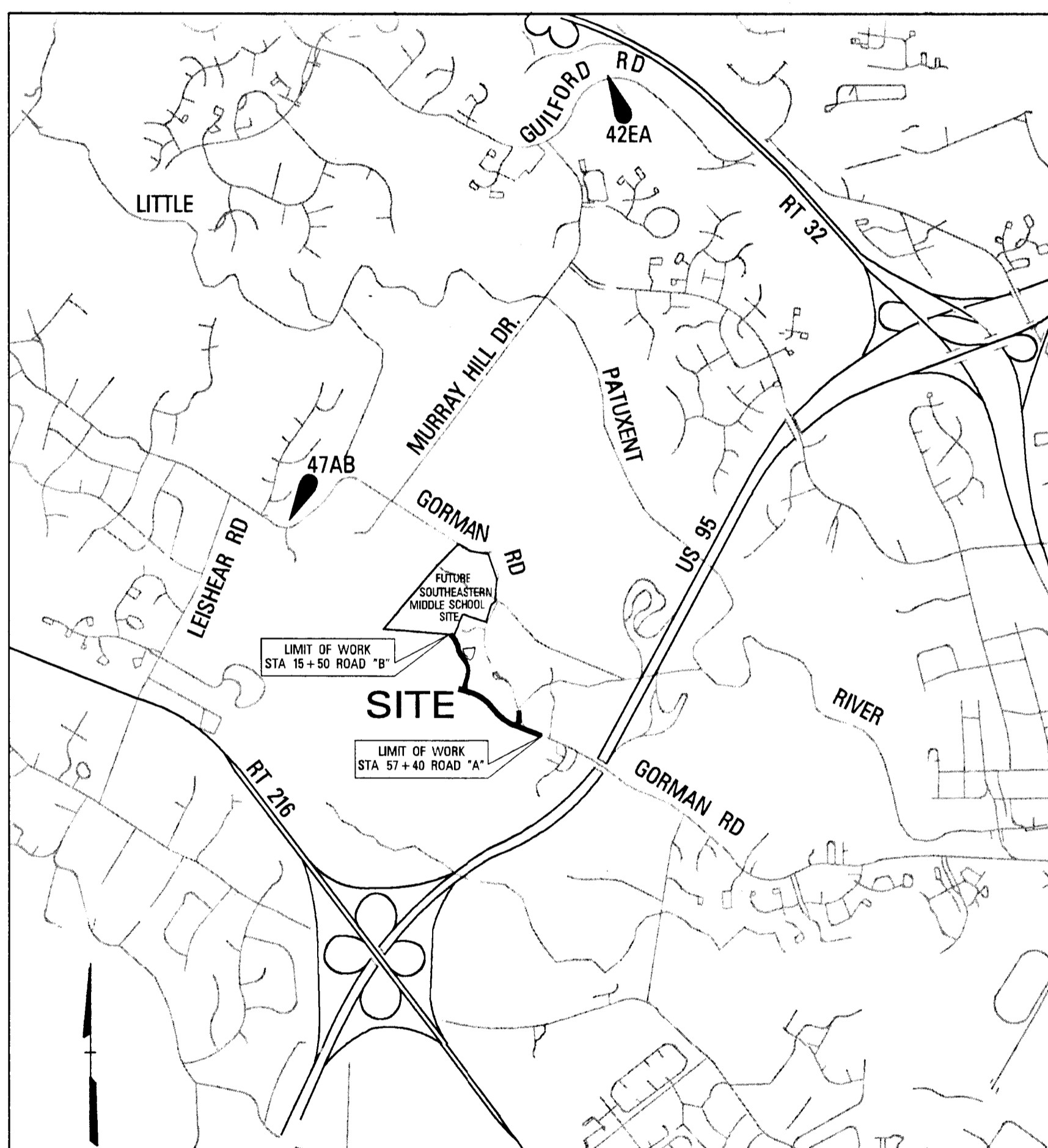


# INDEX OF DRAWINGS

SHEET	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS
3	TYPICAL SECTIONS
4	ROADWAY PLAN
5	ROADWAY PLAN
6	SEDIMENT AND EROSION CONTROL PLAN
7	SEDIMENT AND EROSION CONTROL PLAN
8	SEDIMENT AND EROSION CONTROL DETAILS
9	ROADWAY PROFILES
10	ROADWAY PROFILES
11	ROADWAY PROFILES
12	STORM DRAIN PROFILES
13	GRADING WATER QUALITY PLAN
14	GRADING WATER QUALITY PLAN
15	BIORETENTION AREA DETAILS
16	FOREST CONSERVATION DETAILS
17-22	CROSS SECTIONS

# HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

## GORMAN ROAD REALIGNMENT CAPITOL PROJECT E-0935



### LOCATION MAP

SCALE: 1" = 2000'

PROJECT LENGTH 0.52 MILES

#### General Notes

- All construction shall be performed in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications if applicable or as specified.
- Approximate location of existing utilities are shown from best available information. The contractor shall take all necessary precautions to protect the existing utilities and maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- The contractor shall test pit existing utilities at least five (5) days before starting work shown on these drawings to verify their location and elevation. The contractor shall notify the engineer immediately if location of utilities is other than shown.
- The contractor shall notify "Miss Utility" at 1-800-257-777 at least 48 hours prior to any excavation work being done, and shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs be in place prior to the placement of any asphalt.
- Any damage caused by the Contractor to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be at the Contractor's expense.
- The existing topography in the area of Road "B" is taken from a field run survey with two foot contour intervals prepared by Schmidt Pfetiz & McDonald, Inc., dated January 1995. The existing topography in the area of Road "A" is taken from field run survey with two foot contour intervals prepared by Daft McCune Walker Inc., dated October 1995.
- All inlets shall be constructed in accordance with Howard County Standards or MSHA Standards as specified on structure schedule.
- All hydraulic data is for the 10-year storm unless otherwise noted.
- Required siltation and sedimentation control measures shall be provided, installed and maintained.
- Gorman Road is a scenic road on the Howard County Scenic Road Inventory.
- The subsurface exploration and geotechnical engineering analysis for this project was prepared by Herbst & Associates, January 1995.
- All fill areas shall be compacted to a minimum of 95% of the maximum dry density as determined and verified in accordance with AASHTO T-180.
- All plan dimensions are to face of curb unless otherwise noted.
- The coordinates shown hereon are based upon the Howard County geodetic control which is based upon the Maryland State plane coordination system. Howard County monument nos. 47E4 and 47E4 were used for this project.
- The Design Speed of Road "A" and Road "C" is 40 MPH. The Design Speed of Road "B" is 30 MPH.

#### BENCHMARK

HORIZONTAL (NAD 83) AND VERTICAL (NVD 29) CONTROL BASED UPON HOWARD COUNTY TRAVERSE POINTS 47AB, 42EA, AND 1941005

#### OWNER /DEVELOPERS CERTIFICATE:

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 ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*William Grau*  
SIGNATURE OF DEVELOPER  
PRINT NAME BELOW SIGNATURE  
DATE 2/27/96

#### ENGINEERS 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.

*John W. Rauscher, Sr.*  
SIGNATURE OF ENGINEER  
PRINT NAME BELOW SIGNATURE  
DATE 2/29/96

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

*J. A. Warfield*  
S.D.A. NATURAL RESOURCES CONSERVATION SERVICE  
DATE 3/1/96

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

APPROVED: *Heather W. Schmitz*  
HOWARD SOIL CONSERVATION DISTRICT  
DATE 3/1/96  
FINAL PLANS RECEIVED

MAR 4 - 1996

TRANSPORTATION PROJECTS & WATERSHED MGMT. DIVISION  
BUREAU OF ENGINEERING

G-3672 c416A201

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James P. Slavin* 2/28/96  
DIRECTOR OF PUBLIC WORKS  
*Robert D. Sporn* 2/28/96  
CHIEF, BUREAU OF ENGINEERING  
*John A. Carole* 2/28/96  
CHIEF, BUREAU OF HIGHWAYS  
*John A. Carole* 2/28/96  
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT

**DMW**  
Daft • McCune • Walker, Inc.  
A Team of Land Planners, 200 East Pennsylvania Avenue  
Landscape Architects, Towson, Maryland 21286  
Engineers, Surveyors & Environmental Professionals 410 296 3333  
Fax: 296 4705

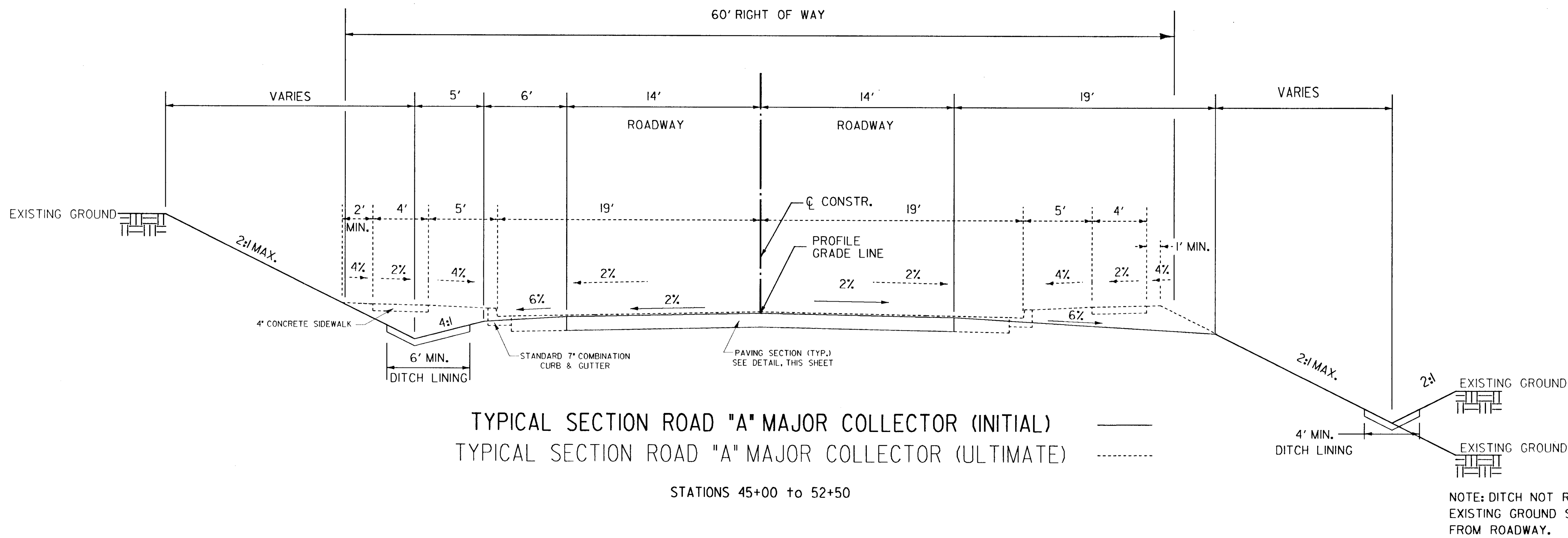


DESIGN BY:	JWS
DRAWN BY:	JWS
CHECKED BY:	JWR
DATE:	FEB. 5, 1996
BY NO.	REVISION
DATE	600 SCALE MAP NO. 47 BLOCK NO. 2

TITLE SHEET

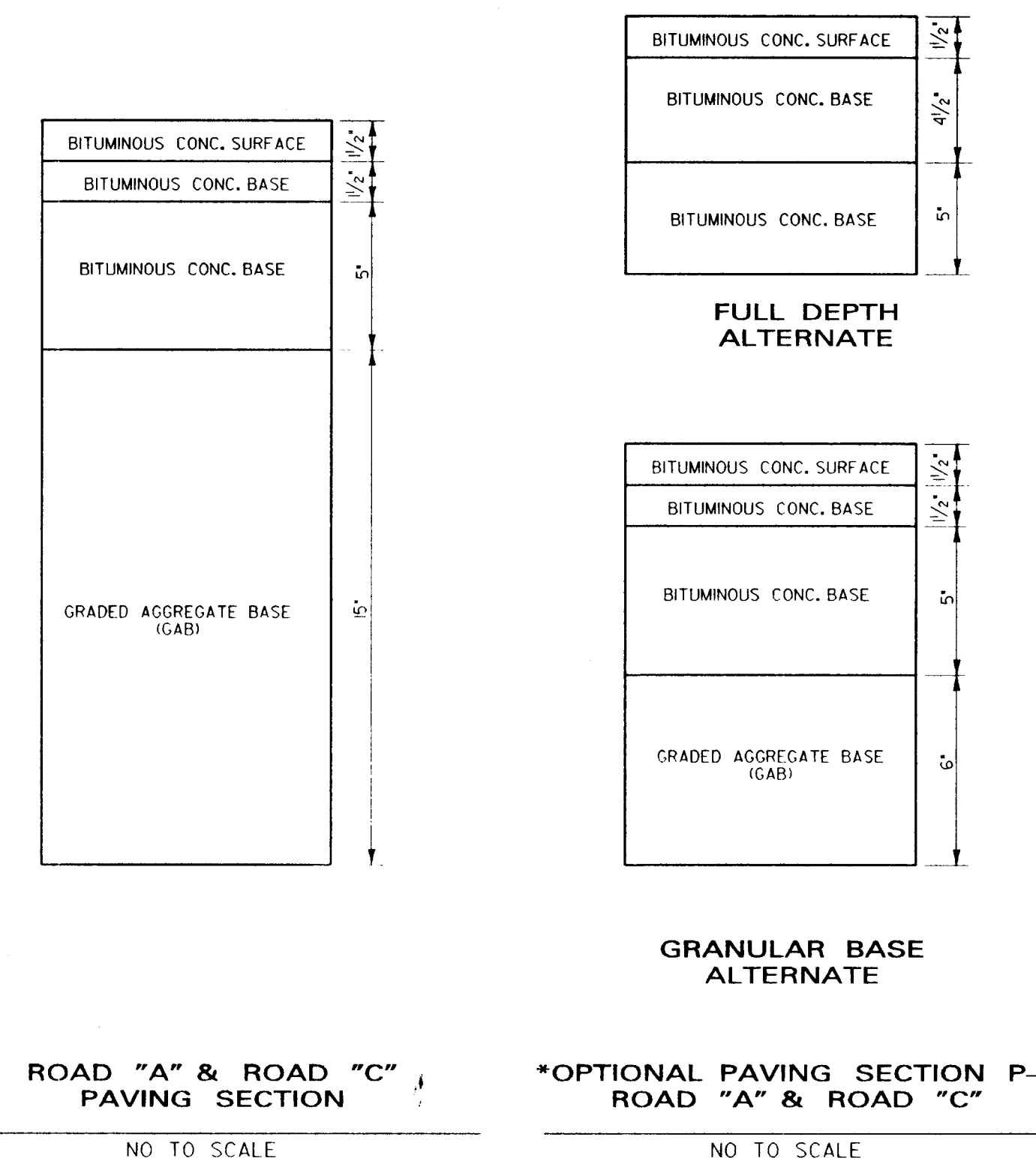
GORMAN ROAD REALIGNMENT  
CAPITOL PROJECT E-0935  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY MARYLAND

SCALE AS SHOWN  
SHEET 1 OF 22



TYPICAL SECTION ROAD "A" MAJOR COLLECTOR (INITIAL)  
 TYPICAL SECTION ROAD "A" MAJOR COLLECTOR (ULTIMATE)

STATIONS 45+00 to 52+50



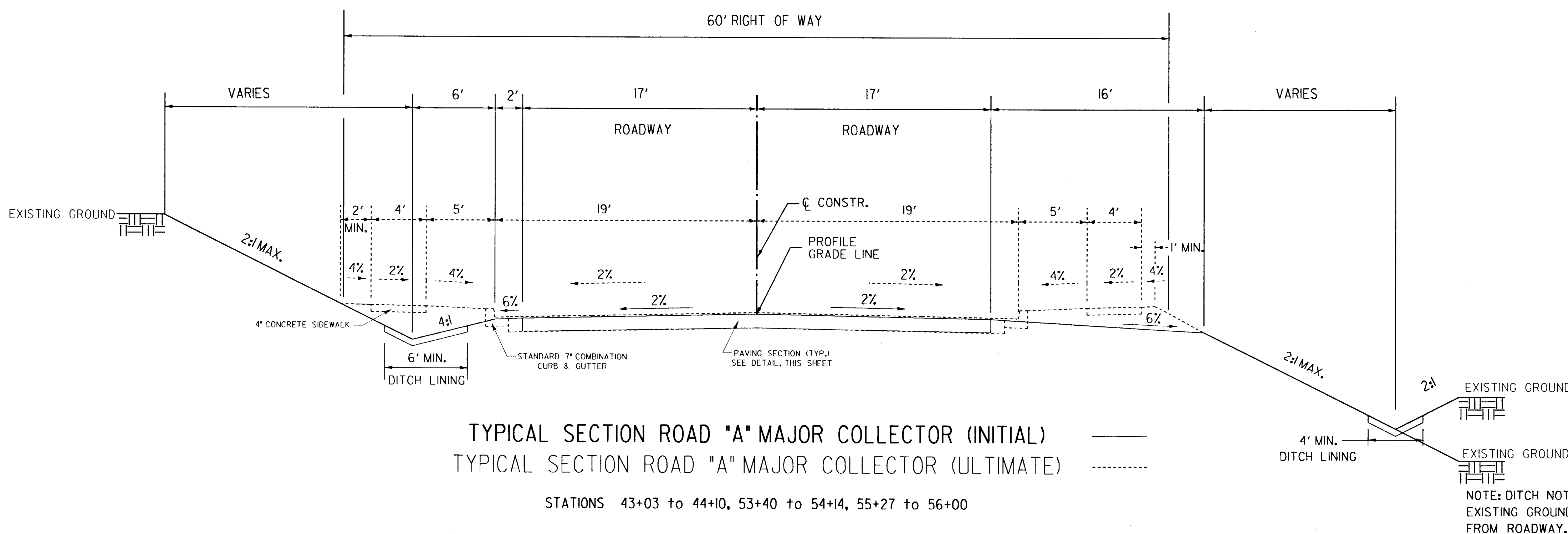
ROAD "A" & ROAD "C"  
 PAVING SECTION

\*OPTIONAL PAVING SECTION P-5  
 ROAD "A" & ROAD "C"

NO TO SCALE

NO TO SCALE

\*USE OF OPTIONAL PAVING SECTION REQUIRES THAT ONE (1) FOOT OF MATERIALS BELOW SUBGRADE THROUGHOUT THE ROADWAY ALIGNMENT HAVE A MINIMUM CBR VALUE OF SEVEN (7). THIS MAY ENTAIL UNDERCUTTING OF IN-PLACE SUBSOILS IN CUT AREAS ALONG VARIOUS PORTIONS OF THE PROPOSED ROADWAY AND REPLACEMENT OF THE UNDERCUT SOILS WITH APPROVED BORROW CONFORMING TO HOWARD COUNTY SPECIFICATIONS AND HAVING A MINIMUM CBR VALUE OF SEVEN (7).



TYPICAL SECTION ROAD "A" MAJOR COLLECTOR (INITIAL)  
 TYPICAL SECTION ROAD "A" MAJOR COLLECTOR (ULTIMATE)

STATIONS 43+03 to 44+10, 53+40 to 54+14, 55+27 to 56+00

**DITCH STABILIZATION SCHEDULE**

ROAD	STATION FROM	STATION TO	SOIL STABILIZATION MATTING No. MATTING WIDTHS (4')	AREA (S.Y.)	RIP RAP	
					CLASS	AREA
A	44+30 RT	50+30 RT	1	267		
A	44+30 LT	49+40 LT	1	227		
A	50+50 RT	55+00 RT	1	200		
A	51+00 LT	54+00 LT	1	133		
B	16+00 RT	18+70 RT	1	120		
B	19+00 RT	21+00 RT	1	89		
C	100+50 RT	102+50 RT	1	89		
C	100+50 LT	102+50 LT	1	89		
B	18+40 15'RT	18+40 50'RT	1	87		
B	20+94 50'LT	20+94 200'LT		--	1	140 S.Y.
B	25+25 38'RT	25+60 80'RT	3	720		
B	18+40 46'LT	18+40 53'LT			1	22 S.Y.
B	18+40 34'RT	18+40 43'RT			1	28 S.Y.
B	25+16 32'RT	25+24 38'RT			1	9 S.Y.
A	50+35 43'LT	50+35 56'LT			1	22 S.Y.
A	50+35 35'RT	50+35 50'RT			1	28 S.Y.

NOTE: SEE ROADWAY PLAN, SHEET 5, FOR DITCH LOCATIONS.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*James P. Lewis* 2/29/96  
 DIRECTOR OF PUBLIC WORKS DATE

*Ellen Adams* 2-27-96  
 CHIEF, BUREAU OF HIGHWAYS DATE

*Richard J. DeLeon* 2/28/96  
 CHIEF, BUREAU OF ENGINEERING DATE

*Ellen Adams* 2/28/96  
 CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

**DMW**  
**Daft · McCune · Walker, Inc.**

A Team of Land Planners, 200 East Pennsylvania Avenue  
 Landscape Architects, Towson, Maryland 21286  
 Engineers, Surveyors & Environmental Professionals 410 296 3333  
 Fax 296 4705

DESIGN BY: JWS  
 DRAWN BY: JWS  
 CHECKED BY: JWR  
 DATE: FEB. 5, 1996

BY	NO.	REVISION	DATE

TYPICAL SECTION

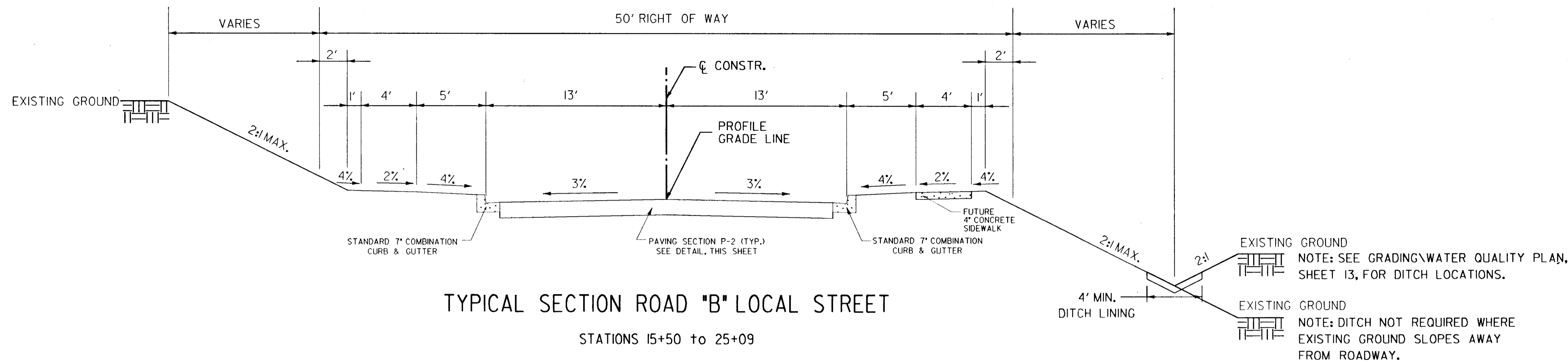
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GORMAN ROAD REALIGNMENT  
 CAPITAL PROJECT E-0935  
 ELECTION DISTRICT NO. 6  
 HOWARD COUNTY MARYLAND

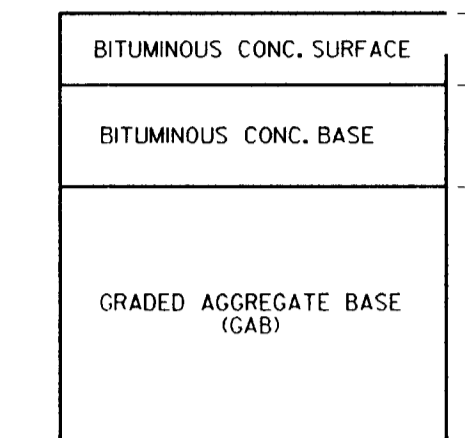
SCALE  
 1" = 5'  
 SHEET  
 2 OF 22

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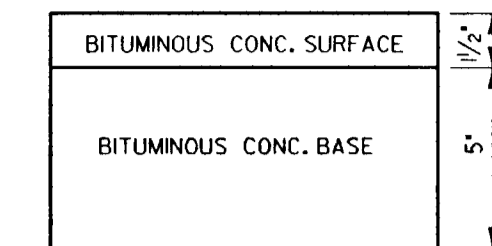
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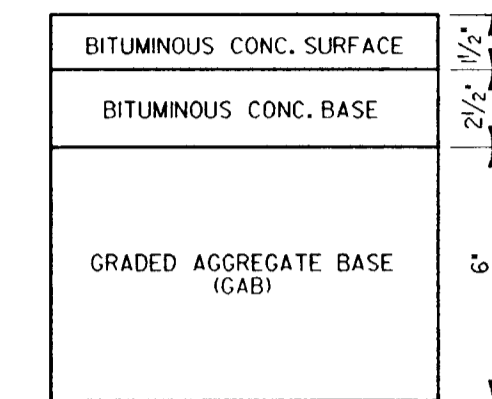
TYPICAL SECTION ROAD "B" LOCAL STREET  
STATIONS 15+50 to 25+09



ROAD "B" PAVING SECTION  
NOT TO SCALE



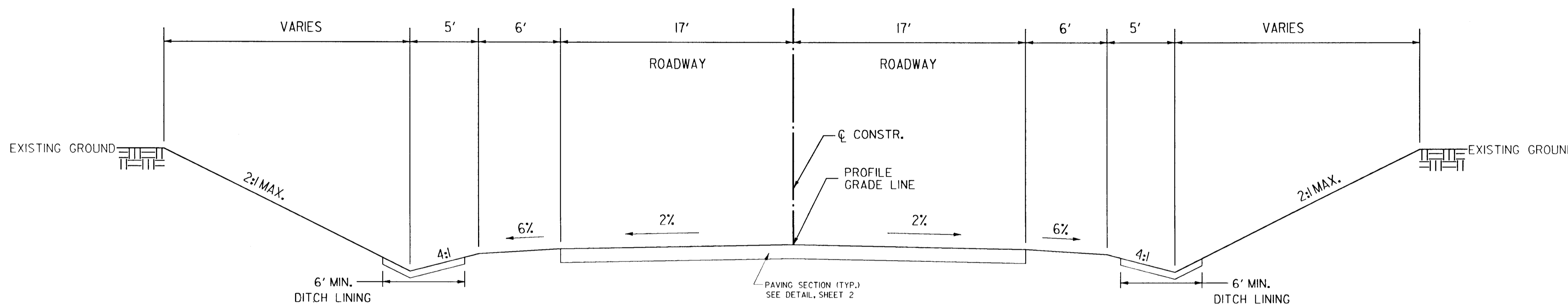
FULL DEPTH ALTERNATE



GRANULAR BASE ALTERNATE

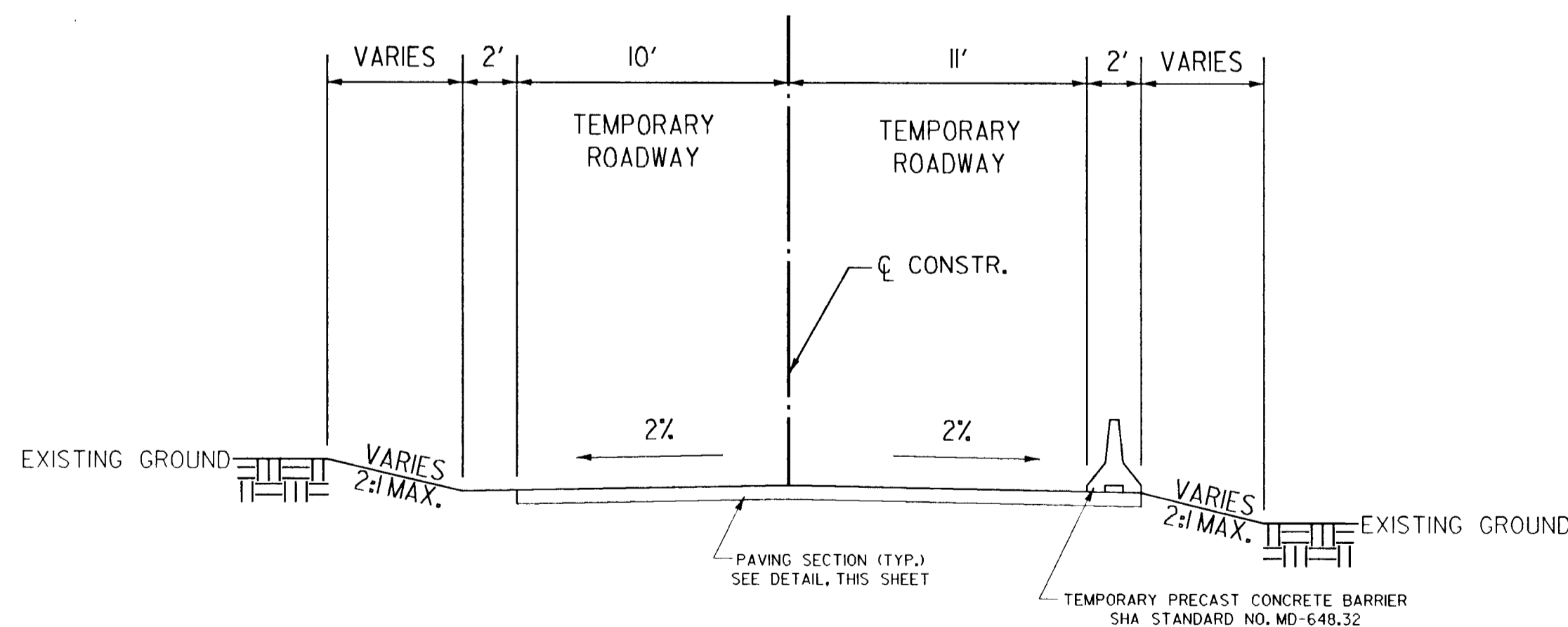
\*OPTIONAL PAVING SECTION P-2 ROAD "B"  
NOT TO SCALE

\* USE OF OPTIONAL PAVING SECTION REQUIRES THAT ONE (1) FOOT OF MATERIALS BELOW SUBGRADE THROUGHOUT THE ROADWAY ALIGNMENT HAVE A MINIMUM CBR VALUE OF SEVEN (7). THIS MAY ENTAIL UNDERCUTTING OF IN-PLACE SUBSOILS IN CUT AREAS ALONG VARIOUS PORTIONS OF THE PROPOSED ROADWAY AND REPLACEMENT OF THE UNDERCUT SOILS WITH APPROVED BORROW CONFORMING TO HOWARD COUNTY SPECIFICATIONS AND HAVING A MINIMUM CBR VALUE OF SEVEN (7).

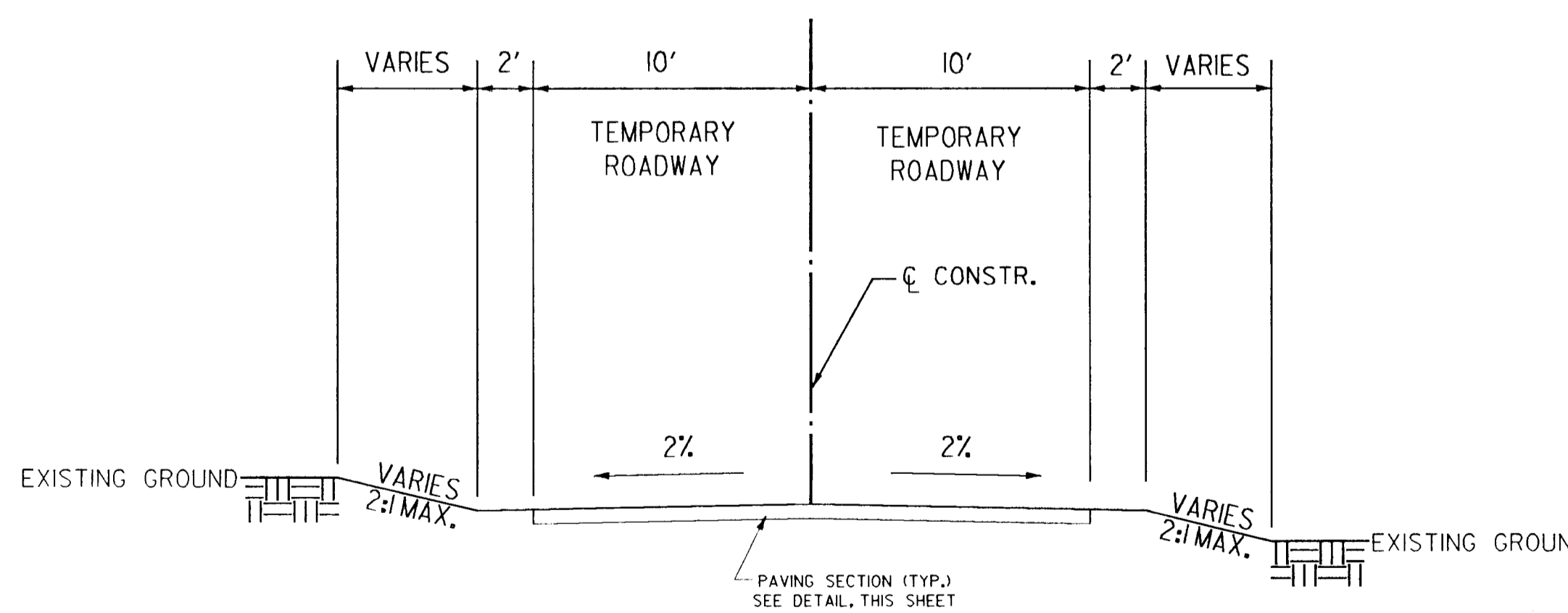


TYPICAL SECTION ROAD "C" MAJOR COLLECTOR  
STATIONS 100+75 to 100+90

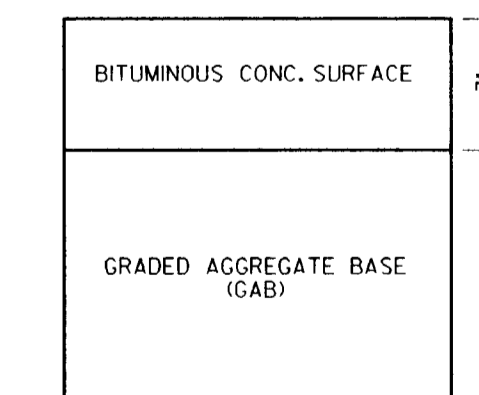
NOTE: SEE ROADWAY PLAN, SHEET 5, FOR DITCH LOCATIONS.



