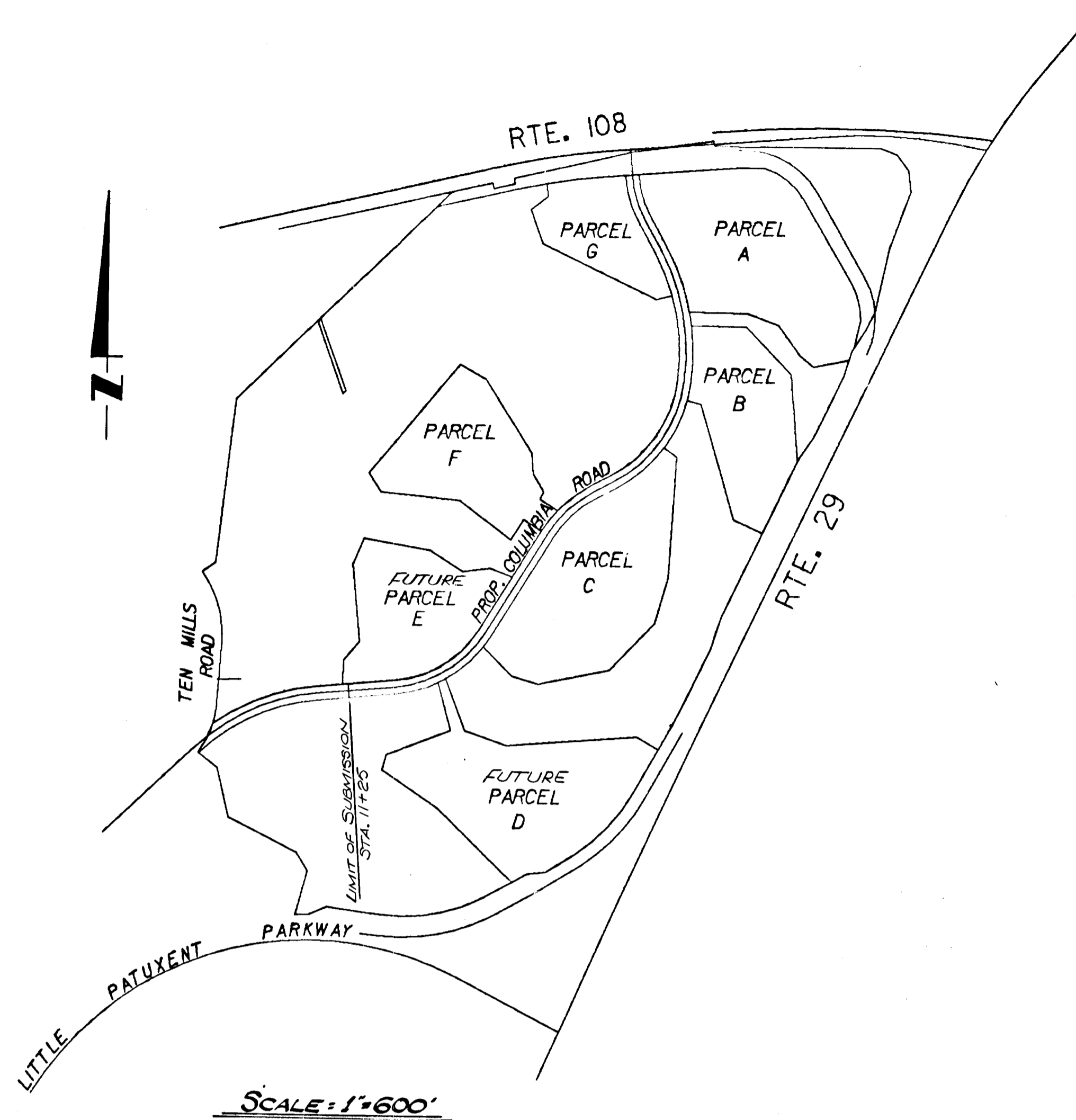


INDEX	
SHEET NO.	TITLE
1	TITLE PAGE
2	STREET GRADE, STORM DRAINAGE & PAVING PLAN
3	STREET GRADE, STORM DRAINAGE & PAVING PLAN
4	STREET GRADE, STORM DRAINAGE & PAVING PLAN
5	STREET GRADE, STORM DRAINAGE & PAVING PLAN
6	STORM DRAIN PROFILES
7	STORM DRAIN PROFILES
8	STORM DRAIN PROFILES
9	STORM DRAIN PROFILES
10	SEDIMENT CONTROL
11	SEDIMENT CONTROL
12	SEDIMENT CONTROL
13	SEDIMENT CONTROL
14	DRAINAGE AREA
15	DRAINAGE AREA
16	DETAILS
17	DETAILS

NOTE: STORMWATER MANAGEMENT FACILITIES WILL BE REQUIRED ON THE PARCELS SHOWN ON THIS PLAN IN ACCORDANCE WITH THE DESIGN MANUALS. PRIOR TO SIGNATURE APPROVAL OF THE SITE DEVELOPMENT PLAN, THE DEVELOPER WILL BE REQUIRED TO EXECUTE THE DEVELOPER'S AGREEMENT FOR THE CONSTRUCTION OF THE STORMWATER MANAGEMENT FACILITY AND A MAINTENANCE AGREEMENT. (PARCEL "A" AND A PORTION OF PARCEL "B" ONLY.)



- GENERAL NOTES**
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOL. IV, DETAILS AND SPECIFICATIONS FOR CONSTRUCTION.
 - ALL UTILITY COMPANIES SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF CONSTRUCTION.
 - ALL INLETS SHALL BE HOWARD COUNTY STANDARDS UNLESS OTHERWISE SHOWN.
 - ALL STREET CURB RETURNS SHALL HAVE A 30.0' RADIUS UNLESS OTHERWISE NOTED.
 - STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY STANDARD SPECIFICATIONS.
 - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES WHERE DIRECTED BY THE ENGINEER A MINIMUM OF TWO WEEKS IN ADVANCE OF ANY CONSTRUCTION.
 - TEMPORARY COMPACTED 18" HIGH EARTH FILL DIVERSION DIKES SHALL BE CONSTRUCTED ABOUT THE LIPS OF FILL SLOPES ON THE R.O.W. CONCURRENTLY WITH THE INITIAL GRADING AND DIRECTED TO UNDISTURBED SOO AREAS AT THE END OF EACH DAY.
 - CONTRACTOR TO NOTIFY THE HOWARD COUNTY DEPT. OF INSPECTIONS AND PERMITS AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE NO. 992-2436.
 - ALL DISTURBED SLOPE AREAS TO BE STABILIZED AS SOON AS GRADING IS COMPLETED.
 - ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3500 P.S.I..
 - ALL SWALES AND SLOPES SHALL BE PERMANENTLY SEEDED. SEE THE SEED SPECIFICATIONS ON SHEET 13.
 - TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1981 REVISED EDITION.
 - POLY-FILTER-X OR EQUAL SHALL BE PLACED UNDER ALL STONE RIP RAP (FULL WIDTH AND LENGTH OF STONE).
 - STONE FOR RIP RAP SHALL BE AS SPECIFIED ON THE DRAWINGS. ALL RIP RAP SHALL BE UNPAVED, EXCEPT WHERE NOTED.
 - STUBS FOR 6" P.V.C. UNDERDRAIN PIPE TO BE INSTALLED AT CENTER OF EACH WALL OF EVERY INLET.
 - Contractor shall notify the following utilities or agencies at least five (5) working days before starting work shown on these plans:
 - State Highway Administration - 531-5533
 - Baltimore Gas & Electric Company - Underground Electric Distribution Customer Service - 685-0123
 - Baltimore Gas & Electric Company - Underground Gas Distribution Customer Service - 685-0123
 - Chesapeake & Potomac Telephone Company - 725-9976
 - American Telephone & Telegraph - Cable Location Division - 393-3553
 - Street Trees (204 Total) - The location type and number of trees shown on this plan are tentative and are used for bond purposes only. The final location and variety of trees may vary to accommodate field conditions and builders landscape program. Bond release is contingent upon Section 15.31 of the Howard County Subdivision Regulations, as approved by the Office of Planning and Zoning.
 - Stormwater Management for this project has been waived per P-85-15. PARCEL "A" AND A PORTION OF PARCEL "B" WILL BE REQUIRED TO PROVIDE STORMWATER MANAGEMENT FACILITIES AT THEIR SITE.
 - PROVIDE 250 WATT MERCURY VAPOR LAMP (SHOWN THIS IS) PENDANT MOUNTED FIXTURES ON 30 FT. ALUMINUM BRONZE POLE TO BE LOCATED AT STA. 16+00 LT., STA. 20+00 LT., STA. 24+50 LT., STA. 29+10 LT., STA. 33+20 LT., STA. 38+10 LT., STA. 43+00 LT., STA. 47+60 LT. AND STA. 52+10 LT.

VILLAGE OF DORSEY'S SEARCH

SECTION 3 AREA I PHASE I

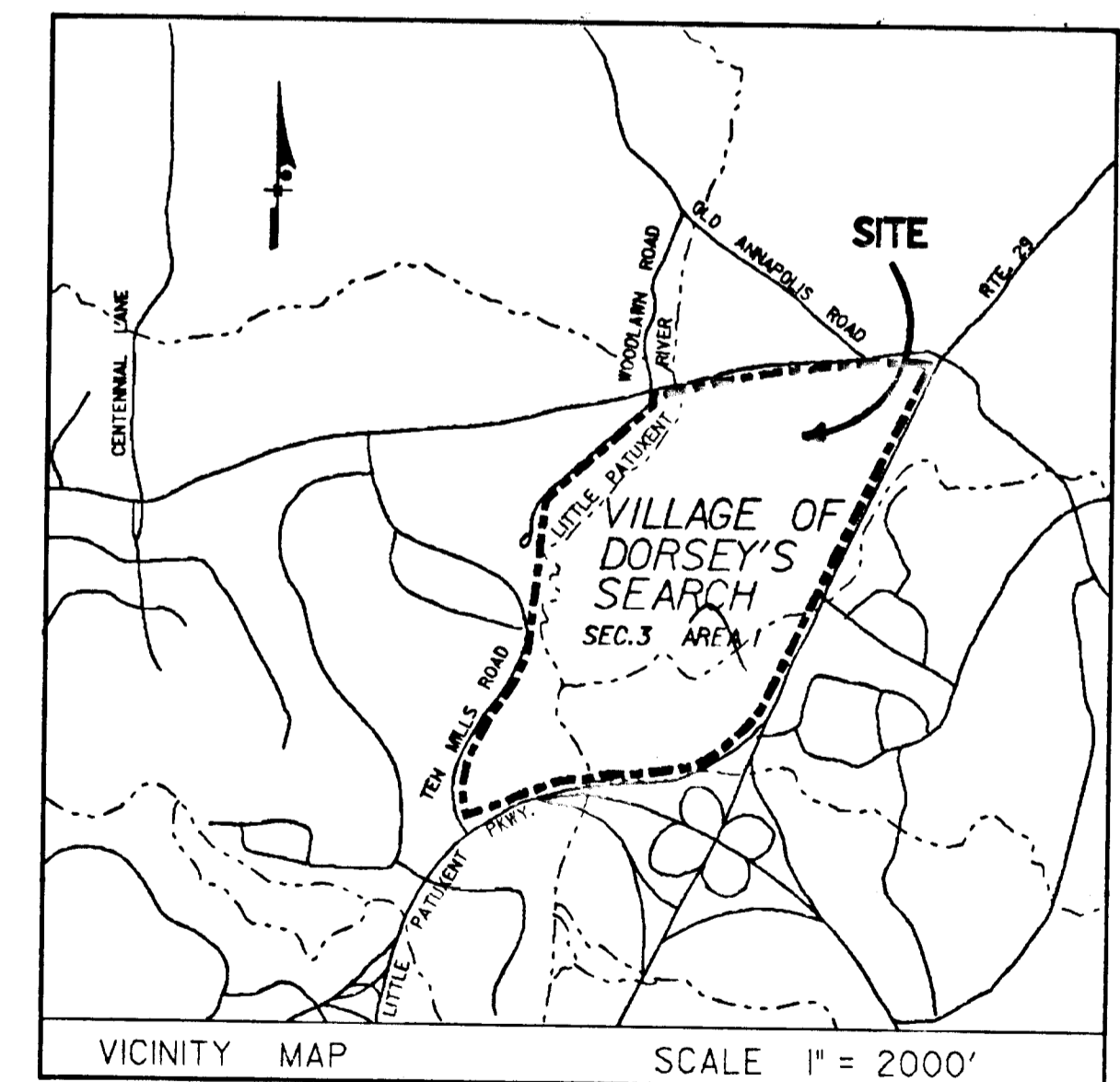
COLUMBIA, MARYLAND

CONTRACT NO. 1

ROAD CONSTRUCTION DRAWINGS

PHASE I STA. 11+25 TO STA. 54+40

FIFTH ELECTION DISTRICT - HOWARD CO., MARYLAND



NOTE:
AS-BUILT SURVEY CERTIFIED
BY RICHARD F. LAKE P.E. No. 301
JANUARY 6, 1988

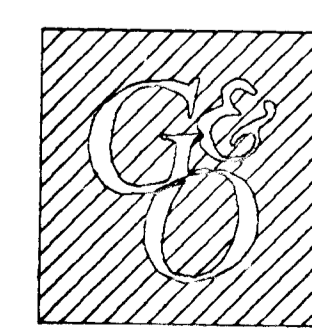
Bruce D. Boltz
BRUCE D. BOLTZ
MD. P.E. 12232

DEPARTMENT OF PUBLIC WORKS
Melinda Johnson
CHIEF, BUREAU OF ENGINEERING
DATE 11-5-85

DEPARTMENT OF PLANNING AND ZONING
Richard F. Lane
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
DATE 11-1-85

THE HOWARD RESEARCH & DEVELOPEMENT CORPORATION
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
(301) 992-6084

No.	REVISION	DATE	BY
1	REVISED PHASE NO. AS PER HOWARD CO. REVIEW	12-10-85	PLP



ENGINEERS-ARCHITECTS-PLANNERS-SCIENTISTS-SURVEYORS-PHOTOGRAMMETRISTS
GREENHORNE & O'MARA, INC.
2 RESEARCH PLACE ROCKVILLE, MD. 20850
(301) 948-0900
ANNAPOLIS, MD-ATLANTA, GA-BECKLEY, WV-CULPEPER, VA-DENVER, CO-FAIRFAX, VA
GREENSBORO, NC-MONROE, MI-N. HUNTINGDON, PA-ROCKVILLE, MD-WILLISTON PARK, NY

RHM DESIGN	SCALE AS SHOWN
CADD	
DRAWN GSK	1 OF 17
BOB CHECKED	SHEET
JUNE 85 DATE	R-1186-X FILE NO.

DATE	
BY	
NOTED	
PLANNED	
DESIGNED	
DRAWN	
CHECKED	
APPROVED	

DATE	
BY	
NOTED	
PLANNED	
DESIGNED	
DRAWN	
CHECKED	
APPROVED	

CURVE DATA	
R	700.00'
Δ	53°16'57"
A	650.97'
T	351.17'
CHD.	N58°15'07"E
E	627.76'
PC	13+44.38
PT	13+95.30

NOTE:
AS-BUILT SURVEY CERTIFIED
BY RICHARD F. LANE
P.E. No. 301
JAN. 6, 1988

DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
ZONING ADMINISTRATOR

DATE	NO.	REVISION DESCRIPTION
12-10-85	1	REVISED PHASE NO. IN TITLE BLOCK

COLUMBIA
VILLAGE OF DORSEY'S SEARCH
SECTION 3 AREA 1
PHASE - 1
ELECTION DISTRICT NO. 5 HOWARD COUNTY, MD.

OWNER & DEVELOPER
THE HOWARD RESEARCH & DEVELOPMENT CORP.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MD. 21044
(301) 992-6000

GREENHORNE AND O'MARA, INC.
ENGINEERS ARCHITECTS PLANNERS SURVEYORS
#2 RESEARCH PLACE ROCKVILLE, MARYLAND 20850
(301) 323-1929

AREA TAX MAP NO. 30
PARCELS 124, 224 & 210

TITLE
GRADE ESTABLISHMENT
STORM DRAINAGE AND PAVING PLAN

DESIGNED BY: RHM	SCALE: 1"=50'	PROJECT NO.
DRAWN BY: JDP	DATE: JUNE, 85	DRAWING NUMBER
CHECKED BY: BDB	APPROVED:	2 OF 17

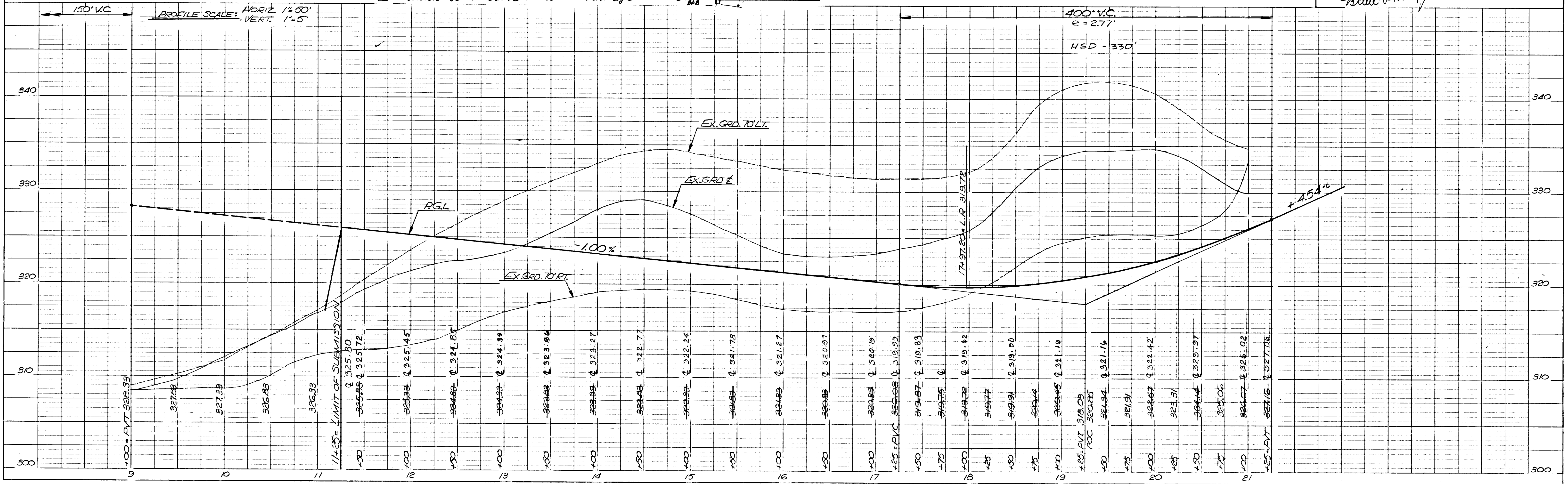
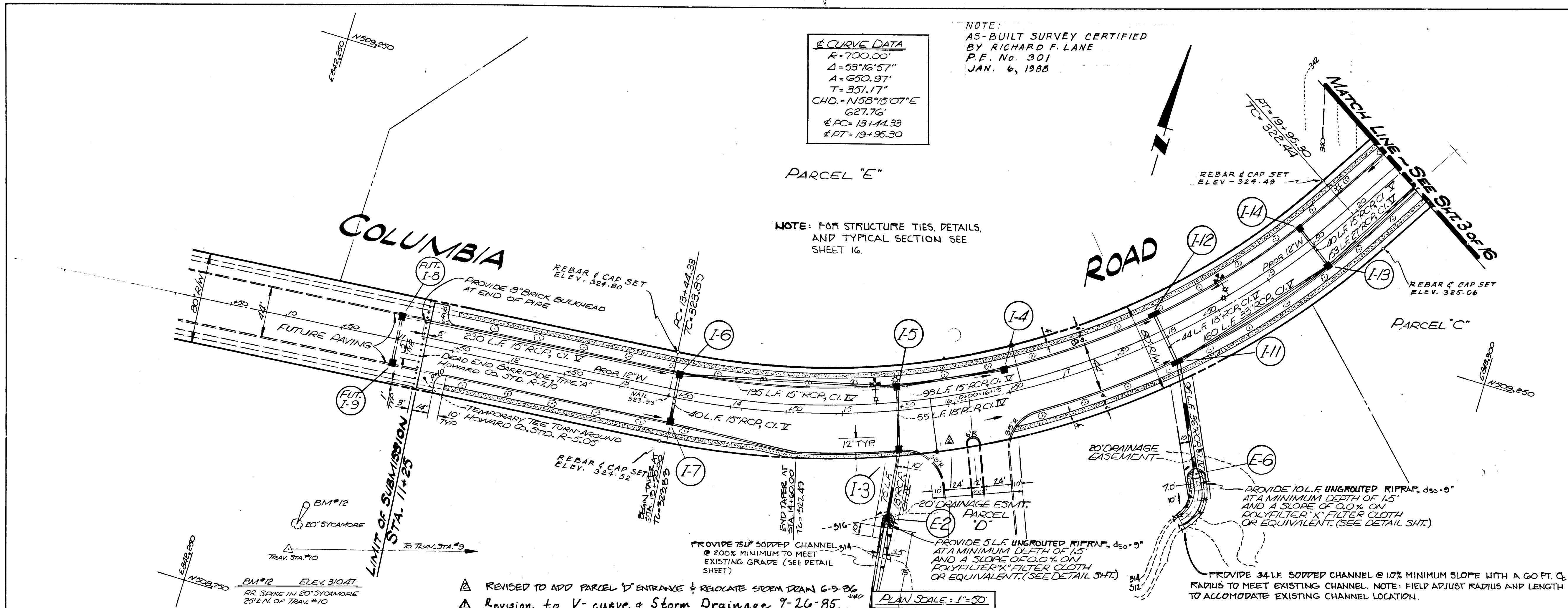
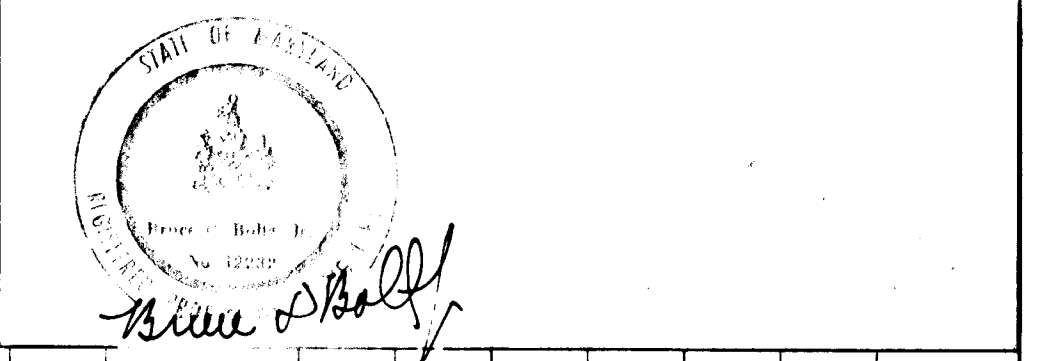


PLATE 1 PLAN-PROFILE OF P.A. & R.E. STANDARD
BY ZONEN CORPORATION
PRINTED IN U.S.A.

