

**SHEET INDEX**

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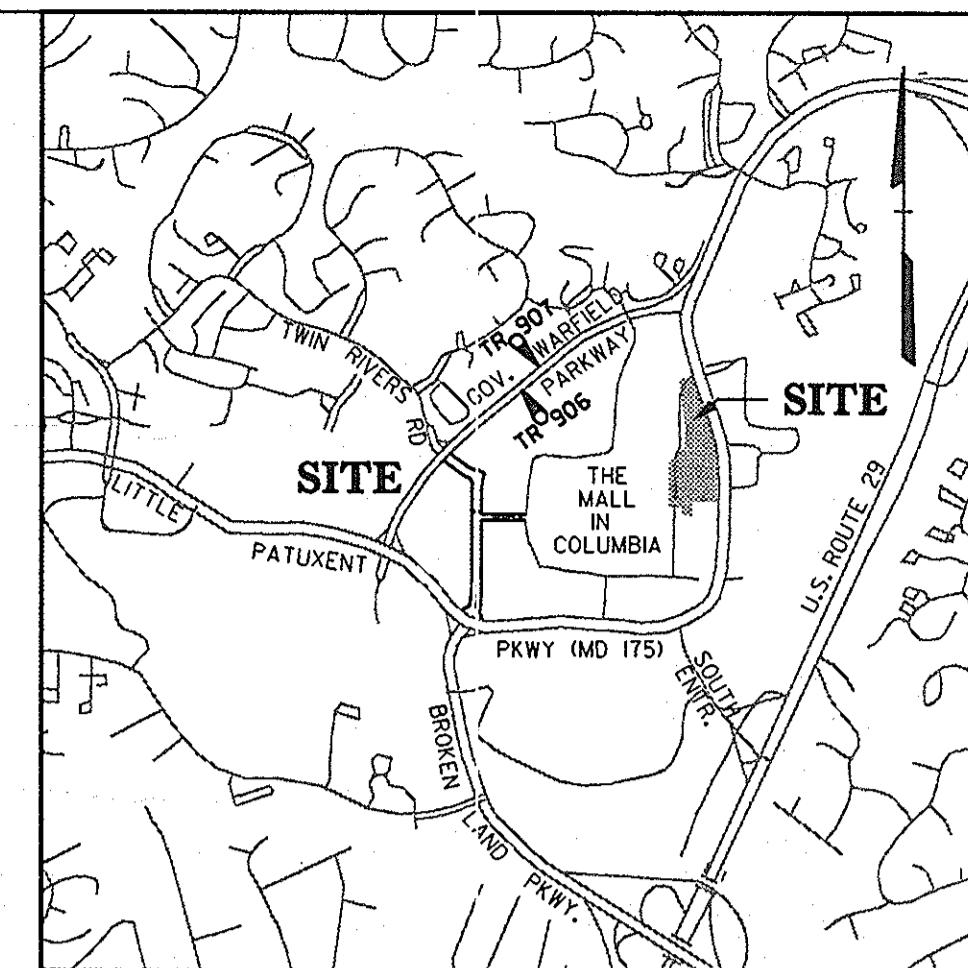
**TRAFFIC CONTROL NOTES**

**Traffic Sequencing**

1. Vehicular access to all parking areas, stores, and delivery areas will be maintained during hours when malls open. Defour traffic through the parking lot for utility construction as needed.

**GENERAL NOTES**

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
- The contractor shall notify the Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- All plan dimensions are to the face of curb unless otherwise noted.
- Topography was field run surveyed by Doff-McCune-Walker, Inc. in July 1995.
- Coordinates and bearings shown herein are referred to the Maryland Coordinate system (MAD 27) as projected from the following Whitman, Reardon & Assoc. traverse stations:  
TR 101 N 503630.8580 E 83902.2760  
TR 102 N 503630.7000 E 83834.2860
- Stormwater management is provided by an underground detention facility for quantity. Quality control is provided by stormceptors, by overcompensation as shown on previously approved plans SDP 97-107.
- Stormwater management facilities are privately maintained.
- No wetlands exist within the limits of disturbance per report by D.M.W. Inc. Dated 6/13/97.
- The existing utilities were located by actual field survey and by a survey prepared by Doff-McCune-Walker, Inc. The contractor must dig test pits, by hand, at all utility crossings and connection points at least 5 days prior to starting work to verify exact location.
- The Soils analysis was prepared by R. Balter Group. Previously submitted with SDP 97-107.
- Handicap parking details shall be in accordance with the 'Maryland Building Code for the Handicapped', Section 5.01-7.05.
- Any damage to County owned right-of-way to be corrected at the contractor's expense.
- All sidewalks shall be cross sloped at 1/4 inch per foot.
- Trench bedding for storm drainage structures shall be in accordance with Howard County Standard 62.01.
- Department of Planning and Zoning reference file numbers:  
F-97-185, F-97-189, S-96-09, SDP 97-107  
F-97-185, F-97-189, S-96-09, SDP 97-107
- All inlets shall be constructed in accordance with Howard County standards or MSHA Standards as specified on the structure schedule.
- All materials and construction is to be in accordance with the Howard County Design Manual Volume IV.
- The building setback restrictions from the property lines and right-of-way lines of any public road shall be in accordance with FDP Phase 47-A-VI.
- All on-site driveways and parking areas to be privately maintained.
- All curb radii are five foot radius unless otherwise labeled.
- All equipment and tools shall be placed as not to interfere with vehicular or pedestrian movement unless specified.
- The contractor shall be responsible for any damage to existing property which may occur as a result of his negligence in the execution of the work.
- All paving areas indicated are private.
- All proposed handicap ramps shall be in accordance with the current A.D.A. Standards.
- Existing lights in Phase IB to be relocated as necessary.
- There is no floodplain on this site.
- No traffic study is required for this site.
- Public Water and Sewer is utilized for this site.
- No additional landscaping is required for this plan.
- See sheets 1 & 12 for limit of disturbance.
- Provide buttresses at all water line bends.



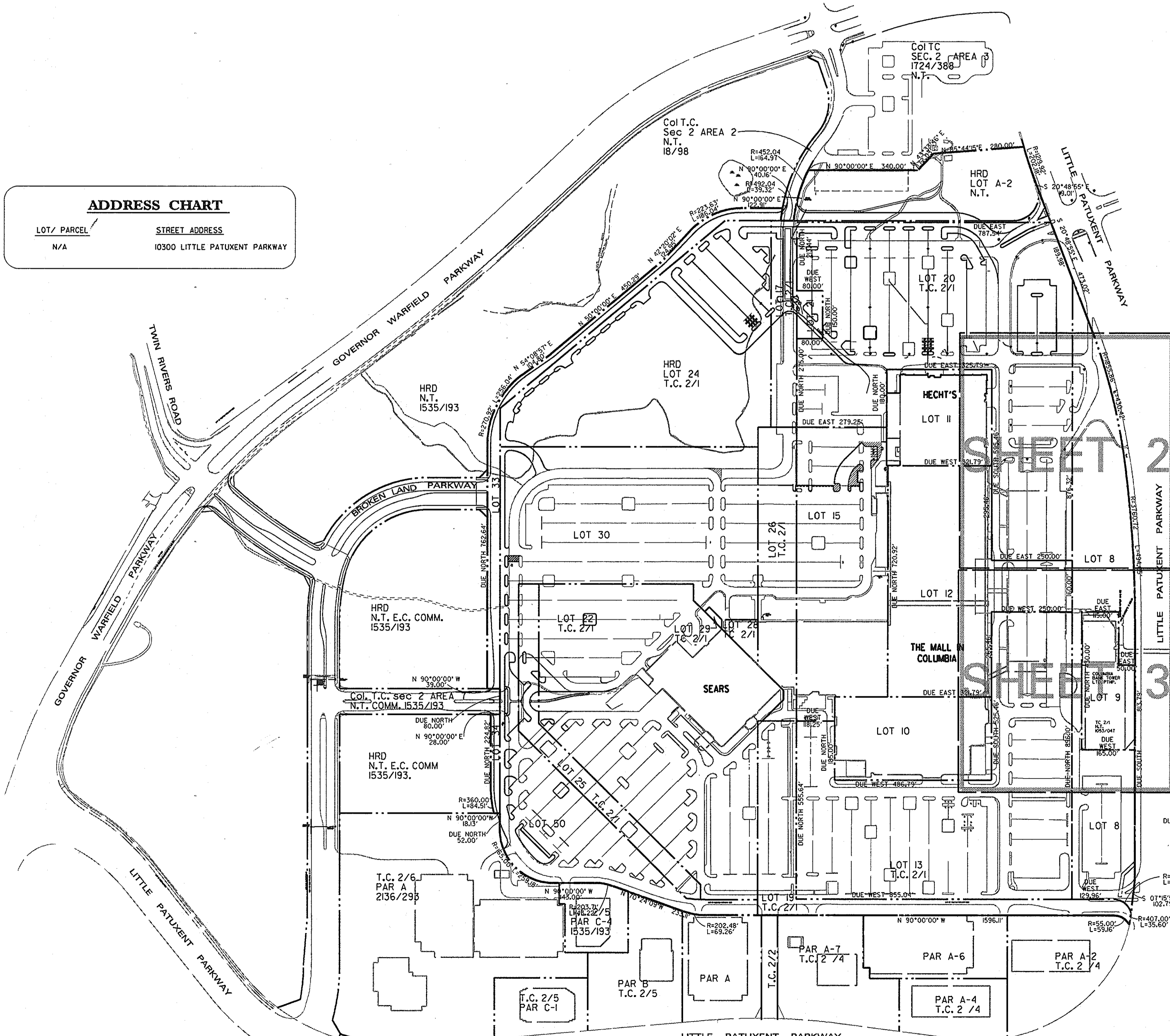
**LOCATION MAP**

SCALE: 1" = 200'

ELEVATIONS SHOWN HEREON ARE BASED ON THE FOLLOWING TRAVERSE STATIONS ESTABLISHED BY FISHER, COLLINS AND CARTER, INC. (NGVD 29 VERTICAL DATUM)  
TR 905 N 504280.1630 E 838550.3630 ELEV. 381.500  
TR 907 N 504400.6701 E 838647.7701 ELEV. 394.150

**ADDRESS CHART**

LOT/PARCEL	STREET ADDRESS
N/A	10300 LITTLE PATUXENT PARKWAY



**SITE ANALYSIS**

- Zonings: New Town - Commercial (Per FDP Ph. 47-A-VI)
- Phase IB Area/Limit of Disturbance = 6.0 Ac. OR 261,360 S.F.
- Proposed Use: Revised Parking Lot
- Parking Tabulation

	Proposed Ph. IB (a)	Existing Ph. IB	Total Added Ph. IB	Deck Demolition	Existing Total Per SDP-97-107	Proposed Total
Parking Spaces	382	298	84	-321	605	5778
Handicap Spaces	113 VAN	10	1	-4	80 (10 VAN)	77 (13 VAN)
Total	393	308	85	-325	605	5855

(a) Required parking does not increase due to the fact that there is no proposed building square footage proposed with Phase I.

- Area Tabulation
  - Phase IB Area/Limit of Disturbance: 6.0 Ac.
  - Proposed building area: N/A
  - Impervious area: 3.0 Ac.
  - Temporary green area in Phase I: 3.0 Ac.

Lot	Owner	Area	Plot Reference
8	Howard Research & Develop. Corp.	5.794 AC.	18/39
12	Columbia Mall, Inc.	6.244 AC.	18/39
13	Columbia Mall, Inc.	10.793 AC.	18/39
20	Columbia Mall, Inc.	13.157 AC.	3634

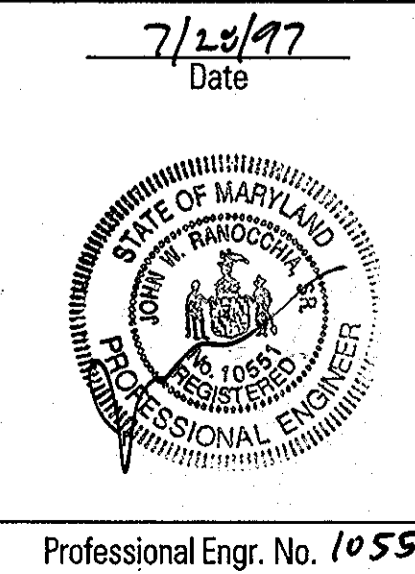
**APPROVED**  
PLANNING BOARD  
of HOWARD COUNTY

DATE July 16, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK [Signature] 5/1/97 DATE  
DIRECTOR [Signature] 8/1/97 DATE

**THE MALL IN COLUMBIA**  
PHASE IB EXPANSION  
TOWN CENTER  
SECTION 2 AREA 1  
HOWARD COUNTY, MD  
LOTS 8, 12, 13, 20  
OWNER / DEVELOPER:  
THE HOWARD RESEARCH & DEVELOPMENT CORP.  
COLUMBIA MALL, INC.  
10275 LITTLE PATUXENT PARKWAY  
COLUMBIA, MARYLAND 21044

**DMW**  
Doff-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



Date	No.	Revision Description

DESIGNER	SCALE	DATE	PROJECT NO.
MJP	AS SHOWN	7/22/97	95019B

CHK BY	DATE	STATUS	SHEET NO.
JWR	7/22/97	Approved	1 OF 15

**VICINITY MAP**  
1" = 200'

Professional Engr. No. 10551

SDP-97-158



COORDINATE TABLE	
PRIVATE DRIVE	
STATION 4+00	N 503773.0, E 840007.8
STATION 8+41	N 503332.0, E 840007.8

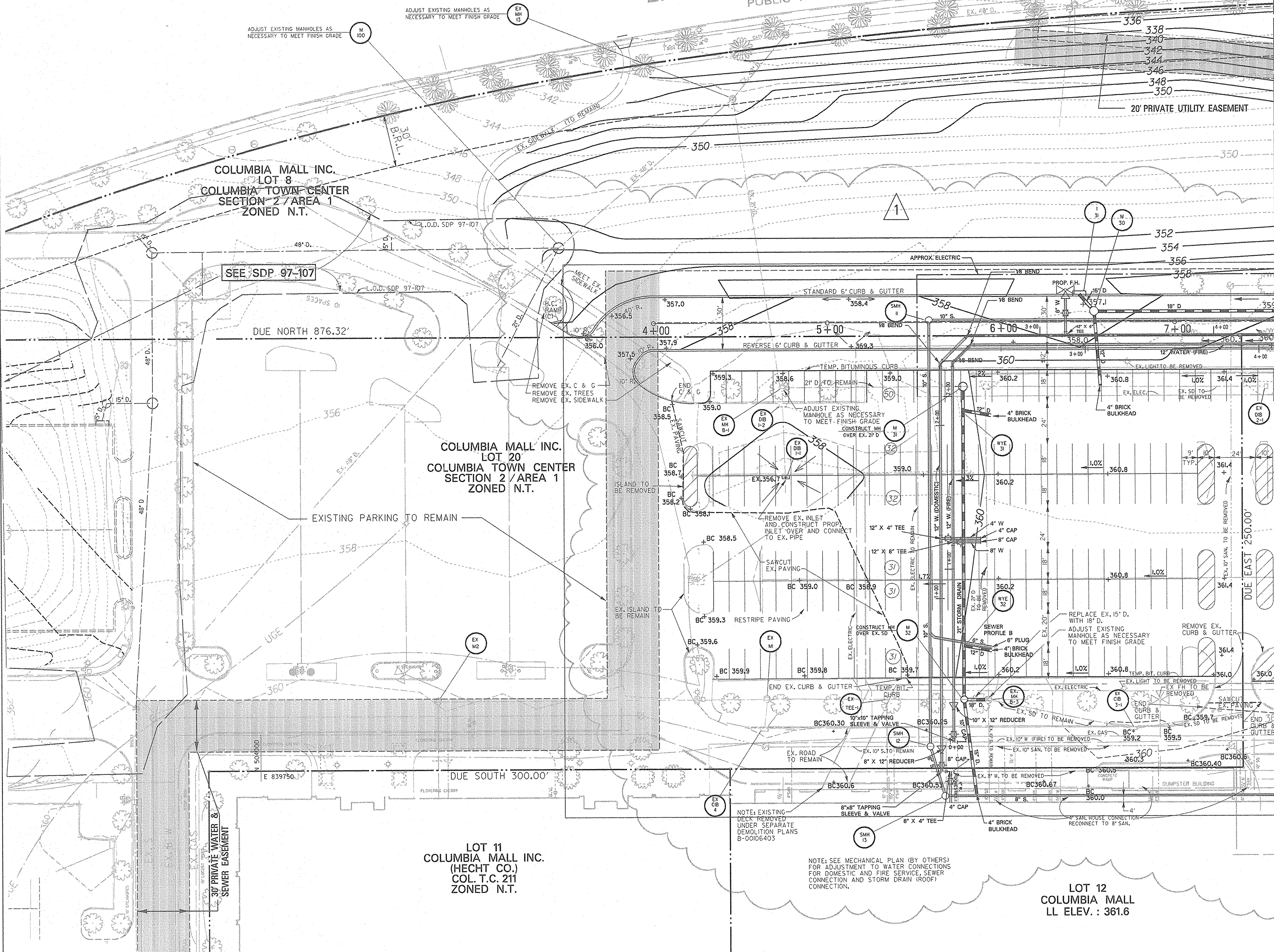
**LEGEND**

- 350 --- EX. CONTOUR
- - - - - EX. WATER
- - - - - EX. SANITARY SEWER
- - - - - EX. STORM DRAIN
- - - - - EX. GAS
- - - - - EX. EDGE OF ROAD
- 352 --- PROP. CONTOUR
- PROP. UTILITIES
- PROP. STORM DRAINAGE
- 6" COMB. C&G
- BC 358.J EX. BOTTOM OF CURB
- EX. CURB & GUTTER
- + 358.J PROP. SPOT ELEVATION
- ▨ PAINTED ISLAND

MATCHLINE SEE SHEET 3

MATCHLINE SEE SHEET 3

**LITTLE PATUXENT PARKWAY**  
PUBLIC ROAD R.O.W. VARIES



NOTE: GAS, ELECTRIC AND TELEPHONE UTILITIES ARE SHOWN ON THESE PLANS FOR REFERENCE ONLY AND ARE DESIGNED AND BUILT BY OTHERS.

NOTE: CONTRACTOR MUST DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS AND CONNECTION POINTS AT LEAST 5 DAYS PRIOR TO STARTING WORK TO VERIFY EXACT LOCATION. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF ANY DISCREPANCY.

NOTE: SEE SHEET 15 FOR UTILITY LOCATION PLAN.

Date: 1/6/98  
 State of Maryland Professional Engineer  
 Professional Engr. No. 10521

APPROVED  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 DATE: July 16, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
Chief, Development Engineering Division	MK 1/12/98
Chief, Division of Land Development	1/16/98
Director	1/21/98

Date	No.	Revision Description
15/98	1	REVISED UTILITIES

**THE MALL IN COLUMBIA**  
 PHASE 1B  
 TOWN CENTER  
 SECTION 2 AREA 1  
 HOWARD COUNTY, MD  
 LOTS 8, 12, 13, 20

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

**DMW**  
 Draft-McCune-Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3859  
 Fax 296-4706

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

TITLE  
**PHASE 1B**  
**REVISED SITE DEVELOPMENT PLAN**

Des By	MJP	Scale	1" = 30'	Proj. No.	950198
Drn By	KDE	Date	8/22/97		
Chk By	JWR	Approved		2 OF 15	



**LEGEND**

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- 352 PROP. CONTOUR
- PROP. UTILITIES
- PROP. STORM DRAINAGE
- 6" COMB. C&G
- 8" EX. BOTTOM OF CURB
- 358.1 EX. CURB & GUTTER
- 358.1 PROP. SPOT ELEVATION
- PAINTED ISLAND

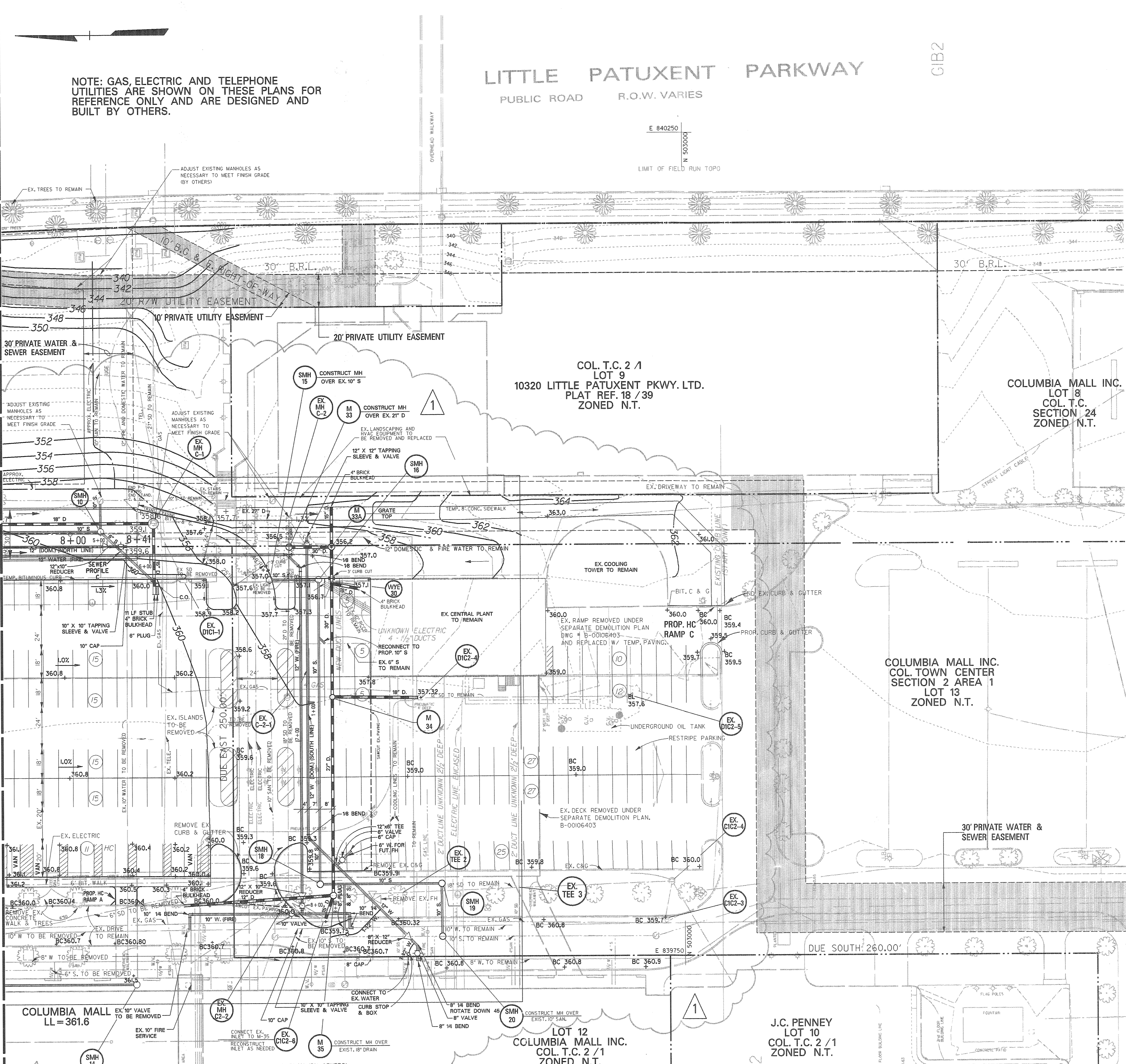
NOTE: CONTRACTOR MUST DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS AND CONNECTION POINTS AT LEAST 5 DAYS PRIOR TO STARTING WORK TO VERIFY EXACT LOCATION. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF ANY DISCREPANCY.

