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5 of 13	Plan & Profile: Hayshed Lane (33+50 to 39+00); Woodstaff Way
6 of 13	Plan & Profile: Hayshed Lane (39+00 to 44+50); Winter Pasture Way Wild Wing Way
7 of 13	Plan & Profile: Hayshed Lane (44+50 to 46+49.56) Wind Dance Way
8 of 13	Plan & Profile: Stonecutter Road and Worn Mountain Way
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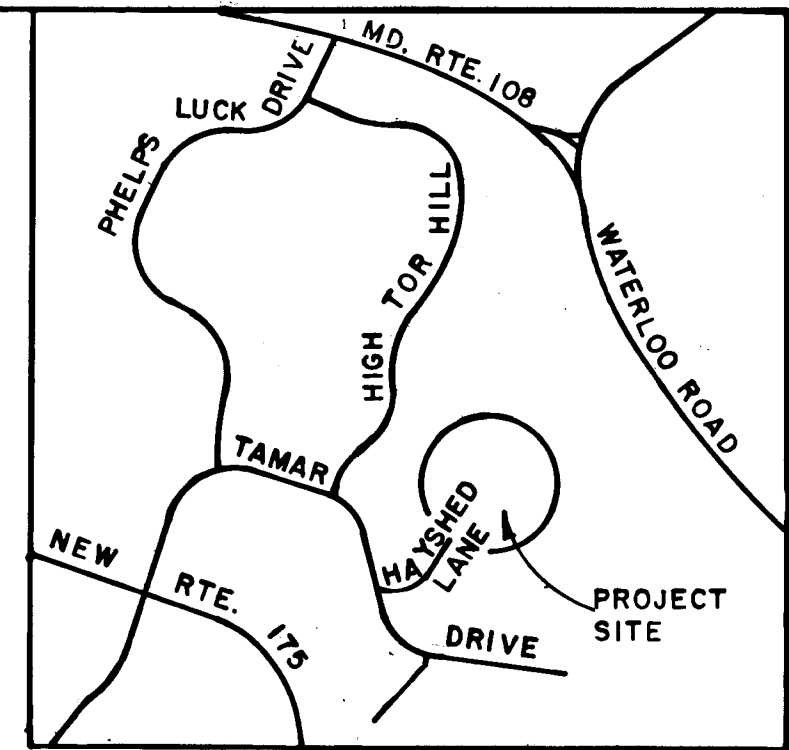
# COLUMBIA

HOWARD COUNTY, MARYLAND

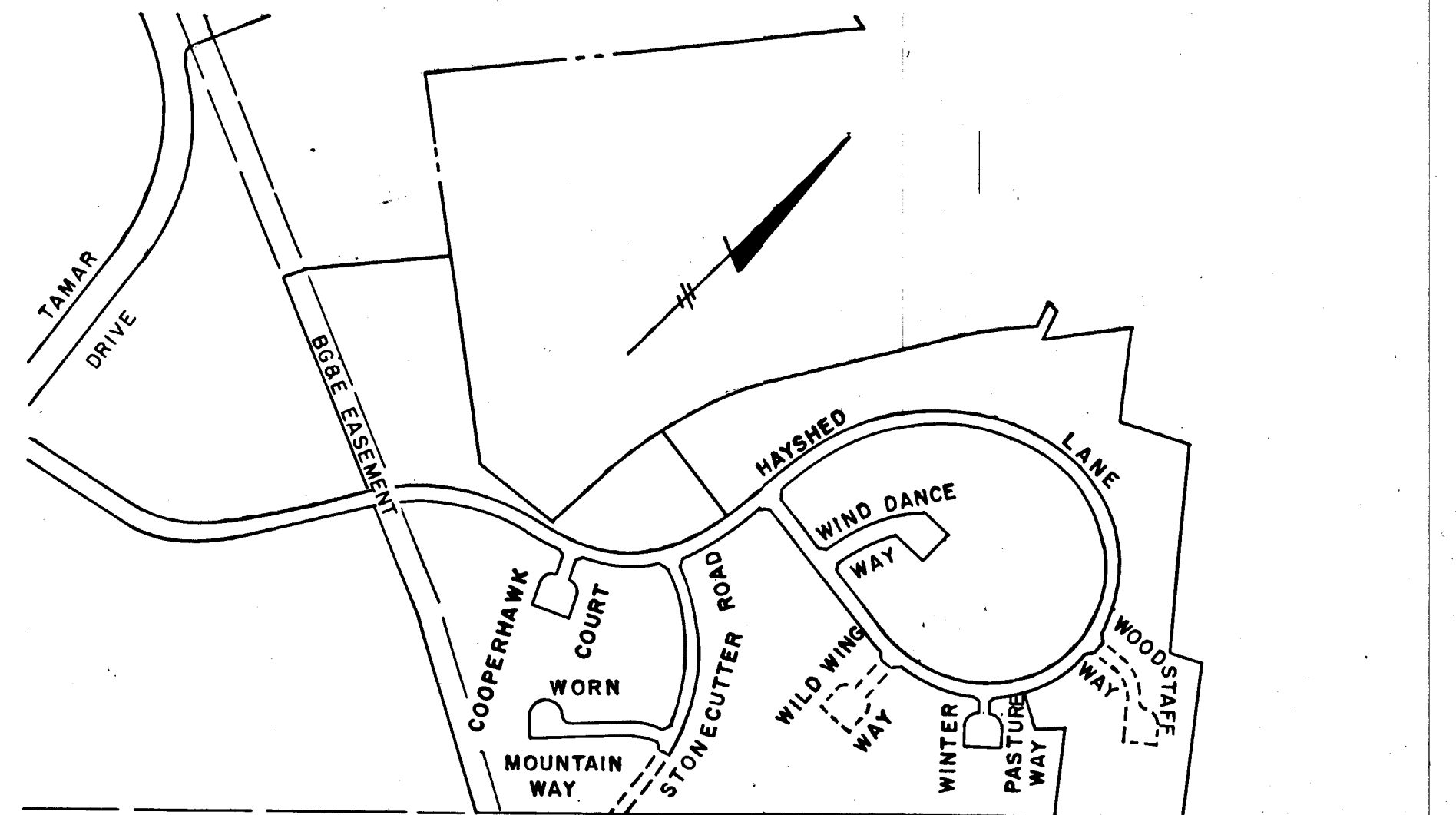
6 ELECTION DISTRICT

## VILLAGE OF LONGREACH SEC. 1 AREA 10

### ROAD CONSTRUCTION PLANS



VICINITY MAP  
Scale 1"=2000'



SUSQUEHANNA TRANSMISSION R/W

KEY PLAN  
Scale: 1"=400'

- BENCHMARKS
- Top Fire Hydrant @ Intersection Hayshed Lane & Tamar Drive: 426.65
  - Top Fire Hydrant @ Sta. 32+00 + Right Side Hayshed Lane: 486.23
  - Top Fire Hydrant @ Sta. 23+00 Right Side Hayshed Lane: 450.81
  - Top Fire Hydrant @ Sta. 0+40, Right Side Stonecutter Rd.: 452.24
  - Top Fire Hydrant @ Sta. 10+15', Left Side Hayshed Lane: 465.47

**PURDUM & JESCHKE**  
CONSULTING ENGINEERS  
LAND SURVEYORS  
1023 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194

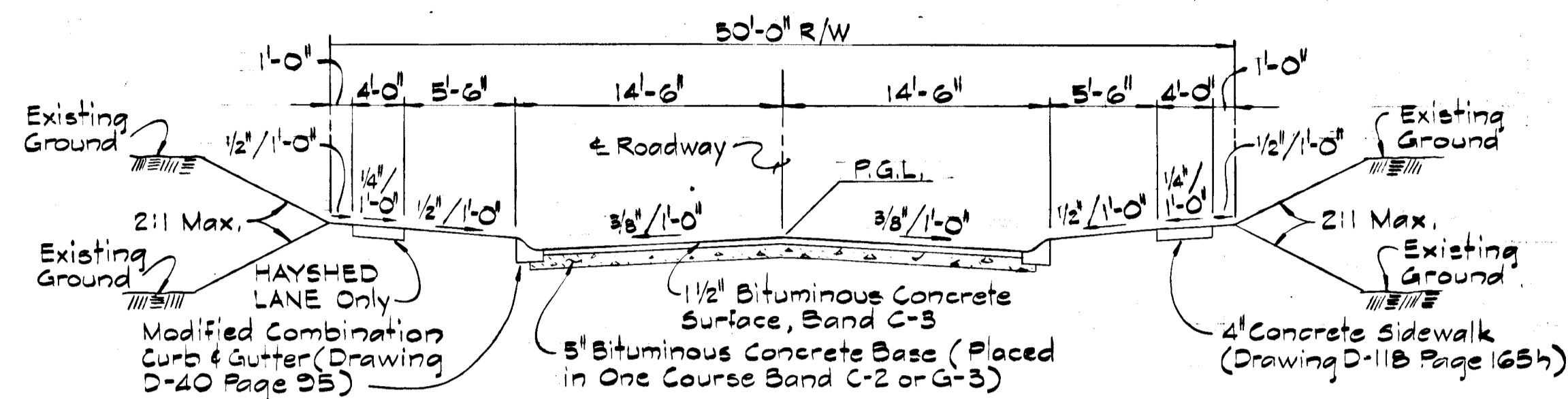
APPROVED: Office of Planning and Zoning

*Richard Wasserman* 4-20-78  
Chief Division of Land Development  
And Zoning Administration Date

APPROVED: Department of Public Works

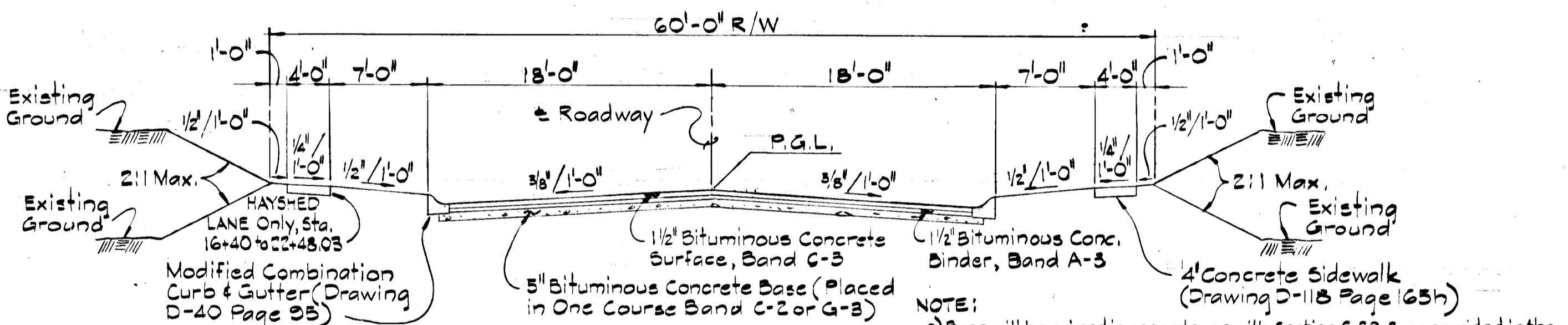
*W. O. Lobert* 4-24-78  
Chief Bureau of Engineering Date

AS BUILT 2-23-81 T.B.L. F-15-125C



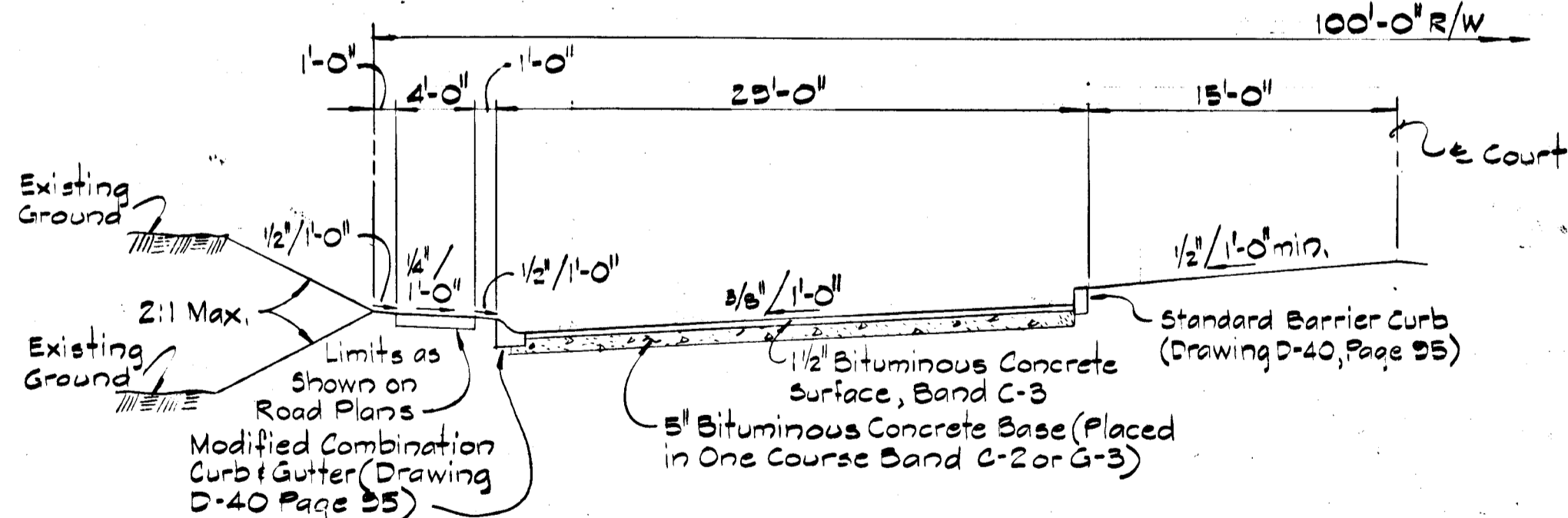
**TYPICAL SECTION**

HAYSHED LANE STA. 23+88.03 TO STA. 48+06.56,  
 STONECUTTER DRIVE STA. 0+43 TO STA. 7+25.00,  
 COOPERHAWK CT., WIND DANCE WAY, WORN MT,  
 WAY, WOOD STAFF WAY STA 0+00 TO STA. 0+39.50,  
 WILD WING WAY STA. 0+00 TO STA. 0+39.50 &  
 WINTER PASTURE WAY,

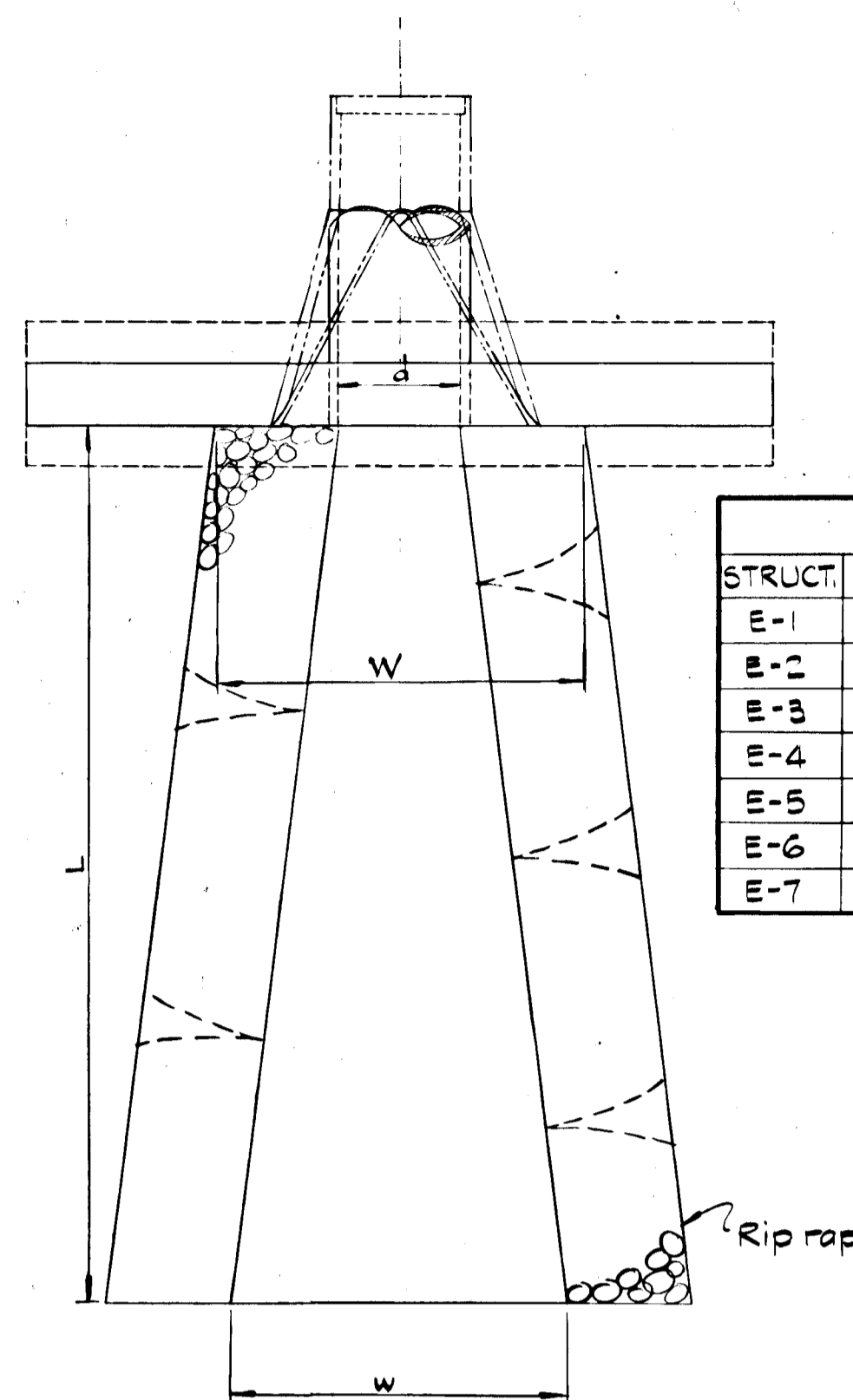


**TYPICAL SECTION**  
 HAYSHED LANE STA. 10+86.12 TO STA. 22+48.03

NOTE:  
 a) Base will be primed in accordance with Section C-30-3, as provided in the Howard County Road Construction Code and Standard Specifications.  
 b) Tack Coat is required in accordance with Section C-31-4, of the Howard County Road Construction Code and Standard Specifications.

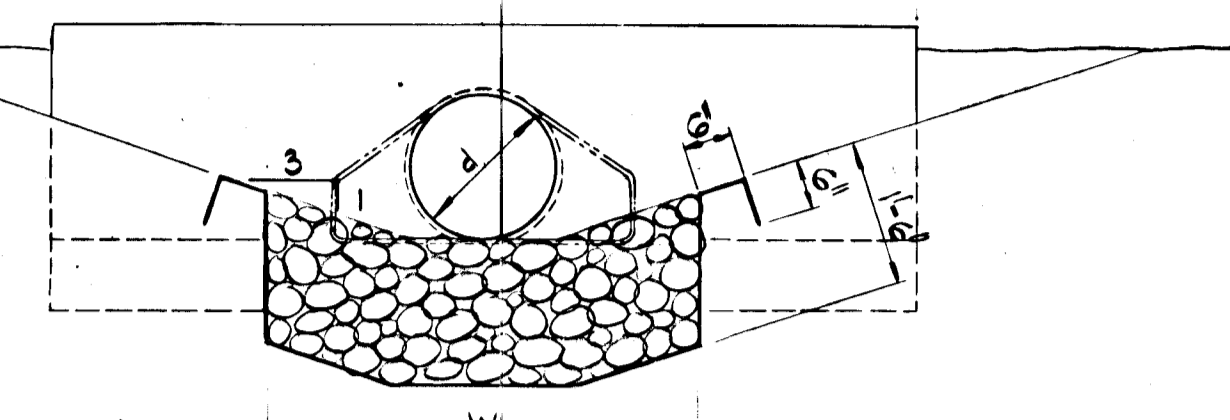


**TYPICAL CUL-DE-SAC  
 HALF-SECTION**

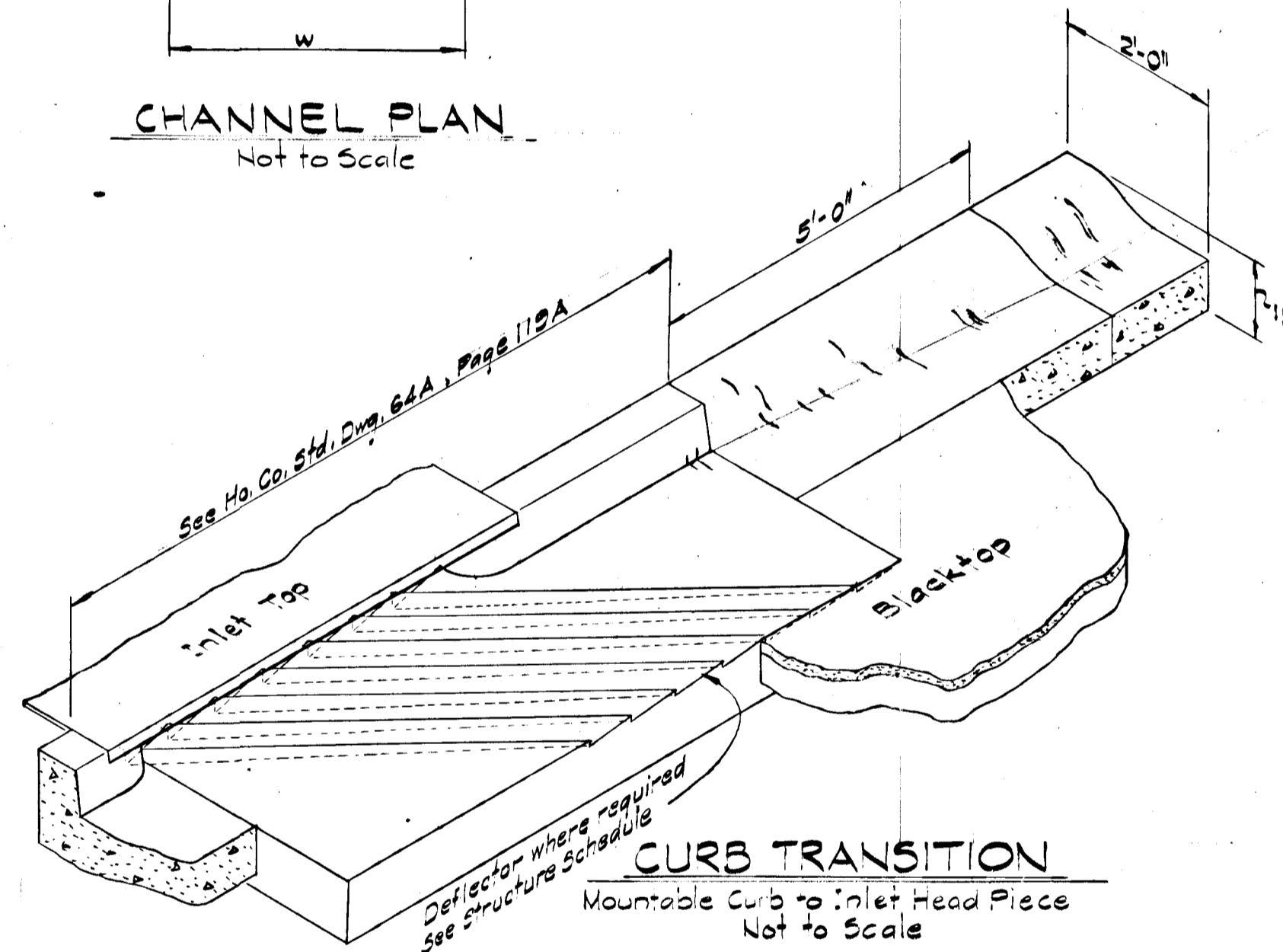


**CHANNEL PLAN**  
 Not to Scale

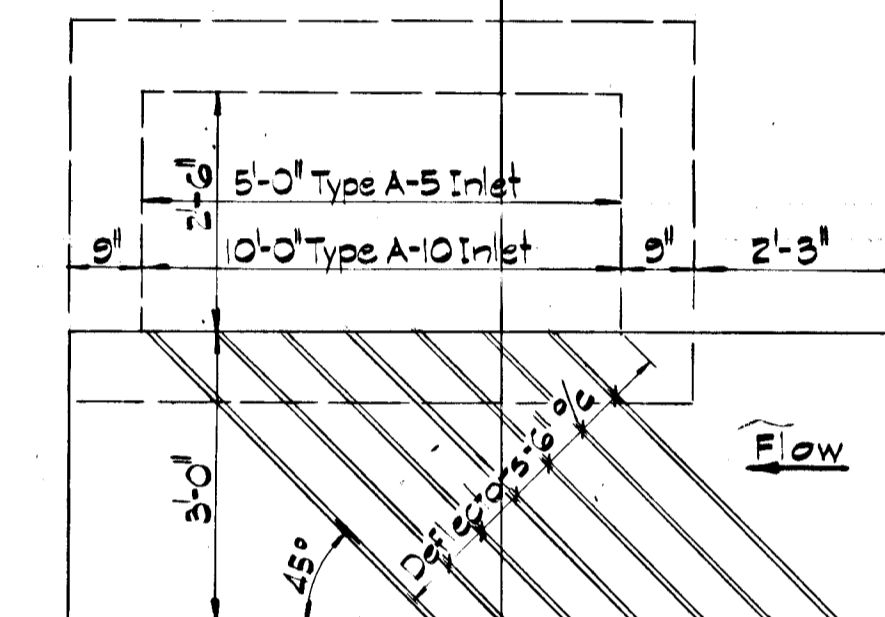
STRUCT.	d (in)	Q cfs	V fps	W (ft)	w (ft)	L (ft)	RIP RAP
E-1	15"	6.90	1.25	7	10	20	5-50#
E-2	27"	26.05	2.81	11	13.5	20	100-150#
E-3	15"	4.33	1.82	6	10	20	5-50#
E-4	15"	11.39	2.30	8	10	20	50-100#
E-5	15"	1.41	1.35	4	15	45	5-50#
E-6	18"	11.04	2.30	8	10	20	50-100#
E-7	18"	11.47	2.30	8	10	20	50-100#



