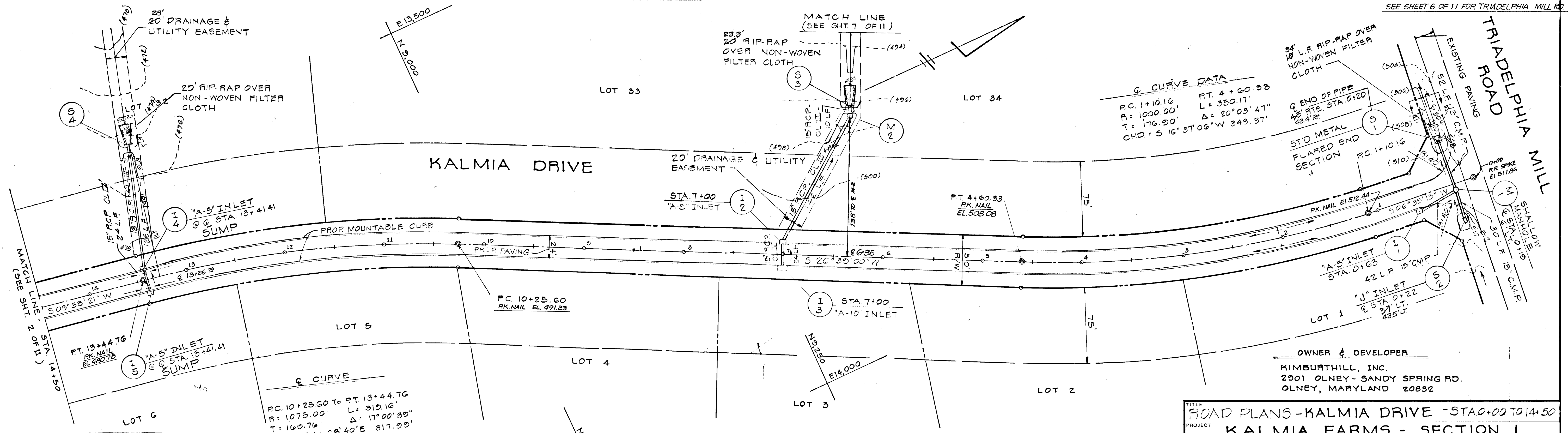


PLAN
 DRAWN BY: _____ DATE: _____
 CHECKED BY: _____
 NOTE BOOK: _____
 NO. _____



PLAN
 SCALE: 1" = 50'

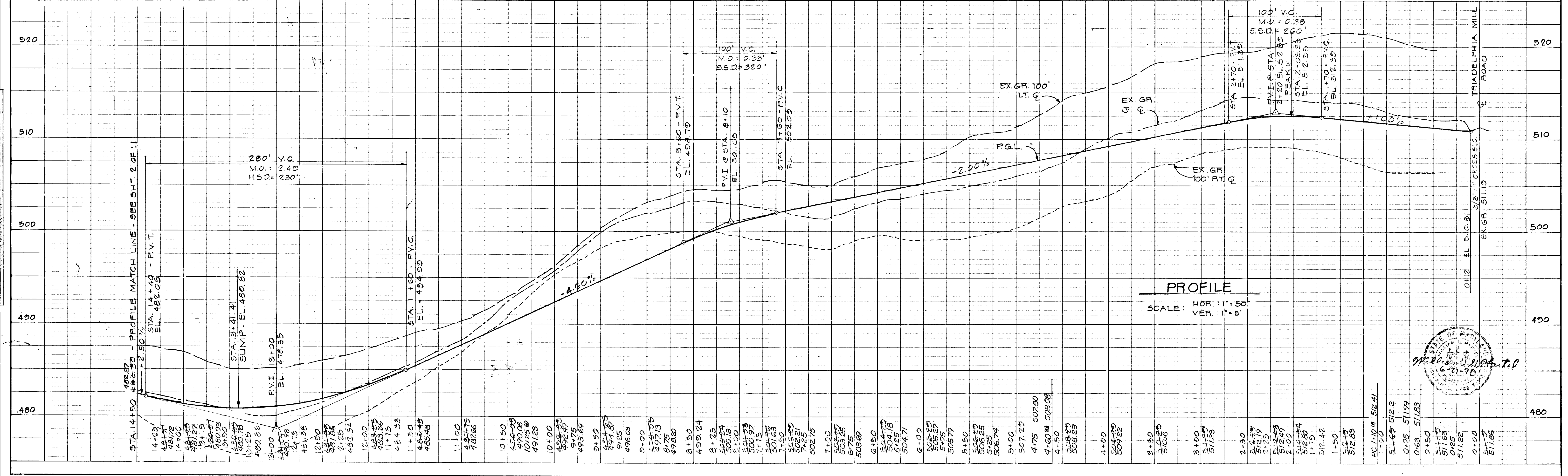
- NOTE -
 AS-BUILT INFORMATION VERIFIED WITH SIGNATURE AND SEAL BY WILLIAM G. HARTEL, MD REG. LAND SURVEYOR No. 9436 FEB. 27, 1981

TITLE: ROAD PLANS - KALMIA DRIVE - STA 0+00 TO 14+50			
PROJECT: KALMIA FARMS - SECTION I			
LOCATION: 5TH ELECTION DISTRICT		HOWARD COUNTY, MD.	
DATE: MAY, 1978	DESIGN BY: W.H.N.	DRAWN BY: W.H.N.	CHECKED BY: R.L.M.
SCALE: AS SHOWN	JOB NO.: 1701	DRAWING NO.: 1 OF 11	
boender associates			engineers surveyors planners
BALTIMORE 301-465-7777 • SALISBURY 301-749-1286			

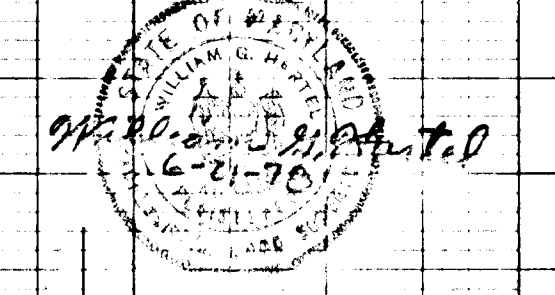
APPROVED DEPARTMENT OF PUBLIC WORKS
W.D. Palkov 12-26-78
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING
John W. Markham 10-19-78
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

PROFILE
 DRAWN BY: _____ DATE: _____
 CHECKED BY: _____
 NOTE BOOK: _____
 NO. _____



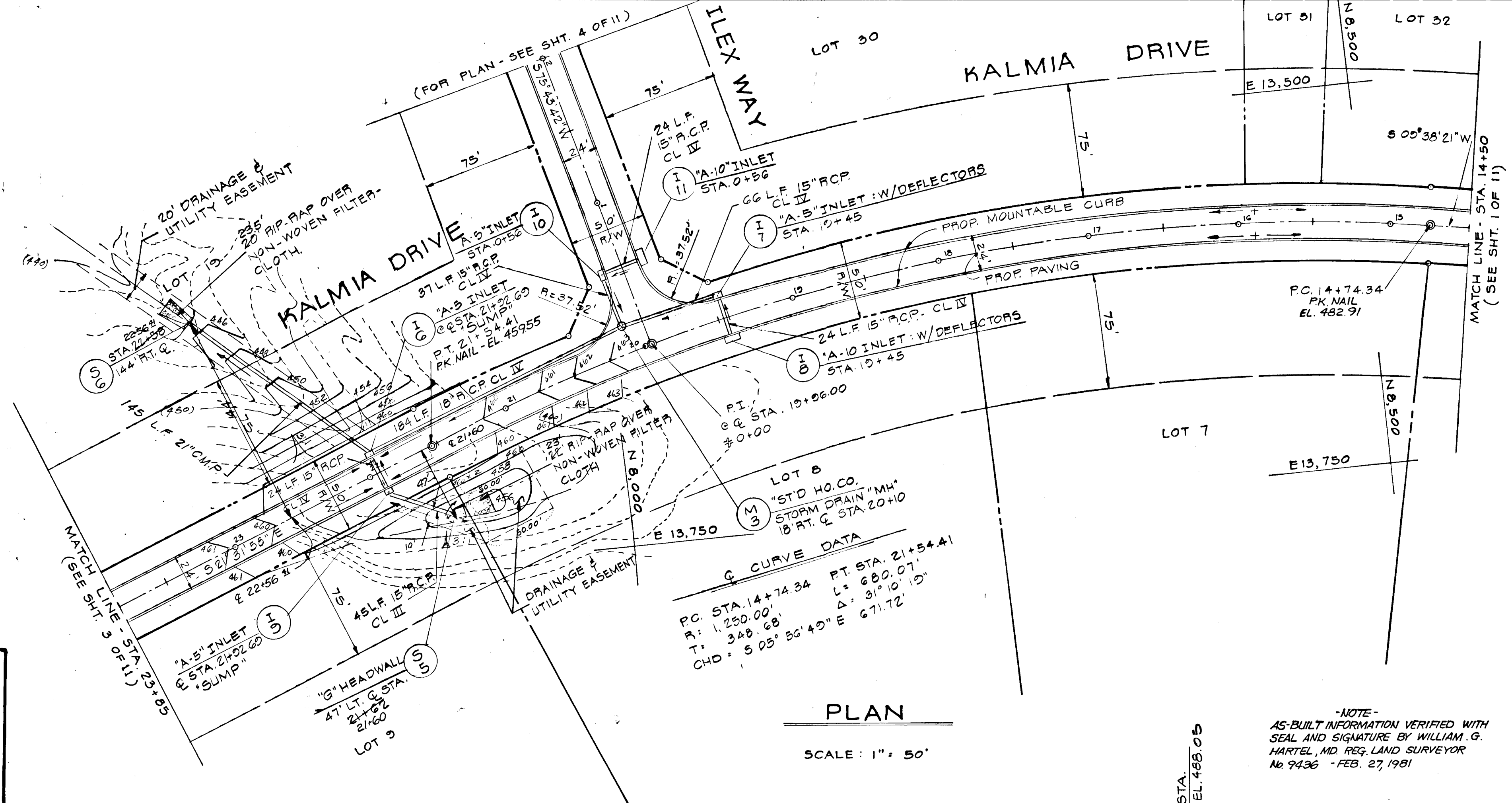
PROFILE
 SCALE: HOR: 1" = 50'
 VER: 1" = 5'



DATE
BY
SURVEYED
PLOTTED
NOTE BOOK GRADES CHECKED
NO.

DATE
BY
SURVEYED
PLOTTED
NOTE BOOK GRADES CHECKED
NO.

APPROVED DEPARTMENT OF PUBLIC WORKS
W.O. Gilbert 10-26-78
CHIEF, BUREAU OF ENGINEERING DATE
APPROVED OFFICE OF PLANNING AND ZONING
John W. Muehlen 10-18-78
CHIEF, DIVISION OF LAND DEVELOPMENT DATE



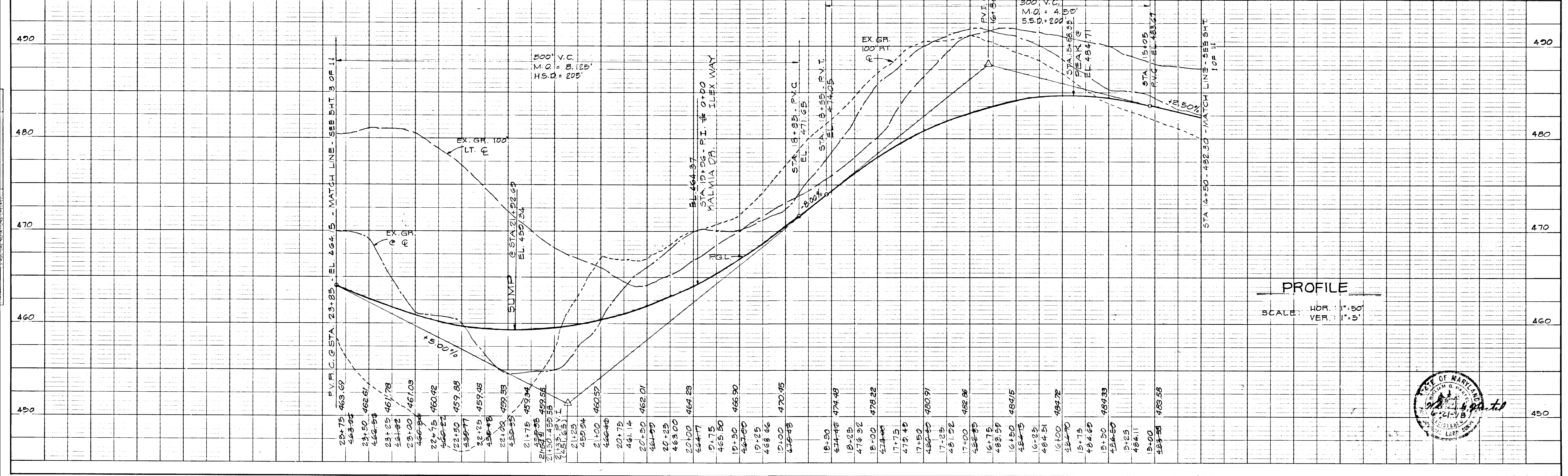
PLAN
SCALE: 1" = 50'

-NOTE-
AS-BUILT INFORMATION VERIFIED WITH
SEAL AND SIGNATURE BY WILLIAM G.
HARTSEL, MD. REG. LAND SURVEYOR
No. 9436 - FEB. 27, 1981

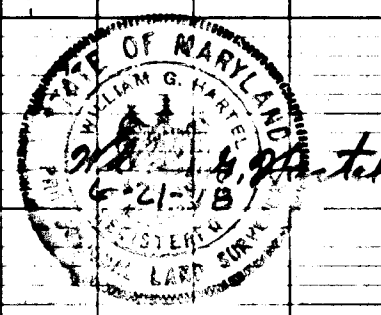
OWNER & DEVELOPER
KIMBURTHILL, INC.
2001 OLNEY - SANDY SPRING RD.
OLNEY, MARYLAND 20832

TITLE: KALMIA DRIVE : STA. 14+50 TO 23+85
PROJECT: KALMIA FARMS - SECTION I
LOCATION: 5TH ELECTION DISTRICT HOWARD COUNTY, MD.
DATE: MAY, 1978 DESIGN BY: W.H.N. DRAWN BY: W.H.N. CHECKED BY: R.L.M.
SCALE: A5 SHOWN JOB NO.: 7701 DRAWING NO.: 2 OF 11

boender associates engineers
surveyors planners
BALTIMORE 301-465-7777 • SALISBURY 301-749-1286

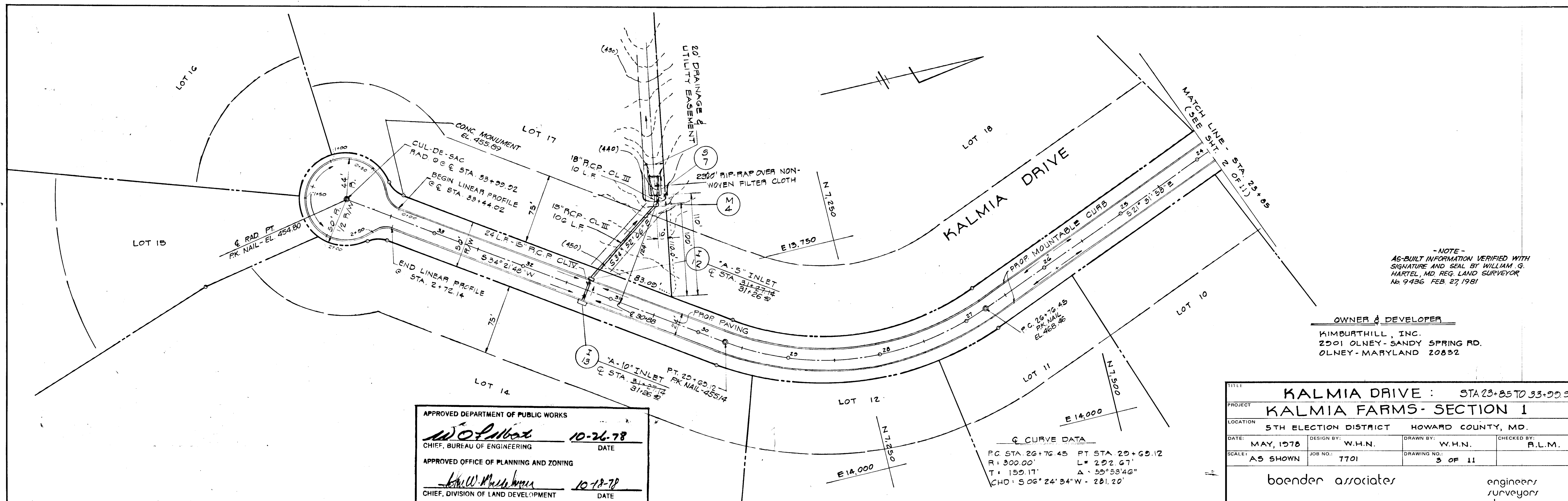


PROFILE
SCALE: HOR. 1" = 50'
VER. 1" = 5'



DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 NOTE BOOK: _____ ALIGNED CHECKED: _____
 NO. _____

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 NOTE BOOK: _____ GRADE CHECKED: _____
 NO. _____



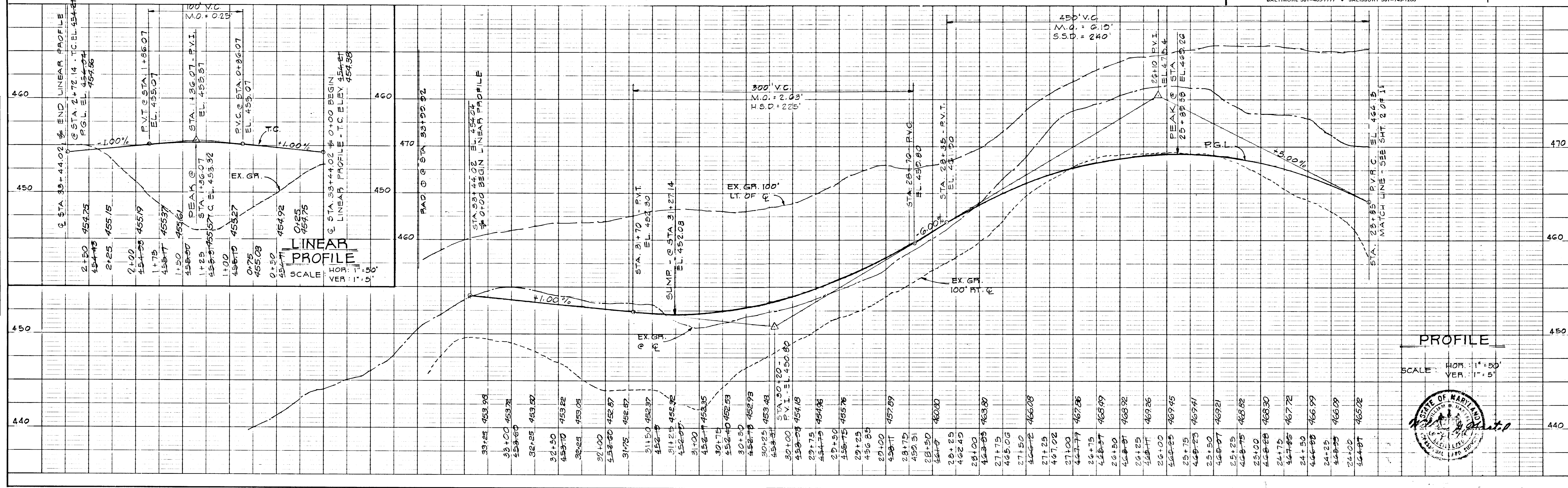
- NOTE -
 AS-BUILT INFORMATION VERIFIED WITH SIGNATURE AND SEAL BY WILLIAM G. HARTEL, MD. REG. LAND SURVEYOR No. 9436 FEB. 27, 1981

OWNER & DEVELOPER
 KIMBURTHILL, INC.
 2201 OLNEY - SANDY SPRING RD.
 OLNEY - MARYLAND 20852

APPROVED DEPARTMENT OF PUBLIC WORKS
W. J. P. Box 10-26-78
 CHIEF, BUREAU OF ENGINEERING DATE
 APPROVED OFFICE OF PLANNING AND ZONING
William W. ... 10-18-78
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

