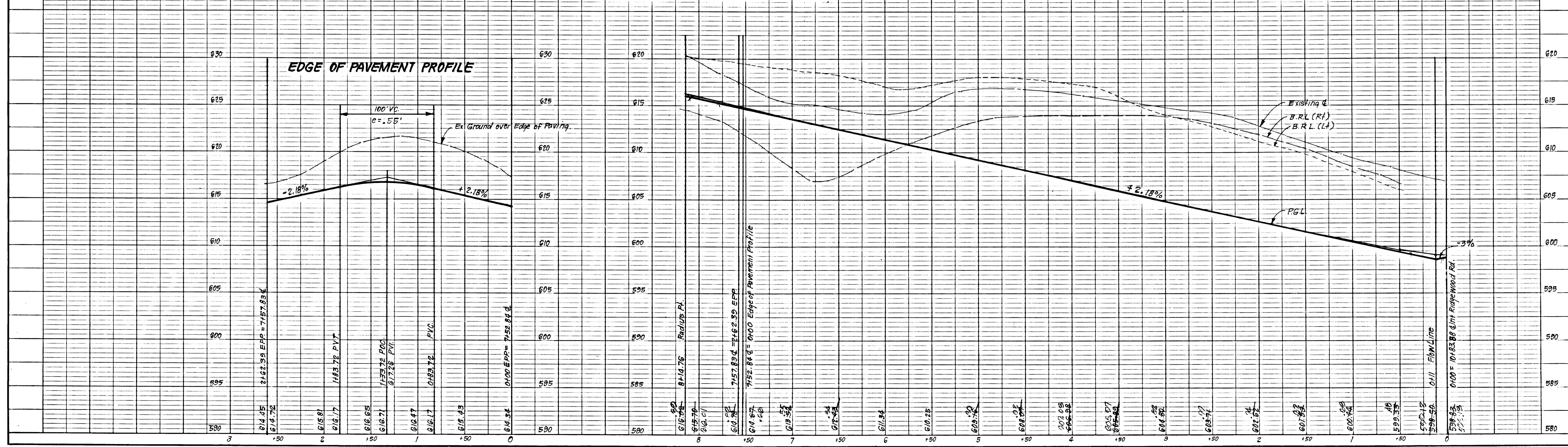
CLARK · FINEFROCK & SACKETT, INC.
ENGINEERS PLANNERS SURVEYORS
7135 MINSTREL WAY COLUMBIA, MARYLAND 21045 301-381-7500 Balt 301-621-8100 Wash.

DESIGNED	JLS	SCALE	As Shown
DRAWN	KIW	DRAWING	7 OF 13
CHECKED	JLS	JOB NO.	87-004
DATE	1-22-88	FILE NO.	87-004-D

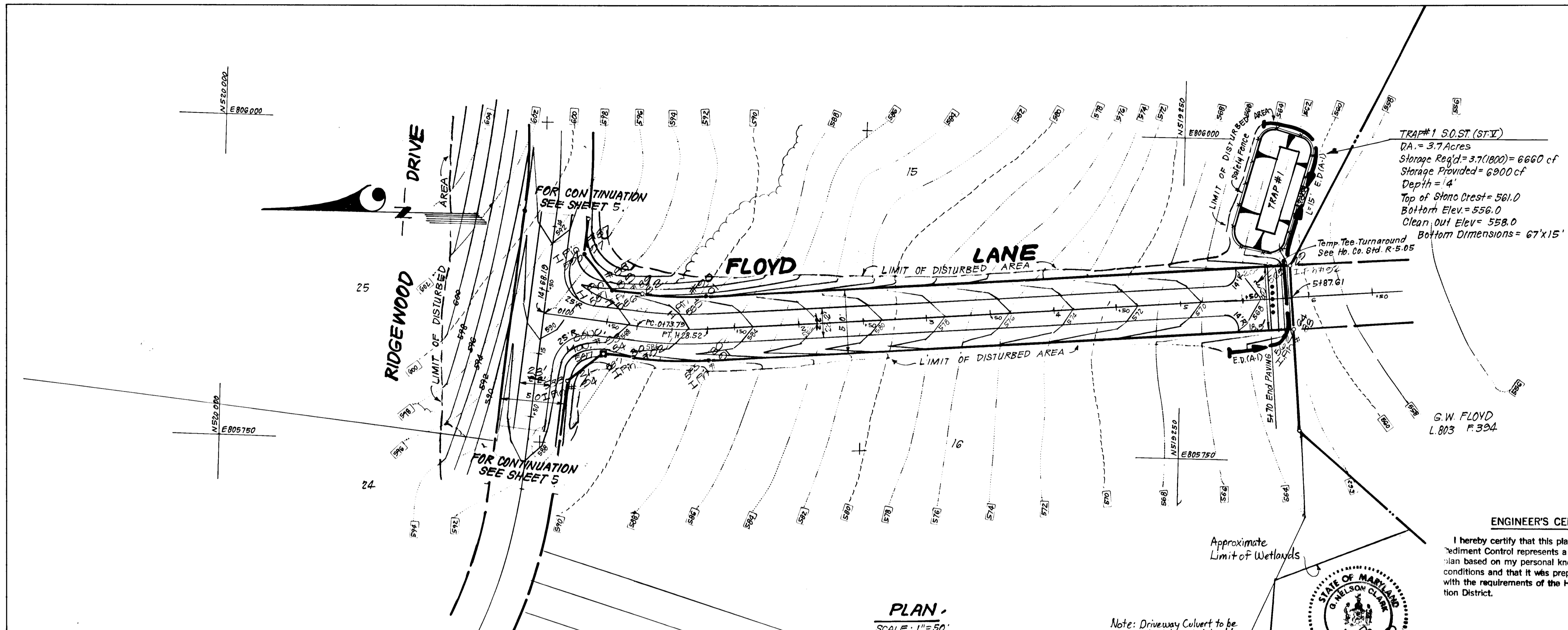
ROAD CONSTRUCTION PLANS
ROYDEN COURT
RIDGEWOOD
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
FOR: F.A.M. EQUITIES
802 GARRETT BLDG.
233 E. REDWOOD ST. BALT. MD. 21202

PROFILE - ROYDEN COURT

PROFILE SCALE
HORIZ. 1"=50'
VERT. 1"=5'



1368



Reviewed for Howard S.C.D.
 Name
 and meets Technical Requirements
 Signature [Signature] Date 5-17-88
 U.S. Soil Conservation Service

FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Approved [Signature] Date

DEVELOPER'S EROSION CONTROL CERTIFICATE

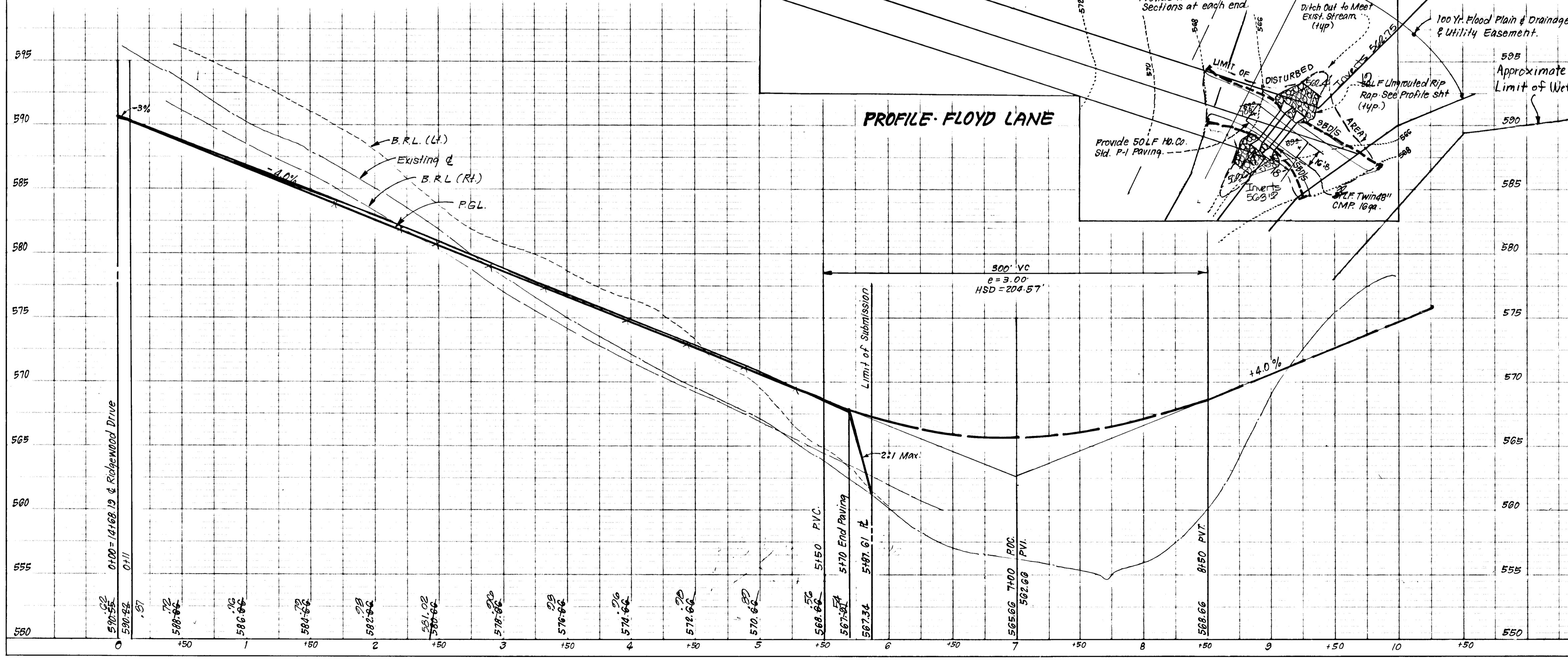
"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training 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."

F.A.M. EQUITIES, INC.
 Signature of Developer/Builder [Signature] Date 1-25-88

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] Date 5/27/88
 Chief, Land Development Division
[Signature] Date 6/8/88
 Chief, Bureau of Highways
[Signature] Date 6/15/88
 Chief, Bureau of Engineering
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
[Signature] Date 6/28/88
 Chief, Division of Community Planning & Land Development

CLARK FINEFROCK & SACKETT INC. ENGINEERS PLANNERS SURVEYORS 7135 MINSTREL WAY COLUMBIA, MARYLAND 21045 301-381-7500 Balt 301-621-8100 Wash.		DESIGNED	JLS	SCALE	As Shown
		DRAWN	KIW	DRAWING	8 OF 13
CHECKED	JLS	JOB NO.	87-004	FILE NO.	87-004-D
DATE	1-22-88	FOR:	F.A.M. EQUITIES 802 Garrett Bldg. 233 E. Redwood St. Balt. Md. 21202		

PC to PT STATIONS	RADIUS	Δ	ARC	TAN	CHORD & BEARING
PC: 0473.79 to PT: 1128.52	300.00	10°27'09"	54.73	27.44'	54.65' S 00°46'26" W



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] Date 1-22-88
 G. Nelson Clark



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I. SITE PREPARATION

Areas designated 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 pond or reservoir 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.

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

II. EARTH FILL

Material

The fill material shall be taken from approved designated borrow areas or areas. It shall be free of roots, stumps, wood, rubbish, oversize stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill material shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of 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 the 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 material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and is to be certified by the Engineer.

Cutoff Trench

Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be as shown on the drawings, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

III. STRUCTURAL BACKFILL

Backfill material shall be of the type and quality 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 compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall the equipment be allowed to operate 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 twenty-four inches or greater over the structure or pipe.

Form - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed.

Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

Reinforcing Steel - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

Consolidating - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be supplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.

Finishing - Defective concrete, honeycombed areas, voids left by the removal of the rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.

Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.

Placing Temperature - Concrete may not be placed at temperatures below 37°F with the temperature falling, or 34°F with the temperature rising.

IV. PIPE LUMENITIES

All pipes shall be circular in cross section.

A. 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 ASTM Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings are commercially available: Nexon, Plasti-Coat, Blac-Klad, and Beth-Gu-Loy. Coated corrugated steel pipe shall meet the requirements of ASTM M-245 and M-246.

Materials - (Aluminum Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of ASTM Specification M-274-791 with watertight coupling bands or flanges.

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

2. 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. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to the completely watertight. Dipble bands are not considered to be 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 provide adequate support.

4. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

5. Backfilling shall conform to structural backfill as shown above.

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

V. CONCRETE

1. Materials

a. Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.

b. Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.

c. Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.

d. Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and shall be well graded with a maximum size of one and one-half (1-1/2) inches.

e. Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

2. Design Mix - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/2 to 6 U.S. Gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

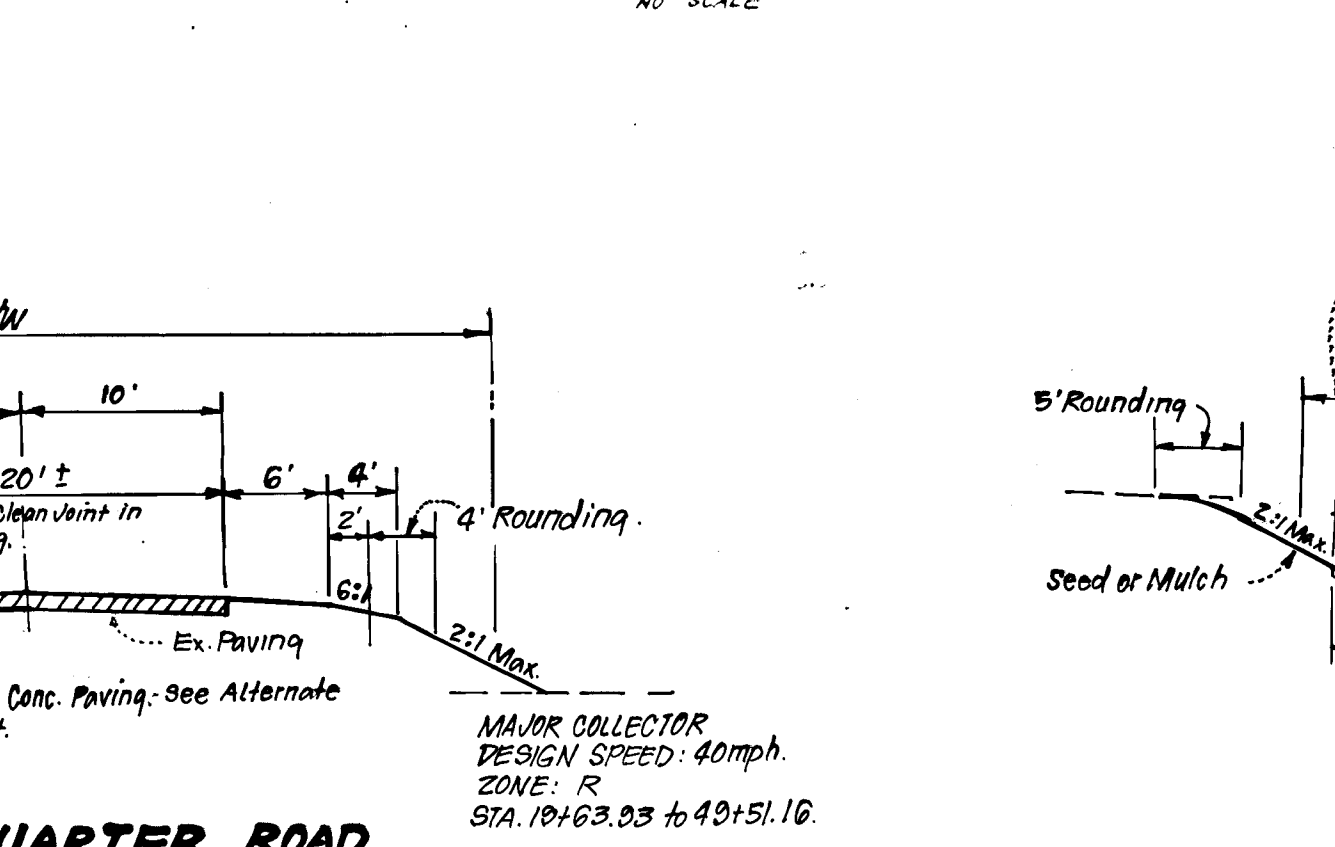
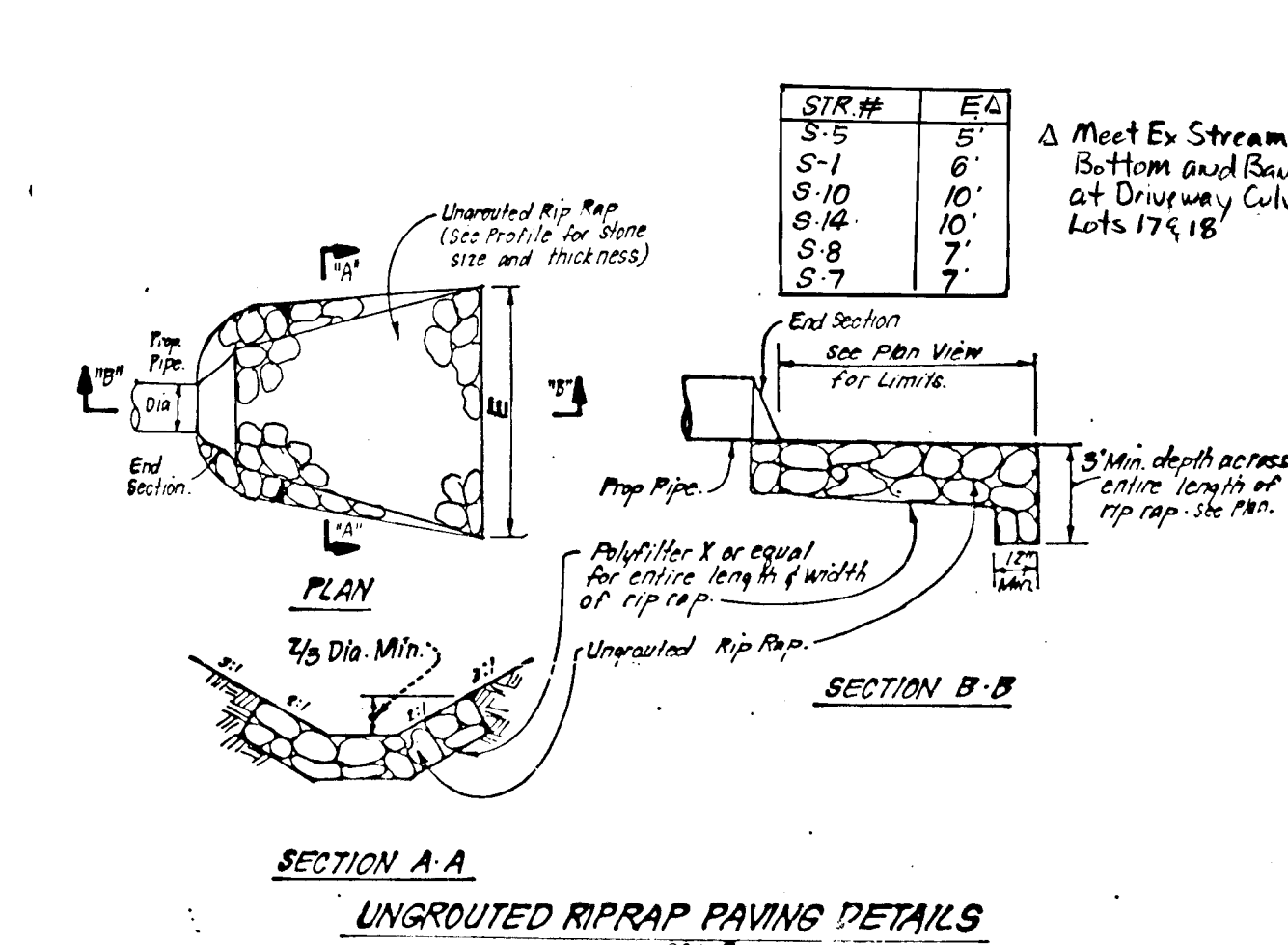
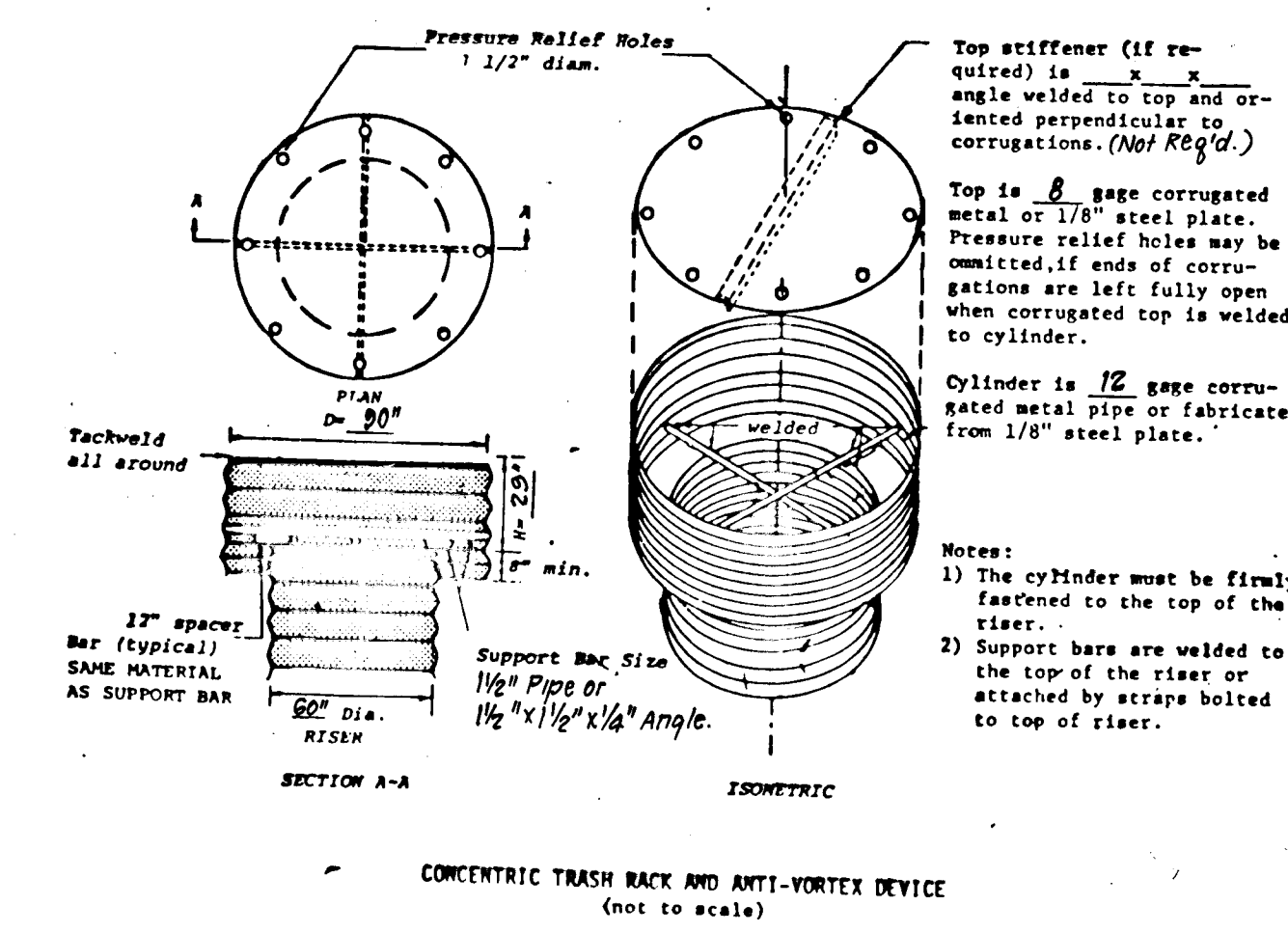
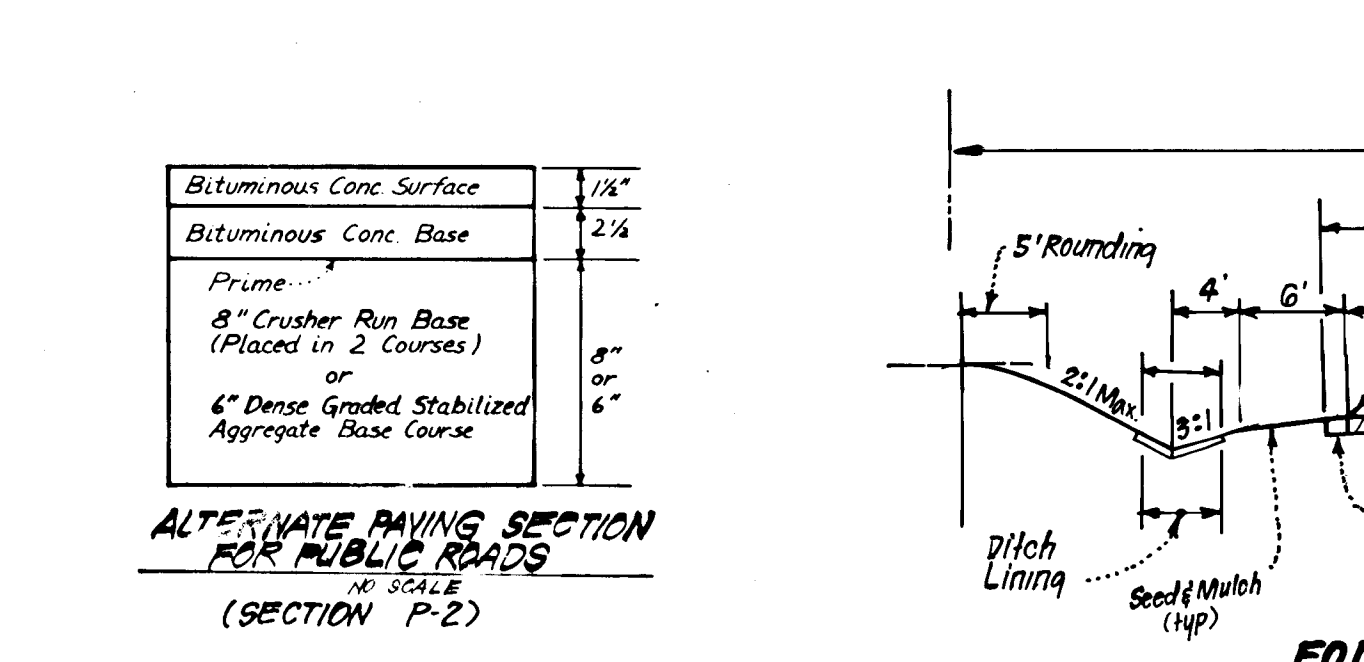
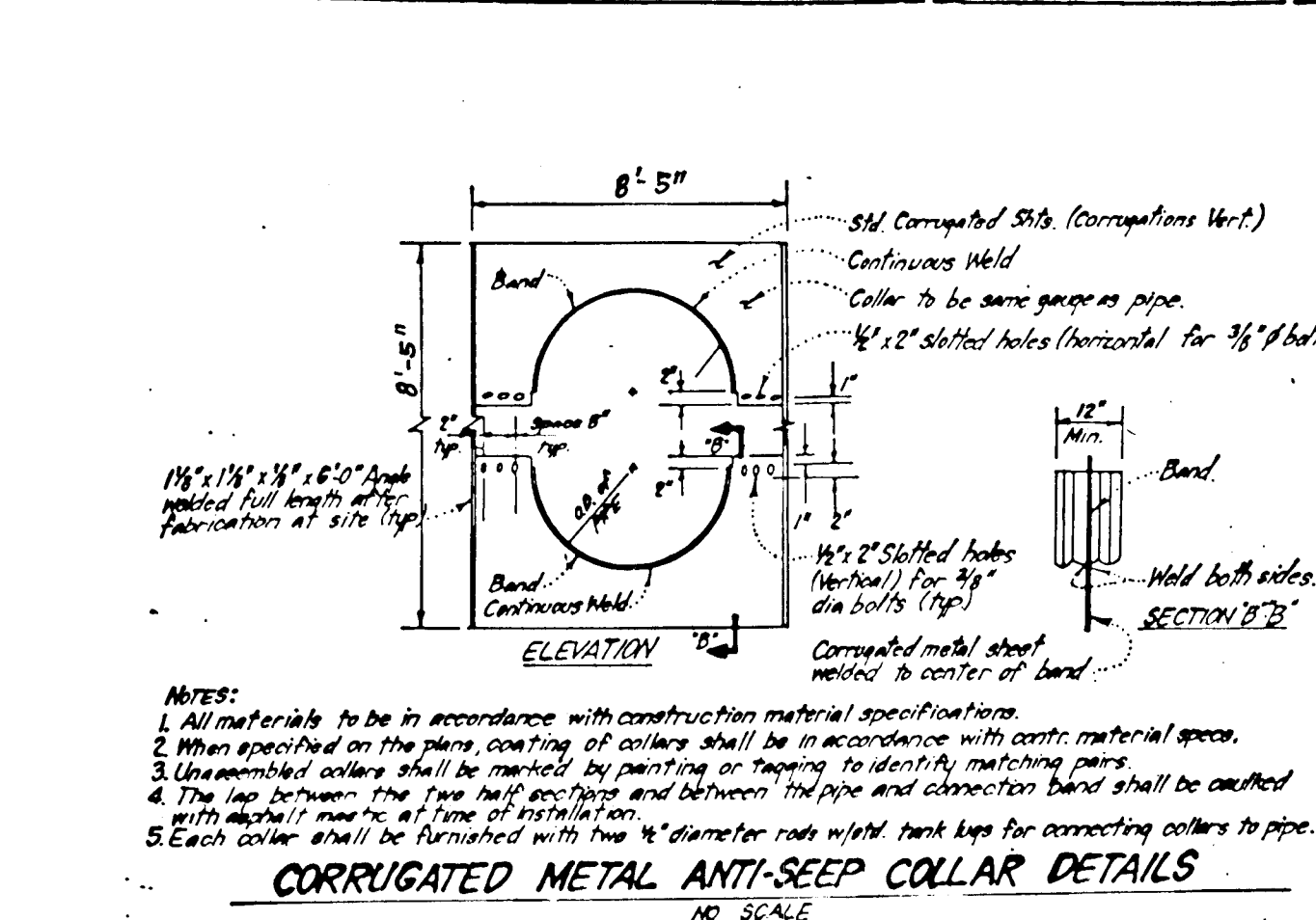
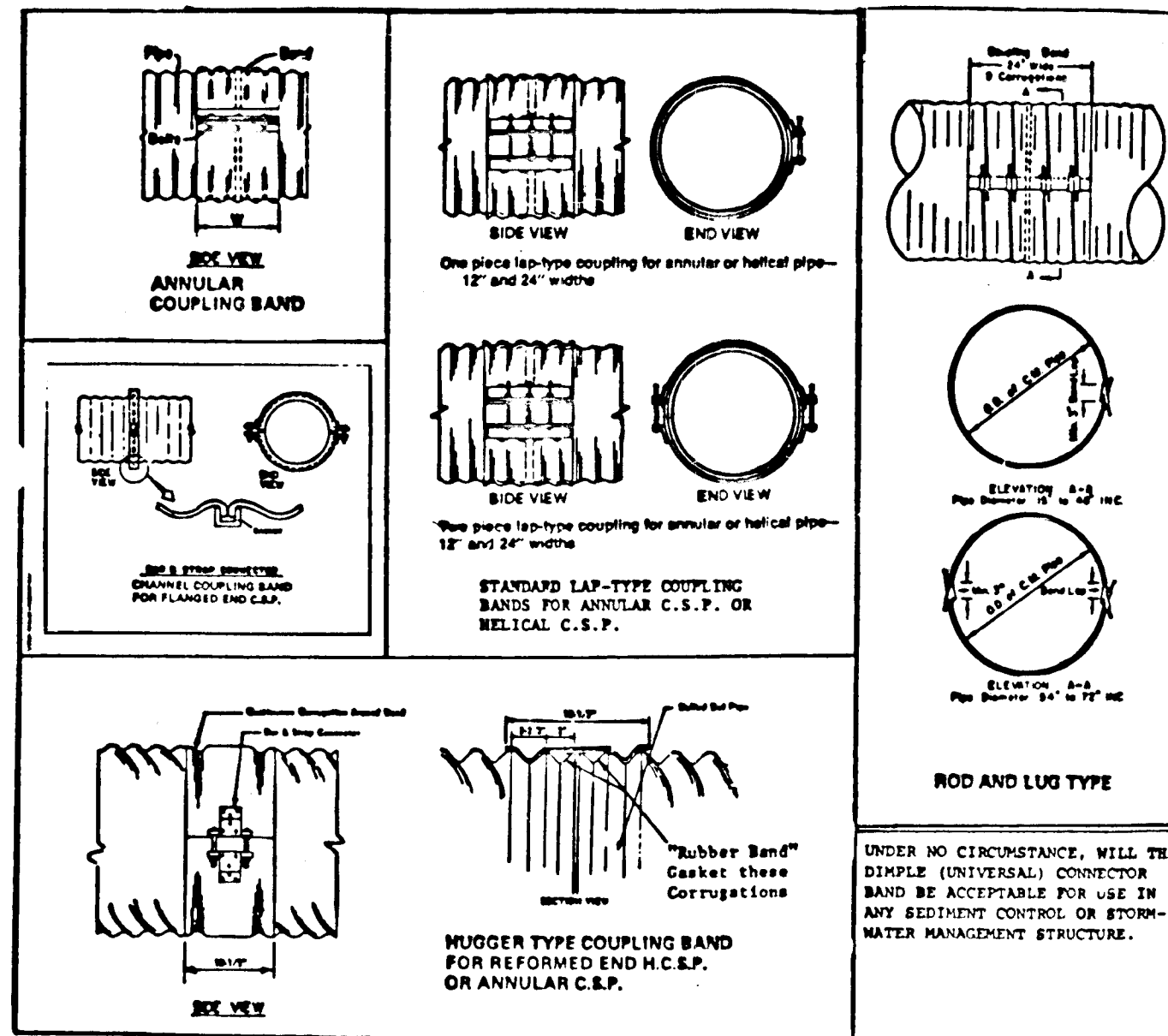
3. Mixing - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the materials.