NOTE: SEE SHEET 15 FOR UTILITY LOCATION PLAN.

NOTE: GAS, ELECTRIC AND TELEPHONE UTILITIES ARE SHOWN ON THESE PLANS FOR REFERENCE ONLY AND ARE DESIGNED AND BUILT BY OTHERS.

MATCHLINE SEE SHEET 2

MATCHLINE SEE SHEET 2



1-6-98  
Date

Professional Engr. No. 10691

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE July 16, 1997  
eg

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>W.D. Williams</i>	1/12/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	DATE
<i>Candy Hamilton</i>	1/14/98
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Joseph K. Kott</i>	1/21/98
DIRECTOR	DATE

Date	No.	Revision Description
1/5/98	1	REVISE UTILITY LAYOUT

THE MALL IN COLUMBIA  
PHASE 1B  
TOWN CENTER  
SECTION 2 AREA 1  
HOWARD COUNTY, MD  
LOTS 8, 12, 13, 20

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

**DMW**  
Darr McConaughy & Walker, Inc.  
300 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4705

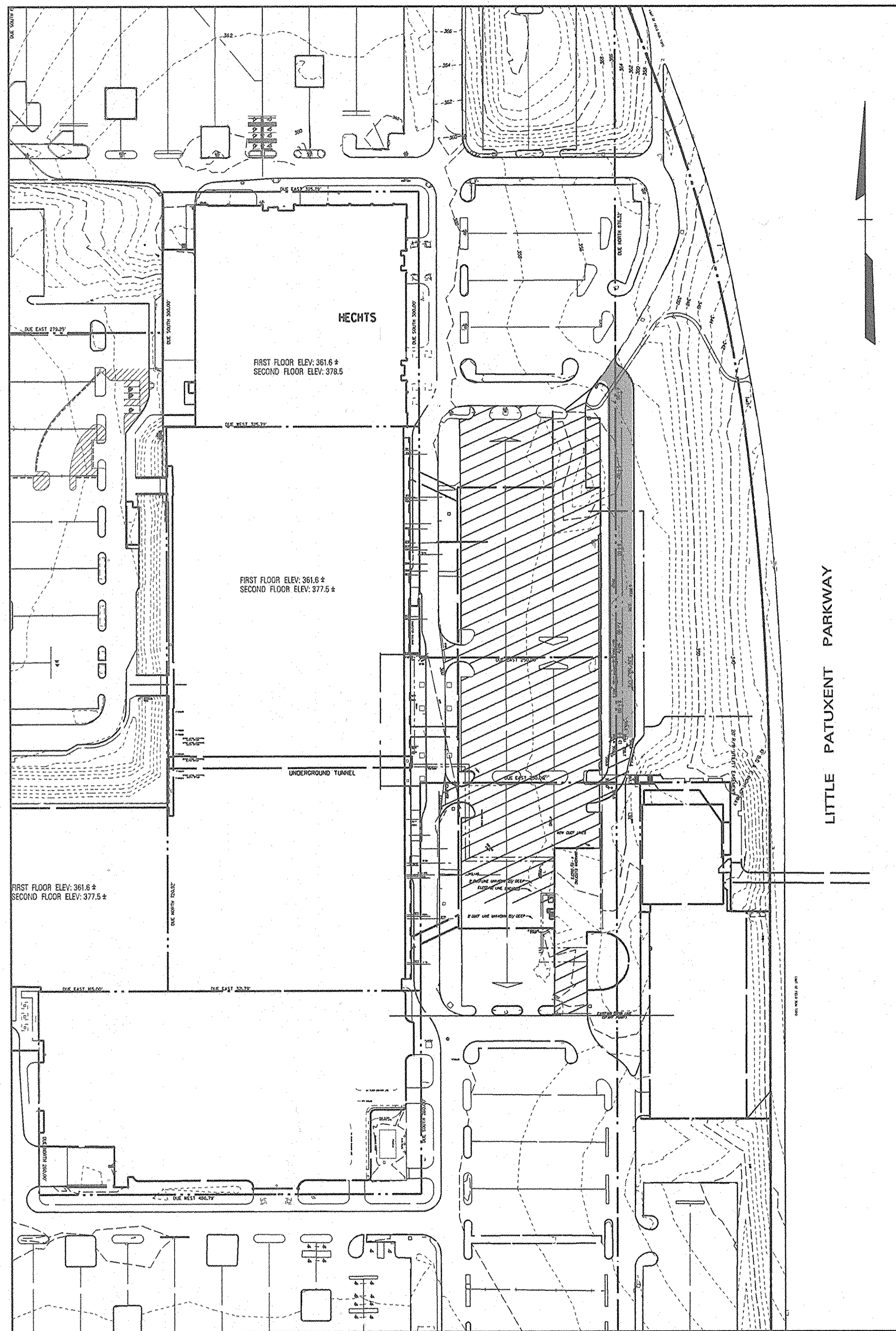
A Team of Land Planners,  
Landscape Architects,  
Engineers, Surveyors &  
Environmental Professionals

TITLE

**PHASE 1B  
REVISED SITE DEVELOPMENT PLAN**

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Drn By	KDE	Date	8/22/97		
Chk By	JWR	Approved			3 OF 15





**PAVING LEGEND**

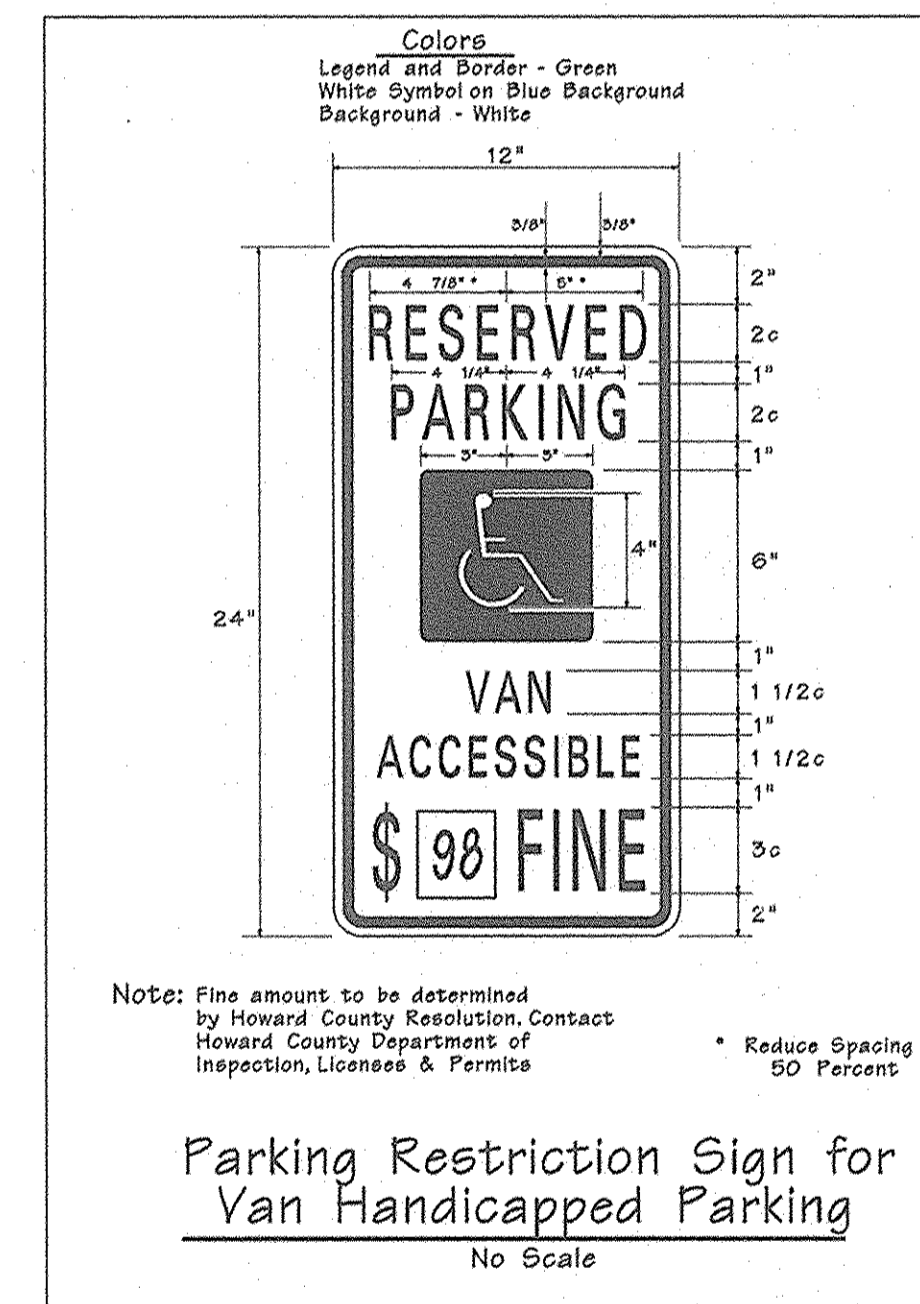
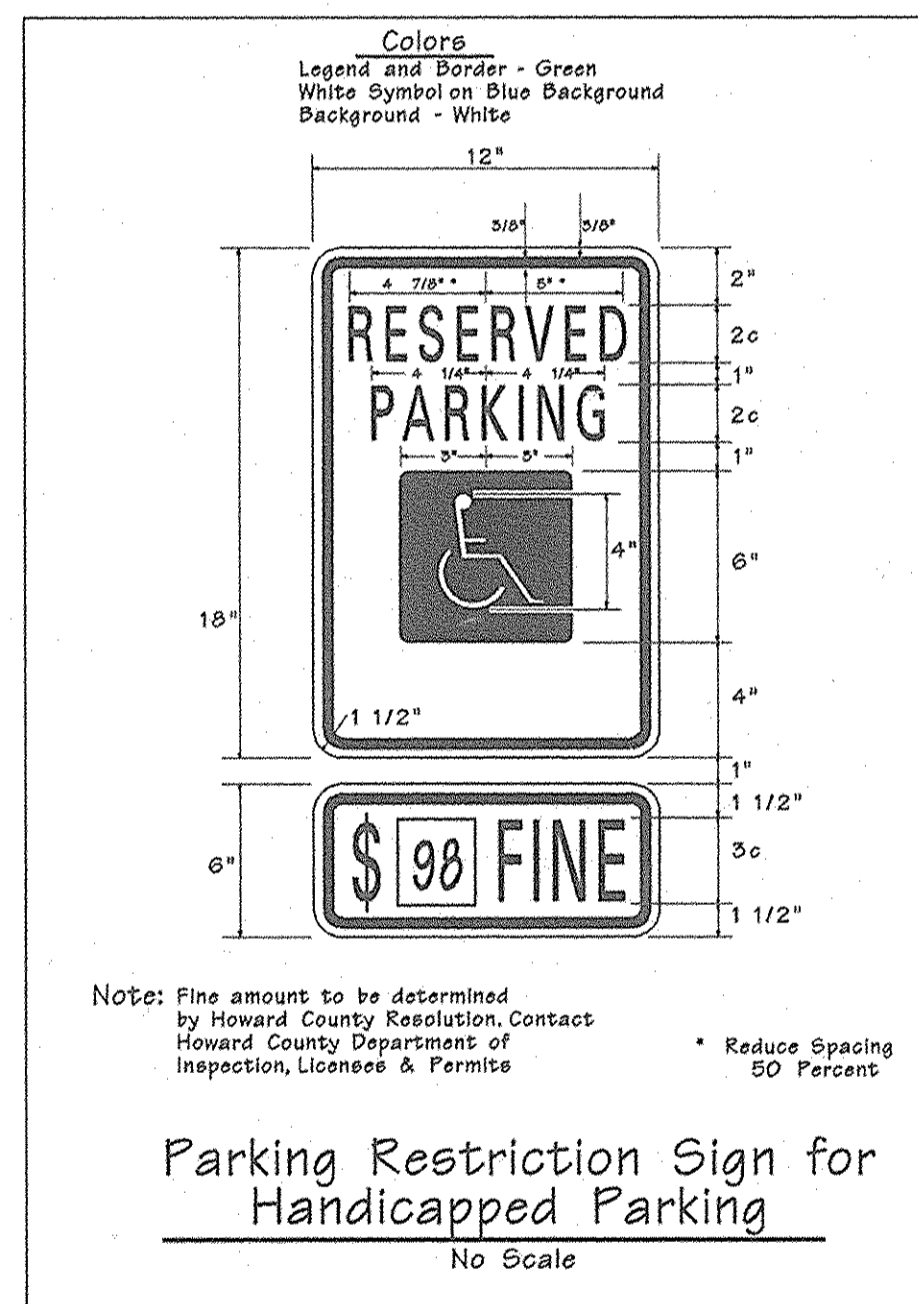
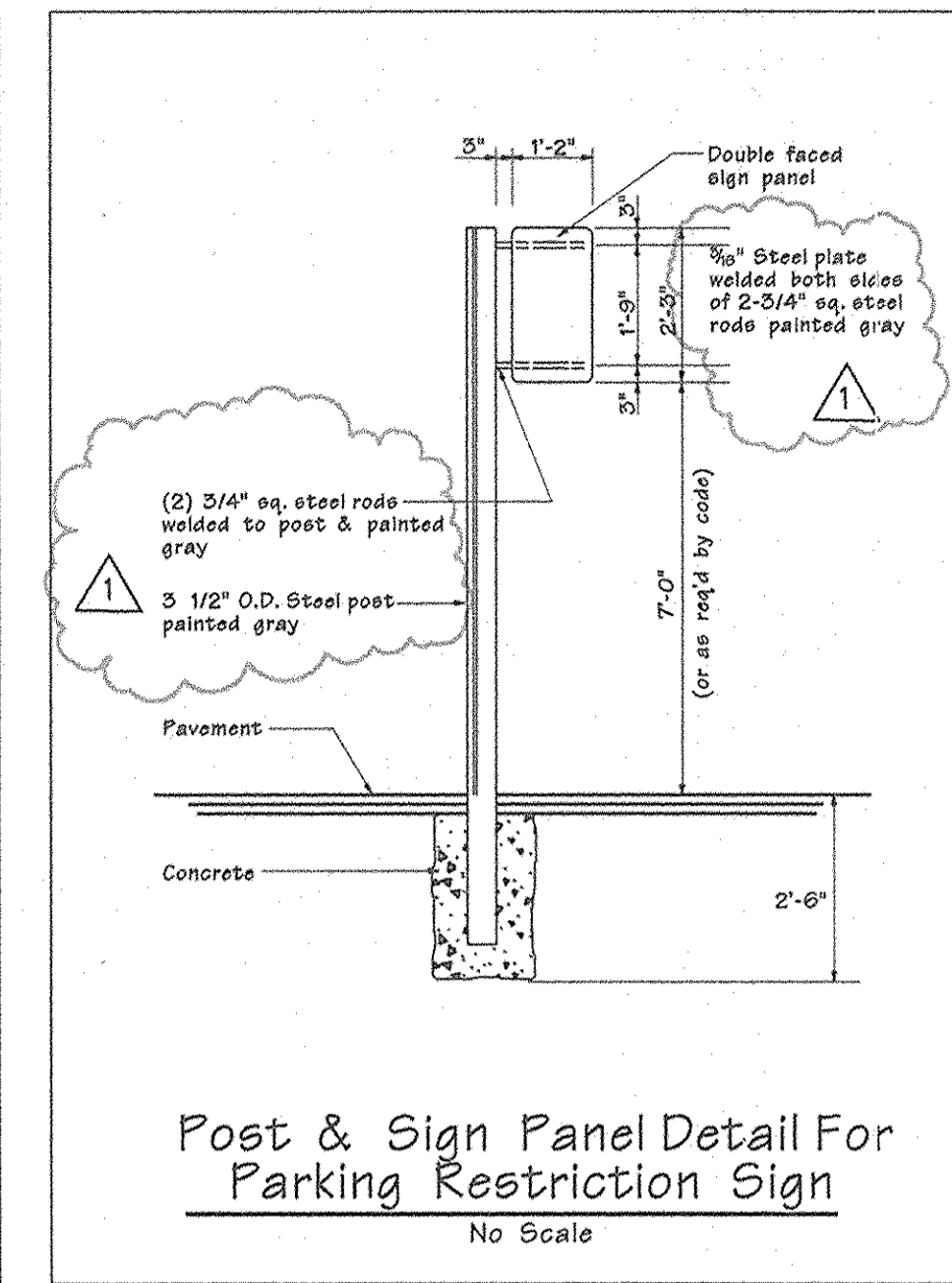
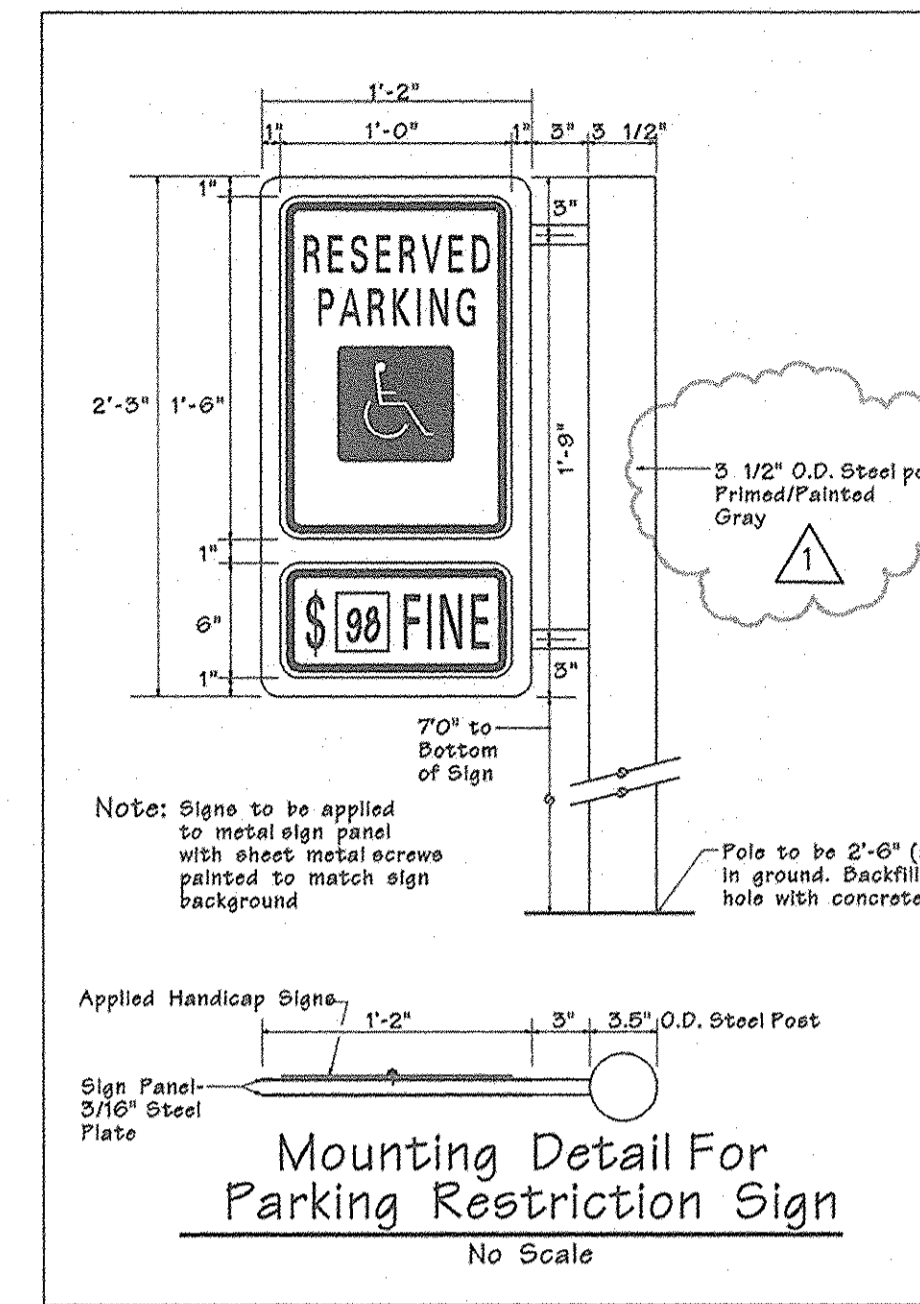
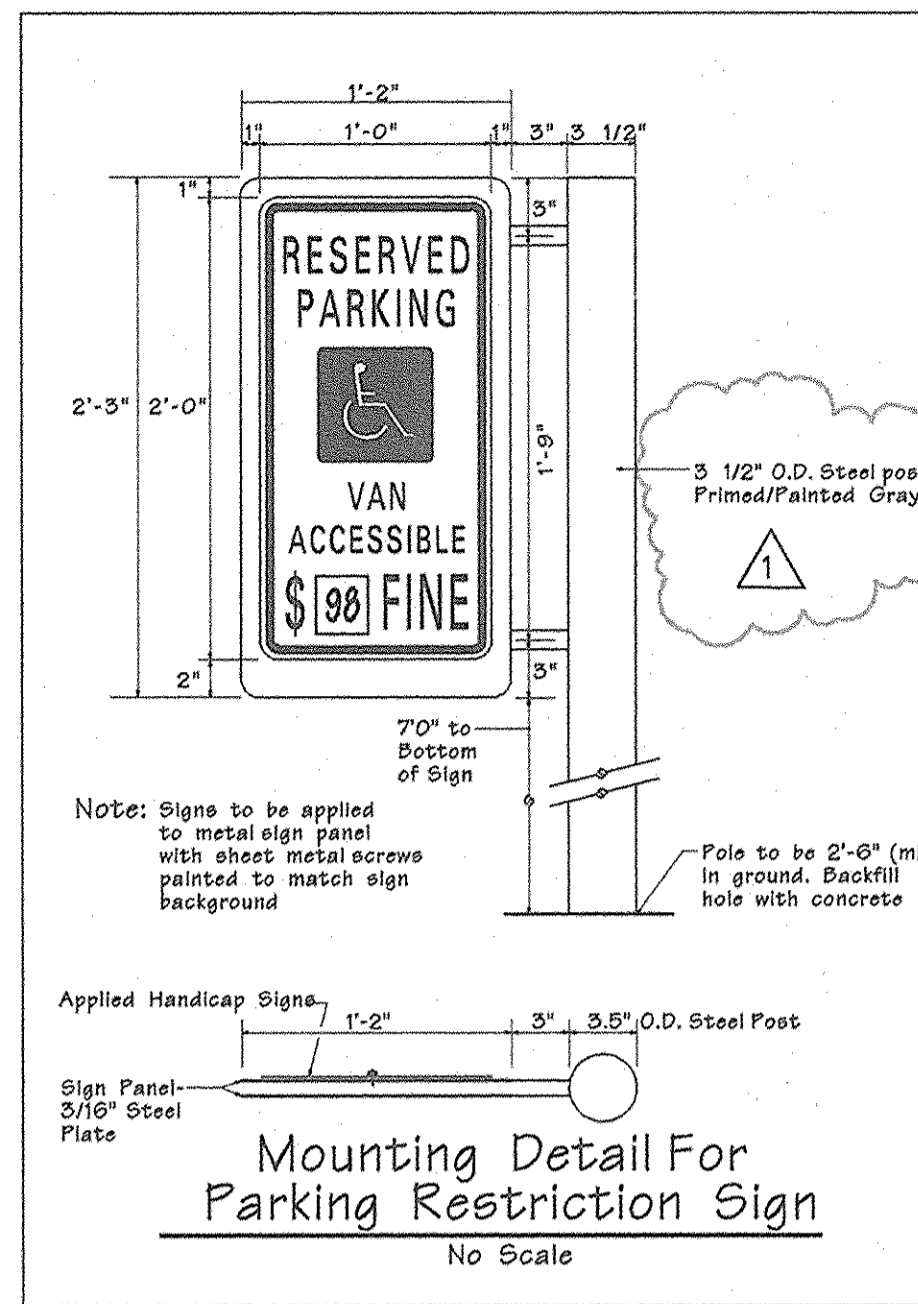
SCALE: 1" = 100'

