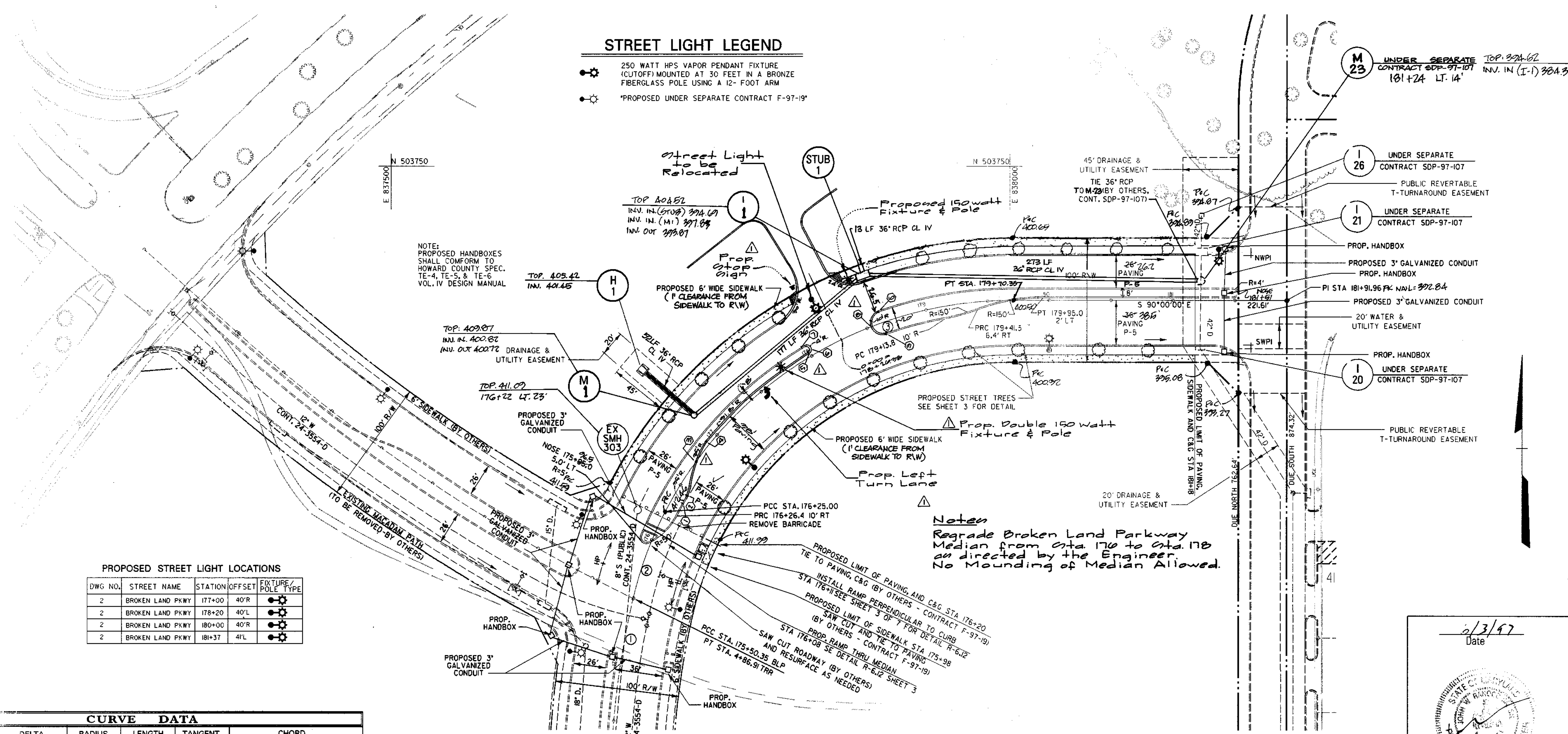


**STREET LIGHT LEGEND**

- 250 WATT HPS VAPOR PENDANT FIXTURE (CUTOFF) MOUNTED AT 30 FEET IN A BRONZE FIBERGLASS POLE USING A 12'-FOOT ARM
- \*PROPOSED UNDER SEPARATE CONTRACT F-97-19\*



**PROPOSED STREET LIGHT LOCATIONS**

DWG NO.	STREET NAME	STATION	OFFSET	FIXTURE / POLE TYPE
2	BROKEN LAND PKWY	177+00	40'R	250 WATT HPS VAPOR PENDANT FIXTURE (CUTOFF) MOUNTED AT 30 FEET IN A BRONZE FIBERGLASS POLE USING A 12'-FOOT ARM
2	BROKEN LAND PKWY	178+20	40'L	250 WATT HPS VAPOR PENDANT FIXTURE (CUTOFF) MOUNTED AT 30 FEET IN A BRONZE FIBERGLASS POLE USING A 12'-FOOT ARM
2	BROKEN LAND PKWY	180+00	40'R	250 WATT HPS VAPOR PENDANT FIXTURE (CUTOFF) MOUNTED AT 30 FEET IN A BRONZE FIBERGLASS POLE USING A 12'-FOOT ARM
2	BROKEN LAND PKWY	181+37	41'L	250 WATT HPS VAPOR PENDANT FIXTURE (CUTOFF) MOUNTED AT 30 FEET IN A BRONZE FIBERGLASS POLE USING A 12'-FOOT ARM

**CURVE DATA**

DELTA	RADIUS	LENGTH	TANGENT	CHORD
13° 07' 29.5"	700'	160.35'	80.53'	S 06° 33' 44.7" W 160.00'
14° 15' 25.8"	300'	74.65'	37.52'	N 20° 15' 14.8" W 74.46'
62° 37' 04.7"	36'	345.35'	192.20'	N 58° 47' 27.5" E 328.42'

PLAN SCALE 1" = 50'

**Top of Curb Elev. Table**

Point #	Station & Offset	Top of Curb Elevation
①	PRC 176+00.00 10' RT	Match Ex (411.71)
②	PT 176+44.51 0' RT	411.600
③	PC 176+79.10 0' RT	411.52
④	PCC 176+86.98 20' LT	411.28
⑤	PRC 177+07.40 20' LT	407.05
⑥	Name 177+07.40 5.00' LT	407.70
⑦	PCC 177+07.50 100' LT	Match Ex (407.72)
⑧	Name 178+51.30 0' RT	406.70
⑨	PRC 178+61.30 0' RT	Match Ex (405.21)
⑩	PCC 178+61.30 100' LT	Match Ex (405.26)

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS  
*Andrew M. Daulton* 6/2/97  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING  
*Mark D. ...* 7/1/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Richard ...* 7/1/97  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS  
 Date No. Revision Description