VI. STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

VII. 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.



RIDGEWOOD DRIVE	STATION	ROAD CLASS.	ZONE
6' 0+00 to 14+68.19		Local	R
4' 0+00 to 8+14.76		Cul. de. SAC	R
4' 0+00 to 5+83.22		Cul. de. SAC	R
6' 0+00 to 5+87.61		Local	R
4' 14+68.19 to 24+20.71		Cul. de. SAC	R

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Signature 5/27/88
Chief, Bureau of Highways

Signature 6/28/88
Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

Signature 6/28/88
Chief, Bureau of Community Planning & Land Development

CLARK - FINEFROCK & SACKETT, INC.
ENGINEERS PLANNERS SURVEYORS
7135 MINSTREL WAY COLUMBIA, MARYLAND 21045 301-381-7500 Bait. 301-621-8100 Wash.

DESIGNED VLS
DRAWN R/W
CHECKED VLB
DATE 1-22-88

SCALE AS SHOWN
DRAWING 30F13
JOB NO 87-004
FILE NO 87.004-D

ROAD CONSTRUCTION PLANS
STORM WATER MANAGEMENT & PAVING DETAILS
RIDGEWOOD
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FOR: F.A.M. EQUITIES
802 Garrett Bldg.
233 E. Redwood St. Baltimore 21202

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.

Approved: *Signature* 5-19-88
Howard S.C.D. Date

Plan Number

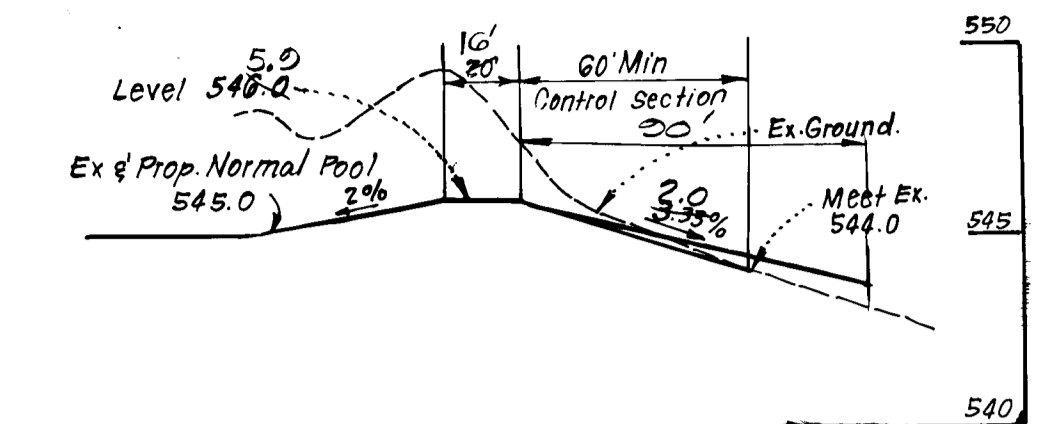
U.S. Soil Conservation Service

Developers Certification:
"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 Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will 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."
F.A.M. EQUITIES, INC.
Signature 1-25-88
Signature of Developer Date

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 must provide the Howard Soil Conservation District with a red-lined 'as built' of the pond within 30 days of completion."
Signature 1-22-88
Signature of Engineer Date

STATE OF MARYLAND
NOTARY PUBLIC
COMMISSION EXPIRES 12-31-88

Signature 1-22-88

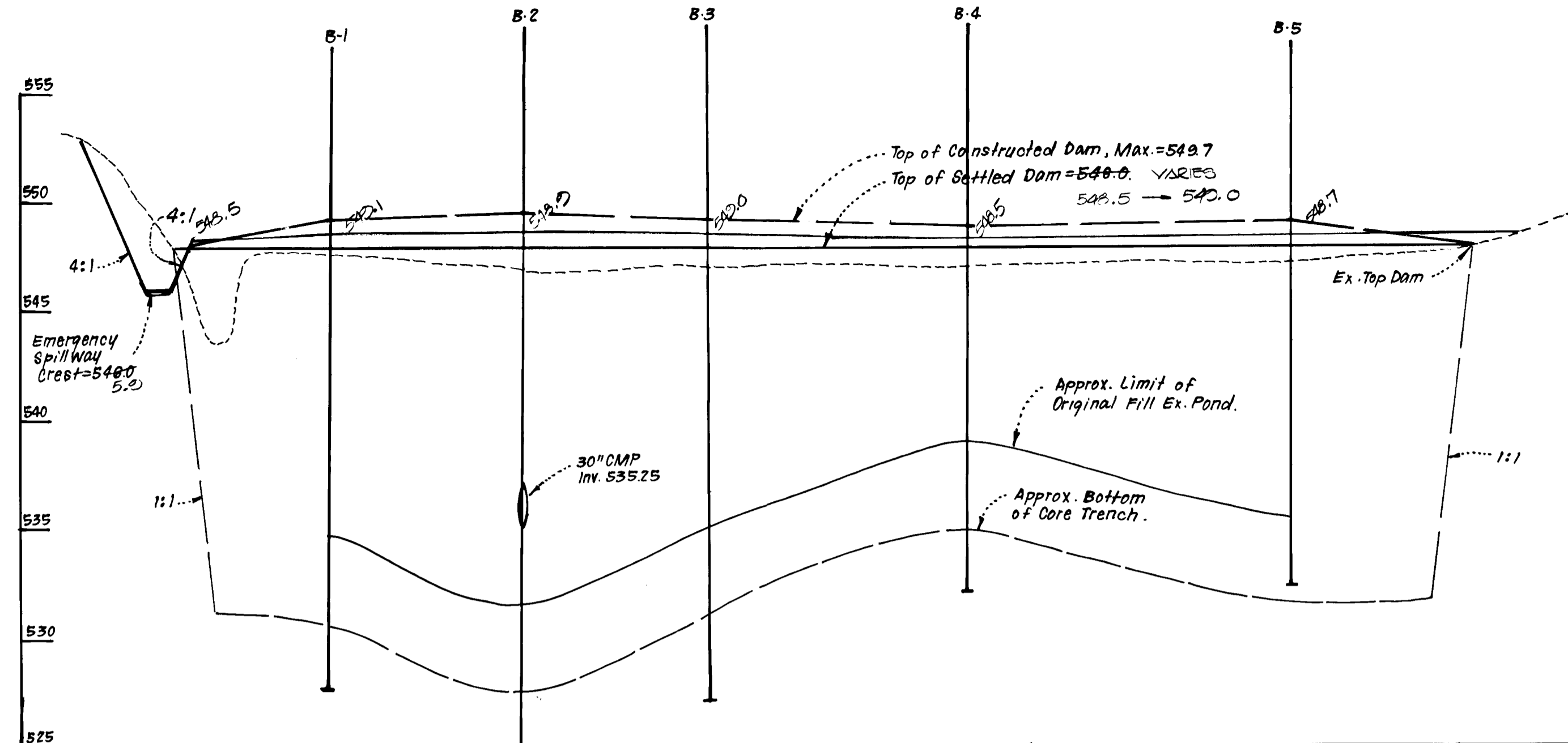
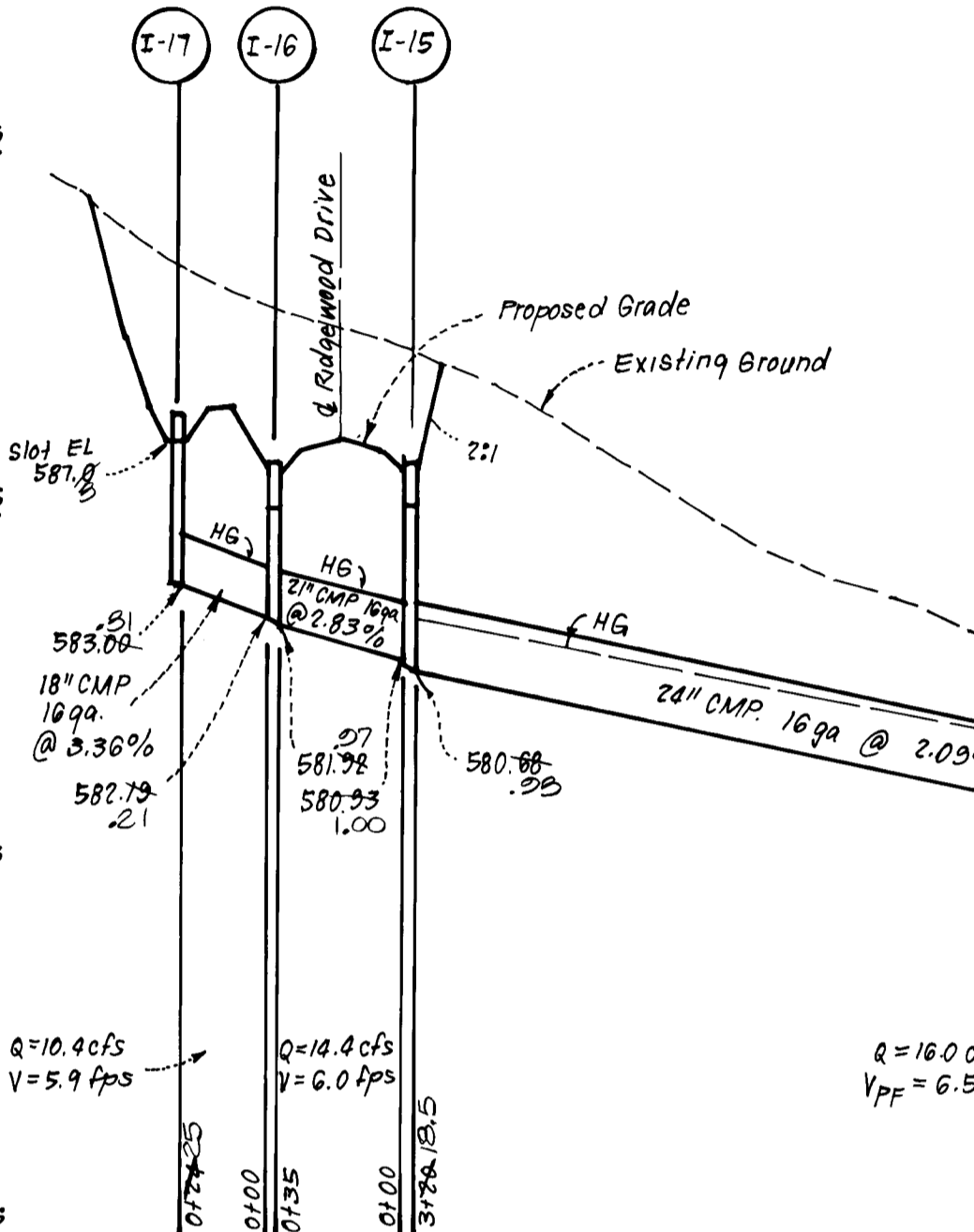