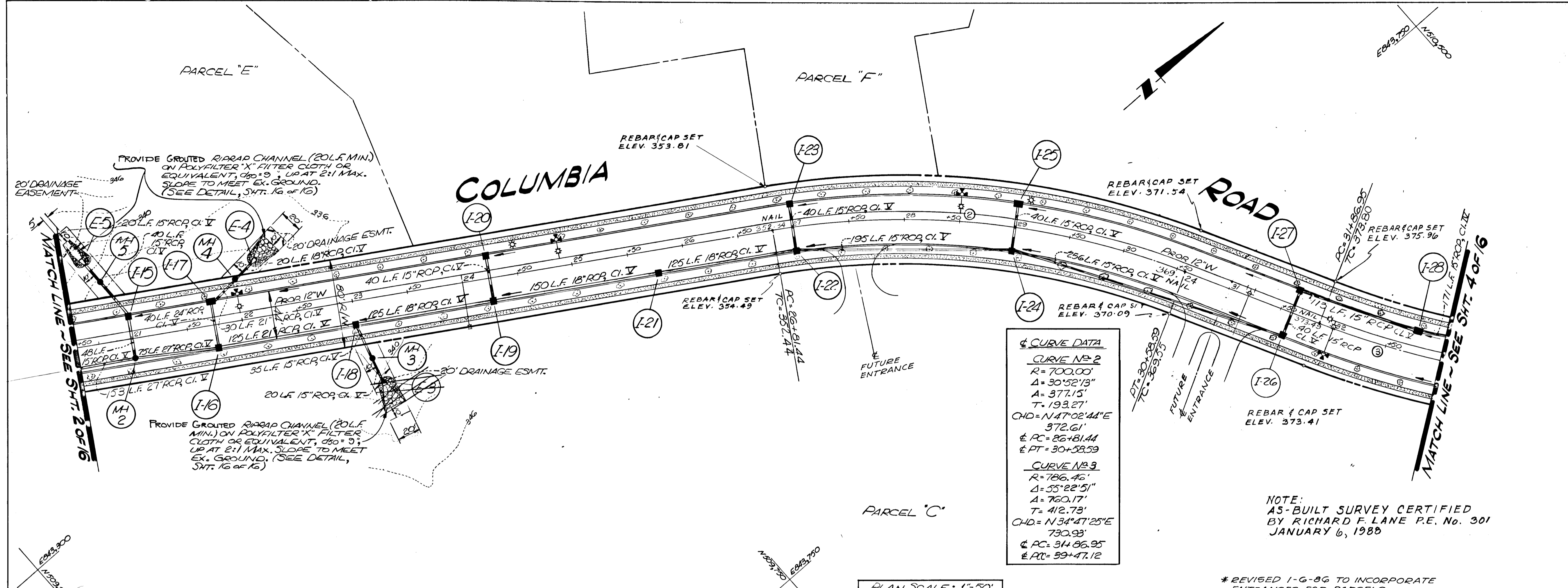
#1159

R-1186-X

F-86-26

DATE	
BY	
NO.	
REVISIONS	
NO.	
DATE	
BY	
NO.	
DATE	
BY	
NO.	
DATE	
BY	
NO.	

DATE	
BY	
NO.	
REVISIONS	
NO.	
DATE	
BY	
NO.	
DATE	
BY	
NO.	



CURVE DATA

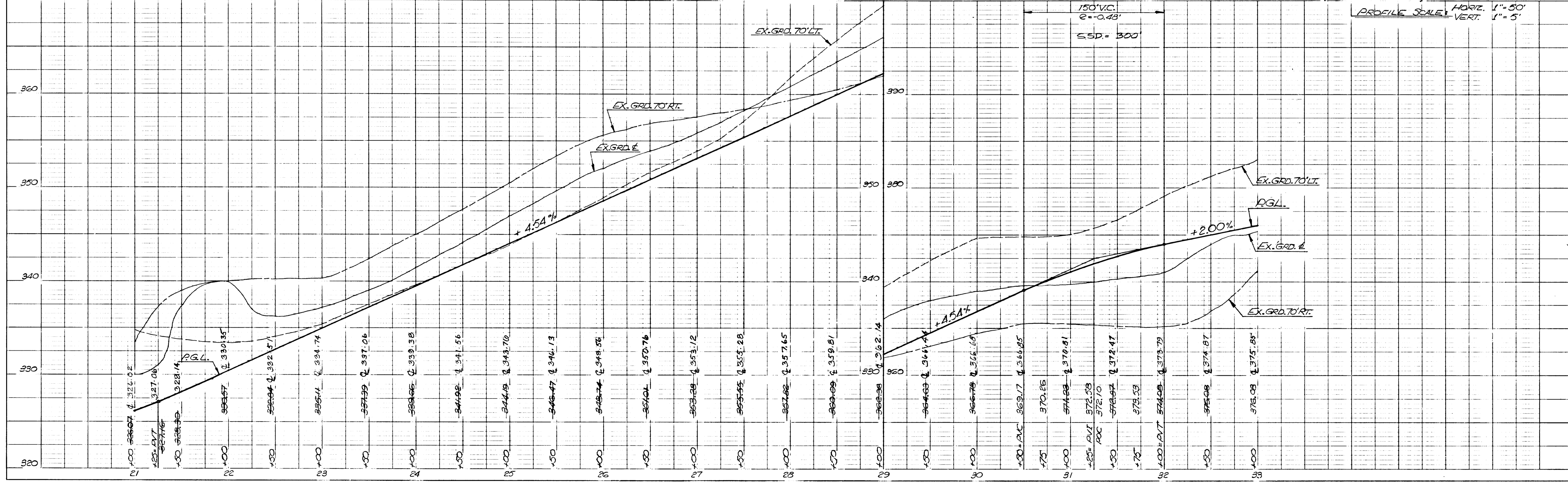
CURVE NO. 2
 R=700.00
 Δ=30°52'13"
 A=377.15'
 T=193.27'
 QHD=N47°02'44"E
 372.61'
 E PC=26+81.44
 E PT=30+58.59

CURVE NO. 3
 R=786.46'
 Δ=33°22'51"
 A=760.17'
 T=412.73'
 QHD=N34°47'25"E
 730.93'
 E PC=314+86.95
 E PT=39+47.12

NOTE:
 AS-BUILT SURVEY CERTIFIED
 BY RICHARD F. LANE P.E. No. 301
 JANUARY 6, 1988

PLAN SCALE: 1"=50'

* REVISED 1-G-86 TO INCORPORATE
 ENTRANCES FOR PARCELS



DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 CHIEF, DIV. OF LAND DEVELOPMENT & ZONING ADMINISTRATION
 DATE: 11-1-85

1/10/86	1	S.D. REVISIONS
12-10-85	1	REVISED PAGE NO. IN TITLE BLOCK
DATE	NO.	REVISION DESCRIPTION

COLUMBIA VILLAGE OF DORSEY'S SEARCH SECTION 3 AREA 1 PHASE - I
 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MD.
 OWNER & DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD. 21044
 (301) 992-6000

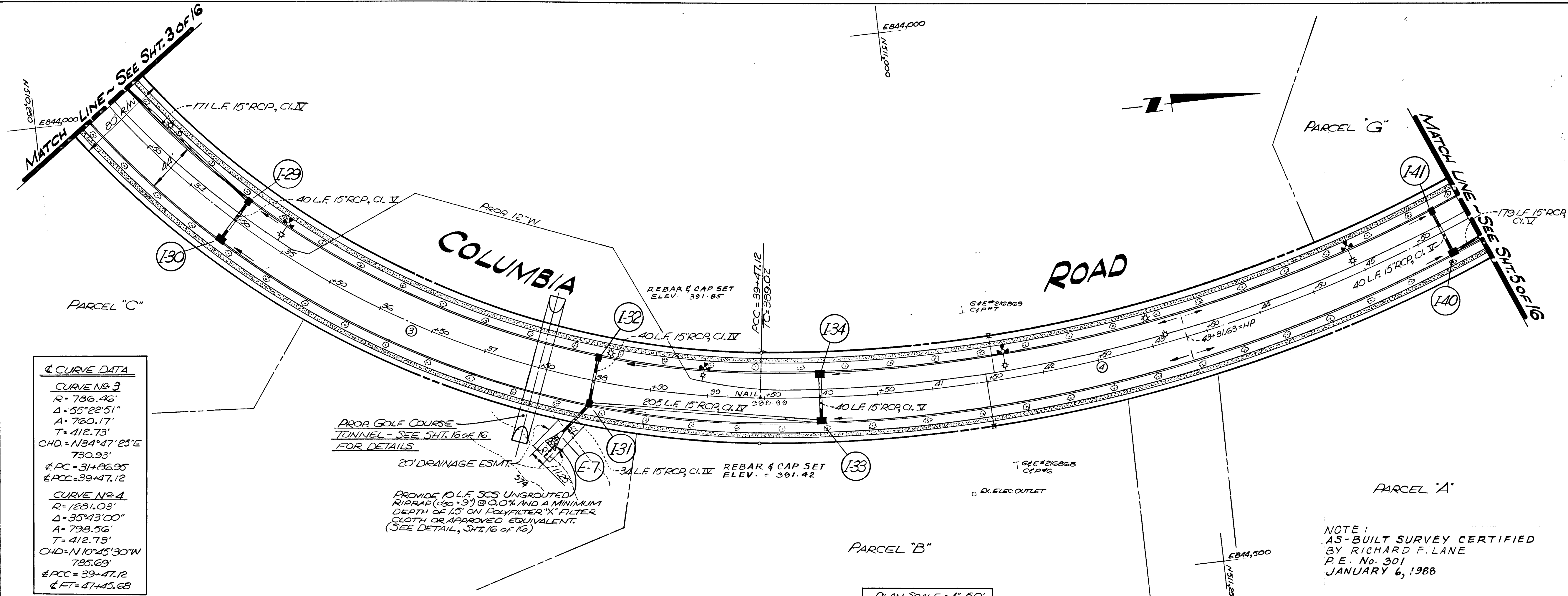
GREENHORNE AND O'MARA, INC.
 ENGINEERS ARCHITECTS PLANNERS SURVEYORS
 *2 RESEARCH PLACE ROCKVILLE, MARYLAND 20850
 (301) 323-1929

AREA TAX MAP NO. 30 PARCELS 124, 224 & 210

TITLE **GRADE ESTABLISHMENT STORM DRAINAGE AND PAVING PLAN**

DESIGNED BY: RHM	SCALE: 1"=50'	PROJECT NO.
DRAWN BY: JDP	DATE: JUNE, '85	DRAWING NUMBER
CHECKED BY: BDE	APPROVED:	3 OF 17

PROF. [Signature]
 PROFILE SCALE: HORIZ. 1"=50' VERT. 1"=5'



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

DATE: 11-8-89
 DATE: 11-8-89

12-10-85 DATE
 1 NO. REVISED PAGE NO. IN TITLE BLOCK
 REVISION DESCRIPTION

COLUMBIA VILLAGE OF DORSEY'S SEARCH
 SECTION 3 AREA 1
 PHASE - I
 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MD.

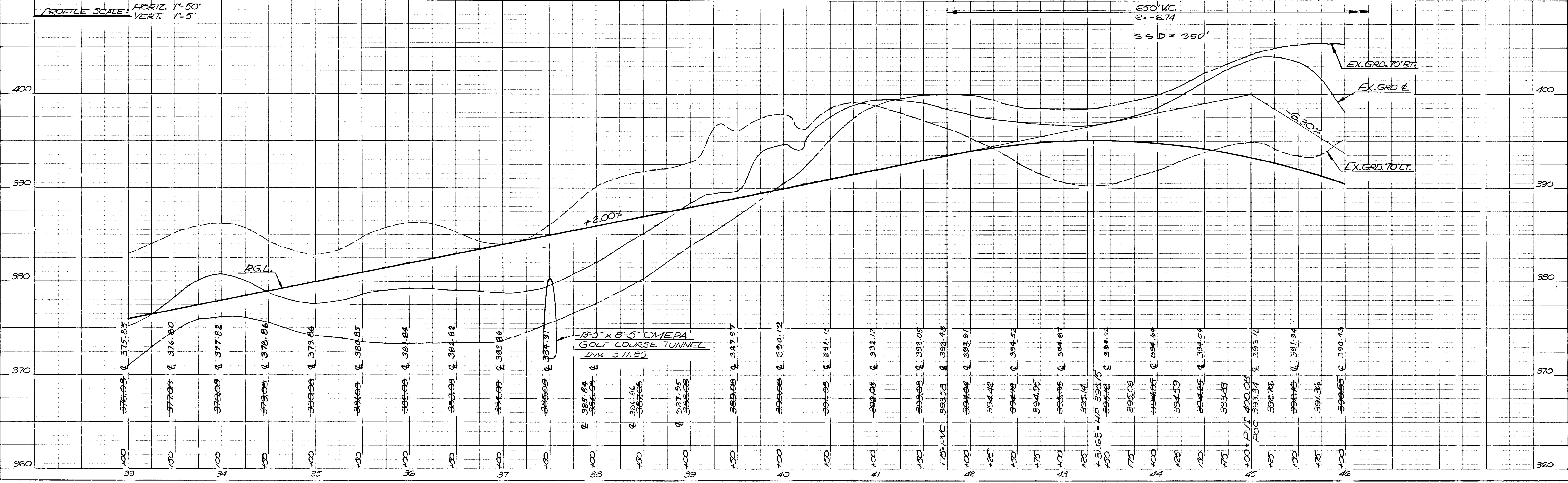
OWNER & DEVELOPER
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 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD. 21044
 (301) 992-6000

GREENHORNE AND O'MARA, INC.
 ENGINEERS ARCHITECTS PLANNERS SURVEYORS
 *2 RESEARCH PLACE ROCKVILLE, MARYLAND 20850
 (301) 323-1929

AREA TAX MAP NO. 30
 PARCELS 124, 224 & 210

TITLE
**GRADE ESTABLISHMENT
 STORM DRAINAGE AND PAVING PLAN**

DESIGNED BY: RHM SCALE: 1"=50' PROJECT NO.
 DRAWN BY: JDP DATE: JUNE, 85 DRAWING NUMBER
 CHECKED BY: BDB APPROVED: 4 OF 17



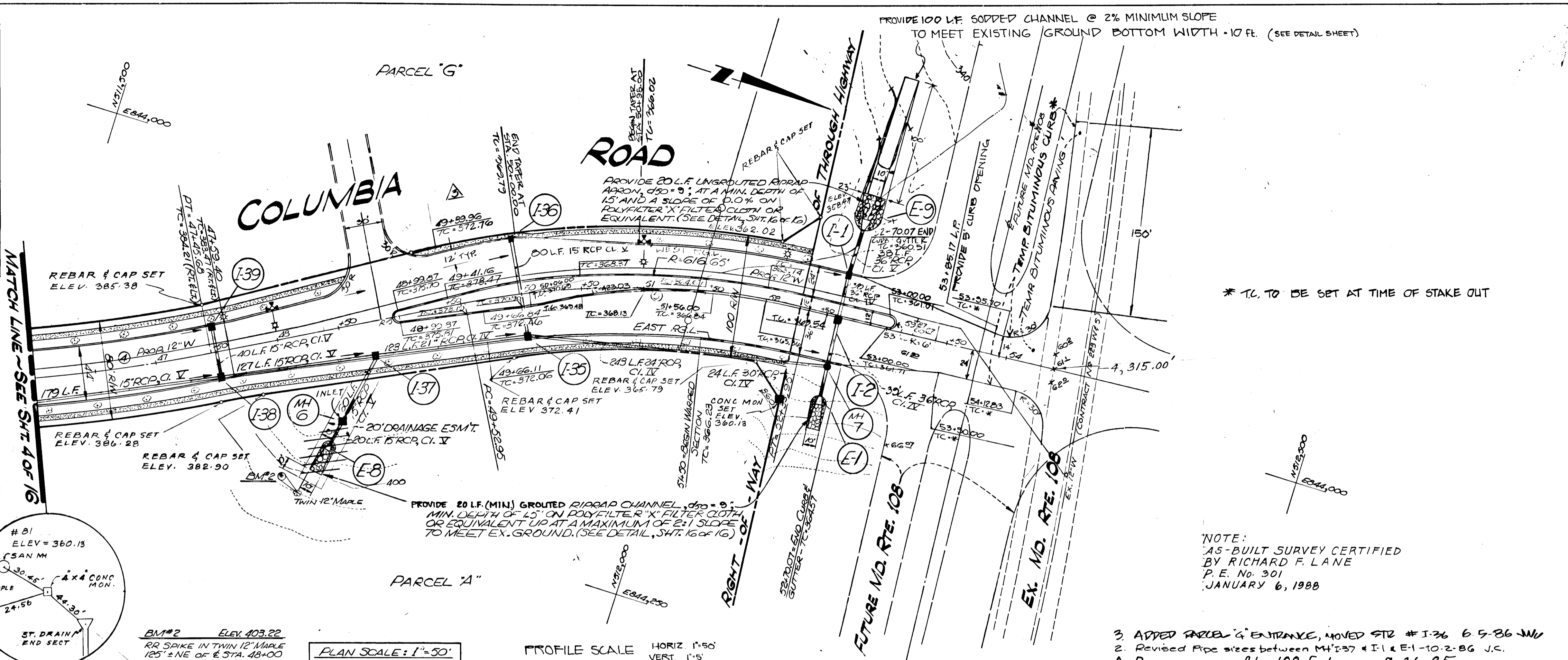
PLAN
 DATE
 BY
 CHECKED
 DATE
 NO.

PROFILE
 DATE
 BY
 CHECKED
 DATE
 NO.

CURVE DATA

CURVE NO. 4
 R = 1281.03'
 Δ = 35°43'00"
 A = 798.56'
 T = 412.73'
 CHD. = N10°45'30"W
 785.69'
 Δ PC = 39+47.12
 Δ PT = 47+45.68

CURVE NO. 5
 R = 650.00'
 Δ = 24°46'09"
 A = 281.00'
 T = 142.73'
 CHD. = N16°13'55"W
 278.81'
 Δ PC = 49+52.95
 Δ PT = 52+33.95



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

DATE: 11-85

REVISION PHASE NO. IN TITLE BLOCK
 REVISION DESCRIPTION

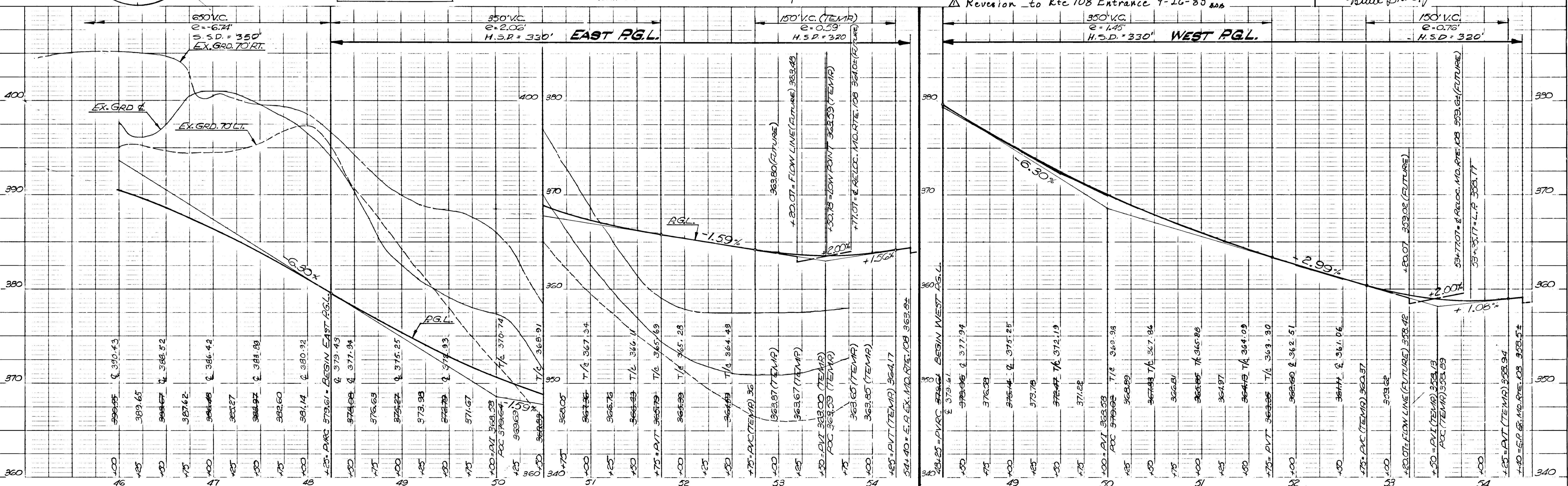
COLUMBIA VILLAGE OF DORSEY'S SEARCH SECTION 3 AREA 1
 PHASE - I
 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MD.