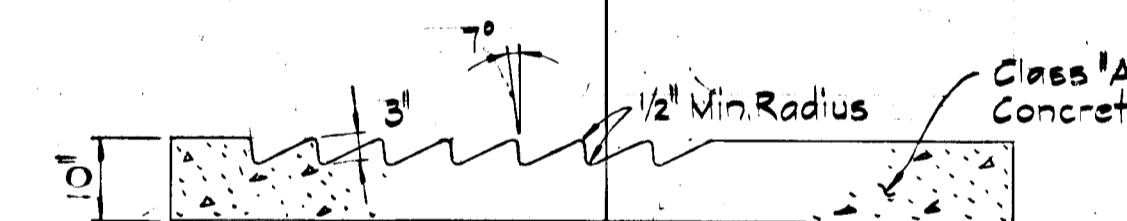
**CHANNEL DETAIL**  
 Not to Scale



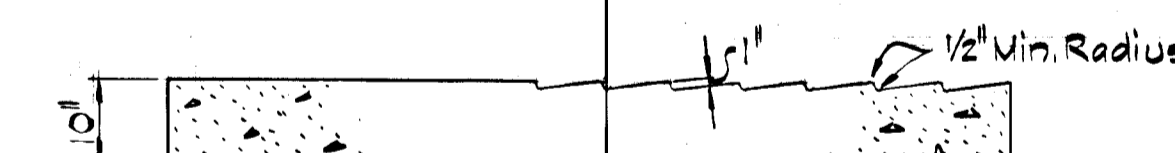
**CURB TRANSITION**  
 Mountable Curb to Inlet Head Piece  
 Not to Scale



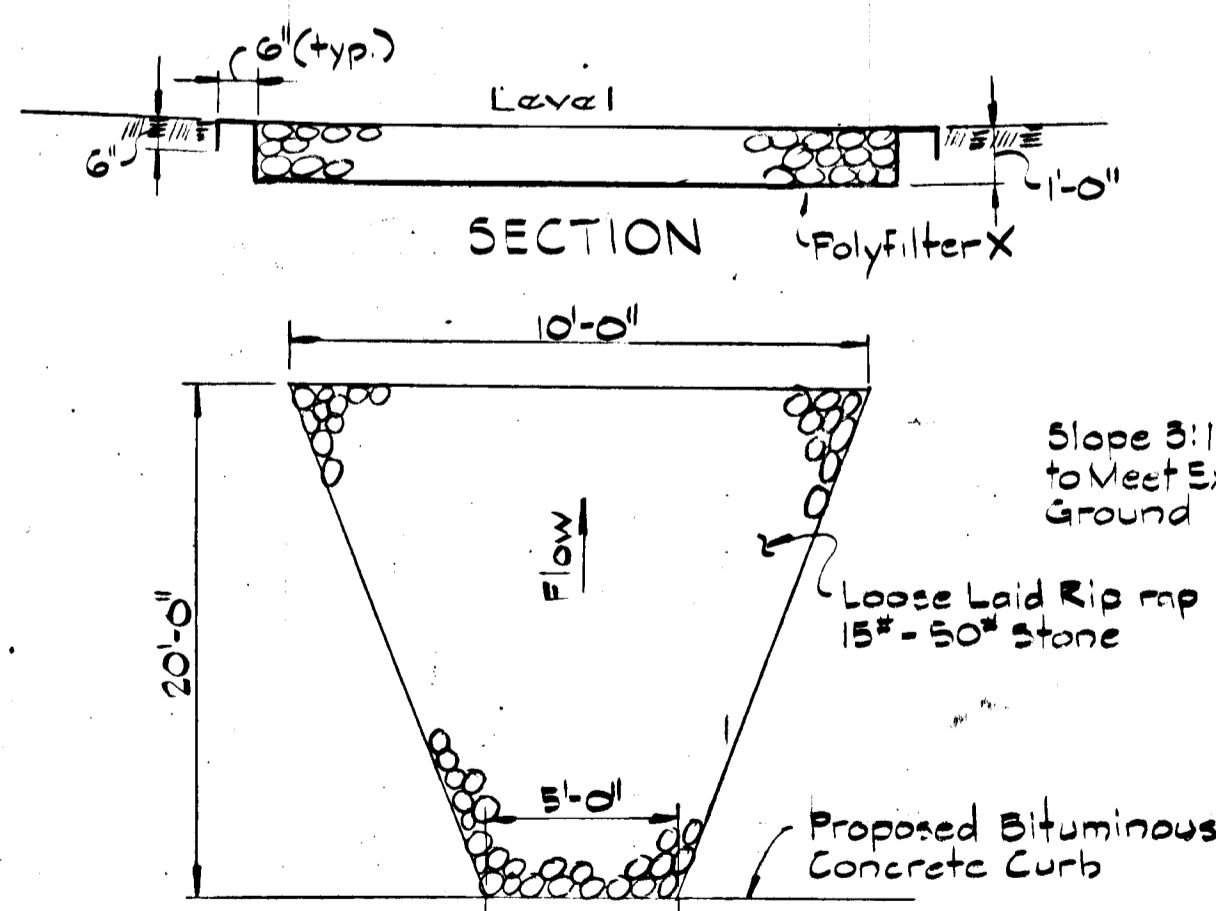
**PLAN**



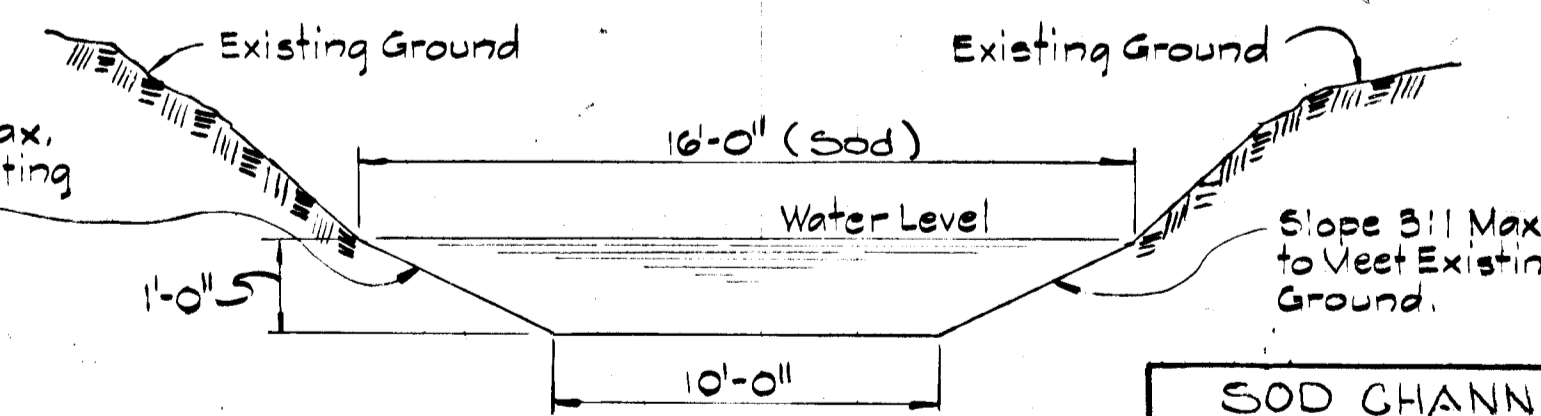
**SECTION 'A-A'**



**SECTION 'B-B'  
 INLET DEFLECTOR DETAIL**

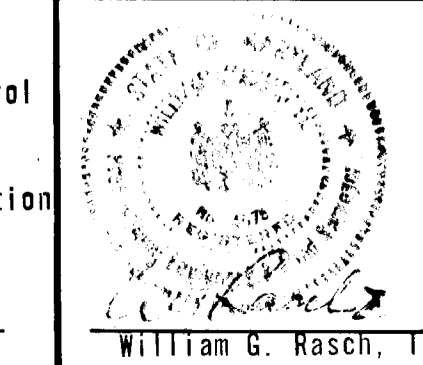


**PLAN-OUTLET PROTECTION APRON**  
 Not to Scale



**CHANNEL DETAIL**  
 Not to Scale  
 CHANNEL DESIGN DATA

STRUCT.	Q cfs	V fps	STRUCT.	Q cfs	V fps
E-1	6.90	2.2	E-5	1.41	1.5
E-3	4.33	1.9	E-6	11.04	2.6
E-4	11.39	2.6			



**ENGINEER'S CERTIFICATE**  
 I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 William G. Rasch, II  
 Date: 12/30/77

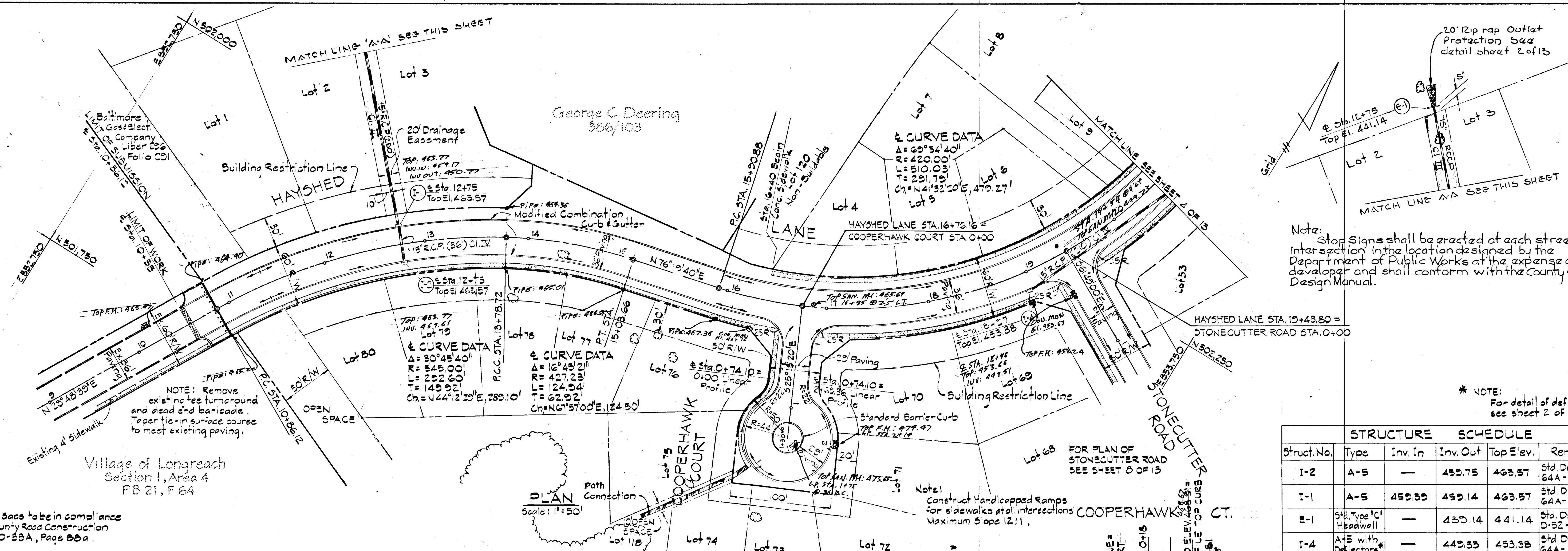
**DEVELOPER'S CERTIFICATE**  
 I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic onsite inspection by the Howard Soil Conservation District or their authorized agent, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.  
 Robert H. Zeldman  
 District Coordinator  
 Date: 4/18/78

Reviewed for Howard County Soil Conservation District and meets Technical Requirements.  
 C. Wayne Ryan  
 U.S. Soil Conservation District  
 Date: 4-18-78  
 This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
 Robert H. Zeldman  
 District Coordinator  
 Date: 4/18/78  
 Howard Soil Conservation District

APPROVED: Department of Public Works  
 W. J. Albert  
 Chief, Bureau of Engineering  
 Date: 4-24-78  
 APPROVED: Office of Planning and Zoning  
 Robert H. Zeldman  
 Chief, Division of Land Development  
 Date: 4-20-78

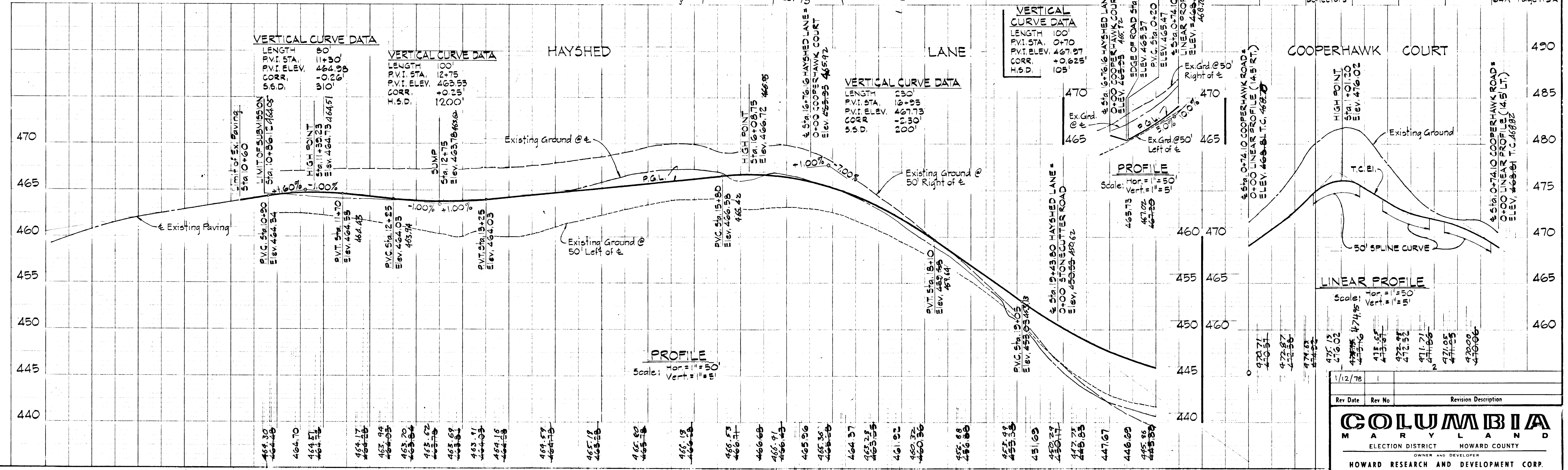
Rev Date	Rev No	Revision Description
<b>COLUMBIA</b> M A R Y L A N D		
6th ELECTION DISTRICT HOWARD COUNTY		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. COLUMBIA, MARYLAND		
PROJECT AREA	VILLAGE OF LONGREACH Section 1 Area 10	
PROJECT TITLE	ROAD CONSTRUCTION DETAILS	
Des. By E.B.W.	Scale As shown	Dwg. No. 2 of 13
Des. By T.A.W.	Date 12/1/77	C.C.F. No.
Chk. By R.B.C.	Approved	





Typical Cul-de-sacs to be in compliance with Howard County Road Construction Code Drawing D-55A, Page 88a.

STRUCTURE		SCHEDULE			Remarks
Struct. No.	Type	Inv. In	Inv. Out	Top Elev.	
I-2	A-5	—	459.75	463.57	Std. Drawing 64A-Page 13A
I-1	A-5	459.55	459.14	463.57	Std. Drawing 64A-Page 13A
E-1	Std. Type 'C' Headwall	—	439.14	441.14	Std. Drawing D-52-Page 107
I-4	A-5 with Deflectors*	—	449.33	453.38	Std. Drawing 64A-Page 13A



APPROVED: Department of Public Works  
W. C. Feltner 4-24-78  
 Chief, Bureau of Engineering  
 Date

APPROVED: Office of Planning & Zoning  
William G. Rosch 4-20-78  
 Chief, Division of Land Development  
 Date

FOR SEDIMENT CONTROL SEE SHEETS NO. 2, 12 AND 13

DEVELOPER'S CERTIFICATE  
 I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic onsite inspection by the Howard Soil Conservation District or their authorized agent, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.  
John H. Neuch 12/30/77  
 Date

ENGINEER'S CERTIFICATE  
 I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
William G. Rosch, II 4/15/78  
 Date

PURDUM & JESCHKE  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 1023 N. Calvert St.  
 Baltimore, Maryland, 21202

**COLUMBIA MARYLAND**  
 ELECTION DISTRICT HOWARD COUNTY  
 OWNER AND DEVELOPER  
**HOWARD RESEARCH AND DEVELOPMENT CORP.**  
 COLUMBIA, MARYLAND

PROJECT AREA: VILLAGE OF LONGREACH Section 1 Area 10  
 Gtr. Election District Howard County Maryland

PROJECT TITLE: PLAN AND PROFILE  
 Hayshed Lane ( Sta. 10+86.12 to Sta. 20+50 )  
 Cooperhawk Court

Des. By: E.B.W. Scale: As Shown Dwg. No. 3 of 13  
 Dwn. By: T.A.W. Date: 12/1/77 C.C.F. No.  
 Chk. By: R.B.C. Approved

BRUNING 44-132 23442  
 110



& CURVE DATA  
 $\Delta = 69^{\circ}34'40''$   
 $R = 420.00'$   
 $L = 510.03'$   
 $T = 291.79'$   
 $Ch = N 41^{\circ}52'20'' E, 479.27'$

& CURVE DATA  
 $\Delta = 64^{\circ}01'00''$   
 $R = 563.00'$   
 $L = 651.39'$   
 $T = 364.42'$   
 $Ch = N 38^{\circ}45'30'' E, 618.03'$

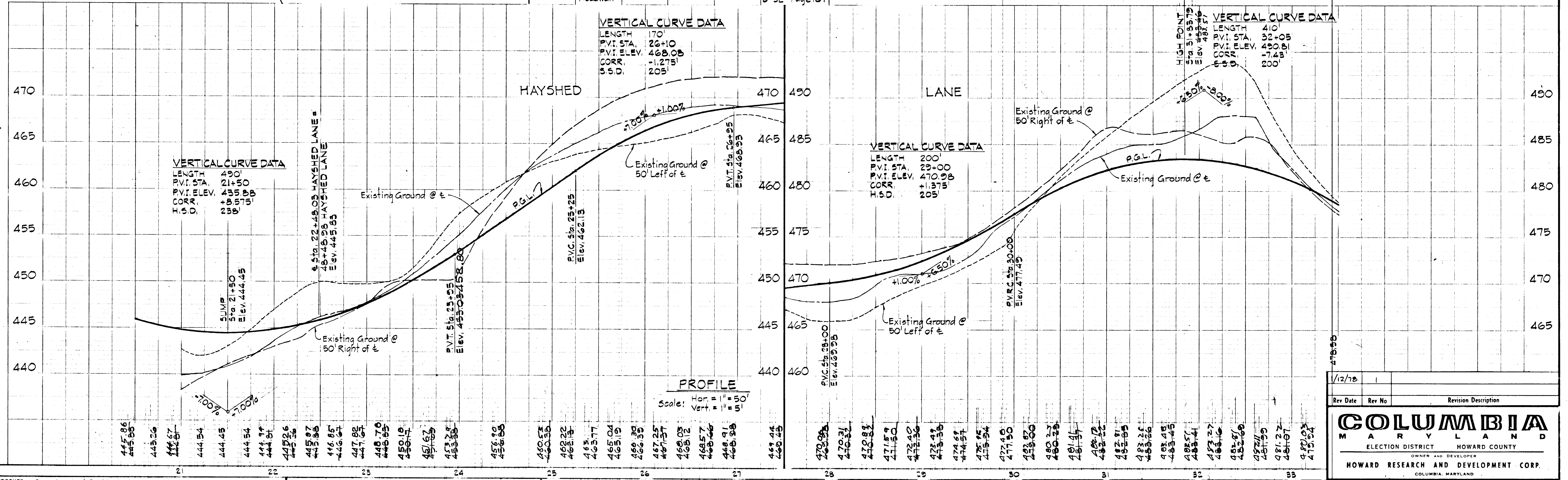
& CURVE DATA  
 $\Delta = 69^{\circ}38'00''$   
 $R = 326.49'$   
 $L = 451.87'$   
 $T = 275.74'$   
 $Ch = S 74^{\circ}25'00'' E, 452.75'$

STRUCTURE SCHEDULE					
Struct. No.	Type	Inv. In	Inv. Out	Top Elev.	Remarks
I-7	A-10	—	437.54	444.24	Std. Drawing G4A-Page 115A
I-6	A-5 with Deflectors*	438.77	438.52	446.09	Std. Drawing G4A-Page 115A
I-5	A-10 with Deflectors*	—	442.73	447.17	Std. Drawing G4A-Page 115A
I-3	A-5	437.75	437.00	444.24	Std. Drawing G4A-Page 115A
M-1	Ho. County Sta. MH	436.65	436.40	444.72	Std. Drawing D103-Page 158
E-2	Std. Type 'C' Headwall	—	435.10	438.35	Std. Drawing D-52-Page 167

PLAN  
 Scale: 1" = 50'

Note: Construct Handicapped Ramps for sidewalks at all intersections. Maximum Slope 12:1.  
 \* NOTE: For detail of deflectors see sheet 2 of 13.

