

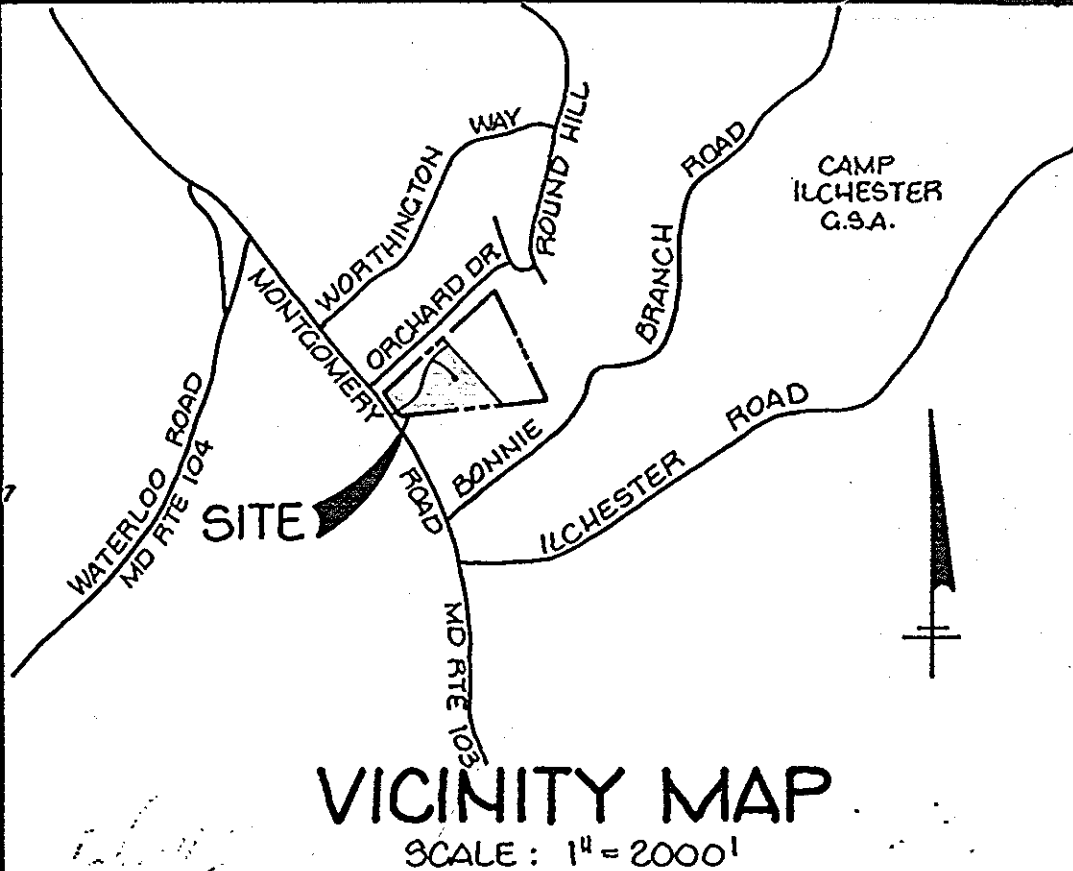
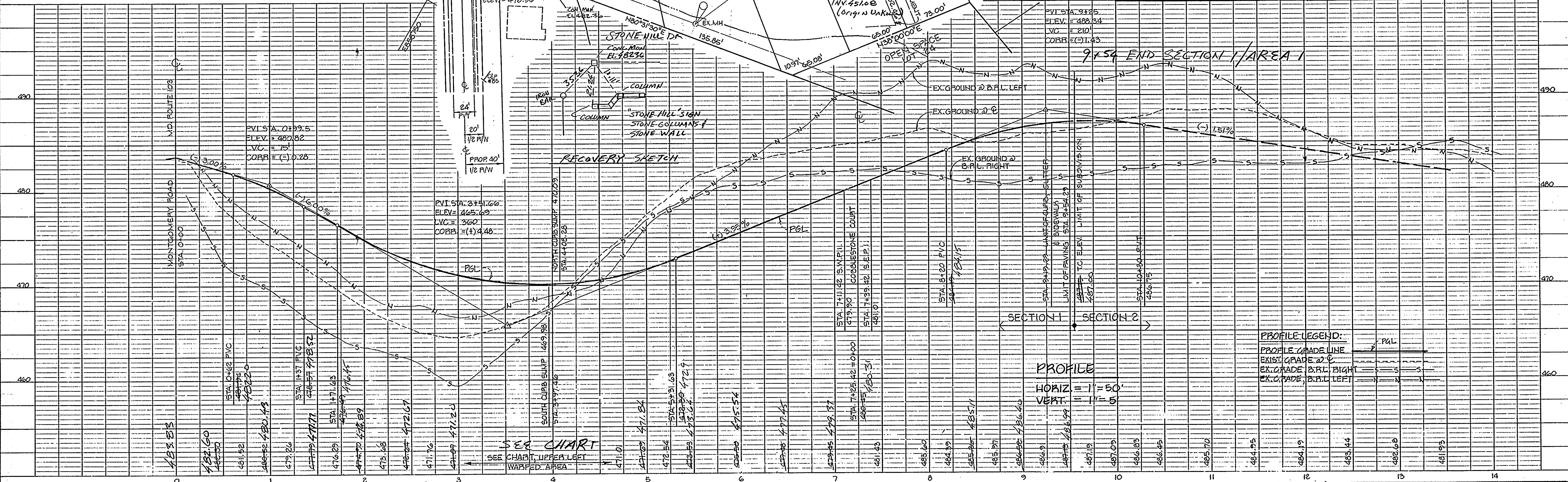
STA.	T.C. (S)	CROSS SLOPE	E. ELEV.	CROSS SLOPE	T.C. (N)	AS-BUILT
3+00	471.07	3%	470.84	3%	471.07	471.20
3+25	470.70	3.73%	470.58	3%	470.81	
3+50	470.45	3.73%	470.33	3%	470.56	470.54
3+75	470.20	3.73%	470.08	3%	470.31	
3+97.46	469.98	3.73%	469.86	3%	470.09	470.10
4+08.28	470.09	3%	469.86	3.73%	469.98	470.08
4+25	470.26	3%	470.03	3.67%	470.16	
4+50	470.51	3%	470.28	3.07%	470.50	470.69
4+75	471.01	3%	470.78	3%	471.01	

\* HORIZONTAL & VERTICAL CONTROL SHOWN HEREON IS BASED ON THE FOLLOWING HOWARD COUNTY CONTROL STATIONS 2744003, 2744004, 2744005 & 2843001

DATE	BY	REVISION

- GENERAL NOTES**
- ALL STORM DRAIN & PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST DETAILS AND SPECIFICATIONS OF HOWARD CO. & MD.S.H.A.
  - TYPES OF STORM DRAIN STRUCTURES REFER TO THE STANDARD DETAILS OF HOWARD COUNTY & MD. S.H.A.
  - TRENCH COMPACTION FOR STORM DRAINS WITHIN ROADS OR STREET RIGHT WAY LIMITS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD CO. ROAD CODE.
  - INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS, BY HAND, AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF CONSTRUCTION.
  - ALL UTILITY COMPANIES SHALL BE NOTIFIED 24 HRS. IN ADVANCE OF CONSTRUCTION.
  - ALL TRAFFIC CONTROL SERVICES, PARKING AND SIGNING TO BE DONE IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", 1971 EDITION.
  - SAG AND CREST VERTICAL CURVES WERE DESIGNED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME III, ROADS & BRIDGES.
  - PROVIDE CONCRETE SIDE WALK RAMP IN CURBS, WHERE SHOWN IN PLAN (MAX 12:1 SLOPE; SEE HOWARD CO. STD. DETAILS, R-4.01)
  - MINIMUM COVER OF 12" SHALL BE PROVIDED OVER STORM DRAIN PIPES IN ALL AREAS NOT BEING FINAL GRADED BY THESE PLANS.
  - DESIGN SPEED: 30 M.P.H.
  - STREET LIGHTS SHALL BE 175 WATT MODERN MERCURY VAPOR LAMP, POST TOP FIXTURES ON 14 FT. GRAY FIBERGLASS POLES.
  - BASE WILL BE PRIMED C-30-3. TACK COAT REQUIRED C-31-4.
  - REFER TO SHEET 4 OF 7 FOR SEDIMENT CONTROL.

DATE	BY	REVISION



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John M. Muschman* 9-25-84  
 Chief, Division of Land Development and Zoning Administration Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*W. E. Day* 9-18-84  
 Chief, Bureau of Engineering Date

EVANS, HAGAN & HOLDEFER, INC.  
 ENGINEERS, LAND PLANNERS & SURVEYORS  
 1052 WEST STREET / LAUREL, MD. 20707  
 (301) 725-0665 / 792-8088  
*Robert May*  
 DATE 9/23/84 SCALE

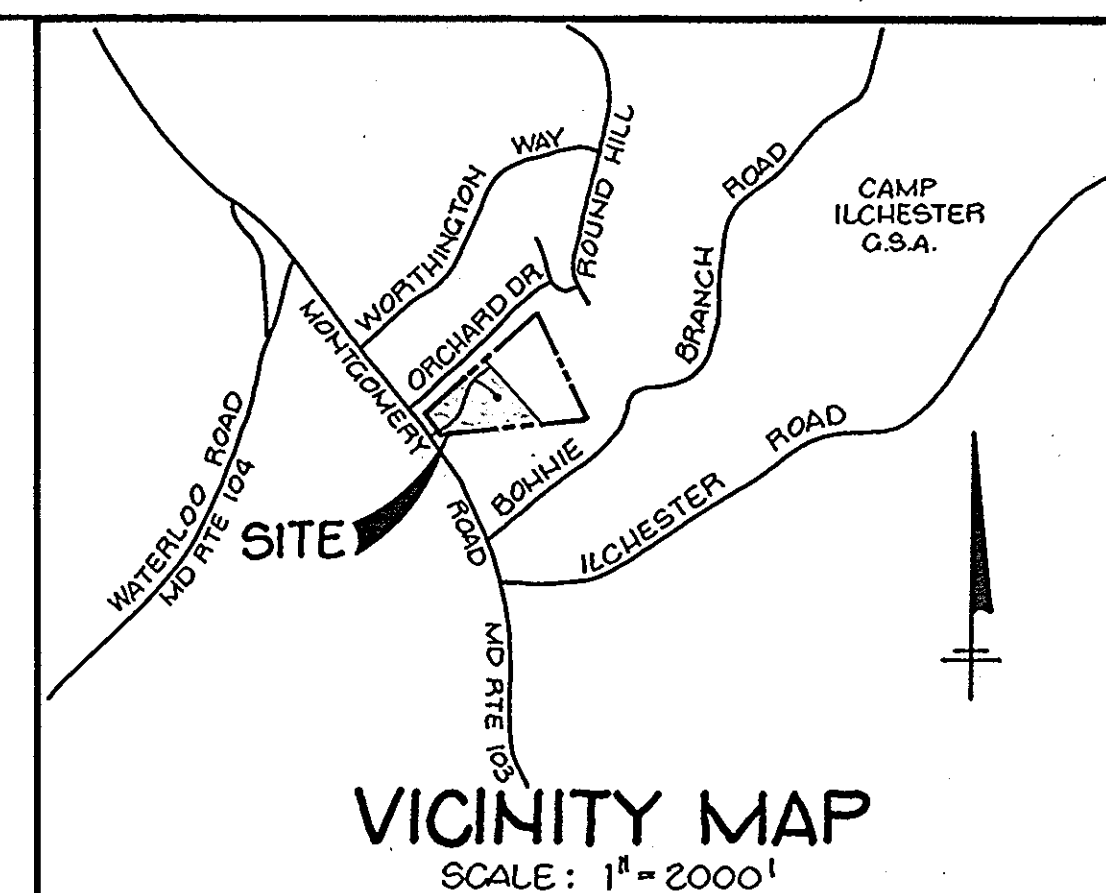
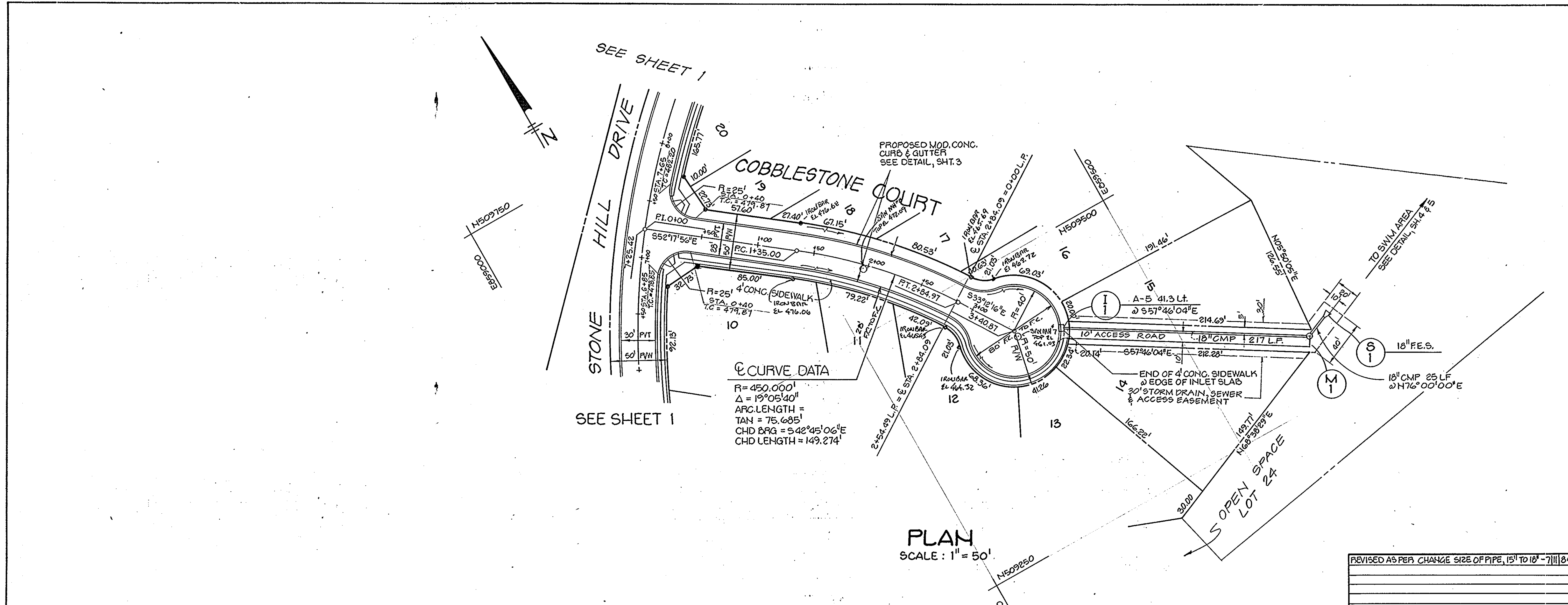
DESIGNED AFC	ROAD PLAN AND PROFILE	SCALE AS SHOWN
DRAWN BLJ	STONE HILL FARM SECTION 1 AREA 1	DWG. NO. 10F3
CHECKED JF	2ND ELECTION DISTRICT	JOB NO. 00032
DATE 6-1-84	FOR: STONE HILL FARM, INC. 514 N. CHAIN HIGHWAY GLEN BURNIE, MARYLAND 21061	FILE NO. 07

1096

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	BY	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	BY	
	NO.	

1096



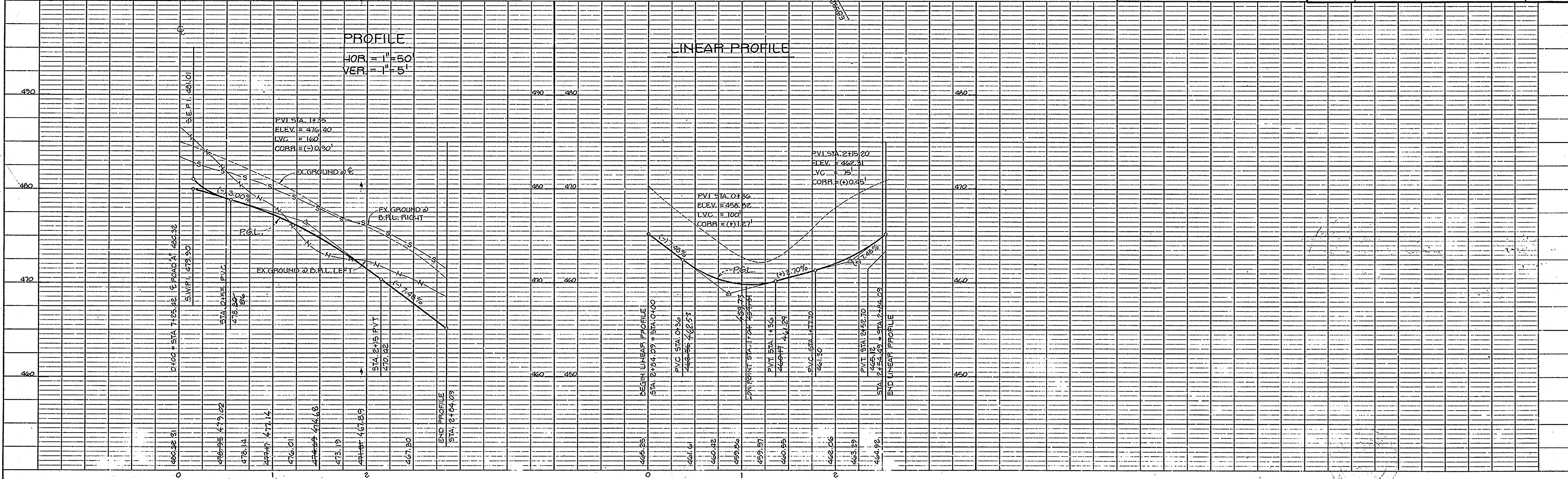
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*John M. ...* 9-25-84  
 Chief, Division of Land Development and Zoning Administration Date

