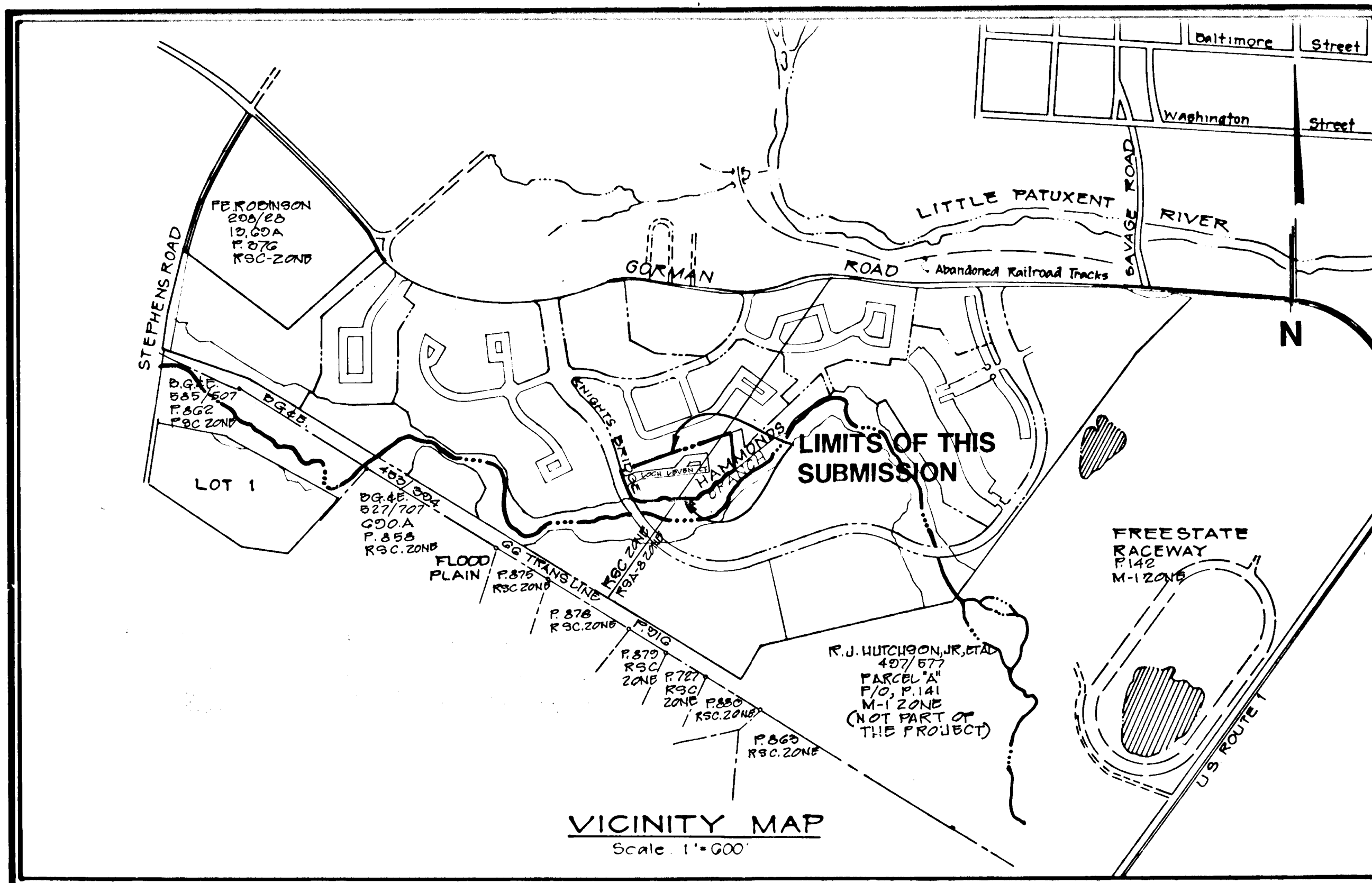


STRUCTURE SCHEDULE							
NO.	TYPE	INV. IN	INV. OUT	UPPER END	LOWER END	H.O.C. STR.	LOCATION
I-1	A-5	211.75	211.00	215.01	215.01	SR-4.01	5+36.57, 14' RT
I-2	A-5 W/DEFLECTOR	217.35	216.85	221.05	220.50	SR-4.01	3+11 14' LT
I-3	A-5 W/DEFLECTOR	—	217.55	221.12	220.57	SR-4.01	3+08.5 14' RT
M-1	MANHOLE	209.05	208.05	212.00	212.00	G-5.12	SEE PLAN
E-1	END SECTION	208.02	208.00	210.02	208.00	SR-5.61	SEE PLAN

PIPE SCHEDULE			
DIA.	MATERIAL	CLASS	LENGTH (FT)
18"	CMP	168A	241'
18"	CMP	168A	75'
24"	CMP	168A	4'

# BOWLING BROOK FARMS SECTION 4, AREA 2 PARCEL H, LOTS H-1 TO H-22



### GENERAL NOTES

- THE APPROXIMATE LOCATION OF ALL UTILITIES IS SHOWN BASED ON INFORMATION OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL LOCATE, PROTECT AND SUPPORT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER/INSPECTOR, AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF PROPOSED UTILITIES AT HIS OWN EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS.  
  
STATE HIGHWAY ADMINISTRATION - 531-5533  
BALTIMORE GAS & ELECTRIC COMPANY - 561-2585 (CONTRACTOR SERVICES)  
BALTIMORE GAS & ELECTRIC COMPANY - 234-6313 (UNDERGROUND DAMAGE CONTROL)  
BALTIMORE GAS & ELECTRIC COMPANY - 298-9013 (TROUBLE SHOOTING)  
"MISS UTILITY" - 800-257-7777  
CHESAPEAKE & POTOMAC (C&P) TELEPHONE COMPANY - 725-9976  
BUREAU OF UTILITIES/HOWARD COUNTY - 992-2366
- ALL DETAILS NOT SHOWN ON THE DRAWINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS.
- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY SPECIFICATIONS AND HOWARD COUNTY DESIGN MANUAL, VOLUME IV.
- ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST EDITION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- TREES SHALL BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT POSSIBLE. TREES SIX INCH (6") DIAMETER OR GREATER (MEASURED FOUR FEET (4') ABOVE EXISTING GRADE) ADJACENT TO THE LIMITS OF CONSTRUCTION SHALL NOT BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- ALL HORIZONTAL AND VERTICAL CONTROLS ARE BASED ON MARYLAND STATE PLANE COORDINATES SYSTEM PROVIDED BY HOWARD COUNTY.
- TOPOGRAPHY TAKEN FROM MAPS PREPARED BY PHOTOGRAMMETRY BY "AERIAL SURVEYS-" IN 1984. TOPOGRAPHY FIELD CHECKED 1986.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12" CLEAR. CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. ANY COST INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT POLES SHALL BE INCLUDED IN UNIT PRICES BID FOR EXCAVATION AND SHALL BE INCLUDED IN UNIT PRICES BID FOR EXCAVATION BACKFILL.
- ALL PIPE BEDDING SHALL BE CLASS C.
- ROAD RIGHT-OF-WAY INFORMATION IS SHOWN ON THE RECORD PLATS.
- SPOT ELEVATIONS SHOWN ARE TOP OF CURB UNLESS OTHERWISE NOTED.
- SHADED AREAS INDICATE WATER, SEWER, UTILITY, DRAINAGE AND/OR ACCESS EASEMENT(S).

### LEGEND

PROPOSED STORM DRAIN	□ 18" CMP
PROPOSED CONTOURS	— 220
PROPOSED RIGHT-OF-WAY	— 210
EXISTING CONTOURS	--- 210
LIMIT OF SUBMISSION	—
STORM DRAIN MANHOLE	(M-1) O
WATER/SEWER AND UTILITY EASEMENT	—
HANDICAP RAMP	—

### PLANT SCHEDULE

Deciduous Trees					
Key	Quantity	Botanical Name	Common Name	Size	Condition
Ar	4	Acer rubrum	Red Maple	2 1/2" cal	B&B
Tc	8	Tilia cordata "Greenspire"	Greenspire Linden	2" cal	B&B
Zs	22	Zelkora serrata "Greenvase"	GreenVase Zelkova	2 1/2" cal	B&B

## PAVING AND STORM DRAIN CONSTRUCTION PLAN

# HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

*Mark S. D'Amico* 7/3/89  
Chief, Division of Community Planning & Land Development Date

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT  
*James M. Helmy* 4/3/89  
SIGNATURE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Frank J. Reppan* 6/23/89  
Chief, Land Development Division Date

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.  
APPROVED *Stuart L. Aron* 9/3/89  
HOWARD SCD DATE

*Branville W. Weckard* 6/23/89  
Chief, Bureau of Highways Date  
*Deborah Anderson* 6/26/89  
Chief, Bureau of Engineering Date

### OWNER/DEVELOPER

GORMAN ROAD LIMITED PARTNERSHIP  
C/O JAMES F. KNOTT DEVELOPMENT CORPORATION  
110 WEST ROAD, SUITE 203  
TOWSON MARYLAND 21204  
(801) 321-6436

### INDEX TO DRAWING

- TITLE SHEET
- PAVING AND STORM DRAIN PLAN AND PROFILE LOCH LEVEN COURT
- DRAINAGE AREA MAP AND STORM DRAIN PROFILE LOCH LEVEN COURT
- DETAIL SHEET (PAVING AND STORM DRAIN)
- DETAIL SHEET (EROSION AND SEDIMENT CONTROL)
- EROSION AND SEDIMENT CONTROL PLAN

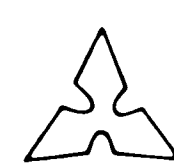
### NOTES:

- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO PLANTING (SEE NOTE #3, SHEET 1).
- ALL PLANT MATERIAL AND PLANTING SHALL BE IN ACCORDANCE WITH "AMERICAN STANDARD FOR NURSERY STOCK", BY THE A.A.N.
- SUBSTITUTIONS MAY BE PERMITTED WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT (762-2220).