Note: Stop Signs shall be erected at each street intersection in the location designed by the Department of Public Works at the expense of the developer and shall conform with the County Code & Design Manual.



APPROVED: Department of Public Works  
 W. O. Lambert, Chief, Bureau of Engineering, Date: 4-24-78  
 APPROVED: Office of Planning and Zoning  
 [Signature], Chief, Division of Land Development, Date: 4-13-78

DEVELOPER'S CERTIFICATE  
 I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic onsite inspection by the Howard Soil Conservation District or their authorized agent, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.  
 [Signature], Date: 12/20/77

ENGINEER'S CERTIFICATE  
 I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 [Signature], Date: 12/5/77  
 William C. Rasch, II

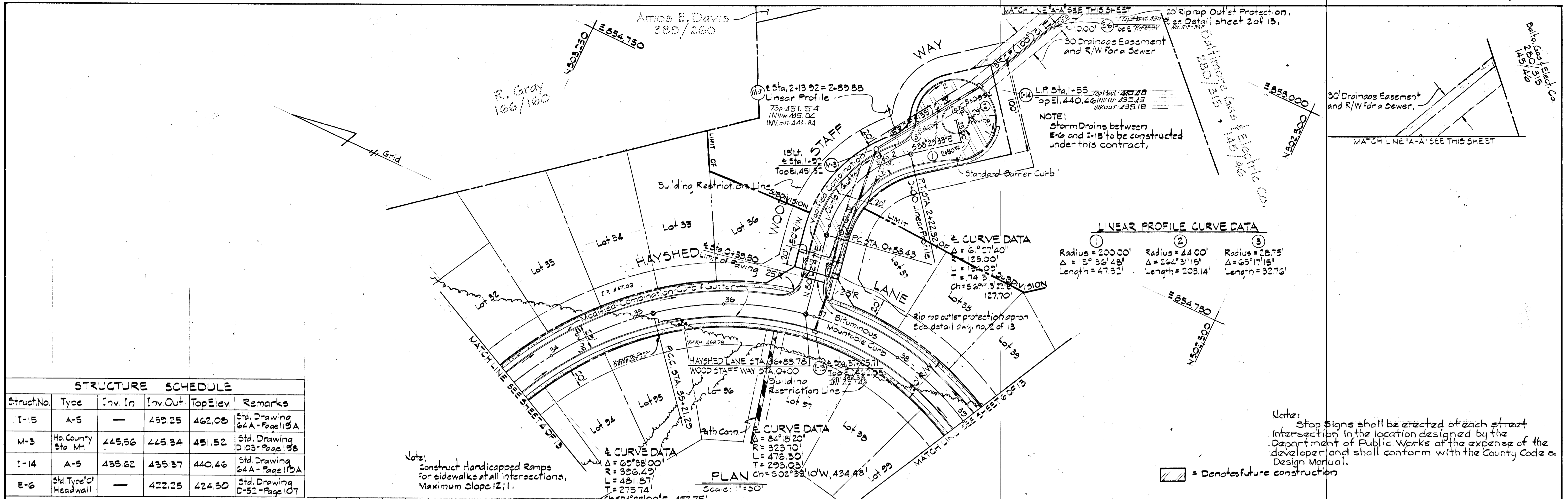
PURDUM & JESCHKE  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 1023 N. Calvert St.  
 Baltimore, Maryland 21202

PROJECT AREA: VILLAGE OF LONGREACH, Section 1, 8th Election District, Howard County, Md.  
 PROJECT TITLE: PLAN AND PROFILE, HAYSHED LANE (Sta. 20+50 to 33+50)  
 Des. By: E. R. W., Scale As Shown, Dwg. No. 4 of 13  
 Dwn. By: T. A. W., Date 12/1/77, C.C.F. No.  
 Chk. By: R. P. F., Approved

1/12/78  
 Rev. Date, Rev. No., Revision Description  
**COLUMBIA**  
 MARYLAND  
 ELECTION DISTRICT HOWARD COUNTY  
 OWNER AND DEVELOPER  
 HOWARD RESEARCH AND DEVELOPMENT CORP.  
 COLUMBIA, MARYLAND

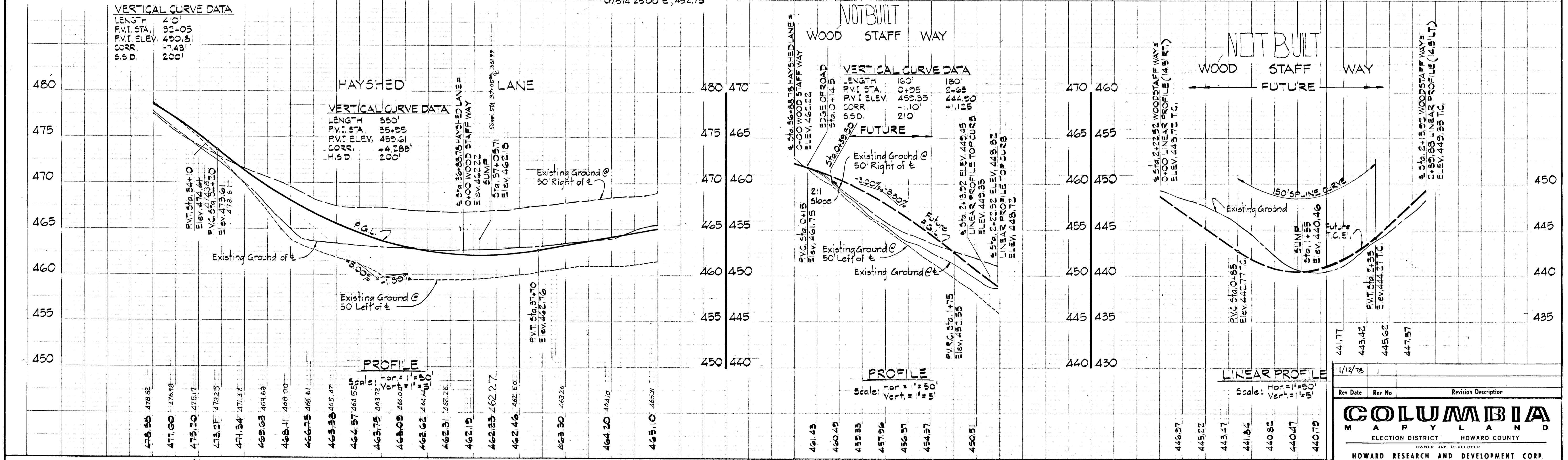
BRUNING 44-132 23442  
 1/10  
 1/10





STRUCTURE SCHEDULE

Struct. No.	Type	Inv. In	Inv. Out	Top Elev.	Remarks
I-15	A-5	—	459.25	462.08	Std. Drawing 64A - Page 11 of 15A
M-3	Ho. County Std. V.H.	445.56	445.34	451.52	Std. Drawing D103 - Page 13B
I-14	A-5	435.62	435.37	440.46	Std. Drawing 64A - Page 11 of 15A
E-6	Std. Type 'C' Headwall	—	422.25	424.50	Std. Drawing D-52 - Page 107



APPROVED: Department of Public Works  
*W O Falout*  
Chief, Bureau of Engineering  
Date: 4-24-78

APPROVED: Office of Planning & Zoning  
*W O Falout*  
Chief, Division of Land Development  
Date: 4-24-78

FOR SEDIMENT CONTROL SEE  
SHEETS NO. 2, 12 AND 13

DEVELOPER'S CERTIFICATE  
I certify that all development and/or construction will be done 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 or their authorized agent, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.  
*W O Falout*  
Date: 12/10/77

ENGINEER'S CERTIFICATE  
I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
*William G. Rasch, II*  
Date: 12/5/77

PURDUM & JESCHKE  
CIVIL ENGINEERS  
LAND SURVEYORS  
1023 N. Calvert St.  
Baltimore, Maryland 21202

1/12/78

Rev. Date	Rev. No.	Revision Description

**COLUMBIA**  
MARYLAND  
ELECTION DISTRICT HOWARD COUNTY  
OWNER AND DEVELOPER  
HOWARD RESEARCH AND DEVELOPMENT CORP.  
COLUMBIA, MARYLAND

PROJECT AREA: VILLAGE OF LONGREACH  
Section 1 Area 10  
6th Election District Howard County, Md.

PROJECT TITLE: PLAN AND PROFILE  
HAYSHED LANE (Sta. 33+50 to 37+00)  
WOOD STAFF WAY

Des. By: E. B. W., A. J. V. Scale As Shown Dwg. No. 5 of 13  
Dwn. By: T. A. W. Date: 12/1/77 C.C.F. No.  
Chk. By: P. B. C. Approved

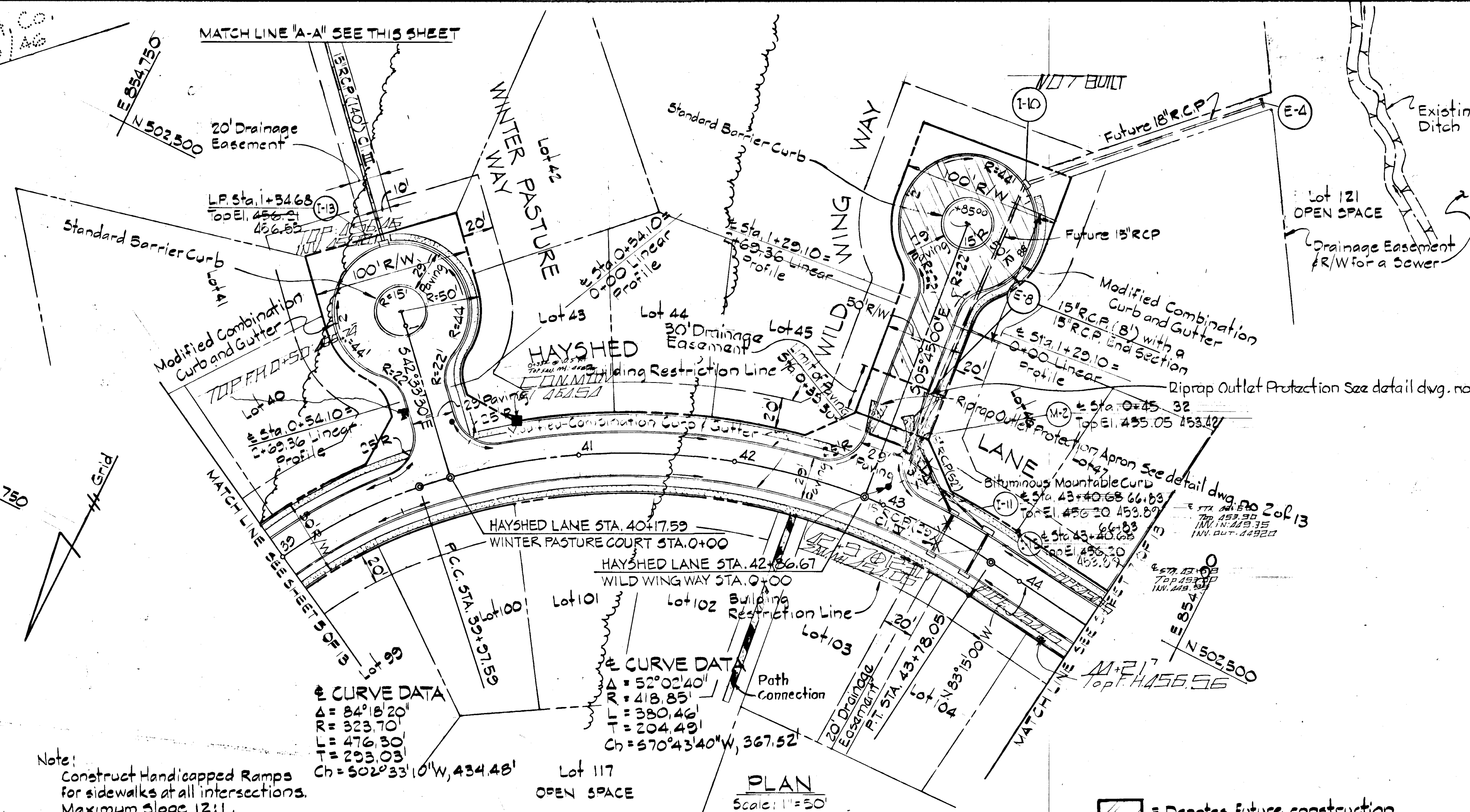
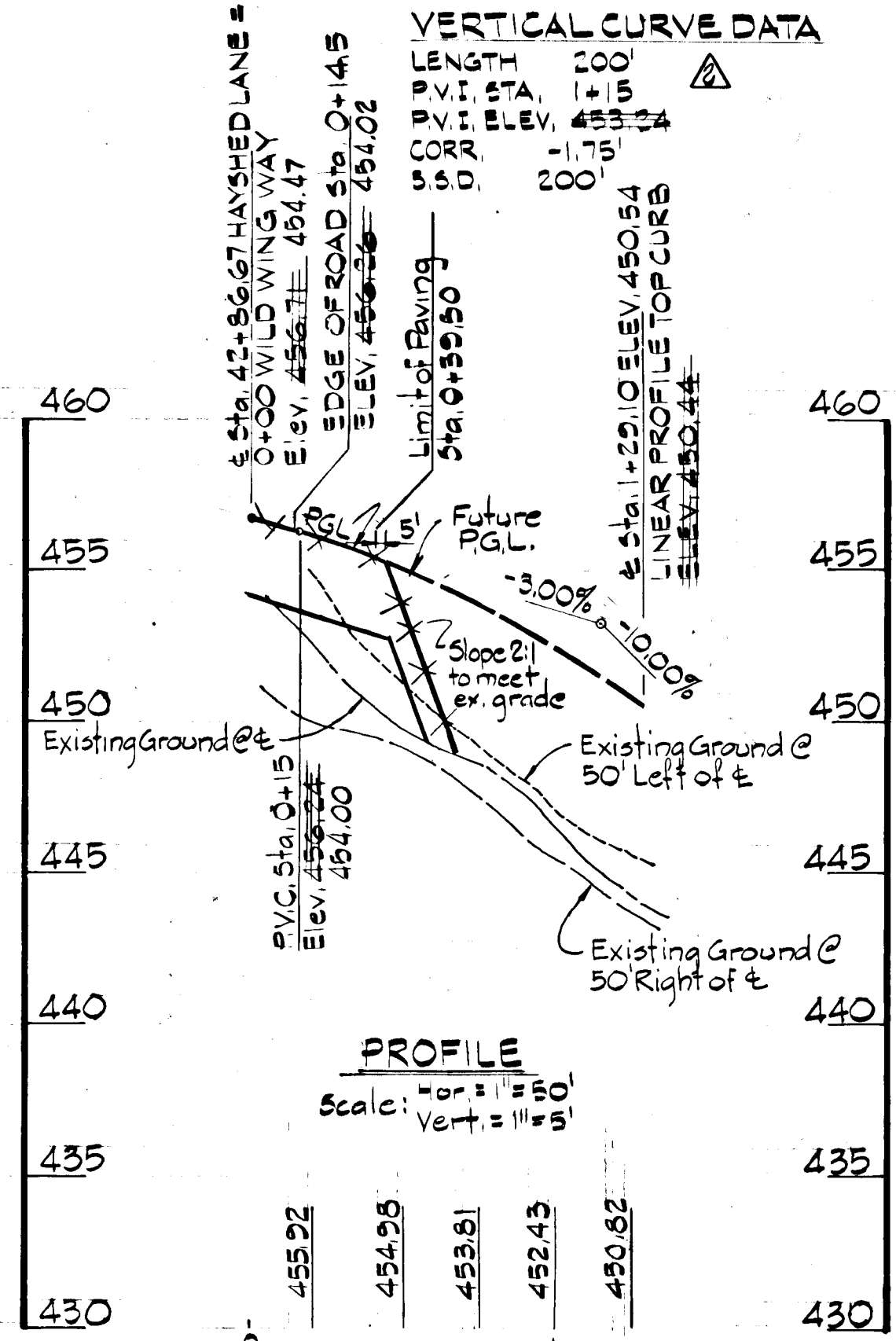
#10  
1-0



**WILD WING WAY**

Dallo, Gas & Elect. Co.  
280/315 - 145/46

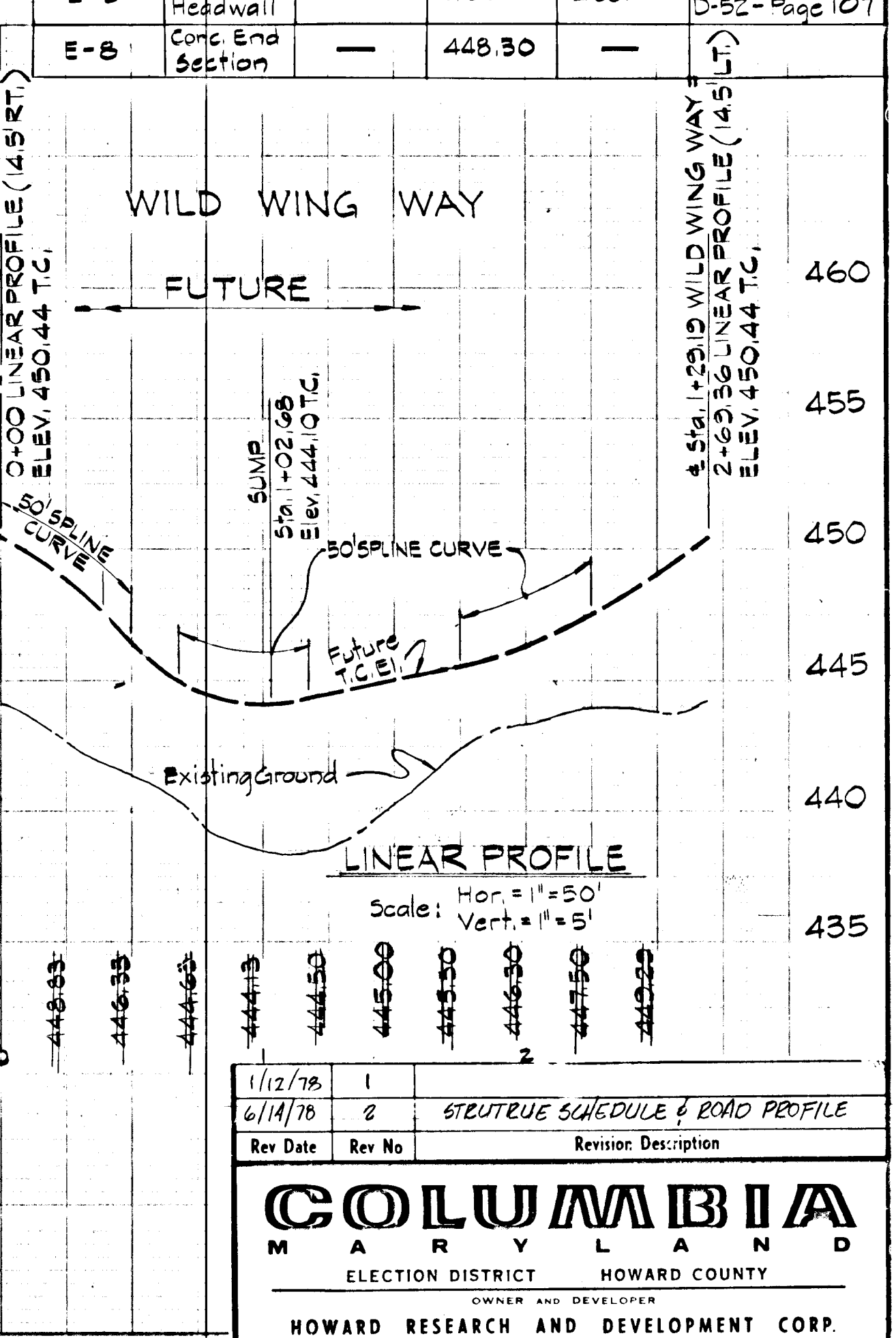
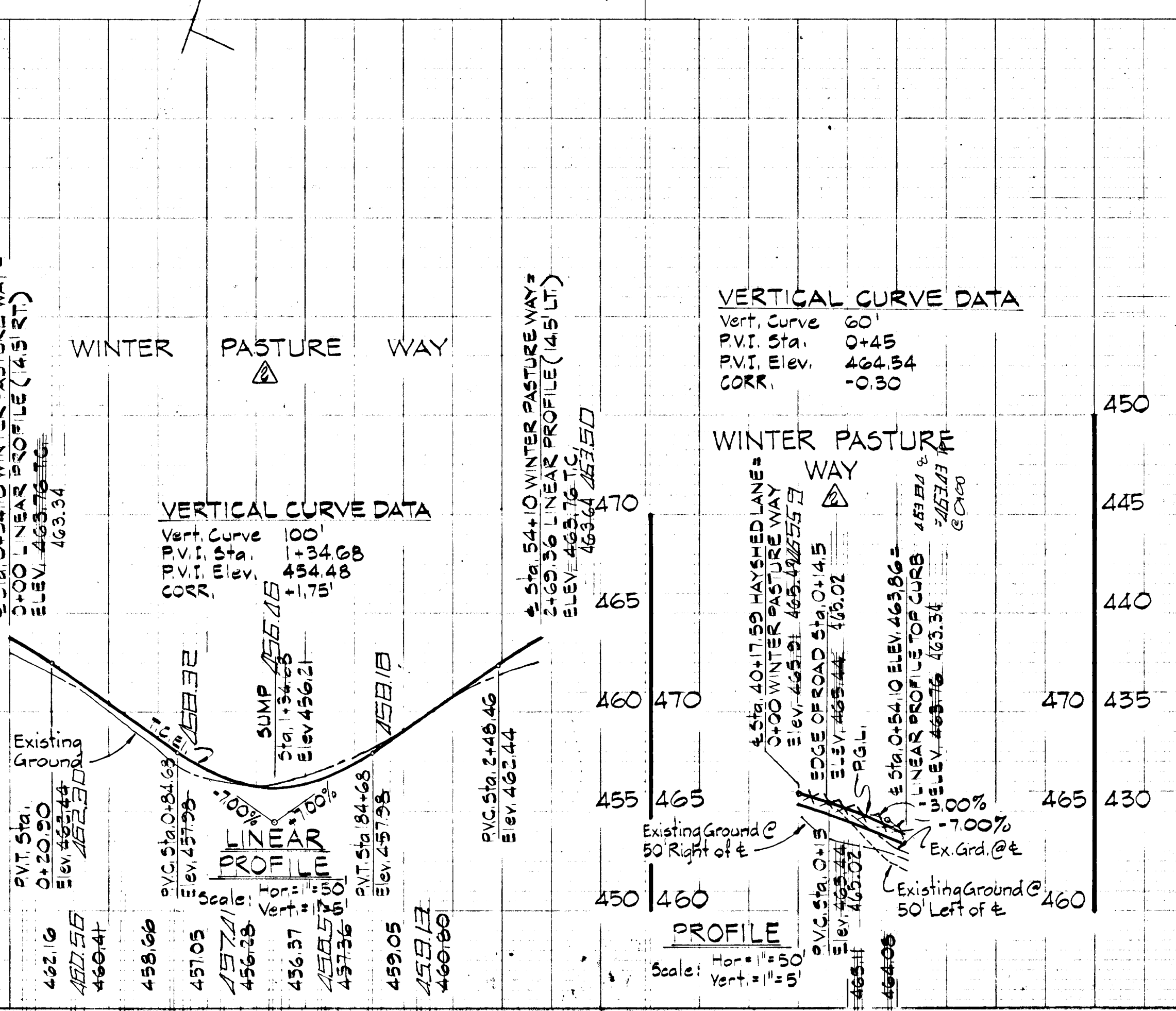
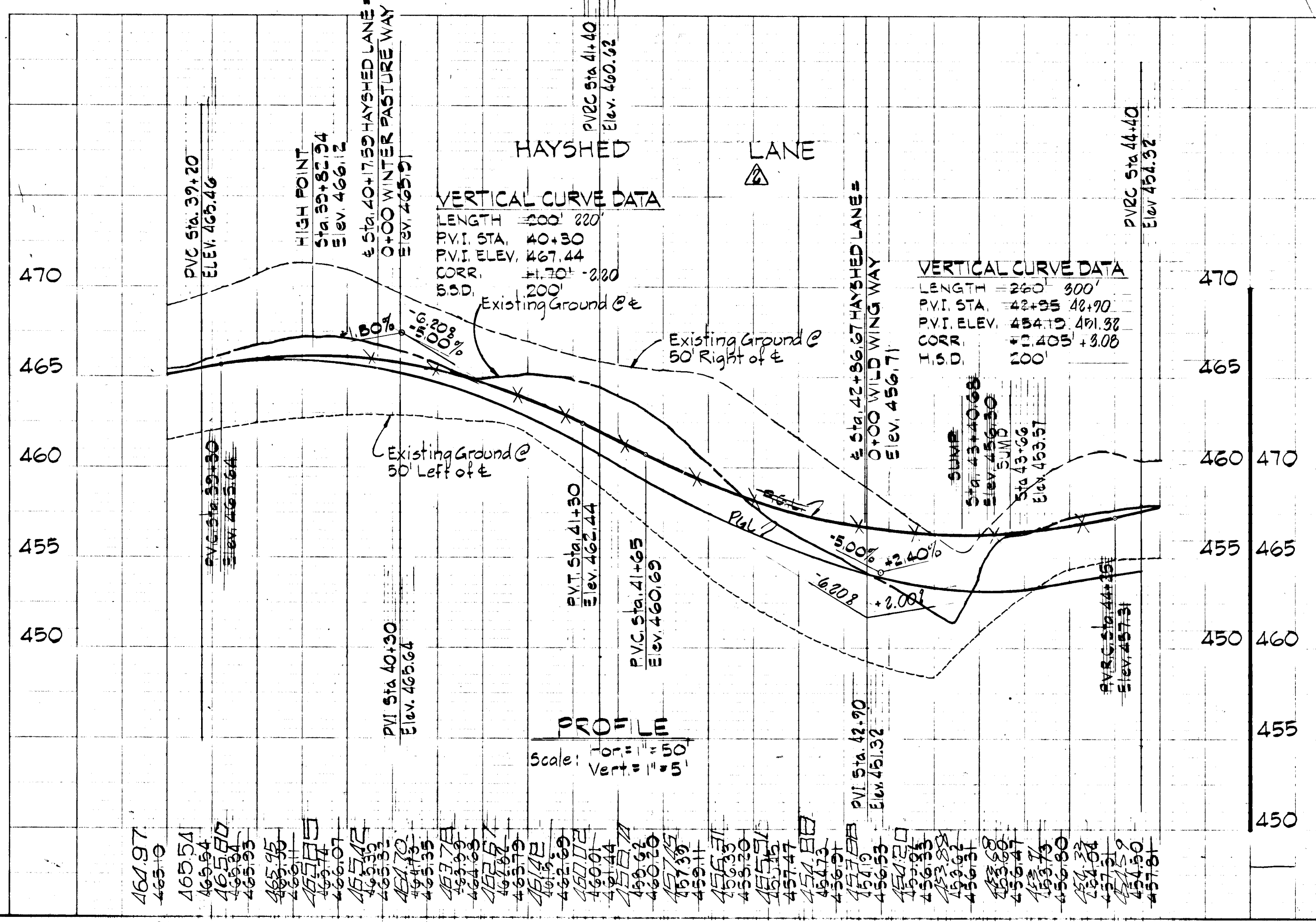
Dallo, Gas & Elect. Co.  
280/315 - 145/46