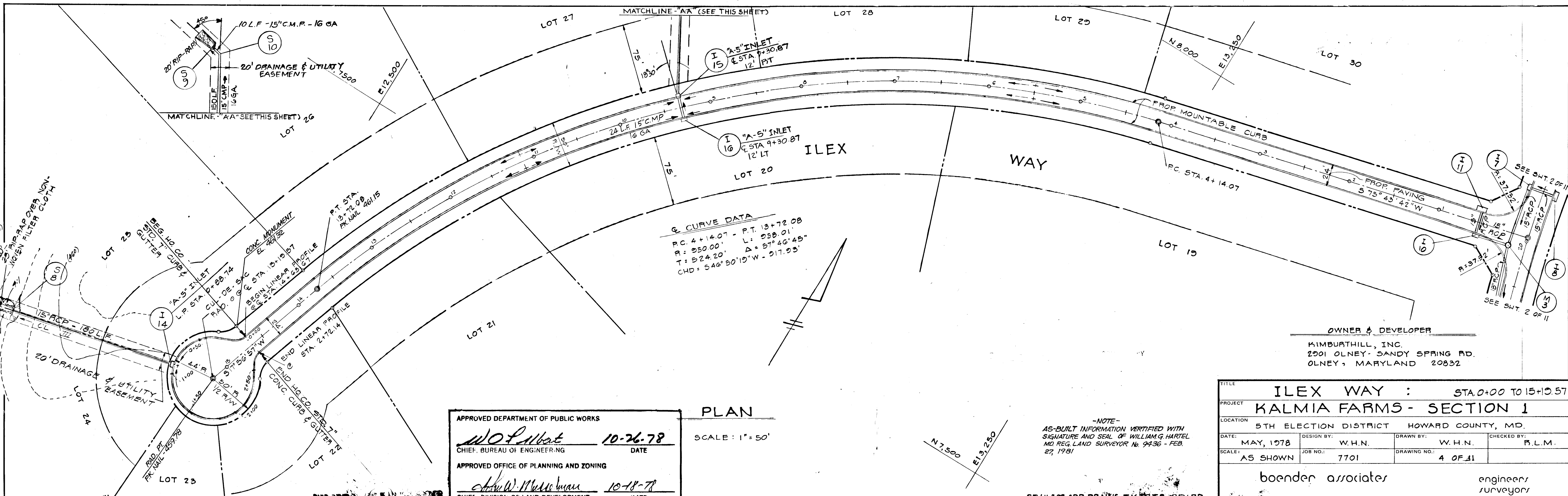
Q CURVE DATA
 P.C. STA. 26+76.45 P.T. STA. 29+69.12
 R: 300.00' L: 292.67'
 T: 159.17' Δ: 55°53'46"
 CHD: S 08°24'34"W - 281.20'

TITLE KALMIA DRIVE : STA 23+85 TO 33+99.2			
PROJECT KALMIA FARMS - SECTION 1			
LOCATION 5TH ELECTION DISTRICT HOWARD COUNTY, MD.			
DATE: MAY, 1978	DESIGN BY: W.H.N.	DRAWN BY: W.H.N.	CHECKED BY: R.L.M.
SCALE: AS SHOWN	JOB NO.: 7701	DRAWING NO.: 3 OF 11	
boender associates		engineers surveyors planners	
BALTIMORE 301-465-7777 • SALISBURY 301-749-1286			

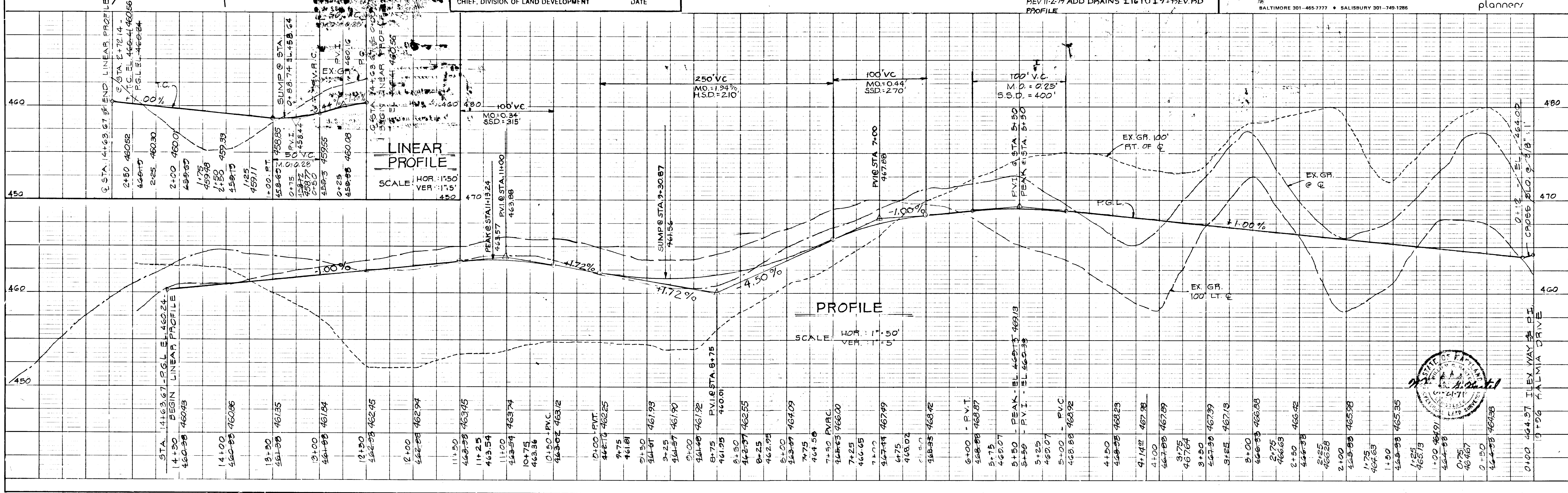


PROFILE
 SCALE: HOR. 1" = 50' VER. 1" = 5'





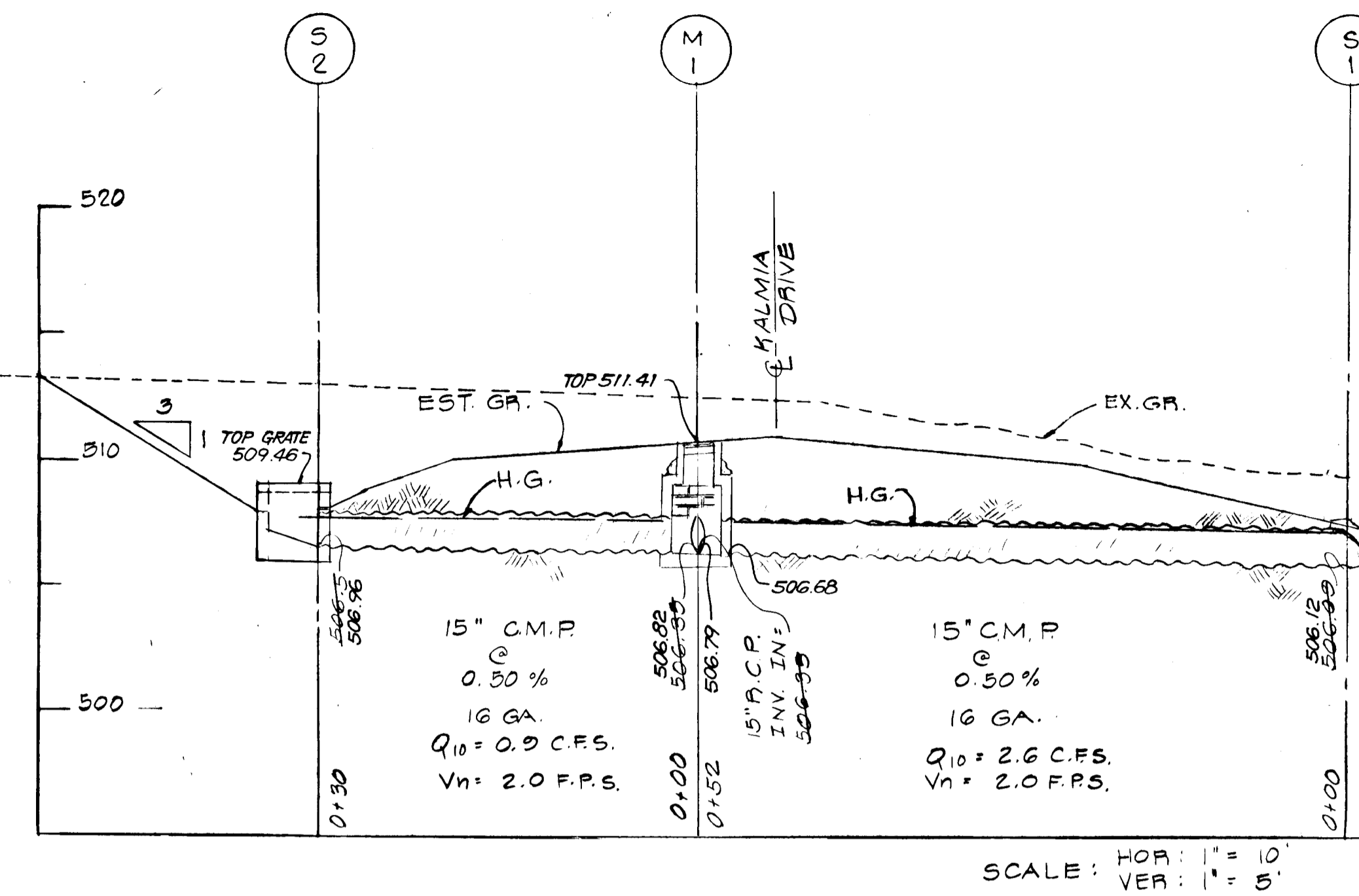
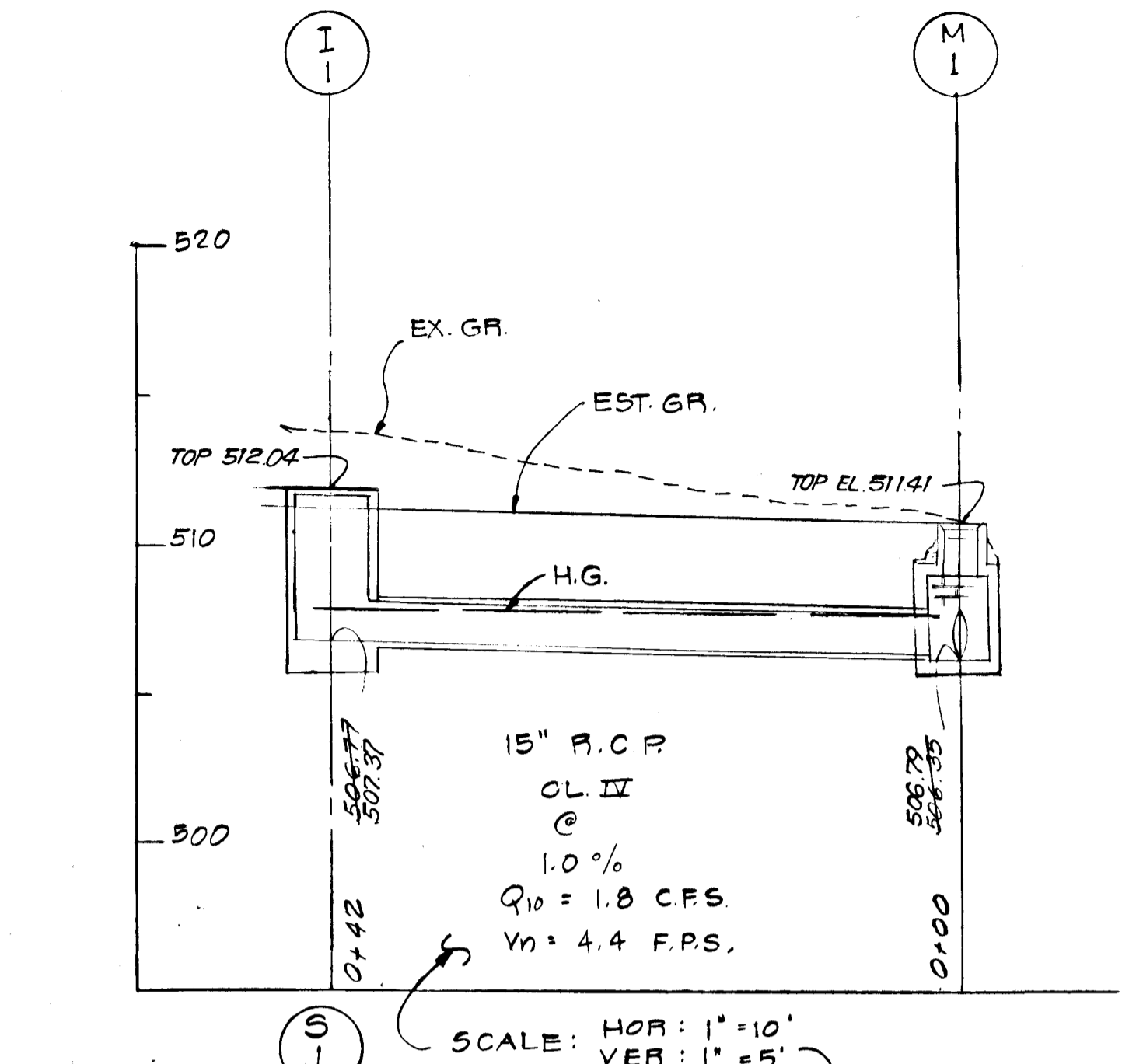
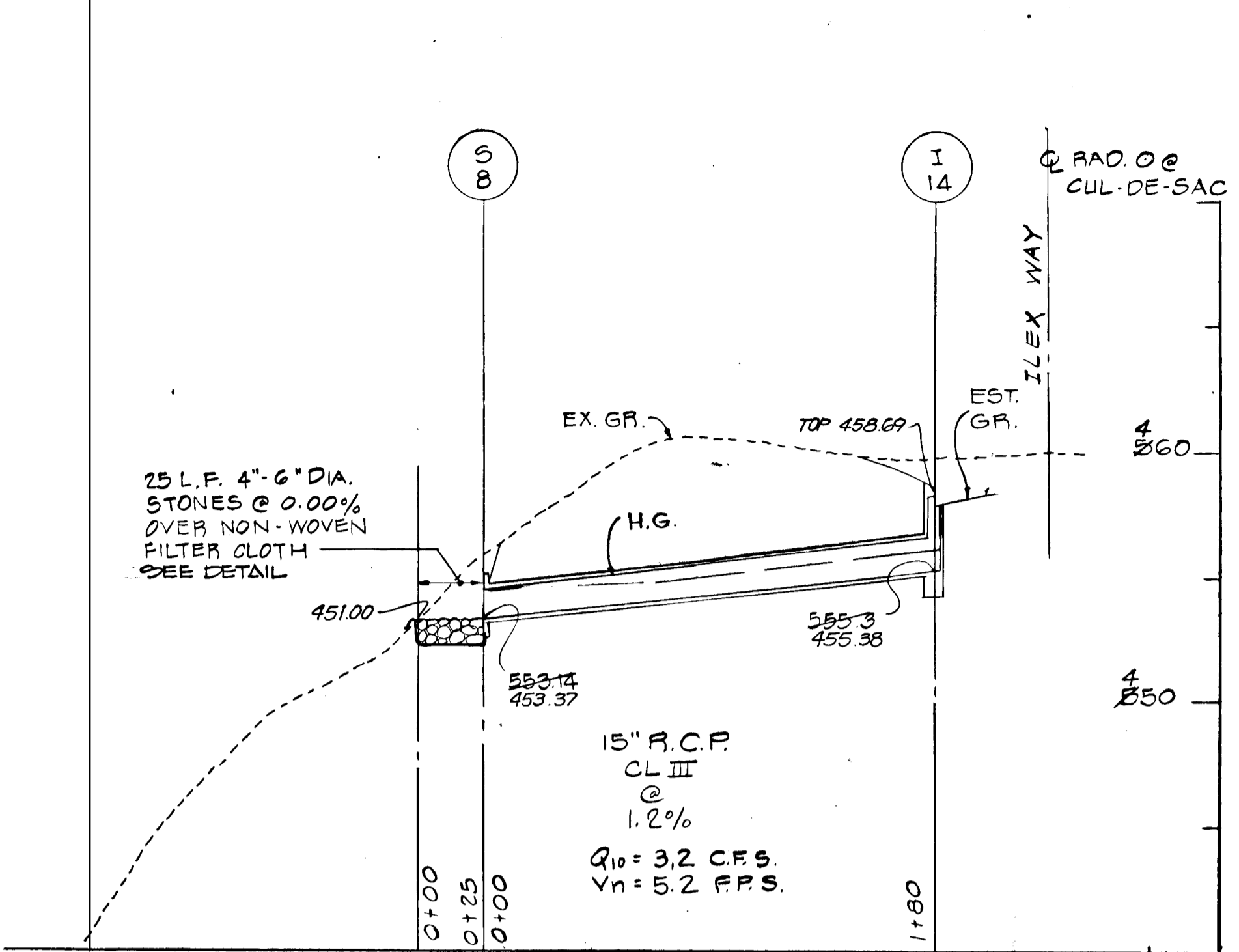
TITLE: ILEX WAY : STA. 0+00 TO 15+05.7			
PROJECT: KALMIA FARMS - SECTION I			
LOCATION: 5TH ELECTION DISTRICT HOWARD COUNTY, MD.			
DATE: MAY, 1978	DESIGN BY: W.H.N.	DRAWN BY: W.H.N.	CHECKED BY: P.L.M.
SCALE: AS SHOWN	JOB NO.: 7701	DRAWING NO.: 4 OF 11	
boender associates		engineers surveyors planners	
BALTIMORE 301-465-7777 • SALISBURY 301-749-1286			