NO.	DESCRIPTION	DATE	APPROVED	DATE
2	ISSUED TO H.O.C. FOR SIGNATURE	9/3/89		
1	ISSUED TO H.O.C. FOR REVIEW	12/3/88		



TITLE SHEET



**Patton Harris Rust and Associates**  
A Professional Corporation  
Engineers, Surveyors, Planners and Landscape Architects  
7609 Standish Place Rockville, Maryland 20855 (301)762-2220

**BOWLING BROOK FARMS**  
SECTION 4 AREA 2  
LOTS H-1 TO H-24  
A RESUBDIVISION OF PARCEL H, BOWLING BROOK FARMS  
TAX MAP 47 PARCEL 141  
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
L. 1394 F. 632

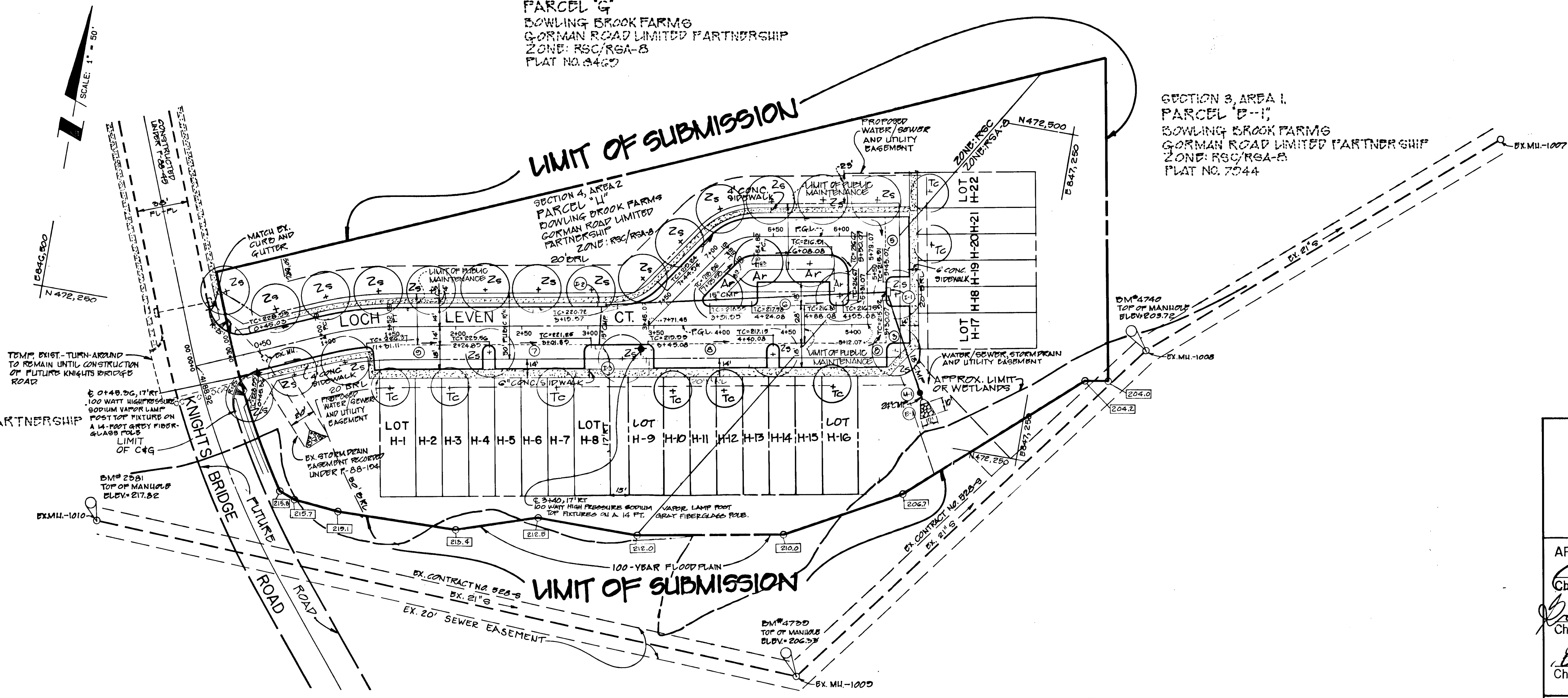
SURVEY PER #4		DATE
DESIGN	MJK	12-31-88
DRAWN	FC	SHEET
CHECKED		1 of 6
SCALE	C.I.	FILE NO.
		2184-1-B

F-89-120

SECTION 4, AREA 1  
 PARCEL "G"  
 BOWLING BROOK FARMS  
 GORMAN ROAD LIMITED PARTNERSHIP  
 ZONE: RSC/RGA-B  
 PLAT NO. 8462

SECTION 3, AREA 1  
 PARCEL "E-1"  
 BOWLING BROOK FARMS  
 GORMAN ROAD LIMITED PARTNERSHIP  
 ZONE: RSC/RGA-B  
 PLAT NO. 7544

SECTION 1, AREA 2  
 PARCEL "I"  
 BOWLING BROOK FARMS  
 GORMAN ROAD LIMITED PARTNERSHIP  
 ZONE: RSC



CENTERLINE LINE DATA			
PC STA.	TO	PT STA.	BEARING DISTANCE (ft.)
0+00		1+00.79	N66 20'10"E 100.79
1+52.89		3+46.07	N79 36'10"E 193.19
3+46.07		5+12.08	N79 36'10"E 166.00
5+12.08		5+79.08	N10 23'50"W 67.00
5+79.08		6+64.83	S79 36'10"W 85.75
6+64.83		7+71.45	S34 36'10"W 81.50

CENTERLINE CURVE DATA							
PC STA.	TO	PT STA.	RADIUS	DELTA	ARC	TAN	CHORD DISTANCE CHORD BEARING
1+00.79		1+52.89	225.00	13 16'00"	52.10	26.17	51.98 N72 58'10"E
6+64.83		6+89.95	32.00	45 00'00"	25.13	13.25	24.49 S57 06'10"W

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Paul D. ...* 6/23/09  
 Chief, Land Development Division Date  
*Lawrence W. ...* 6/23/09  
 Chief, Bureau of Highways Date  
*Elizabeth Anderson ...* 6/23/09  
 Chief, Bureau of Engineering, Planning & Design Date

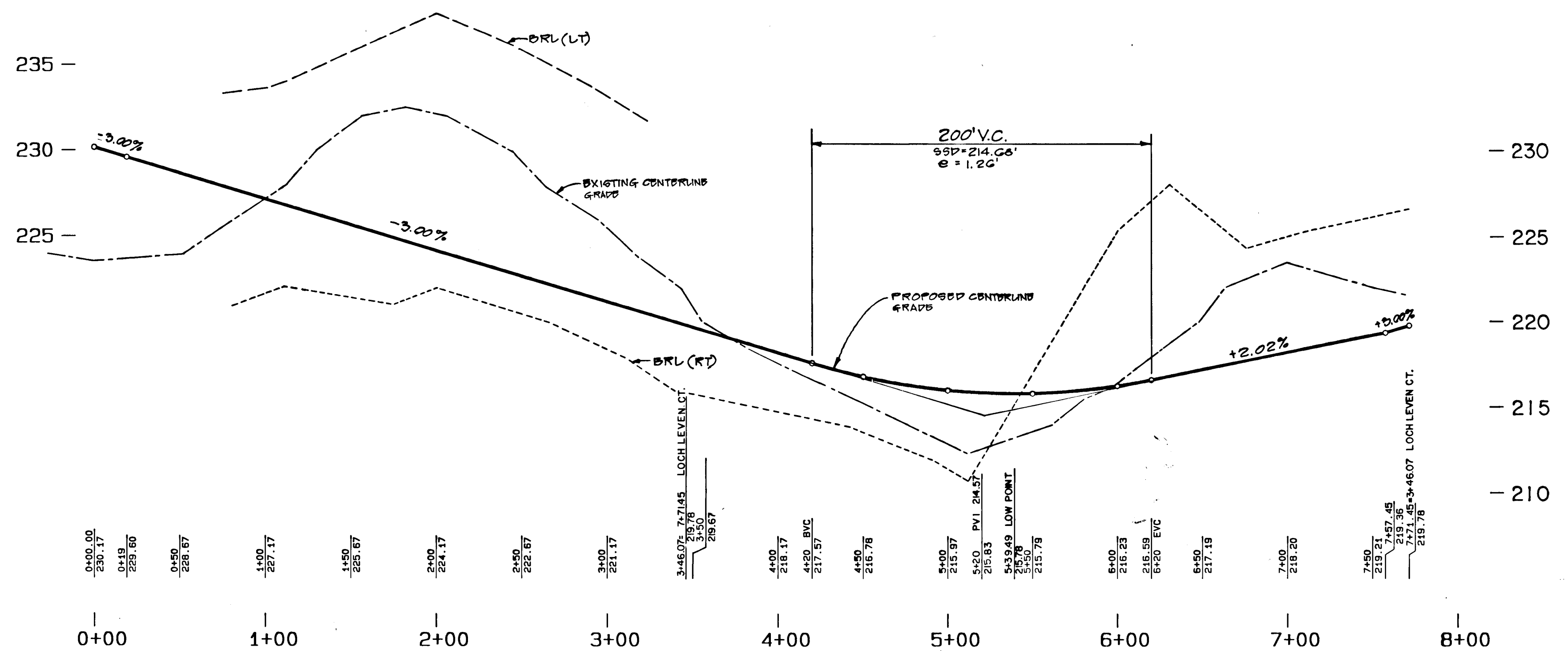
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*Dan ...* 7/2/09  
 Chief, Division of Community Planning & Land Development Date

