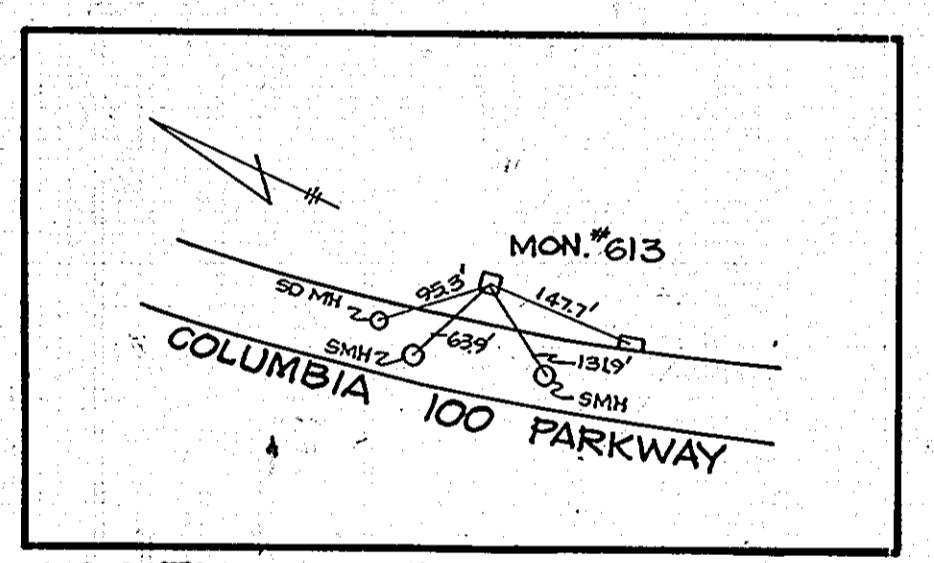
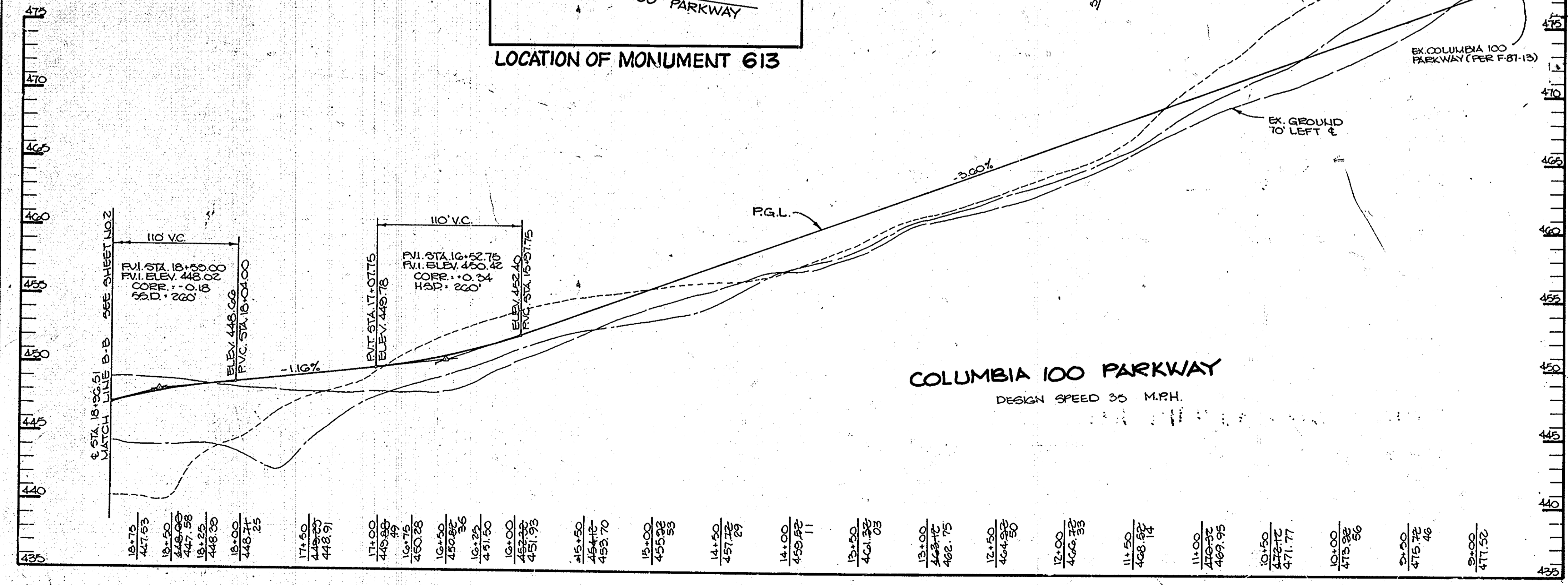


SHEET INDEX	
1 COLUMBIA 100 PARKWAY PLAN AND PROFILE	10 SEDIMENT CONTROL NOTES AND DETAILS
2 COLUMBIA 100 PARKWAY PLAN AND PROFILE	11 DRAINAGE AREA MAP
3 EXECUTIVE PARK DRIVE PLAN AND PROFILE	12 DRAINAGE AREA MAP
4 ROUTE 100 PLAN AND PROFILE	13 GRADING AND SEDIMENT CONTROL PLAN
5 ROUTE 100 PLAN AND PROFILE	14 GRADING AND SEDIMENT CONTROL PLAN
6 ROUTE 100 PLAN AND PROFILE	15 GRADING AND SEDIMENT CONTROL PLAN
7 STORM DRAIN PROFILES	16 GRADING AND SEDIMENT CONTROL PLAN
8 STORM DRAIN PROFILES	17 PLAN AND PROFILE ROUTE 108 AND CENTRE PARK DRIVE IMPROVEMENTS (GRADING, SEDIMENT CONTROL, AND DRAINAGE AREA MAP IMPROVEMENTS)
9 STORM DRAIN PROFILES AND DETAILS	18 DRAINAGE AREA MAP IMPROVEMENTS ROUTE 108 & CENTRE PARK DRIVE

CURVE DATA
 FROM PC STA. 14+81.75 TO PT. STA. 18+71.75
 Δ 22° 20' 45"
 R. 1000.00'
 L. 390.0'
 T. 197.51'
 D. 05° 43' 46"
 Chd. 611° 19' 42" E, 387.53'



LOCATION OF MONUMENT 613



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

- GENERAL NOTES**
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
 - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 C&P TELEPHONE COMPANY 725-9976
 MISS UTILITY 1-800-257-7777
 G&P TELEPHONE COMPANY 725-9976
 AT&T CABLE LOCATION DIVISION 393-3553
 BALTIMORE GAS AND ELECTRIC COMPANY 685-0123
 STATE HIGHWAY ADMINISTRATION 531-5533
 HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK) 792-7272
 - ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOL. IV, I.E., STANDARD SPECIFICATIONS AND DETAILS.
 - STORM DRAIN BACKFILL WITHIN ROADWAYS, UNDER STRUCTURES AND FOR STORM DRAIN TRENCHES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM 1557.
 - NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
 - ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN DETAIL G2.01 (TRENCH IN ROCK OR TRENCH IN EARTH AS DETERMINED BY FIELD CONDITIONS) IN VOL. IV OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.
 - ALL STREET CURB RETURNS SHALL HAVE 35.0" RADII UNLESS OTHERWISE NOTED.
 - ALL ELEVATIONS SHOWN ARE BASED ON U.S.C.G.S. MEAN SEA LEVEL DATUM, 1929.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
 - TOPO TAKEN FROM FIELD RUN SURVEY DATED FEB. 8.2.85 COMPREHENSIVE ZONING PLAN.
 - SUBJECT PROPERTY ZONED PER 8-2-85 COMPREHENSIVE ZONING PLAN.
 - INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1978 EDITION.
 - DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS:
 ALL 80' RIGHT-OF-WAYS 60 M.P.H.
 ALL 100' RIGHT-OF-WAYS 40 M.P.H.
 COLUMBIA PARKWAY 60 RIGHT-OF-WAY 35 M.P.H.
 EXEC. PARK DRIVE 60 RIGHT-OF-WAY 30 M.P.H.
 - SEE SHEET NO. 2 FOR PLANTING DETAIL.

AS-BUILT SURVEY CERTIFIED
 BY ARTHUR E. MUEGGE III MD. PE.
 No. 8707, DN 10-12-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Arthur E. Muegge III 11-18-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William S. Ray 11-28-86
 CHIEF, BUREAU OF ENGINEERING

1/28/88 [] ADDED MANHOLE M.F. 11-28-86

DATE	NO.	REVISION

OWNER: MJF ASSOCIATES LTD. PARTNERSHIP
 1000 EQUITABLE BANK BUILDING
 COLUMBIA, MARYLAND 21044

DEVELOPER: MCCUAN DEVELOPMENT GROUP
 1000 EQUITABLE BANK BUILDING
 COLUMBIA, MARYLAND 21044

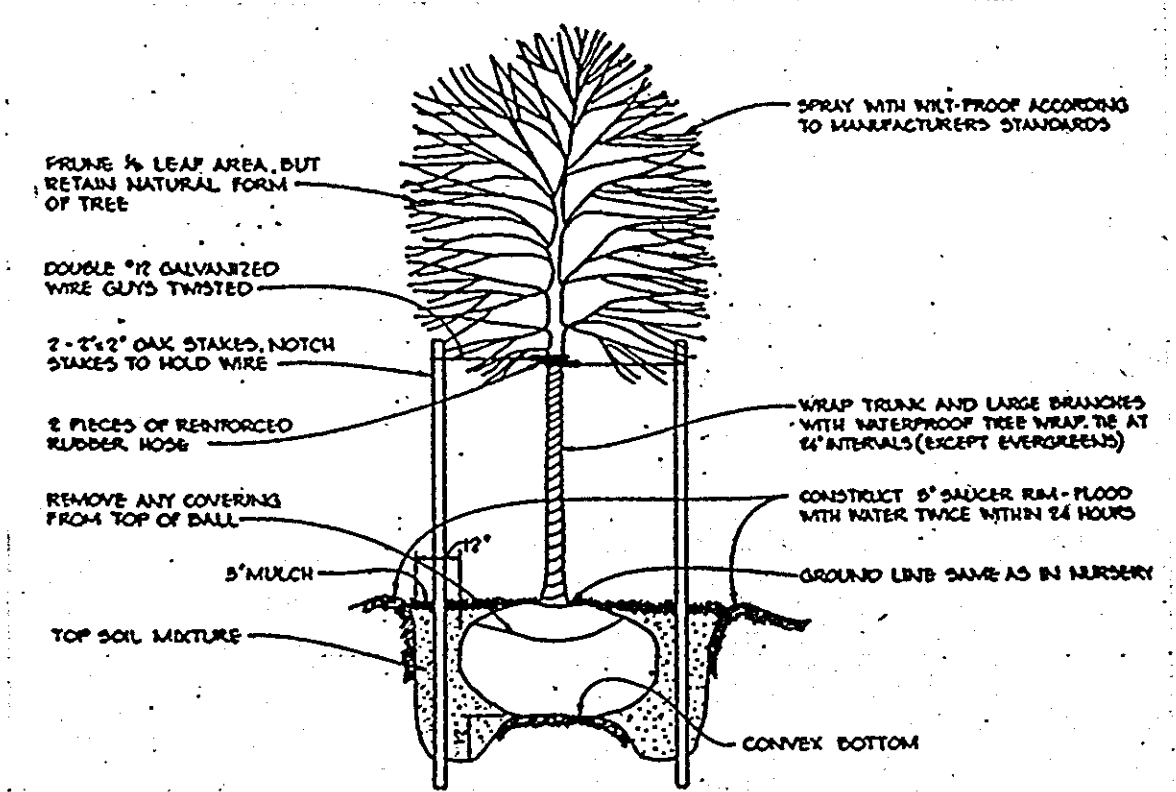
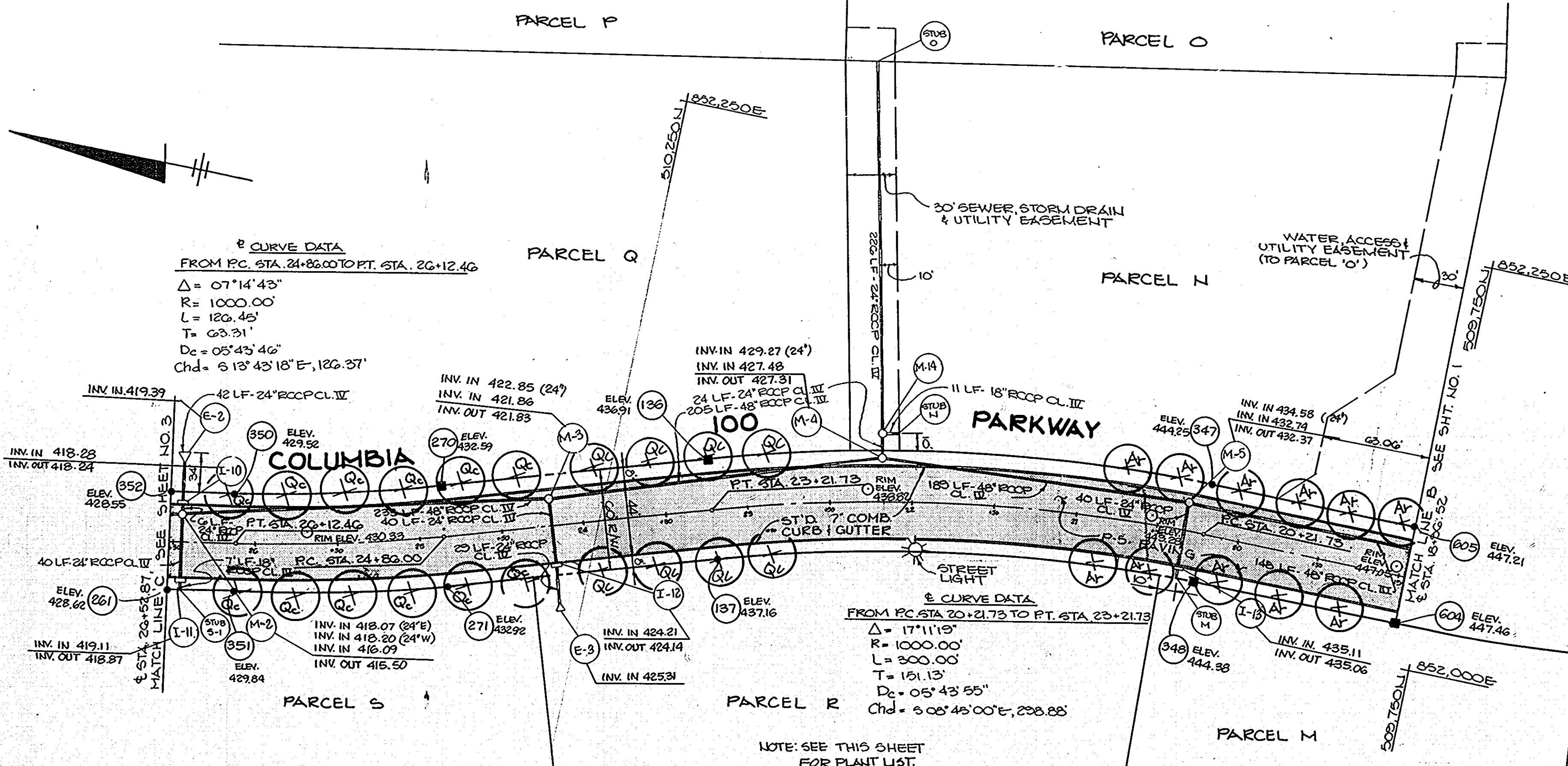
PROJECT: COLUMBIA 100
 OFFICE RESEARCH PARK
 SECTION 1, AREA 2

AREA TAX MAP NO. 30 PARCEL 2
 2ND ELECTION DISTRICT PLAT NO. 5242
 HOWARD COUNTY, MARYLAND

TITLE: COLUMBIA 100 PARKWAY
 PLAN AND PROFILE

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 481-2890

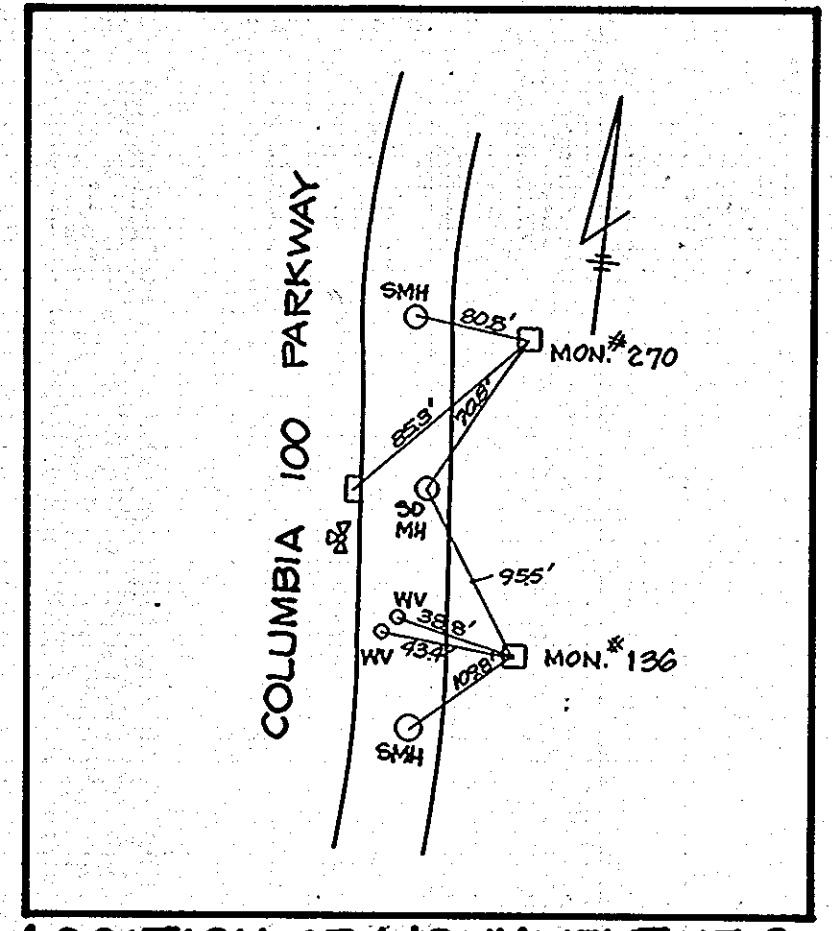
DATE: 7-10-86
 DESIGNED BY: W.C.W.
 DRAWN BY: W.C.W.
 PROJECT NO: 08B10
 DATE: 11-04-86
 SCALE: AS SHOWN
 DRAWING NO. 1 OF 13



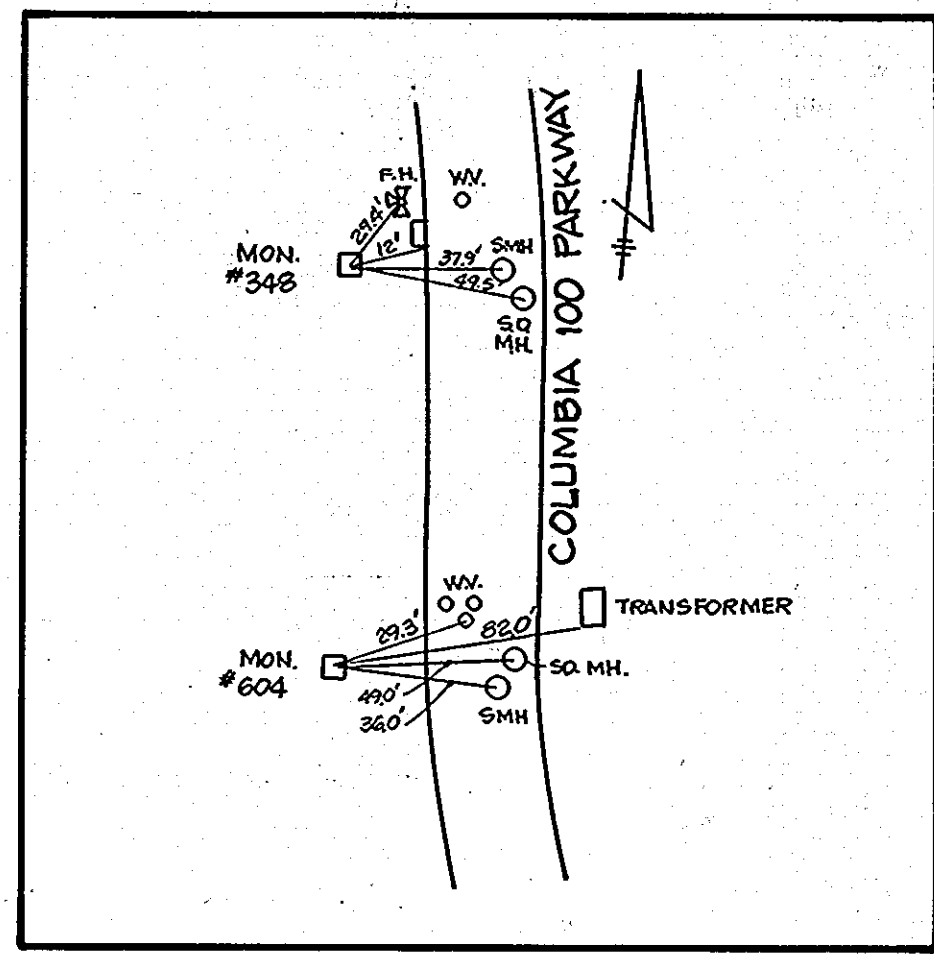
PLANTING DETAIL
NO SCALE

PLANT LIST

72	Ar	Acer Rubrum Red Maple	2 1/2-3\"/>
25	Ls	Liquidambar styraciflua Sweet Gum	2 1/2-3\"/>
55	Ps	Pinus Strobus Eastern White Pine	2 1/2-3\"/>
20	Qc	Quercus Coccinea Scarlet Oak	2 1/2-3\"/>
50	Tc	Tilia Cordata Littelleaf Linden	2 1/2-3\"/>

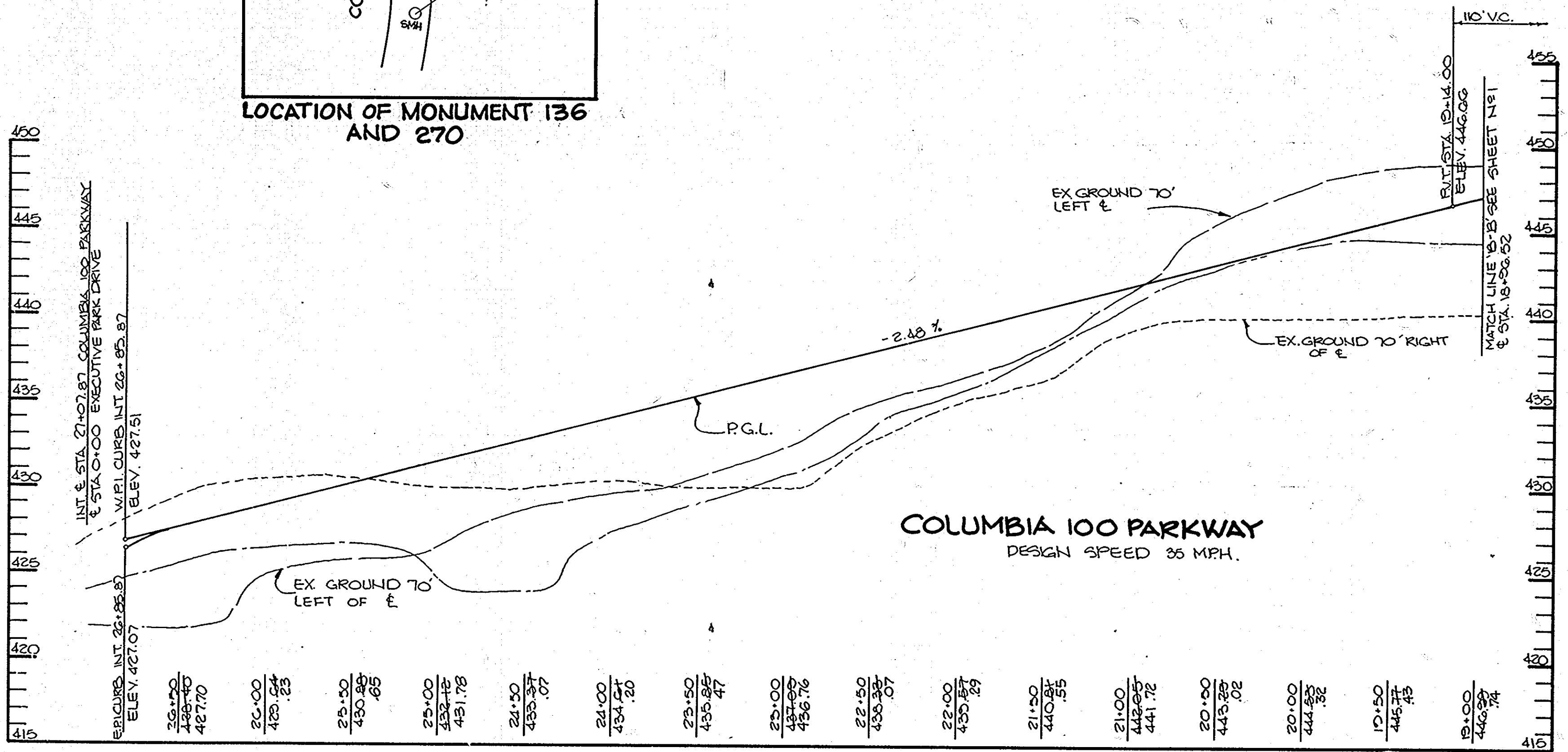


LOCATION OF MONUMENT 136 AND 270



LOCATION OF MONUMENT 348 & 604

PLAN
SCALE: 1\"/>



PROFILE
SCALE: HOR: 1\"/>

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
Arthur E. Muegge III 11-18-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William S. Reay 11-28-86
CHIEF, BUREAU OF ENGINEERING