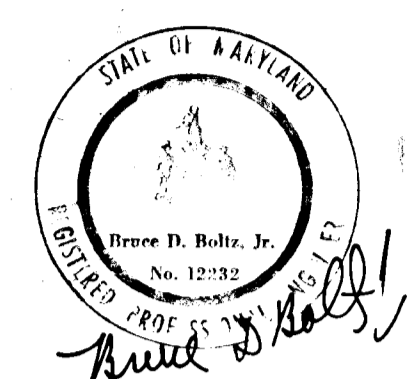
OWNER & DEVELOPER
 THE HOWARD RESEARCH & DEVELOPMENT CORP.
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 (301) 992-6000

GREENHORNE AND O'MARA, INC.
 ENGINEERS, ARCHITECTS, PLANNERS, SURVEYORS
 #2 RESEARCH PLACE ROCKVILLE, MARYLAND 20850
 (301) 323-1929

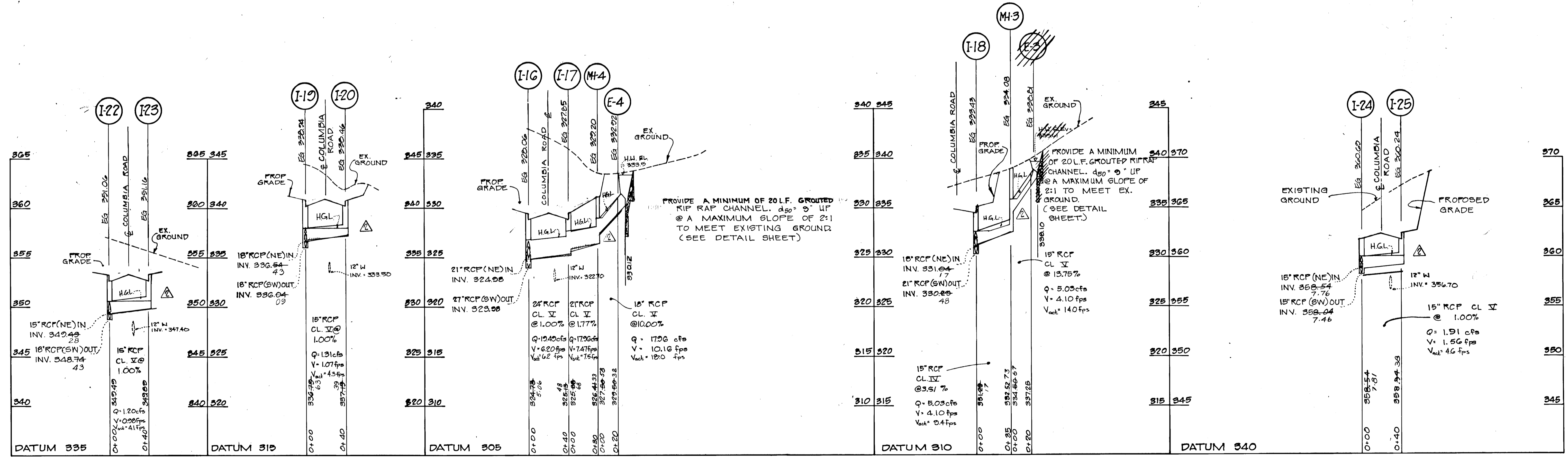
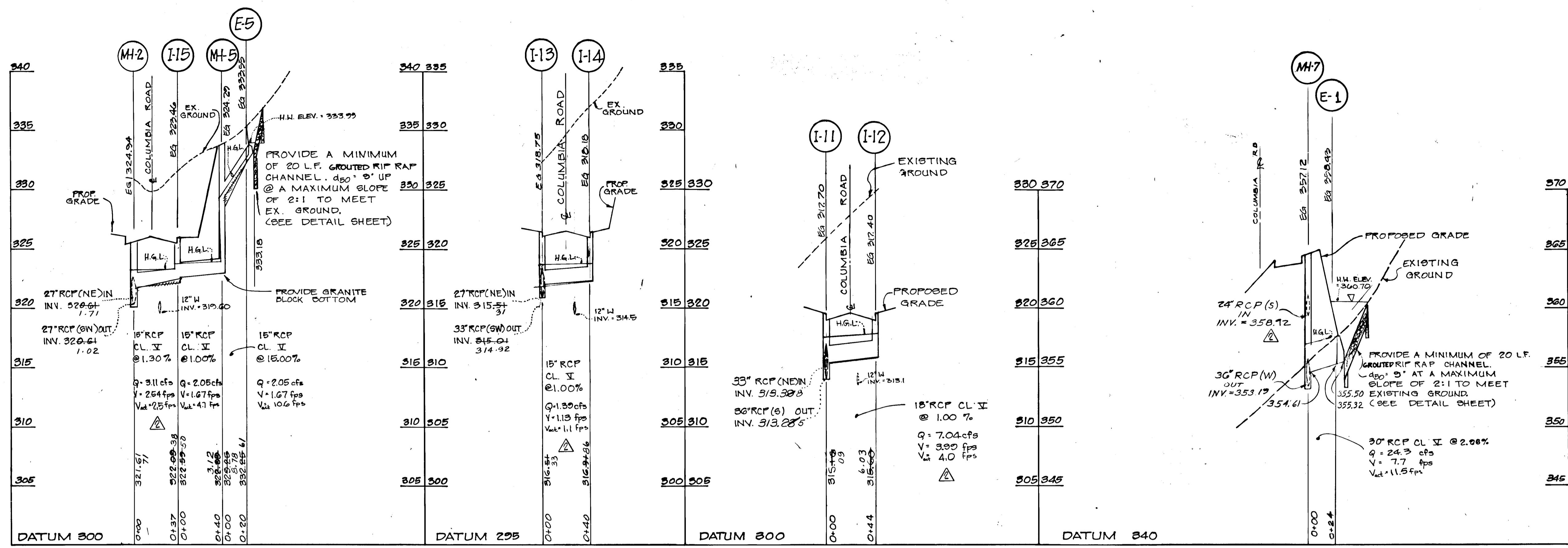
TITLE: **GRADE ESTABLISHMENT STORM DRAINAGE AND PAVING PLAN**

DESIGNED BY: RHM SCALE: 1" = 50' PROJECT NO.
 DRAWN BY: JDP DATE: JUNE, 85 DRAWING NUMBER
 CHECKED BY: BDB APPROVED: 5 OF 17





NOTE:
 AS-BUILT SURVEY CERTIFIED
 BY RICHARD F. LANE P.E. No. 301
 JANUARY 6, 1988



OWNER/DEVELOPER
 HOWARD RESEARCH & DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

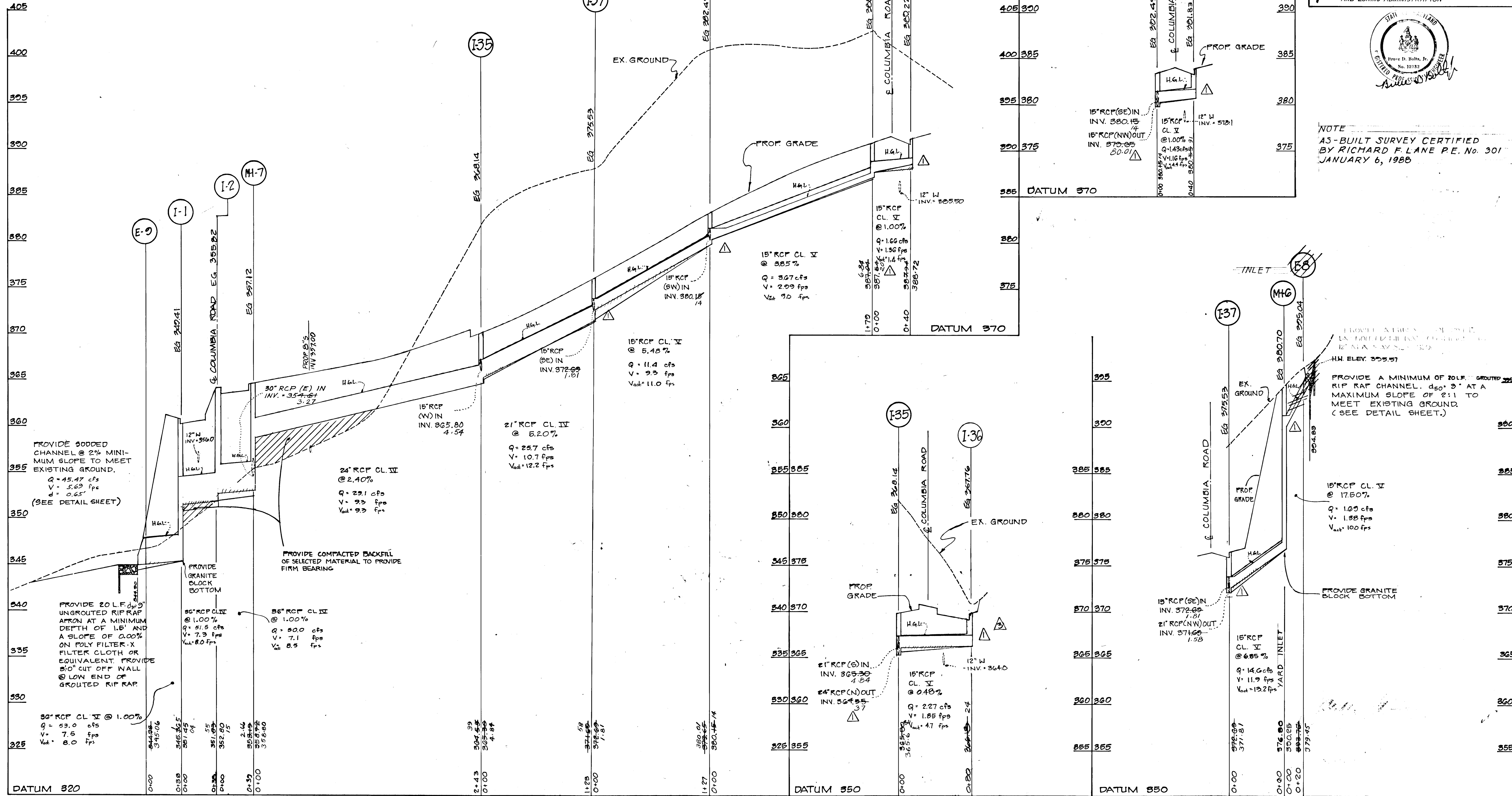
No.	REVISION	DATE	BY
3	REVISED MH 7 & E-1 & I-25	2-11-86	J.C.
2	REVISED HORIZONTAL PROFILES & DATA & PLACE NAME IN TITLE	12-19-85	BLP
1	Revision to I-11, 12, 13, 14 and Profiles	7/16-85	B.O.B.



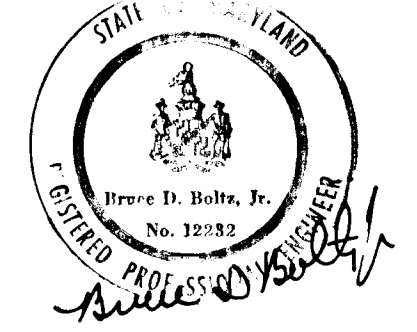
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6 STORM DRAIN PROFILES
COLUMBIA
 VILLAGE OF DORGEY'S SEARCH
 SECTION 3, AREA 1, PHASE 1
 TAX MAP 30 - PARCELS 124, 224 & 210
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

RHM/JWC DESIGN	HORIZ. 1" = 50'
JLM DRAWN	SCALE VERT. 1" = 6'
BDB CHECKED	6 OF 17 SHEET
JUNE 85 DATE	R-1186-X FILE No.
	JOB No.



DEPARTMENT OF PUBLIC WORKS
 11-5-85
 DATE
 CHIEF, BUREAU OF ENGINEERING
 DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 11-7-85
 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION



NOTE
 AS-BUILT SURVEY CERTIFIED
 BY RICHARD F. LANE P.E. No. 301
 JANUARY 6, 1988

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 HOWARD RESEARCH & DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

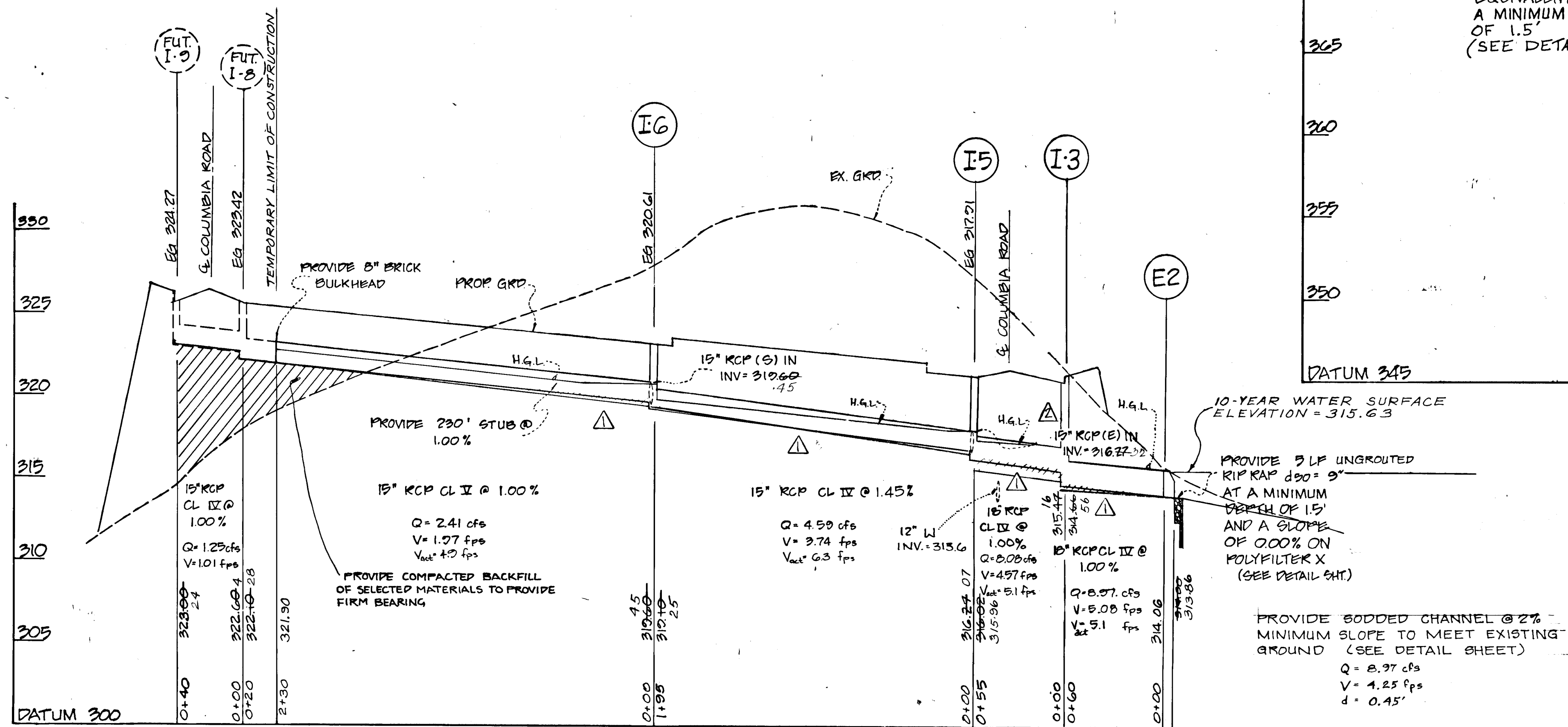
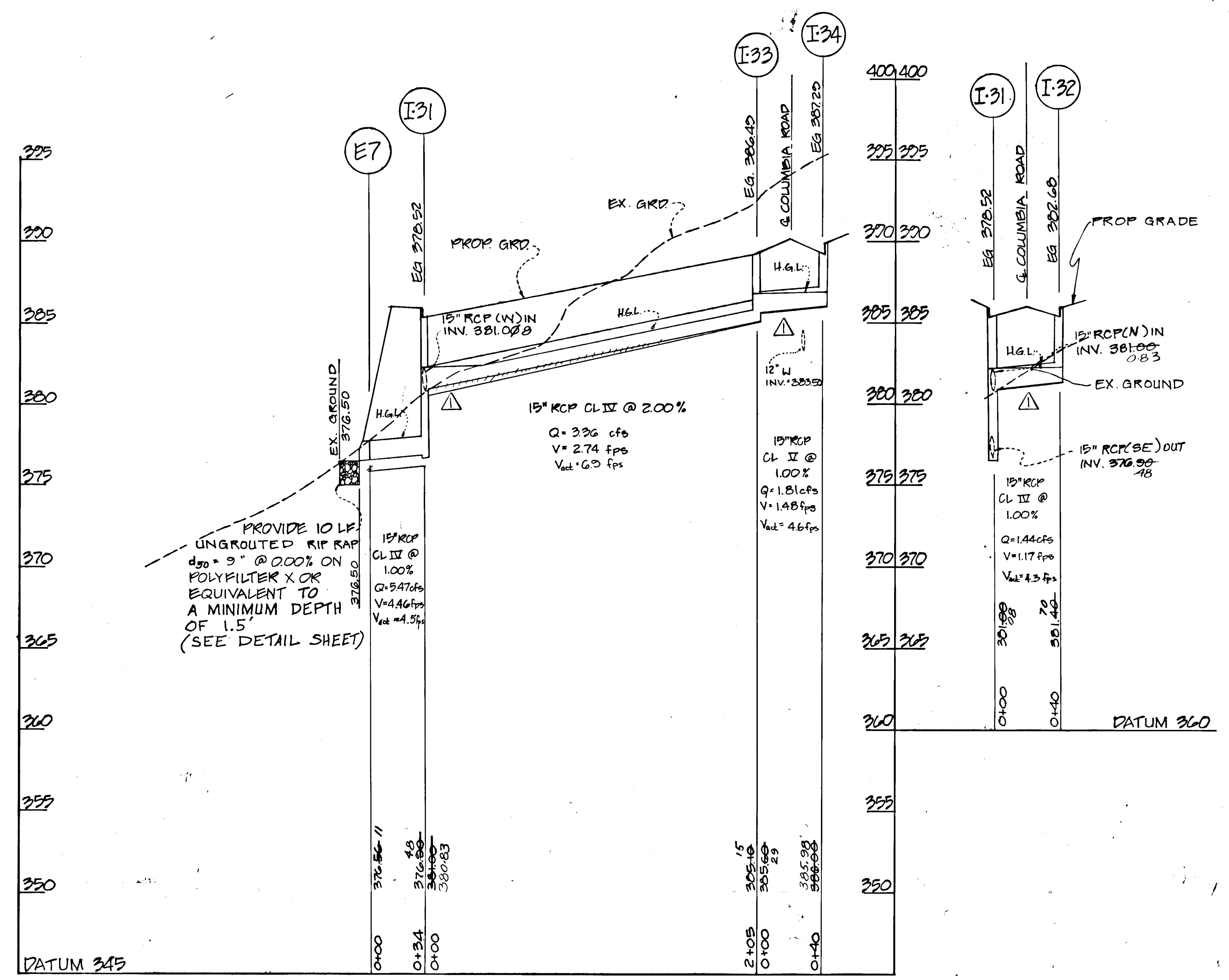
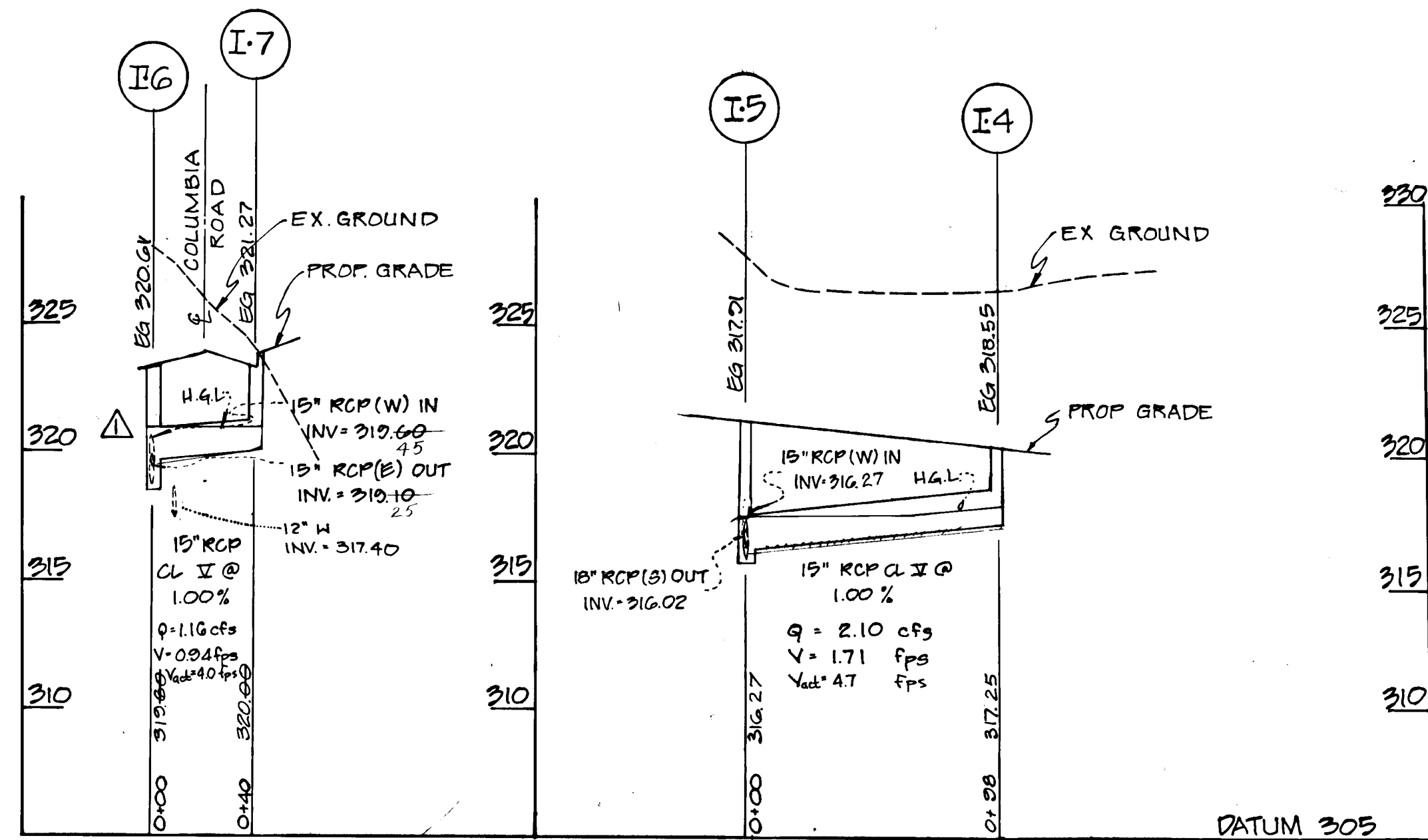
No.	REVISION	DATE	BY
1	REVISED H.G.L. ON PROFILES & DATA & PHASE NO. IN TITLE	12-10-85	BLF
2	REVISED STRUCTURE SIZES & ELEV.	2-11-86	J.C.
3	REVISED STRUCTURE I-36 LOCATION	6-28-86	JWL



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STORM DRAIN PROFILES
COLUMBIA
 VILLAGE OF DORSEY'S SEARCH
 SECTION 3, AREA 1, PHASE I
 TAX MAP 30 - PARCELS 124, 224 & 210
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

RHM/JWC DESIGN	HORIZ: 1"=50'
JLM DRAWN	SCALE VERT: 1"=5'
BDB CHECKED	7 OF 17 SHEET
JUNE 85 DATE	R-1186-X FILE No.
JOB No.	