**BROKEN LAND PARKWAY MALL ACCESS EXTENSION**

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

**DMW**  
 Doherty-McCune-Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3533  
 Fax 296-4705

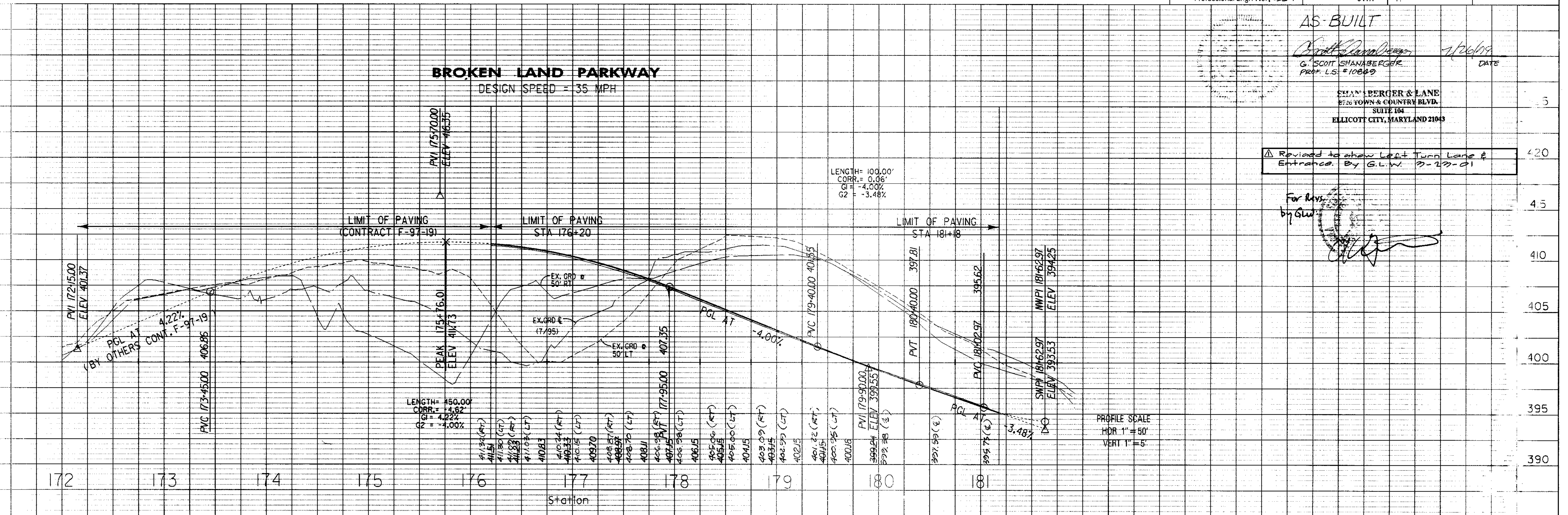
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

AREA: SECTION 2 AREA 9 PHASE 224  
 TAX MAP 36 PARCEL 81  
 ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

TITLE: ROAD CONSTRUCTION PLAN

Des By: JWS Scale: AS SHOWN Proj. No.: 950198  
 Dwn By: WHJ Date: 6/2/97  
 Chk By: JWR Approved: 2 OF 7

Professional Engr. No. 10551  
 Date: 6/3/97



AS-BUILT  
*Scott Shanabarger* 7/26/98  
 G. SCOTT SHANABARGER  
 PROF. L.S. #100622 DATE

SHANABARGER & LANE  
 8720 TOWN & COUNTRY BLVD.  
 SUITE 101  
 ELLICOTT CITY, MARYLAND 21043

Revised to show Left Turn Lane & Entrance. By G.L.W. 7-27-01

For Revs. by G.L.W.

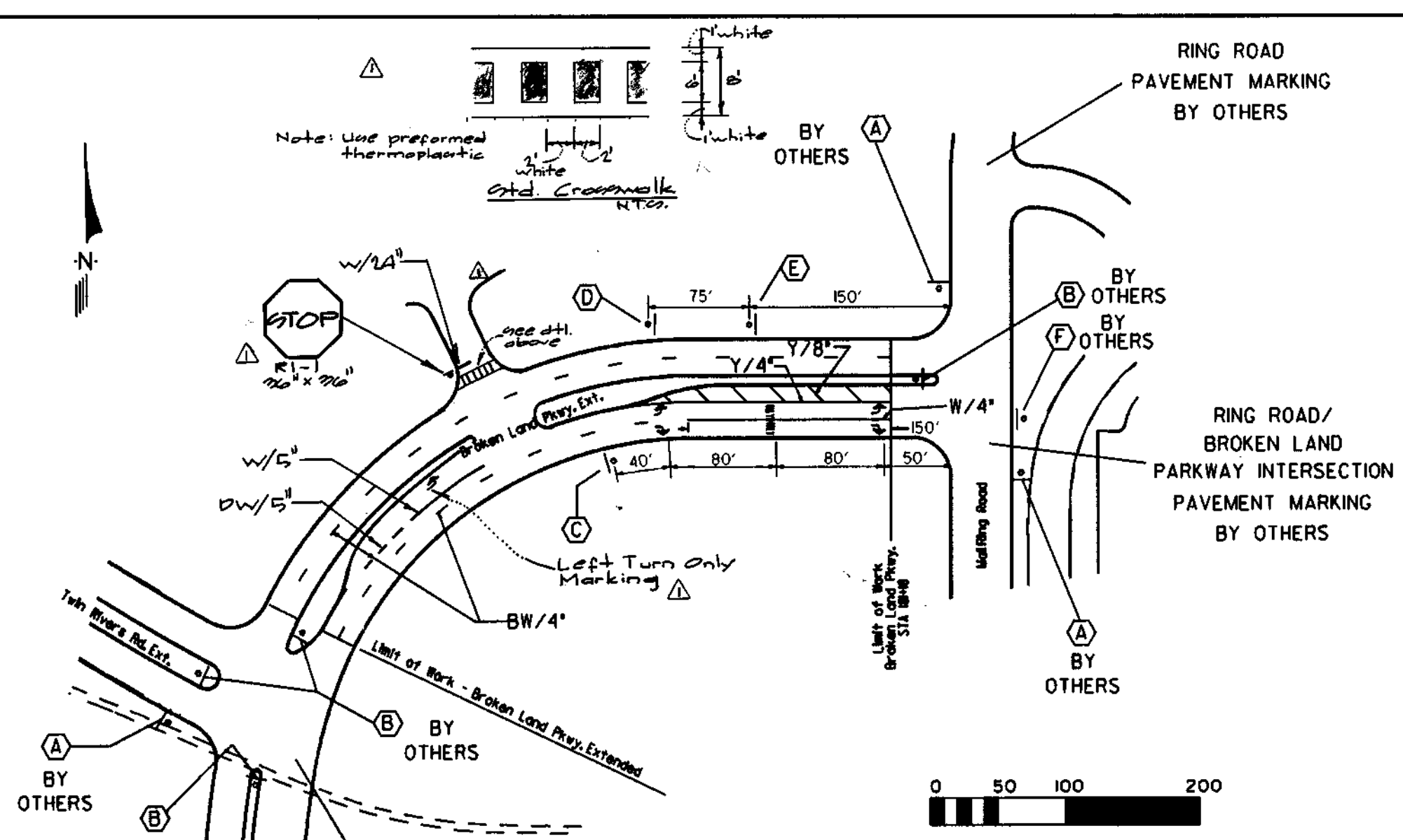
Dwg. No. 3 01/24/97 1997 4/1/97 (2/20/01) (10/10/01)