CROSS-SECTION EMERGENCY SPILLWAY
NO SCALE

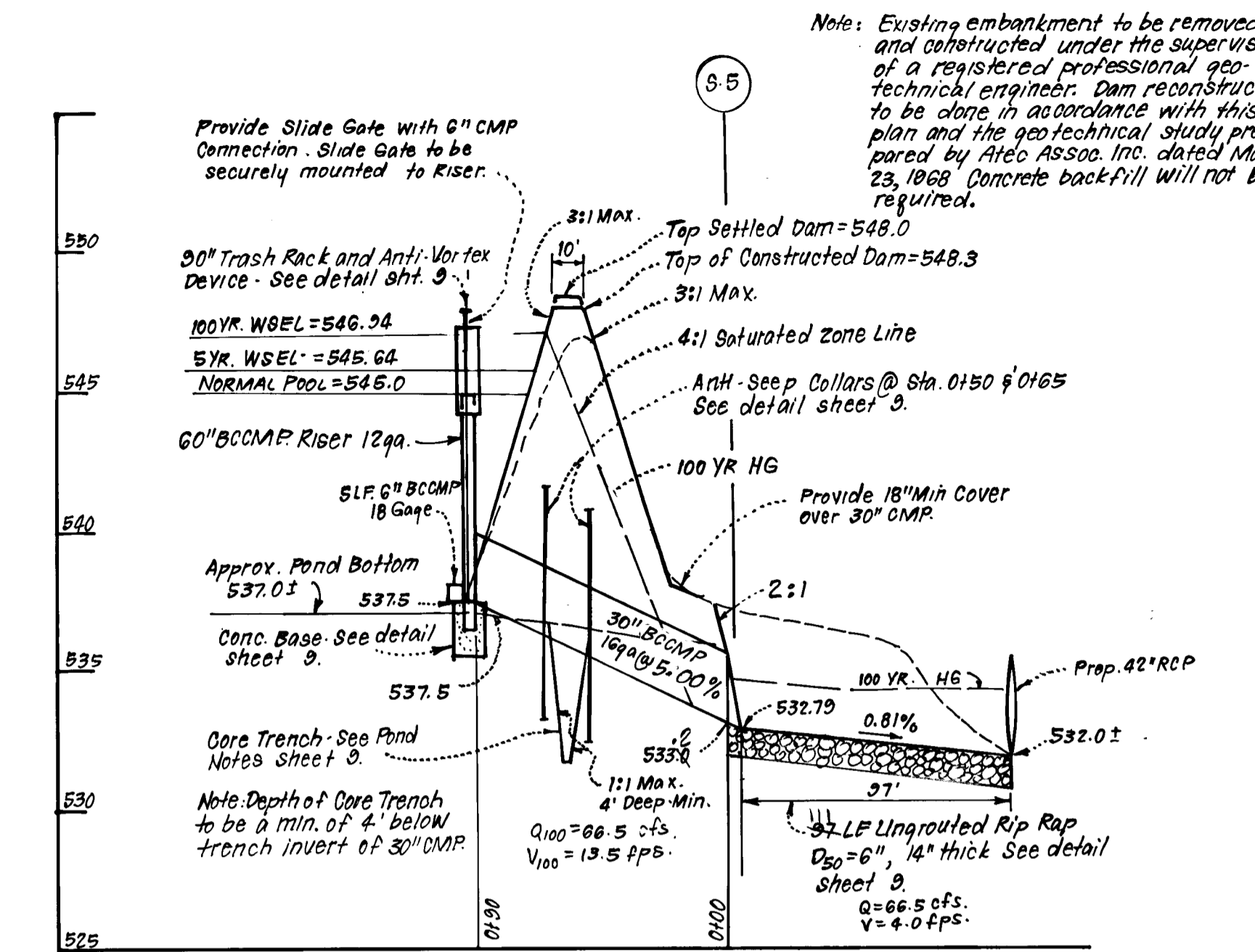
PROFILE ALONG & EMERGENCY SPILLWAY
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

SIZE	TYPE	LENGTH
15"	CMP 16ga.	35 LF
18"	CMP 16ga.	34.0 LF
21"	CMP 16ga.	35 LF
24"	CMP 16ga.	32.0 LF
30"	RC CMP 16ga.	20 LF
42"	CMP 16ga.	75 LF
36"	RCP CL IX	65 LF
48"	RCP CL IX	44.8 LF
48"	CMP 16ga.	22 LF

* 3" x 1" Corrugations
* 2 1/2" x 1/2" Corrugations



PROFILE ALONG & DAM
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



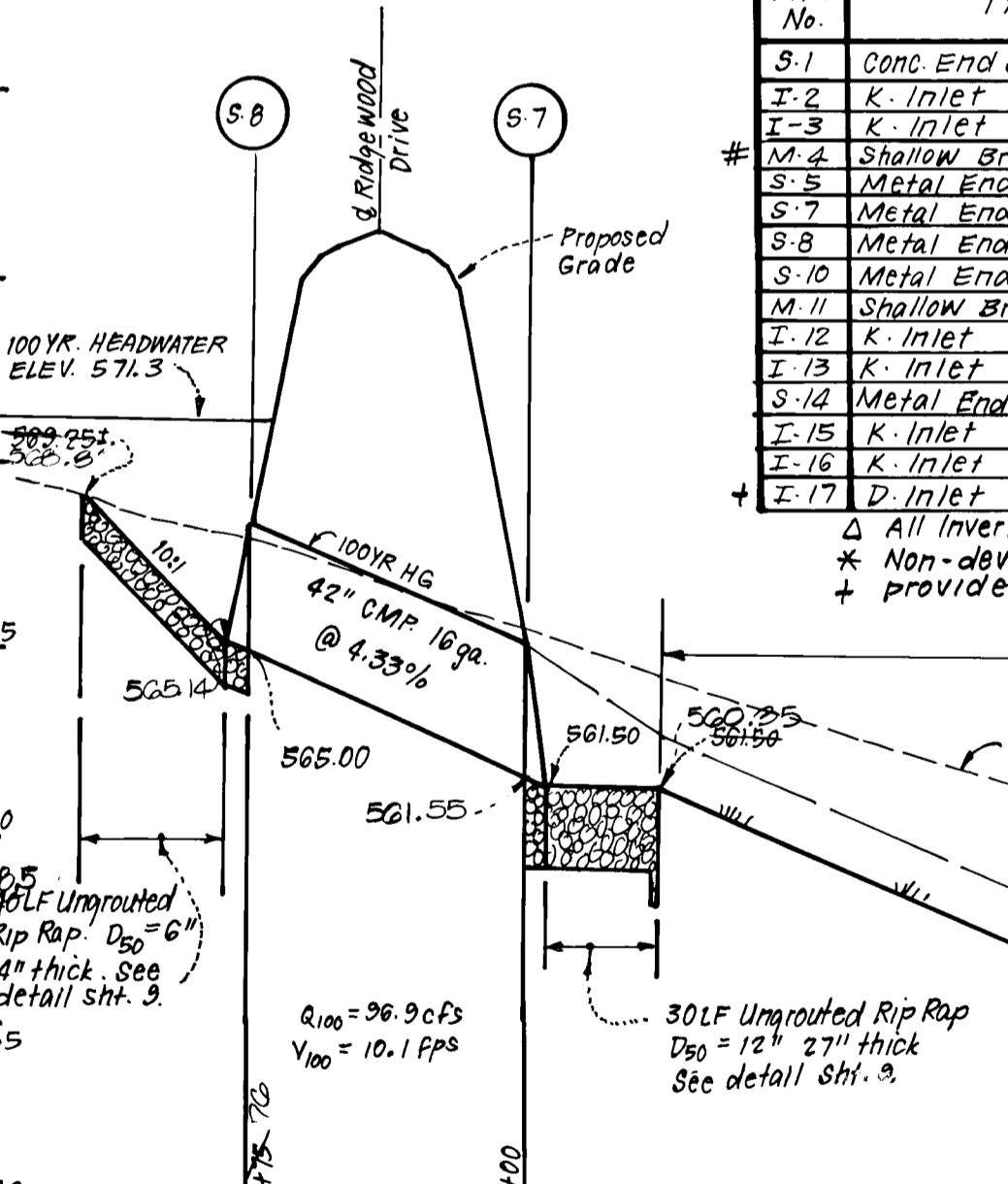
PROFILE OF PRINCIPAL SPILLWAY
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