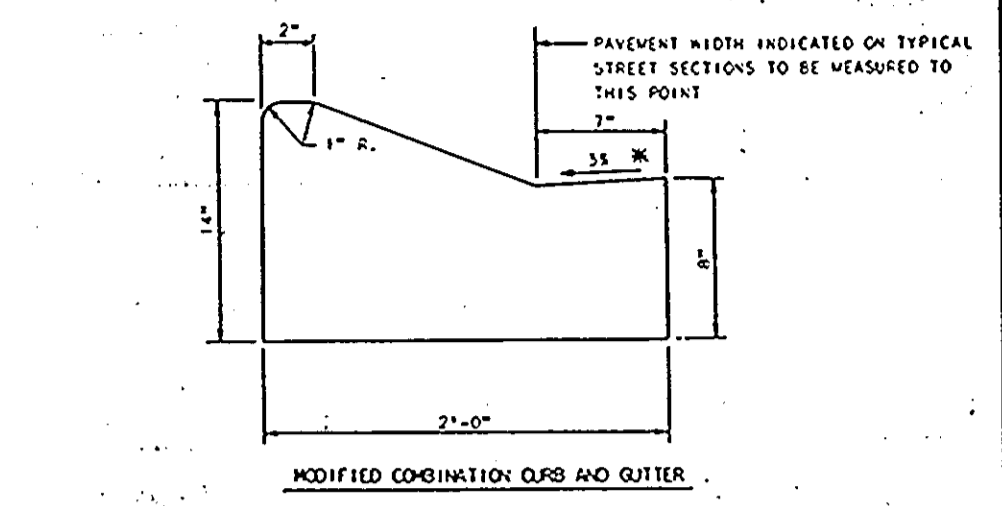
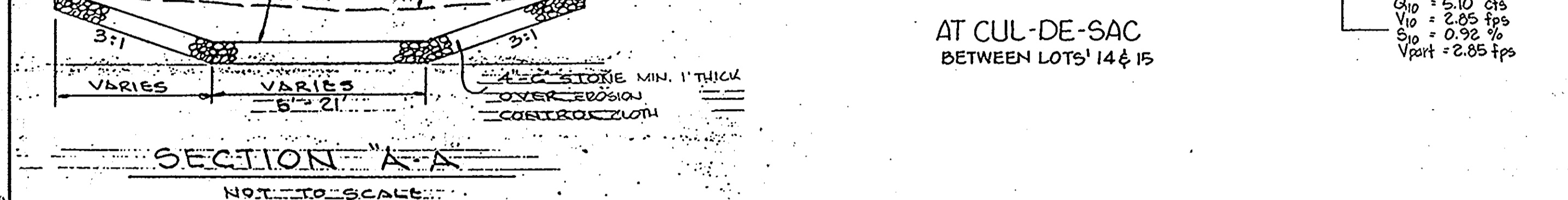
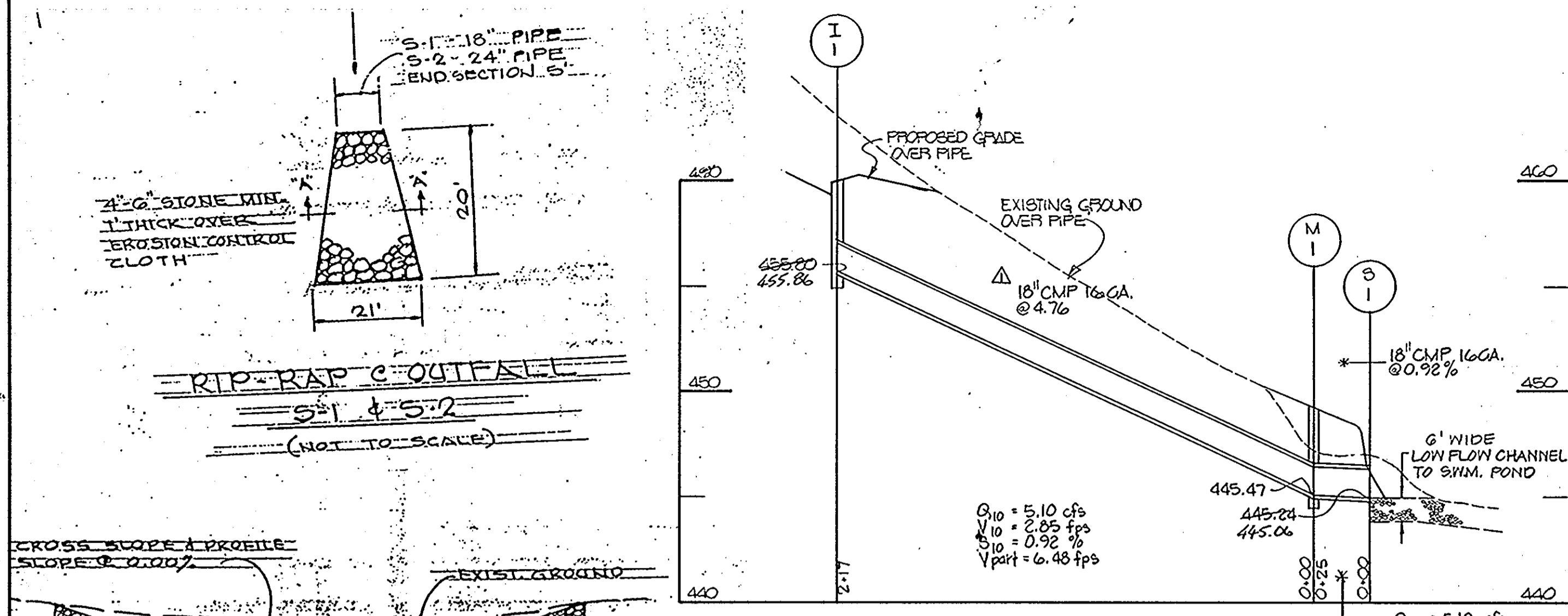
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*...* 9-18-84  
 Chief, Bureau of Engineering Date

EVANS, HAGAN & HOLDEFER, INC.  
 ENGINEERS, LAND PLANNERS & SURVEYORS  
 1052 WEST STREET / LAUREL, MD. 20707  
 (301) 725-0665 / 792-8086

*Robert Mayt*  
 DATE: 5/23/84 SCALE:

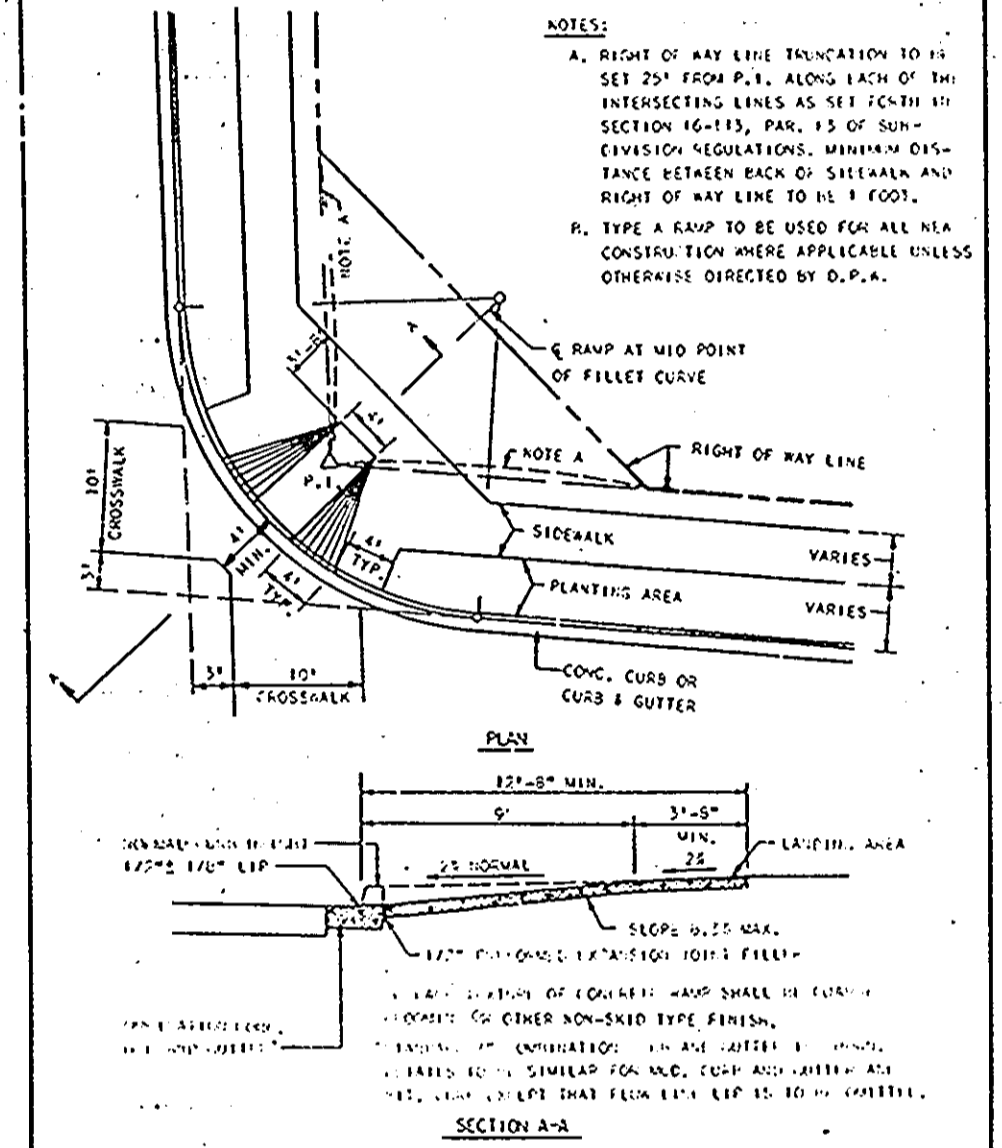
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CHECKED	JVK	2ND ELECTION DISTRICT	JOB NO. 00032
DATE	6-1-84	FOR: STONE HILL FARM, INC. 514 N. CRAIN HIGHWAY GLEN BURNIE, MARYLAND 21061	FILE NO. 07



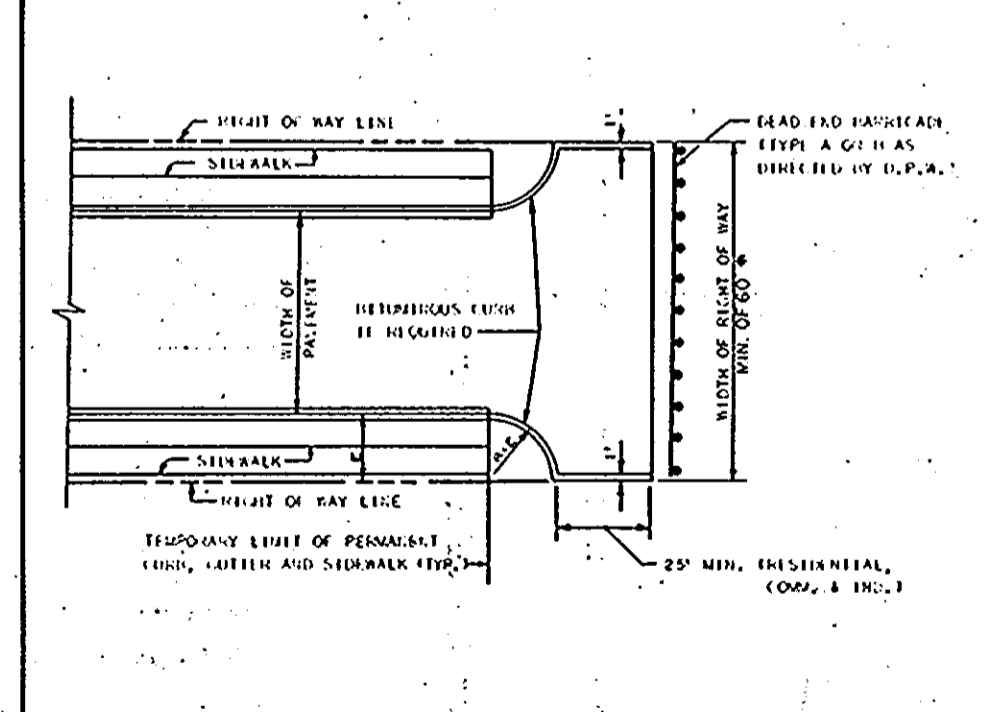


NOTICE: PAVEMENT AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT WHICH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.

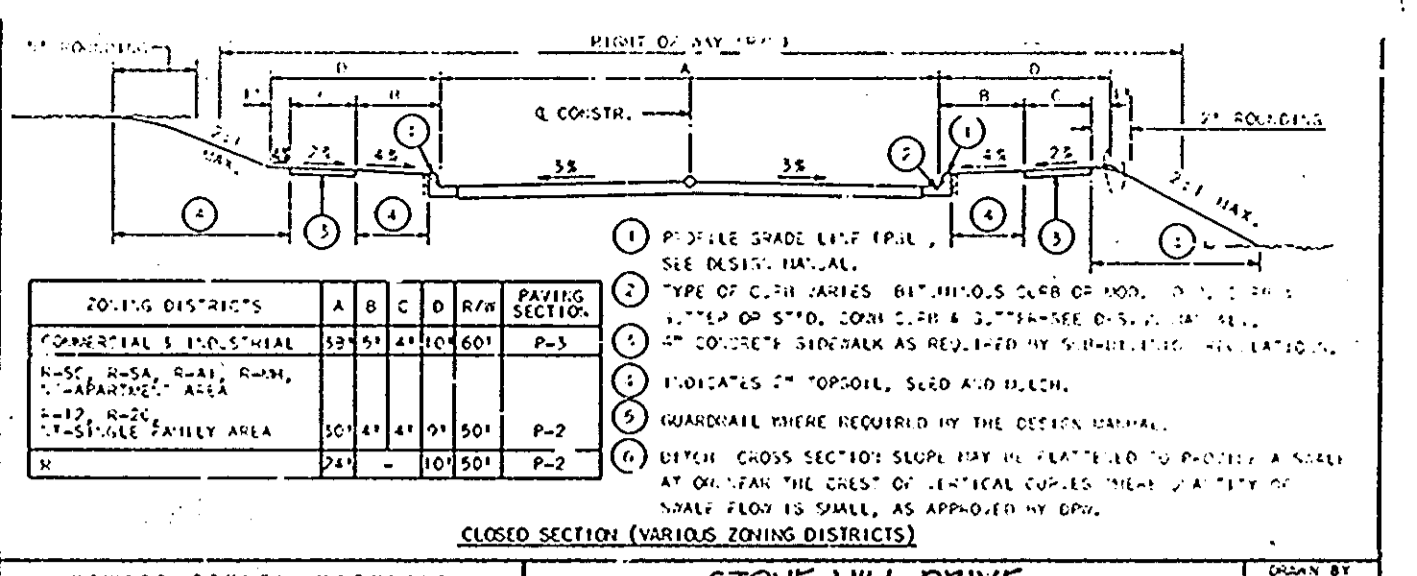
HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief-Bureau of Engineering



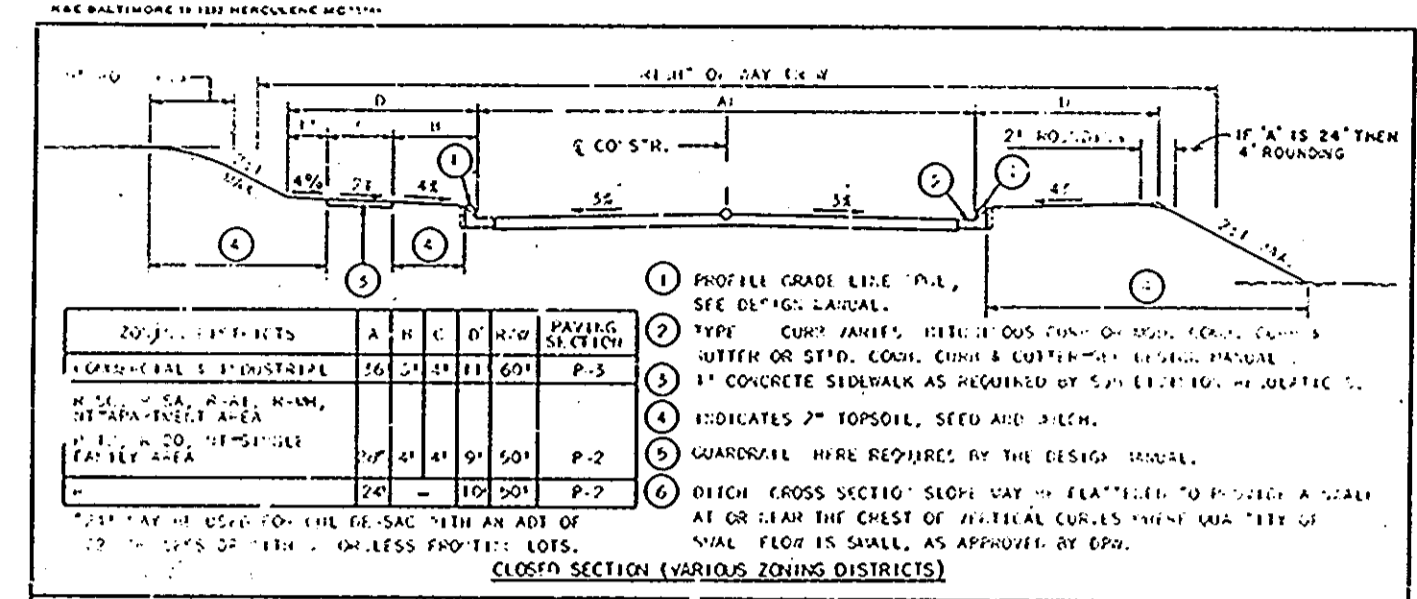
SIDEWALK RAMP, TYPE A Ho.Co.



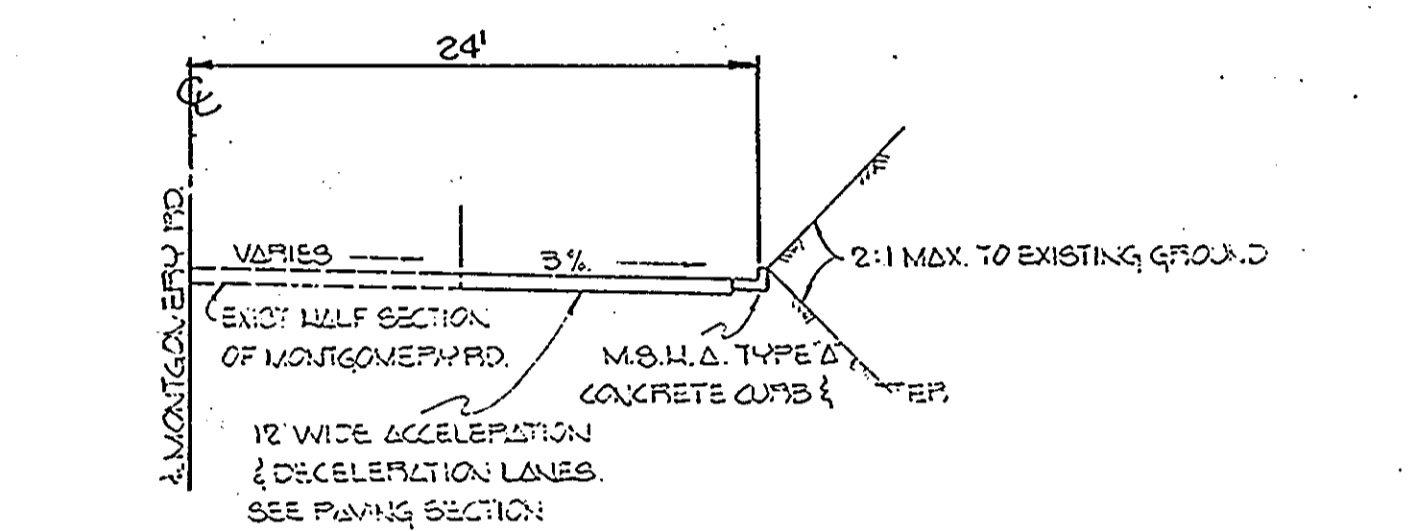
HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief-Bureau of Engineering