DATE	NO.	REVISION
------	-----	----------

OWNER: MJF ASSOCIATES LTD. PARTNERSHIP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

DEVELOPER: MCKEAN DEVELOPMENT GROUP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

PROJECT: COLUMBIA 100
OFFICE RESEARCH PARK
SECTION 1, AREA 2

AREA TAX MAP NO. 30 PARCEL 2
2ND ELECTION DISTRICT PLAT NO. 5246
HOWARD COUNTY MARYLAND

TITLE: COLUMBIA 100 PARKWAY
PLAN AND PROFILE

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Elkport City, Maryland 21043 (301) 461-2690

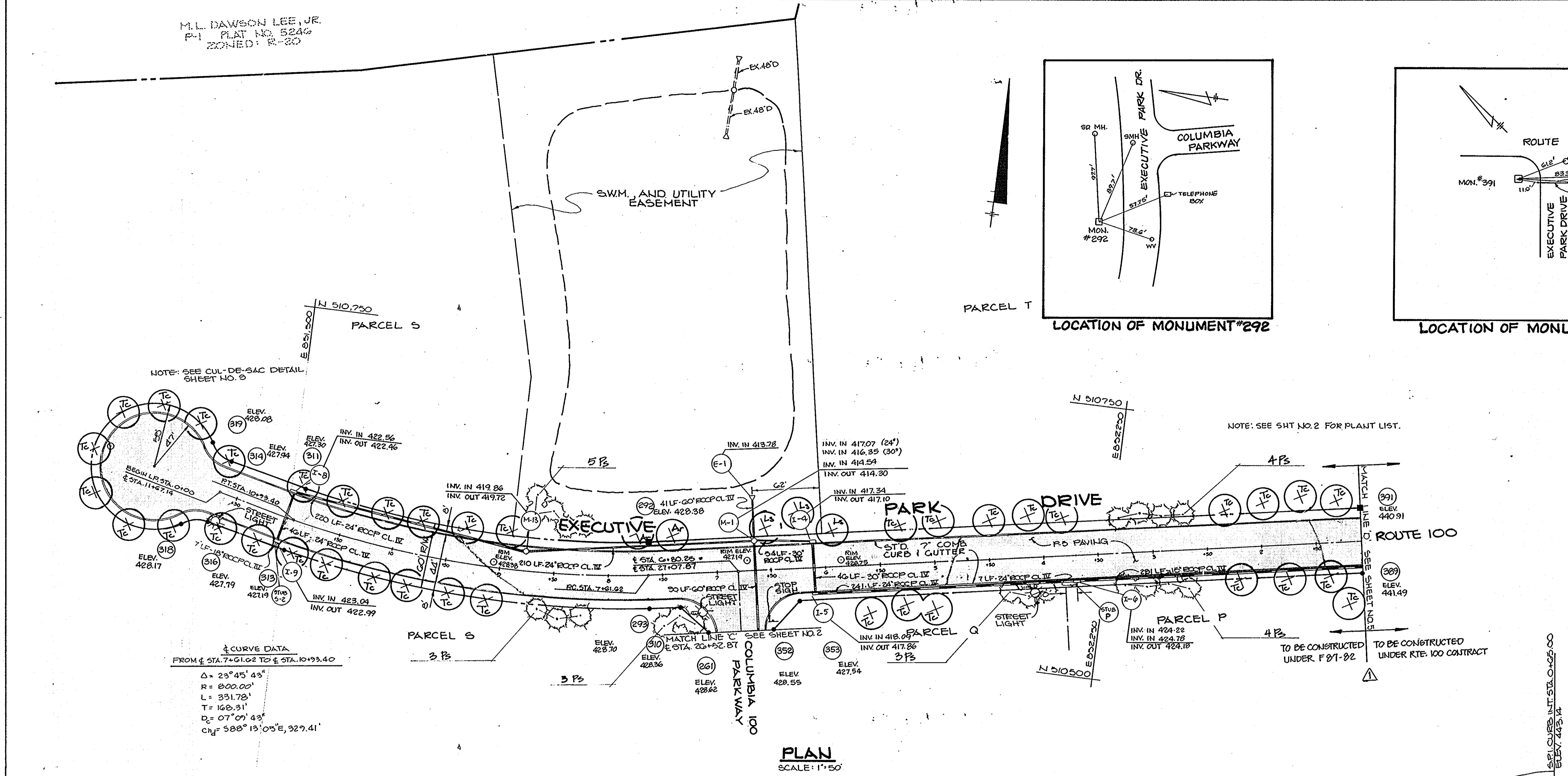
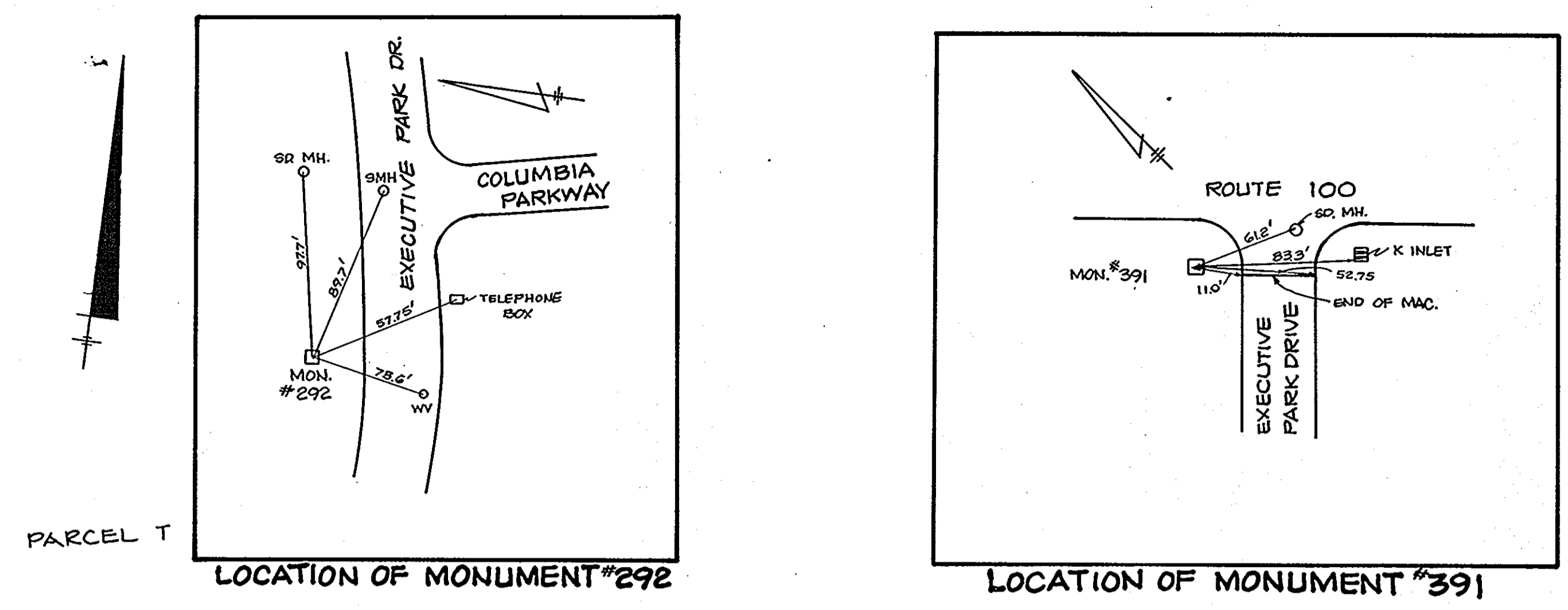
7-10-86
DATE

DESIGNED BY: WCM
DRAWN BY: WCM
PROJECT NO: 00810
DATE: 11-04-86
SCALE: AS SHOWN
DRAWING NO. 2 OF 10

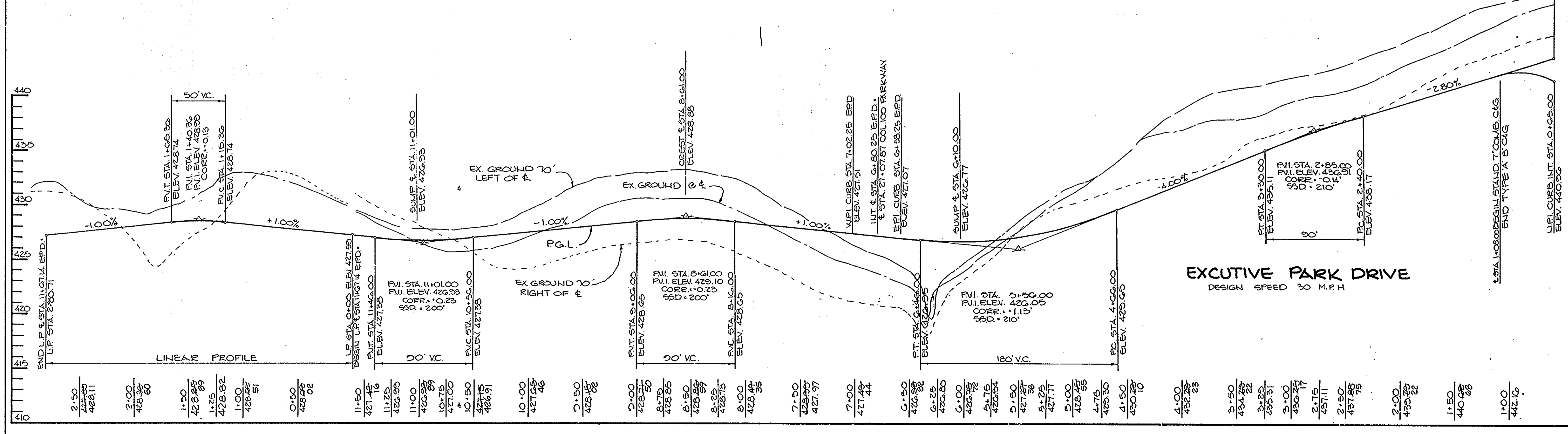
AS-BUILT SURVEY CERTIFIED
BY ARTHUR E. MUEGGE III, MD. P.E.
No. 8707, ON 10-12-88

ARTHUR E. MUEGGE III 11/87

M.L. DAWSON LEE, JR.
P-1 PLAT NO. 524G
ZONED: R-20



△ = 23°45'43"
R = 800.00'
L = 331.78'
T = 168.31'
D = 07°09'43"
CH = 588°13'05"E, 327.41'



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

AS-BUILT SURVEY CERTIFIED
BY ARTHUR E. MUEGGE, MD. P.E.
No. 8707, ON 10-12-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John W. ... 11-18-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William B. ... 11-28-86
CHIEF, BUREAU OF ENGINEERING

11-22-88 Provided limits of construction for the bonding of MD 100.
DATE NO. REVISION

OWNER: M.J.F. ASSOCIATES LTD. PARTNERSHIP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

DEVELOPER: MCCUAN DEVELOPMENT GROUP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

PROJECT: COLUMBIA 100
OFFICE RESEARCH PARK
SECTION 1, AREA 2

AREA TAX MAP NO. 30 PARCEL 2
2ND ELECTION DISTRICT PLAT NO. 524G
HOWARD COUNTY, MARYLAND

TITLE: EXECUTIVE PARK DRIVE
PLAN AND PROFILE

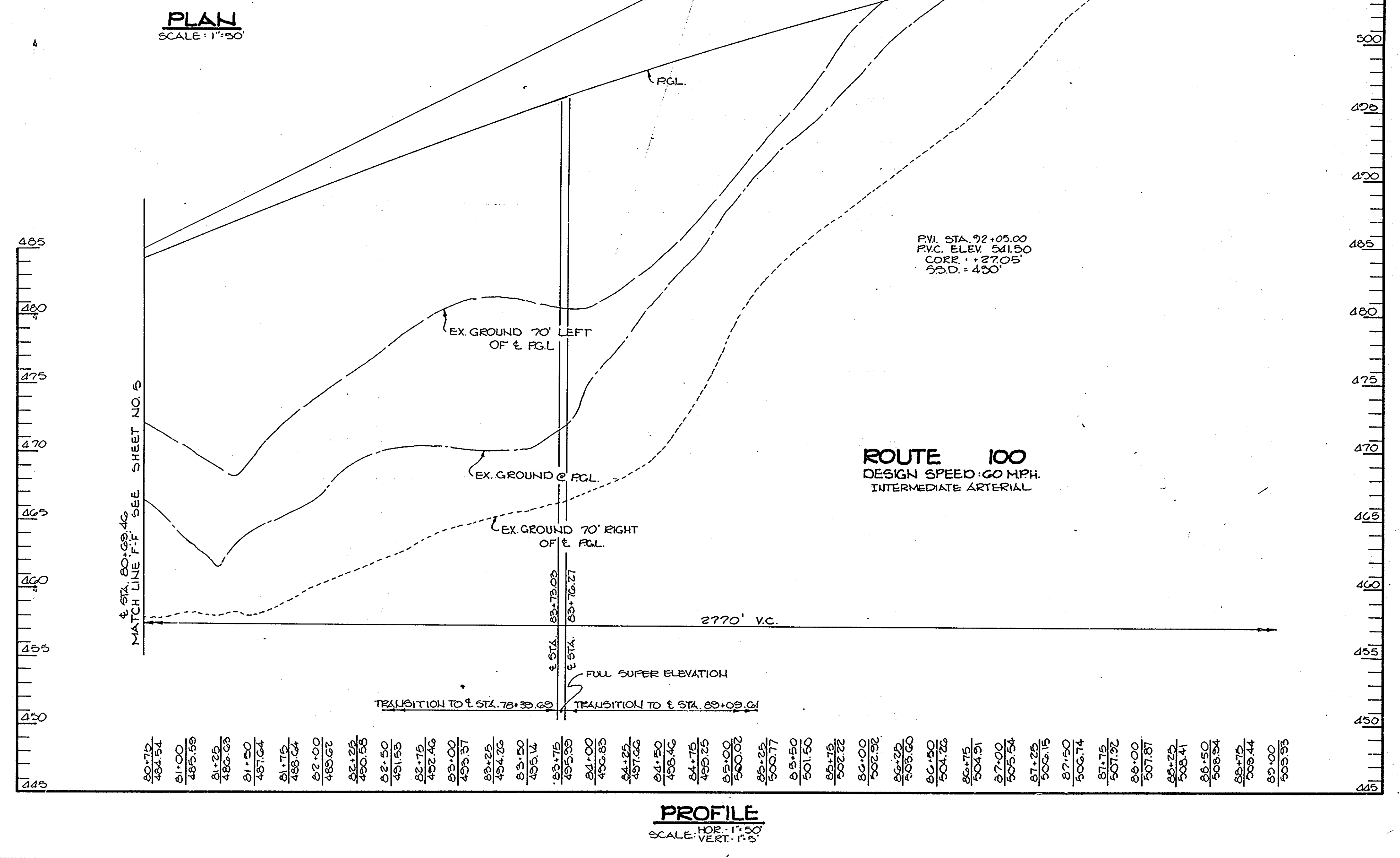
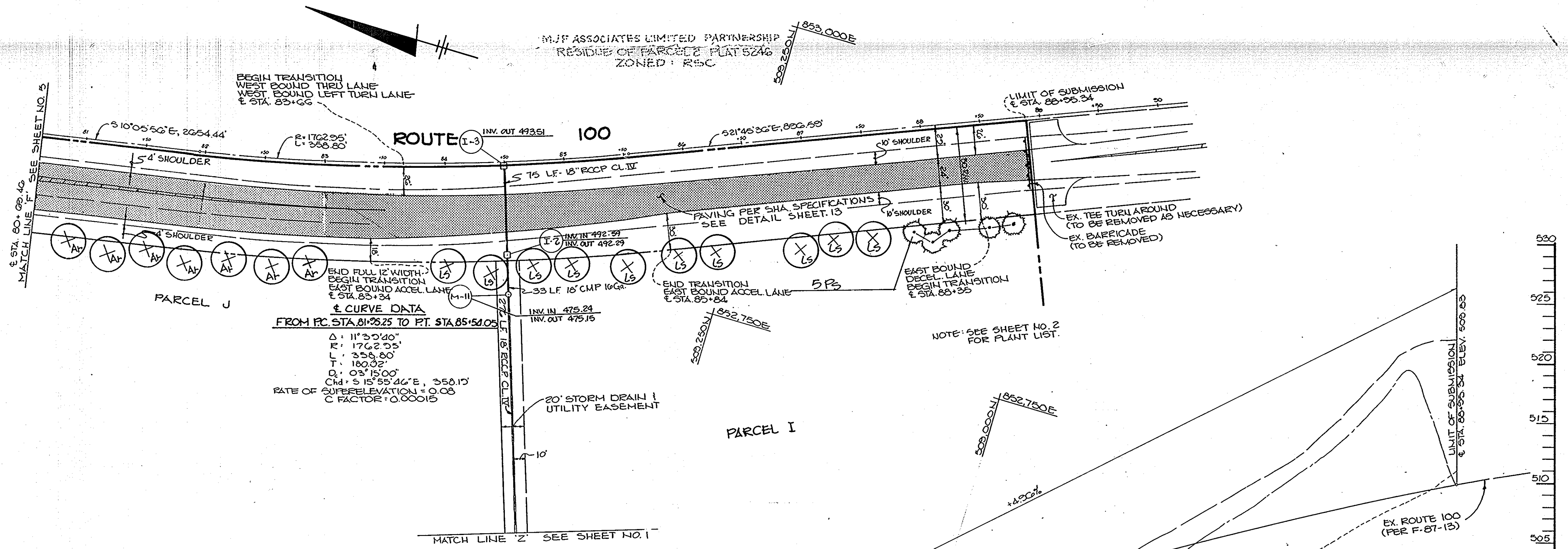
THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

T-10-86
DATE

DESIGNED BY: W.C.W.
DRAWN BY: W.C.W.
PROJECT NO: 00810
DATE: 11-04-86
SCALE: AS SHOWN
DRAWING NO. 3 OF 18

ARTHUR E. MUEGGE 8707

1231

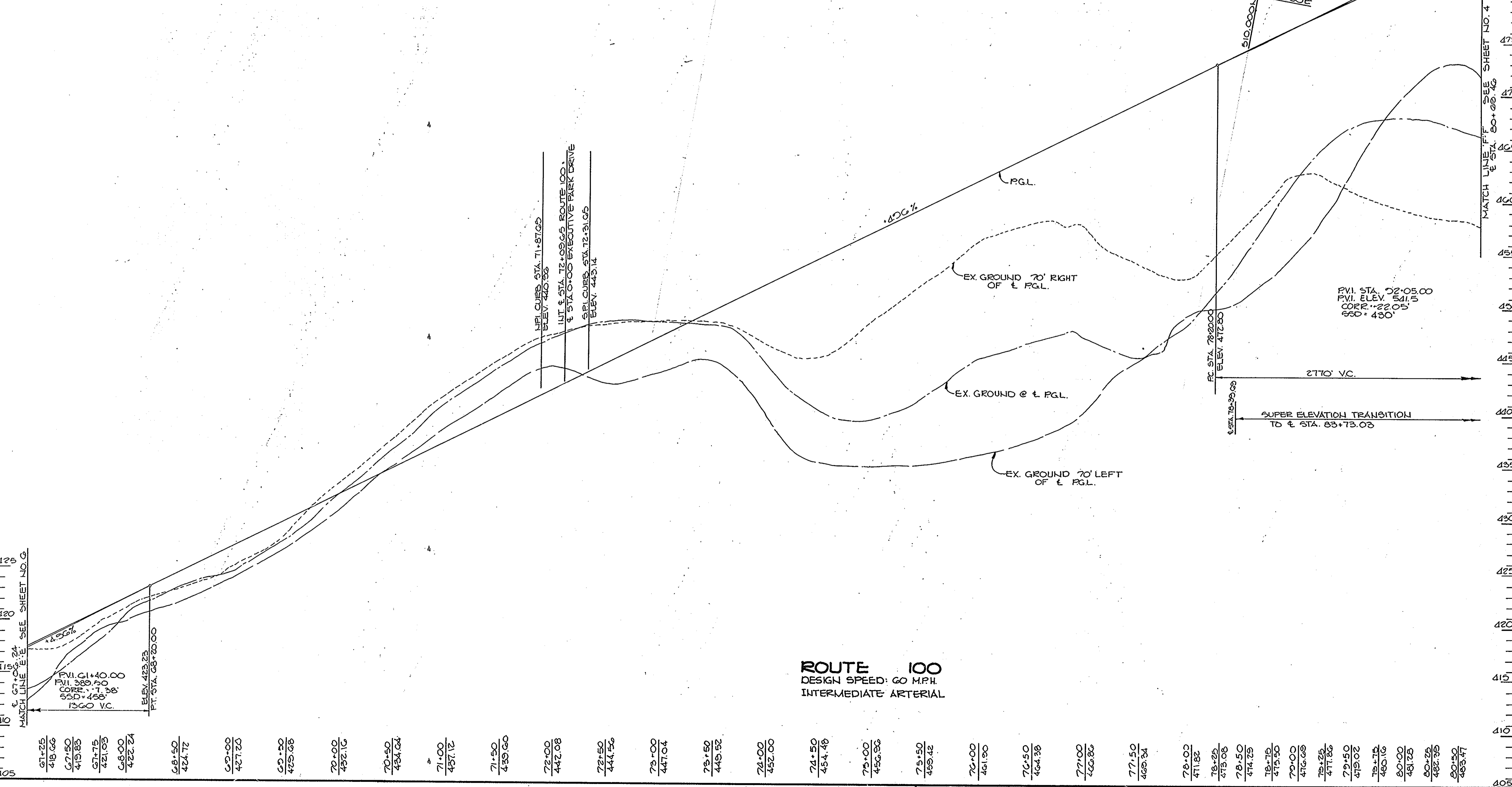
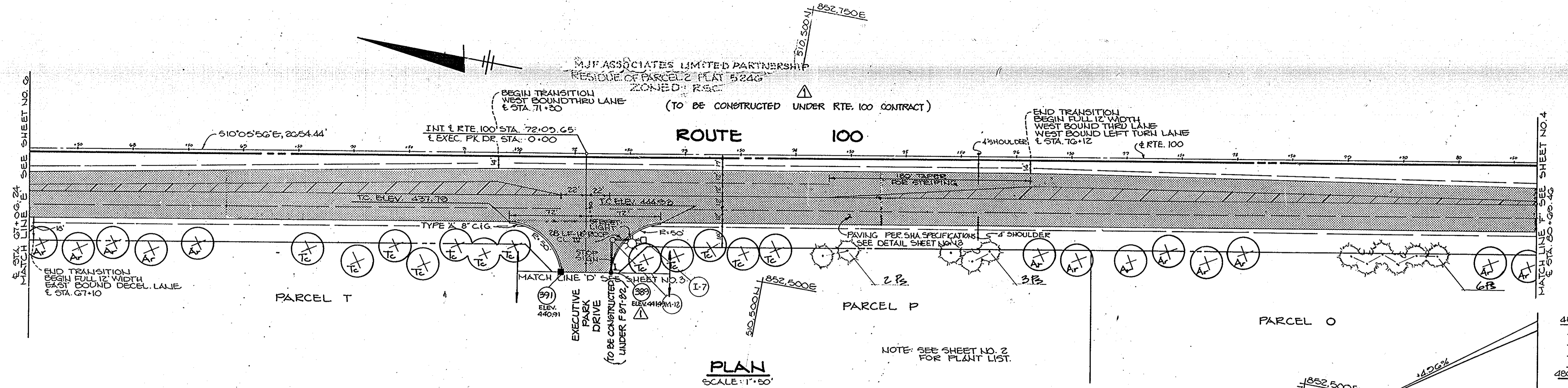