PROFILE

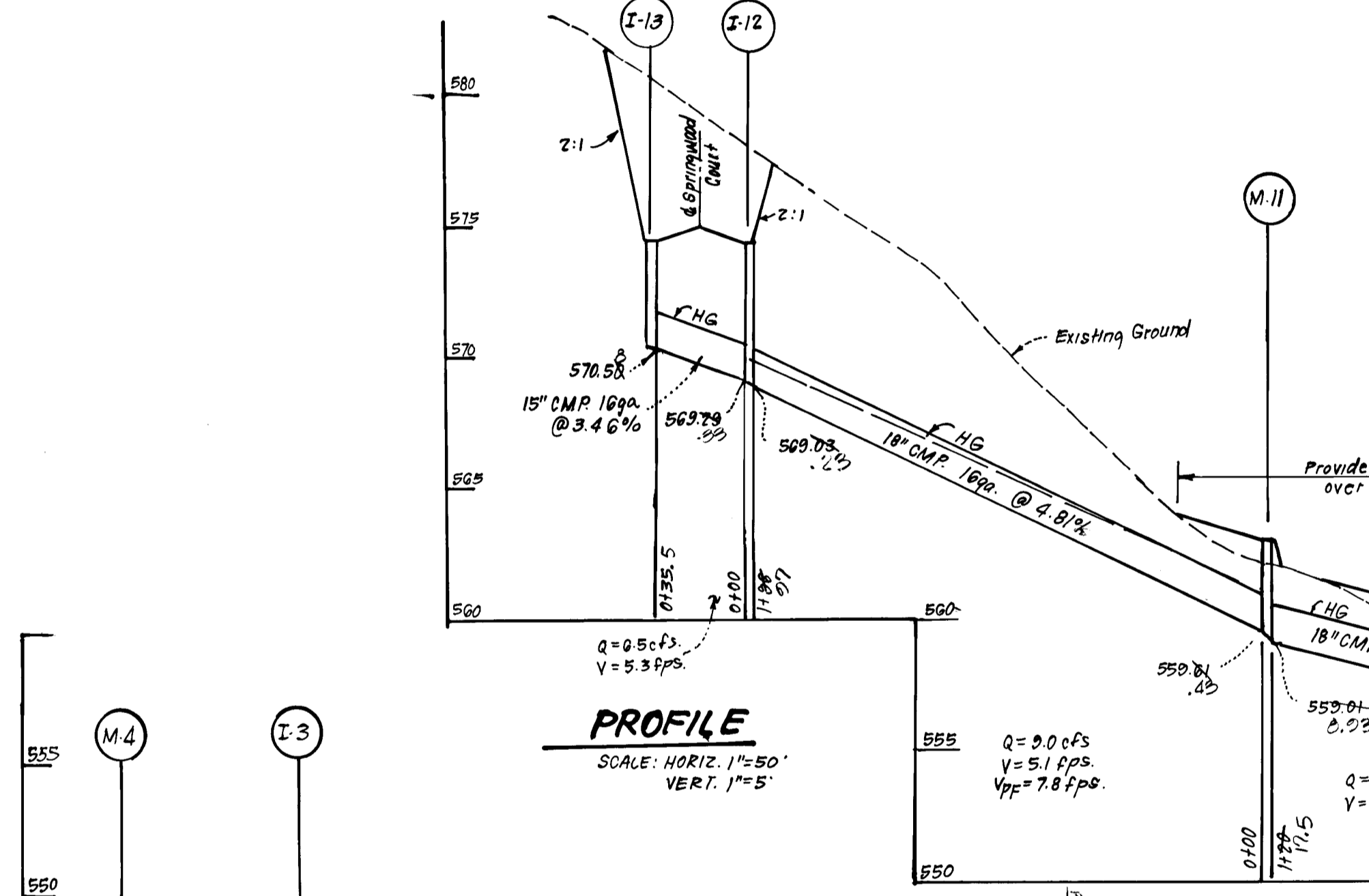
STRUCTURE SCHEDULE

STR. No.	TYPE	INV. IN	INV. OUT	TOP ELEVATION		REMARKS	LOCATION
				UPPER	LOWER		
S-1	Conc. End Section	532.21	532.00	-	-	No. Co. Std. SD 551 42" Ø	See Plan
I-2	K. Inlet	536.97	536.38	547.05	545.41	SD 4.12 W=4.61	4 Str. 23139 Ridge Rd. 10' RT.
I-3	K. Inlet	539.50	539.00	545.25	543.61	SD 4.12 W=4.61	4 Str. 26115 Ridge Rd. 10' RT.
M-4	Shallow Brick Manhole	544.2	540.47	548.28	546.64	G 5.05 48" Sd	4 Str. 26115 Ridge Rd. 20' RT.
S-5	Metal End Section	533.00	532.70	-	-	SD 5.61 30" Ø	See Plan
S-7	Metal End Section	561.75	561.50	-	-	SD 5.61 42" Ø	4 Str. 1462 Ridge Rd. 40' LT.
S-8	Metal End Section	565.25	565.00	-	-	SD 5.61 42" Ø	4 Str. 1462 Ridge Rd. 35' RT.
S-10	Metal End Section	559.44	559.19	563.00	561.36	SD 5.61 18" Ø	See Plan
M-11	Shallow Brick Manhole	569.79	569.03	574.44	572.80	G 5.05 48" Sd	See Plan
I-12	K. Inlet	-	570.50	-	-	SD 4.12 W=3	4 Str. 61167 Spring Mt. Ct. 10' LT.
I-13	K. Inlet	-	570.50	-	-	SD 4.12 W=3	4 Str. 61167 Spring Mt. Ct. 10' RT.
S-14	Metal End Section	574.00	573.97	-	-	See Plan	See Plan
I-15	K. Inlet	580.03	580.00	586.48	584.84	SD 4.12 W=3	4 Str. 16150 Ridge Rd. 10' LT.
I-16	K. Inlet	582.12	581.27	588.48	586.84	SD 4.12 W=3	4 Str. 16150 Ridge Rd. 10' RT.
I-17	D. Inlet	-	583.00	-	-	SD 4.11 2 1/2" Sd	4 Str. 16150 Ridge Rd. 46' RT.

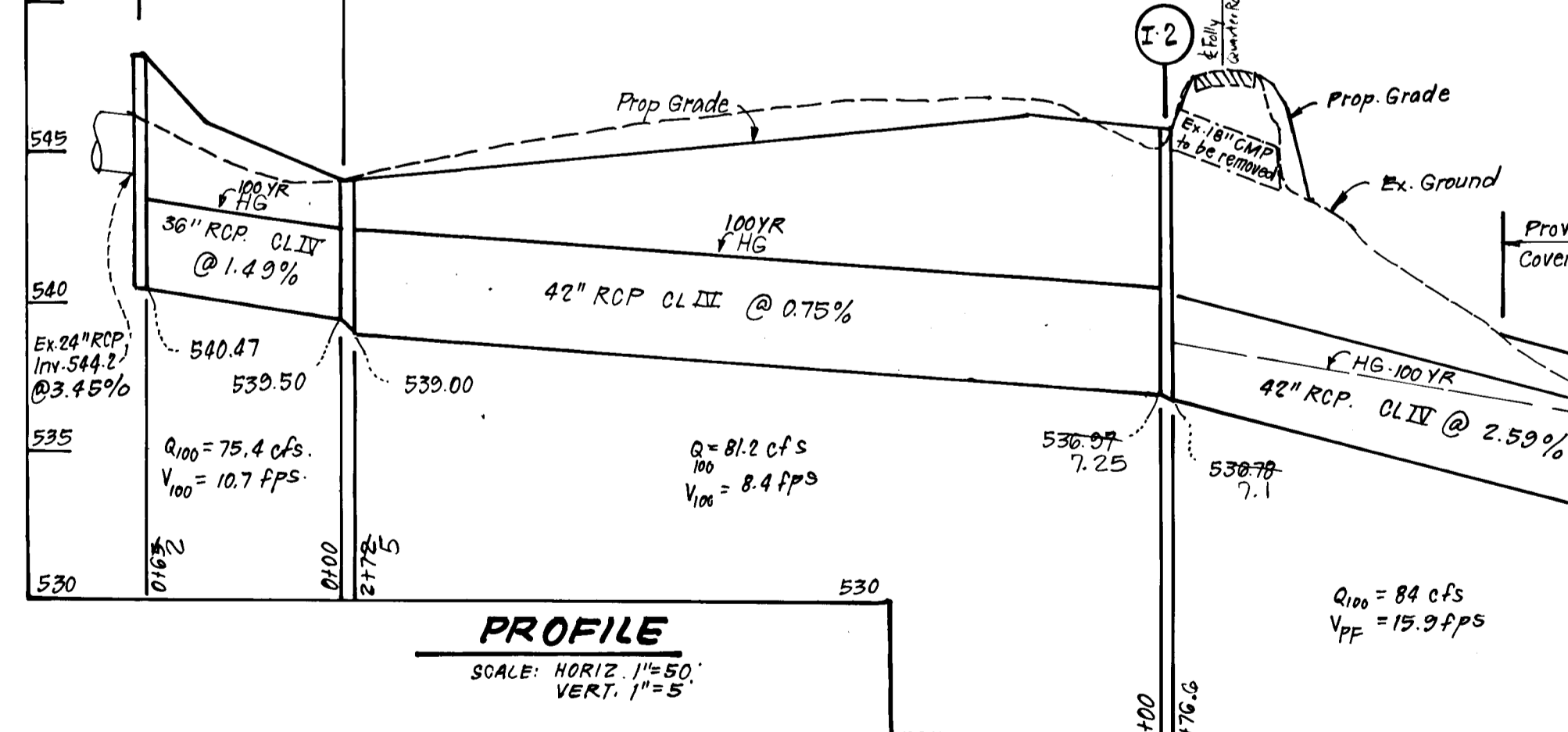
All inverts except @ M-4 to be fully developed.
* Non-developed invert.
+ provide slots in all sides



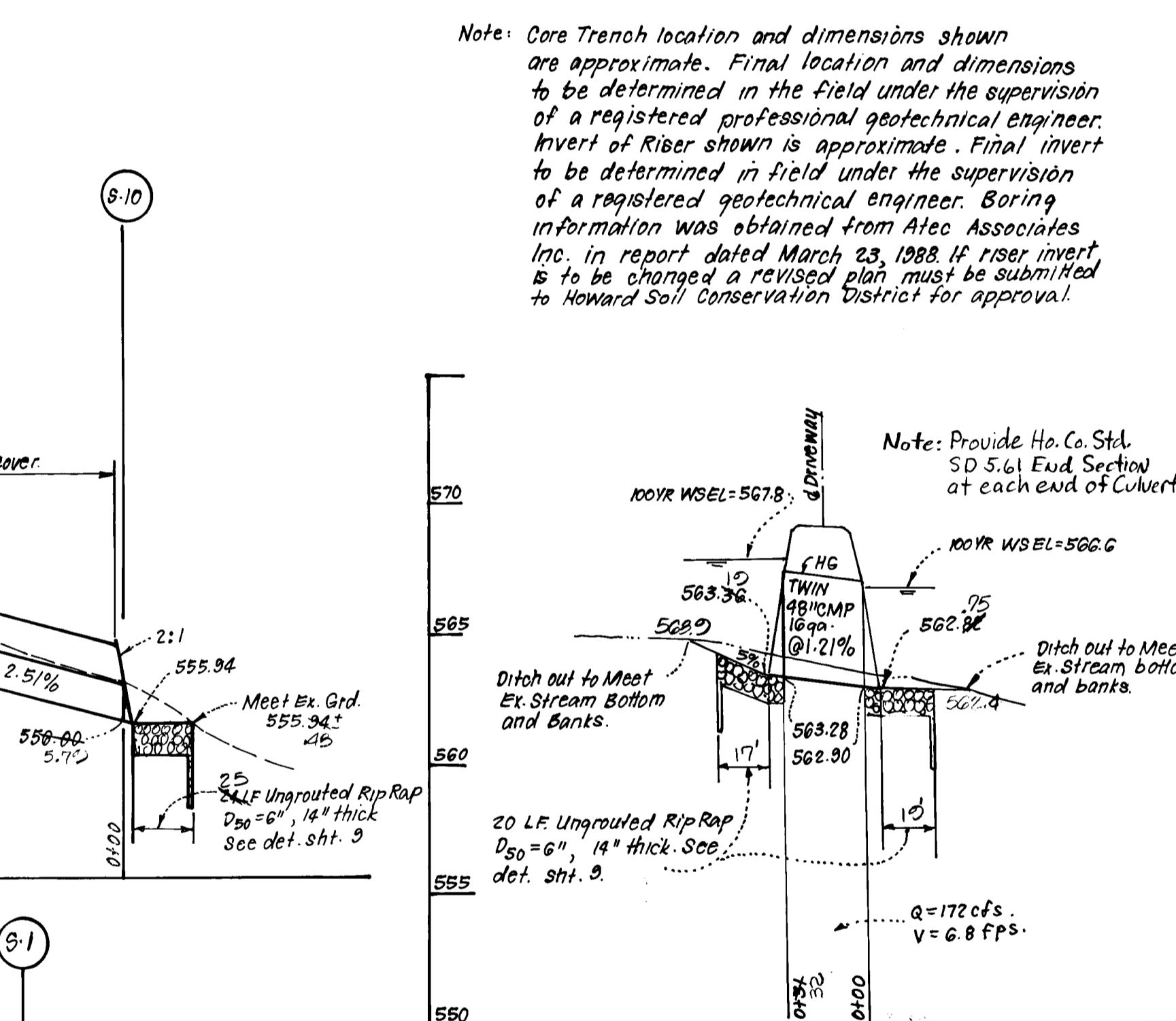
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VERT. 1"=5'



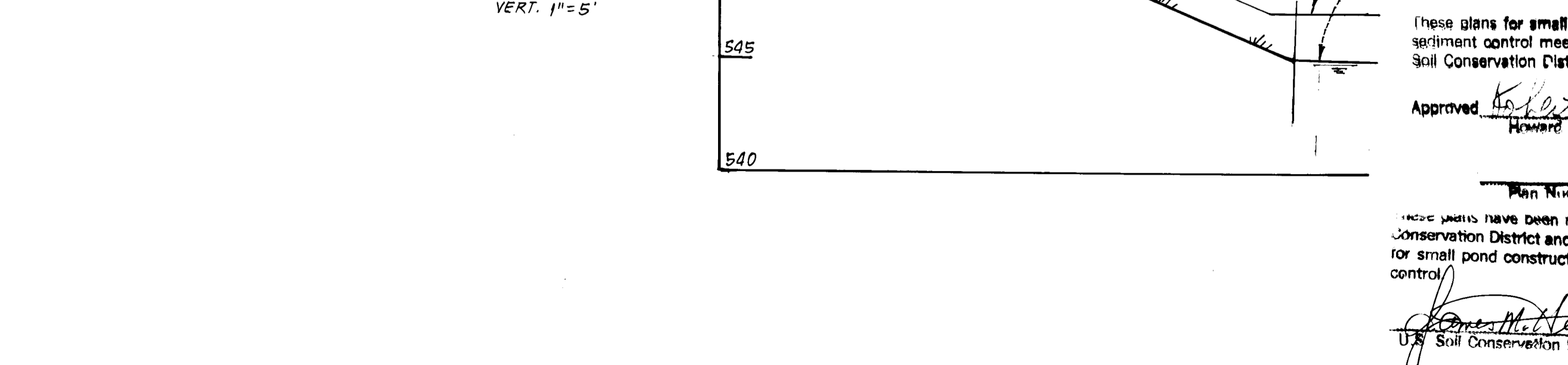
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VERT. 1"=5'



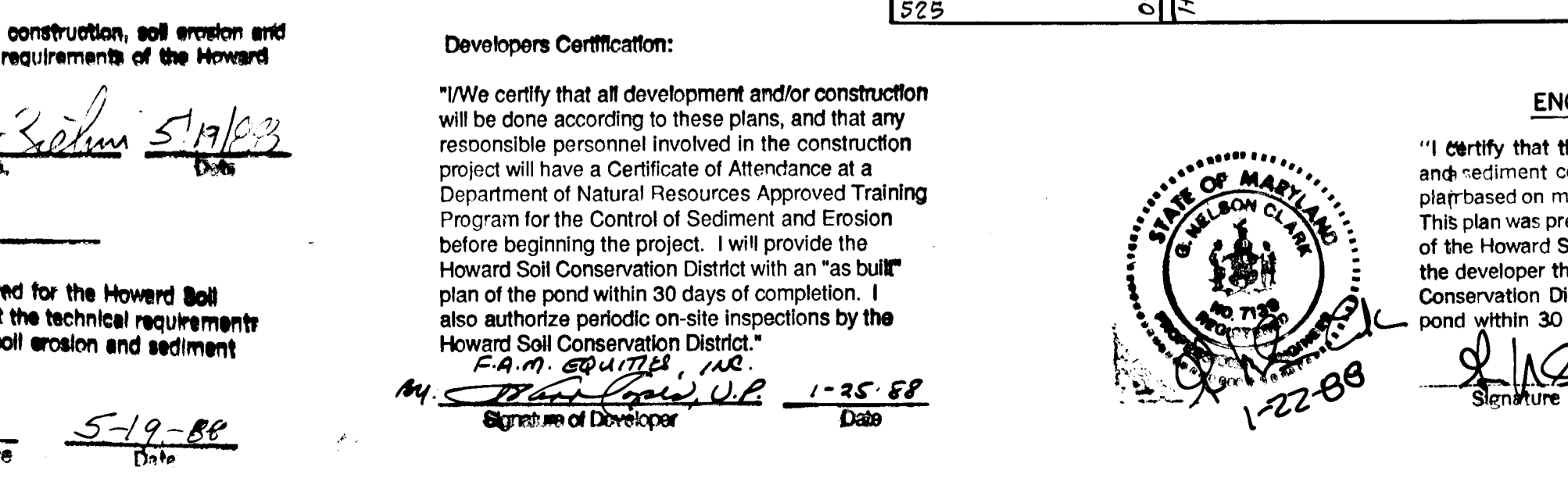
PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



PROFILE DRIVEWAY CULVERT
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



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



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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

APPROVED: CLARK • FINEFROCK & SACKETT, INC.

