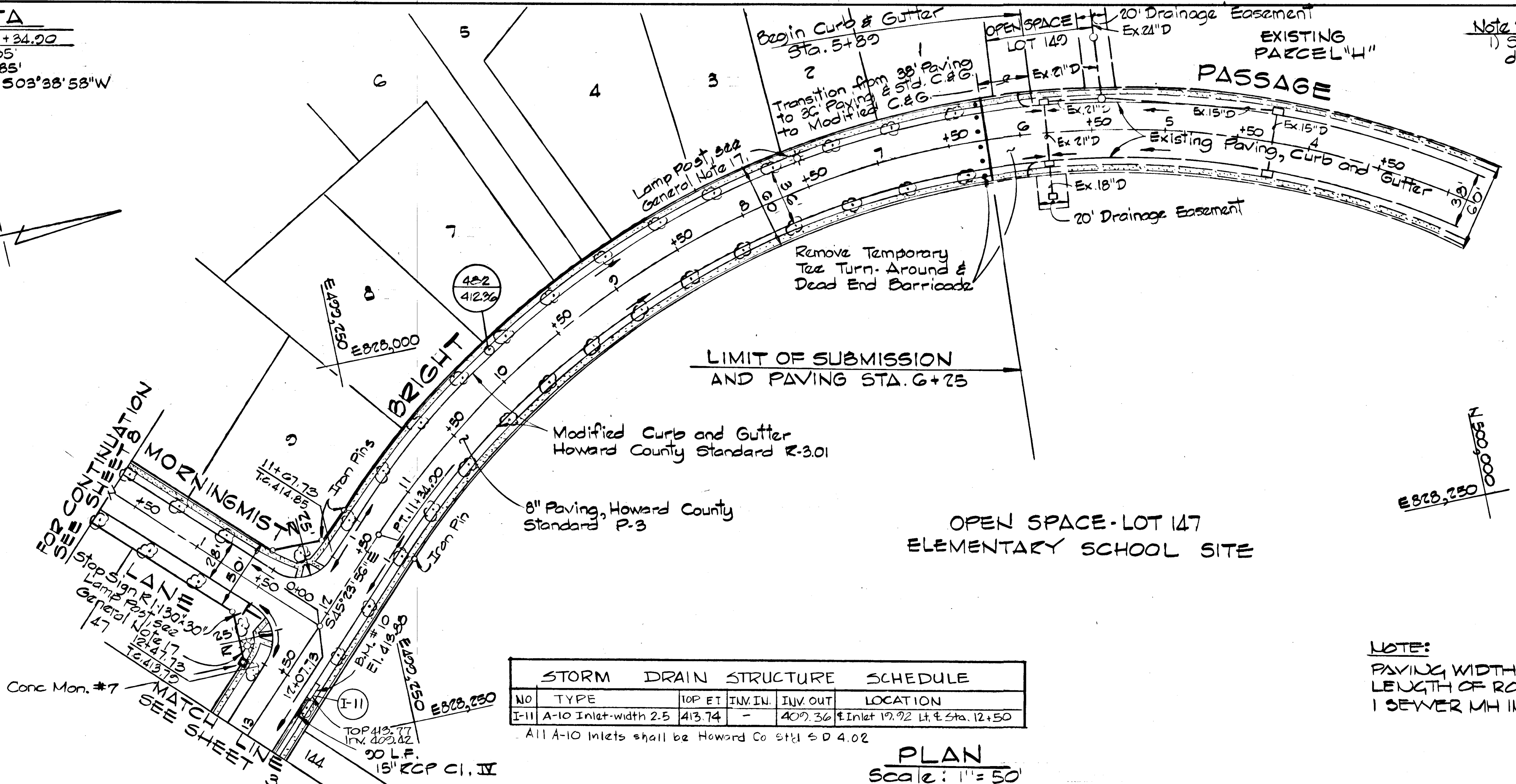


CURVE DATA
 PC 1+02.50 TO PT 11+34.00
 $\Delta = 98^{\circ}05'48''$ $\tan = 694.05$
 $R = 603.00'$ $\text{Chd} = 910.85'$
 $\text{Arc} = 1032.40'$ $\text{Chd} \text{ Org. } 503^{\circ}38'53''\text{W}$



Note:
 1) See sheet 11 for storm drain profiles.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING & ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

Note:
 For Existing Bright Passage, see Construction Drawings for Village of Hickory Ridge, Section 3, Area G (F-84-116)

0/15/86	1	As per DPW and SCS Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION
COLUMBIA 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY PROJECT AREA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 13 PROJECT TITLE PLAN AND PROFILE BRIGHT PASSAGE STA. 6+75 TO STA. 13+00 SCALE: AS SHOWN DATE		
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		

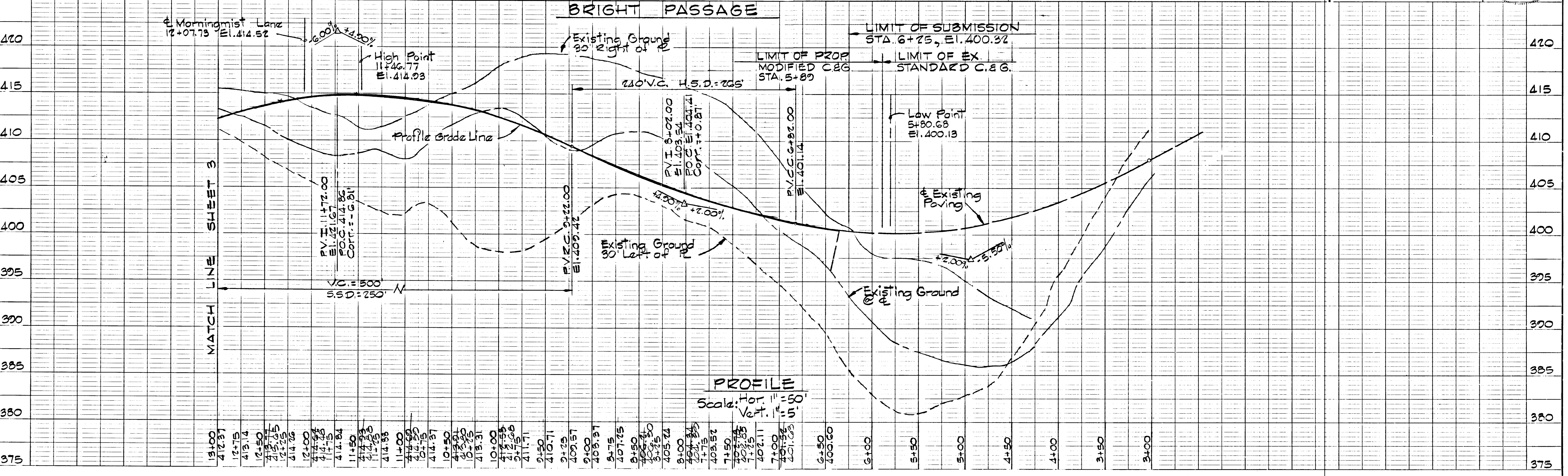
NO	TYPE	TOP ET	INLET	OUTLET	LOCATION
I-11	A-10 Inlet-width 2.5	413.74	-	409.36	Inlet 19.92 Lt. & Sta. 12+50

All A-10 Inlets shall be Howard Co. Std. S D 4.02

PLAN
 Scale: 1" = 50'

NOTE:
 PAVING WIDTH - 36'
 LENGTH OF ROAD - 675'
 1 SEWER MH IN ROAD R/W

Street Traces, see Note on Sheet 1.



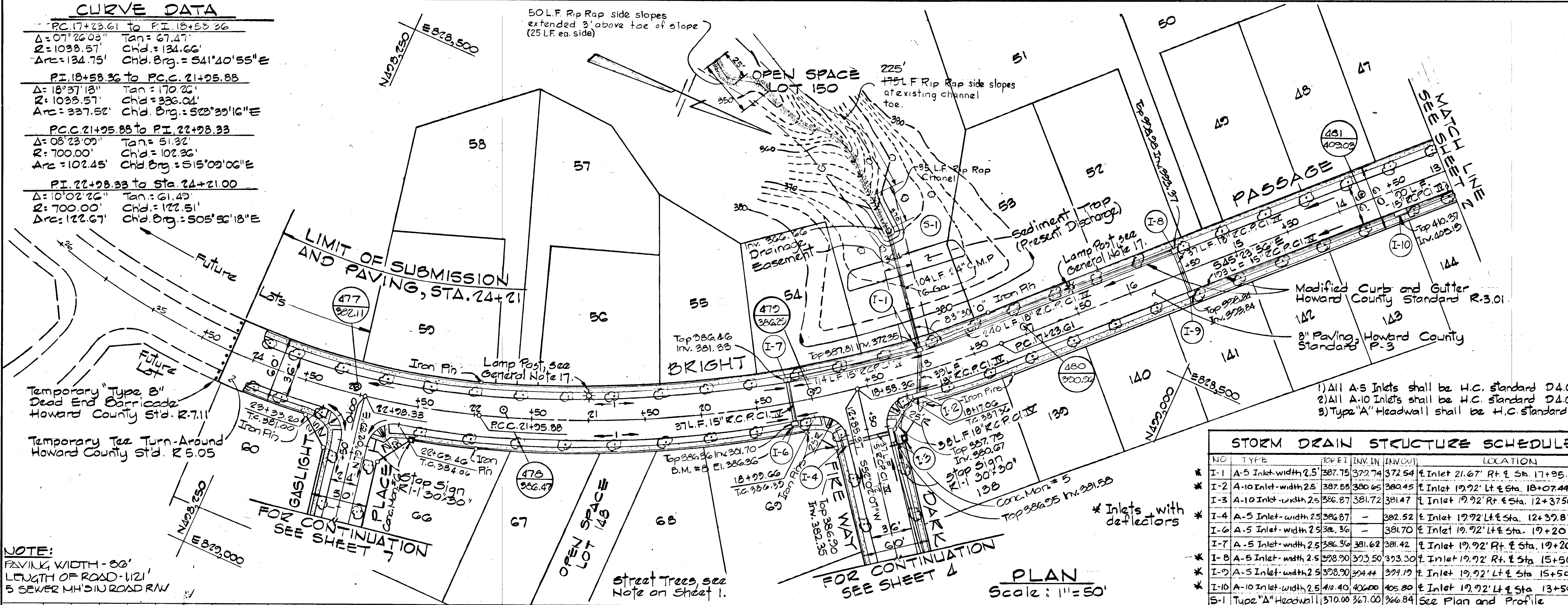
PROFILE
 Scale: Hor. 1" = 50'
 Vert. 1" = 5'

CURVE DATA

PC 17+23.61 to P.I. 18+53.36	$\Delta = 07^{\circ}26'03''$	Tan = 67.47'
	R = 1038.57'	Chd. = 134.66'
	Arc = 134.75'	Chd. Org. = 541'40'55" E
P.I. 18+53.36 to P.C.C. 21+25.88	$\Delta = 18^{\circ}37'13''$	Tan = 170.26'
	R = 1038.57'	Chd. = 336.04'
	Arc = 337.56'	Chd. Org. = 523'39'16" E
P.C.C. 21+25.88 to P.I. 22+28.33	$\Delta = 08^{\circ}23'09''$	Tan = 51.32'
	R = 700.00'	Chd. = 102.26'
	Arc = 102.45'	Chd. Org. = 515'09'06" E
P.I. 22+28.33 to Sta. 24+21.00	$\Delta = 10^{\circ}02'26''$	Tan = 61.49'
	R = 700.00'	Chd. = 122.51'
	Arc = 122.67'	Chd. Org. = 505'56'18" E

50 L.F. Rip Rap side slopes
extended 3' above toe of slope
(25 L.F. ea. side)

APPROVED: DEPARTMENT OF
PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING
OFFICE OF PLANNING & ZONING
11-4-86
CHIEF, DIVISION OF LAND DEVELOPMENT
AND ZONING ADMINISTRATION



STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV.	INVERT	INVERT	LOCATION
I-1	A-5 Inlet width 2.5'	387.75	379.74	372.54	Inlet 21.67' Rt. of Sta. 17+95.86
I-2	A-10 Inlet width 2.5'	387.58	380.65	380.45	Inlet 19.92' Lt. of Sta. 18+07.44
I-3	A-10 Inlet width 2.5'	386.87	381.72	381.47	Inlet 19.92' Rt. of Sta. 12+37.50
I-4	A-5 Inlet width 2.5'	386.87	-	382.52	Inlet 19.92' Lt. of Sta. 12+37.87
I-6	A-5 Inlet width 2.5'	386.36	-	381.70	Inlet 19.92' Lt. of Sta. 19+20
I-7	A-5 Inlet width 2.5'	386.36	381.62	381.42	Inlet 19.92' Rt. of Sta. 19+20
I-8	A-5 Inlet width 2.5'	388.90	393.50	393.50	Inlet 19.92' Rt. of Sta. 15+50
I-9	A-5 Inlet width 2.5'	388.90	394.44	394.19	Inlet 19.92' Lt. of Sta. 15+50
I-10	A-10 Inlet width 2.5'	410.40	406.00	405.80	Inlet 19.92' Lt. of Sta. 13+50
S-1	Type "A" Headwall	370.00	367.00	366.84	See Plan and Profile

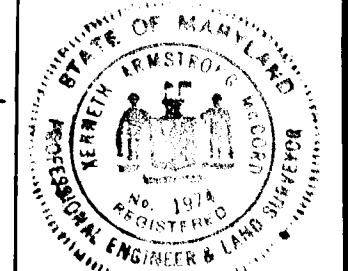
Note:
1) See sheet 11 for storm drain profiles

DATE	REV. NO.	REVISION DESCRIPTION
2/13/86	1	As per DPW and S.O.S. Comments

COLUMBIA
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER
THE HOWARD RESEARCH
AND DEVELOPMENT LAND COMPANY
PROJECT AREA
VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 13

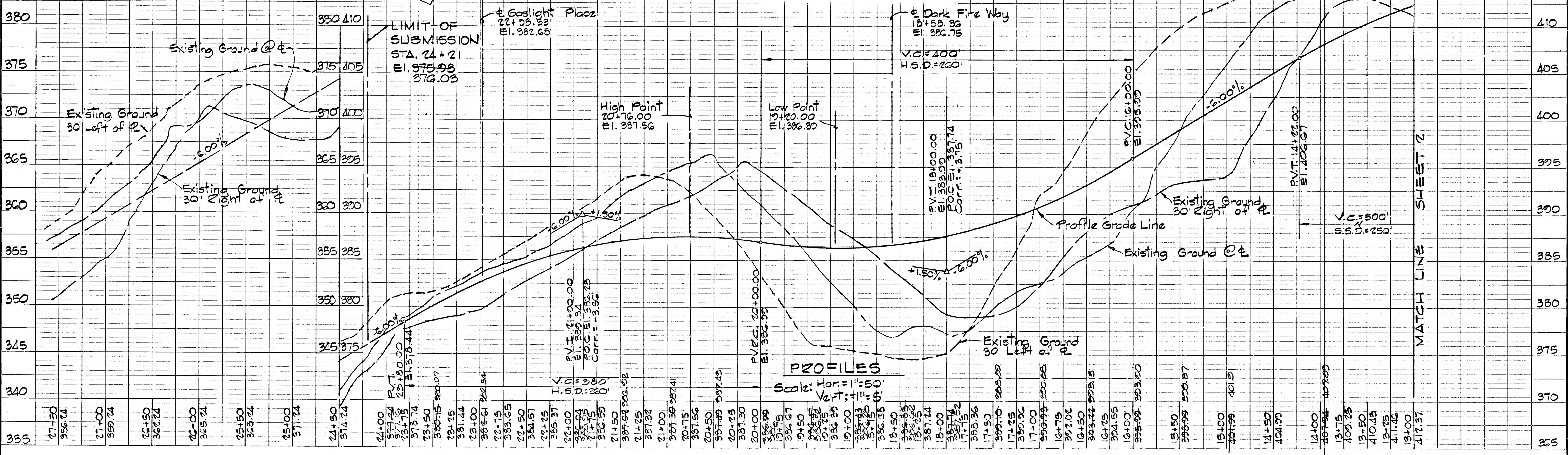
PROJECT TITLE
PLAN AND PROFILE
BRIGHT PASSAGE
STA. 13+00 TO STA. 24+21
SCALE: AS SHOWN DATE:
WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21218

Kenneth A. McCord
Registered Engineer
No. 1974



NOTE:
FAVILK, WIDTH - 30'
LENGTH OF ROAD - 1121'
5 SEWER MH'S IN ROAD R/W

BRIGHT PASSAGE



PROFILES

Scale: Hor. = 1" = 50'
Vert. = 1" = 5'

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING & ZONING
 JOHN W. HANCOCK
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

Note:
 For Existing Little Patuxent Parkway, see Construction Drawings for Village of Hickory Ridge, Section 3, Area 1 (F-83-120)

0/13/80	1	As per D.P.W. and S.C.S. Comments
REVISION NO.	REVISION DESCRIPTION	
COLUMBIA 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY PROJECT AREA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 13		
PROJECT TITLE PLAN AND PROFILE DARK FIRE WAY		
SCALE: AS SHOWN	DATE:	
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
Kenneth A. McCord Registered Engineer No. 1974		

CURVE DATA

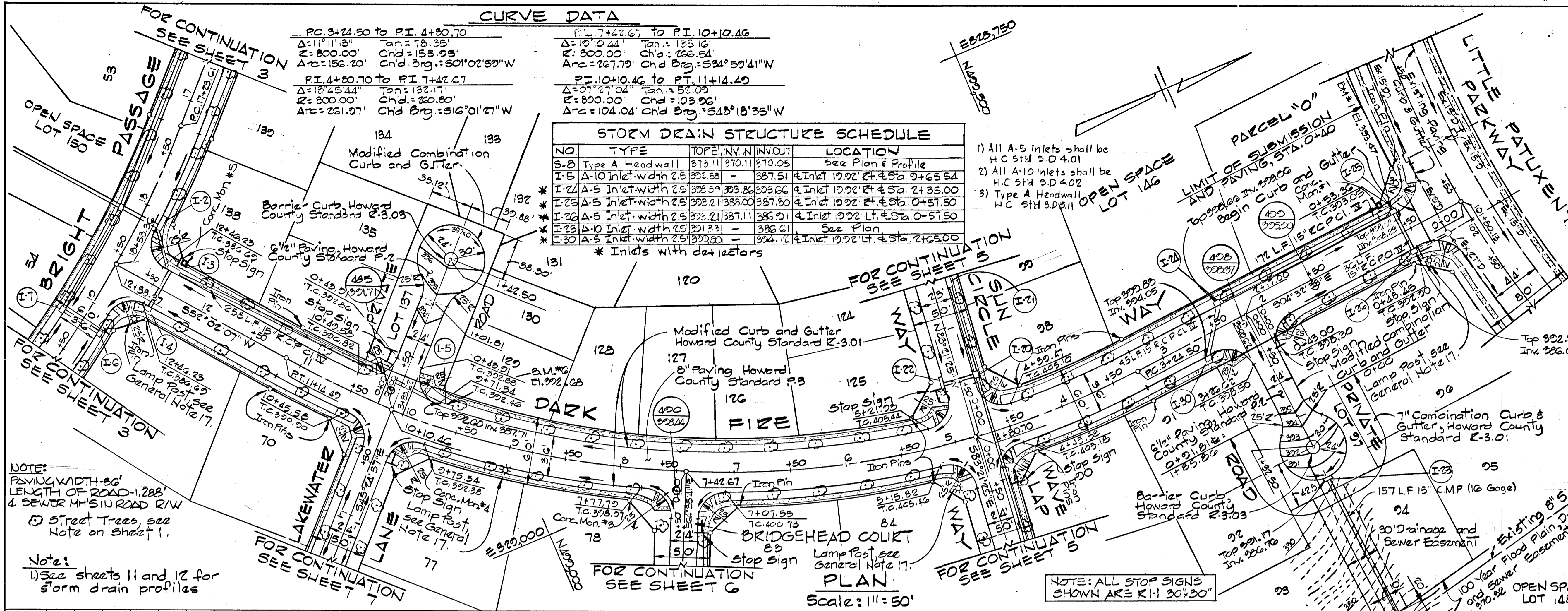
PC 3+24.50 to PT 4+80.70 $\Delta = 111.18^\circ$ Tan = 78.35' $R = 800.00'$ Chd = 155.95' $Arc = 156.20'$ Chd Brg.: $S01^{\circ}02'59''W$	PT 7+42.67 to PT 10+10.46 $\Delta = 127.44^\circ$ Tan = 135.16' $R = 800.00'$ Chd = 266.54' $Arc = 267.79'$ Chd Brg.: $S54^{\circ}59'41''W$
PT 4+80.70 to PT 7+42.67 $\Delta = 184.54^\circ$ Tan = 132.17' $R = 800.00'$ Chd = 260.80' $Arc = 261.97'$ Chd Brg.: $S16^{\circ}01'27''W$	PT 10+10.46 to PT 11+14.49 $\Delta = 97.27^\circ$ Tan = 57.03' $R = 800.00'$ Chd = 103.96' $Arc = 104.04'$ Chd Brg.: $S48^{\circ}18'35''W$

STORM DRAIN STRUCTURE SCHEDULE

NO	TYPE	TOP ELEV. IN	INVERT	LOCATION
S-8	Type A Headwall	378.11	370.05	See Plan & Profile
I-5	A-10 Inlet width 25	382.58	-	Inlet 19.92' R of Sta. 2+65.54
I-24	A-5 Inlet width 25	382.59	383.86	Inlet 19.92' R of Sta. 2+65.00
I-25	A-5 Inlet width 25	383.21	387.80	Inlet 19.92' R of Sta. 0+57.50
I-26	A-5 Inlet width 25	382.21	387.11	Inlet 19.92' L of Sta. 0+57.50
I-23	A-10 Inlet width 25	381.23	-	See Plan
I-30	A-5 Inlet width 25	382.00	384.72	Inlet 19.92' L of Sta. 2+65.00

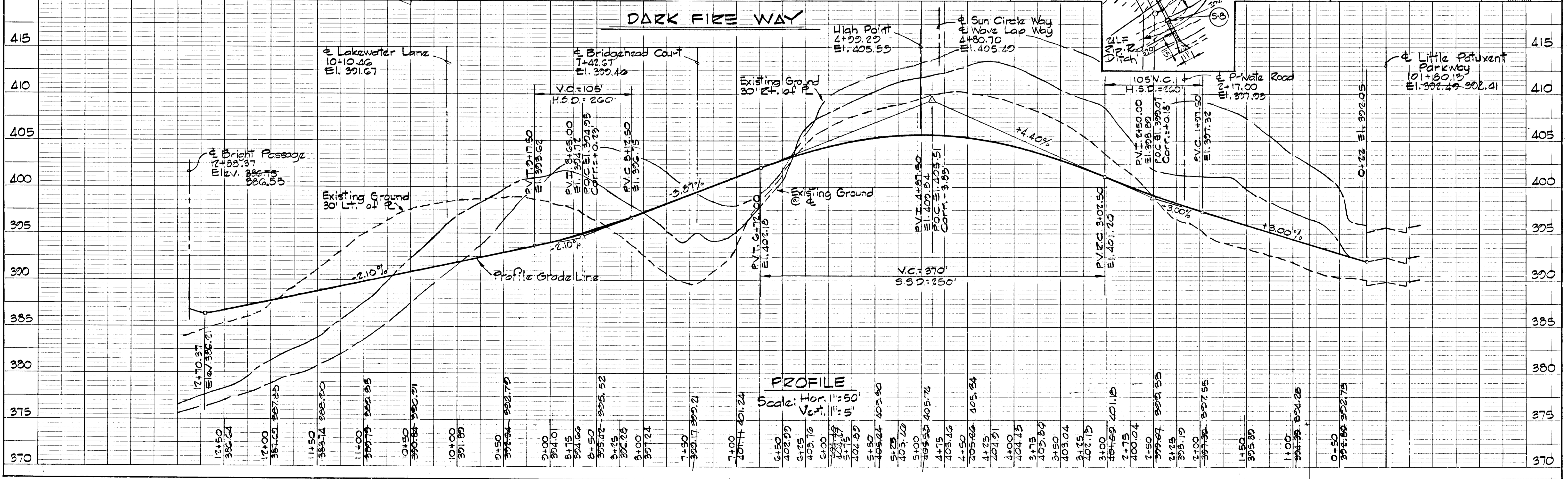
* Inlets with detectors

- All A-5 Inlets shall be H.C. STD. S.D. 4.01
- All A-10 Inlets shall be H.C. STD. S.D. 4.02
- Type A Headwall H.C. STD. S.D. 5.11



NOTE:
 PAVING WIDTH - 26'
 LENGTH OF ROAD - 1.288'
 & SEWER M.H.'S IN ROAD R/W
 Street Trees, see Note on Sheet 1.