AS-BUILT SURVEY CERTIFIED BY RICHARD F. LANE P.E. 301 JANUARY 6, 1988

DEPARTMENT OF PUBLIC WORKS
 CHIEF BUREAU OF ENGINEERING
 DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 DATE: 11-1-85

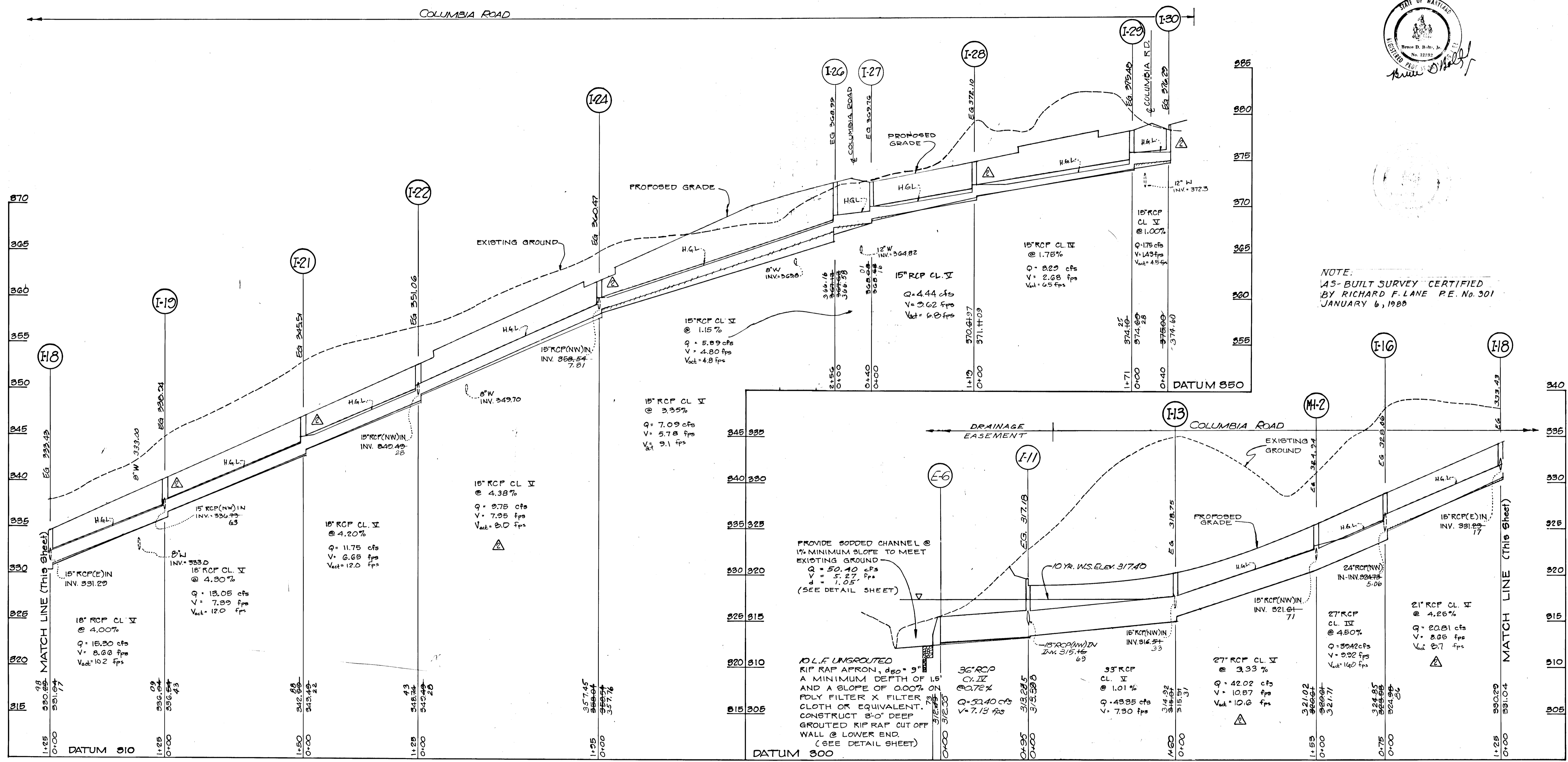
OWNER/DEVELOPER
 HOWARD RESEARCH & DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

No.	REVISION	DATE	BY
2	REVISED SIZ INLET I-2 FOR PARCEL D ENTRANCE 6.3' EX JWC		JWC
1	REVISED HGL ON PROFILES & PAGE NO. IN TITLE	12-10-85	BLF

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GREENHORNE & O'MARA, INC.
 2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
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STORM DRAIN PROFILES
COLUMBIA
 VILLAGE OF DORSEY'S SEARCH
 SECTION 3, AREA 1, PHASE 1
 TAX MAP 30 - PARCELS 124, 224 & 210
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

RHM/JWC DESIGN
 ADJ DRAWN
 BDB CHECKED
 SHEET 8 OF 17
 DATE: JUNE 05
 JOB No. R-118G-X
 FILE No.



NOTE:
 AS-BUILT SURVEY CERTIFIED
 BY RICHARD F. LANE P.E. No. 301
 JANUARY 6, 1985

OWNER/DEVELOPER
 HOWARD RESEARCH & DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

No.	REVISION	DATE	BY
3	Revised between MH-2 I-24 & I-28	2-10-86	J.C.
2	REVISED H.G.L. ON PROFILES & DATA & PHASE NO. IN TITLE	12-10-85	BLP
1	Revision to I-11, 13, MH-2 and B-C	9-26-85	BDG

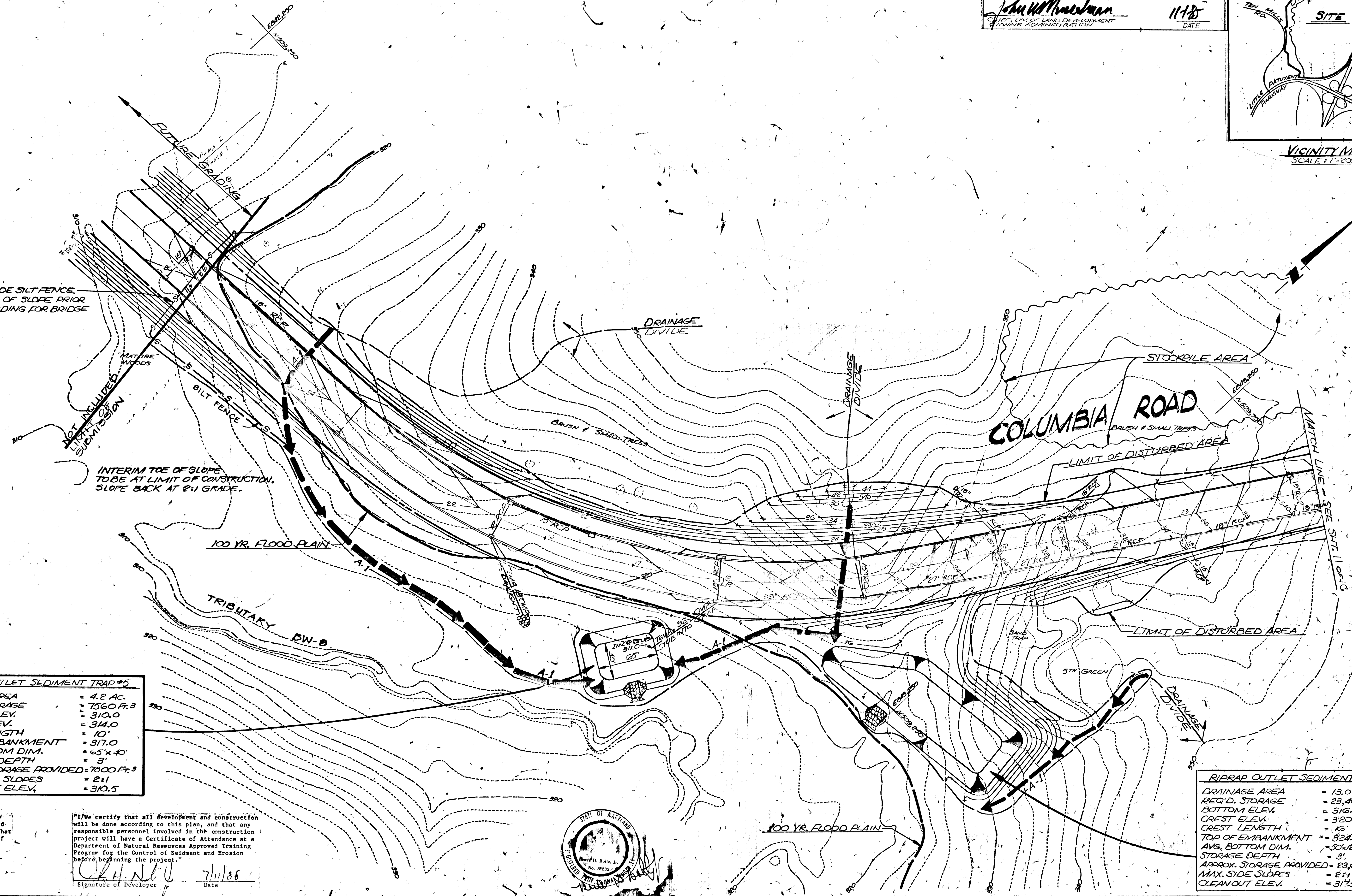
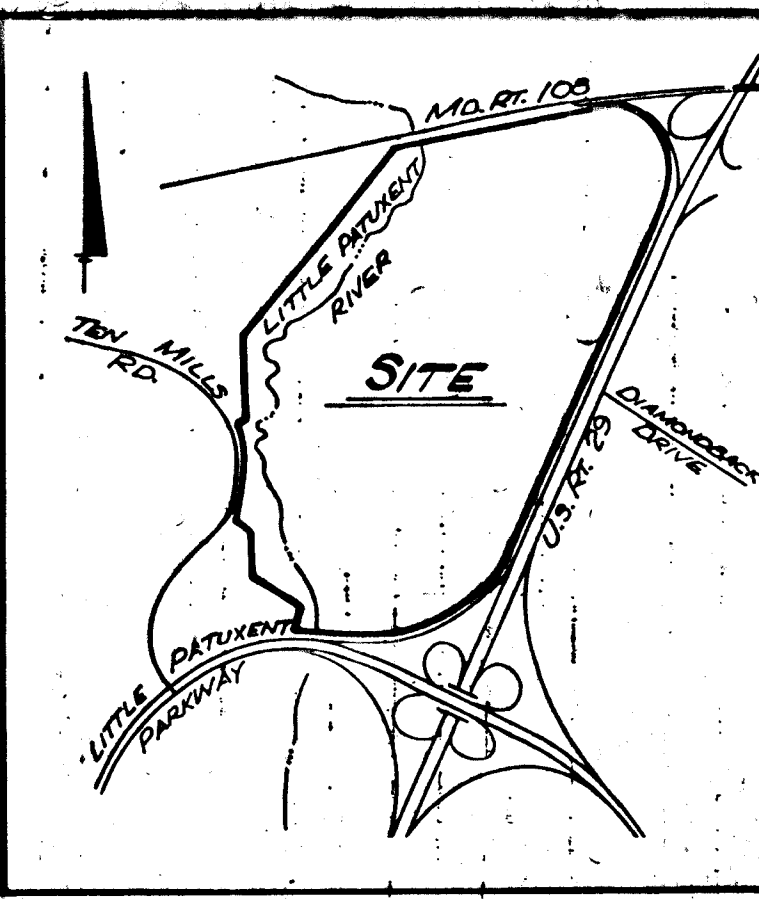


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STORM DRAIN PROFILES
COLUMBIA
 VILLAGE OF DORSEY'S SEARCH
 SECTION 3, AREA 1, PHASE 1
 TAX MAP 30 - PARCELS 124, 224 & 210
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

RHM/JWC DESIGN	SCALE	HORIZ.: 1"=50'
JLM DRAWN		VERT.: 1"=5'
BDB CHECKED		9 OF 17
JUNE, 85 DATE		SHEET
	JOB No.	R-11801
		FILE No.

DEPARTMENT OF PUBLIC WORKS
William H. ... 11/5/85
 CHIEF, BUREAU OF ENGINEERING DATE
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John W. ... 11/18/85
 CHIEF, DIV. OF LAND DEVELOPMENT & ZONING ADMINISTRATION DATE



PROVIDE SILT FENCE @ TOE OF SLOPE PRIOR TO GRADING FOR BRIDGE

INTERIM TOE OF SLOPE TO BE AT LIMIT OF CONSTRUCTION. SLOPE BACK AT 2:1 GRADE.

Reviewed for HOWARD S.C.D.
 Name
 and needs Technical Requirements.
Stephen L. Huber 11/1/85
 Soil Conservation Date
 Service
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
Stephen L. Huber 11/1/85
 Soil Conservation Date
 Service

RIPRAP OUTLET SEDIMENT TRAP #5

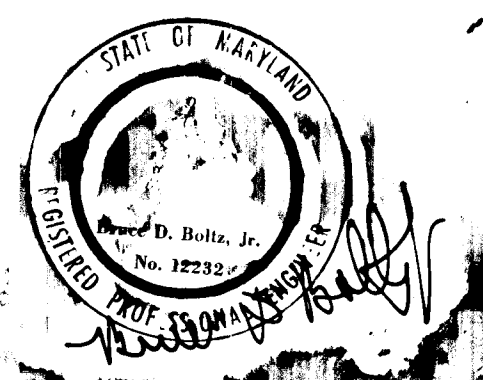
DRAINAGE AREA	= 4.2 AC.
REQ'D. STORAGE	= 7560 FT. ³
BOTTOM ELEV.	= 310.0
CREST ELEV.	= 314.0
CREST LENGTH	= 10'
TOP OF EMBANKMENT	= 317.0
AVG. BOTTOM DIM.	= 65' x 40'
STORAGE DEPTH	= 3'
APPROX. STORAGE PROVIDED	= 7500 FT. ³
MAX. SIDE SLOPES	= 2:1
CLEANOUT ELEV.	= 310.5

RIPRAP OUTLET SEDIMENT TRAP #4

DRAINAGE AREA	= 13.0 AC.
REQ'D. STORAGE	= 23,400 FT. ³
BOTTOM ELEV.	= 316.0
CREST ELEV.	= 320.0
CREST LENGTH	= 16'
TOP OF EMBANKMENT	= 324.0
AVG. BOTTOM DIM.	= 80' x 20' 1/2 x 50' x 75'
STORAGE DEPTH	= 3'
APPROX. STORAGE PROVIDED	= 23,625 FT. ³
MAX. SIDE SLOPES	= 2:1
CLEANOUT ELEV.	= 317.5

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.
Bruce D. Boltz, Jr. July 3, 1985
 Signature of Engineer Date
 BRUCE D. BOLTZ, JR.

I certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project.
CH. NELSON 7/11/85
 Signature of Developer Date



OWNER/DEVELOPER
 HOWARD RESEARCH & DEVELOPMENT CORP
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21043

No.	REVISION	DATE	BY
2	REVISED PHASE NO. IN TITLE	12-10-85	BUP
1	Revisions to the Storm Drainage	7/24/85	BDD



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GREENHORNE & O'MARA, INC.
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SEDIMENT CONTROL PLAN (STREETS ONLY)
COLUMBIA
 VILLAGE OF DORSEY'S SEARCH
 SECTION 3, AREA 1, PHASE 1
 TAX MAP 30 - PARCELS 124, 224 & 210
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

KHM DESIGN	SCALE	1"=50'
J.D.P. DRAWN		10 OF 17
B.D.B. CHECKED	SHEET	
MAY '85 DATE	JOB No.	R-1136-X
	FILE No.	

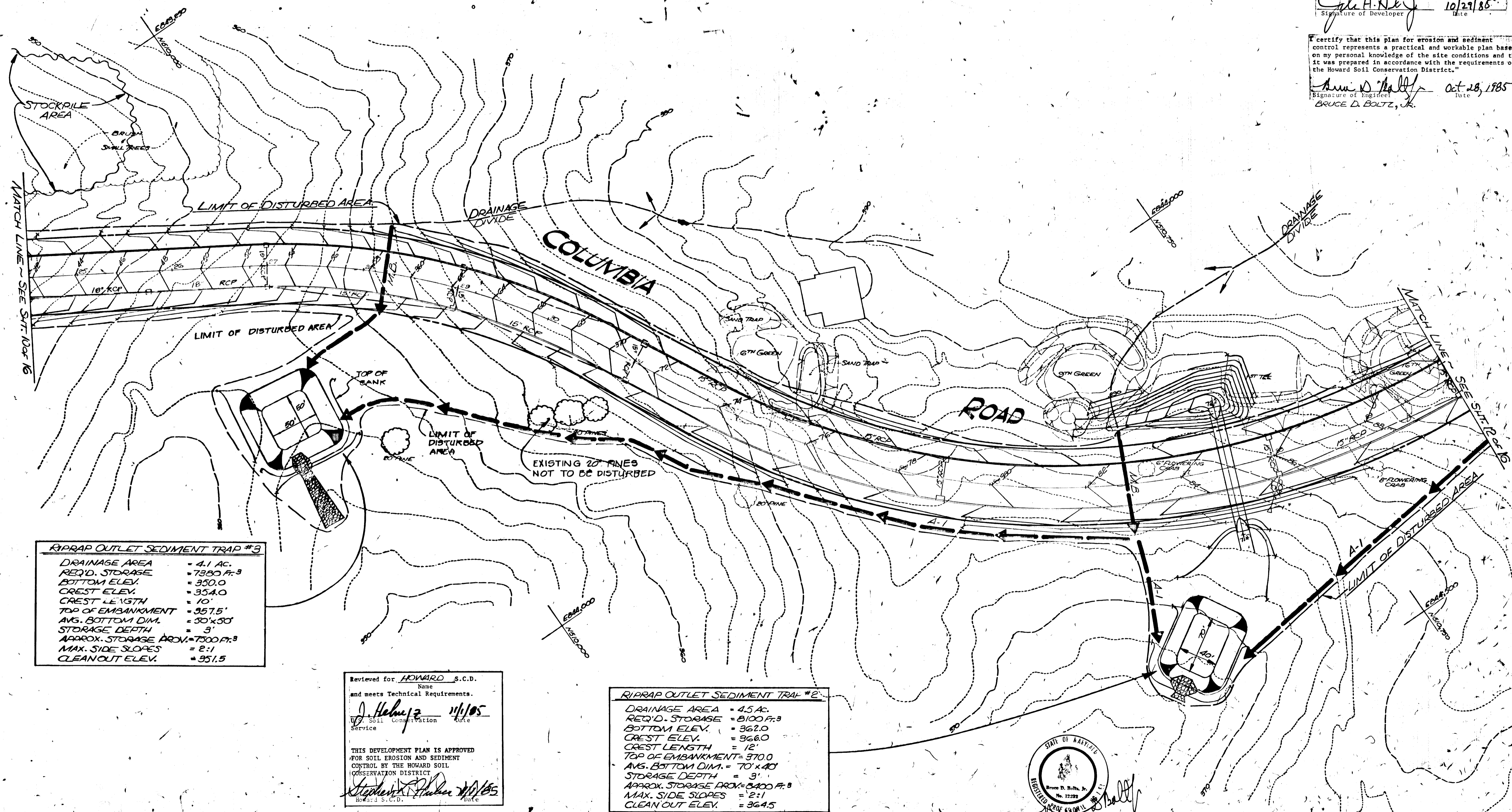
AS-BUILT 1-6-88

F-86-26

DEPARTMENT OF PUBLIC WORKS
Walter W. F.
 CHIEF, BUREAU OF ENGINEERING DATE 11-85
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John M. ...
 CHIEF, DIV. OF LAND & DEVELOPMENT DATE 11-85
 PLANNING ADMINISTRATION

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project."
Gale H. Neij 10/27/85
 Signature of Developer Date

"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."
Bruce D. Boltz, Jr. Oct 28, 1985
 Signature of Engineer Date
 BRUCE D. BOLTZ, JR.