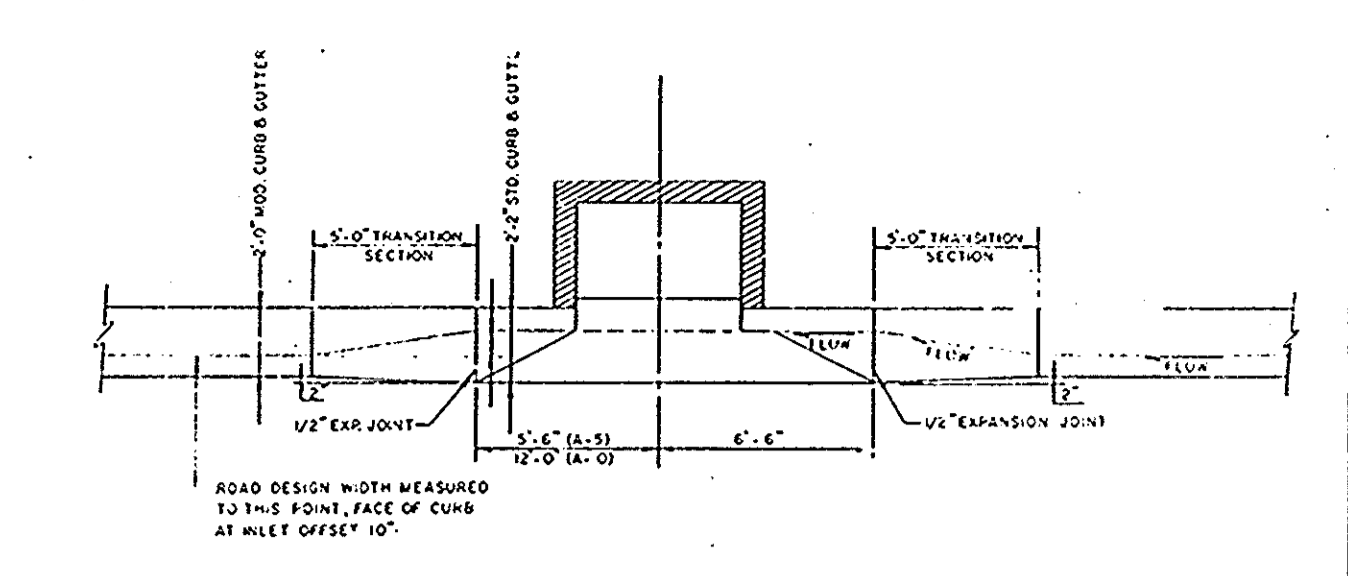
HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief-Bureau of Engineering



HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief-Bureau of Engineering



HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief-Bureau of Engineering



HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief-Bureau of Engineering

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	FULL DEPTH BIT. CONC. ALTERNATE	GRANULAR BASE ALTERNATES
P-1	PARKING AREAS AND TRAVELWAYS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO 4-WAY INTERSECTIONS	1" BIT. CONC. SURFACE 4" BIT. CONC. BASE	4" 1/2" CONC. SURFACE 4" 1/2" CONC. BASE
P-2	INTERSECTION ZONES LOCAL CUL-DE-SAC STR. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL PARCELS AREAS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH 4-WAY INTERSECTIONS	1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE
P-3	INTERSECTION ZONES LOCAL CUL-DE-SAC STR. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL PARCELS AREAS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH 4-WAY INTERSECTIONS	1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE
P-4	INTERSECTION ZONES LOCAL CUL-DE-SAC STR. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL PARCELS AREAS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH 4-WAY INTERSECTIONS	1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE

HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief-Bureau of Engineering

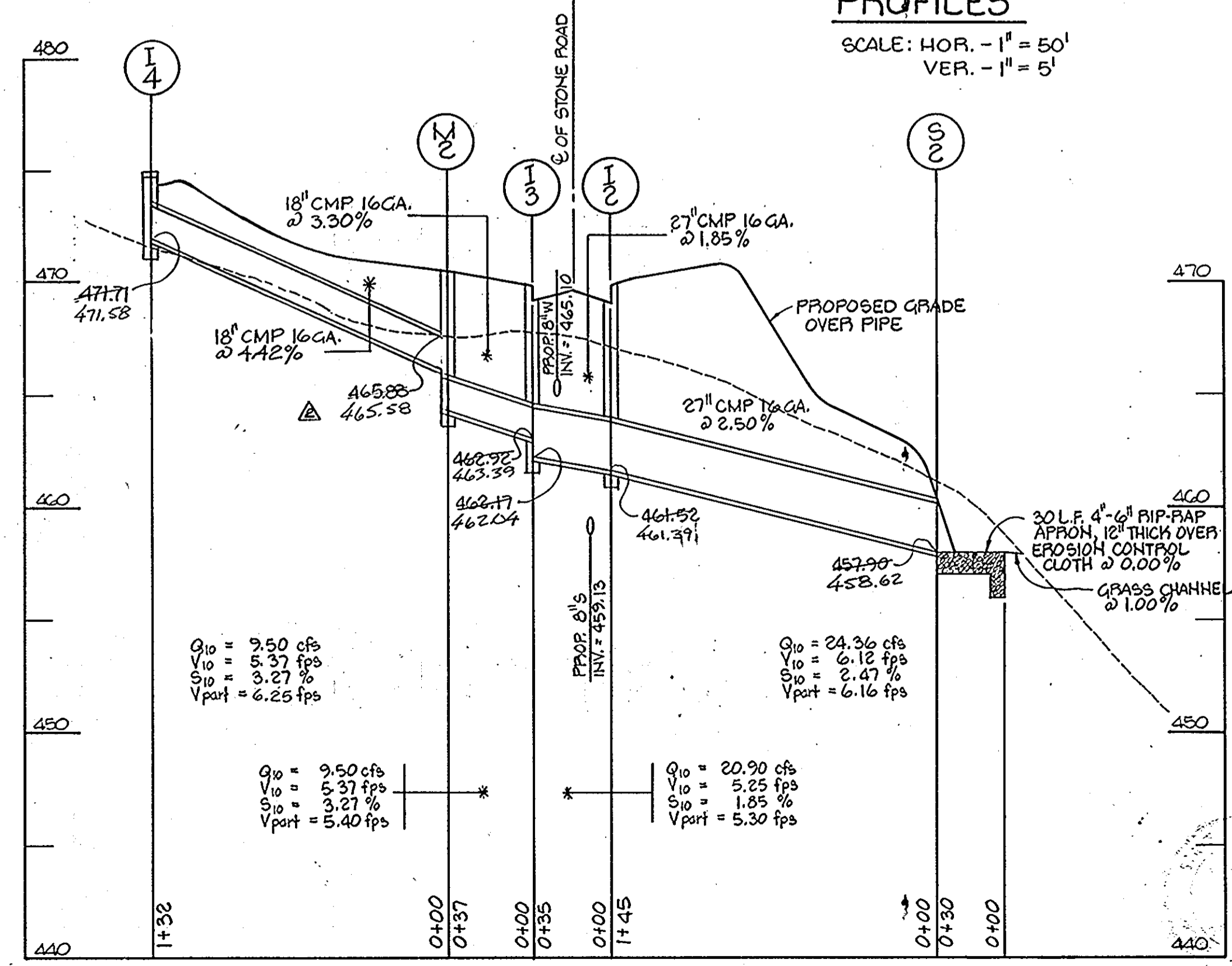
SECTION NUMBER	ROAD AND STREET CLASSIFICATION	FULL DEPTH BIT. CONC. ALTERNATE	GRANULAR BASE ALTERNATES
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P-3	INTERSECTION ZONES LOCAL CUL-DE-SAC STR. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL PARCELS AREAS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH 4-WAY INTERSECTIONS	1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE
P-4	INTERSECTION ZONES LOCAL CUL-DE-SAC STR. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL PARCELS AREAS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH 4-WAY INTERSECTIONS	1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE

HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief-Bureau of Engineering

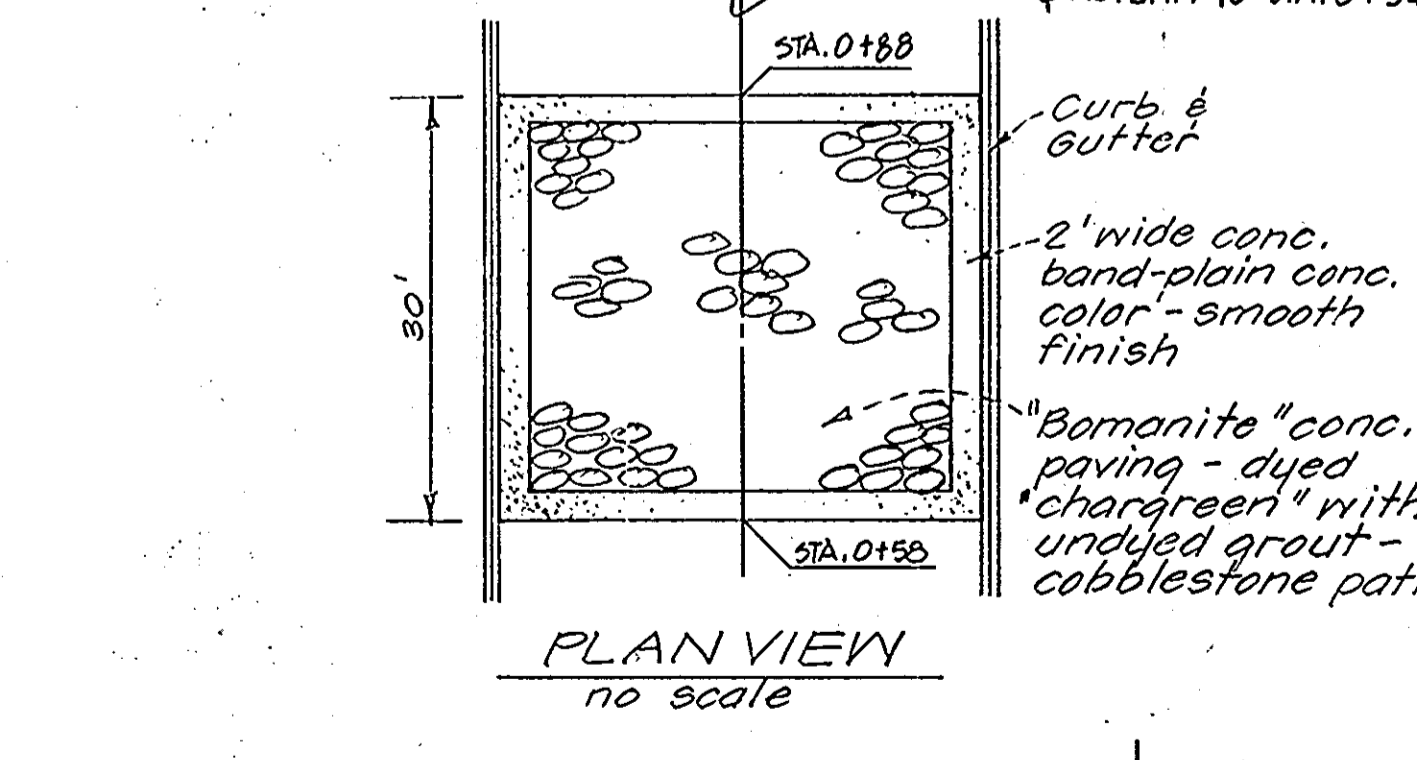
No	TYPE	INV. IN	INV. OUT	TOP ELEV.	REMARKS
I-1	HO. CO. STD. CLASS A-5 INLET	455.24	455.80	455.81	SEE HO. CO. STD. DETAIL SD-4.01
I-2	HO. CO. STD. CLASS A-5 INLET	461.52	461.82	461.96	SEE HO. CO. STD. DETAIL SD-4.01
I-3	HO. CO. STD. CLASS A-10 INLET	462.77	462.77	462.75	SEE HO. CO. STD. DETAIL SD-4.02
I-4	HO. CO. STD. 0' INLET MOD.	445.24	445.24	445.24	SEE HO. CO. STD. DETAIL SD-4.11
M-1	HO. CO. STD. MANHOLE	445.24	445.47	445.47	SEE HO. CO. STD. DETAIL G5.01
M-2	HO. CO. STD. MANHOLE	464.14	464.14	470.70	SEE HO. CO. STD. DETAIL G5.01
S-1	HO. CO. STD. METAL END SECTION	455.24	445.22	447.00	SEE HO. CO. STD. DETAIL SD-5.61
S-2	HO. CO. STD. METAL END SECTION	457.90	457.80	460.50	SEE HO. CO. STD. DETAIL SD-5.61

\* TOP OF SLAB, 474.71  
(3 THROAT OPENINGS, 474.38)

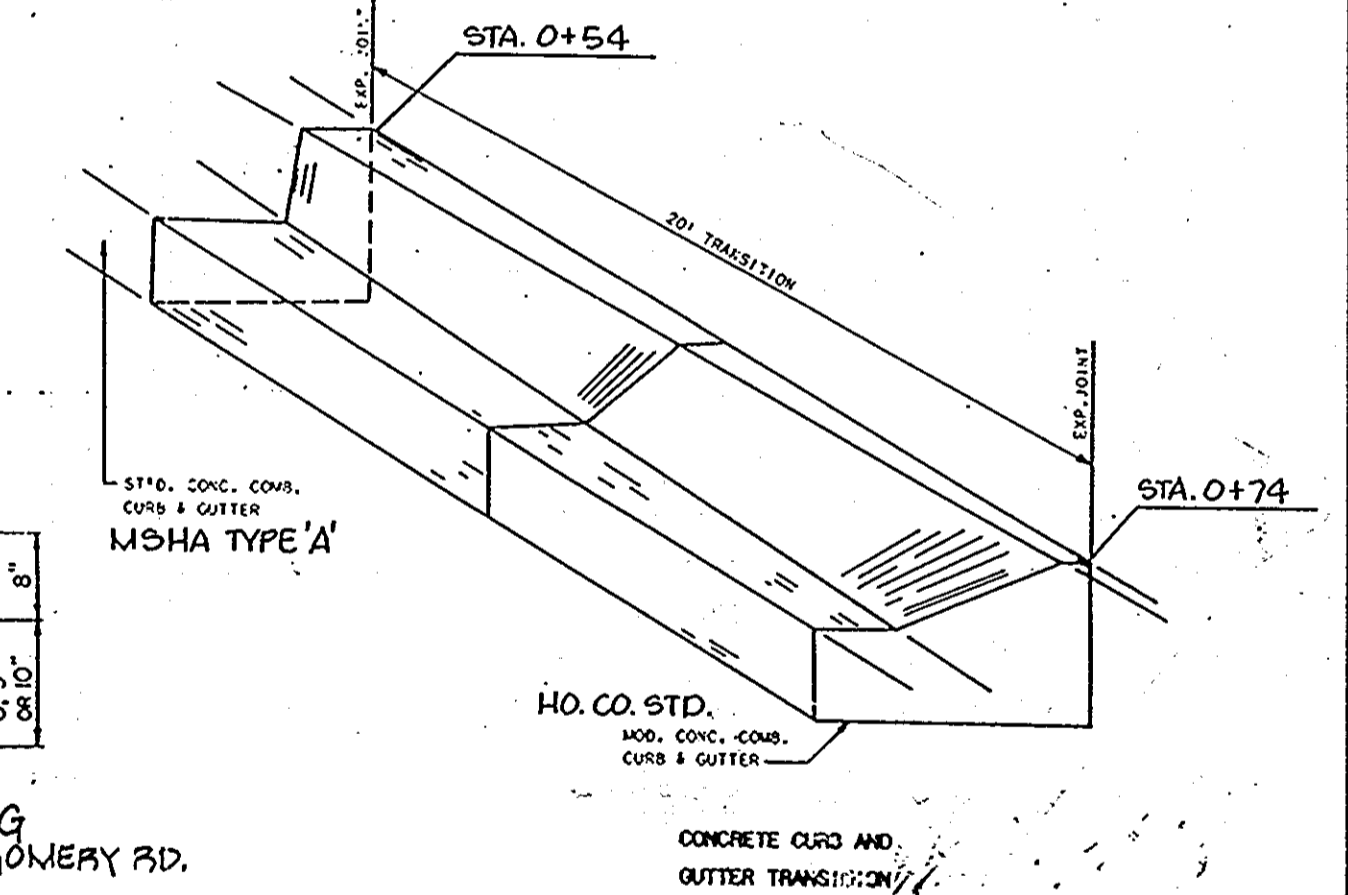
PROFILES  
SCALE: HOR. - 1" = 50'  
VER. - 1" = 5'



AT & OF R. BETWEEN LOTS 3 & 4  
AT ROAD STA. 4+00 ±  
AT & OF R. BETWEEN LOTS 7 & 8



HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief-Bureau of Engineering



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*[Signature]* 9-25-84  
Chief, Division of Land Development and Zoning Administration Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* 9-18-84  
Chief, Bureau of Engineering Date

DESIGNED: AFC  
DRAWN: BLJ/LWC  
CHECKED: JVA  
DATE: 6-1-84

STORM DRAIN PROFILE & CONSTRUCTION DETAILS  
STONE HILL FARM  
SECTION 1 AREA 1  
2ND ELECTION DISTRICT

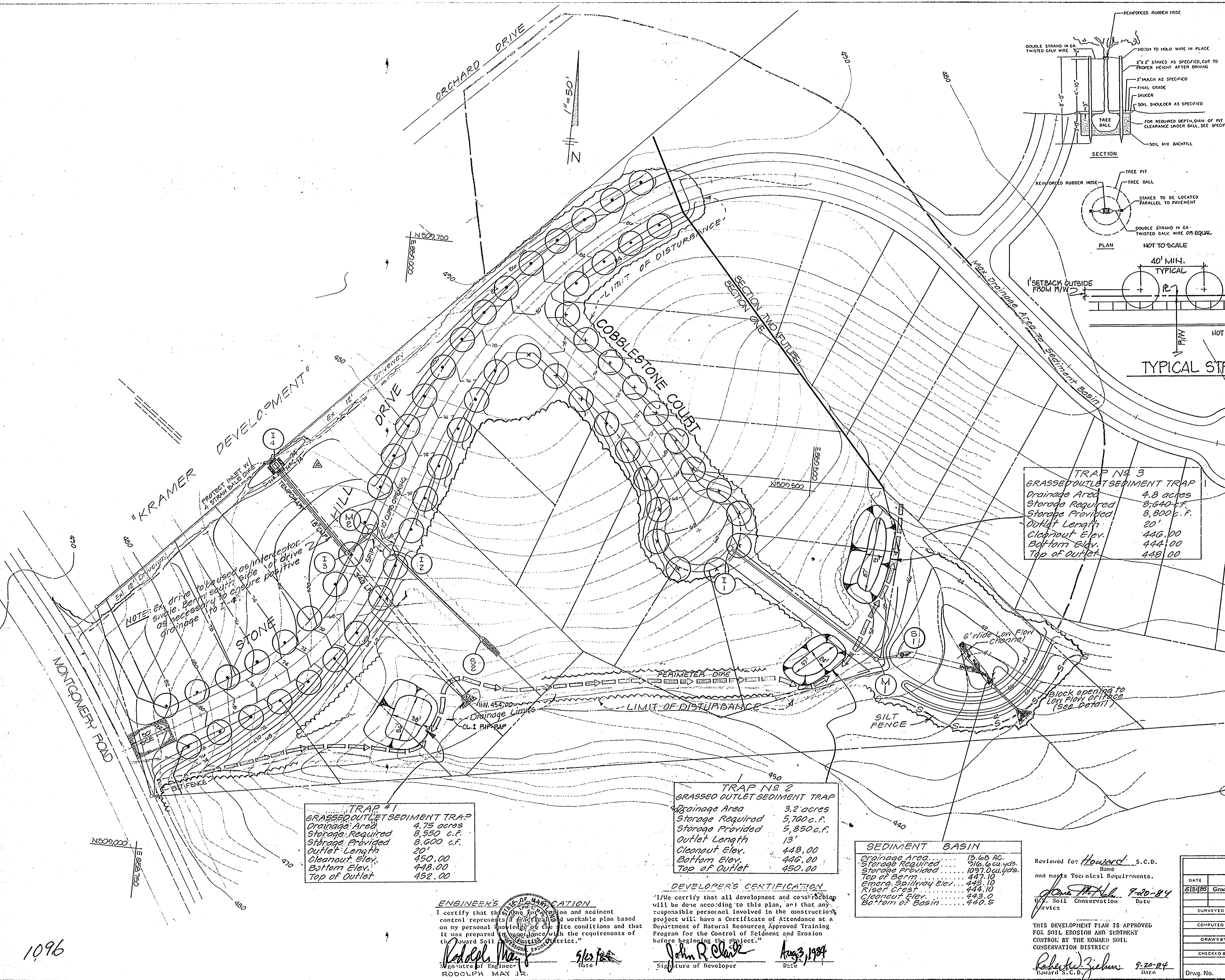
FOR: STONE HILL FARM, INC.  
514 N. CRAIN HIGHWAY  
GLEN BURNIE, MARYLAND 21061

SCALE: AS SHOWN  
DWG. NO.: 3 OF 3  
JOB NO.: 00032  
FILE NO.: 07

EVANS, HAGAN & HOLDEFER, INC.  
ENGINEERS, LAND PLANNERS & SURVEYORS  
1052 WEST STREET / LAUREL, MD 20707  
(301) 725-0865