AS-BUILT SURVEY CERTIFIED
 BY ARTHUR E. MUEGGE III, MD. P.E.
 No. 8707, ON OCT. 12, 1988

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING	
<i>John W. Muegge</i>	11-18-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>Arthur E. Muegge III</i>	11-22-86
CHIEF, BUREAU OF ENGINEERING	DATE
DATE	REVISION
OWNER	MJF ASSOCIATES LTD. PARTNERSHIP 1000 EQUITABLE BANK BUILDING COLUMBIA, MARYLAND 21044
DEVELOPER	MCCUAN DEVELOPMENT GROUP 1000 EQUITABLE BANK BUILDING COLUMBIA, MARYLAND 21044
PROJECT:	COLUMBIA 100 OFFICE RESEARCH PARK SECTION I, AREA 2
AREA TAX MAP NO. 30	PARCEL 2
2ND ELECTION DISTRICT	PLAT NO. 524G
HOWARD COUNTY, MARYLAND	
TITLE:	ROUTE 100 PLAN AND PROFILE
THE RIEMER GROUP, INC. The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2880	
DATE	7-10-86
DESIGNED BY:	WCM
DRAWN BY:	WCM
PROJECT NO.:	0080
DATE:	11-04-86
SCALE:	AS SHOWN
DRAWING NO.:	4 OF 18

1231

MARYLAND SURVEYING CO., INC. 18289



AS-BUILT SURVEY CERTIFIED
BY ARTHUR E. MUEGGE III, MD. P.E.
No. 8707, ON 10-12-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John W. ... 11-18-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
... 11-28-86
CHIEF, BUREAU OF ENGINEERING

11-22-88 Provided limits of construction for the bonding of MD. 100
DATE NO. REVISION

OWNER: MJF ASSOCIATES LTD. PARTNERSHIP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

DEVELOPER: McCUAN DEVELOPMENT GROUP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

PROJECT: COLUMBIA 100
OFFICE RESEARCH PARK
SECTION I, AREA 2

AREA TAX MAP NO. 30 PARCEL 2
2ND ELECTION DISTRICT PLAT NO. 5246
HOWARD COUNTY, MARYLAND

TITLE: ROUTE 100
PLAN AND PROFILE

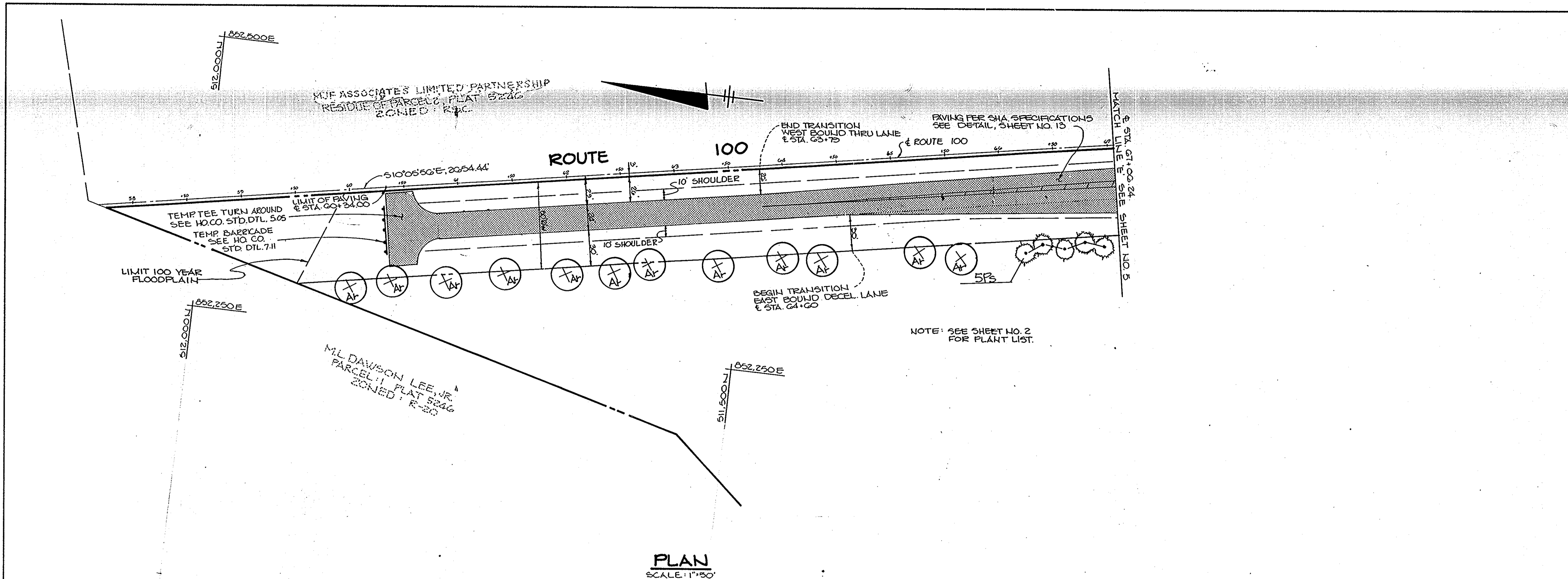
THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2680

7-10-86 DATE
DESIGNED BY: WC.W.
DRAWN BY: WC.W.
PROJECT NO: 00810
DATE: 11-04-86
SCALE: AS SHOWN
DRAWING NO. 5 OF 18

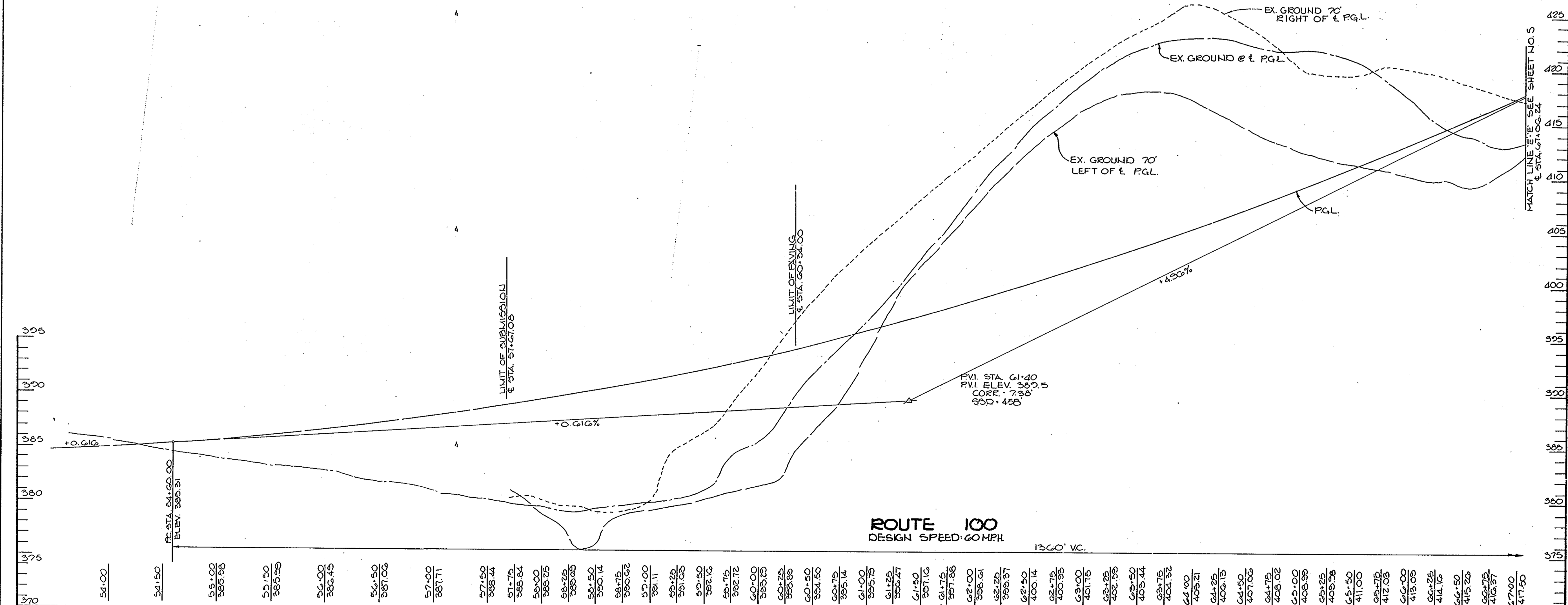
ARTHUR E. MUEGGE III 8707

1231

MARYLAND BLUEPRINT CO., INC. N839



PLAN
SCALE: 1"=50'



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

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John Mueggler 11-18-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William S. Reay 11-28-86
 CHIEF, BUREAU OF ENGINEERING

DATE	NO.	REVISION

OWNER: MVF ASSOCIATES LTD. PARTNERSHIP
 1000 EQUITABLE BANK BUILDING
 COLUMBIA, MARYLAND 21044

DEVELOPER: MCCUAN DEVELOPMENT GROUP
 1000 EQUITABLE BANK BUILDING
 COLUMBIA, MARYLAND 21044

PROJECT: **COLUMBIA 100**
 OFFICE RESEARCH PARK
 SECTION 1, AREA 2

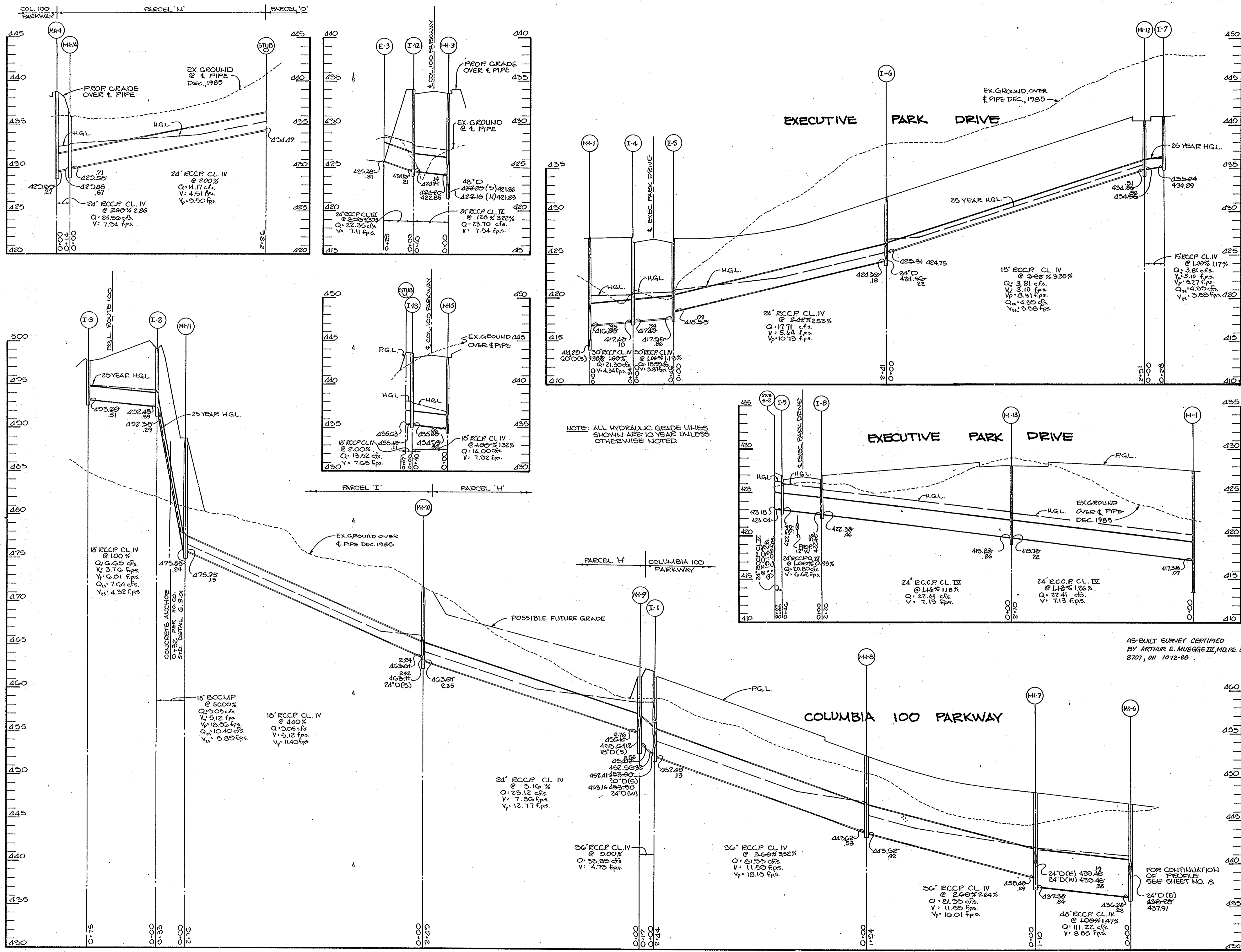
AREA TAX MAP NO 30 PARCEL 2
 2ND ELECTION DISTRICT PLAT NO
 HOWARD COUNTY, MARYLAND 524G

TITLE: **ROUTE 100**
 PLAN AND PROFILE

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Heath Park Drive, Ellicott City, Maryland 21043 (301) 481-2880

	DATE: 1-10-86	DESIGNED BY: W.C.W.
		DRAWN BY: W.C.W.
		PROJECT NO: 00610
		DATE: 11-04-86
		SCALE: AS SHOWN
	DRAWING NO. 6 OF 16	

1231



BY THE DEVELOPER:

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Christie G. Richards Nov. 12, 1986
DEVELOPER DATE

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Arthur E. Mueggel 11-17-86
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

John M. Vela 11-17-86
S.O. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Stephaniel A. Miller 11/17/86
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

John W. Mueggel 11-18-86
CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Arthur E. Mueggel 11-28-86
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER: M/J ASSOCIATES LTD. PARTNERSHIP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

DEVELOPER: MCGRAW DEVELOPMENT GROUP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

PROJECT: COLUMBIA 100
OFFICE RESEARCH PARK
SECTION 1, AREA 2

AREA TAX MAP NO. 30 PARCEL 2
2ND ELECTION DISTRICT PLAT NO.
HOWARD COUNTY, MARYLAND 5246

TITLE: STORM DRAIN PROFILES

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Elcott City, Maryland 21043 (301) 481-2880

7-10-86 DATE

DESIGNED BY: W.C.W.

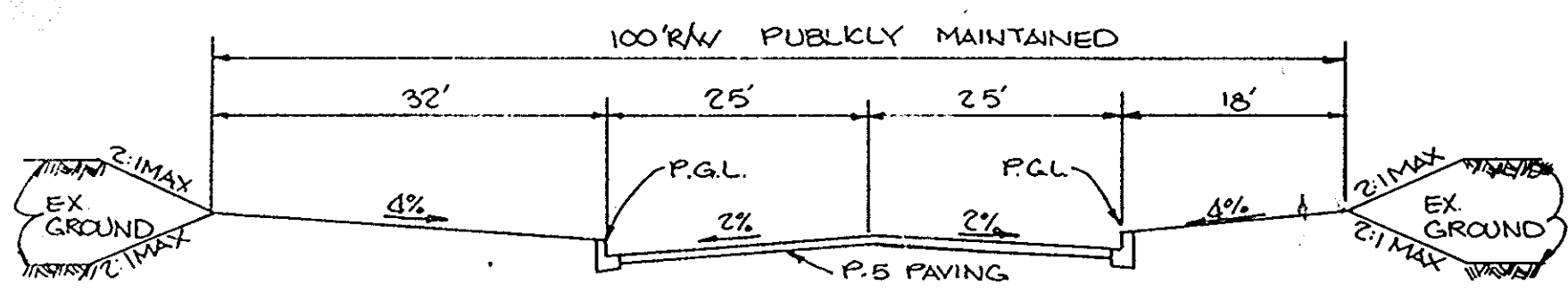
DRAWN BY: F.D.M.

PROJECT NO: 00810

DATE: 11-04-86

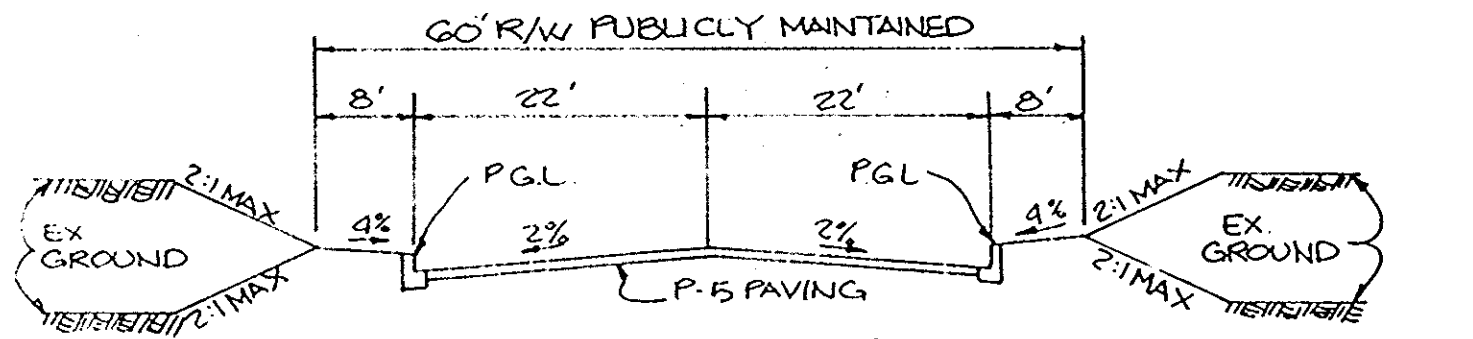
SCALE: HOR. 1"=50'
VERT. 1"=5'

DRAWING NO. 7 OF 18



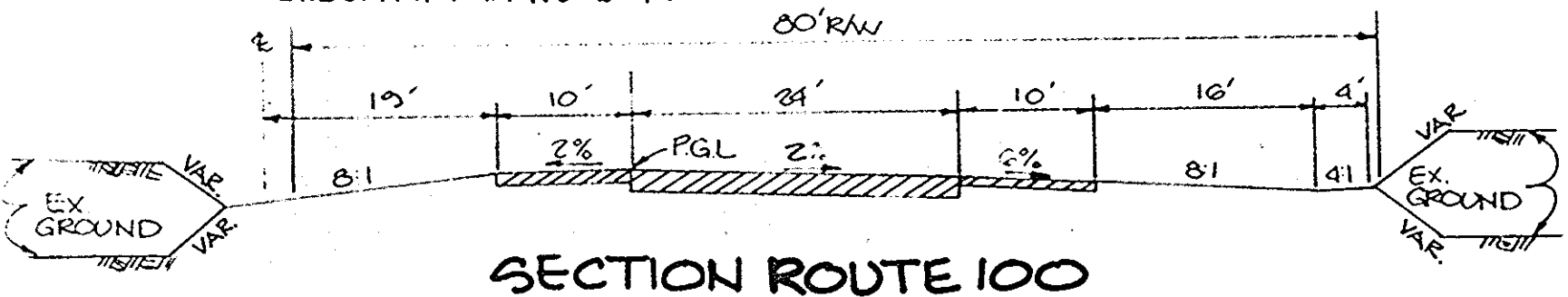
TYPICAL SECTION 100' R/W CENTRE PARK DRIVE
NO SCALE
MAJOR COLLECTOR
ZONED P.O.R.

LIMITS: E STA. 12+42.69 TO E STA. 18+64.60

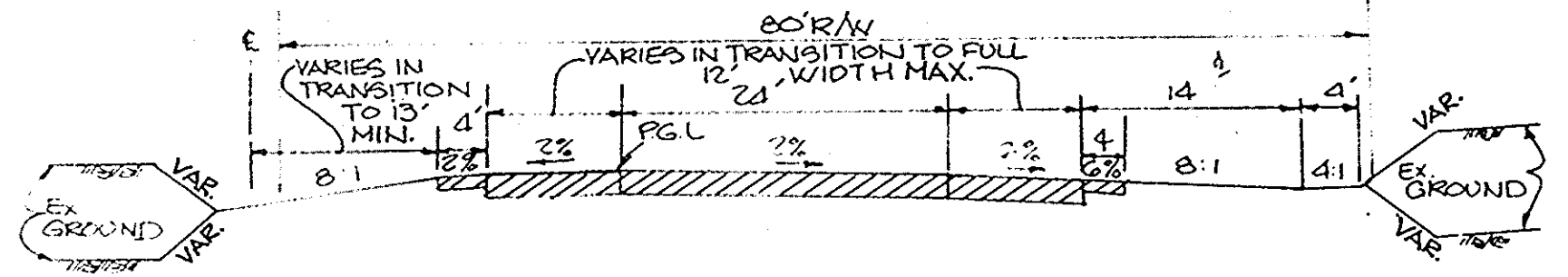


TYPICAL SECTION 60' R/W COLUMBIA 100 PARKWAY EXECUTIVE PARK DRIVE
NO SCALE
MINOR COLLECTOR
DESIGN SPEED: COL. 100 PARKWAY - 35 MPH. EXEC. PARK DRIVE - 30 MPH.

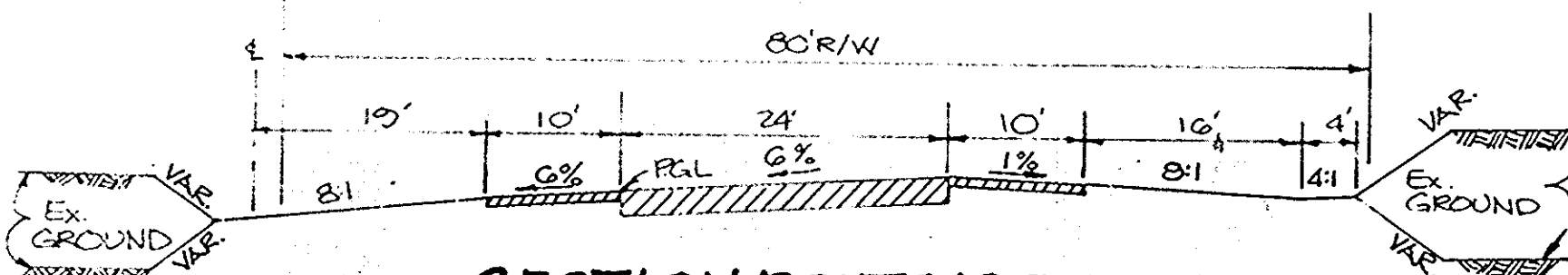
LIMITS: COL. 100 PARKWAY - E STA. 0+61.00 TO E STA. 22+80.87
EXEC. PARK DRIVE - E STA. 1+08.00 TO E STA. 11+07.14



SECTION ROUTE 100
NO SCALE
INTERMEDIATE ARTERIAL
DESIGN SPEED: 60 MPH.

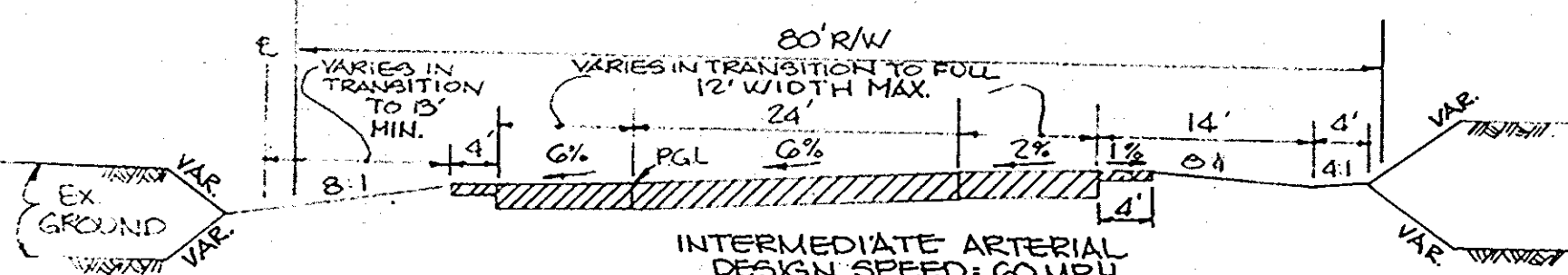


SECTION ROUTE 100
NO SCALE
INTERMEDIATE ARTERIAL
DESIGN SPEED: 60 MPH.