Note: Stop Signs shall be erected at each street intersection in the location designed by the Department of Public Works at the expense of the developer and shall conform with the County Code & Design Manual.

Typical Cul-de-sacs to be in compliance with Howard County Road Construction Code Drawing D-35A, Page 83A.

STRUCTURE SCHEDULE					
Struct. No.	Type	Inv. In.	Inv. Out.	Top Elev.	Remarks
I-12	A-10	—	449.66	453.67	Std. Drawing 64A - Page 119A
I-11	A-5	449.63	449.33	453.50	Std. Drawing 64A - Page 119A
V-2	Ho County	448.50	448.29	453.42	Std. Drawing D-103 - Page 158
Future I-10	A-5	439.70	439.45	444.10	Std. Drawing 64A - Page 119A
Future I-4	Std. Type 'C' Headwall	—	426.01	428.26	Std. Drawing D-52 - Page 107
I-13	A-5	—	450.00	456.23	Std. Drawing 64A - Page 119A
E-5	Std. Type 'C' Headwall	—	436.00	438.55	Std. Drawing D-52 - Page 107
E-6	Conc. End Section	—	448.30	—	—



APPROVED: Department of Public Works  
*W. O. Lambert* 4-27-78  
Chief, Bureau of Engineering Date

APPROVED: Office of Planning and Zoning  
*[Signature]* 4-27-78  
Chief, Division of Land Development Date

FOR SEDIMENT CONTROL, SEE SHEETS NO. 2, 12 AND 13

**DEVELOPER'S CERTIFICATE**  
I certify that all development and/or construction will be done 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 or their authorized agent, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.  
*[Signature]* Date

**ENGINEER'S CERTIFICATE**  
I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
*William G. Rasch, II* Date

**PURDUM & JESCHKE**  
CIVIL ENGINEERS  
LMD SURVEYORS  
1023 N. Calvert St.  
Baltimore, Maryland 21202

**COLUMBIA**  
M A R Y L A N D  
ELECTION DISTRICT HOWARD COUNTY  
OWNER AND DEVELOPER  
**HOWARD RESEARCH AND DEVELOPMENT CORP.**  
COLUMBIA, MARYLAND

PROJECT AREA: VILLAGE OF LONGFACH  
Section 1 Area 10  
8th Election District, Howard County, Md.

PROJECT TITLE: PLAN AND PROFILE  
HAYSHED LANE (Sta. 40+00 to 44+50)  
WINTER PASTURE WILD WING WAY

Des. By E. B. W., A. J. V. Scale As Shown Dwg. No. 6 of 13  
Dn. By T. P. V. Date 12/1/77 C.C.F. No.  
Chk. By R. B. C. Approved

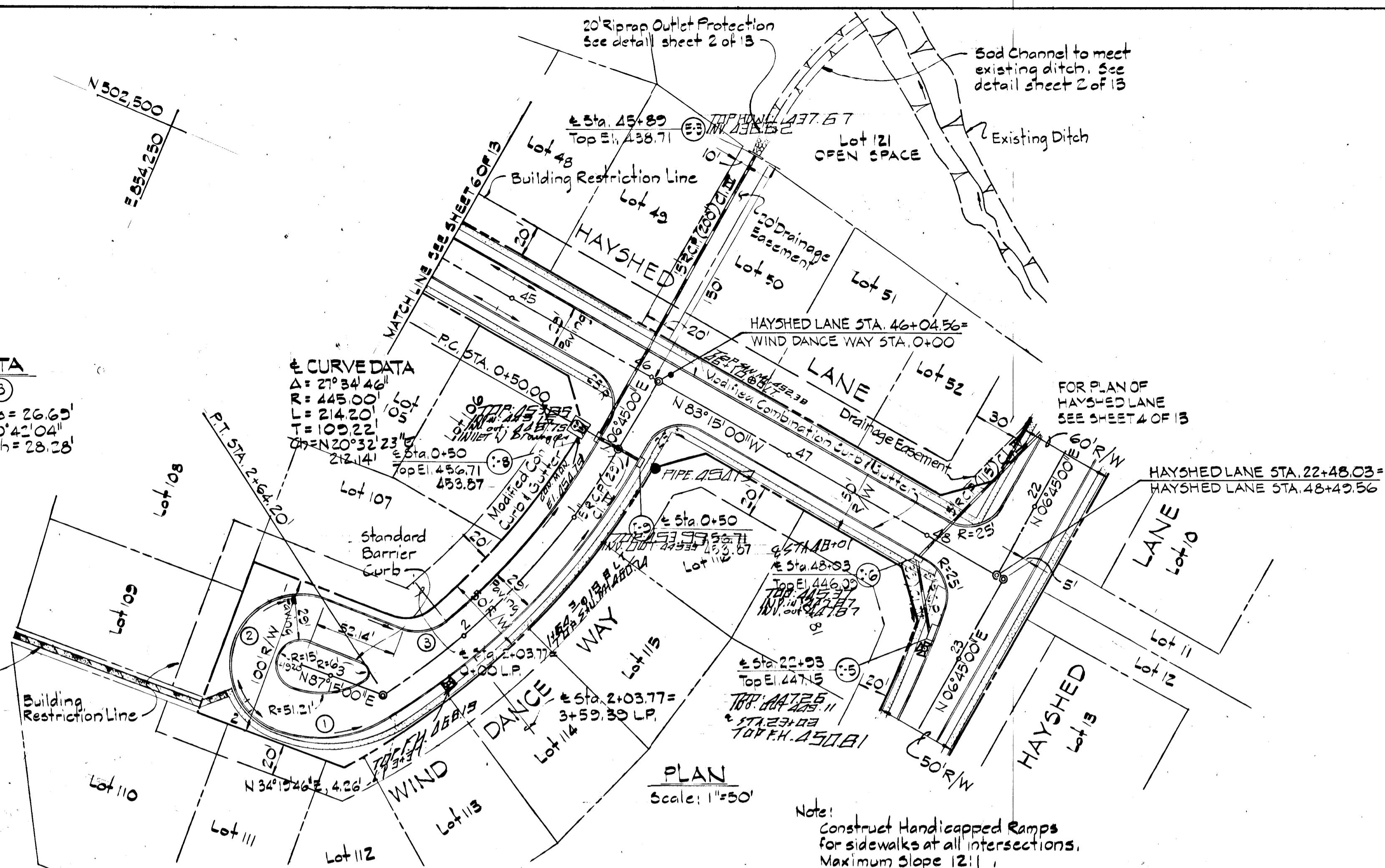
PLANNING 4-15-78 23442



Note: Stop Signs shall be erected at each street intersection in the location designed by the Department of Public Works at the expense of the developer and shall conform with the County Code & Design Manual.

**LINEAR PROFILE CURVE DATA**

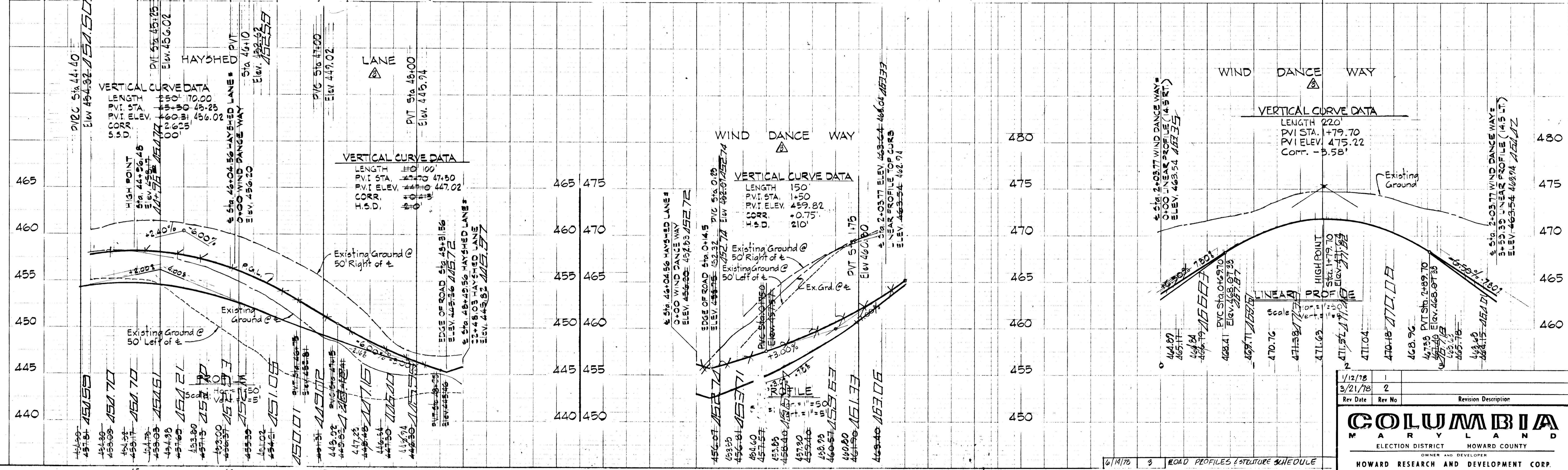
①	②	③
Radius = 30.21'	Radius = 44.00'	Radius = 26.65'
$\Delta = 52^{\circ}55'14"$	$\Delta = 130^{\circ}00'00"$	$\Delta = 60^{\circ}42'04"$
Length = 74.08'	Length = 133.23'	Length = 28.28'



\* NOTE: For deflector detail see sheet 2 of 13

**STRUCTURE SCHEDULE**

Struct. No.	Type	Inv. In.	Inv. Out.	Top Elev.	Remarks
I-A	A-5 with Deflectors	449.25	453.87	453.87	Std. Drawing G4A-Page 119A
I-B	A-5 with Deflectors	448.96	452.71	452.71	Std. Drawing G4A-Page 119A
E-3	Ha. Co. Std. Type C' Sewer	436.71	439.71	439.71	Std. Drawing D-52-Page 107



Rev. Date	Rev. No.	Revision Description
1/12/78	1	
3/21/78	2	

**COLUMBIA MARYLAND**  
ELECTION DISTRICT HOWARD COUNTY  
OWNER AND DEVELOPER  
**HOWARD RESEARCH AND DEVELOPMENT CORP.**  
COLUMBIA, MARYLAND

APPROVED: Department of Public Works  
*W. O. Roberts* 4-24-78  
Chief, Bureau of Engineering Date  
APPROVED: Office of Planning & Zoning  
*William G. Rasch, II* 4/20/78  
Chief, Division of Land Development Date

FOR SEDIMENT CONTROL SEE SHEETS NO. 2, 12 AND 13

**DEVELOPER'S CERTIFICATE**  
I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic onsite inspection by the Howard Soil Conservation District or their authorized agent, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.  
*William G. Rasch, II* 12/30/77  
Date

**ENGINEER'S CERTIFICATE**  
I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
*William G. Rasch, II* 12/15/77  
Date

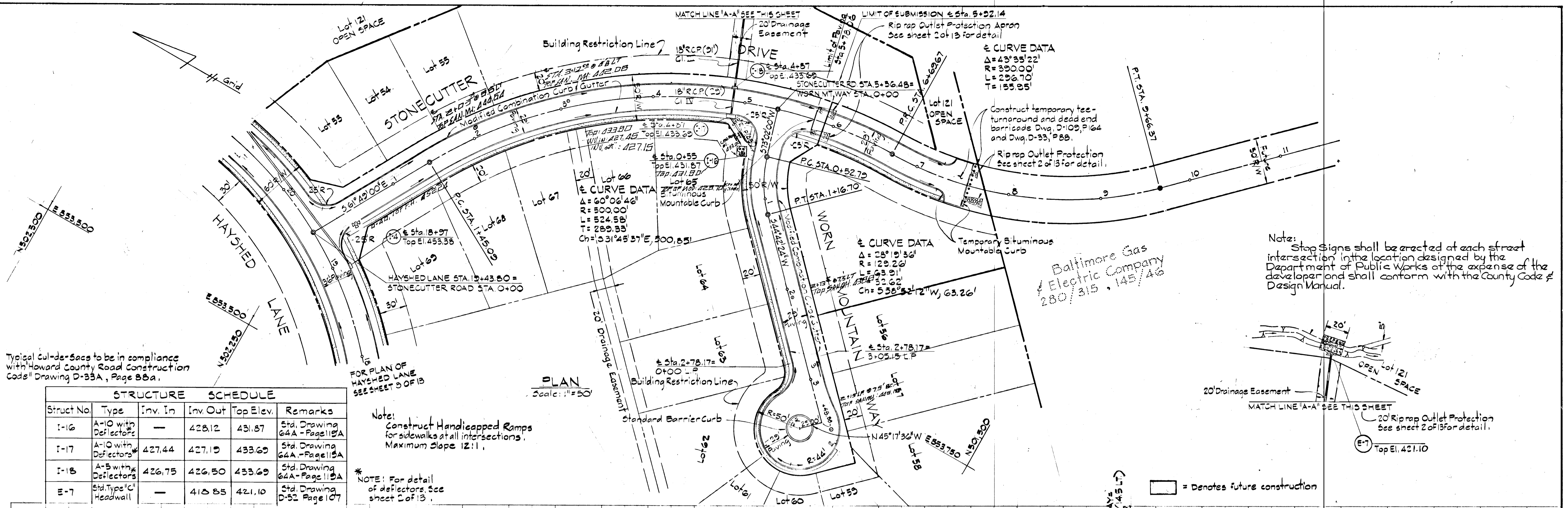
**PURDUM & JESCHKE**  
CIVIL ENGINEERS  
LAND SURVEYORS  
1023 N. Calver St.  
Baltimore, Maryland 21202

PROJECT AREA: VILLAGE OF LONGFRACH Section 1 Area 10  
6th Election District Howard County, Md.  
PROJECT TITLE: PLAN AND PROFILE HAYSHED LANE STA. 44+50 TO 48+49.56) WIND DANCE WAY  
Des. By: E.B.W. Scale: As Shown Dwg. No. 7 of 13  
Dwn. By: T.A.W. Date: 12/1/77 C.C.F. No.  
Chk. By: R.B.C. Approved

BRUNING 44-32 23442

AS BUILT





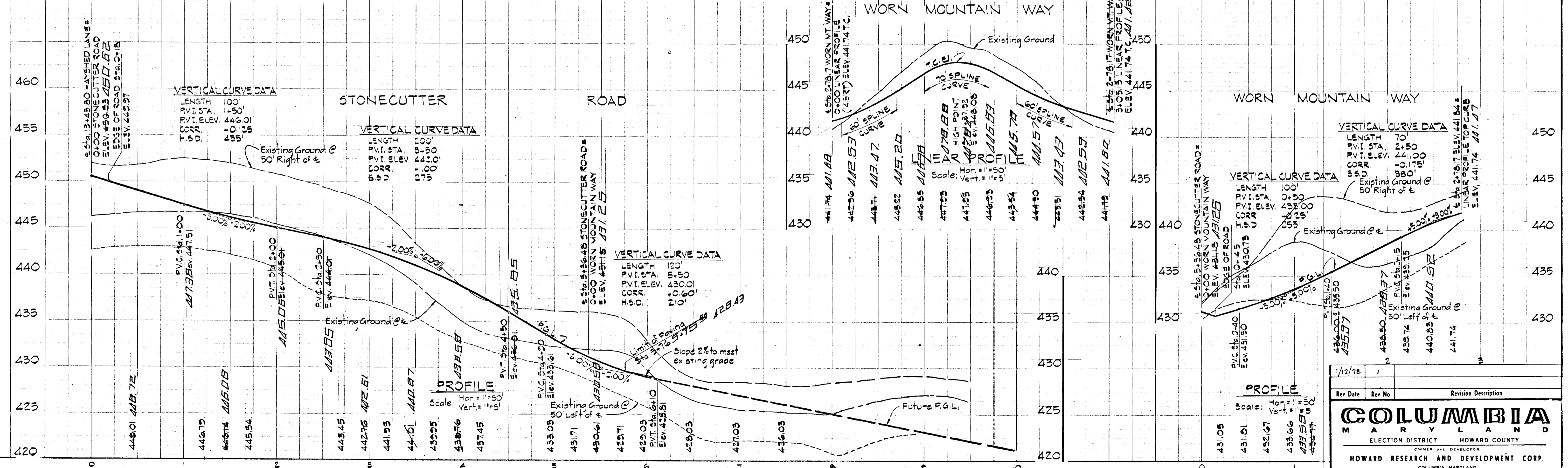
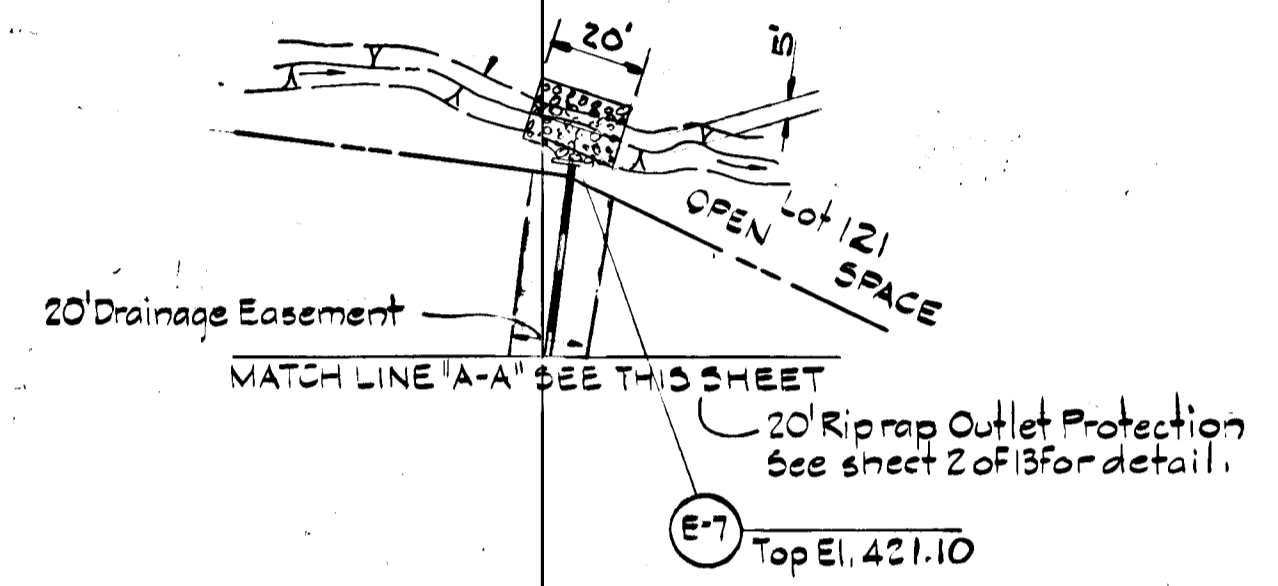
Typical Cul-de-Sacs to be in compliance with Howard County Road Construction Code Drawing D-33A, Page 88a.

STRUCTURE	SCHEDULE
Struct No.	Type
I-16	A-10 with Deflectors
I-17	A-10 with Deflectors
I-18	A-5 with Deflectors
E-7	Std. Type 'C' Headwall

Note: Construct Handicapped Ramps for sidewalks at all intersections. Maximum Slope 12:1.

\* NOTE: For detail of deflectors. See sheet 2 of 3.

Note: Stop Signs shall be erected at each street intersection in the location designed by the Department of Public Works at the expense of the developer and shall conform with the County Code & Design Manual.