530 POPLAR STREET / CAMBRIDGE, MD 21613 (301) 228-3350  
111 JOHN STREET / WESTMINSTER, MD 21157 (301) 848-1790  
8015 BELAIR ROAD / BAYWINDOR, MD 21236 (301) 668-1501

DATE: 5/23/84



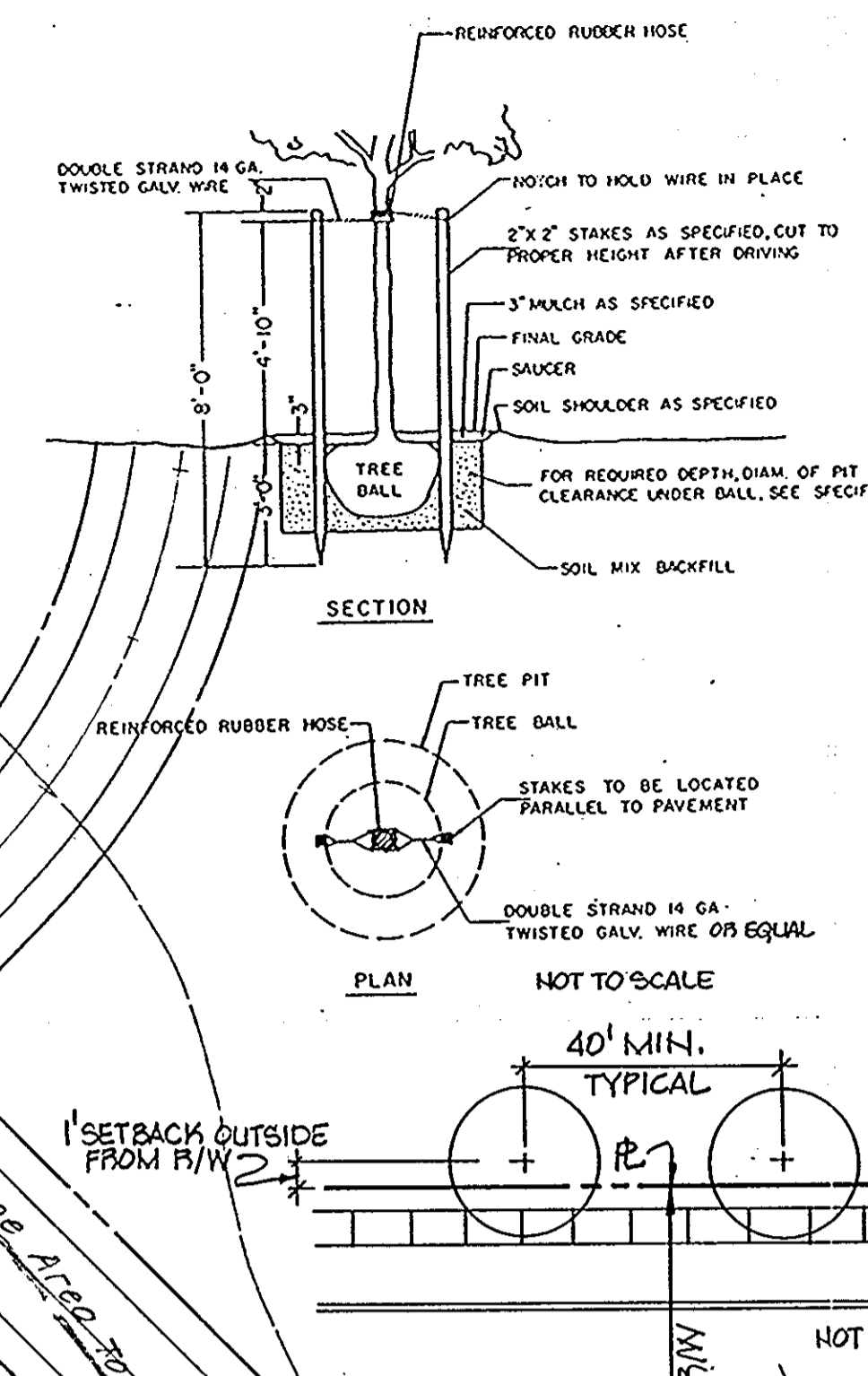
**GENERAL NOTES:**

- Field conditions such as walks, driveways, underground utilities, cleanouts, etc. shall determine the final location of street tree plantings.
- All trees shall be balled and burlapped or container grown.
- All trees shall be firmly staked. (See detail this sheet)
- Plant mix per cubic yard: 3 parts topsoil, 1 part peat moss & 2 pounds fertilizer (10-10-10)
- Plant mix shall be thoroughly mixed on site.
- All planting shall be guaranteed one calendar year from time of acceptance.
- Street Tree Typical Plan per Section 16.181 of the Howard County Code.

**PLANT LIST \***

SYMBOL	BOTANICAL NAME / COMMON NAME	QUANTITY
○	ACER SACCHARINUM / SUGAR MAPLE	41
×	PLATANUS ACERIFOLIA 'BLOODGOOD' / LONDON PLANETREE	20

\*ALL TREES SHALL BE A MINIMUM OF SIZE; 2-2 1/2" CAL, 12-14' HT. B & B



**TYPICAL STREET TREE PLANTING**

**TRAP NO 3**  
GRASSED OUTLET SEDIMENT TRAP

Drainage Area	4.8 acres
Storage Required	8,640 c.f.
Storage Provided	8,800 c.f.
Outlet Length	20'
Clearout Elev.	446.00
Bottom Elev.	444.00
Top of Outlet	448.00

**TRAP #1**  
GRASSED OUTLET SEDIMENT TRAP

Drainage Area	4.75 acres
Storage Required	8,550 c.f.
Storage Provided	8,600 c.f.
Outlet Length	20'
Clearout Elev.	450.00
Bottom Elev.	448.00
Top of Outlet	452.00

**TRAP NO 2**  
GRASSED OUTLET SEDIMENT TRAP

Drainage Area	3.2 acres
Storage Required	5,760 c.f.
Storage Provided	5,850 c.f.
Outlet Length	13'
Clearout Elev.	448.00
Bottom Elev.	446.00
Top of Outlet	450.00

**SEDIMENT BASIN**

Drainage Area	13.68 AC.
Storage Required	316.6 cu. yds.
Storage Provided	1097.0 cu. yds.
Top of Basin	447.10
Emerg. Spillway Elev.	445.10
Riser Crest	444.10
Clearout Elev.	443.0
Bottom of Basin	440.5

**DEVELOPER'S CERTIFICATION**  
"I/We certify that all development and construction will be done according to this plan, 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."

Signature of Developer: *John R. Clark*  
Date: *Aug 3, 1984*

**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 County Department of Public Works, District."

Signature of Engineer: *Rodolph May Jr.*  
Date: *5/15/84*  
RODOLPH MAY JR.  
Soil Conservation Engineer

Reviewed for Howard County S.C.D. Name: *Howard*  
and meets Technical Requirements.  
Signature: *John M. Hagan* 7-20-84  
Soil Conservation District  
Signature: *Robert J. Zichner* 9-22-84  
Soil Conservation District

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*Shirley M. Hagan* 9-25-84  
Chief, Division of Land Development and Zoning Administration Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*KS. [Signature]* 9-18-84  
Chief, Bureau of Engineering Date

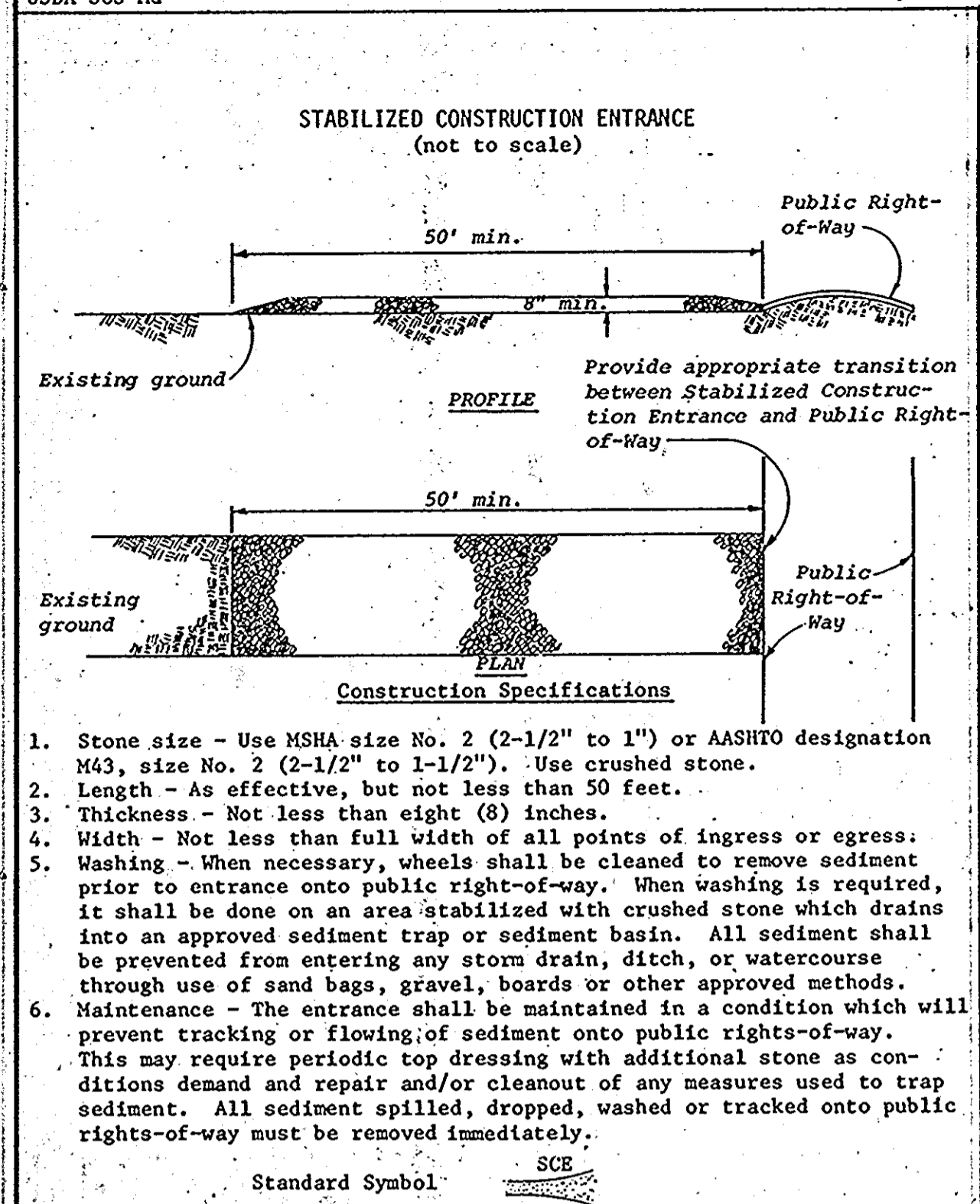
DESIGNED	AFC	SEDIMENT AND EROSION CONTROL & STREET TREE PLANTING	SCALE: 1"=50'
DRAWN	LWC	STONE HILL FARM	DWG. NO. 4 OF 9
CHECKED	AFC	SECTION 1 AREA 1	JOB NO. 00032
DATE	April, 1984	2ND ELECTION DISTRICT	FILE NO. 07

FOR: STONE HILL FARM, INC.  
514 N. CRAIN HIGHWAY  
GLEN BURNIE, MARYLAND 21061

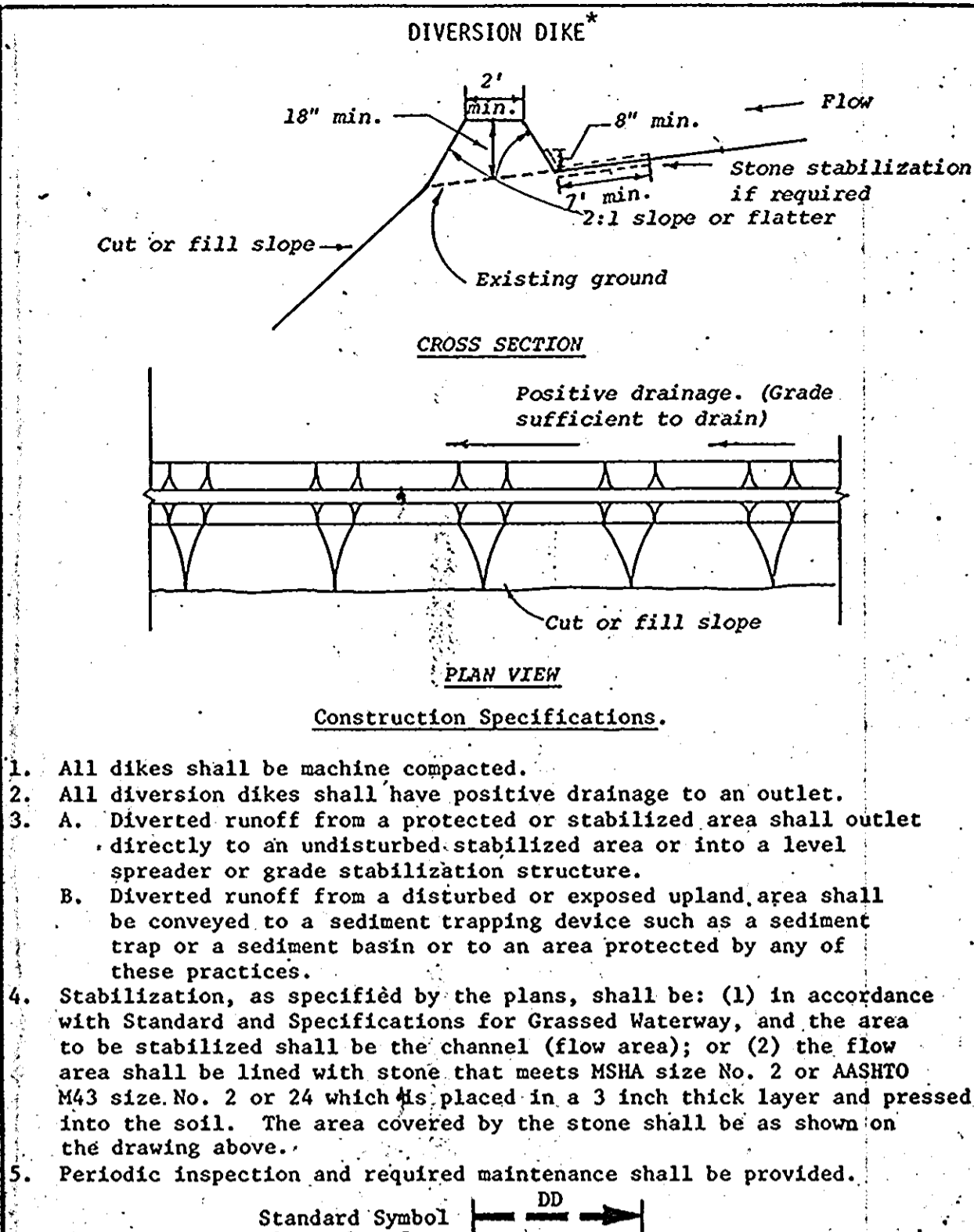
**EVANS, HAGAN & HOLDEFER, INC.**  
ENGINEERS, LAND PLANNERS & SURVEYORS  
1052 WEST STREET / LAUREL, MD 20707  
(301) 725-0255

539 POPLAR STREET / CAMBRIDGE, MD 21613 (301) 228-3350  
111 1/2 WEST STREET / WESTMINSTER, MD 21157 (301) 848-1750  
601 W. 10TH ROAD / WEST THORE, MD 27355 (301) 658-1501

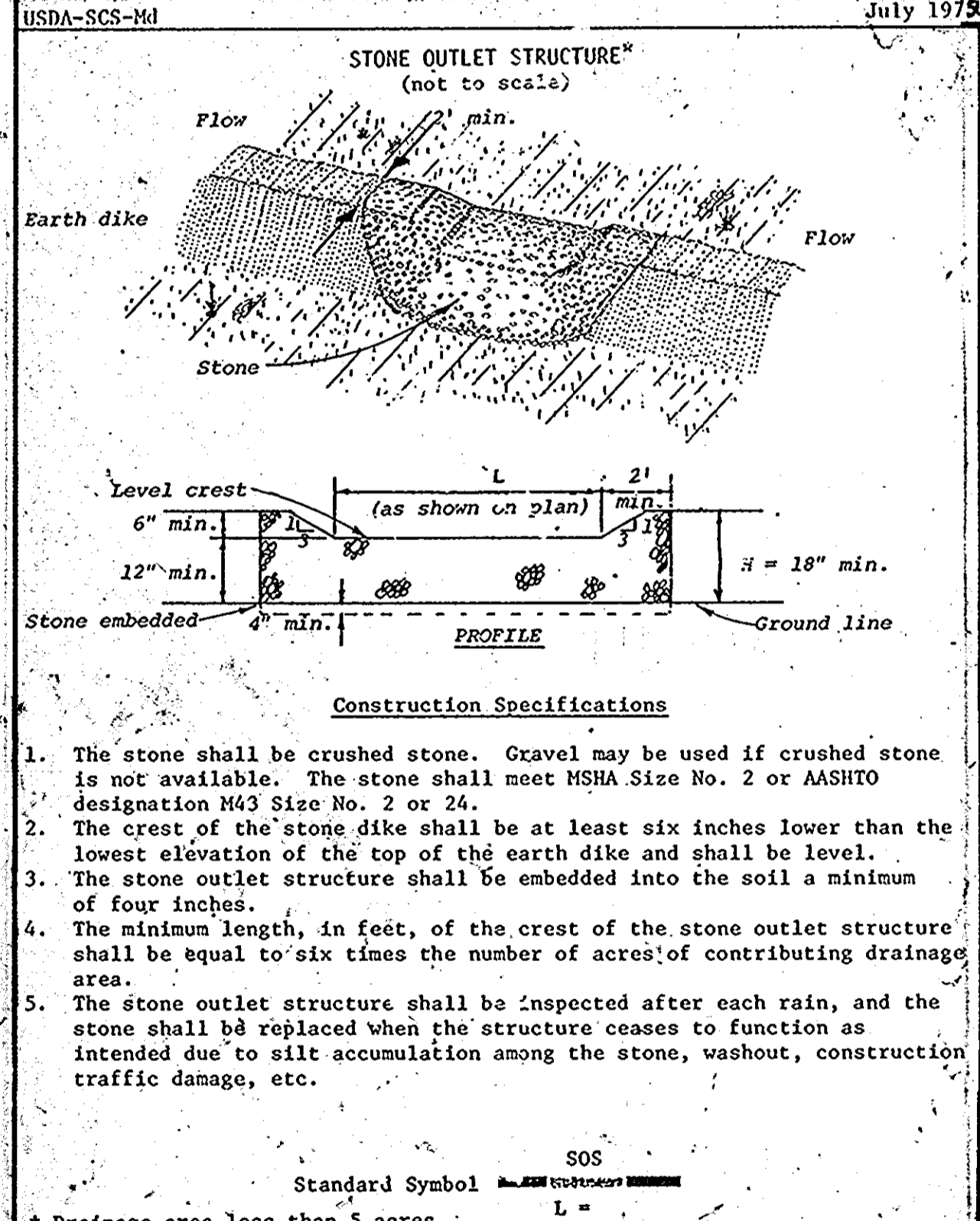
Signature: *Rodolph May Jr.*  
Date: *5/15/84*