7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (301) 381-7200 - BALTO. • (301) 621-8100 - WASH.

DESIGNED: JLS
DRAWN: KIW
CHECKED: JLS
DATE: 1-22-88

ROAD CONSTRUCTION PLANS
STORM WATER MANAGEMENT & STORM DRAIN PROFILES & DETAILS
RIDGEWOOD
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
FOR: F.A.M. EQUITIES
802 Garrett Bldg.
233 E. Redwood St. Balt. Md. 21202

AS SHOWN
DRAWING
10 OF 13
JOB NO.
87-004
FILE NO.
87-004-D

DATE: 1-22-88

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

Approved: *[Signature]* 5/19/88
Howard S.C.D.

Plan Number: 5-19-88

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.

Approved: *[Signature]* 5-19-88
Howard S.C.D.

Developers Certification:

"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 Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will 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."

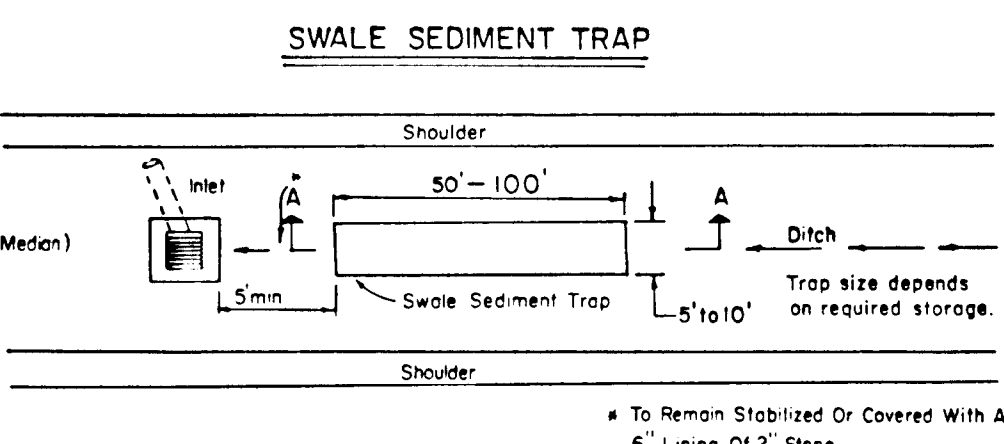
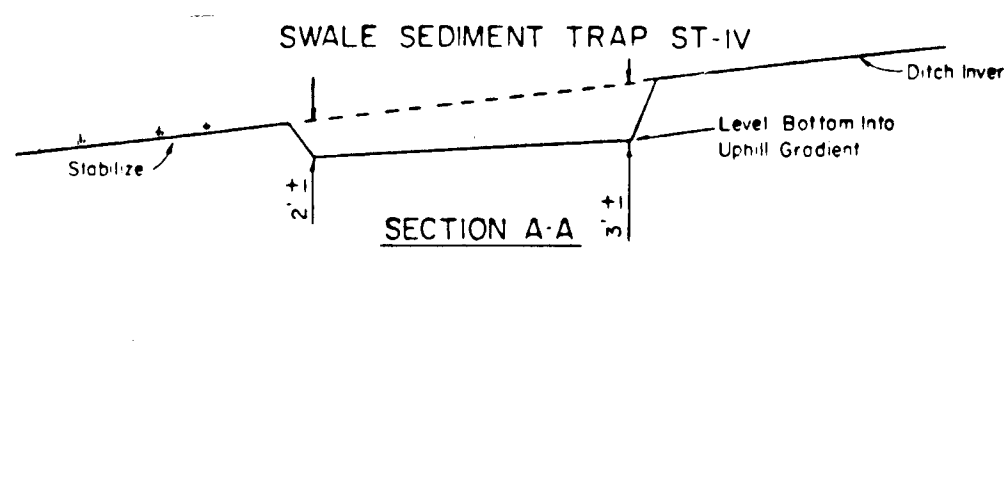
F.A.M. EQUITIES
1-25-88
Signature of Developer

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 must provide the Howard Soil Conservation District with a red-lined "as built" of the pond within 30 days of completion."

Signature of Engineer: *[Signature]* 1-22-88
Date: 1-22-88

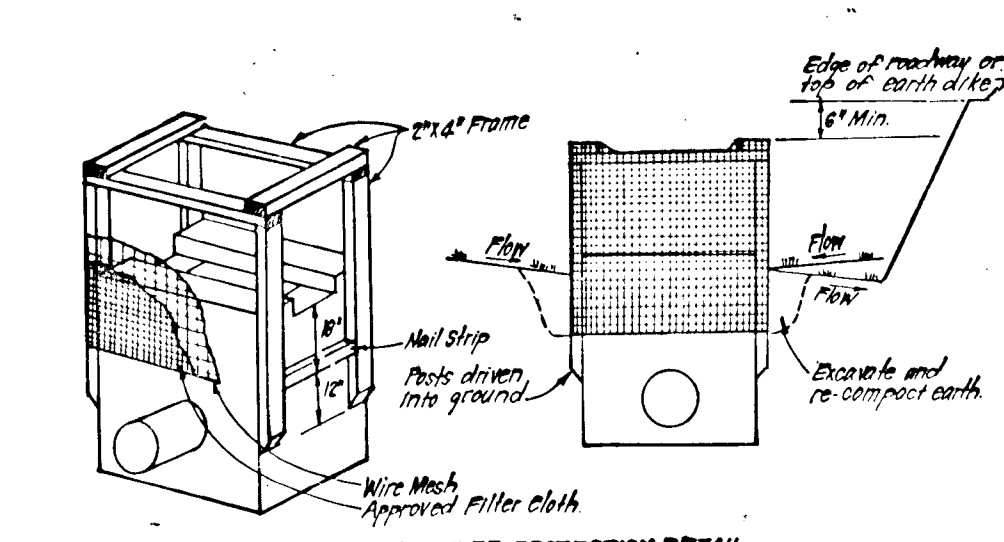
AS-BUILT
NOV. 1, 1991



CONSTRUCTION SPECIFICATION FOR ST-IV

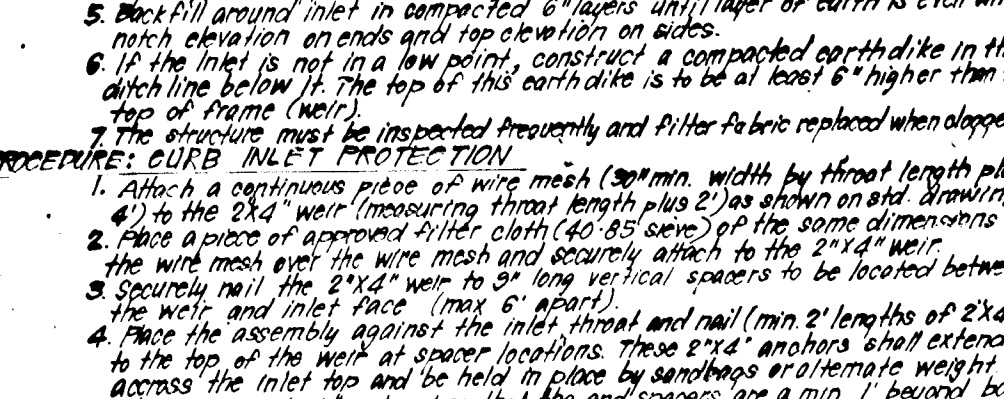
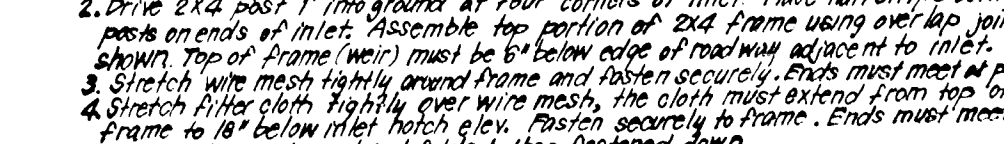
- The swale sediment trap shall be constructed in accordance with the dimensions provided on the design drawings or sized to provide the minimum storage necessary 1800 cubic feet of storage for each acre of drainage area.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 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 shall be minimized.
- The sediment trap shall be removed and area stabilized when the contributory drainage area has been properly stabilized.
- The swale sediment trap will be properly backfilled and the swale or ditch reconstructed.

Maximum Drainage Area: 2 Acres



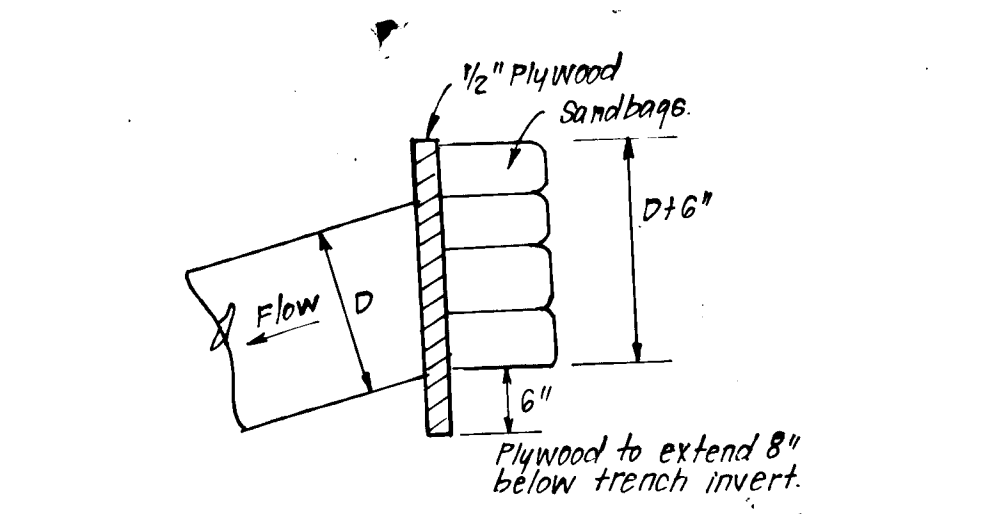
CONSTRUCTION SPECIFICATIONS:

- Materials: A. Wooden frame to be constructed of 2"x4" construction grade lumber. B. Wire mesh must be of sufficient strength to support filter fabric and also to curb mounds, with water fully impounded around it. C. Filter cloth must be of a type approved for this purpose, resistant to sunlight with a pore size, 20 to 40 microns, to allow sufficient passage of water and removal of sediment. D. Stone to be in 1/2" size and clean wire mesh would clog the cloth.
- PROCEDURE:** SWALE DITCHLINE OR DITCHLINE PROTECTION
 - Excavate completely around inlet to a depth of 18" below notch elevation.
 - Drive 2x4 post 1' into ground at four corners of inlet. Place nailstrips between posts on ends of inlet. Assemble top portion of 2x4 frame using end cap joint.
 - Stretch top of frame (wire) must be 6" below edge of road way adjacent to inlet.
 - Stretch wire mesh tightly around frame and tension securely. Ends must meet at post.
 - Stretch filter cloth tightly over wire mesh. The cloth must extend from top frame to 6" below inlet notch edge. Fasten securely to frame. Ends must meet at post, be overlapped and riveted, then fastened down.
 - Backfill around inlet in compacted 6" layers until layer of earth is even with notch elevation on ends and top elevation on sides.
 - If the inlet is not in a low point, construct a compound earth/dike in the ditch line below it. The top of this earth/dike is to be at least 6" higher than the top of frame.
 - The structure must be inspected frequently and filter fabric replaced when damaged.
- PROCEDURE:** CURB INLET PROTECTION
 - Attach a continuous piece of wire mesh (approx. width by throat length plus 4") to the 2x4 weir (measuring throat length plus 2" as shown on detail drawings).
 - Place a piece of approved filter cloth (40-60 mesh) on top some dimensions as the wire mesh and the wire mesh and securely attach to the 2x4 weir.
 - Support the 2x4 weir to 1/2" long vertical spacers to be located between the weir and inlet face (max 6" apart).
 - Place the assembly against the inlet throat and nail (min 2" lengths of 2x4" at top of the work at spacer locations. These 2x4" anchors shall extend across the inlet top and be held in place by a temporary retaining weight or asphalt dikes directing flow to inlet.
 - The assembly shall be placed so that the end-spacers are at min 1' beyond both ends of throat opening.
 - From the wire mesh and 2x4 weir cloth to the concrete curb and against the face of curb on both sides of the inlet. Place a 2" strip over the mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
 - This type of protection must be inspected frequently and the filter cloth and wire replaced when damaged with sediment.
 - Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow to inlet.