PLAN SCALE: 1"=50'

PROFILE LEGEND:  
 PROFILE GRADE LINE  
 EXISTING & DRL (RT)  
 DRL (LT)

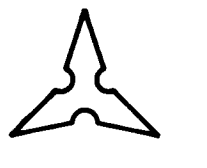
PROFILE SCALE:  
 HORIZ.: 1"=50'  
 VERT.: 1"=5'

NOTE:  
 THE PROPOSED PROFILE GRADE LINE (P.G.L.)  
 COINCIDES WITH THE STREET CENTERLINE GRADE.



*Lawrence W. ...* 6/23/09  
 Chief, Bureau of Highways

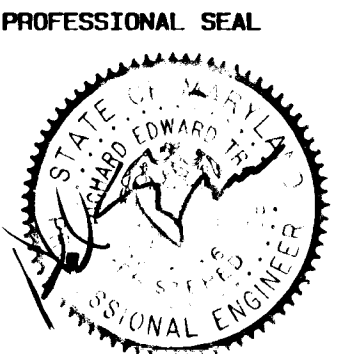
12/1



CLIENT  
 OWNER/DEVELOPER  
 GORMAN ROAD LIMITED PARTNERSHIP  
 C/O JAMES F. KNOTT DEVELOPMENT CORP.  
 110 WEST ROAD, SUITE 203  
 TOWSON, MARYLAND 21204  
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JOB  
**BOWLING BROOK FARMS**  
 SECTION 4 AREA 2  
 LOTS H-1 TO H-24  
 A RESUBDIVISION OF PARCEL H, BOWLING BROOK FARMS  
 TAX MAP 47 PARCEL 141  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 L. 1394 F. 632