DATE: _____ BY: _____
 DATE: _____ BY: _____
 DATE: _____ BY: _____

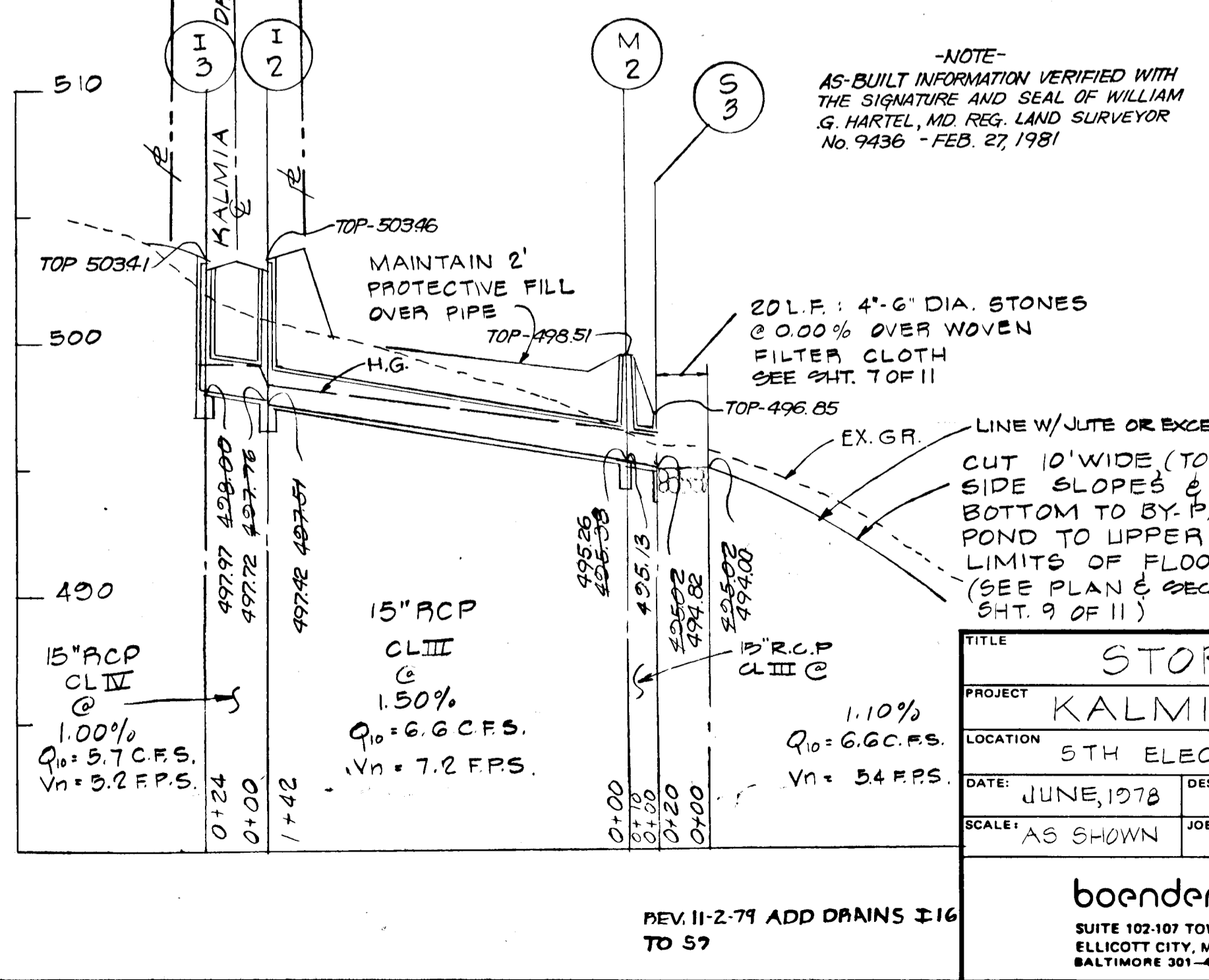
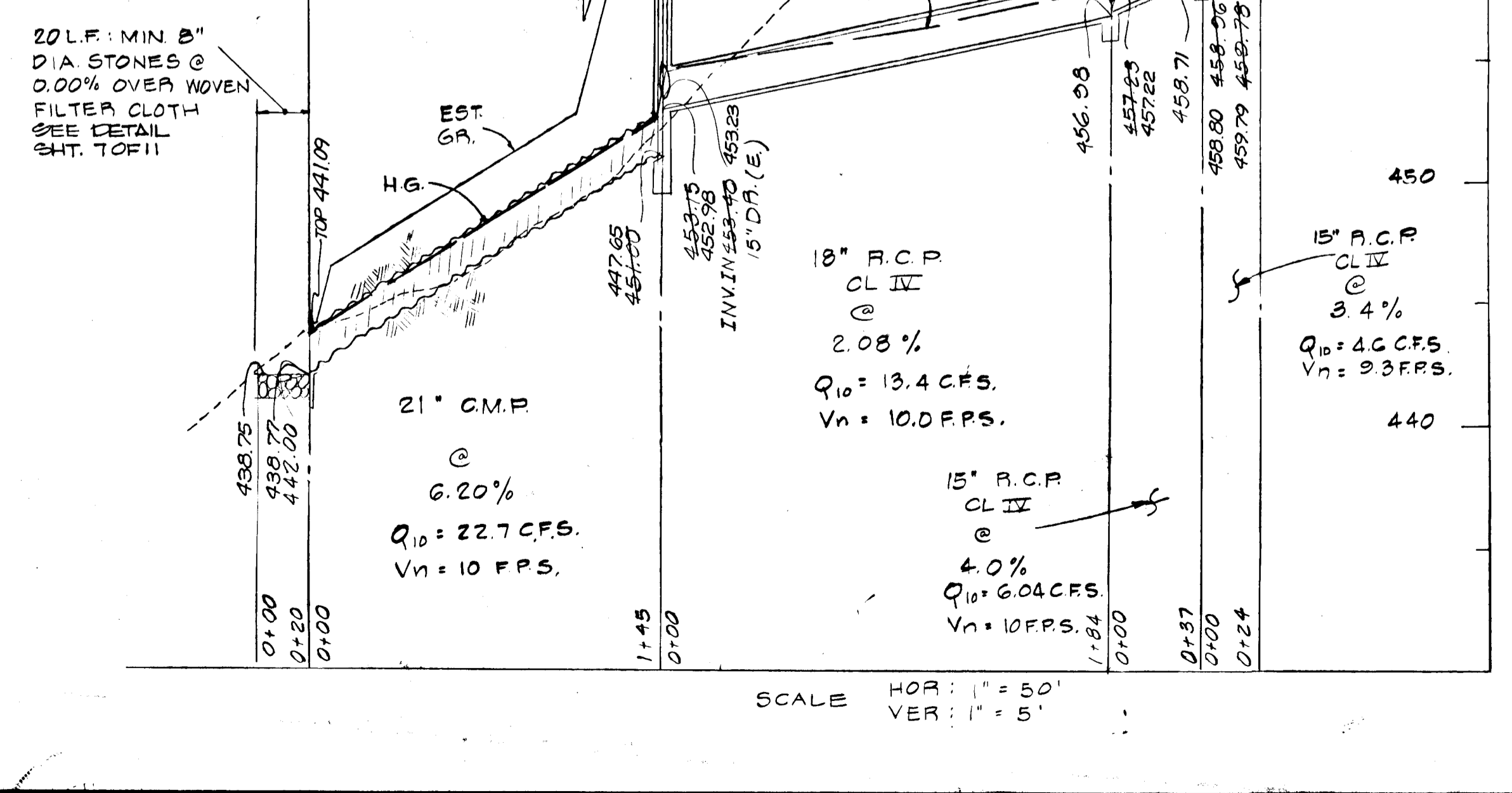
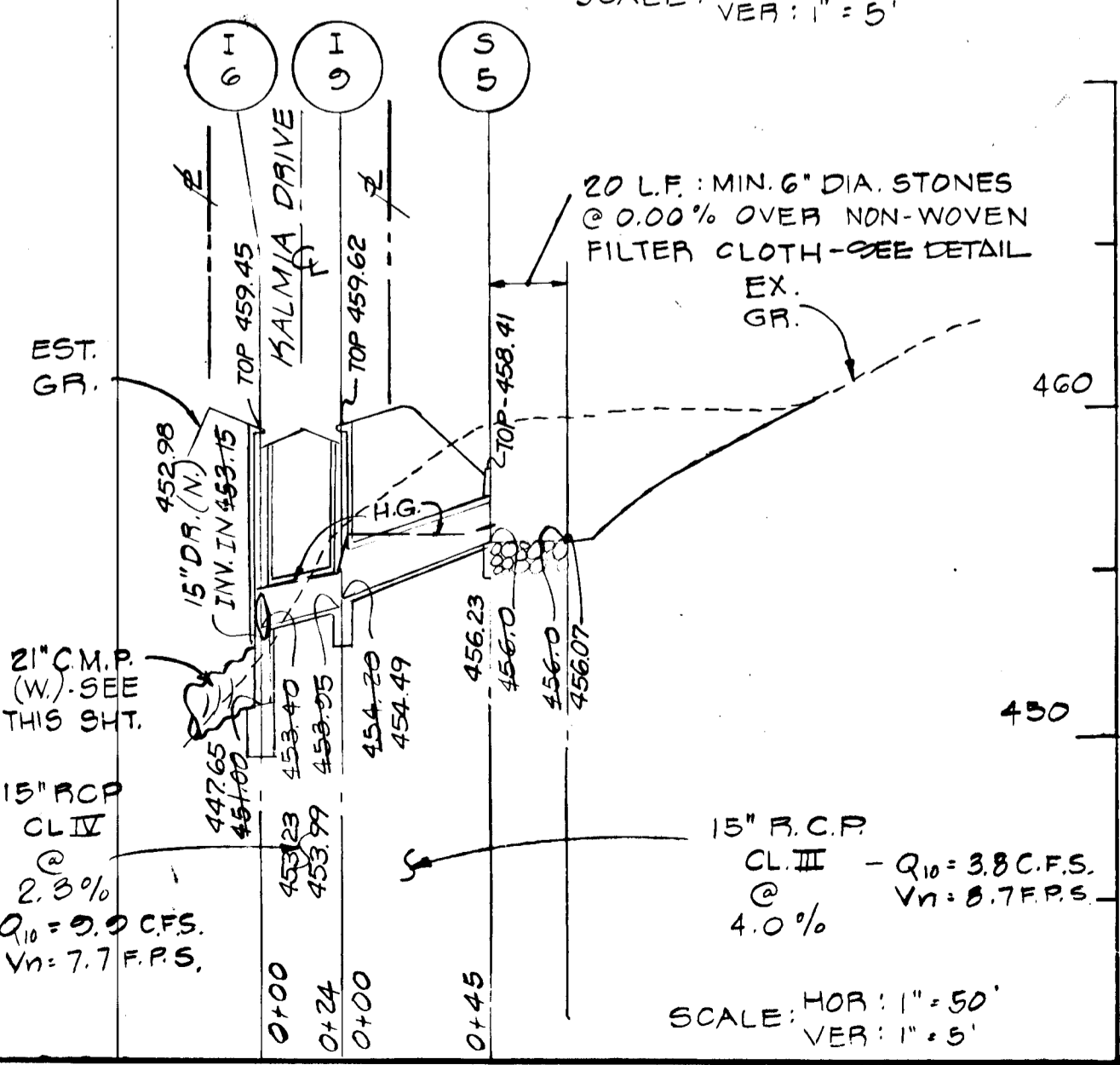
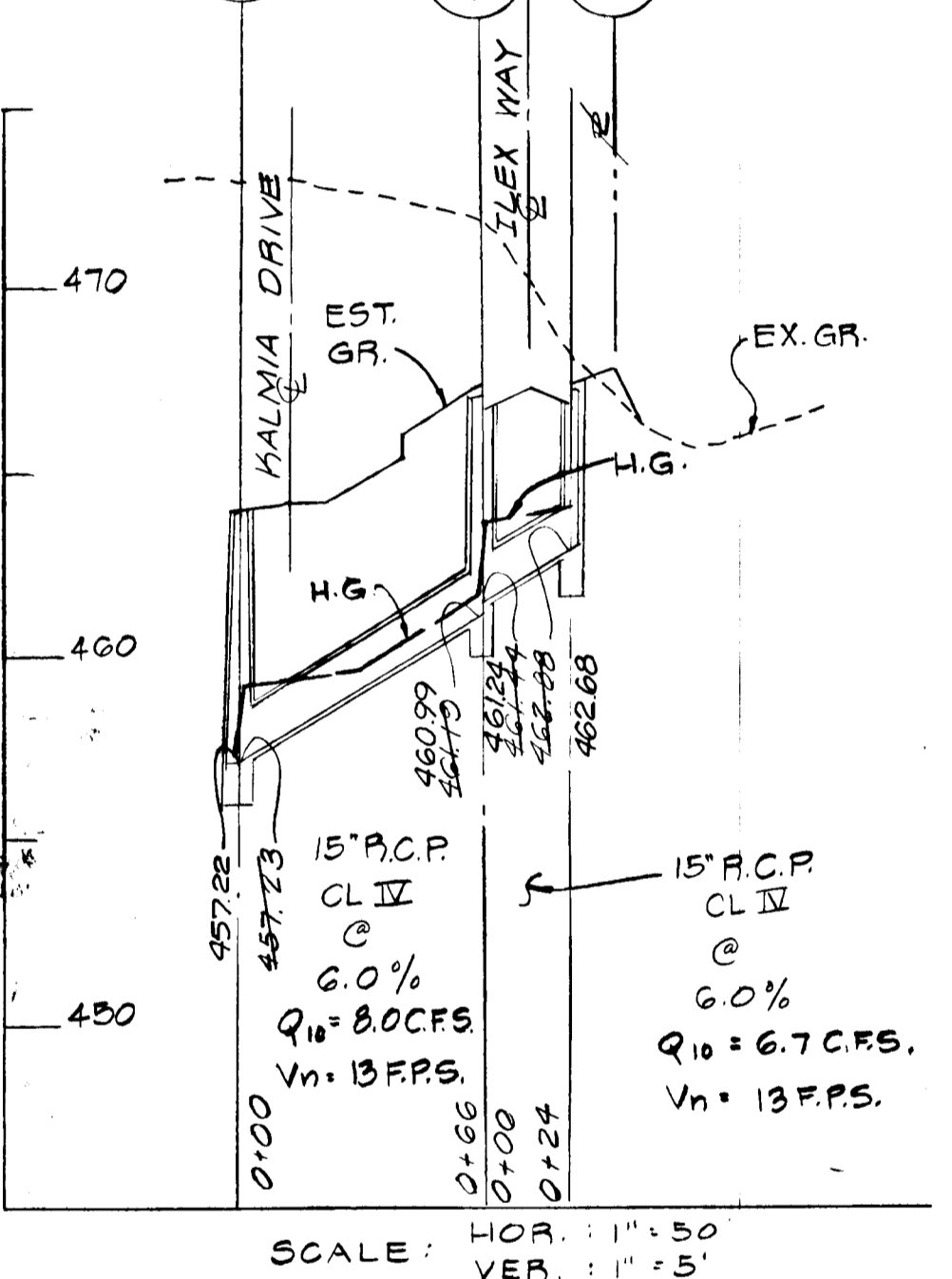
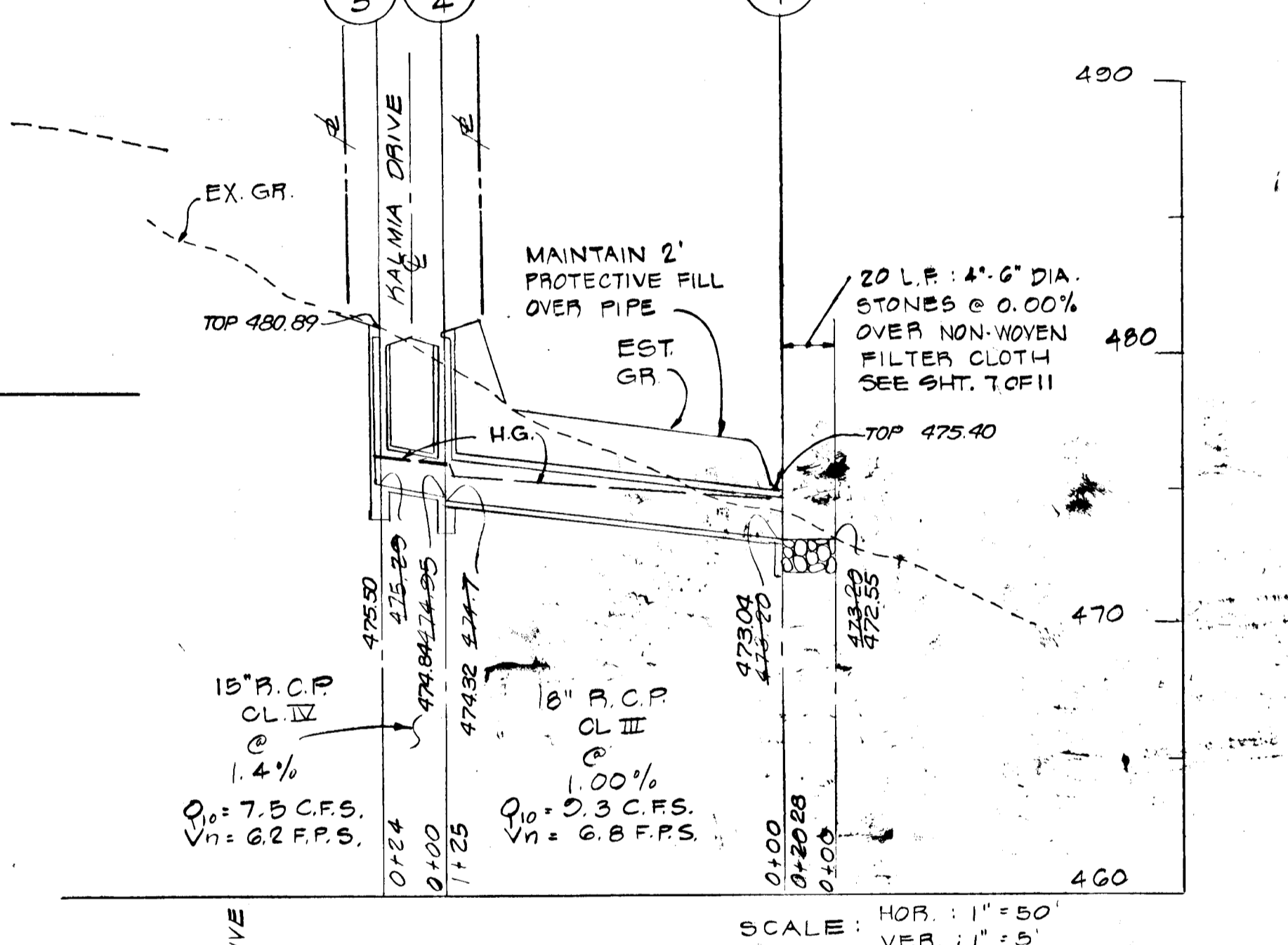
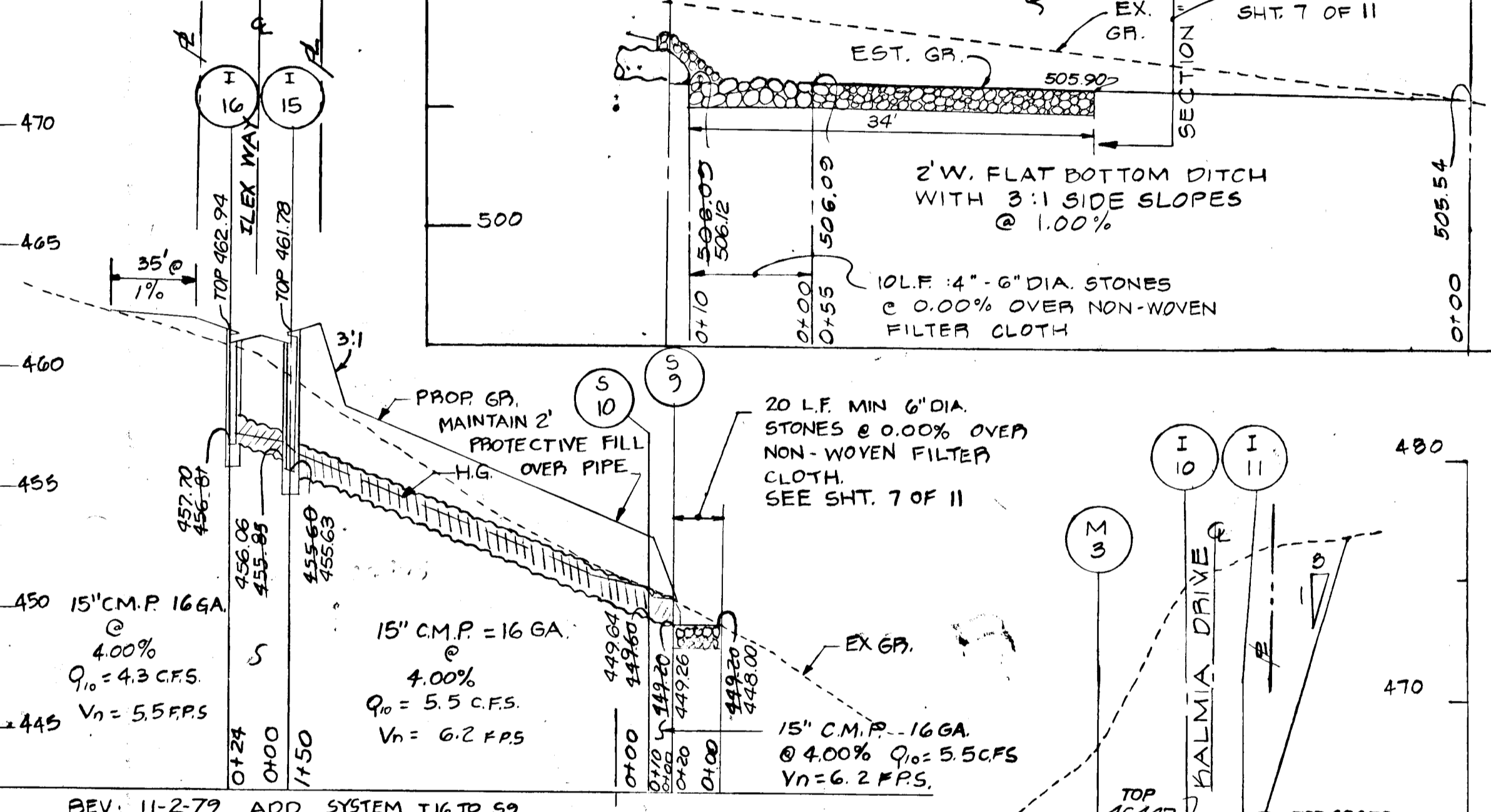
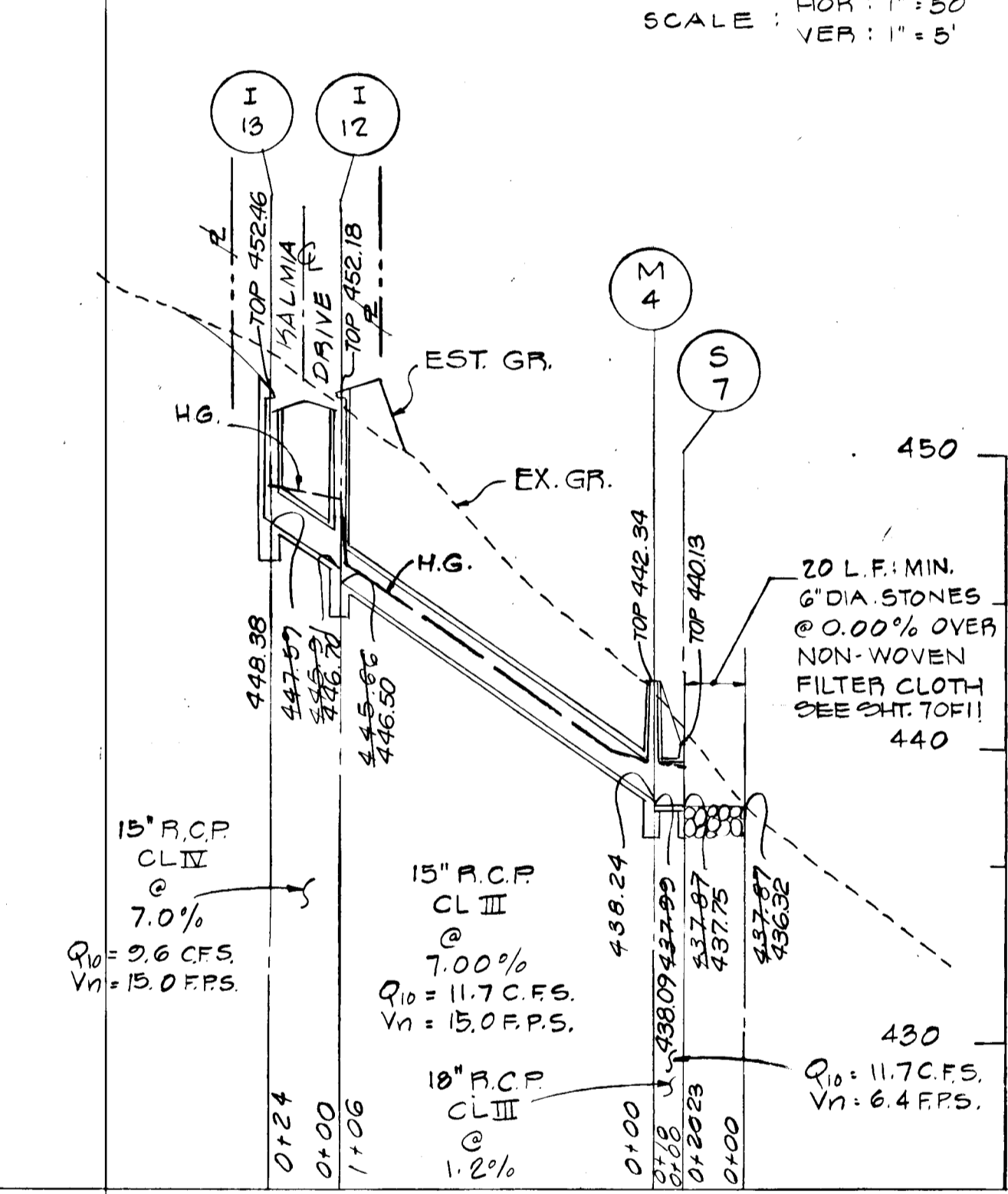
693
 1/26/78