SECTION ROUTE 100 DURING SUPER ELEVATION
NO SCALE

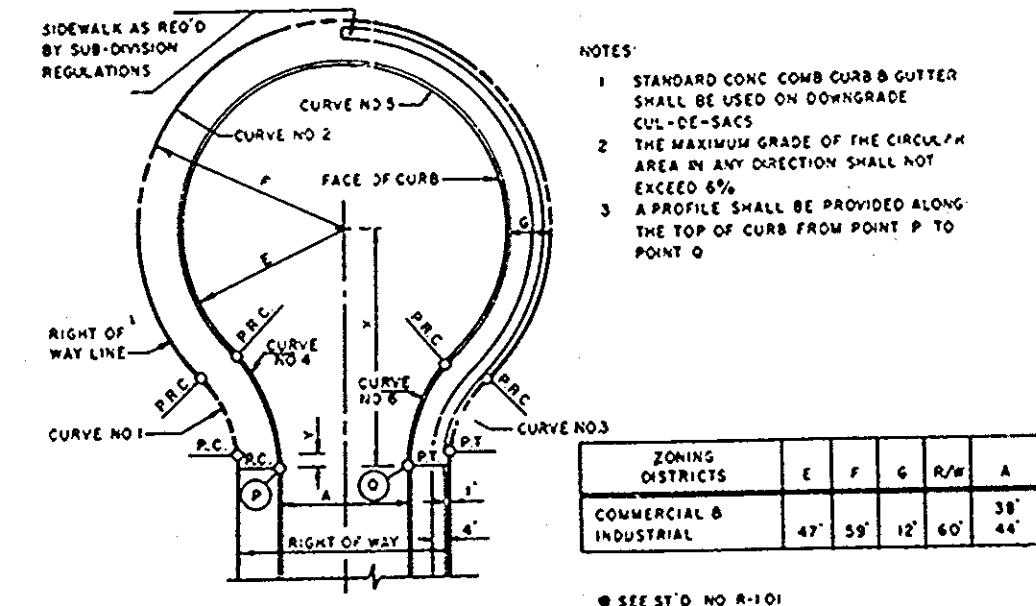
LIMITS OF SUPER ELEVATION INCLUDING TRANSITION
STA. 78+39.60 TO STA. 80+09.61
STA. 90+26.20 TO STA. 97+82.70
INTERMEDIATE ARTERIAL
DESIGN SPEED: 60 MPH.



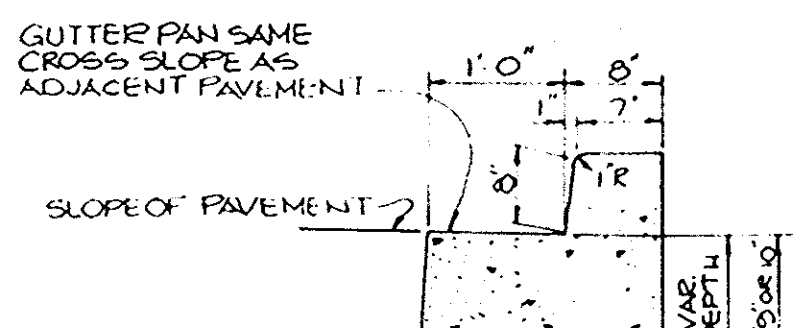
SECTION ROUTE 100 DURING SUPER ELEVATION
NO SCALE

LIMITS OF 48' PAVEMENT WIDTH INCLUDING TRANSITION
STA. 83+30 TO STA. 85+84
STA. 88+25 TO STA. 97+83

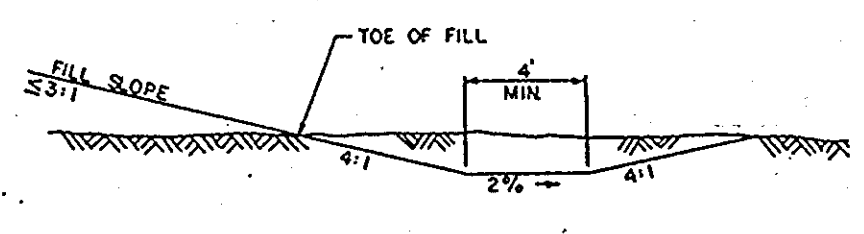
NOTE: SEE PLAN VIEW FOR EXACT STATIONING OF EAST AND WEST BOUND AUXILIARY LANES.



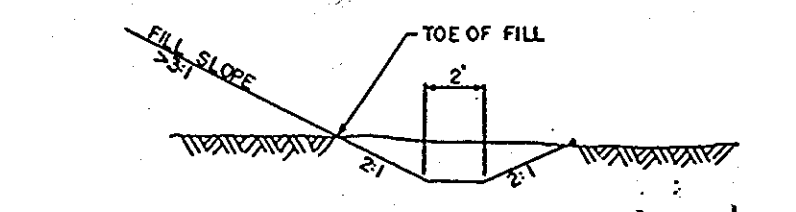
CUL-DE-SAC DETAIL
NO SCALE
EXECUTIVE PARK DRIVE



TYPE 'A' 8" CURB & GUTTER
NO SCALE

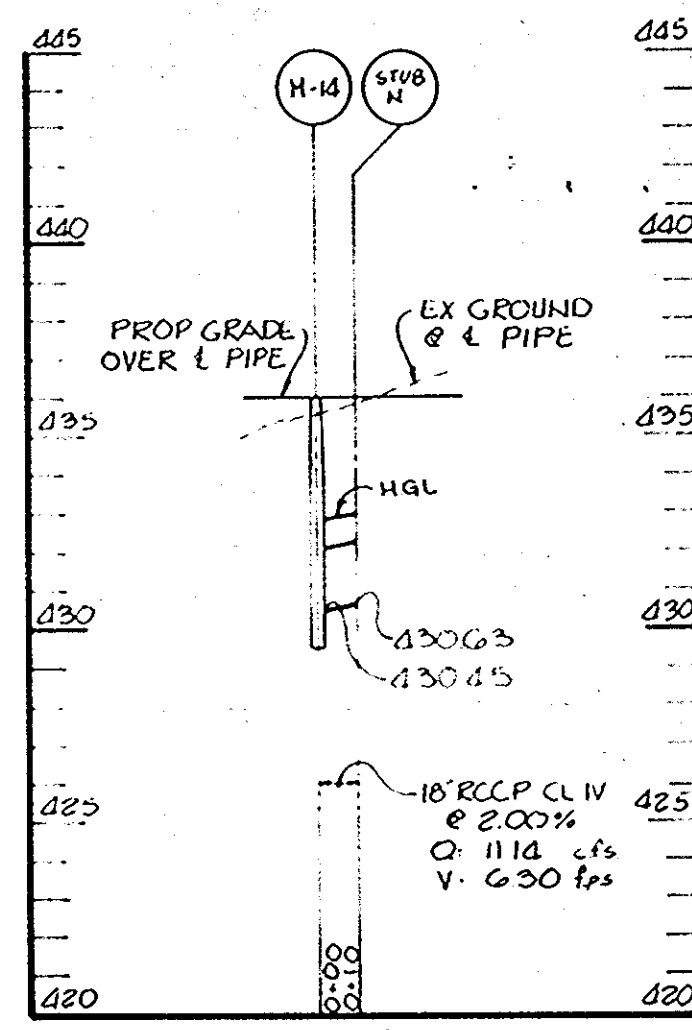


TRAVERSABLE SECTION
(FOR USE IN AREAS EXPOSED TO TRAFFIC)

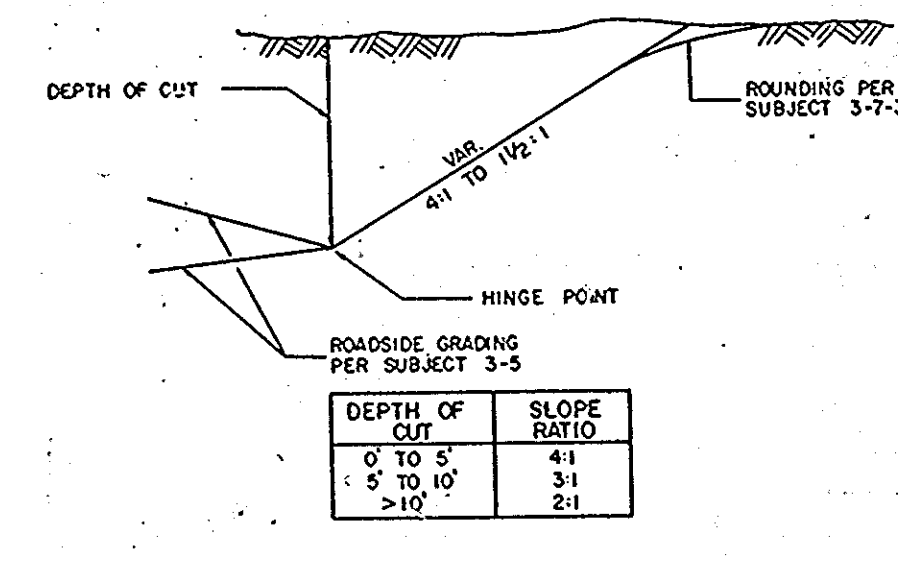


NON-TRAVERSABLE SECTION
(FOR USE IN AREAS NOT EXPOSED TO TRAFFIC)

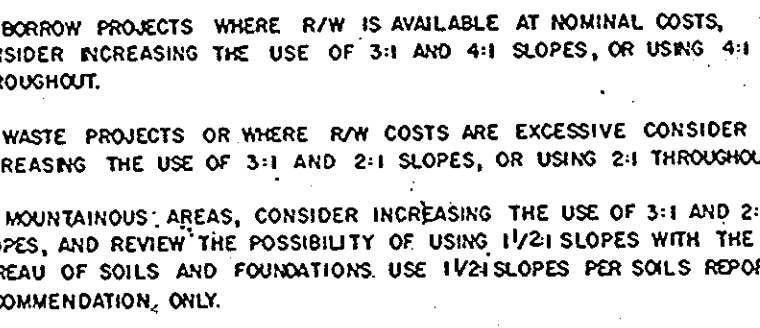
SIDE-DITCH IN FILL AREA
NO SCALE
(RTE. 100 ONLY)



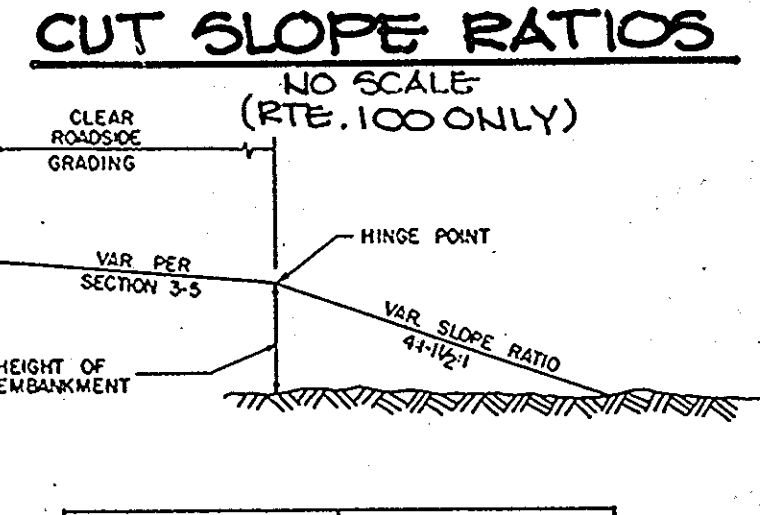
PROFILE
SCALE: HOR. 1"=50' VERT. 1"=5'



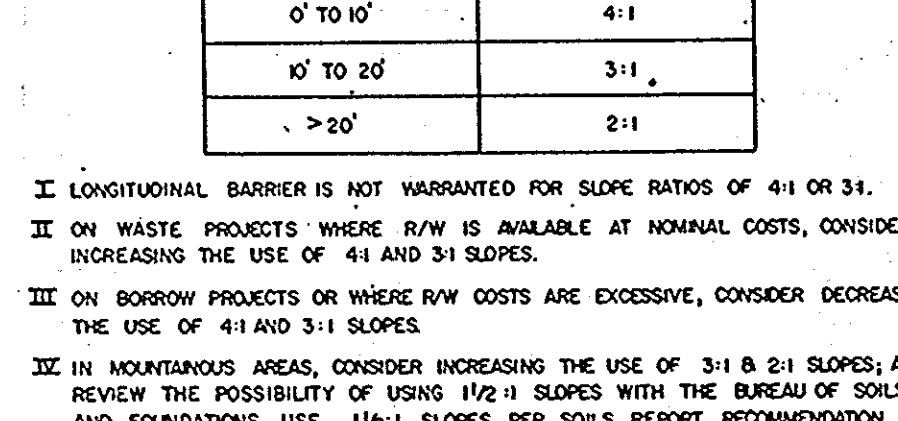
CUT SLOPE RATIOS
NO SCALE
(RTE. 100 ONLY)



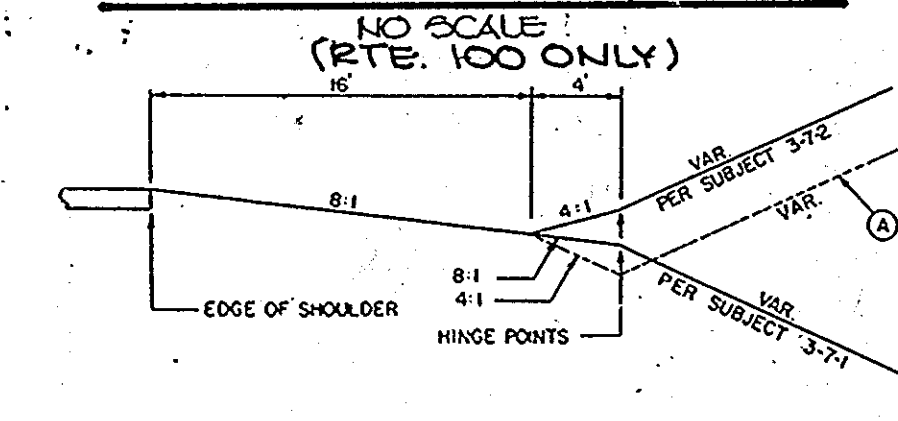
CUT SLOPE ROUNDING
NO SCALE
(RTE. 100 ONLY)



FILL SLOPE RATIOS
NO SCALE
(RTE. 100 ONLY)



SAFETY GRADE TRANSITION
NO SCALE
(RTE. 100 ONLY)

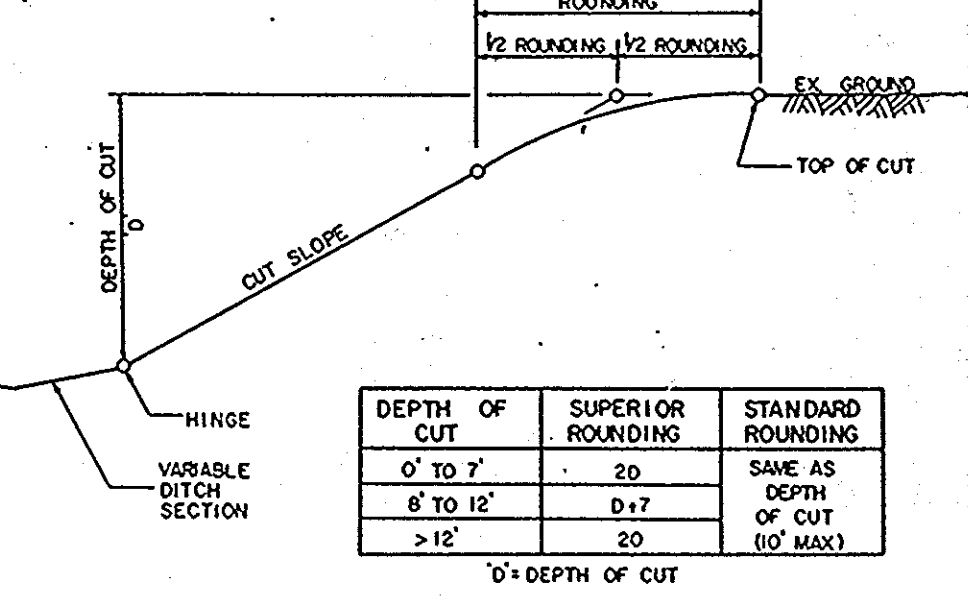


FILL SLOPE RATIOS
NO SCALE
(RTE. 100 ONLY)

NOTE
Under certain conditions, a 50 M.P.H. open section may be constructed as shown on subject 3-5-5. The Assistant Chief Engineer-Highway Development will consider approval of a design exception for the reduced grading section as follows:

- The request for an exception should be justified on the basis of at least one, but preferably two or more of the following:
Low volumes of traffic
Low operating speeds (anticipated)
R/C restrictions
Excessive grading costs
Functional classification - Arterial or Collector
- For other than new construction, justification may be based on the above and/or the nature of the proposed improvements, i.e., reconstruction, rehabilitation, resurfacing or other limited scopes of work.

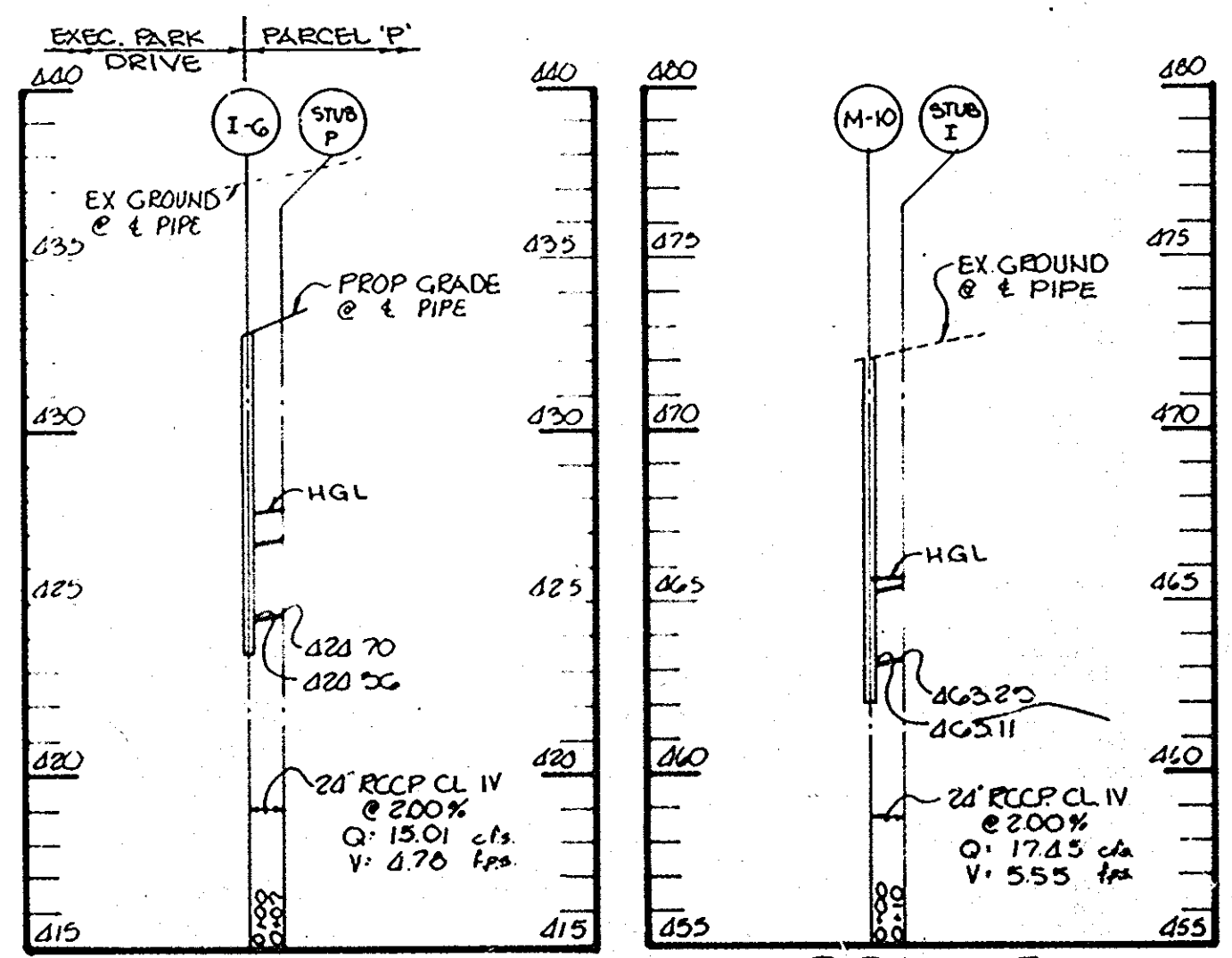
Where subsurface drainage problems are encountered, the soils report may recommend additional depth of ditch in cut areas as shown dashed. This does not necessarily apply to all cuts on a particular project, only those where drainage problems exist.



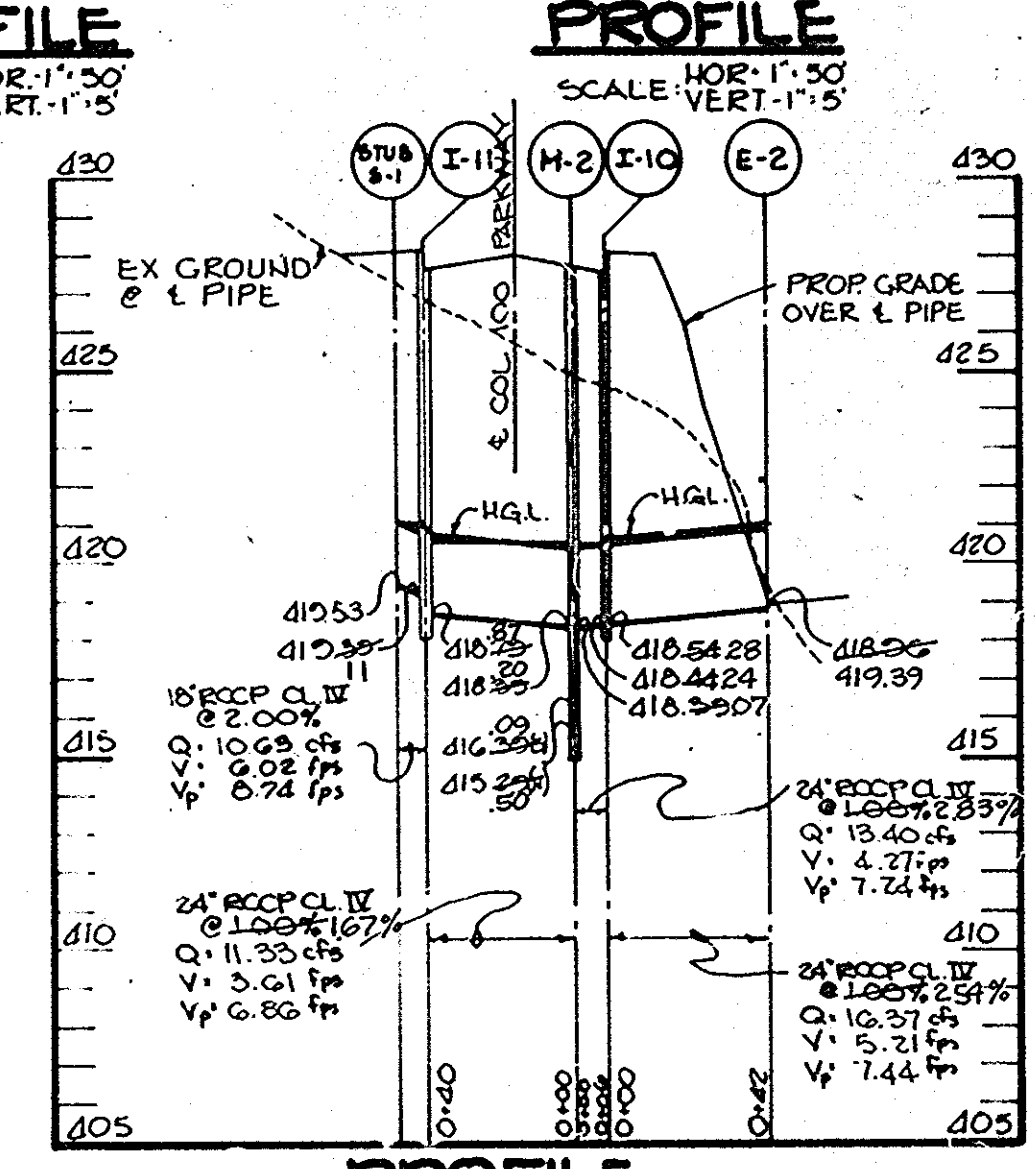
CUT SLOPE ROUNDING
NO SCALE
(RTE. 100 ONLY)

NOTE
THE USE OF SUPERIOR VERSUS STANDARD SLOPE ROUNDING WILL BE BASED ON THE JUDGEMENT OF THE DESIGN ENGINEER. IN GENERAL, THE SUPERIOR ROUNDING WILL BE USED ON EXPRESSWAYS, NEW OR RELOCATED ARTERIALS, AND WHEREVER THE R/W IS READILY AVAILABLE. THE STANDARD ROUNDING WILL BE USED ON LOCAL STREETS, COLLECTORS, AND IN UPGRADING HIGHWAYS WHERE R/W BECOMES A MAJOR PROBLEM.