APPROVED: Department of Public Works  
 W. O. E. [Signature] Chief, Bureau of Engineering  
 Date: 4-27-78

APPROVED: Office of Planning & Zoning  
 [Signature] Chief, Division of Land Development  
 Date: 4-20-78

FOR SEDIMENT CONTROL SEE SHEETS NO. 2, 12 AND 13

DEVELOPER'S CERTIFICATE  
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 [Signature] Date: 12/30/77

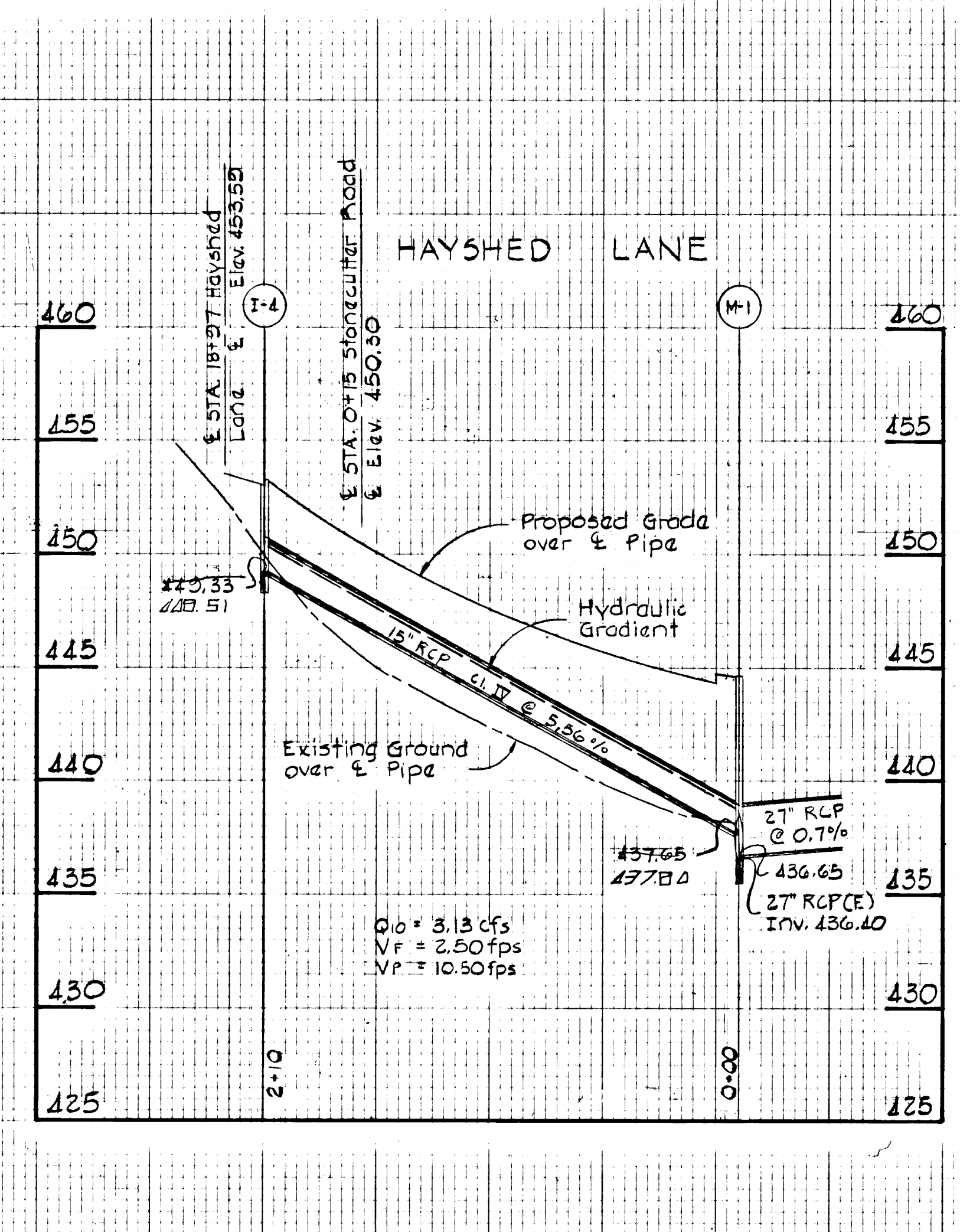
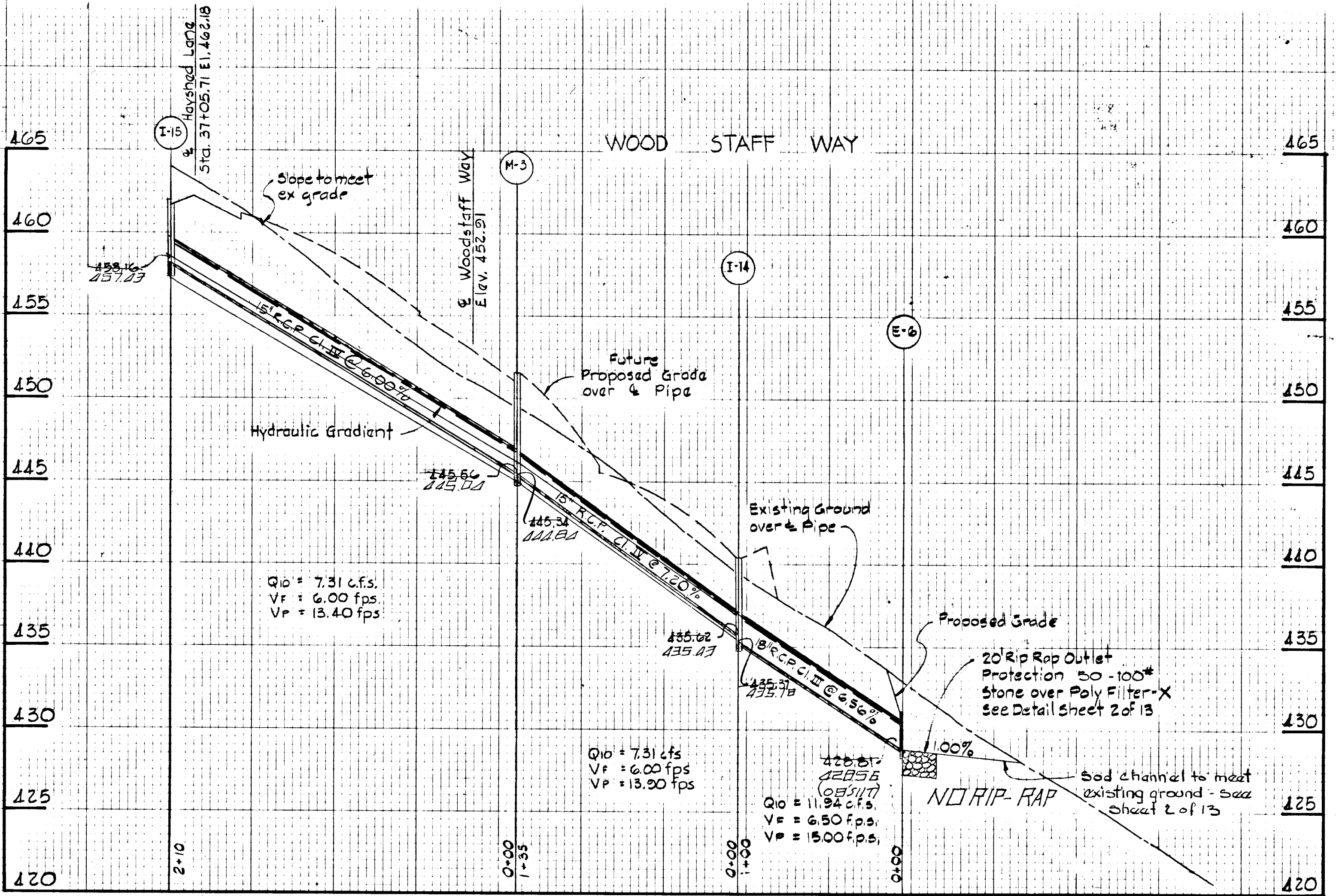
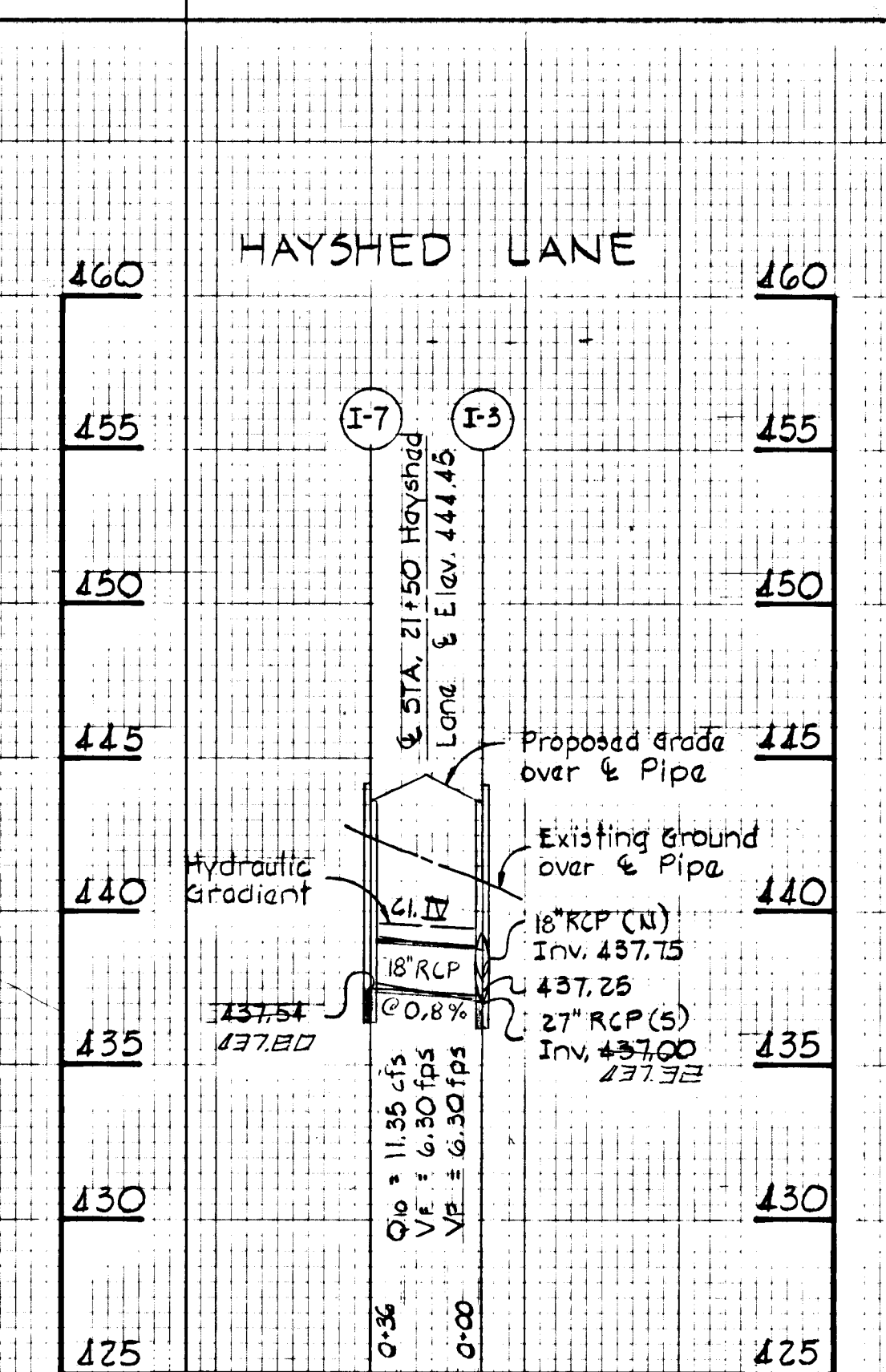
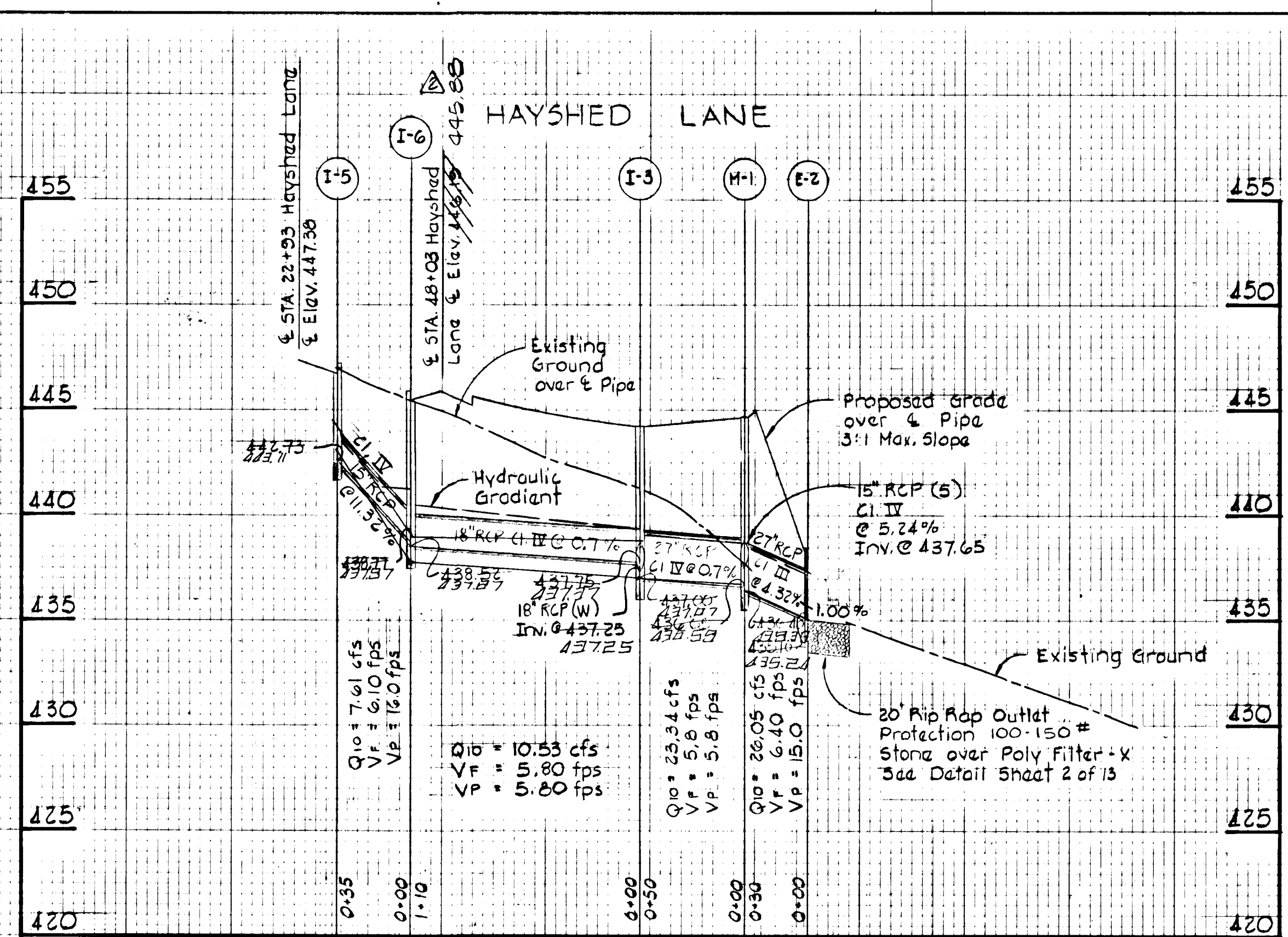
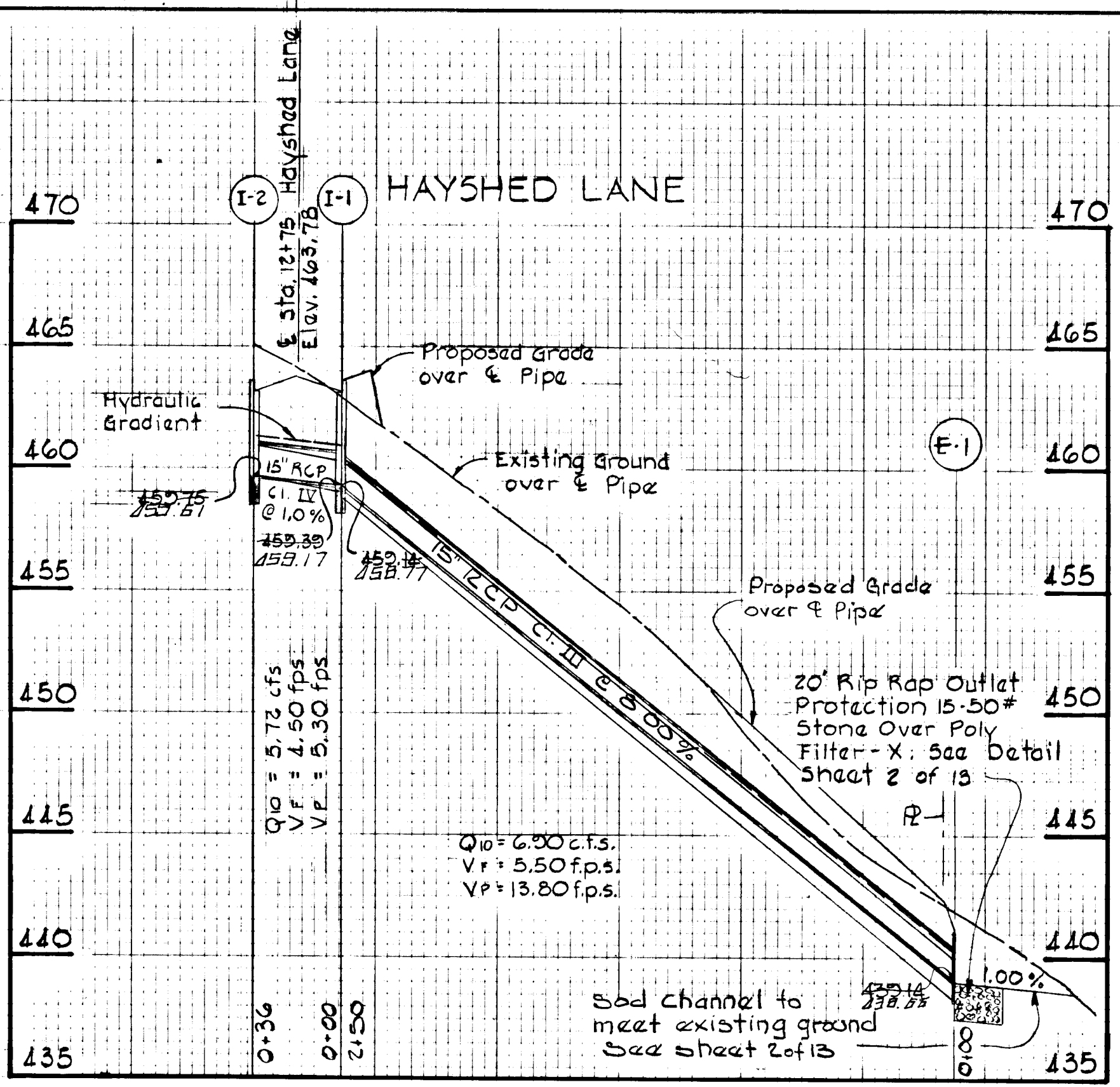
ENGINEER'S CERTIFICATE  
 I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 [Signature] William G. Rasch, II Date: 12/5/77

PURDUM & JESCHKE  
 CIVIL ENGINEERS  
 LAND SURVEYORS  
 1023 N. Calvert St.  
 Baltimore, Maryland 21202

1/12/78	1	
Rev Date	Rev No	Revision Description
<b>COLUMBIA</b> MARYLAND		
ELECTION DISTRICT HOWARD COUNTY		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. COLUMBIA, MARYLAND		
PROJECT AREA	VILLAGE OF LONGREACH Section 1 Area 10	
PROJECT TITLE	6th Election District Howard County, Md. PLAN AND PROFILE STONECUTTER ROAD AND WORN MOUNTAIN WAY	
Des. By	E. B. W., P. N. W.	Scale As Shown
Dwn. By	T. A. W.	Date 12/1/77
Chk. By	R. R. C.	Approved
		Dwg. No. 8 of 13
		C.C.F. No.

DRAWING 44-132 23442





**STORM DRAIN PROFILES**  
SCALE: Horiz 1" = 50'  
Vert. 1" = 5'

1/12/78	1	
4/13/78	2	HAYSHED ELEV. CHANGED @ I-6
Rev Date	Rev No	Revision Description

**COLUMBIA**  
MARYLAND  
ELECTION DISTRICT HOWARD COUNTY  
OWNER AND DEVELOPER  
HOWARD RESEARCH AND DEVELOPMENT CORP.  
COLUMBIA, MARYLAND

PROJECT AREA	VILLAGE OF LONGREACH
Section 1	Area 10
6th Election District	Howard County, Md.
PROJECT TITLE	STORM DRAIN PROFILES
Des. By	E. R. W. & P. W. K. Scale As Shown
Dwn. By	A. J. V. Date 12/1/77
Chk. By	R. B. C. Approved
Dwg. No.	3 of 13
C.C.F. No.	