TYPICAL SECTION TEMPORARY ROAD "D"  
STATIONS 0+46 to 2+26



TYPICAL SECTION TEMPORARY ROAD "D"  
STATIONS 2+26 to 6+10



TEMPORARY ROAD "D" PAVING SECTION  
NOT TO SCALE

Tue Feb 27 10:42:10 1996 d:\b1400194\401.dwg

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Carroll S. Lewis* 2/29/96  
DIRECTOR OF PUBLIC WORKS DATE

*Robert D. Johnson* 2/28/96  
CHIEF, BUREAU OF ENGINEERING DATE

*Charles M. Smith* 2-29-96  
CHIEF, BUREAU OF HIGHWAYS DATE

*Robert D. Johnson* 2/28/96  
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

**DMW**  
**Daft · McCune · Walker, Inc.**  
A Team of Land Planners, 200 East Pennsylvania Avenue  
Landscape Architects, Towson, Maryland 21286  
Engineers, Surveyors & Environmental Professionals 410 296 3333  
Fax 296 4705

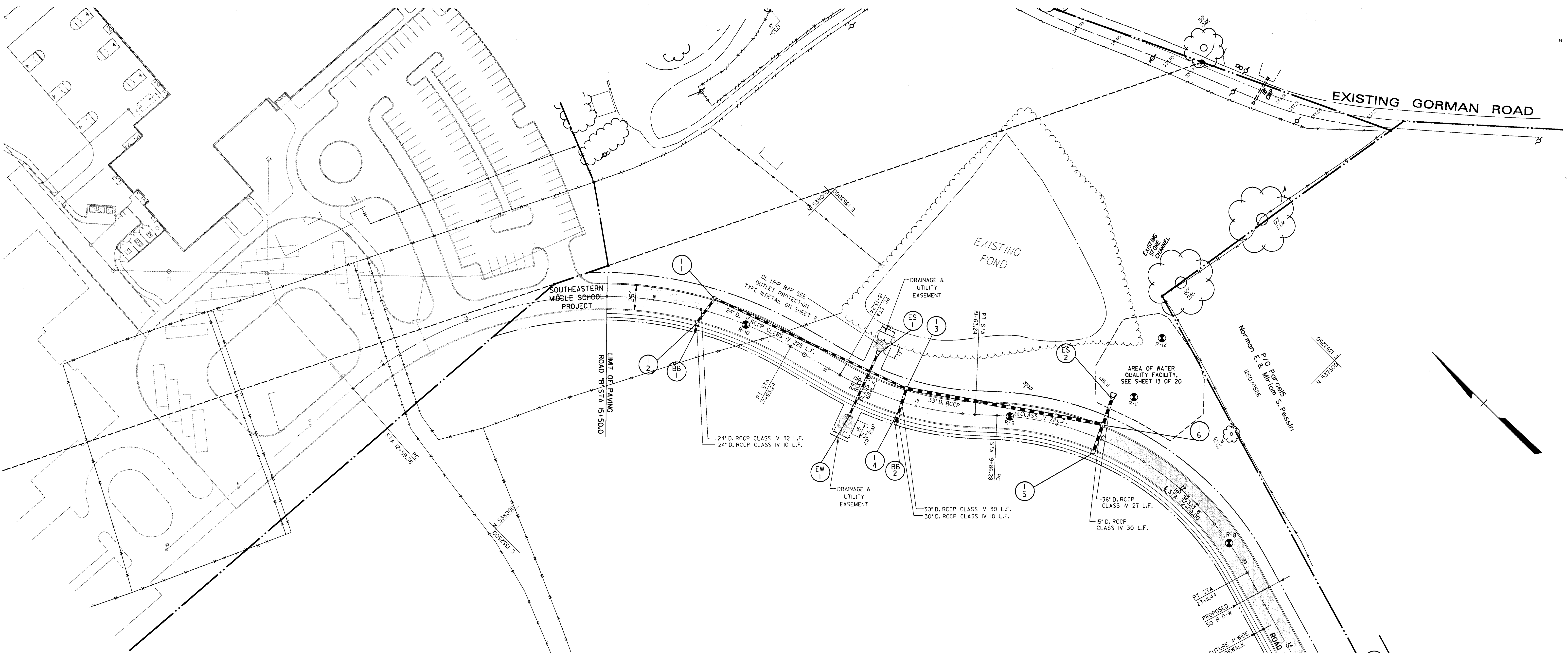
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CHECKED BY:	JWR				
DATE:	FEB. 5, 1996	BY	NO.	REVISION	DATE

TYPICAL SECTION

600 SCALE MAP NO. 47 BLOCK NO. 2

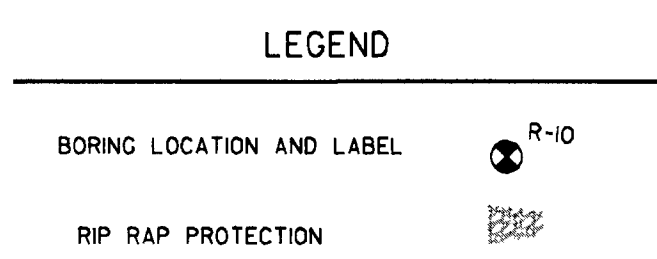
GORMAN ROAD REALIGNMENT  
CAPITAL PROJECT E-0935  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY MARYLAND

SCALE  
1"=5'  
SHEET  
3 OF 22

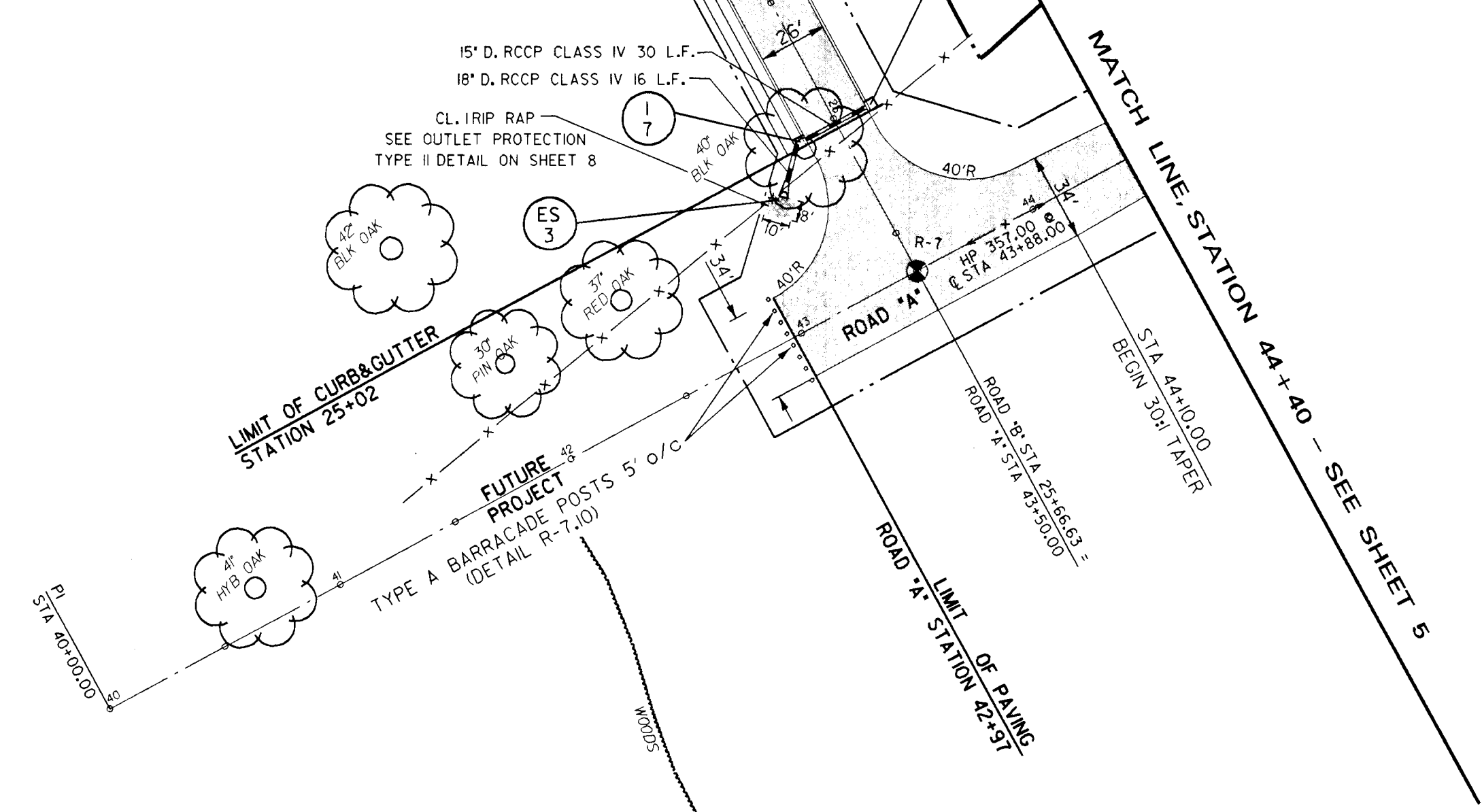


ROAD "B" DATA TABLE

POINT	STATION	BEARING \ CURVE DATA	DISTANCE	COORDINATES	
				NORTHING	EASTING
PC	12+59.36	$\Delta = 070^{\circ}44'34.8''$ $D = 14,324.9'$ $R = 400'$ $T = 283.966'$ $L = 493.879'$ $E = 90.55'$		538210.7959	1352498.2848
PT	17+53.24	$S 15^{\circ}18'09.9'' E$	60.0000'	537916.2750	1352855.6633
PC	18+13.24	$\Delta = 027^{\circ}11'50.5''$ $D = 18,316'$ $R = 316.000'$ $T = 76.441'$ $L = 150.000'$ $E = 9.11'$		537858.3565	1352871.3301
PT	19+63.24	$S 42^{\circ}20'01.3'' E$	23.0354'	537728.0598	1352942.7686
PC	19+86.28	$\Delta = 058^{\circ}57'22.0''$ $D = 18,316'$ $R = 316.000'$ $T = 178.624'$ $L = 325.157'$ $E = 46.99'$		537711.0313	1352958.2817
PT	23+11.44	$S 16^{\circ}37'20.8'' W$	255.1900'	537407.8259	1353027.4779
PI	25+66.63			537163.3001	1352954.4773



P/O Parcel 3  
Howard Research & Development Corp.  
3245/2514



Tue Feb 27 10:58:13 1996 d:\bmc\p\roadplan.dwg

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Ramon A. Lewis* 2/27/96  
DIRECTOR OF PUBLIC WORKS DATE

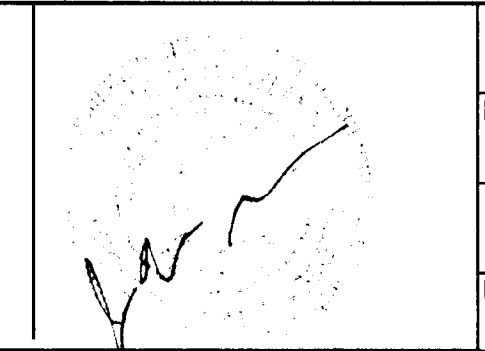
*Richard D. Leppan* 2/28/96  
CHIEF, BUREAU OF ENGINEERING DATE

*Thomas M. Gault* 2/27/96  
CHIEF, BUREAU OF HIGHWAYS DATE

*Erica A. Adams* 2/28/96  
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

**DMW**  
**Daft · McCune · Walker, Inc.**

A Team of Land Planners, 200 East Pennsylvania Avenue  
Landscape Architects, Towson, Maryland 21286  
Engineers, Surveyors & Environmental Professionals 410 296 3333  
Fax 296 4705



DESIGN BY:	JWS
DRAWN BY:	JWS
CHECKED BY:	JWR
DATE:	FEB. 5, 1996
BY NO.	
REVISION	
DATE	

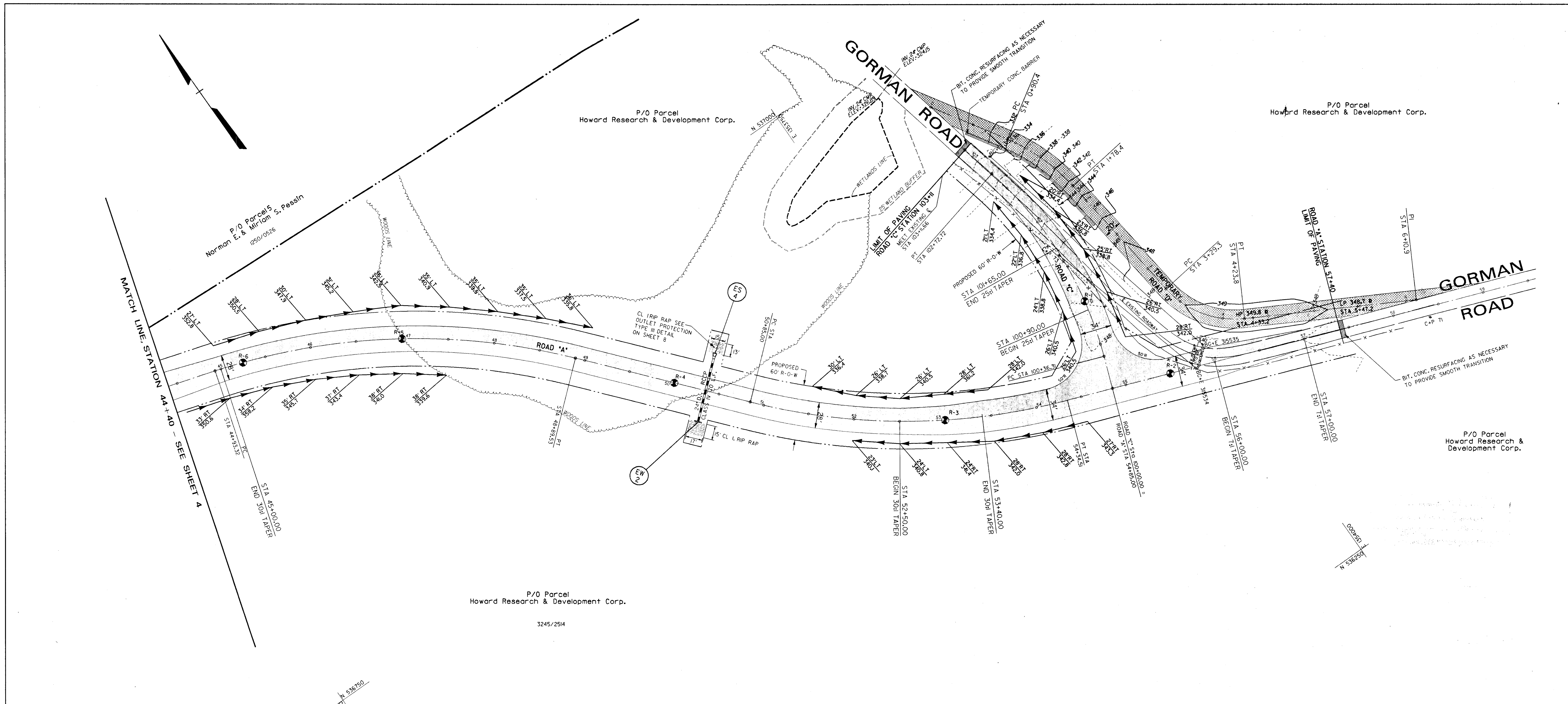
600 SCALE MAP NO.	47	BLOCK NO.	2
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ROADWAY PLAN

GORMAN ROAD REALIGNMENT  
CAPITAL PROJECT E-0935  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY MARYLAND

SCALE  
1" = 50'

SHEET  
4 OF 22



ROAD "A" DATA TABLE

POINT	C STATION	BEARING \ CURVE DATA	DISTANCE	COORDINATES	
				NORTHING	EASTING
PI	40+00.00	S 73°22'39" E	350.0000'	537263.4223	1352619.1036
PI	43+50.00	S 73°22'39" E	143.3222'	537163.3001	1352954.4776
PC	44+93.32			537122.3008	1353091.8102
		Δ = 032°25'48"			
		D = 8.1851'			
		R = 700.000'			
		T = 203.567'			
		L = 396.206'			
		E = 29.00'			
PT	48+89.53	S 40°56'52" E	195.4725'	536910.3120	1353420.2815
PC	50+85.00			536762.6700	1353548.3882
		Δ = 028°36'28"			
		D = 8.1851'			
		R = 700.000'			
		T = 178.478'			
		L = 349.510'			
		E = 22.39'			
PT	54+34.51	S 69°33'20" E	50.4899'	536565.5213	1353832.5938
PI	54+85.00	S 69°33'20" E	668.8768'	536547.8852	1353879.9034
PI	61+53.88	S 69°33'20" E	668.8768'	536314.2469	1354506.6484

ROAD "C" DATA TABLE

POINT	C STATION	BEARING \ CURVE DATA	DISTANCE	COORDINATES	
				NORTHING	EASTING
PI	100+00.00	N 20°26'40.1" E	36.3146'	536547.8852	1353879.9034
PC	100+36.31			536581.9124	1353892.5881
		Δ = 033°51'47.4"			
		D = 14.3239'			
		R = 400.000'			
		T = 121.770'			
		L = 236.410'			
		E = 18.12'			
PT	102+72.72	S 40°56'52" E	38.9371'	536814.4583	1353906.8637
MEET EX. C	103+11.66			536852.3325	1353897.8278

TEMPORARY ROAD "D" DATA TABLE

POINT	C STATION	BEARING \ CURVE DATA	DISTANCE	COORDINATES	
				NORTHING	EASTING
PI	0+00.0	S 32°15'25" E	90.37'	536911.8	1353894.0
PC	0+90.4			536935.4	1353942.2
		Δ = 025°13'30"			
		D = 28.65'			
		R = 200.00'			
		T = 44.75'			
		L = 88.05'			
		E = 4.95'			
PT	1+78.4	S 7°01'56" E	105.83'	536753.1	1353971.5
PC	3+29.2			536603.4	1353990.1
		Δ = 054°10'10"			
		D = 57.30'			
		R = 100.00'			
		T = 51.41'			
		L = 94.54'			
		E = 12.32'			
PT	4+23.8	S 61°12'06" E	187.07'	536528.1	1354041.1
PI	6+10.9			536436.9	1354205.1

LEGEND

- BORING LOCATION AND LABEL
- RIP RAP PROTECTION
- DITCH OFFSET & ELEVATION
- DITCH FLOW DIRECTION
- TEMPORARY ROAD CONTOURS

Tue Feb 27 11:39:35 1996 d:\94400\944001.rvt

DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

*Sam A. Lewis* 2/29/96  
 DIRECTOR OF PUBLIC WORKS DATE  
*Charles J. Pappas* 2/28/96  
 CHIEF, BUREAU OF ENGINEERING DATE  
*Charles J. Pappas* 2/29/96  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*Charles J. Pappas* 2/28/96  
 CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

**DMCA**  
**Daft · McCune · Walker, Inc.**

A Team of Land Planners, 200 East Pennsylvania Avenue  
 Landscape Architects, Towson, Maryland 21286  
 Engineers, Surveyors & Environmental Professionals 410 296 3333  
 Fax 296 4705

DESIGN BY: JWS

DRAWN BY: JWS

CHECKED BY: JWR

DATE: FEB. 5, 1996

ROADWAY PLAN

GORMAN ROAD REALIGNMENT

CAPITAL PROJECT E-0935

ELECTION DISTRICT NO. 6

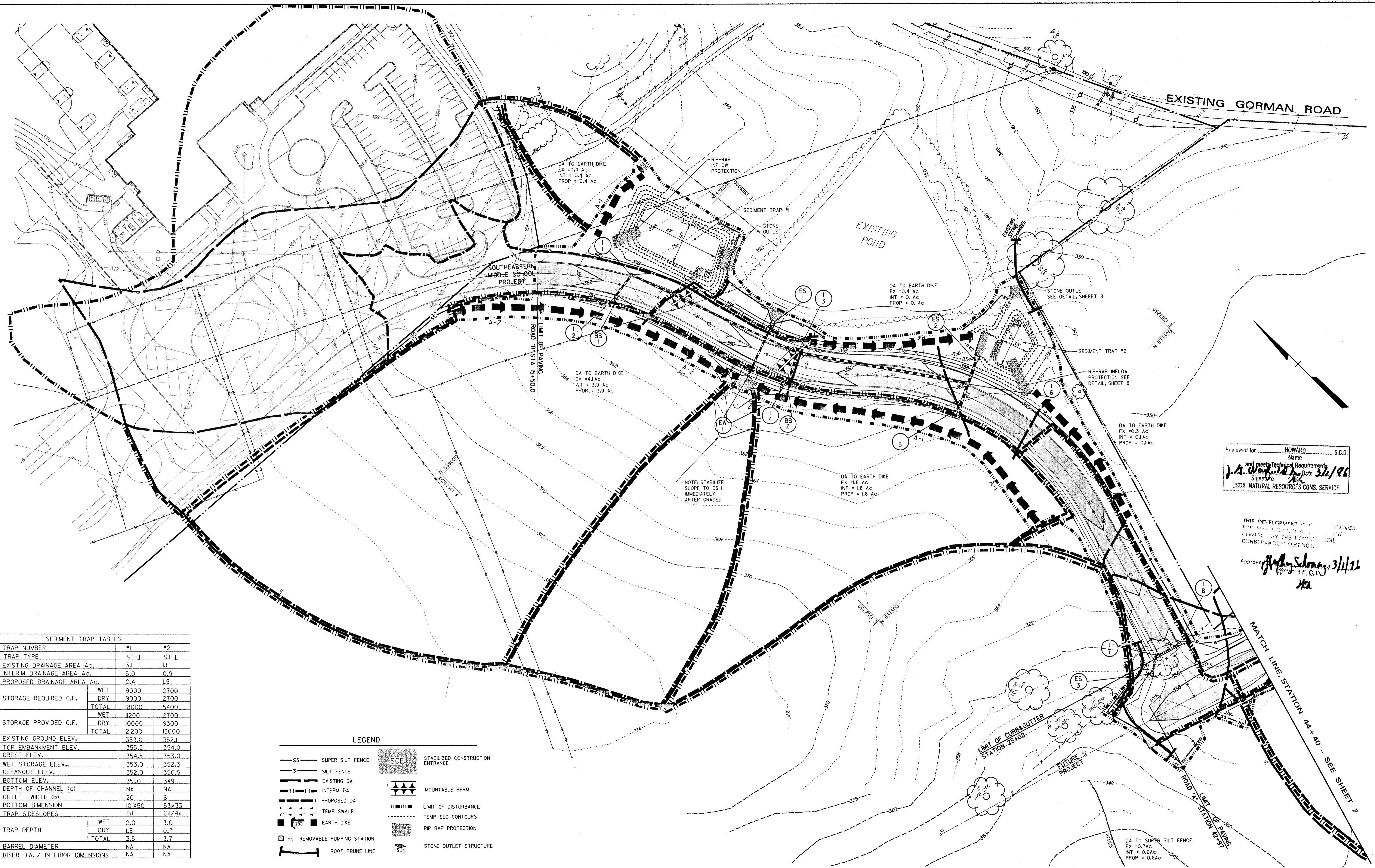
HOWARD COUNTY MARYLAND

SCALE

1" = 50'

SHEET

5 OF 22



Reviewed for: HOWARD, S.C.D.  
 Name: J.A. Woodfield  
 and meet Technical Requirements  
 Date: 3/1/96  
 Signature: [Signature]  
 USDA, NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN HAS BEEN REVIEWED FOR SOIL CONSERVATION SERVICE CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 Approved: [Signature] 3/1/96  
 [Signature]

SEDIMENT TRAP TABLES		
TRAP NUMBER	#1	#2
TRAP TYPE	ST-II	ST-II
EXISTING DRAINAGE AREA AC.	3.1	1.1
INTERIM DRAINAGE AREA AC.	5.0	0.9
PROPOSED DRAINAGE AREA AC.	0.4	1.5
STORAGE REQUIRED C.F.	WET	9000
	DRY	9000
	TOTAL	18000
STORAGE PROVIDED C.F.	WET	11200
	DRY	10000
	TOTAL	21200
EXISTING GROUND ELEV.	353.0	352.1
TOP EMBANKMENT ELEV.	355.5	354.0
CREST ELEV.	354.5	353.0
WET STORAGE ELEV.	353.0	352.3
CLEANOUT ELEV.	352.0	350.5
BOTTOM ELEV.	351.0	349
DEPTH OF CHANNEL (a)	NA	NA
OUTLET WIDTH (b)	20	6
BOTTOM DIMENSION	10x50	53x33
TRAP SIDESLOPES	WET	2:1
	DRY	3:1
TRAP DEPTH	WET	2.0
	DRY	1.5
TOTAL	3.5	3.7
BARREL DIAMETER	NA	NA
RISER DIA. / INTERIOR DIMENSIONS	NA	NA

- LEGEND**
- SS SUPER SILT FENCE
  - S SILT FENCE
  - EXISTING DA
  - INTERM DA
  - PROPOSED DA
  - TEMP SWALE
  - EARTH DIKE
  - RPS REMOVABLE PUMPING STATION
  - ROOT PRUNE LINE
  - SCE STABILIZED CONSTRUCTION ENTRANCE
  - MOUNTABLE BERM
  - LIMIT OF DISTURBANCE
  - TEMP SEC CONTOURS
  - RIP RAP PROTECTION
  - STONE OUTLET STRUCTURE

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

Director of Public Works: [Signature] 2/28/96  
 Chief, Bureau of Engineering: [Signature] 2/28/96  
 Chief, Bureau of Highways: [Signature] 2-27-96  
 Chief, Division of Transportation Projects and Watershed Management: [Signature] 2/28/96

**DMW**  
**Daft · McCune · Walker, Inc.**  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 410 296 3333  
 Fax 296 4709



DESIGN BY:	JWS:RLH		
DRAWN BY:	JWS:PSN		
CHECKED BY:	JWR		
DATE:	FEB. 5, 1996		
BY	NO.	REVISION	DATE

SEDIMENT AND EROSION CONTROL PLAN

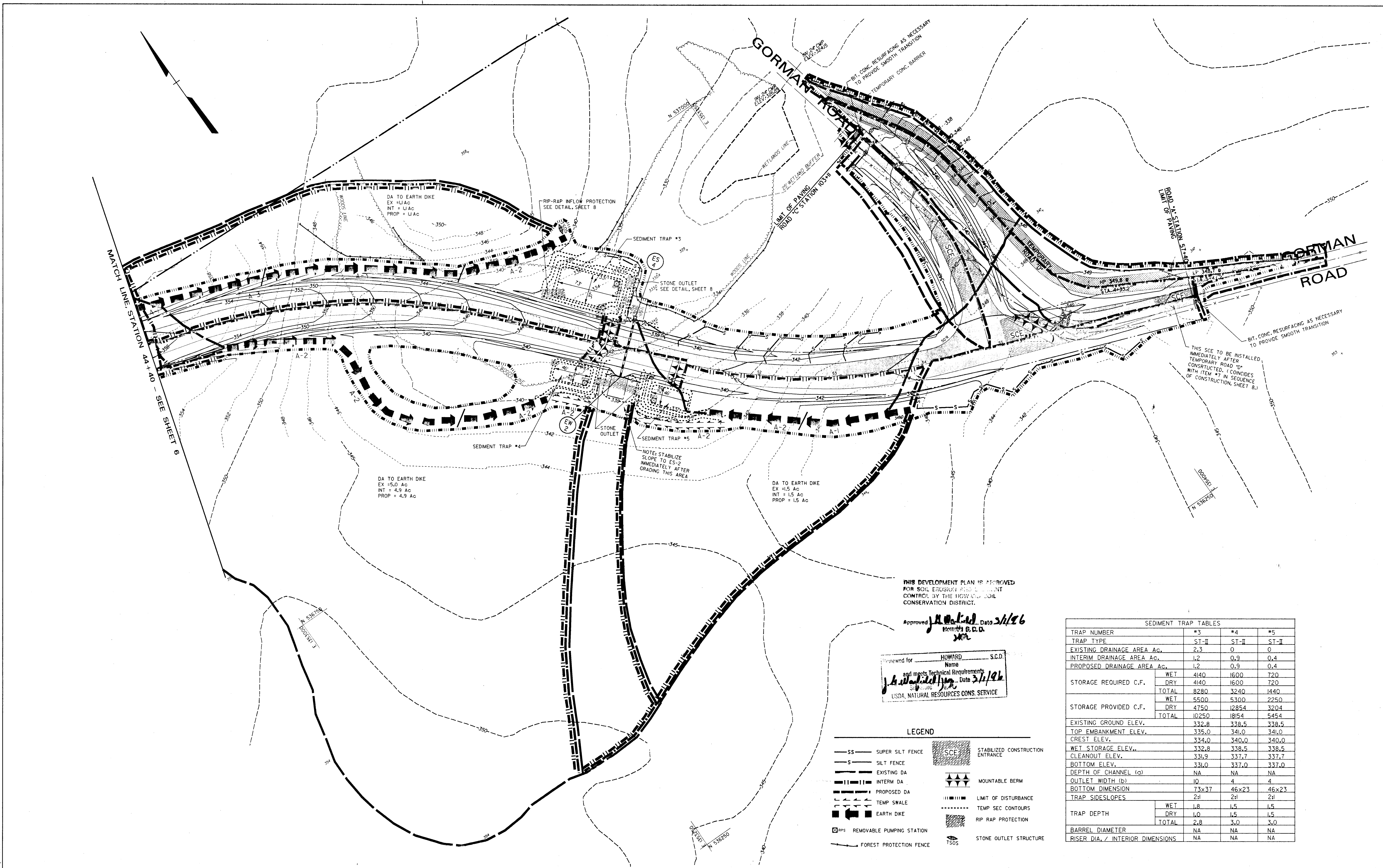
600 SCALE MAP NO. 47 BLOCK NO. 2

GORMAN ROAD REALIGNMENT  
 CAPITAL PROJECT E-0935  
 ELECTION DISTRICT NO. 6  
 HOWARD COUNTY MARYLAND

SCALE  
 1" = 50'  
 SHEET  
 6 OF 22

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

Approved *J. A. ...* Date *3/1/96*  
Howard S.C.D.

Reviewed for **HOWARD S.C.D.**  
Name  
and meets Technical Requirements  
Date *3/1/96*  
Signature  
USDA, NATURAL RESOURCES CONSERVATION SERVICE

**LEGEND**

- SS SUPER SILT FENCE
- S SILT FENCE
- EXISTING DA
- INTERM DA
- PROPOSED DA
- TEMP SWALE
- EARTH DIKE
- REMOVABLE PUMPING STATION
- FOREST PROTECTION FENCE
- SCE STABILIZED CONSTRUCTION ENTRANCE
- MOUNTABLE BERM
- TEMP SEC CONTOURS
- RIP RAP PROTECTION
- STONE OUTLET STRUCTURE

SEDIMENT TRAP TABLES			
TRAP NUMBER	#3	#4	#5
TRAP TYPE	ST-II	ST-II	ST-II
EXISTING DRAINAGE AREA Ac.	2.3	0	0
INTERIM DRAINAGE AREA Ac.	1.2	0.9	0.4
PROPOSED DRAINAGE AREA Ac.	1.2	0.9	0.4
STORAGE REQUIRED C.F.	WET	4140	1600
	DRY	4140	1600
	TOTAL	8280	3200
STORAGE PROVIDED C.F.	WET	5500	5300
	DRY	4750	12854
	TOTAL	10250	18154
EXISTING GROUND ELEV.	332.8	338.5	338.5
TOP EMBANKMENT ELEV.	335.0	341.0	341.0
CREST ELEV.	334.0	340.0	340.0
WET STORAGE ELEV.	332.8	338.5	338.5
CLEANOUT ELEV.	331.9	337.7	337.7
BOTTOM ELEV.	331.0	337.0	337.0
DEPTH OF CHANNEL (a)	NA	NA	NA
OUTLET WIDTH (b)	10	4	4
BOTTOM DIMENSION	73x37	46x23	46x23
TRAP SIDESLOPES	2:1	2:1	2:1
TRAP DEPTH	WET	1.8	1.5
	DRY	1.0	1.5
	TOTAL	2.8	3.0
BARREL DIAMETER	NA	NA	NA
RISER DIA. / INTERIOR DIMENSIONS	NA	NA	NA

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Ramon ...* 2/29/96  
DIRECTOR OF PUBLIC WORKS  
*Robert M. ...* 2-29-96  
CHIEF, BUREAU OF HIGHWAYS

*Charles ...* 2/28/96  
CHIEF, BUREAU OF ENGINEERING  
*Ed ...* 2/28/96  
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT

**DMW**  
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Fax 296 4705

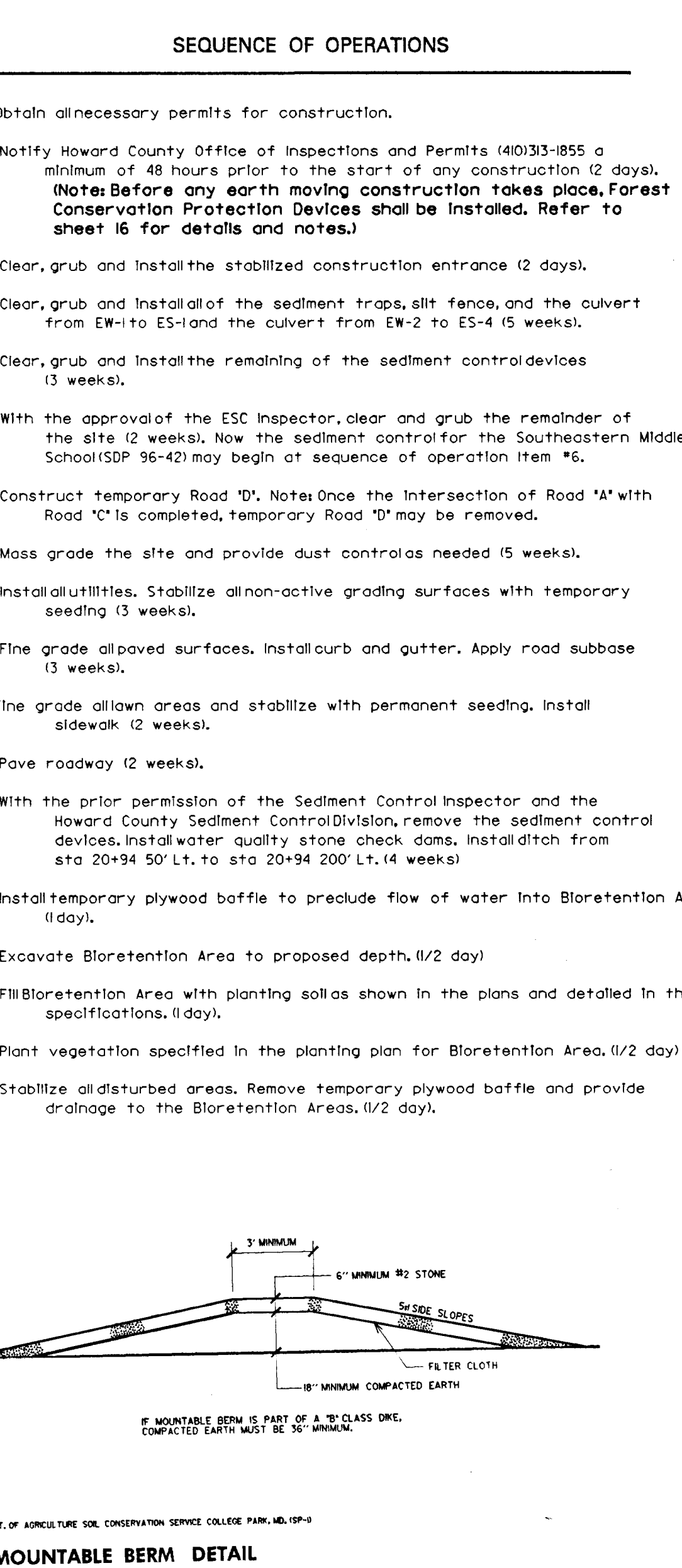
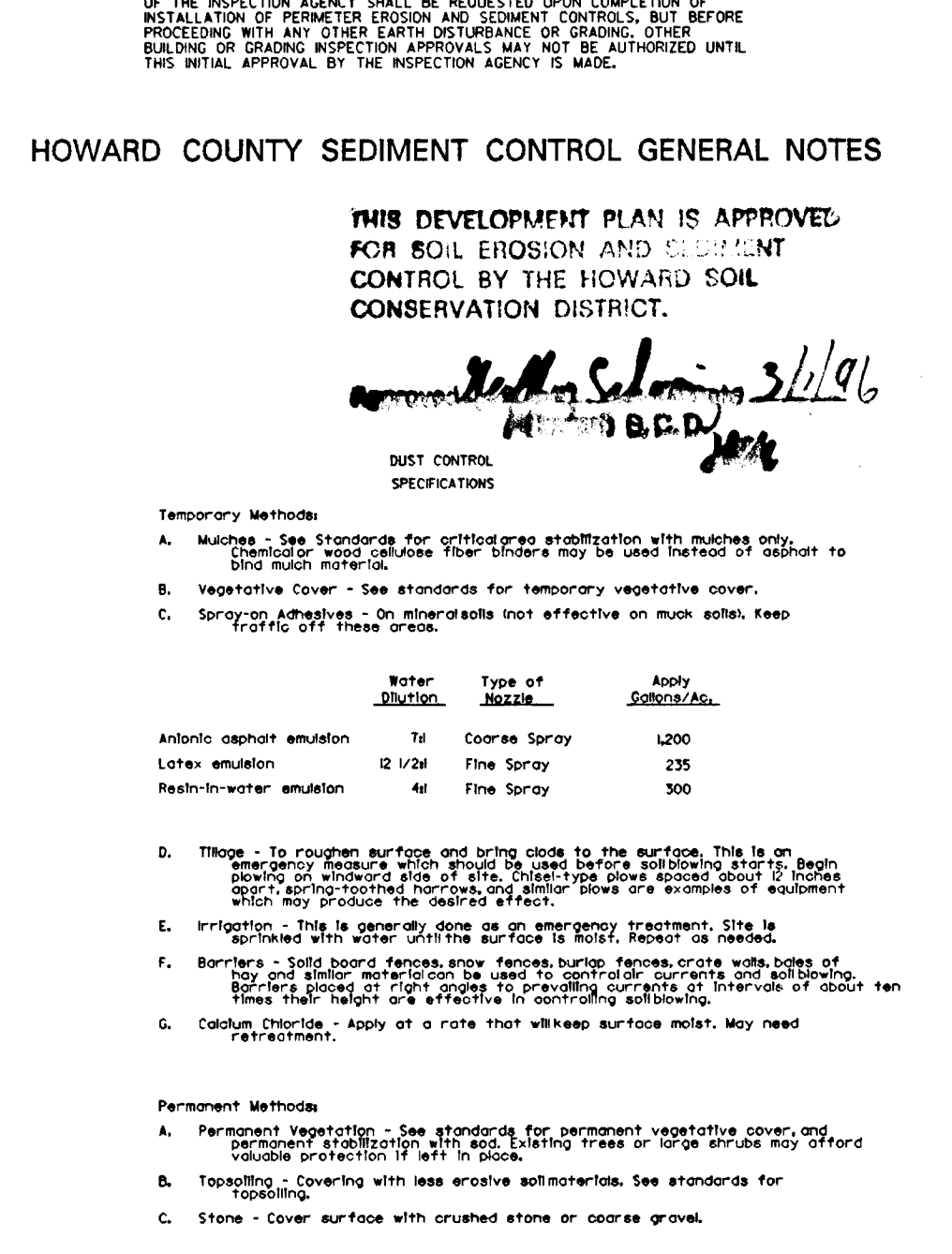
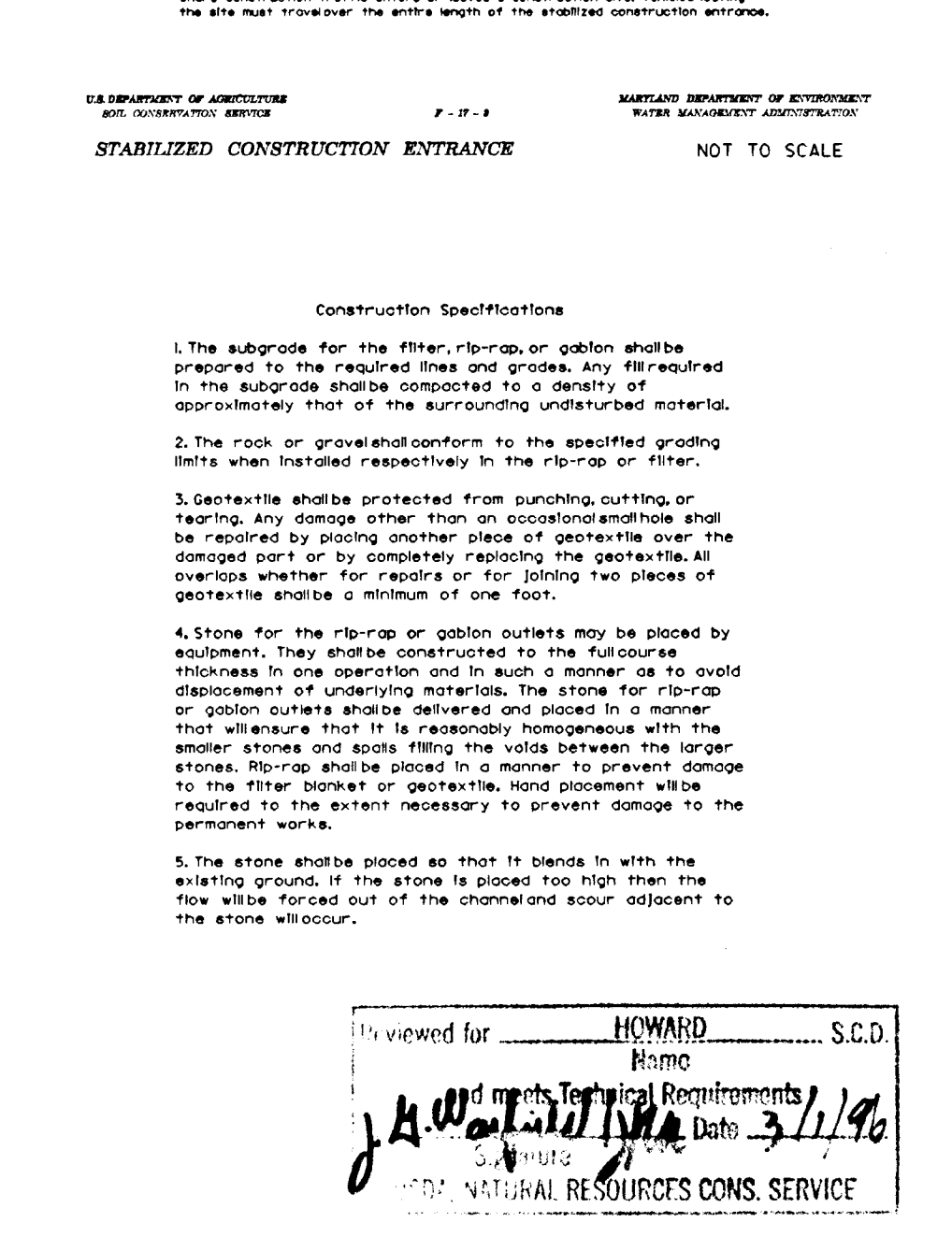
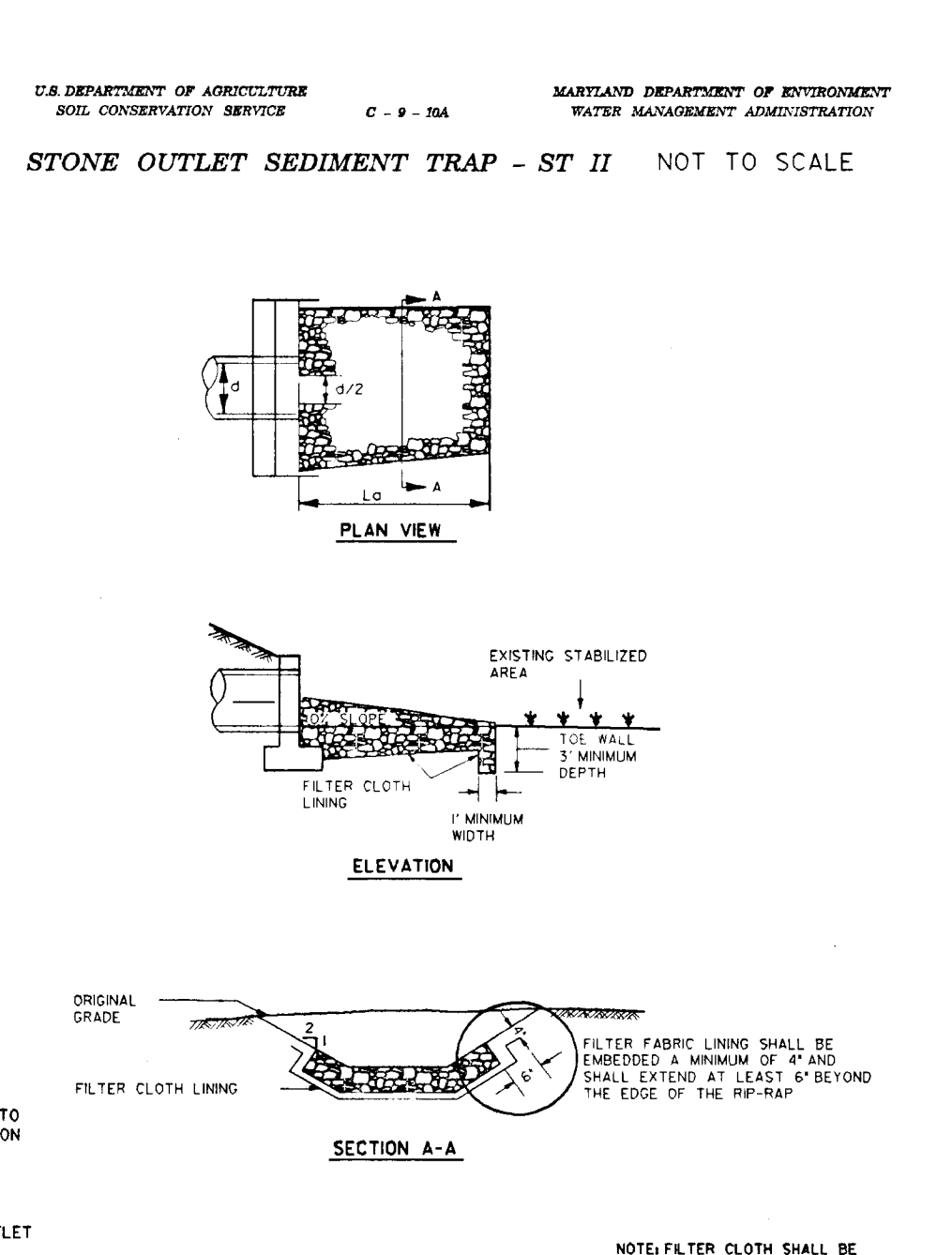
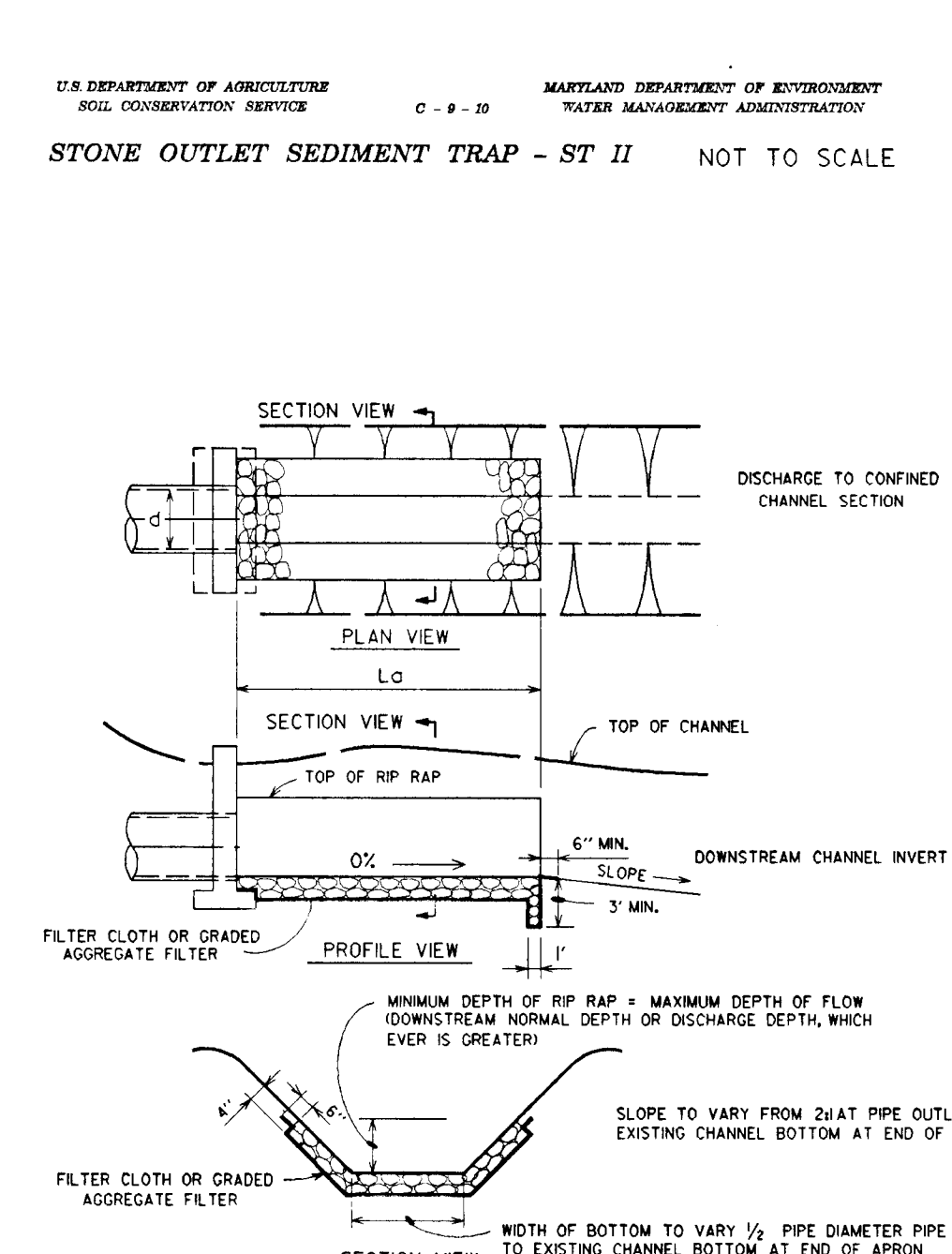
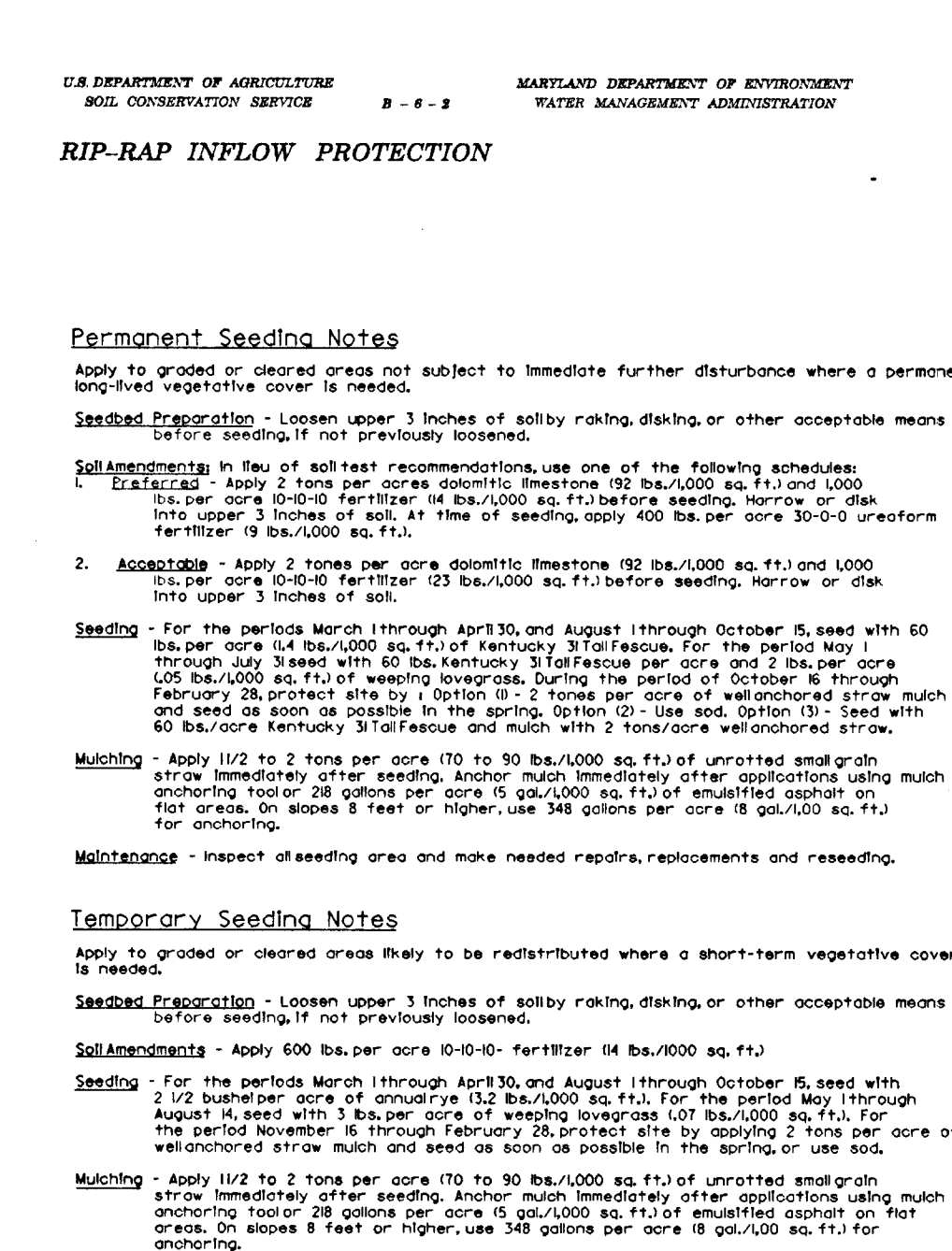
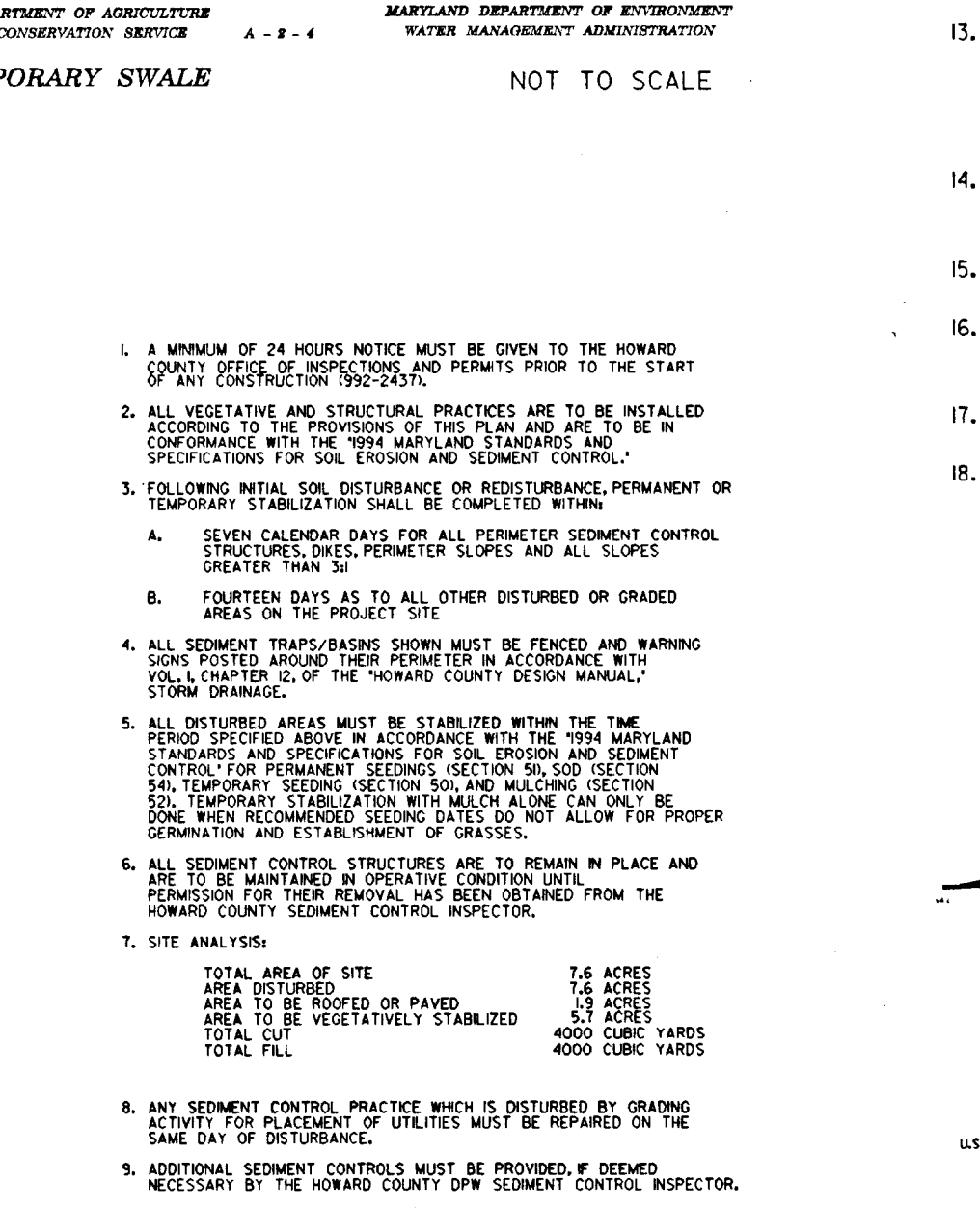
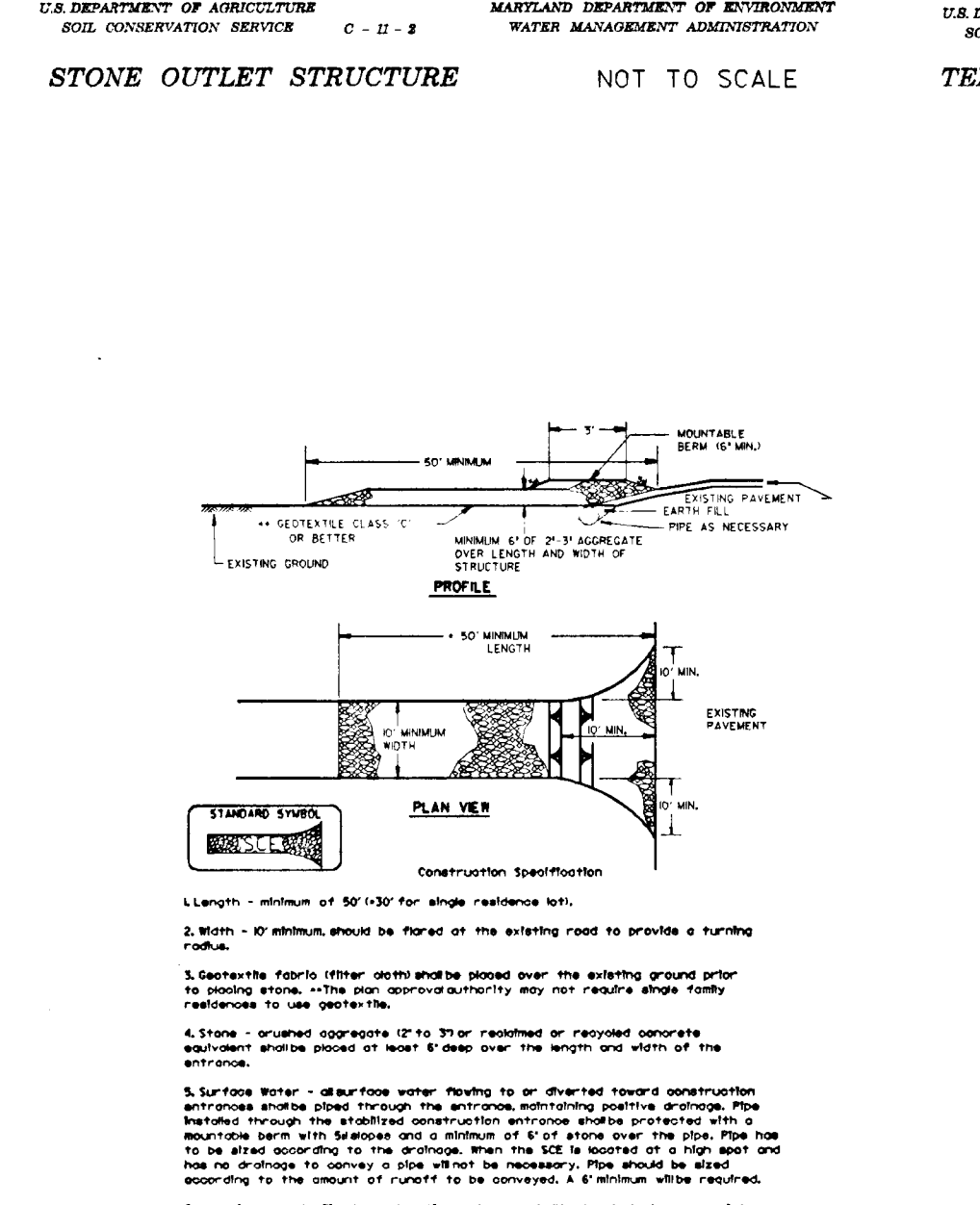
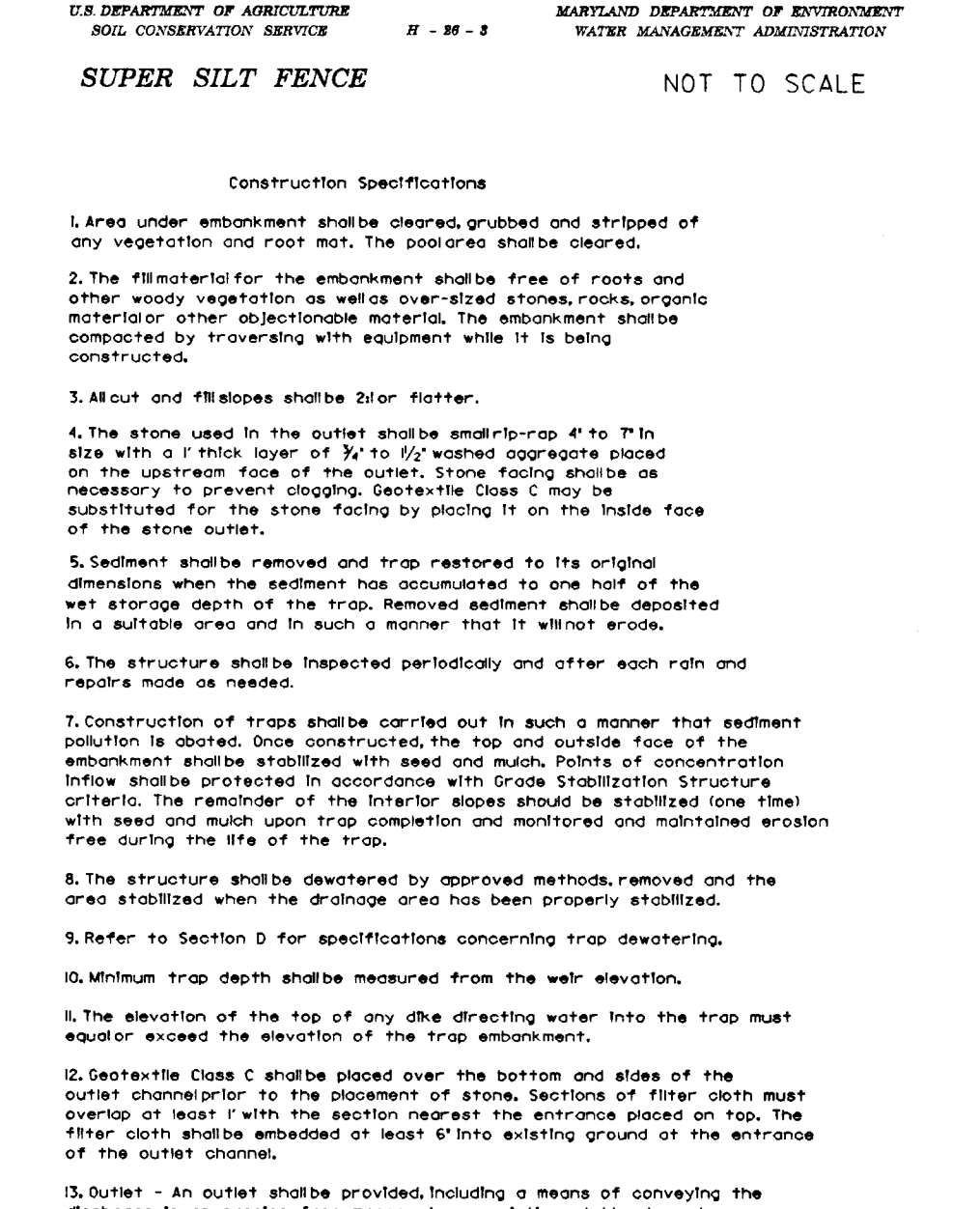
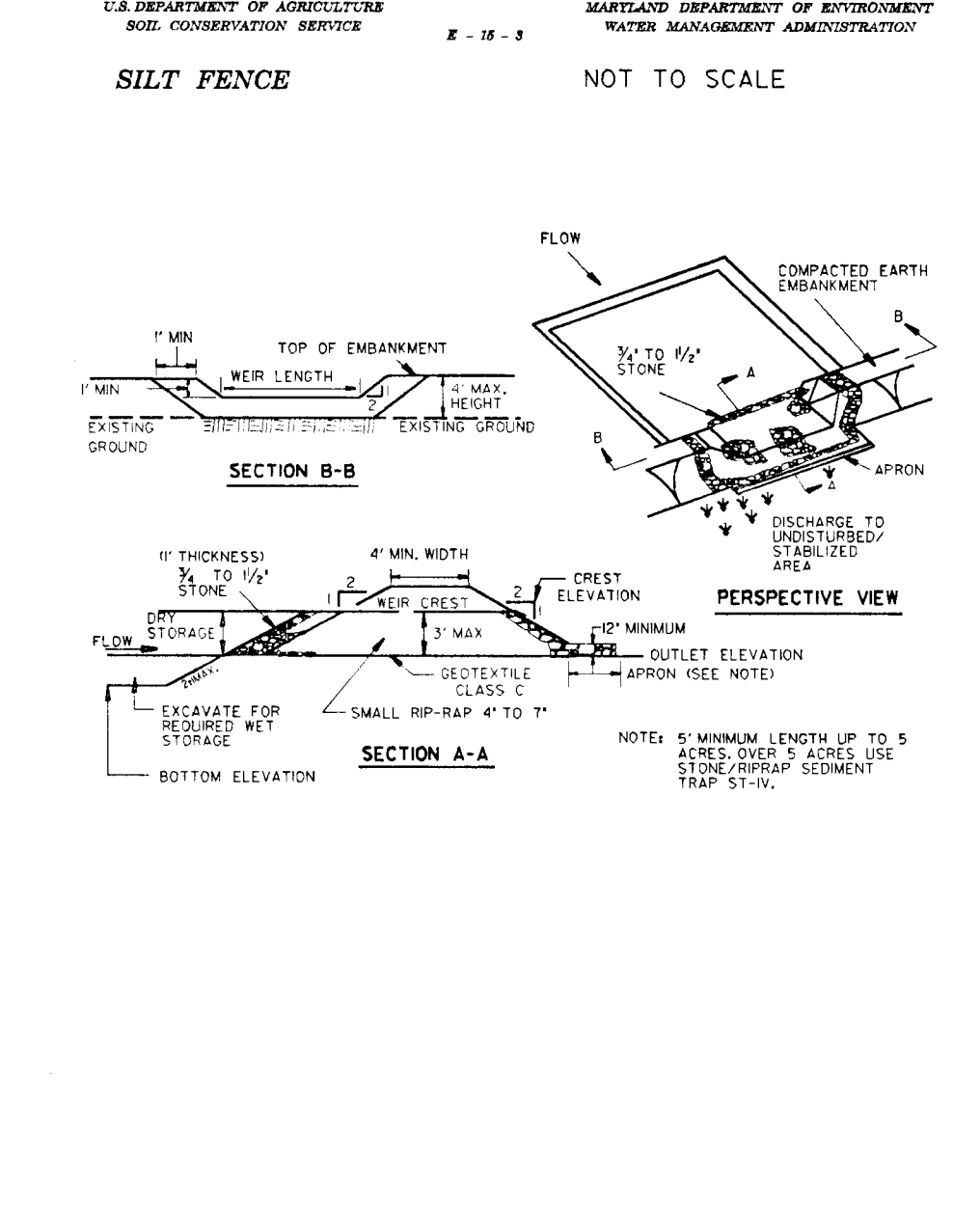
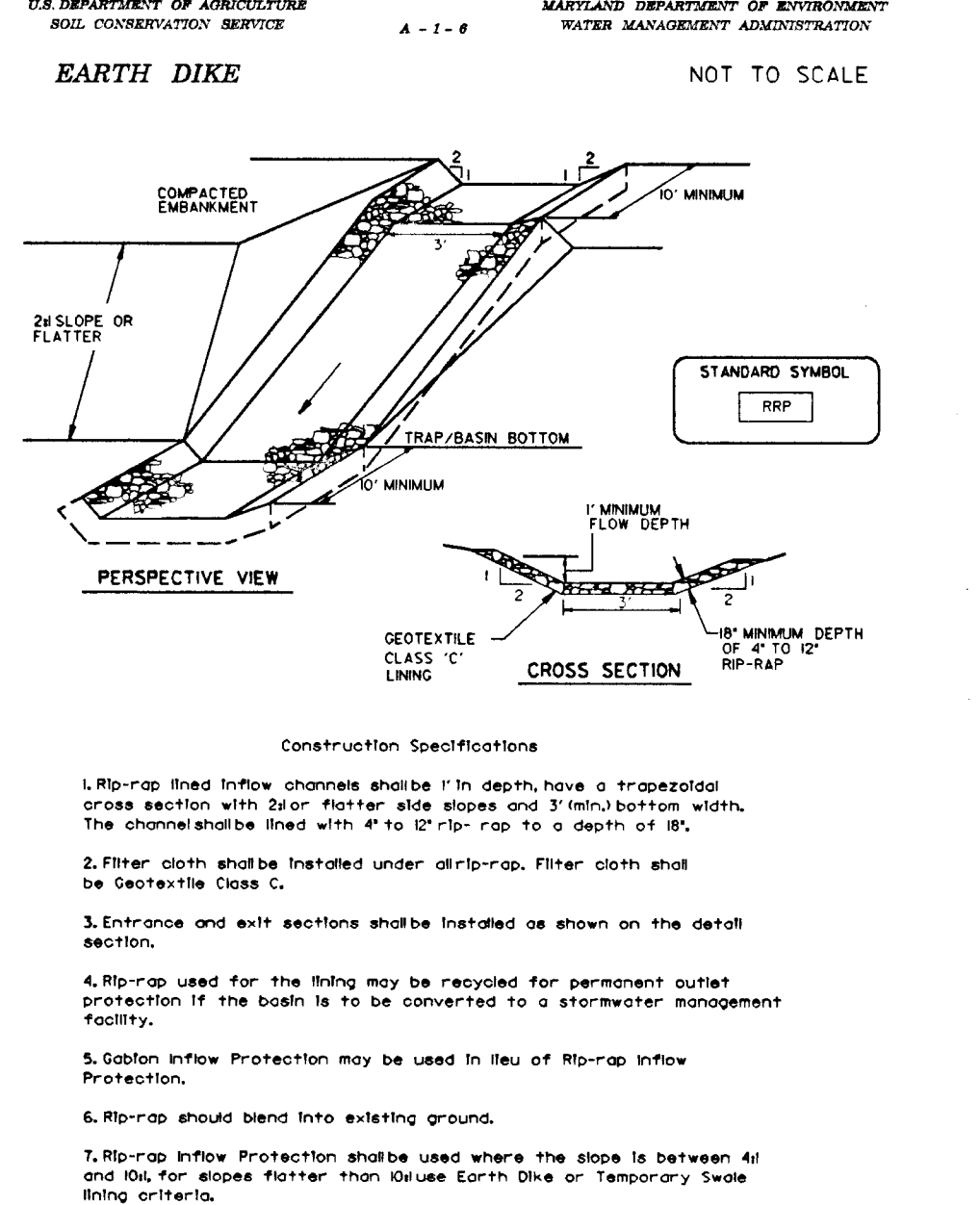
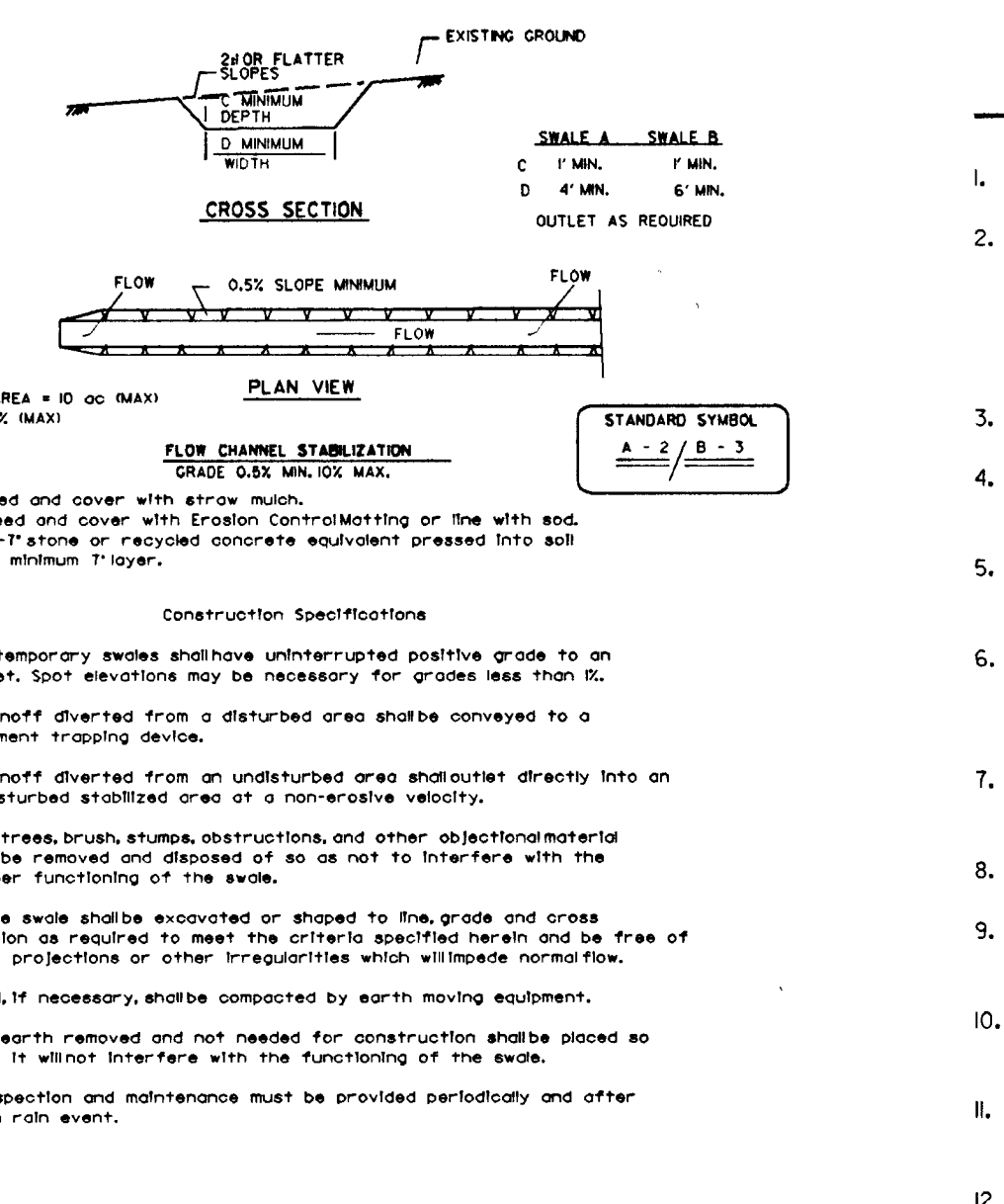
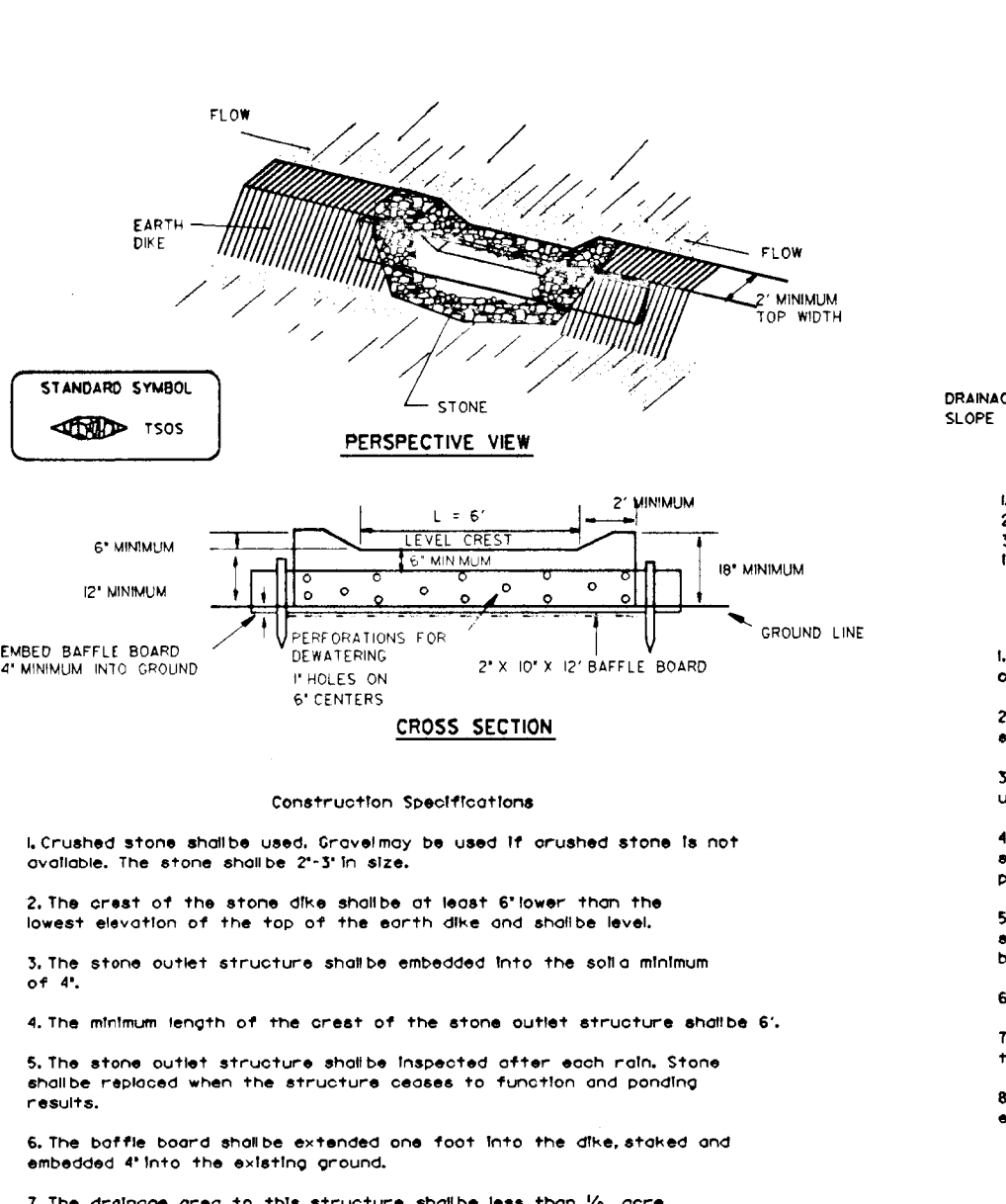
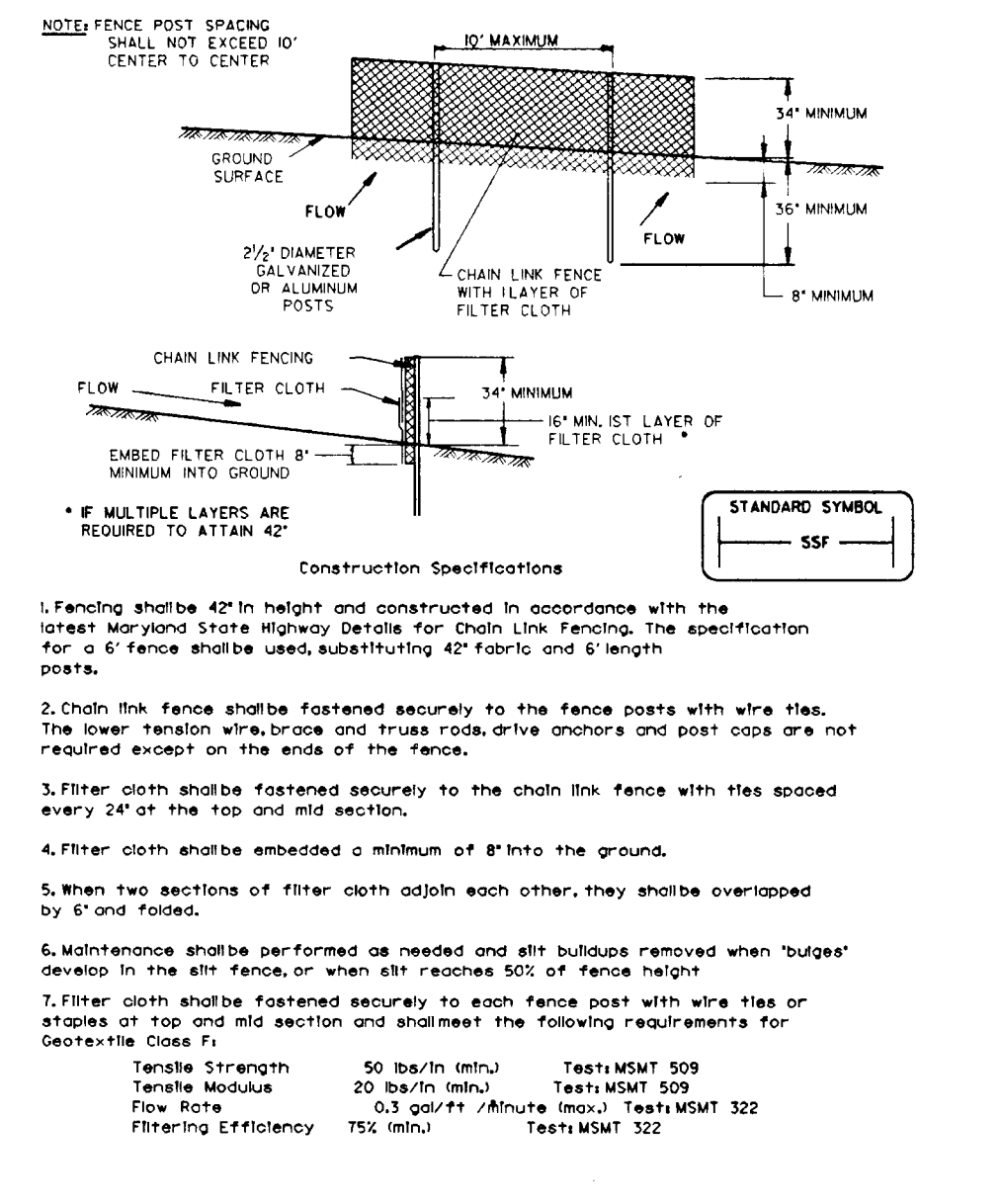
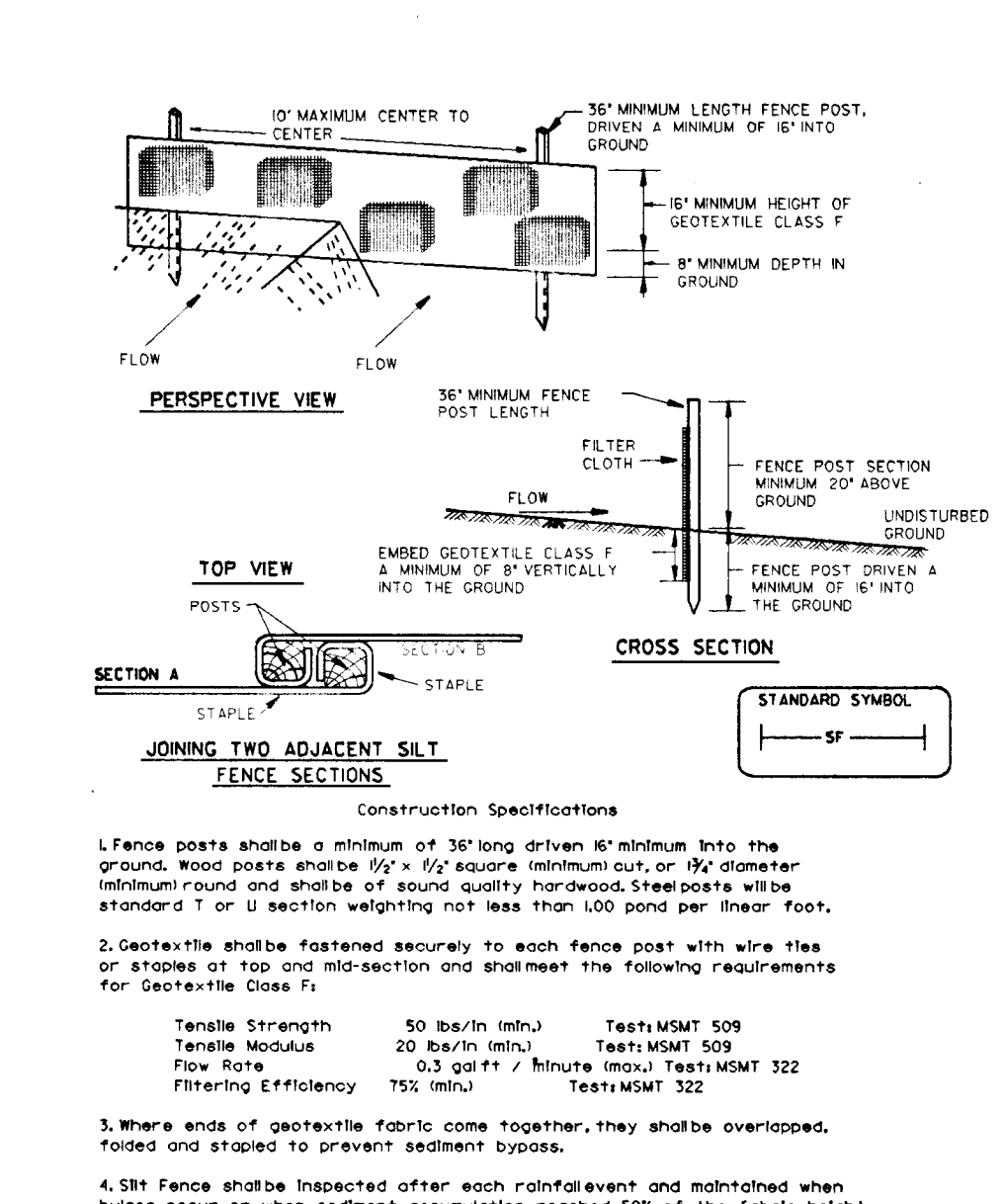
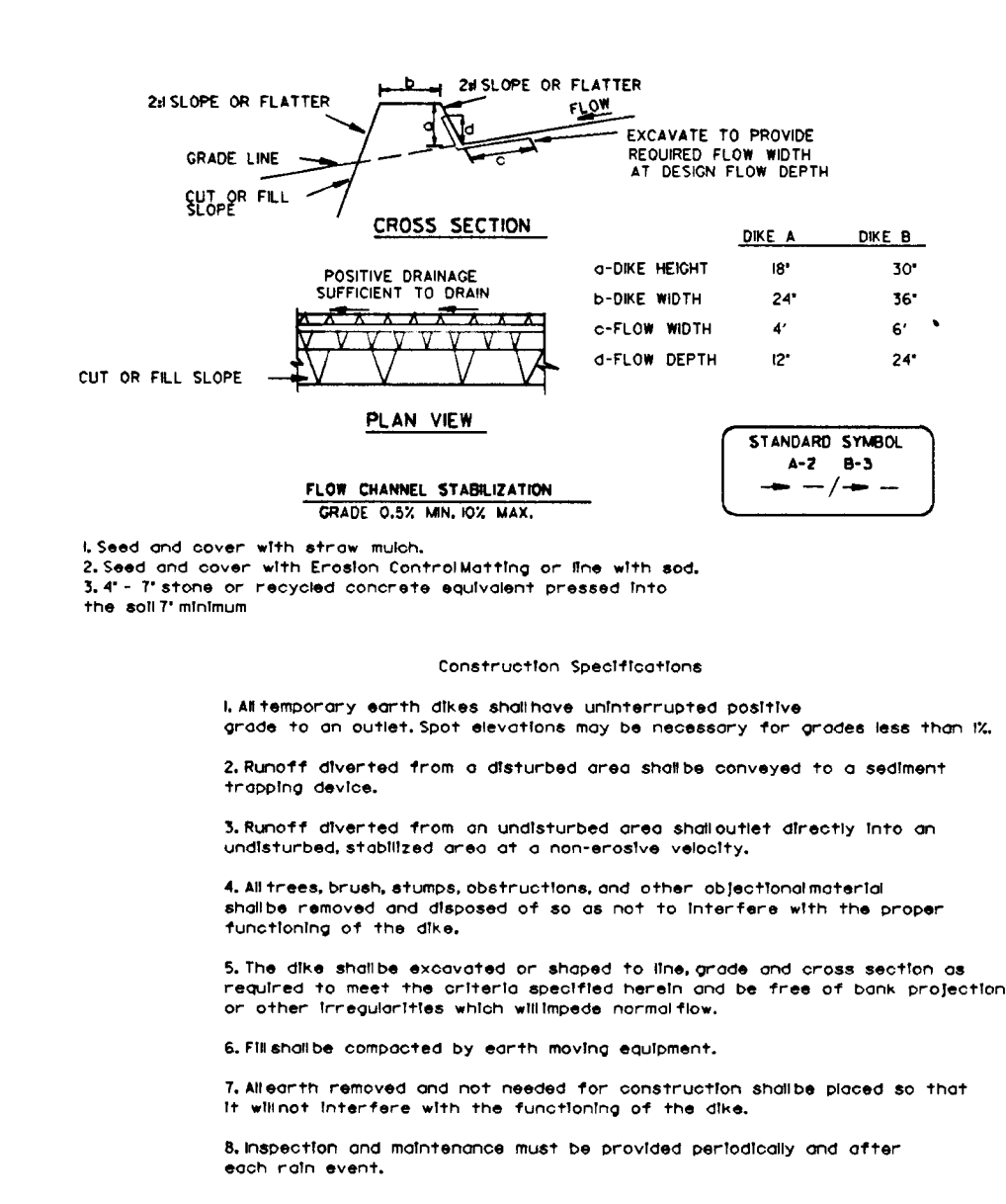
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DRAWN BY:	JWS\PSN
CHECKED BY:	JWR
DATE:	FEB. 5, 1996
BY NO.	
REVISION	
DATE	