APPROVED DEPARTMENT OF PUBLIC WORKS
W. J. Hartzel 10-26-78
 CHIEF, BUREAU OF ENGINEERING DATE
 APPROVED OFFICE OF PLANNING AND ZONING
William W. Hartzel 10-18-78
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



FOR DET. OUTLET DITCH - SEE PROFILE THIS SHT.

10 L.F. 4" - 6" DIA. STONES @ 0.00% OVER WOVEN FILTER CLOTH



-NOTE- AS-BUILT INFORMATION VERIFIED WITH THE SIGNATURE AND SEAL OF WILLIAM G. HARTZEL, MD REG. LAND SURVEYOR No 9436 - FEB. 27, 1981

OWNER & DEVELOPER
 KIMBATHILL, INC.
 2001 OLNEY-SANDY SPRING RD.
 OLNEY, MARYLAND 20832

William G. Hartzel
 6/21/78

TITLE STORM DRAIN PROFILES			
PROJECT KALMIA FARMS - SECTION I			
LOCATION 5TH ELECTION DISTRICT HOWARD COUNTY, MD.			
DATE: JUNE, 1978	DESIGN BY: W.H.N.	DRAWN BY: W.H.N.	CHECKED BY: H.L.M.
SCALE: AS SHOWN	JOB NO.: 7701	DRAWING NO.: 5 OF 11	

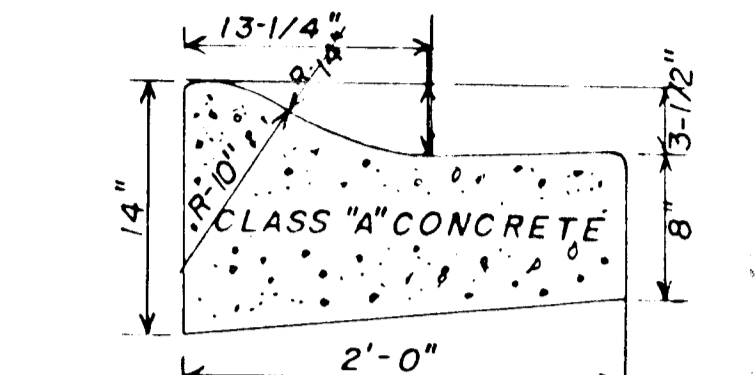
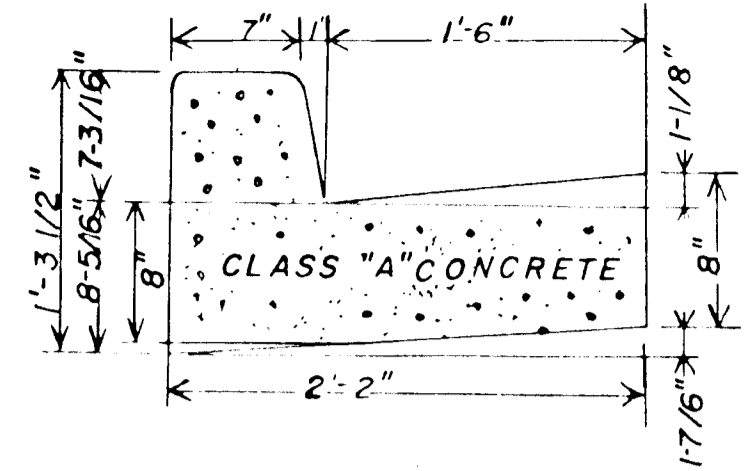
boender associates
 SUITE 102-107 TOWN & COUNTRY PROFESSIONAL BUILDING
 ELLICOTT CITY, MARYLAND 21043
 BALTIMORE 301-468-7777 SALISBURY 301-748-1288

engineers
 surveyors
 planners

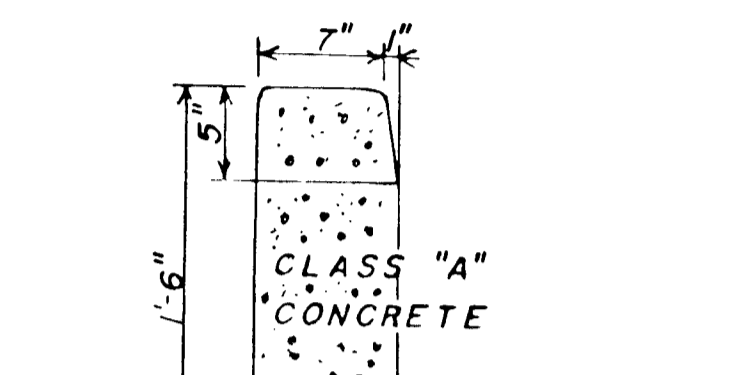
AS-BUILT FEB. 27, 1981 F-79-30

REV. II-2-79 ADD DRAINS I 16 TO S 9

STANDARD 7" COMBINATION CURB & GUTTER

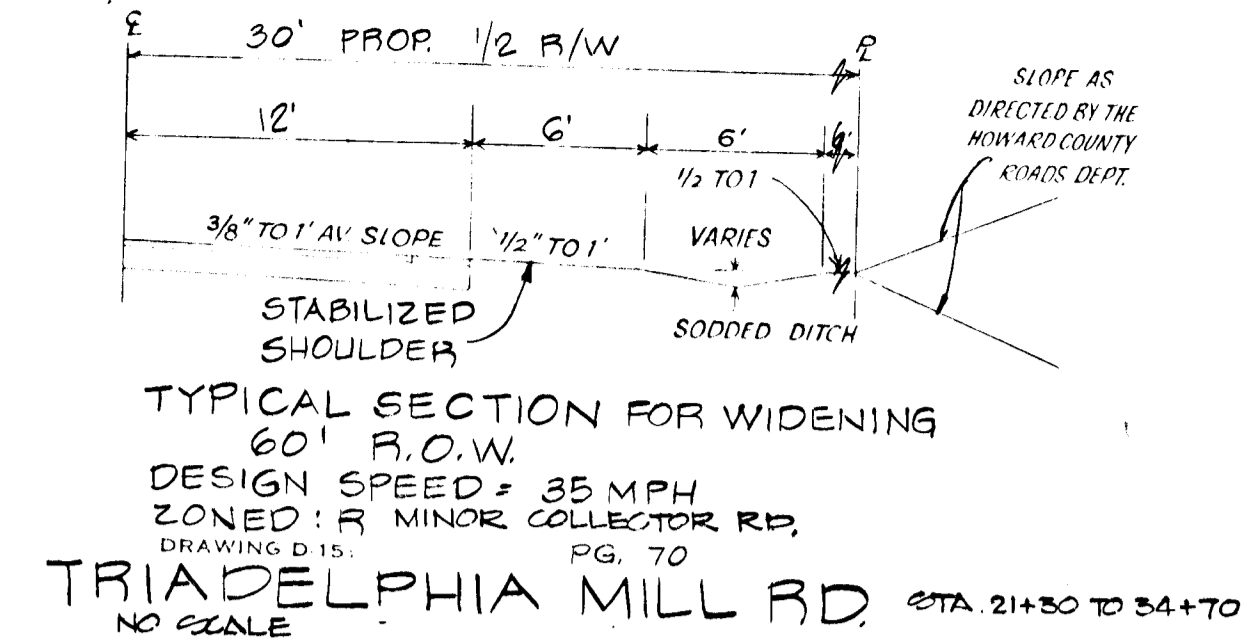


MODIFIED COMBINATION CURB & GUTTER

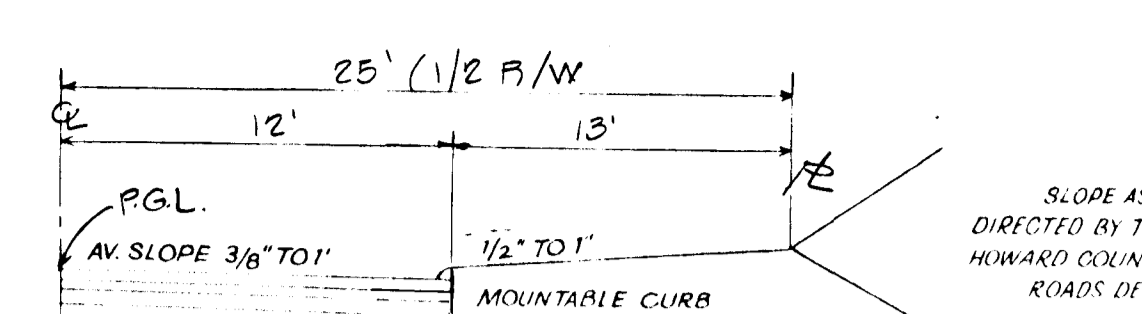


STANDARD BARRIER CURB

Howard County Concrete Curbs
DRAWING D-40 (MAY, 1968) Page 35



TRIADELPHIA MILL RD STA 21+50 TO 34+70

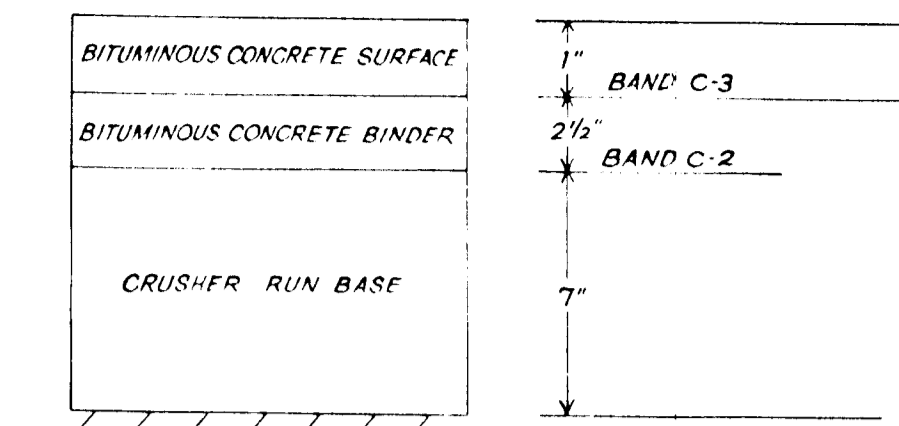


KALMIA DRIVE & ILEX WAY
NO SCALE

DRAWING D-16 (MAY, 1968) Page 71

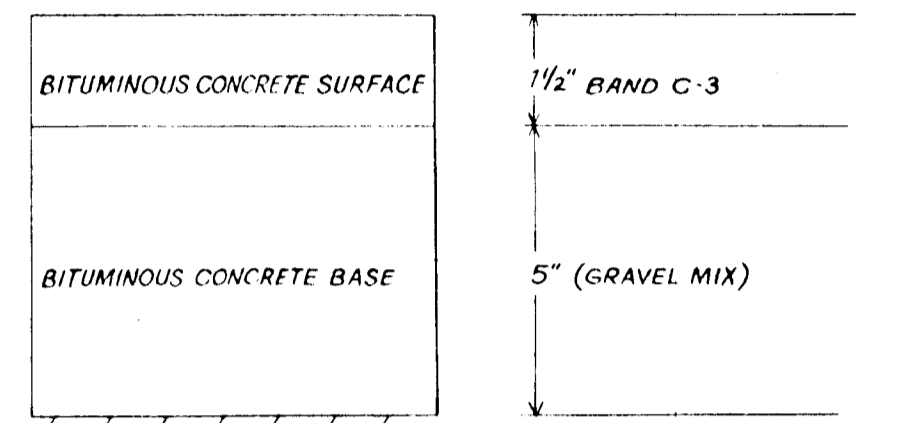
AS-BUILT TRIADELPHIA MILL ROAD 11-3-81

STATION	ELEV.	ED. OF PAVING	TOP OF BANK	TOP OF BANK
21+00	490.18	489.72		
21+50	489.68	488.76	36' RT. BOTTOM OF BANK - 485.36	
22+00	488.86	488.45	488.48	488.74
22+20	489.43	488.93	488.68	488.11
22+50	488.93	488.48	488.46	488.05
23+00	489.37	488.57	488.14	488.08
23+50	488.86	487.25	487.86	487.77
24+00	488.98	488.11	487.75	487.41
24+50	488.81	487.81	487.48	487.32
25+00	489.02	488.14		
25+50	489.46	488.61	488.33	488.36
26+00	490.23	489.51	489.17	489.16
26+50	491.42	490.73	490.42	490.42
27+00	493.74	493.24	492.88	492.80
27+50	497.28	497.18	497.19	496.96
28+00	501.52	501.99	24' RT. DRIVEWAY - 502.55	
28+50	504.81	504.44	504.05	503.92
29+00	507.75	506.78	506.27	506.10
29+29	509.35	509.14	508.14	508.52
29+72.28	511.86			
30+00				
30+50	516.66	515.71	515.40	515.88
31+00	520.37	519.48	519.11	519.10
31+50	523.21	522.42	522.07	522.08
32+00	526.00	524.93	524.42	524.55
32+50	528.17	526.82	526.49	526.55
33+00	529.65	528.24	527.67	527.34
33+50	527.97	526.79	526.13	525.65
34+00	525.63	524.80		



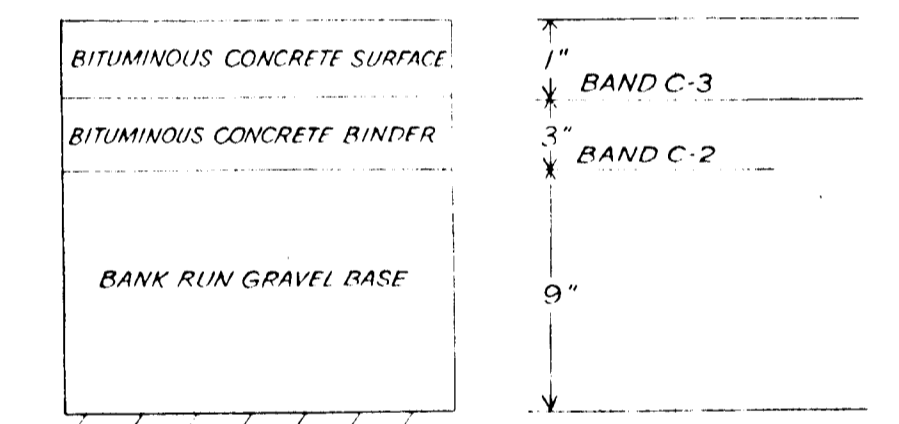
CLEARING and GRADING: ARTICLE C-1
SUBGRADE: ARTICLE C-2
BASE COURSE: ARTICLE C-25
BINDER COURSE: ARTICLE C-31 or C-33
SURFACE COURSE: ARTICLE C-31

TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS
DRAWING D-4 (MAY, 1968) Page 59



CLEARING and GRADING: ARTICLE C-1
SUBGRADE: ARTICLE C-2
BASE COURSE: ARTICLE C-33
SURFACE COURSE: ARTICLE C-31

TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS
DRAWING D-5 (MAY, 1968) Page 60



CLEARING and GRADING: ARTICLE C-1
SUBGRADE: ARTICLE C-2
BASE COURSE: ARTICLE C-25
BINDER COURSE: ARTICLE C-31 or C-33
SURFACE COURSE: ARTICLE C-31

TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS
DRAWING D-3 Page 58

PAVING SPECIFICATIONS

- TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.
- BASE WILL BE PRIMED IN ACCORDANCE WITH SECTION C-30-3 AS PROVIDED IN THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.
- TACK COAT IS IN ACCORDANCE WITH SECTION C-31-4 OF THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.

OWNER & DEVELOPER
KIMBURTHILL, INC.
2901 OLNEY - SANDY SPRING RD.
OLNEY, MARYLAND 20832

KALMIA DRIVE & ILEX WAY

ROAD CONSTRUCTION PLANS

KALMIA FARMS: SECTION 1

5TH ELECTION DISTRICT HOWARD COUNTY, MD.