LAWN AREAS MAY BE GRADED TO THE SUPERIOR STANDARDS IF THE AFFECTED PROPERTY OWNER AGREES TO GRANT A "TEMPORARY EASEMENT FOR LAWN GRADING."



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



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

AS-BUILT SURVEY CERTIFIED BY
ARTHUR E. MUEGGE, MD. P.E.
NO. 8707, ON 10-12-88

BY THE DEVELOPER:
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Christina A. Richards
DEVELOPER
Nov-12-1986
DATE

BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Arthur E. Muegge
ENGINEER
11-7-86
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

James M. Allen
U.S. SOIL CONSERVATION SERVICE
11-17-86
DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: Stephen D. Chader
HOWARD S.C.D.
11/7/86
DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John W. Muegge
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
11-18-86
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William S. G...
CHIEF, BUREAU OF ENGINEERING
11-26-86
DATE

DATE NO REVISION

OWNER: M.J.F. ASSOCIATES LTD. PARTNERSHIP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

DEVELOPER: McCuan Development Group
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

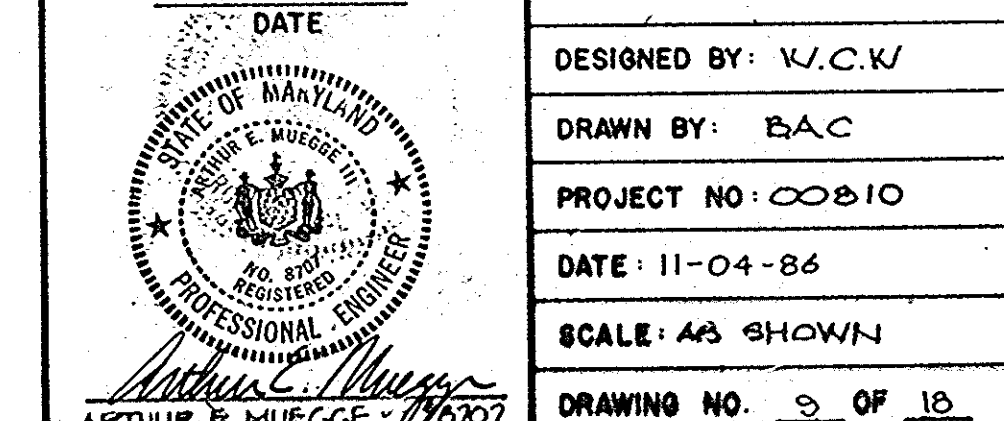
PROJECT: COLUMBIA 100
OFFICE RESEARCH PARK
SECTION 1, AREA 2

AREA TAX MAP NO 30 PARCEL 2
2ND ELECTION DISTRICT PLAT NO 824G

TITLE: STORM DRAIN
PROFILES & DETAILS

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2600

DATE
DESIGNED BY: W.C.W.
DRAWN BY: B.A.C.
PROJECT NO: 00810
DATE: 11-04-86
SCALE: AS SHOWN
DRAWING NO. 3 OF 18



1231

1. SITE PREPARATION
Areas under the borrow areas, embankment, and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. Channel banks and sharp bays shall be cleared to no steeper than 1:1.

Areas cleared by the pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately 6 inches above the ground surface.

All cleared and grubbed material shall be disposed of outside the limits of the dam and reservoir as directed by the owner or his representative. The specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

2. EARTH FILL
The fill material shall be taken from approved designated borrow areas or areas. It shall be free of roots, stumps, wood, rubbish, oversize stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

3. PLACEMENT
Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 6-inch maximum thickness (before compaction) lifts which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

4. COMPACTION
The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be covered by one tire tread track of the equipment. The compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

5. CUTOFF TRENCH
Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted by equipment or rollers to assure maximum density and minimum permeability.

6. STRUCTURAL MASSFILL
Backfill material shall be of the type and quality conforming to that specified for the adjoining fill materials. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material used to fill completely all voids and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

7. CORRUGATED METAL PIPE
INSTALLATION
(Steel Pipe)-This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of ASTM Specification A-131 Type A with water tight coupling bands. Any bituminous coating damaged or substrate removed shall be replaced with cold applied bituminous coating compound.

8. CONNECTIONS
All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are coupled. Watertight coupling bands shall be used at all joints. Antisep collars shall be connected to the pipe in such a manner as to be completely watertight.

9. BEDDING
The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

10. CONCRETE
INSTALLATION
1. Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.
2. Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.
3. Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing one-quarter inch sieve. Limestone sand shall not be used.
4. Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-1/2) inches.
5. Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

11. DESIGN MIX
The concrete shall be mixed in the following proportions, measured by weight: The water-cement ratio shall be 3:1 to 4 U.S. gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

12. MIXING
The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicated on proper control of the speed of rotation of the mixer and of the introduction of the material, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive averaging requiring the addition of water to preserve proper consistency shall not be permitted. Truck cause no violation of any applicable provisions of the specifications given here.

13. PLACING TEMPERATURES
Concrete may not be placed at temperatures below 37° F with the temperature falling or 34° with the temperature rising.

14. STABILIZATION
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillways, spill and borrow areas, and berms shall be stabilized with the vegetative treatment specifications shown on or accompanying the drawings.

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

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

Soil Amendments: Apply 400 lbs. per acre 10-20-20 fertilizer (14 lbs./1000 sq.ft.) where soil is highly acidic, apply dolomitic limestone at the rate of 1 ton per acre.

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 140 lbs. per acre of annual ryegrass (3.2 lbs./1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of seeding lovegrass (0.7 lbs./1000 sq.ft.). For the period October 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 seed.

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 210 gal. per acre (5 gal./1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 feet 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.

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, discing or other acceptable means before seeding.

Soil Amendments: Apply 0-20-20 fertilizer at the rate of 400 lbs. per acre. Narrow or disc lime and 0-20-20 fertilizer into the soil to a minimum depth of 3". Lawns or high maintenance areas will be dragged and leveled with a York rake. At the time of seeding, apply 600 lbs. of 20-0-0 ureaform fertilizer and 500 lbs. of 10-20-20 or equivalent fertilizer per acre.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 40 lbs. per acre (1 lb./1000 sq.ft.) of a mixture of certified 'Merion' Kentucky bluegrass, common Kentucky bluegrass or 40 lbs. per acre (1 lb./1000 sq.ft.) and Red Fescue, Pennlawn or Jamestown 20 lbs. per acre (0.5 lb./1000 sq.ft.) for the period May 1 thru July 31, seed with 40-60-20 mix as specified above and 2 lbs. per acre (0.05 lb./1000 sq.ft.) of seeding 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) Use sod. (Option 3) Seed with 40-60-20 mix specified above and mulch with 2 tons/acre well-anchored straw.

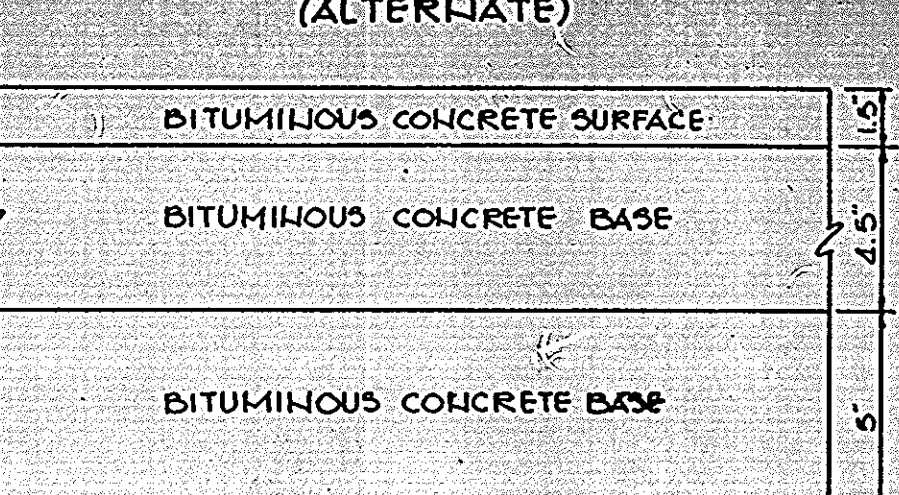
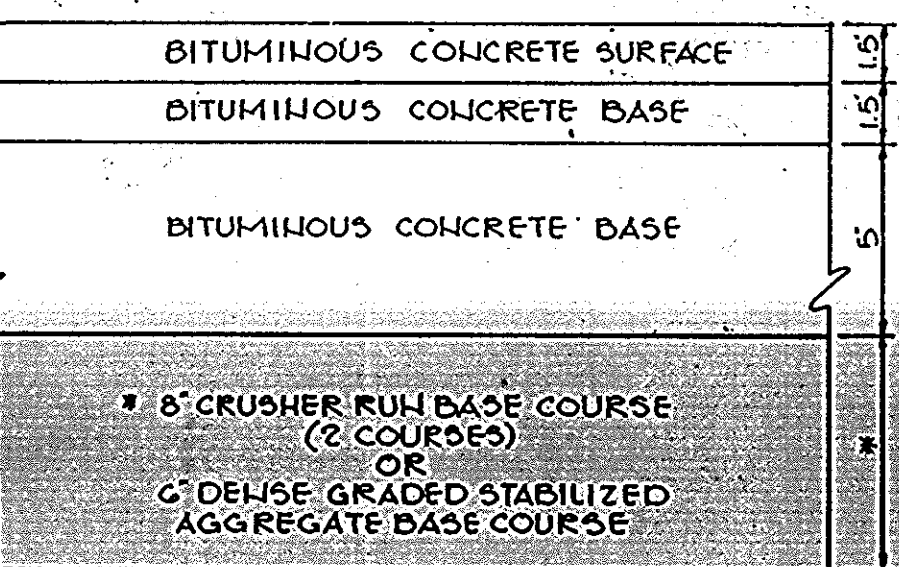
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Maintenance: Inspect all seeded areas and make needed repairs, replantings and reseedings.

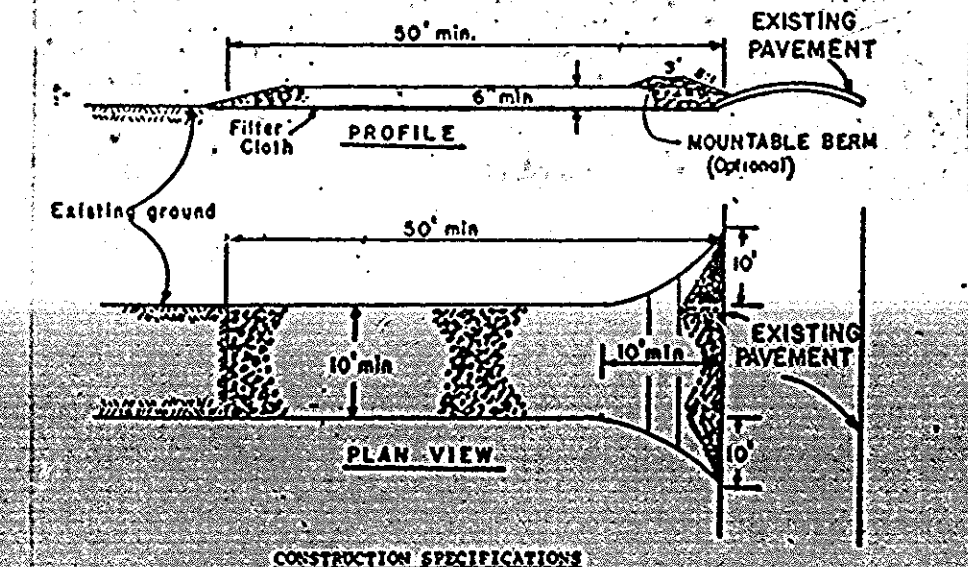
SEDIMENT CONTROL NOTES
1. A minimum of 24 hours notice must be given to the Howard County Office of Inspections and Permits prior to the start of any construction (992-2437)
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance 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 2:1, 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. 5) sod (Sec. 5A), 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: 70.07 acres
Area Disturbed: 20.42 acres
Area to be roofed or paved: 6.42 acres
Area to be vegetatively stabilized: 14.01 acres
Total Cut: 4100 Cu. yds.
Total Fill: 4100 Cu. yds.
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 DPZ sediment control inspector.
10. Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
11. Sediment will be removed from traps when its depth reaches the clean out elevation shown on the plans.

SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT.
- PERFORM MAINTENANCE AND REPAIRS TO EXISTING SEDIMENT CONTROLS PER MASS GRADING PLAN CP-86-57 (3 DAYS).
- PERFORM ROUGH GRADING (2 WEEKS).
- INSTALL STORM DRAINS, UTILITIES AND ROADWAY PAVEMENT (8 WEEKS).
- STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES (4 DAYS).
- UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES.
- STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES (1 DAY).



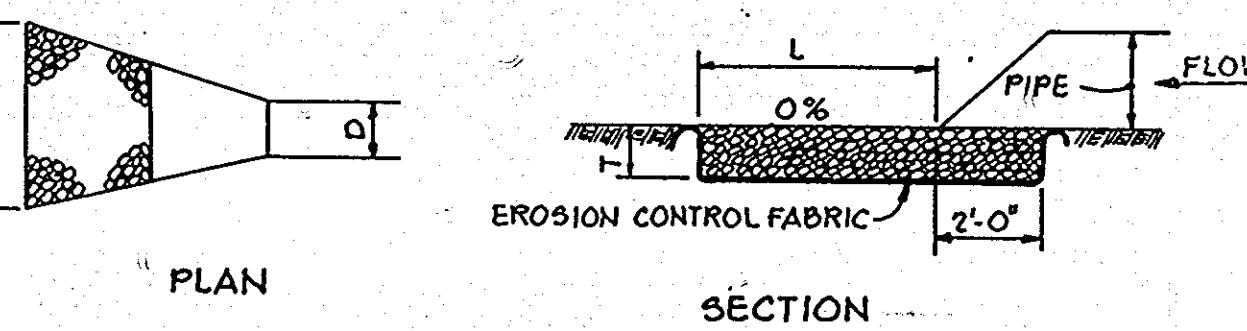
HOWARD COUNTY DESIGN MANUAL VOLUME IX - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-202) (11" PAVING, P-5) NO SCALE



CONSTRUCTION SPECIFICATIONS

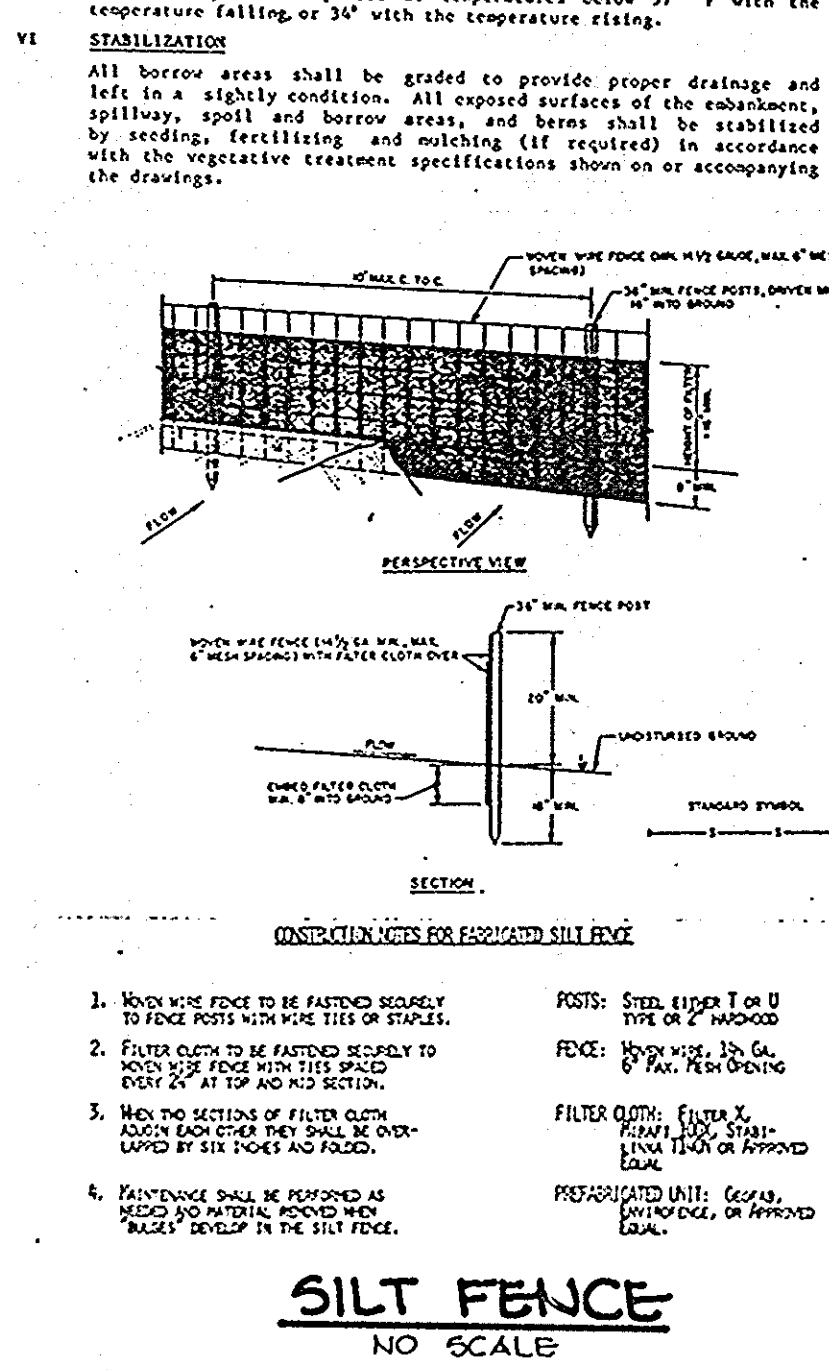
- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
- Length - Be required, but not less than 50 feet (except on a single residential lot where a 30 foot minimum length would apply).
- Thickness - Not less than six (6) inches.
- Width - The (10) foot minimum, but not less than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

STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

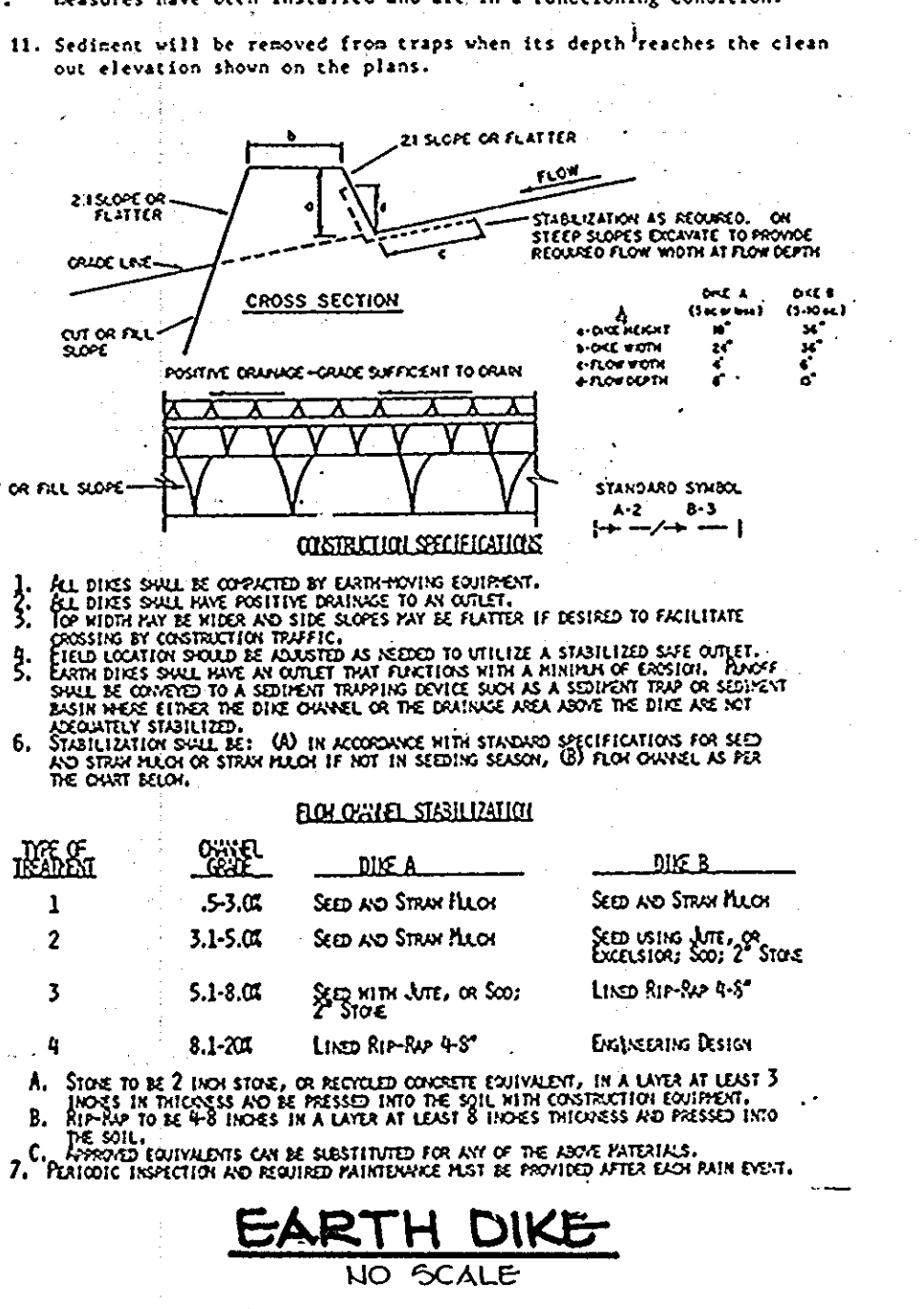


STRUCTURE	MEDIUM STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	0.67'	10'	1.8'	1.5'