**SEDIMENT AND EROSION CONTROL PLAN**

600 SCALE MAP NO. 47 BLOCK NO. 2

**GORMAN ROAD REALIGNMENT**  
CAPITAL PROJECT E-0935  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY MARYLAND

SCALE  
1" = 50'  
SHEET  
7 OF 22



**SEEDING NOTES**

Refer to the 1987 Maryland Standards and Specifications for Soil Erosion and Sediment Control for standards and methods not covered.

**DEPARTMENT OF PUBLIC WORKS**

HOWARD COUNTY, MARYLAND

*[Signature]* DATE 2/28/96  
 DIRECTOR OF PUBLIC WORKS

*[Signature]* DATE 2/29/96  
 CHIEF, BUREAU OF HIGHWAYS

**DAFT · McCune · Walker, Inc.**

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 410 296 3333  
 Fax: 296 4705

*[Signature]* DATE 2/28/96  
 CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT

DESIGN BY:	RLH				
DRAWN BY:	JWS				
CHECKED BY:	JWR				
DATE:	FEB. 5, 1996				
BY	NO.	REVISION	DATE	600 SCALE MAP NO.	BLOCK NO.

**SEDIMENT & EROSION CONTROL DETAILS**

HOWARD COUNTY S.C.D. (Severna Park)

*[Signature]* DATE 2/1/96  
 NATURAL RESOURCES CONSERVATION SERVICE

**REMOVABLE PUMPING STATION**

**CONSTRUCTION SPECIFICATIONS**

1. The outer pipe shall be 48" dia. or shall be at least 4" greater in diameter than the inner pipe. The outer pipe shall be wrapped with 12" horizontal filter cloth to prevent backflow from entering the perforations.
2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
3. The inner pipe shall be constructed by perforating a corrugated or PVC pipe between 12" and 36" diameter. The perforation shall be 1/2" x 6" slots or 1/2" diameter holes 6" on center. The center pipe shall be wrapped with 12" horizontal filter cloth. The wrapped pipe shall be placed in the outer pipe with the wrapped portion with Geotextile Class E.
4. The center pipe shall extend 12" to 18" above the anticipated water surface elevation or 12" to 18" above the construction water surface elevation.

**DEPARTMENT OF PUBLIC WORKS**

HOWARD COUNTY, MARYLAND

*[Signature]* DATE 2/28/96  
 DIRECTOR OF PUBLIC WORKS

*[Signature]* DATE 2/29/96  
 CHIEF, BUREAU OF HIGHWAYS

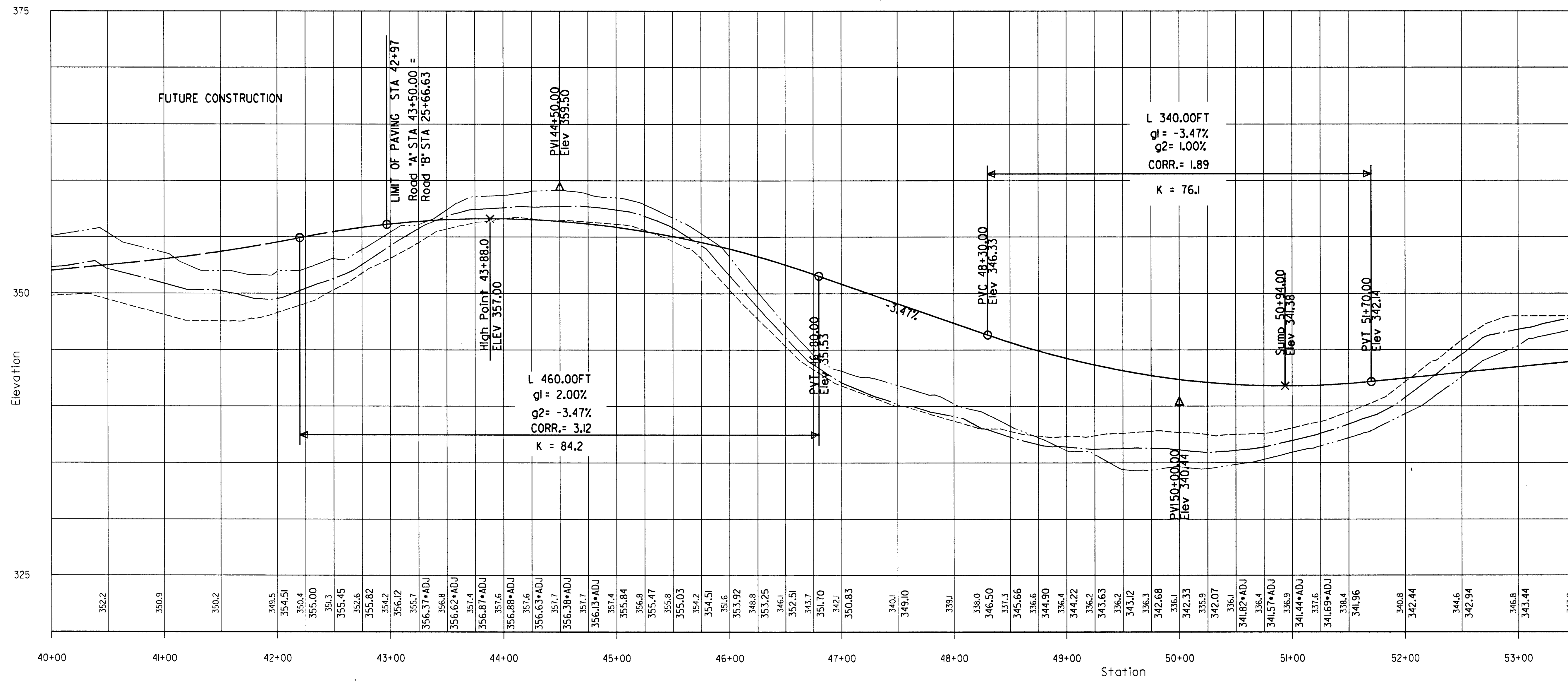
**DEPARTMENT OF PUBLIC WORKS**

HOWARD COUNTY, MARYLAND

*[Signature]* DATE 2/28/96  
 CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT



# ROAD "A" PROFILE



MATCH LINE - SEE SHEET 10

**LEGEND**

LINE	SURFACE	OFFSET
—	PROPOSED CENTERLINE	0.00
- - -	EXISTING CENTERLINE	0.00
· · ·	EXISTING LEFT R/W	-30.00
· · ·	EXISTING RIGHT R/W	30.00
EXISTING $\phi$ GROUND ELEVATION		340.8
PROPOSED $\phi$ ELEVATION		342.44

VERTICAL SCALE 1"=5'  
HORIZONTAL SCALE 1"=50'

Tue Feb 27 12:02:25 1996 d:\s\h\m\h\road\p

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 2/27/96  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 2/28/96  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 2-27-96  
CHIEF, BUREAU OF HIGHWAYS DATE

*[Signature]* 2/28/96  
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

**DMW**  
**Daft · McCune · Walker, Inc.**

A Team of Land Planners, 200 East Pennsylvania Avenue  
Landscape Architects, Towson, Maryland 21286  
Engineers, Surveyors & Environmental Professionals 410 296 3333  
Fax 296 4705

*[Handwritten Signature]*

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DATE:	FEB. 5, 1996

BY	NO.	REVISION	DATE

**ROADWAY PROFILES**

600 SCALE MAP NO. 47 BLOCK NO. 2

GORMAN ROAD REALIGNMENT  
CAPITAL PROJECT E-0935  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY MARYLAND

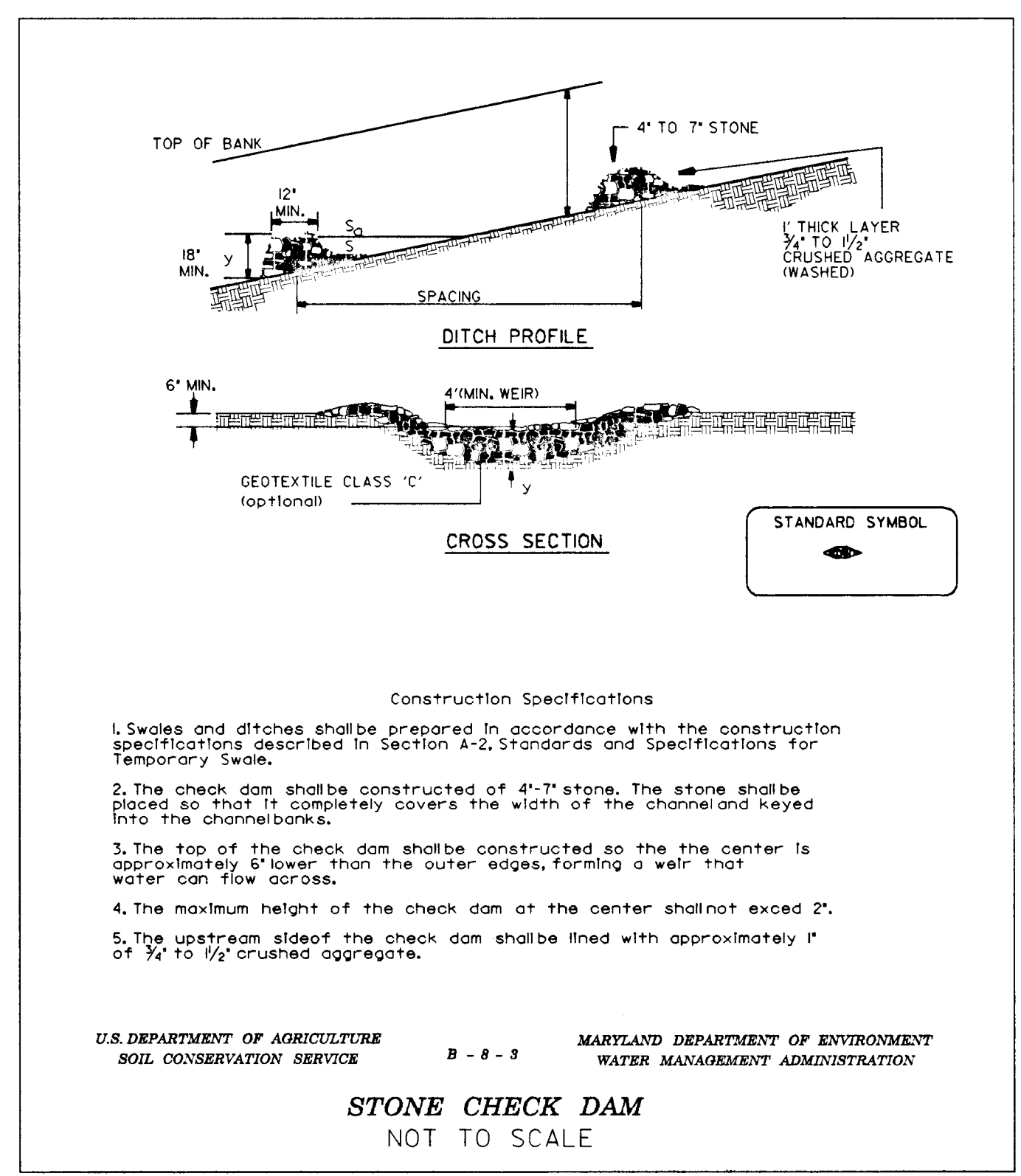
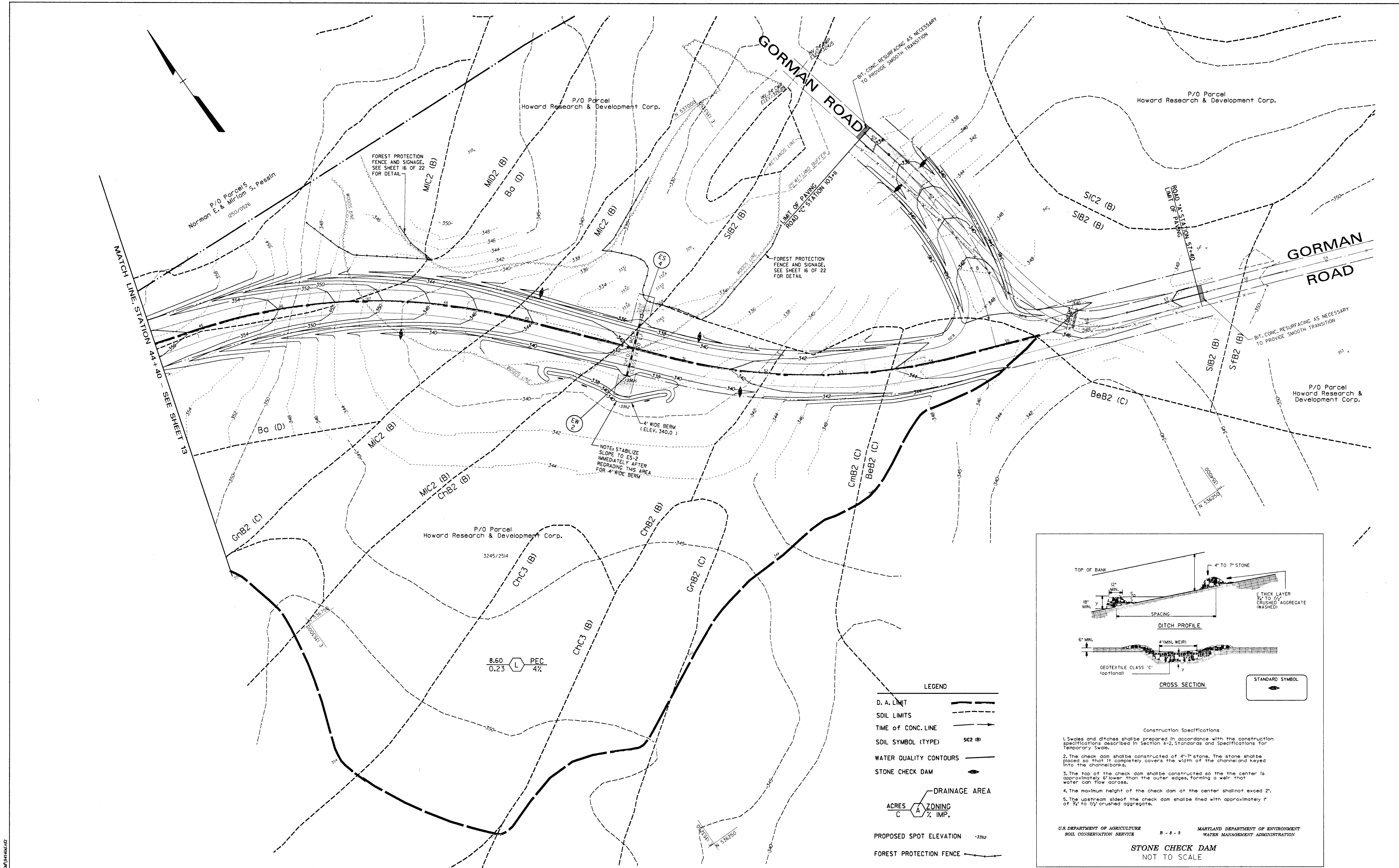
SCALE AS SHOWN  
SHEET 9 OF 22











- LEGEND**
- D. A. LIMIT
  - SOIL LIMITS
  - TIME OF CONC. LINE
  - SOIL SYMBOL (TYPE)      SIC2 (B)
  - WATER QUALITY CONTOURS
  - STONE CHECK DAM
  - DRAINAGE AREA
  - ACRES      ZONING      % IMP.
  - PROPOSED SPOT ELEVATION      +392
  - FOREST PROTECTION FENCE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Lawrence J. ...* 2/21/96  
DIRECTOR OF PUBLIC WORKS      DATE

*Richard P. ...* 2/28/96  
CHIEF, BUREAU OF ENGINEERING      DATE

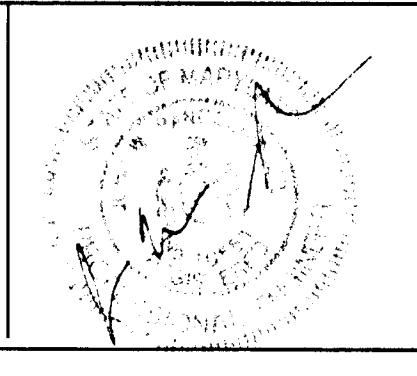
*Edward ...* 2-29-96  
CHIEF, BUREAU OF HIGHWAYS      DATE

*Ed ...* 2/28/96  
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT      DATE