Notes:
 1) See sheets 11 and 12 for storm drain profiles



PROFILE
 SURVEYED, PLOTTED, CHECKED, BY DATE
 NOTE BOOK NO. STRUCTURE NOTATIONS CHECKED

CURVE DATA
SUN CIRCLE WAY
 P.C. 1+55.36 to P.T. 4+61.82
 $\Delta = 51^{\circ}38'35''$ Tan = 164.52'
 $R = 340.00'$ Chd = 236.19'
 Arc = 306.46' Chd Brg. = $570^{\circ}29'18''$ W

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING & ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 DATE: 8/1/86

Note:
 1) See sheet 12 for storm drain profiles.

REV. NO.	REVISION DESCRIPTION
0/15/86	As per D.P.W. and S.C.S. Comments

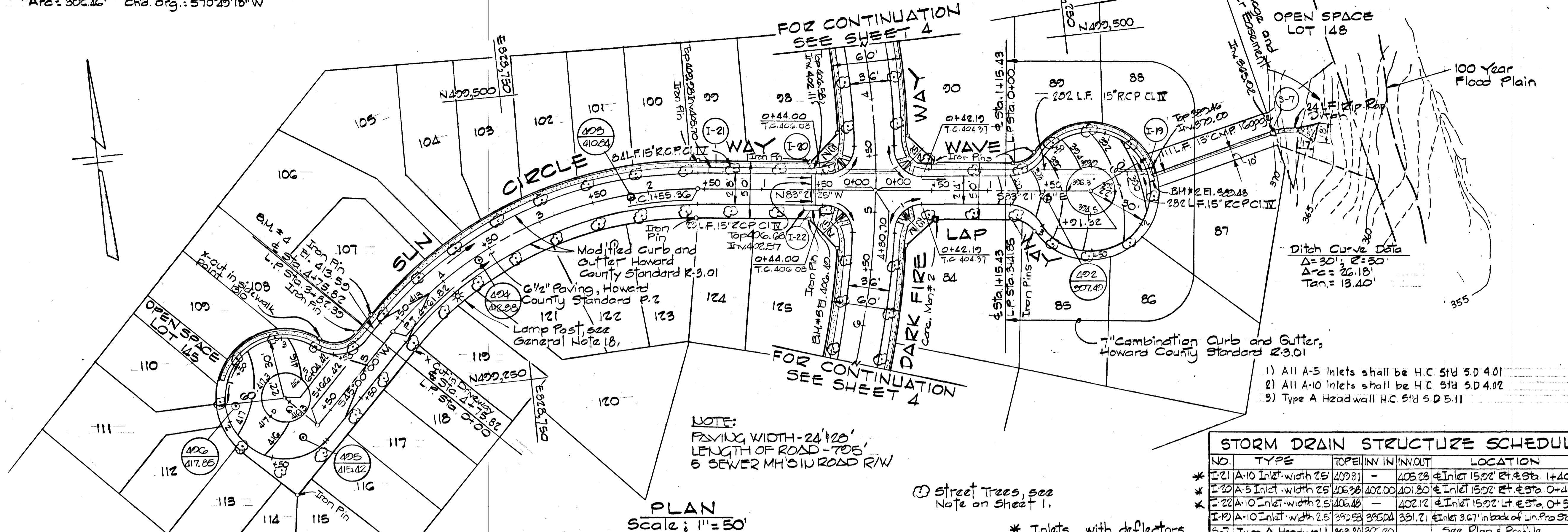
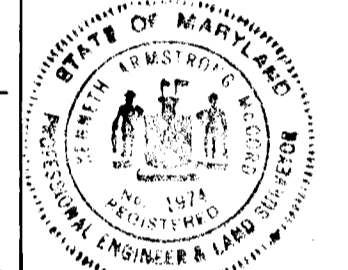
COLUMBIA
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH
 AND DEVELOPMENT LAND COMPANY
 PROJECT AREA
VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 13

PROJECT TITLE
PLAN AND PROFILES
SUN CIRCLE WAY
WAVE LAP WAY

SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

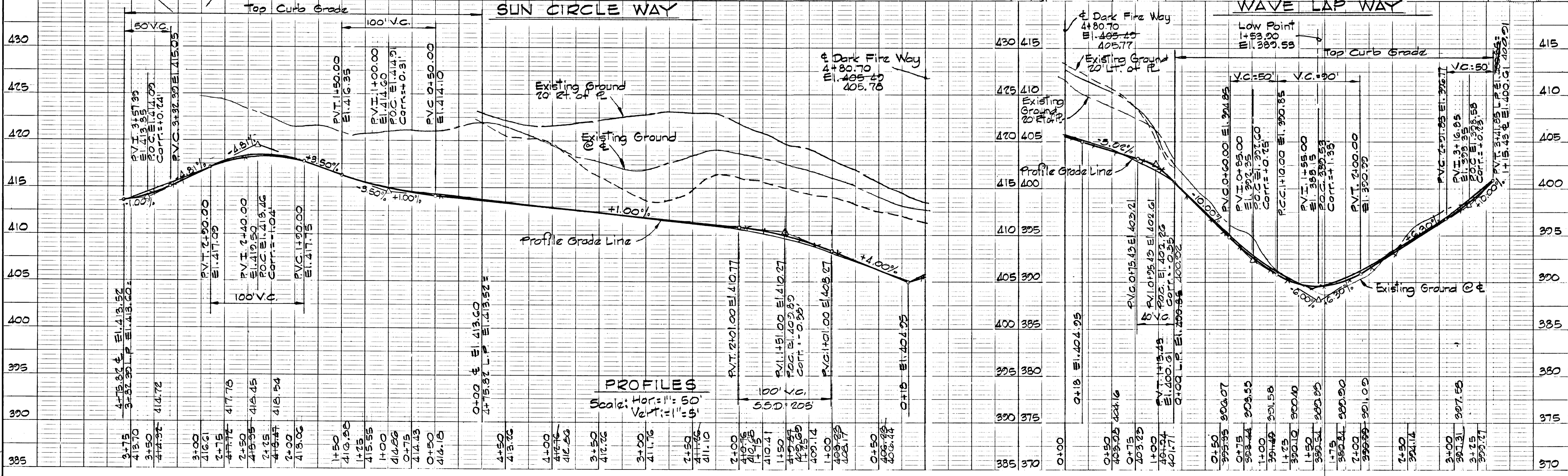
Kenneth A. McCord
KENNETH A. MCCORD
 Registered Engineer
 NO. 1974



PLAN
 Scale: 1" = 50'

STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV. IN	IN/OUT	LOCATION
* I-21	A-10 Inlet width 25	400.91	-	405.28 Inlet 15.02' Rt. of Sta. 1+40.00
* I-20	A-5 Inlet width 25	406.98	401.80	Inlet 15.02' Rt. of Sta. 0+48.50
* I-22	A-10 Inlet width 25	406.48	-	402.12 Inlet 15.02' Lt. of Sta. 0+50.00
I-19	A-10 Inlet width 25	392.53	395.04	391.71 Inlet 3.67' in back of Lin. Pro Sta. H424.85
S-7	Type A Headwall	369.20	366.20	See Plan & Profile



PROFILES

Scale: Hor: 1" = 50'
 Vert: 1" = 5'

CURVE DATA

P.C. 4+65.00 to P.T. 3+76.23
 $\Delta = 25^{\circ}25'59''$ Tan: 52.12'
 $R = 250.00'$ Chd: 110.06'
 Arc: 110.97' Chd. Org. 531'53"05"W

 P.I. 3+76.23 to P.T. 5+75.07
 $\Delta = 45^{\circ}24'35''$ Tan: 102.60'
 $R = 250.00'$ Chd: 192.99'
 Arc: 193.14' Chd. Org. 503'32"12"E

 P.C. 4+75.07 to P.T. 9+02.12
 $\Delta = 38^{\circ}26'25''$ Tan: 117.98'
 $R = 338.41'$ Chd: 222.82'
 Arc: 227.05' Chd. Org. 507'01"14"E
 350

OPEN SPACE LOT 149
 Self Stone Ditch
 See Profile, sheet 10 of
 for cross section and details

APPROVED: DEPARTMENT OF
 PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING & ZONING
 DATE: 11-4-86
 CHIEF, DIVISION OF LAND DEVELOPMENT
 AND ZONING ADMINISTRATION

Note:
 1) See sheet 11 for storm
 drain profiles.

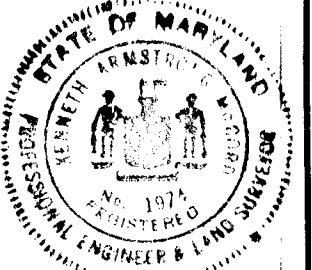
0/13/80	As per D.P.W. and S.O.S. comments
REVISION	REVISION DESCRIPTION
COLUMBIA 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY PROJECT AREA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 13 PROJECT TITLE PLAN AND PROFILE MORNINGMIST LANE	
SCALE: AS SHOWN	DATE:
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218	

STORM DRAIN STRUCTURE SCHEDULE

NO	TYPE	TOP	IN	IN	OUT	LOCATION
I-13	A-10 Inlet width 25	377.23	-	373.00	4	Inlet 150' Lt. of Sta. 8+04.68
I-12	A-5 Inlet width 25	377.23	372.36	372.16	4	Inlet 150' Lt. of Sta. 8+04.68
M-1	Precast MH	315.50	317.14	317.54		See Plan & Profile
S-7	Type A Headwall	365.50	362.50	362.36		See Plan & Profile

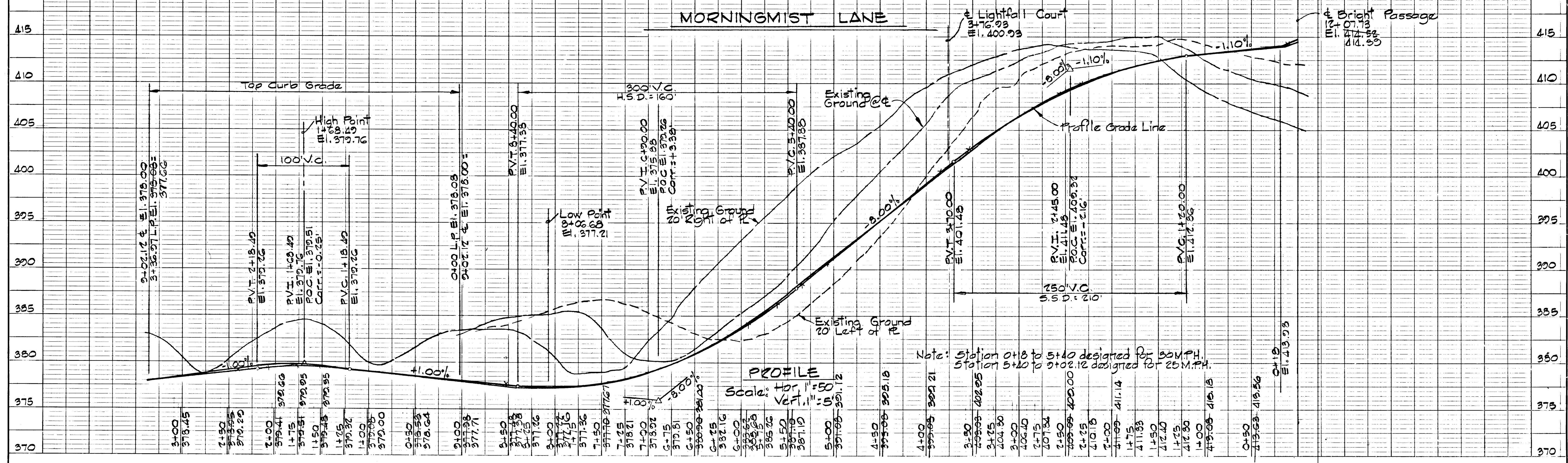
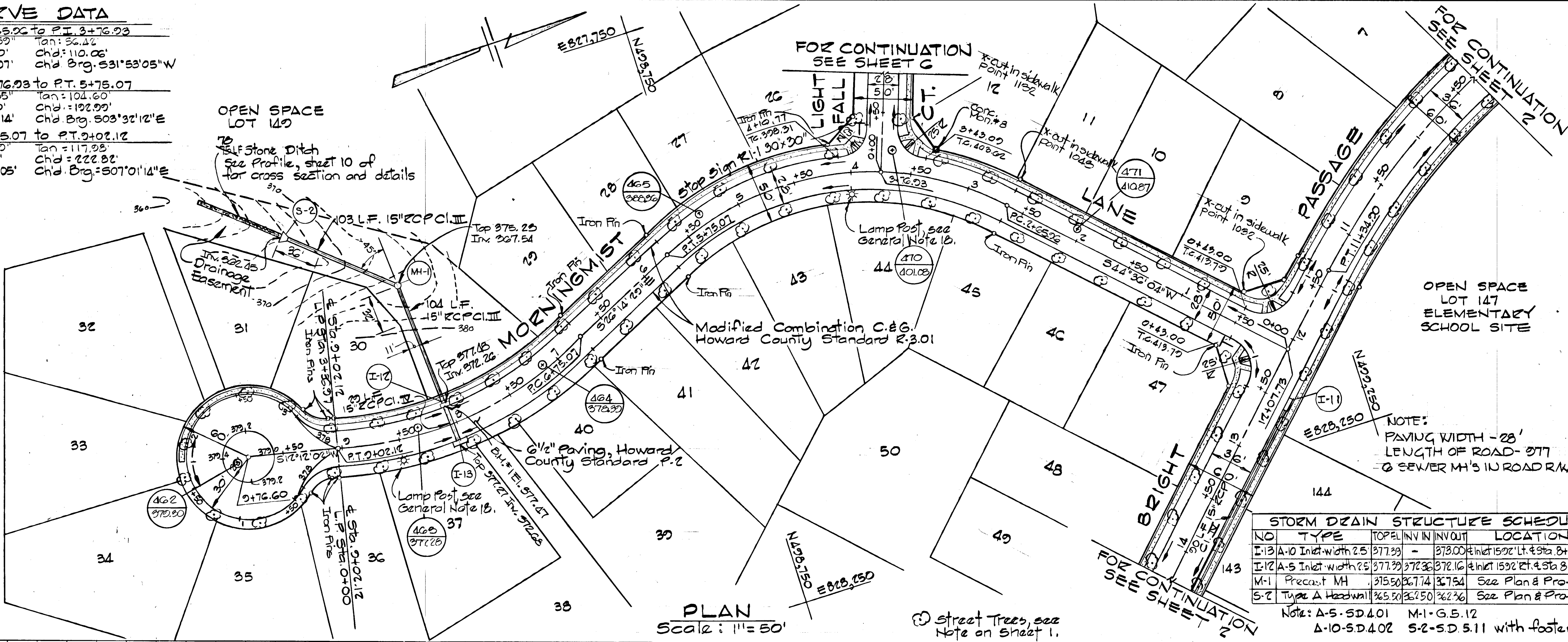
Note: A-5-SD 401 M-1-G.5.12
 A-10-SD 402 S-2-SD 5.11 with footer