SEE SHEETS 2 & 3 FOR SAW CUT LOCATIONS

**LEGEND**

SYMBOL	DESCRIPTION
	P-5 PAVING
	TEMPORARY PARKING LOT

SEE SHEET 5 FOR PAVING DETAILS.



**APPROVED**  
PLANNING BOARD  
of HOWARD COUNTY  
DATE July 16, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*John J. Smith* 1/16/98  
 CHIEF DEVELOPMENT ENGINEERING DIVISION MK DATE  
*Carol Hamilton* 1/16/98  
 CHIEF DIVISION OF LAND DEVELOPMENT DATE  
*John J. Smith* 1/21/98  
 DIRECTOR DATE

15/98	1	REV. POST COLOR
-------	---	-----------------

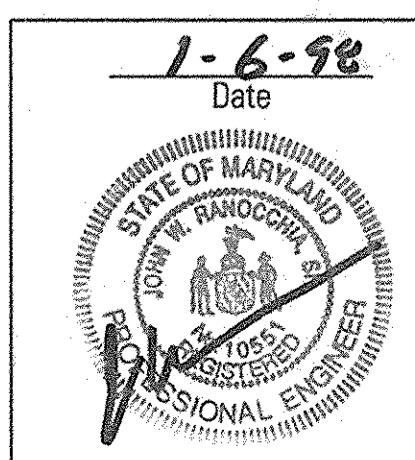
Date No. Revision Description

**THE MALL IN COLUMBIA**  
 PHASE I EXPANSION  
 TOWN CENTER  
 SECTION 2 AREA 1  
 HOWARD COUNTY, MD  
 LOTS 8, 12, 13, 20

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

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

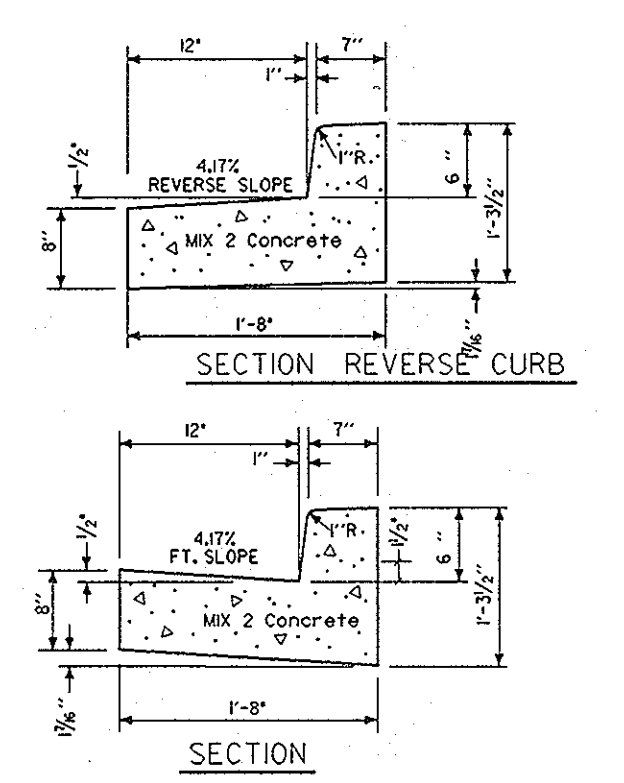
A Team of Land Planners,  
 Landscape Architects,  
 Engineers, Surveyors &  
 Environmental Professionals



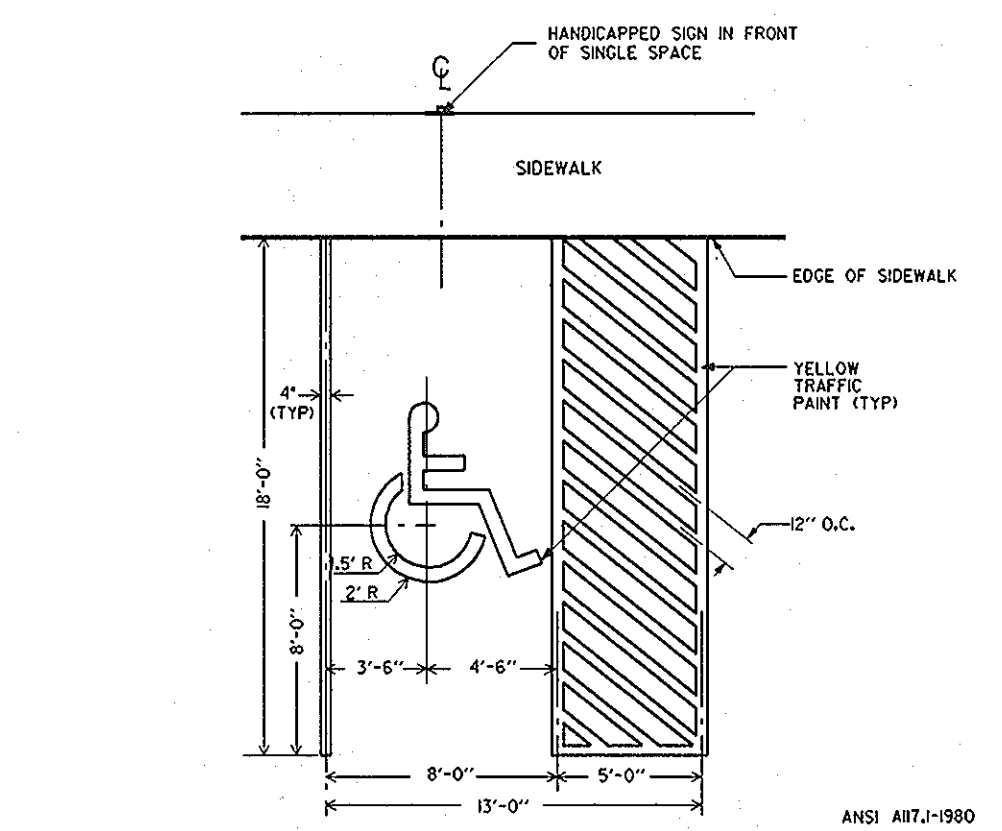
TITLE  
**PHASE 1B**  
**REVISED PAVING LEGEND & SITE DETAILS**

Des By	MJP	Scale	AS SHOWN	Proj. No.	95019 B
Dim By	WHJ	Date	8/22/97		
Chk By	JWR	Approved			4 OF 15

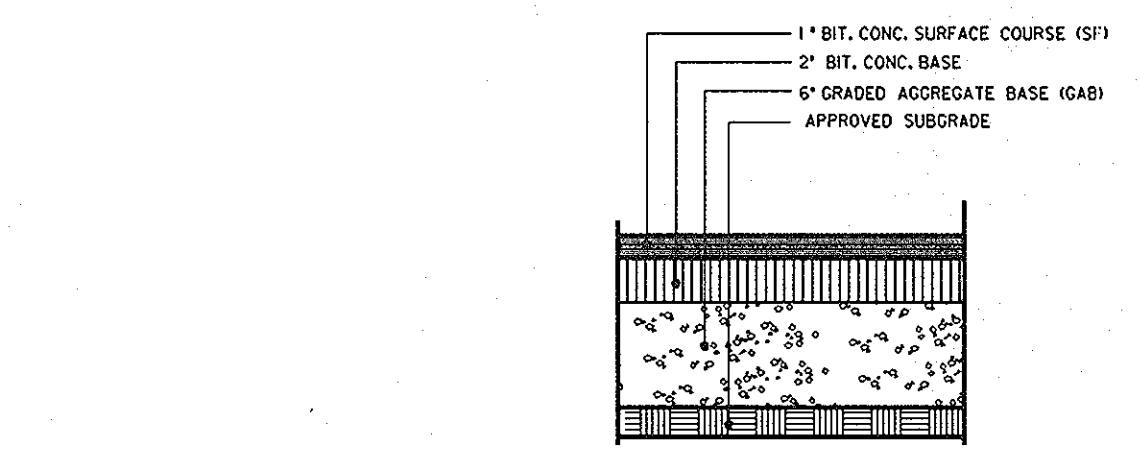
Professional Engr. No. 10561  
 SDP-97-158



**Concrete Curb, Typ.**  
Not To Scale

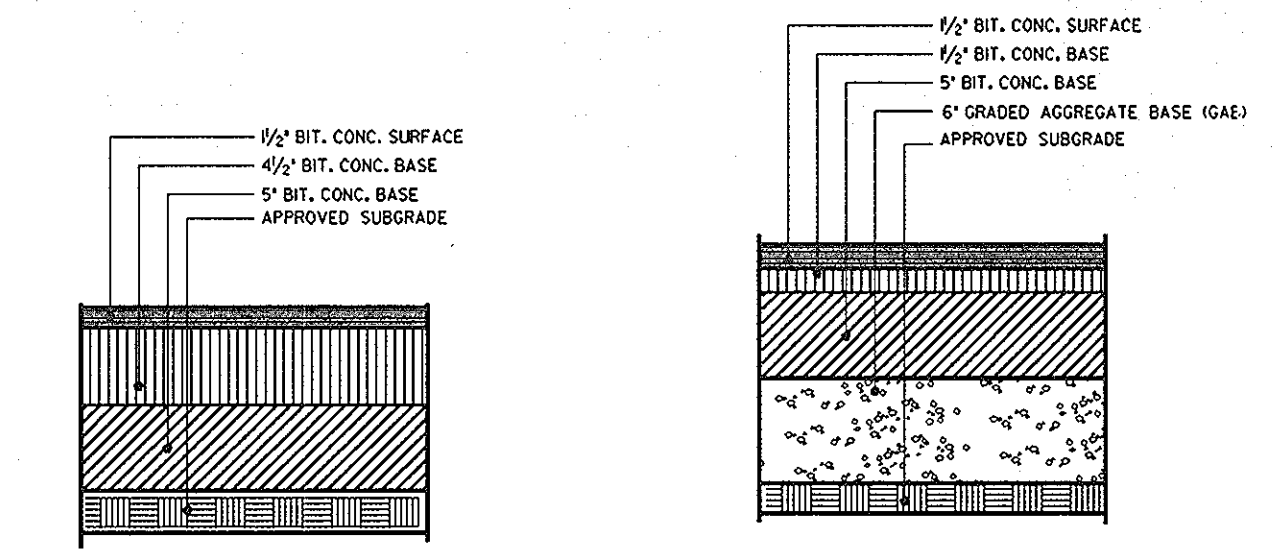


**Handicapped Parking Space**  
Not To Scale



Parking & Travel Lane  
**Typical Paving Section - Temp. Parking Lot**  
Not To Scale

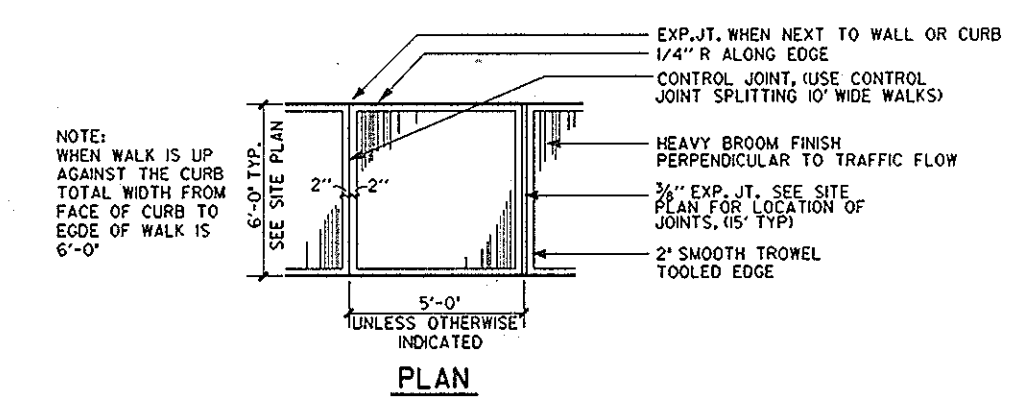
See Sheet 4 For Paving Legend



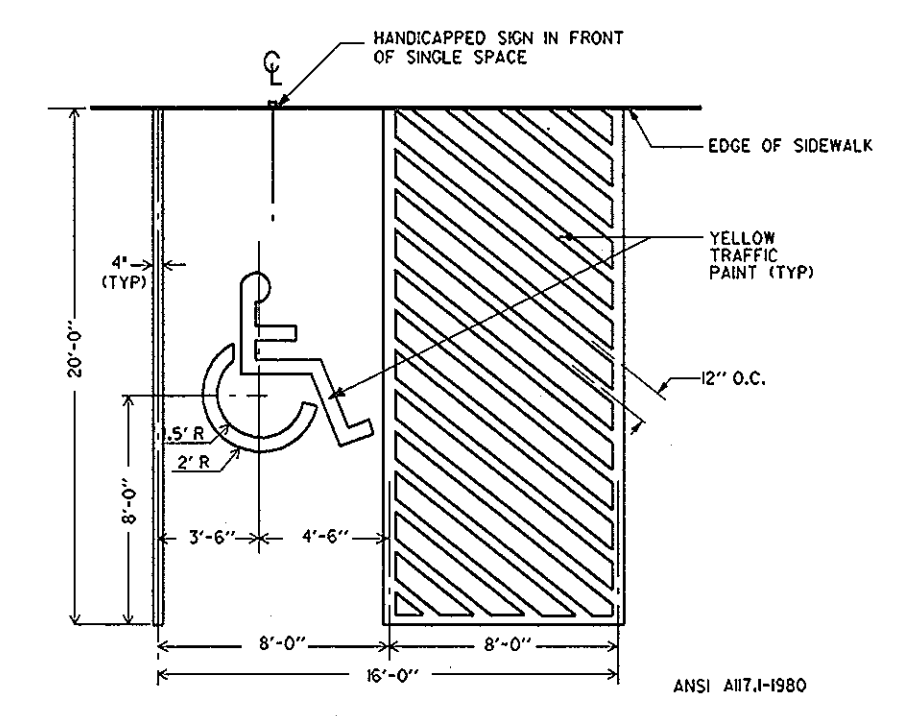
P-5 Full Depth Bituminous Concrete P-5 Granular Base (Alternate)

Ring Road  
**Typical Paving Section (P-5)**  
Not To Scale

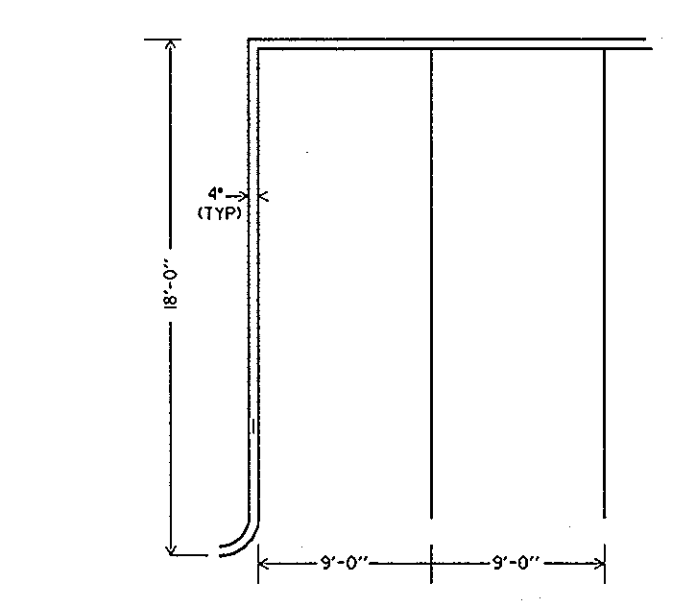
- NOTES
- 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK
  - CONCRETE TO BE MIX NO. 2
  - WHEN SIDEWALK ADJUTS CURB WALK SHALL BE 1/4" ABOVE CURB WITH 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL BETWEEN SIDEWALK AND CURB
  - CONCRETE WALK WITHIN 6" OF BUILDING SHALL HAVE 6" OF #41 STONE OR APPROVED EQUAL AS A BASE COURSE