**GENERAL NOTES:**

- The Contractor shall be governed by the standards and requirements of the following publications:
  - Manual Uniform Traffic Control Devices (MUTCD), 1988 Edition and subsequent revisions.
  - AASHTO - Specifications for the Design and Construction of Structural Supports for Highway Signs, April 1975 Edition.
  - AASHTO - Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, April 1985 Edition.
- Standard sign panel layouts shall be based on the MUTCD.
- Signs shall be located by dimension as shown on the plans. Any required changes in the locations of signs necessary due to field conditions shall have the prior approval of the Engineer.
- Wells and Associates, LLC does not warrant or guarantee the accuracy or completeness of the information shown on the plans. It shall be the responsibility of the Contractor to locate and protect existing facilities that may be affected by this work.
- All new signs shown on this plan shall have Non Reflective (Black Copy) or High Intensity Reflective Sheeting (All Other Colors) sheeting background and copy. Reflective Sheeting shall be Type III-A Encapsulated Lens Reflective Element Material.
- All new sheet aluminum signs shall have Non-Demountable Copy.
- The following minimum thicknesses shall be used for the appropriate size of Sheet aluminum sign blanks:
 

Longest Dimension (inches)	Minimum Thickness (inches)
Up to 12"	0.040"
12" to 24"	0.063"
24" to 36"	0.080"
36" to 48"	0.100"
Over 48"	0.125"
- Signs shall be mounted on 4" x 4" pressure treated (w/olefinated posts). A single post shall be provided for signs with an area of 9.0 square feet or less. For signs with an area of greater than 9.0 square feet, two posts shall be provided. Sign posts shall be installed in the ground to a minimum depth of 4.0 feet and the sign post shall extend to the top of the sign panel.
- Signs shall be mounted such that the clearance to the bottom edge of the sign panels is a minimum of 7 feet.
- The following signs proposed under contract F-97-19 Town Center, shall be removed; sign (1) "W-1 STA. 172+00 Broken Land Parkway sign @ "W-1" STA 175+00 Twin Rivers Road.