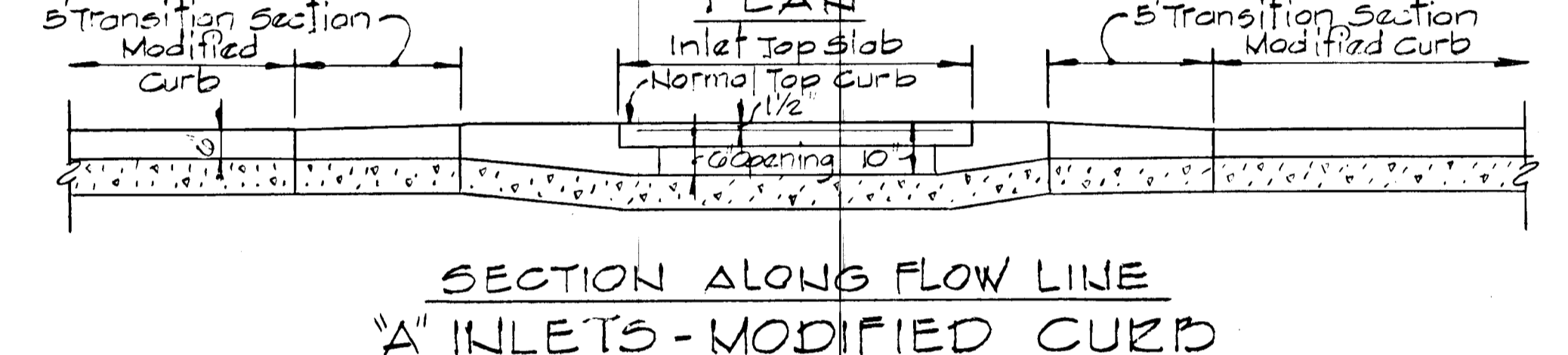
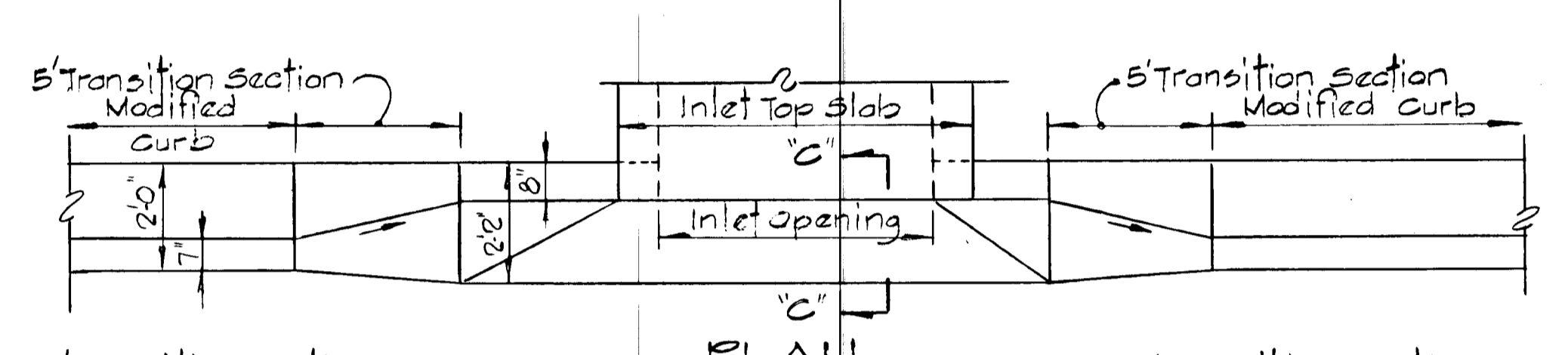
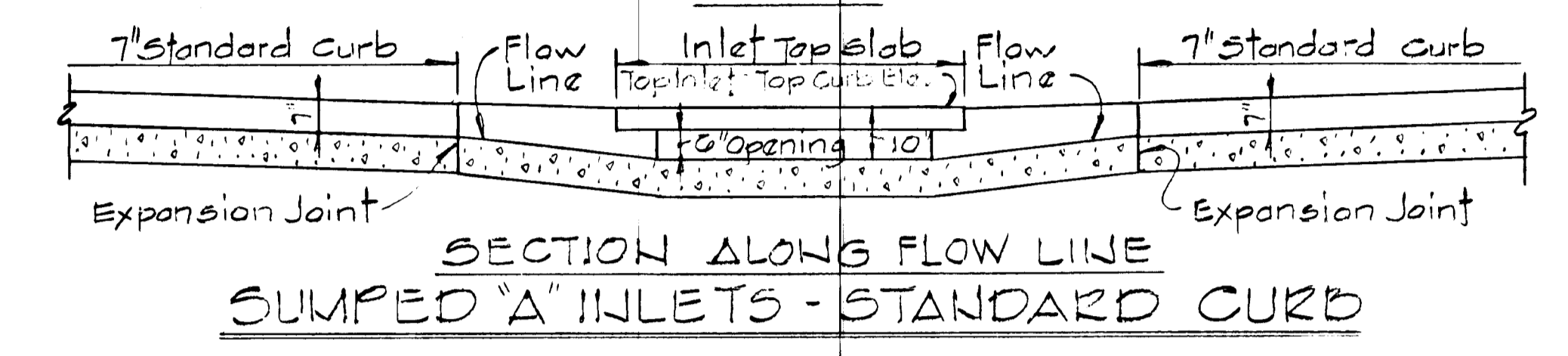
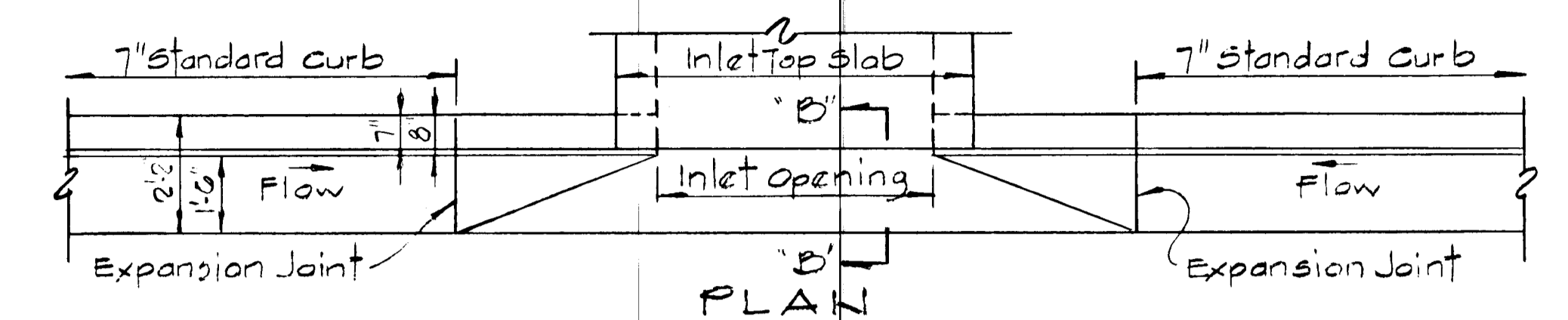
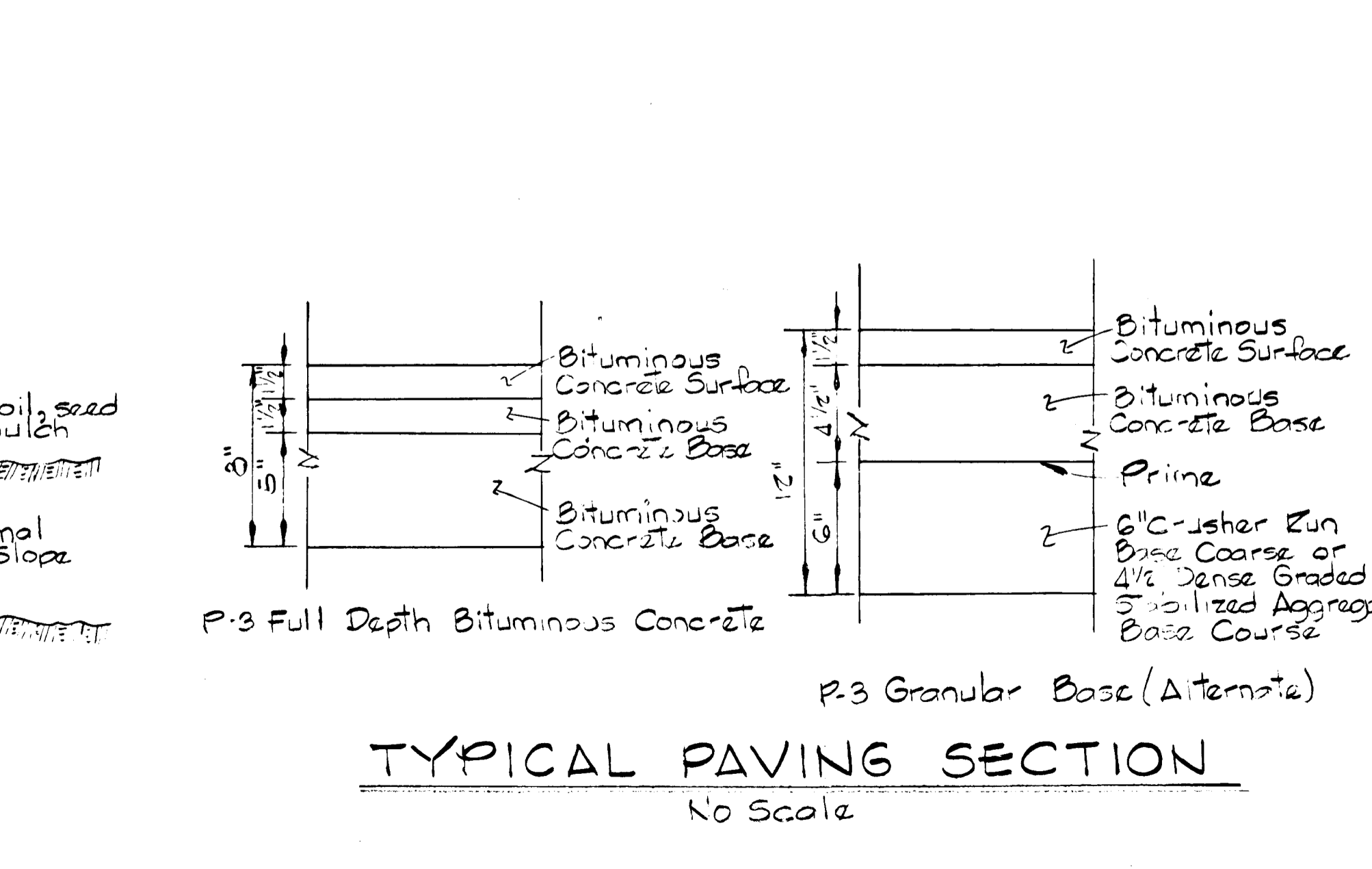
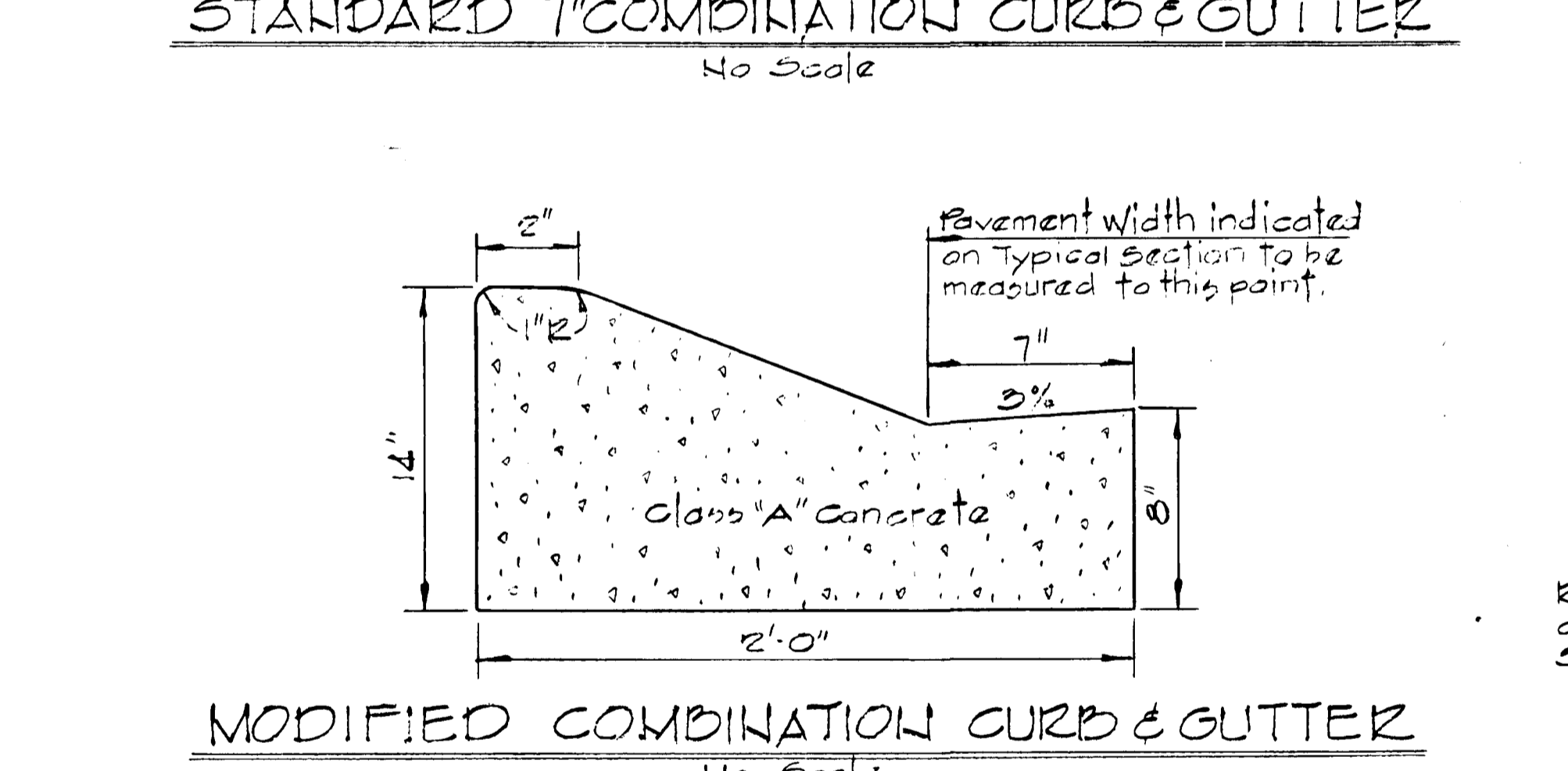
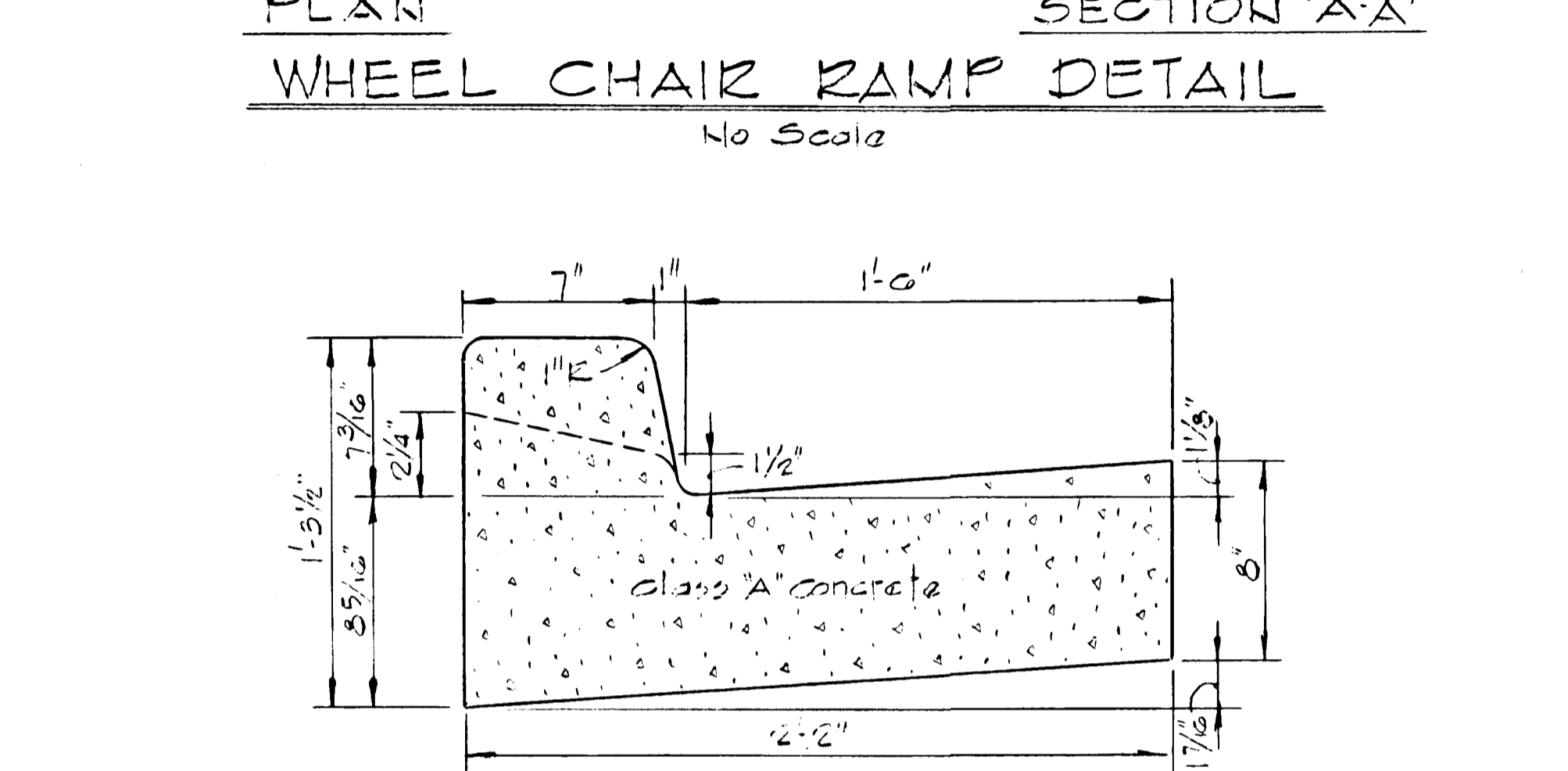
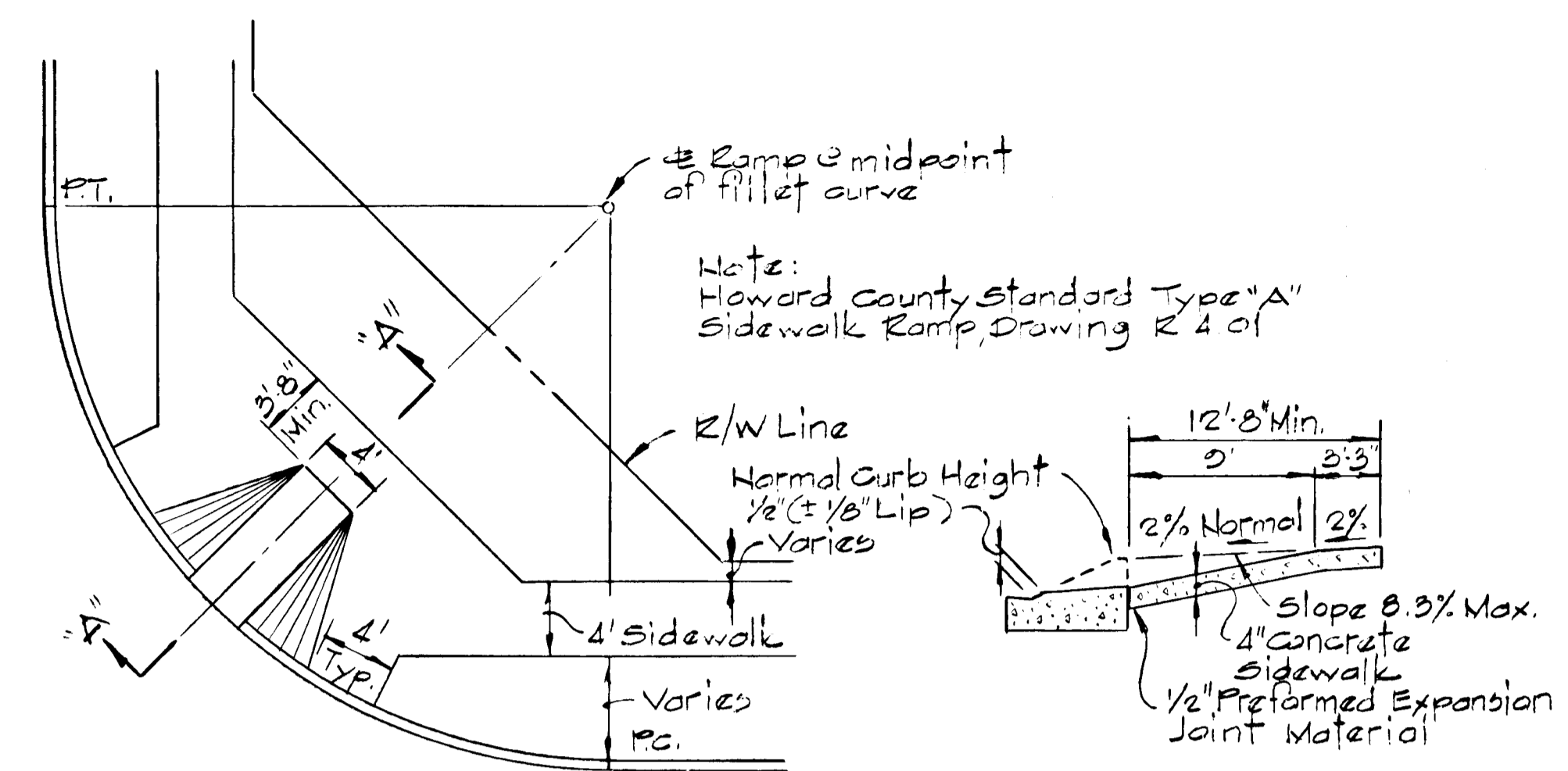
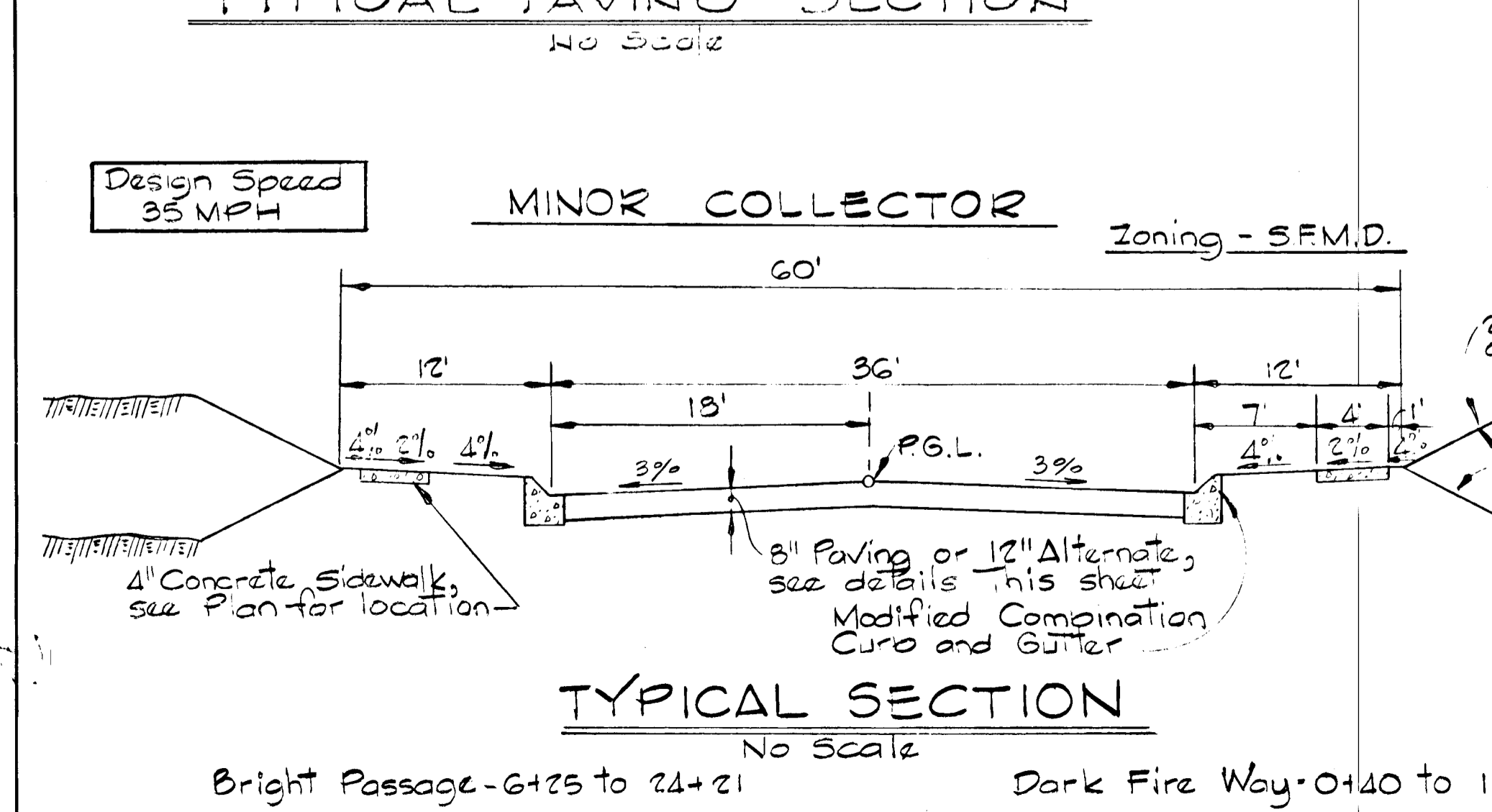
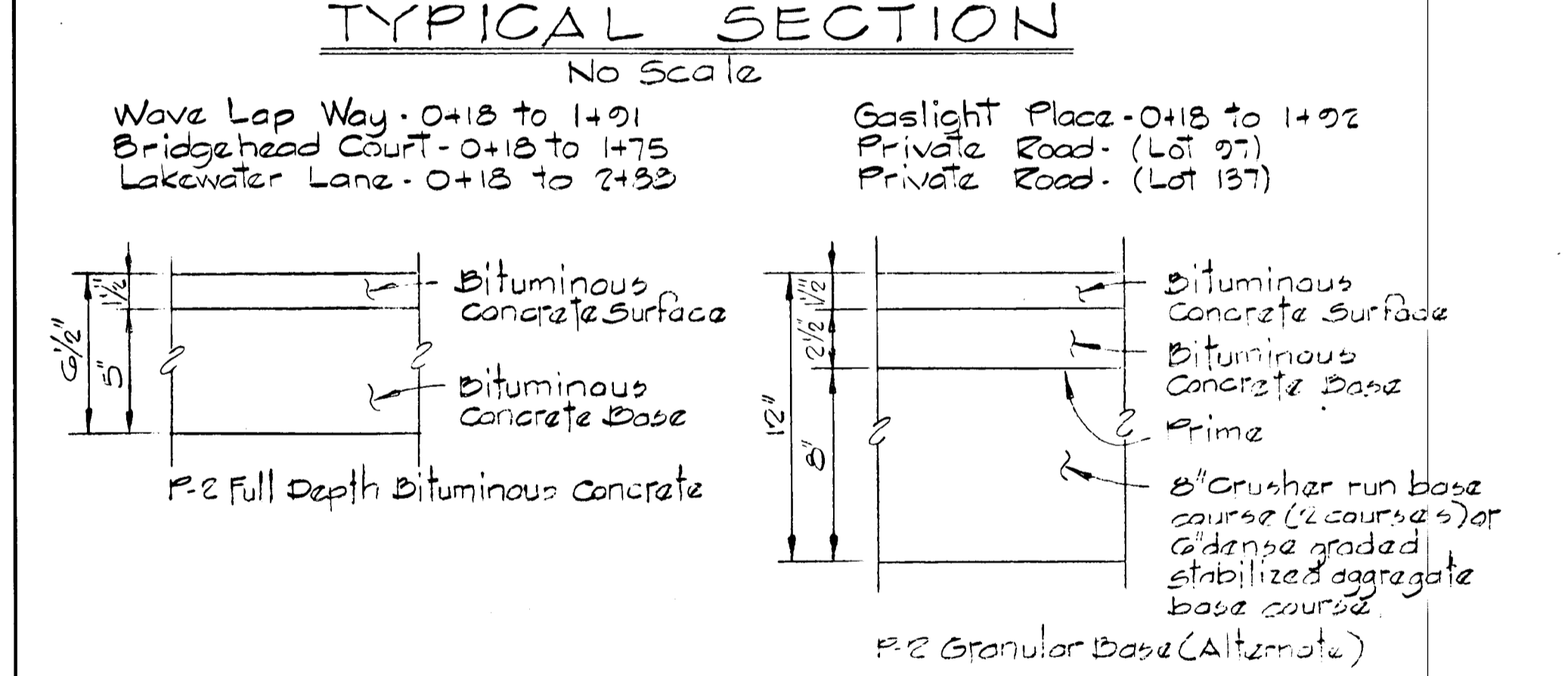
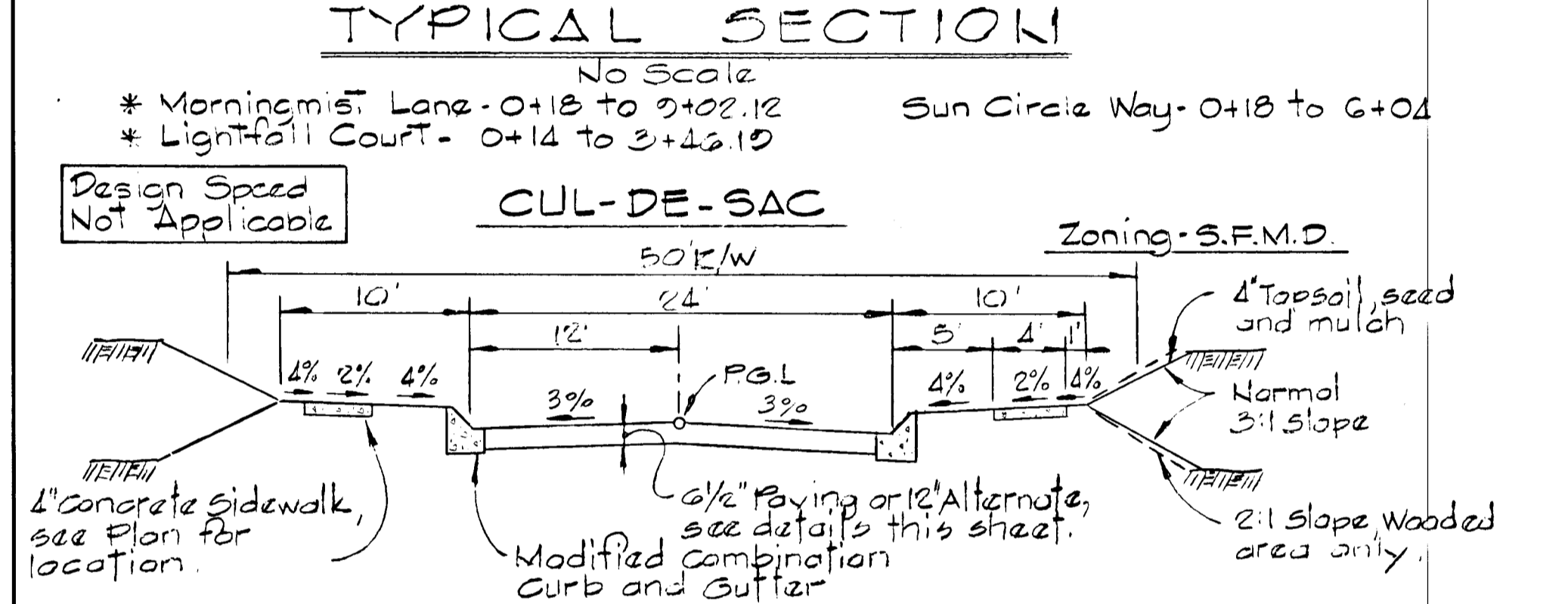
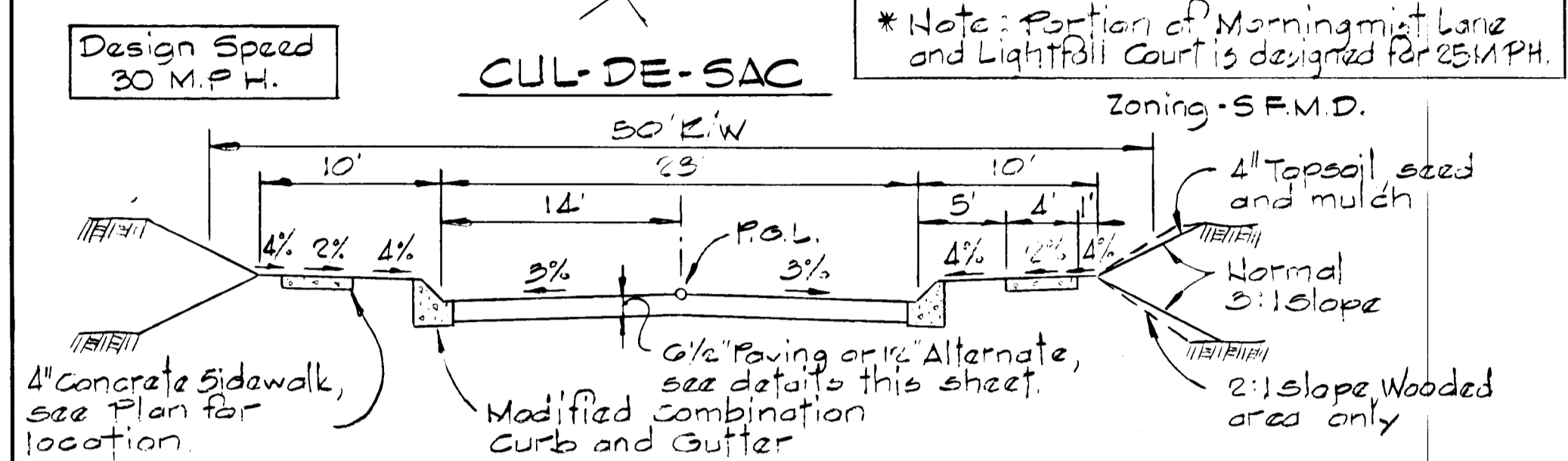
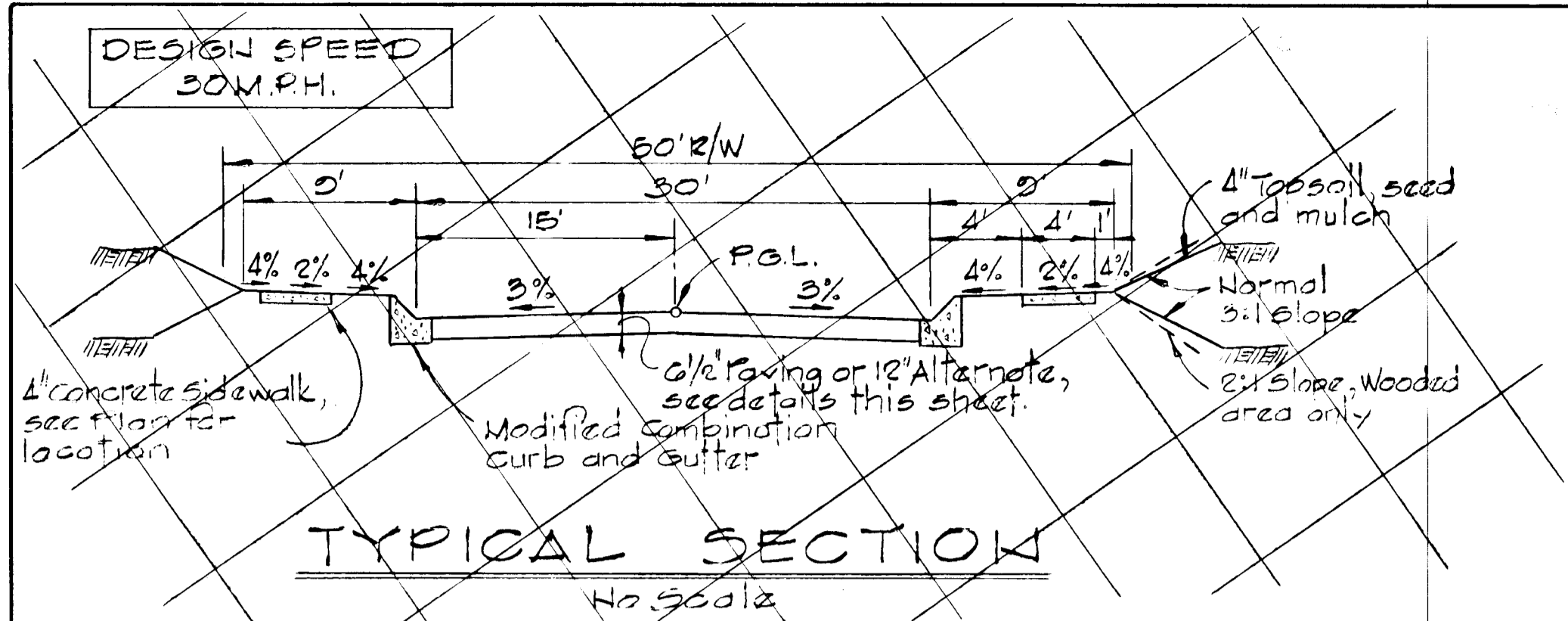
Kenneth A. McCord
 Registered Engineer
 No. 1974