**DMW**  
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200 East Pennsylvania Avenue  
Towson, Maryland 21286  
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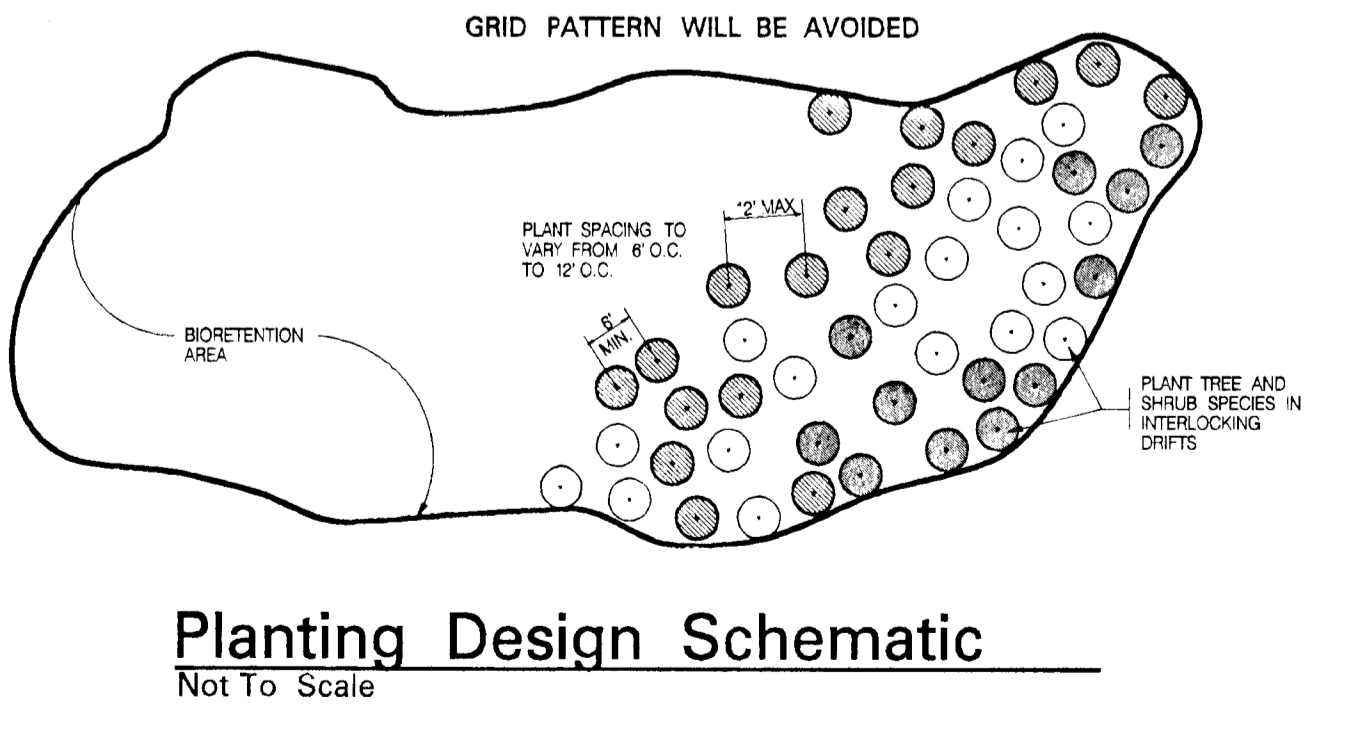
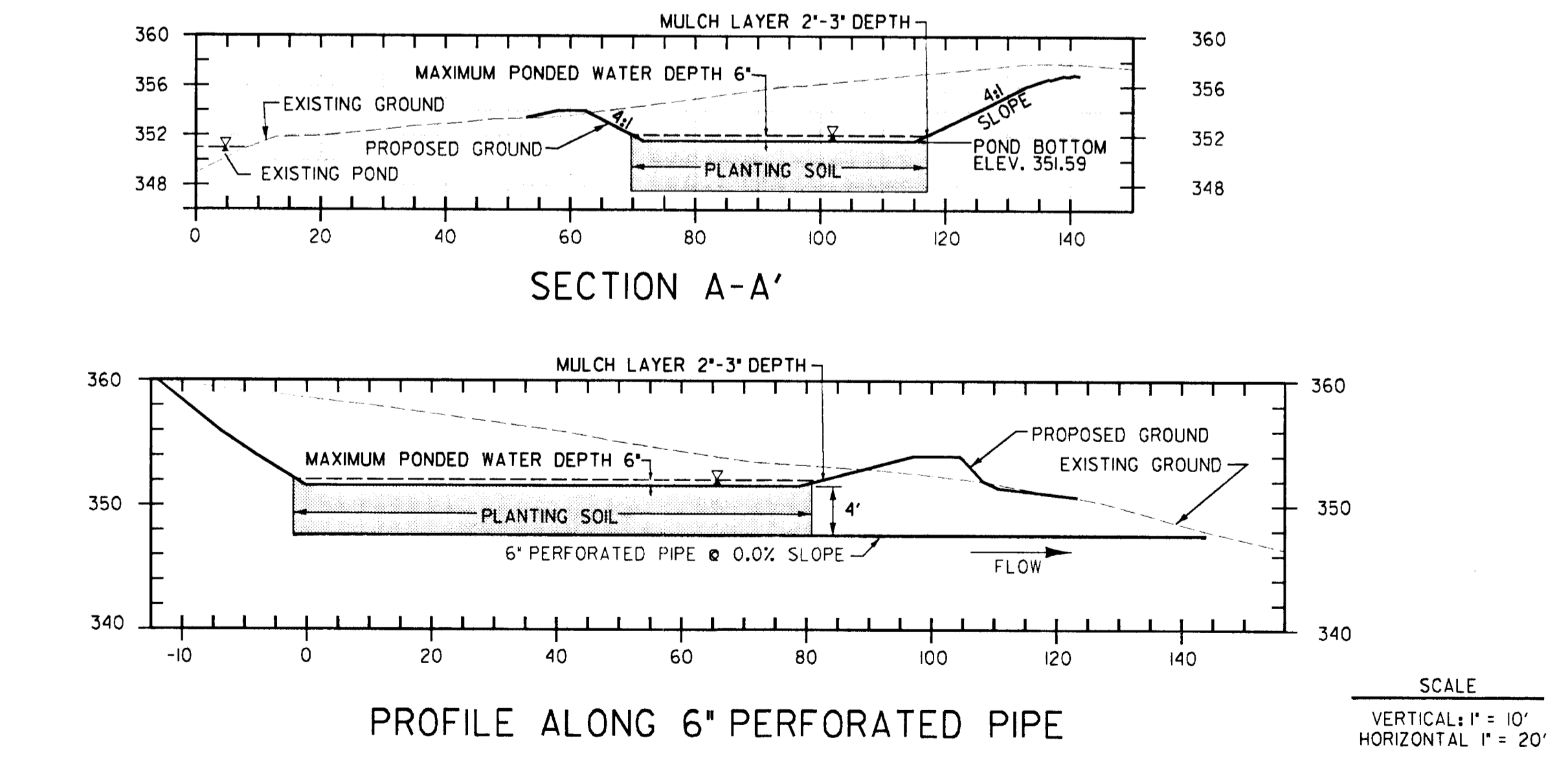
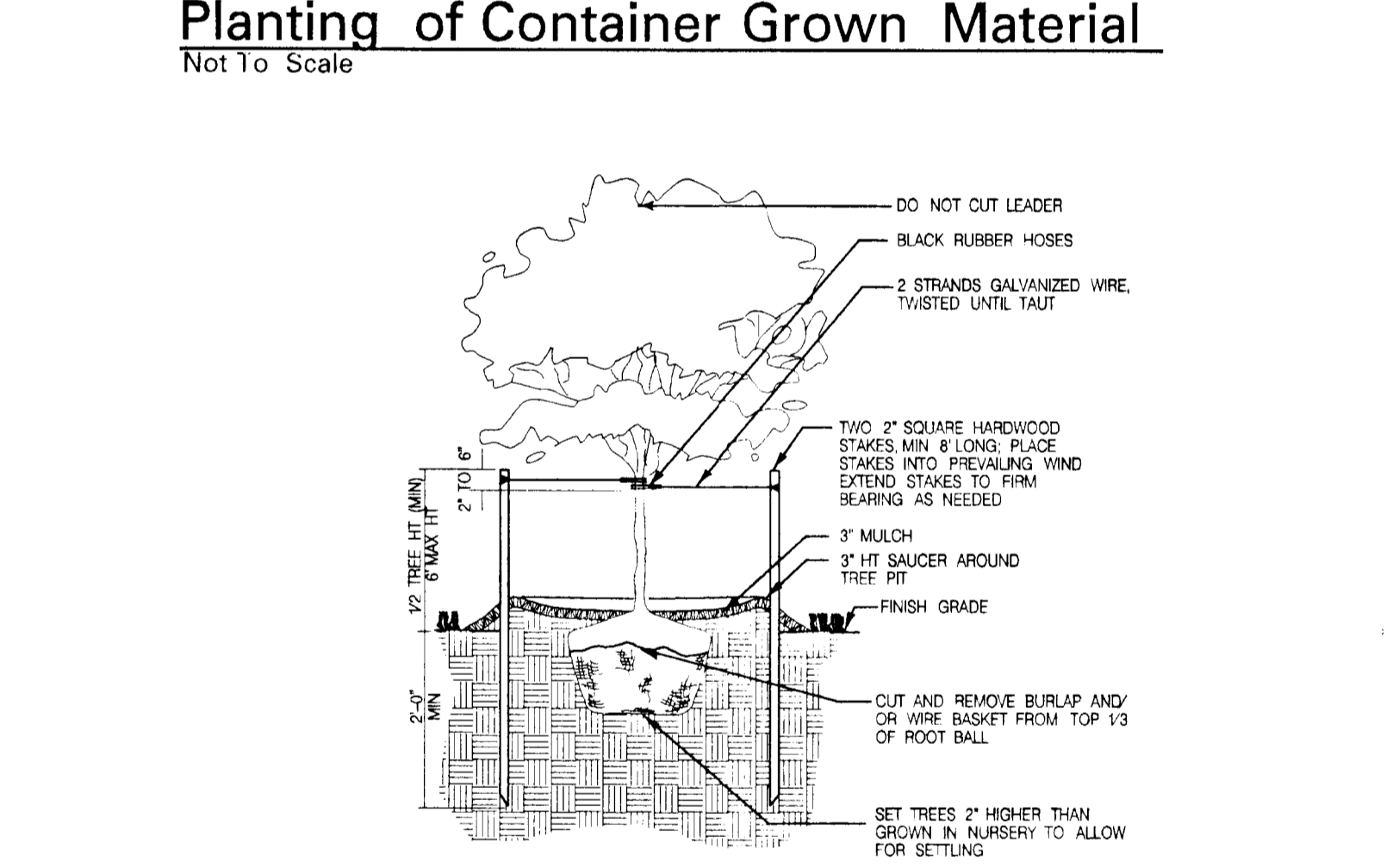
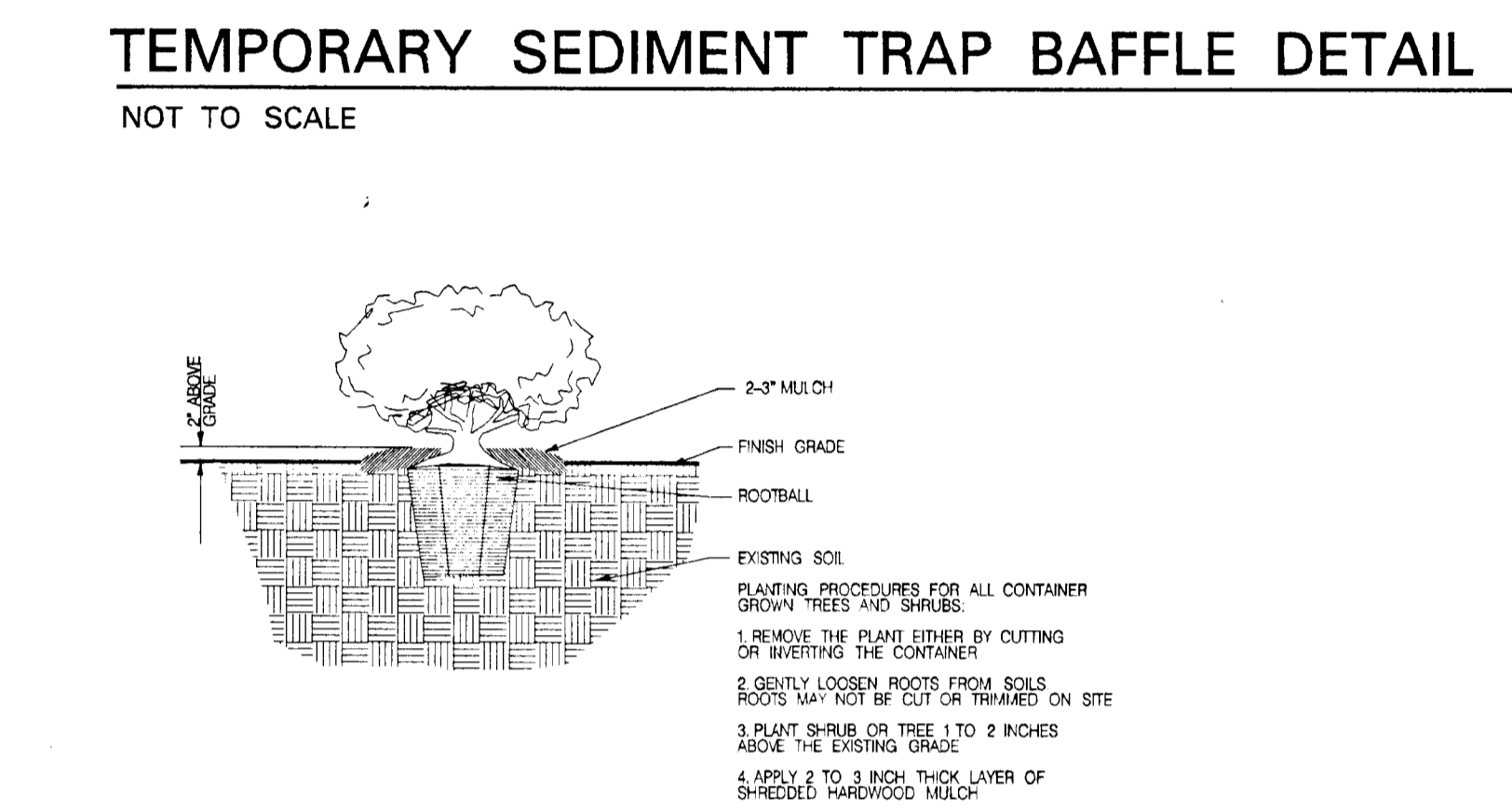
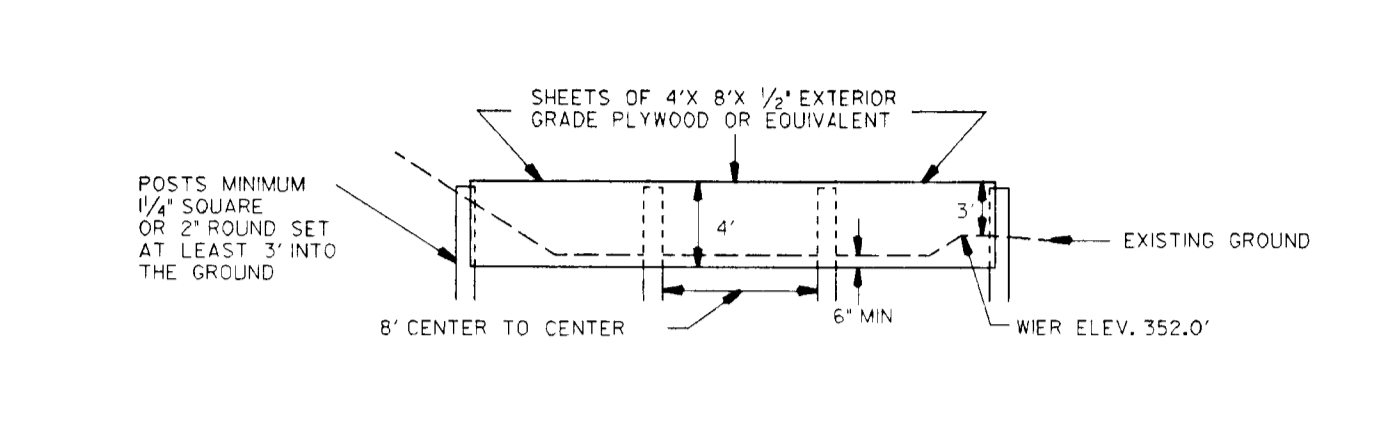
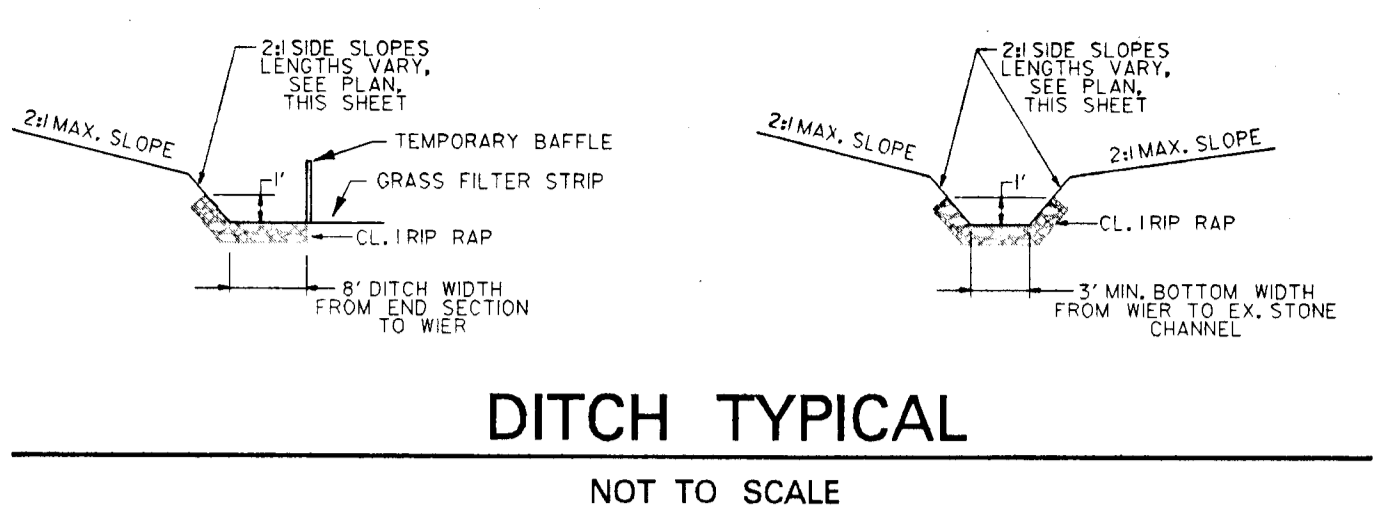
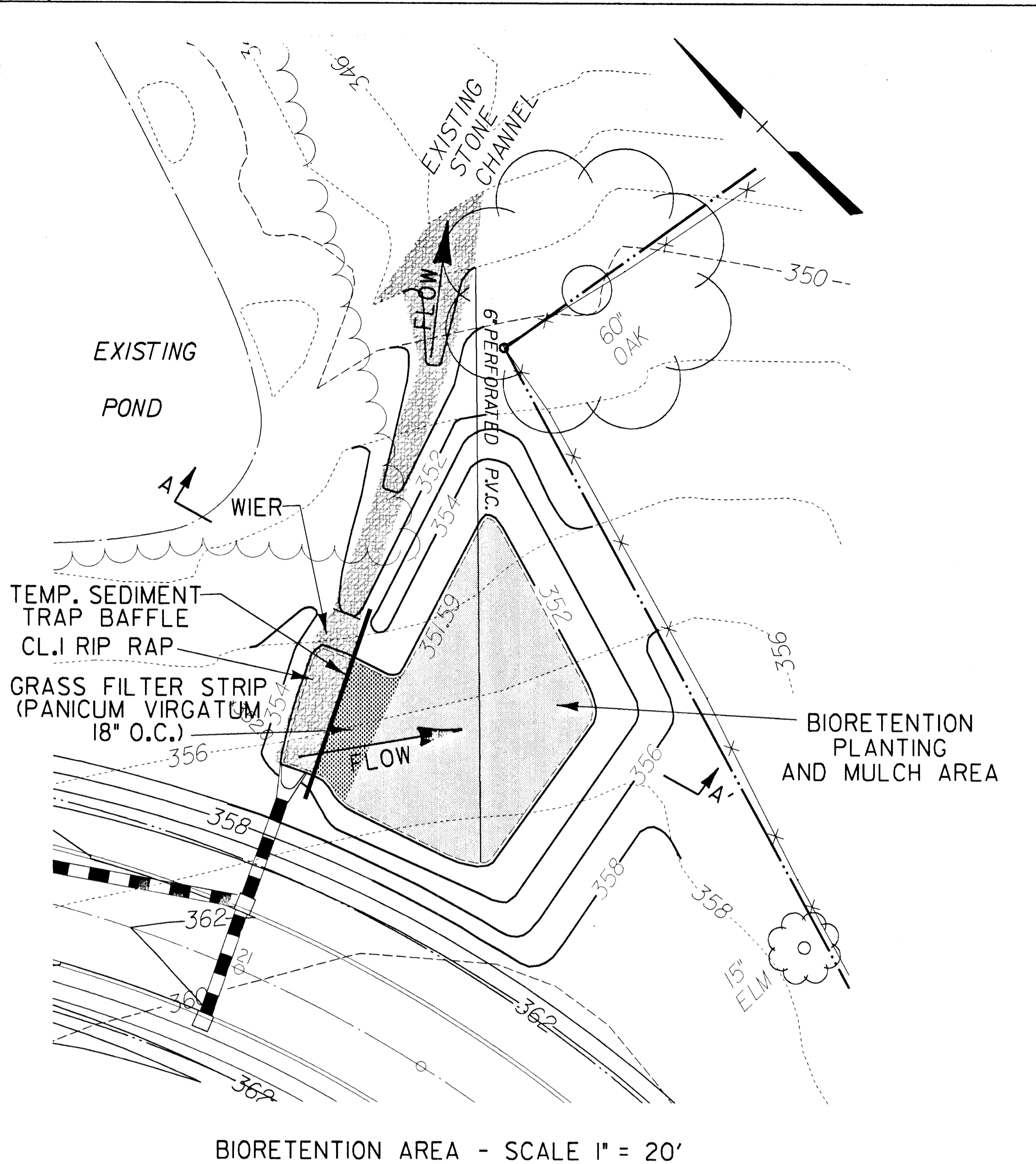
GRADING \ WATER QUALITY PLAN

600 SCALE MAP NO. 47      BLOCK NO. 2

GORMAN ROAD REALIGNMENT  
CAPITAL PROJECT E-0935  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY MARYLAND

SCALE  
1" = 50'  
SHEET  
14 OF 22

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GENERAL NOTES

- Refer to Sheet 8 of 21 for Sequence of Construction.
- GENERAL
- DESCRIPTION
- Work consists of labor, materials, equipment and services necessary for the execution and completion of specified herein.
- INCLUDE:
- Furnishing of plant material.
- Slope operation, planting operations, mulching and staking.
- Maintenance and guarantee.
- Quality Assurance
- American Association of Nurserymen (A.A.N.) American Standard for Nursery Stock, (A.A.S.S. 260) as expanded herein.
- United States Department of Agriculture: Textural Classification Diagram for Soils.
- National Arborist Association "Standard for Pruning of Shade Trees Using of Shade Trees, Fertilizing Shade and Ornamental Trees and Pesticides Application Operations."
- Project Conditions
- Planting Season: September 15 to May 1 other periods with the written approval of the Landscape Architect. Do not plant when excessive wet planting soil at any time.
- Definitions
- Start of Planting: installation of plant material into excavated pits or baffle.
- Project Acceptance:
- Upon determination by the Landscape Architect and Contractor that the work meets the requirements of Substantial Completion, the Landscape Architect will prepare a Certificate of Substantial Completion document (CSC) for the approval and acceptance of the Owner and the Contractor.
- The Landscape Architect shall prepare and submit to the Contractor a list of items to be completed or corrected within the time limits established in the Certificate of Substantial Completion.
- The Contractor shall include any items of such list that do not occur according to the contract documents.
- The Landscape Architect and Owner may review and amend the list of items to be completed or corrected and amend the Certificate of Substantial Completion at any time before final notice of completion.
- The continued validity of a Certificate of Substantial Completion by the Owner and Landscape Architect shall be contingent upon the satisfactory completion of all punch list items. Final notice of completion shall be issued upon revocation of this Certificate.
- All subsequent expenses including reimbursements and fees incurred by the Landscape Architect shall be paid by the Owner and deducted from the retainage held by the Owner.
- Warranties required by the Contract Documents shall commence on the date of Substantial Completion for the work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.
- Maintenance Period: From start of mobilization and last through 90 days after issuance of Certificate of Substantial Completion.
- Guarantee Period: From issuance of AIA Certificate of Substantial Completion to expiration of first anniversary (12 months).
- BIORETENTION AREA SOIL SPECIFICATIONS
- Planting Soil
- The bioretention areas shall consist of planting soil having a composition of at least 10 to 25 percent clay and shall be of a sandy loam or loamy sand texture. The planting soil must consist of 35 percent sand. The furnished planting soil shall be of uniform composition free of stumps, roots or similar objects larger than one inch brush or any other material or substance which may be harmful to plant growth or create a hindrance to planting or maintenance operations.
- Planting soil shall be free of plants, propagules or plant parts of Bermuda grass, buck grass, Johnson grass, Mugwort, Nutcracker, Poison Ivy, and Canadian Thistle.
- Planting soil shall not contain any toxic substances harmful to plant growth.
- Planting soil shall be tested and meet the following criteria:
  - pH range: 5.5 - 6.5
  - Organic Matter: 3.0 - 5.0%
  - Macronutrient - N: 15 - 30 lbs./acre
  - Macronutrient - P: 10 - 20 lbs./acre
  - Potassium - 120 - 180 lbs./acre @ 500 ppm
  - Soluble salts: not to exceed 500 ppm
- The following testing frequencies shall apply to the above soil constituents:
  - pH, Organic Matter: 1 test per Bioretention Area
  - Magnesium, Phosphorus, Potassium, Soluble Salts: 1 test per 500 cubic yards, but no less than 1 test per borrow source.
- One grain size analysis shall be performed for the Bioretention Area.
- Mulch Layer Specifications
- A mulch layer shall be provided on top of the planting soil. An acceptable mulch layer shall include shredded bark, shredded yard chips, or other similar product approved by the Landscape Architect.
- Mulch products must be well aged, uniform in color and free of foreign material including stumps, twigs, weed mulch, leaves that has been stockpiled or stored for at least twelve (12) months.
- Compaction
- Soil shall be placed in lifts less than 18 inches and lightly compacted (limited consecutive effort) by raking with a bucket from a loader, backhoe, or other appropriate equipment.
- BIORETENTION AREA PLANT SPECIFICATIONS
- Plants must be:
  - Sound, healthy, vigorous, free from plant diseases, insect pests or their eggs.
  - Nursery stock grown in Maryland, Delaware, New Jersey, Ohio, Pennsylvania, Florida or West Virginia for at least two (2) years prior to planting.
  - Plants cut back from larger sizes or pruned prior to delivery will not be accepted.
  - Transplanted or root pruned at least once in past three (3) years.
  - Shape and form Plant materials shall be symmetrical and typical for the variety and species.
- Deciduous trees must be:
  - Single leader, well branched, without suckers or evidence of suckering, with straight trunks and symmetrically balanced according to their normal habit.
  - Free of branches for 1.5 feet up the leader from ground level per inch.
  - Measurements: the caliper of deciduous shade trees shall be measured at a point 4 to 6 inches above ground level for caliper larger than 4 inches and 6 inches above ground level for caliper smaller than 4 inches caliper.
  - Shrubs shall have:
    - At least 75 percent of the individual branches or canes of a shrub shall be to the height specified.
  - General:
    - Store balled plants that cannot be planted within 48 hours in a sheltered place, balled covered with soil straw mulch or similar covers water and maintain as required until planted.
    - Transport and handle plants so that foliage, roots or bolls are protected from excessive sun and wind. Loss or roots of plants allowed to dry out or which have been damaged or disturbed root balls shall cause for rejection.
    - B & B balled and burlapped plants: Firm, natural balls of soil with size and depth of ball in accordance with A.A.N. standards.
    - Planting pits shall be dug so that they are vertical, and scarified to eliminate clods of the soil.
    - The diameter of the planting pit must be a minimum of six inches (6") larger than the diameter of the ball of the tree.
    - The planting pit shall be deep enough to allow 1/4 inch of the ball to be above the existing grade. Loose soil at the bottom of the pit shall be tamped by hand.
    - Apply fertilizer in bottom of planting pit as specified below.
    - The plant shall be removed from the container and placed in the planting pit by lifting and carrying the plant by its ball. Do not pull by the branches or trunk.
    - Set the plant vertical in the center of the pit so that the top of the ball is approximately 1/4 inch above the final grade.
    - Backfill planting pit with existing soil.
    - Make sure plant remains vertical during backfill procedure.
    - Never cover top of the ball with soil. Mound soil around the exposed ball (1/4").
    - Stake of trees requiring staking within 24 hours after planting.
    - Guying shall be in accordance with planting details.
    - Stakes shall be securely driven in ground and plants guyed to provide and maintain adequate support until firm.
  - Fertilization
    - Tree and Shrub fertilizer shall be 21gm. tightly compressed, long lasting, slow release 6-2-2 (over 21gm. tablets with 6 minimum guaranteed analysis of 20-10-5).
    - Total Nitrogen 10% - 20%
    - Water Soluble Organic Nitrogen - 7%
    - Water Soluble Organic Phosphorus - 13%
    - Water Soluble Organic Potassium - 10%
    - Avoidance Phosphate Acid (pH 5.5 - 10.5)
  - For containerized trees and shrubs, place the specified fertilizer tablets in the bottom of the planting pit according to the following rates:
    - 1 gal. Container - 1 ea. 21gm. Tablets
    - 2 gal. Container - 2 ea. 21gm. Tablets
    - 3 gal. Container or 8 1/2" dia. 21gm. Tablets
  - Planting Grass Filter Strip
  - The planting holes shall be dug through the mulch with one of the following hand trowel, shovel, bulb planter, or hoe.
  - Before planting, biodegradable pots shall be soft and non-biodegradable pots shall be removed. Root systems of allotted plants shall be spill or crumpled.
  - The grass shall be planted so that any existing stones/rocks are surrounded by soil below the mulch. Batted plants shall be set so that the top of the pot is even with the existing grade.
  - The entire grass filter strip shall be thoroughly watered.
  - Planting Slopes Adjacent to the Bioretention Area
  - Slopes adjacent to the Bioretention Area shall be seeded per the seeding specification shown on Sheet 8 of 21.
  - Seed mix used for this area shall be Loft's Eco-mix or other similar mix as approved by the Landscape Architect.
  - MAINTENANCE
  - The Contractor's Maintenance Period shall begin at mobilization and last through 90 days after the issuance of a Certificate of Substantial Completion.
  - The Contractor's maintenance of new planting shall consist of watering, cultivating, weeding, mulching, re-staking, tightening and re-guying as well as re-planting or replacement of plants in poor position, and furnishing and applying such pesticide sprays and fungicides as may be necessary to keep the plantings free of insects and disease and in thriving condition.
  - Protect planting areas and plants of all times against damage of all kinds for duration of maintenance period. Maintenance includes temporary protection barriers and signs as required for protection. If any plants become damaged or injured because sufficient protection was not provided, treat or replace as directed by Landscape Architect at no additional cost to Owner.
  - WARRANTY
  - Planting shall be warranted by the Contractor to remain alive and healthy for a period of 12 months after the date of Substantial Completion. Plants in an unhealthy or dying condition after initial acceptance or within 12 months shall be removed and replaced. New planting and method of planting shall comply with the requirements of the specifications. Plants replacing those removed during the warranty period shall be guaranteed to remain alive and healthy for an additional 12 months after installation and acceptance.
  - Contractor shall not be held responsible for failure due to neglect by Owner, vandalism, etc., during warranty period. Report such conditions to the Landscape Architect in writing when discovered.
  - Submit a letter of warranty containing the following information:
    - We hereby guarantee that the landscape planting we have furnished and installed is free from disease and in good condition, and the work has been completed in accordance with the drawings and no defect excepted, has gone to repair or replace any defects in material or workmanship which may develop during the warranty period of one year from the date of acceptance and due to repair or replace any damage resulting from the replanting or replacement of plants at no additional cost to the Owner. We shall make such reports or replacements within a reasonable time as determined by the Owner, after receipt of written notice in the event of our failure to make such reports or replacements within a reasonable time after receipt of written notice from the Owner, we authorize the Owner to proceed to have soil, plants or replacements made at our expense and we will pay the costs and charges therefore upon demand.

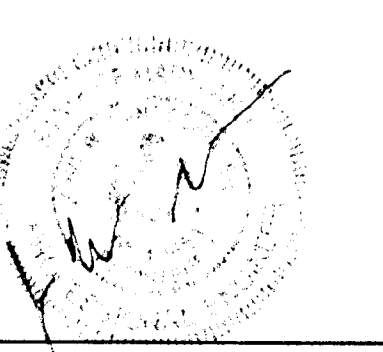
Bioretention Area Planting Plan

Species	Size	Spacing	Quantity	Planting Units	Stratum	Tolerance
Isar subum	2 1/2" B&B	10'-12" rdm	10	na	Canopy	FAC
Liquidambar styraciflua	2 1/2" B&B	10'-12" rdm	5	na	Canopy	FAC
Quercus palustris	2 1/2" B&B	10'-12" rdm	5	na	Canopy	FACW
Hamaelis virginiana	3'-4" cont	6'-8" rdm	15	na	Shrub	FAC
Undera benzoica	3'-4" cont	6'-8" rdm	15	na	Shrub	FACW
Viburnum dentatum	3'-4" cont	6'-8" rdm	20	na	Shrub	FAC
Panicum virgatum	1-3/4" pipot	18" oc	120	na	Herb	FAC
TOTALS			220			

NOTE: All plants will be placed at random locations and spacing as specified. Grid patterns and single-species massings will be avoided. No woody vegetation will be planted within the grass filter strip.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
Director of Public Works  
Chief, Bureau of Engineering  
Chief, Bureau of Highways

DAWM  
Dart, McCune, Walker, Inc.  
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
410 296 3333  
410 296 4705



DESIGN BY: JWS, RLH, ECH  
DRAWN BY: JWS  
CHECKED BY:  
DATE: FEB. 5, 1996

600 SCALE MAP NO. 47 BLOCK NO. 2

GORMAN ROAD REALIGNMENT  
CAPITAL PROJECT E-0935  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY MARYLAND  
SCALE AS SHOWN SHEET 15 OF 22