TITLE  
**PAVING AND STORM DRAIN**  
**PLAN AND PROFILE**  
**LOCH LEVEN COURT**

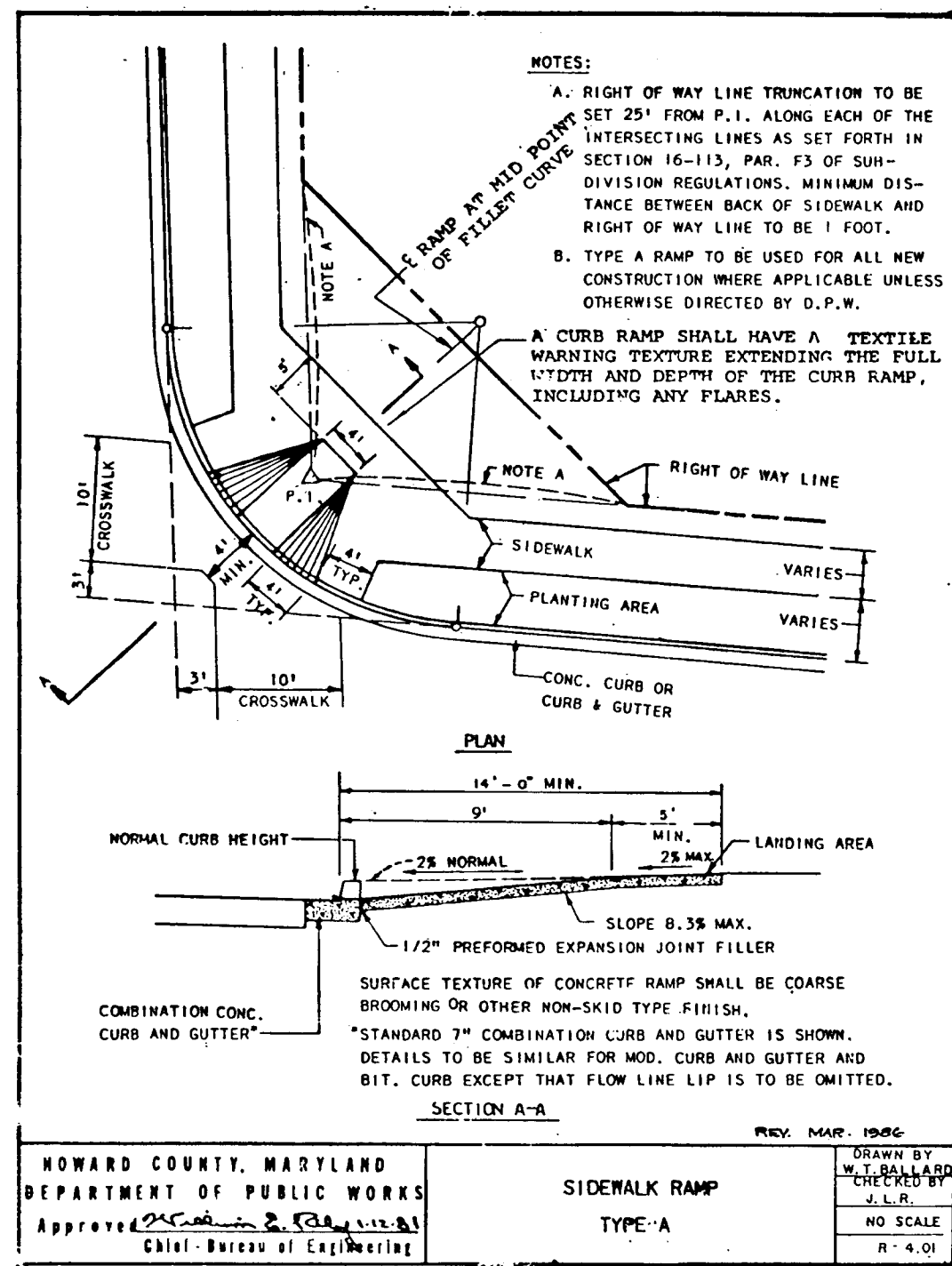


NO.	REVISIONS	DATE	BY
1	ISSUED TO HOWARD COUNTY FOR REVIEW	12/31/08	
2	ISSUED TO HOWARD COUNTY FOR SIGNATURE	2/20/09	

SURVEY BY	FILE NO.
PHR&A	2184-1-B
DESIGN	DATE
MJK	12-31-08
DRAWN	SCALE
CADD/PC	AS NOTED
CHECKED	SHEET
	2 OF 6

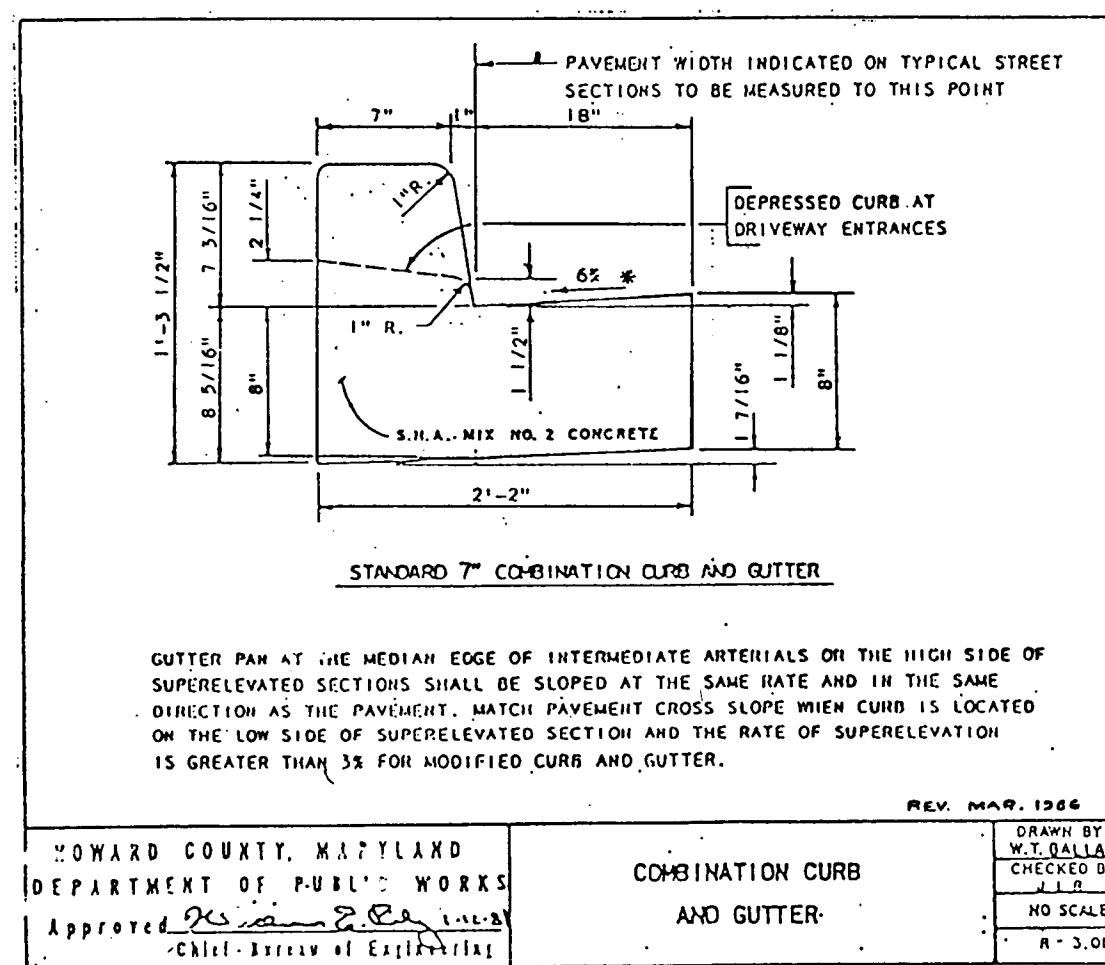
F-89-120





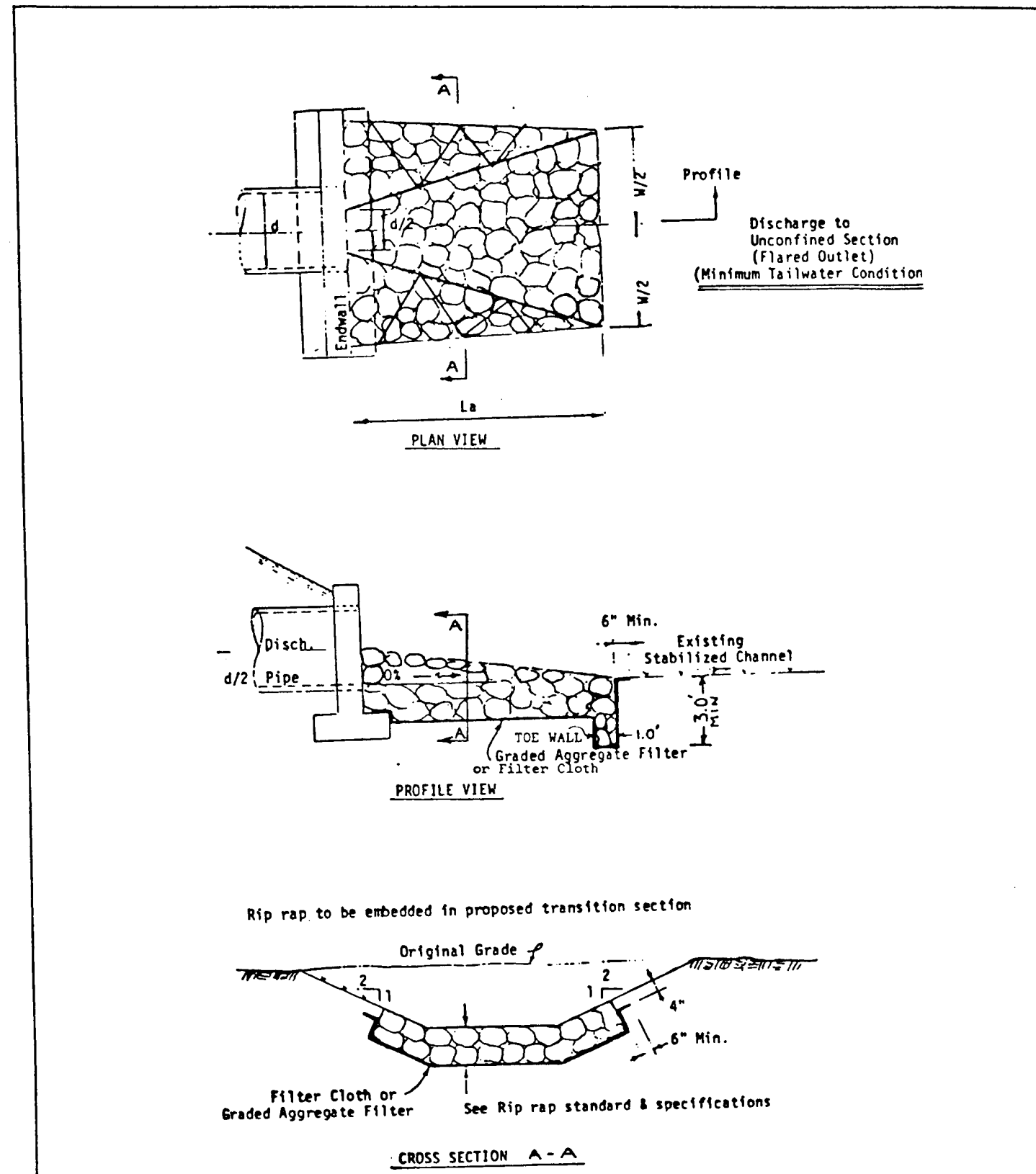
HOWARD COUNTY, MIDDLEBURY  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief, Bureau of Engineering

REVISIONS:  
1. REV. MAR. 1986  
2. REV. MAR. 1986  
3. REV. MAR. 1986  
4. REV. MAR. 1986



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

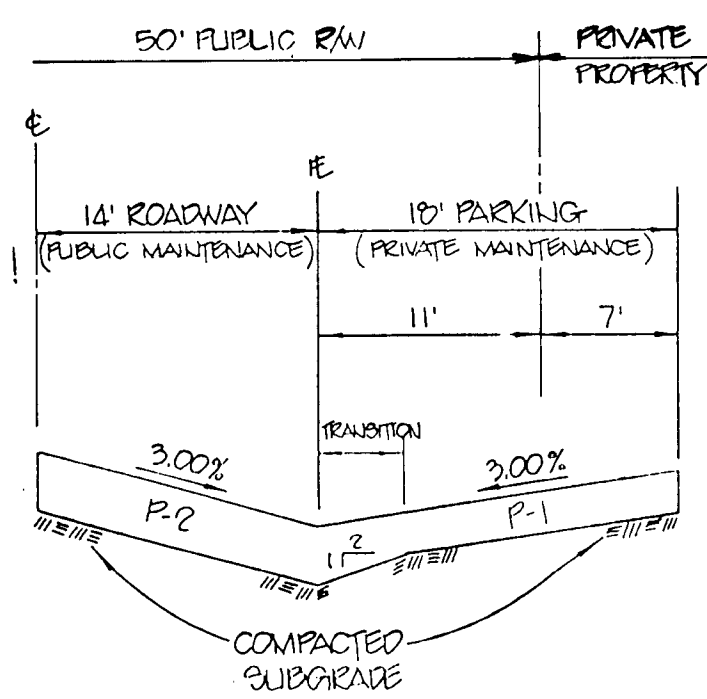
REVISIONS:  
1. REV. MAR. 1986  
2. REV. MAR. 1986  
3. REV. MAR. 1986  
4. REV. MAR. 1986