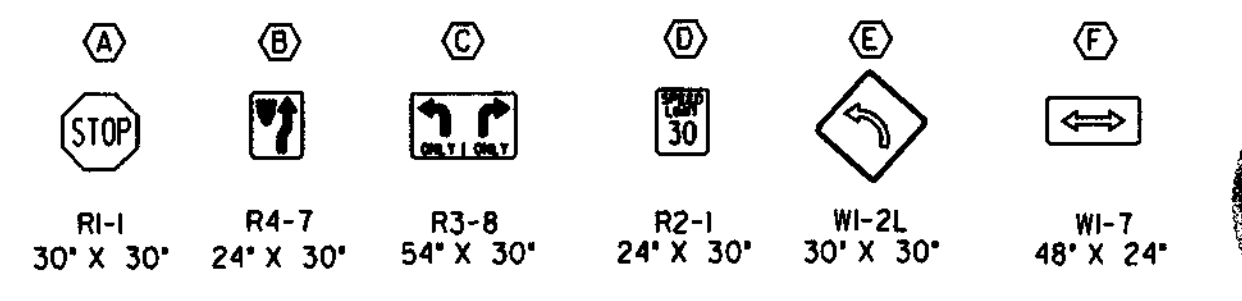


QUAN	SYM	SERIES	SIZE	LEGEND
1	(C)	R3-B	54"X30"	LANE USE (AS DETAILED)
1	(D)	W2-2	30"X30"	SIDE ROAD SYMBOL

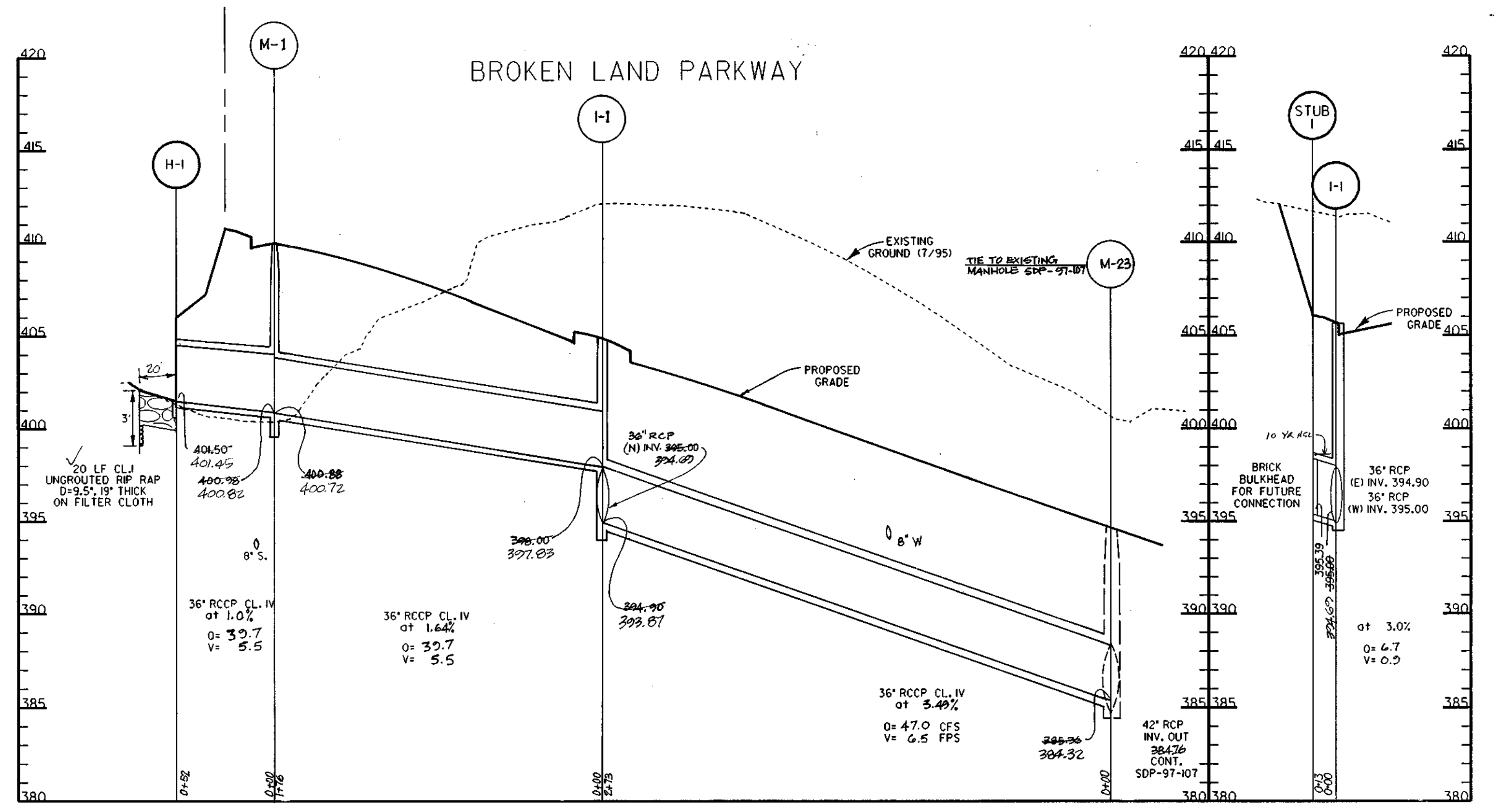
**LEGEND:**

- Existing Sign and Support
- Proposed Sign and Support
- BW/4" - Broken White Lane Line/Width (4" Line/3" Gap)
- DW/4" - Dashed White Lane Line/Width (3" Line/3" Gap)
- W/4" - Solid White Lane Line/Width
- Y/4" - Solid Yellow Lane Line/Width
- DY/4" - Double Yellow Lane Line/Width

**STRIPING AND SIGNAGE**  
SCALE HORIZONTAL 1"=100'  
(PREPARED BY WELLS & ASSOCIATES, INC.)



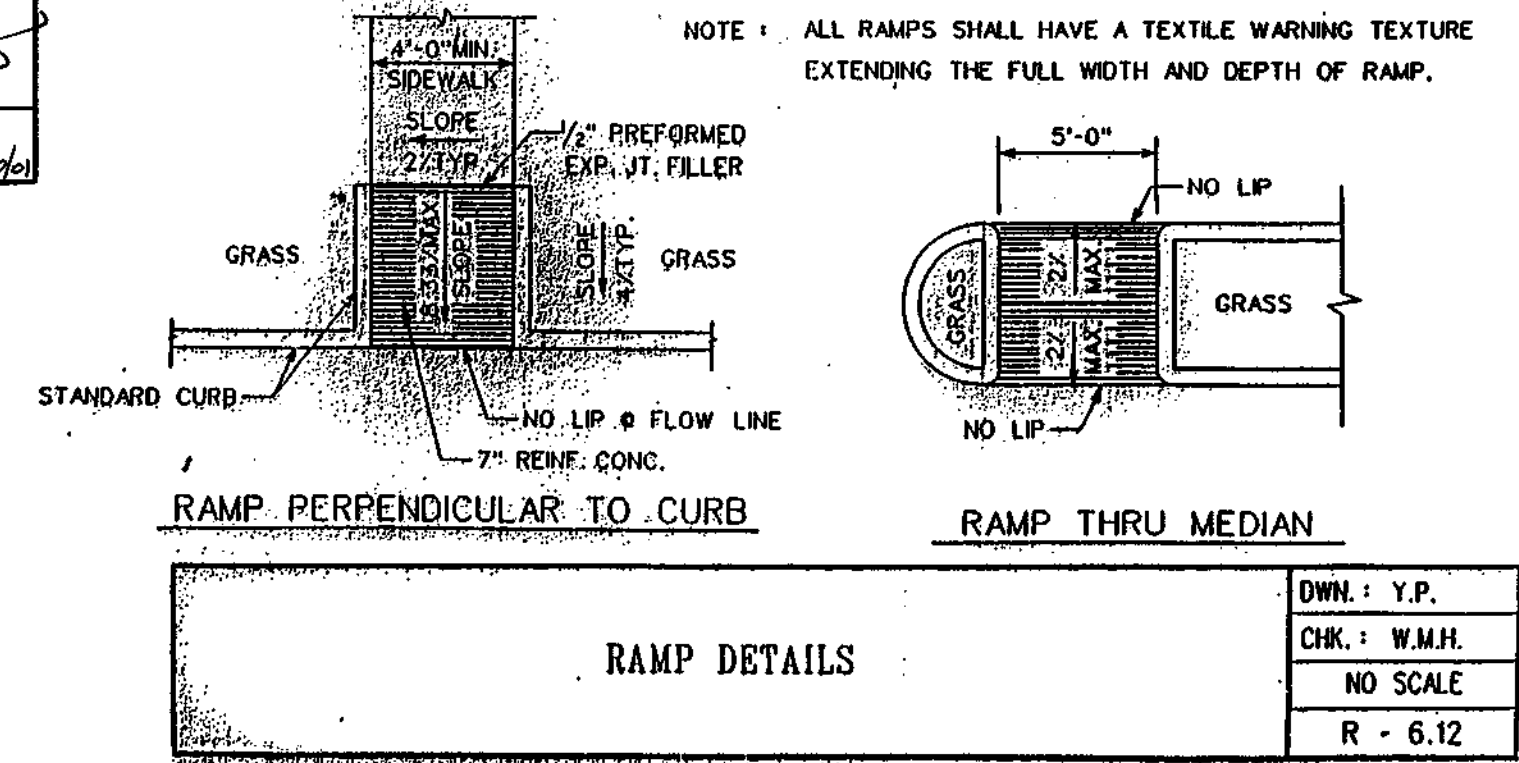
Rev. Road, Median, Markings, & added Crosswalk d.t. By GLW 9/29/97



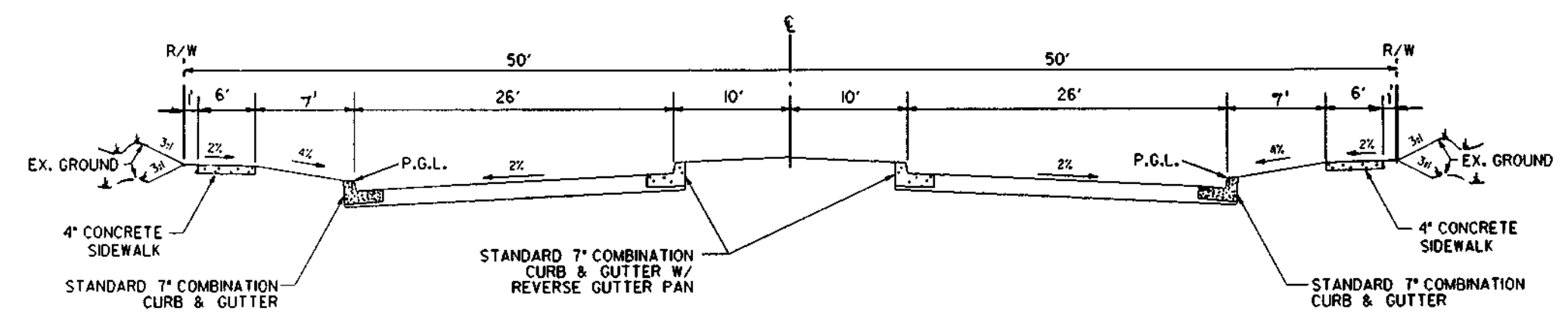
**STORM DRAIN PROFILE**  
SCALE HORIZONTAL 1"=50' VERTICAL 1"=5'