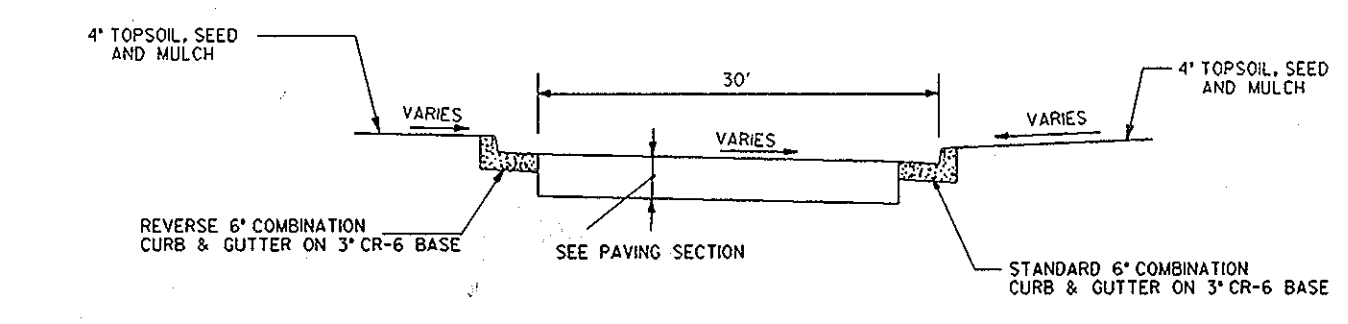
**Concrete Walk**  
Not To Scale



**Handicapped Van Parking Space**  
Not To Scale



**Standard Parking Space**  
Not To Scale

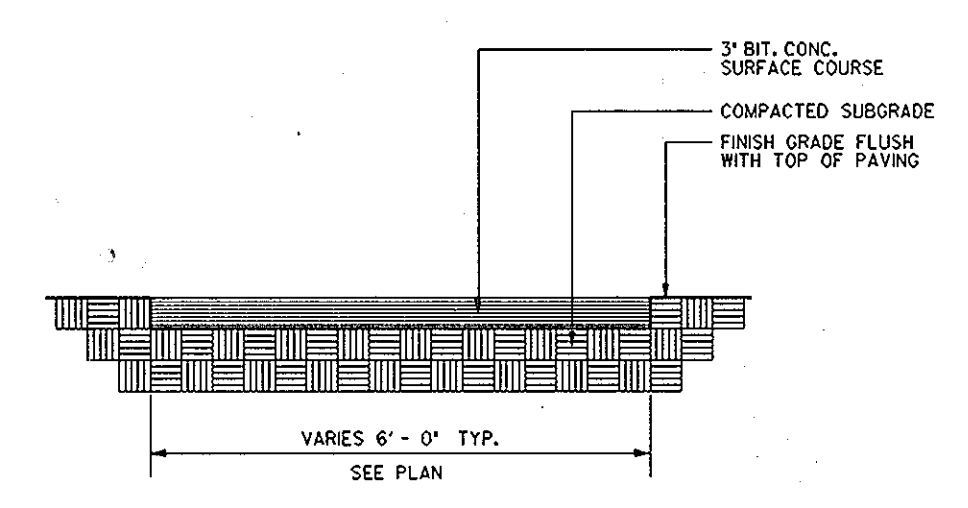


**Typical Section Ring Road (Private Drive)**  
Not To Scale

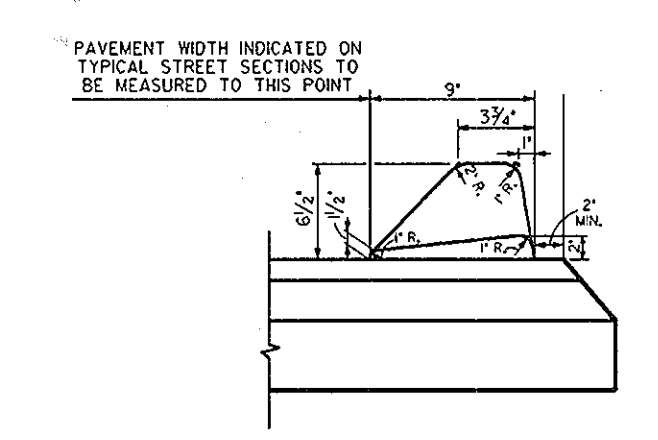
**APPROVED**  
PLANNING BOARD  
of HOWARD COUNTY  
DATE July 16, 1997  
RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

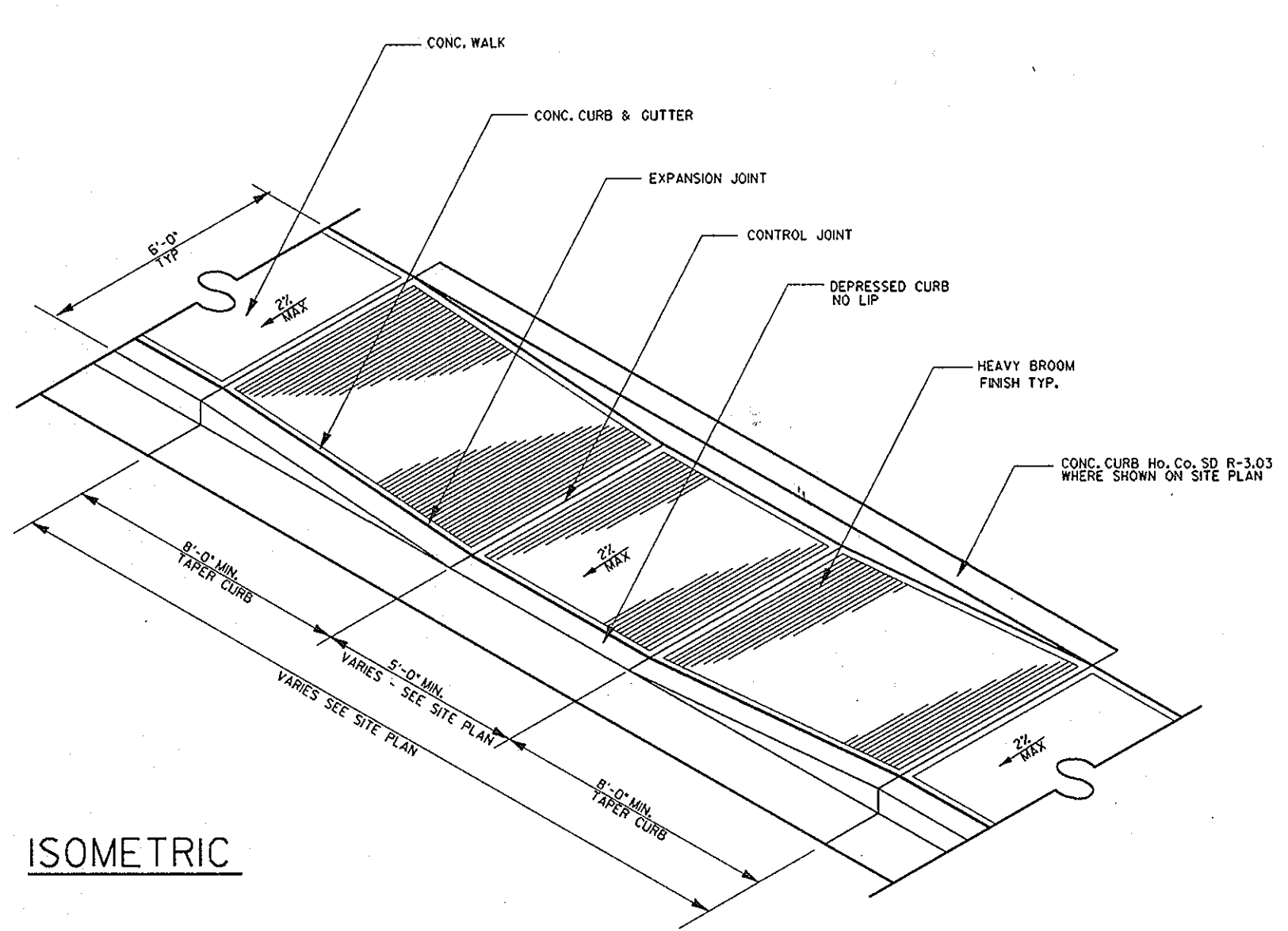
CHIEF, DEVELOPMENT ENGINEERING DIVISION	MJK	5/16/97	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	R. J. [Signature]	5/19/97	DATE
DIRECTOR	[Signature]	5/19/97	DATE



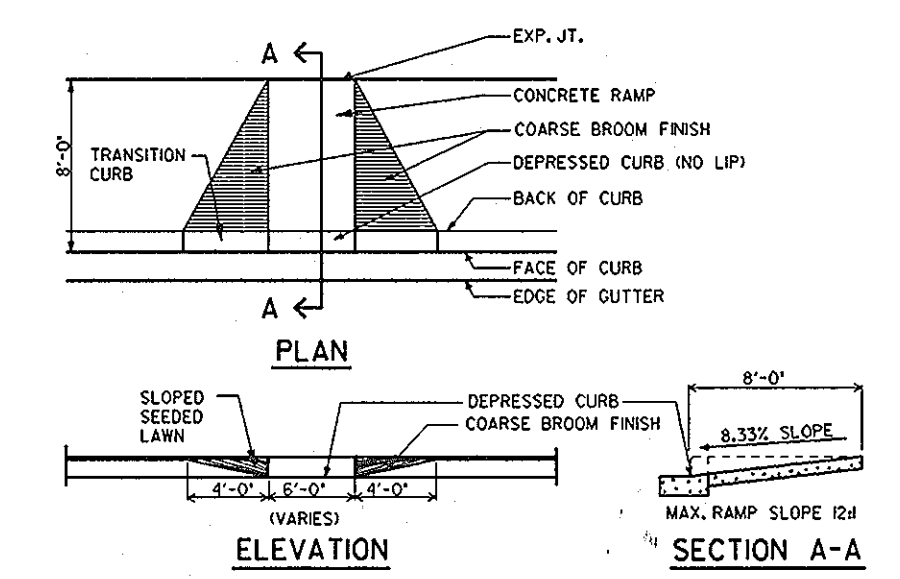
**Light Duty Bit. Conc. Walk**  
Not To Scale



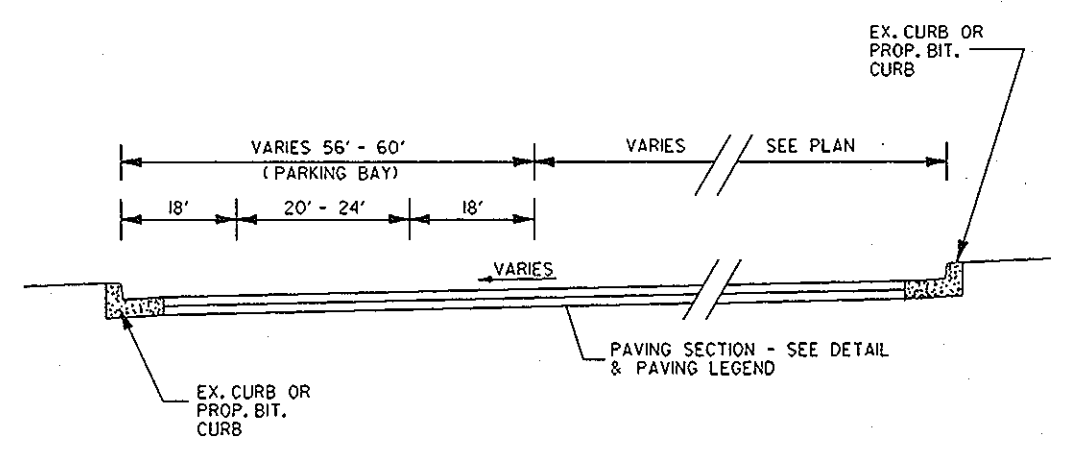
**Standard Bituminous Curb**  
Not To Scale



**Handicapped Ramp - A**  
Not To Scale



**Handicapped Ramp - C**  
Not To Scale



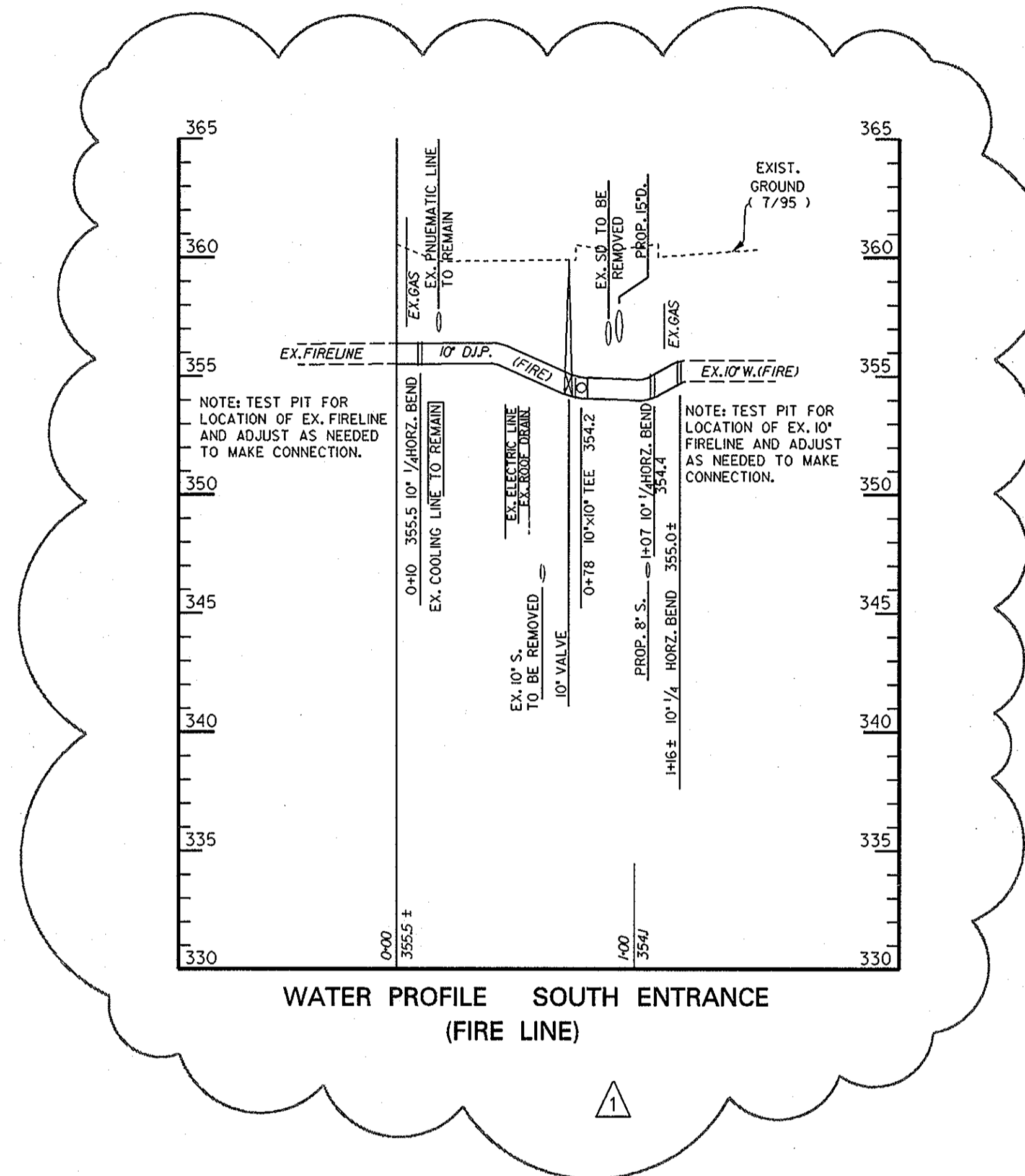
**Typical Section Private Parking**  
Not To Scale

7/22/97  
Date

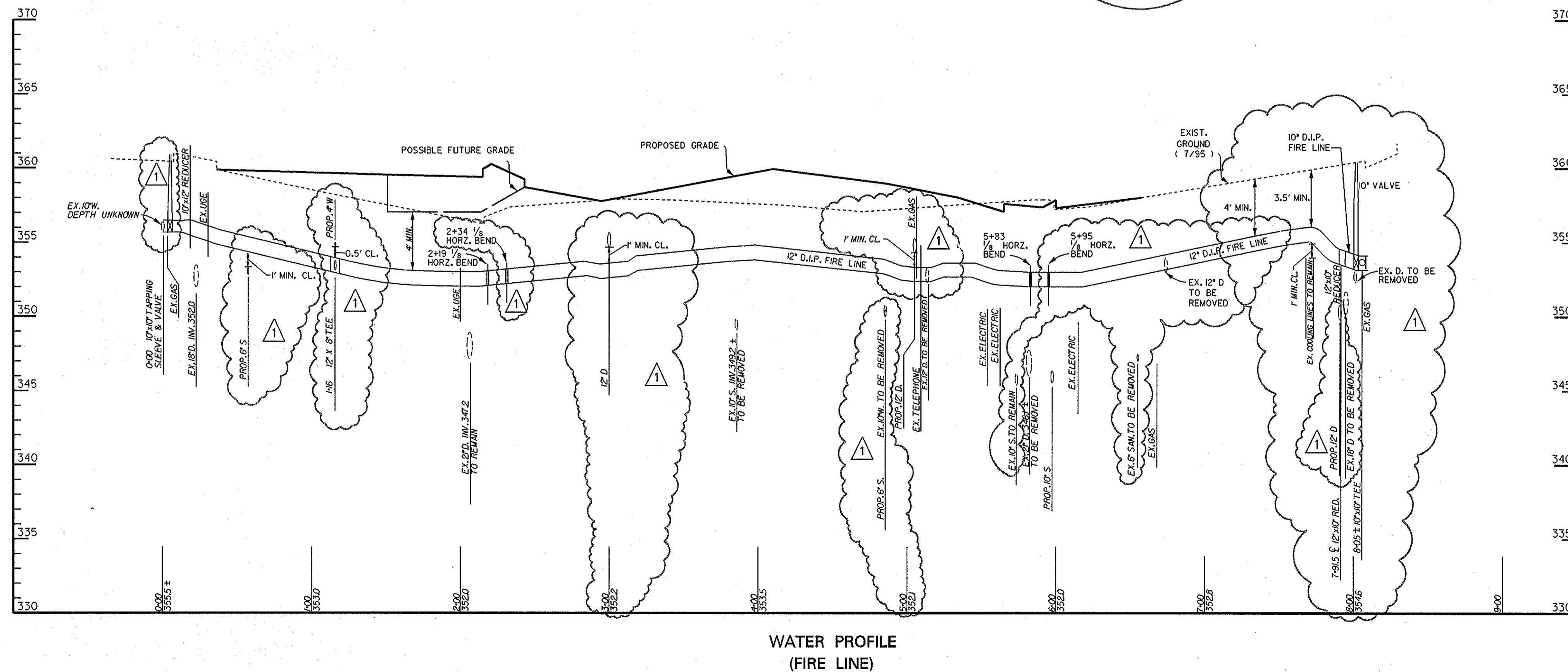
Professional Engr. No. 10551

Date	No.	Revision Description	
		THE MALL IN COLUMBIA	
		PHASE IB TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 8, 12, 13, 20	
		OWNER / DEVELOPER: THE HOWARD RESEARCH & DEVELOPMENT CORP. COLUMBIA MALL, INC. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044	
		<b>DMW</b> Daft-McCune-Walker, Inc. 200 East Pennsylvania Avenue Frostons, Maryland 21086 (410) 298-3333 Fax 298-4705	
		A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals	
		TITLE <b>PHASE IB SITE DETAILS</b>	
Des By	MJP	Scale AS SHOWN	Proj. No. 95019 B
Dim By	CLZ	Date 7/22/97	5 OF 15
Chk By	JWR	Approved	





**APPROVED**  
PLANNING BOARD  
of HOWARD COUNTY  
DATE July 16, 1997  
ea



NOTES: PROVIDE BUTTRESSES AT ALL WATER LINE BENDS.  
PROVIDE RESTRAINED JOINTS FROM STATION 5+33 TO STATION 6+35.