PLAN
 SURVEYED, ALIGNED, GRADES CHECKED, R.M.S. NOTED, STRUCTURE LOCATIONS CHECKED.
 DATE: BY:

PROFILE
 SURVEYED, GRADES CHECKED, R.M.S. NOTED, STRUCTURE LOCATIONS CHECKED.
 DATE: BY:





REV DATE	REV NO	REVISION DESCRIPTION
0/15/86	1	As per DPW and SOB Comments

COLUMBIA
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY

PROJECT AREA
 VILLAGE OF HICKORY RIDGE
 SECTION 3 AREA 13

PROJECT TITLE
ROADWAY AND STORM DRAIN DETAILS

SCALE: AS SHOWN DATE:

WHITMAN, REQUAZOT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 No. 1074

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING & ZONING
 JOHN M. MOSEMAN 11-4-86
 CHIEF, DIVISION OF LAND DEVELOPMENT, DATE AND ZONING ADMINISTRATION



100 Year Flood Plain, Drainage, Sewer, Water, Utility and Stormwater Management Access Easement

DATE	REVISION NO.	REVISION DESCRIPTION
2/15/86	1	As per DPW and SCS Comments

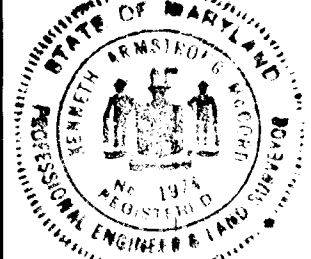
COLUMBIA
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH
 AND DEVELOPMENT LAND COMPANY
 PROJECT AREA
 VILLAGE OF HICKORY RIDGE
 SECTION 3 AREA 13

PROJECT TITLE
 DRAINAGE AREA MAP

SCALE: 1"=100' DATE:

WHITMAN, REQUARDT AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

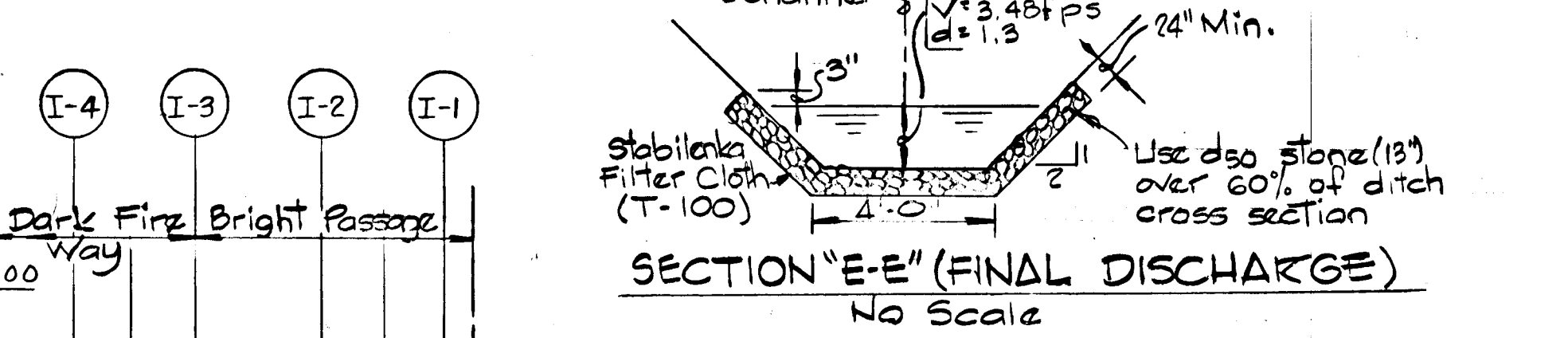
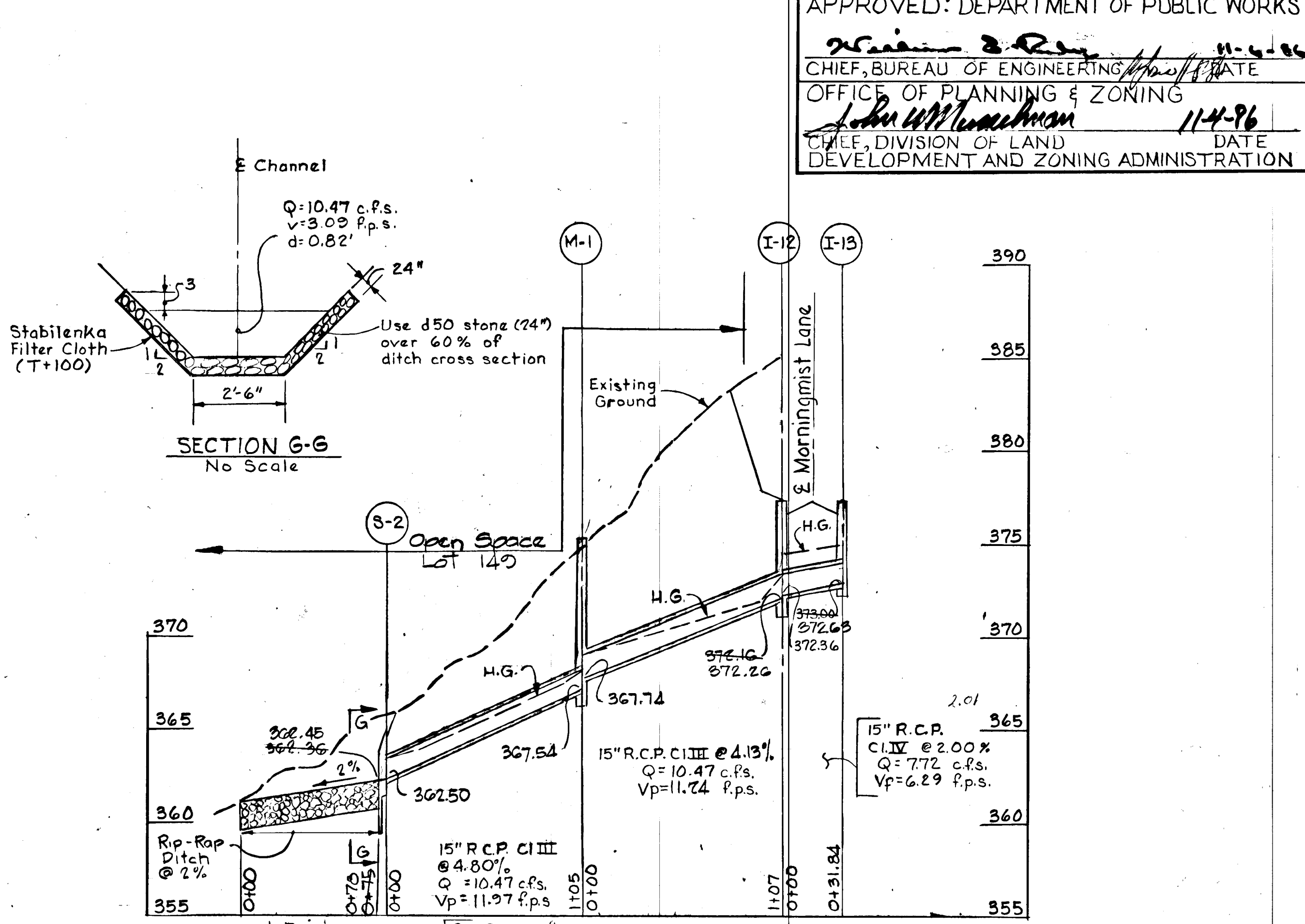
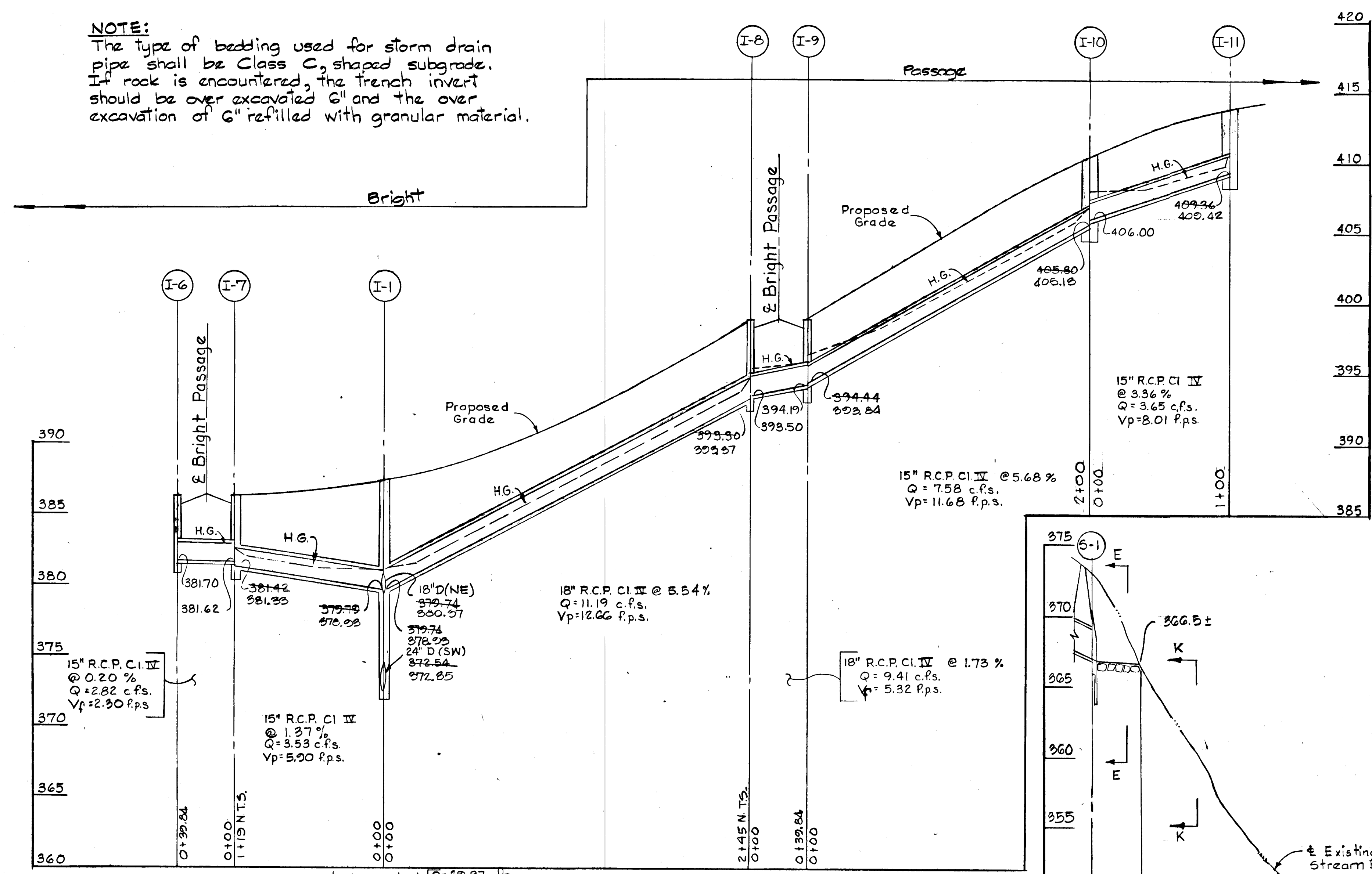
Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 NO. 1974



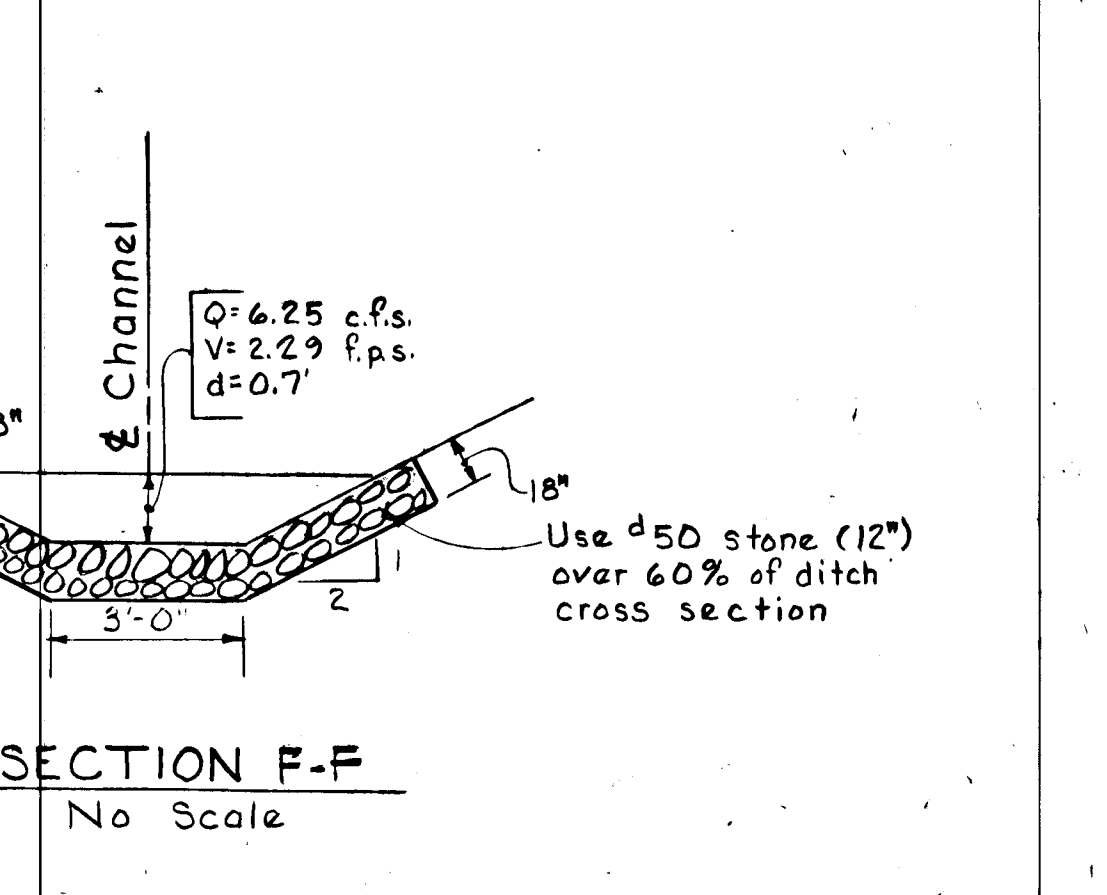
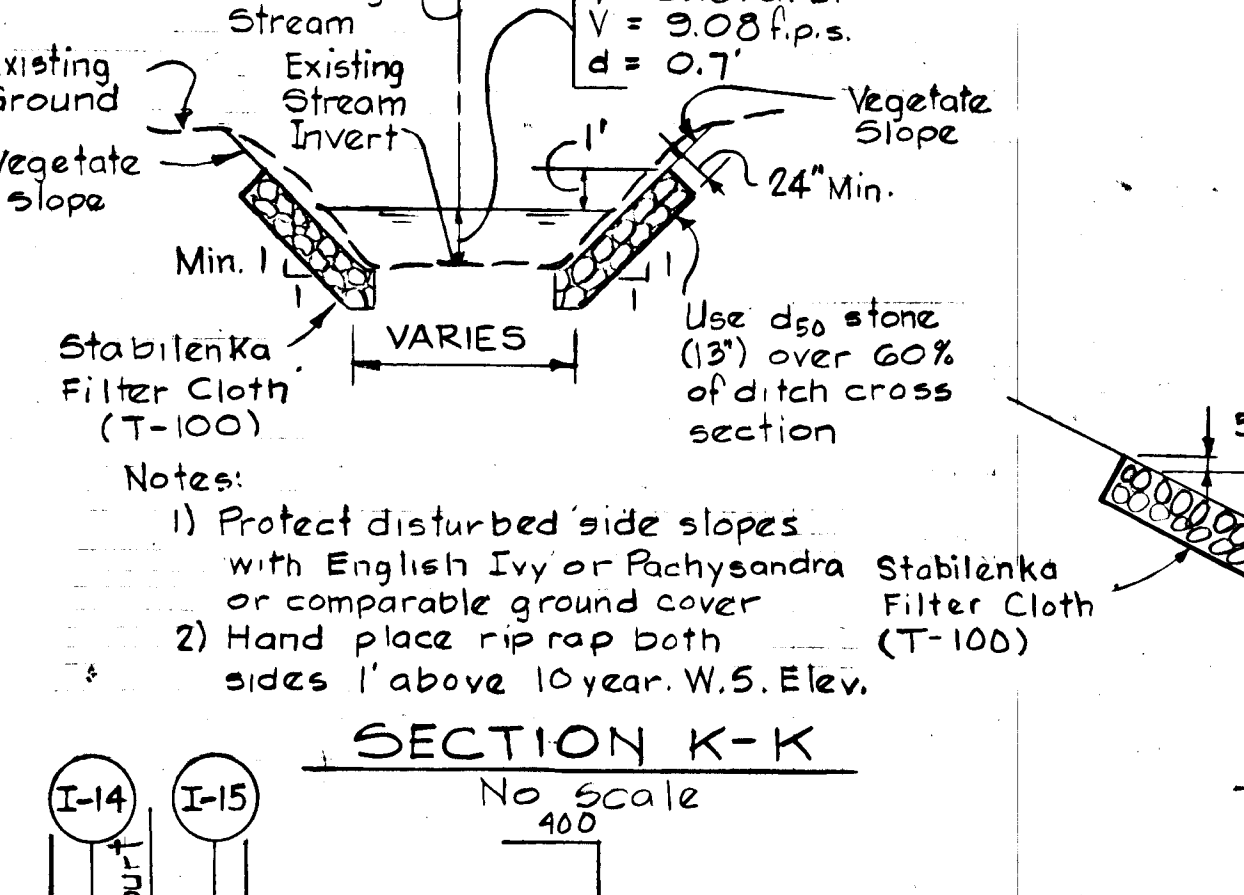
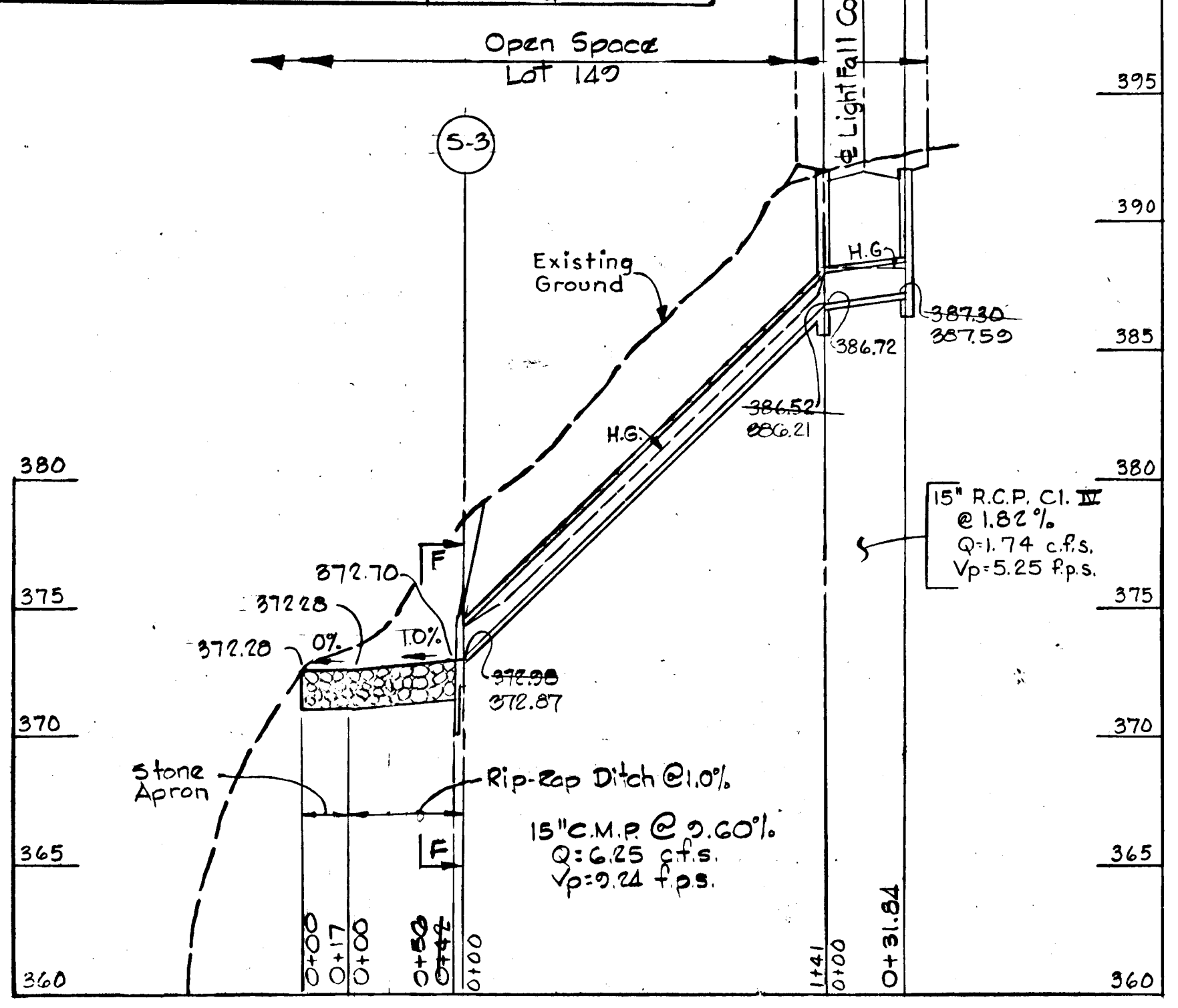
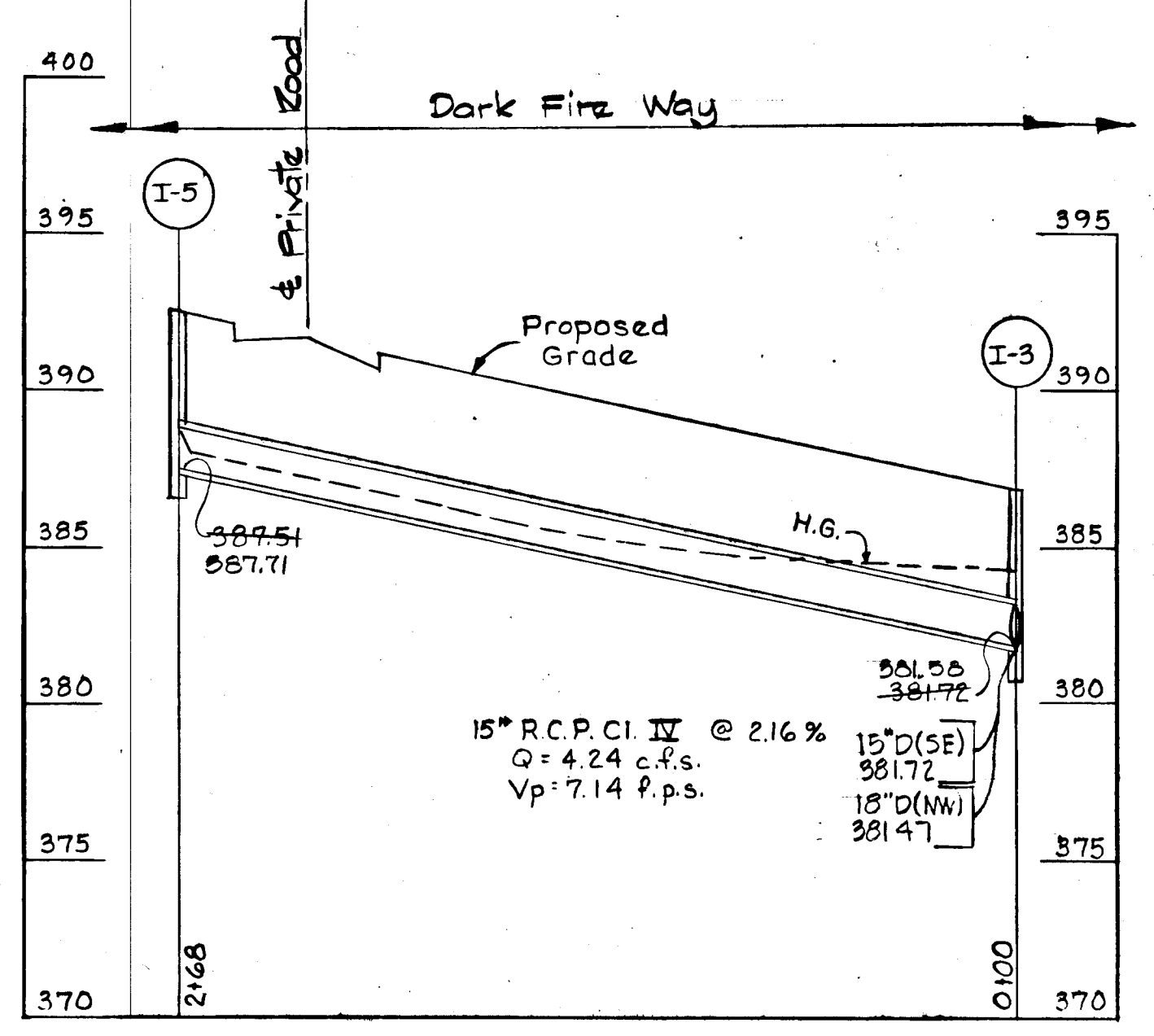
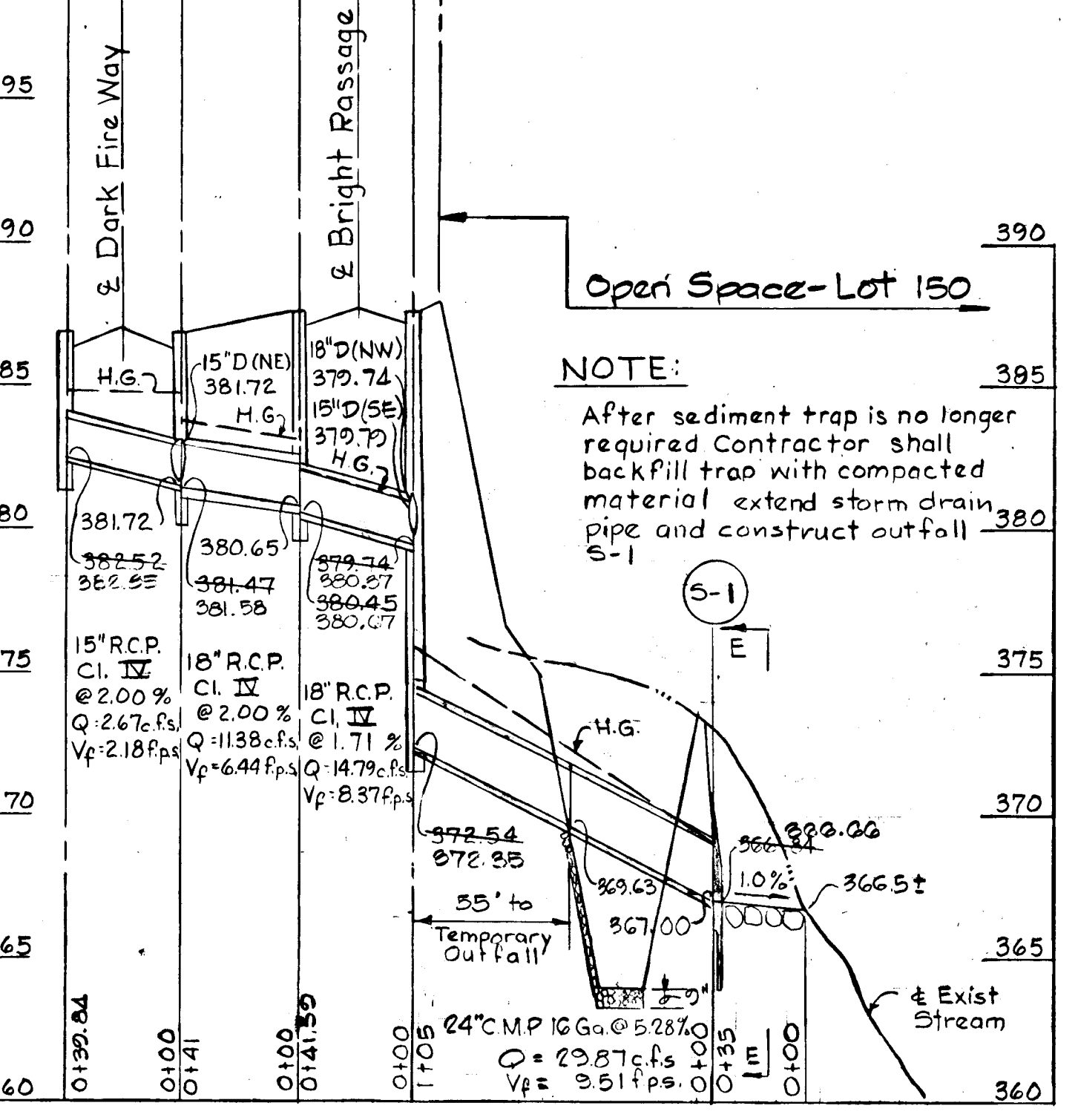
42

CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING & ZONING
 DATE 11-4-96
 DEVELOPMENT AND ZONING ADMINISTRATION

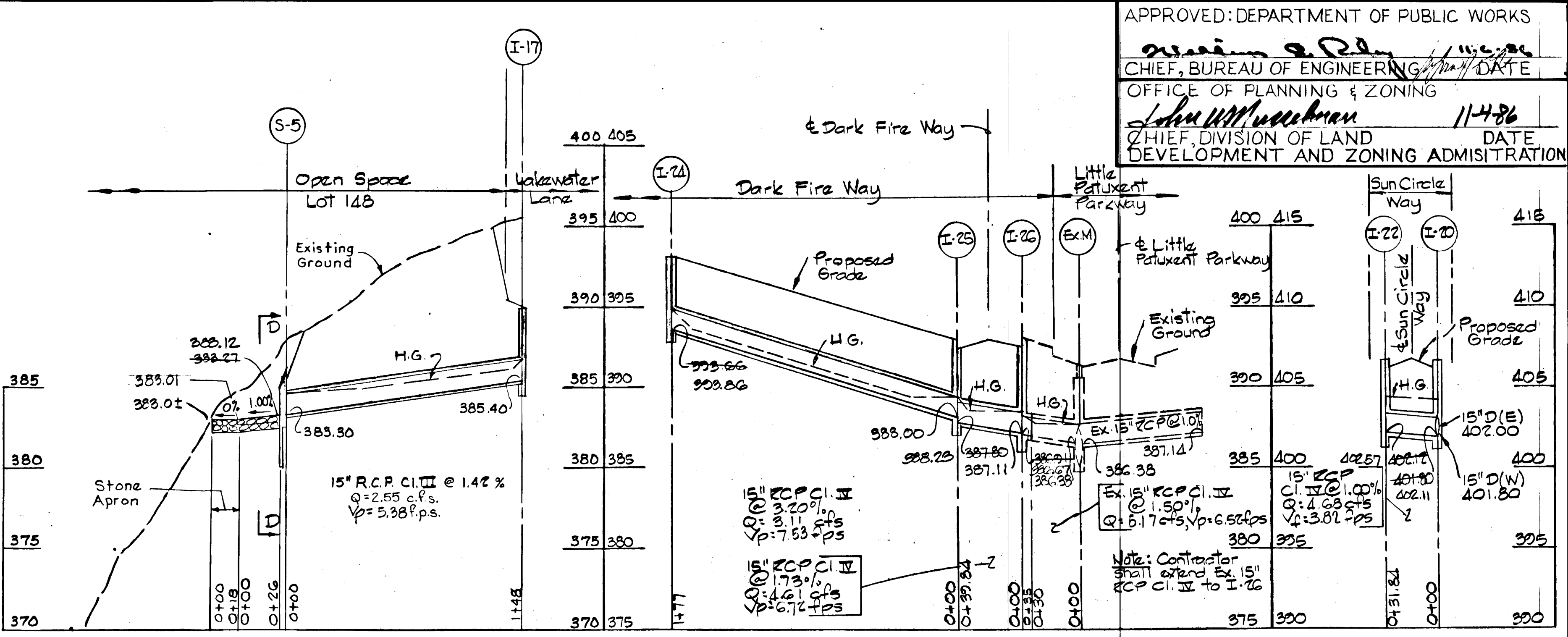
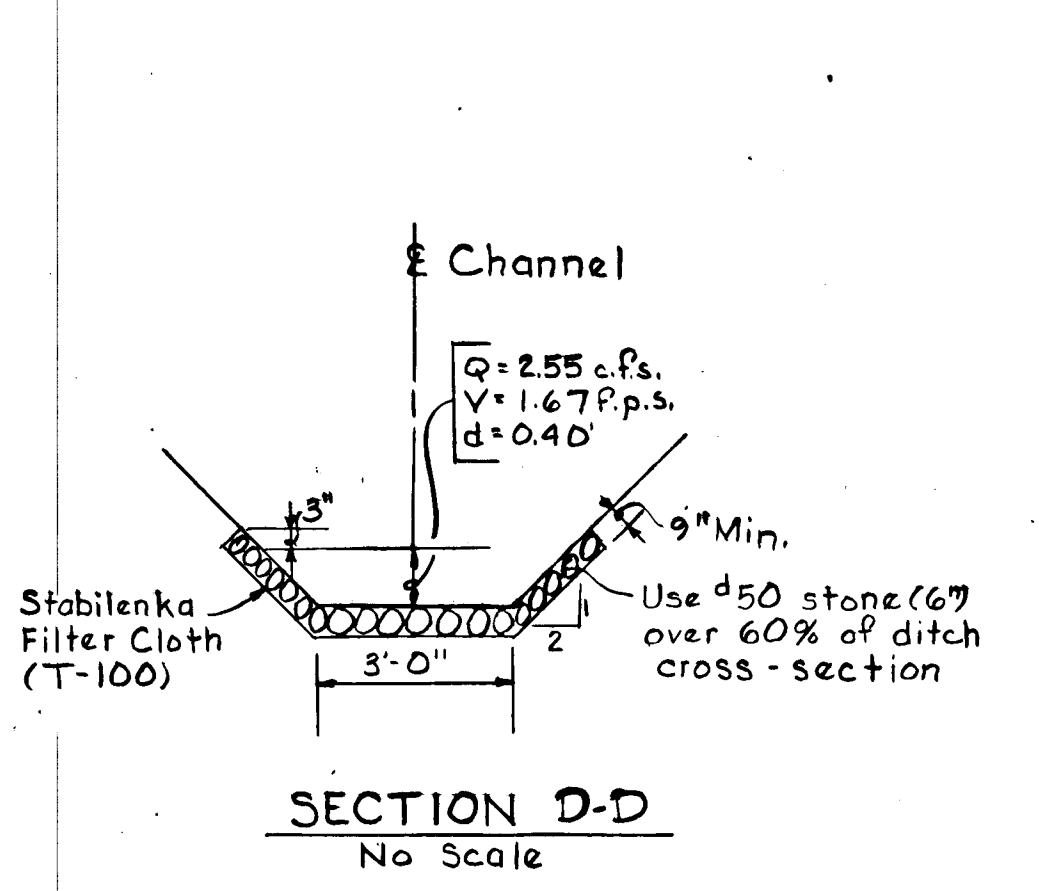
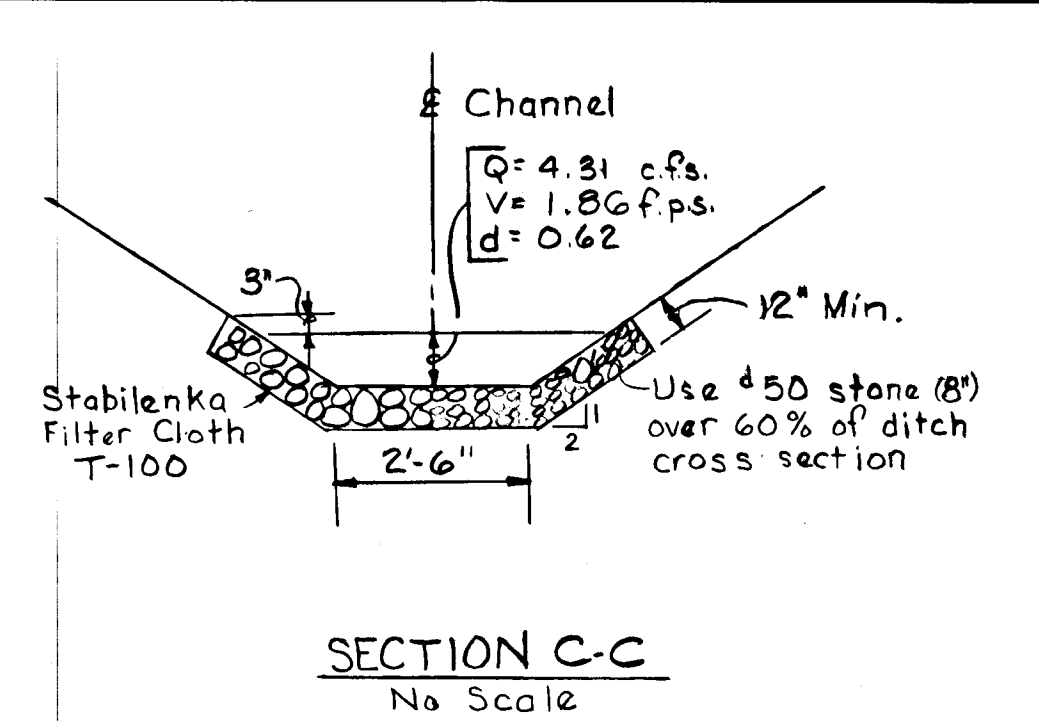
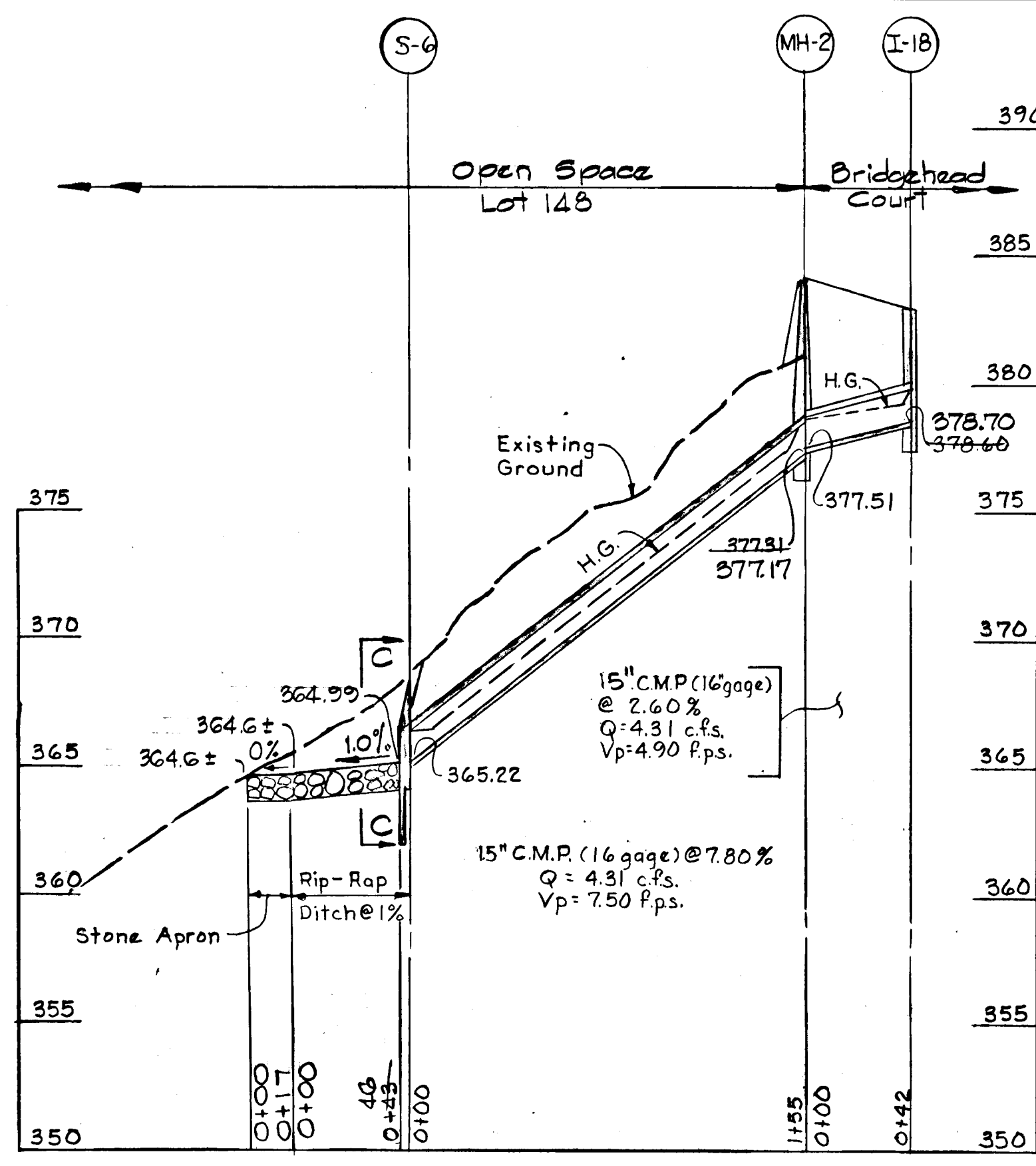
NOTE:
 The type of bedding used for storm drain pipe shall be Class C, shaped subgrade. If rock is encountered, the trench invert should be over excavated 6" and the over excavation of 6" refilled with granular material.