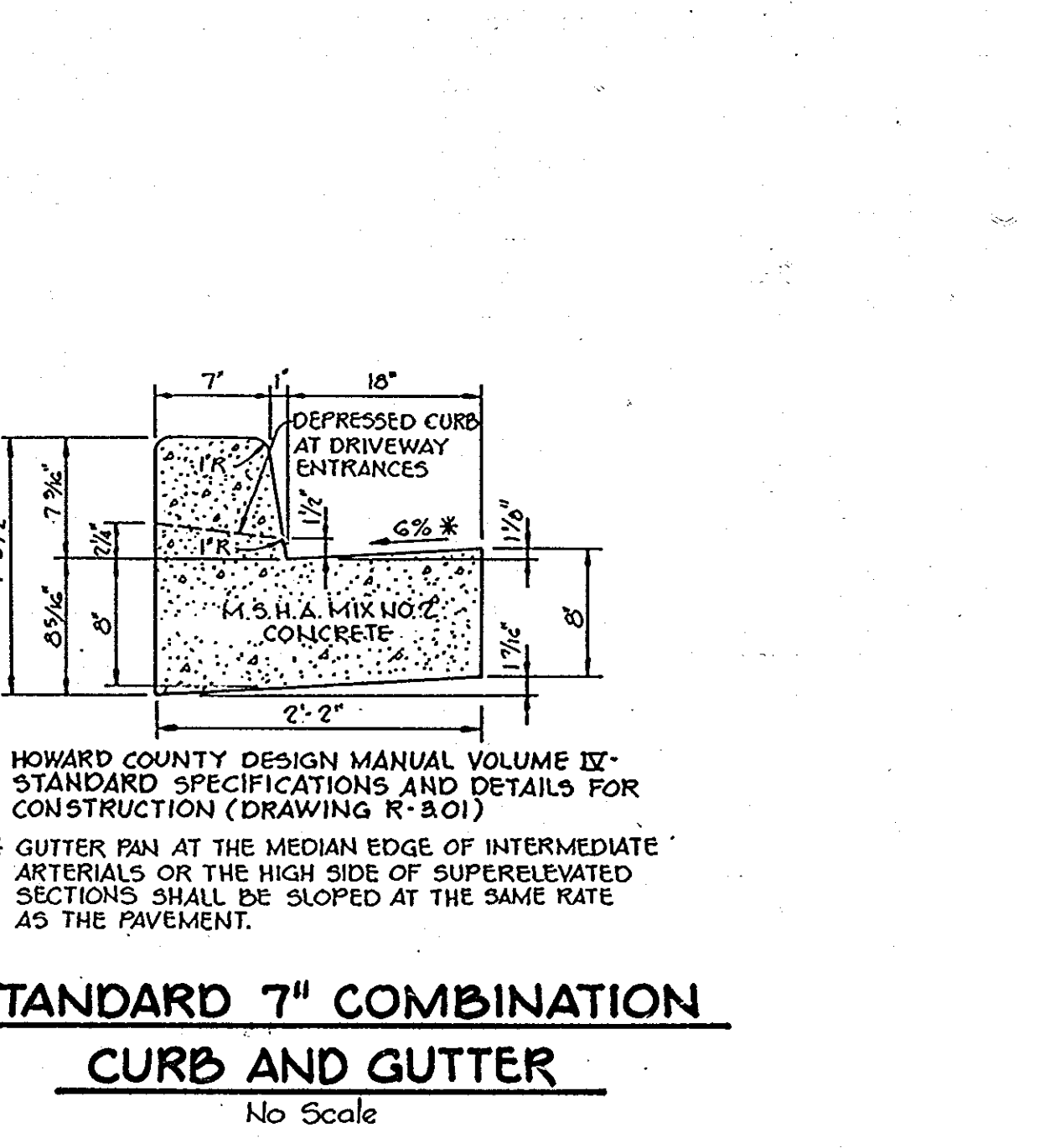
OUTLET PROTECTION DETAIL
No Scale



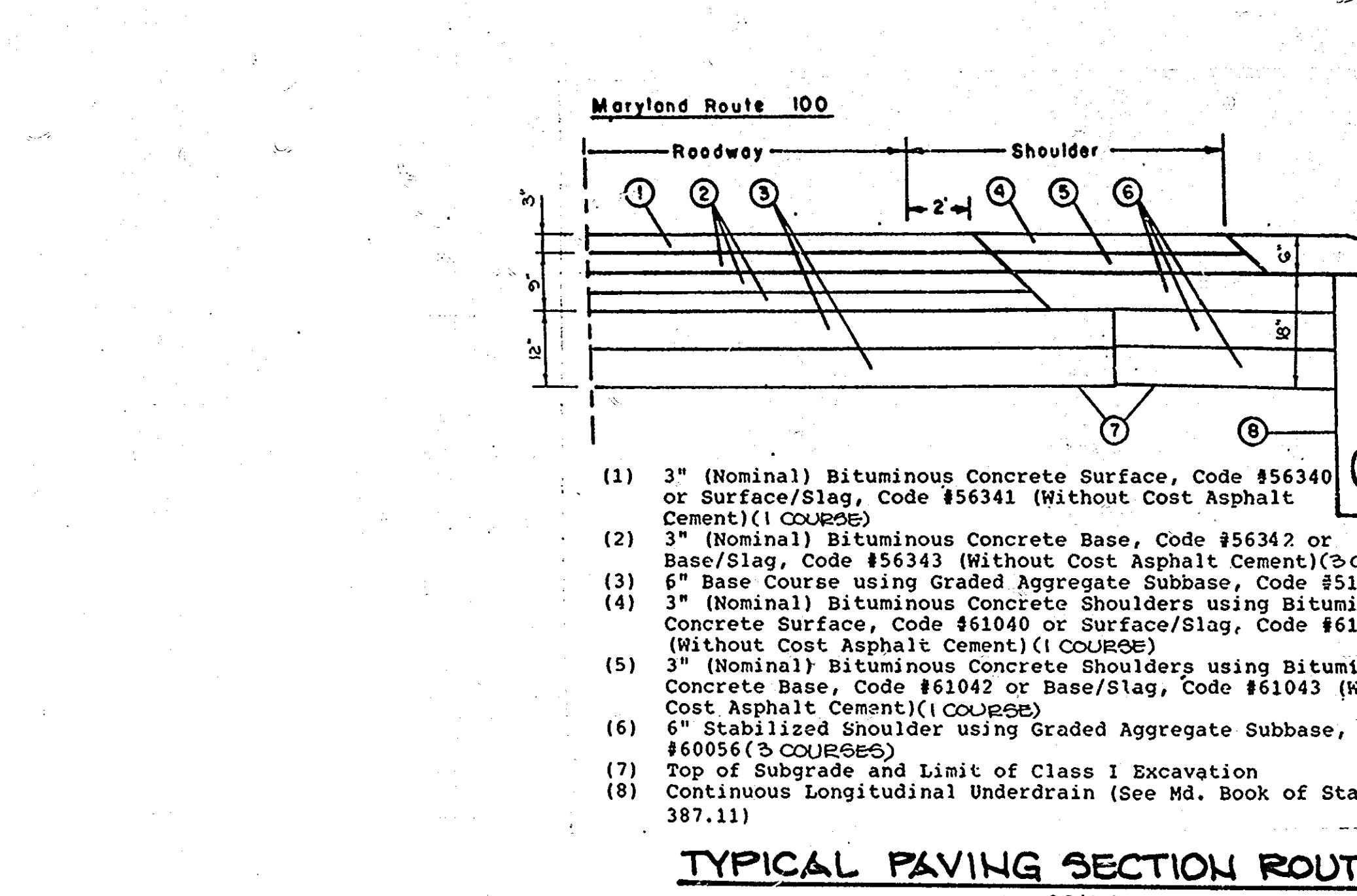
SILT FENCE
NO SCALE



EARTH DIKE
NO SCALE



STANDARD 7" COMBINATION CURB AND GUTTER
No Scale



TYPICAL PAVING SECTION ROUTE 100
NO SCALE

BY THE DEVELOPER:
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
Christina A. Rahnke DEVELOPER *Nov. 13, 1986* DATE

BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
Arthur E. Mueggel ENGINEER *11-17-86* DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
John M. Stahl U.S. SOIL CONSERVATION SERVICE *11-17-86* DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
John M. Stahl APPROVED *11-17-86* DATE

APPROVED, HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John M. Stahl CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION *11-18-86* DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William E. Rahn CHIEF, BUREAU OF ENGINEERING *11-23-86* DATE

11-22-86 Revised Sequence of Construction RBM

OWNER: MJF ASSOCIATES LTD. PARTNERSHIP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

DEVELOPER: MCCUN DEVELOPMENT GROUP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

PROJECT: COLUMBIA 100
OFFICE RESEARCH PARK
SECTION 1, AREA 2

TITLE: SEDIMENT CONTROL NOTES AND DETAILS

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 481-2880

DATE: 7-10-86
DESIGNED BY: W.C.W.
DRAWN BY: W.C.W.
PROJECT NO: 00810
DATE: 11-04-86
SCALE: AS SHOWN
DRAWING NO. 10 OF 18

NOVEMBER 4, 1986

1231

AS-BUILT 10-12-88 F-87-82



BY THE DEVELOPER:

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Christina A. Richards 11-12-86
DEVELOPER DATE

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Arthur E. Muegge 11-12-86
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Joseph M. Schmitt 11-17-86
U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *Stephen L. Fisher* 11-17-86
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

John W. Mansueti 11-18-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William B. Kelly 11-23-86
CHIEF, BUREAU OF ENGINEERING DATE

4/28/88 Δ ADDED STUB P, REVISED AREA FOR STUB H

DATE	NO	REVISION

OWNER: MJF ASSOCIATES LTD. PARTNERSHIP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

DEVELOPER: MCCUAN DEVELOPMENT GROUP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

PROJECT: COLUMBIA 100
OFFICE RESEARCH PARK
SECTION 1, AREA 2

AREA TAX MAP N 20 PARCEL 2
2ND ELECTION DISTRICT PLATS 2240
HOWARD COUNTY, MARYLAND

TITLE: DRAINAGE AREA MAP

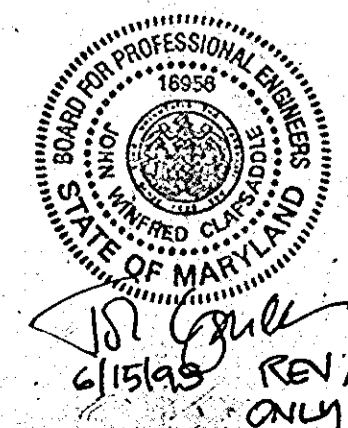
THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm.
3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

7-10-86 DATE
DESIGNED BY: W.C.W.
DRAWN BY: F.D.M.
PROJECT NO: 00810
DATE: 11-04-86
SCALE: 1"=100'
DRAWING NO. 11 OF 18

Arthur E. Muegge 11-12-86
ARTHUR E. MUEGGE

AS-BUILT 10-12-88 F-87-82 NOVEMBER 4, 1986

1231



AS-BUILT SURVEY CERTIFIED BY
ARTHUR E. MUEGGE, MD. P.E.
No. 8707, ON 10-12-88

BY THE DEVELOPER:
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Christina A. Rose Nov. 12, 1986
DEVELOPER DATE

BY THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Arthur E. Muegge 11-16-86
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

John M. Helms 11-17-86
U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Stephen L. Hall 11/12/86
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

John W. Woodman 11-18-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William S. Reilly 11-18-86
CHIEF, BUREAU OF ENGINEERING DATE

4/20/88 Δ REVISED STRUCTURE SCHEDULE - ADDED M-17

DATE	NO	REVISION

OWNER: MJF ASSOCIATES LTD. PARTNERSHIP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

DEVELOPER: MCCOY DEVELOPMENT GROUP
1000 EQUITABLE BANK BUILDING
COLUMBIA, MARYLAND 21044

PROJECT: COLUMBIA 100
OFFICE RESEARCH PARK
SECTION 1, AREA 2

AREA TAX MAPS: 20 PARCEL 2
ZONING DISTRICT: PLAT 148 522G
HOWARD COUNTY, MARYLAND

TITLE: DRAINAGE AREA MAP

THE RIEMER GROUP, INC.

The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Heath Park Drive, Ellicott City, Maryland 21043 (301) 481-2800

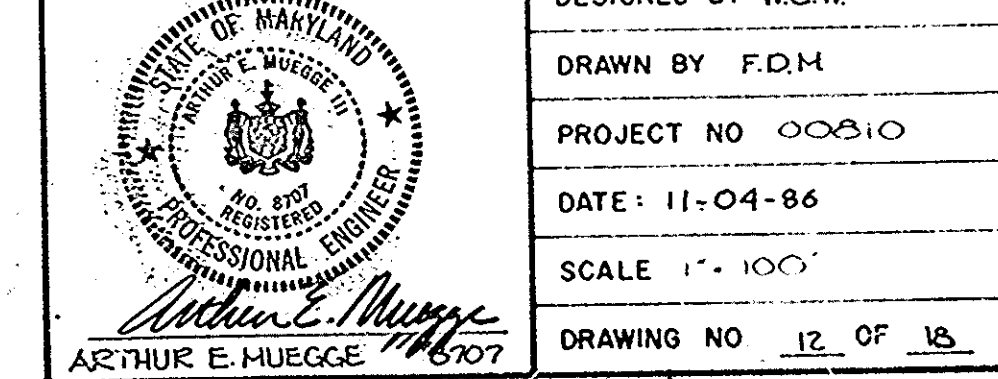
DATE: 1-10-86
DESIGNED BY: W.C.W.

DRAWN BY: F.D.M.

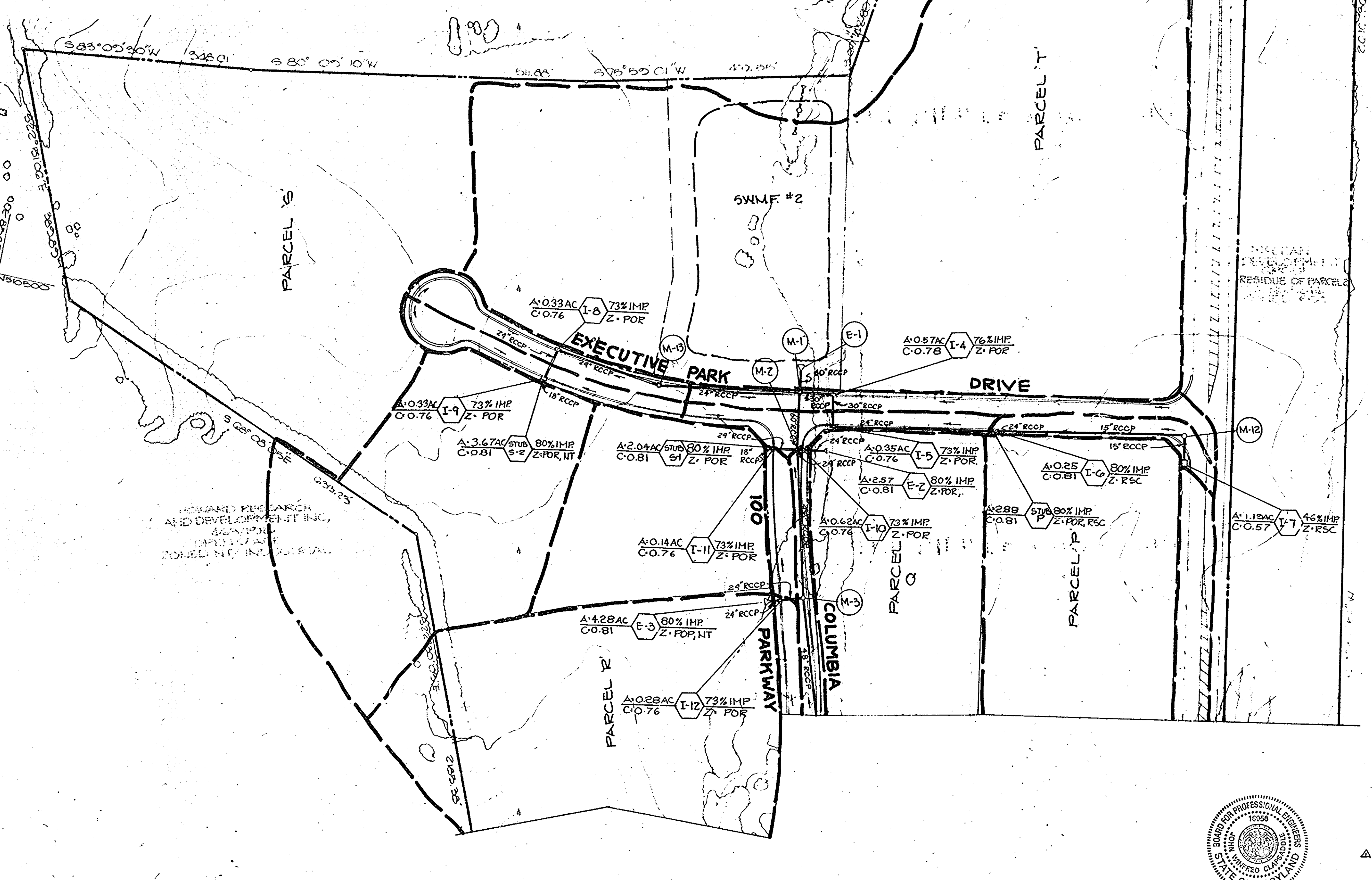
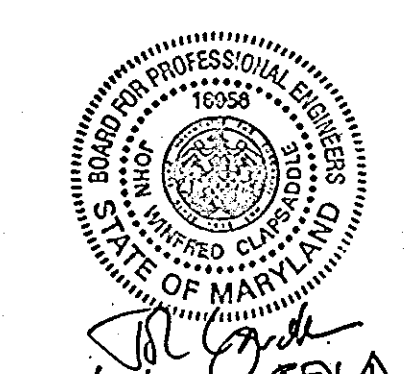
PROJECT NO: 00810

DATE: 11-04-86

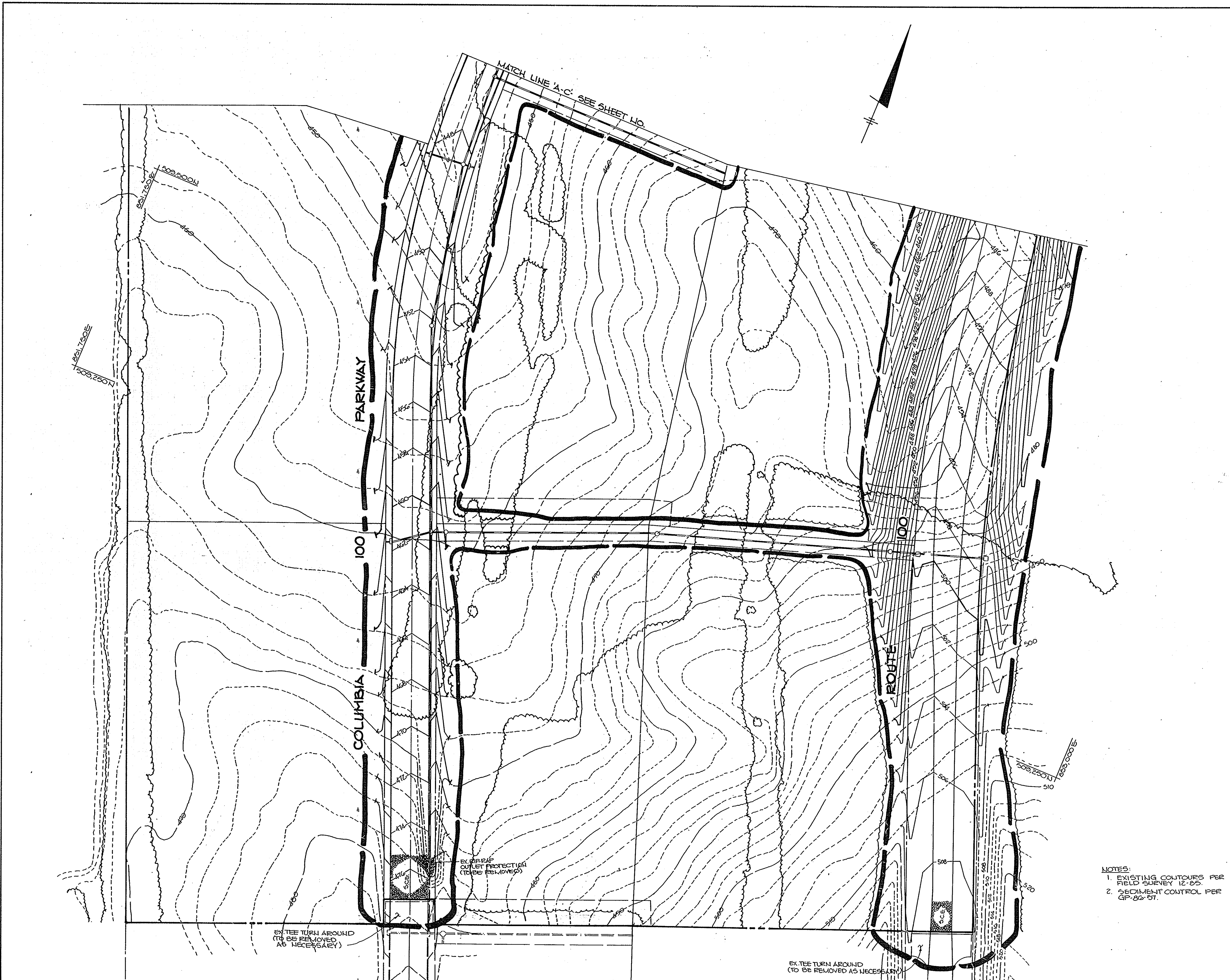
SCALE: 1" = 100'
DRAWING NO: 12 OF 18
NOVEMBER 4, 1986



STRUCT. NO.	TYPE	LOCATION	INV. IN	INV. OUT	T.C. ELEV.	REMARKS
I-1	A-5	22' Lt. CL	30°D(N)453.34	452.13	461.88	Ho. Co. Std. SD-4.01
I-2	'R' Type	See Plan	36°D(N)452.5682	492.29	498.15	Ho. Co. Std. SD-4.13
I-3	'R' Type	See Plan	18°D(N)424.4389	493.21	497.22	Ho. Co. Std. SD-4.13
I-4	A-5	22' Lt. CL	30°D(N)417.34	417.34	426.77	Ho. Co. Std. SD-4.01
I-5	A-5	22' Rt. CL	24°D(N)418.22	417.35	426.78	Ho. Co. Std. SD-4.01
I-6	A-5 w/Defl.	22' Rt. CL	15°D(N)424.31	424.18	433.55	Ho. Co. Std. SD-4.01
I-7	'R' Type	See Plan	24°D(N)424.31	434.89	440.74	ASD-4.83
I-8	A-5	22' Lt. CL	24°D(N)442.58	422.32	426.23	Ho. Co. Std. SD-4.01
I-9	A-5	22' Rt. CL	18°D(N)423.24	422.32	426.55	Ho. Co. Std. SD-4.01
I-10	A-5 w/Defl.	22' Lt. CL	24°D(N)418.22	418.24	428.32	Ho. Co. Std. SD-4.01
I-11	A-5	22' Rt. CL	18°D(E)419.36	418.27	428.22	Ho. Co. Std. SD-4.01
I-12	A-5 w/Defl.	22' Rt. CL	24°D(E)424.21	424.14	434.14	Ho. Co. Std. SD-4.01
I-13	A-5	22' Rt. CL	18°D(N)435.11	422.06	430.70	& SD-4.83
I-14	A-5	22' Lt. CL	24°D(NW)439.76	439.68	448.66	Ho. Co. Std. SD-4.01
I-15	A-5	22' Rt. CL	24°D(E)449.77	449.77	448.78	Ho. Co. Std. SD-4.01
I-16	A-5 w/Defl.	22' Rt. CL	24°D(N)454.17	454.09	462.30	Ho. Co. Std. SD-4.01
I-24	A-5	22' Lt. CL	30°D(N)461.37	461.47	470.50	Ho. Co. Std. SD-4.01
M-1	Junction Chamber	Sta. 64.64	30°D(N)416.8935	414.39	427.29	Ho. Co. Std. SD-1.12
M-2	Junction Chamber	Sta. 17.77	60°D(N)414.3954	415.29	428.11	Ho. Co. Std. SD-1.12
M-3	Junction Chamber	Sta. 24.19	48°D(N)421.86	421.83	425.65	Ho. Co. Std. SD-1.12
M-4	Junction Chamber	Sta. 22.18	24°D(N)427.5268	427.25	433.26	Ho. Co. Std. SD-1.12
M-5	Junction Chamber	Sta. 20.34	18°D(N)435.38	432.39	443.16	Ho. Co. Std. SD-1.12
M-6	Junction Chamber	Sta. 18.89	48°D(N)436.2822	436.13	446.71	Ho. Co. Std. SD-1.12
M-7	Junction Chamber	Sta. 17.77	24°D(N)438.4838	437.38	448.30	Ho. Co. Std. SD-1.12
M-8	Standard 5' Dia.	Sta. 15.80	36°D(N)443.6253	443.42	452.40	Ho. Co. Std. G-5.13
M-9	Standard 5' Dia.	See Plan	24°D(N)452.19	452.19	461.50	Ho. Co. Std. G-5.13
M-10	Standard 5' Dia.	See Plan	18°D(N)463.61	463.61	472.14	Ho. Co. Std. G-5.13
M-11	Standard 4' Dia.	See Plan	18°D(N)475.15	475.15	488.35	Ho. Co. Std. G-5.12
M-12	Standard 4' Dia.	Sta. 0.77	15°D(N)434.38	434.38	440.22	Ho. Co. Std. G-5.12
M-13	Standard 5' Dia.	Sta. 8.78	17° Rt. CL	419.33	428.33	Ho. Co. Std. G-5.13
M-14	Standard 5' Dia.	See Plan	24°D(N)429.21	429.21	438.77	Ho. Co. Std. G-5.13
M-16	Standard 5' Dia.	See Plan	18°D(E)476.95	476.35	482.35	Ho. Co. Std. G-5.13
F-1	60" RCCP End Section	See Plan	60°D(N)413.28			Ho. Co. Std. SD-5.51
E-2	24" RCCP End Section	See Plan		419.39		Ho. Co. Std. SD-5.51
E-3	24" RCCP End Section	See Plan		425.48		Ho. Co. Std. SD-5.51
M-17	BUILD OVER MANHOLE	Sta. 91.25	18°D	469.23	468.23	476.37 Ho. Co. Std. G-5.14