U.S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
COLLEGE PARK, MARYLAND

38.07

RIPRAP OUTLET PROTECTION-1  
STANDARD DRAWING  
ROP-1



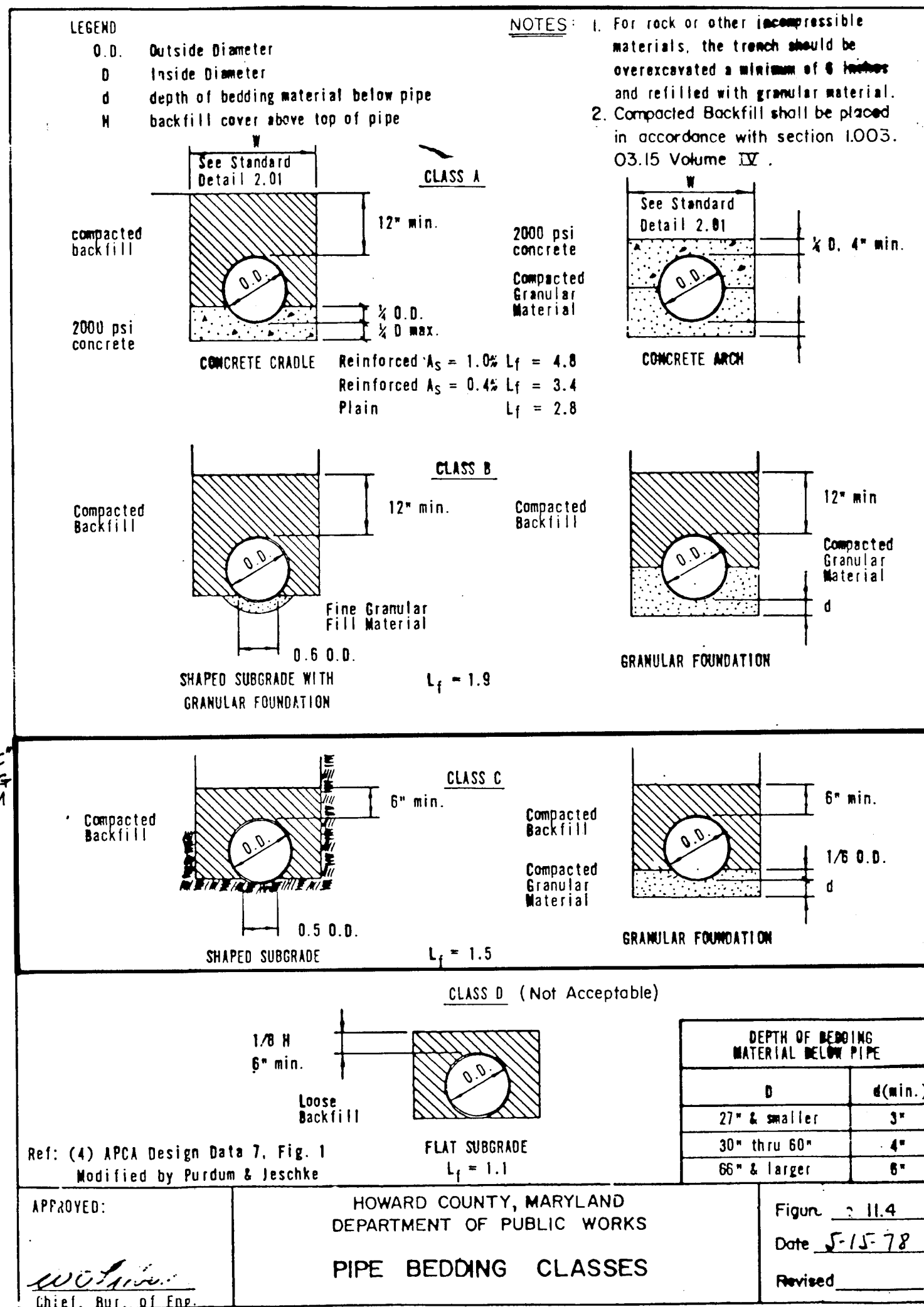
ALTERNATE PAVING SECTION  
NOT TO SCALE

NOTE:  
IF THE P-1 PAVEMENT SECTION IS USED WITHIN THE PRIVATE PARKING AREA, IT SHALL BE USED THROUGHOUT THE ENTIRE PROJECT.  
CURE PAVEMENT SECTION (FULL DEPTH BITUMINOUS CONCRETE PAVEMENT OR BITUMINOUS CONCRETE PAVEMENT OVER GRANULAR BASE) SHALL BE USED THROUGHOUT THE ENTIRE PROJECT.

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVEMENT MATERIALS
P-1	PARKING AREAS AND TRAVELWAY APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO HEAVY TRUCKS	FULL DEPTH BIT. CONC. ALTERNATE: 1\"/>
P-2	RESIDENTIAL ZONES LOCAL, COLLECTOR STS, ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS	FULL DEPTH BIT. CONC. SURFACE: 1 1/2\"/>
P-3	RESIDENTIAL ZONES MINOR AND MAJOR COLLECTORS COMMERCIAL-INDUSTRIAL ZONES LOCAL AND COLLECTOR STREETS ALLEYS	FULL DEPTH BIT. CONC. SURFACE: 1 1/2\"/>
P-4	COMMERCIAL-INDUSTRIAL ZONES MINOR COLLECTOR	FULL DEPTH BIT. CONC. SURFACE: 1 1/2\"/>

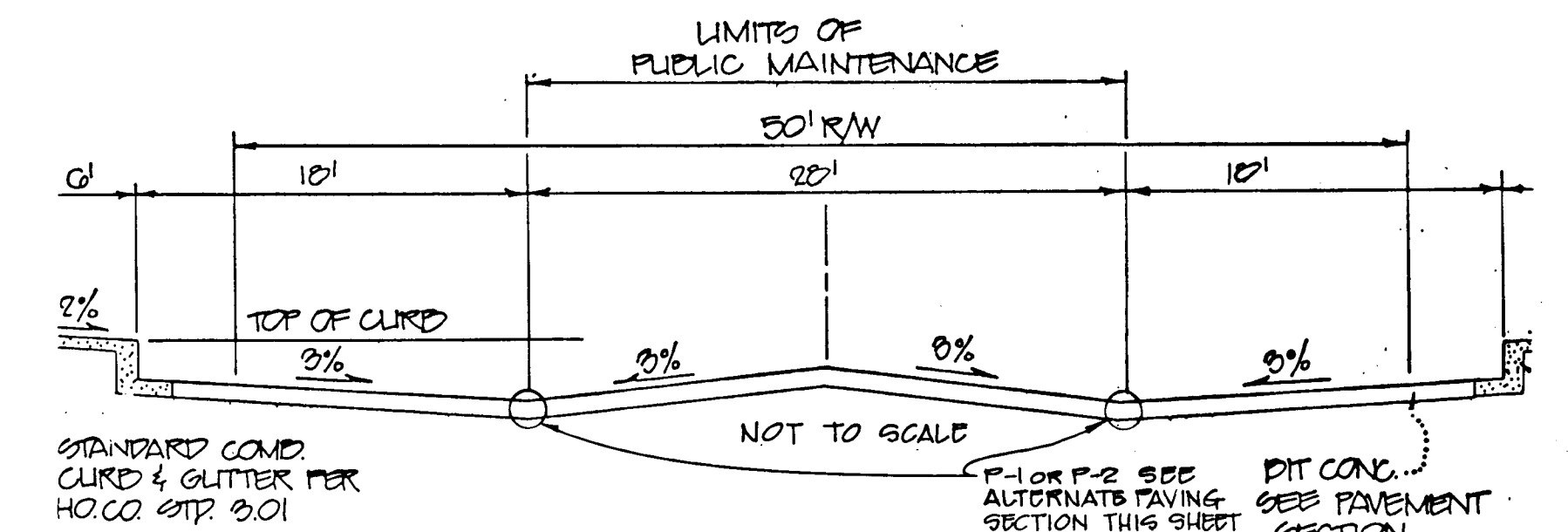
HOWARD COUNTY, MIDDLEBURY  
DEPARTMENT OF PUBLIC WORKS  
Approved: *[Signature]* Chief, Bureau of Engineering