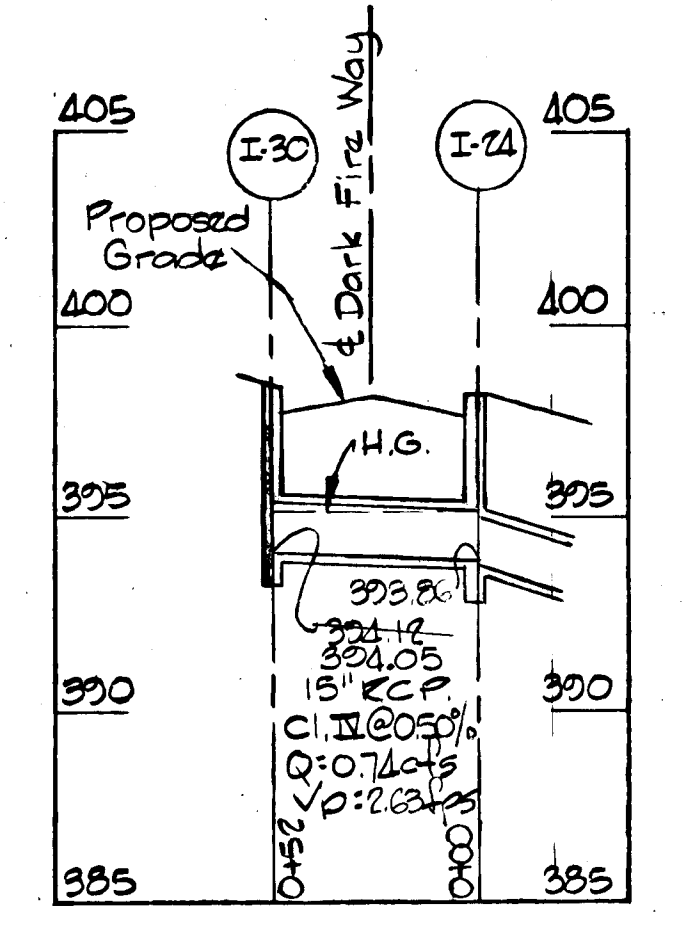
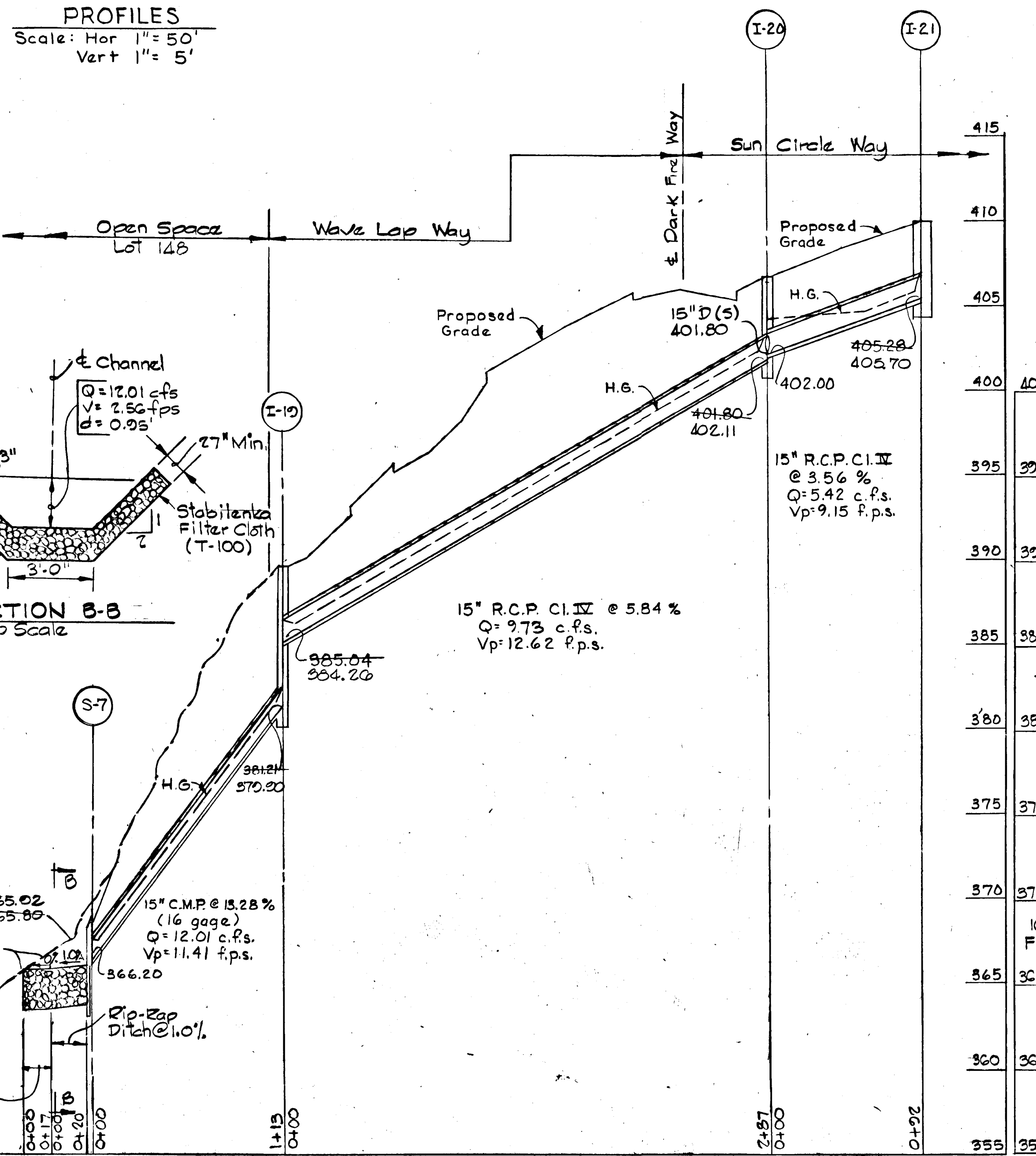
PROFILES
 Scale: Hor. 1" = 50'
 Vert. 1" = 5'



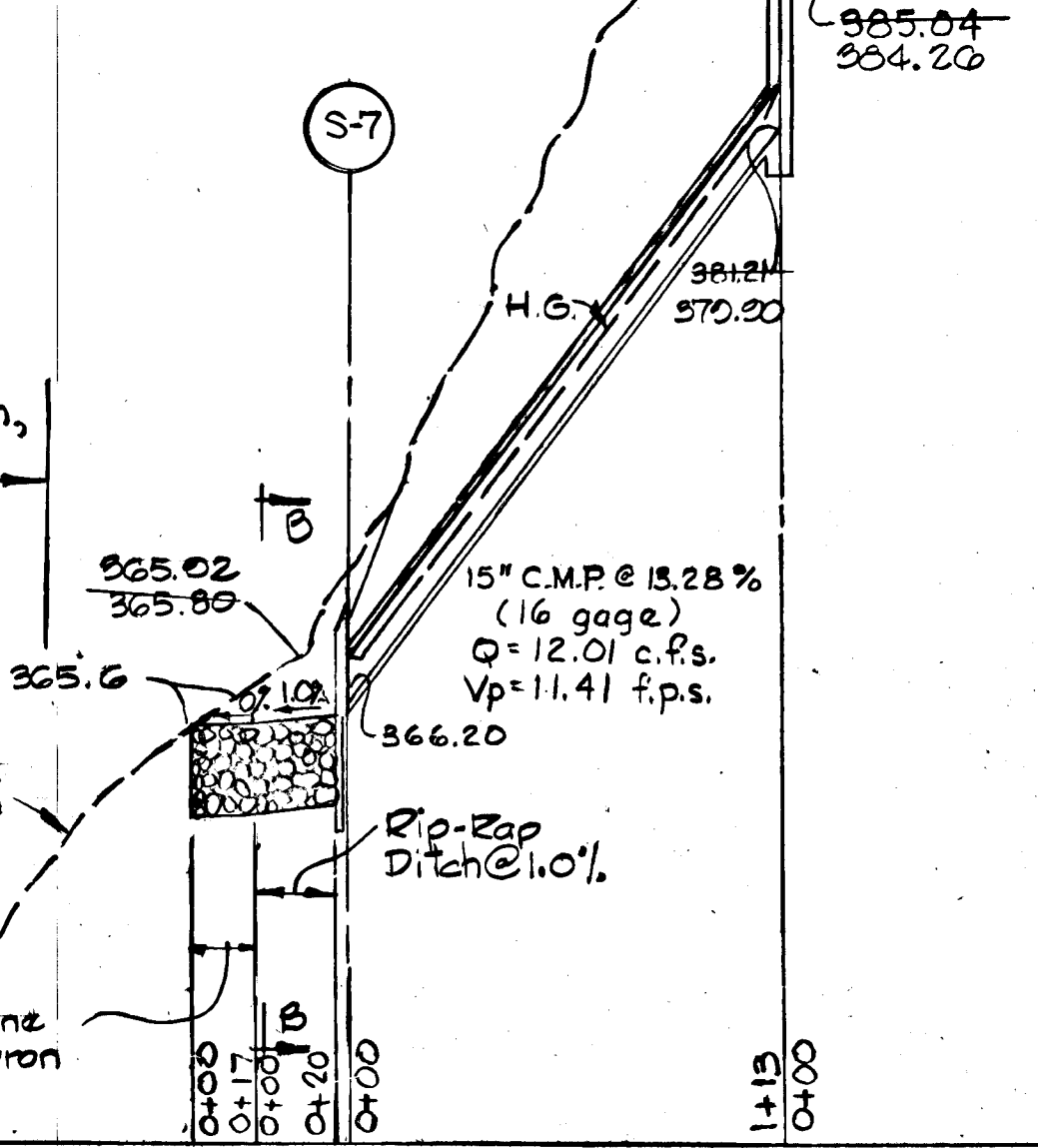
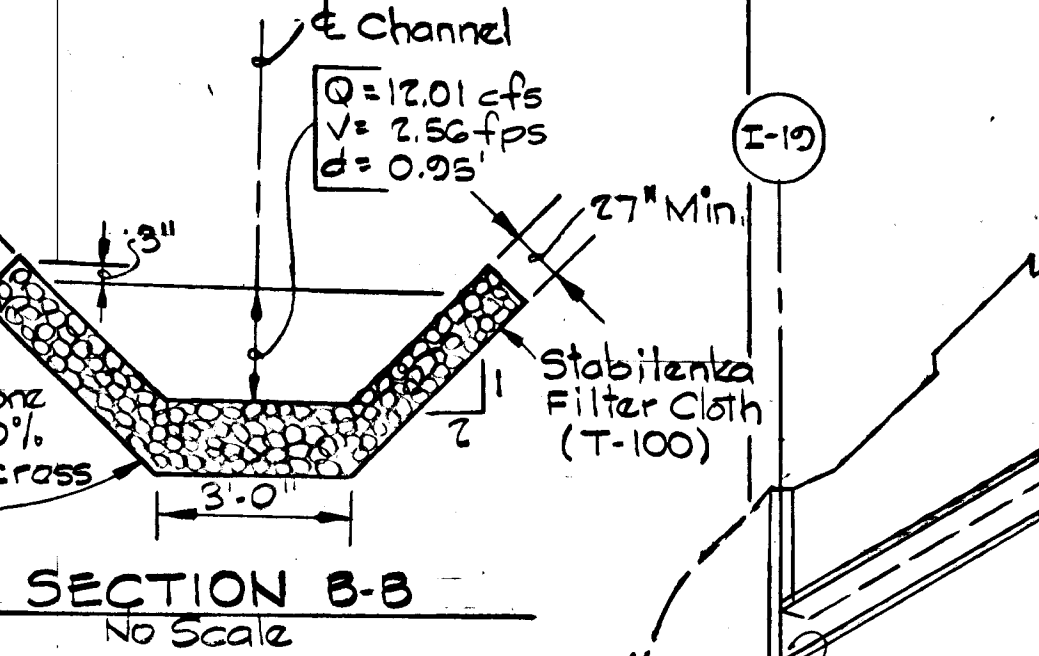
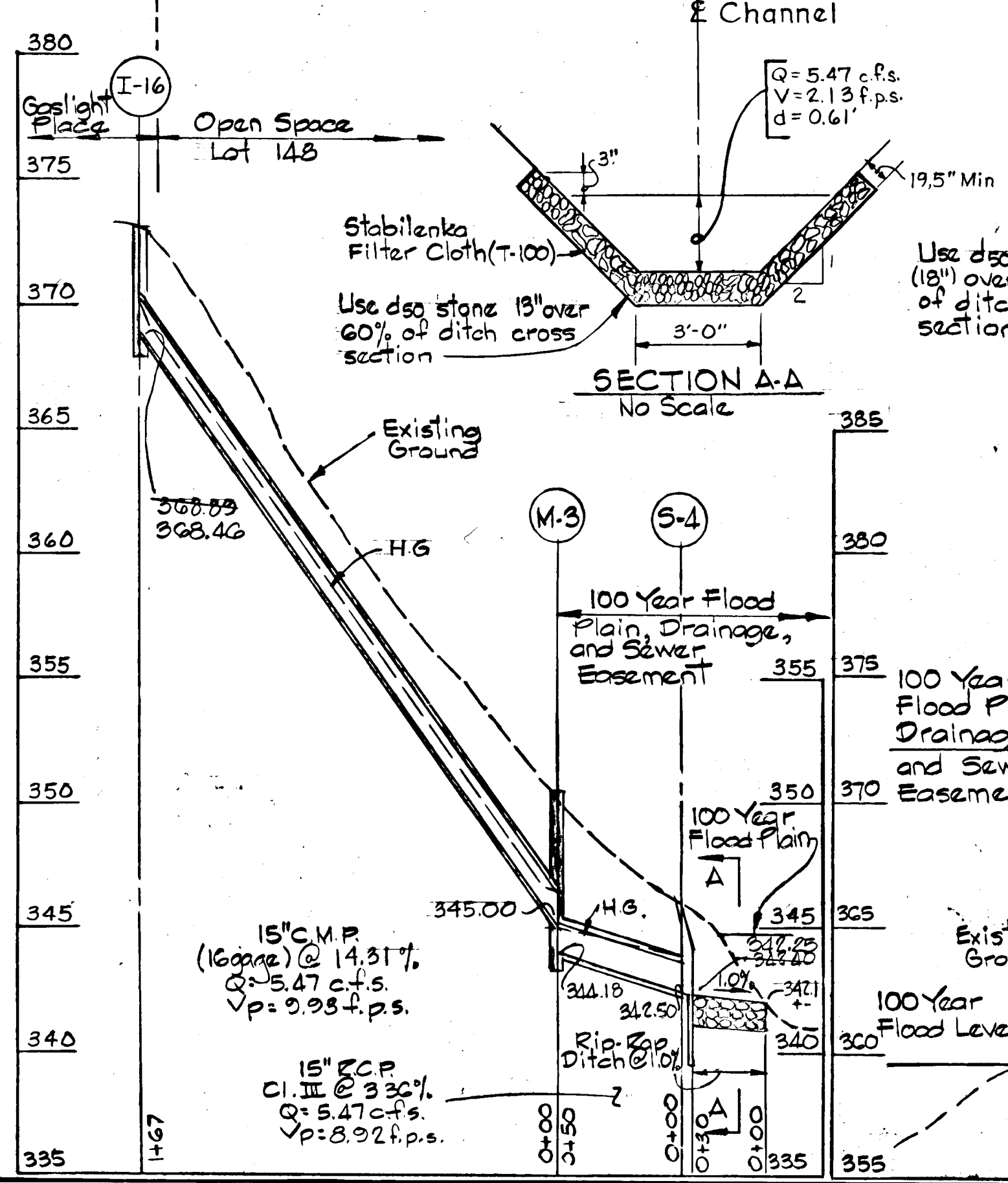
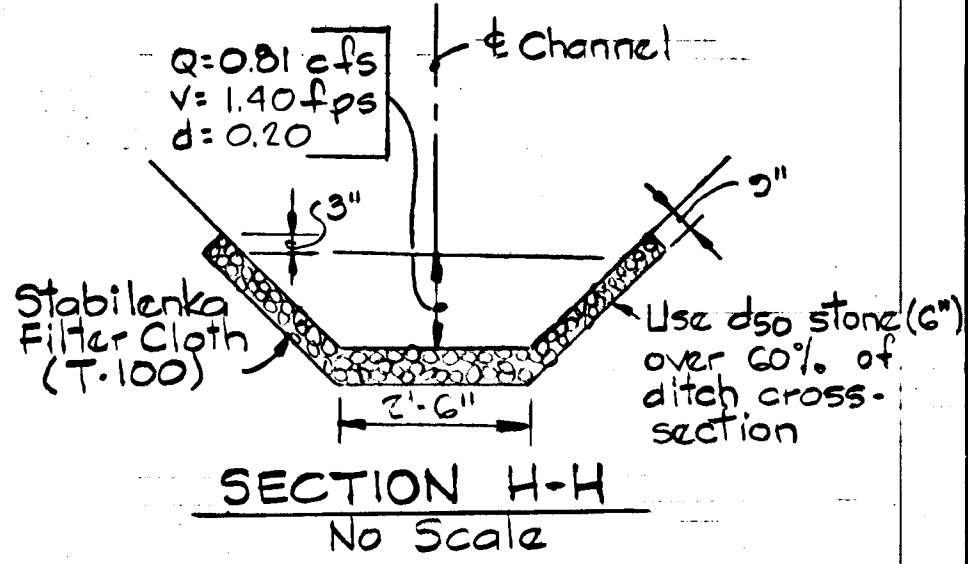
REV. DATE	REV. NO.	REVISION	DESCRIPTION
01/15/86		As per D.F. Ward S.C.S. Comments	
COLUMBIA 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY PROJECT AREA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 13 PROJECT TITLE STORM DRAIN PROFILES SCALE: AS SHOWN DATE: WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218 Registered Engineer No. 1974			



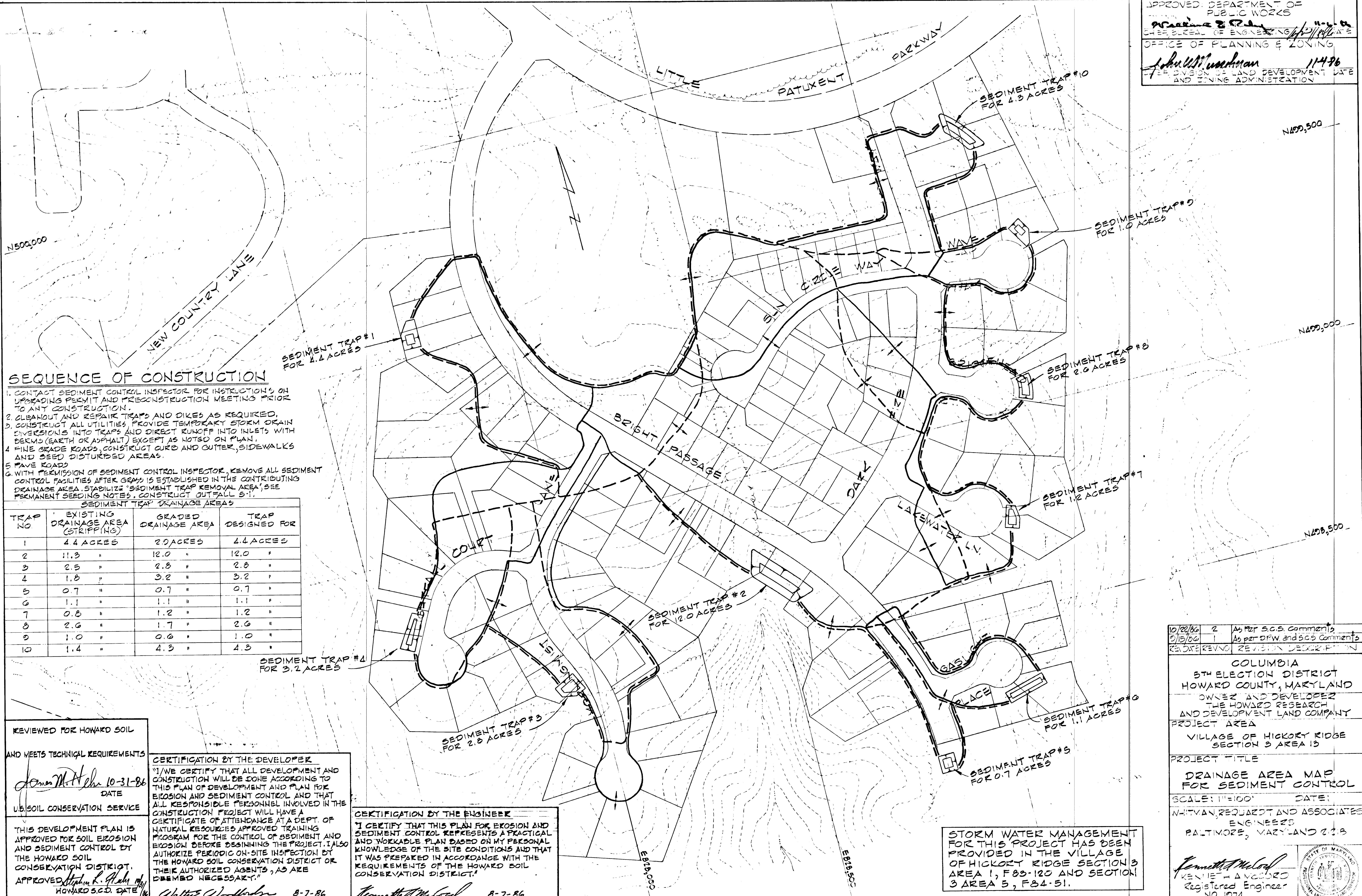
PROFILES
 Scale: Hor 1" = 50'
 Vert 1" = 5'



NOTE:
 The type of bedding used for storm drain pipe shall be Class C, shaped subgrade. If rock is encountered, the trench invert should be over excavated 6" and the over excavation of 6" refilled with granular material.



REL. DATE	REV. NO.	REVISION	DESCRIPTION
0/15/86		As per D.P.N. and S.C.S. Comments	
COLUMBIA 5 th ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY			
PROJECT AREA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 13			
PROJECT TITLE STORM DRAIN PROFILES			
SCALE: AS SHOWN DATE: WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218			
Kenneth A. McCord Registered Engineer No. 1974			



SEQUENCE OF CONSTRUCTION

1. CONTACT SEDIMENT CONTROL INSPECTOR FOR INSTRUCTIONS ON UPGRADING PERMIT AND PRECONSTRUCTION MEETINGS PRIOR TO ANY CONSTRUCTION.
2. CLEANOUT AND REPAIR TRAPS AND DIKES AS REQUIRED.
3. CONSTRUCT ALL UTILITIES, PROVIDE TEMPORARY STORM DRAIN DIVERSIONS INTO TRAPS AND DIRECT RUNOFF INTO INLETS WITH BERMS (EARTH OR ASPHALT) EXCEPT AS NOTED ON PLAN.
4. FINE GRADE ROADS, CONSTRUCT CURB AND GUTTER, SIDEWALKS AND SEED DISTURBED AREAS.
5. PAVE ROADS.
6. WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL FACILITIES AFTER GRASS IS ESTABLISHED IN THE CONTIGUOUS DRAINAGE AREA. STABILIZE SEDIMENT TRAP REMOVAL AREA, SEE PERMANENT SEEDING NOTES. CONSTRUCT OUTFALL S-1.

SEDIMENT TRAP DRAINAGE AREAS

TRAP NO	EXISTING DRAINAGE AREA (STRIPPING)	GRADED DRAINAGE AREA	TRAP DESIGNED FOR
1	4.4 ACRES	2.0 ACRES	4.4 ACRES
2	11.3 "	12.0 "	12.0 "
3	2.5 "	2.8 "	2.8 "
4	1.8 "	3.2 "	3.2 "
5	0.7 "	0.7 "	0.7 "
6	1.1 "	1.1 "	1.1 "
7	0.8 "	1.2 "	1.2 "
8	2.6 "	1.7 "	2.6 "
9	1.0 "	0.6 "	1.0 "
10	1.4 "	4.3 "	4.3 "

REVIEWED FOR HOWARD SOIL AND MEETS TECHNICAL REQUIREMENTS
James M. Hehr 10-31-86
 DATE
 U.S. SOIL CONSERVATION SERVICE

CERTIFICATION BY THE DEVELOPER
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DETERMINED NECESSARY.

Walter E. Woodford 8-7-86
 WALTER E. WOODFORD DATE

CERTIFICATION BY THE ENGINEER
 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.

Kenneth A. McCord 8-7-86
 KENNETH A. MCCORD DATE

STORM WATER MANAGEMENT FOR THIS PROJECT HAS BEEN PROVIDED IN THE VILLAGE OF HICKORY RIDGE SECTION 3 AREA 1, F83-120 AND SECTION 3 AREA 5, F84-51.

10/22/86	2	As per S.C.S. Comments
01/15/87	1	As per D.P.W. and S.C.S. Comments
REVISION NO.	REVISION DESCRIPTION	

COLUMBIA
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH
 AND DEVELOPMENT LAND COMPANY
 PROJECT AREA
 VILLAGE OF HICKORY RIDGE
 SECTION 3 AREA 13

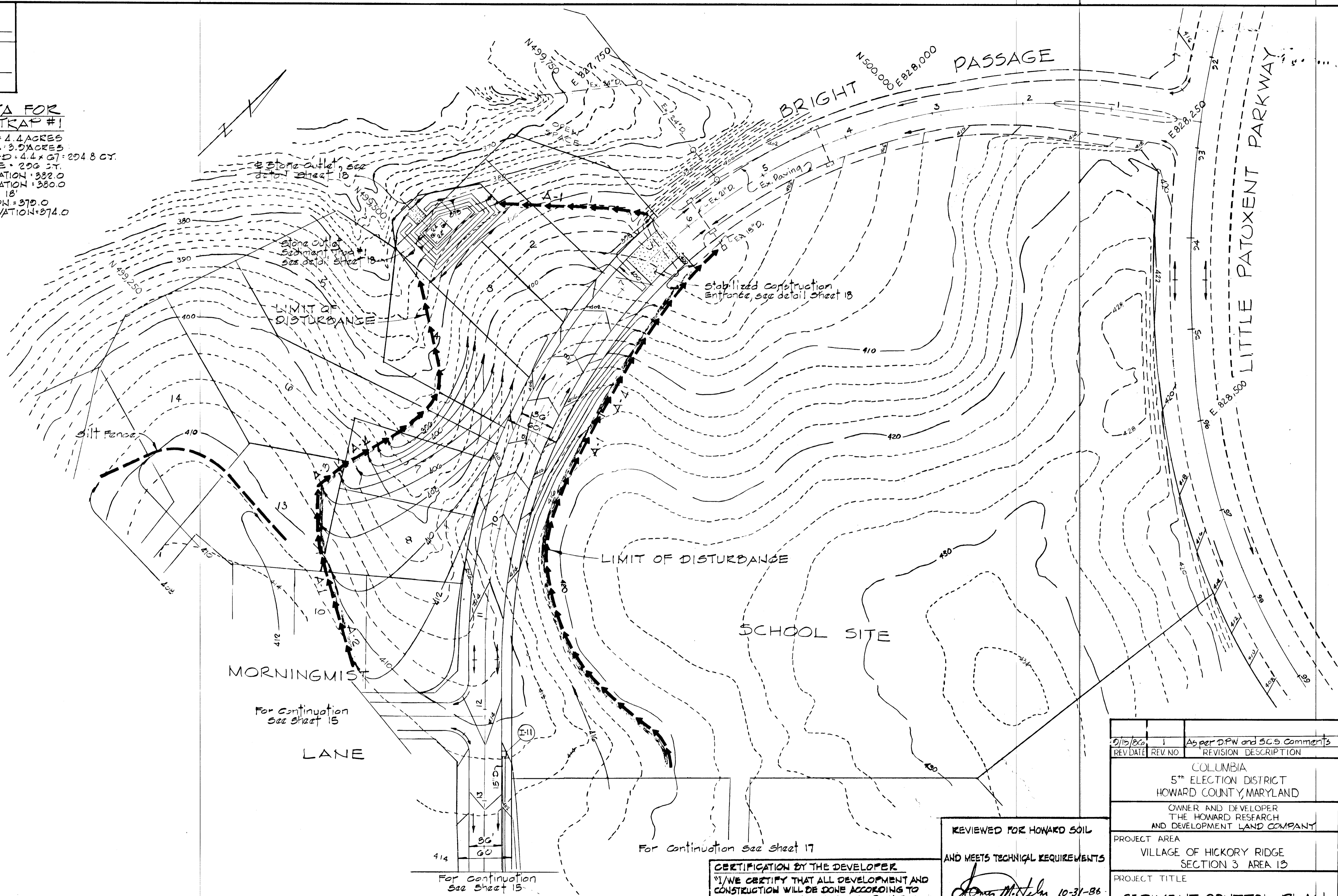
PROJECT TITLE
 DRAINAGE AREA MAP
 FOR SEDIMENT CONTROL
 SCALE: 1"=100' DATE:
 WHITMAN, REARD AND ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21218

Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 NO. 1074

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING & ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 AND ZONING ADMINISTRATION

**DESIGN DATA FOR
 SEDIMENT TRAP #1**

DRAINAGE AREA = 4.4 ACRES
 DISTURBED AREA = 3.5 ACRES
 VOLUME REQUIRED = 4.4 x 67 = 294.8 CY.
 VOLUME AVAILABLE = 299.5 CY.
 TOP OF WEIR ELEVATION = 382.0
 WEIR CREST ELEVATION = 380.0
 LENGTH OF WEIR = 18'
 STORAGE ELEVATION = 379.0
 BOTTOM TRAP ELEVATION = 374.0



For Continuation
 See Sheet 15

For Continuation See Sheet 17

For Continuation
 See Sheet 15

CERTIFICATION BY THE ENGINEER
 "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."