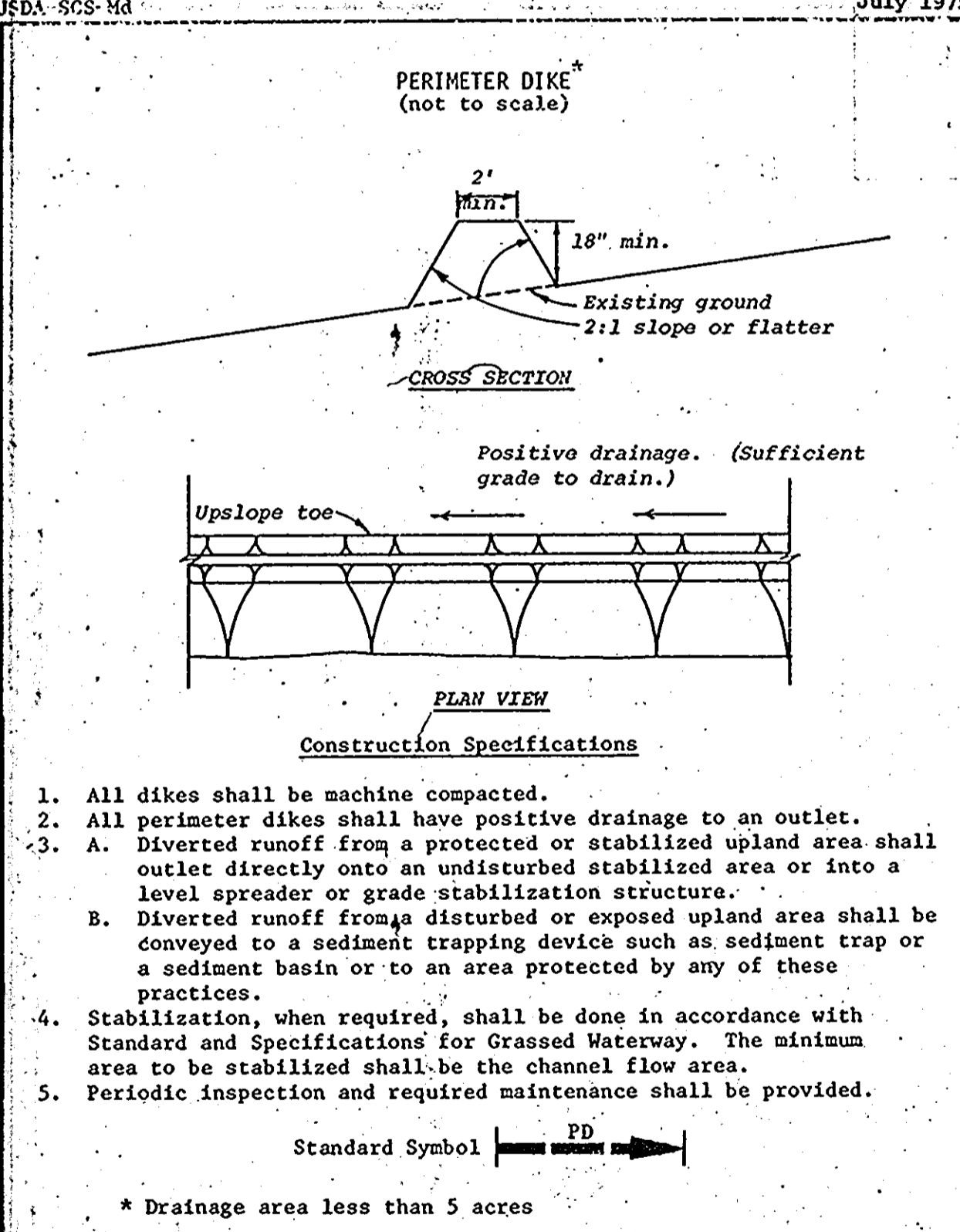
U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
College Park, Md.



U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
College Park, Md.



U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
College Park, Md.



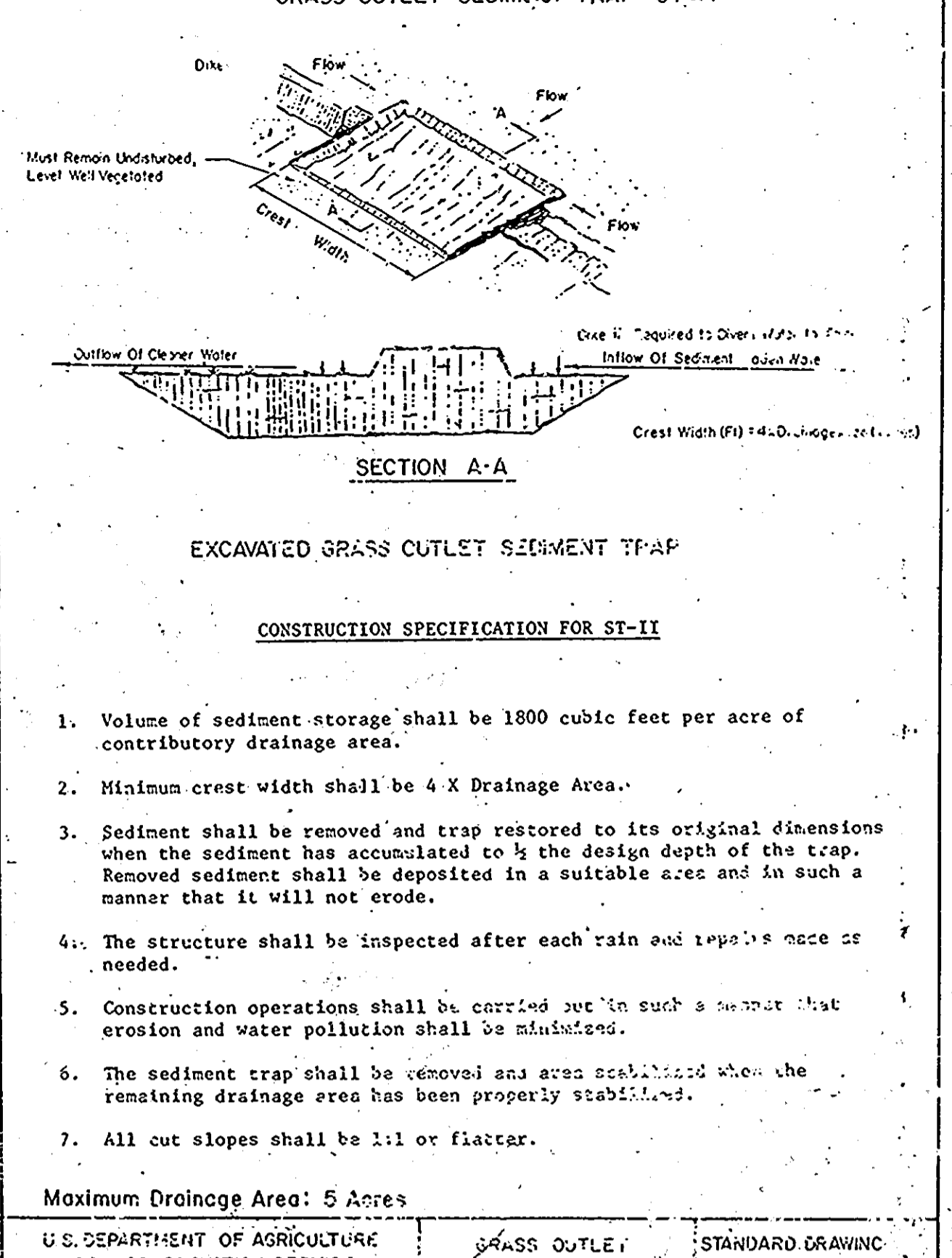
U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
College Park, Md.

**UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL PRACTICES**

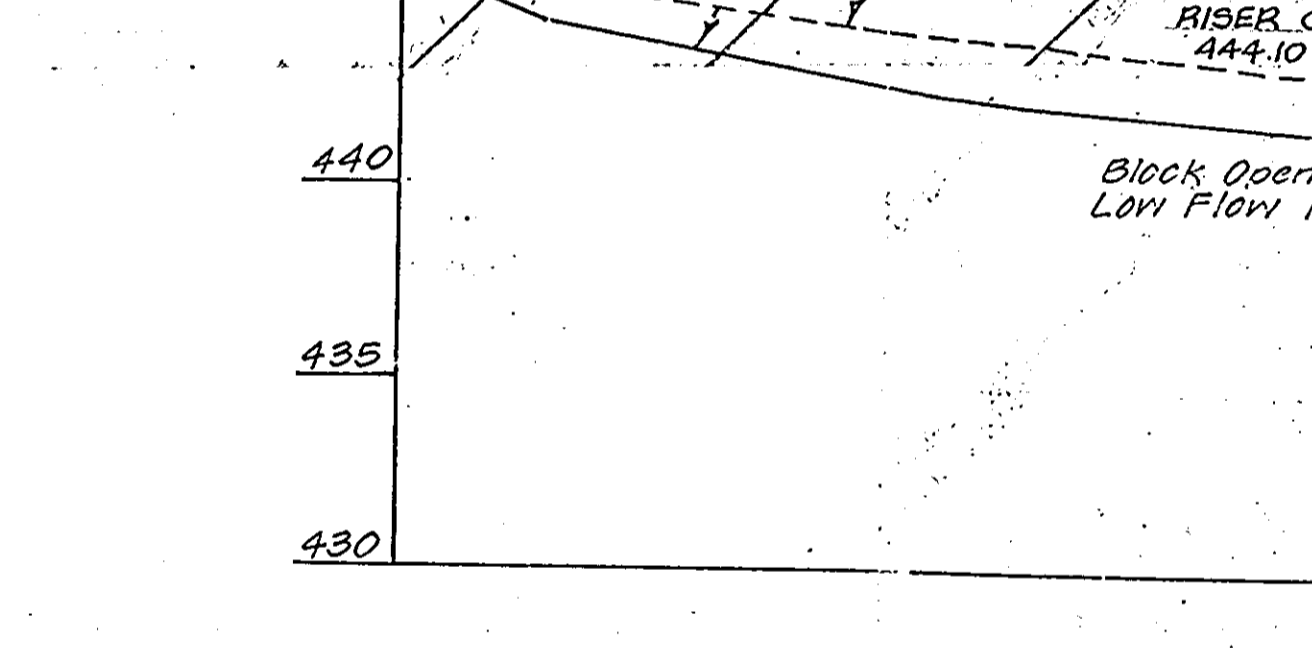
- Excavated trench material shall be placed on upstream side of trench.
- Immediately following pipe installation the trench shall be back-filled, compacted and immediately stabilized (mulched, seeded, and/or sodded mechanical stabilization) at the end of each work day.
- Temporary silt fences shall be placed immediately down stream of any disturbed area intended to remain disturbed longer than one (1) working day.
- The contractor shall disturb and open trench the minimum practical area required to accomplish the work designated for each day.
- All sediment and erosion control practices and vegetation stabilization shall be in accordance with the "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas."

Reviewed for Howard S.C.D. Name  
and meets Technical Requirements.  
Robert W. Ziehm 9-20-84 Date  
U.S. Soil Conservation Service Howard S.C.D.

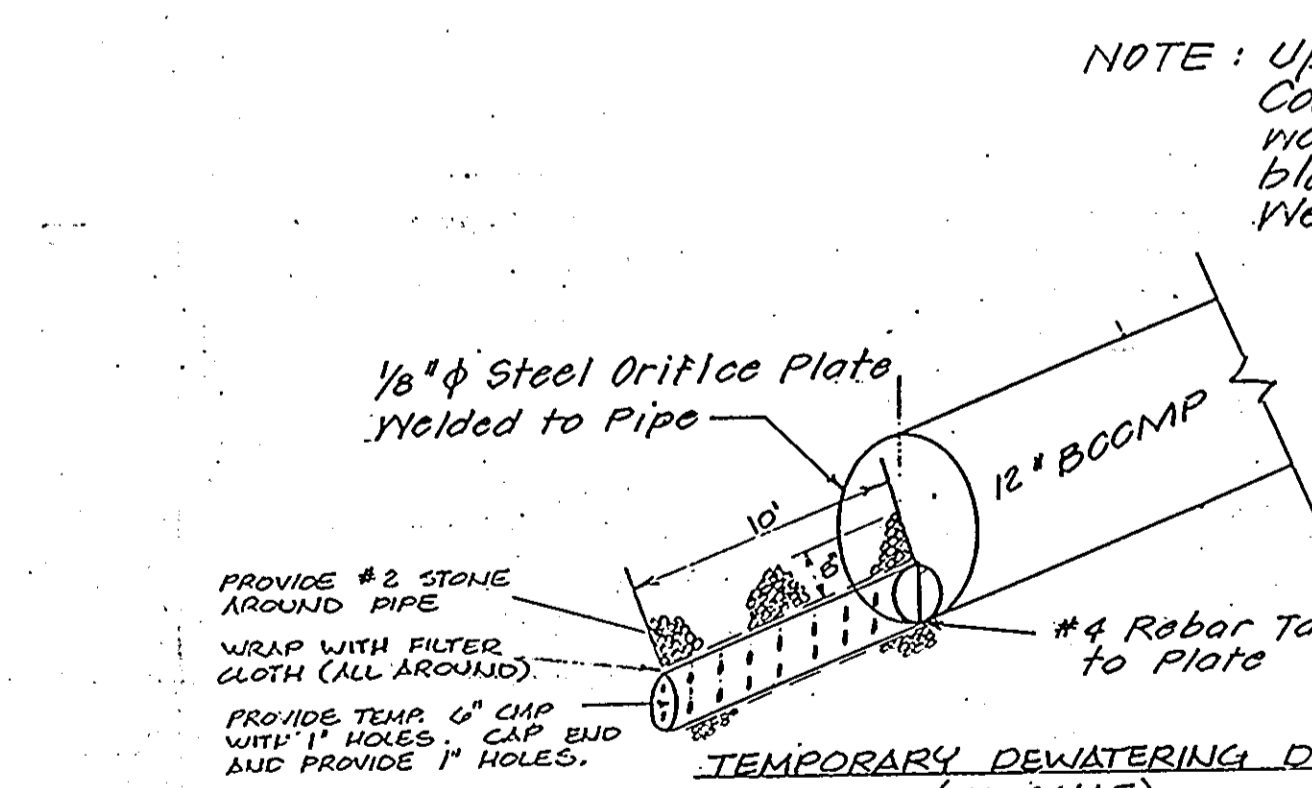
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
Robert W. Ziehm 9-20-84 Date  
Howard S.C.D.



U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE



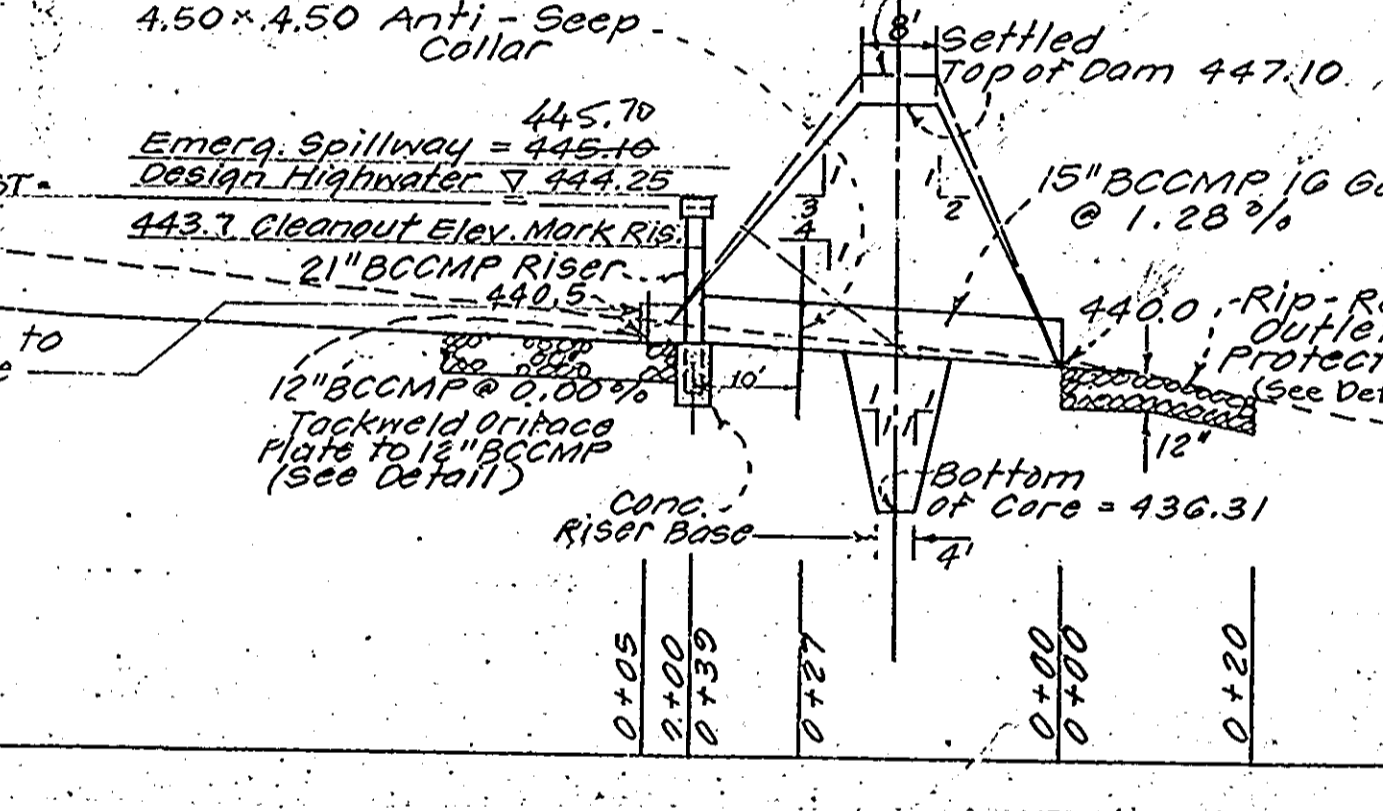
SECTION THRU PRINCIPAL SPILLWAY  
Scales: Horiz 1" = 20'  
Vert. 1" = 5'



TEMPORARY DEWATERING DEVICE (NO SCALE)

**GENERAL NOTES**

- All sediment and erosion control measures will be installed and stabilized according to this plan prior to any other grading, clearing or disturbance of the existing surface of the site. See note No. 6 for stabilization except that the seed mixture will be annual rye applied at a rate of 1.4 lbs./1,000 sq. ft.
- Notify the Bureau of Inspections and Permits at least 24 hours before starting any work.
- All sediment control practices to conform to the "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas" and shall be adjusted to meet actual field conditions.
- Rip rap low flow channels should not be constructed until conversion of sediment basin.
- All structural sediment control measures are to remain in place until removal for their removal has been obtained from the Bureau of Inspections and Permits.
- On-site inspection and maintenance of all sediment control measures including clean-out of sediment traps and dikes, and proper establishment of all planned vegetative measure will be the responsibility of the developer or his representative on the site, on a continuing day to day basis.
- It will be the developers responsibility to provide additional sediment and erosion control devices to protect stabilized areas during construction.
- The contractor shall keep all public roads free of sediment deposits left from traffic leaving construction site.
- Site Analysis:
  - Total Area: 11.916 Ac<sup>2</sup>
  - Area To Be Paved: 1.034 Ac<sup>2</sup>
  - Area To Be Seeded: 2.48 Ac<sup>2</sup>
  - Area Undisturbed: 6.204 Ac<sup>2</sup>
  - Any area not actively graded for a period of 30 days shall be stabilized.