NOTE: CONTRACTOR TO TEST PIT AREA OF PROPOSED CONNECTION PRIOR TO WATER LINE CONSTRUCTION.  
NOTE: UNLESS OTHERWISE NOTED ALL UTILITY INVERTS ARE APPROXIMATE.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*W.D. Dammann* 1/12/98  
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK (DATE)

*Cindy Hamilton* 1/16/98  
CHIEF, DIVISION OF LAND DEVELOPMENT (DATE)

*James S. Rutter* 1/21/98  
DIRECTOR (DATE)

1698	1	REVISED PROFILE, ADDED PROFILE
------	---	--------------------------------

Date No. Revision Description

**THE MALL IN COLUMBIA**  
PHASE IB  
TOWN CENTER  
SECTION 2 AREA 1  
HOWARD COUNTY, MD  
LOTS 8, 12, 13, 20

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

**DMW**  
Darr McQuinn-Walkers, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3389  
Fax 296-4705

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

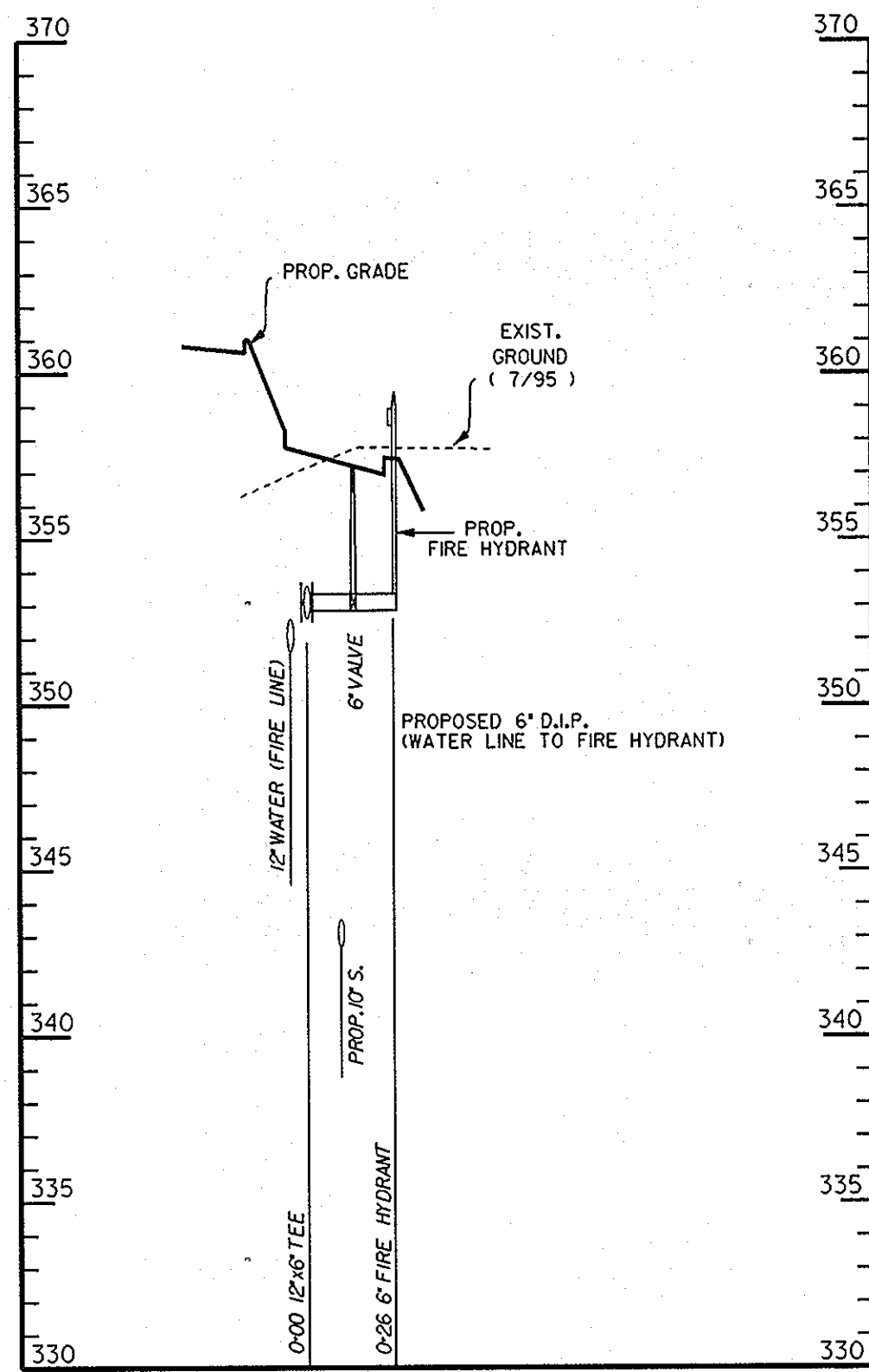
TITLE  
**PHASE IB  
REVISED WATER PROFILES  
(FIRE LINE)**

Des By	RLH	Scale	1" = 50'	Proj. No.
Dwn By	FJZ	Date	8/22/97	6 OF 15
Chk By	JWR	Approved		

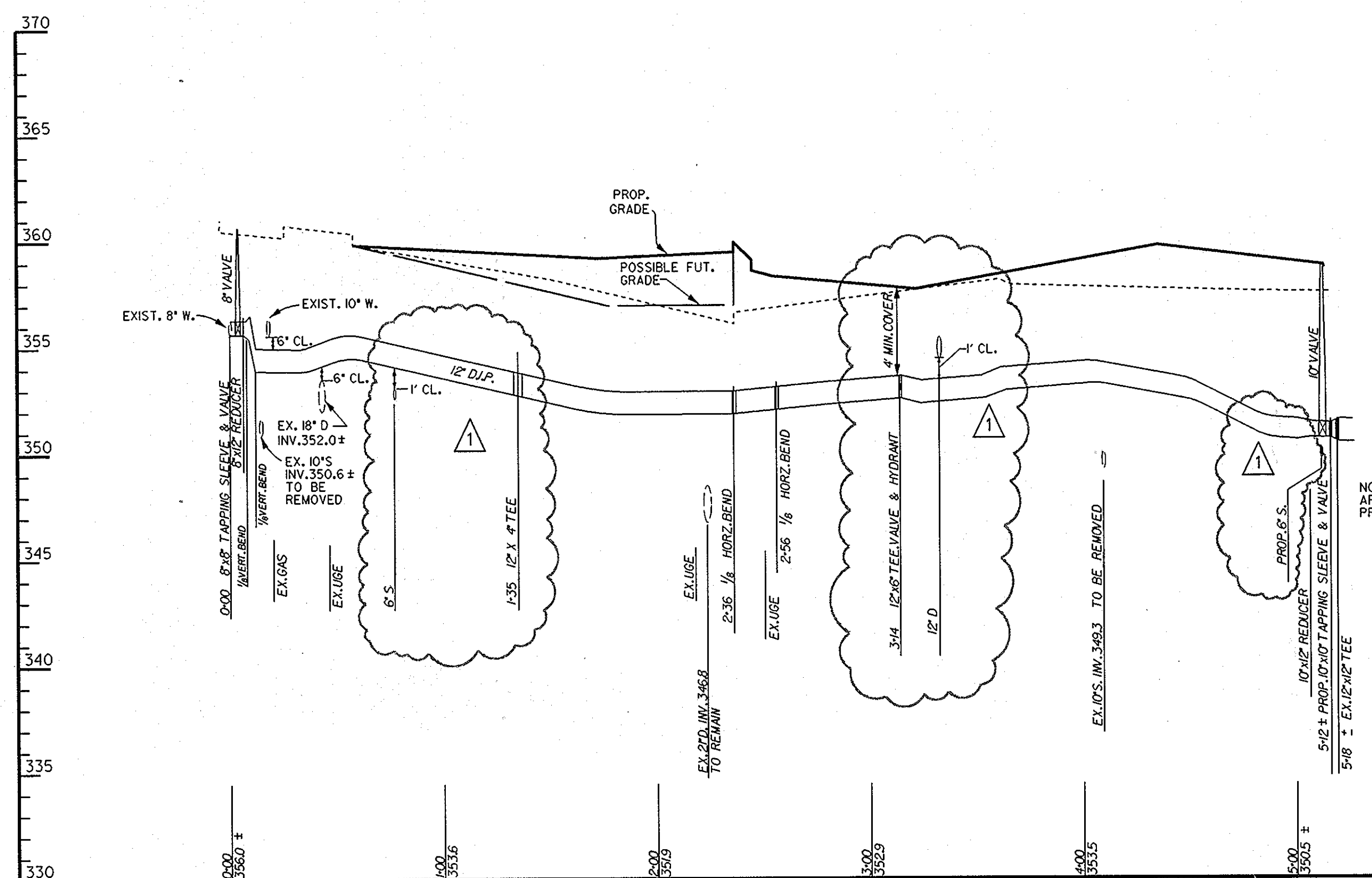
Professional Engr. No. 10551

1-6-98  
Date

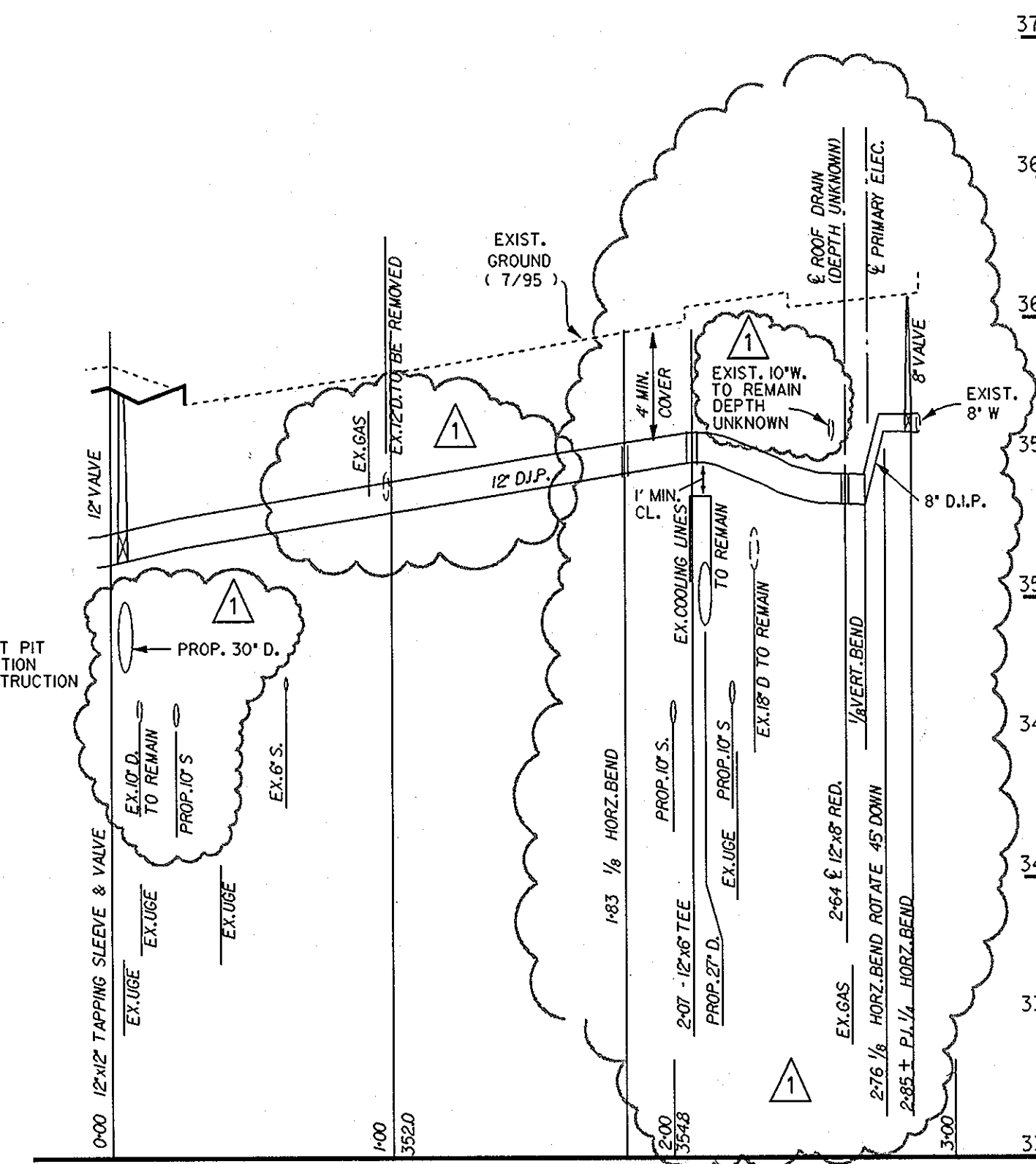
Professional Engr. No. 10551



WATER PROFILE - FIRE HYDRANT DOMESTIC LINE



WATER PROFILE (NORTH LINE) (DOMESTIC)



WATER PROFILE (SOUTH LINE) (DOMESTIC)

NOTE: PROVIDE BUTTRESSES AT ALL WATER LINE BENDS  
 NOTE: RESTRAIN WATER MAIN ONE PIPE LENGTH PAST REDUCER AS PER MD. CO. STD. W 2.11 OR W 2.13  
 NOTE: CONTRACTOR TO TEST PIT AREA OF PROPOSED CONNECTION PRIOR TO WATER LINE CONSTRUCTION  
 NOTE: UNLESS OTHERWISE NOTED ALL UTILITY INVERTS ARE APPROXIMATE

APPROVED  
 PLANNING BOARD  
 of HOWARD COUNTY

DATE: July 16, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 Chief Development Engineering Division MKK 1/12/98  
 Chief, Division of Land Development 1/16/98  
 Director 1/21/98

Date	No.	Revision Description
1/5/98	1	REVISED PROFILES

THE MALL IN COLUMBIA  
 PHASE 1B  
 TOWN CENTER  
 SECTION 2 AREA 1  
 HOWARD COUNTY, MD  
 LOTS 8, 12, 13, 20  
 OWNER / DEVELOPER:  
 THE HOWARD RESEARCH & DEVELOPMENT CORP.  
 COLUMBIA MALL, INC.  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21044

**DMW**  
 Dan McCune-Walkers, Inc.  
 300 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3333  
 Fax: 296-4705  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

1-6-98  
 Date  
 Professional Engr. No. 10651



TITLE  
 PHASE 1B  
 REVISED WATER PROFILES  
 (DOMESTIC LINE)

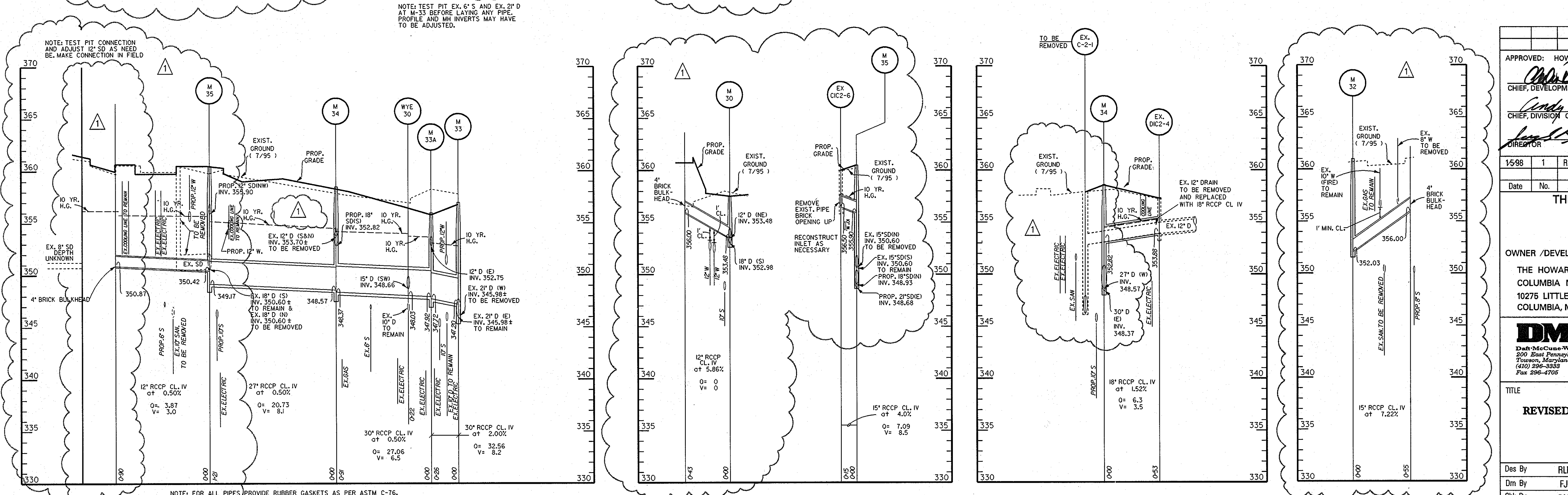
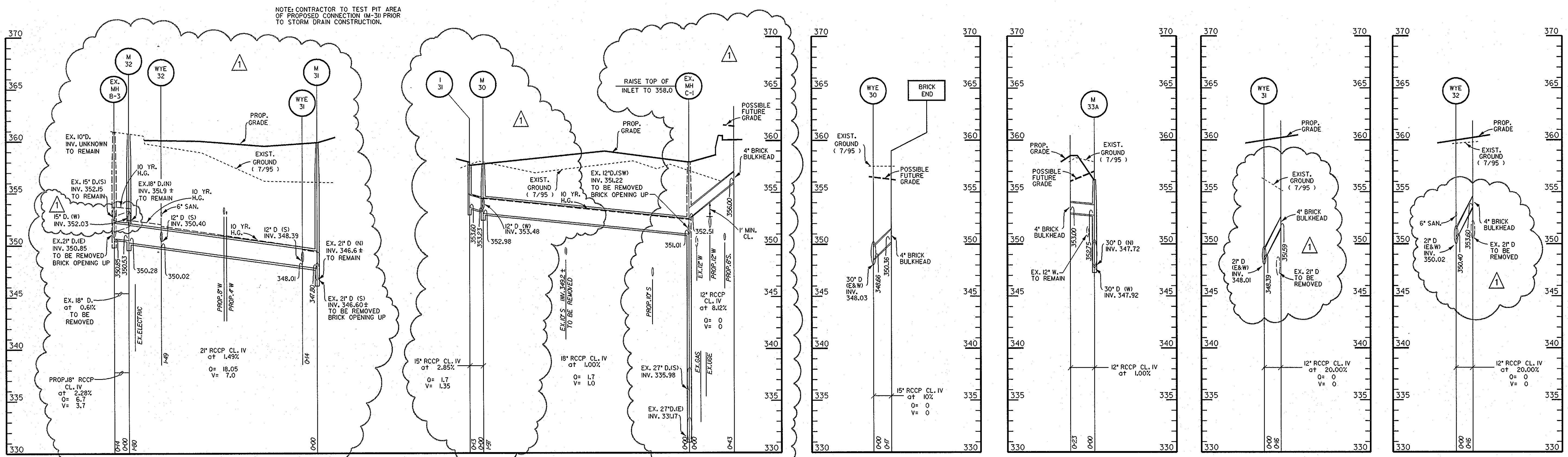
Des By	RLH	Scale	HOR. 1" = 50' VERT. 1" = 5'	Proj. No.	95019B
Drn By	FJZ	Date	8/22/97		
Chk By	JWR	Approved			7 OF 15

STRUCTURE SCHEDULE				
NO.	TYPE	SIZE	INV. OUT	TOP ELEV.
WYE30	WYE CONN.	15"x30"	348.03	HO. CO. STD. 2#
WYE31	WYE CONN.	12"x21"	348.01	HO. CO. STD. 2#
WYE32	WYE CONN.	12"x21"	350.02	HO. CO. STD. 2#

MANHOLE SCHEDULE					
NO.	TYPE	SIZE	INV. OUT	TOP ELEV.	DETAIL
M-30	PRECAST	48"	352.98	357.51	G-5.12
M-31	PRECAST	60"	347.6±	359.9	G-5.13
M-32	PRECAST	48"	350.28	360.6	G-5.12
M-33	PRECAST	72"	345.98±	356.8	SHA 384.05
M-33A	PRECAST	60"	347.72	356.2	G-5.12
M-34	PRECAST	60"	348.37	358.0	G-5.13
M-35	PRECAST	48"	349.17	360.2	G-5.12
M-36	PRECAST	48"	349.80	360.5	G-5.12

INLET SCHEDULE						
NO.	TYPE	Q 10YR	INV. OUT	TOP ELEV.	DETAIL	WIDTH
I-31	A-10	L70	353.60	** 357.6	SD 4.02	2'-6"
DIB-H	SINGLE WR	10.09	353.90	356.70	SD 4.37	-

\* NOTE: USE GRATE TOP. GRATE TO HAVE TRAFFIC BEARING CAPACITY. NEEDHAM R-1793-FG OR EQUIVALENT  
 ALL INVERTS TO BE FULLY DEVELOPED  
 \*\* AT 1 FT. ABOVE CROWN OF PIPE REDUCE MH TO 4' DIA.