NO.	TYPE	WIDTH	TOP ELEV.	INV. OUT	STD. DETAIL	LOCATION
H-1	A-10	7.0	404.88	394.90	SD4.41	STA 178+61
H-1	TYPE "C" HEADWALL	36" DIA.	405.50	405.45	SD5.21	STA 177+00.76' LT
M-1	STD MH	5'	409.97	400.66	G 5.02	STA 177+00.25' LT

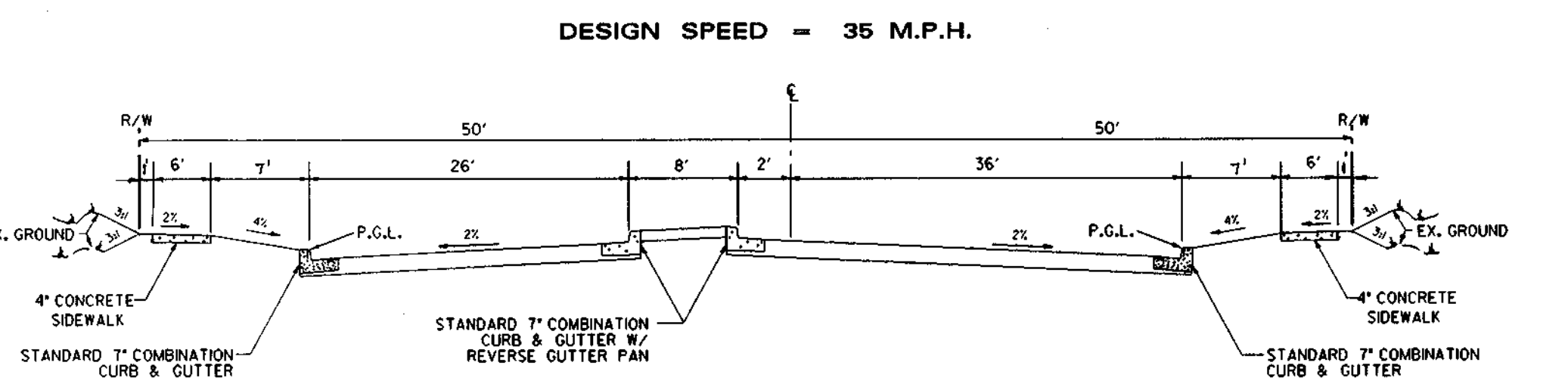
\* NOTE: ELEVATION REPRESENTS TOP OF CURB @ CL HEADPIECE OF A-10 INLETS



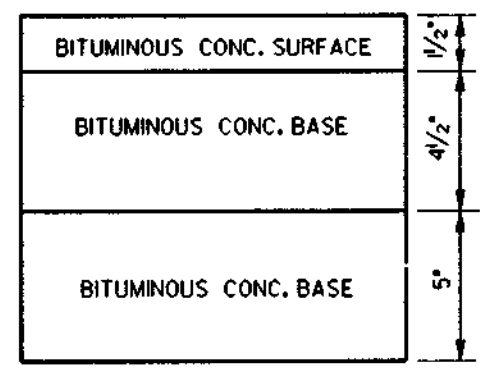
**RAMP DETAILS**  
DWN: Y.P.  
CHK: W.M.H.  
NO SCALE  
R - 6.12