APPROVED: Department of Public Works.  
*W. O. Albert* 4-27-78  
Chief, Bureau of Engineering Date

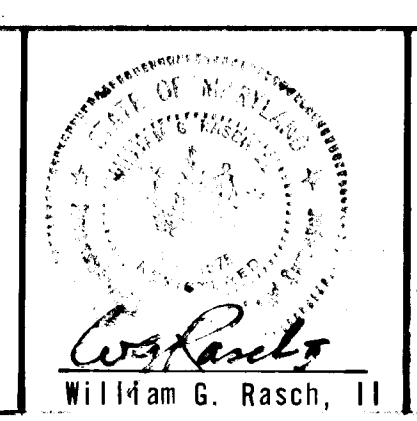
APPROVED: Office of Planning & Zoning  
*Robert J. Zuelman* 4/20/78  
District Coordinator Date

Reviewed for Howard County Soil Conservation District and meets Technical Requirements.  
*Robert J. Zuelman* 4-18-78  
U.S. Soil Conservation District Date

This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*Robert J. Zuelman* 4/18/78  
District Coordinator Date

**DEVELOPER'S CERTIFICATE**  
I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic onsite inspection by the Howard Soil Conservation District or their authorized agent, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.  
*William G. Rasch, II* 12/12/77  
Date

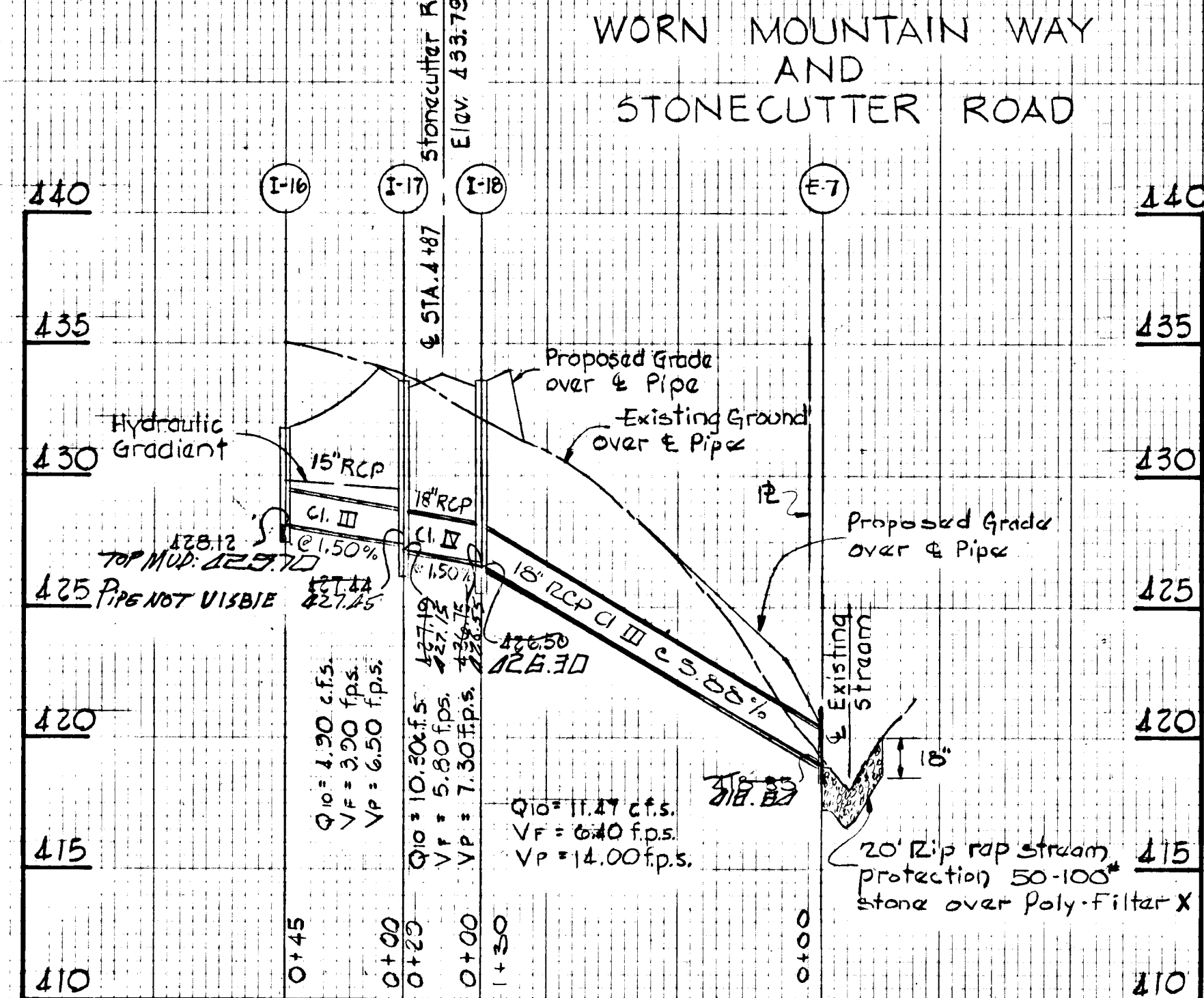
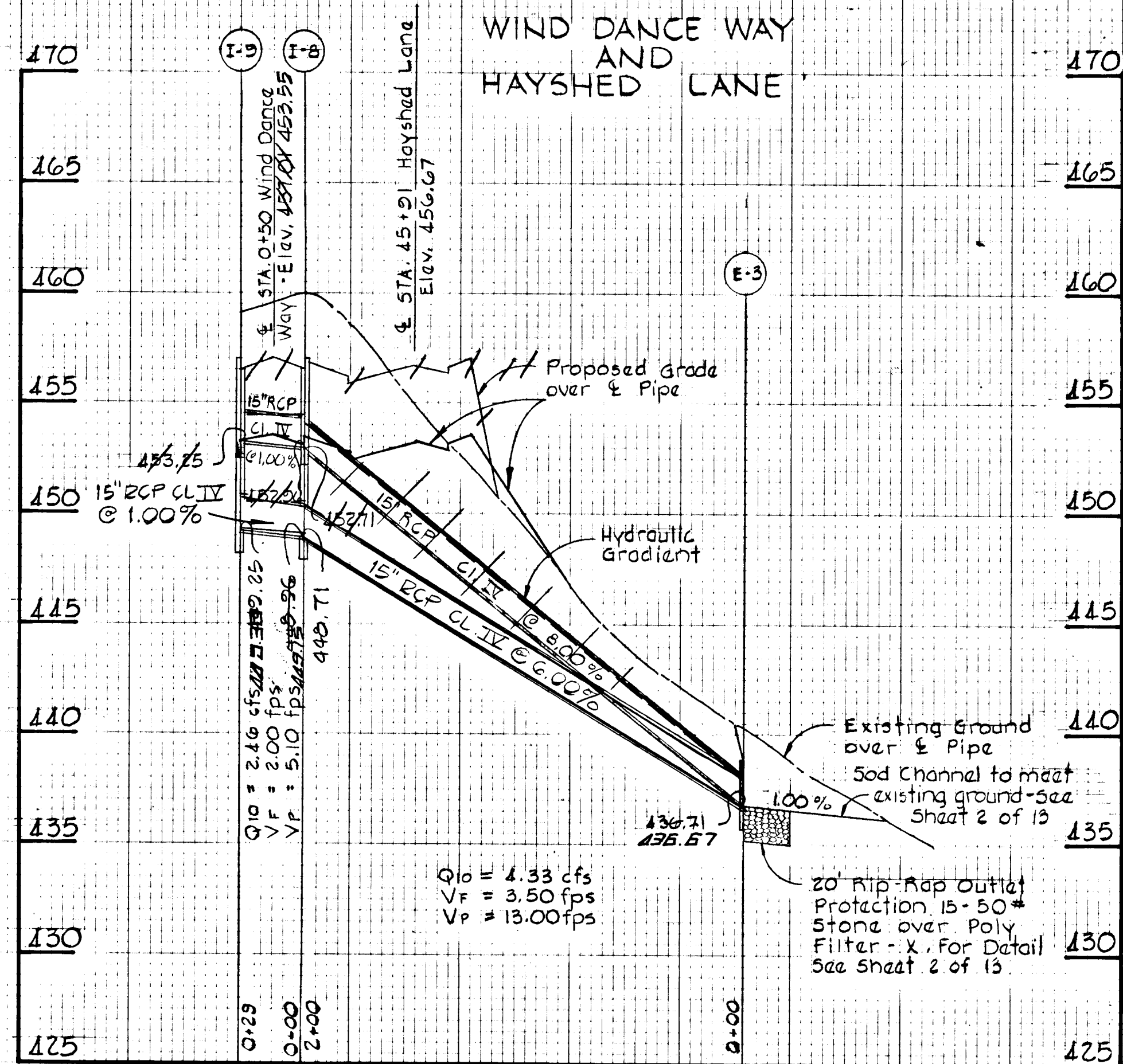
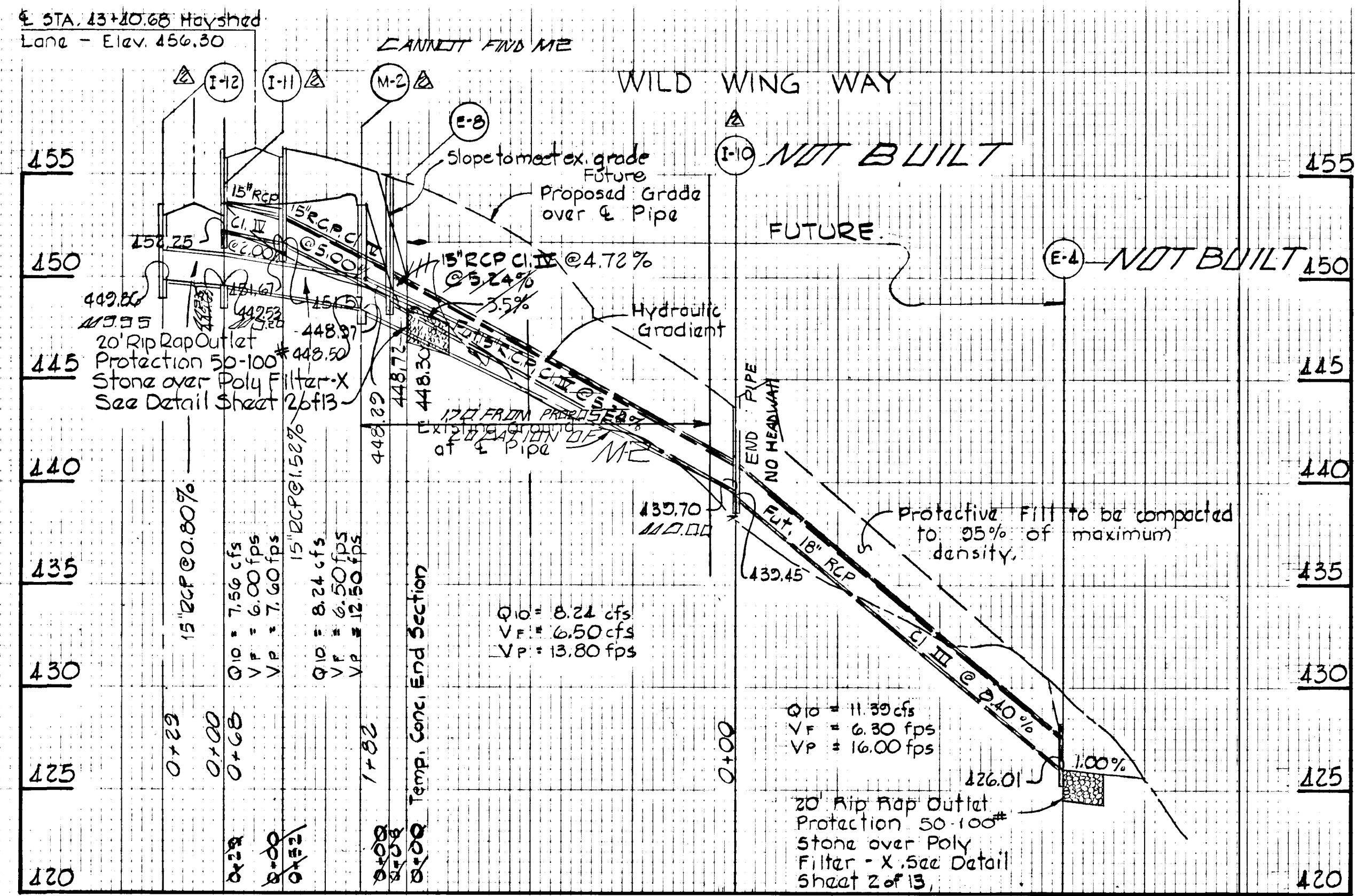
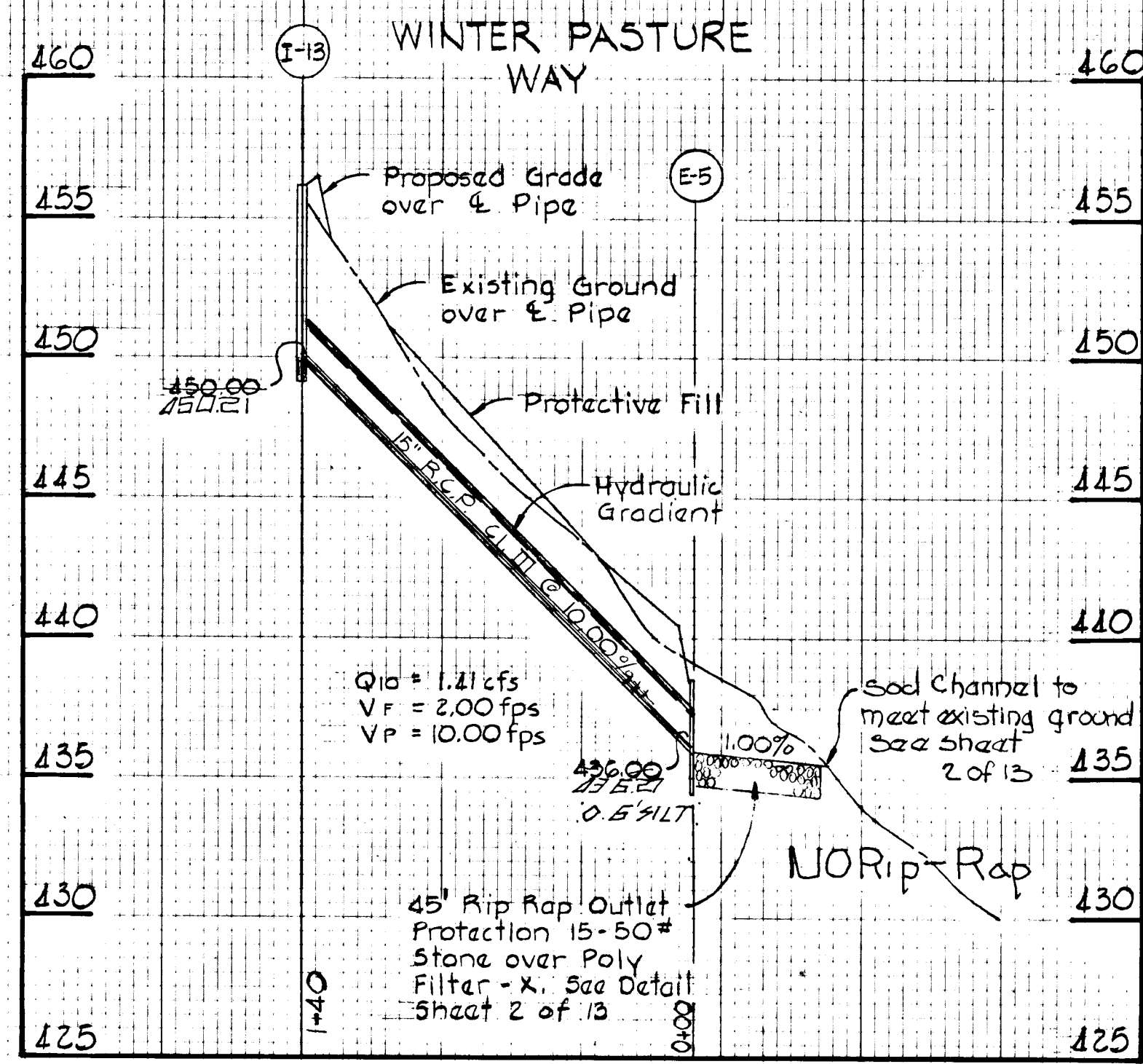
**ENGINEER'S CERTIFICATE**  
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*William G. Rasch, II* 12/15/77  
Date



PURDUM & JESCHKE  
CIVIL ENGINEERS  
LAND SURVEYORS  
1023 N. Calvert St.  
Baltimore, Maryland 21202

710  
1-10





STORM DRAIN PROFILES  
SCALE: Horiz. 1" = 50'  
Vert. 1" = 5'

1/12/78	1	WILD WING - 1-10 THROUGH 1-12 REVISED
6-13-78	2	WIND DANCE WAY & HAYSHED LANE E-3 THRU 1-12 REV.
Rev Date	Rev No	Revision Description

**COLUMBIA**  
MARYLAND  
ELECTION DISTRICT HOWARD COUNTY  
OWNER AND DEVELOPER  
**HOWARD RESEARCH AND DEVELOPMENT CORP.**  
COLUMBIA, MARYLAND

PROJECT AREA	VILLAGE OF LONGREACH	Area No. 10
Section 1	6th Election District	Howard County, Md.
PROJECT TITLE	STORM DRAIN PROFILES	
Des. BY: P.R. & P.W.K.	Scale: As Shown	Dwg. No. 10 of 13
Drn. By: A.J.V.	Date: 12/1/77	C.C.F. No.
Chk. By: P.S.G.	Approved	

APPROVED: Department of Public Works  
*W.O. Albert* 4-27-78  
Chief, Bureau of Engineering Date

APPROVED: Office of Planning & Zoning  
*[Signature]* 4-29-78  
Chief, Division of Land Development Date

Reviewed for Howard County Soil Conservation District and meets Technical Requirements.  
*C. V. Name* 4-18-78  
U.S. Soil Conservation District Date

This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*[Signature]* 4/18/78  
District Coordinator Date  
Howard Soil Conservation District

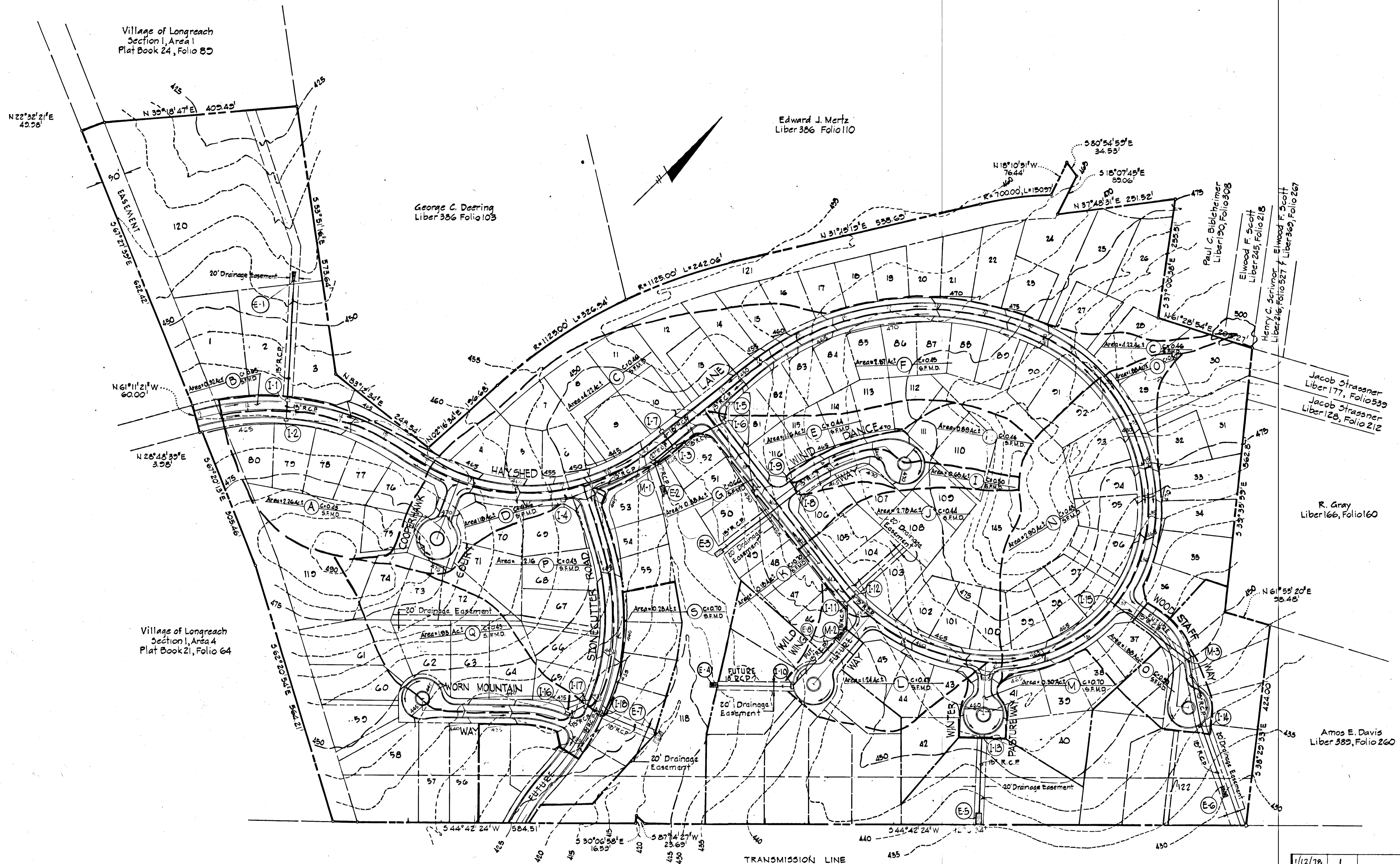
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*[Signature]* 12/31/77  
Date

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*[Signature]* 10/15/77  
William G. Rasch, II Date



PURDUM & JESCHKE  
CIVIL ENGINEERS  
LAND SURVEYORS  
1023 N. Calvert St.  
Baltimore, Maryland 21202





Village of Longreach  
Section 1, Area 1  
Plat Book 24, Folio 80

Edward J. Mertz  
Liber 386 Folio 110

George C. Deering  
Liber 386 Folio 103

Village of Longreach  
Section 1, Area 4  
Plat Book 21, Folio 64

Jacob Strassner  
Liber 177, Folio 533  
Jacob Strassner  
Liber 128, Folio 212

R. Gray  
Liber 166, Folio 160

Amos E. Davis  
Liber 389, Folio 260

TRANSMISSION LINE  
Baltimore Gas & Electric Company  
Liber 280, Folio 315 / Liber 145, Folio 46

PLAN  
Scale: 1" = 100'

1/12/78	1	
Rev Date	Rev No	Revision Description

**COLUMBIA**  
MARYLAND  
6th ELECTION DISTRICT HOWARD COUNTY  
OWNER AND DEVELOPER  
**HOWARD RESEARCH AND DEVELOPMENT CORP.**  
COLUMBIA, MARYLAND

APPROVED: Department of Public Works  
*W. F. Libert*  
Chief, Bureau of Engineering  
4-24-78  
Date

APPROVED: Office of Planning and Zoning  
*[Signature]*  
Chief, Division of Land Development  
4-20-78  
Date

Reviewed for Howard County Soil Conservation District and meets Technical Requirements.  
*C. Wayne Gray*  
S. Soil Conservation District  
4-19-78  
Date

This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*Robert V. Zuberger*  
District Coordinator  
Howard Soil Conservation District  
4/18/78  
Date

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*Joseph H. Nash*  
12/30/77  
Date