1-6-98  
 Date  
  
 Professional Engr. No. 10551

APPROVED  
 PLANNING BOARD  
 of HOWARD COUNTY  
 DATE July 16, 1997

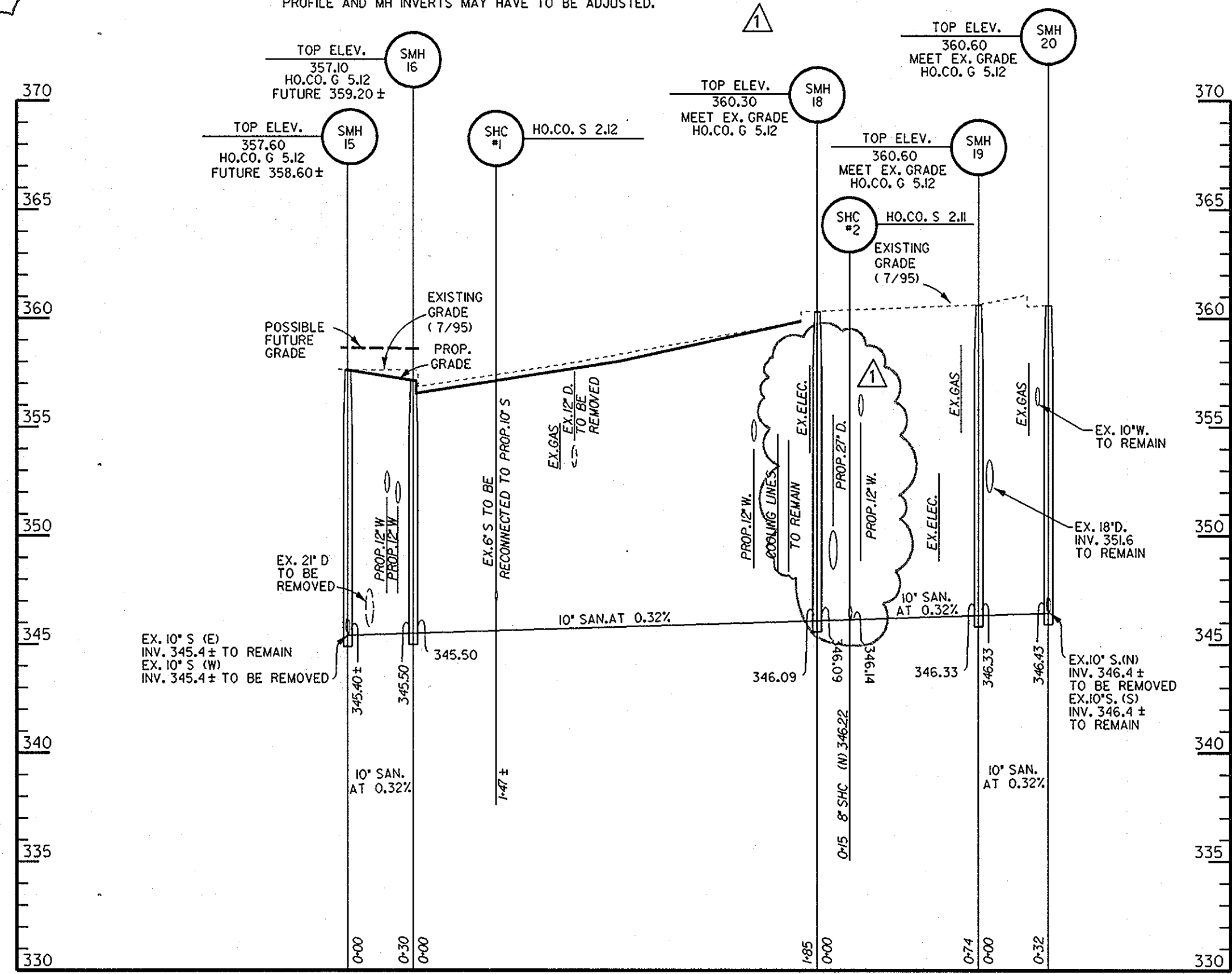
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
Chief Development Engineering Division MK	1/16/98
Chief Division of Land Development	1/16/98
Director	1/16/98
1/98	1 REVISED STORM DRAIN UTILITIES
Date	No.
Revision Description	
THE MALL IN COLUMBIA	
PHASE I EXPANSION	
TOWIN CENTER	
SECTION 2 AREA 1	
HOWARD COUNTY, MD	
LOTS 8, 12, 13, 20	
OWNER / DEVELOPER:	
THE HOWARD RESEARCH & DEVELOPMENT CORP.	
COLUMBIA MALL, INC.	
10275 LITTLE PATUXENT PARKWAY	
COLUMBIA, MARYLAND 21044	
<b>DMW</b>	
Darr-McCune-Walker, Inc.	
200 East Pennsylvania Avenue	
Towson, Maryland 21286	
(410) 298-3355	
Fax 298-4705	
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals	
TITLE	
PHASE 1B	
REVISED STORM DRAIN PROFILES	
Des By	RLH
Scale	HOR. 1" = 50'
Proj. No.	95019B
Dim By	FJZ
Date	8/22/97
Chk By	JWR
Approved	
8 OF 15	



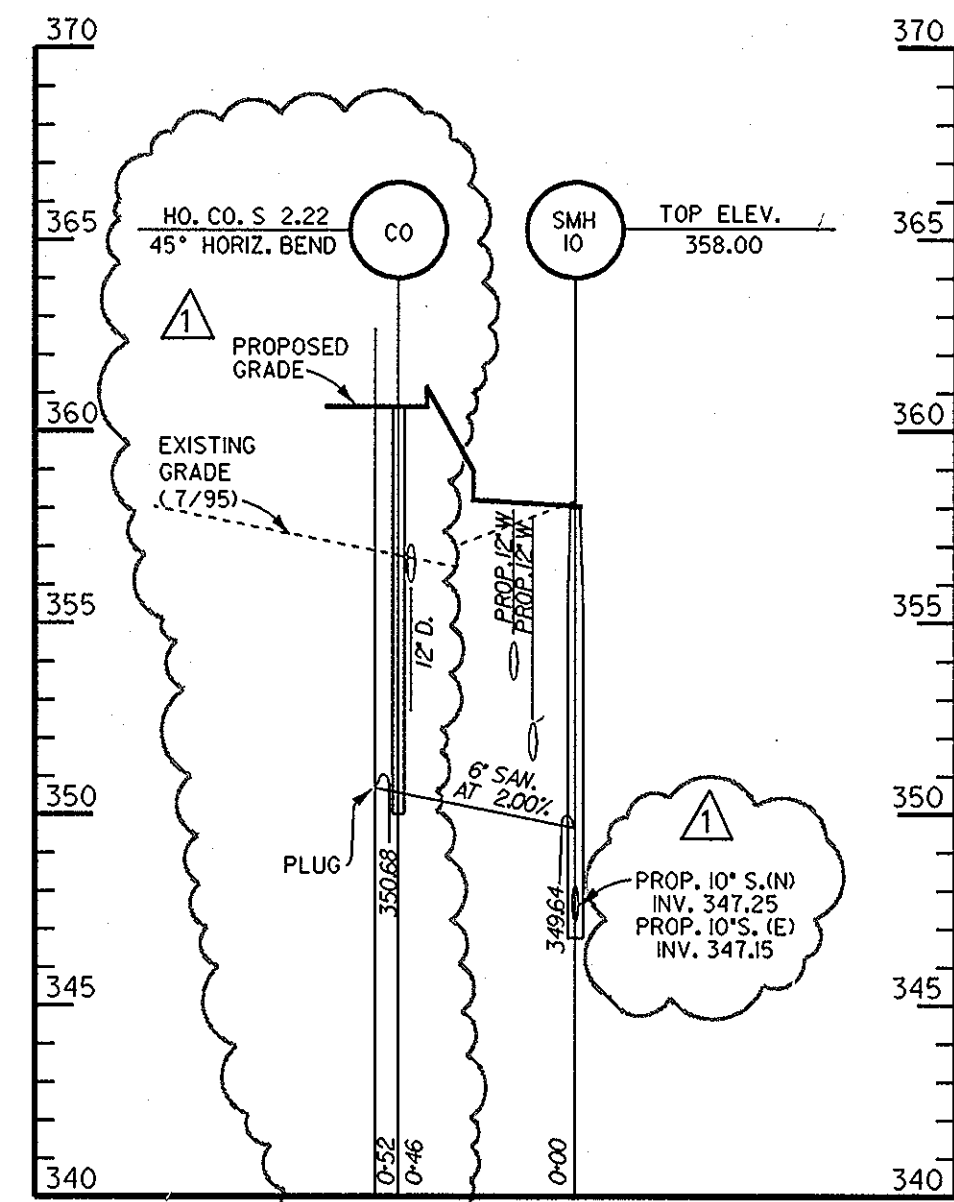




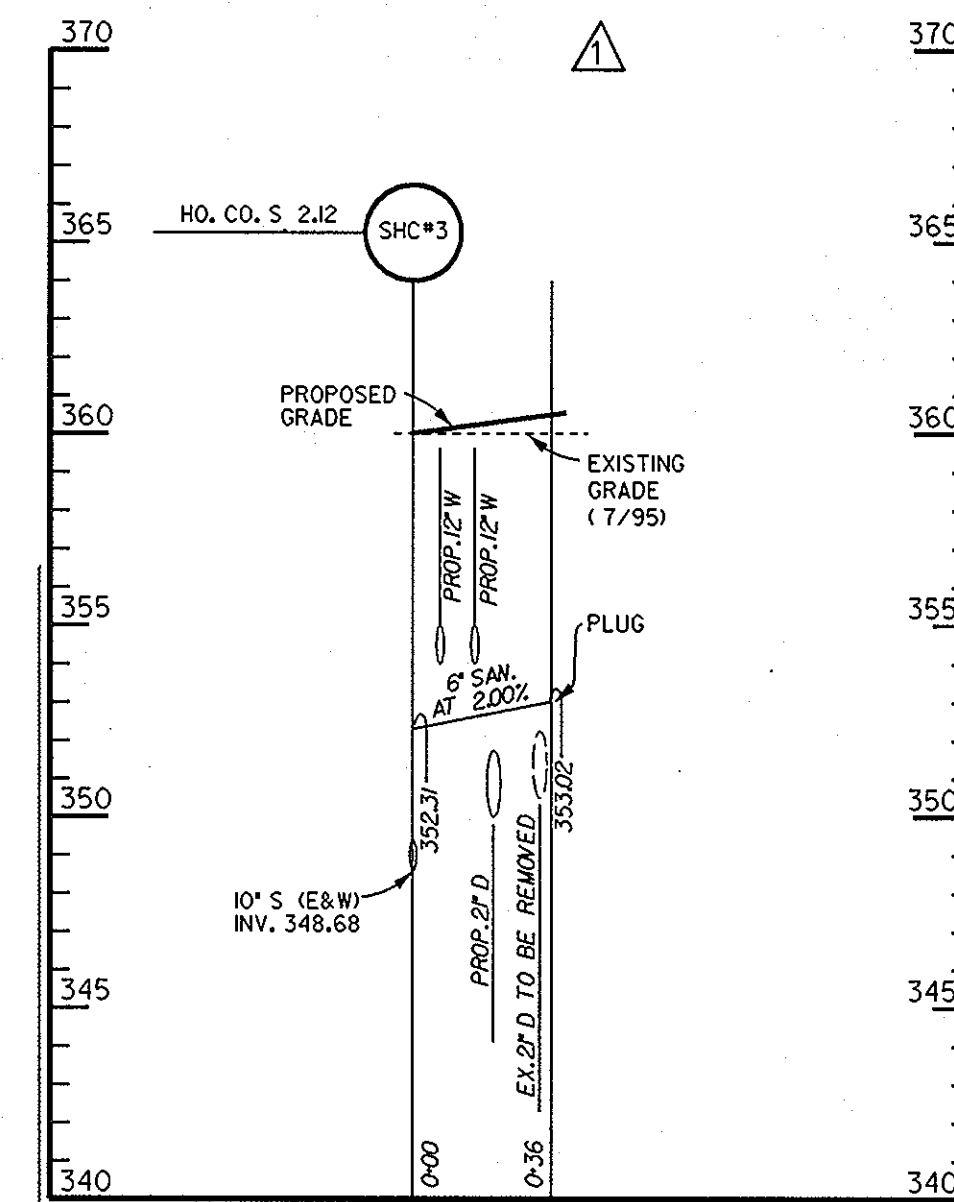
NOTE: CONTRACTOR TO TEST PIT AND LOCATE 10" S CONNECTION PRIOR TO LAYING ANY PIPE. PROFILE AND MH INVERTS MAY HAVE TO BE ADJUSTED.



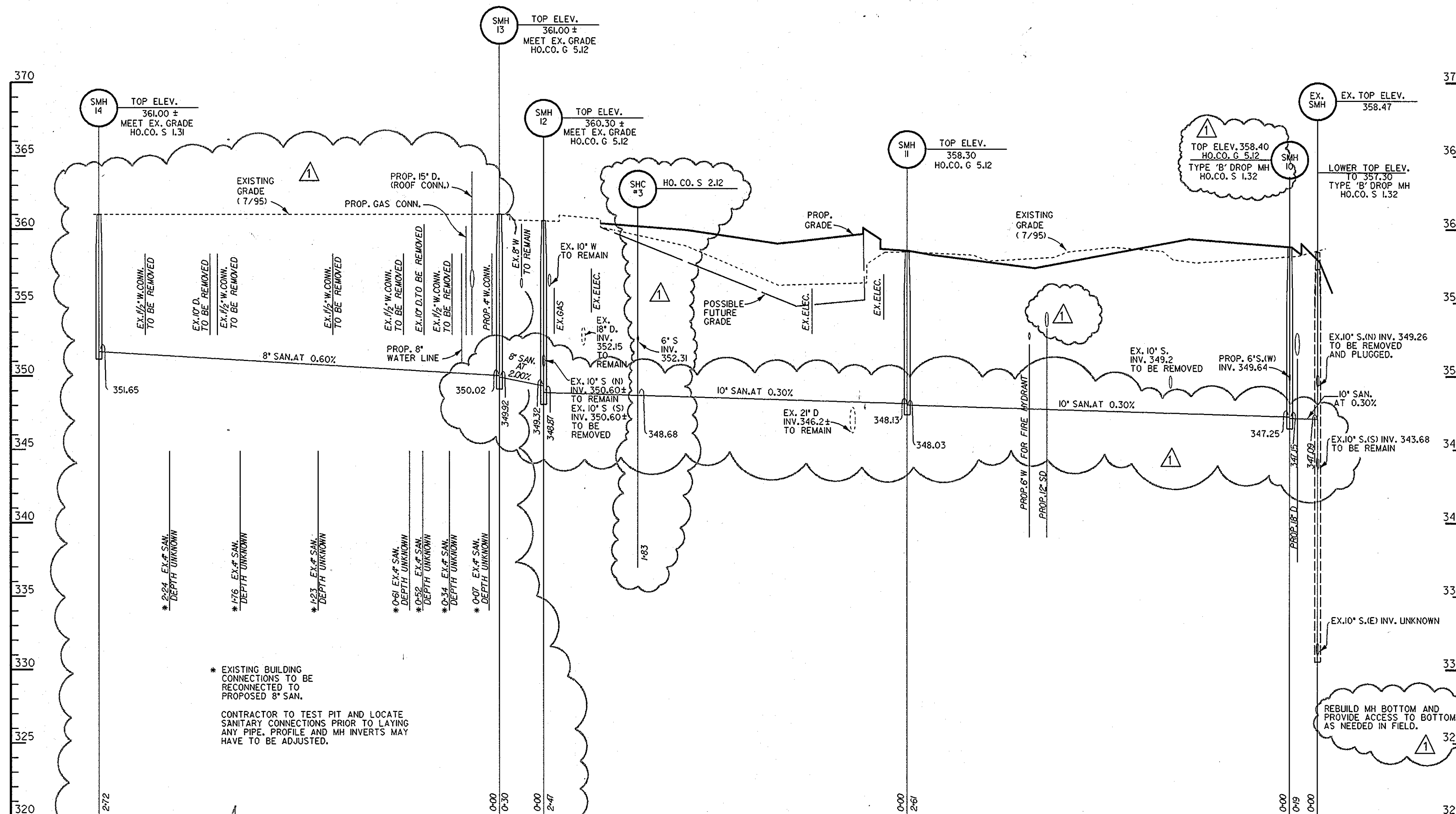
SANITARY SEWER PROFILE



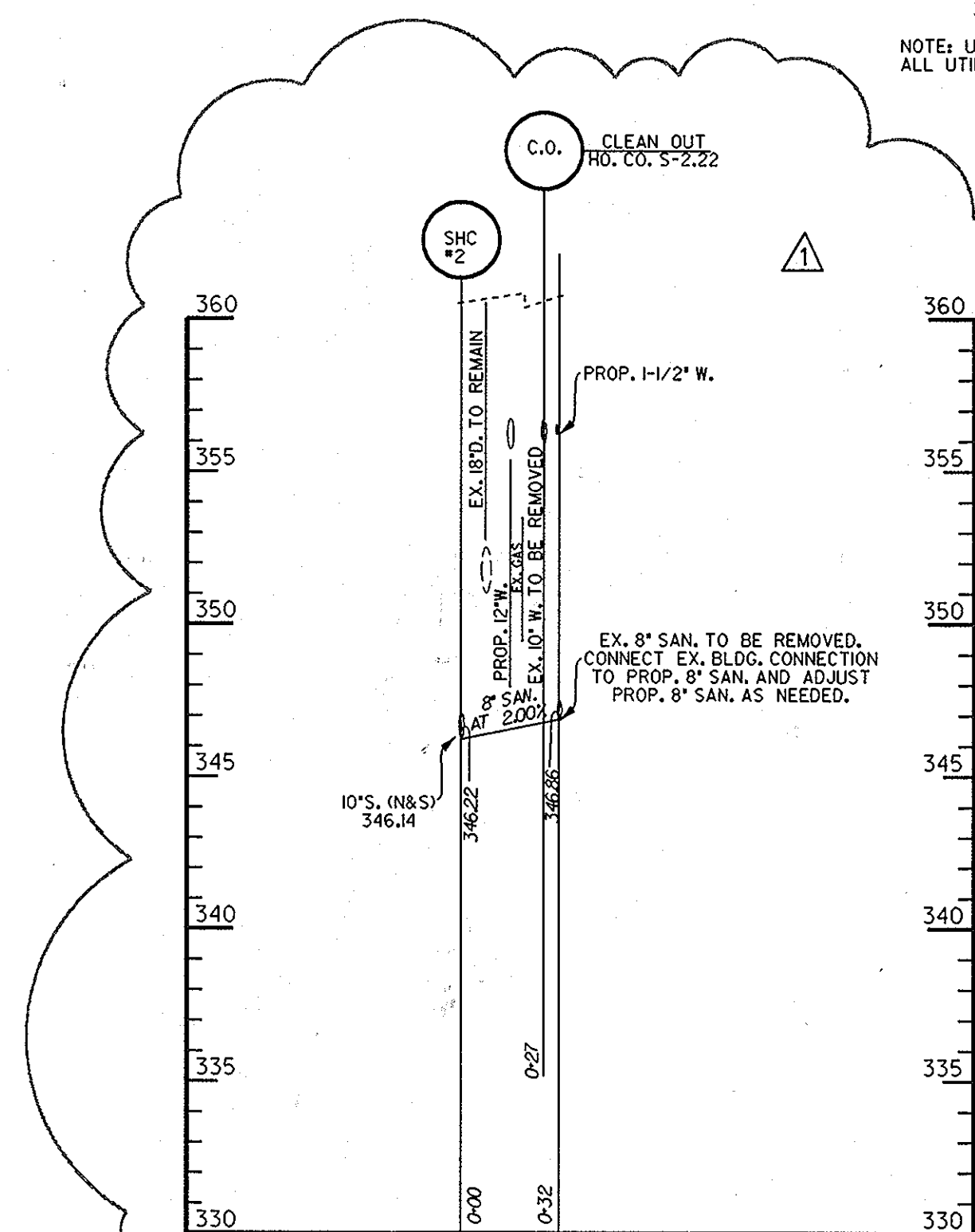
SANITARY SEWER PROFILE C



SANITARY SEWER PROFILE B



SANITARY SEWER PROFILE



NOTE: UNLESS OTHERWISE NOTED ALL UTILITY INVERTS ARE APPROXIMATE

1-6-98  
Date



Professional Engr. No. 10551

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY

DATE July 14, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Michael Summers* 1/2/98  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE  
*Cindy Hamilton* 1/16/97  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Joseph Smith* 1/21/98  
 DIRECTOR DATE

15/98 1 REVISED PROFILES AND ADDED BUILDING CONNECTION

Date	No.	Revision Description
		THE MALL IN COLUMBIA

PHASE I EXPANSION  
TOWN CENTER  
SECTION 2 AREA 1  
HOWARD COUNTY, MD  
LOTS 8, 12, 13, 20

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

**DMW**  
Dunn, McCaskey, 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

TITLE  
**PHASE IB  
REVISED SANITARY SEWER PROFILES**

Des By	RLH	Scale	1" = 30'	Proj. No.	95019B
Drn By	FJZ	Date	8/22/97		
Chk By	JWR	Approved			10 OF 15



MATCHLINE SEE SHEET 12

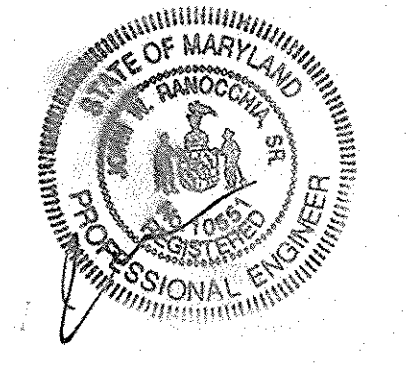
MATCHLINE SEE SHEET 12

LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- 358 PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- BC 358J EX. BOTTOM OF CURB
- EX. CURB & GUTTER
- 358J PROP. SPOT ELEVATION
- PAINTED ISLAND
- SILT FENCE
- SUPER SILT FENCE
- INLET PROTECTION
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENT.
- MOUNTABLE BERM
- LOD LIMIT OF DISTURBANCE

NOTE: GAS, ELECTRIC AND TELEPHONE UTILITIES ARE SHOWN ON THESE PLANS FOR REFERENCE ONLY AND ARE DESIGNED AND BUILT BY OTHERS.