PAVING SECTIONS  
P-1 THROUGH P-4

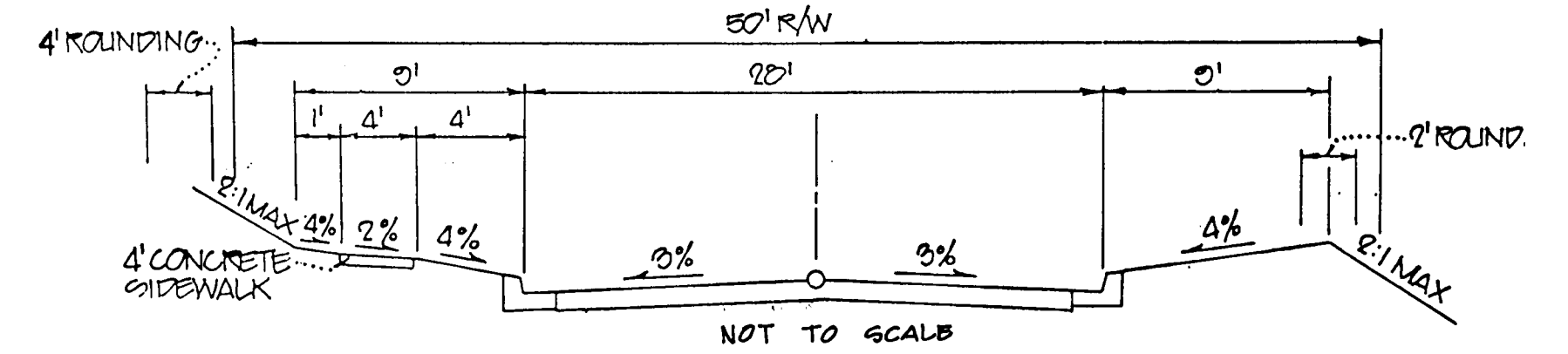


HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
PIPE BEDDING CLASSES

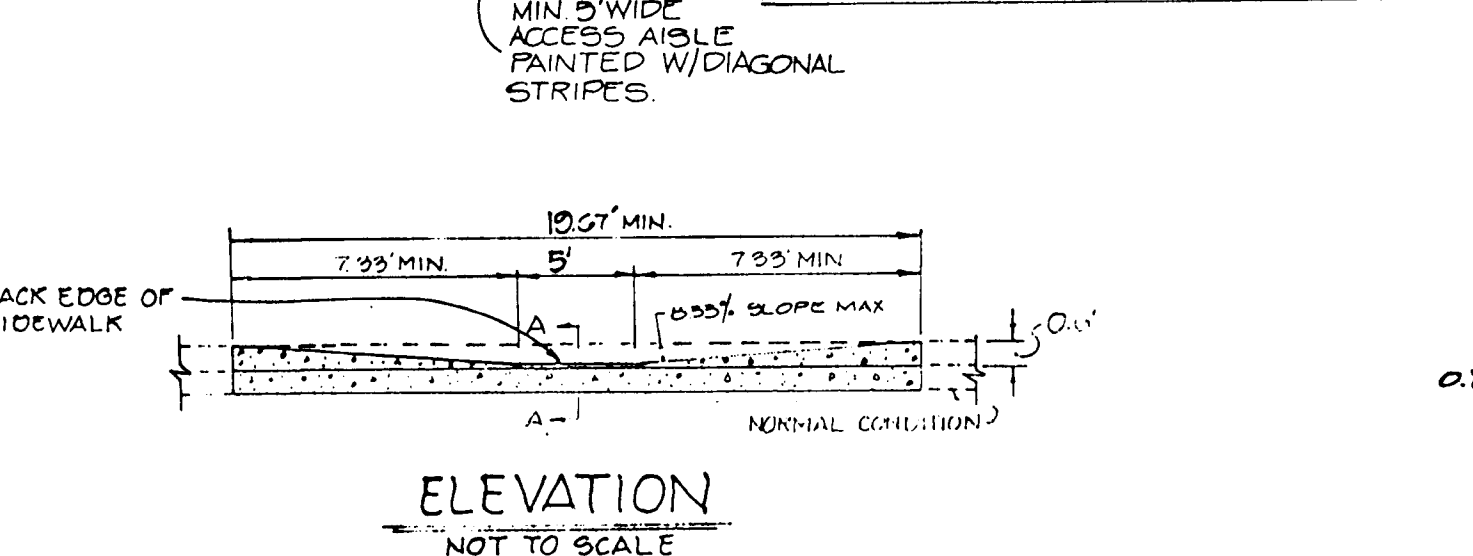
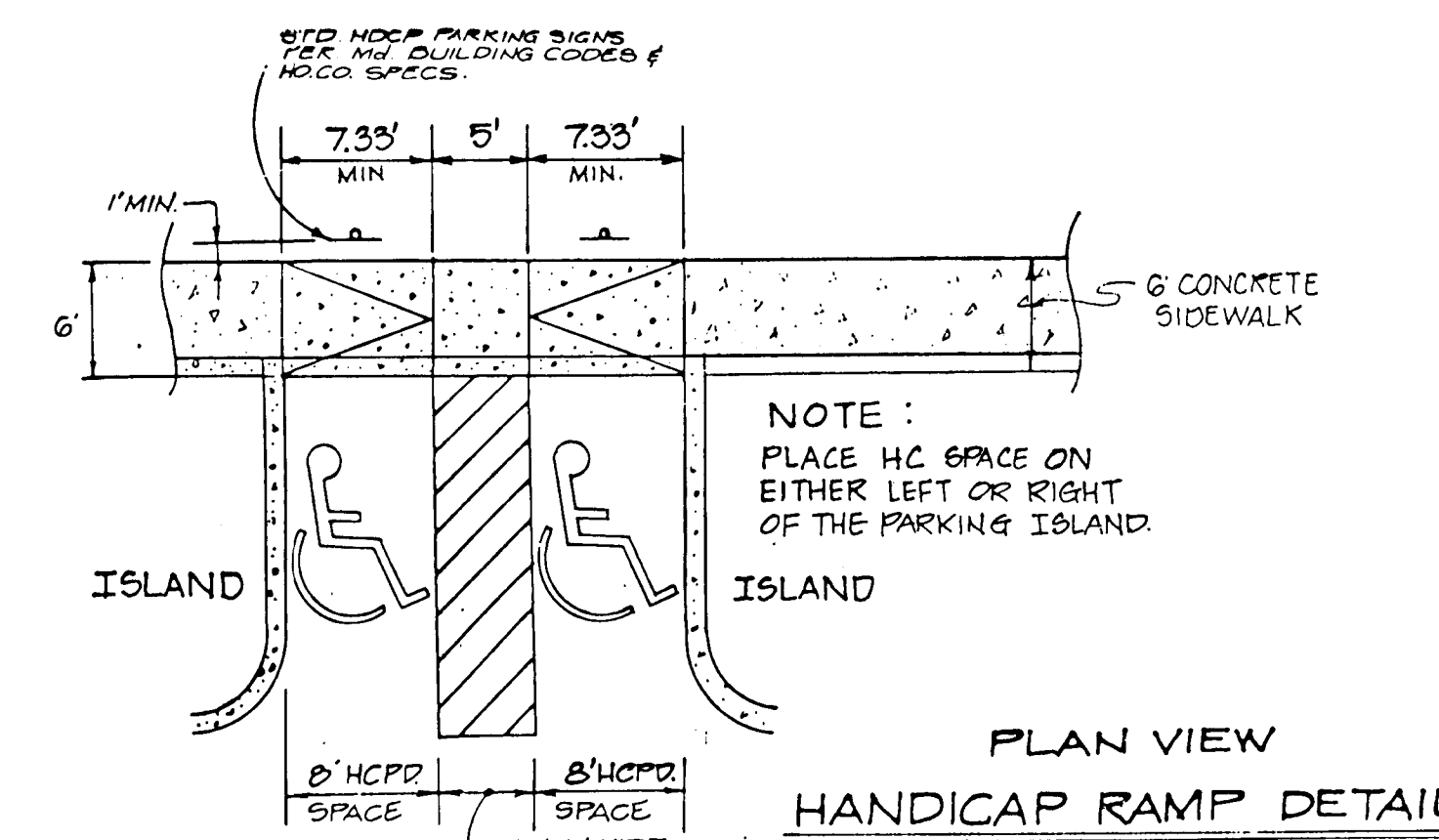
Figure 11.4  
Date 5-15-78  
Revised



LOCH LEVEN COURT  
CUL-DB-SAC STREET  
DESIGN SPEED = 30 MPH.  
STATION VARIES-SEE PLAN SHEET 2



LOCH LEVEN COURT  
CUL-DB-SAC STREET  
DESIGN SPEED = 30 MPH.  
STATION VARIES-SEE PLAN SHEET 2



ELEVATION  
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* Chief, Land Development Division  
*[Signature]* Chief, Bureau of Highways  
*[Signature]* Chief, Bureau of Engineering

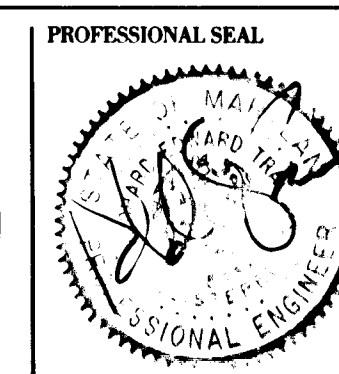
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
*[Signature]* Chief, Division of Community Planning & Land Development

**PHR&A**  
Patton Harris Rust & Associates, PC  
Engineers, Surveyors, Planners, Landscape Architects  
7400 Sandhill Place  
Rockville, Maryland 20855  
301 762-2220