1231



BY THE DEVELOPER:

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Christine A. Richards 11-13-86
DEVELOPER DATE

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Arthur E. Muegge 11-22-86
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

James M. Helm 11-17-86
SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED *Stephen L. Fink* 11/17/86
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

John W. Muehman 11-18-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William B. Cook 11-22-86
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION
OWNER: MJF ASSOCIATES LTD. PARTNERSHIP 1000 EQUITABLE BANK BUILDING COLUMBIA, MARYLAND 21044		
DEVELOPER: MCCUAN DEVELOPMENT GROUP 1000 EQUITABLE BANK BUILDING COLUMBIA, MARYLAND 21044		
PROJECT: COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2		
AREA TAX MAP N° 30 PARCEL 2 2 ND ELECTION DISTRICT PLAT N° 524G HOWARD COUNTY, MARYLAND		
TITLE: GRADING AND SEDIMENT CONTROL PLAN		

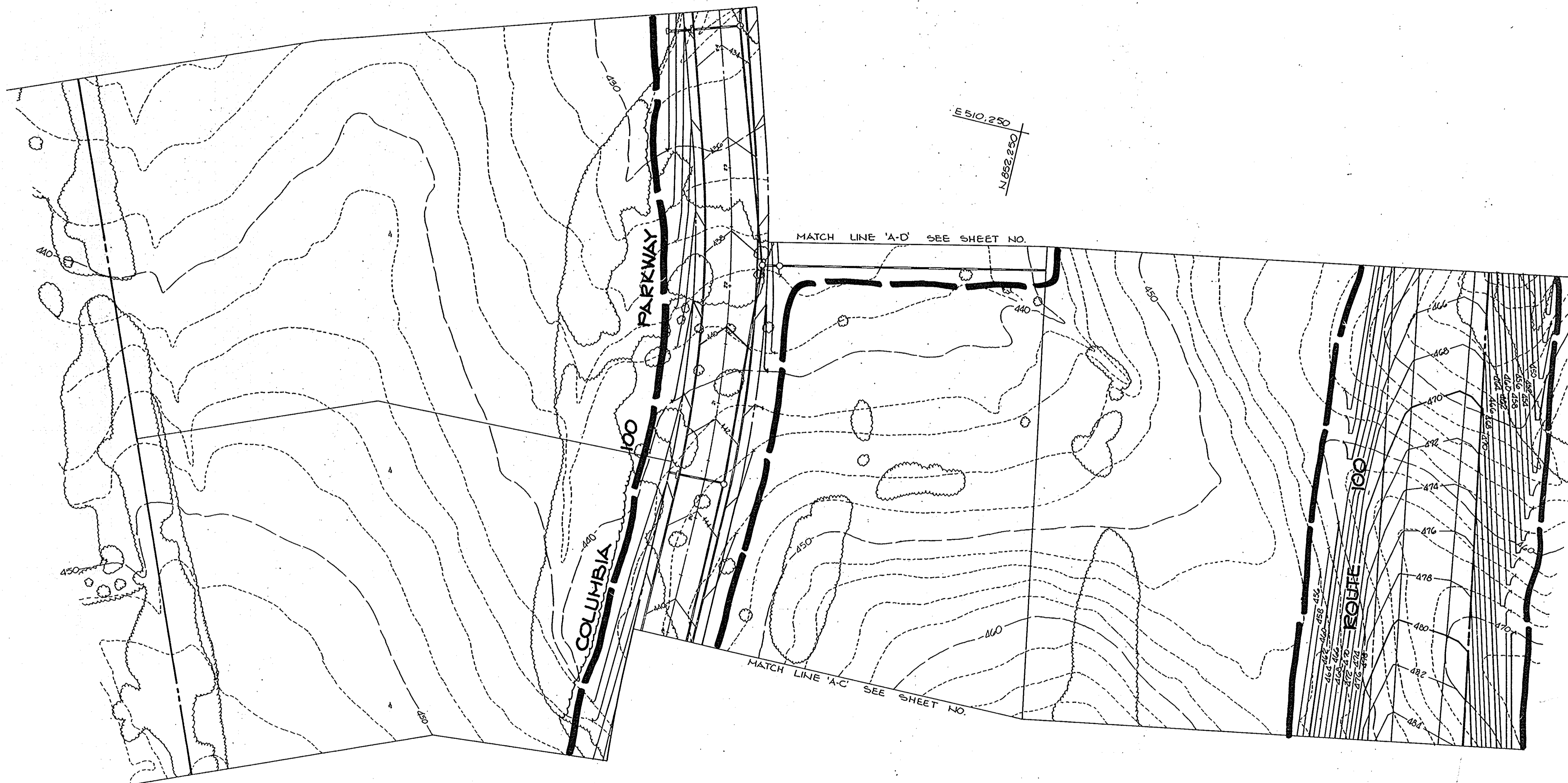
THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Heath Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

NOTES:
1. EXISTING CONTOURS PER FIELD SURVEY 12-85.
2. SEDIMENT CONTROL PER GP-86-57.

7-10-86 DATE	DESIGNED BY: W.C.W.
	DRAWN BY: W.C.W.
	PROJECT NO: 00810
	DATE: 11-04-86
	SCALE: 1"=50'
<i>Arthur E. Muegge</i> ARTHUR E. MUEGGE, P.E.	DRAWING NO. 13 OF 18

1231

MARYLAND BLUEPRINT CO., INC.



BY THE DEVELOPER:
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
Christina A. Richards Nov. 12, 1986
 DEVELOPER DATE

BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
Arthur E. Muegg 11-10-86
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
James McHale 11-17-86
 U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED *Stephen L. Clark* 11/19/86
 HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John W. Muschman 11-18-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William E. Ruff 11-28-86
 CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION
OWNER: MJF ASSOCIATES LTD. PARTNERSHIP 1000 EQUITABLE BANK BUILDING COLUMBIA, MARYLAND 21044		
DEVELOPER: MCCUAN DEVELOPMENT GROUP 1000 EQUITABLE BANK BUILDING COLUMBIA, MARYLAND 21044		
PROJECT: COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2		
AREA TAX MAP NO. 30		PARCEL 2
2ND ELECTION DISTRICT		PLAT NO. 5206
HOWARD COUNTY, MARYLAND		
TITLE: GRADING AND SEDIMENT CONTROL PLAN		

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 9105 Health Park Drive, Ellicott City, Maryland 21043 (301) 481-2890

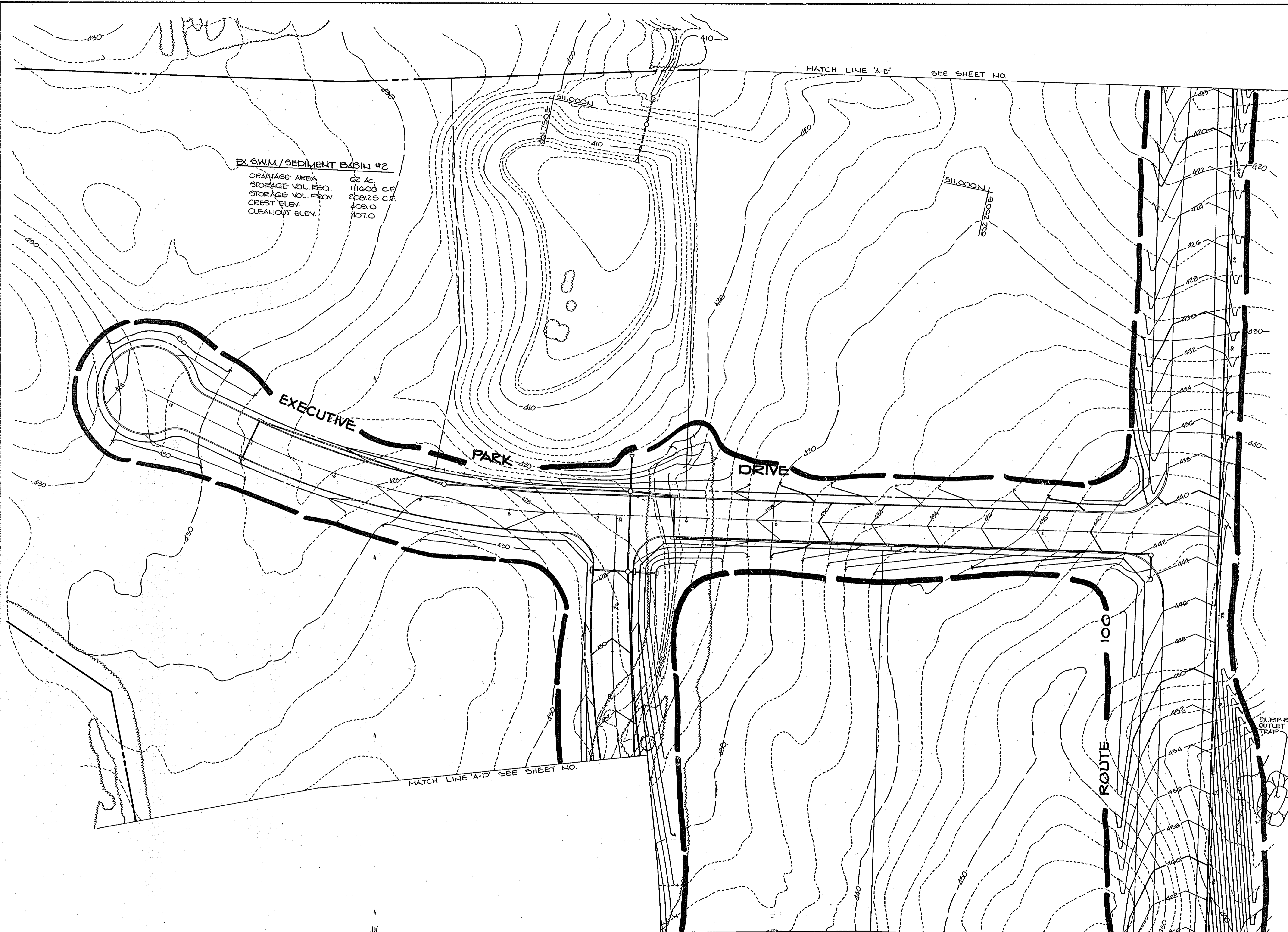
7-10-86
 DATE

DESIGNED BY: W.C.W.
 DRAWN BY: W.C.W.
 PROJECT NO: 00010
 DATE: 11-04-86
 SCALE: 1"=50'
 DRAWING NO. 14 OF 18

Arthur E. Muegg
 ARTHUR E. MUEGG #8701

- NOTES:
 1. EXISTING CONTOURS PER FIELD SURVEY 12-85.
 2. SEDIMENT CONTROL PER GP-82-57.

1231



EX. S.W.M./SEDIMENT BASIN #2
 DRAINAGE AREA 22 AC
 STORAGE VOL. REQ. 116000 C.F.
 STORAGE VOL. PROV. 208125 C.F.
 CREST ELEV. 409.0
 CLEANOUT ELEV. 407.0

MATCH LINE 'A-E' SEE SHEET NO.

MATCH LINE 'A-D' SEE SHEET NO.

BY THE DEVELOPER:
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
Christian A. Richards Nov. 12, 1986
 DEVELOPER DATE

BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
Arthur E. Muegge 11-12-86
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
Joseph M. Heltz 11-17-86
 U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Stephen L. Pugh 11/17/86
 HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John M. ... 11-18-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William B. ... 11-28-86
 CHIEF, BUREAU OF ENGINEERING DATE

DATE NO.	REVISION
OWNER	MJF ASSOCIATES LTD. PARTNERSHIP 1000 EQUITABLE BANK BUILDING COLUMBIA, MARYLAND 21044
DEVELOPER	MCCUAN DEVELOPMENT GROUP 1000 EQUITABLE BANK BUILDING COLUMBIA, MARYLAND 21044
PROJECT:	COLUMBIA 100 OFFICE RESEARCH PARK SECTION 1, AREA 2
AREA TAX MAP NO. 30	PARCEL 2
2ND ELECTION DISTRICT	PLAT NO. 524G
HOWARD COUNTY, MARYLAND	

TITLE:
GRADING AND SEDIMENT CONTROL PLAN

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 481-2890

DATE	DESIGNED BY: W.C.W.
7-10-86	DRAWN BY: W.C.W.
	PROJECT NO: 00810
	DATE: 11-04-86
	SCALE: 1"=50'
	DRAWING NO. 15 OF 18

- NOTES:
 1. EXISTING CONTOURS PER FIELD SURVEY 12-85.
 2. SEDIMENT CONTROL PER GP-85-57.
 3. EXISTING CONTOURS IN AREA OF S.W.M.F. #2 AS PER GP-85-57.

EX. RIP-RAP OUTLET SEDIMENT TRAP #2
 DRAINAGE AREA 3.5 AC
 STORAGE REQ'D 6500 C.F.
 STORAGE PROV'D 6504 C.F.
 CREST ELEV. 422.0
 CLEANOUT ELEV. 420.0
 CREST WIDTH 8'



1231

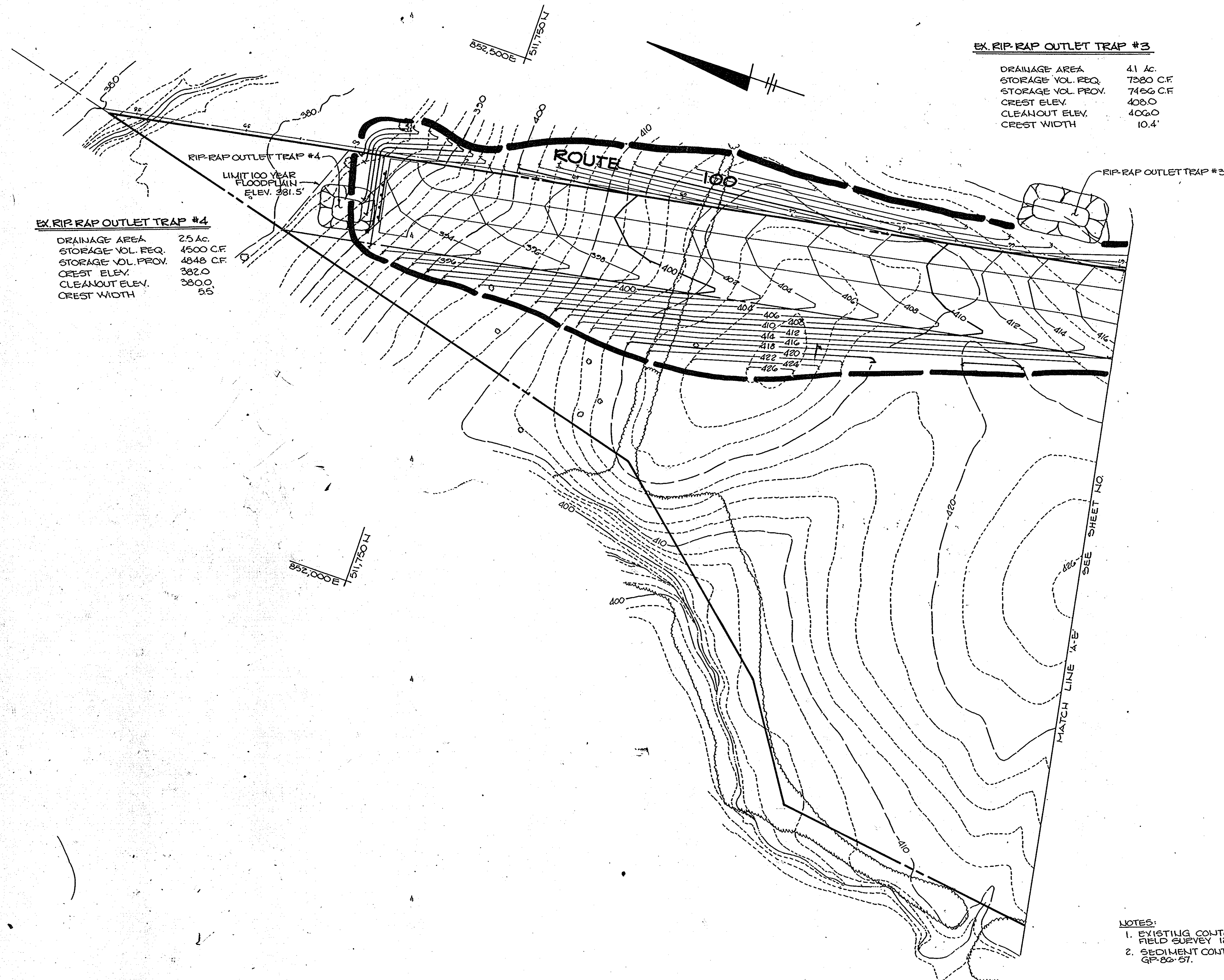
MARYLAND BLUEPRINT CO., INC. N4399

EX. RIP-RAP OUTLET TRAP #4

DRAINAGE AREA 25 AC.
 STORAGE VOL. REQ. 4500 C.F.
 STORAGE VOL. PROV. 4848 C.F.
 CREST ELEV. 382.0
 CLEANOUT ELEV. 380.0
 CREST WIDTH 55'

EX. RIP-RAP OUTLET TRAP #3

DRAINAGE AREA 41 AC.
 STORAGE VOL. REQ. 7280 C.F.
 STORAGE VOL. PROV. 7456 C.F.
 CREST ELEV. 408.0
 CLEANOUT ELEV. 406.0
 CREST WIDTH 10.4'



- NOTES:**
- EXISTING CONTOURS PER FIELD SURVEY 12-85
 - SEDIMENT CONTROL PER GP-82-57.

BY THE DEVELOPER:

"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Christina A. Roberts 11-12-86
 DEVELOPER DATE

BY THE ENGINEER:

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Arthur E. Muegge 11-18-86
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

John M. Loh 11-19-86
 HOWARD SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED *Stephen L. Huber* 11-19-86
 HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
John M. Muegge 11-19-86
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William S. Kelly 11-28-86
 CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION

OWNER: M.J.F. ASSOCIATES LTD. PARTNERSHIP
 1000 EQUITABLE BANK BUILDING
 COLUMBIA, MARYLAND 21044

DEVELOPER: MCCUAN DEVELOPMENT GROUP
 1000 EQUITABLE BANK BUILDING
 COLUMBIA, MARYLAND 21044

PROJECT: **COLUMBIA 100**
 OFFICE RESEARCH PARK
 SECTION 1, AREA 2

AREA TAX MAP NO. 30 PARCEL 2
 2ND ELECTION DISTRICT PLAT NO.
 HOWARD COUNTY, MARYLAND 5086

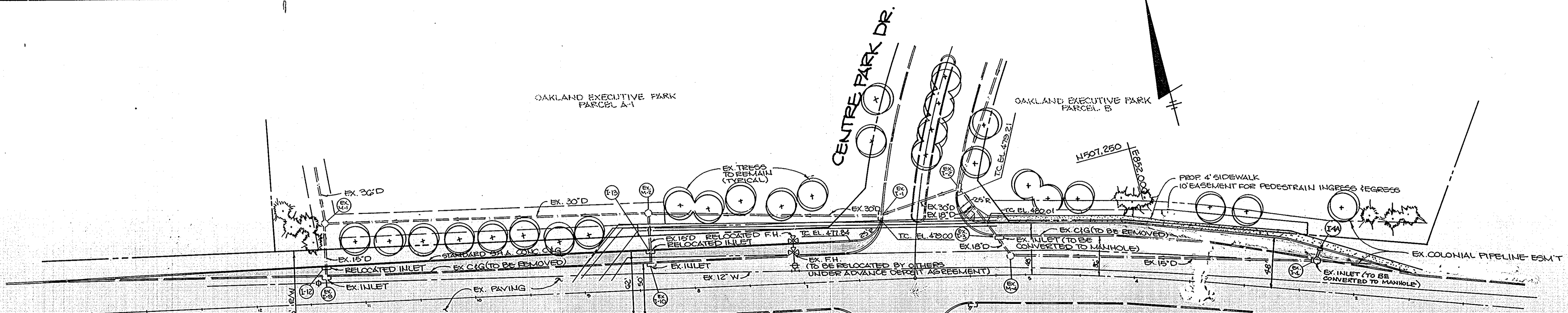
TITLE: GRADING AND SEDIMENT CONTROL PLAN

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 481-2890

	DATE: 7-10-86
	DESIGNED BY: W.C.W.
	DRAWN BY: W.C.W.
	PROJECT NO: 00810
	DATE: 11-04-86
SCALE: 1"=50'	
DRAWING NO. 16 OF 18	

1231

MARYLAND BLUEPRINT CO., INC.