7/12/97  
Date



Professional Engr. No. 10551

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

*Cheryl Simmons* 7/31/97  
Natural Resources Conservation Service Date

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

*John R. Robertson* 7/31/97  
Howard Soil Conservation District Date

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

*Joseph H. Necker, Jr.* 7-21-97  
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, Jr.* 7/18/97  
Date

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT-ENGINEERING DIVISION	<i>MK</i>	DATE	1/4/97
DIRECTOR, DIVISION OF LAND DEVELOPMENT	<i>Richard Blomel</i>	DATE	8/1/97
DIRECTOR	<i>James Smith</i>	DATE	8/5/97

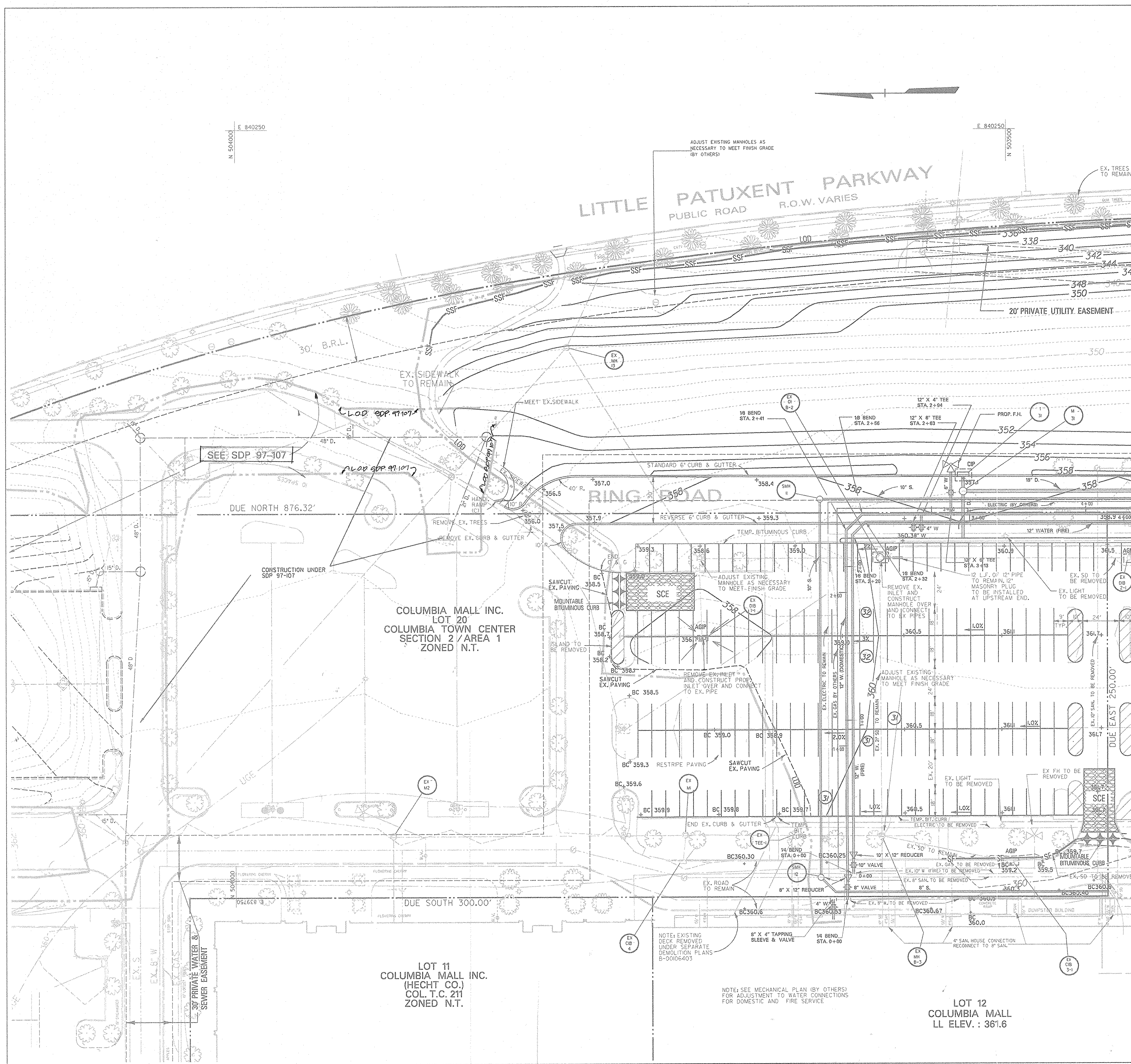
Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE 1B TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 8, 12, 13, 20

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

**DMW**  
Drew McCaskey-Walker, Inc.  
300 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3393  
Fax: 296-4706

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

TITLE			
PHASE 1B EROSION & SEDIMENT CONTROL PLAN			
Des By	MJP	Scale	1" = 30'
Proj. No.	95019B	Date	7/22/97
Drn By	KDE	Approved	11 OF 15
Chk By	JWR		



N 504000  
E 840250



ADJUST EXISTING MANHOLES AS NECESSARY TO MEET FINISH GRADE (BY OTHERS)

LITTLE PATUXENT PARKWAY  
PUBLIC ROAD R.O.W. VARIES

SEE SDP 97-107

DUE NORTH 876.32'

COLUMBIA MALL INC.  
LOT 20  
COLUMBIA TOWN CENTER  
SECTION 2 / AREA 1  
ZONED N.T.

LOT 11  
COLUMBIA MALL INC.  
(HECHT CO.)  
COL. T.C. 211  
ZONED N.T.

LOT 12  
COLUMBIA MALL  
LL ELEV.: 361.6

NOTE: EXISTING DECK REMOVED UNDER SEPARATE DEMOLITION PLANS B-00106403

NOTE: SEE MECHANICAL PLAN (BY OTHERS) FOR ADJUSTMENT TO WATER CONNECTIONS FOR DOMESTIC AND FIRE SERVICE



MATCHLINE SEE SHEET 11

MATCHLINE SEE SHEET 11

NOTE: GAS, ELECTRIC AND TELEPHONE UTILITIES ARE SHOWN ON THESE PLANS FOR REFERENCE ONLY AND ARE DESIGNED AND BUILT BY OTHERS.

# LITTLE PATUXENT PARKWAY

PUBLIC ROAD R.O.W. VARIES

### Sequence of Construction

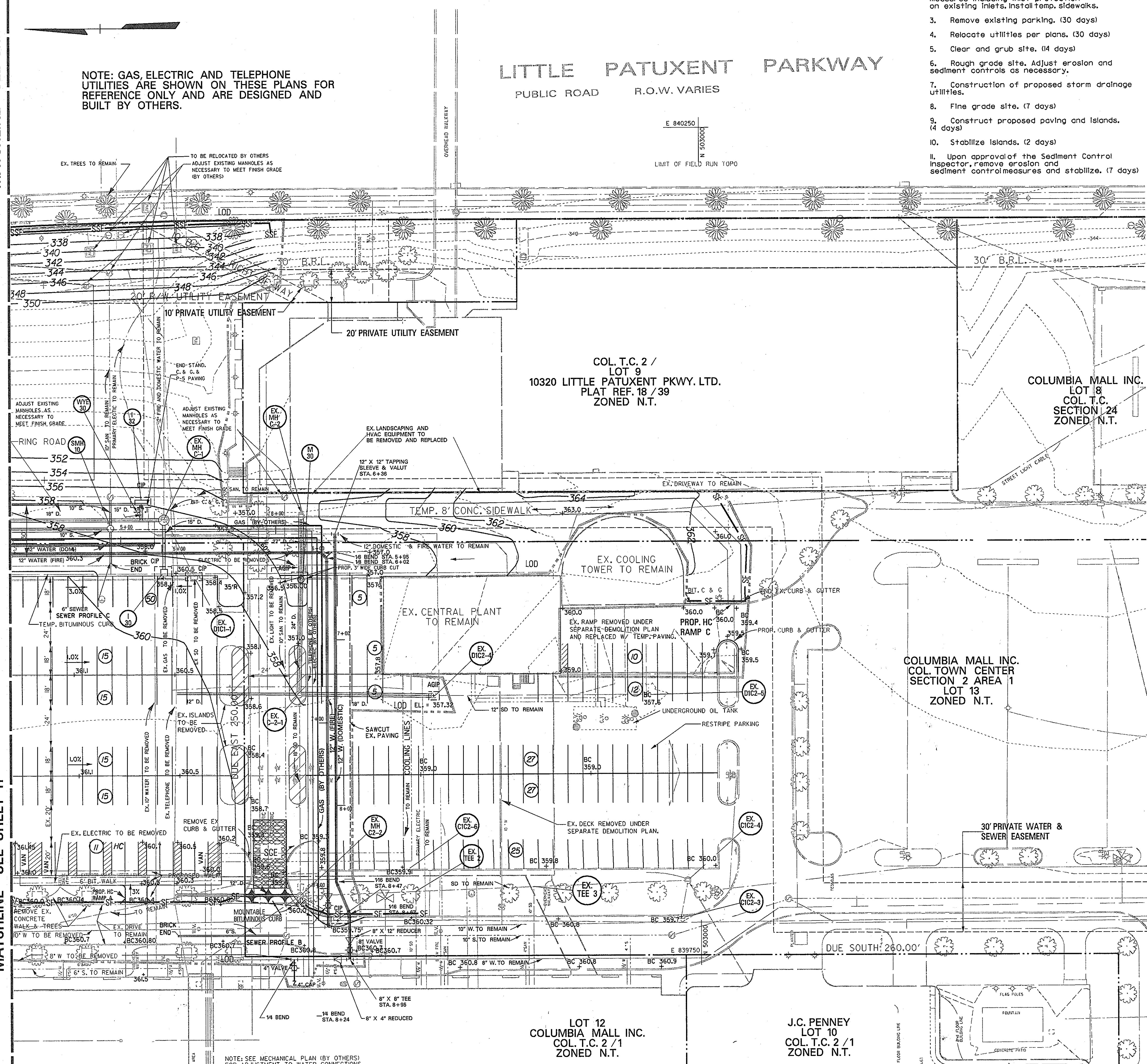
1. Obtain grading permit. (2 days)
2. Install erosion and sediment control measures including inlet protection on existing inlets, install temp. sidewalks.
3. Remove existing parking. (30 days)
4. Relocate utilities per plans. (30 days)
5. Clear and grub site. (14 days)
6. Rough grade site. Adjust erosion and sediment controls as necessary.
7. Construction of proposed storm drainage utilities.
8. Fine grade site. (7 days)
9. Construct proposed paving and islands. (4 days)
10. Stabilize islands. (2 days)
11. Upon approval of the Sediment Control Inspector, remove erosion and sediment control measures and stabilize. (7 days)

### LEGEND

- 352 --- EX. CONTOUR
- 8" W --- EX. WATER
- 8" S --- EX. SANITARY SEWER
- 12" D --- EX. STORM DRAIN
- GAS --- EX. GAS
- --- EX. EDGE OF ROAD
- 358 --- PROP. CONTOUR
- --- PROP. UTILITIES
- --- 6" STANDARD COMB. C&G
- --- 6" REV. COMB. C&G
- BC 358.1 --- EX. BOTTOM OF CURB
- --- EX. CURB & GUTTER
- 358.1 --- PROP. SPOT ELEVATION
- --- PAINTED ISLAND
- --- SILT FENCE
- --- SUPER SILT FENCE
- --- INLET PROTECTION
- --- STABILIZED CONSTRUCTION ENT. MOUNTABLE BERM
- --- LOD
- --- LIMIT OF DISTURBANCE

N 503500  
E 840250

E 840250  
N 503500  
LIMIT OF FIELD RUN TOPO



7/16/97  
Date

Professional Engr. No. 10551

**APPROVED**  
PLANNING BOARD  
of HOWARD COUNTY  
DATE: July 16, 1997  
RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MKC 8/1/97  
DATE

*Richard Blawie* 8/1/97  
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

*David R. Smith* 8/16/97  
DATE

DIRECTOR

Date	No.	Revision Description
		THE MALL IN COLUMBIA
		PHASE B
		TOWN CENTER
		SECTION 2 AREA 1
		HOWARD COUNTY, MD
		LOTS 8, 12, 13, 20
		OWNER / DEVELOPER:
		THE HOWARD RESEARCH & DEVELOPMENT CORP.
		COLUMBIA MALL, INC.
		10275 LITTLE PATUXENT PARKWAY
		COLUMBIA, MARYLAND 21044

**DMW**  
Darr McCune-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3353  
Fax: 296-4705

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

TITLE

**PHASE 1B**  
**EROSION & SEDIMENT CONTROL PLAN**

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Drn By	KDE	Date	7/22/97		
Chk By	JWR	Approved			12 OF 15

DEVELOPERS CERTIFICATION:  
I/We certify that 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 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.

*John H. Nicks* 7-21-97  
*Joseph H. Nicks* Date

ENGINEER'S CERTIFICATION:  
I certify that this plan for erosion and sediment control represents a practiced 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. Ramaccio, Jr.* 7/16/97  
Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

*Cheryl Simmens* 7/31/97  
Natural Resources Conservation Service Date

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

*John W. Ramaccio, Jr.* 7/31/97  
Howard Soil Conservation District Date

LOT 12  
COLUMBIA MALL INC.  
COL. T.C. 2 / 1  
ZONED N.T.

J.C. PENNEY  
LOT 10  
COL. T.C. 2 / 1  
ZONED N.T.



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 at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize the plan to be inspected by the Howard Soil Conservation District.

*Joseph H. Nicks*  
*Joseph H. Nicks, Jr.*  
7-21-97  
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. Ranucha, Sr.*  
7/12/97  
Date


Reviewed for Howard Soil Conservation District and meets Technical Requirements.

*Cheyl Simmons*  
7/31/97  
Date

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

*John W. Ranucha, Sr.*  
7/31/97  
Date

7/12/97  
Date



Professional Engr. No. 10551

APPROVED  
PLANNING BOARD  
of HOWARD COUNTY  
DATE: July 16, 1997  
RS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Richard Blood* 8/4/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE  
*Richard Blood* 8/4/97  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*John W. Ranucha, Sr.* 8/5/97  
DIRECTOR DATE

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE IIB TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 8, 12, 13, 20

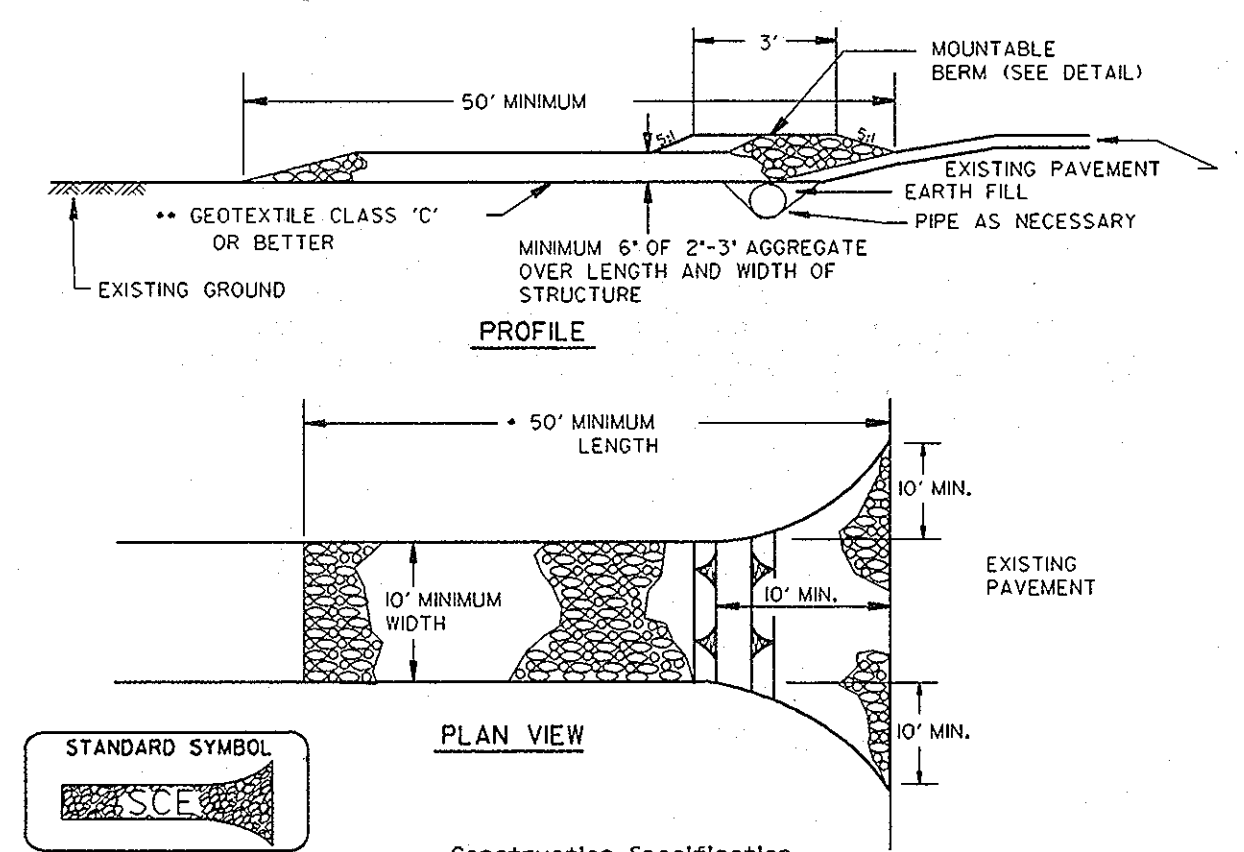
OWNER /DEVELOPER:  
THE HOWARD RESEARCH & DEVELOPMENT CORP.  
COLUMBIA MALL, INC.  
10275 LITTLE PATUXENT PARKWAY  
COLUMBIA, MARYLAND 21044

**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

TITLE  
**PHASE IIB  
EROSION & SEDIMENT CONTROL  
DETAIL SHEET**

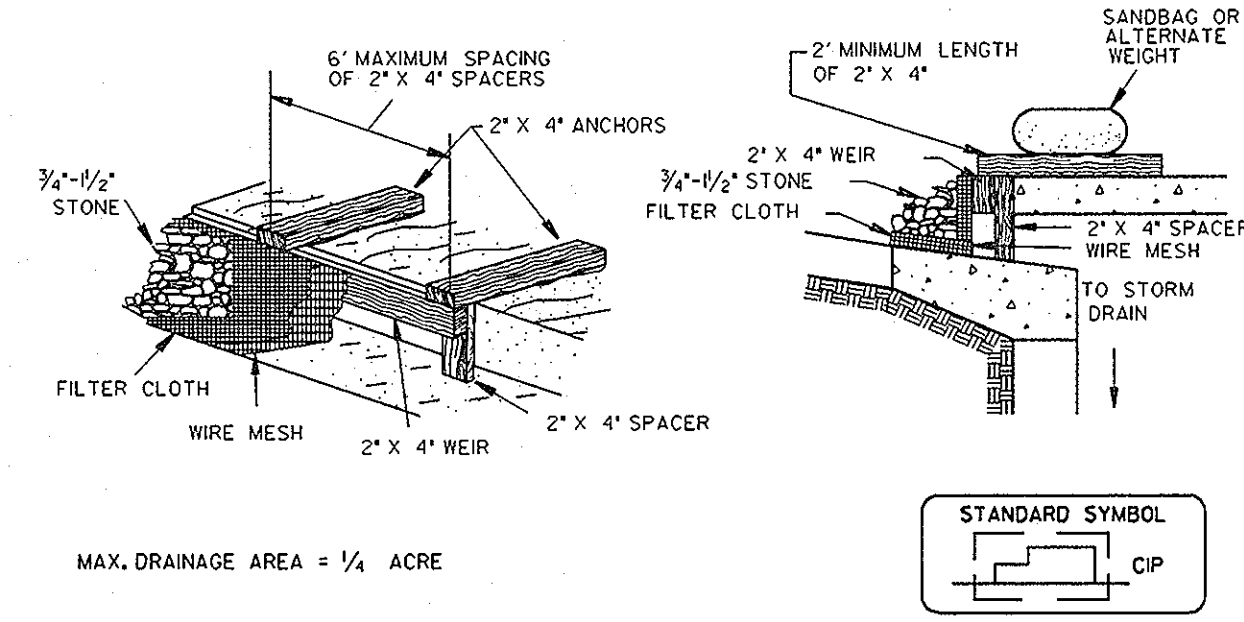
Des By	MJP	Scale	AS SHOWN	Proj. No.	95019B
Drn By	KDE	Date	7/22/97		
Chk By	JWR	Approved			13 OF 15



- Construction Specification
- Length - minimum of 50' (+30' for single residence lot).
  - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
  - Geotextile fabric Class C (filter cloth) shall be placed over the existing ground prior to placing stone. \*\*The plan approval authority may not require single family residences to use geotextile.
  - Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
  - Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
  - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE F - 17 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