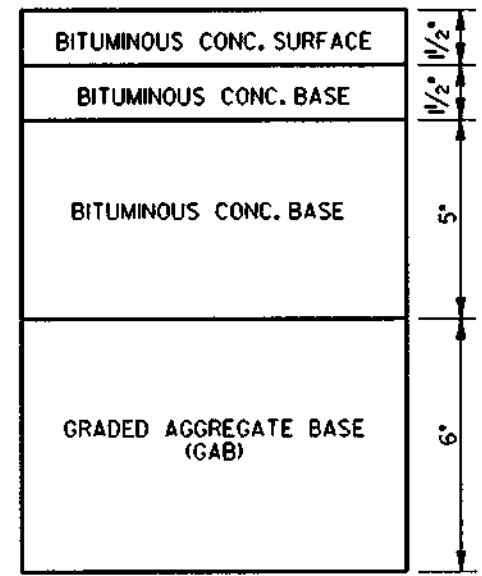
**TYPICAL FULL SECTION (100' RIGHT-OF-WAY)**  
NOT TO SCALE



**TYPICAL SECTION (100' RIGHT-OF-WAY) WITH LEFT TURN LANE**  
NOT TO SCALE

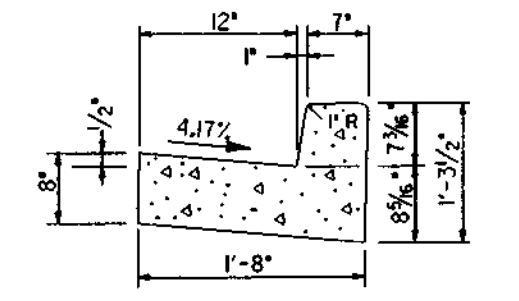


**FULL DEPTH ALTERNATE**

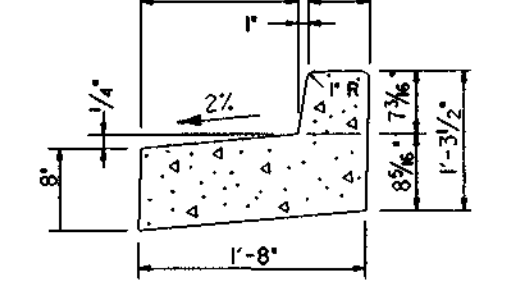


**GRANULAR BASE ALTERNATE**

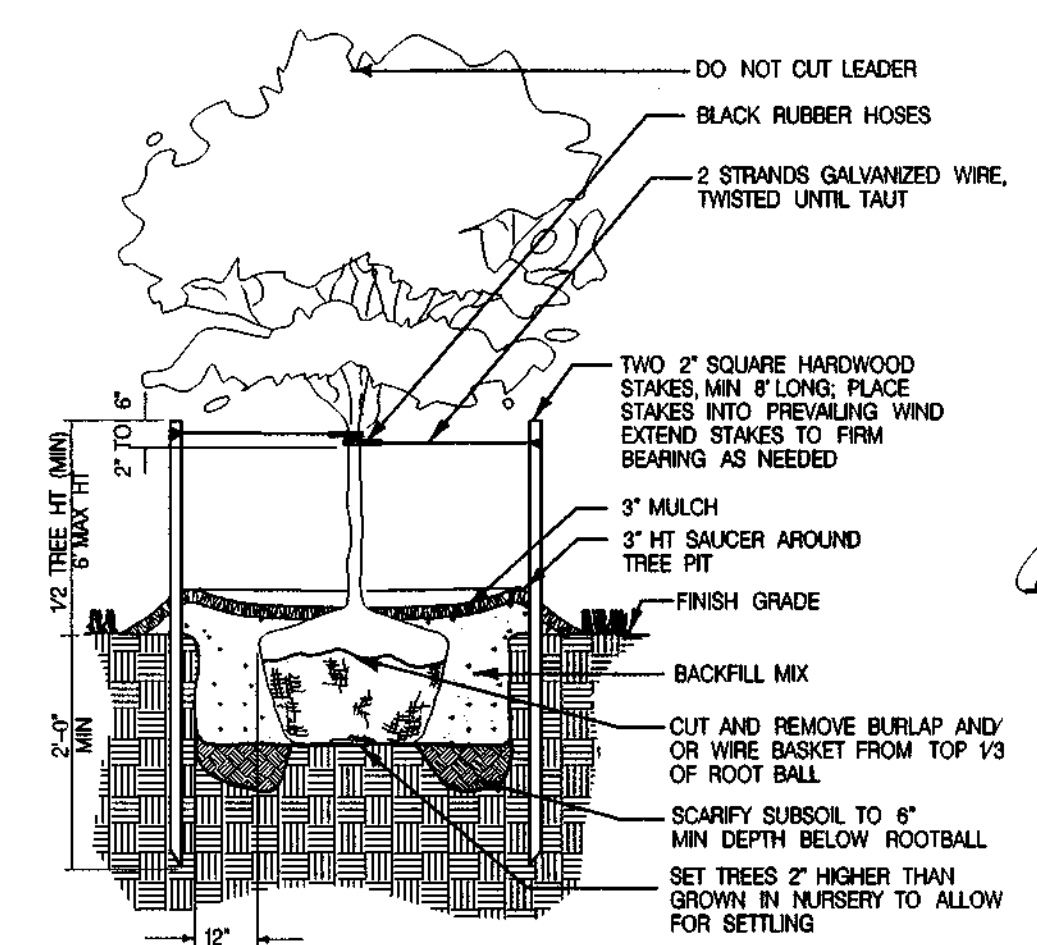
**P-5 PAVING SECTION**  
NOT TO SCALE



**STANDARD 7" CURB & GUTTER H.C. STD. 3.01**  
NOT TO SCALE



**STANDARD 7" CURB & GUTTER W/REVERSE GUTTER PAN**  
NOT TO SCALE



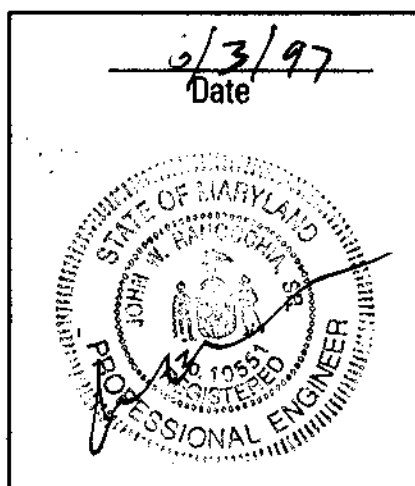
**TREE PLANTING DETAIL**  
NOT TO SCALE

QUANTITY OF TREES	COMMON NAME	BOTANICAL NAME	HEIGHT
21	PIN OAK	QUERCUS PALUSTRIS	10'

NOTE: THE DEVELOPER IS RESPONSIBLE FOR THE INSTALLATION OF ALL STREET TREES AND THE REQUIRED PERIMETER AND SITE LANDSCAPING WILL BE PROVIDED BY THE BUILDER IN CONJUNCTION WITH THE SITE DEVELOPMENT PLANS. SPACING BETWEEN STREET LIGHT AND ANY STREET TREE MUST BE 20' MIN.

**AS-BUILT**  
G. SCOTT SHANBERGER  
PROF. L.S. #10849  
DATE 10/3/97

SHANBERGER & LANE  
3726 TOWN & COUNTRY BLVD.  
SUITE 104  
ELLCOTT CITY, MARYLAND 21043



APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS  
*Andrew M. Dangle* 6-13-97  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING  
*Richard Blodgett* 7/1/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION M&K DATE

*Richard Blodgett* 7/1/97  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Date	No.	Revision Description
7/20/97	1	See Note Upper Left

**BROKEN LAND PARKWAY MALL ACCESS EXTENSION**

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

**DMW**  
Dunn, McQueen, Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 286-3333  
Fax 396-4708

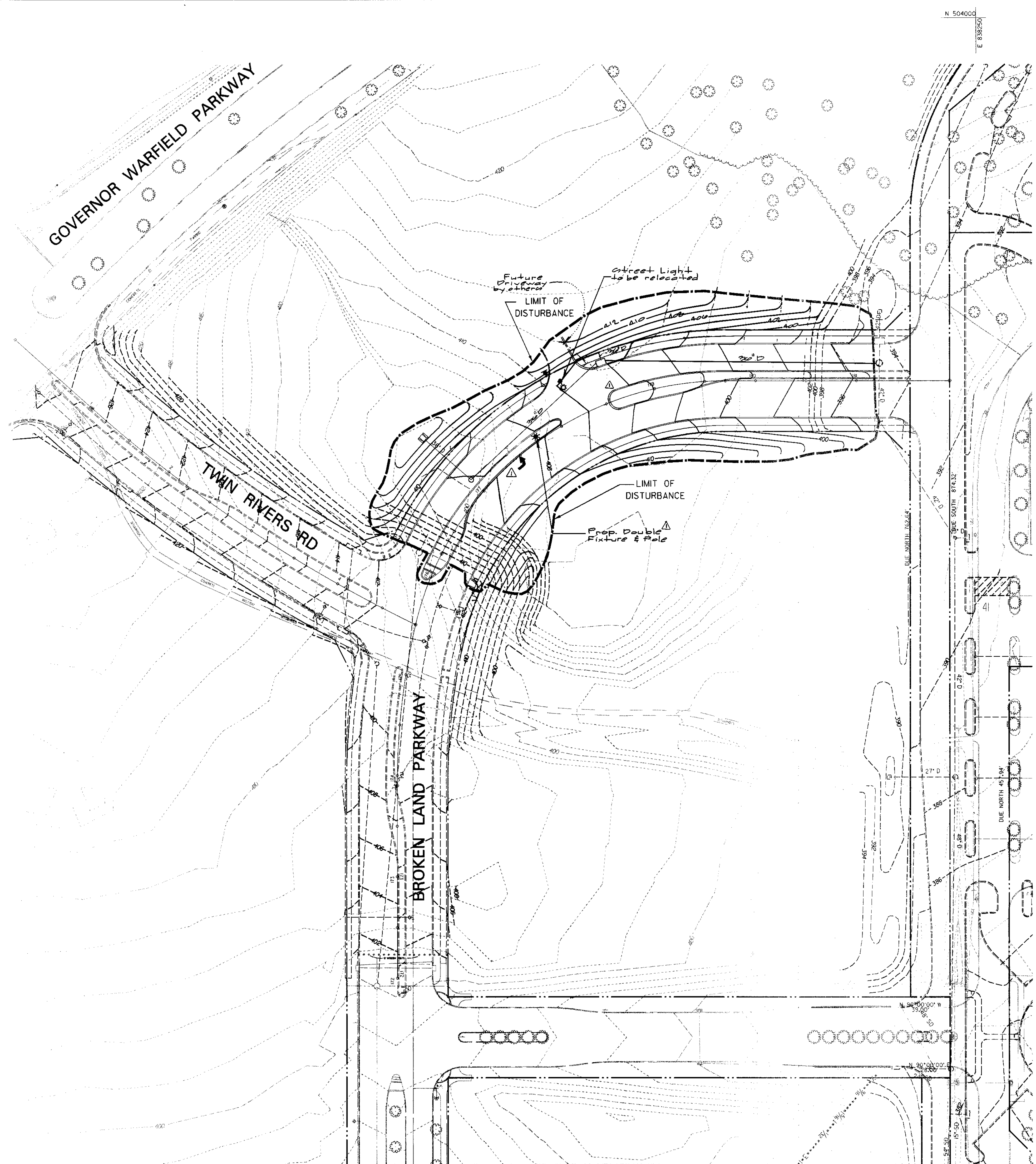
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