RIEPP RAP OUTLET DETAIL (NO SCALE)

**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 and notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.  
Robert W. Ziehm 9-20-84 DATE  
Howard S.C.D.

**DEVELOPER'S CERTIFICATION**  
I/we certify that all development and construction will be done according to this plan, 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.  
Robert W. Ziehm 9-20-84 DATE  
STONE HILL FARM, INC.

**PERMANENT SEEDING NOTES**

All disturbed areas shall be stabilized as follows:

**Seedbed Preparation:** Loosen upper 3 inches of soil by raking, discing or other acceptable means.

**Soil Amendments:** Apply 2 tons per acre dolomitic limestone (92 lbs./1,000 sq. ft.) and 600 lbs. per acre 0-20-20 fertilizer (14 lbs./1,000 sq. ft.). Harrow or disc lime and fertilizer into upper three inches of soil. At time of seeding, apply 400 lbs. per acre (9.2 lbs./1,000 sq. ft.) of 38-0-0 ureaform fertilizer and 500 lbs. per acre (11.5 lbs./1,000 sq. ft.) of 10-20-20 fertilizer.

**Seeding:** For the periods March 1 through April 30, and August 1 through October 15, seed with 60 lbs. per acre (1.4 lbs./1,000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May through July 31, seed with 60 lbs. per acre and 2 lbs. per acre (1.05 lbs./1,000 sq. ft.) of weeping lovegrass. During the period of October 16 through 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./1,000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using 200 gallons per acre (5 gallons/1,000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gallons/1,000 sq. ft.) for anchoring.

**Maintenance:** Inspect all seeded areas and made needed repairs, replacements, and reseeding.

**TEMPORARY SEEDING NOTES**

**Seedbed Preparation:** Loosen upper 3 inches by discing, raking, or other acceptable means.

**Soil Amendments:** Apply 600 lbs. per acre (15 lbs./1,000 sq. ft.) of 10-20-10 fertilizer.

**Seeding:** For periods March 1 through April 30, and from August 15 through November 15, seed with 2 1/2 bushels per acre (3.2 lbs./1,000 sq. ft.) of annual rye. For the period May 1 through August 14 seed with 3 lbs./acre (0.07 lbs./1,000 sq. ft.) of weeping lovegrass.

**Mulching:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1,000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using 200 gallons per acre (5 gallons/1,000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher use 348 gallons per acre (8 gallons/1,000 sq. ft.) for anchoring.

**GENERAL NOTES (cont)**

- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within:
  - seven calendar days for all perimeter sediment control structures, dikes, swales, ditches, perimeter slopes and all slopes greater than 3:1.
  - fourteen days as to all other disturbed or graded areas on the project site.
- Core trench and dam construction to be done in accordance with the soils engineers' recommendations. Contact Steve Kight @ 427-5422 prior to beginning work.

**SEQUENCE OF CONSTRUCTION**

- Notify Howard County Bureau Of Inspections and permits at least 24 hours before starting any work.
- Construct stabilized construction entrance.
- Clear minimum area required to construct temp 18" CHP.
- Construct all remaining sediment control practices shown.
- Rough grade site, construct sediment basin.
- Upon sediment control inspectors approval remove all sediment traps.
- Re-direct P.D. to sediment basin.
- Construct utilities, storm drain, streets, houses.
- Maintenance.

APPROVED: Howard Co. Office of Planning & Zoning  
John W. W. W. W. 9-25-84  
Chief, Division of Land Development & Zoning Admin. Date  
APPROVED: Howard Co. Dept. of Public Works  
John W. W. W. W. 9-25-84  
Chief, Bureau of Engineering & Planning

DESIGNED: SEDIMENT AND EROSION CONTROL DETAILS  
Scale: As Shown  
Drawn: LWC  
Checked: AFC  
Date: April, 1984

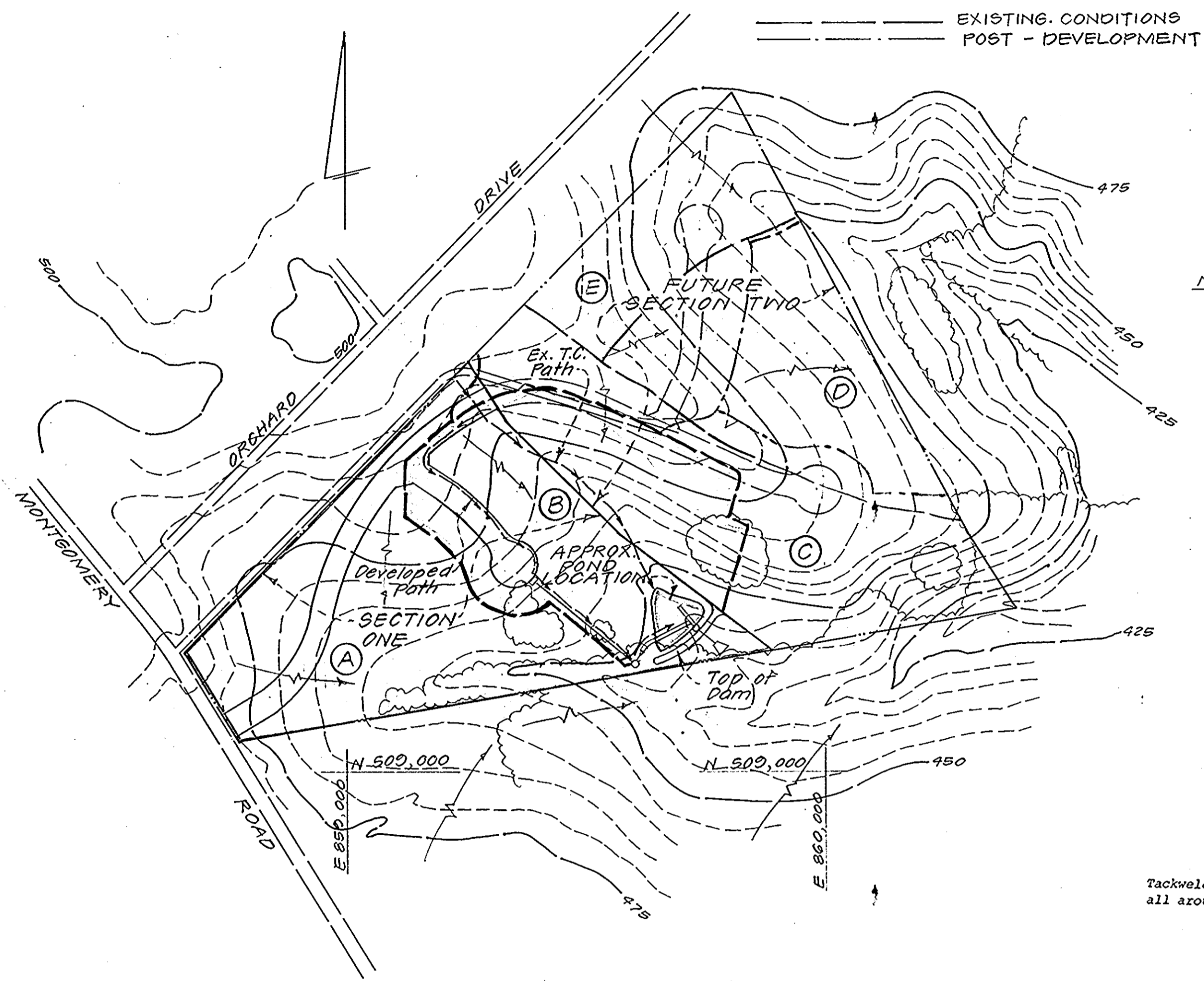
STONE HILL FARM  
SECTION 1 AREA 1  
2nd ELECTION DIST.  
FOR: STONE HILL FARM, INC.  
GLEN BURKE, MD. 21061  
File No. 07

**EVANS, HAGAN & HOLDEFER, INC.**  
ENGINEERS, LAND PLANNERS & SURVEYORS  
1032 WEST STREET / LAUREL, MD 20707  
(301) 725-0685

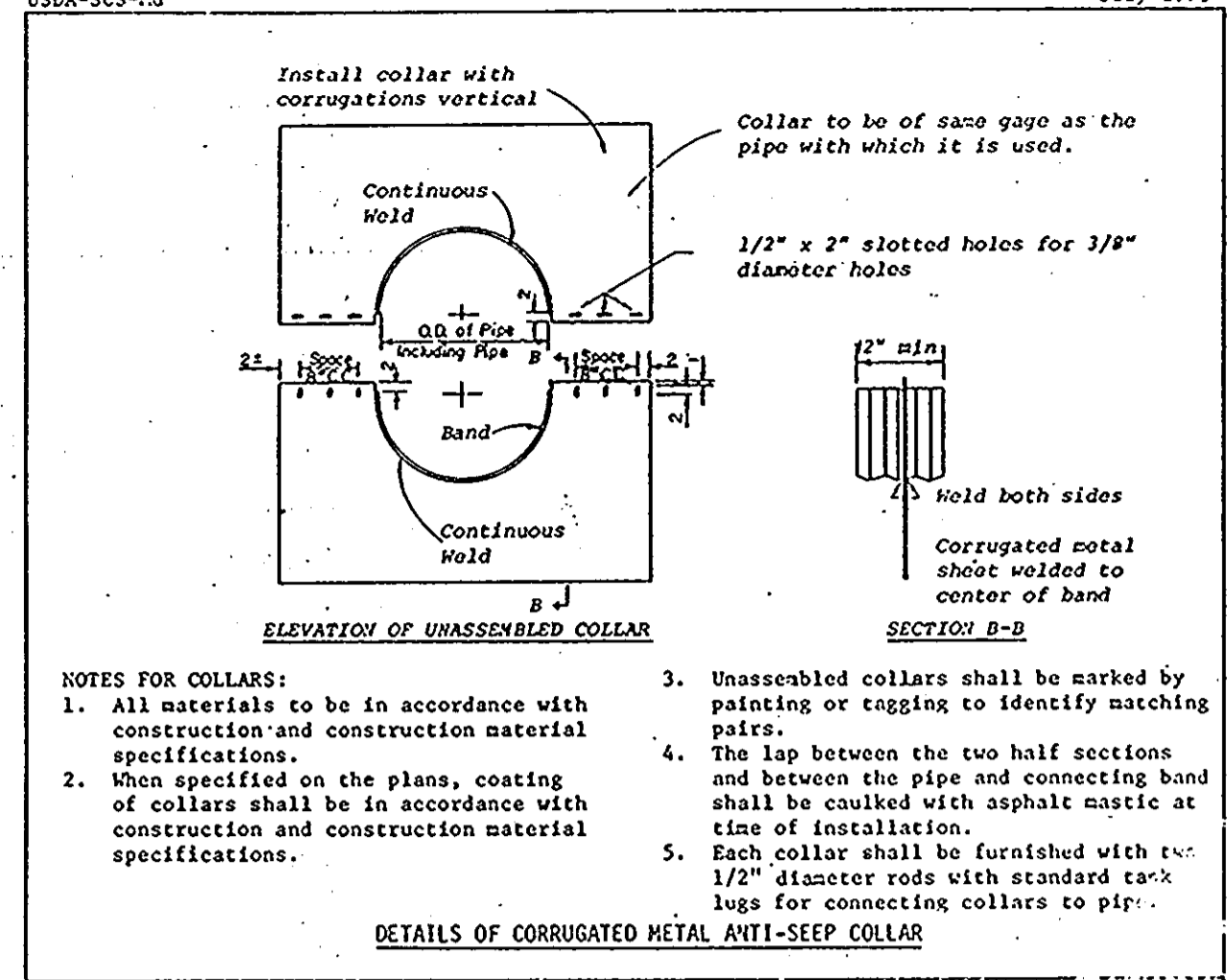
530 POPLAR STREET / CAMBRIDGE, MD 21613 (301) 228-3350  
111 JOHN STREET / WESTMINSTER, MD 21157 (301) 848-1790  
5015 BIRCH ROAD / BETHESDA, MD 21220 (301) 668-1501

Robert W. Ziehm 9-20-84 DATE  
STONE HILL FARM, INC.

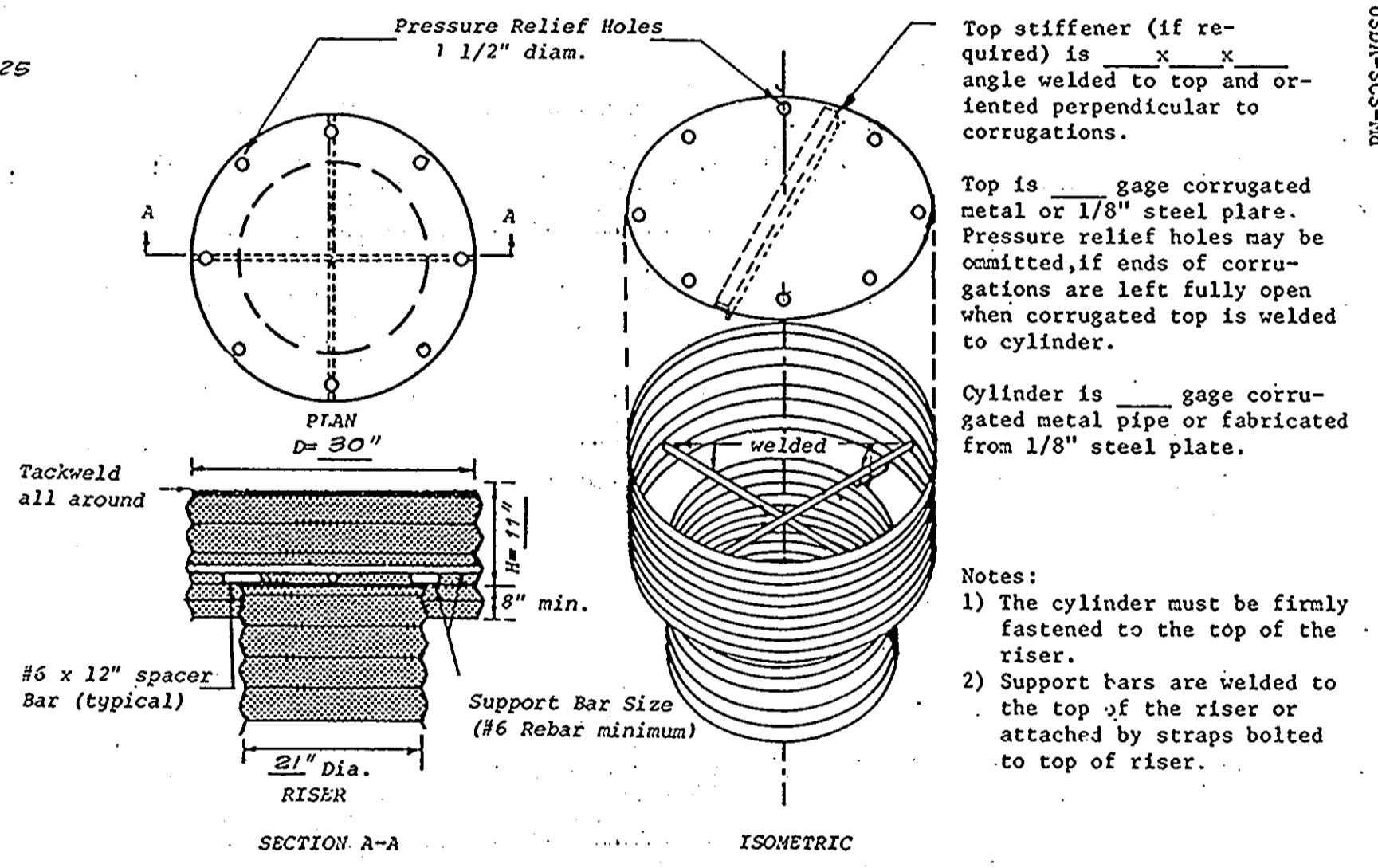
core trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.