DATE: JUNE 13, 1978
SCALE: AS SHOWN
JOB NO.: 7701
DRAWING NO.: 6 OF 11

boender associates engineers/surveyors/planners

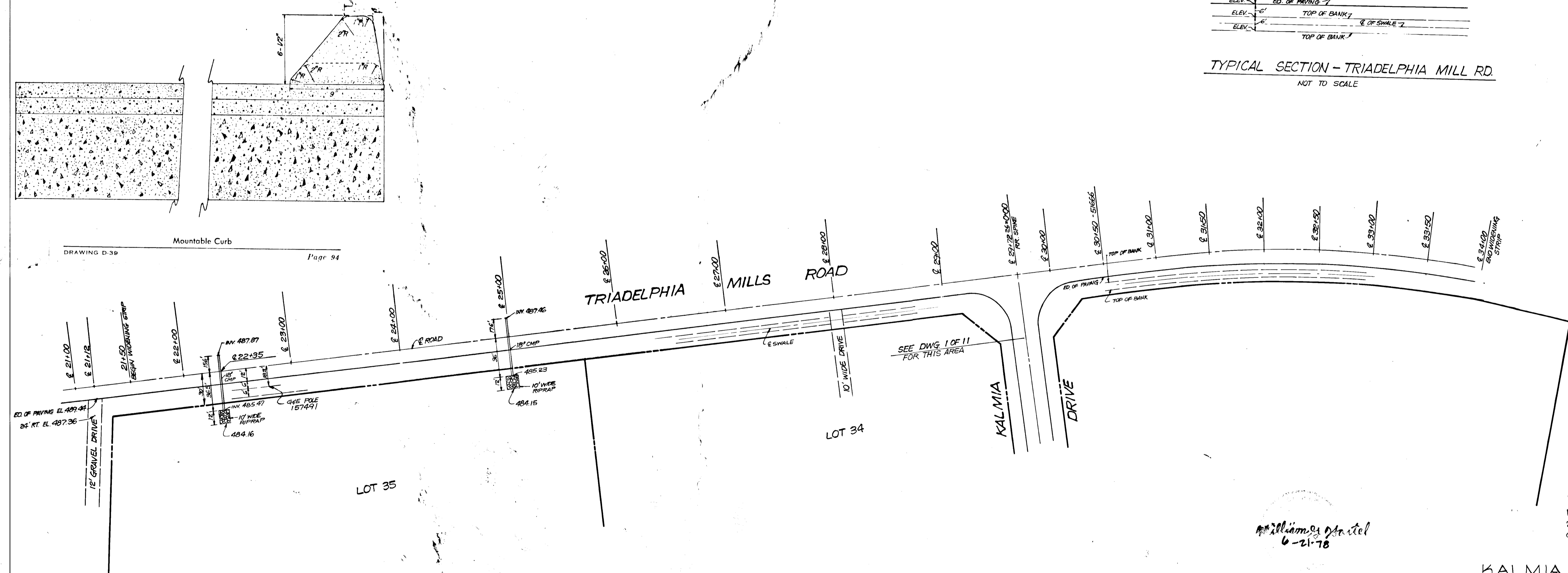
BALTIMORE 301-465-7777 * SALISBURY 301-749-1200

AS-BUILT NOV 3, 1981

APPROVED: *[Signature]* 11-26-78
CHIEF, BUREAU OF ENGINEERING DATE

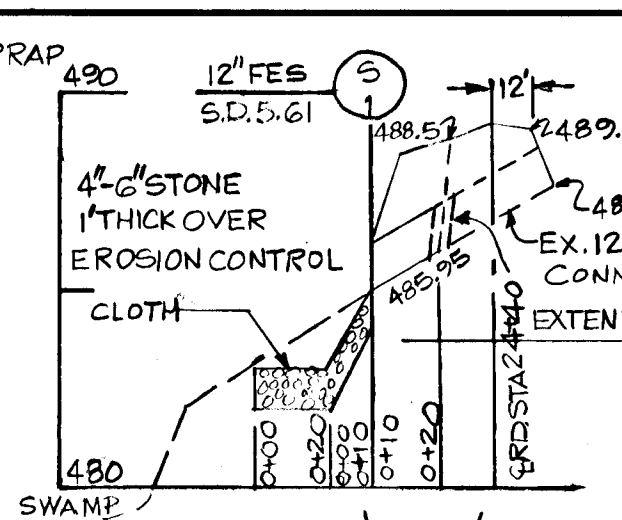
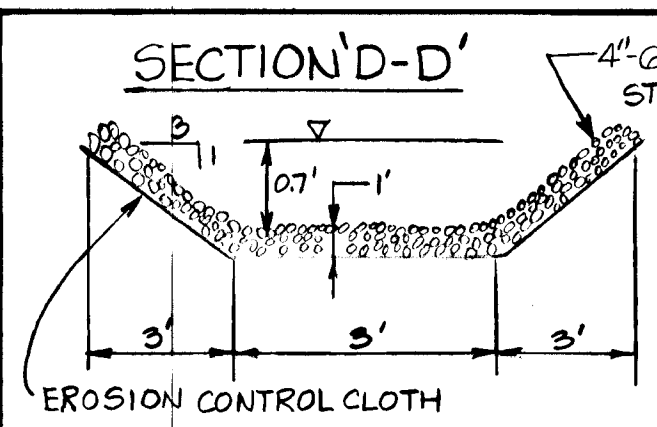
APPROVED: *[Signature]* 10-18-77
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

NOTE - AS-BUILT INFORMATION VERIFIED WITH THE SIGNATURE AND SEAL OF WILLIAM G. HARTZEL, MD REG. LAND SURVEYOR No. 9436 NOV 3, 1981



[Handwritten signature]
6-21-78

44-6-93 Dec. 1

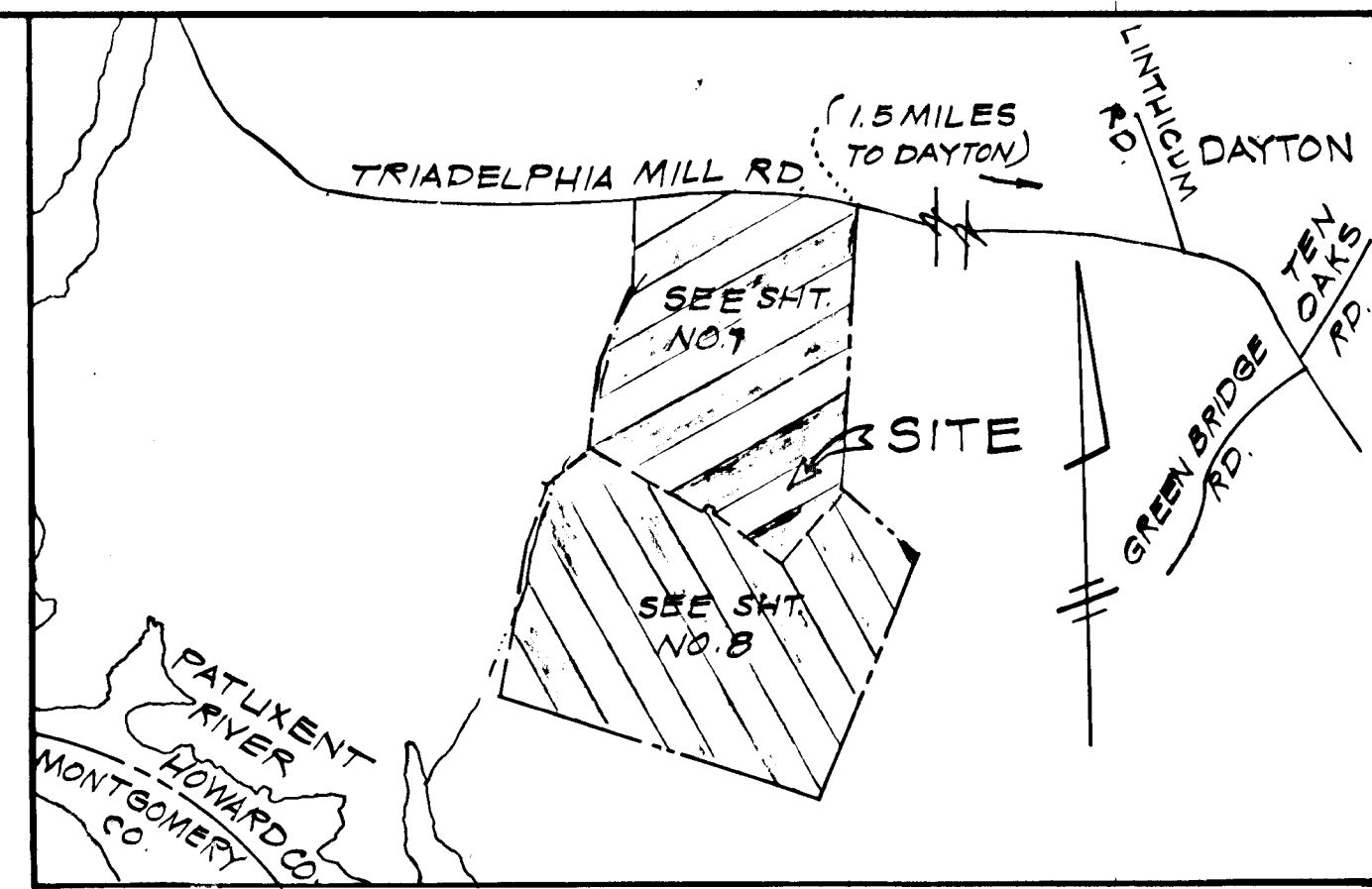


DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND HAS/AUTHORITY FROM THE HOWARD SOIL CONSERVATION DISTRICT AS THIS AUTHORIZED PERSON HAS BEEN LICENSED BY THE HOWARD SOIL CONSERVATION DISTRICT. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.

John B. ... 10/5/78

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN OF DEVELOPMENT AND/OR CONSTRUCTION REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON A REASONABLE ASSESSMENT OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

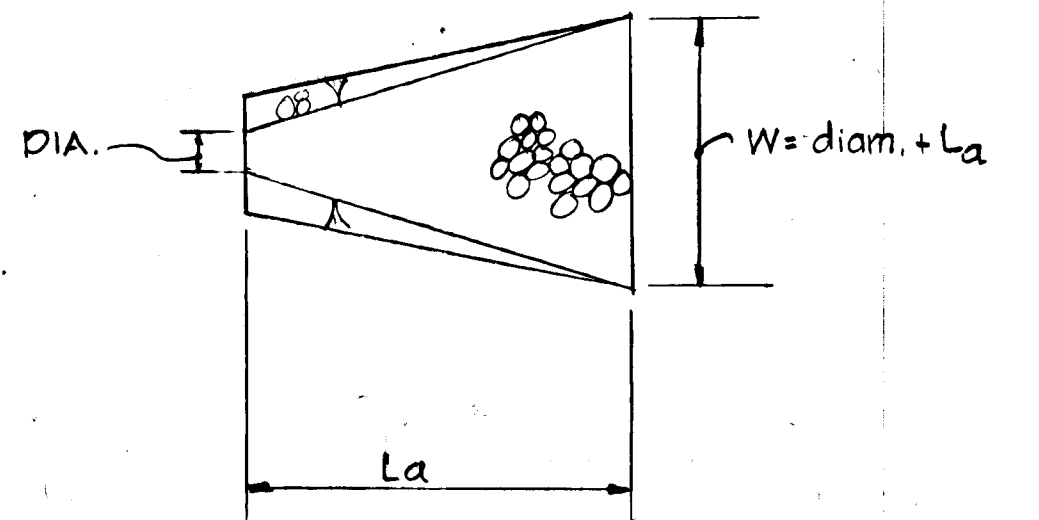
Rodolph ... 10/5/78



KEY SHEET & VICINITY MAP
 SCALE: 1" = 1200'

RIP-RAP APRON SCHEDULE

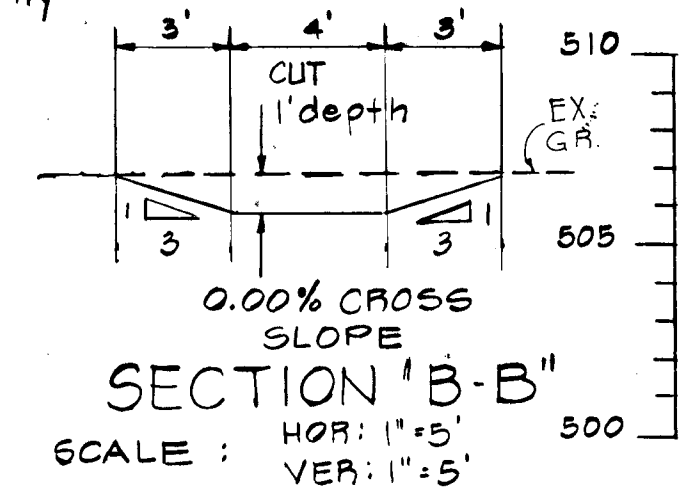
STRUCTURE NO.	La. REQUIRED	La. PROVIDED	W/DIA REQ'D	W/DIA PROVIDED	STONE DIA. REQUIRED	STONE DIA. PROVIDED
S-1	9.5'	10'	10.75"	11"	4"	4"-6"
S-2	9.5'	10'	10.75"	11"	4"	4"-6"
S-3	9.5'	10'	10.75"	11"	4"	4"-6"
S-4	10'	20'	11.5"	12"	4"	4"-6"
S-5	9.5'	22'	10.75"	11"	4"	4"-6"
S-6	17'	20'	10.75"	10"	4"	4"-6"
S-7	9.5'	20'	10.75"	11"	4"	4"-6"
S-8	9.5'	23'	10.75"	11"	4"	4"-6"



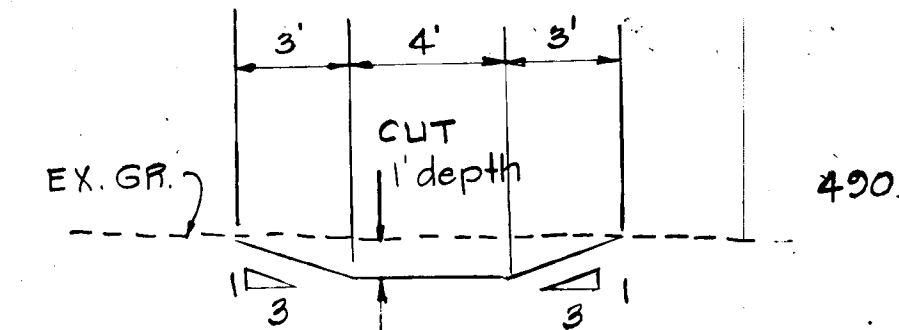
APRON DETAIL PLAN

NO SCALE
 (SEE USDA-SCS-MD)
 DRAWG. A-38.09
 MINIMUM TAILWATER CONDITION
 (TW < 0.5 DIA.)

TRY Q
 0.4' depth
 $A = 4.2 \text{ SF}$
 $W = 10.12 \text{ FT.}$
 $R = .42$
 $R^{2/3} = .56$
 $n = .045$
 $Slo. = 1.00\%$
 $S^{1/2} = .046$
 $V = 1.486 \text{ } \frac{2}{3} s^{1/2}$
 $V = 0.85 \text{ F.P.S.}$
 $Q_{try} = 3.57 \text{ C.F.S.}$
 $Q_{10} = 2.6 \text{ C.F.S.}$



SECTION B-B'
 SCALE: HOR: 1" = 5', VER: 1" = 5'



SECTION A-A'

TRY Q
 0.4' depth
 $A = 2.8 \text{ SF}$
 $W = 10.05 \text{ FT.}$
 $R = .28$
 $R^{2/3} = .43$
 $n = .045$
 $Slo. = 4.0\%$
 $S^{1/2} = 0.2$
 $V = 1.486 \text{ } \frac{2}{3} s^{1/2}$
 $Q_{AV} = 7.84 \text{ C.F.S.}$
 $Q_{10} = 6.6 \text{ C.F.S.}$
 $V_{10} = 2.8 \text{ F.P.S.}$
 OWNER & DEVELOPER
 KIMBURTHILL, INC.
 2201 OLNEY-SANDY SPRING RD.
 OLNEY, MARYLAND 20832



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

C. Wayne Ray 10-18-78
 SOIL CONSERVATION SERVICE DATE

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

Rodolph ... 10-18-78
 SOIL CONSERVATION DISTRICT DATE

APPROVED DEPARTMENT OF PUBLIC WORKS

W. H. N. 10-21-78
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING

John ... 10-18-78
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

TITLE: DRAINAGE AREA MAP

PROJECT: KALMIA FARMS: SECTION 1

LOCATION: 5TH ELECTION DISTRICT HOWARD COUNTY, MD.

DATE: MAY, 1978 DESIGN BY: W. H. N. DRAWN BY: W. H. N. CHECKED BY: R. L. M.

SCALE: 1" = 100' JOB NO.: 7701 DRAWING NO.: 7 OF 11

boender associates engineers/surveyors/planners

BALTIMORE 301-465-7777 * SALISBURY 301-740-1286

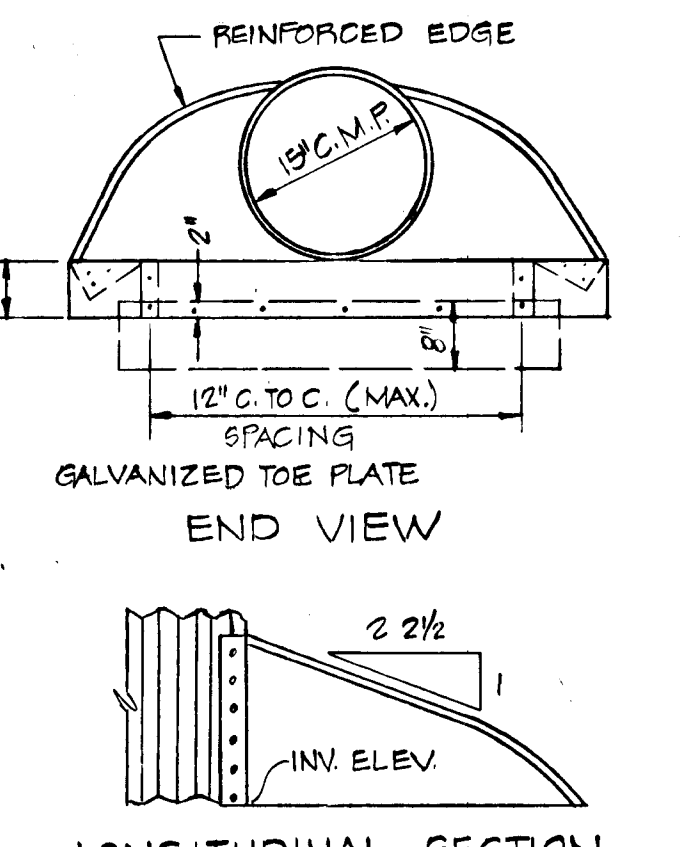
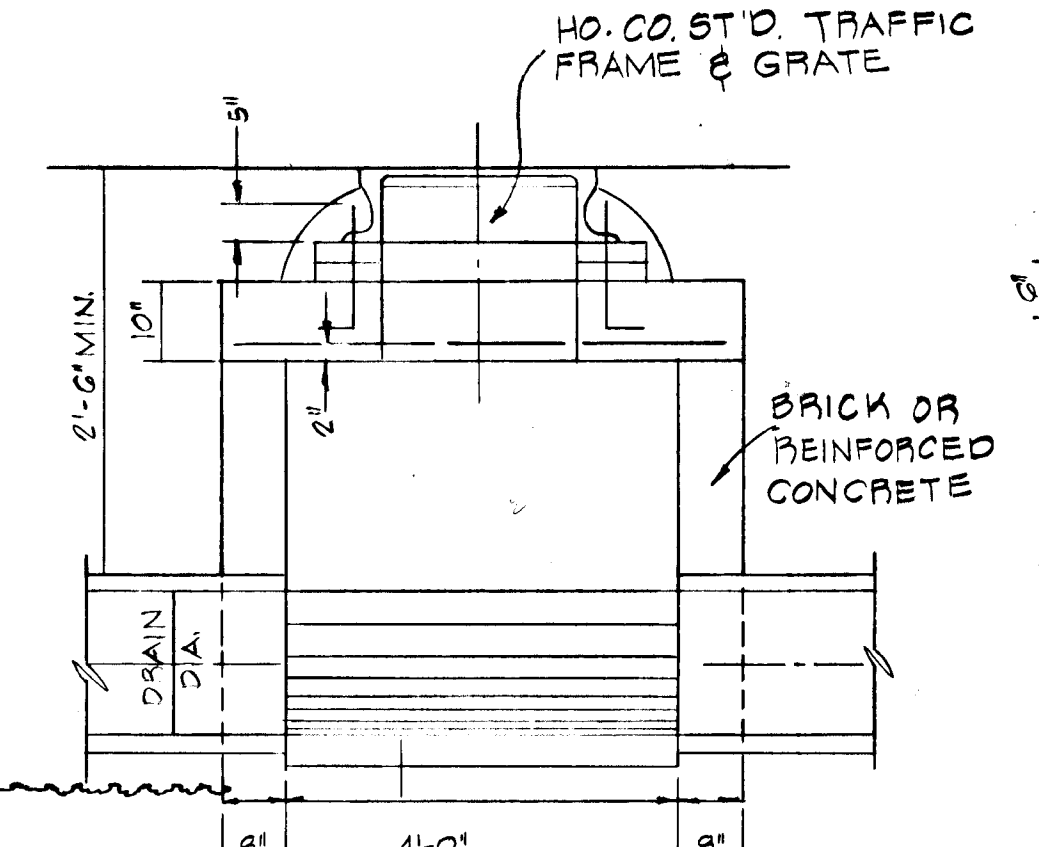
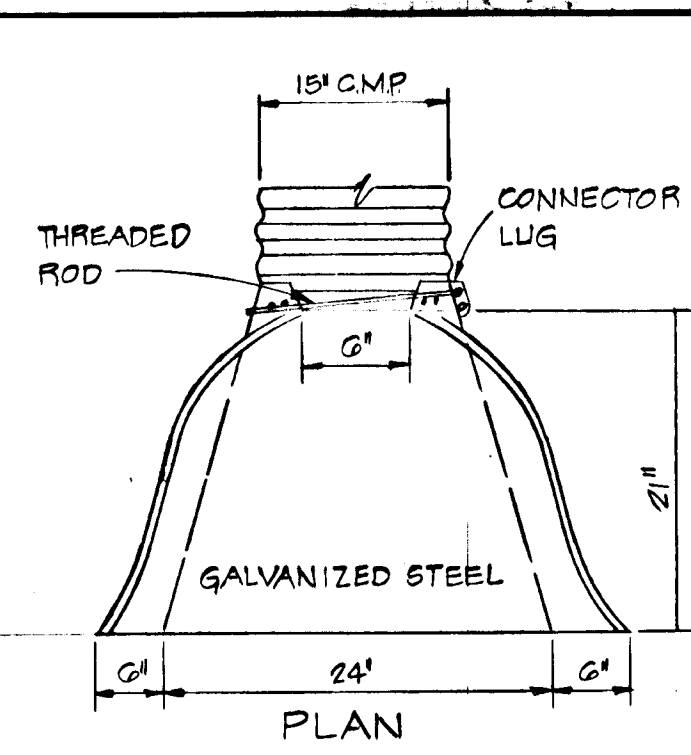
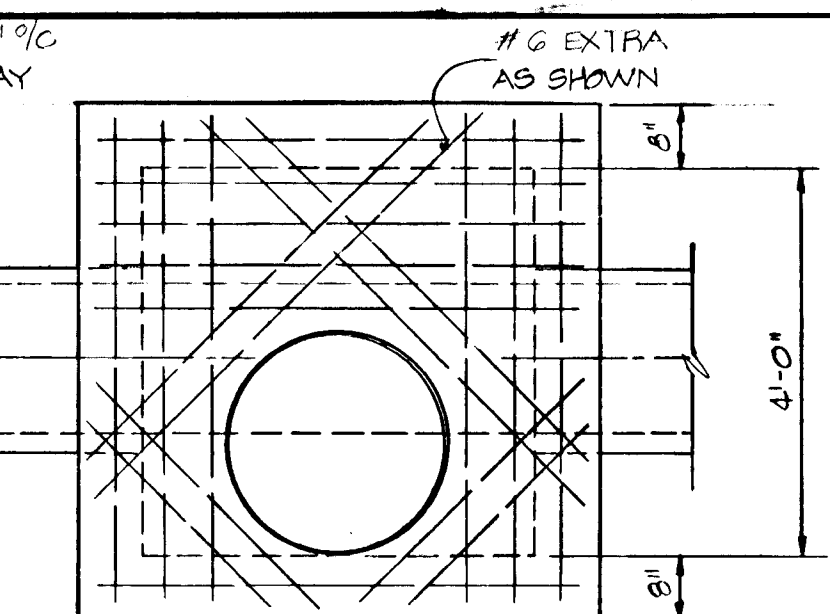
10-18-78