Tue Feb 27 14:26:07 1996 d:\341400\341400.dwg

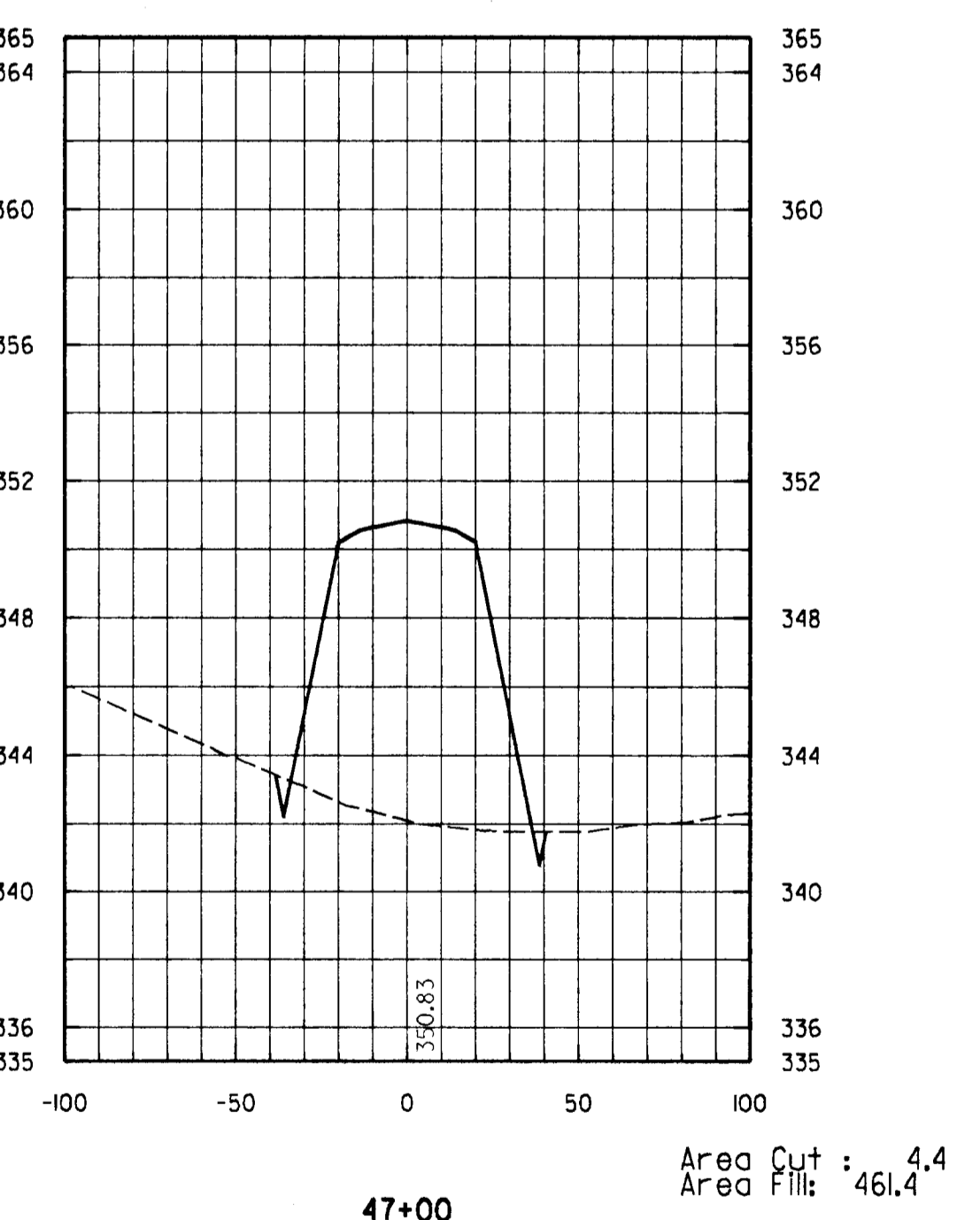
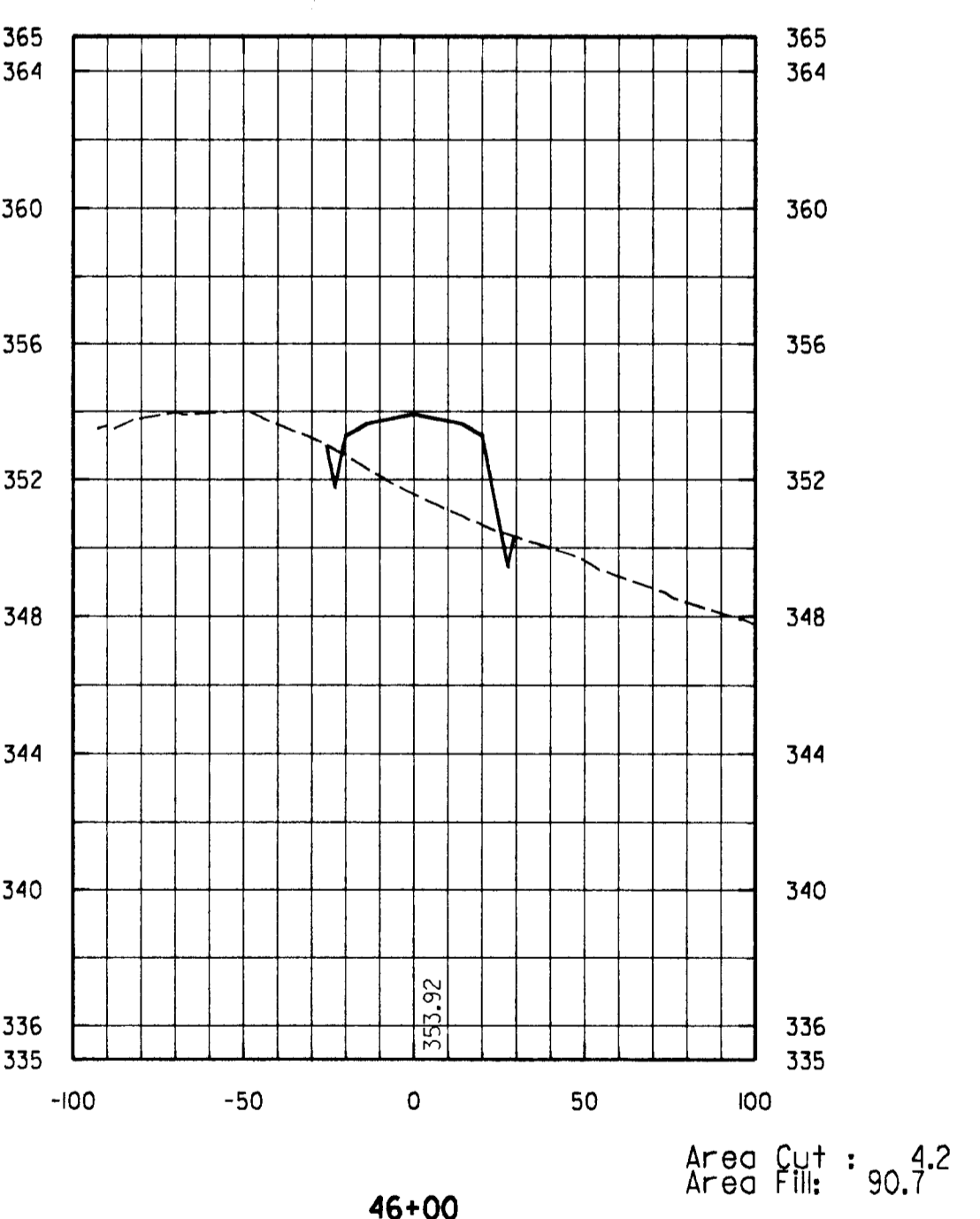
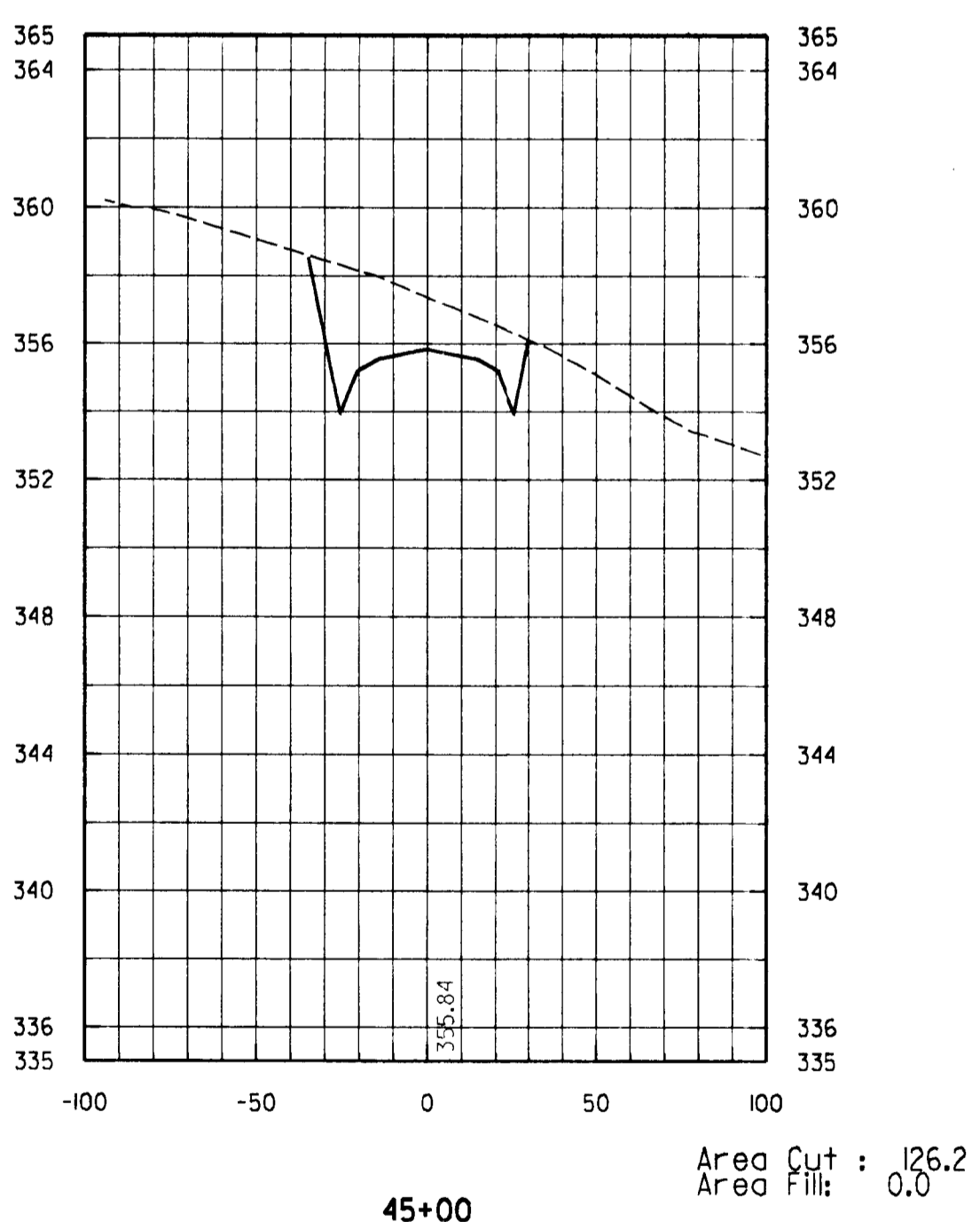
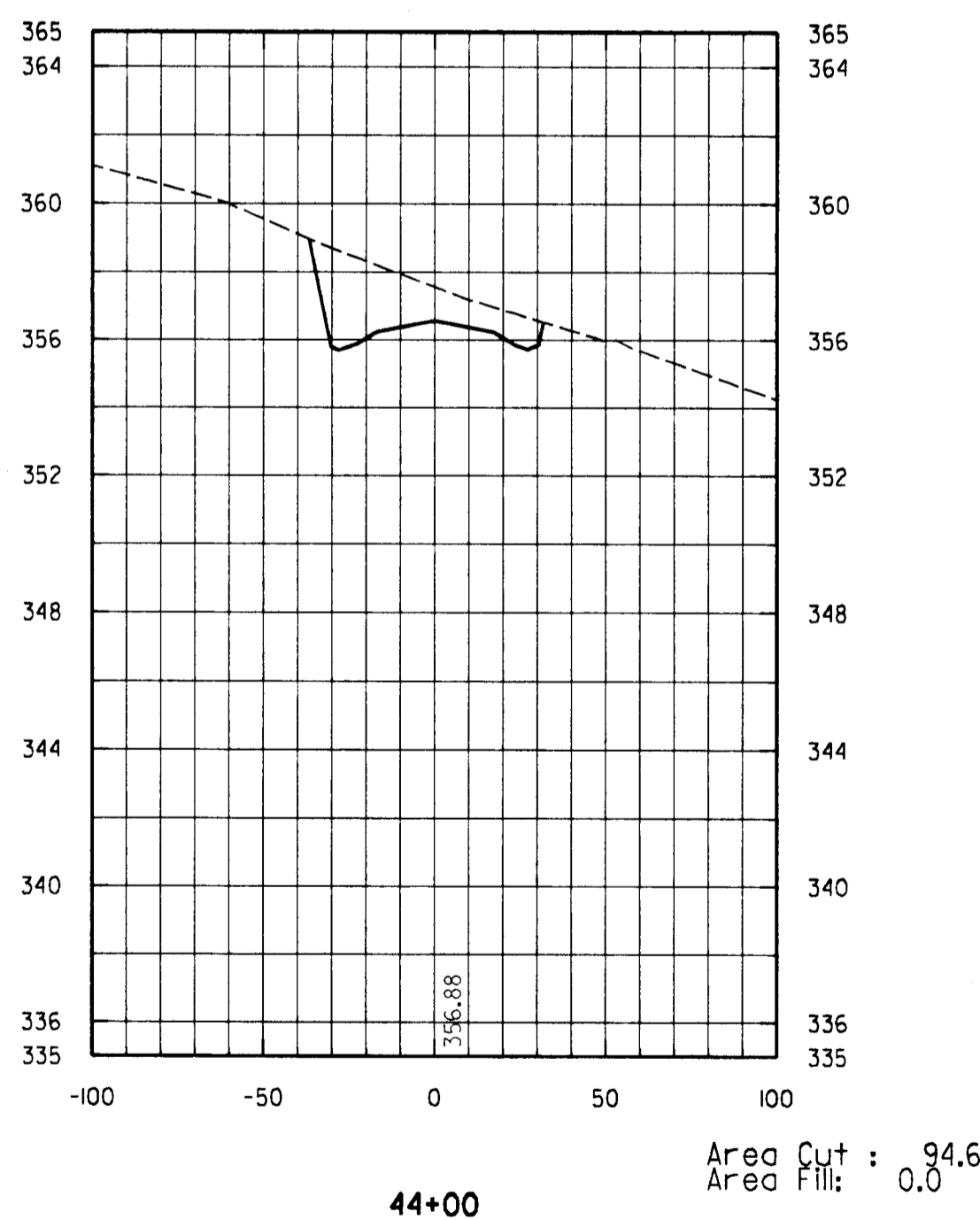
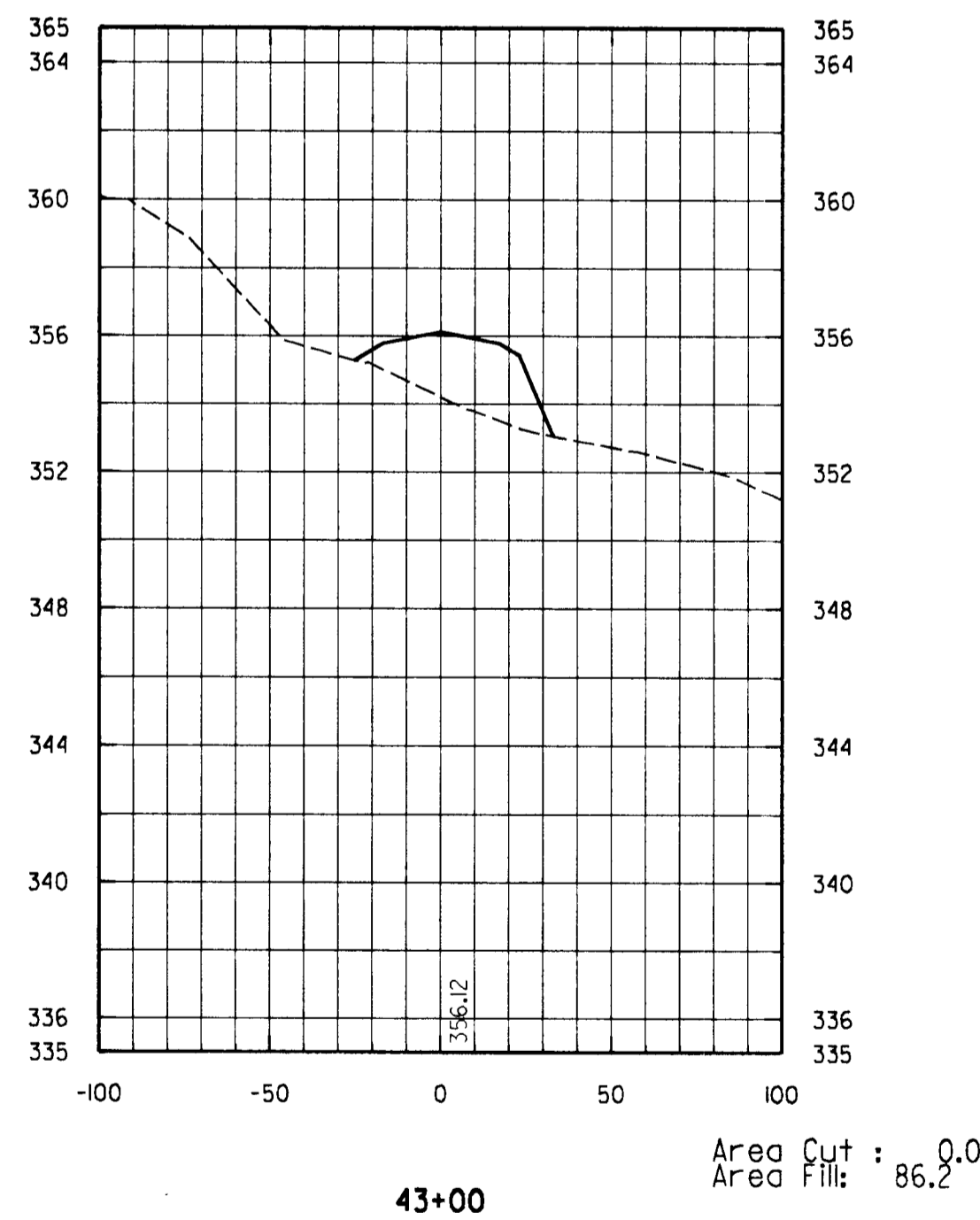
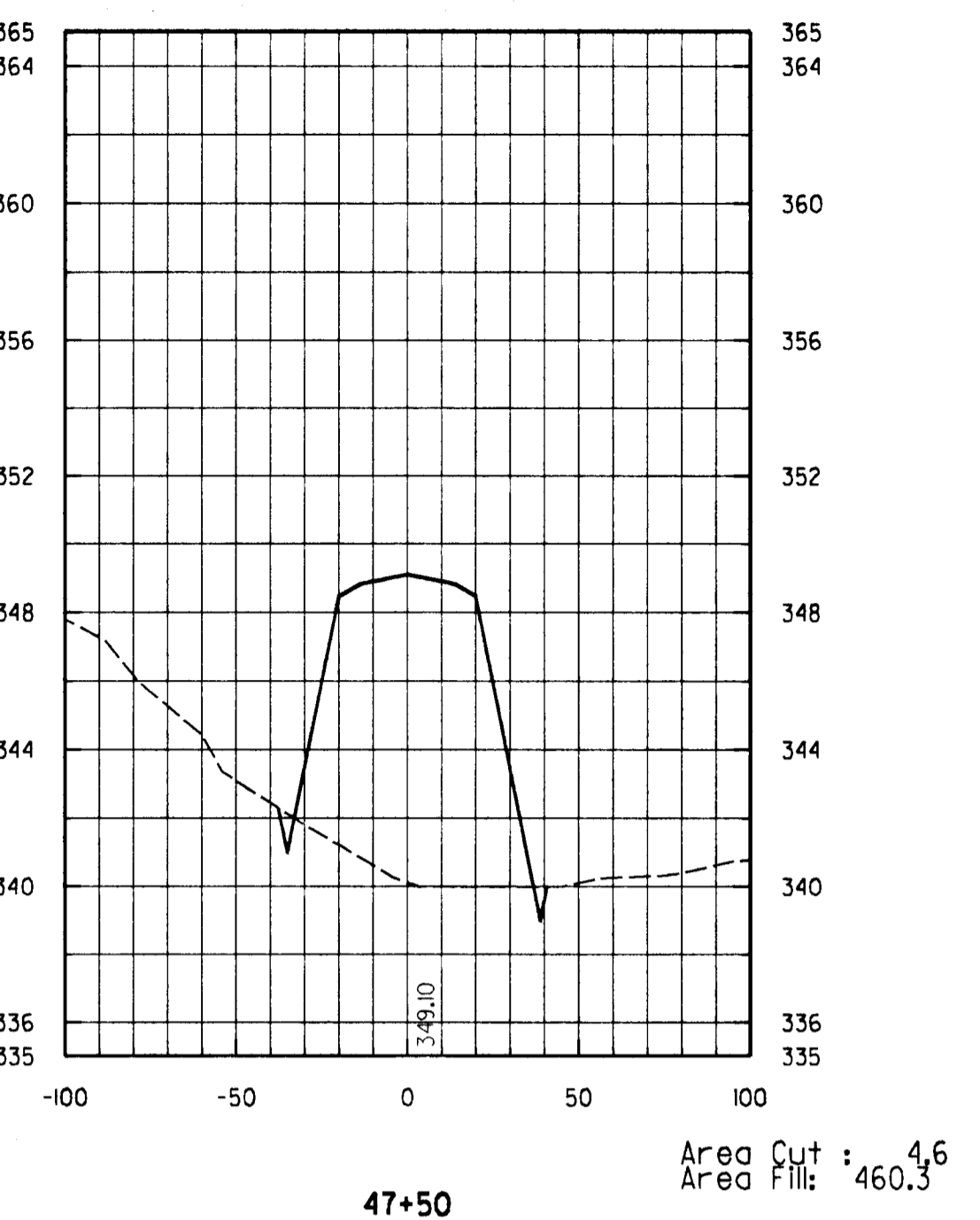
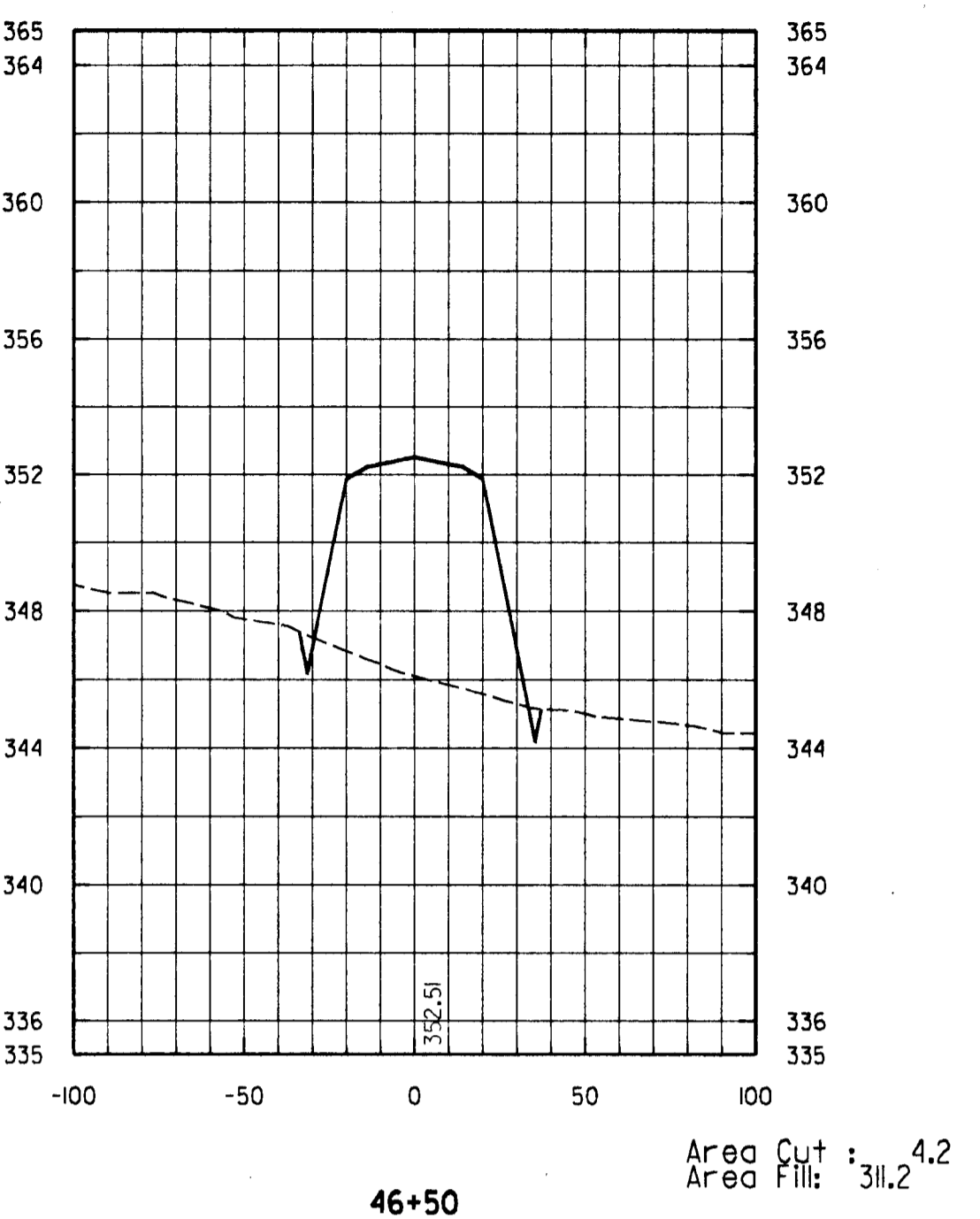
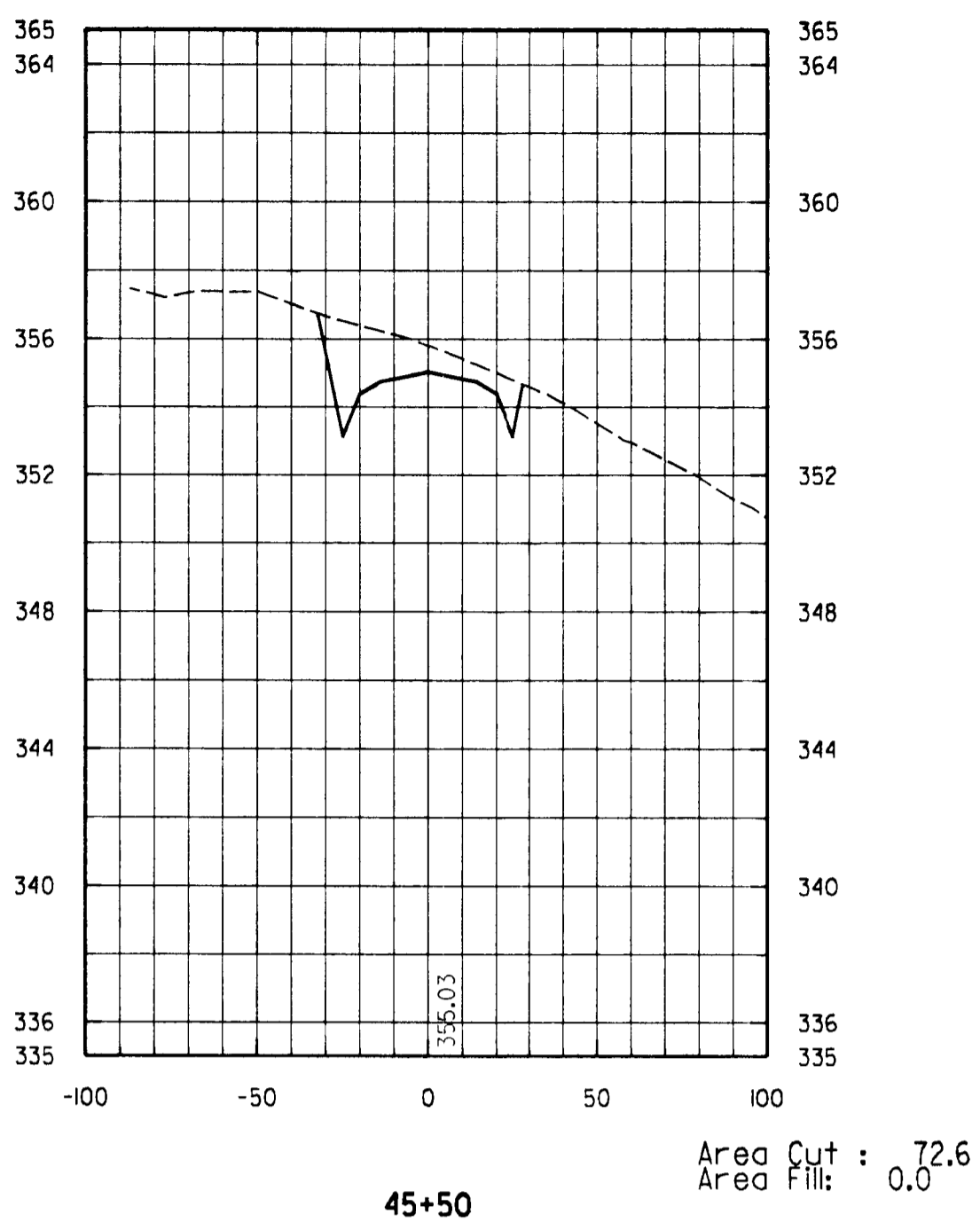
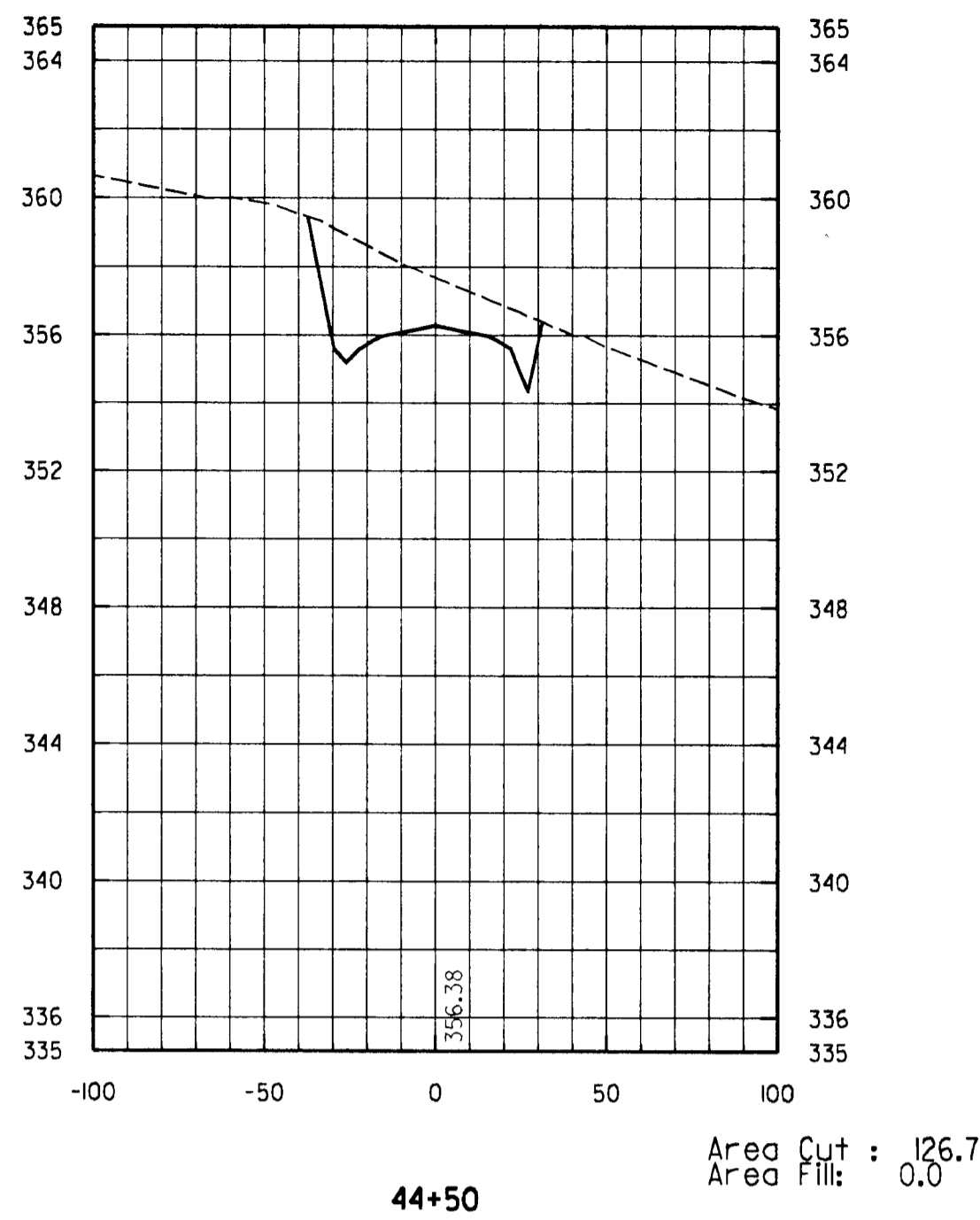
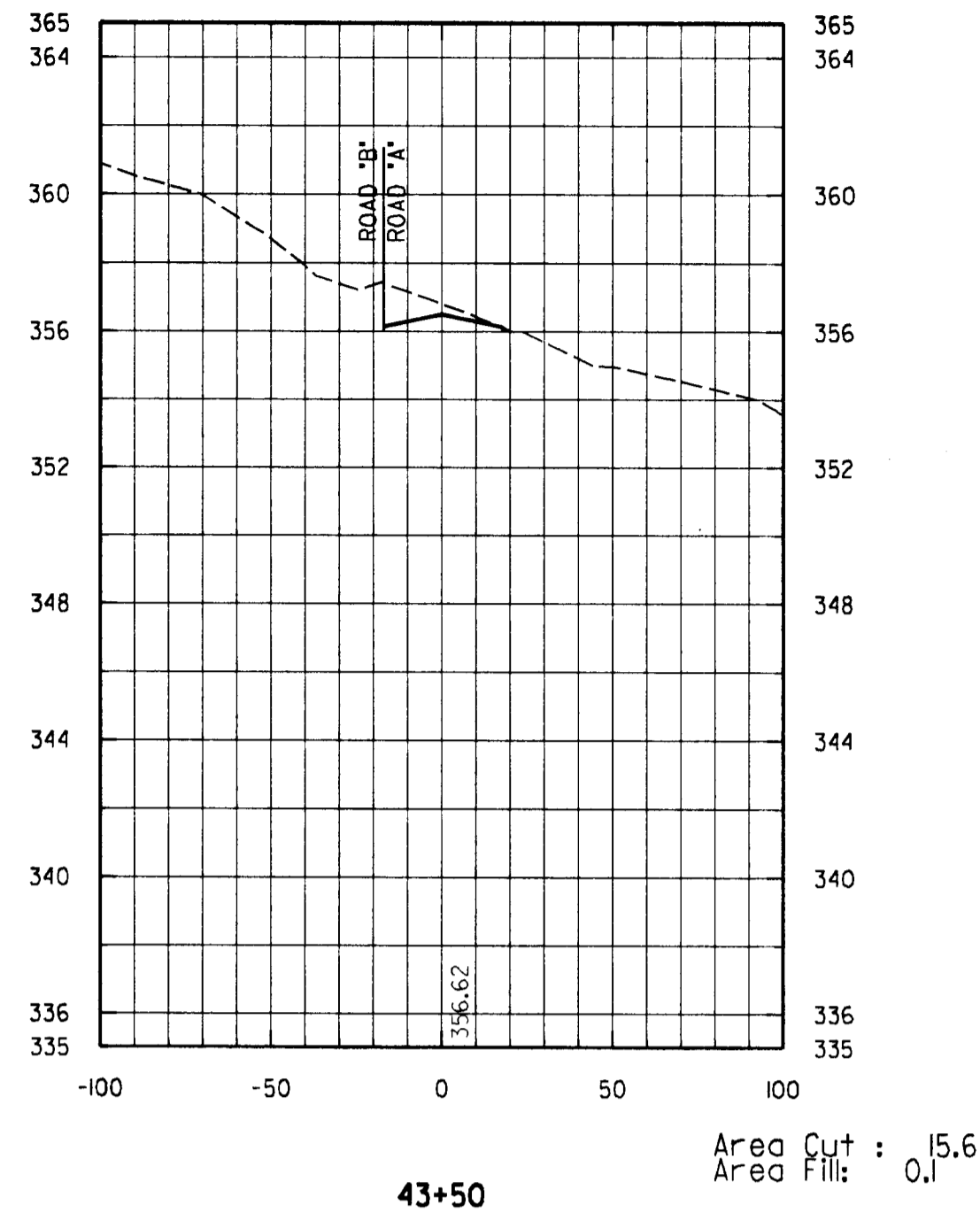
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102+50

NOTE: 1) EARTHWORK SHOWN IS RELATED TO FINISHED GRADE  
2) AREA UNITS - SQUARE FEET

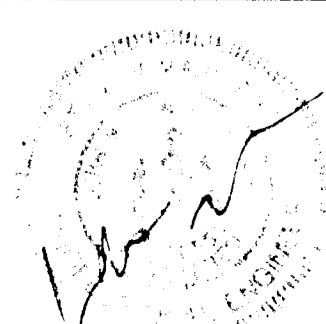
LEGEND  
 --- EXISTING GROUND  
 --- PROPOSED GRADE  
 --- PROPOSED C. ELEVATION

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James P. Lowe* 2/20/96  
DIRECTOR OF PUBLIC WORKS DATE  
*John M. Bielecki* 2-29-96  
CHIEF, BUREAU OF HIGHWAYS DATE

*Richard D. Brown* 2/20/96  
CHIEF, BUREAU OF ENGINEERING DATE  
*John A. Adams* 2/28/96  
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

**DMW**  
**Daft · McCune · Walker, Inc.**  
A Team of Land Planners, 200 East Pennsylvania Avenue  
Landscape Architects, Towson, Maryland 21286  
Engineers, Surveyors & Environmental Professionals 410 296 3333  
Fax 296 4705



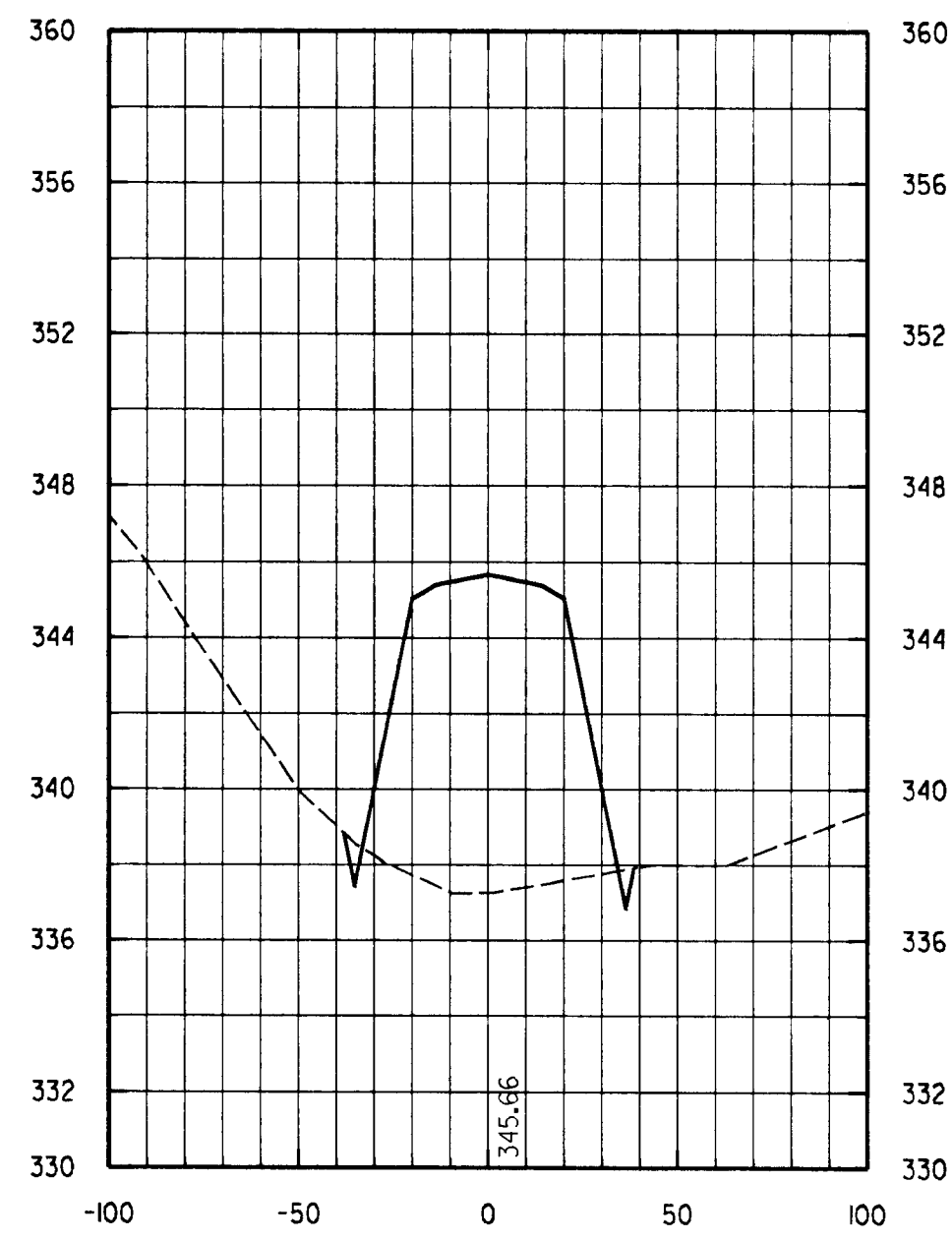
DESIGN BY:	JWS
DRAWN BY:	JWS
CHECKED BY:	JWR
DATE:	FEB. 5, 1996
BY NO.	
REVISION	
DATE	

CROSS SECTIONS  
ROAD "A"

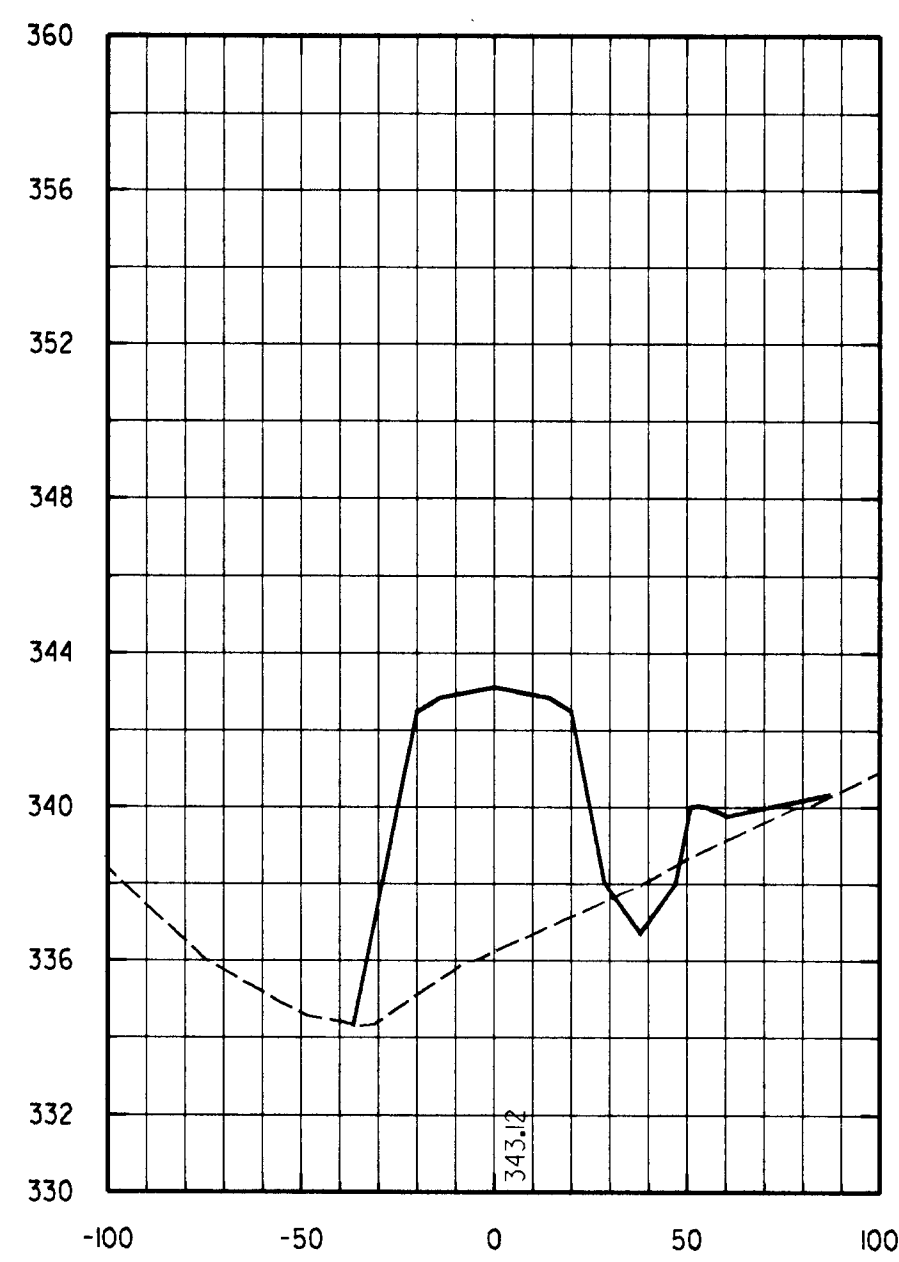
600 SCALE MAP NO. 47 BLOCK NO. 2

GORMAN ROAD REALIGNMENT  
CAPITAL PROJECT E-0935  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY MARYLAND

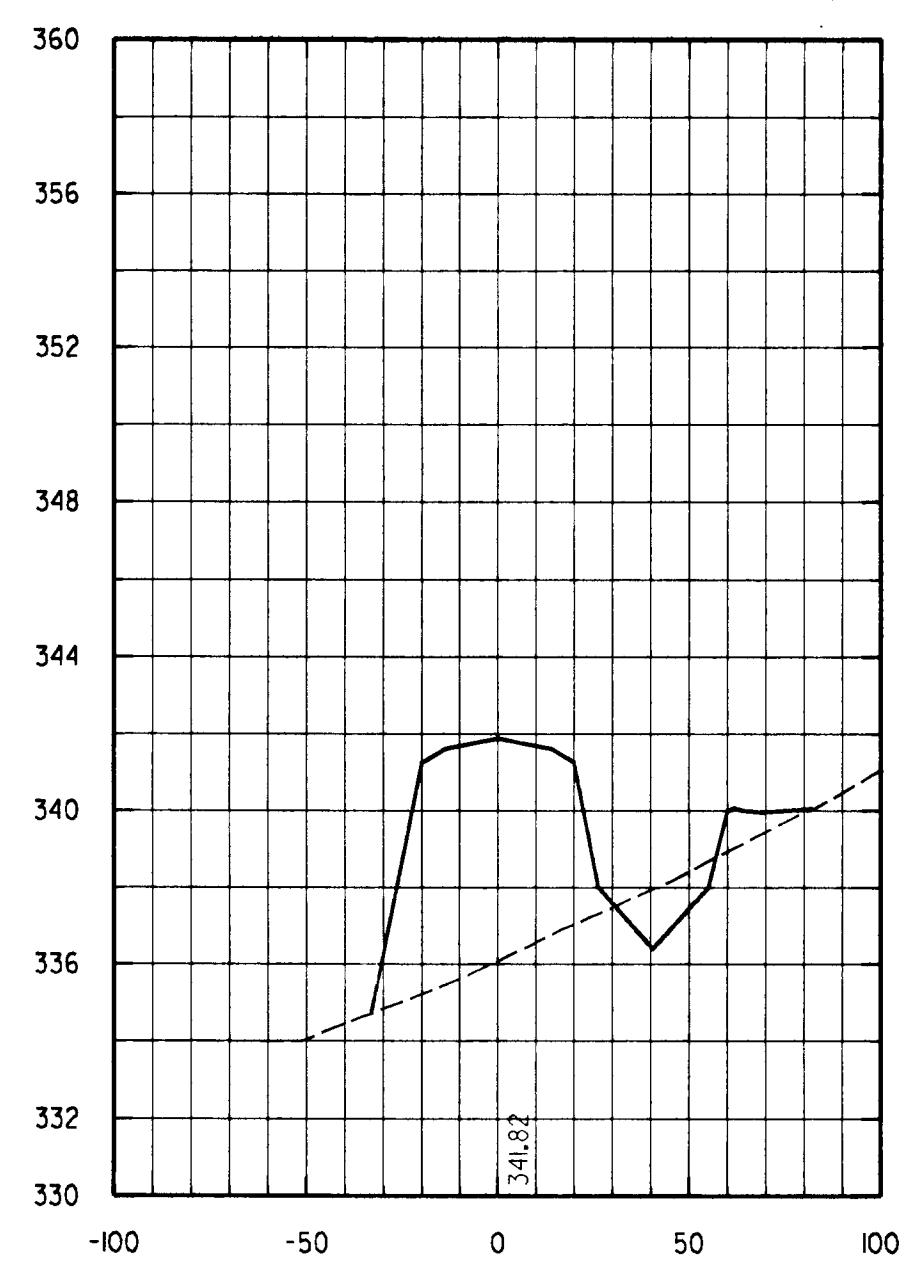
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HOR 1" = 50'  
SHEET  
19 OF 22