MARYLAND

ROUTE 108

PLAN
SCALE: 1"=50'

125' TAPER
300' LEFT TURN LANE

PHELPS LUCK DRIVE

STRIPING PLAN
SCALE: 1"=50'

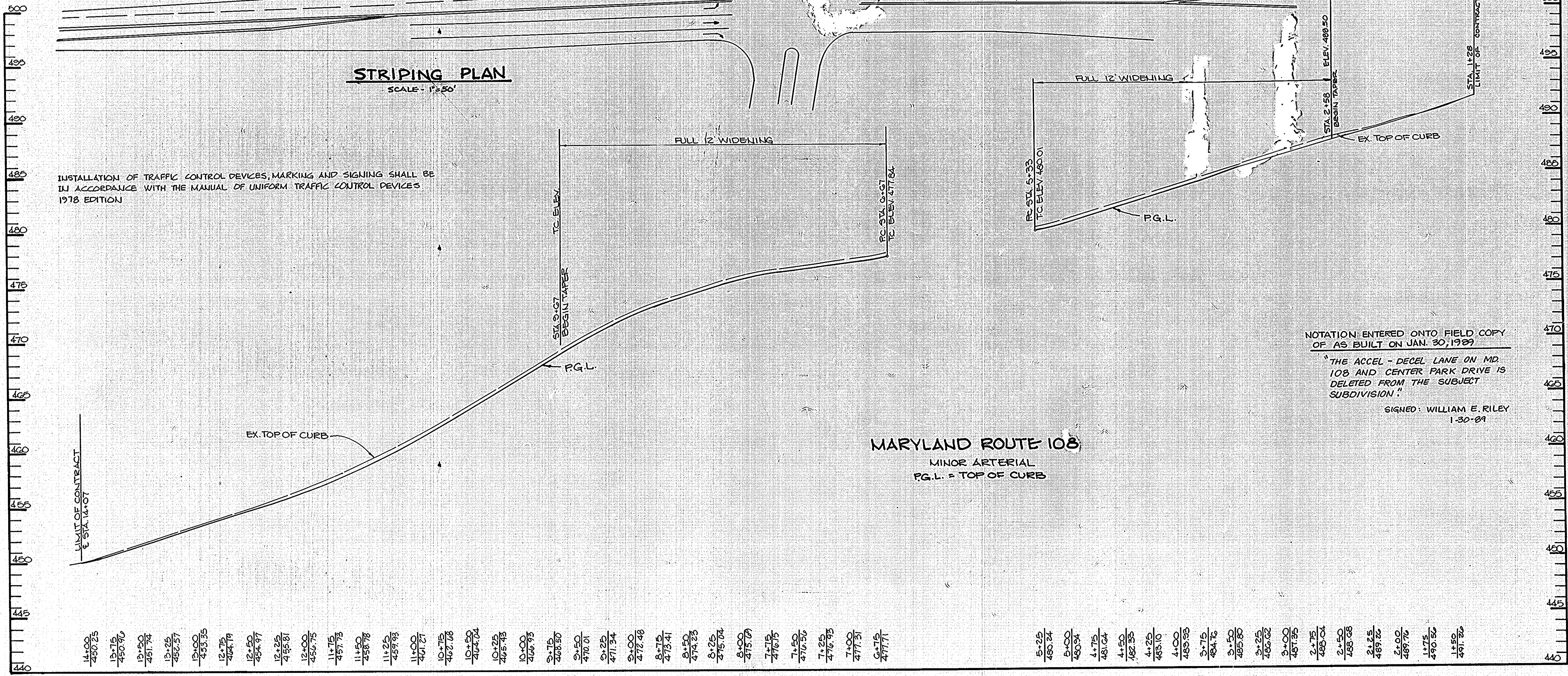
INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES 1978 EDITION

FULL 12' WIDENING

FULL 12' WIDENING

NOTATION ENTERED ONTO FIELD COPY OF AS BUILT ON JAN. 30, 1989
"THE ACCEL - DECEL LANE ON MD. 108 AND CENTER PARK DRIVE IS DELETED FROM THE SUBJECT SUBDIVISION."
SIGNED: WILLIAM E. RILEY
1-30-89

MARYLAND ROUTE 108
MINOR ARTERIAL
P.G.L. = TOP OF CURB



GRASS OUTLET TRAP
 D.A. = 1.5 ACRES
 REQ'D VOLUME = 2700 C.F.
 VOLUME PROV'D = 3088 C.F.
 BOTTOM ELEV. = 446.0
 CREST ELEV. = 450.0
 CREST WIDTH = 6'
 BOTTOM DIM. = 10' x 50'

LEAVE OUT 10' C&G FOR SEDIMENT CONTROL

MARYLAND

ROUTE 108

PHILIP LUCK DRIVE

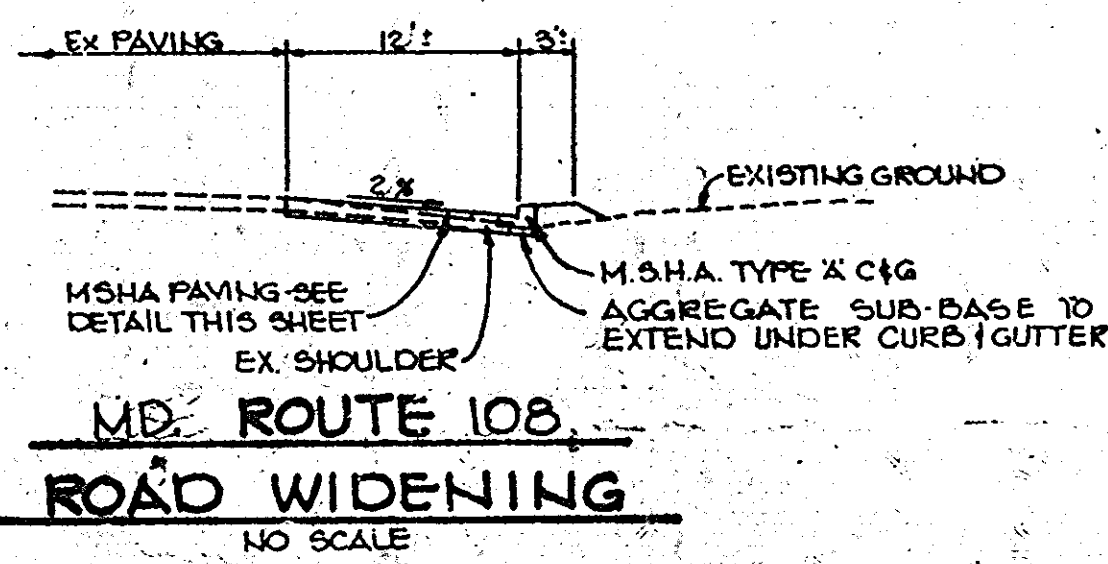
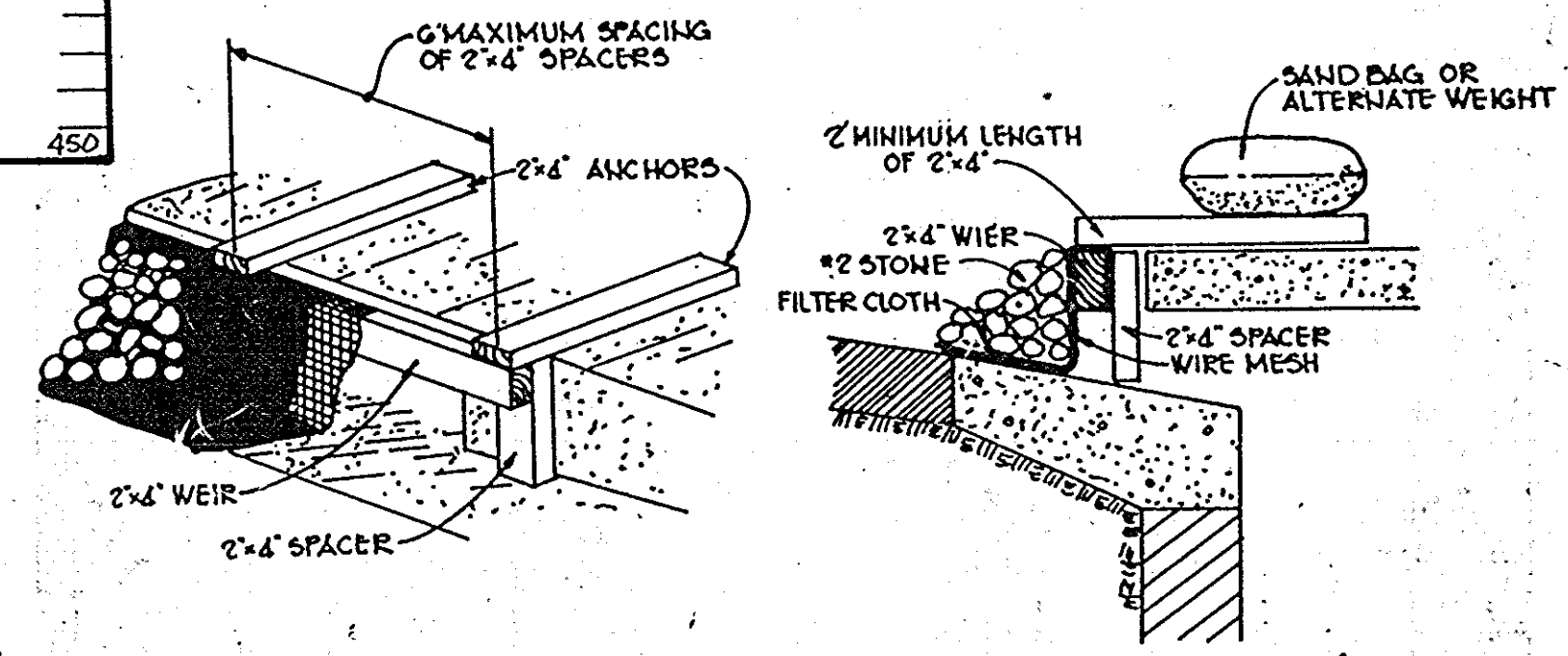
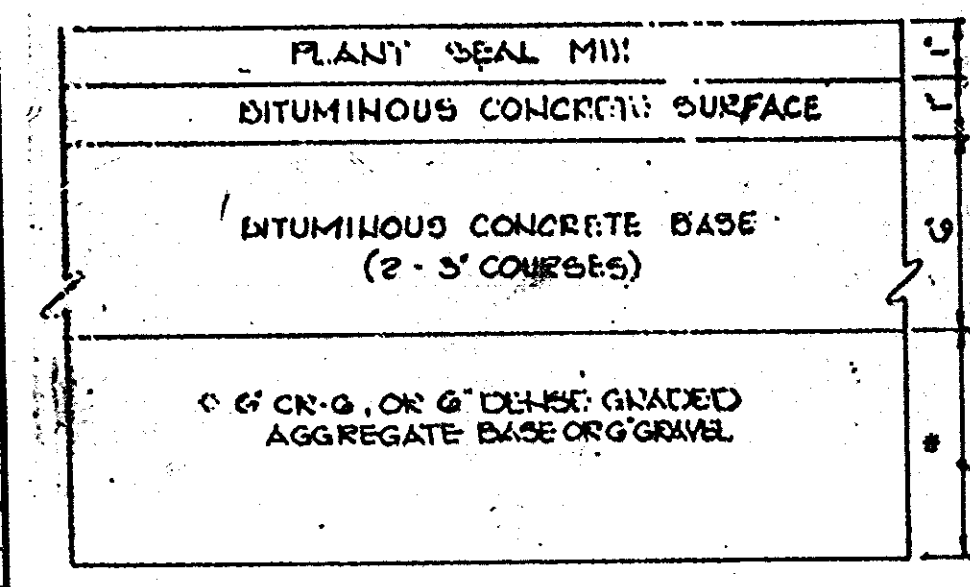
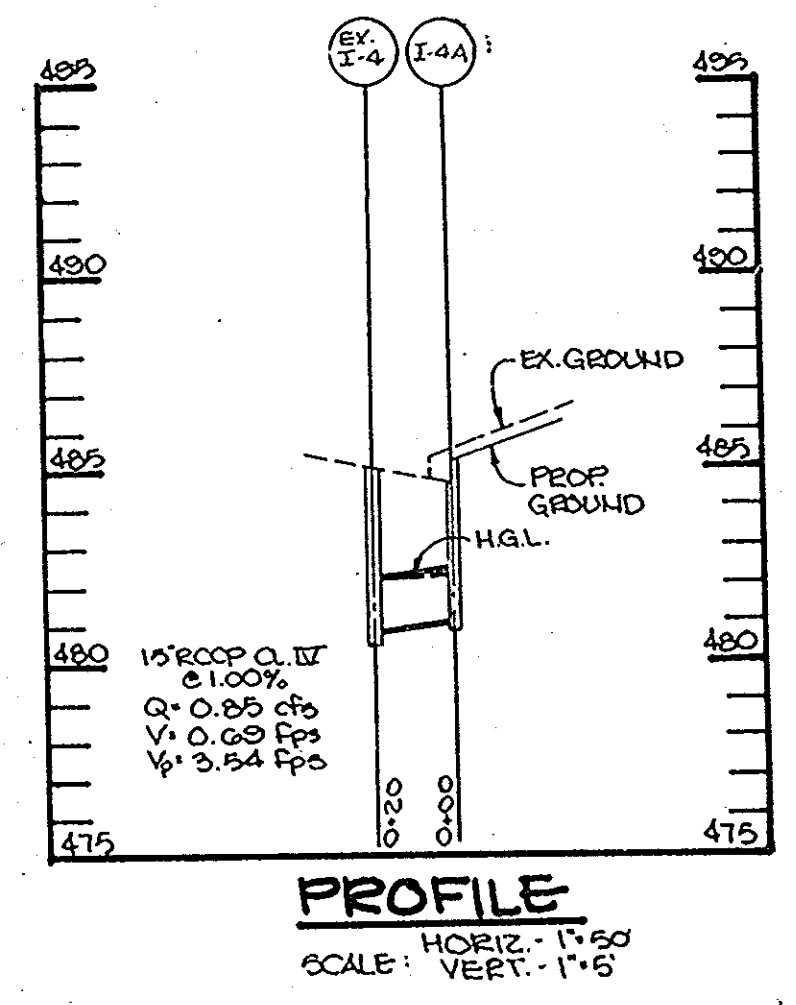
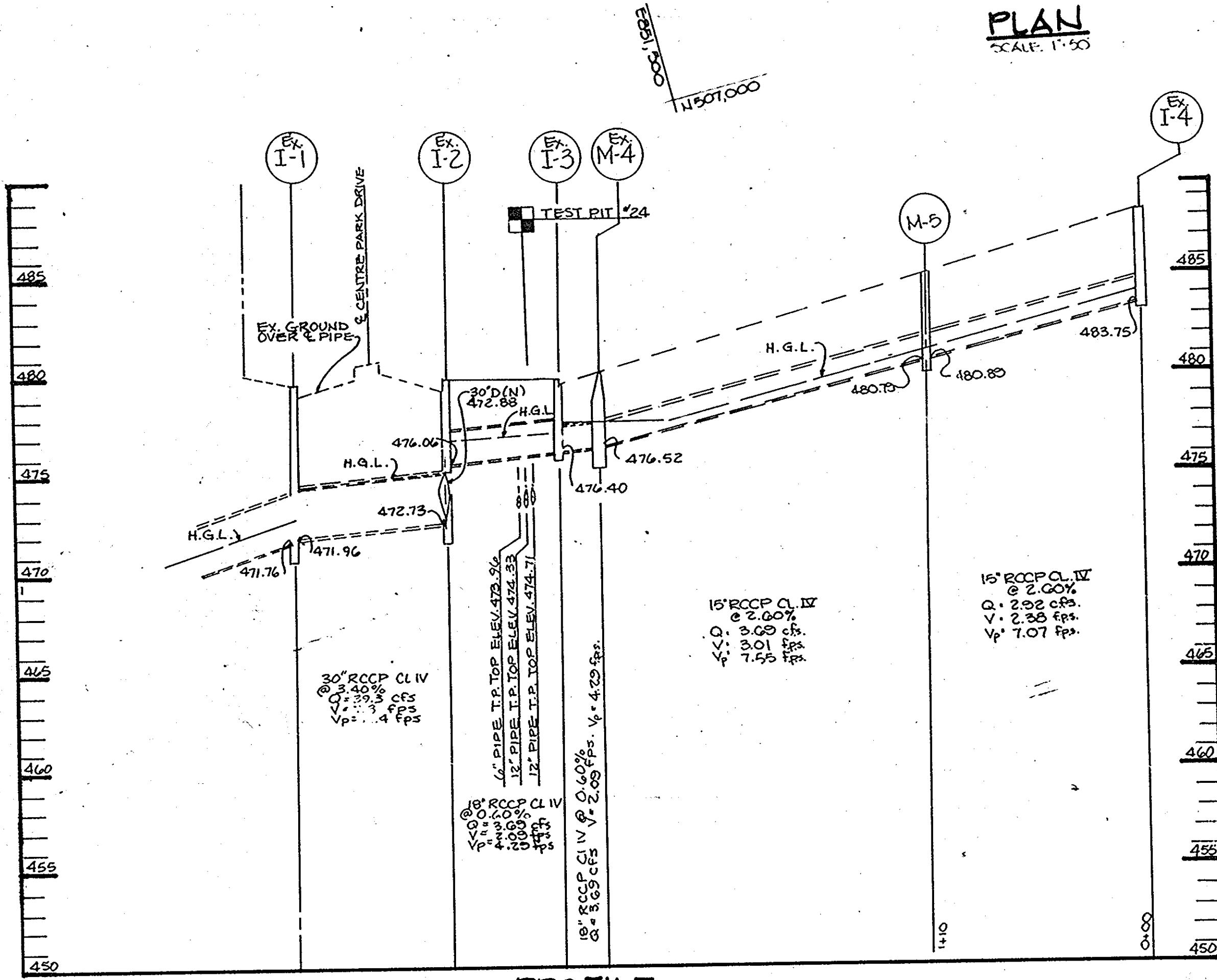
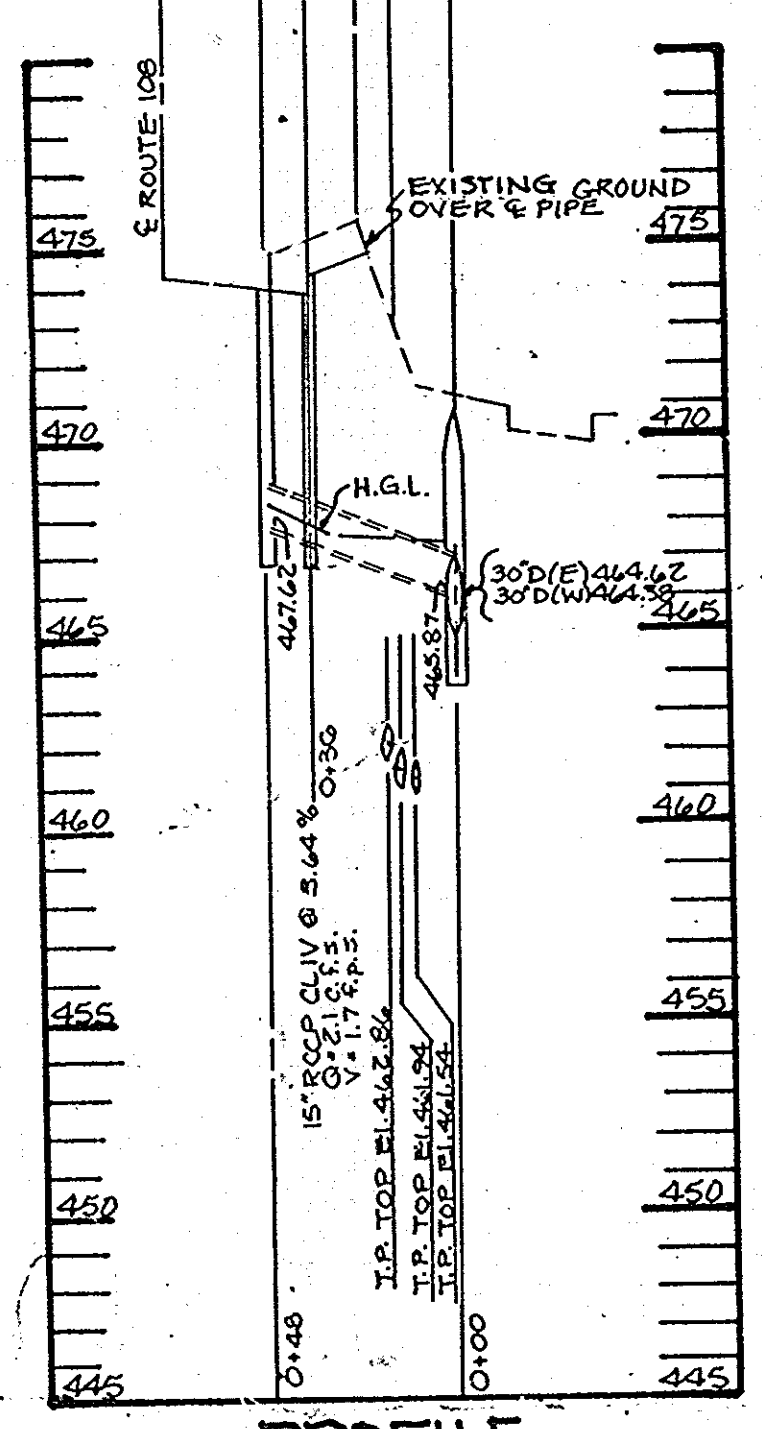
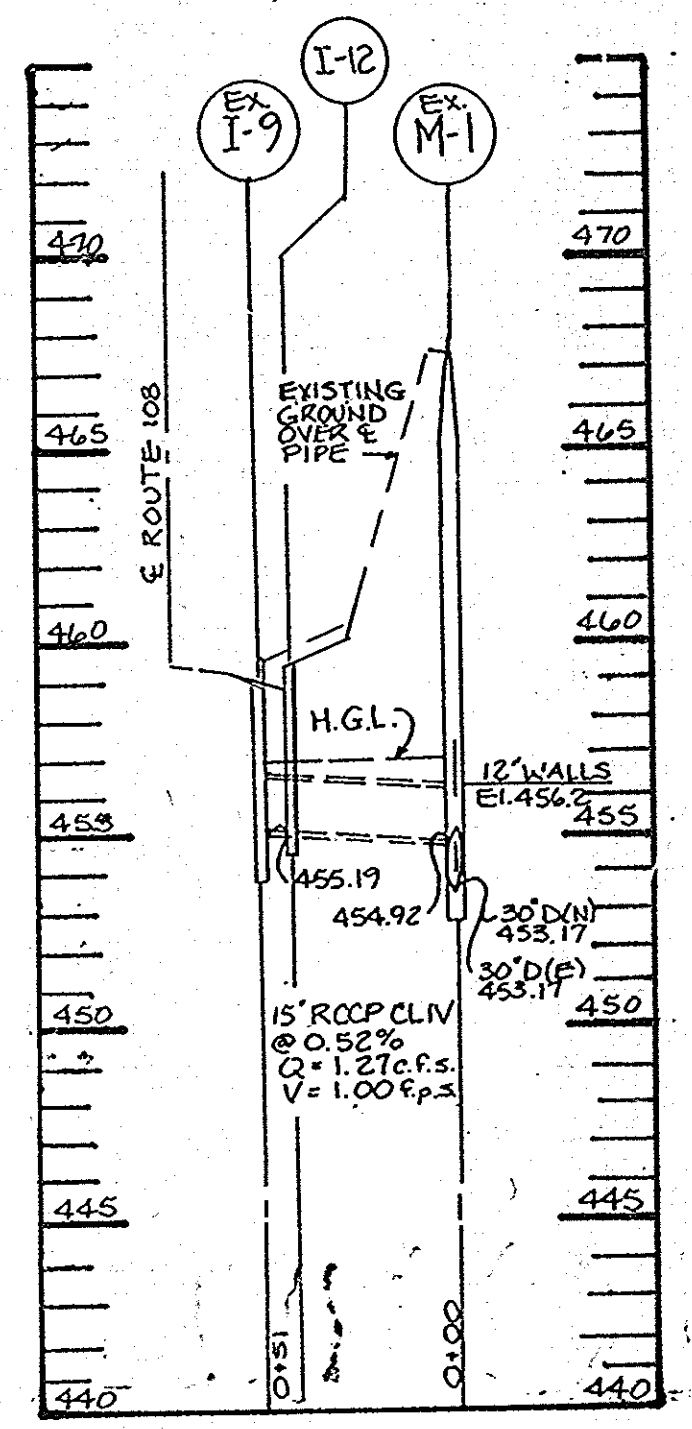
SEQUENCE OF CONSTRUCTION RTE. 108 IMPROVEMENTS

1. OBTAIN GRADING PERMIT.
2. REMOVE 10' EXISTING CURB AND GUTTER AND INSTALL SEDIMENT TRAP.
3. REMOVE REMAINING CURB AND GUTTER AND ROUGH GRADE.
4. INSTALL NEW STORM DRAIN INLETS AND PROVIDE INLET BLOCKING PROTECTION.
5. COMPLETE WORK.
6. STABILIZE IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.
7. UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROLS.
8. INSTALL 10' OF CURB AND GUTTER UPON REMOVAL OF SEDIMENT TRAP.
9. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INV. IN	INV. OUT	T.C. ELEV.	REMARKS
I-11	WR INLET	27' RT. CL STA. 3+18	481.09	486.82	486.82	M.S.H.A. STD. DTL. MD. 374.04
I-12	WR INLET	36' RT. CL STA. 8+39	455.15	474.59	474.59	M.S.H.A. STD. DTL. MD. 374.04
I-13	WR INLET	32' RT. CL STA. 11+35	467.18	459.47	459.47	M.S.H.A. STD. DTL. MD. 374.04
M-5	STD. 4' MANHOLE	22' RT. CL STA. 3+33	480.89	480.79	*486.14	HD. CO. STD. DTL. G-5.13
M-6	STD. 4' MANHOLE	36' RT. CL STA. 5+26	467.40	467.40	*479.87	HD. CO. STD. DTL. G-5.13

* TOP OF RIM ELEVATION



BY THE DEVELOPER:
 "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."
 Christopher Richards DEVELOPER Nov 12 1986 DATE

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."
 Arthur E. Nuegge ENGINEER 11-11-86 DATE

REVIEWED FOR: HOWARD S.C.D. NAME AND MEETS TECHNICAL REQUIREMENTS
 Joseph M. Johnson 11-19-86 DATE U.S. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Stephen L. Fisher 11-17-86 DATE HOWARD S.C.D.

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 [Signature] 11-18-86 DATE CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 11-28-86 DATE CHIEF, BUREAU OF ENGINEERING

OWNER: MJF ASSOCIATES LTD. PARTNERSHIP
 1000 EQUITABLE BANK BUILDING
 COLUMBIA, MARYLAND 21044

DEVELOPER: MCCUAN DEVELOPMENT GROUP
 1000 EQUITABLE BANK BUILDING
 COLUMBIA, MARYLAND 21044

PROJECT: COLUMBIA 100
 OFFICE RESEARCH PARK
 SECTION 1, AREA 2

AREA: TAX MAP NR 30
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: GRADING, SEDIMENT CONTROL AND DRAINAGE AREA MAP IMPROVEMENTS RTE. 108 & CENTRE PARK DR.

THE RIEMER GROUP, INC.
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
 3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 481-2690

11-11-86 DATE
 DESIGNED BY J.K.B.
 DRAWN BY W.C.W.
 PROJECT NO: 00810
 DATE: 11-11-86
 SCALE: AS SHOWN
 DRAWING NO. 18 OF 18

1231