1-79-30



APPROVED DEPARTMENT OF PUBLIC WORKS
W. W. Hartel 10-26-78
 CHIEF, BUREAU OF ENGINEERING DATE
 APPROVED OFFICE OF PLANNING AND ZONING
W. W. Hartel 10-18-78
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

JOSEPH HORRELL
 386/438



W.S.S.C. 127/118, 171/91, 193/510
 SHALLOW MANHOLE SECTION
 NO SCALE

- NOTE -
 AS-BUILT INFORMATION VERIFIED WITH THE SIGNATURE AND SEAL OF WILLIAM G. HARTEL, MD REG. LAND SURVEYOR No. 7436 - FEB. 27, 1981

PROPOSED STRUCTURE SCHEDULES

NO.	TYPE	IN V. IN	IN V. OUT	TOP	REMARKS
I-15	HO. CO. STD. CLASS A-5 INLET	456.00	456.00	456.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-16	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-1	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-2	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-3	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-4	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-5	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-6	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-7	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-8	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-9	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-10	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-11	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-12	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-13	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
I-14	HO. CO. STD. CLASS A-5 INLET	457.00	457.00	457.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
M-1	SHALLOW MANHOLE	456.00	456.00	456.00	SEE DETAIL THIS SHEET
M-2	SHALLOW MANHOLE	456.00	456.00	456.00	SEE DETAIL THIS SHEET
M-3	SHALLOW MANHOLE	456.00	456.00	456.00	SEE DETAIL THIS SHEET
M-4	SHALLOW MANHOLE	456.00	456.00	456.00	SEE DETAIL THIS SHEET
S-1	METAL FLARED END SECTION	456.00	456.00	456.00	SEE DETAIL THIS SHEET
S-2	HO. CO. STD. 'J' INLET	456.00	456.00	456.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
S-3	HO. CO. STD. 'C' ENDWALL	456.00	456.00	456.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
S-4	HO. CO. STD. 'C' ENDWALL	456.00	456.00	456.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
S-5	HO. CO. STD. 'G' HEADWALL	456.00	456.00	456.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
S-6	HO. CO. STD. 'C' ENDWALL	456.00	456.00	456.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
S-7	HO. CO. STD. 'C' ENDWALL	456.00	456.00	456.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
S-8	HO. CO. STD. 'C' ENDWALL	456.00	456.00	456.00	SEE HO. CO. STD. DETAILS DRAWG. G4-A, PG. 110-A
S-9	METAL FLARED END SECT.	456.00	456.00	456.00	SEE DETAIL THIS SHEET
S-10	METAL HOP. 45° BEND	449.00	449.00	449.00	SEE DETAIL THIS SHEET

S-1 NOTE: SET REAR WALL TOWARDS TRIADELPHIA MILL ROAD IN ORDER TO SUPPORT THE ESTABLISHED 2:1 SIDE SLOPE. ALSO SLOPE BOTTOM OF INLET 2:1 FROM END TO END, INSTEAD OF STD. BEAR TO FRONT. OUTLET DRAIN END OF INLET.

OWNER & DEVELOPER
 KIMBURN HILL INC.
 2901 OLNEY - SANDY SPRING RD.
 OLNEY, MARYLAND 20832

DRAINAGE AREA MAP			
PROJECT KALMIA FARMS - SECTION 1			
LOCATION 5TH ELECTION DISTRICT		HOWARD COUNTY MD.	
DATE: MAY 1978	DESIGN BY: W.H.N.	DRAWN BY: W.H.N.	CHECKED BY: P.L.M.
SCALE: 1" = 100'	JOB NO.: 7701	DRAWING NO.: 8 OF 11	

William G. Hartel
 6/21/78

W.S.S.C.
 127/118, 171/91, 193/510

boender associates engineers/surveyors/planners

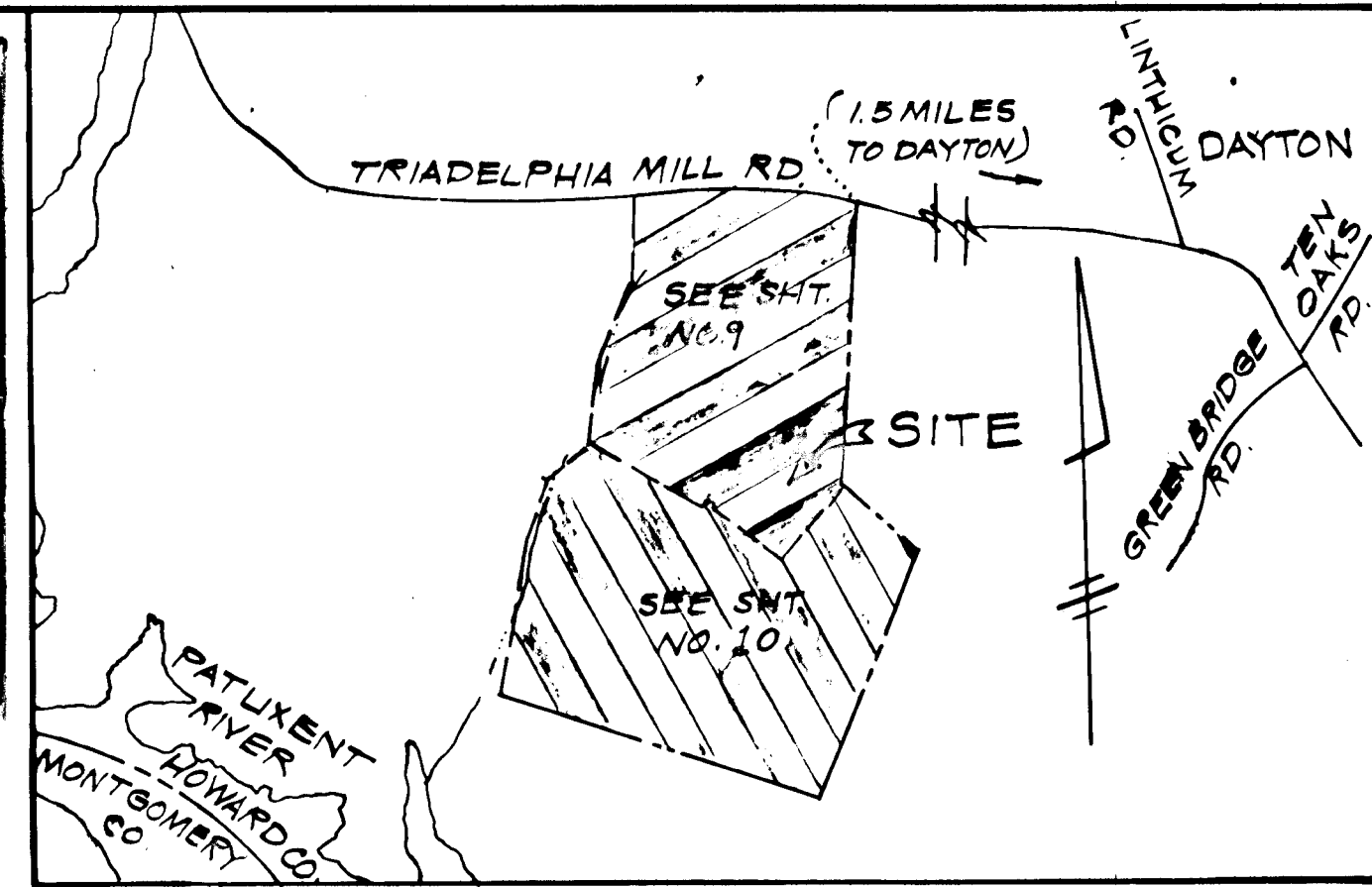
SEDIMENT TRAP SCHEDULE						
TRAP NO.	DRAINAGE AREA	VOLUME PROVIDED	REQ'D	BOTTOM SIZE	BOTTOM ELEV.	ELEV. SPILLWAY
1	2.3 AC.	4230 CF	4140 CF	2' DEEP x 50' x 24"	498.0	500.5 L+13'
2	1.9 AC.	3486 CF	3420 CF	2' DEEP x 60' x 24"	476.0	478.2 L+12'
3	2.2 AC.	4000 CF	3960 CF	2' DEEP x 60' x 24"	455.0	457.5 L+14'
4	2.4 AC.	4375 CF	4320 CF	2' DEEP x 50' x 30"	441.0	443.5 L+15'
5	2.7 AC.	4875 CF	4800 CF	2' DEEP x 50' x 30"	430.0	432.5 L+17'

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I SO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE SOIL CONSERVATION DISTRICT OF THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE SOIL CONSERVATION DISTRICT.

DATE: 6-22-78
 DEVELOPER - AGENT: JOHN A. BOENDER

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOIL CONSERVATION DISTRICT.

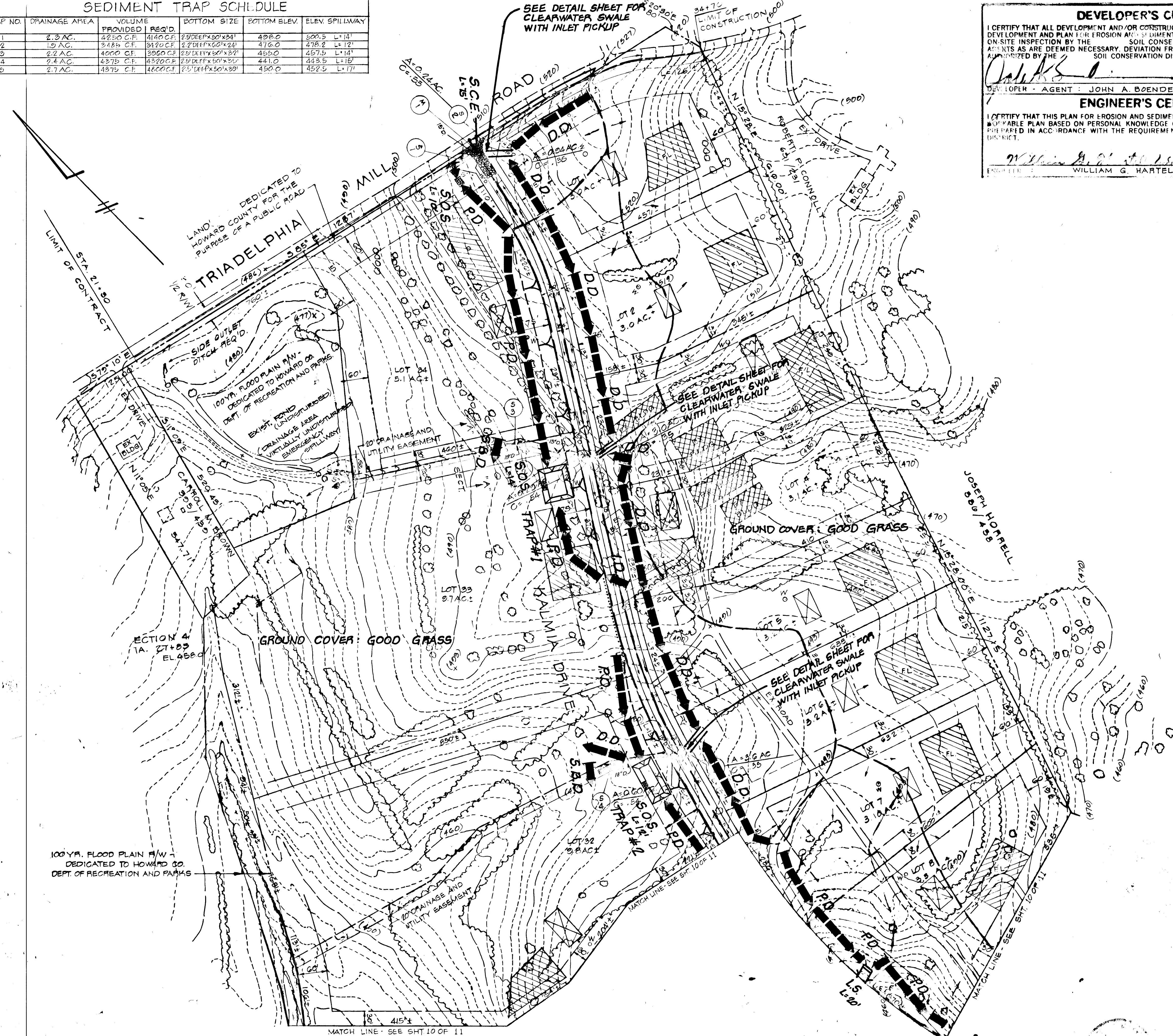
DATE: 6-22-78
 ENGINEER: WILLIAM G. HARTEL - L.S. 2436



CONSTRUCTION SEQUENCE

1. OBTAIN GRADING PERMIT.
2. NOTIFY THE BUREAU OF LICENSE, INSPECTIONS AND PERMITS AT 502-2426 24 HOURS PRIOR TO BEGINNING.
3. INSTALL STONE CONSTRUCTION ENTRANCE.
4. INSTALL TEMPORARY SEDIMENT CONTROL MEASURES.
5. CONSTRUCT STORM DRAINS. BLOCK THE PROPOSED STREET PICKUP END OF INLET AT THE END OF EACH DAY UNTIL ALL DISTURBED AREAS ARE STABILIZED.
6. ROUGH GRADE ROADS. STABILIZE WITH BASE MATERIALS AND TEMPORARY SEEDING.
7. ALL SEDIMENT CONTROL TRAPS SHALL BE RESTORED TO THEIR ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 OF THE DESIGN DEPTH OF THE TRAP. SEDIMENT REMOVED FROM THE TRAP SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
8. PAVE ROADS. STABILIZE ALL GRADED AREAS WITH PERMANENT SEEDING, ETC. ACCORDING TO SEDIMENT CONTROL NOTES.
9. REMOVE TEMPORARY SEDIMENT CONTROL MEASURES WITH APPROVAL OF THE BUREAU OF LICENSE, INSPECTIONS AND PERMITS.

LAND DEDICATED TO HOWARD COUNTY FOR THE PURPOSE OF A PUBLIC ROAD
 TRIADELPHIA MILL RD
 STA. 21+30
 LIMIT OF CONTRACT



CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 W. J. H. 10-31-78
 CHIEF, BUREAU OF ENGINEERING DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
 C. Wayne Gray 10-18-78
 U.S. SOIL CONSERVATION SERVICE DATE
 THIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Robert J. Zick 10-18-78
 SOIL CONSERVATION DISTRICT DATE

OWNER & DEVELOPER
 KIMBURTHILL, INC.
 2001 OLNEY - SANDY SPRING RD.
 OLNEY, MARYLAND 20832

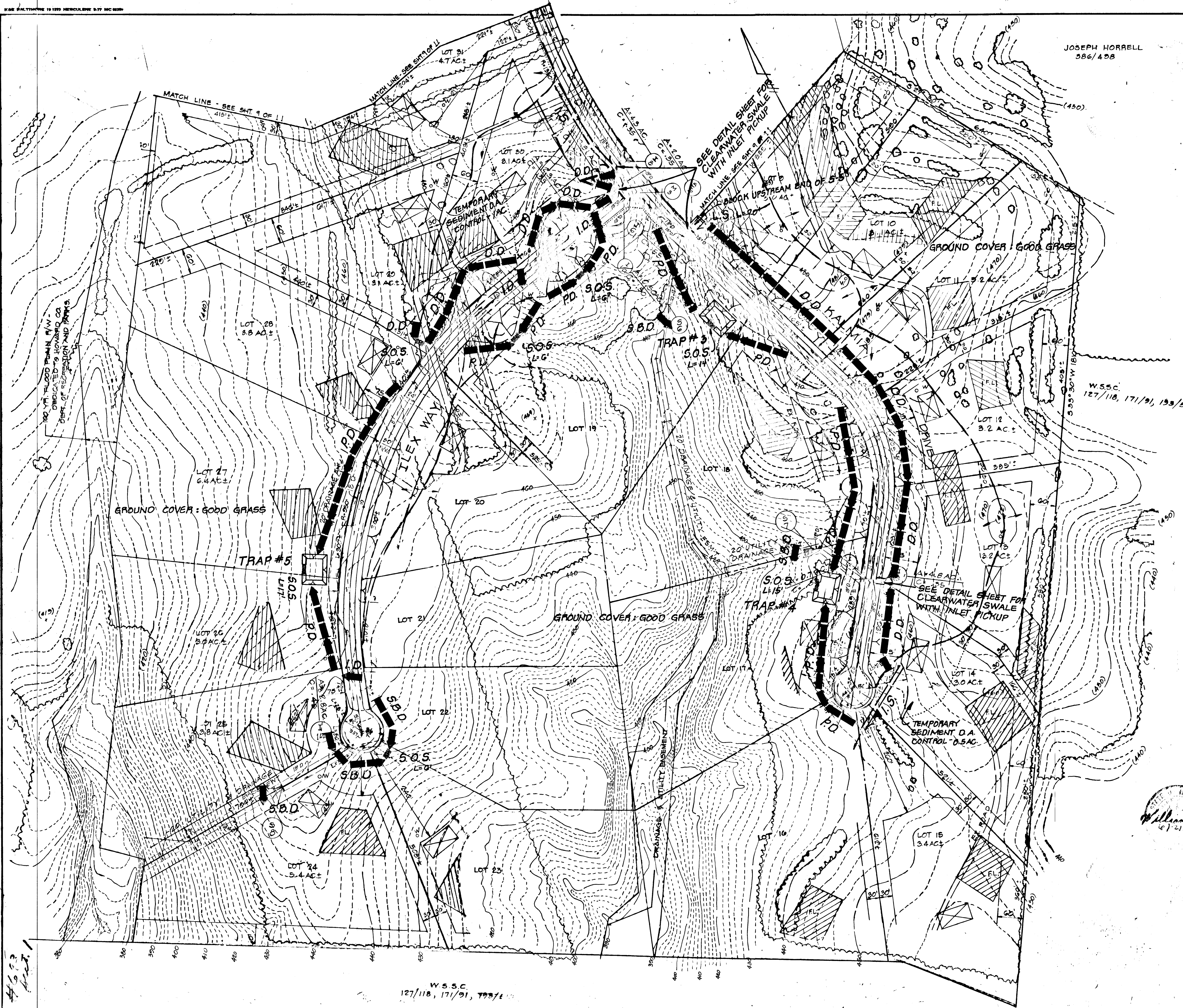
SEDIMENT CONTROL PLAN
KALMIA FARMS: SECTION 1
 LOCATION: 5TH ELECTION DISTRICT HOWARD COUNTY, MD.
 DATE: MAY 1978 DESIGN BY: W.H.N. DRAWN BY: J.J.B. CHECKED BY: R.L.M.
 SCALE: 1" = 100' JOB NO.: 7701 DRAWING NO.: 9 OF 11
 bqender associates engineers/surveyors/planners
 BALTIMORE 301-465-7777 • SALISBURY 301-749-1286

William G. Hartel
 6-21-78

4-6-83
 J. J. B.