RIPRAP OUTLET SEDIMENT TRAP #3
 DRAINAGE AREA = 4.1 AC.
 REQ'D. STORAGE = 7350 FT.³
 BOTTOM ELEV. = 350.0
 CREST ELEV. = 354.0
 CREST LENGTH = 10'
 TOP OF EMBANKMENT = 357.5'
 AVG. BOTTOM DIM. = 50' x 30'
 STORAGE DEPTH = 3'
 APPROX. STORAGE PROV. = 7000 FT.³
 MAX. SIDE SLOPES = 2:1
 CLEAN OUT ELEV. = 351.5

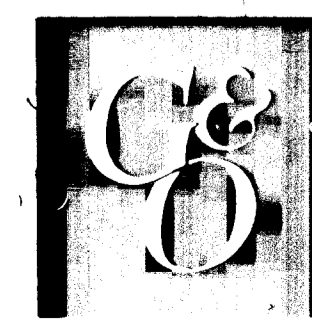
Reviewed for HOWARD S.C.D.
 Name
 and meets Technical Requirements.
J. Helms 11/1/85
 Soil Conservation Service
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
Stephen A. Fisher 11/1/85
 Board S.C.D. Date

RIPRAP OUTLET SEDIMENT TRAP #2
 DRAINAGE AREA = 4.5 AC.
 REQ'D. STORAGE = 8100 FT.³
 BOTTOM ELEV. = 362.0
 CREST ELEV. = 366.0
 CREST LENGTH = 12'
 TOP OF EMBANKMENT = 370.0
 AVG. BOTTOM DIM. = 70' x 40'
 STORAGE DEPTH = 3'
 APPROX. STORAGE PROV. = 8400 FT.³
 MAX. SIDE SLOPES = 2:1
 CLEAN OUT ELEV. = 364.5



OWNER / DEVELOPER
 HOWARD RESEARCH & DEVELOPMENT CORP
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21043

No.	REVISION	DATE	BY
1	REVISED PHASE NO. IN TITLE	12-10-85	ELP



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SEDIMENT CONTROL PLAN (STREETS ONLY)
COLUMBIA
 VILLAGE OF DORSEY'S SEARCH
 SECTION 3, AREA 1, PHASE 1
 TAX MAP 30 - PARCELS 124, 224 & 210
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

RHM DESIGN	SCALE 1" = 50'
JDP DRAWN	11 OF 17
ELP CHECKED	SHEET
MAY '85 DATE	R-1186-X FILE No.

RIPRAP OUTLET SEDIMENT TRAP #1

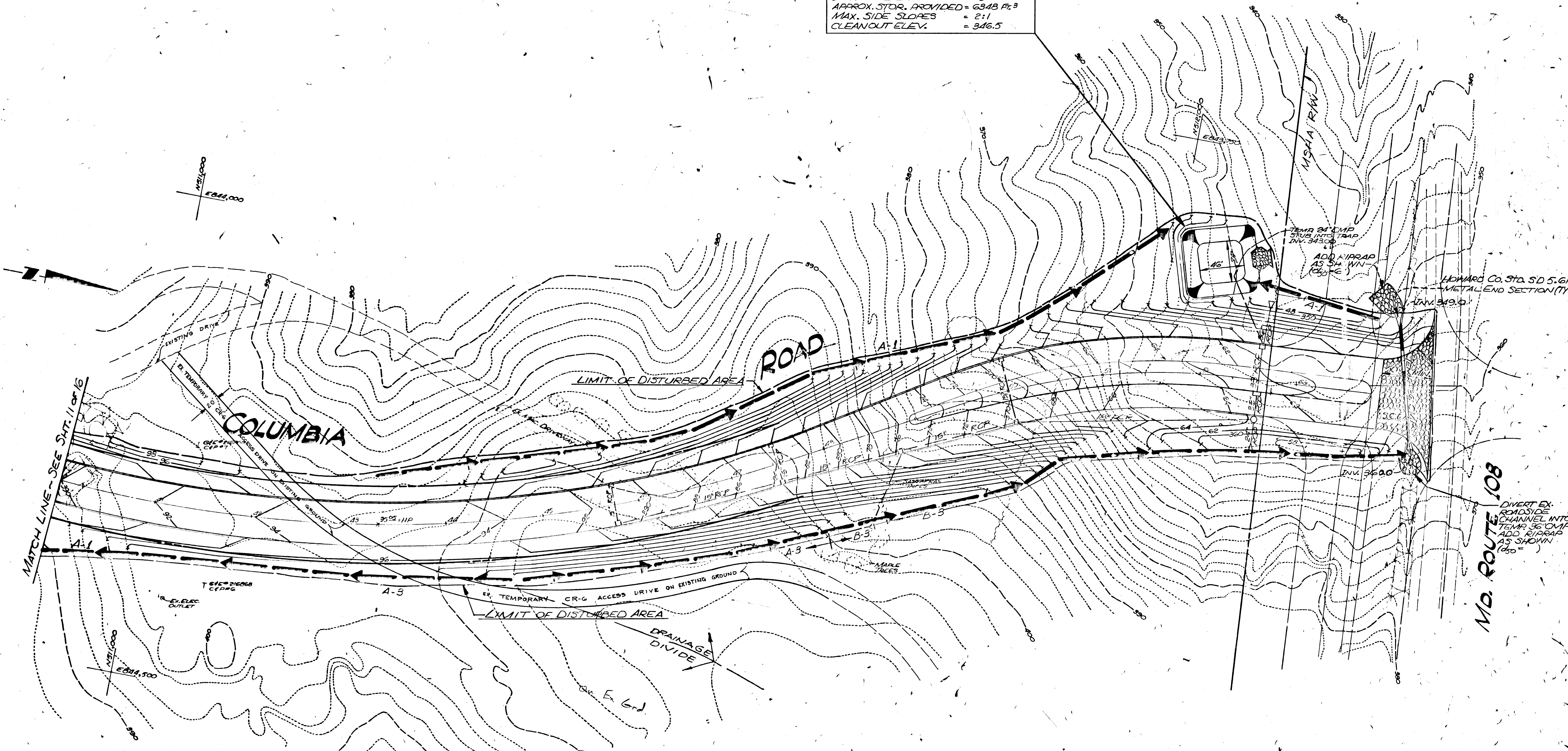
DRAINAGE AREA = 3.5 AC.
 REQ'D. STORAGE = 6300 FT.³
 BOTTOM ELEV. = 348.0
 CREST ELEV. = 346.0
 CREST LENGTH = 10'
 TOP OF EMBANKMENT = 349.0
 AVG. BOTTOM DIM. = 46' x 46'
 STORAGE DEPTH = 3'
 APPROX. STOR. PROVIDED = 6348 FT.³
 MAX. SIDE SLOPES = 2:1
 CLEANOUT ELEV. = 346.5

DEPARTMENT OF PUBLIC WORKS

Michael W. F.
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

John W. ...
 CHIEF, DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION DATE 11-1-85



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.

Bruce D. Boltz, Jr.
 Signature of Engineer
 Bruce D. Boltz, Jr.
 July 9, 1985
 Date

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project."

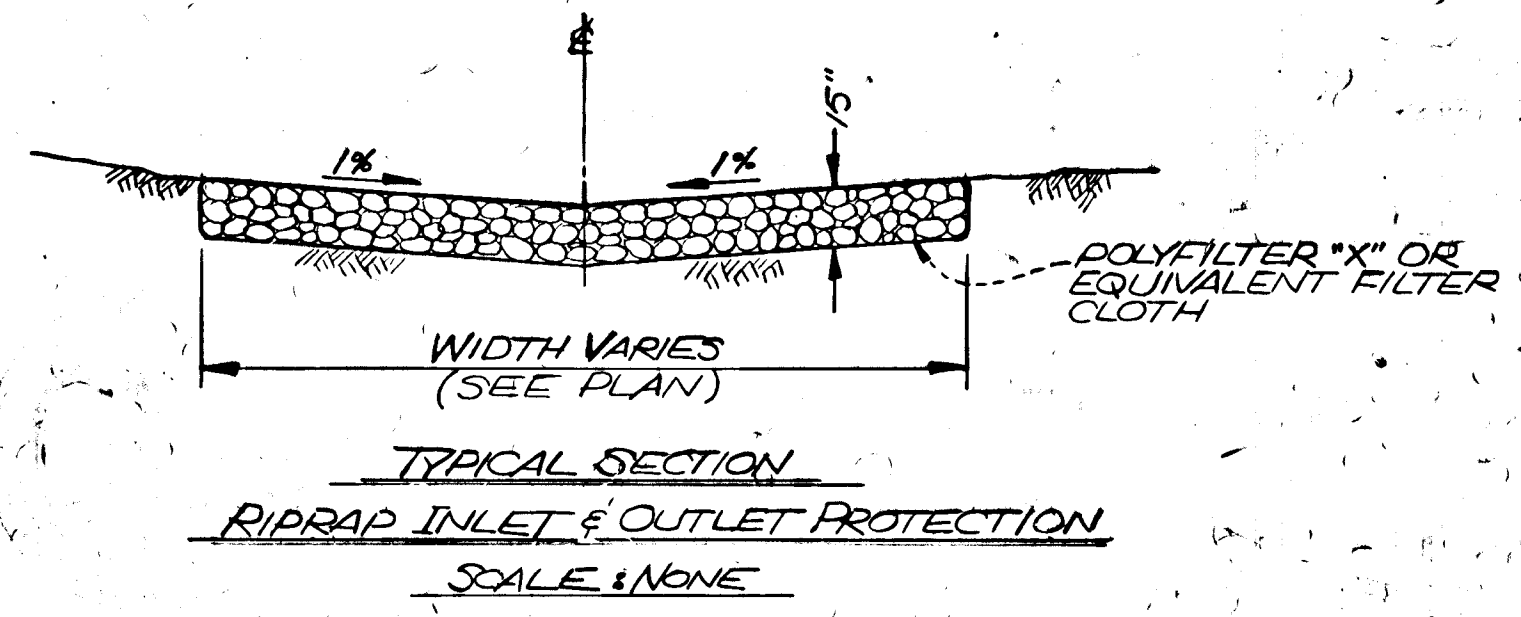
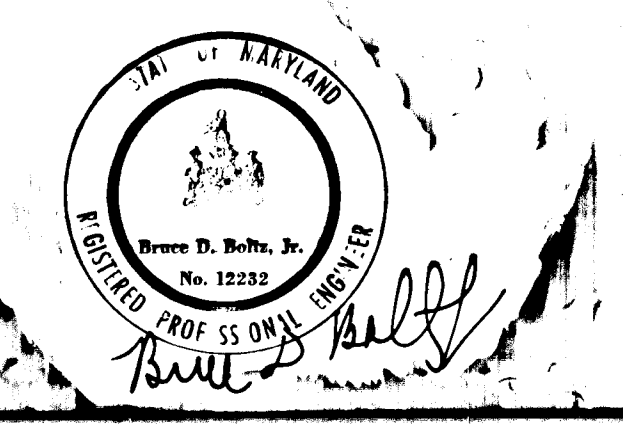
[Signature]
 Signature of Developer
 7/11/85
 Date

Reviewed for HOWARD S.C.D. Name and meets Technical Requirements.

[Signature] 11/1/85
 Date

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

[Signature] 11/1/85
 Date



OWNER/DEVELOPER
 HOWARD RESEARCH & DEVELOPMENT CORP
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21043

No.	REVISION	DATE	BY
1	REVISED PHASE NO. IN TITLE	12-10-85	ELP

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 2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
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SEDIMENT CONTROL PLAN (STREETS ONLY)

COLUMBIA
 VILLAGE OF DORSEY'S SEARCH
 SECTION 3, AREA 1, PHASE 1
 TAX MAP 30 - PARCELS 124, 224 & 210
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

RHM DESIGN SCALE 1" = 50'

J.D.R. DRAWN 12 OF 17

B.D.B. CHECKED SHEET

MAY, '85 DATE R-1186-X FILE No.

SEQUENCE OF CONSTRUCTION

1. Obtain necessary permit to start grading.
2. Clear and Grub Areas Necessary to construct Sediment Control Measures. (1 WEEK)
3. Install Temporary 36" CMP at entrance. (3 DAYS)
4. Construct all Sediment Control Measures. (1-2 WEEKS)
5. Clear & Grub Remainder of Site and Commence Road Grading. (5 WEEKS)
6. Stabilize Any Disturbed Areas per H&SD Standards. (1 WEEK)
7. Inspect and Repair Mountable Berm Daily As Necessary.
8. UPON COMPLETION OF GRADING, COMMENCE CONSTRUCTION OF STORM DRAIN & UTILITIES.
9. COMMENCE CONSTRUCTION OF CURB & GUTTER AND PAVING.
10. STABILIZE ANY REMAINING DISTURBED AREAS.

TEMPORARY SEEDING NOTES

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

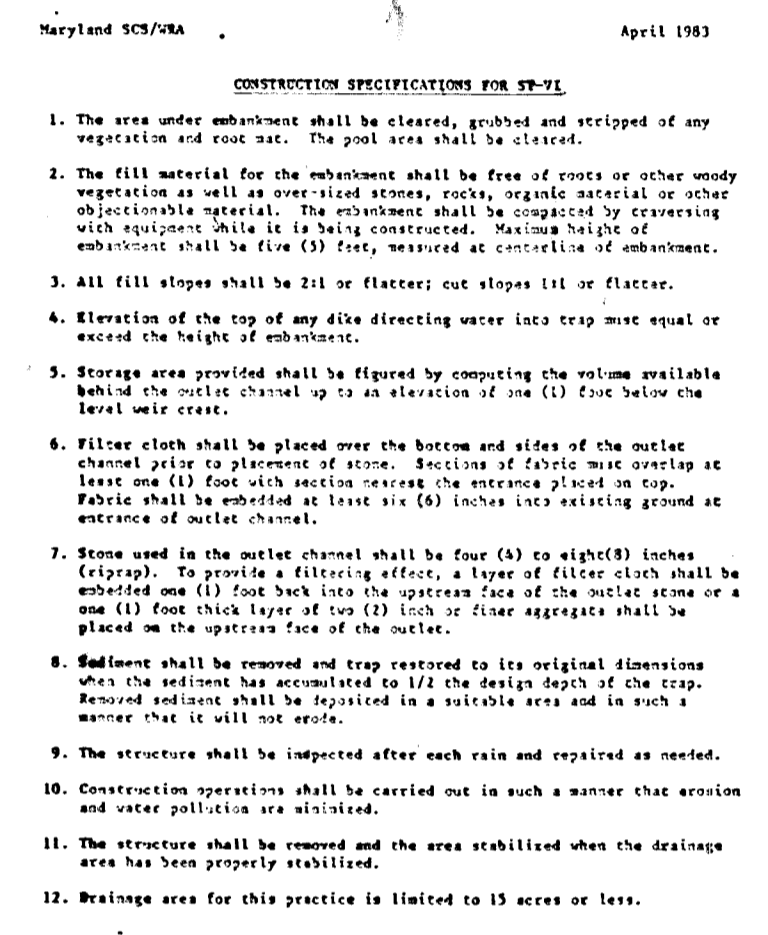
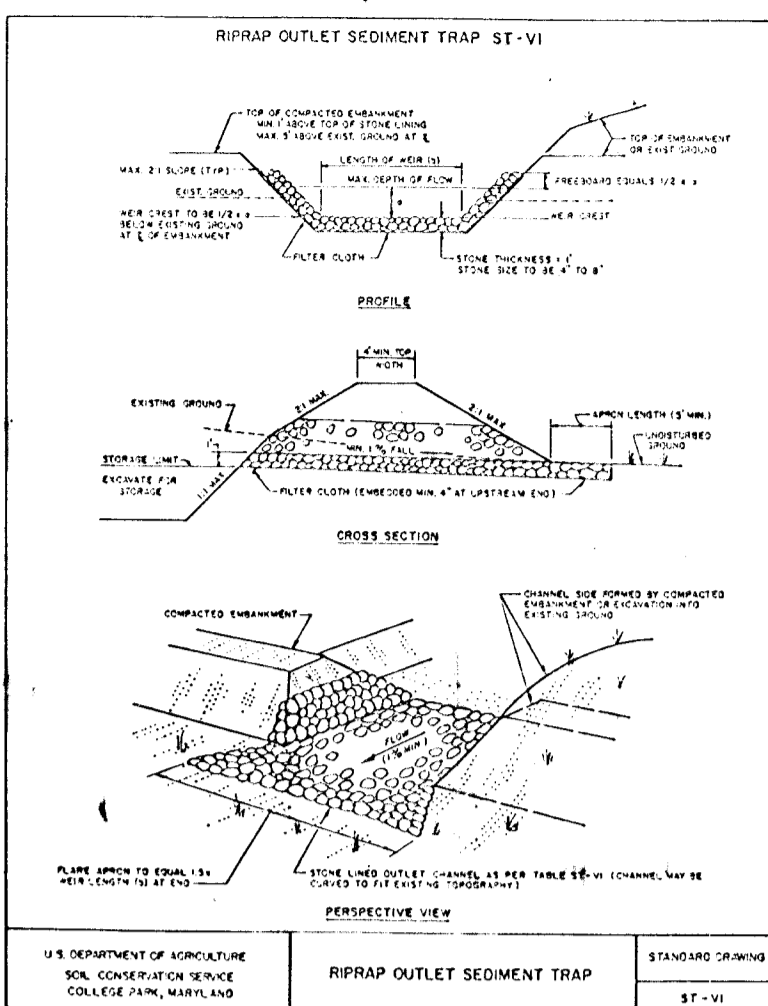
Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding.