OWNER/DEVELOPER  
CORMAN ROAD LIMITED PARTNERSHIP  
C/O JAMES F. KNOTT DEVELOPMENT CORP  
110 WEST ROAD, SUITE 203  
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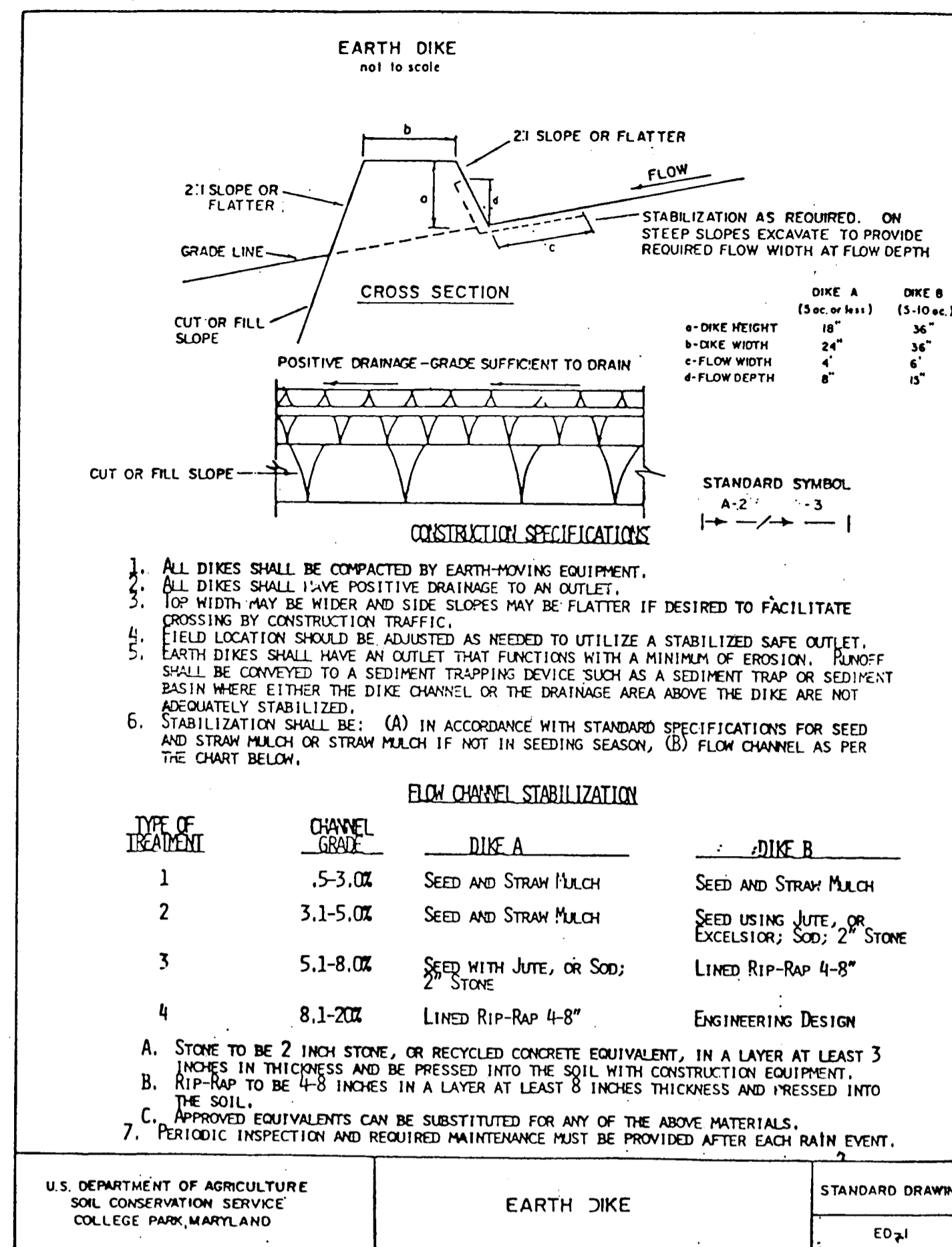
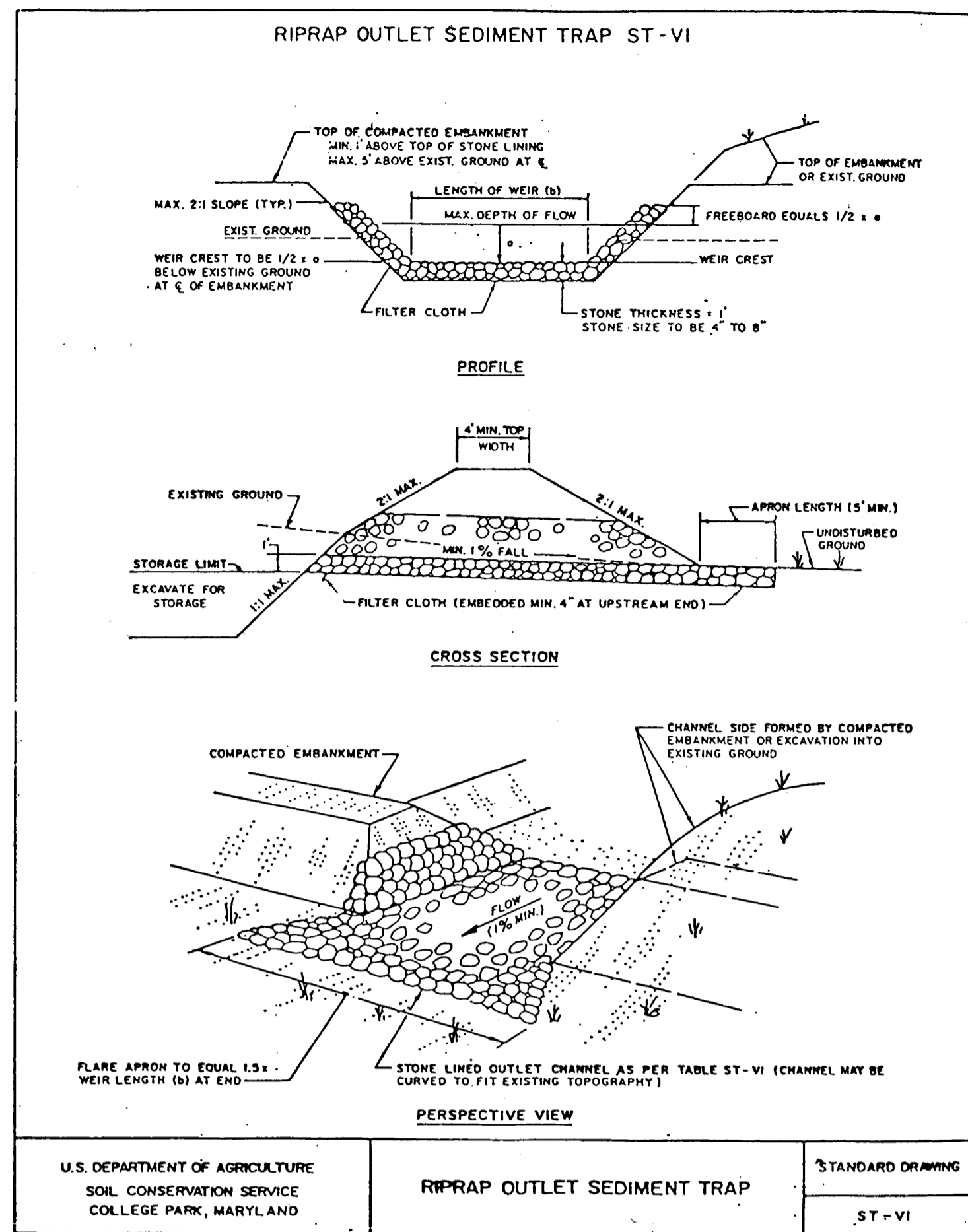
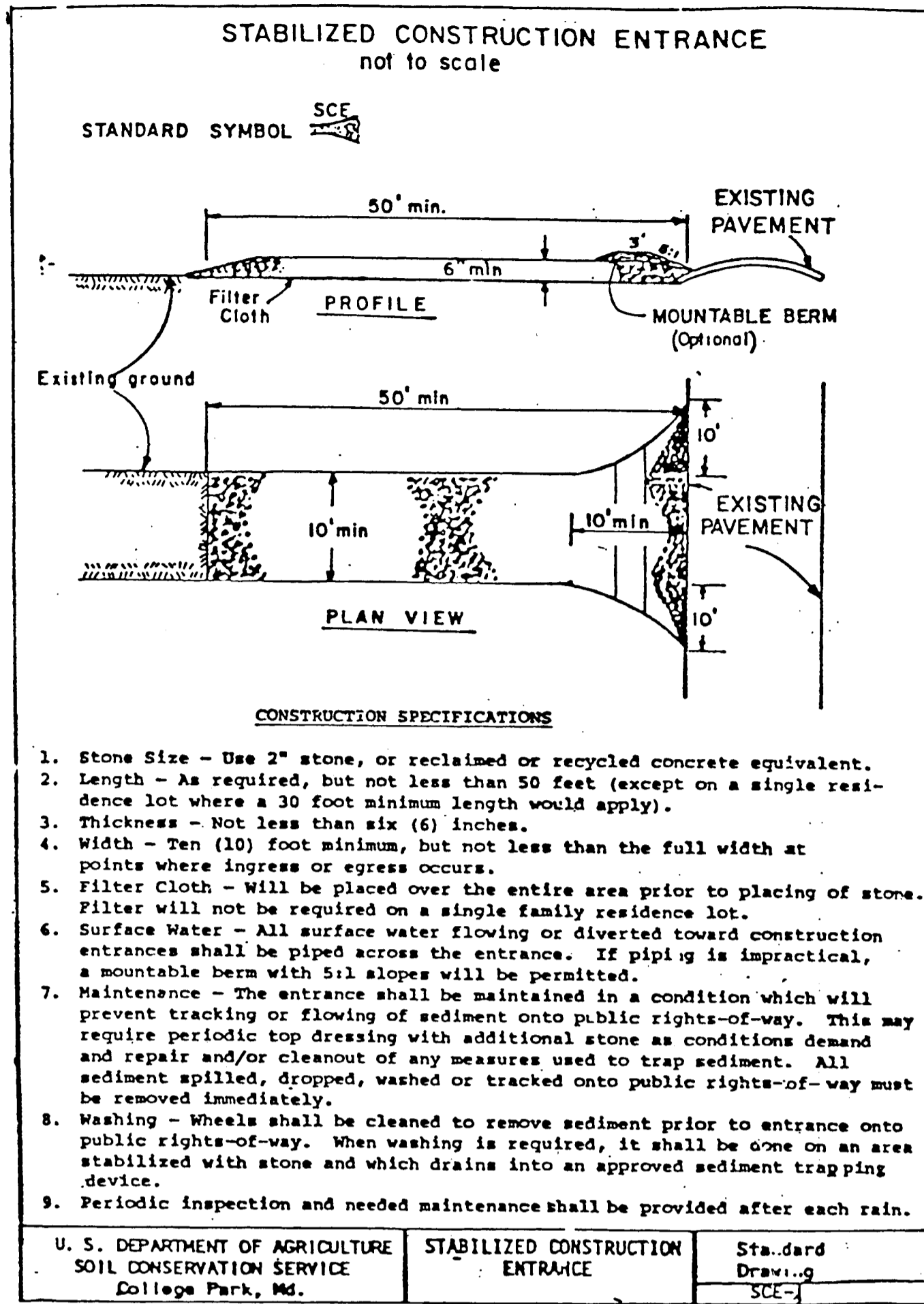
**BOWLING BROOK FARMS**  
SECTION 4 AREA 2  
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A RESUBDIVISION OF PARCEL H, BOWLING BROOK FARMS  
TAX MAP 47 PARCEL 141  
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
L. 1394 F. 632

**DETAIL SHEET**  
**PAVING & STORM DRAIN**



NO.	REVISIONS	DATE	BY	SURVEY BY	FILE NO.
1	ISSUED TO HOWARD COUNTY FOR REVIEW	12/31/88		PHR & A.	2104-1-D
2	ISSUED TO HOWARD COUNTY FOR SIGNATURE	3/30/89		M.J.K.	12-31-88
				V.P.	SCALE AS SHOWN
					SHEET 4 OF 6

F-89-120



#### 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	205 Acres
Area Disturbed	276 Acres
Area to be roofed or paved	0.06 Acres
Area to be vegetatively stabilized	124 Acres
Total Cut	1,000 Cu. yds
Total Fill	1,990 Cu. yds

 Office waste/borrow area location
  - Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
  - Additional sediment controls must be provided, if deemed necessary by the Howard County DPW 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.
- \* QUANTITIES SHOWN ARE FOR EROSION AND SEDIMENT CONTROL PURPOSES ONLY.