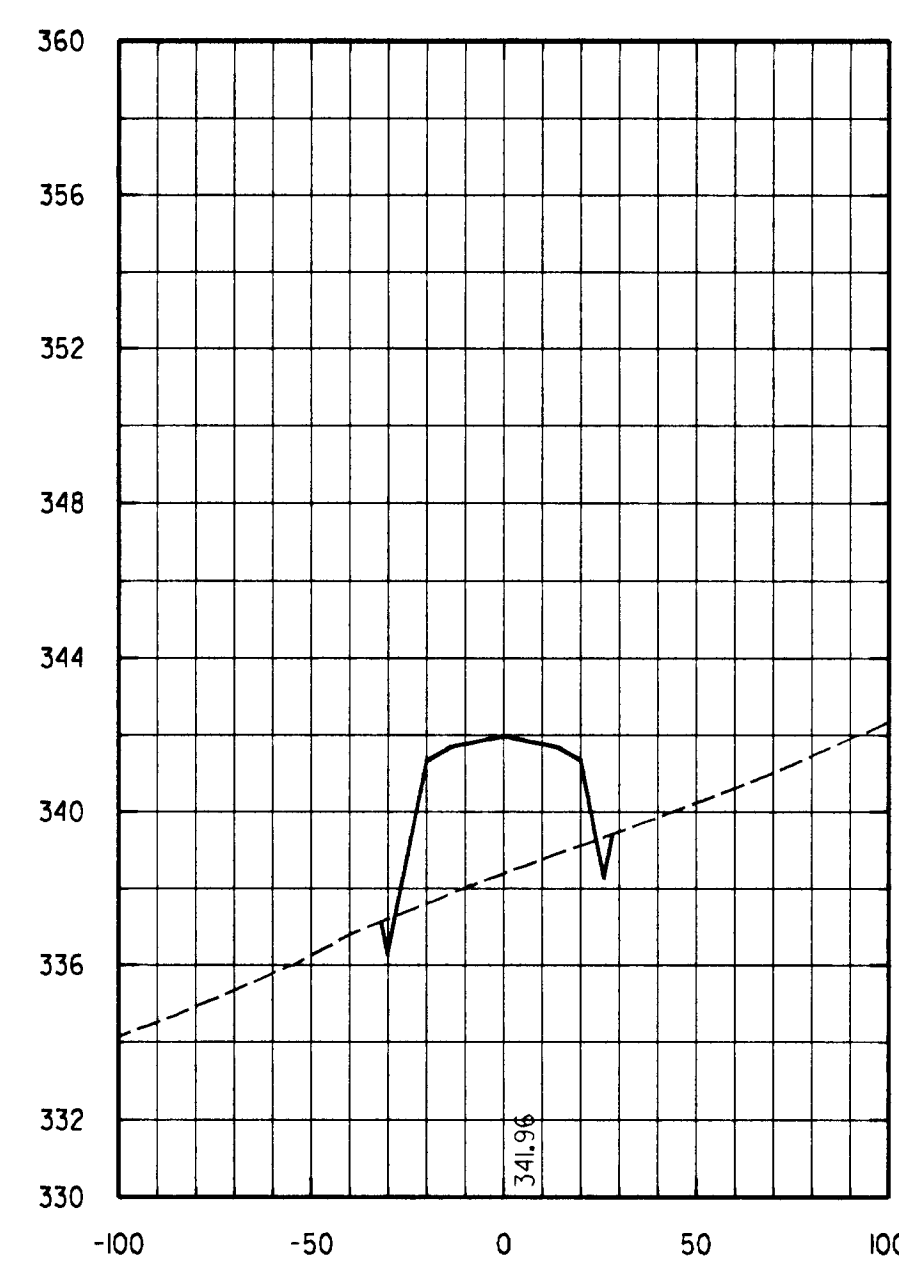
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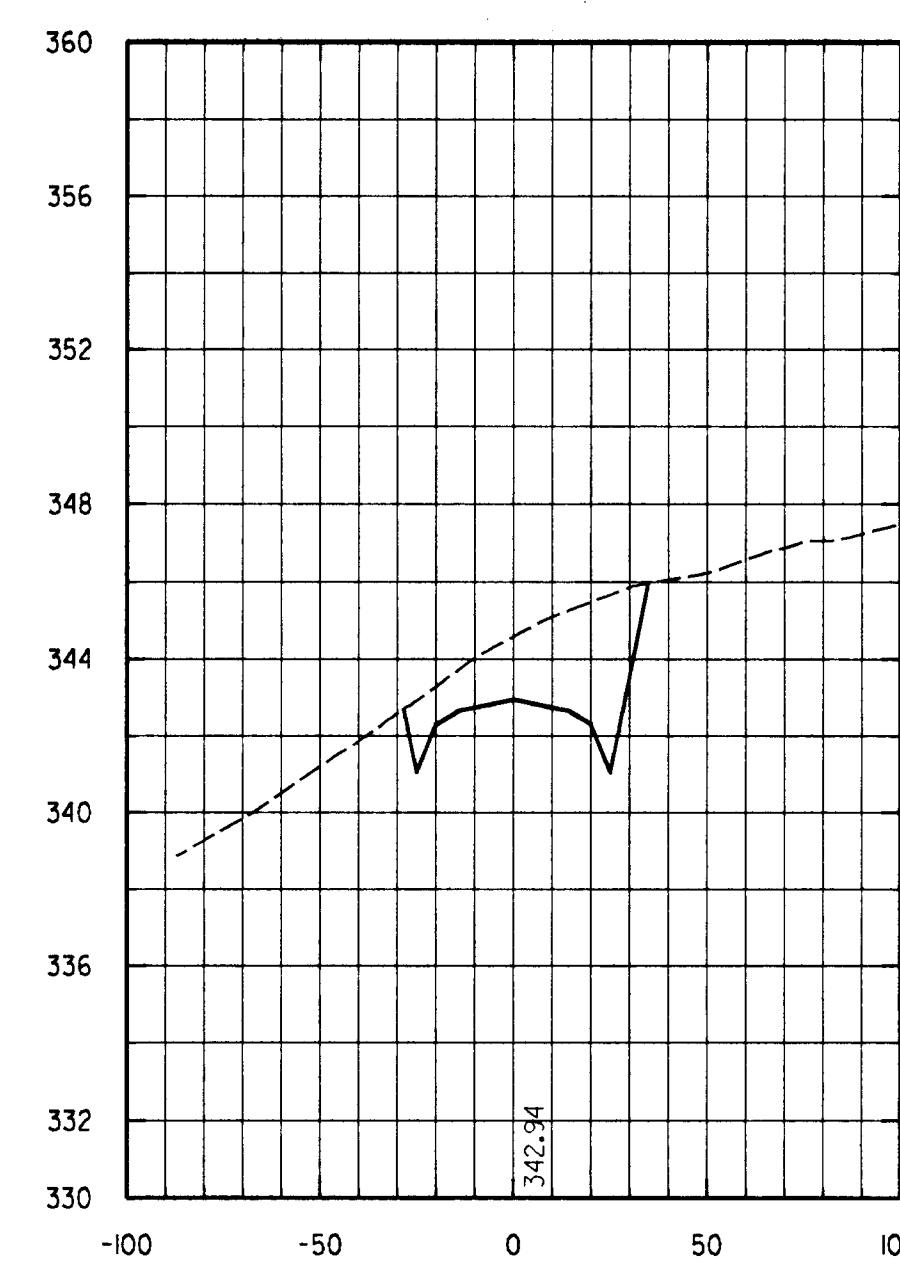
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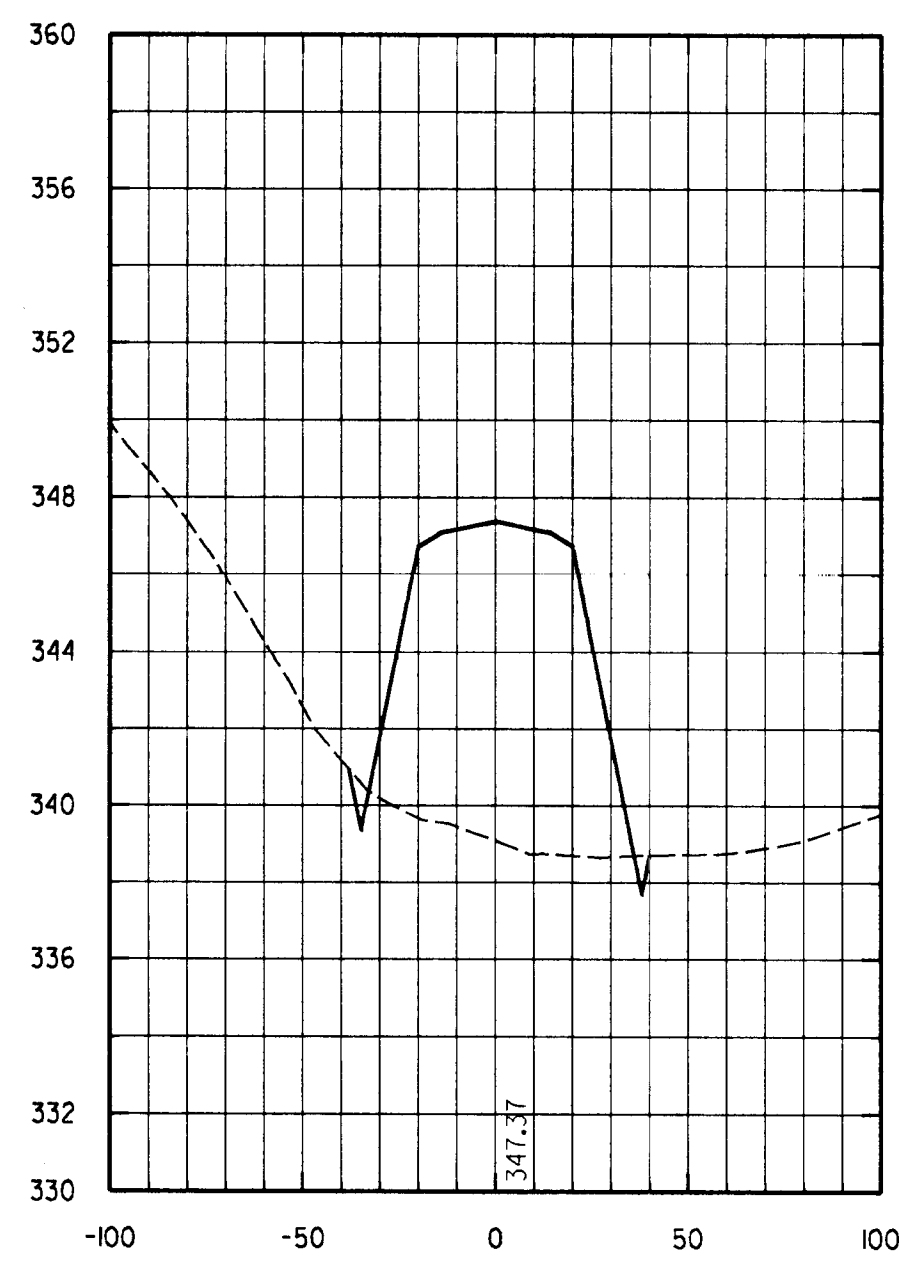
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51+50 Area Cut : 4.0  
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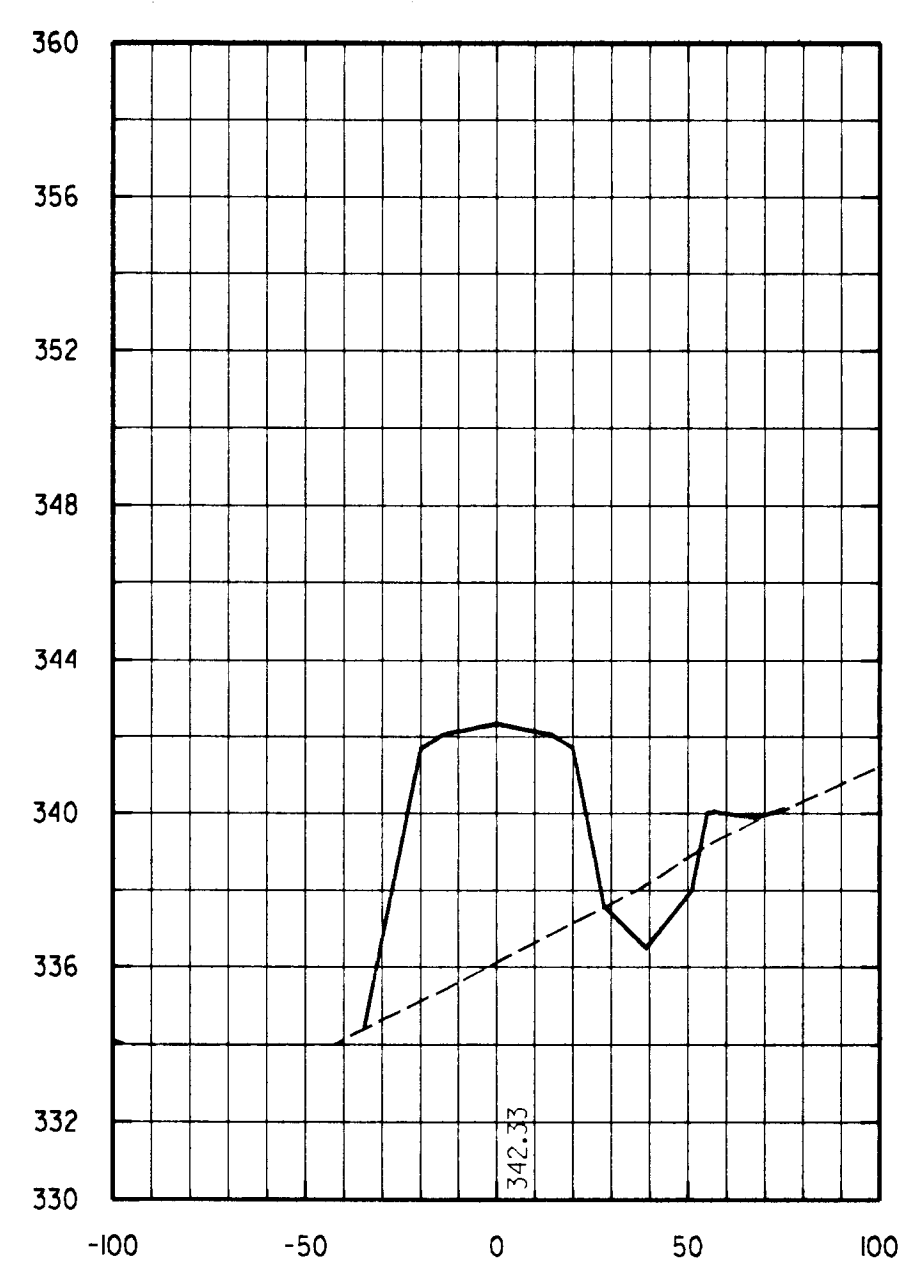
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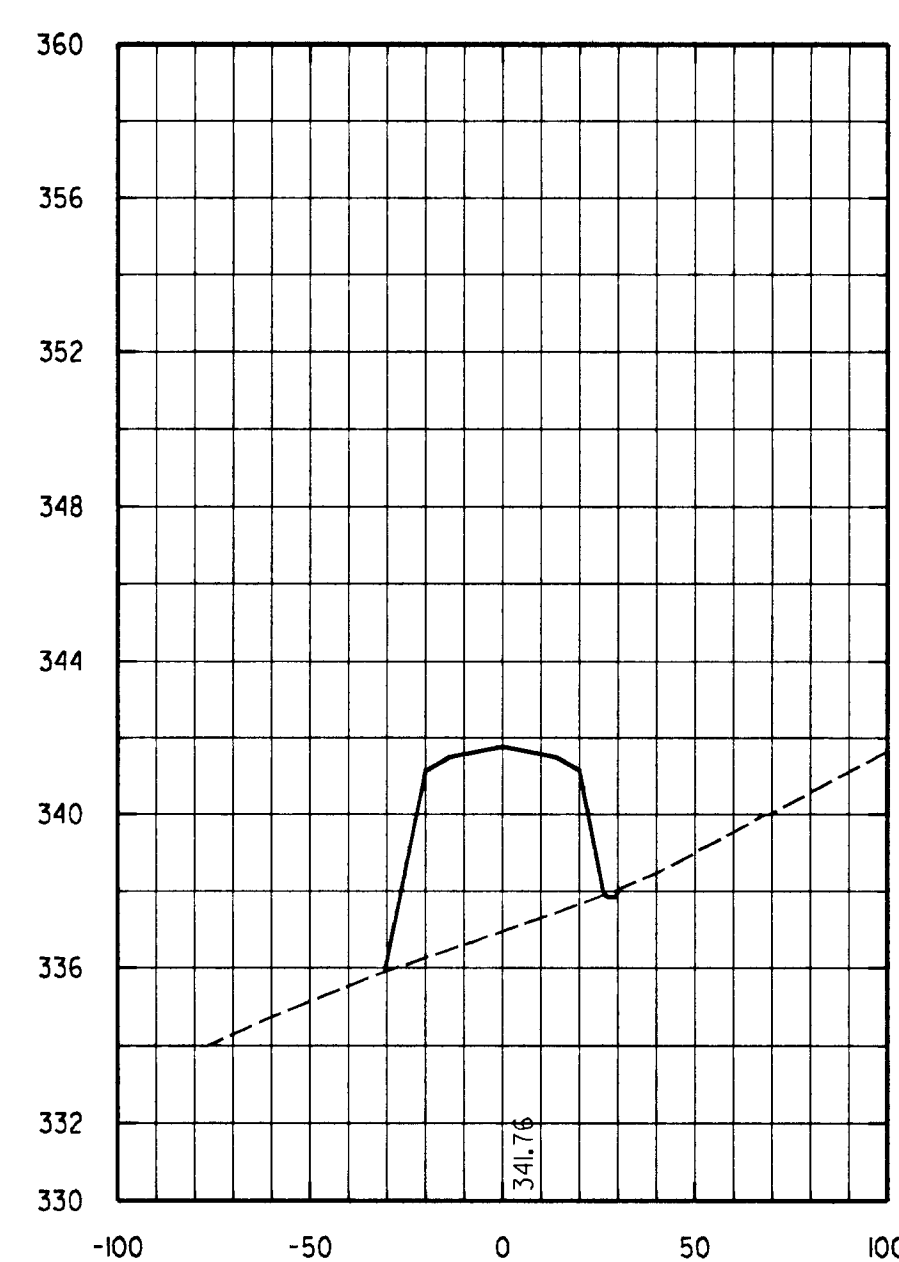
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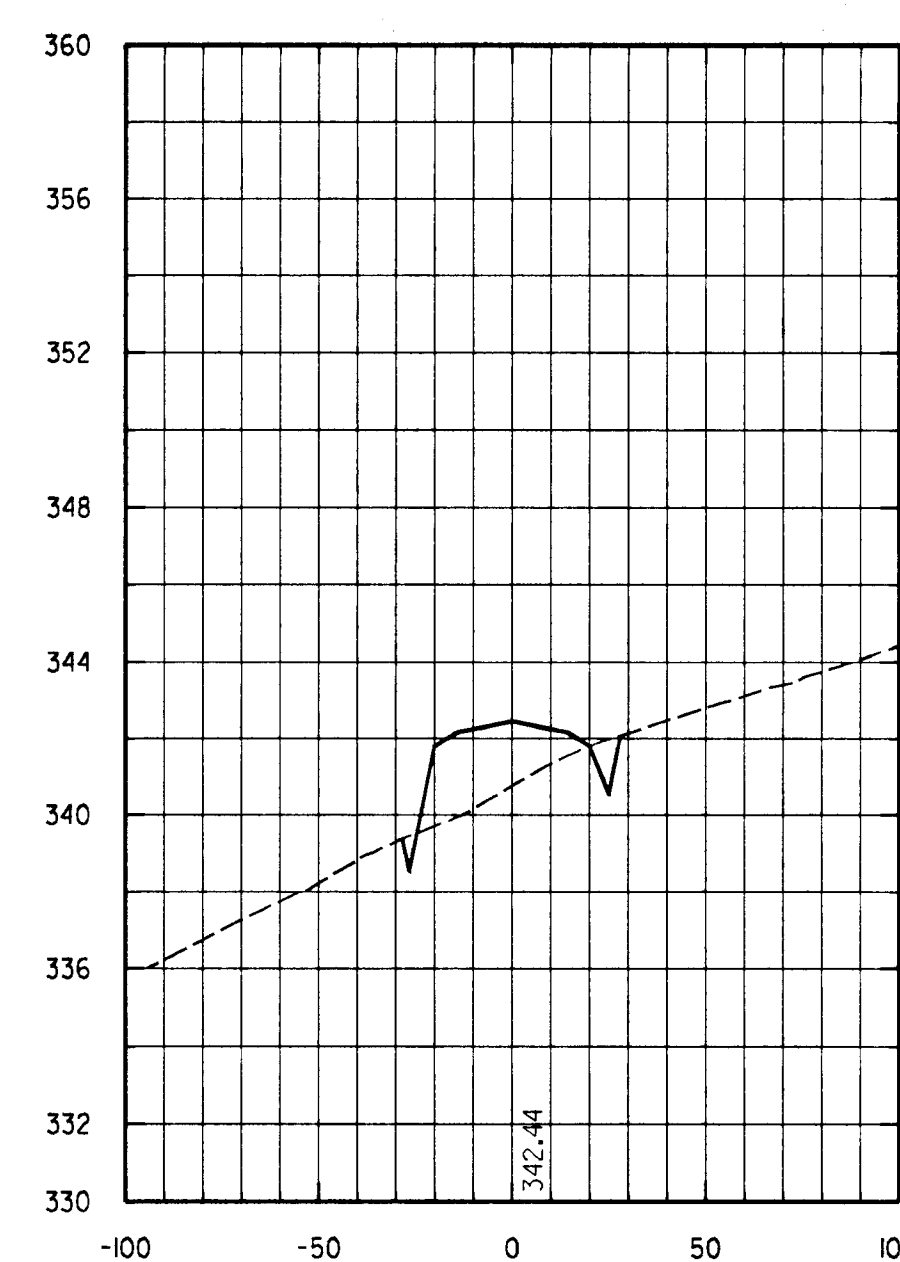
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Area Fill: 400.0



50+00 Area Cut : 25.1  
Area Fill: 312.8



51+00 Area Cut : 0.5  
Area Fill: 219.1



52+00 Area Cut : 7.5  
Area Fill: 62.5

LEGEND  
 EXISTING GROUND - - -  
 PROPOSED GRADE - -  
 PROPOSED C ELEVATION - - -  
 360.0

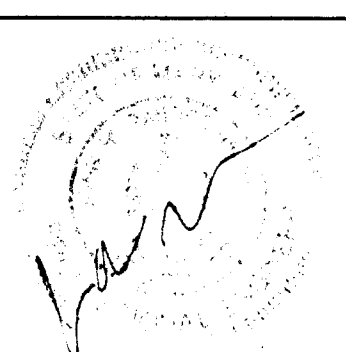
NOTE: 1) EARTHWORK SHOWN IS RELATED TO FINISHED GRADE  
 2) AREA UNITS - SQUARE FEET

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DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

Director of Public Works: *Robert M. ...* 2/25/96  
 Chief, Bureau of Engineering: *Robert M. ...* 2/25/96  
 Chief, Bureau of Highways: *Robert M. ...* 2/25/96  
 Chief, Division of Transportation Projects and Watershed Management: *Robert M. ...* 2/25/96

**DMW**  
**Daft · McCune · Walker, Inc.**  
 A Team of Land Planners, 200 East Pennsylvania Avenue, Towson, Maryland 21286  
 Landscape Architects, 410 296 3333  
 Engineers, Surveyors & Environmental Professionals, Fax 296 4705

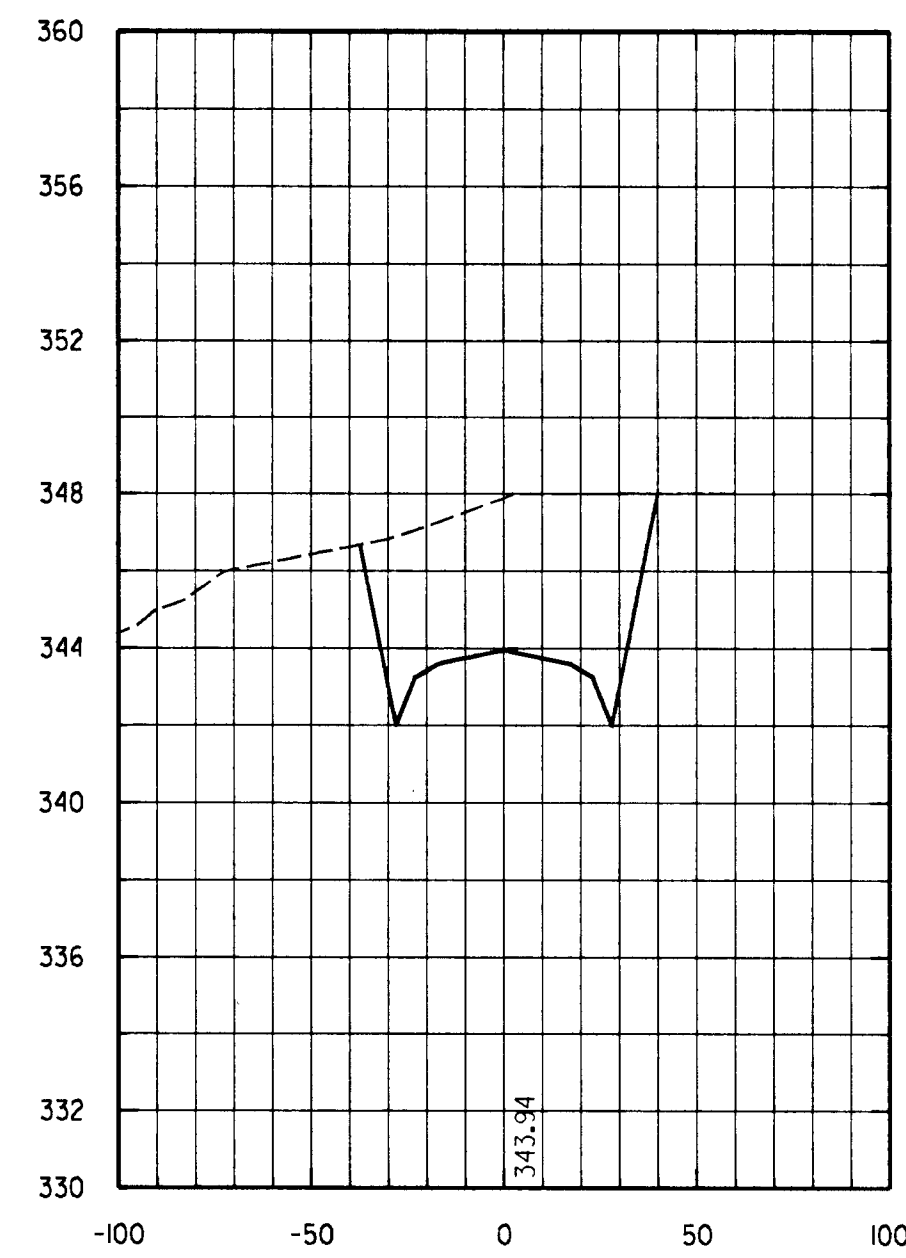


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DRAWN BY:	JWS
CHECKED BY:	JWR
DATE:	FEB. 5, 1996
BY NO.	
REVISION	
DATE	

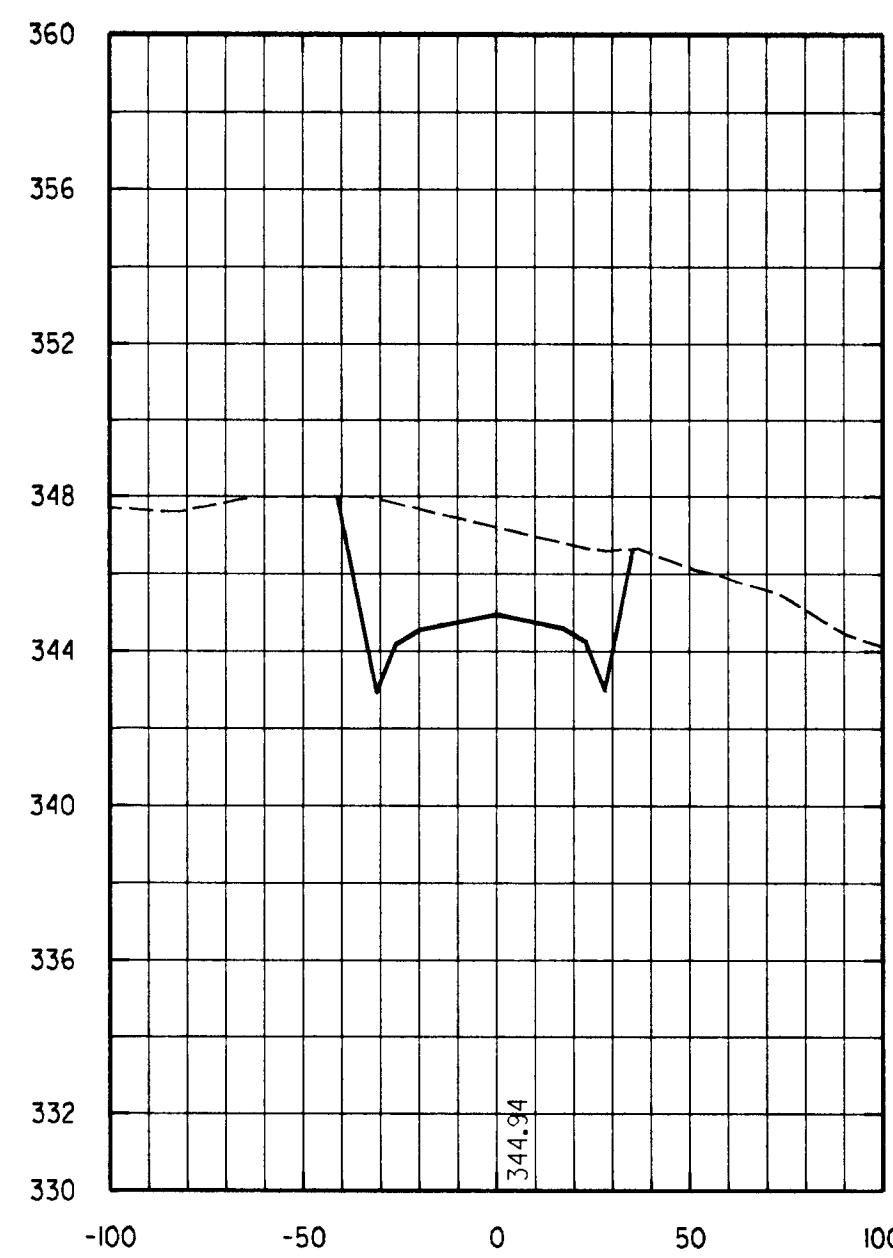
CROSS SECTIONS  
 ROAD "A"  
 600 SCALE MAP NO. 47 BLOCK NO. 2

GORMAN ROAD REALIGNMENT  
 CAPITAL PROJECT E-0935  
 ELECTION DISTRICT NO. 6  
 HOWARD COUNTY MARYLAND

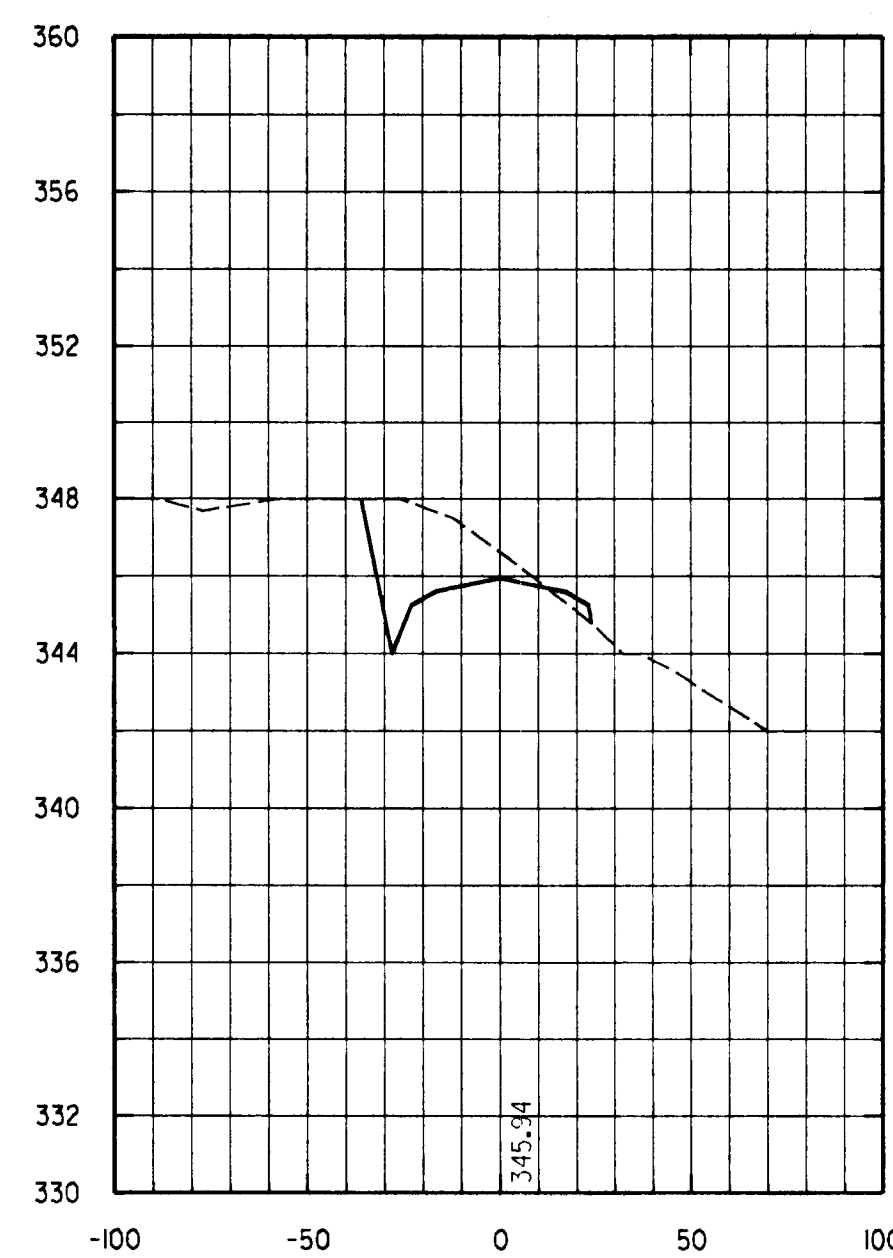
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 SHEET  
 20 OF 22