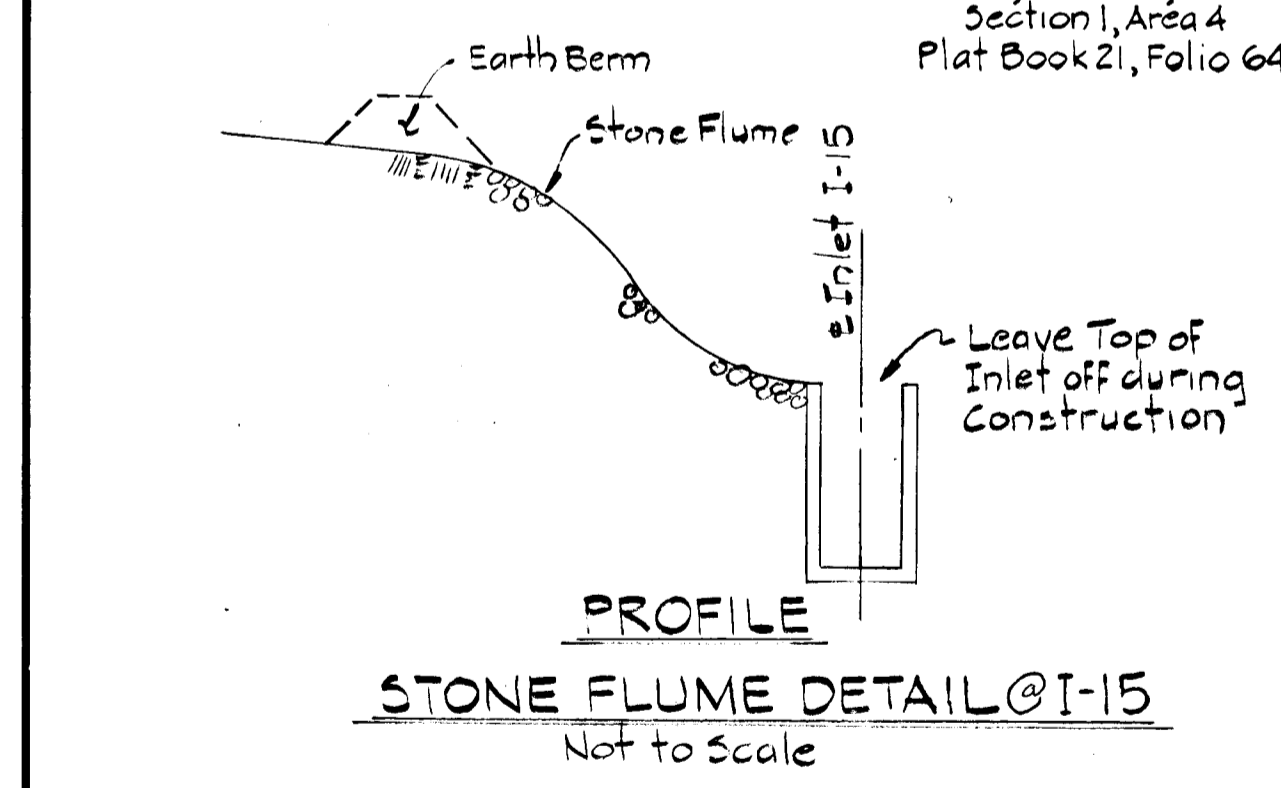
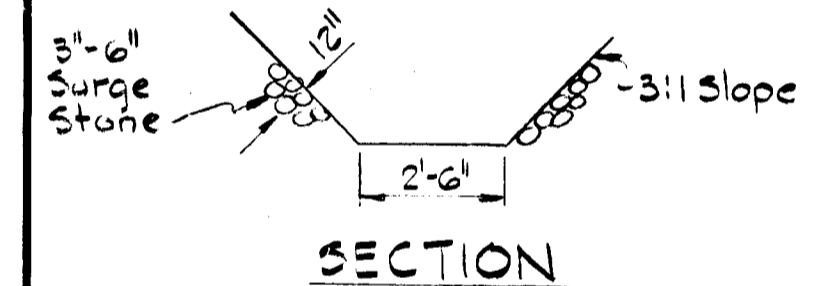
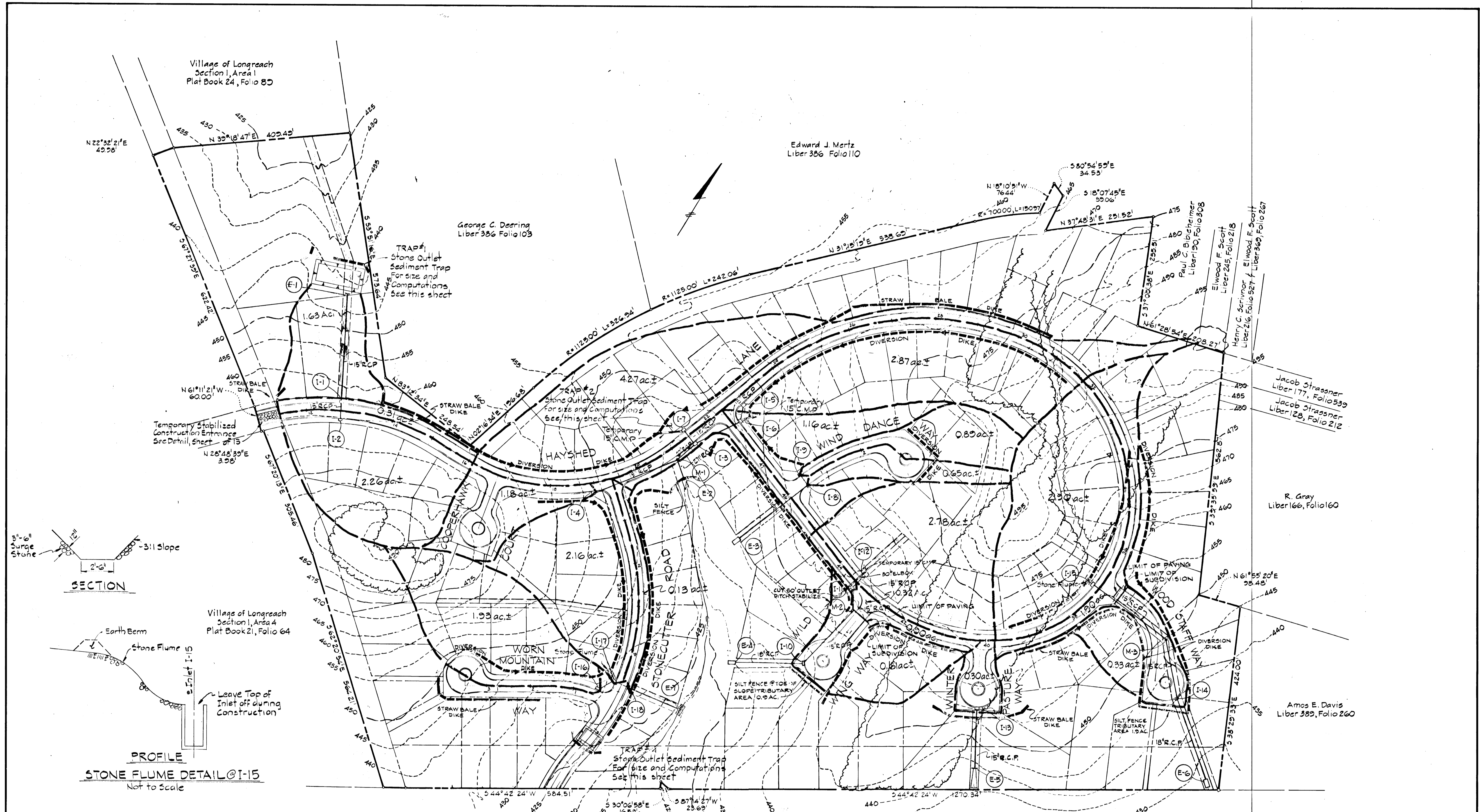
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*William G. Rasch, II*  
12/15/77  
Date



**PURDUM & JESCHKE**  
CIVIL ENGINEERS  
LAND SURVEYORS  
1023 N. Calvert St.  
Baltimore, Maryland 21202

PROJECT AREA	VILLAGE OF LONGREACH Section 1 Area 19
PROJECT TITLE	DRAINAGE AREA MAP
Des. By	E. B. W.
Scale	As Shown
Dwg. No.	11 of 13
Drn. By	A. E. G.
Date	12/1/77
C.C.F. No.	
Chk. By	R. B. C.
Approved	





SEDIMENT TRAP DATA					
Sediment Trap	D.A.	Volume Required	Volume Provided	Trap Size	Stone Outlet Crest Length
#1	4.2 ac ±	113 cu. yd.	119 cu. yd.	40 x 100 x 2'	25'
#2	1.1 ac ±	30 cu. yd.	30 cu. yd.	2000 cu. ft.	7'
#3	3.1 ac ±	83 cu. yd.	90 cu. yd.	50 x 60 x 2'	19'
#4	1.3 ac ±	35 cu. yd.	36 cu. yd.	30 x 40 x 2'	8'

Baltimore Gas & Electric Company  
Liber 280, Folio 315 / Liber 145, Folio 46  
PLAN  
Scale: 1" = 100'

APPROVED: Department of Public Works  
*W. J. Hill* 4-24-78  
Chief, Bureau of Engineering Date

APPROVED: Office of Planning and Zoning  
*Robert H. Zelnick* 4/20/78  
Chief, Division of Land Development Date

Reviewed for Howard County Soil Conservation District and meets Technical Requirements.  
*C. Wayne Ray* 4-19-78  
U.S. Soil Conservation District Date

This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*Robert H. Zelnick* 4/18/78  
District Coordinator Date

Howard Soil Conservation District

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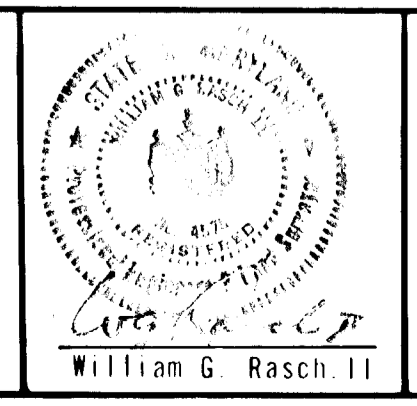
*William G. Rasch, II* 2/30/77  
Date

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*William G. Rasch, II* 2/26/77  
Date

PURDUM E. JESCHKE  
CIVIL ENGINEERS  
LAND SURVEYORS  
1023 N. Calvert St.  
Baltimore, Maryland 21202



1/12/78	1	
Rev Date	Rev No	Revision Description
<b>COLUMBIA</b> M A R Y L A N D		
6th ELECTION DISTRICT HOWARD COUNTY OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. COLUMBIA, MARYLAND		
PROJECT AREA	VILLAGE OF LONGREACH Section 1 Area 10	
PROJECT TITLE	SEDIMENT CONTROL PLAN	
Des By	E.B.W.	Scale Not to Scale
Dwn By	T.A.W.	Date 12/1/77
Chk By	P.B.C.	Approved
Dwg No	12 of 13	CCF No



**SEDIMENT CONTROL NOTES**

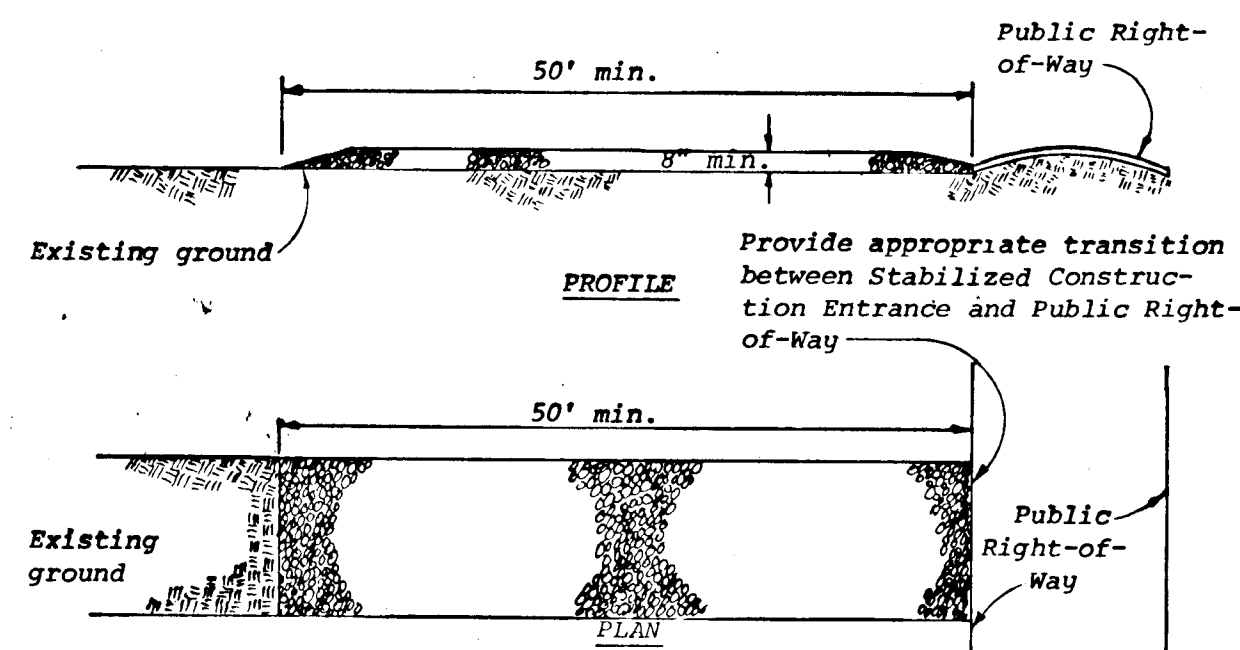
- Specifications for the Sediment Control Details shown hereon are included in the U.S.D.A. Soil Conservation Service "Standards and Specifications for soil erosion and sediment control in developing areas."
- A grading plan must be developed by the builder and approved before beginning any work shown hereon.
- The developer shall notify the Howard County Office of Inspections and Permits at least 24 hours prior to beginning any construction shown hereon (465-5000 Ext. 365).
- Sediment control structures to be constructed prior to any on-site grading or disturbance to any existing surface material, and are to be stabilized as soon as constructed.
- All sediment control structures to remain in place until permission for their removal has been obtained from the Howard County Office of Inspection and Permits (465-5000 Ext. 365).
- All graded areas not to be sodded shall be stabilized by seeding and mulching in accordance with the following:
  - Site Preparation
    - Harrow or disc in areas proposed to be seeding the following materials at the specified rate to a depth of 3".
      - Pulverized limestone at 2 tons/acre.
      - Commercial fertilizer 10-10-10 at 1/2 tons/acre.
      - Super phosphate at 600 lbs/acre.
  - Seeding
    - Sow the following seed mixture at the rate of 200 lbs/acre with a mechanical spreader.
      - Temporary: Italian or Perennial Rye Grass
      - Permanent: 40% Marion Blue Grass, 40% South Dakota Blue Grass and 20% Penn Lawn Creeping Red Fescue
    - The seeded area shall then be raked with a York Rake (a minimum of 2 passes) covered and compacted with Cultipacker or other approved method.
  - Mulching
    - Seeded areas shall be uniformly mulched immediately after seeding with unweathered small grain straw at the rate of 1 1/2 - 2 tons/acre.
    - Tie mulch down with liquid asphalt at 0.1 gal/s.y. or emulsified asphalt at 0.04 gal/s.y. or mulch netting.
- Further development of individual lots are subject to additional Sediment and Erosion Control Requirements.
- The open end of all storm drain pipes must be capped at the end of each day with plywood sheathing and held in place by sand bags or other approved methods.
- All inlets shall be protected according to detail shown on Sheet 13 of 13.
- Sodding (See Sediment Control Notes - Continued)

**LEGEND**

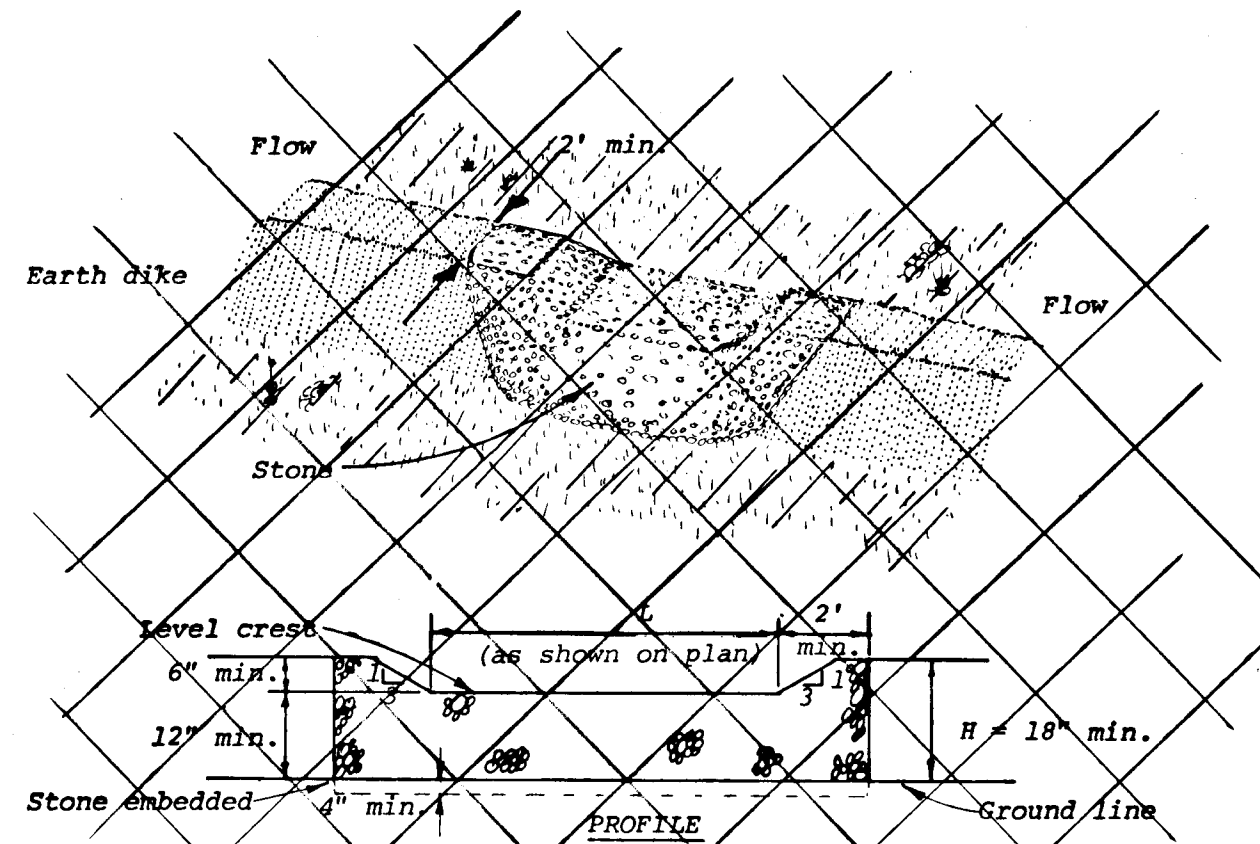
- Stabilized Construction Entrance
- Stone Outlet Structure
- Diversion Dike
- Interceptor Dike
- Perimeter Dike
- Straw Bale Dike
- Storm Inlet Sediment Trap
- Grassed Waterway
- Stone Outlet Sediment Trap
- Silt Fence

**CONSTRUCTION SEQUENCE**

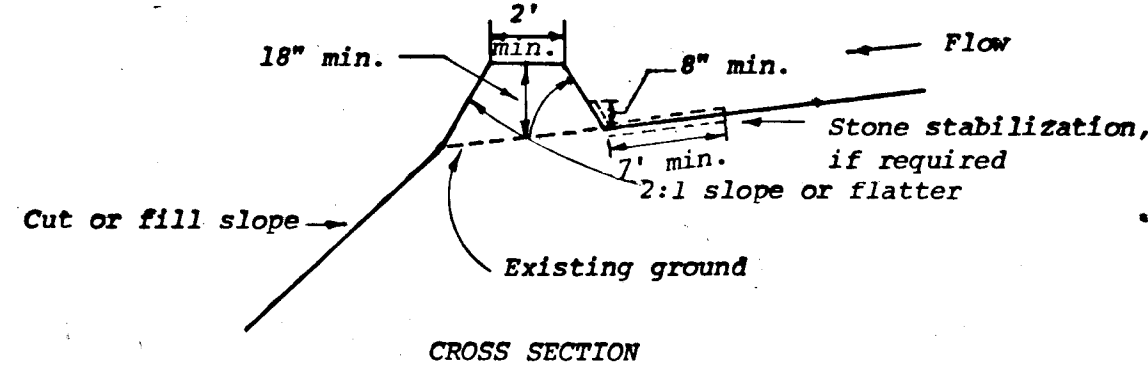
- Obtain grading permit
- Construct temporary stabilized construction entrance.
- Erect silt fence and diversion dikes south side Hayshed Lane opposite station 21+00.
- Stabilize diversion dikes with Temporary Seeding and mulch.
- Construct storm drain systems between E-2 to I-5 including I-7 and connect temporary 15" C.M.P. into rear face I-7 and I-5.
- Place straw bale dike along North side Hayshed Lane between stations 10+ to 11+, 13+ to 15+, and 26+ to 30+.
- Construct Stone Outlet Sediment Trap downstream E-1. Stabilize with Temporary seeding and mulch.
- Construct storm drain system from E-6 to I-15 and place stone flume in cut slope from top of slope to I-15.
- Construct diversion dikes along both sides of Hayshed Lane between Stations 22+ to 48+ as shown, and stabilize with Temporary seeding and mulch.
- Place silt fence across Wood Staff Way.
- Place straw bale dike beyond toe of fill slope in back of Winter Pasture Way.
- Place temporary 15" C.M.P. across Hayshed Lane @ Sta. 43+60 and construct temp. silt fence at toe of proposed slope at limits of Wild Wing Way.
- Place diversion dike beyond top of cut slope @ the terminus of Wind Dance Way. Stabilize with Temporary seeding and mulch.
- Construct storm drain system between E-7 and I-16 in Stonecutter Road and place stone flume in cut slope from top of slope to I-17.
- Construct diversion dikes along both sides Stonecutter Road. Extend dike on west side of Stonecutter Road along south side Hayshed Lane toward Cooperhawk Court and along the north side of Worn Mountain Way, as shown.
- Stabilize diversion dikes with Temporary seeding and mulch.
- Construct stone outlet sediment trap beyond limits of construction station 6+ Stonecutter Road.
- Place all roads to subgrade. Stabilize graded areas with temporary seeding and mulch.
- Install balance of storm drain systems
- Install all other utilities.
- Repair any sediment and erosion control device disturbed during construction of utilities.
- Maintain sediment traps.
- Place curbs and paving courses.
- Fine grade slopes between curb and property lines, roadway supporting slopes and along channels.
- Stabilize with permanent seeding and sodding as required (see sediment control notes).
- Remove sediment control devices.