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

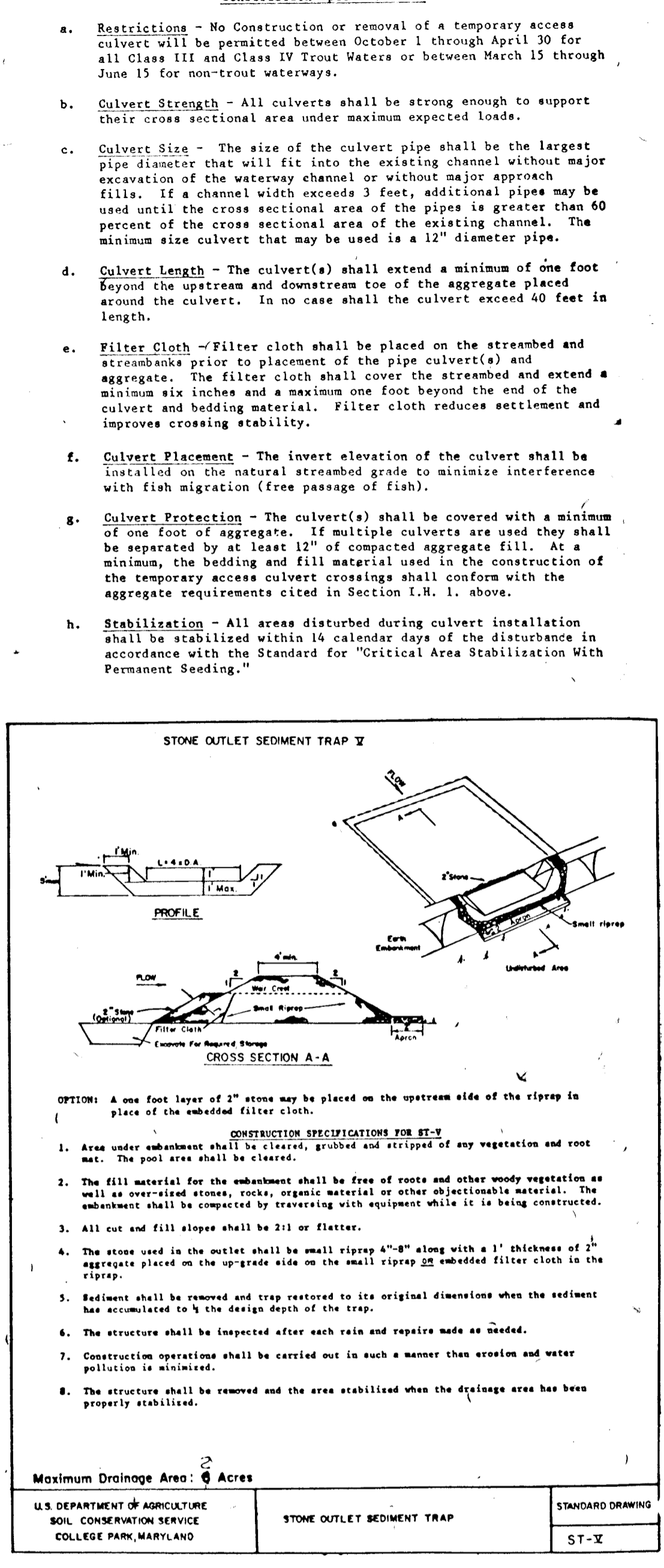
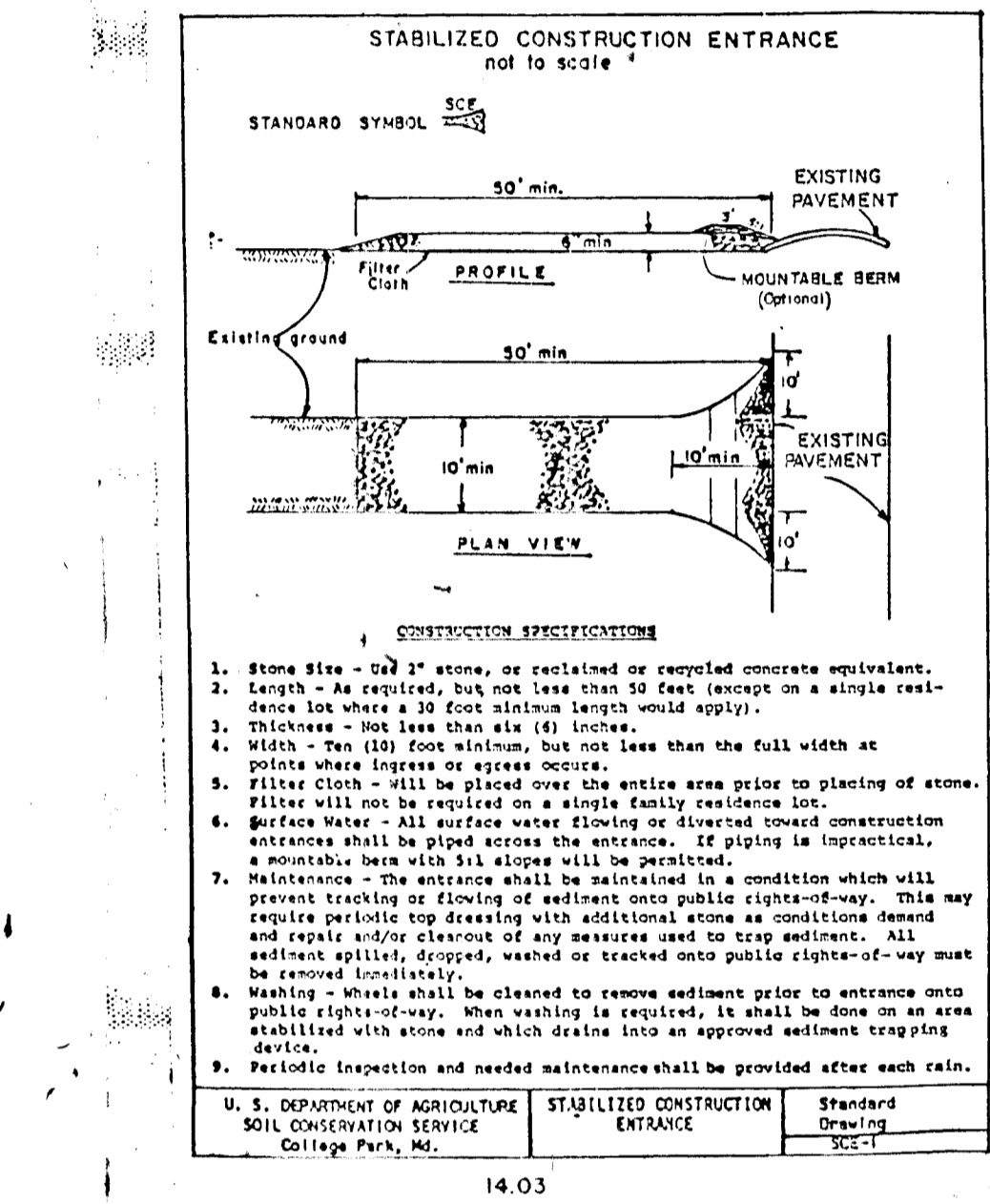
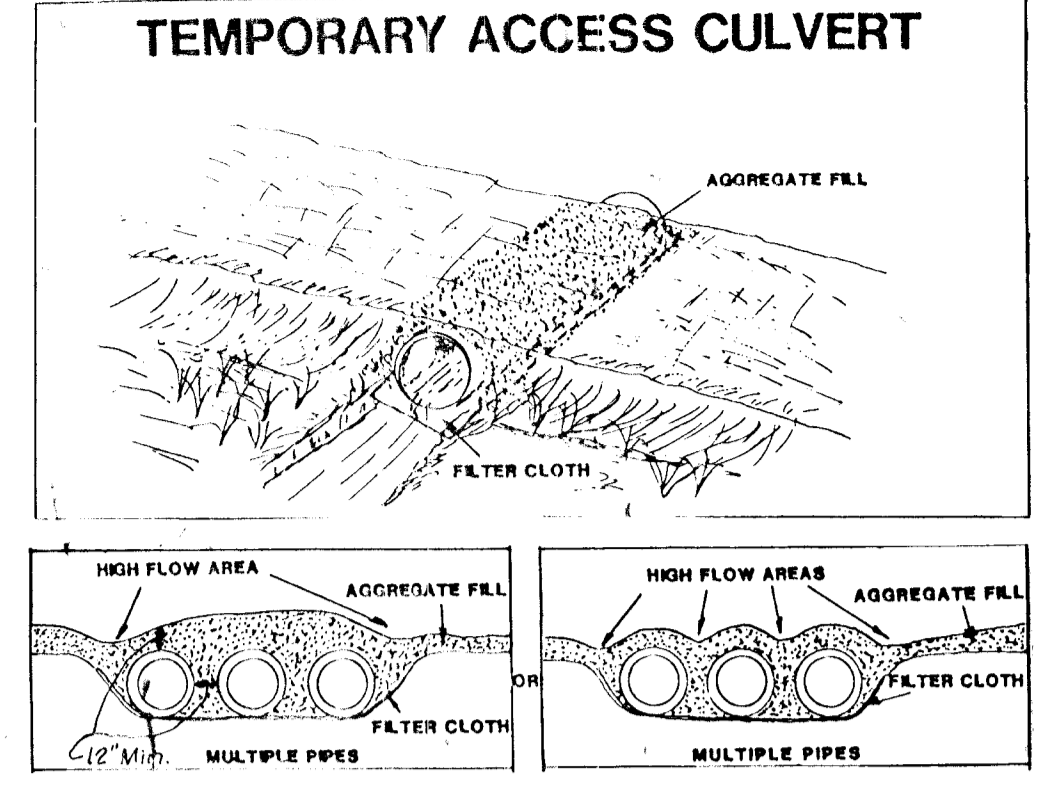
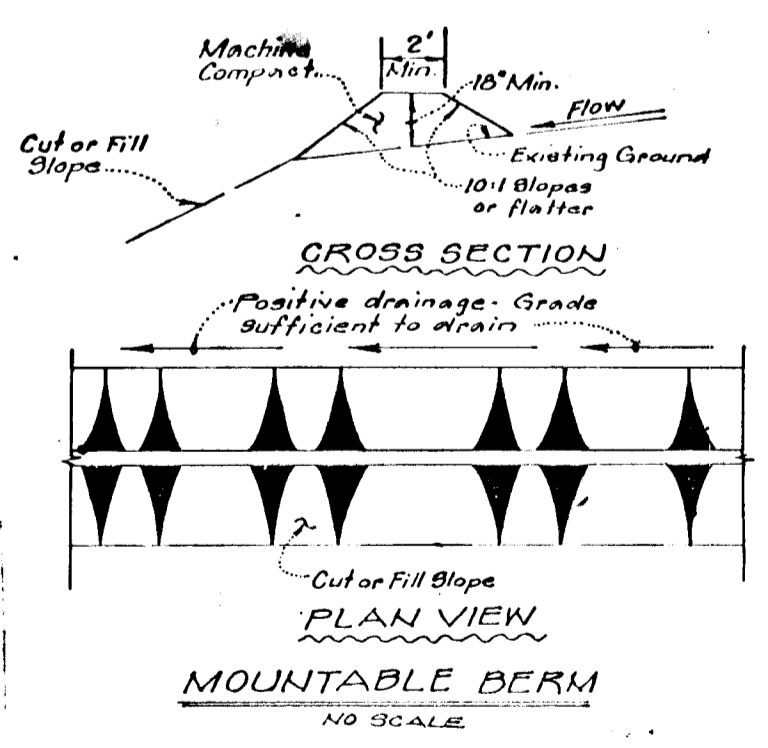
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (3 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 349 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.



SEDIMENT CONTROL NOTES

- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- 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 redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- 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) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52.) Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 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: 290 Acres
 Area Disturbed: 13.4 Acres
 Area to be roofed or paved: 42 Acres
 Area to be vegetatively stabilized: 73.4 Acres
 Total Cut: 28,000 Cu. yds
 Total Fill: 16,000 Cu. yds
 Offsite 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 DEP 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.



"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project."

Signature of Developer: Bruce D. Boltz, Jr.
Date: 5-6-85

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 of Engineer: Bruce D. Boltz, Jr.
Date: May 8, 1985

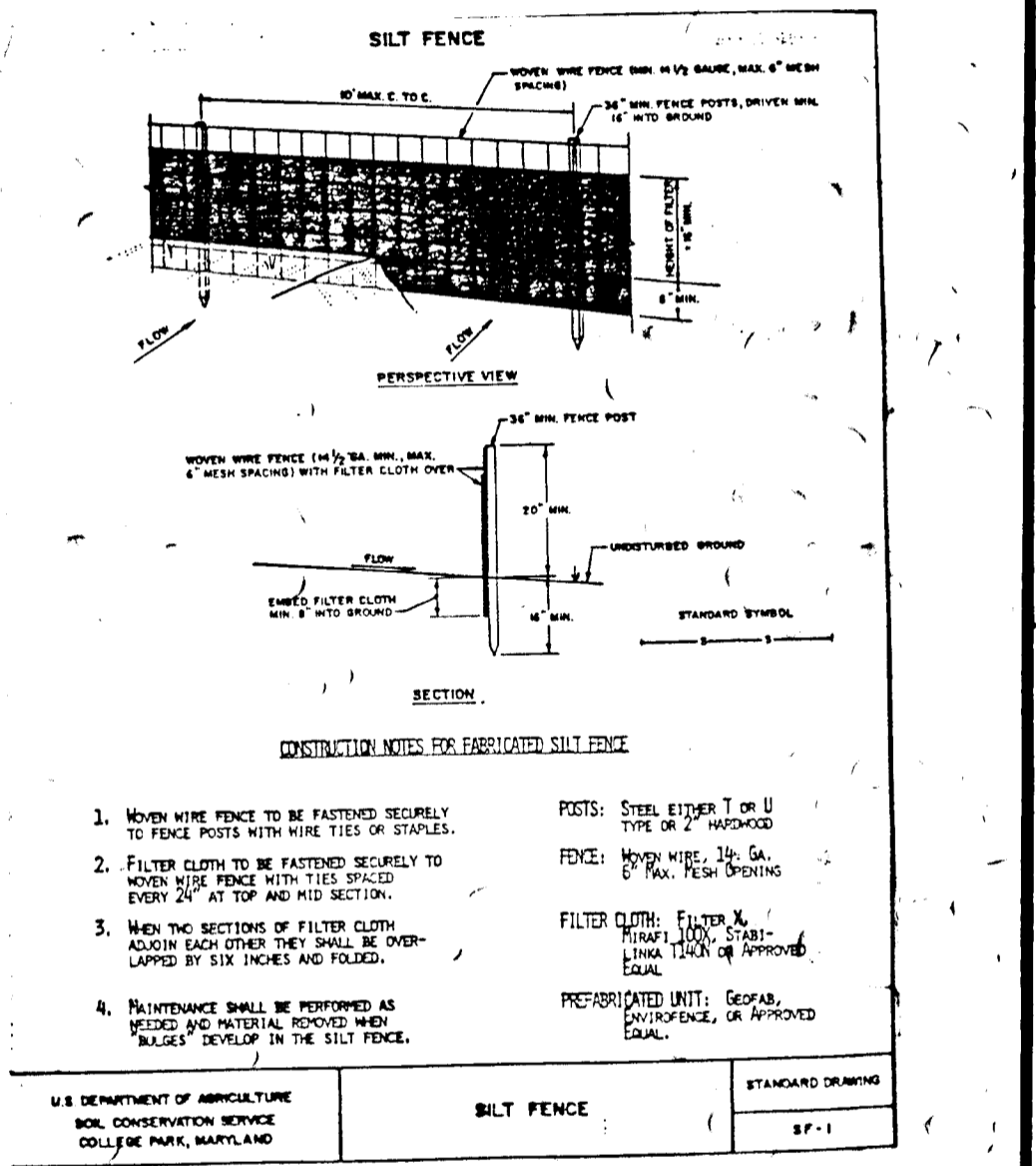
DEPARTMENT OF PUBLIC WORKS
CHIEF BUREAU OF ENGINEERING
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
CHIEF DIV. OF LAND DEVELOPMENT & ZONING ADMINISTRATION

Culvert Maintenance Requirements

1. Inspection - Periodic inspection shall be performed to ensure that the culverts, streambed, and streambanks are not damaged, and that sediment is not entering the stream or blocking fish passage or migration.
2. Maintenance - Maintenance shall be performed, as needed in a timely manner to ensure that structures are in compliance with this standard and specification. This shall include removal and disposal of any trapped sediment or debris. Sediment shall be disposed of and stabilized outside the waterway flood plain.

Culvert Removal and Clean-Up Requirements

1. Removal - When the crossing has served its purpose, all structures including culverts, bedding and filter cloth materials shall be removed within 14 calendar days. In all cases, the culvert materials shall be removed within one year of installation. No structure shall be removed during the spawning season (March 15 through June 15).
2. Final Clean-up - Final clean-up shall consist of removal of the temporary structure from the waterway, removal of all construction materials, restoration of original stream channel cross section, and protection of the stream banks from erosion. Removed material shall be stored outside of the waterway flood plain.
3. Method - Removal of the structure and clean up of the area shall be accomplished without construction equipment working in the waterway channel.



OWNER/DEVELOPER
HOWARD RESEARCH & DEVELOPMENT CORP.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21043

No.	REVISION	DATE	BY
1	REVISED PER PERMITS	11/18/85	PL

ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS

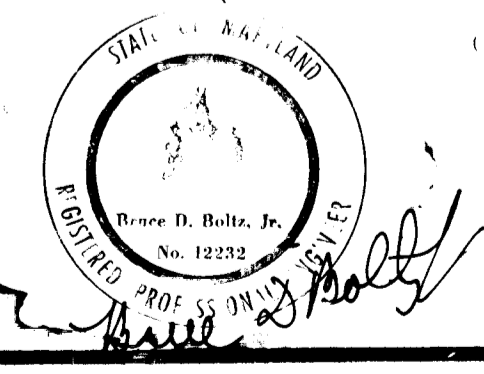
GREENHORNE & O'MARA, INC.
2 RESEARCH PLACE, ROCKVILLE, MARYLAND, 20850
(301) 948-0900

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SEDIMENT CONTROL DETAILS & NOTES

COLUMBIA
VILLAGE OF DORSEY'S SEARCH
SECTION 3, AREA 1, PHASE 1
TAX MAP 30 - PARCELS 124, 224 & 210
5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

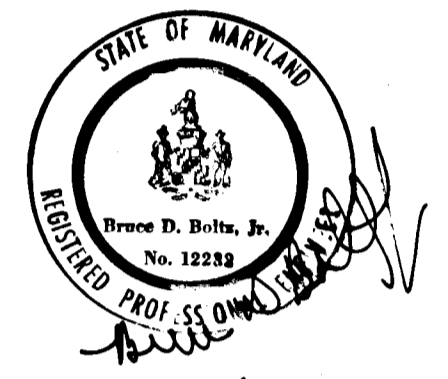
RHM DESIGN SCALE NONE
EG DRAWN 13 OF 17
BDB CHECKED SHEET
MAY 85 DATE
JOB No. R-1186-X
FILE No. 1-86-26



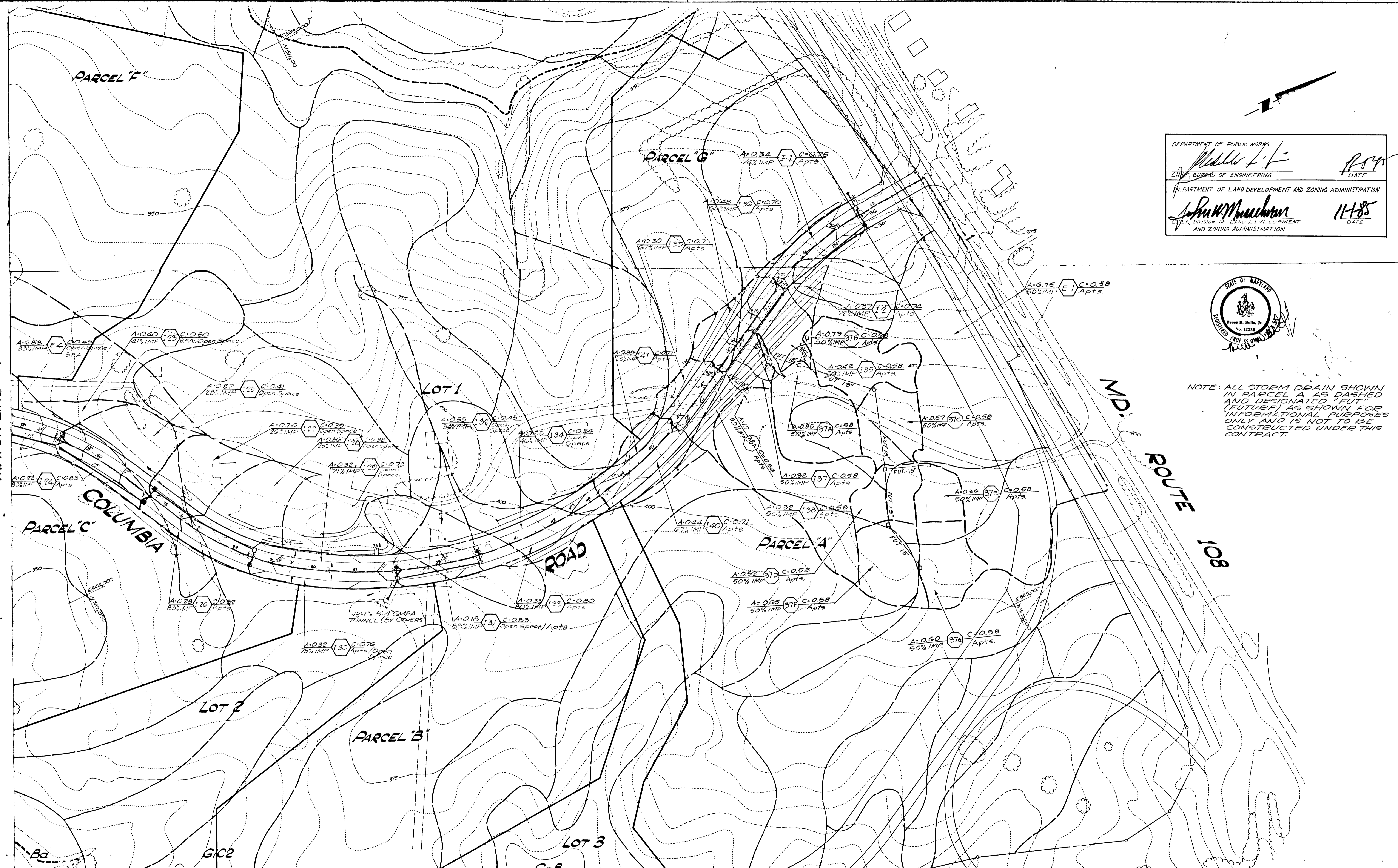
MATCH LINE - SEE SH. 15 OF 16

DEPARTMENT OF PUBLIC WORKS
Richard L. F.
 CHIEF, BUREAU OF ENGINEERING
 DATE 11-85

DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
John W. Macchiaro
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 DATE 11-85

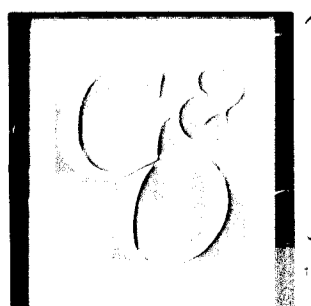


NOTE: ALL STORM DRAIN SHOWN IN PARCEL A AS DASHED AND DESIGNATED "FUT" (FUTURE) AS SHOWN FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TO BE CONSTRUCTED UNDER THIS CONTRACT.



OWNER/DEVELOPER
 HOWARD RESEARCH & DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

No.	REVISIONS	DATE	BY
2	REVISED DRAINAGE AREAS	2-11-86	J.C.
1	REVISED PHASE NO. IN TITLE	12-10-85	B.P.



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 2 RESEARCH PLACE, ROCKVILLE, MARYLAND 20850
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 FAIRFAX, VA • GREENSBORO, NC • MONROE, MI • EXPORT, PA • WILLISTON PARK, NY

DRAINAGE AREA MAP
COLUMBIA
 VILLAGE OF DORSEY'S SEARCH
 SECTION 3, AREA 1, PHASE 1
 TAX MAP 30 - PARCELS 124, 224 & 210
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

DESIGN	SCALE 1" = 100'
DRAWN	14 OF 17
B.D.B. CHECKED	SHEET
DATE June 85	JOB No. R-118G-X
	FILE No.