#### SEQUENCE OF CONSTRUCTION

- OBTAIN REVISED GRADING PERMIT.
- REMOVE EXISTING SEDIMENT CONTROL MEASURES IN PLACE FROM ROUGH GRADING OPERATIONS, GP-88-65 UNDER THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- INSTALL SEDIMENT CONTROL MEASURES AS REQUIRED BY THIS PLAN AND THE SEDIMENT CONTROL INSPECTOR.
- CONSTRUCT SANITARY SEWER, WATER MAINS AND STORM DRAINS AS INDICATED ON PLAN.
- INSTALL TEMPORARY DIVERSION PIPE AS SHOWN ON PLAN.
- CONSTRUCT REMAINING UNDERGROUND UTILITIES, PAVE STREETS AND PARKING AREAS.
- APPLY TEMPORARY AND/OR PERMANENT VEGETATIVE STABILIZATION TO DISTURBED AREAS NOT SUBJECT TO IMMEDIATE CONSTRUCTION AS REQUIRED BY THE SEEDING NOTES ON THIS SHEET.
- AS THEIR CONTRIBUTING DRAINAGE AREAS ARE BROUGHT TO FINAL GRADE AND STABILIZED, REMOVE SEDIMENT CONTROL MEASURES AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

**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 Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

Kimberly T. von Paris 3/20/89  
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.

Paul S. [Signature] 3/30/89  
Signature of Engineer Date

**CONSTRUCTION SPECIFICATIONS FOR ST-VI**

- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
- All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
- Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
- Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.
- Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
- Stone used in the outlet channel shall be four (4) to eight (8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- The structure shall be inspected after each rain and repaired as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
- Drainage area for this practice is limited to 15 acres or less.

**PERMANENT SEEDING NOTES**

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

**Soil Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

**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. Harrow 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. Harrow 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 25 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

**Mulching:** Apply 14 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted 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 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 followings.

**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

**Soil Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

**Soil Amendments:** Apply 60 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 25 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

**Mulching:** Apply 14 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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

Jane M. Helmer 4/3/89  
U.S. Soil Conservation Service Date

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

Stephen L. John 4/3/89  
Howard S.C.D. Date

PLAN NUMBER \_\_\_\_\_

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature] 6/22/89  
Chief, Land Development Division Date

[Signature] 6/23/89  
Chief, Bureau of Highways Date

[Signature] 6/26/89  
Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

[Signature] 7/3/89  
Chief, Division of Community Planning & Land Development Date



Patten Harris Rust & Associates, Inc.  
Engineers, Surveyors, Planners, Landscape Architects  
7609 Standish Place  
Rockville, Maryland 20855  
301 762-2220

Office:  
Fairfax, VA  
Bridgewater, VA  
Leesburg, VA  
Rockville, MD  
Virginia Beach, VA

CLIENT

OWNER/DEVELOPER  
GORMAN ROAD LIMITED PARTNERSHIP  
C/O JAMES F. KNOTT DEVELOPMENT CORP.  
110 WEST ROAD, SUITE 203  
TOWSON, MARYLAND 21204  
(301) 221-6436

JOB

**BOWLING BROOK FARMS**  
SECTION 4 AREA 2  
LOTS H-1 TO H-24  
A RESUBDIVISION OF PARCEL H, BOWLING BROOK FARMS  
TAX MAP 47 PARCEL 141  
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
L. 1394 F. 632

TITLE

**DETAIL SHEET**  
**EROSION & SEDIMENT CONTROL**

PROFESSIONAL SEAL

NO. REVISIONS

1	ISSUED TO HOWARD COUNTY FOR REVIEW	DATE	12/5/88
2	ISSUED TO HOWARD COUNTY FOR SIGNATURE	DATE	3/20/89

DATE

BY  
MUK

SURVEY BY

P.H.R. & A.

FILE NO.

204-1-D

DESIGN

M.J.K.

DATE

12-31-88

DRAWN

V.P.

SCALE

AS SHOWN

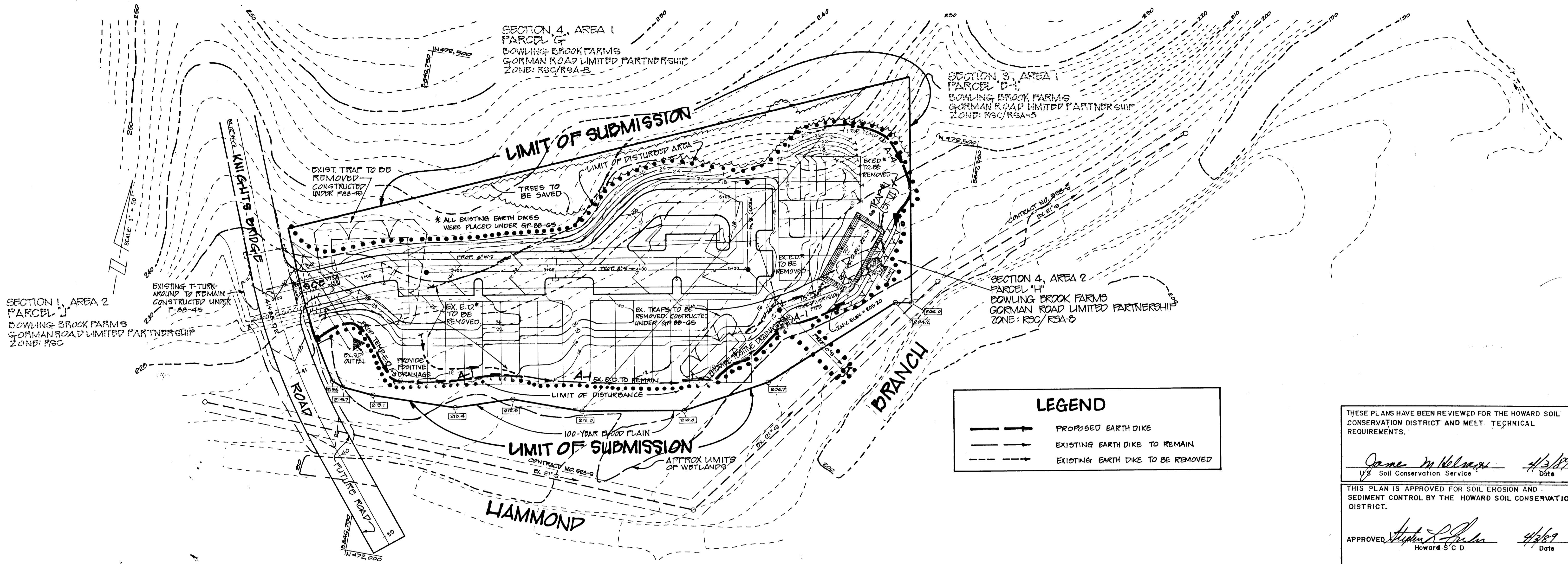
CHKD

SHEET

5

OF

6



**LEGEND**

- PROPOSED EARTH DIKE
- EXISTING EARTH DIKE TO REMAIN
- EXISTING EARTH DIKE TO BE REMOVED

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

*James M. Williams* 4/3/89  
U.S. Soil Conservation Service Date

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

APPROVED *Stephen L. Jones* 4/3/89  
Howard S.C.D. Date

PLAN NUMBER \_\_\_\_\_

**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 Department of Natural Resources Appraiser Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

*Kimberley T. von Paris* 3/30/89  
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.

*Phil S. Jones* 3/30/89  
Signature of Engineer Date

**SEDIMENT TRAP SCHEDULE**

SEDIMENT TRAP #1	1		
TYPE OF TRAP - STD & SPEC #	ST VI		
DRAINAGE AREA (ACRES)	3.63		
STORAGE REQUIRED (FT <sup>3</sup> )	6,534		
STORAGE PROVIDED (FT <sup>3</sup> )	6,015		
BASE DIMENSIONS & ELEV.	27' x 70' E.L.V. = 207.10		
WEIR LENGTH & ELEV.	30' @ E.L.V. = 206.70		
STORAGE DEPTH	3.5'		
EMBANKMENT HT. & TOP ELEV.	3' @ E.L.V. = 209.00		
MAX. DEPTH OF FLOW OVER WEIR	1.5'		

APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Stephen L. Jones* 6/23/89  
Chief, Land Development Division Date

*Granville W. Williams* 6/23/89  
Chief, Bureau of Highways Date

*Charles Anderson Collier* 6/26/89  
Chief, Bureau of Engineering Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

*Frank J. Campbell* 7/13/89  
Chief, Division of Community Planning & Land Development Date LWS



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TAX MAP 47 PARCEL 141  
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L. 1394 F. 632

**TITLE**

**EROSION AND SEDIMENT CONTROL PLAN**

**PROFESSIONAL SEAL**

**NO. REVISIONS**

NO.	REVISIONS	DATE	BY
1	ISSUED TO HOWARD COUNTY FOR REVIEW	12/31/88	
2	REVISED PER HSCD COMMENTS	3/15/89	MJK
3	ISSUED TO HOWARD COUNTY FOR SIGNATURE	3/30/89	MJK

**DESIGN** PHR&A FILE NO. 2184-1-B  
**DATE** 12-31-88  
**DESIGNER** MJK  
**DRAWN** CAPP/FC SCALE 1"=50'  
**CHKD** SHEET 6 OF 6