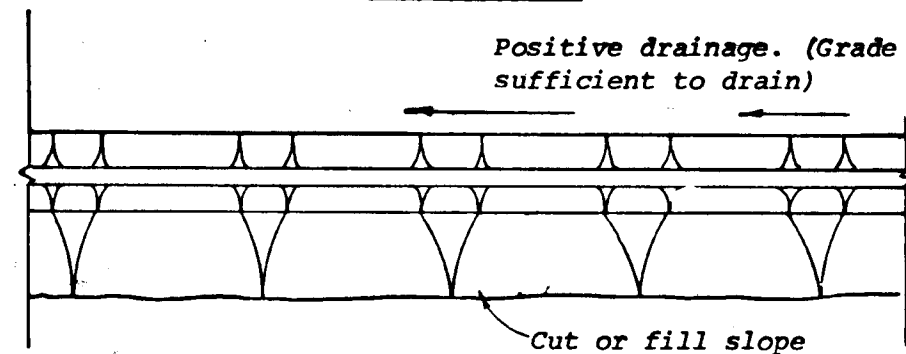
**STABILIZED CONSTRUCTION ENTRANCE**



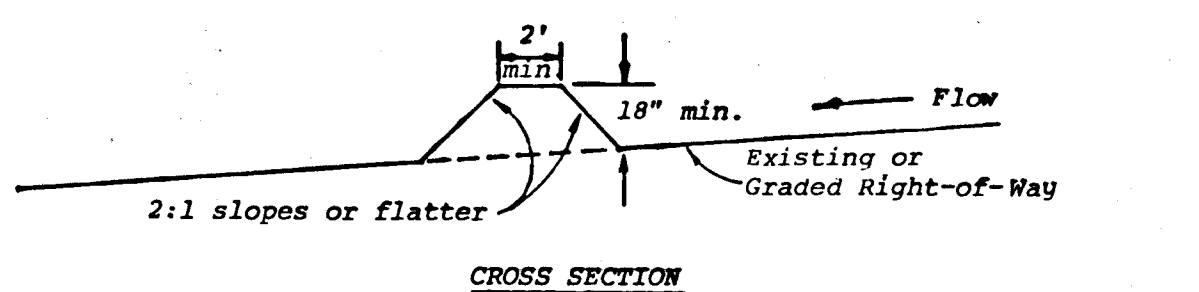
**STONE OUTLET STRUCTURE**



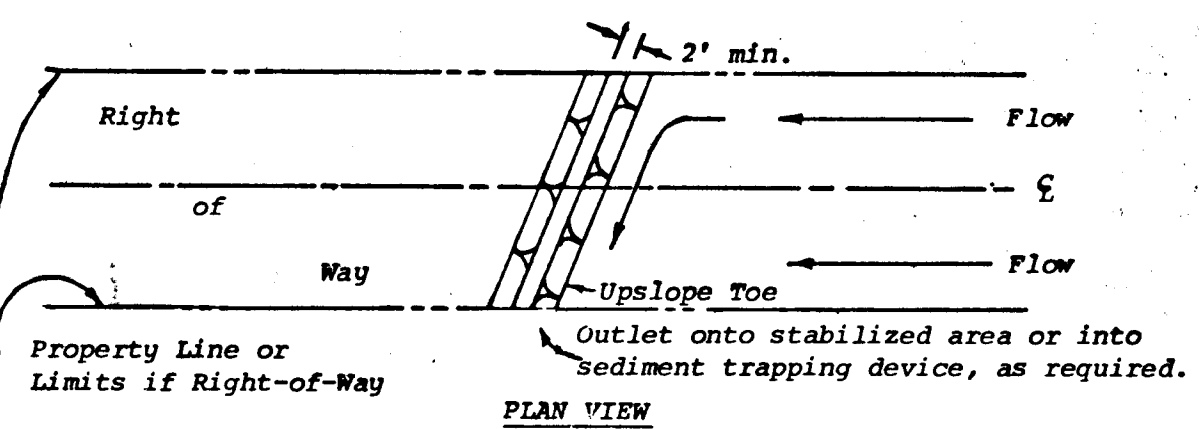
**CROSS SECTION**



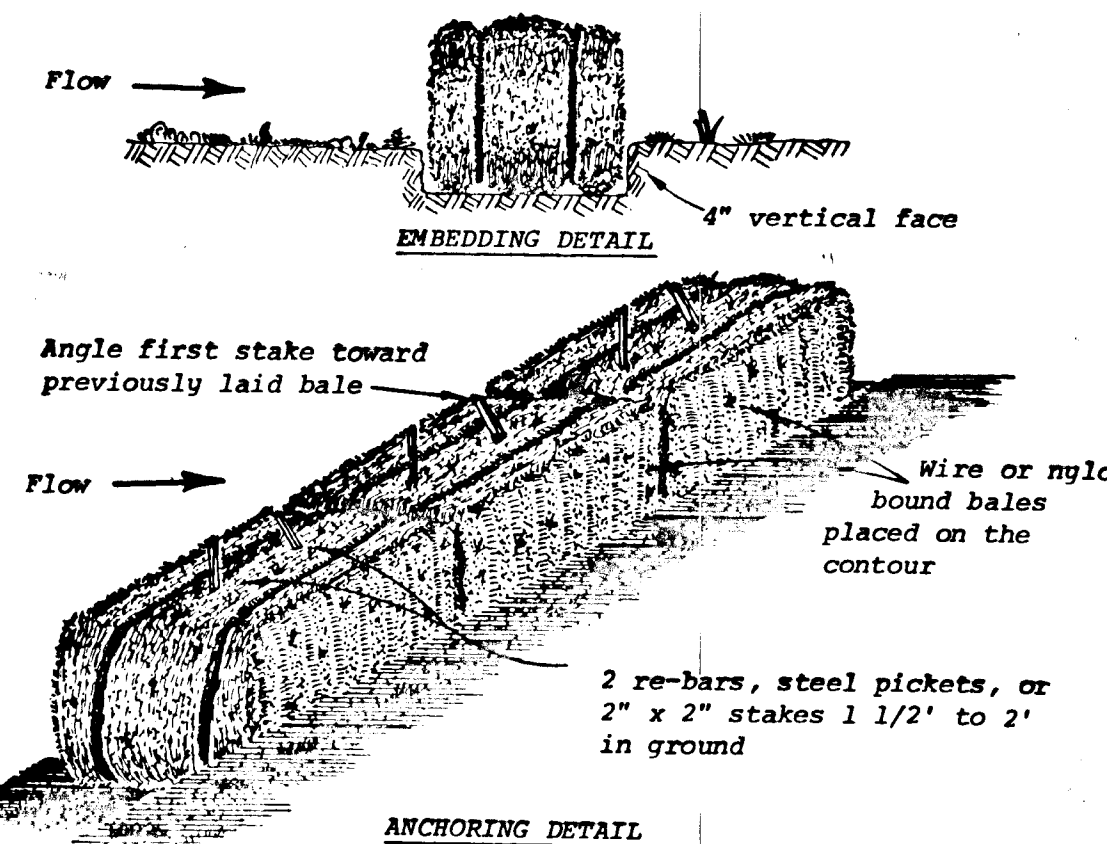
**DIVERSION DIKE**



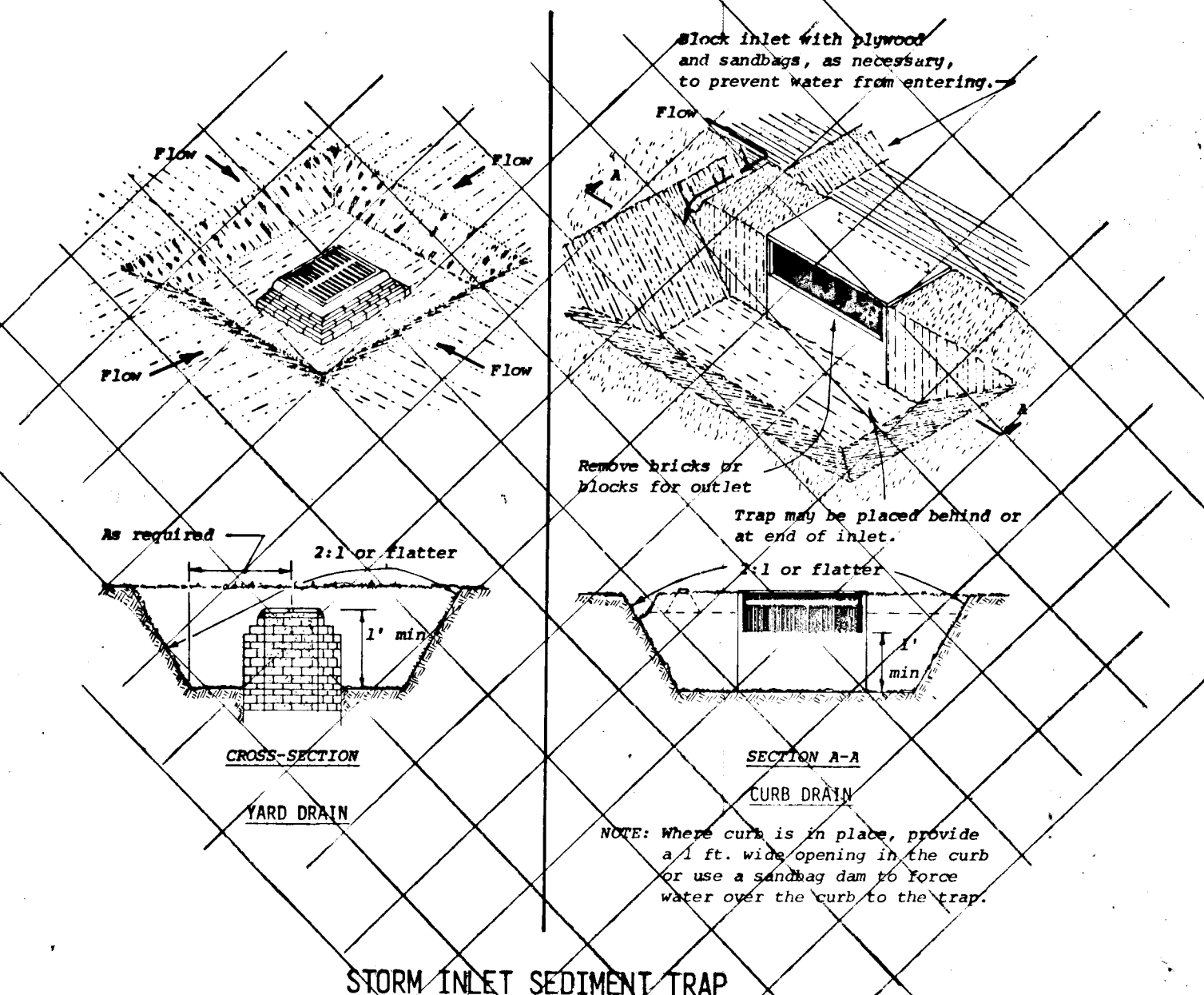
**CROSS SECTION**



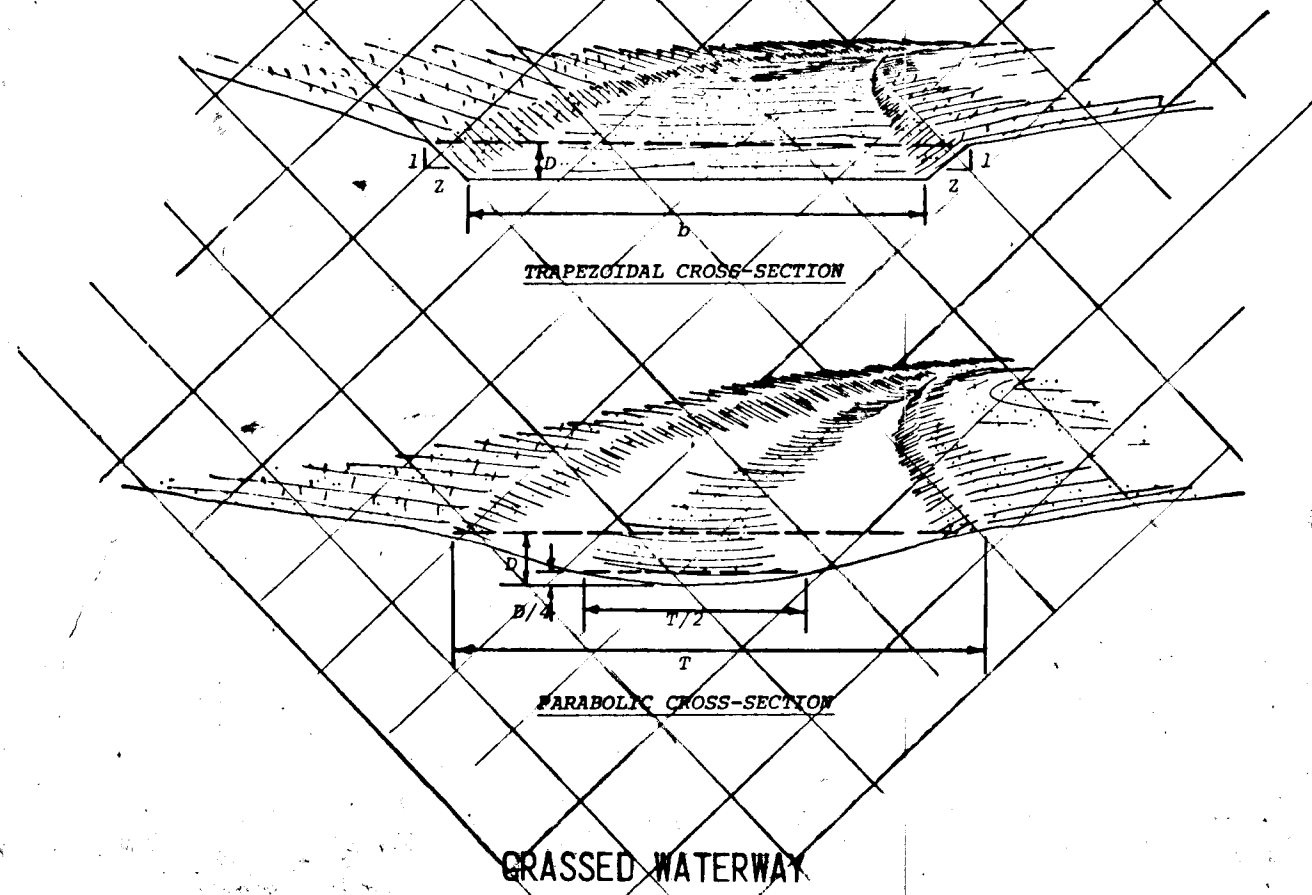
**INTERCEPTOR DIKE**



**STRAW BALE DIKE**



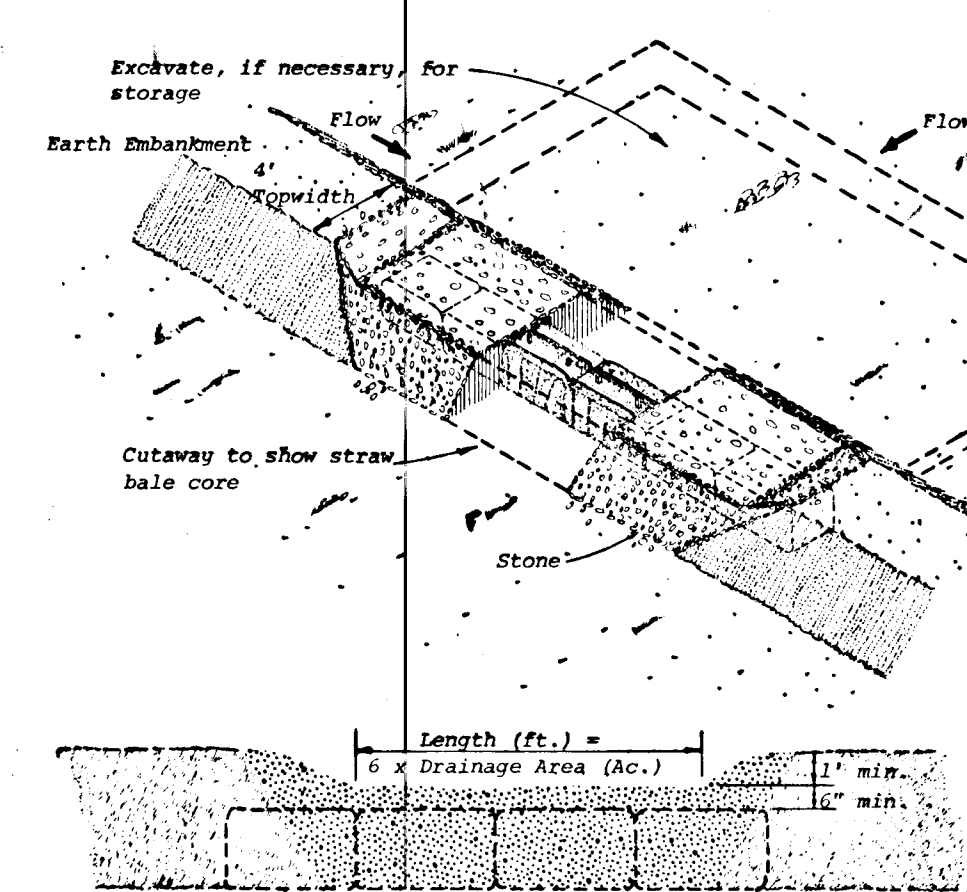
**STORM INLET SEDIMENT TRAP**



**GRASSED WATERWAY**

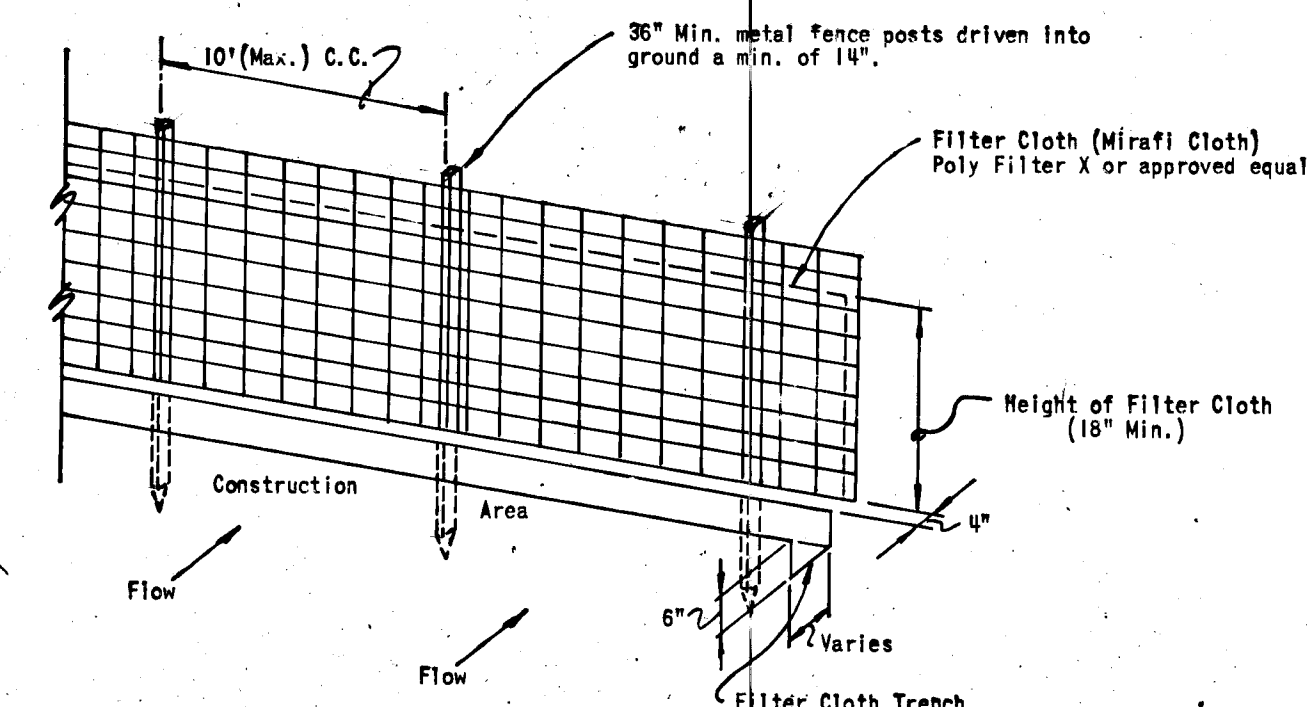
**SEDIMENT CONTROL NOTES (CONTINUED)**

- SODDING
  - Apply 10-10-10 fertilizer at 1000 lbs/acre. (25 lbs./1000 S.F.)
  - Apply Ground Agricultural Limestone at 2000 lbs./acre. (50 lbs./1000 S.F.)
  - Incorporate both lime and fertilizer into soil by discing. Firm up after incorporation.
  - Lay sod to a tight fit. Roll to insure contact with underlying soil. Water as necessary for first two weeks (in summer) to insure establishment.



**STONE OUTLET SEDIMENT TRAP**

NOT TO SCALE



**SILT FENCE DETAIL**

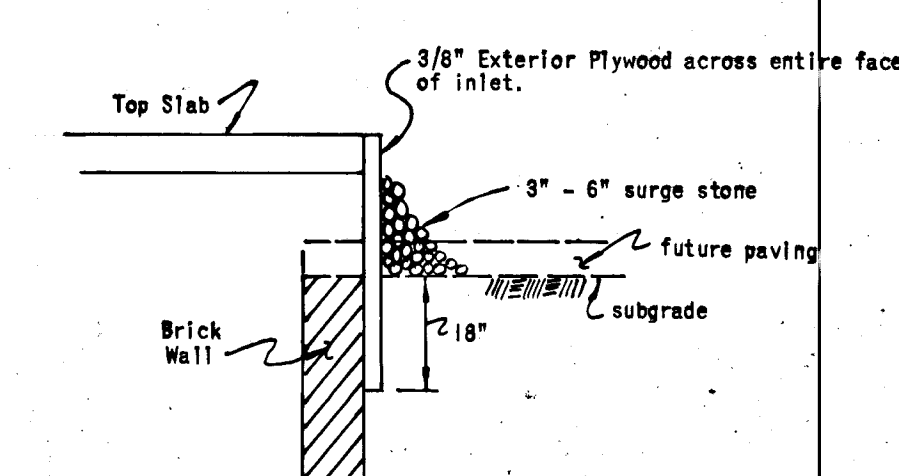
NOT TO SCALE

**NOTES:**

- Woven Wire Fence to be fastened securely to fence posts by use of wire ties.
- Filter cloth to be fastened securely to woven wire fence by use of wire ties spaced every 24" x 24".
- Silt fence to be placed in lieu of straw bales and/or diversion dikes at the option of the Developer.

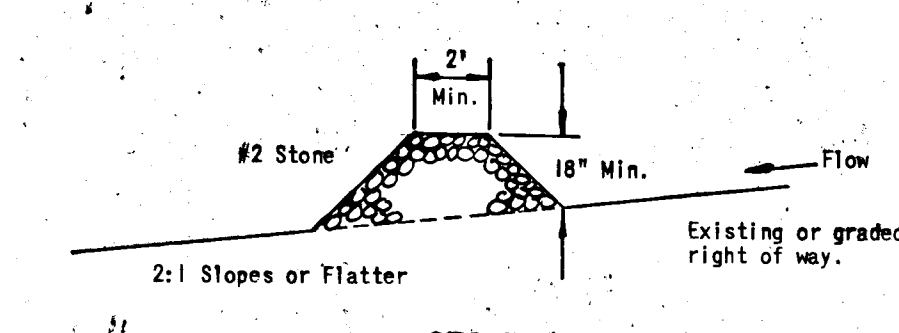
**SITE ANALYSIS**

- Total Area of Site.....58.6 Ac.±
- Area to be Graded.....9.3 Ac.±
- Area to be Paved.....5.4 Ac.±
- Area to be Revegetated.....3.9 Ac.±
- Undisturbed Area.....49.3 Ac.±



**TYPE A INLET PROTECTION DETAIL**

NOT TO SCALE



**STONE DIKE**

<p>APPROVED: Department of Public Works.</p> <p><i>W. J. Allert</i> 4-24-78 Chief, Bureau of Engineering Date</p> <p>APPROVED: Office of Planning &amp; Zoning</p> <p><i>Shirley M. Pugh</i> 4-20-78 Chief, Division of Land Development Date</p>	<p>Reviewed for Howard County Soil Conservation District and meets Technical Requirements.</p> <p><i>C. Wayne Ray</i> 4-18-78 U. S. Soil Conservation District Date</p> <p>This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District</p> <p><i>Robert W. Zesch</i> 4/18/78 District Coordinator Date</p> <p>Howard Soil Conservation District</p>	<p><b>DEVELOPER'S CERTIFICATE</b></p> <p>I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic onsite inspection by the Howard Soil Conservation District or their authorized agent, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.</p> <p><i>John H. Neukirch</i> 12/30/77 Date</p>	<p><b>ENGINEER'S CERTIFICATE</b></p> <p>I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.</p> <p><i>William G. Rasch, II</i> 12/15/77 Date</p>	<p><b>PHILIP M. JESCHKE</b></p> <p>CIVIL ENGINEERS LAND SURVEYORS</p> <p>1023 N. Calvert St. Baltimore, Maryland 21202</p>	<p>1/12/78</p> <table border="1"> <tr> <th>Rev. Date</th> <th>Rev. No.</th> <th>Revision Description</th> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table> <p><b>COLUMBIA</b> MARYLAND 6th ELECTION DISTRICT HOWARD COUNTY OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.</p> <p>PROJECT AREA: VILLAGE OF LONGREACH Section 1 Area 10</p> <p>PROJECT TITLE: SEDIMENT CONTROL DETAILS</p> <table border="1"> <tr> <td>Des. By: E.B.W.</td> <td>Scale: Not to Scale</td> <td>Dwg. No.: 13 of 13</td> </tr> <tr> <td>Drn. By: T.A.W.</td> <td>Date: 12/1/77</td> <td>C.C.F. No.</td> </tr> <tr> <td>Chk. By: R.B.C.</td> <td>Approved</td> <td></td> </tr> </table>	Rev. Date	Rev. No.	Revision Description				Des. By: E.B.W.	Scale: Not to Scale	Dwg. No.: 13 of 13	Drn. By: T.A.W.	Date: 12/1/77	C.C.F. No.	Chk. By: R.B.C.	Approved	
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