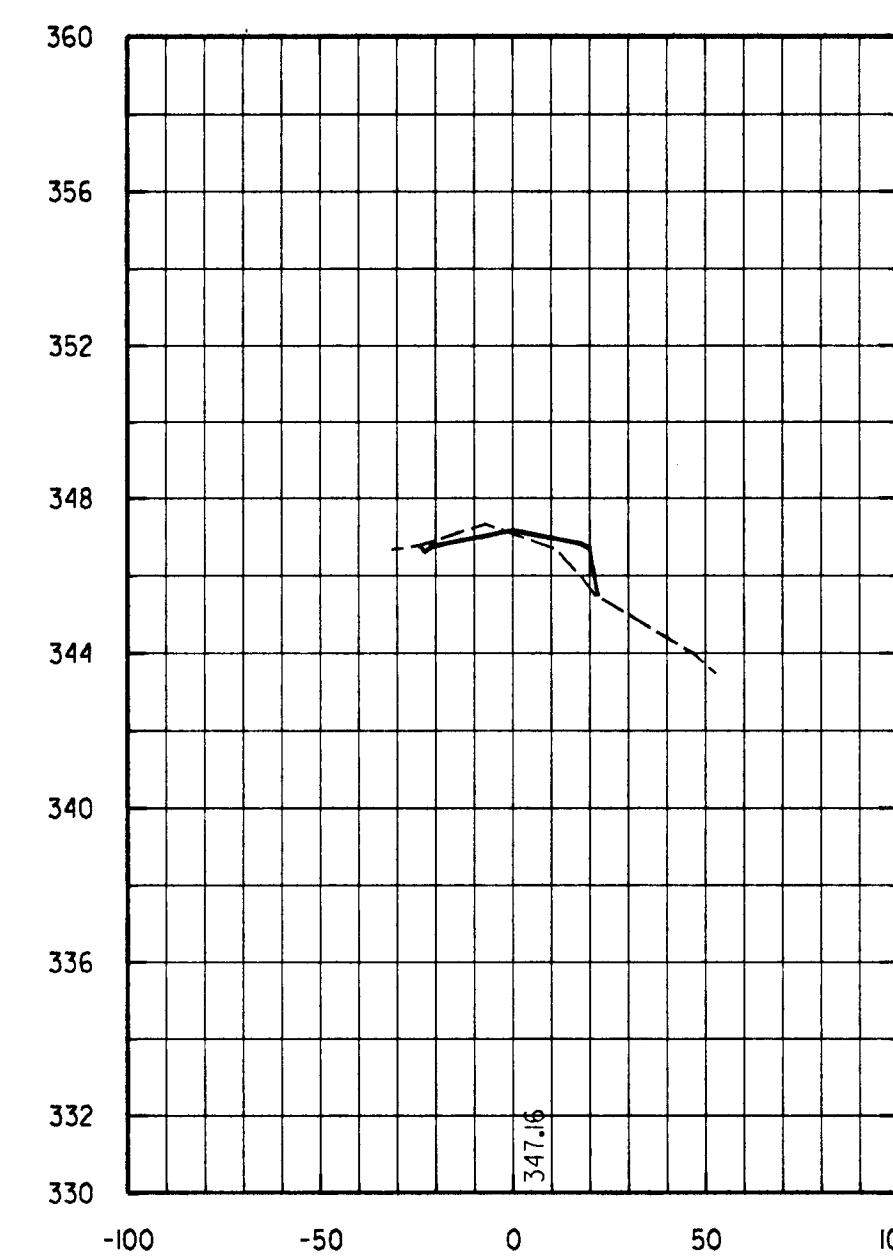
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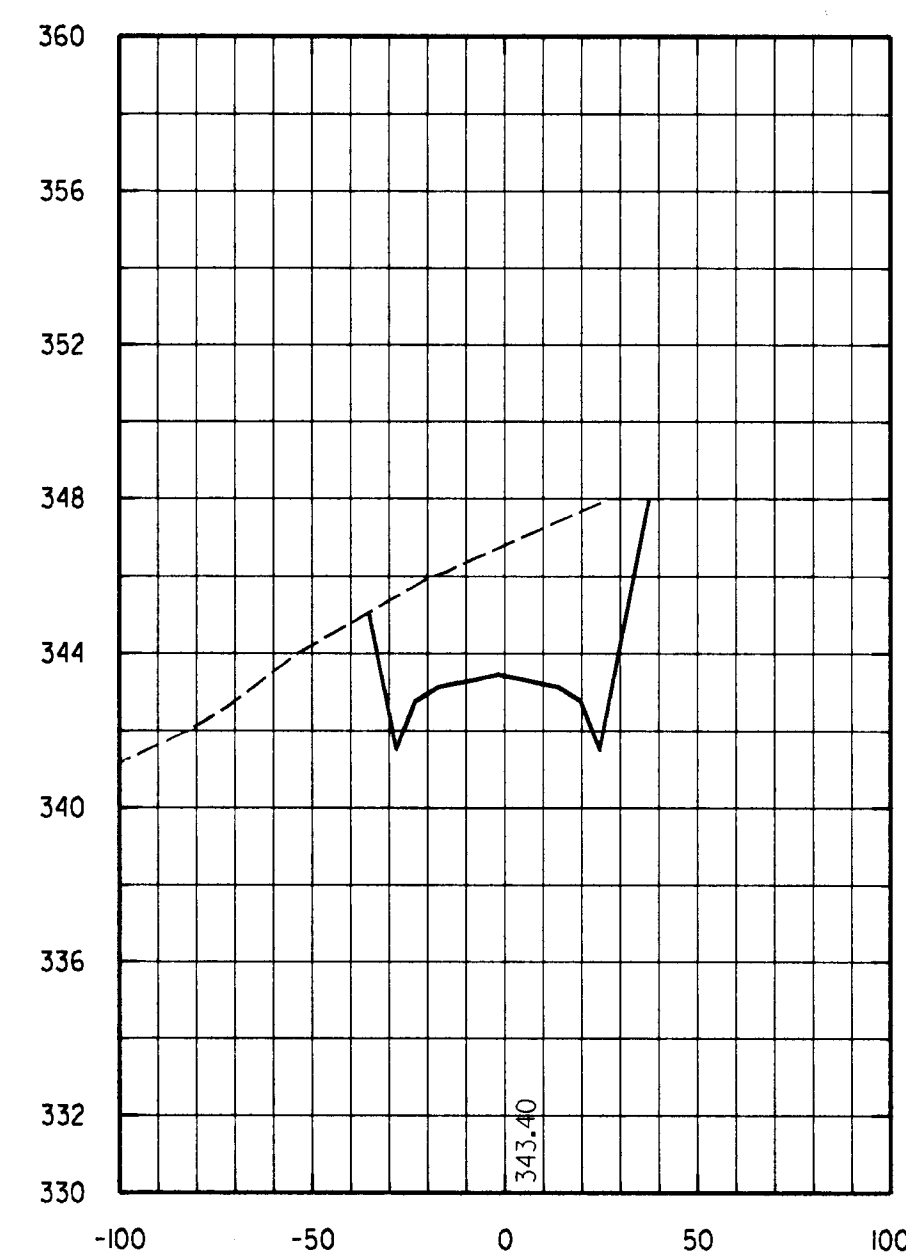
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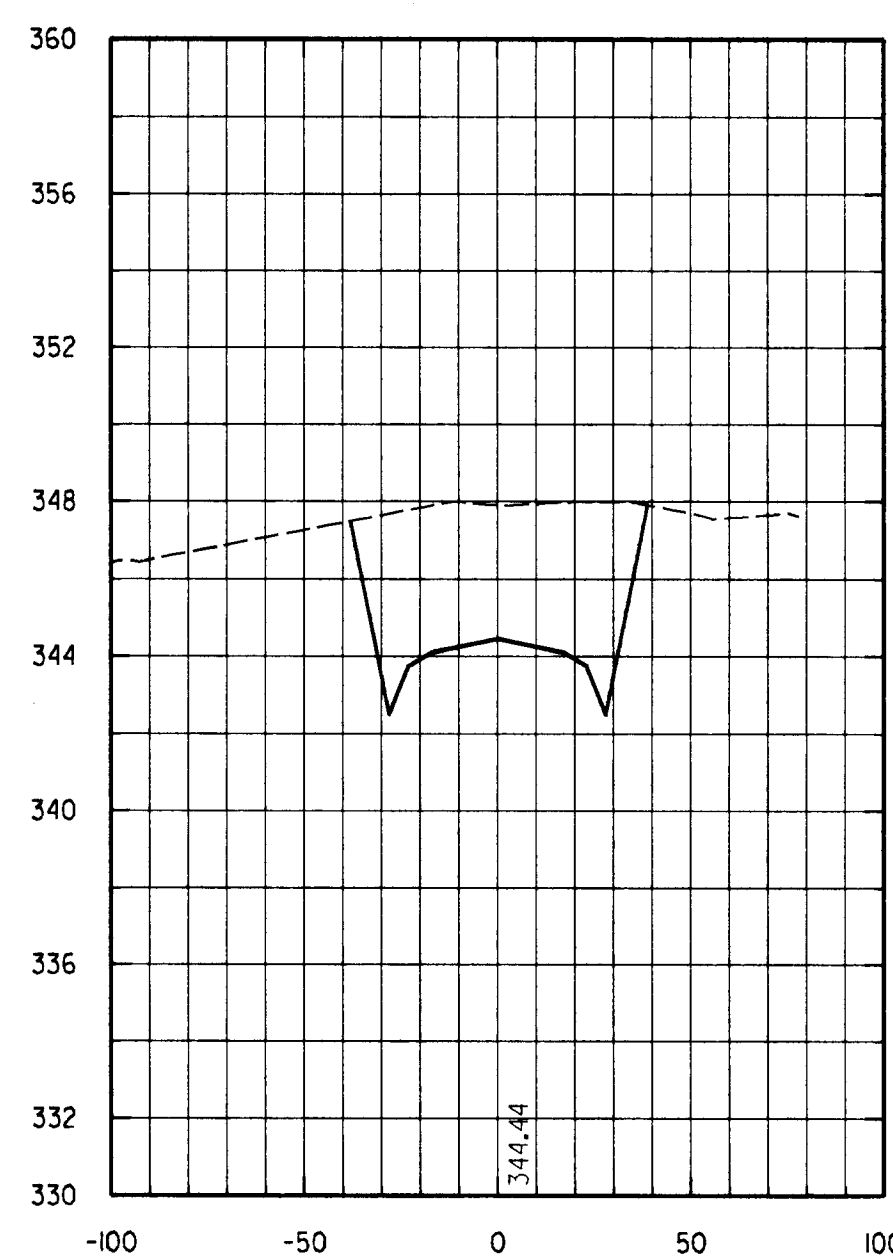
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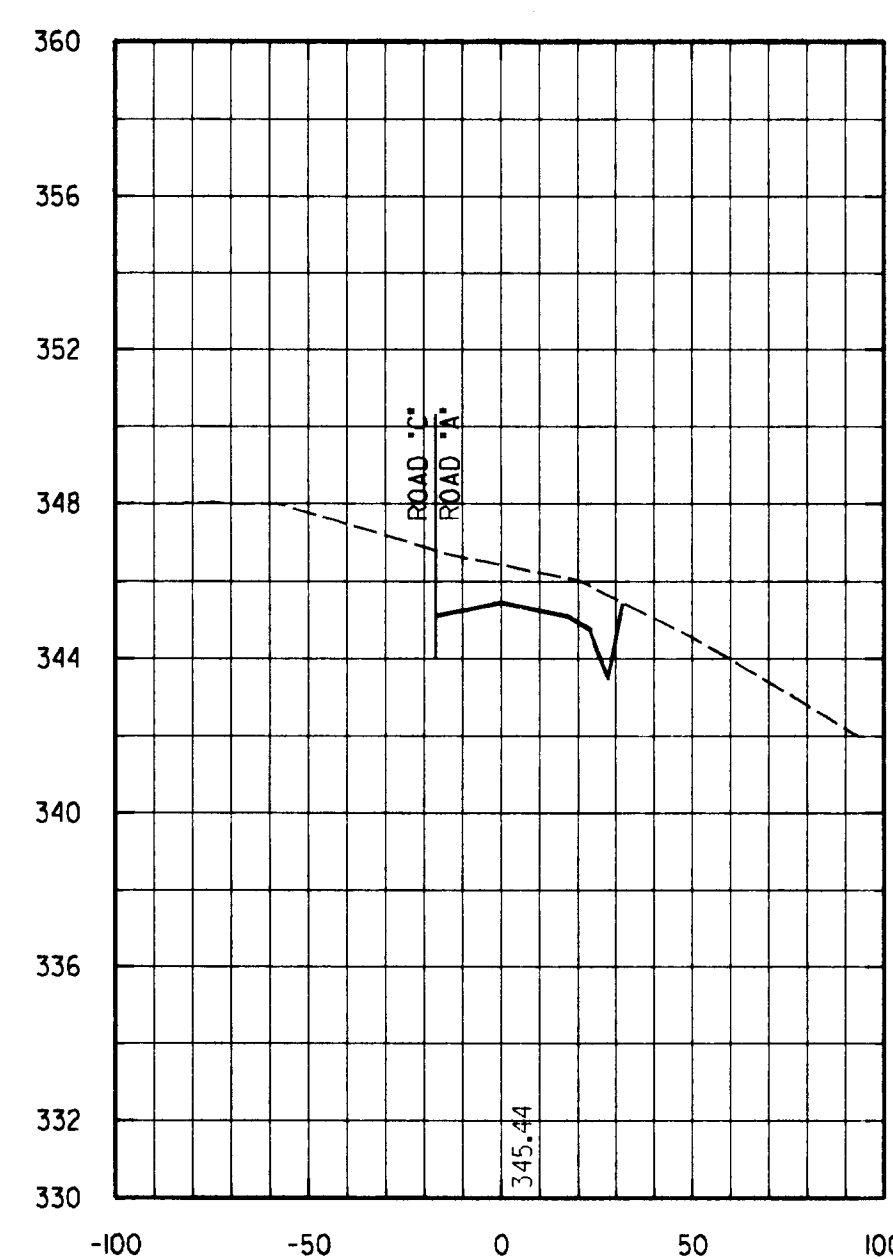
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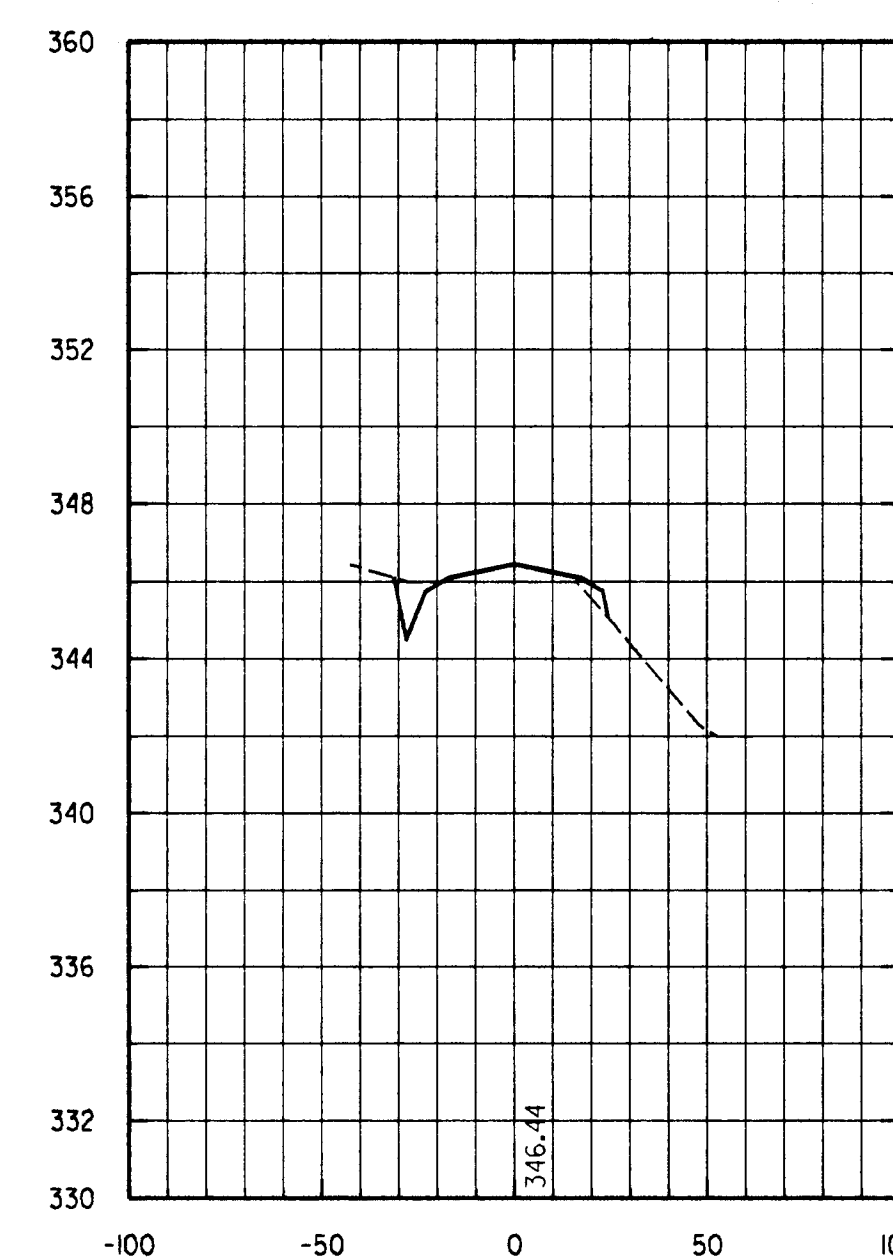
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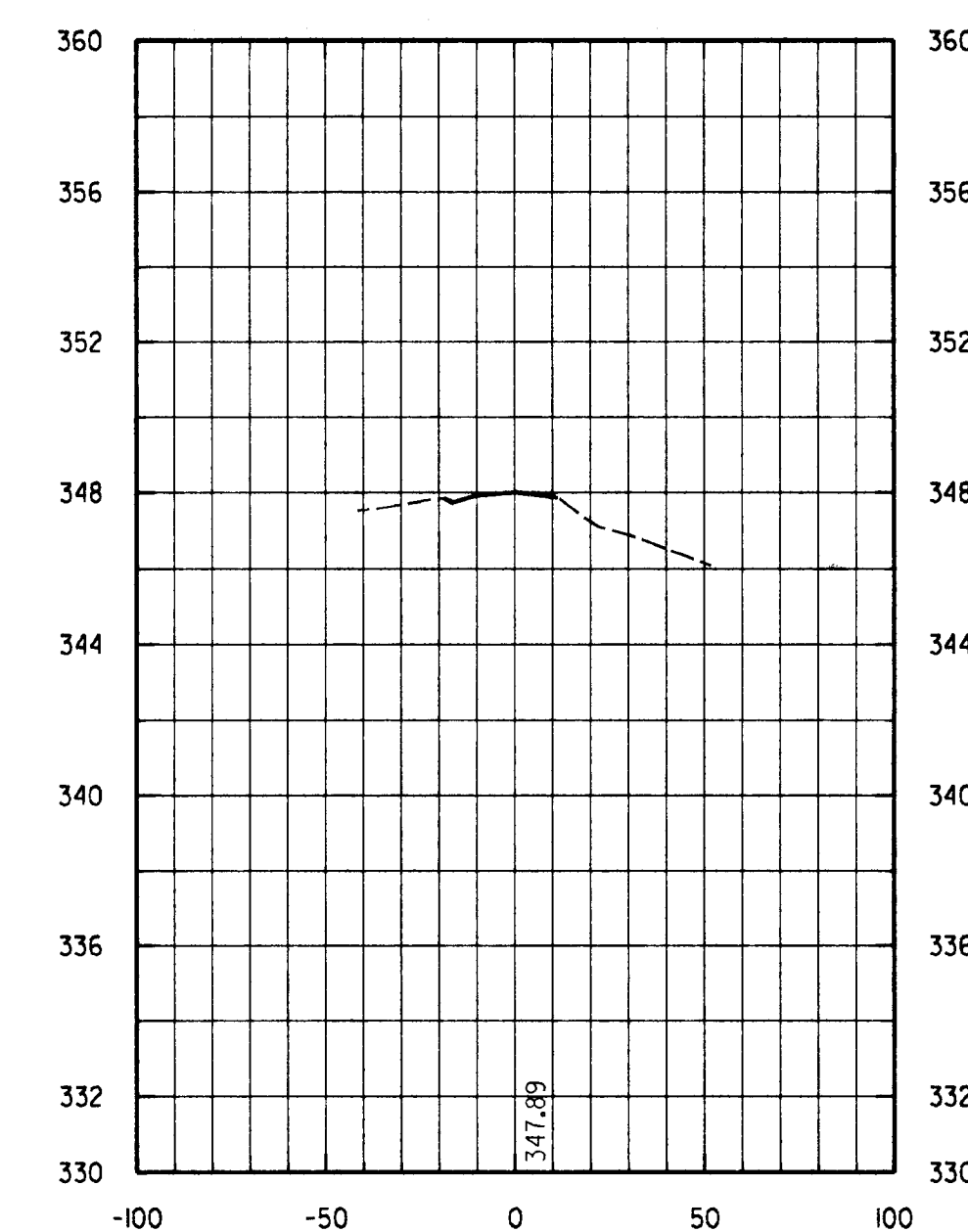
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55+00 Area Cut : 58.2  
Area Fill: 0.0



56+00 Area Cut : 7.4  
Area Fill: 11.7



57+00 Area Cut : 0.8  
Area Fill: 0.0

LEGEND  
 EXISTING GROUND   
 PROPOSED GRADE   
 PROPOSED C ELEVATION

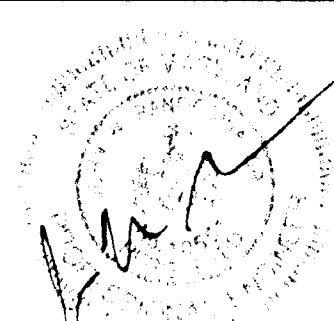
NOTE: 1) EARTHWORK SHOWN IS RELATED TO FINISHED GRADE  
 2) AREA UNITS - SQUARE FEET

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DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*Camille A. Linn* 2/24/96  
 DIRECTOR OF PUBLIC WORKS DATE  
*William M. Blanche* 2/28/96  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*Richard J. Ryan* 2/28/96  
 CHIEF, BUREAU OF ENGINEERING DATE  
*Michael A. Anderson* 2/28/96  
 CHIEF, DIVISION OF TRANSPORTATION  
 PROJECTS AND WATERSHED MANAGEMENT DATE

**DMW**  
**Daft · McCune · Walker, Inc.**  
 A Team of Land Planners, 200 East Pennsylvania Avenue  
 Landscape Architects, Towson, Maryland 21286  
 Engineers, Surveyors & 410 296 3333  
 Environmental Professionals Fax 296 4705



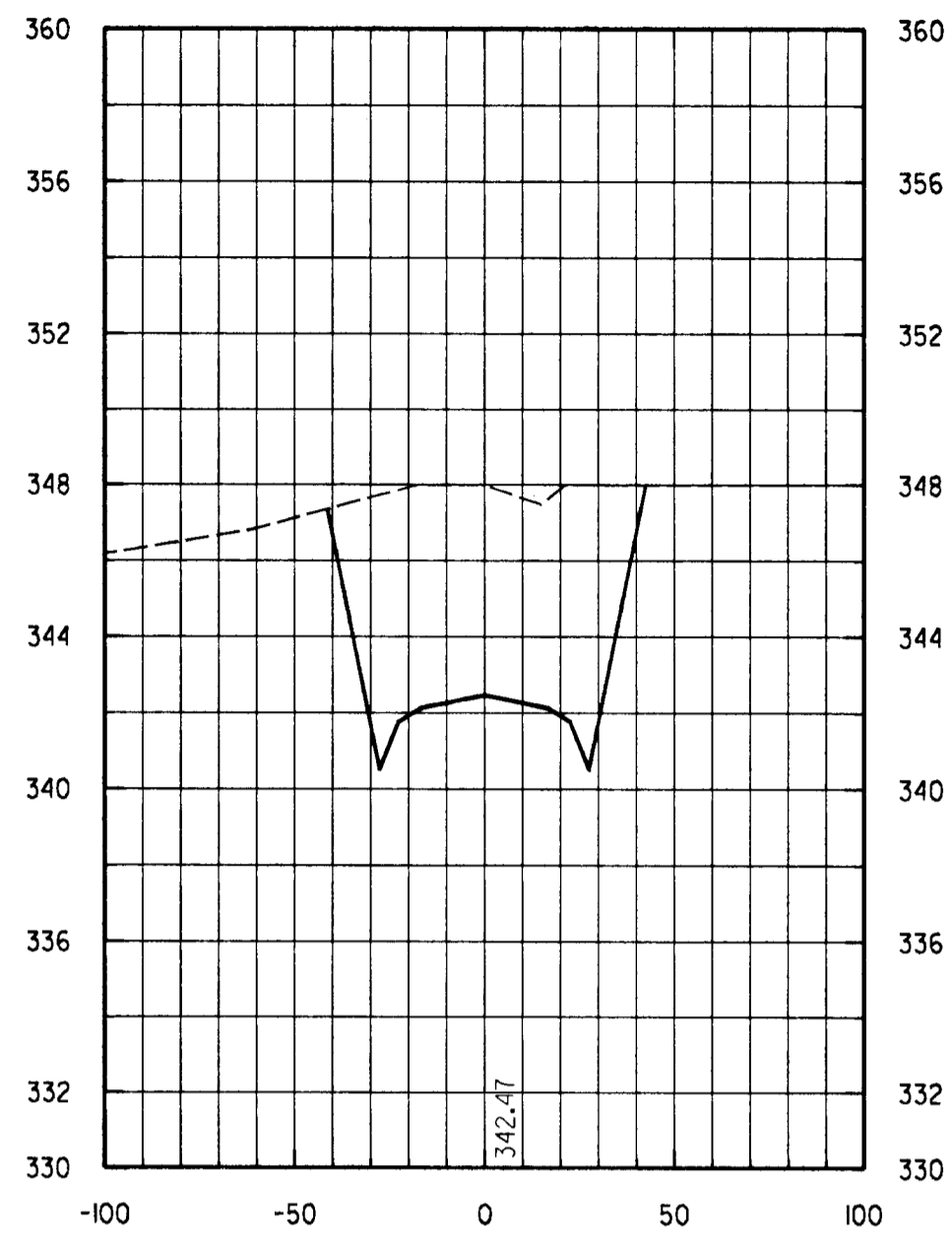
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DRAWN BY:	JWS			
CHECKED BY:	JWR			
DATE:	FEB. 5, 1996			
BY	NO.	REVISION	DATE	

CROSS SECTIONS  
 ROAD "A"

600 SCALE MAP NO. 47 BLOCK NO. 2

GORMAN ROAD REALIGNMENT  
 CAPITAL PROJECT E-0935  
 ELECTION DISTRICT NO. 6  
 HOWARD COUNTY MARYLAND

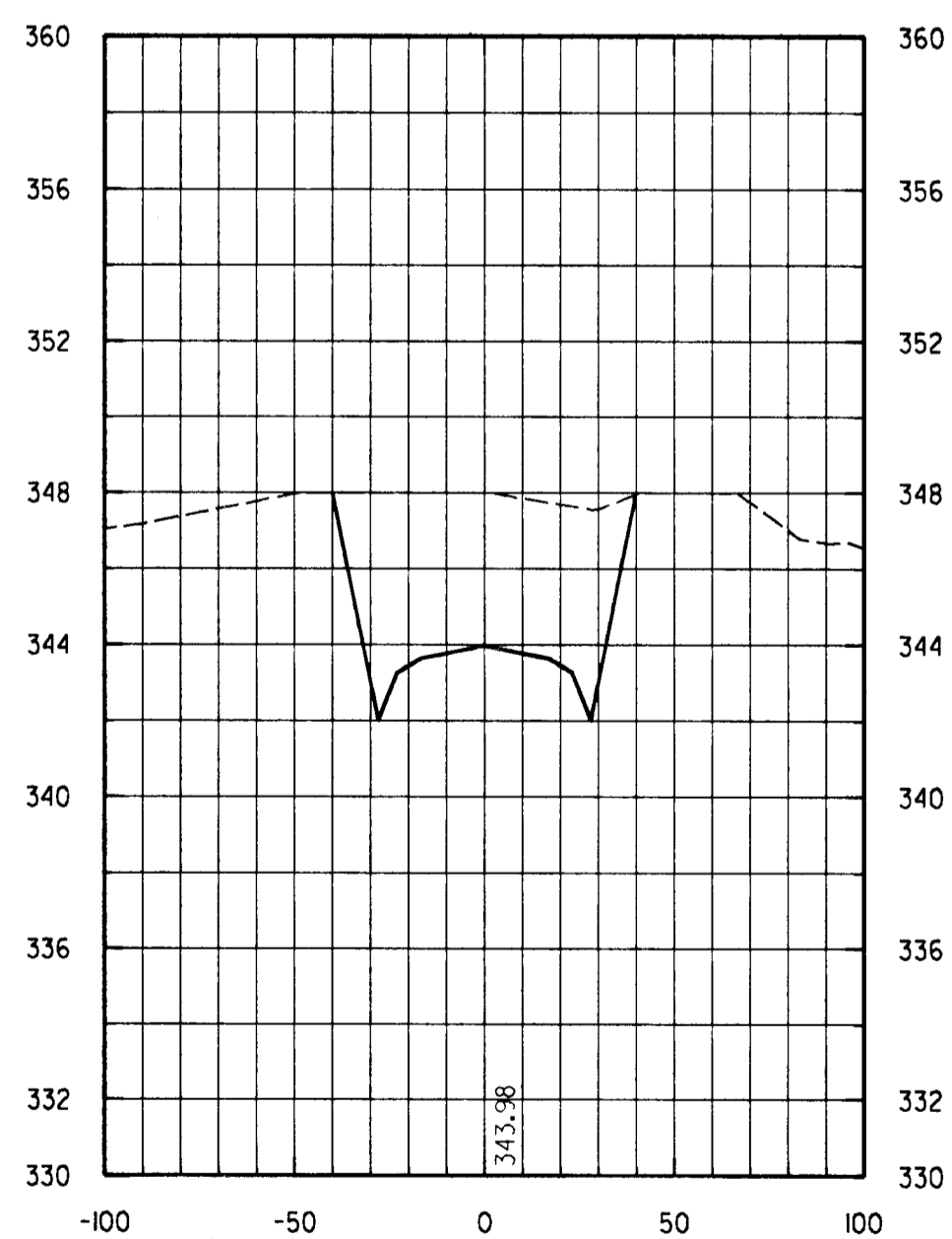
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 HOR 1" = 50'  
 SHEET  
 21 OF 22



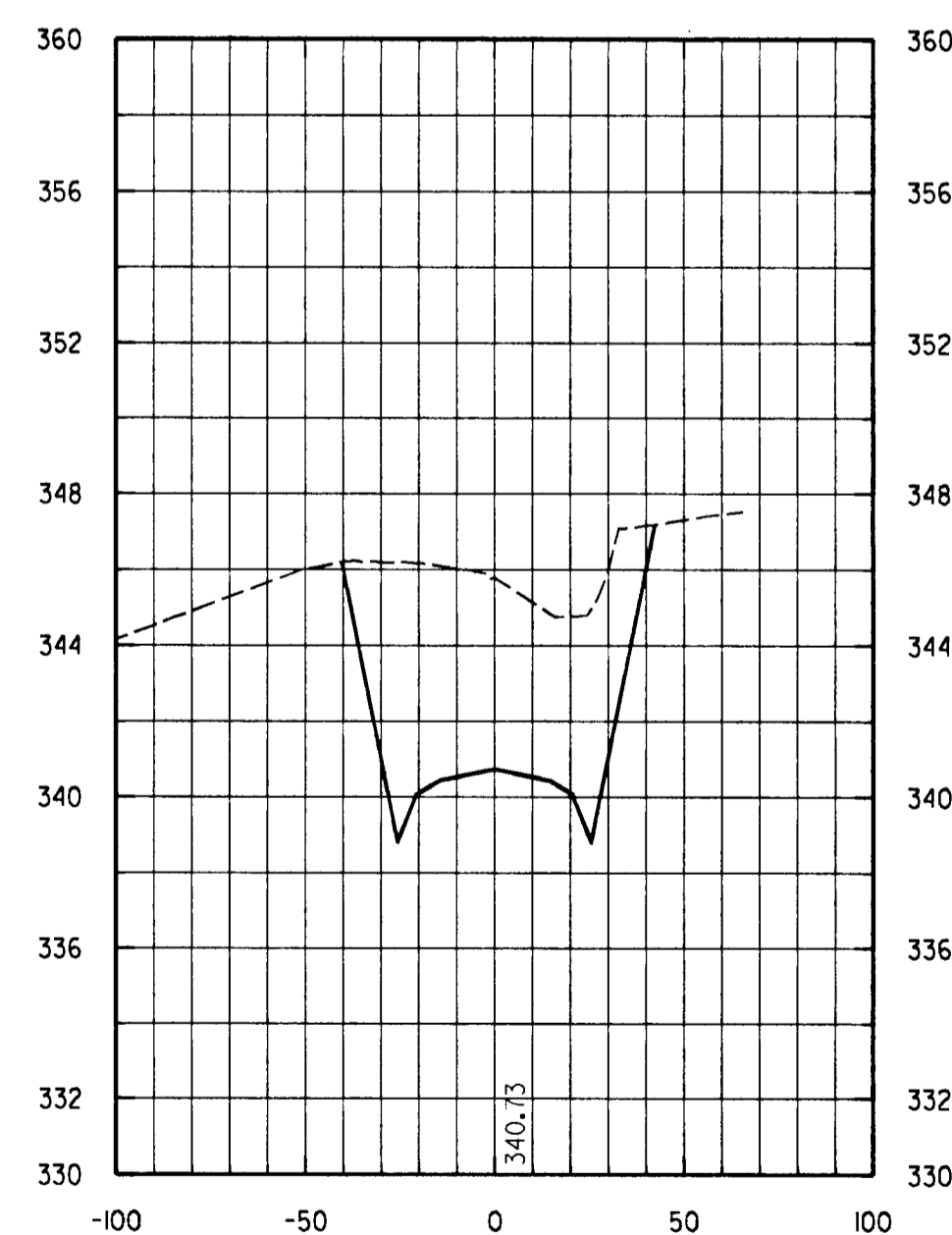
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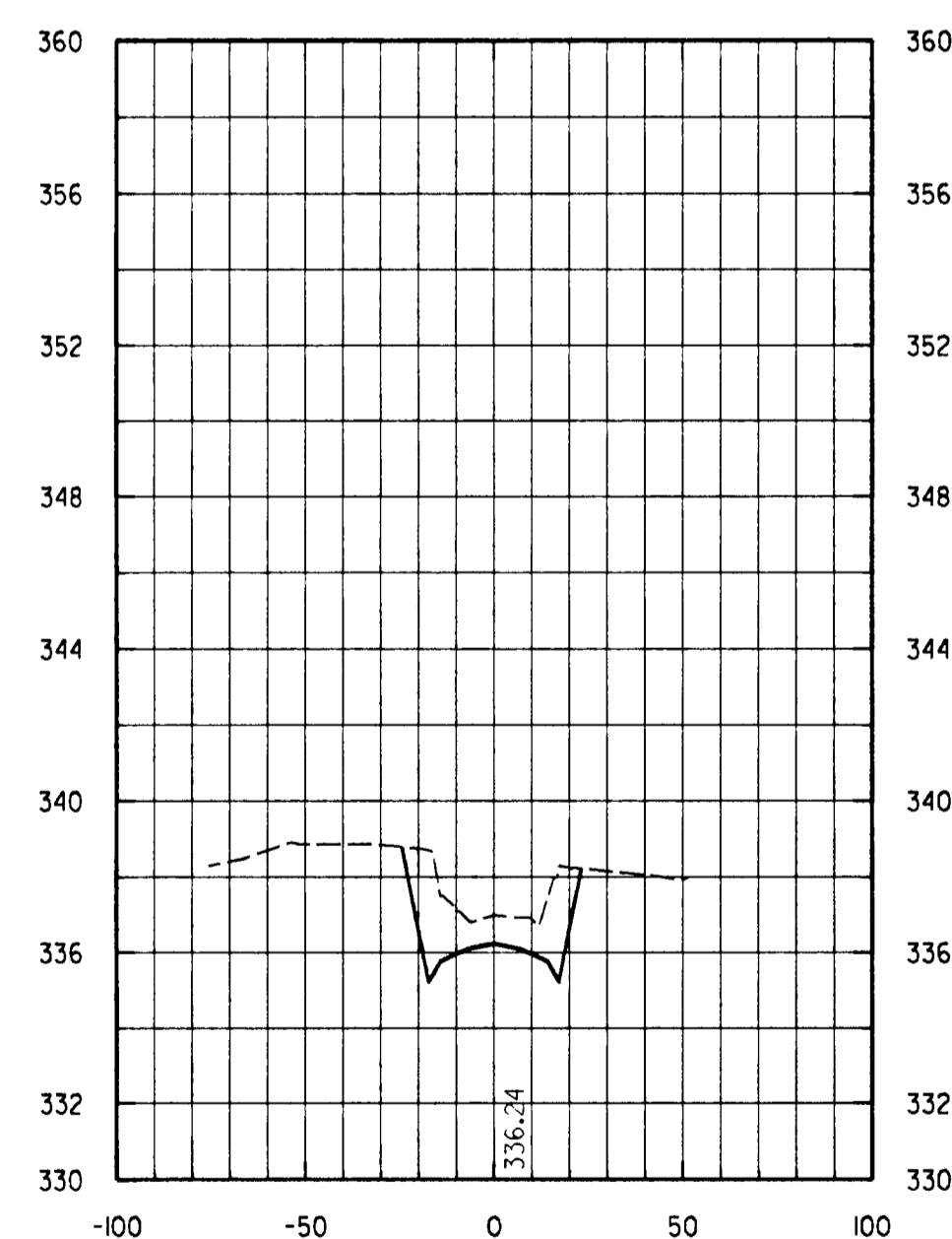
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100+50  
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101+50  
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Area Fill: 0.0



102+50  
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Area Fill: 0.0

NOTE: 1) EARTHWORK SHOWN IS RELATED TO FINISHED GRADE  
2) AREA UNITS - SQUARE FEET

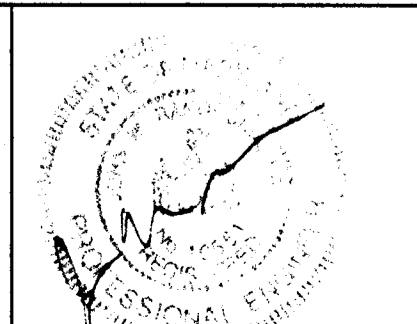
LEGEND  
EXISTING GROUND  
PROPOSED GRADE  
PROPOSED Q ELEVATION

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Lana V. Lum* 2/27/96  
DIRECTOR OF PUBLIC WORKS DATE  
*Gregory M. Daniels* 2-28-96  
CHIEF, BUREAU OF HIGHWAYS DATE

*Richard J. Sporn* 2/28/96  
CHIEF, BUREAU OF ENGINEERING DATE  
*Eric Colson* 2/28/96  
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

**DMW**  
**Daft · McCune · Walker, Inc.**  
A Team of Land Planners, 200 East Pennsylvania Avenue, Towson, Maryland 21286  
Landscape Architects, Engineers, Surveyors & Environmental Professionals  
410 296 3333  
Fax 296 4705



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DRAWN BY:	JWS			
CHECKED BY:	JWR			
DATE:	FEB. 5, 1996			
BY	NO.	REVISION	DATE	

CROSS SECTIONS  
ROAD "C"

600 SCALE MAP NO. 47 BLOCK NO. 2

GORMAN ROAD REALIGNMENT  
CAPITAL PROJECT E-0935  
ELECTION DISTRICT NO. 6  
HOWARD COUNTY MARYLAND

SCALE  
VERT 1"=5'  
HOR 1"=50'  
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