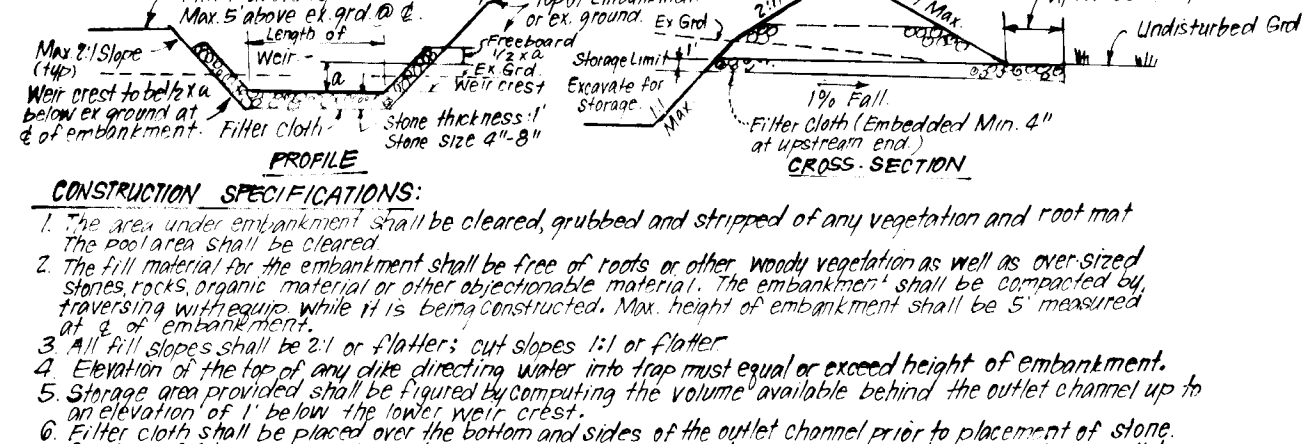
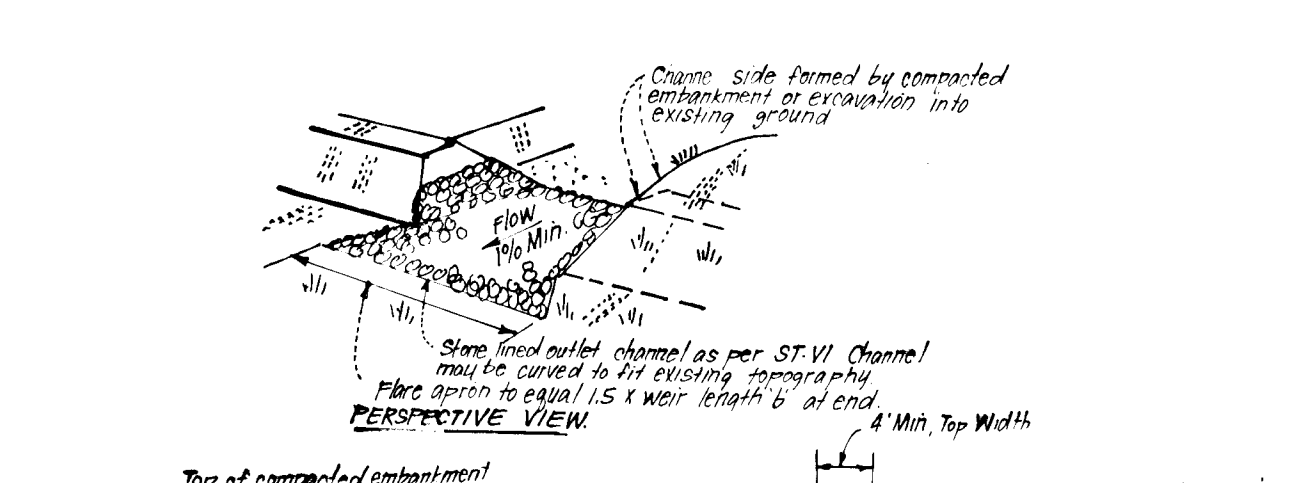
CONSTRUCTION SPECIFICATIONS:

- Stone size - Use 2" stone or rounded or recycled concrete equivalent.
- Length - As required, but not less than 50' feet (except on a single residence lot where a 30' foot minimum length would apply).
- Thickness - Not less than six (6) inches.
- Width - Ten (10) feet minimum, but not less than the full width of points where ingress or egress occurs.
- 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.
- Surface Water - All surface water flowing or directed toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
- 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 construction demand and repair and/or cleanup of any measures used to trap sediment. All sediment applied, cleaned, washed or tracked onto public rights-of-way must be removed or prevented.
- 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.
- Periodic inspection and needed maintenance shall be provided after each rain.



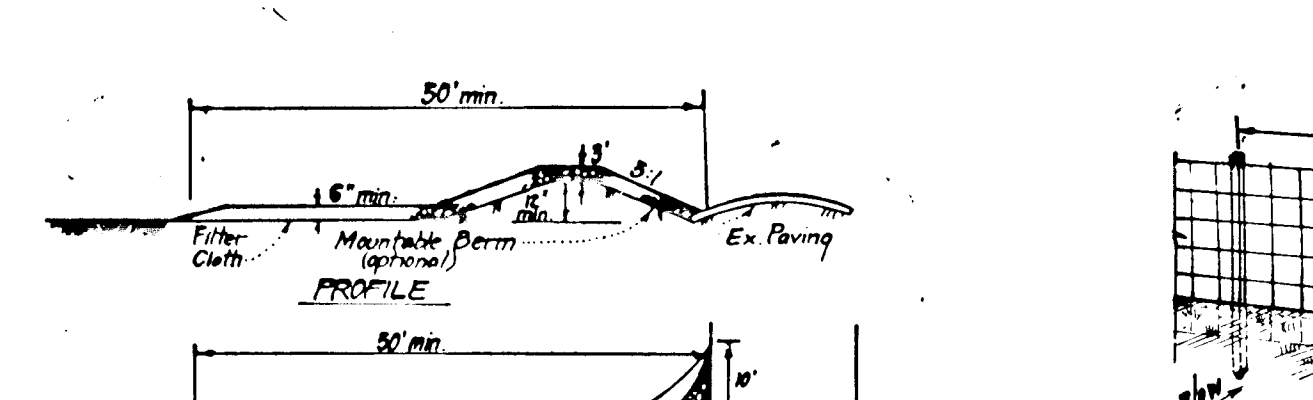
CONSTRUCTION SPECIFICATIONS:

- Structure to be 2' high, or recycled concrete equivalent, in a layer of at least 3" thick and be pressed into soil with construction equipment.
- Filter cloth to be 4' x 4' in a layer of at least 1/2" thick, pressed into soil.
- Approved equivalents can be substituted for any of the above materials.
- Periodic inspection and required maintenance must be provided after each rain.



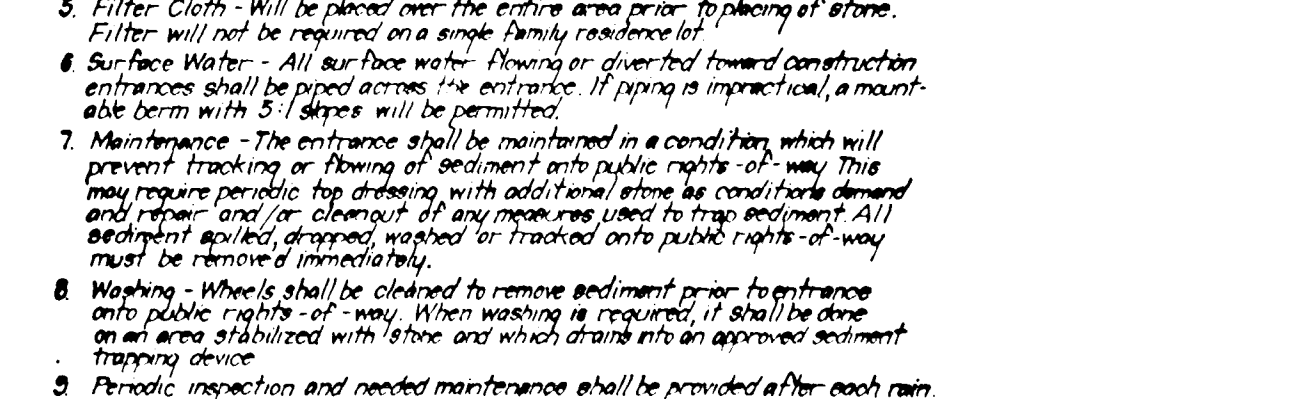
CONSTRUCTION SPECIFICATIONS:

- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The riprap shall be clean.
- The fill material for the embankment shall be free of rocks or other woody vegetation as well as over-sized stones, rocks, trash, material or other objectionable material. Embankment shall be compacted up to a depth of 1' below the lower surface.
- Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must be placed in a manner to prevent the entrance of water into the channel.
- Stone shall be placed in a layer of 12" and compacted. A layer of filter cloth shall be embedded at least 6" into existing riprap. A drainage ditch shall be placed on the outside of the riprap to collect any water that enters the riprap.
- 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 area stabilized when the drainage area has been properly stabilized.
- Drainage area for this practice is limited to 15 acres or less.



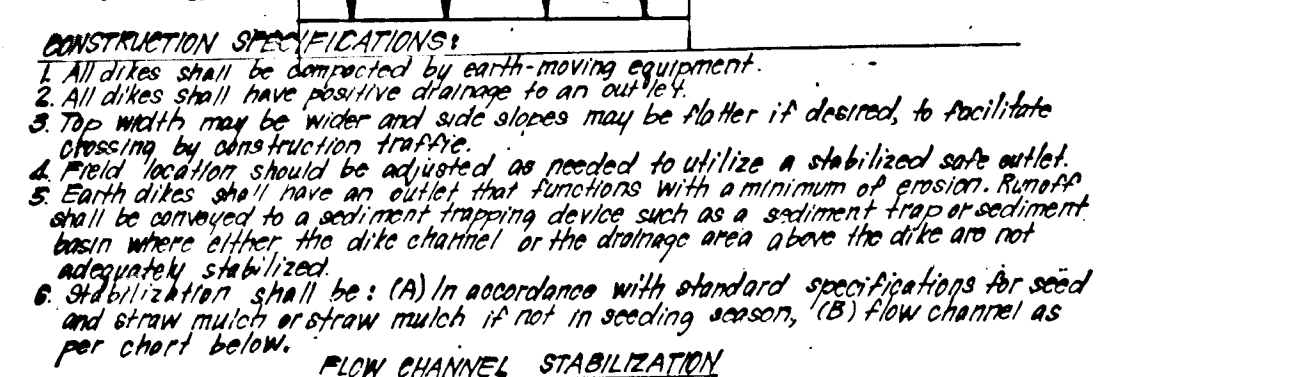
CONSTRUCTION SPECIFICATIONS:

- 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 ties spaced every 30" at top and mid section.
- When 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and stapled.
- Maintenance shall be performed as needed and material removed when "barges" develop in Silt Fence.



CONSTRUCTION SPECIFICATIONS:

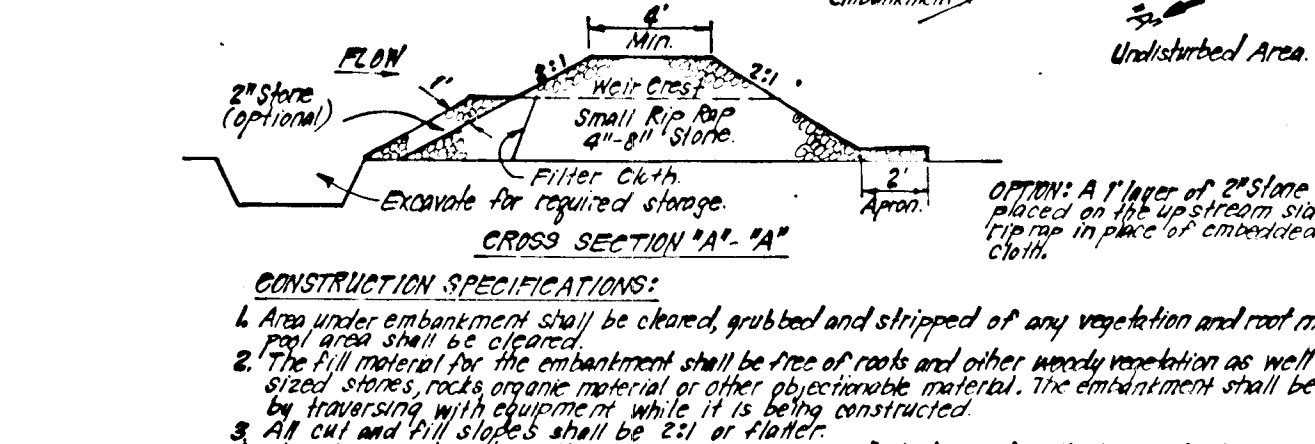
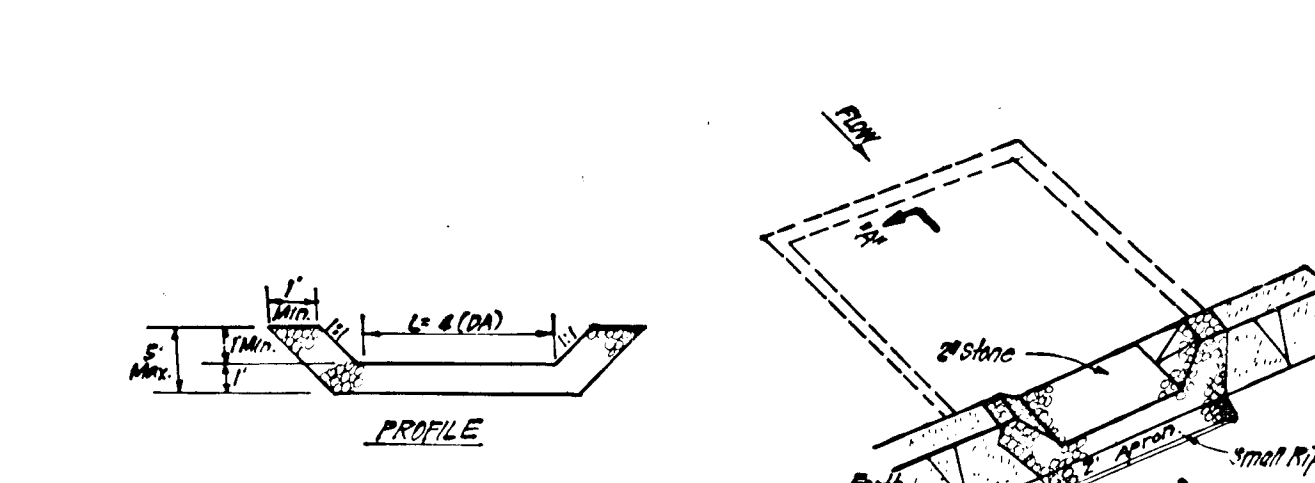
- Bales shall be placed in the top of a slope or on the corner and in a row with ends tightly abutting the adjacent bales.
- Each bale shall be encased in the soil a min of 4" and placed so the bindings are horizontal.
- Bales shall be securely anchored in place by either 2 stakes or 4 rebar driven thru the bale. The 1/2" stake in each bale shall be driven through the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the soil.
- Inspection shall be frequent and repair replacement shall be made promptly as needed.
- Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.