1-79-80

JOSEPH HORRELL
586/498



DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OF THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT.

John A. Boender
 DEVELOPER AGENT - JOHN A. BOENDER
 DATE: 6/23/78

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William G. Hartel
 ENGINEER - WILLIAM G. HARTEL - L.S. 2496
 DATE: 6-27-78

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William G. Hartel
 CHIEF, BUREAU OF ENGINEERING DATE: 10-31-78

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

C. Wayne Gray
 U.S. SOIL CONSERVATION SERVICE DATE: 10-18-78

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

Robert Zielinski
 SUPERVISOR DATE: 10-18-78

OWNER & DEVELOPER
 KIRK BURT HILL, INC.
 2201 OLNEY - SANDY SPRING RD
 OLNEY, MARYLAND 20832

SEDIMENT CONTROL PLAN			
KALMIA FARMS - SECTION 1			
PROJECT	5TH ELECTION DISTRICT HOWARD COUNTY, MD		
LOCATION	5TH ELECTION DISTRICT HOWARD COUNTY, MD		
DATE: MAY 1978	DESIGN BY: W.H.N.	DRAWN BY: J.J.B.	CHECKED BY: R.L.M.
SCALE: 1" = 100'	JOB NO.: 7701	DRAWING NO.: 10 OF 11	
boender associates			engineers surveyors planners
BALTIMORE 301-465-7777 • SALISBURY 301-749-1286			

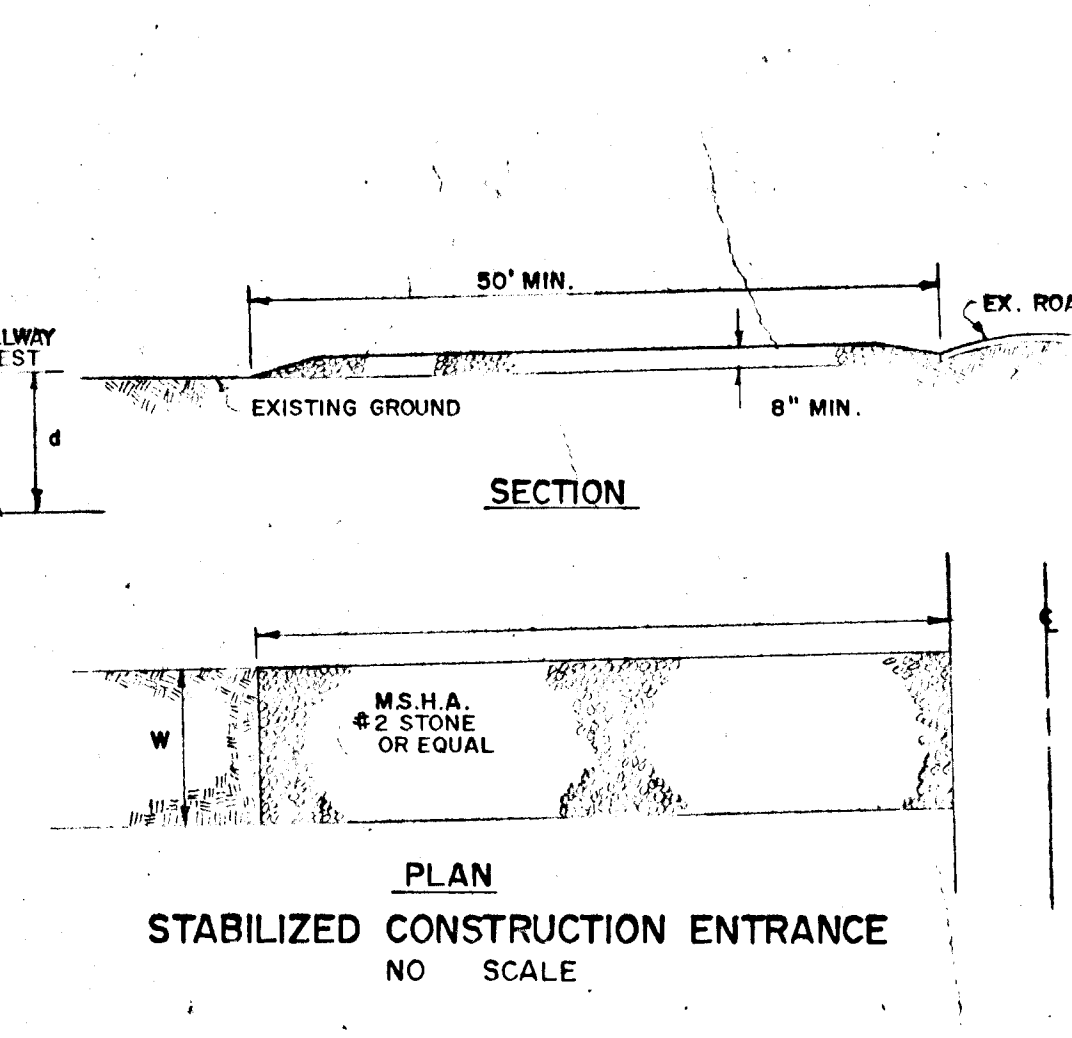
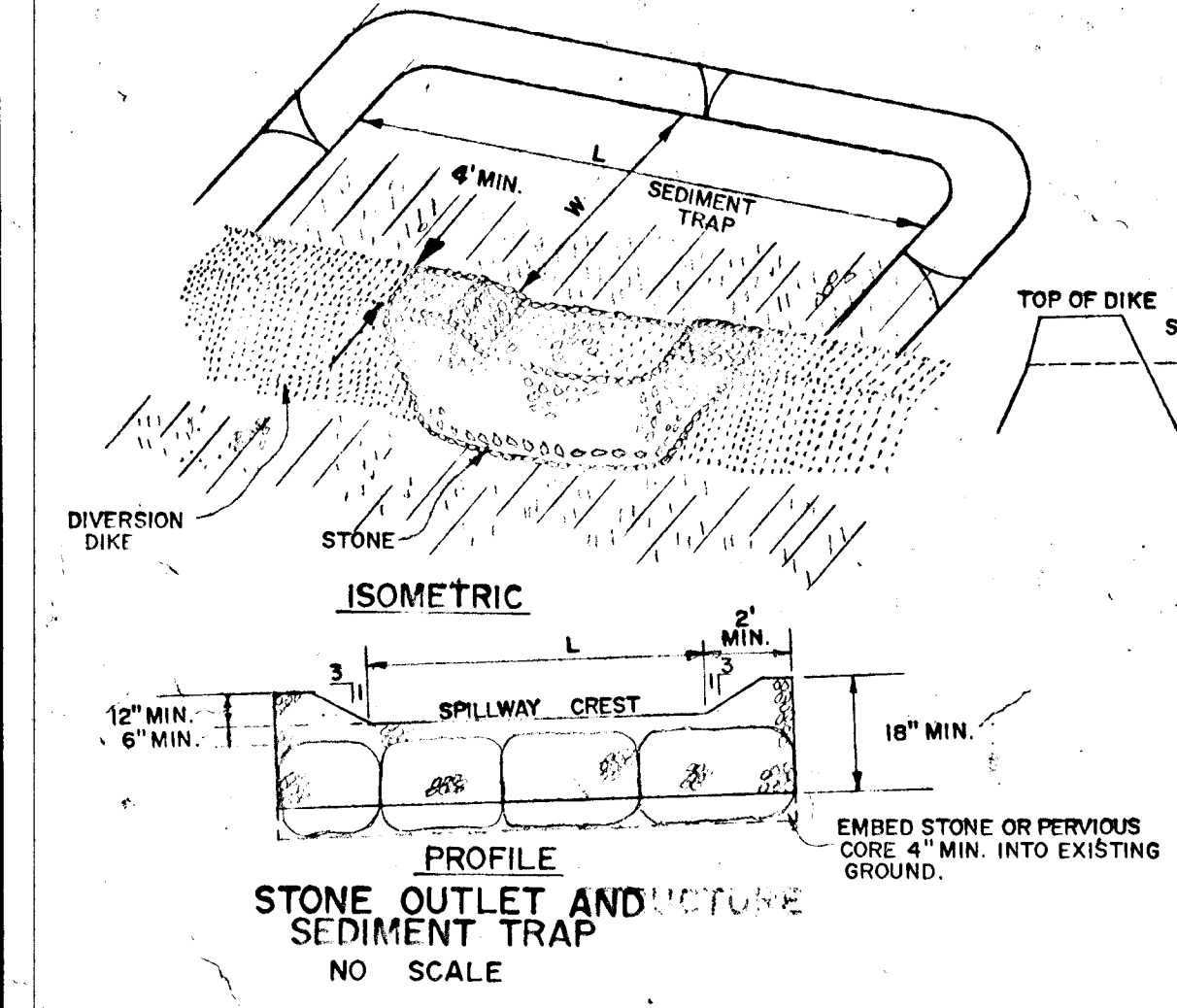
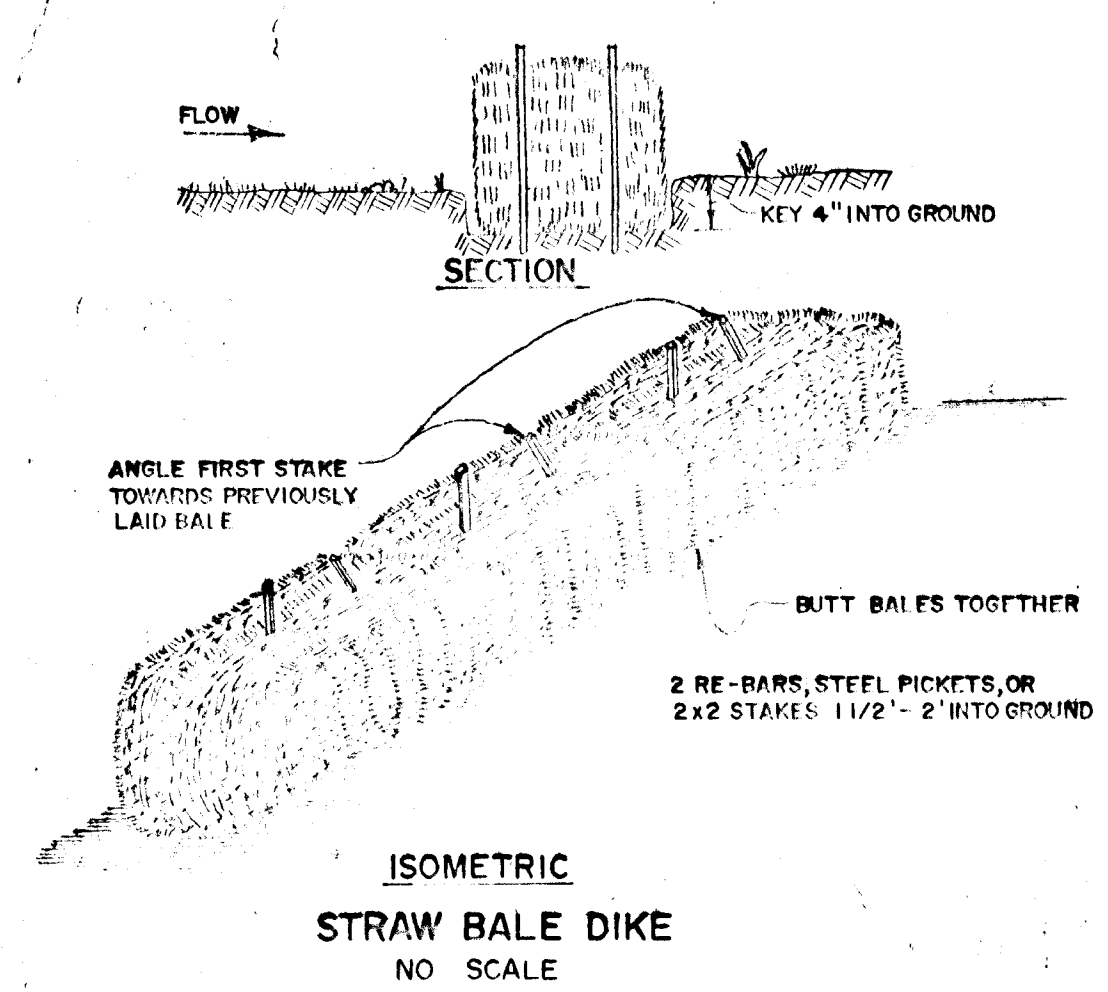
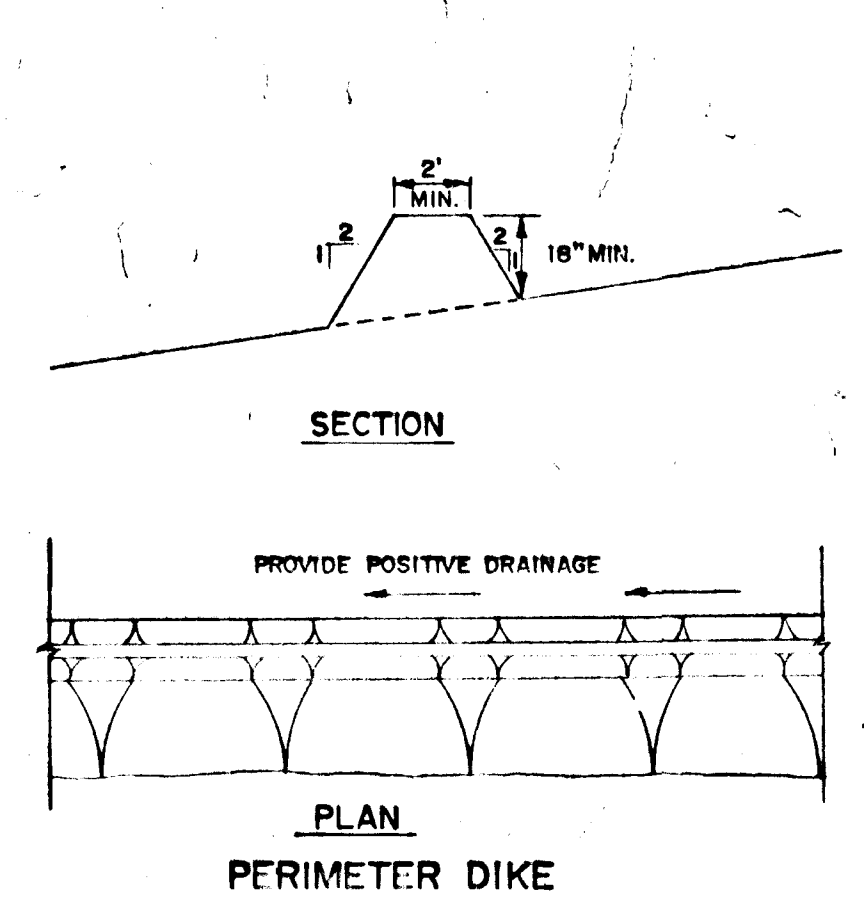
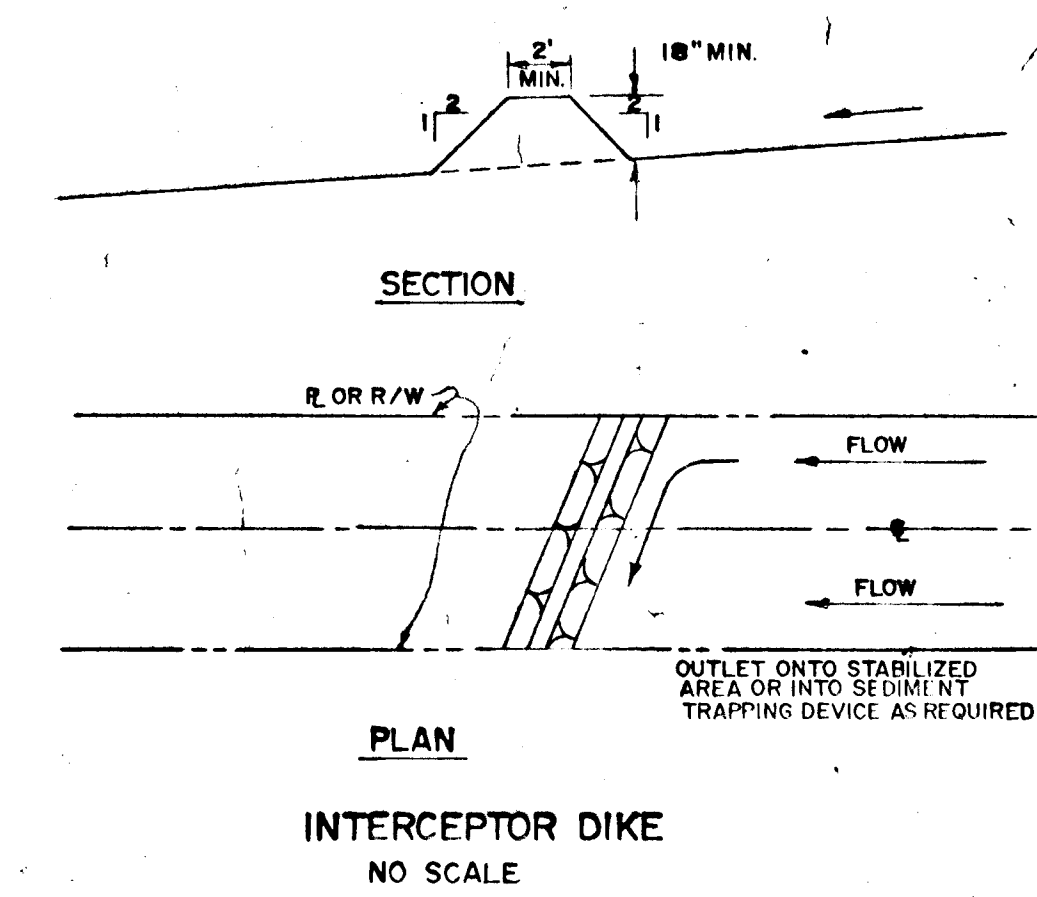
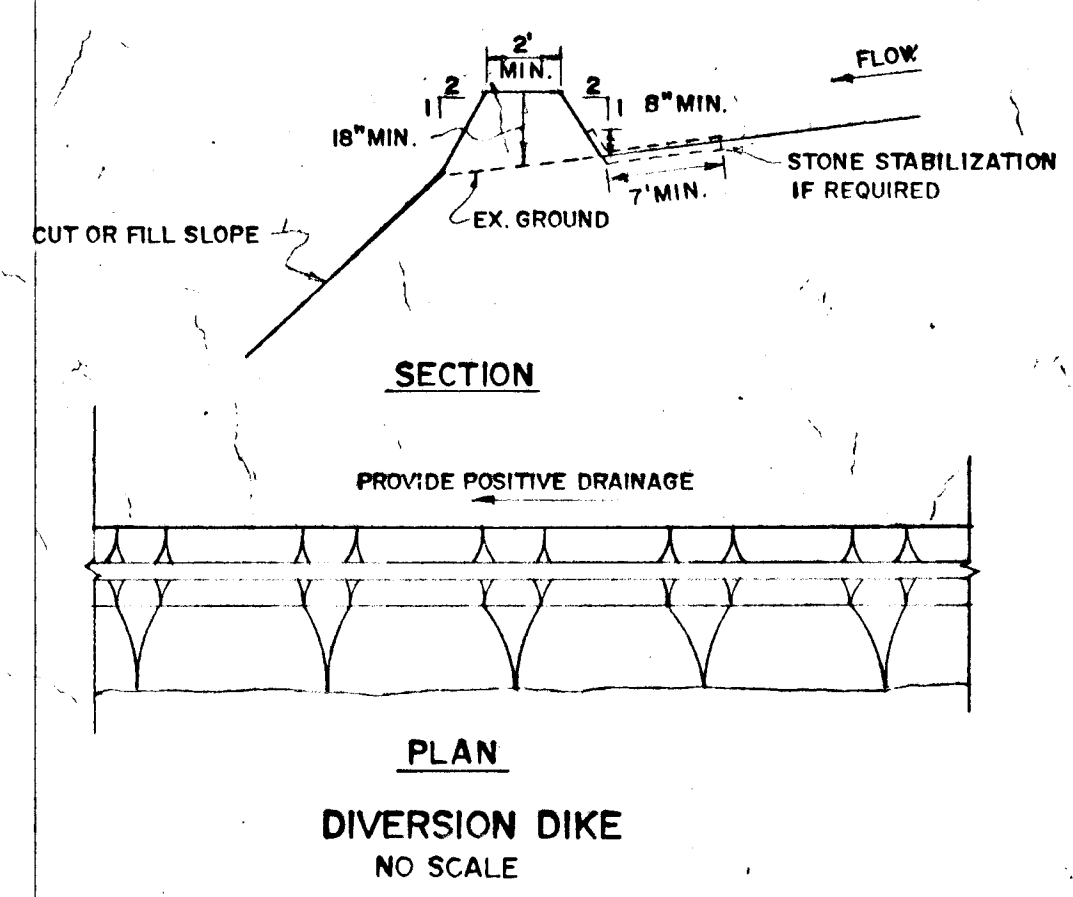
W.S.S.C.
127/118, 171/91, 193/6