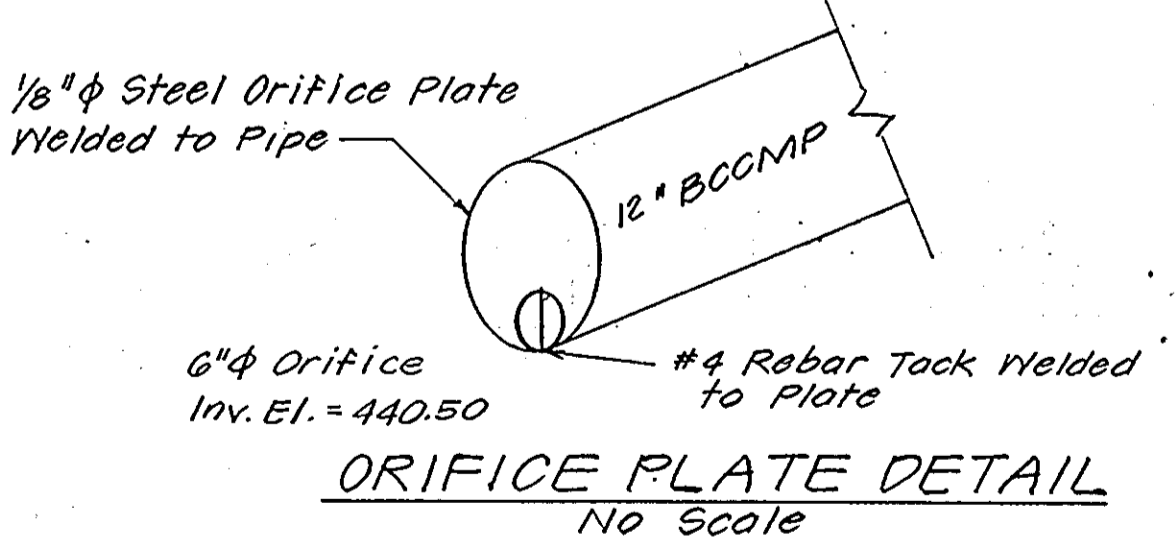
DRAINAGE AREA MAP Scale: 1" = 200'



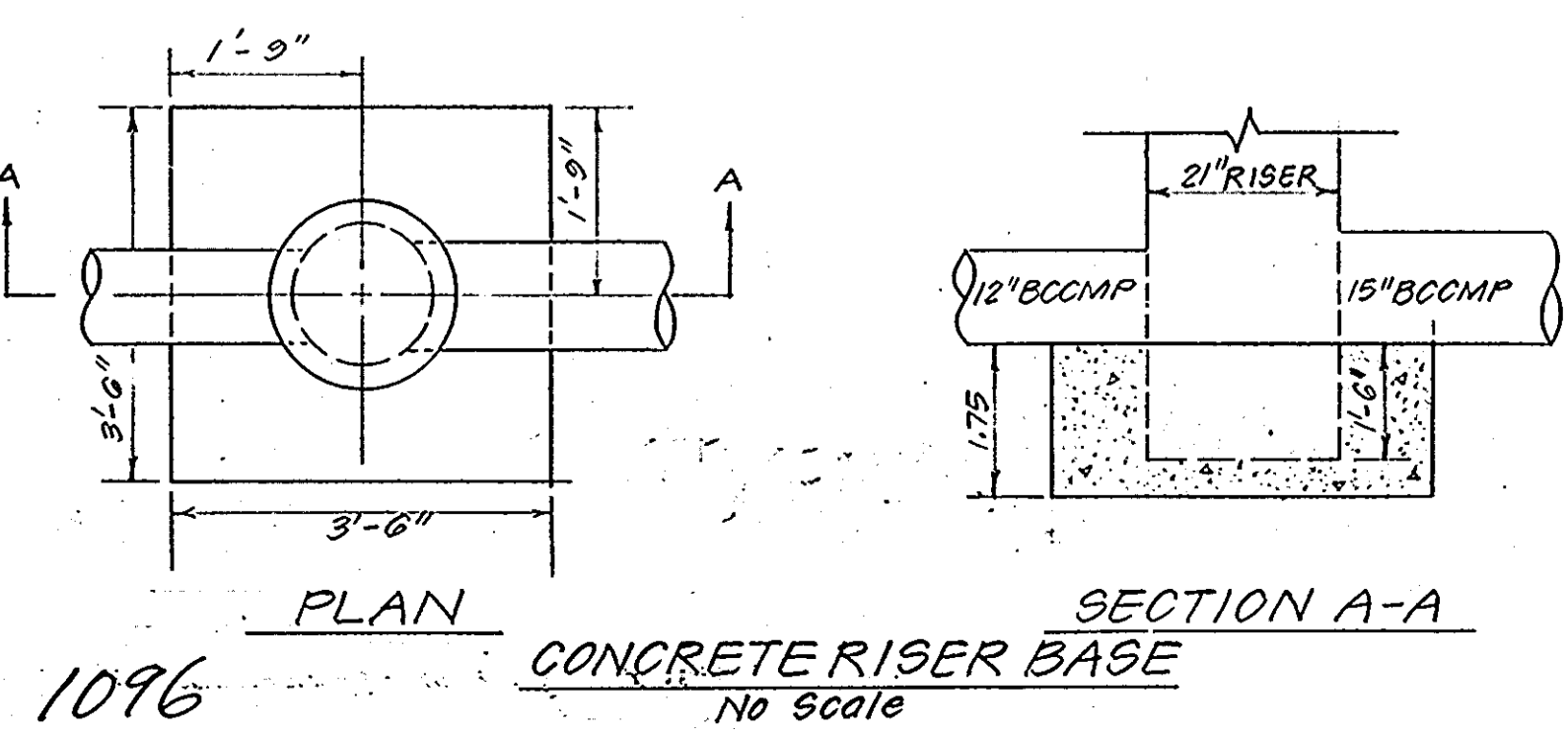
NOTES FOR COLLARS: 1. All materials to be in accordance with construction and construction material specifications. 2. When specified on the plans, coating of collars shall be in accordance with construction and construction material specifications. 3. Unassembled collars shall be marked by painting or tagging to identify matching pairs. 4. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at time of installation. 5. Each collar shall be furnished with two 1/2" diameter rods with standard rack lugs for connecting collars to pipe.



CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE (not to scale)



ORIFICE PLATE DETAIL No Scale



CONCRETE RISER BASE No Scale

DEVELOPER'S CERTIFICATION

I hereby certify that all development and construction will be done according to this plan at development and plan for a pond. I also authorize periodic on-site inspection by the Howard County Soil Conservation District or their authorized agents as are deemed necessary. Deviations from these plans will not be made unless authorized by the Howard County Soil Conservation District.

John R. Clark agent SHF DEVELOPER - STONE HILL FARM, INC. DATE 9-20-84

These plans for small pond construction meet the requirements of the Howard County Soil Conservation District.

Robert W. Ziehn APPROVED - HO. CO. S.C.D. DATE 9-20-84

These plans have been reviewed for the Howard County Soil Conservation District and meet the technical requirements for small pond construction.

James M. Helm U.S. SOIL CONSERVATION SERVICE DATE 9-20-84

I. SITE PREPARATION

Areas under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. To facilitate clean out and restoration, it is recommended that the permanent pool area be cleared of all brush and trees.

II. EARTH FILL

Material The fill material shall be taken from approved designated borrow area or areas. It shall be free from roots, stumps, wood, rubbish, over-size 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 at least 10 percent above the design elevation (including freeboard) unless otherwise shown on the plans.

Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials 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 not 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 so that it can be formed into a ball without crumbling. If water can be squeezed out of the ball, it is too wet to compact properly.

Core Trench

Where specified, a core 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 governed by the equipment used for excavation, 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

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.

B. REINFORCED CONCRETE PIPE

1. Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-301. Approved equivalents are AWA Specification C-300, 301, and 302.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its diameter with a minimum thickness of 3". W.S.S.C. low cradle bedding is an approved equivalent.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed on the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.

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

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

V. CONCRETE

Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications for Materials, Highways, Bridges, and Incidental Structures, Article 20.07 (Portland Cement Concrete Mixtures), Class A-1, or P-1.

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 and borrow areas shall be stabilized by seeding and applying straw mulch in accordance with Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas immediately after finish grading.

ENGINEER'S CERTIFICATION

I hereby certify that this plan 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.



Rodolph C. May, Jr. DATE

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 driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall the contractor drive equipment 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.

IV. PIPE CONDUITS

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 AASHTO 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.

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

Helically corrugated pipe in addition to the requirements above shall have either continuously welded seams or have lock seams which are caulked with a neoprene bead.

2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.

C. Acceptable Construction Criteria

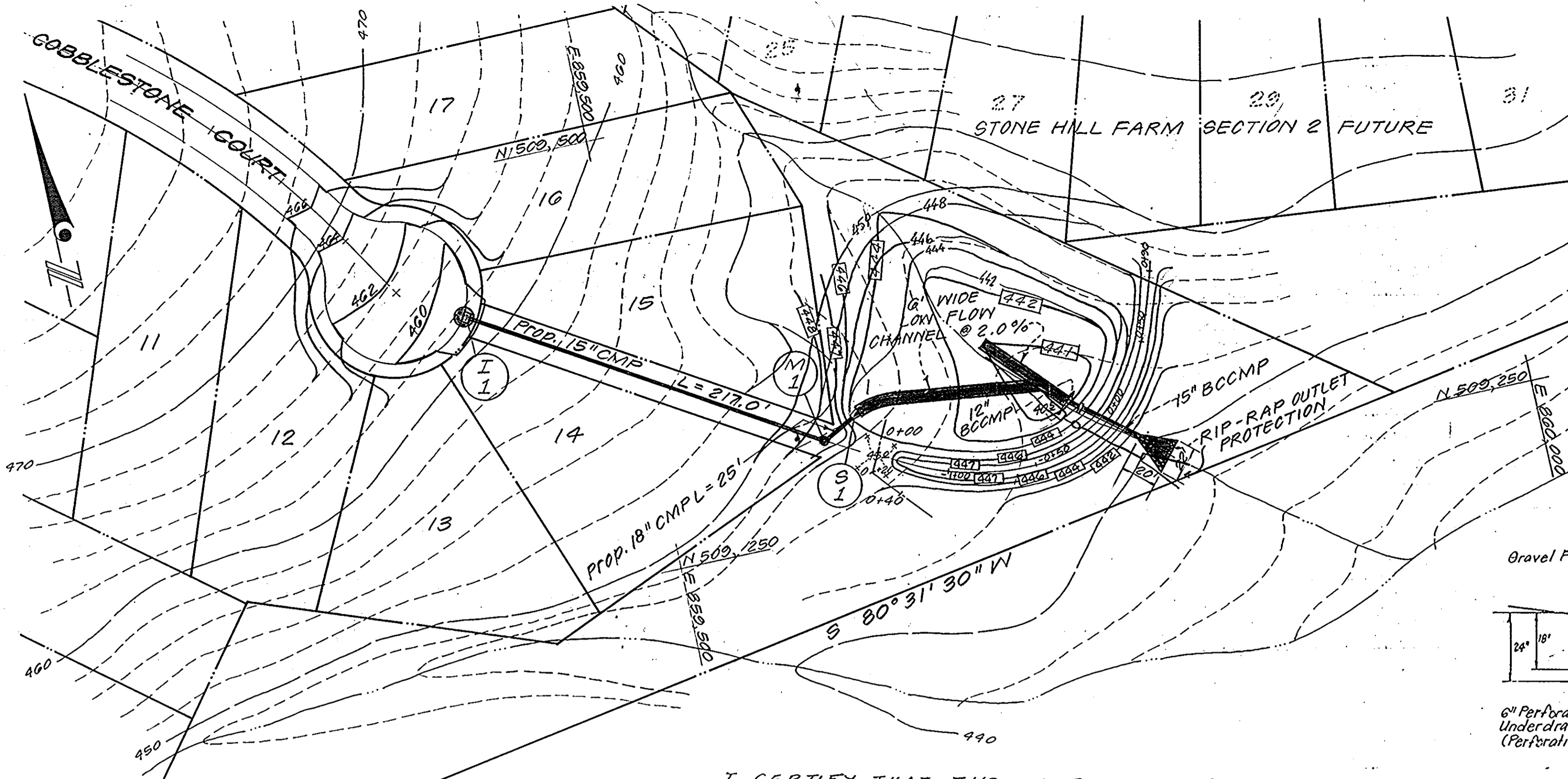
The following items should be considered in reviewing As-Built plans to determine if it is acceptable:

- 1. The pipe and riser diameter, materials, and elevations must be correct.
2. The number, size and location of the anti-seep collars must be correct.
3. The emergency spillway exit slope may be 1-2% steeper, but no flatter than the design, and no narrower than the design.
4. The top of fill elevation must be no less than the design elevation plus the allowance for settlement.
5. The top width and side slopes must be equal to or flatter than the design.
6. There must be the proper relation between the elevations of the principal spillway crest, the emergency spillway crest, and the top of dam. All of these elevations should be greater than or equal to the design elevations.
7. The structure must have an acceptable outlet as provided in the plans.

Any major change or deviation from the original plan must be redesigned and revised plans submitted to the approving soil conservation district prior to the performance of the work.

Approval table with signatures and dates for Howard County Office of Planning & Zoning, Chief Division of Land Development & Zoning Admin., and Chief Bureau of Engineering.

EVANS, HAGAN & HOLDEFER, INC. ENGINEERS, LAND PLANNERS & SURVEYORS. Includes contact information and a professional seal.



I CERTIFY THAT THE AS-BUILT IS ACCURATE AND COMPLETE AND THAT THE POND AS CONSTRUCTED MEETS THE REQUIREMENTS OF THE STANDARDS AND SPECIFICATIONS FOR PONDS

(SIGNED)  
JOHN E. PATMORE  
P.E. MD. 2978

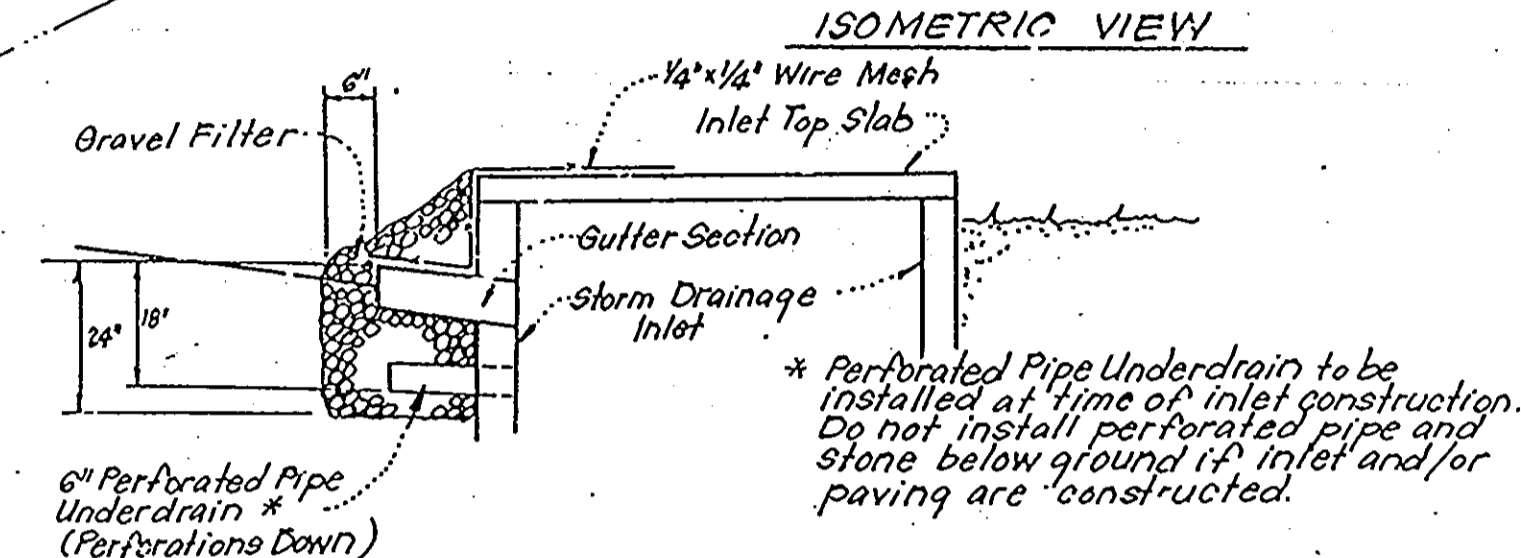
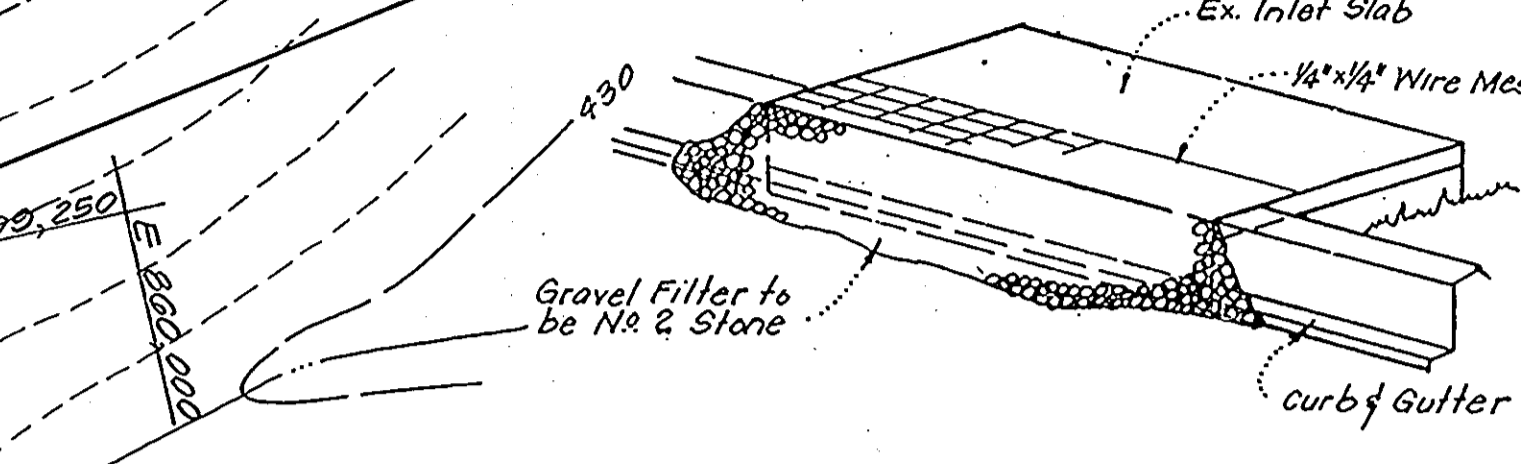
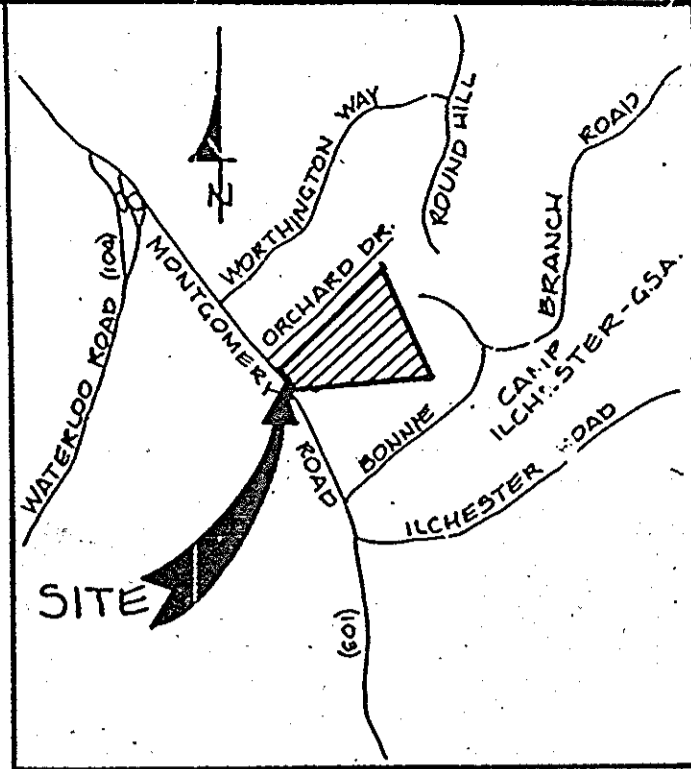
**STORMWATER MANAGEMENT POND PLAN**  
Scale: 1" = 50'

TEMPORARY SEEDING NOTES

Seeded Preparation: Loosen upper 3 inches by discing, raking, or other acceptable means.  
Soil Amendments: Apply 600 lbs. per acre (15 lbs./1,000 sq. ft.) of 10-20-10 Fertilizer.  
Seeding: For period: March 1 through April 30, and from August 15 through November 15, seed with 2 1/2 bushels per acre (3.2 lbs./1,000 sq. ft.) of annual rye. For the period May 1 through August 14 seed with 3 lbs. per acre (0.07 lbs./1,000 sq. ft.) of weeping lovegrass.  
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1,000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using 200 gallons per acre (5 gallons/1,000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher use 348 gallons per acre (8 gallons/1,000 sq. ft.) for anchoring.

PERMANENT SEEDING NOTES

All disturbed areas shall be stabilized as follows:  
Seeded Preparation: Loosen upper 3 inches of soil by raking, discing or other acceptable means.  
Soil Amendments: Apply 2 tons per acre dolomitic limestone (92 lbs./1,000 sq. ft.) and 600 lbs. per acre 0-20-20 fertilizer (14 lbs./1,000 sq. ft.). Harrow or disc time and fertilizer into upper three inches of soil. At time of seeding, apply 400 lbs. per acre (9.2 lbs./1,000 sq. ft.) of 38-0-0 ureaform fertilizer and 500 lbs. per acre (11.5 lbs./1,000 sq. ft.) of 10-20-20 fertilizer.  
Seeding: For the periods March 1 through April 30, and August 1 through October 15, seed with 60 lbs. per acre (1.4 lbs./1,000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May through July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1,000 sq. ft.) of weeping lovegrass. During the period of October 16 through 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./1,000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using 200 gallons per acre (5 gallons/1,000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gallons/1,000 sq. ft.) for anchoring.  
Maintenance: Inspect all seeded areas and made needed repairs, replacements, and reseeding.