Kenneth A. McCord 8-7-86
 KENNETH A. MCCORD DATE

CERTIFICATION BY THE DEVELOPER
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DREMBED NECESSARY."

Walter B. Woodford 8-7-86
 WALTER B. WOODFORD DATE

REVIEWED FOR HOWARD SOIL AND MEETS TECHNICAL REQUIREMENTS

James Mitchell 10-31-86
 DATE
 U.S. SOIL CONSERVATION SERVICE

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

APPROVED *Richard P. White*
 HOWARD S.C.D. DATE

0/15/86	1	As per DPW and SCS Comments
REV DATE	REV NO	REVISION DESCRIPTION
COLUMBIA 5 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY		
PROJECT AREA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 13		
PROJECT TITLE SEDIMENT CONTROL PLAN		
SCALE: 1" = 50'		DATE:
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No 1974		

REVIEWED FOR HOWARD SOIL

AND MEETS TECHNICAL REQUIREMENTS

James M. Hahn 10-31-86
DATE

US SOIL CONSERVATION SERVICE

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

APPROVED *Stephen L. Rubin* 11/12/86
HOWARD S.C.D. DATE

CERTIFICATION BY THE DEVELOPER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Walter E. Woodford 8-7-86
WALTER E. WOODFORD DATE

CERTIFICATION BY THE ENGINEER

"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."

Kenneth A. McCord 8-7-86
KENNETH A. MCCORD DATE

DESIGN DATA FOR SEDIMENT TRAP #2

DRAINAGE AREA: 12.0 ACRES
DISTURBED AREA: 11.3 ACRES
VOLUME REQUIRED: 120.67 - 804.0 CY
VOLUME AVAILABLE: 819.0 CY
TOP OF DEEM ELEVATION: 374.0
WEIR CREST ELEVATION: 371.0
LENGTH OF WEIR: 13'
STORAGE ELEVATION: 370.0
BOTTOM TRAP ELEVATION: 364.0

DESIGN DATA FOR SEDIMENT TRAP #3

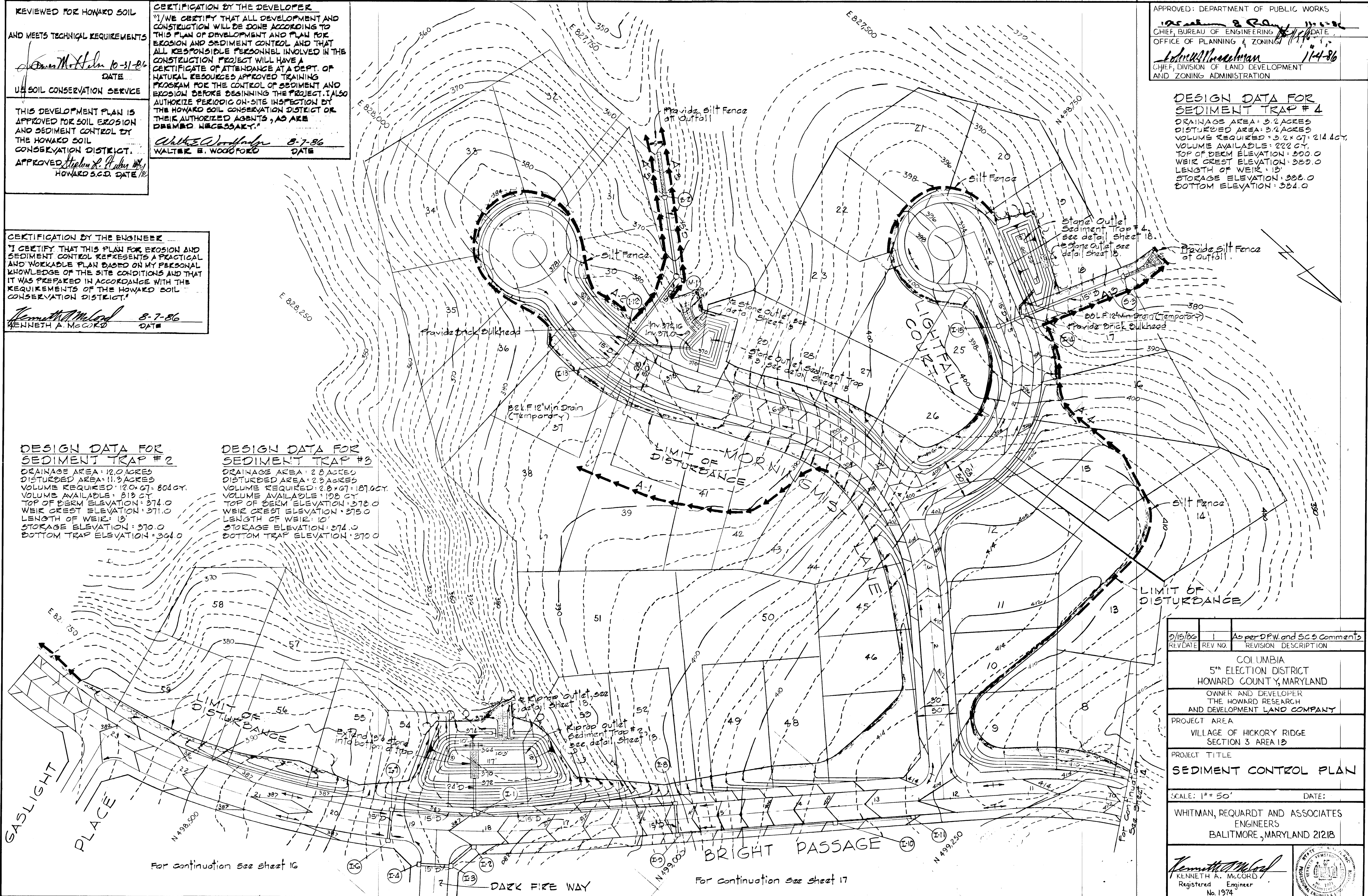
DRAINAGE AREA: 2.8 ACRES
DISTURBED AREA: 2.3 ACRES
VOLUME REQUIRED: 2.8 x 67 = 187.6 CY
VOLUME AVAILABLE: 128.0 CY
TOP OF DEEM ELEVATION: 378.0
WEIR CREST ELEVATION: 375.0
LENGTH OF WEIR: 10'
STORAGE ELEVATION: 374.0
BOTTOM TRAP ELEVATION: 370.0

APPROVED: DEPARTMENT OF PUBLIC WORKS

Richard M. Hanchman 11-4-86
CHIEF, BUREAU OF ENGINEERING DATE
OFFICE OF PLANNING & ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

DESIGN DATA FOR SEDIMENT TRAP #4

DRAINAGE AREA: 3.2 ACRES
DISTURBED AREA: 3.4 ACRES
VOLUME REQUIRED: 3.2 x 67 = 214.4 CY
VOLUME AVAILABLE: 222.0 CY
TOP OF DEEM ELEVATION: 390.0
WEIR CREST ELEVATION: 389.0
LENGTH OF WEIR: 15'
STORAGE ELEVATION: 388.0
BOTTOM ELEVATION: 384.0



REV DATE	REV NO	REVISION DESCRIPTION
9/15/86	1	As per DPW and S.C.S. Comments

COLOMBIA
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
THE HOWARD RESEARCH
AND DEVELOPMENT LAND COMPANY

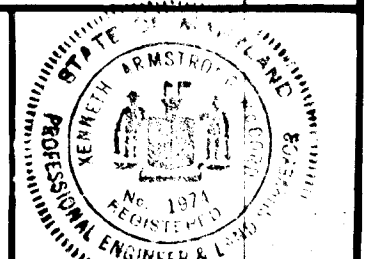
PROJECT AREA
VILLAGE OF HICKORY RIDGE
SECTION 3 AREA 13

PROJECT TITLE
SEDIMENT CONTROL PLAN

SCALE: 1" = 50' DATE:

WHITMAN, REQUARDT AND ASSOCIATES
ENGINEERS
BALITMORE, MARYLAND 21218

Kenneth A. McCord
KENNETH A. MCCORD
Registered Engineer
No. 1974



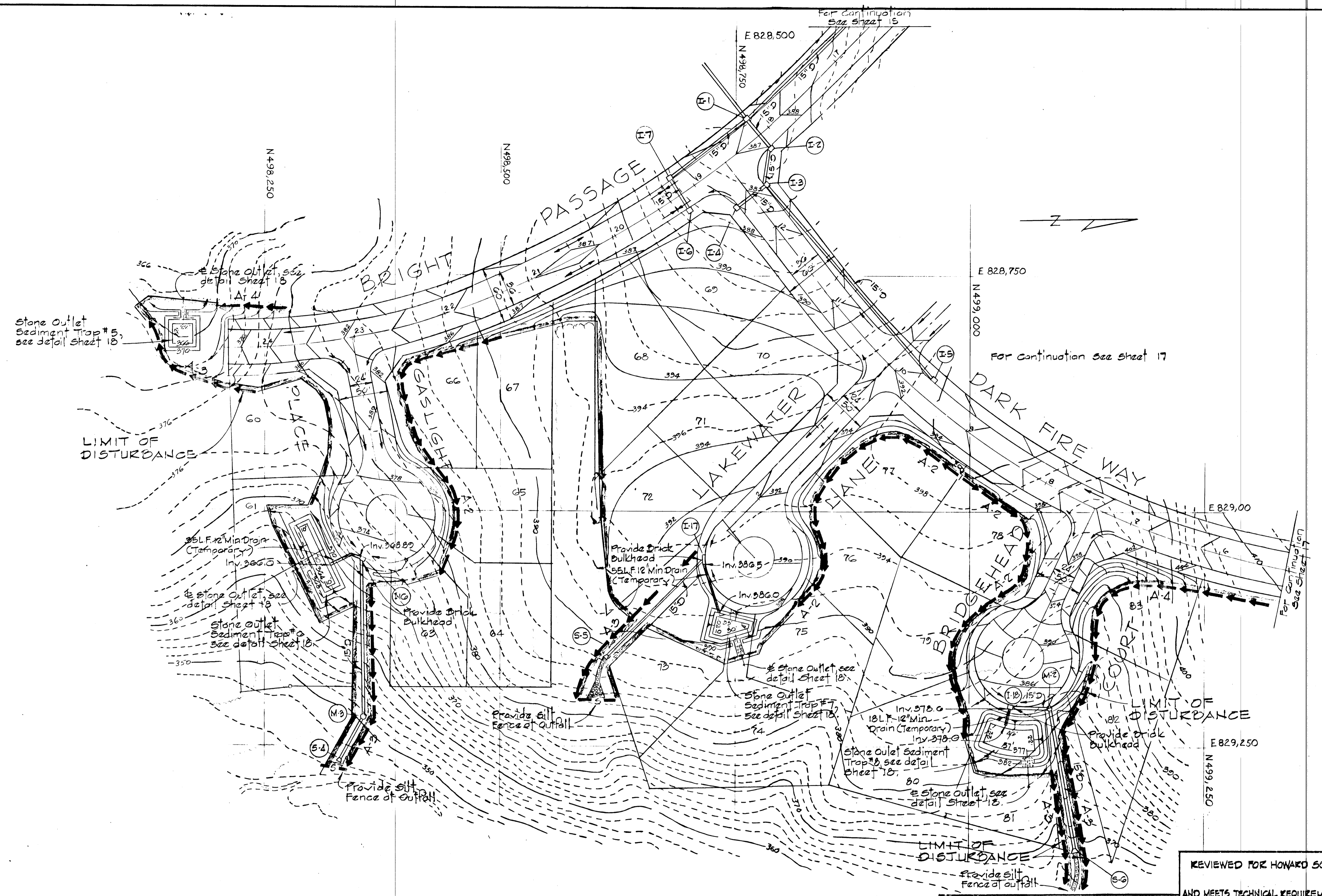
APPROVED: DEPARTMENT OF PUBLIC WORKS
William E. Peltz 11-4-86
 CHIEF, BUREAU OF ENGINEERING
 OFFICE OF PLANNING & ZONING
John M. Muschick 11-4-86
 CHIEF, DIVISION OF LAND DEVELOPMENT
 AND ZONING ADMINISTRATION

**DESIGN DATA FOR
 SEDIMENT TRAP #5**
 DRAINAGE AREA: 0.7 ACRES
 DISTURBED AREA: 0.7 ACRES
 VOLUME REQUIRED: 0.7 x 67 = 47 CY.
 VOLUME AVAILABLE: 50 CY.
 TOP OF BERM ELEVATION: 370.0
 WEIR CREST ELEVATION: 369.0
 LENGTH OF WEIR: 5'
 STORAGE ELEVATION: 368.0
 BOTTOM TRAP ELEVATION: 366.0

**DESIGN DATA FOR
 SEDIMENT TRAP #6**
 DRAINAGE AREA: 1.1 ACRES
 DISTURBED AREA: 1.1 ACRES
 VOLUME REQUIRED: 1.1 x 67 = 73.7 CY.
 VOLUME AVAILABLE: 77 CY.
 TOP OF BERM ELEVATION: 368.0
 WEIR CREST ELEVATION: 367.0
 LENGTH OF WEIR: 5'
 STORAGE ELEVATION: 366.0
 BOTTOM TRAP ELEVATION: 364.0

**DESIGN DATA FOR
 SEDIMENT TRAP #7**
 DRAINAGE AREA: 1.2 ACRES
 DISTURBED AREA: 1.2 ACRES
 VOLUME REQUIRED: 1.2 x 67 = 80.4 CY.
 VOLUME AVAILABLE: 83 CY.
 TOP OF BERM ELEVATION: 390.0
 WEIR CREST ELEVATION: 388.0
 LENGTH OF WEIR: 5'
 STORAGE ELEVATION: 387.0
 BOTTOM TRAP ELEVATION: 384.0

**DESIGN DATA FOR
 SEDIMENT TRAP #8**
 DRAINAGE AREA: 2.6 ACRES
 DISTURBED AREA: 2.6 ACRES
 VOLUME REQUIRED: 2.6 x 67 = 174.2 CY.
 VOLUME AVAILABLE: 177 CY.
 TOP OF BERM ELEVATION: 382.0
 WEIR CREST ELEVATION: 381.0
 LENGTH OF WEIR: 10'
 STORAGE ELEVATION: 380.0
 BOTTOM TRAP ELEVATION: 377.0



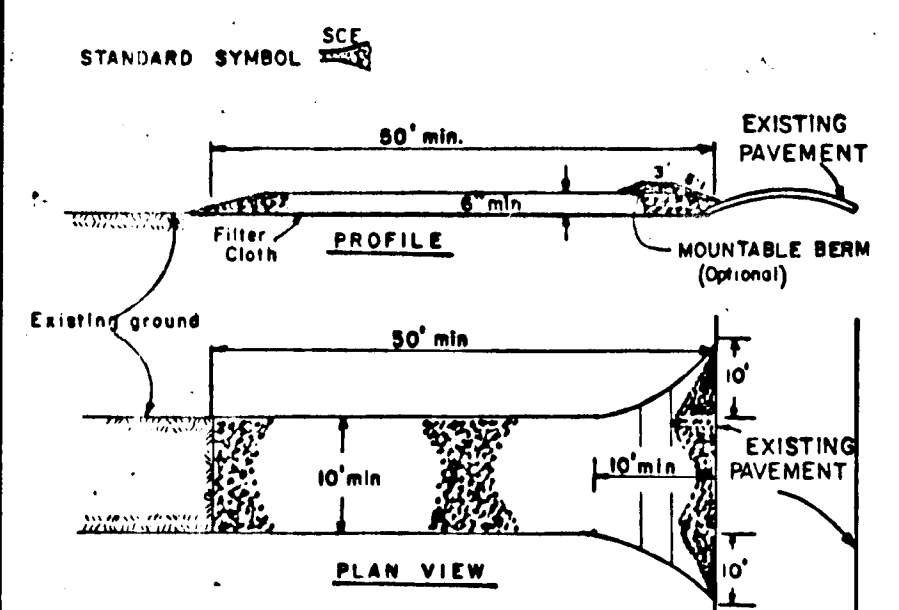
CERTIFICATION BY THE ENGINEER
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
Kenneth A. McCord 8-7-86
 KENNETH A. McCORD DATE

CERTIFICATION BY THE DEVELOPER
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."
Walter E. Woodford 8-7-86
 WALTER E. WOODFORD DATE

REVIEWED FOR HOWARD SOIL AND MEETS TECHNICAL REQUIREMENTS
John M. Muschick 8/31/86
 DATE
 U.S. SOIL CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED *William E. Peltz* 8-7-86
 HOWARD S.C.S. DATE

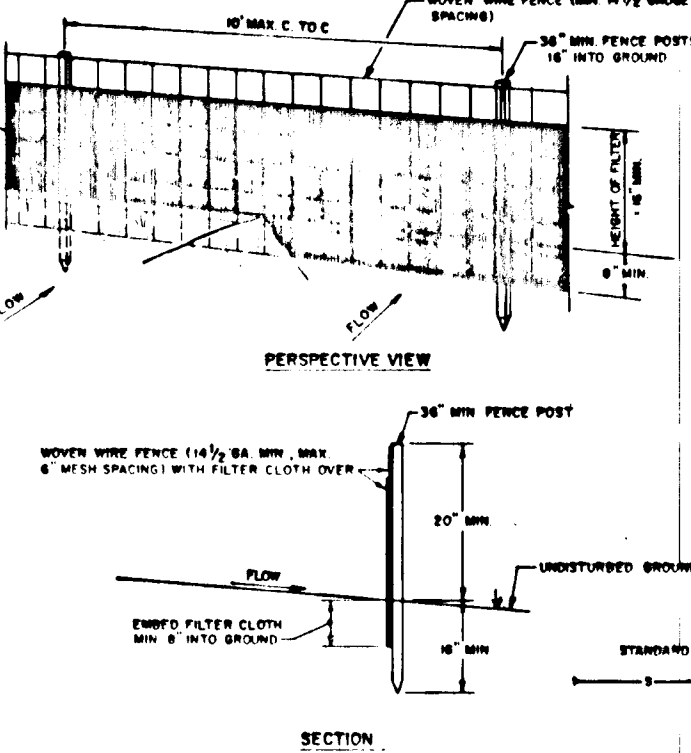
9/5/86	1	As per DPW and S.C.S. Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION
COLUMBIA 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY		
PROJECT AREA	VILLAGE OF HICKORY RIDGE SECTION 3 AREA 1B	
PROJECT TITLE	SEDIMENT CONTROL PLAN	
SCALE: 1" = 50'	DATE:	
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974		

STABILIZED CONSTRUCTION ENTRANCE
not to scale



- CONSTRUCTION SPECIFICATIONS**
1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
 2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
 3. Thickness - Not less than six (6) inches.
 4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
 5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
 6. Surface Water - All surface water flowing or directed toward construction entrance shall be piped across the entrance. If piping is impractical, a mountable berm with 3:1 slopes will be provided.
 7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediments spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
 8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area unconnected with streets and which drains into an approved sediment trapping device.
 9. Periodic inspection and needed maintenance shall be provided after each rain.

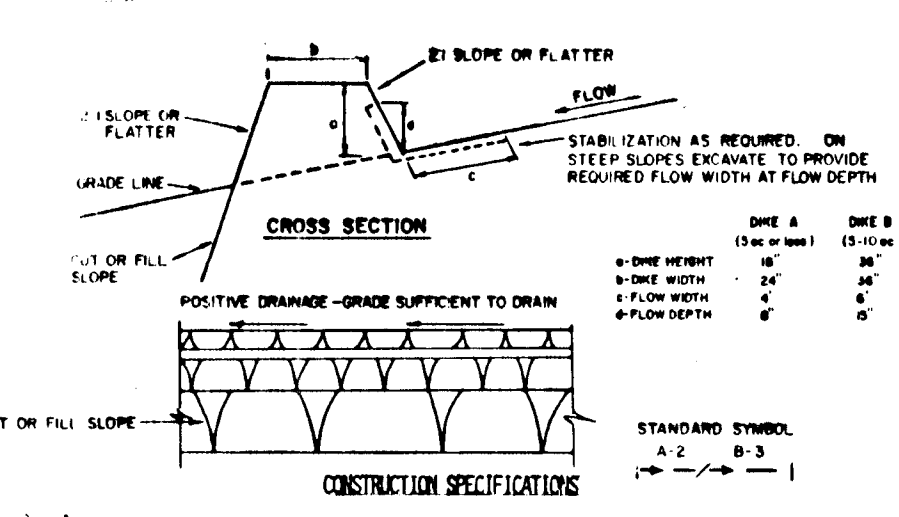
SILT FENCE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WITH WIRE FENCE TO BE FASTENED TO WOODEN POSTS WITH NAILS OR STAPLES.
2. THE CLOTH TO BE FASTENED TO WOODEN POSTS WITH 1/2" STAPLES AT TOP AND MID SECTION.
3. WITH TWO SECTIONS OF FILTER CLOTH ADJACENT EACH OTHER THE STAPLES SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PROVIDED AS NEEDED AND MATERIAL REPLACED WHEN NEEDED TO DEVELOP IN THE FUTURE.