AREA SECTION 2 AREA 9 PHASE 224  
TAX MAP 38 PARCEL 81  
6th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

TITLE **STORM DRAIN PROFILES AND CONSTRUCTION DETAILS**

Des By	JWS	Scale	AS SHOWN	Proj. No.	950189
Drn By	WHJ	Date	6-2-97		
Chk By	JWR	Approved			3 OF 7

Professional Engr. No. 10551



THE MALL  
IN COLUMBIA

For Revs.  
By GLW:

△ Revised to show deceleration lane & entrance. By GLW on 2.29.01

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS  
*Andrew M. Daniels* 6-13-97  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING  
*W. J. [Signature]* 7/1/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Richard Blood* 7/1/97  
 DIVISION OF LAND DEVELOPMENT DATE

Date	No.	Revision Description
2/29/01	△	see Note Above

**BROKEN LAND PARKWAY  
MALL ACCESS EXTENSION**

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

**DMW**  
 Dan McCune-Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3533  
 Fax 296-4708  
 A Team of Land Planners,  
 Landscape Architects,  
 Engineers, Surveyors &  
 Environmental Professionals

6/3/97  
 Date  

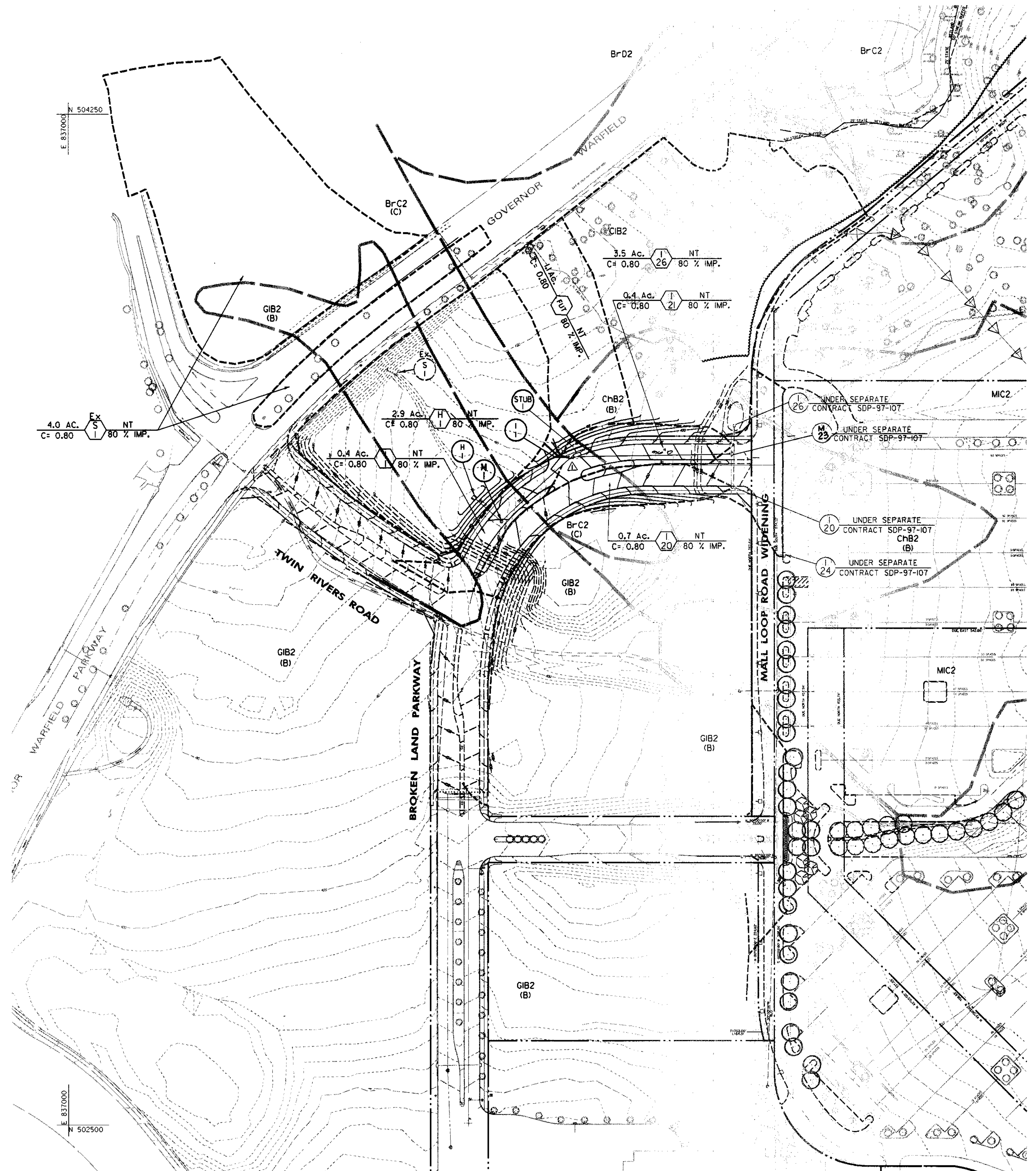
 Professional Engr. No. 10551

AREA SECTION 2 AREA 9 PHASE 224  
 TAX MAP 36 PARCEL 0  
 5th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

**MASS GRADING PLAN**

Des By	JWS	Scale	1" = 50'	Proj. No.	95019B
Drn By	WHJ	Date	06/02/97	4 OF 7	
Chk By	JWR	Approved			





For Revs.  
by G.L.W.