CONSTRUCTION SPECIFICATIONS:

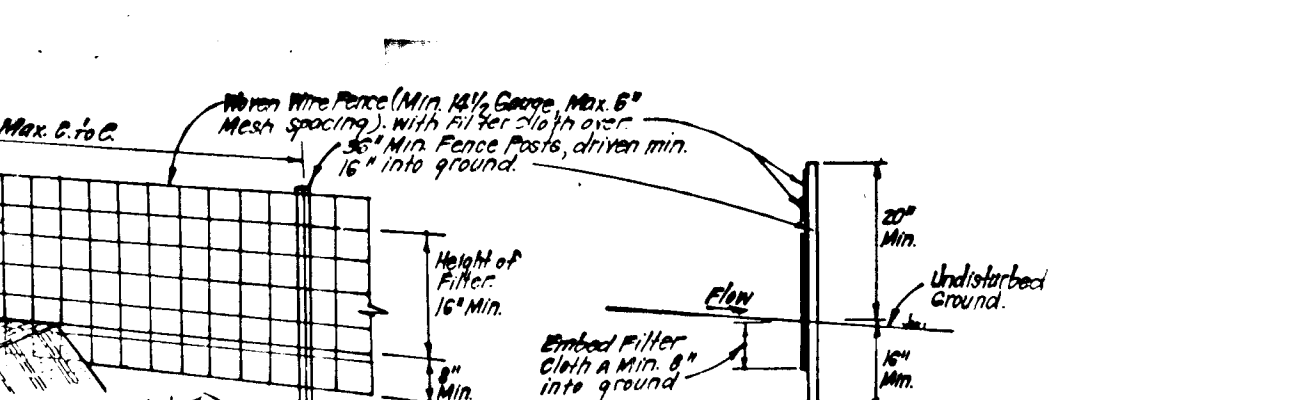
- All dikes shall be constructed by earth-moving equipment.
- All dikes shall have positive drainage to an outlet.
- The width may be wider on side slopes may be flatter if desired to facilitate crossing by construction traffic.
- Final location should be adjusted as needed to utilize a stabilized soil outlet.
- Each dike shall have an outlet and function with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
- 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	CHANNEL	DIKE A	DIKE B
1	2'-3" D ₅₀	Seed & Straw Mulch	Seed or Straw Mulch
2	3"-4" D ₅₀	Seed & Straw Mulch	Seed or Straw Mulch
3	4"-5" D ₅₀	Seed & Straw Mulch	Seed or Straw Mulch
4	5"-6" D ₅₀	Seed & Straw Mulch	Seed or Straw Mulch
5	6"-8" D ₅₀	Seed & Straw Mulch	Seed or Straw Mulch



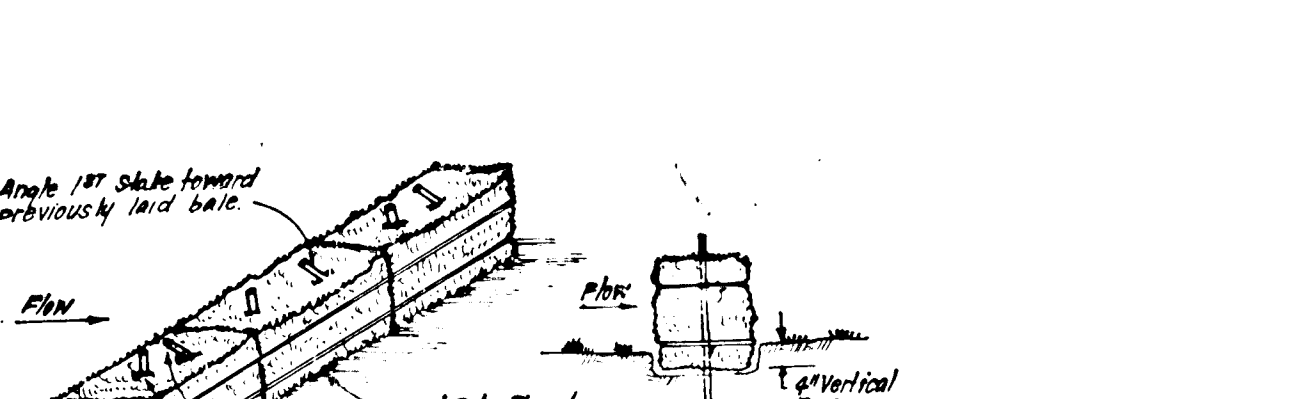
CONSTRUCTION SPECIFICATIONS:

- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The riprap shall be clean.
- The fill material for the embankment shall be free of rocks or other woody vegetation as well as over-sized stones, rocks, trash, material or other objectionable material. Embankment shall be compacted up to a depth of 1' below the lower surface.
- Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must be placed in a manner to prevent the entrance of water into the channel.
- Stone shall be placed in a layer of 12" and compacted. A layer of filter cloth shall be embedded at least 6" into existing riprap. A drainage ditch shall be placed on the outside of the riprap to collect any water that enters the riprap.
- 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 area stabilized when the drainage area has been properly stabilized.



CONSTRUCTION SPECIFICATIONS:

- 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 ties spaced every 30" at top and mid section.
- When 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and stapled.
- Maintenance shall be performed as needed and material removed when "barges" develop in Silt Fence.



CONSTRUCTION SPECIFICATIONS:

- Bales shall be placed in the top of a slope or on the corner and in a row with ends tightly abutting the adjacent bales.
- Each bale shall be encased in the soil a min of 4" and placed so the bindings are horizontal.
- Bales shall be securely anchored in place by either 2 stakes or 4 rebar driven thru the bale. The 1/2" stake in each bale shall be driven through the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the soil.
- Inspection shall be frequent and repair replacement shall be made promptly as needed.
- Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.



CONSTRUCTION SPECIFICATIONS:

- All dikes shall be constructed by earth-moving equipment.
- All dikes shall have positive drainage to an outlet.
- The width may be wider on side slopes may be flatter if desired to facilitate crossing by construction traffic.
- Final location should be adjusted as needed to utilize a stabilized soil outlet.
- Each dike shall have an outlet and function with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
- 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.

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, discing or other acceptable means before seeding, if not previously loosened.

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

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq 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).
- 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) 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 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 re-disturbed 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, 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 bushels per acre of annual ryegrass (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 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 1993 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

CONSTRUCTION SEQUENCE

- Obtain Grading Permit 7 Days
- Construct storm drainage M4 thru S1 and install SBD/S, IPD, and S37 trap #6 28 Days
- Remove upper two (2) ponds and de-water lower # pond and re-grade pond bottoms in accordance with plans and immediately stabilize. 21 Days
- Install SBD/S below lower pond 1 Day
- Reconstruct pond embankment and construct principal and emergency spillways 21 Days
- Construct 42" C/MF under Ridgewood Drive and install SBD/S and construct ditch to pond and immediately stabilize 28 Days
- Install remaining sediment & erosion control measures 28 Days
- Clear and rough grade roads 60 Days
- Construct remaining storm drainage 30 Days
- Fine and grade and construct paving 30 Days
- Stabilize all disturbed areas on-site in accordance with standards and specs. 30 Days
- Upon approval of the sediment control inspector remove sediment & erosion control measures & stabilize 30 Days

*Ponds to be dewatered by pumping.

SEDIMENT CONTROL NOTES

- 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)
- 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.
- 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.
- 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.
- 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 seeding (Sec. 50) and mulching (Sec. 52.) Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 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
- Site Analysis:

Total Area of Site	177.22 Acres
Area Disturbed	21.34 Acres
Area to be roofed or paved	2.57 Acres
Area to be vegetatively stabilized	18.77 Acres
Total Cut	83,000 Cu. yds
Total Fill	23,000 Cu. yds
Offsite waste/borrow area location	N/A
- Any sediment control practice which is disturbed by grading approval for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County DFW sediment control inspector.
- 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.
- If houses are to be constructed on an "As-Built" basis, at random, Single Lot Sediment Control as shown below shall be implemented. N/A
- All pipes to be blocked at the end of each day (see detail below).
- The total amount of straw bale dikes/silt fence equals 2720 L.F.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Paul H. [Signature] 5/27/88
Chief, Land Development Division

James W. [Signature] 6/18/88
Chief, Bureau of Highways

James W. [Signature] 6/18/88
Chief, Bureau of Engineering

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING.

Joseph [Signature] 6/28/88
Chief, Office of Community Planning & Land Development.

CLARK · FINEROCK & SACKETT, INC.
ENGINEERS PLANNERS SURVEYORS

7135 · MINSTREL WAY COLUMBIA, MARYLAND 2045 301/381-7500 Ext. 301-621-8100 Wash.

DESIGNED JLS
DRAWN KIW
CHECKED JLS
DATE 1-22-88

SCALE As Shown
DRAWING 12 OF 13
JOB NO 87.004
FILE NO 87.004-D

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 so deemed necessary.

Paul W. Ziehm 5/19/88
Signature of Developer/Builder

G. Nelson Clark 1-22-88
Signature of District Engineer

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.

G. Nelson Clark 1-22-88
Signature of District Engineer

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY OFFICE OF PLANNING & ZONING

CLARK · FINEROCK & SACKETT, INC.

ENGINEERS PLANNERS SURVEYORS

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SCALE As Shown
DRAWING 12 OF 13
JOB NO 87.004
FILE NO 87.004-D

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Paul H. [Signature] 5/27/88
Chief, Land Development Division

James W. [Signature] 6/18/88
Chief, Bureau of Highways

James W. [Signature] 6/18/88
Chief, Bureau of Engineering

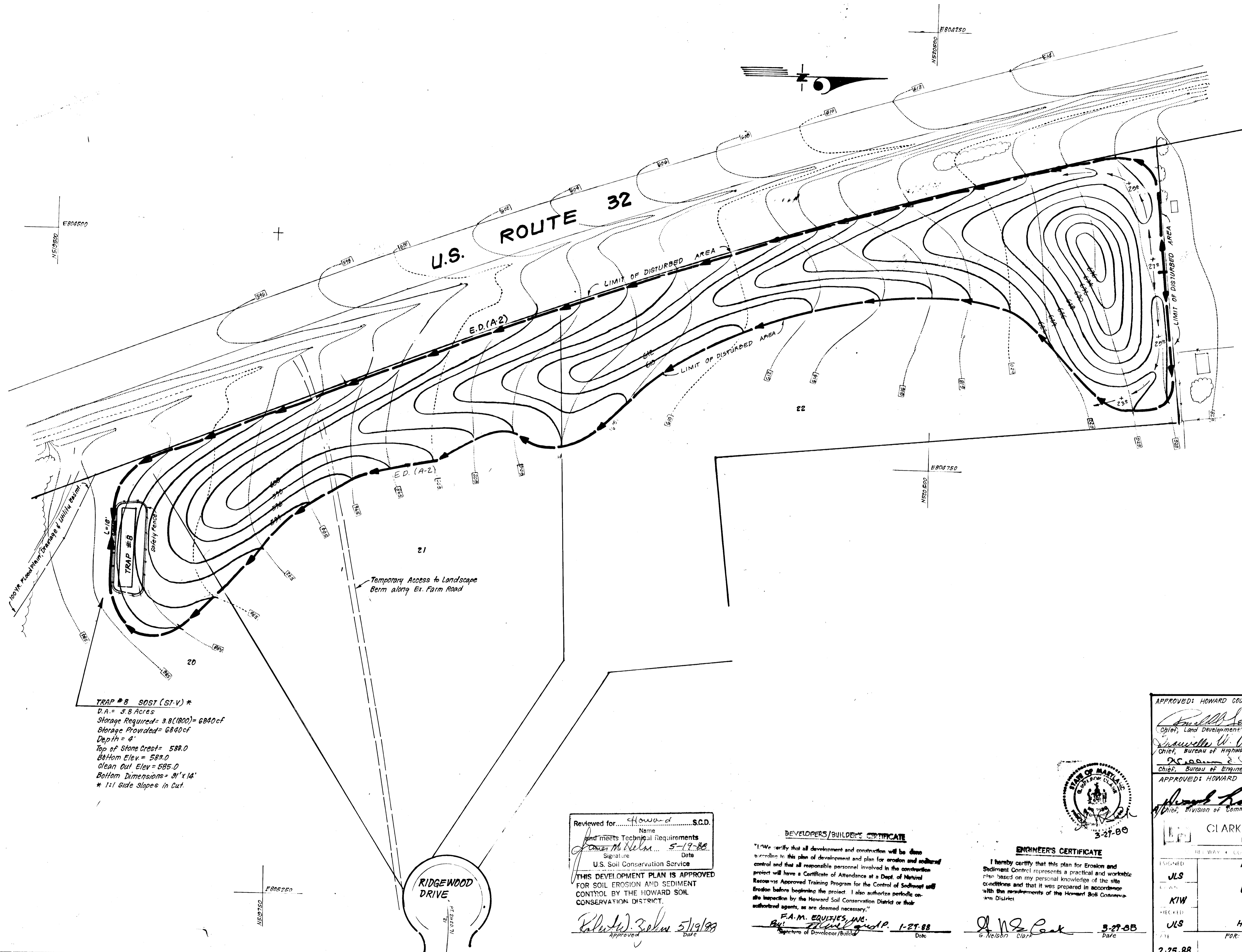
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING.

Joseph [Signature] 6/28/88
Chief, Office of Community Planning & Land Development.

1318

1-22-88

F-88-163



TRAP #8 SOST (ST-V) *
 D.A. = 3.8 Acres
 Storage Required = 3.8(1800) = 6840cf
 Storage Provided = 6840cf
 Depth = 4'
 Top of Stone Crest = 588.0
 Bottom Elev = 583.0
 Clean Out Elev = 585.0
 Bottom Dimensions = 31' x 14'
 * 1:1 side slopes in cut

Temporary Access to Landscape Berm along Ex. Farm Road

RIDGEWOOD DRIVE

Reviewed for Howard S.C.D.
 Name
 and meets Technical Requirements
James M. Nelson 5-19-88
 Signature Date
 U.S. Soil Conservation Service
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Robert W. Zehn 5/19/88
 Approved Date

DEVELOPERS/BUILDERS 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."
F.A.M. Equities, Inc.
Bill Frawley 1-27-88
 Signature of Developer/Builder 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.
G. Nelson Clark 5-27-88
 Signature Date



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Paul M. Seom 5/27/88
 Chief, Land Development Division Date
Shawwelle W. McLeod 6/14/88
 Chief, Bureau of Highways Date
W. Seom 6/15/88
 Chief, Bureau of Engineering Date
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
Howard Clark 6/22/88
 Chief, Division of Community Planning & Land Development Date

CLARK • FINFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 802 GARRETT BLDG.
 233 E. REDWOOD ST. BALT. MD. 21202

DESIGNED	JLS	SCALE	1"=50'
DRAWN	KIW	DATE	130F/13
CHECKED	JLS	JOB NO.	87-004
FOR: F.A.M. EQUITIES 802 Garrett Bldg. 233 E. Redwood St. Balt. Md. 21202			87-004-D

2-25-88
 NOV. 1, 1991
 F-98-163

L348