0+00 COLUMBIA ROAD =
18+99.93 TEN MILLS ROAD

SECTION 9, AREA 4
PB. 13 F. 41 & 42
NEW TOWN - SFMD

EX. 27'S (CONTRACT NO. 124.5)

DEPARTMENT OF PUBLIC WORKS
W. J. F.
 CHIEF BUREAU OF ENGINEERING
 DATE 11-85

DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
Sam W. Maschman
 CHIEF DIVISION OF LAND DEVELOPMENT
 AND ZONING ADMINISTRATION
 DATE 11-85

VILLAGE OF WILDE LAKE
SECTION 9, AREA 4
PB. 13 F. 43
NEW TOWN - APARTMENTS

LOT 4
100-YR. WSEL = 317.32
10-YR. WSEL = 313.02

LOT 1
100-YR. WSEL = 317.35
10-YR. WSEL = 313.84

LOT 4
100 YR. ULTIMATE
FLOOD PLAIN

LOT 1
100-YR. WSEL = 319.20

100-YR. WSEL = 314.08

100 YR. ULTIMATE
FLOOD PLAIN

Prue W. Ball

MATCH LINE - SEE SHEET 14 OF 16

OWNER/DEVELOPER
 HOWARD RESEARCH & DEVELOPMENT CORP.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

NO.	DESCRIPTION	DATE	BY
2	REVISED AREA @ IIC & PHASE NO. IN TITLE	12-10-85	ELP
1	Revision to S.D. 01-2-7-11 S.D. 12	1-25-85	ELP

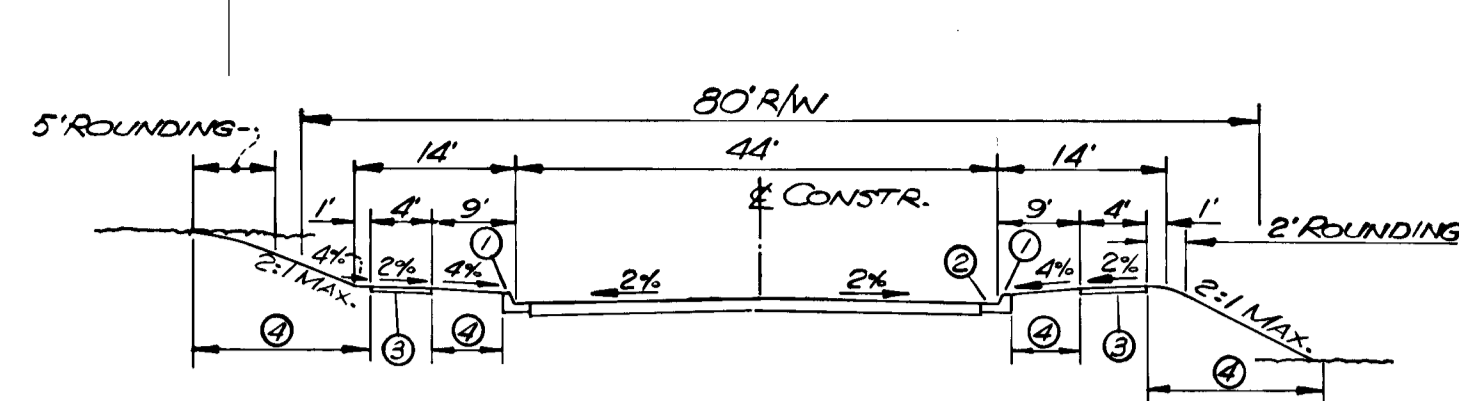
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GREENHORN & O'MARA, INC.
 2 RESEARCH PLAC, ROCKVILLE, MARYLAND 20850
 (301) 948-0900

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URAINAGE AREA MAP
COLUMBIA
 VILLAGE OF DORSLEY'S SEARCH
 SECTION 3, AREA 1, PHASE 1
 TAX MAP 30 - PARCELS 12A, 22A & 210
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

DESIGN	SCALE 1" = 100'
DRAWN	15 OF 17
CHECKED	SHEET
DATE	JUNE 85
JOB NO.	FILE NO.



TYPICAL SECTION

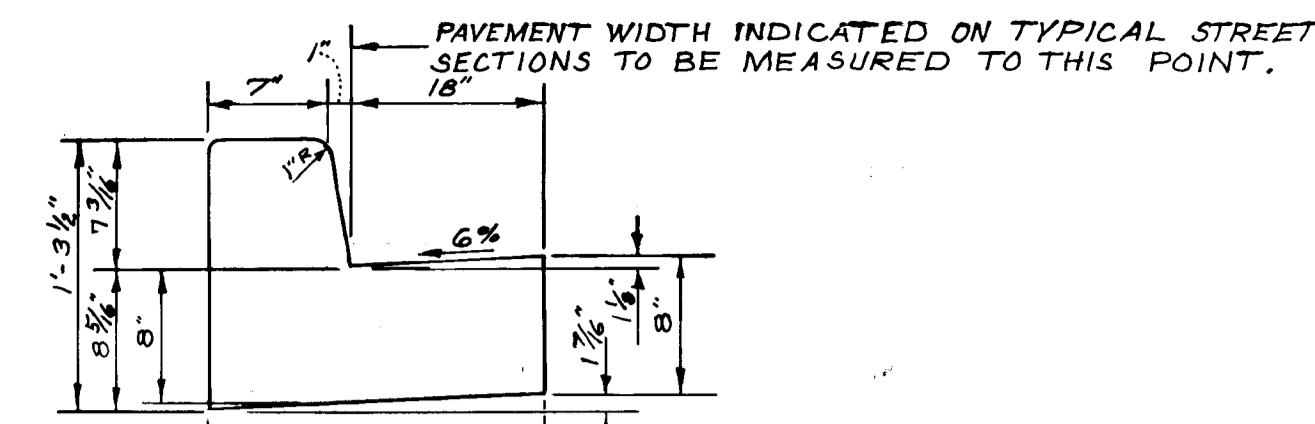
COLUMBIA ROAD

STA. 14+25 TO 14+56.8

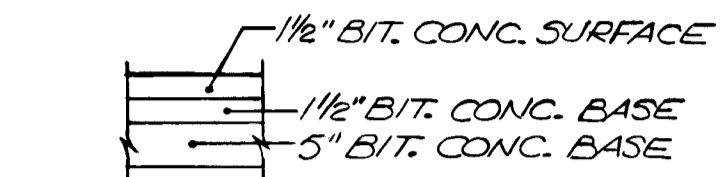
DESIGN SPEED: 40 MPH (MAJOR COLLECTOR)

SCALE: NONE

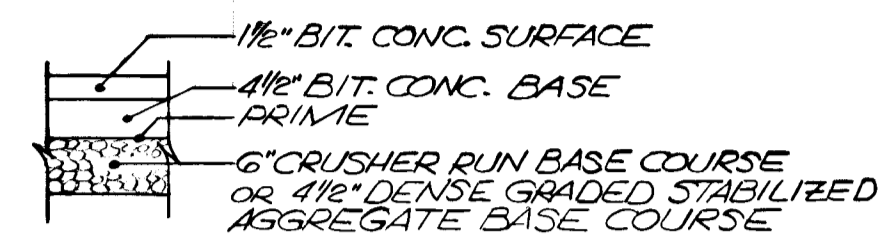
- ① PROFILE GRADE LINE (P.G.L.)
- ② STD. COMB. CURB & GUTTER (HOWARD CO. STD. R-3.0)
- ③ 4" CONC. SIDEWALK
- ④ 2" TOPSOIL, SEED & MULCH



STANDARD 7" COMBINATION CURB & GUTTER



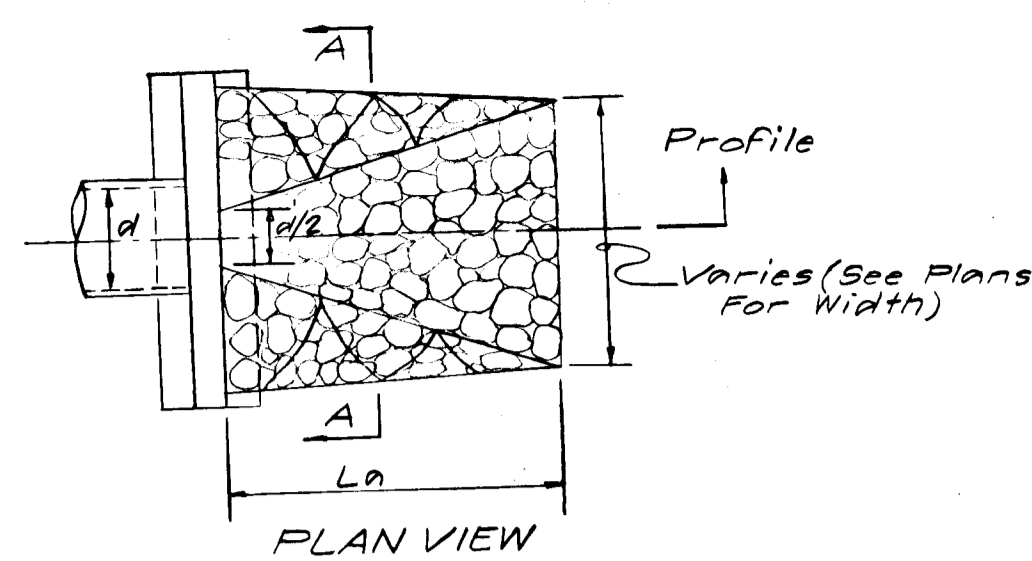
FULL DEPTH BIT CONC. ALTERNATE



GRANULAR BASE ALTERNATE

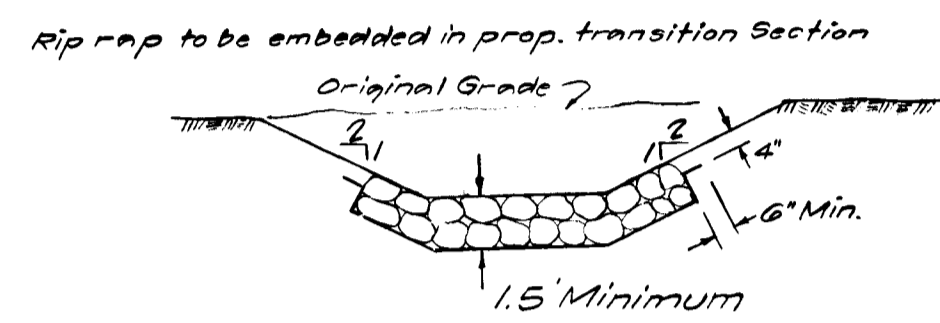
PAVING SECTIONS (P-3)

SCALE: NONE



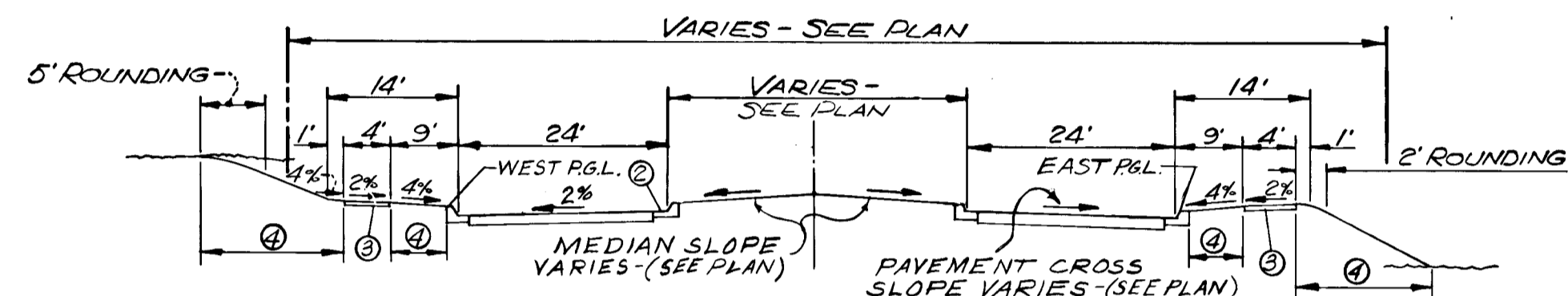
PLAN VIEW

PROFILE VIEW



CROSS SECTION A-A STRUCTURE E7 & E8

NO SCALE



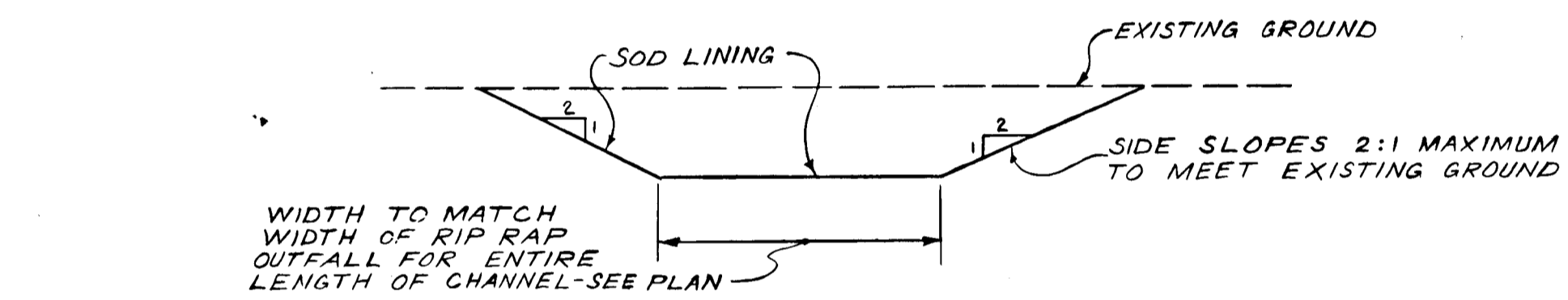
TYPICAL SECTION

COLUMBIA ROAD

STA. 17+45.68 TO STA. 19+77.38

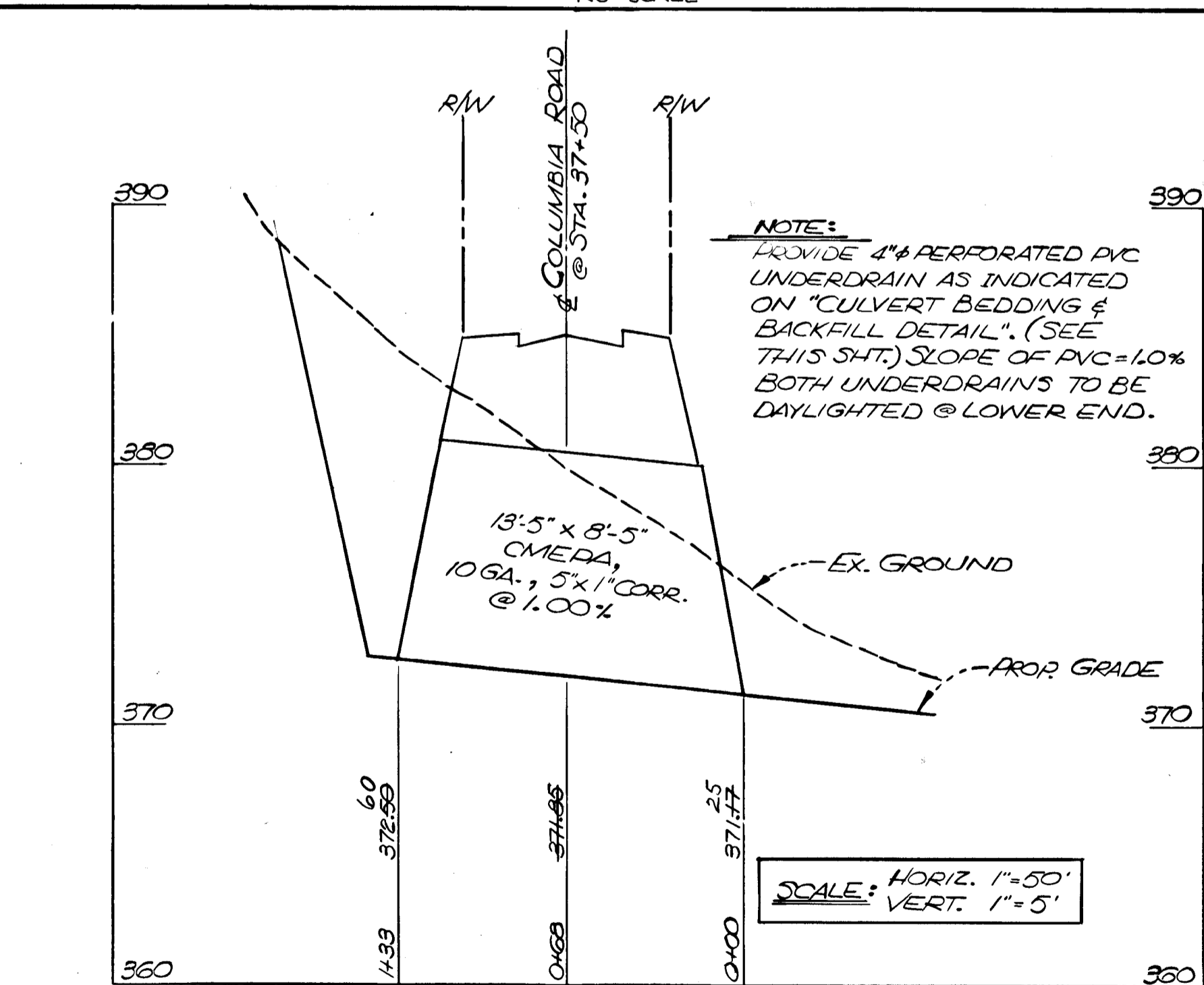
DESIGN SPEED: 40 MPH (MAJOR COLLECTOR)

SCALE: NONE



SODDED CHANNEL

NO SCALE



GOLF COURSE TUNNEL

(TO BE PRIVATELY MAINTAINED FOR GOLF COURSE USE)

OWNER/DEVELOPER
HOWARD RESEARCH & DEVELOPMENT CORP.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

No.	REVISION	DATE	BY
3	REVISED STR. SCHEDULE - SHIFT INLETS 1-3 & 1-26	6-5-84	JWC
2	REVISED STRUCTURE SCHEDULE	2-11-84	J.C.
1	REVISED PHASE NO. IN TITLE	12-19-83	ELF



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FAIRFAX, VA • GREENSBORO, NC • MONROE, MI • EXPORT, PA • WILLISTON PARK, NY

STRUCTURE SCHEDULE				
NO.	TYPE	TOP ELEVATION*		LOCATION
		UPPER	LOWER	
I 1	DBL'S Comb. Undep. Inlet Modified	360.58	360.58	& Box 34.02' Lt. & Sta. 52+60
I 2	DBL'S Comb. Dep. Inlet	363.32	363.02	& Box 1.00' Rt. & Sta. 52+60
I 3	"S" Comb. Undep. Inlet	321.76	321.71	& Box 32.92' Rt. & Sta. 15+48
I 4	"S" Comb. Undep. Inlet	320.89	320.80	& Box 20.92' Lt. & Sta. 16+50
I 5	"S" Comb. Dep. Inlet	321.86	321.80	& Box 20.92' Lt. & Sta. 15+50
I 6	"S" Comb. Undep. Inlet	323.87	323.80	& Box 20.92' Lt. & Sta. 13+50
I 7	"S" Comb. Undep. Inlet	323.86	323.80	& Box 20.92' Rt. & Sta. 13+50
I 8	"S" Comb. Undep. Inlet	326.36	326.30	& Box 20.92' Lt. & Sta. 11+00
I 9	"S" Comb. Undep. Inlet	326.36	326.30	& Box 20.92' Rt. & Sta. 11+00
I 11	Dep. A-10 Inlet W=3.5'	310.72	310.72	& Box 24.42' Rt. & Sta. 17+97.20
I 12	Dep. A-10 Inlet W=3.5'	310.72	310.72	& Box 24.42' Lt. & Sta. 17+97.20
I 13	"S" Comb. Undep. Inlet	321.38	321.29	& Box 20.92' Rt. & Sta. 19+50
I 14	"S" Comb. Undep. Inlet	321.38	321.29	& Box 20.92' Lt. & Sta. 19+50
I 15	"S" Comb. Undep. Inlet	326.47	326.39	& Box 20.92' Lt. & Sta. 21+00
I 16	"S" Comb. Undep. Inlet	326.47	326.39	& Box 20.92' Rt. & Sta. 21+75
I 17	"S" Comb. Undep. Inlet	329.52	329.44	& Box 20.92' Lt. & Sta. 21+75
I 18	"S" Comb. Undep. Inlet	335.27	334.97	& Box 20.92' Rt. & Sta. 23+00
I 19	"S" Comb. Undep. Inlet	340.04	339.65	& Box 20.92' Rt. & Sta. 24+25
I 20	"S" Comb. Undep. Inlet	340.04	339.65	& Box 20.92' Lt. & Sta. 24+25
I 21	"S" Comb. Undep. Inlet	347.72	347.46	& Box 20.92' Rt. & Sta. 25+75
I 22	"S" Comb. Undep. Inlet	353.42	353.14	& Box 20.92' Rt. & Sta. 27+00
I 23	"S" Comb. Undep. Inlet	353.42	353.14	& Box 20.92' Lt. & Sta. 27+00
I 24	"S" Comb. Undep. Inlet	362.50	362.22	& Box 20.92' Rt. & Sta. 29+00
I 25	"S" Comb. Undep. Inlet	362.50	362.22	& Box 20.92' Lt. & Sta. 29+00
I 26	"S" Comb. Undep. Inlet	373.06	372.78	& Box 20.92' Rt. & Sta. 31+60
I 27	"S" Comb. Undep. Inlet	373.06	372.78	& Box 20.92' Lt. & Sta. 31+60
I 28	DBL'S Comb. Undep. Inlet	375.66	375.50	& Box 20.92' Rt. & Sta. 33+75
I 29	"S" Comb. Undep. Inlet	379.47	379.20	& Box 20.92' Lt. & Sta. 34+50
I 30	DBL'S Comb. Undep. Inlet	379.76	379.00	& Box 20.92' Rt. & Sta. 34+50
I 31	"S" Comb. Undep. Inlet	386.47	386.02	& Box 20.92' Rt. & Sta. 38+00
I 32	"S" Comb. Undep. Inlet	386.47	386.02	& Box 20.92' Lt. & Sta. 38+00
I 33	DBL'S Comb. Undep. Inlet	390.76	390.00	& Box 20.92' Rt. & Sta. 40+00
I 34	DBL'S Comb. Undep. Inlet	390.76	390.00	& Box 20.92' Lt. & Sta. 40+00
I 35	"S" Comb. Dep. Inlet	370.47	370.47	& Box 33.92' Rt. & Sta. 50+00
I 36	"S" Comb. Dep. Inlet	379.94	379.65	& Box 43.92' Lt. & Sta. 49+97
I 37	"S" Comb. Dep. Inlet	376.80	376.45	& Box 27.92' Rt. & Sta. 48+75
I 38	"S" Comb. Dep. Inlet	384.47	384.20	& Box 20.92' Lt. & Sta. 47+50
I 39	"S" Comb. Undep. Inlet	384.47	384.20	& Box 20.92' Rt. & Sta. 47+50
I 40	DBL'S Comb. Undep. Inlet	391.40	391.24	& Box 20.92' Rt. & Sta. 45+75
I 41	"S" Comb. Undep. Inlet	391.40	391.27	& Box 20.92' Lt. & Sta. 45+75
E 1	Std. 30" Conc. End Section	355.50	4.98	& End 70.75' Lt. & Sta. 52+60
E 2	Std. 18" Conc. End Section	314.06	314.06	& Outfall 97' Rt. & Sta. 15+33
E 3	Std. 15" Conc. End Section	338.10	337.25	& End 72' Rt. & Sta. 23+14
E 4	Std. 18" Conc. End Section	330.12	329.50	& End 48' Lt. & Sta. 22+15
E 5	Std. 15" Conc. End Section	333.18	332.55	& End 72' Lt. & Sta. 20+70
E 6	Std. 36" Conc. End Section	312.55	312.47	& Outfall 124' Rt. & Sta. 17+76
E 7	Std. 15" Conc. End Section	376.56	376.50	& Outfall 55' Rt. & Sta. 37+80
E 8	Std. 15" Conc. End Section	394.83	393.75	& End 90' Rt. & Sta. 48+26
E 9	Std. 36" Conc. End Section	344.98	344.90	& Outfall 82' Lt. & Sta. 52+64
MH 2	5' Precast Manhole G 5.13	325.674		& MH 15' Rt. & Sta. 21+00
MH 3	4' Precast Manhole G 5.12	339.00		& MH 53' Rt. & Sta. 23+10
MH 4	3' Inlet Precast Manhole G 5.12	331.9913		& MH 37' Lt. & Sta. 22+00
MH 5	4' Precast Manhole G 5.12 Modified	333.703		& MH 55' Lt. & Sta. 20+81
MH 6	4' Precast Manhole G 5.12 Modified	394.50		& MH 74' Rt. & Sta. 48+38
MH 7	5' Precast Manhole G 5.13	364.610		& MH 40.5' Rt. & Sta. 52+60