Rev. to show decel. lane & Entrance By G.L.W. on 7/27/01	
APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS <i>Andrew M. Daniels</i> CHIEF, BUREAU OF HIGHWAYS	6-13-97 DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING <i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	7/1/97 DATE
<i>Richard Blouel</i> DIVISION OF LAND DEVELOPMENT	7/1/97 DATE
2/13/01	See Note Above
Date	Revision Description

**BROKEN LAND PARKWAY  
MALL ACCESS EXTENSION**

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

**DMW**  
Duff McCune Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4705

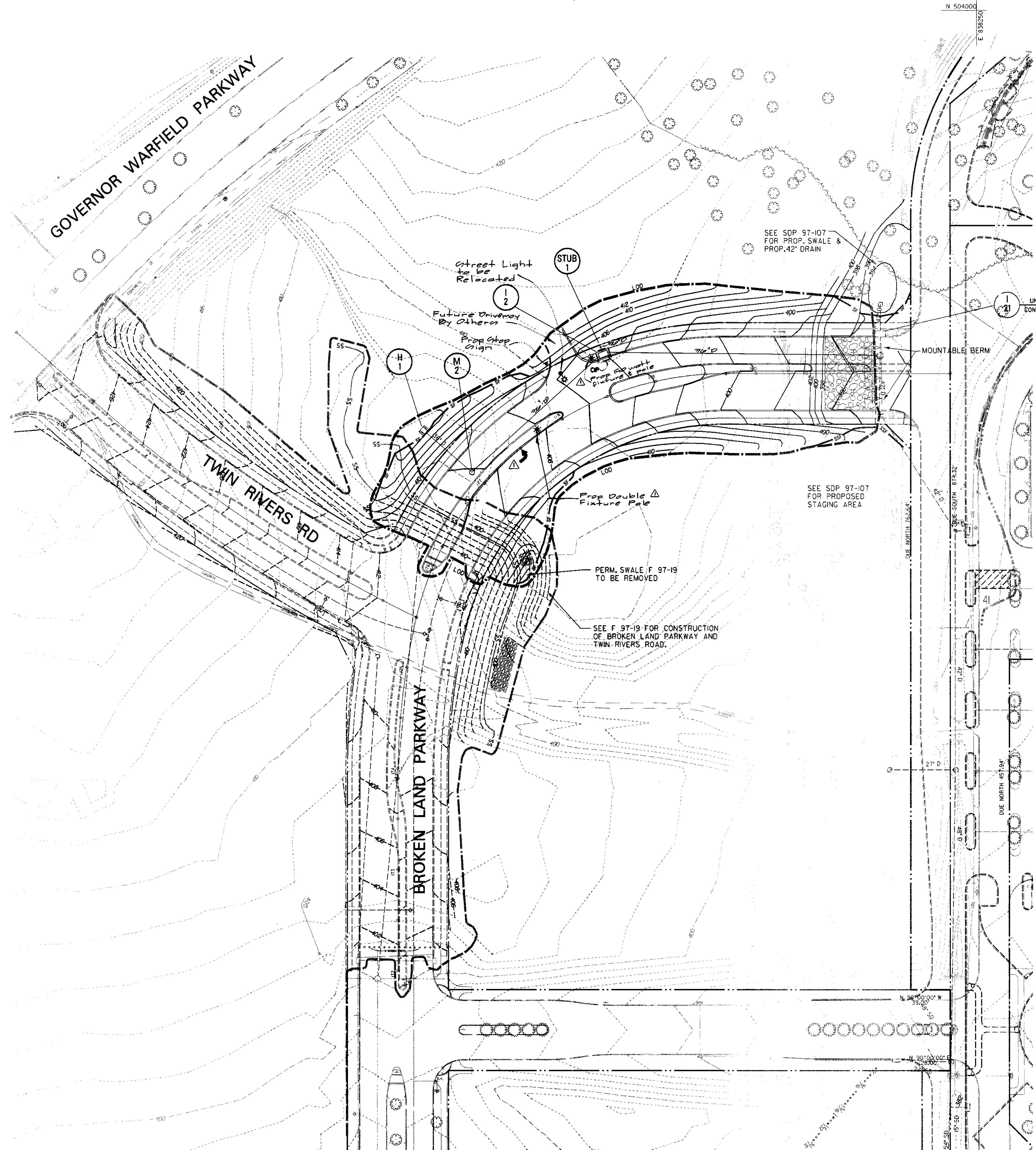
A Team of Land Planners,  
Landscape Architects,  
Engineers, Surveyors &  
Environmental Professionals

6/3/97  
Date

Professional Engr. No. 10551

AREA	SECTION 2 AREA 9 PHASE 224 TAX MAP 36 PARCEL 67 5th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND		
TITLE	<b>STORM DRAIN DRAINAGE AREA MAP</b>		
Des By	JWS	Scale	1" = 100'
Drn By	WHJ	Date	6/2/97
Chk By	JWR	Approved	
Proj. No.	35019B	5 F 7	





**LEGEND**

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. STORM DRAIN
- EX. EDGE OF ROAD
- PROP. UTILITIES
- PROP. EDGE OF ROAD
- SILT FENCE
- EXISTING SUPER SILT FENCE
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENT.
- MOUNTABLE BERM
- TEMPORARY SWALE
- EXISTING EARTH DIKE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED CONTOUR
- × 360.70 SPOT ELEVATION

**DEVELOPERS CERTIFICATION:**

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 of a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

*Greg Klar* 6/3/97  
Date

**ENGINEER'S CERTIFICATION:**

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.

*John W. Ranocchia, Sr.* 6/3/97  
Date

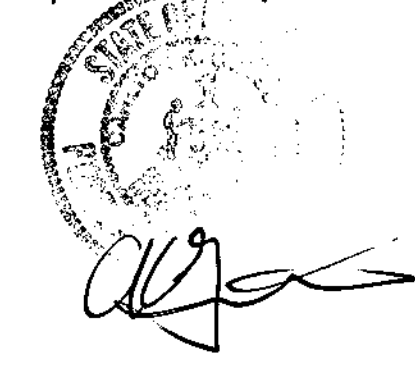
Reviewed for Howard Soil Conservation District and meets Technical Requirements.

*Cheval Simmons* 6/6/97  
Natural Resources Conservation Service Date

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

*John P. ...* 6/6/97  
Howard Soil Conservation District Date

For Revs by G.W.



APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS <i>Andrew M. ...</i> 6-13-97 CHIEF, BUREAU OF HIGHWAYS DATE		
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING <i>Richard Blood</i> 7/1/97 CHIEF, DIVISION OF LAND DEVELOPMENT DATE		

Date	No.	Revision Description
6/20/97	1	See Note Above

**BROKEN LAND PARKWAY MALL ACCESS EXTENSION**

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

**DMW**  
 Dash McCune Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3535  
 Fax 296-4708

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

AREA SECTION 2 AREA 9 PHASE 224  
 TAX MAP 36 PARCEL 81  
 5th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

TITLE  
**EROSION AND SEDIMENT CONTROL PLAN**

Des By	JLS	Scale	1" = 50'	Proj. No.	95019B
Drn By	WHJ	Date	06/02/97	6 OF 7	
Chk By	JWR	Approved			

6/3/97  
Date

Professional Engr. No. 10551