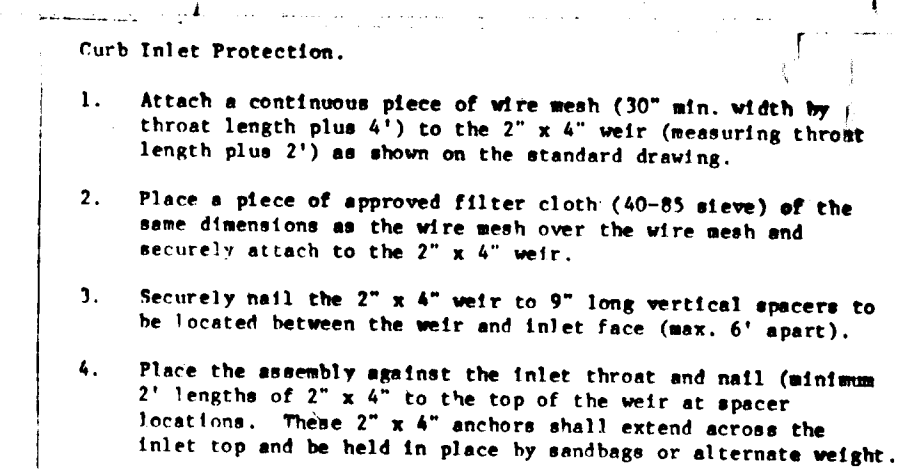
EARTH DIKE
not to scale



CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE CONSTRUCTED BY EARTHWORKING EQUIPMENT.
2. DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. DIKES SHALL BE WIDER AND HIGHER SLOPES MAY BE FLATTER IF DESIGNED TO FACILITATE PASSAGE BY CONSTRUCTION TRAFFIC.
4. THE LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. EROSION SHALL BE CONTROLLED BY A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENTATION BASIN LOCATED UPSTREAM OF THE DRAINAGE AREA ABOVE THE DIKE AND NOT ADJACENTLY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON; (B) FLOW CHANNEL AS PER THE COUNTY MANUAL.

TYPE OF TREATMENT	CHANNEL WIDTH	DIKE A	DIKE B
1	1.5-3.0	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSTON, SOG, 2" STONE
3	5.1-8.0	SEED WITH JUTE, OR SOG	LINED RIP-RAP 4-8"
4	8.1-20	LINED RIP-RAP 4-8"	ENGINEERING DESIGN



- Curb Inlet Protection.**
1. Attach a continuous piece of wire mesh (30" min. width by 1' throat length plus 4") to the 2" x 4" weir (measuring throat length plus 4") as shown on the standard drawing.
 2. Place a piece of approved filter cloth (40-85 size) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
 3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6" apart).
 4. Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.

SEDIMENT CONTROL NOTES

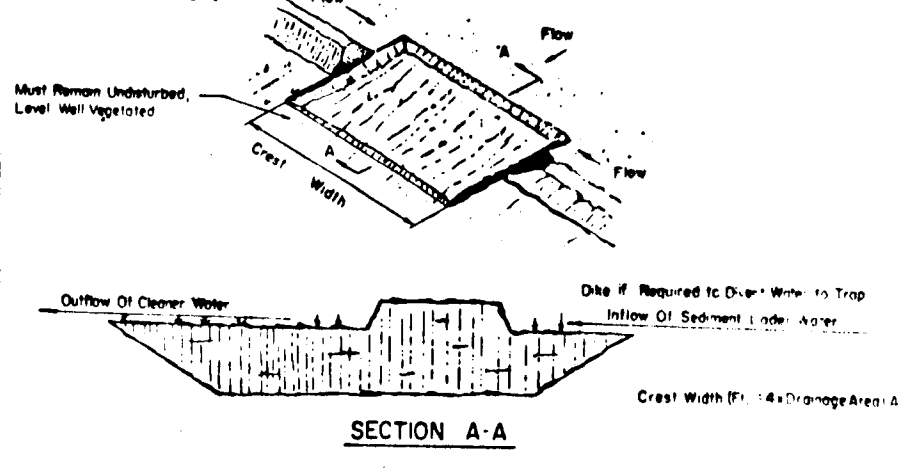
- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permitting prior to the start of any construction. (892-2437)
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3) Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1; (b) 14 days as to all other disturbed or graded areas on the project site.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) and (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 51). Temporary stabilization which mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- 7) Site Analysis:
Total Area of Site: 0.25 Acres
Area Disturbed: 0.25 Acres
Area to be seeded or planted: 0.25 Acres
Area to be vegetatively stabilized: 0.25 Acres
Total Cut: 24,000 cu. yds
Total Fill: 24,000 cu. yds
Off-site waste/borrow area location: NONE
- 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- 9) Additional sediment controls must be provided, if deemed necessary by the Howard County DPM sediment control inspector.
- 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

PERMANENT SEEDING NOTES

- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seeding Preparation:** Loosen upper three inches of soil by raking, dicing or other acceptable means before seeding.
- Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules
- 1) Preferred - Apply 2 tons per acre dolomitic limestone (82 lbs/1000 sq ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 urea-form fertilizer (19 lbs/1000 sq ft).
 - 2) Acceptable - Apply 2 tons per acre dolomitic limestone (82 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.
- Seeding -** For the period March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) low sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.
- Mulching -** Apply 15 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.
- Maintenance -** Inspect all seeded areas and make needed repairs, replacements and reseedings.
- TEMPORARY SEEDING NOTES**
- Apply to graded or cleared areas likely to be regraded where a short-term vegetative cover is needed.
- Seeding Preparation:** Loosen upper three inches of soil by raking, dicing or other acceptable means before seeding.
- Soil Amendments:** Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)
- Seeding -** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 25 bushel per acre of annual ryegrass (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 1 lb per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.
- Mulching -** Apply 15 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring. Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

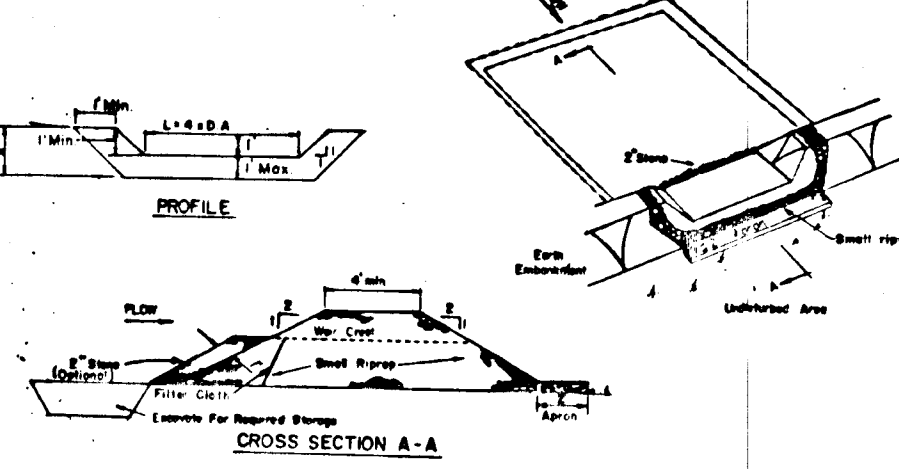
DEPARTMENT OF PUBLIC WORKS
John M. Mearns
CHIEF BUREAU OF ENGINEERING
OFFICE OF PLANNING & ZONING
John M. Mearns
CHIEF DIVISION OF LAND DEVELOPMENT, CARE AND ZONING ADMINISTRATION

GRASS OUTLET SEDIMENT TRAP ST-II



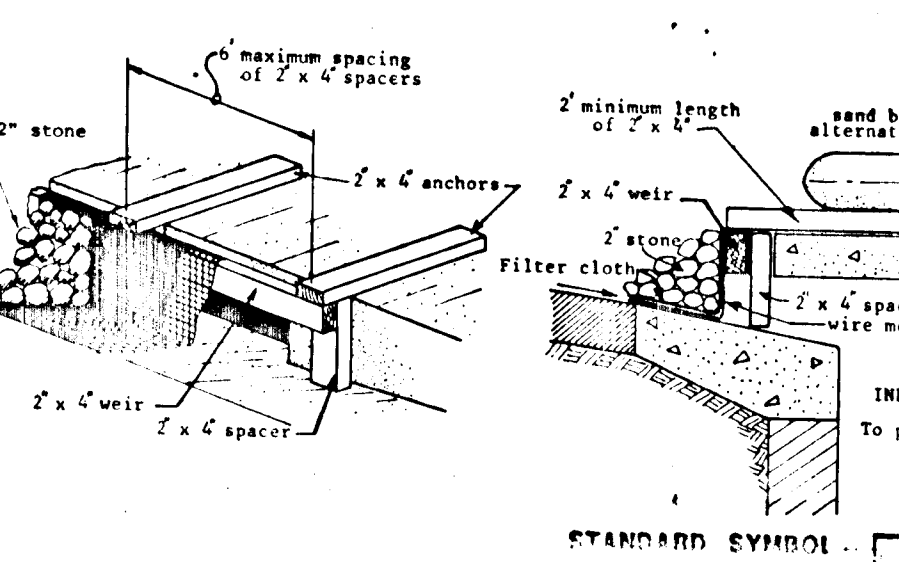
- CONSTRUCTION SPECIFICATION FOR ST-II**
1. Area under embankment shall be cleared, graded and stripped of any vegetation and root mat. The pool area shall be cleared.
 2. The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 3. All cut and fill slopes shall be 3:1 or flatter.
 4. The stones used in the outlet shall be small riprap 4"-8" along with a 1" thickness of 2" aggregate placed on the upstream side on the small riprap and embedded filter cloth in the riprap.
 5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 3/4 the design depth of the trap.
 6. The structure shall be inspected after each rain and repairs made as needed.
 7. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
 8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
 9. All cut slopes shall be 1:1 or flatter.
- Maximum Drainage Area: 5 Acres

STONE OUTLET SEDIMENT TRAP



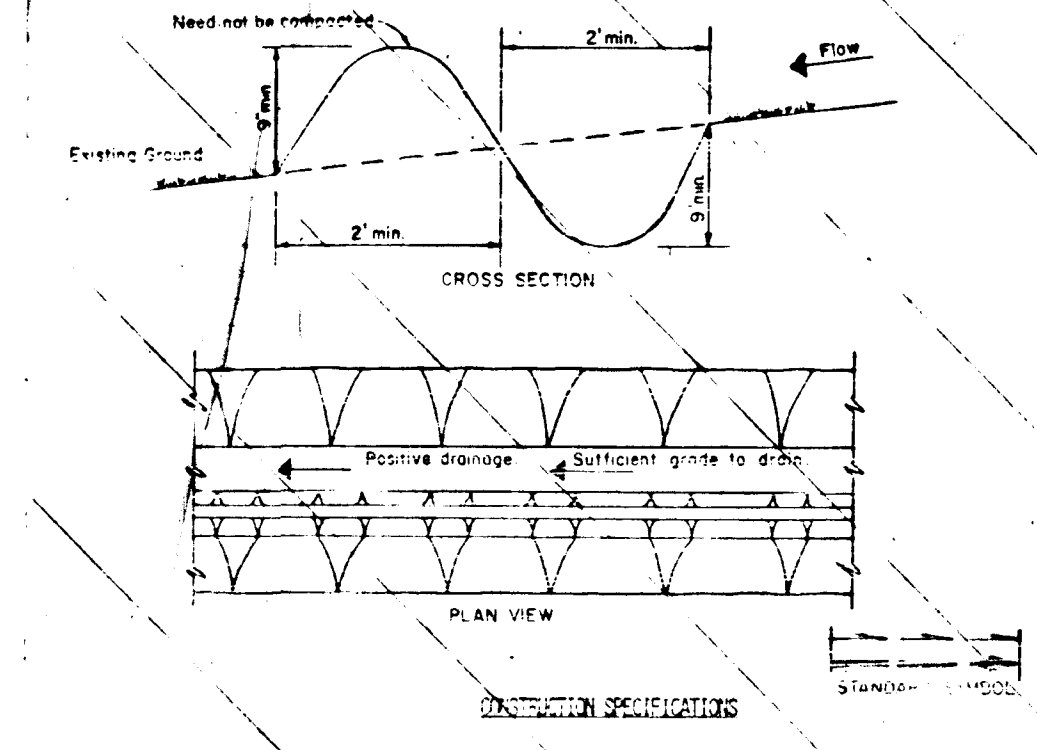
- CONSTRUCTION SPECIFICATIONS FOR ST-V**
1. Area under embankment shall be cleared, graded and stripped of any vegetation and root mat. The pool area shall be cleared.
 2. The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 3. All cut and fill slopes shall be 3:1 or flatter.
 4. The stones used in the outlet shall be small riprap 4"-8" along with a 1" thickness of 2" aggregate placed on the upstream side on the small riprap and embedded filter cloth in the riprap.
 5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 3/4 the design depth of the trap.
 6. The structure shall be inspected after each rain and repairs made as needed.
 7. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
 8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
 9. All cut slopes shall be 1:1 or flatter.

CURB INLET PROTECTION DETAIL



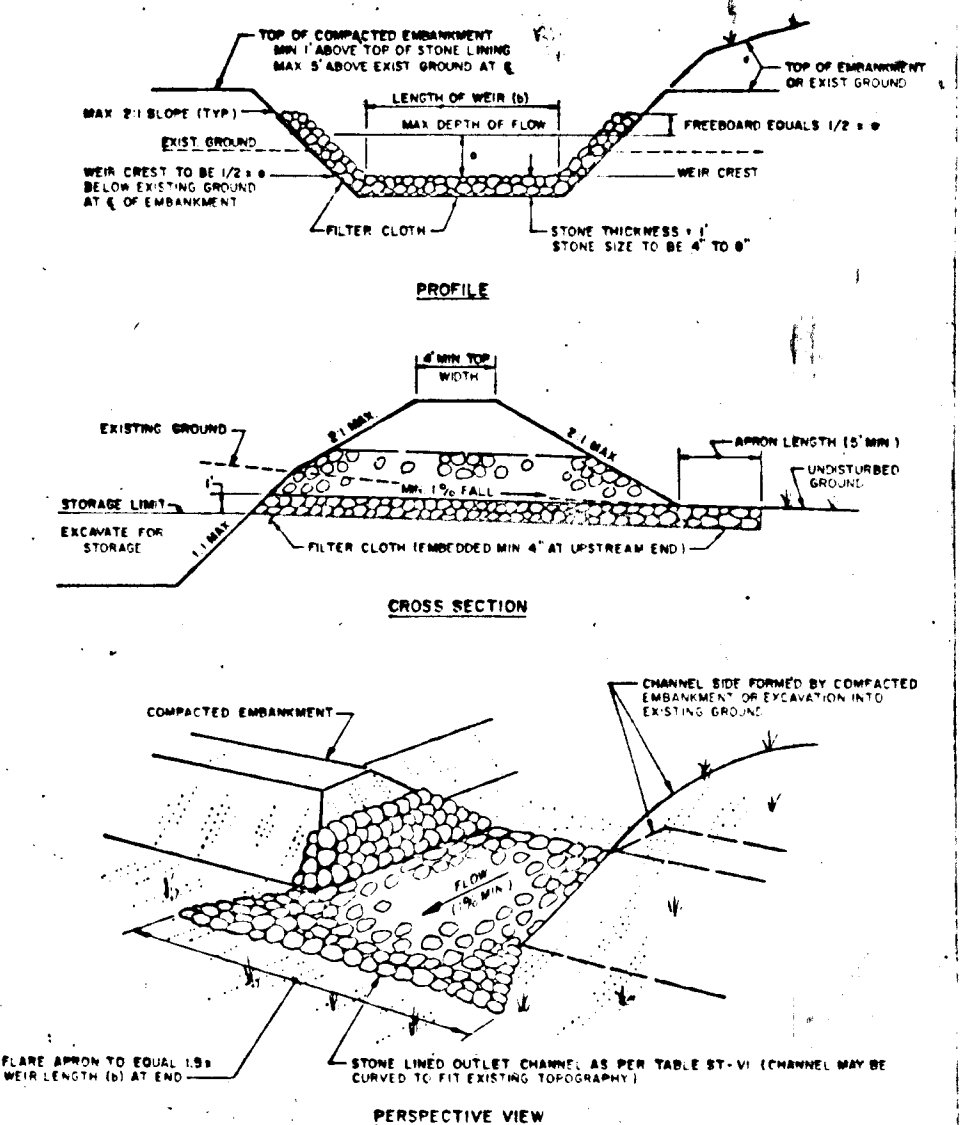
- Curb Inlet Protection.**
1. Attach a continuous piece of wire mesh (30" min. width by 1' throat length plus 4") to the 2" x 4" weir (measuring throat length plus 4") as shown on the standard drawing.
 2. Place a piece of approved filter cloth (40-85 size) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.
 3. Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6" apart).
 4. Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.

PERIMETER DIKE/SWALE
not to scale

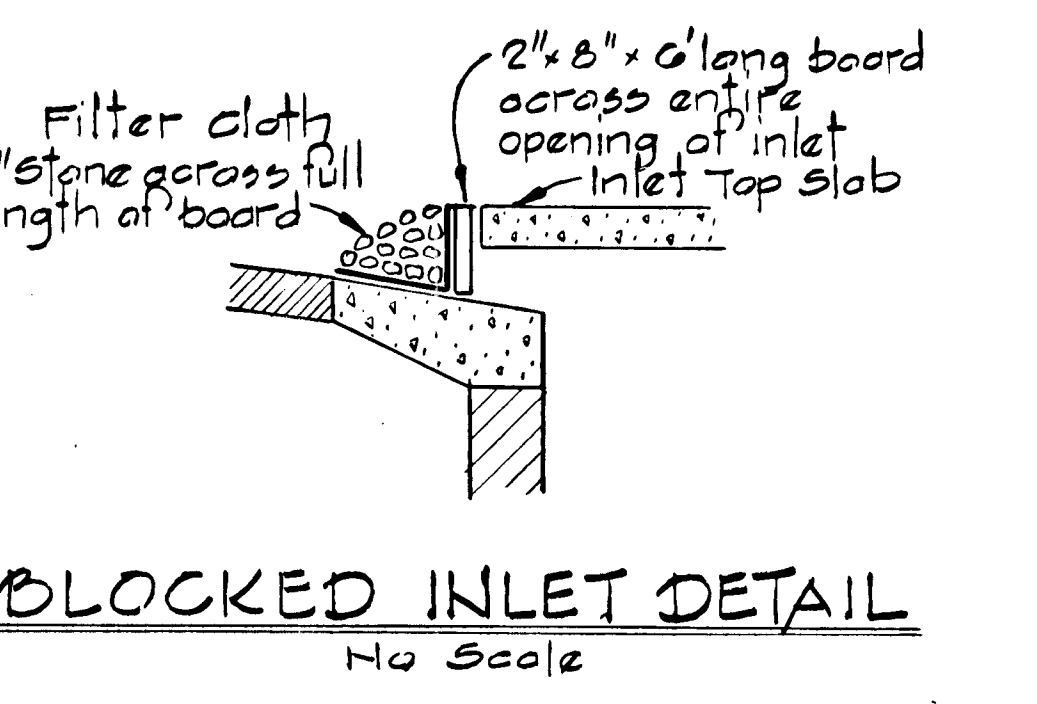
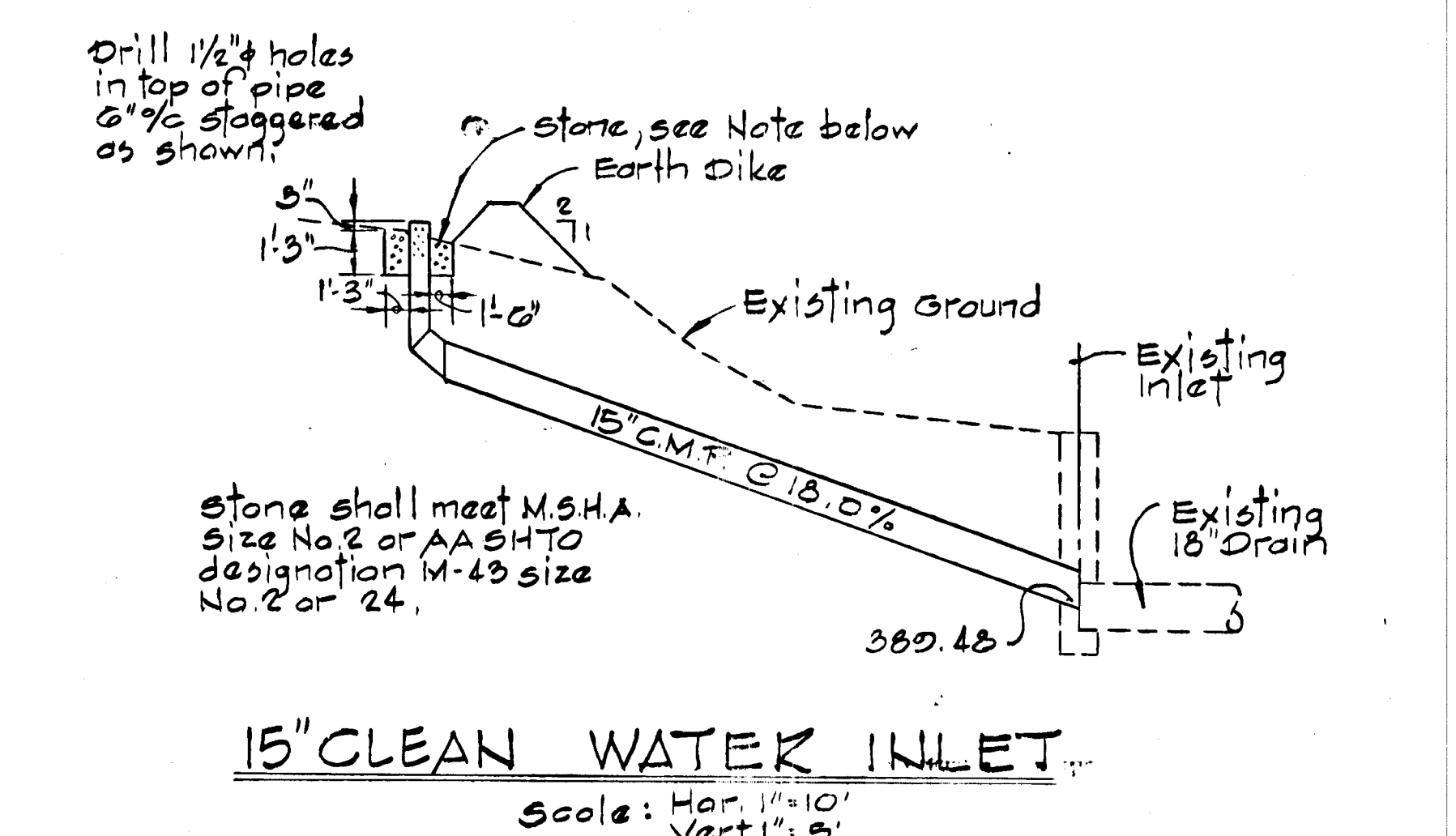


1. ALL PERIMETER DIKE/SWALE SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
 2. DIKES SHALL BE 2' HIGH AND 3' WIDE AT THE CREST. SWALES SHALL BE DESIGNED TO CONVEY TO A SEDIMENT TRAPPING DEVICE.
 3. DISTURBED AREAS FROM UNINTERRUPTED ARE SHALL BE TREATED AS DISTURBED AREAS WITH THE SAME REQUIREMENTS AS ABOVE.
 4. THE ONLY SHALL BE EXHAUSTED OR DISPOSED TO LAND, SPACE AND CROSS SECTION AS REQUIRED TO MEET THE DESIGN SPECIFIED IN THE DRAWING.
 5. STABILIZATION OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE DONE IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 6. PERIODIC INSPECTION AND MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.
- Max. Drainage Area Limit: 2 Acres

RIPRAP OUTLET SEDIMENT TRAP ST-VI



1. All perimeter dike/swale shall have uninterrupted positive grade to an outlet.
2. Dikes shall be 2' high and 3' wide at the crest. Swales shall be designed to convey to a sediment trapping device.
3. Disturbed areas from uninterrupted areas shall be treated as disturbed areas with the same requirements as above.
4. The only shall be exhausted or disposed to land, space and cross section as required to meet the design specified in the drawing.
5. Stabilization of the area disturbed by the dike and swale shall be done in accordance with the Maryland Standards and Specifications for Soil Erosion and Sediment Control.
6. Periodic inspection and maintenance must be provided after each rain event.



CERTIFICATION BY THE ENGINEER

"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."

Kenneth A. McCord 8-7-86
KENNETH A. MCCORD DATE

CERTIFICATION BY THE DEVELOPER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Walter E. Woodford 8-7-86
WALTER E. WOODFORD DATE

REVIEWED FOR HOWARD SCD AND METS TECHNICAL REQUIREMENTS

James M. E. John 10-31-86
DATE
AS SOIL CONSERVATION SERVICE

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

APPROVED: *John L. Kelly* 10/31/86
HOWARD SCD DATE

10/15/86	1	As per D.P.W. and S.C.S. Comments
REV. DATE	REV. NO.	REVISION DESCRIPTION
COLUMBIA 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT LAND COMPANY PROJECT AREA VILLAGE OF HICKORY RIDGE SECTION 3 AREA 1B		
PROJECT TITLE SEDIMENT CONTROL DETAILS		
SCALE: AS SHOWN DATE:		
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1074		
STATE OF MARYLAND BOARD OF PROFESSIONAL ENGINEERS		