SECTION VIEW  
STONE FILTER INLET PROTECTION (S.F.I.P.)  
No Scale

ENGINEER'S CERTIFICATION

I hereby certify that this plan for a pond 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.

(SIGNED)  
Rodolph May  
RODOLPH L. MAY, P.E.

DATE

DEVELOPER'S CERTIFICATION

I hereby certify that all development and construction will be done according to this plan of development and plan for a pond. I also authorize periodic on-site inspection by the Howard County Soil Conservation District or their authorized agents as are deemed necessary. Deviations from these plans will not be made unless authorized by the Howard County Soil Conservation District.

Aug 3, 1984  
DATE

(SIGNED)  
John R. Clark  
DEVELOPER - STONE HILL FARM, INC.

These plans for small pond construction meet the requirements of the Howard County Soil Conservation District.

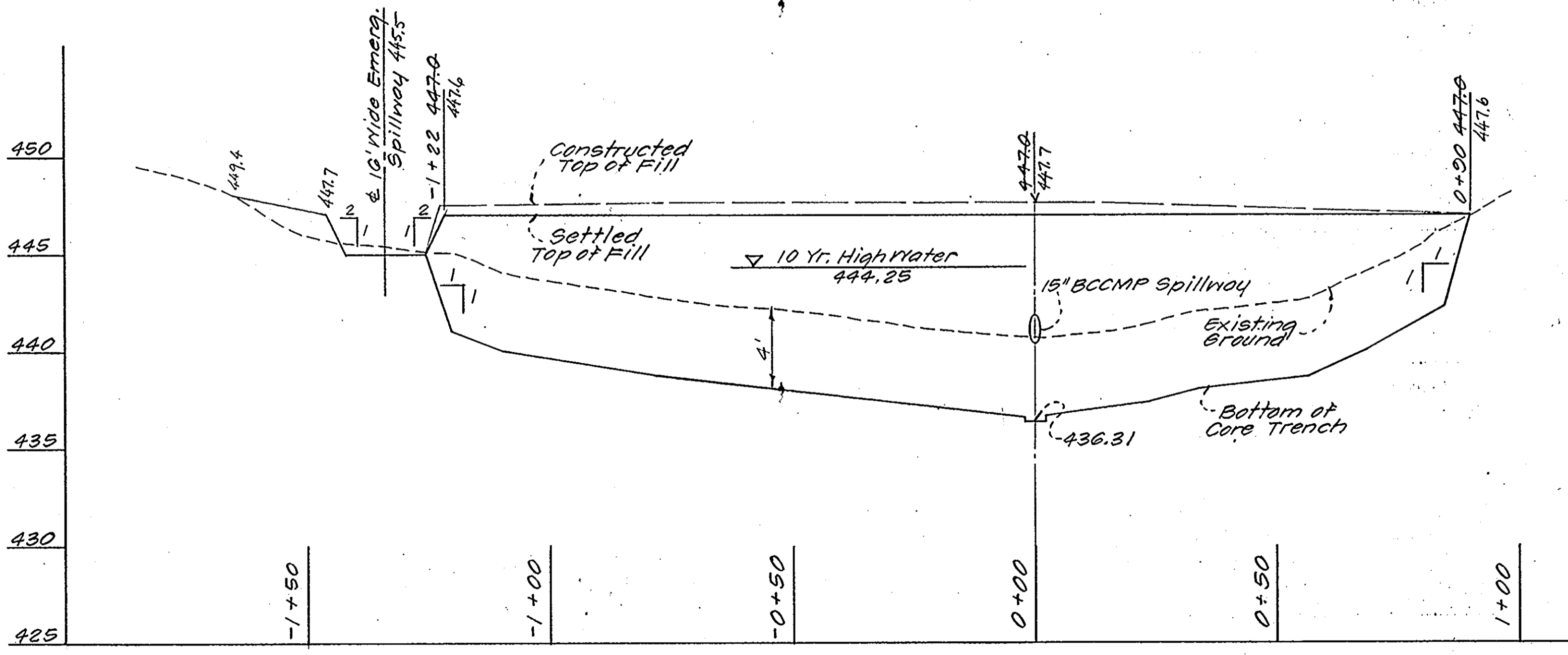
9-20-84  
DATE

(SIGNED)  
Robert W. Ziehm  
APPROVED - Ho. Co. S.C.D.

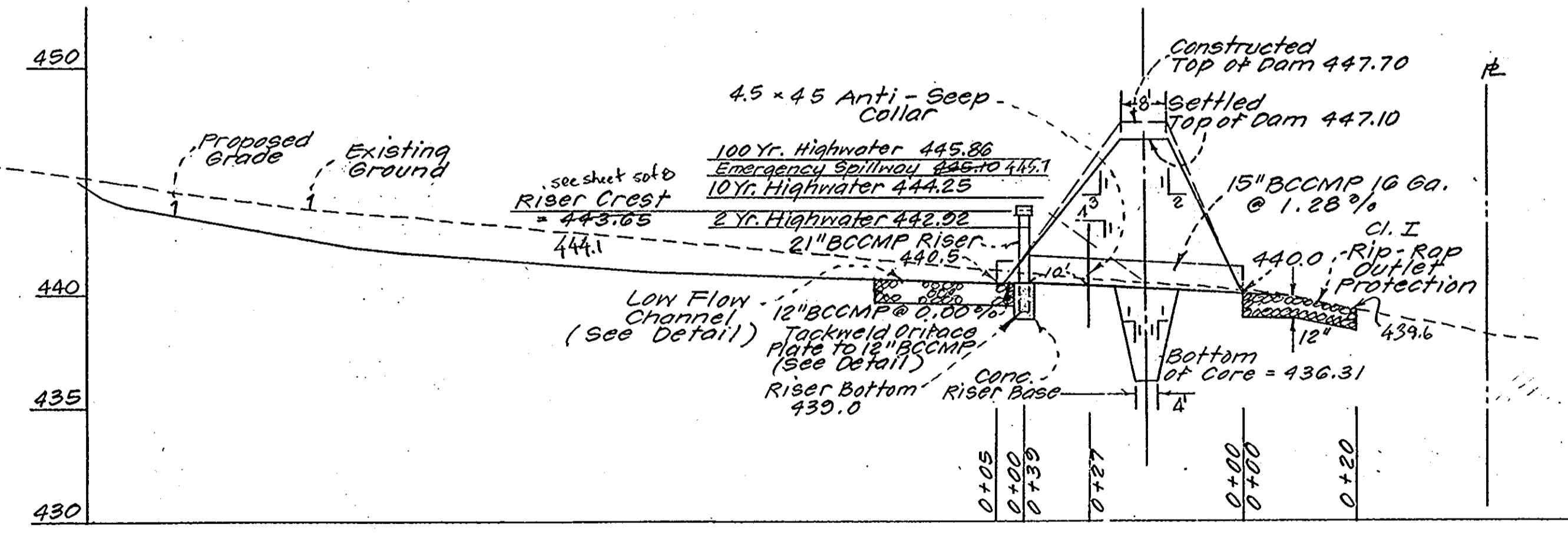
These plans have been reviewed for the Howard County Soil Conservation District and meet the technical requirements for small pond construction.

9-20-84  
DATE

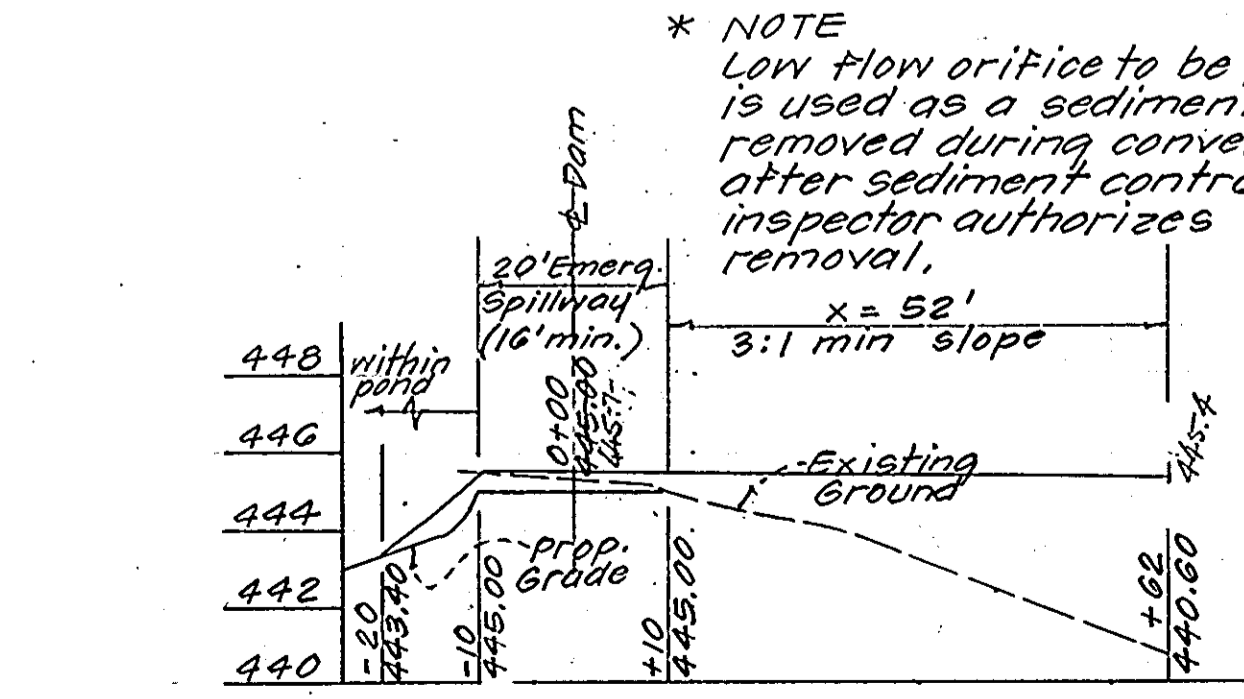
(SIGNED)  
James M. Helzer  
U.S. SOIL CONSERVATION SERVICE



PROFILE ALONG  
C OF DAM  
Scale: Horiz. = 1" = 20'  
Vert. = 1" = 5'



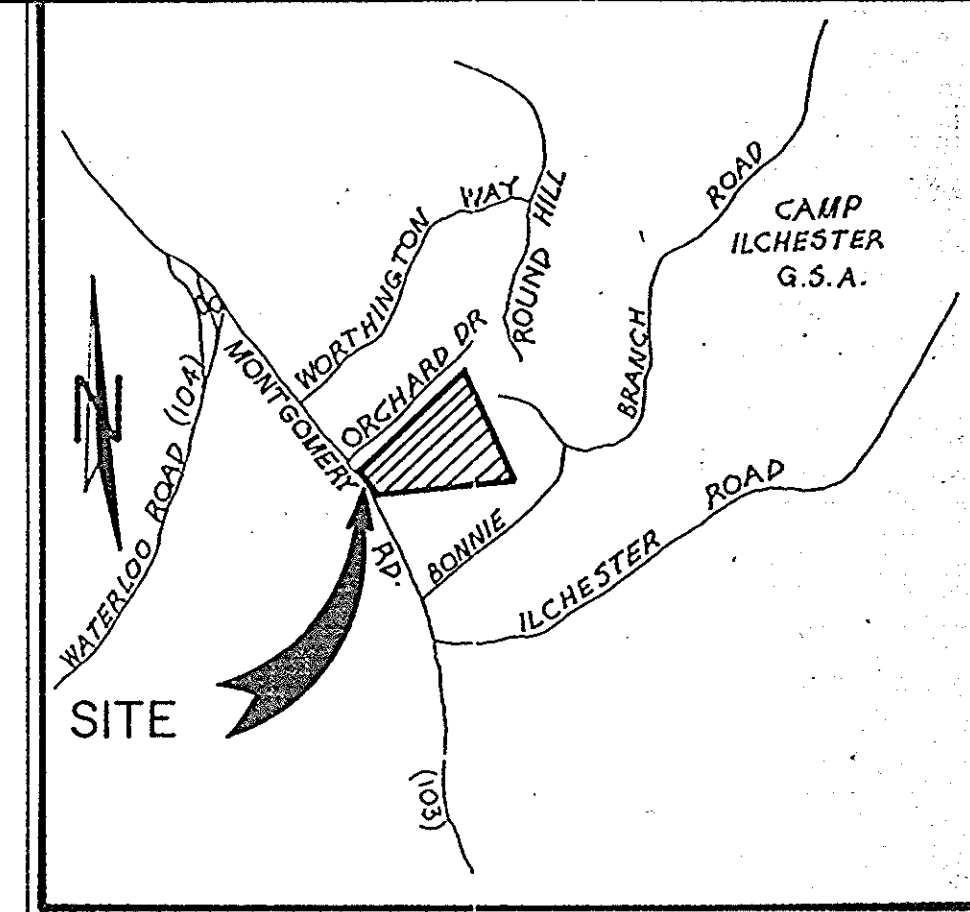
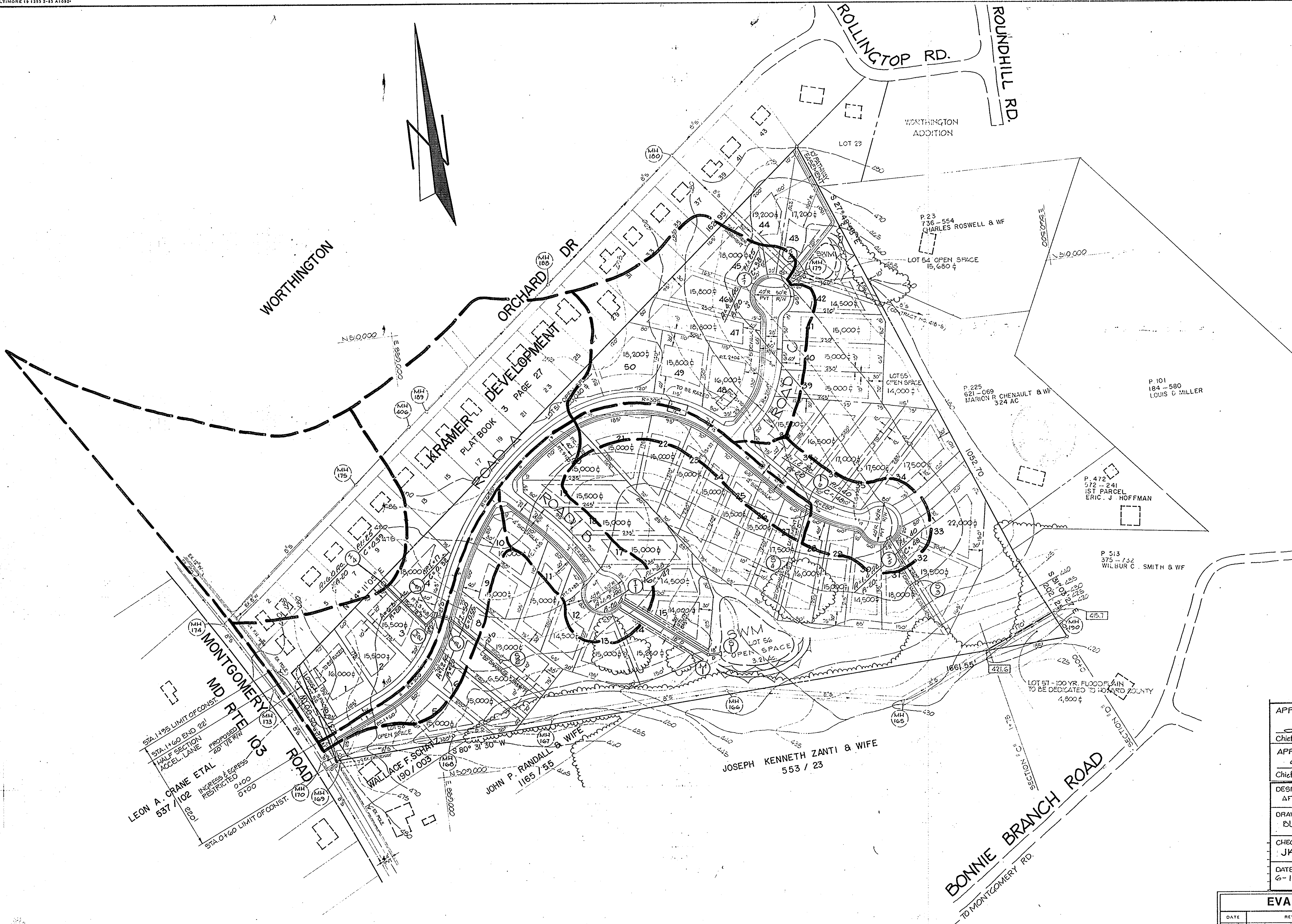
SECTION THROUGH PRINCIPAL SPILLWAY  
Scale: Horiz. 1" = 20'  
Vert. 1" = 5'



SECTION THRU EMERGENCY SPILLWAY  
Scale: Horiz. 1" = 20'  
Vert. 1" = 5'

1096  
APPROVED: Howard Co. Office of Planning & Zoning  
9-25-84  
APPROVED: Howard Co. Dept. of Public Works  
9-18-84


SHEET 7 OF 9  
STORM WATER MANAGEMENT PLANS & PROFILES  
STONE HILL FARM, INC.  
EVANS, HAGAN & HOLDEFER, INC.  
ENGINEERS, LAND PLANNERS & SURVEYORS  
1052 WEST STREET / LAUREL, MD 20707  
(301) 725-0665  
639 POPLAR STREET / CAMBRIDGE, MD 21613 (301) 228-3350  
111 JOHN STREET / WESTMINSTER, MD 21157 (301) 548-1790  
8013 BELAIR ROAD / BALTIMORE, MD 21284 (301) 568-1501  
DATE: 5/23/84 SCALE: As Shown



VICINITY MAP  
SCALE: 1" = 2,000'

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING		
<i>John W. Muscarello</i>		9-25-84
Chief, Division of Land Development and Zoning Administration Date		
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS		
<i>William S. Re...</i>		9-18-84
Chief, Bureau of Engineering Date		
DESIGNED AFC	DRAINAGE AREA MAP	SCALE AS SHOWN
DRAWN BLJ	STONE HILL FARM	DWG NO. 30F8
CHECKED JK	SECTION 1 AREA 1	JOB NO. 00032
DATE 6-1-84	FOR: STONE HILL FARM, INC. 514 N. CRAIN HIGHWAY GLEN BURNIE, MARYLAND 21061	FILE NO. 07

EVANS, HAGAN & HOLDEFER, INC.

DATE	REVISION	BY	SURVEYORS AND CIVIL ENGINEERS
2/27/84	ROAD ALIGNED @ ENTRANCE TO RD'S	BLJ	
4/2/84	REVISED/UPDATED		
SURVEYED BY			
COMPUTED BY			
DRAWN BY			
CHECKED BY			
Drwg. No. 00032-04			1052 WEST ST / LAUREL, MD. 20707 792-8086 DATE 2 APR 84 SCALE 1" = 100"