4/2/78
part 1

REVISIONS			
NO.	BY & DATE	DESCRIPTION	CHECK

SEDIMENT CONTROL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS" PREPARED BY THE U.S.D.A. SOIL CONSERVATION SERVICE.
- APPLY FOR GRADING PERMIT.
- NOTIFY THE BUREAU OF LICENSE INSPECTIONS AND PERMITS 24 HRS. PRIOR TO GRADING OPERATIONS.
- CONSTRUCTION SHALL ADHERE TO THE CONSTRUCTION SEQUENCE.
- CUT AND FILL SLOPES SHALL BE 3:1 MAXIMUM.
- ELEVATIONS MARKED THUS (X) SHALL BE FINISHED GRADE.
- ANY EXCESS MATERIAL SHALL BE STOCKPILED IN A CLEARED LOCATION ON SITE WHICH IS PROTECTED BY SEDIMENT CONTROL STRUCTURE(S). MAXIMUM FILL SLOPE SHALL BE 3:1. STOCKPILED MATERIAL SHALL BE STABILIZED ACCORDING TO SEEDING SPECIFICATIONS BELOW.
- SEDIMENT CONTROL STRUCTURES SHALL BE REMOVED ONLY WITH PERMISSION OF THE BUREAU OF LICENSE, INSPECTIONS AND PERMITS.
- STABILIZATION MEASURES:
 - TEMPORARY STABILIZATION:
 - APPLY: 2000 LBS./AC. OR 46 LBS. OF PULVERIZED DOLOMIC LIMESTONE, 500 LBS./AC. OR 11.5 LBS./1000 SQ. FT. OF 10-10-10 FERTILIZER. PLANT WITH RYEGRASS AT 40 LBS./AC. MULCH ALL DISTURBED AREAS IMMEDIATELY AFTER GRADING.
 - PERMANENT STABILIZATION:
 - APPLY: 2000 LBS./AC. OF PULVERIZED DOLOMIC LIMESTONE, 500 LBS./AC. OF 10-10-10 FERTILIZER.
 - SEED: 85 LBS./AC. OF KENTUCKY 31 TALL FESCUE, 40 LBS./AC. OF KENTUCKY BLUE GRASS, 25 LBS./AC. OF ANNUAL RYEGRASS.
- NOTE: SEEDING MAY BE DONE BETWEEN MARCH 1 - MAY 1, OR AUG. 1 - OCT. 1 ONLY. MULCH ALL DISTURBED AREAS IMMEDIATELY AFTER GRADING.
- MULCH: 2 TONS/AC. OF UNWEATHERED WHEATSTRAW. TIE MULCH DOWN WITH 480 GAL./AC. OF LIQUID ASPHALT.
- INSTALL JUTE OR EXCELSIOR MATTING ON A PRE-PREPARED SEED OR PLANTING BED OF A CHANNEL OR STEEP SLOPE TO BE STABILIZED WITH VEGETATION; AS AN AID IN ORDER TO CONTROL EROSION ON CRITICAL DRAINAGE OUTFALLS DURING ESTABLISHMENT PERIOD OF PROTECTIVE VEGETATION, WHERE DESIGNED FLOW EXCEEDS 3.5 F.P.S.

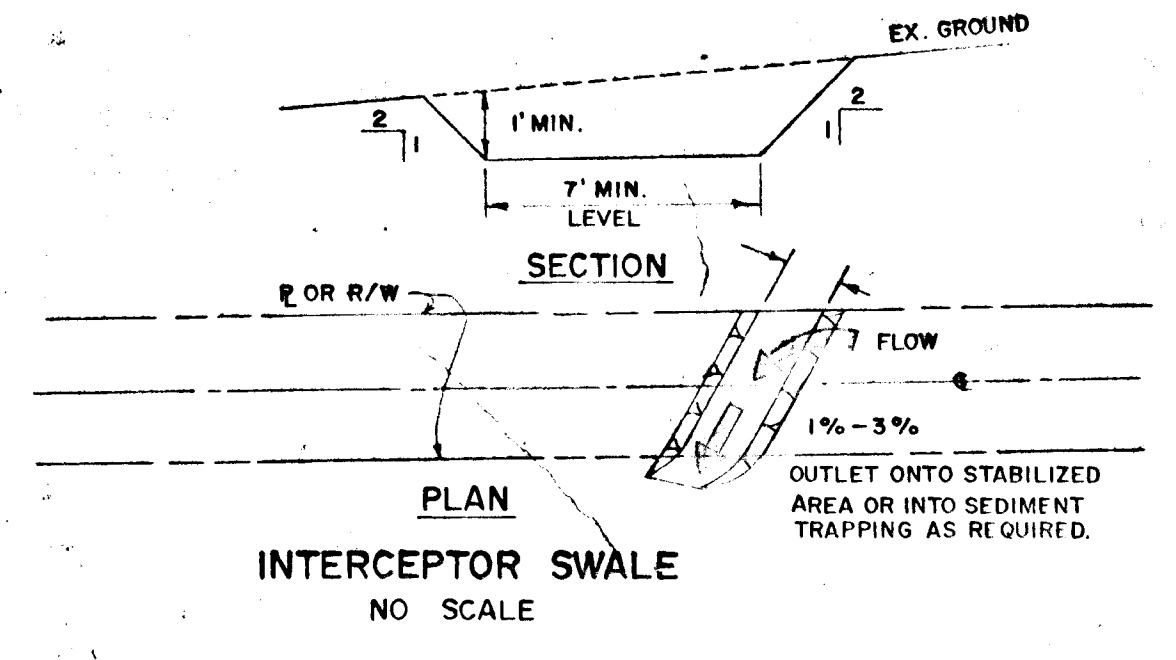
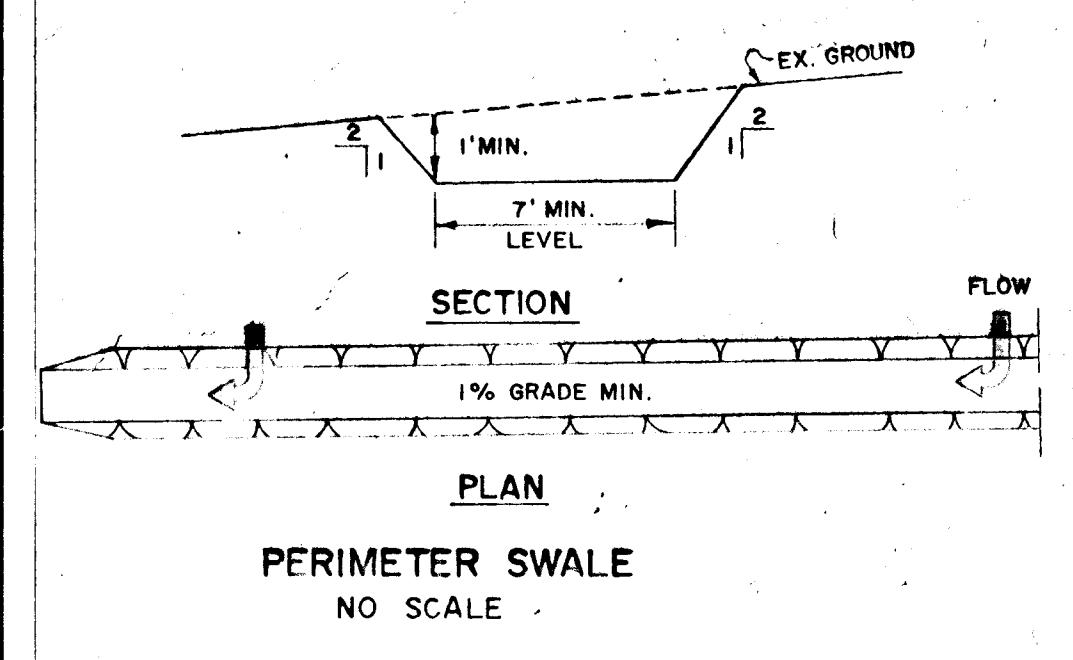
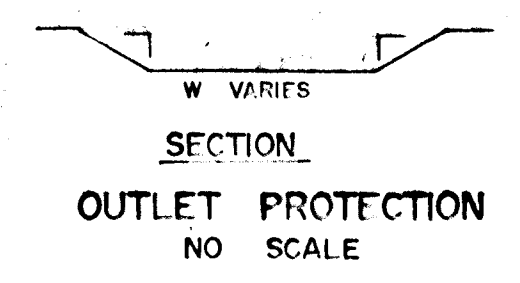
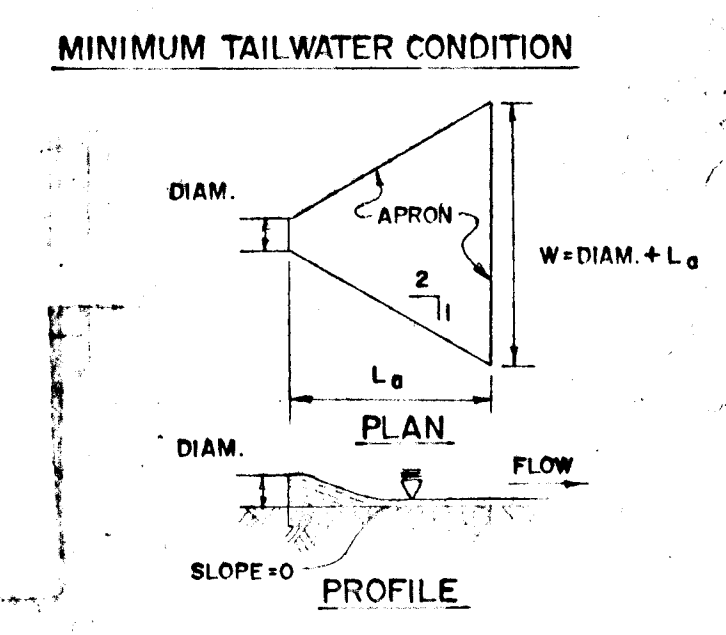


DEVELOPER'S CERTIFICATE
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John A. Doender
DEVELOPER - AGENT: JOHN A. DOENDER DATE: 6-22-78

ENGINEER'S CERTIFICATE
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

William G. Hartel L.S. N. 9134 6-27-78
ENGINEER: WILLIAM G. HARTEL - L.S. 5436 DATE

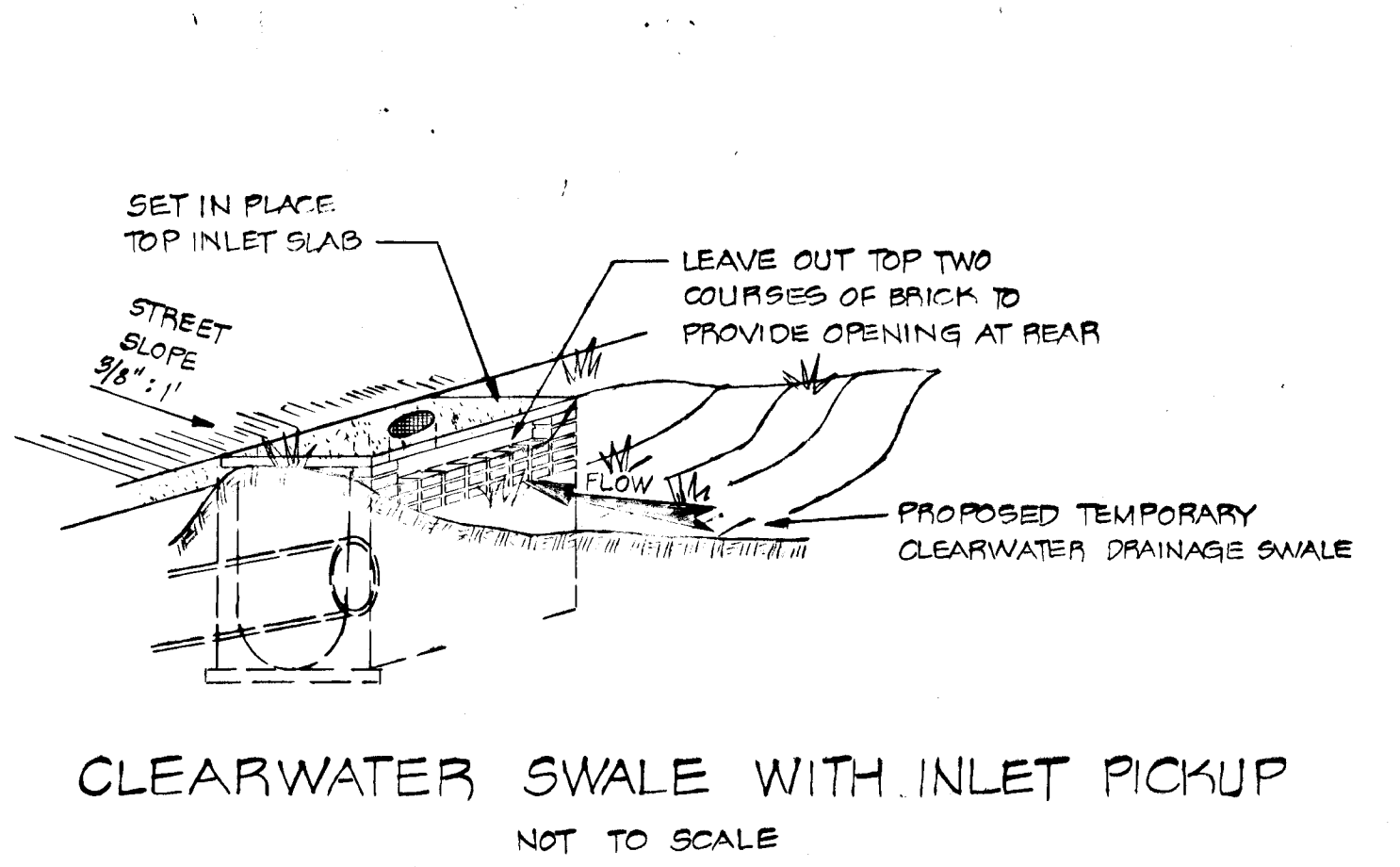
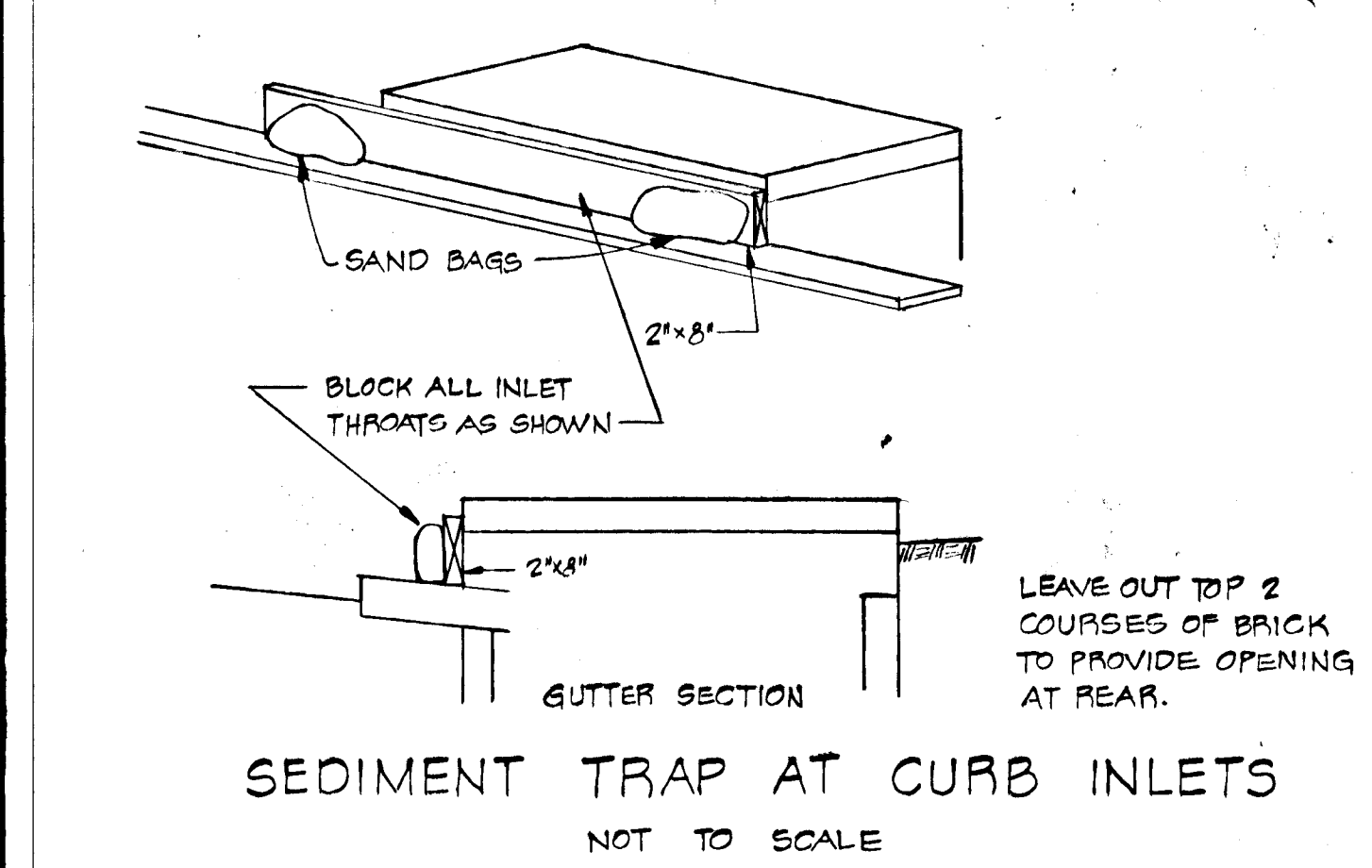


SITE ANALYSIS

TOTAL AREA = 148.14 AC.
AREA DISTURBED = 18.1 AC. ±
AREA PAVED = 2.9 AC. ±
AREA RE-VEGETATED = 10.2 AC. ±
AREA UNDISTURBED = 135. AC. ±

STANDARD SYMBOLS

- DIVERSION DIKE
 - INTERCEPTOR DIKE
 - PERIMETER DIKE
 - STRAW BALE DIKE
 - INTERCEPTOR SWALE
 - PERIMETER SWALE
 - STABILIZED CONSTRUCTION ENTRANCE
 - STONE OUTLET STRUCTURE
 - GRADE STABILIZATION STRUCTURE
 - CHUTE OR FLUME
 - RIGID PIPE SLOPE DRAIN
 - FLEXIBLE PIPE SLOPE DRAIN
 - DIVERSION
 - GRASSED WATERWAY
 - LEVEL SPREADER
 - SUBSURFACE DRAIN
- NOTES:
1. ARROWS POINT DOWNSLOPE OR TO THE OUTLET.
2. DIKE AND DIVERSION SYMBOLS SHALL HAVE A CROSS MARK TO CLEARLY SHOW WHERE THE STRUCTURE BEGINS AND ENDS.



OWNER & DEVELOPER
HIMBURTHILL, INC.
2201 OLNEY - SANDY SPRING RD.
OLNEY, MARYLAND 20832

SEDIMENT CONTROL DETAILS

PROJECT: KALMIA FARMS - SECTION I

LOCATION: 5TH ELECTION DISTRICT HOWARD CO., MD

DATE: MAY, 1978 DESIGNED BY: W.N. DRAWN BY: W.G.H. CHECKED BY: W.G.H.

SCALE: AS SHOWN JOB NO: 7701 DRAWING NO: 11 OF 11

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

C. Wayne Bress 12-18-78
U.S. SOIL CONSERVATION SERVICE DATE

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

Robert W. Ziehm 10-18-78
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED DEPARTMENT OF PUBLIC WORKS

[Signature]
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED OFFICE OF PLANNING AND ZONING

[Signature] 10-18-78
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ENGINEERING
PLANNING
SURVEYING
BY
BOENDER ASSOCIATES INC.
BALTIMORE, MD. 21202
WESLEYCHURCH, MD. 21287

4/16/92
1/14/91