NOTES:

- SELECT BACKFILL & BEDDING MATERIAL SHALL BE LOCAL CRUSHER RUN OR BANK RUN GRAVEL HAVING A MAXIMUM DRY WEIGHT NOT LESS THAN 115 POUNDS PER CUBIC FOOT AS DETERMINED BY AASHTO T99, METHOD A, WITH A LIQUID LIMIT NOT EXCEEDING 30, A PLASTICITY INDEX NOT EXCEEDING 6 CONFORMING TO MSHA SRC GRADATION OR G OR GRAVEL SBTI.
- PRIOR TO PLACEMENT OF SELECT BEDDING MATERIAL, CULVERT TRENCHES SHALL BE INSPECTED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER. DEPTH OF BEDDING MATERIAL SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- EARTH BACKFILL, ABOVE SELECT BACKFILL MATERIAL, SHALL CONSIST OF SOIL HAVING A MAXIMUM DENSITY OF NOT LESS THAN 105 LBS. PER CUBIC FOOT AS DETERMINED BY AASHTO T99, METHOD A, WITH A LIQUID LIMIT NOT EXCEEDING 30, A PLASTICITY INDEX NOT EXCEEDING 6, CONTAINING NO STONES LARGER THAN 1 INCH IN THE GREATEST DIMENSION.

- * For Inlets Elevations Given Are Top Of Curb For End Sections Elevations Given Are Inverts For Manholes Elevations Given Are Top Of Manhole Cover
- ** For Modified Type "S" Comb Inlet B=16" Where "A" Is 11" To 17"
- *** Modified Manhole Invert And Bench To Be Constructed Of 8" Granite Block In Place Of Brick

STRUCTURE SCHEDULE NOTES:

- "S" Comb Inlet Howard County Standard S.D. 4.32 (DBL'S UNDER DESIGNATED DEPRESSED & UNDERDESIGNED INLETS RESPECTIVELY)
- DBL "S" Comb. Inlet Howard County Standard S.D. 4.34 (DBL'S UNDER DESIGNATED DEPRESSED & UNDERDESIGNED INLETS RESPECTIVELY)
- A-10 Inlet Howard County Standard S.D. 4.02
- Conc. End Section Howard County Standard S.D. 5.51
- Precast Manhole Howard County Standard G 5.12 & G 5.13
- All Storm Drain Pipe Bedding To Be Class "C" Shaped Subgrade Unless Otherwise Noted. If Rock is Encountered The Trench Invert should Be Over-excavated 6" Inches And The Overexcavation Of 6" Inches Refilled with Granular Material.

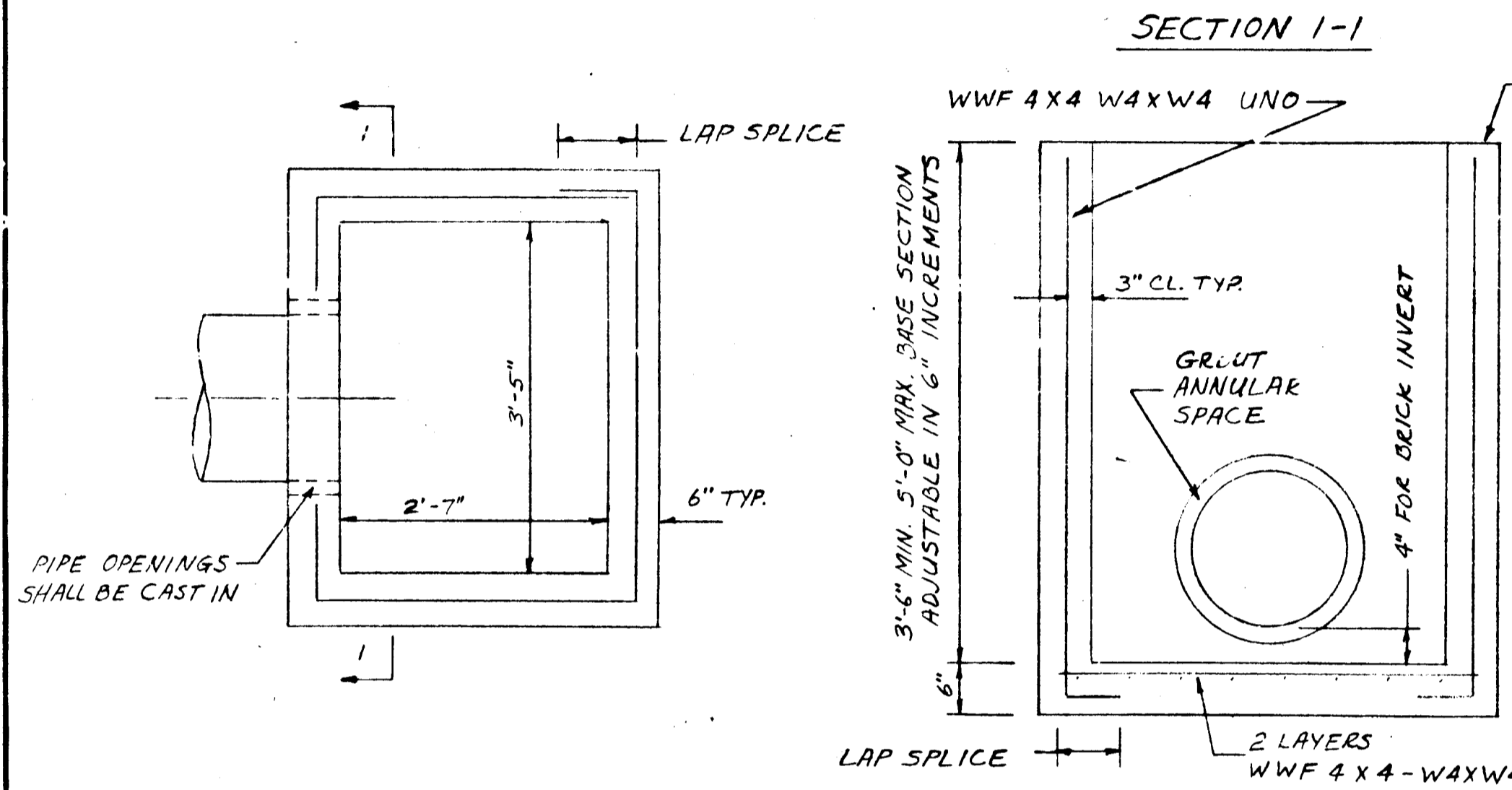
DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF ENGINEERING
DEPARTMENT OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

11-1-85

ROAD & STORM DRAIN DETAILS
COLUMBIA
VILLAGE OF DORSEY'S SEARCH
SECTION 3, AREA 1, PHASE 1
TAX MAP 30 - PARCELS 124, 224 & 210
5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

RHM DESIGN	SCALE AS SHOWN
JDP DRAWN	16 OF 17
BDB CHECKED	SHEET
JUNE 85 DATE	FILE No.

PLAN - STANDARD TYPES COMB
SINGLE GRATE
REFERENCE SD 4.32



SEE NOTE 3

NOTES:
1. CONCRETE SHALL CONFORM TO THE MARYLAND DOT SHA, STANDARD SPECIFICATIONS FOR CONSTRUCTION MATERIALS 1952 MIX NO. 6 EXCEPT THAT TYPE III CEMENT & ASTM C-33 COARSE AGGREGATE SHALL BE USED.
2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185, LAP SPLICES SHALL BE A MINIMUM OF 1 1/2 TRANSVERSE WIRE SPACES. WIRE CAGES SHALL BE TACK WELDED TO MAKE A RIGID UNIT.
3. OVERALL HEIGHT OF PRECAST IS ADJUSTABLE IN 6" INCREMENTS. FINAL GRADE ADJUSTMENT SHALL BE MADE BY THE CONTRACTOR WITH BRICK AND MORTAR. A 5'-0" MAX. RISER SECTION MAY BE PROVIDED IF A 1" X 2" NOMINAL KEY IS CAST ON TO THE TOP OF THE BASE SECTION.

TERRE HILL
CONCRETE PRODUCTS, INC.
TERRE HILL, PA. 17581

PRECAST STANDARD TYPE 3 COMB SINGLE GRATE

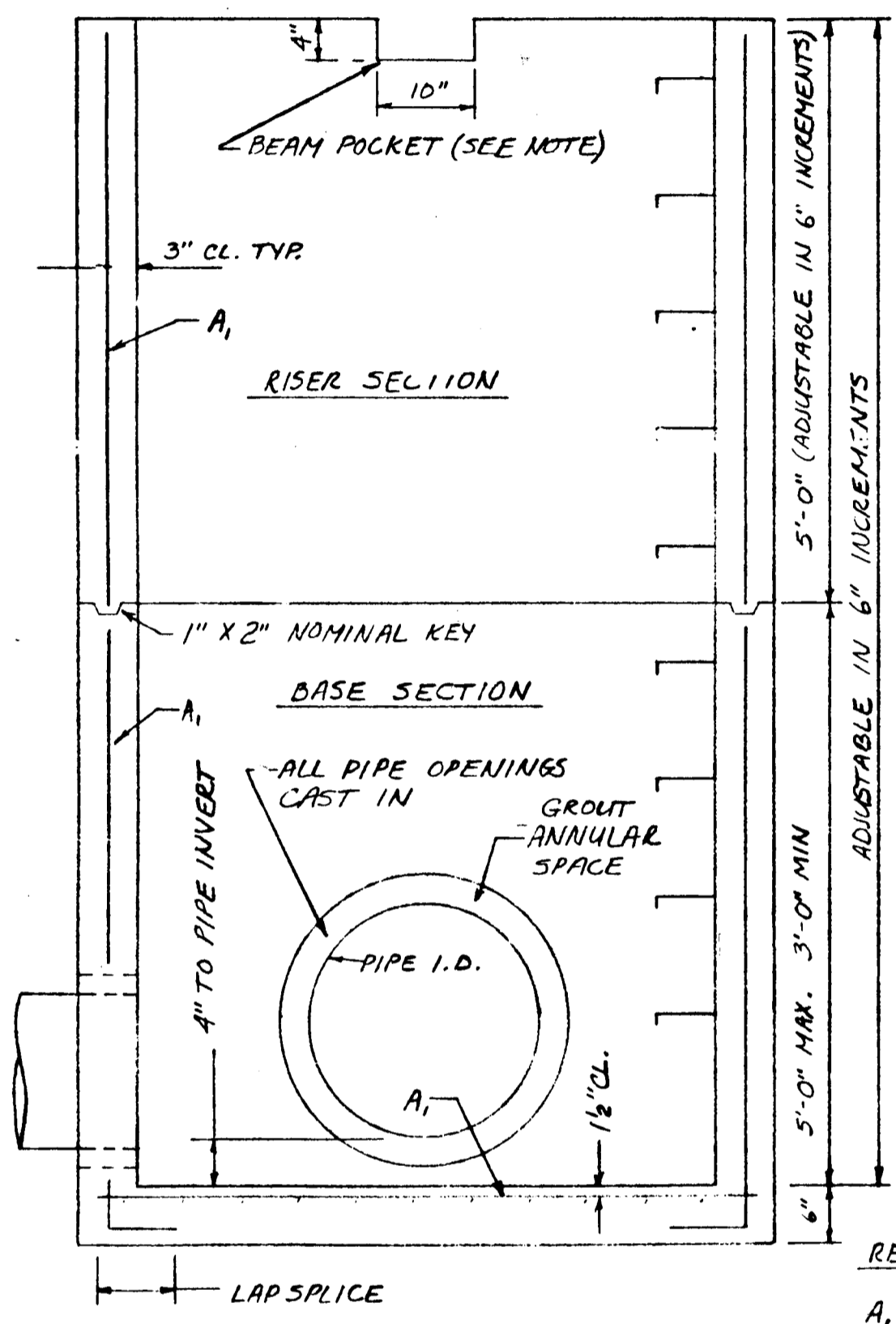
JOB: VILLAGE OF DORSEY SEARCH
HOWARD CO. MARYLAND

CONTR: GAINES & CO.

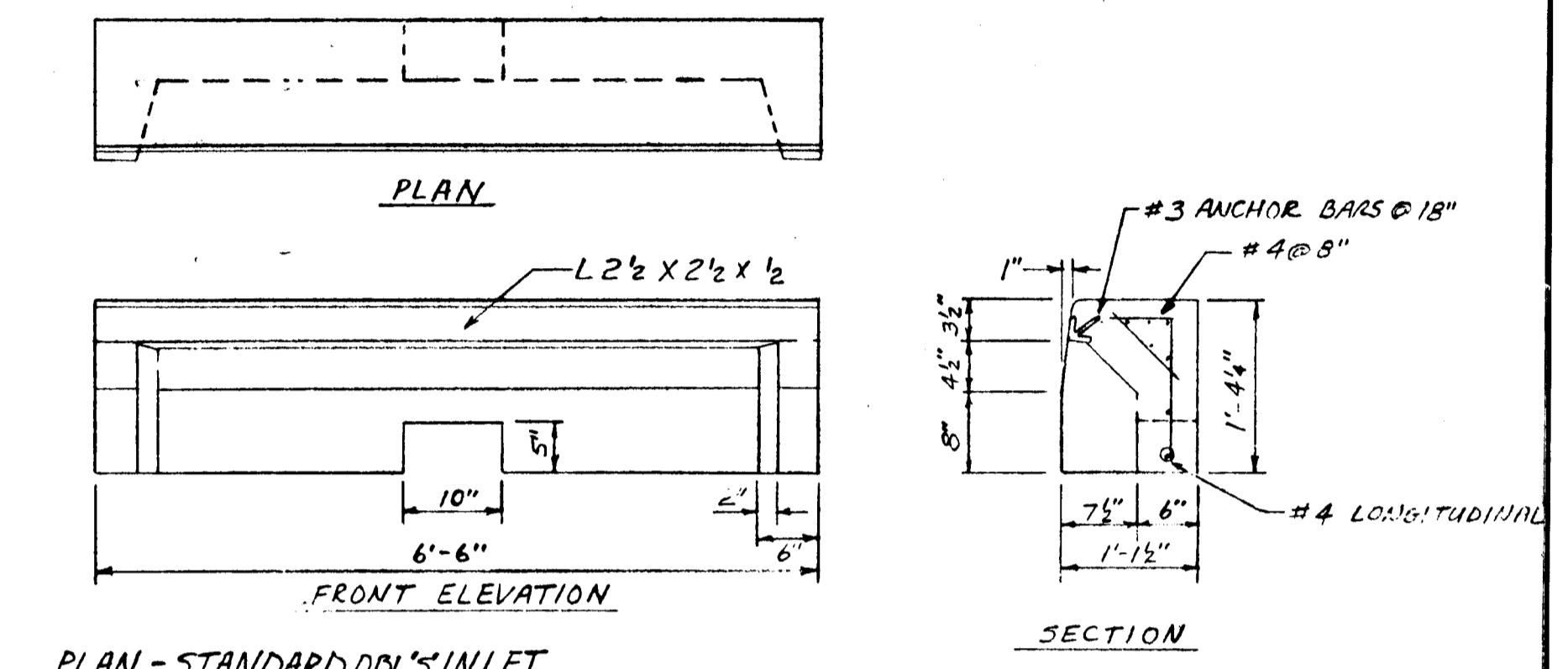
ENG'R:

BY: DLM DATE: 1-28-86 SHT. 1 OF 2

ELEVATION - STD.
DBL.'S INLET

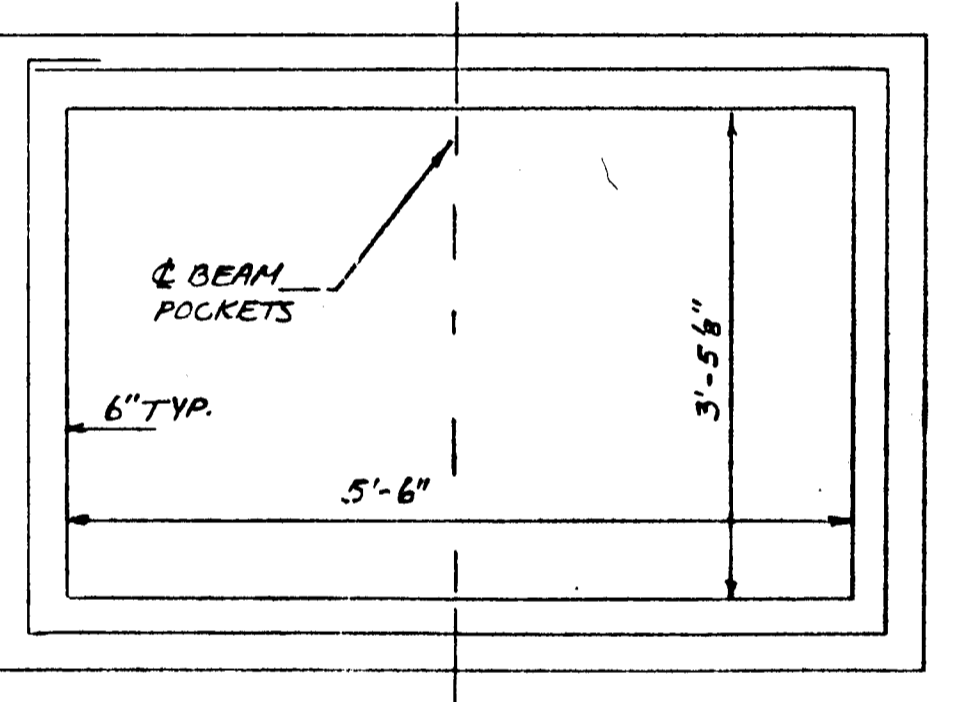


PRECAST CURB



NOTE:
BEAM POCKET IS PROVIDED TO ACCEPT WB X 31 BEAMS.

PLAN - STANDARD DBL.'S INLET



REINFORCING SCHEDULE
A₁ = WWF 4 X 4 - W 4 X W 4

TERRE HILL
CONCRETE PRODUCTS, INC.
TERRE HILL, PA. 17581

PRECAST STANDARD DBL.'S INLET AND PRECAST CURB

JOB: VILLAGE OF DORSEY SEARCH
HOWARD CO. MARYLAND

CONTR: GAINES & CO.

ENG'R:

BY: DLM DATE: 1-28-86 SHT. 2 OF 2

DEPARTMENT OF PUBLIC WORKS

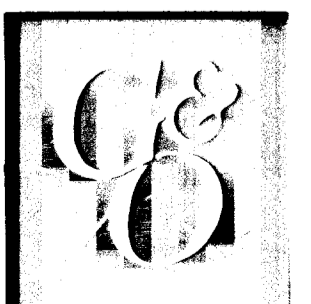
CHIEF, BUREAU OF ENGINEERING

DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

THE HOWARD RESEARCH & DEVELOPEMENT CORPORATION
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
(301) 992-6084

No.	REVISION	DATE	BY



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VILLAGE OF DORSEY'S SEARCH
PRECAST STORM DRAIN STRUCTURE PLAN
SECTION 3 AREA 1 PHASE 191
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DESIGN	SCALE	AS SHOWN
DRAWN	17	OF 17
CHECKED	SHEET	
FEB '86	DATE	
	JOB No.	R-1186-X
		FILE No.

AS-BUILT 1-6-86

F-86-26

1159

F-86-26