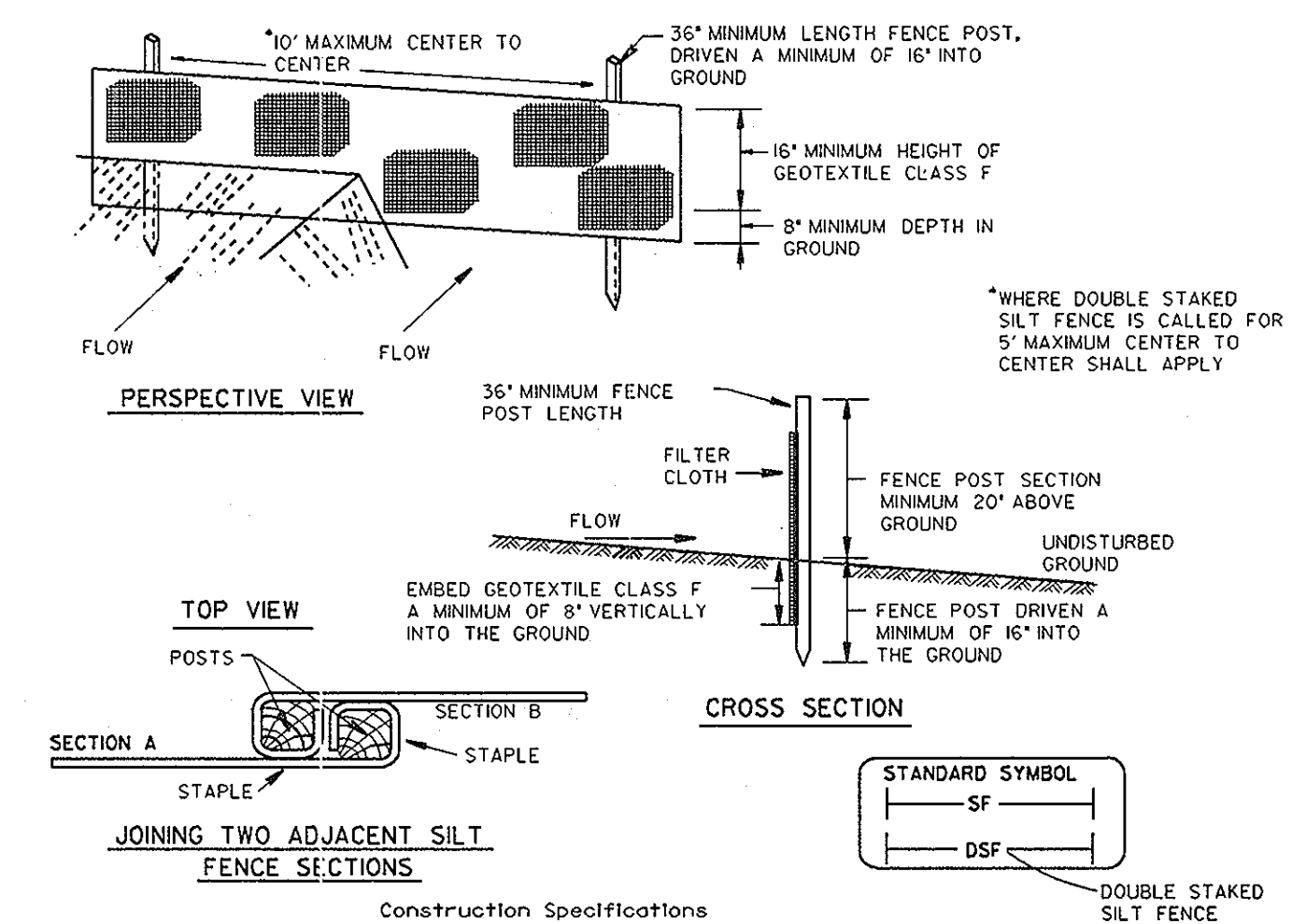
**STABILIZED CONSTRUCTION ENTRANCE** NOT TO SCALE



- Construction Specifications
- MAX. DRAINAGE AREA = 1/4 ACRE
- Attach a continuous piece of 1/2" x 1/2" wire mesh (30" minimum width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
  - Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the weir and securely attach it to the 2" x 4" weir.
  - Securely nail the 2" x 4" weir to a 3" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).
  - Place the assembly against the inlet throat and nail minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
  - The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
  - Form the 1/2" x 1/2" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4" x 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
  - This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
  - Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE E - 16 - 6B MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

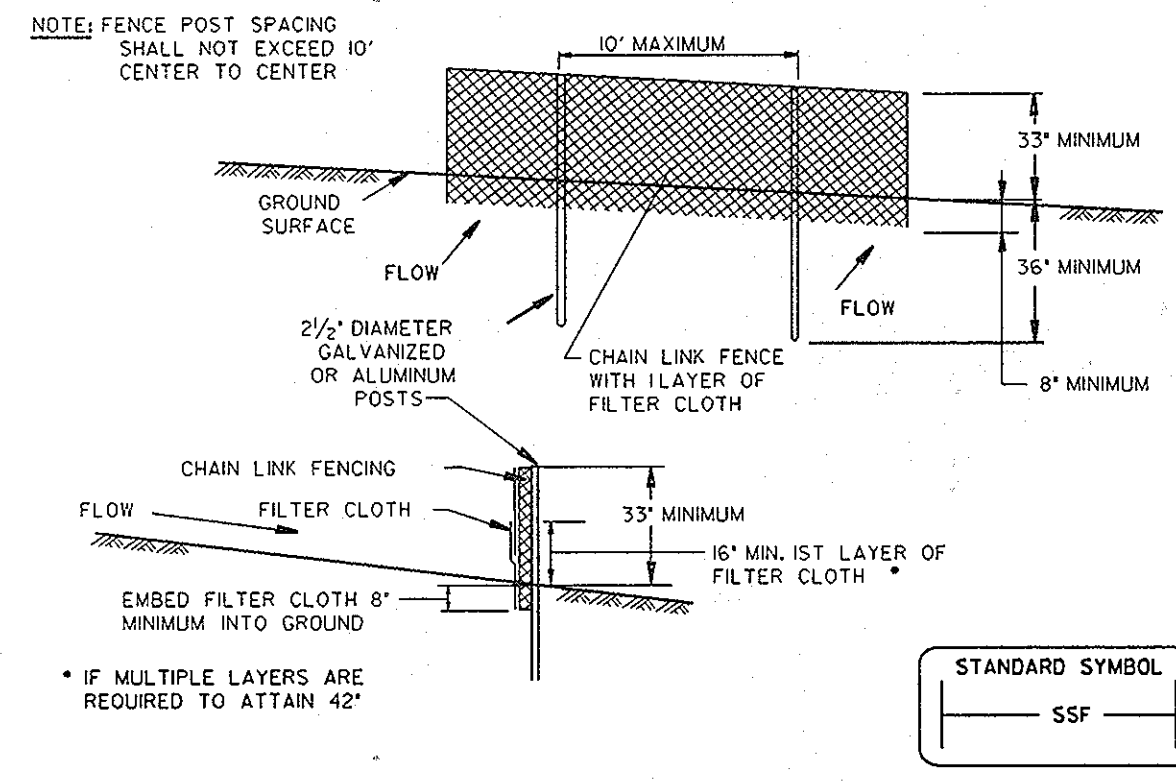
**CURB INLET PROTECTION (COG OR COS INLETS)** NOT TO SCALE



- Construction Specifications
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1/2" x 1/2" square (minimum) cut, or 1 1/2" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 100 pound per linear foot.
  - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
- |                      |                          |                |
|----------------------|--------------------------|----------------|
| Tensile Strength     | 50 lbs/in (min.)         | Test: MSMT 509 |
| Tensile Modulus      | 20 lbs/in (min.)         | Test: MSMT 509 |
| Flow Rate            | 0.3 gal/ft/minute (max.) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min.)               | Test: MSMT 322 |
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
  - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE E - 16 - 8 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**SILT FENCE** NOT TO SCALE



- Construction Specifications
- Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
  - The posts do not need to be set in concrete.
  - Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.
  - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
  - Filter cloth shall be embedded a minimum of 8" into the ground.
  - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
  - Maintenance shall be performed as needed and silt bulges removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE H - 26 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**SUPER SILT FENCE** NOT TO SCALE

- DUST CONTROL SPECIFICATIONS
- Temporary Methods
- Mulches - See Standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
  - Vegetative Cover - See standards for temporary vegetative cover.
  - Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before following starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
  - Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. If no time should the site be irrigated to the point the runoff begins to flow.
  - Barriers - Solid board fences, snow fences, burlap fences, straw bales, and similar material can be used to control currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
  - Calcium Chloride - Apply at a rate that will keep surface moist. May need re-treatment.
- Permanent Methods
- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
  - Topsoiling - Covering with less erosive soil materials. See standards for topsoiling.
  - Stone - Cover surface with crushed stone or coarse gravel.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE H - 30 - 1 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**DUST CONTROL SPECIFICATIONS** NOT TO SCALE



**PERMANENT SEEDING NOTES**

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1. PREFERRED - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS./1000 SO.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SO.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SO.FT.)
2. ACCEPTABLE - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS./1000 SO.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SO.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (0.4 LBS./1000 SO.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SO.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOD. OPTION (3) - SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SO.FT.) OF UNROTTED WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATIONS USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL./1000 SO.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL./1000 SO.FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.

**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, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS - APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SO.FT.)

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SO.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SO.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 SO.FT.) OF UNROTTED WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL./1000 SO.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT. OR HIGHER, USE 348 GAL. PER ACRE (8 GAL./1000 SO.FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

**PERMANENT SEEDING 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 (899-2437).
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 1994 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. SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DICES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1
  - B. FOURTEEN 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. I, 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL\* FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING, AND MULCHING (SECTION D). 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	6.0 ACRES
AREA DISTURBED	6.0 ACRES
AREA TO BE ROOFED OR PAVED	3.0 ACRES
AREA TO BE VEGETATIVELY STABILIZED	3.0 ACRES
TOTAL CUT	5600 CUBIC YARDS
TOTAL FILL	11500 CUBIC YARDS
*OFF-SITE WASTE/BORROW AREA LOCATION WASTE =	5900 CY
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 DPW 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.
  - \* COLUMBIA MALL PHASE IA SDP 97-107

**SEDIMENT CONTROL GENERAL NOTES**

**UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL PRACTICES**

1. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON UPSTREAM SIDE OF TRENCH.
2. IMMEDIATELY FOLLOWING PIPE INSTALLATION THE TRENCH SHALL BE BACKFILLED, COMPACTED AND IMMEDIATELY STABILIZED (MULCHED, SEEDED, AND/OR SODDED, MECHANICAL STABILIZATION) AT THE END OF EACH WORK DAY.
3. SILT FENCE SHALL BE PLACED IMMEDIATELY DOWN STREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED LONGER THAN ONE WORKING DAY. (SILT FENCE AS PER SCS STANDARD DRAWING E-45-3)
4. THE CONTRACTOR SHALL DISTURB AND OPEN THE MINIMUM PRACTICAL AREA REQUIRED TO ACCOMPLISH THE WORK DESIGNATED FOR EACH DAY.
5. ALL SEDIMENT AND EROSION CONTROL PRACTICES AND VEGETATIVE STABILIZATION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS. ANY EROSION AND SEDIMENT CONTROL PRACTICES DAMAGED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

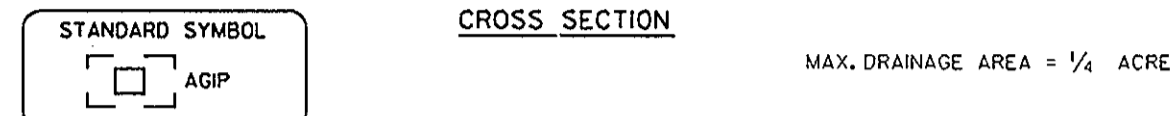
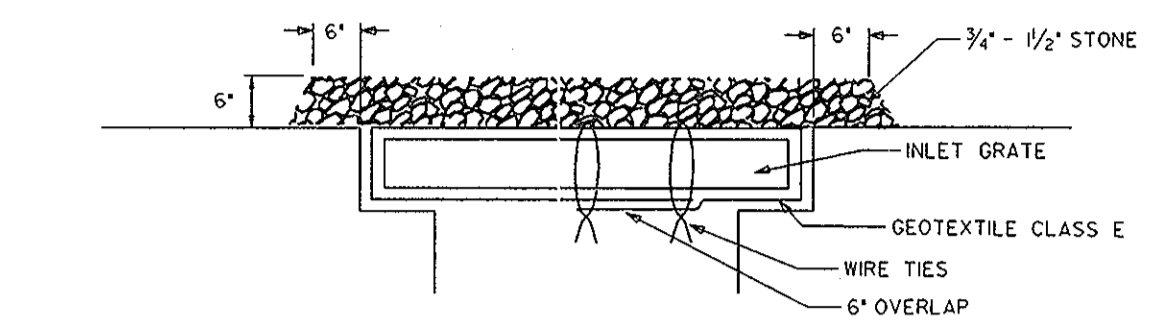
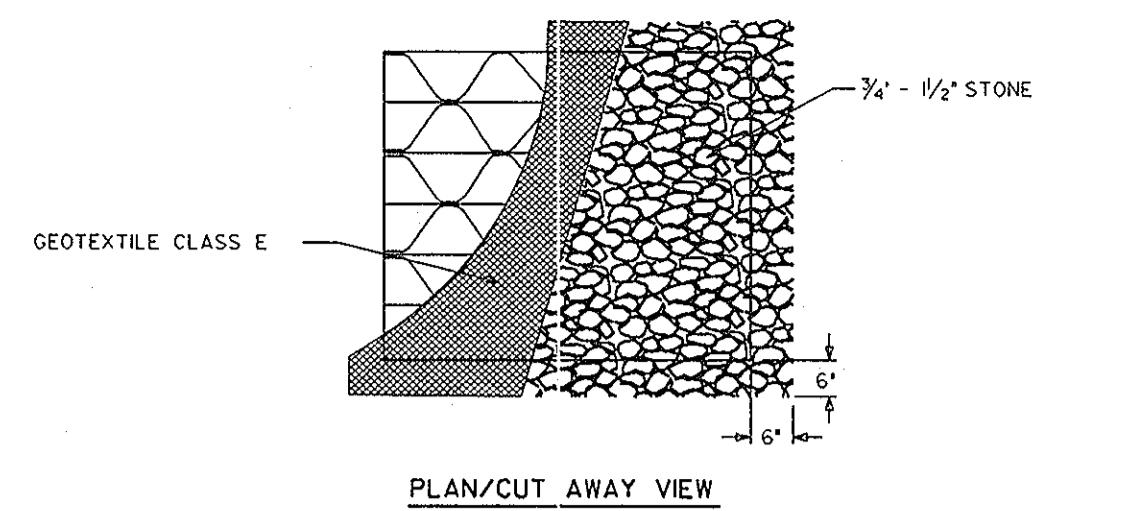
**UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL**

Table 27 Geotextile Fabrics

CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSL. MIN.
A	0.30**	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80*	90	190

\* US Std. Sieve CW-02215 \*\* .50 mm max. for Super Silt Fence  
 The properties shall be determined in accordance with the following procedures:  
 - Apparent opening size MSMT 323  
 - Grab tensile strength ASTM 1682; 4x8' specimen, 1x2' clamps, 12'/min. strain rate  
 - Burst strength In both principal directions of geotextile fabric. ASTM D 3786

The fabric shall be inert to commonly encountered chemicals and hydrocarbons, and will be rot and mildew resistant. It shall be manufactured from fibers consisting of long chain synthetic polymers, and composed of a minimum of 85% by weight of polyolefins, polyesters, or polyamides. The geotextile fabric shall resist deterioration from ultraviolet exposure.  
 In addition, Classes A through E shall have a 0.01 cm./sec. minimum permeability when tested in accordance with MSMT 507, and an apparent minimum elongation of 20 percent (20%) when tested in accordance with the grab tensile strength requirements listed above.  
 Silt Fence  
 Class F geotextile fabrics for silt fence shall have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modulus when tested in accordance with MSMT 509. The material shall also have a 0.3 gal./ft. min. flow rate and seventy-five percent (75%) minimum filtering efficiency when tested in accordance with MSMT 322. Geotextile fabrics used in the construction of silt fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amounts of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a temperature range of 0 to 120 degrees F.



- Construction Specifications
1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.
  2. Place 1/2" x 1/2" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE E - 10 - 6A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

AT GRADE INLET PROTECTION NOT TO SCALE

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.

*Joseph H. Newkirk*  
 Date 7-21-97

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. Rameckie, Sr.*  
 Date 7/16/97

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

*Charles Simmons*  
 Natural Resources Conservation Service  
 Date 7/31/97

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

*John W. Rameckie, Sr.*  
 Howard Soil Conservation District  
 Date 7/31/97

7/16/97 Date  
  
 Professional Engr. No. 12551

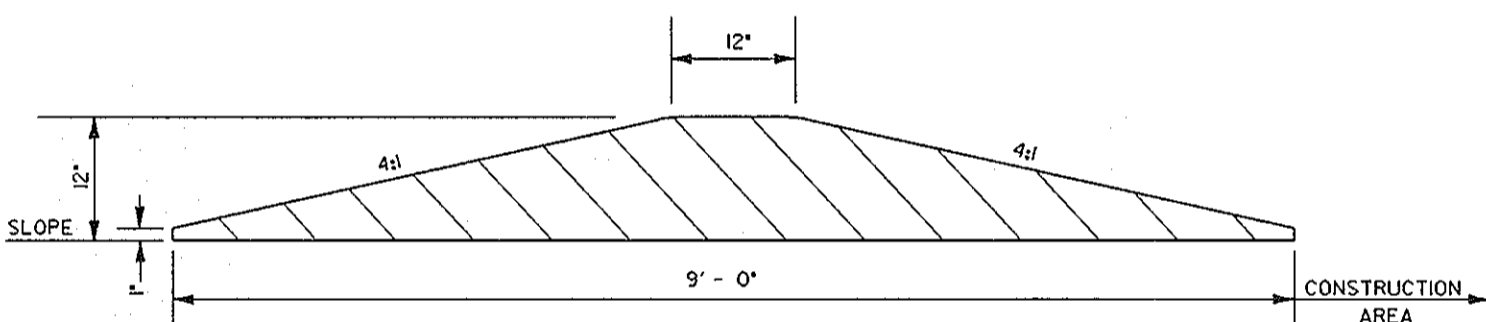
APPROVED  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 DATE July 16, 1997  
 RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 CHIEF DEVELOPMENT ENGINEERING DIVISION MK 8/14/97 DATE  
 R. Edward Blosser 8/14/97 DATE  
 DIVISION OF LAND DEVELOPMENT  
 DIRECTOR 8/15/97 DATE

THE MALL IN COLUMBIA  
 PHASE IB  
 TOWN CENTER  
 SECTION 2 AREA 1  
 HOWARD COUNTY, MD  
 LOTS 8, 12, 13, 20  
 OWNER /DEVELOPER:  
 THE HOWARD RESEARCH & DEVELOPMENT CORP.  
 COLUMBIA MALL, INC.  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21044

DMW  
 Data McCune-Walken, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 286-5353  
 Fax 286-4705  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

Des By	MJP	Scale	AS SHOWN	Proj. No.	95019B
Drn By	KDE	Date	7/22/97		
Chk By	JWR	Approved			14 OF 15



**MOUNTABLE BITUMINOUS CURB DIVERSION**

Table 28 Stone Size

NUMBER	SIZE RANGE	D <sub>50</sub>	D <sub>100</sub>	AASHTO	WEIGHT
NUMBER 57*	3/8" - 1/2"	1/2"	1/2"	M-43	N/A
NUMBER 1	2" - 3"	2 1/2"	3"	M-43	N/A
RIP-RAP**	4" - 7"	5 1/2"	7"	N/A	N/A
CLASS I	N/A	9.5"	15"	N/A	150lb max.
CLASS II	N/A	16"	24"	N/A	700lb max.
CLASS III	N/A	23"	34"	N/A	2000lb max.

\* This classification is to be used on the inside face of stone outlets and check dams.  
 \*\* This classification is to be used when ever smaller rip-rap is required. The State Highway Administration designation for this stone is Stone for Gabions (905.01.04)

Stone For Gabion Baskets

BASKET THICKNESS	SIZE OF INDIVIDUAL STONES
INCHES	MM
6	150
9	225
12	300
18	460
36	910

NOTE: Recycled concrete equivalent may be substituted for all stone classifications. Recycled concrete equivalent shall be concrete broken into the sizes meeting the appropriate classification, shall contain no steel reinforcement, and shall have a density of 150 pounds per cubic foot.

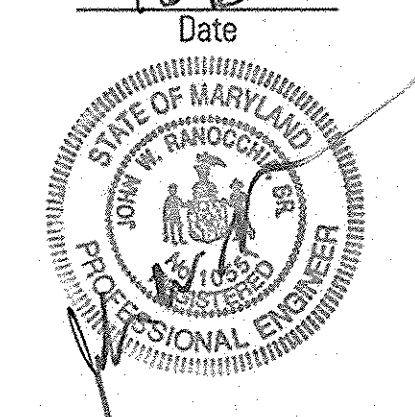


**LEGEND**

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- BC 358.1 EX. BOTTOM OF CURB
- EX. CURB & GUTTER
- 358.1 PROP. SPOT ELEVATION
- PAINTED ISLAND

NOTE: GAS, ELECTRIC AND TELEPHONE UTILITIES ARE SHOWN ON THESE PLANS FOR REFERENCE ONLY AND ARE DESIGNED AND BUILT BY OTHERS.

1-6-98  
Date



Professional Engr. No. 106971

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE: July 16, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*John J. Williams* 1/12/98  
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

*Carol Hamilton* 1/16/97  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*David S. Smith* 1/21/98  
DIRECTOR DATE

1/5/98	1	REVISE UTILITIES AND GRADING
Date	No.	Revision Description

**THE MALL IN COLUMBIA**  
PHASE 1B  
TOWN CENTER  
SECTION 2 AREA 1  
HOWARD COUNTY, MD  
LOTS 8, 12, 13, 20

OWNER / DEVELOPER:  
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10275 LITTLE PATUXENT PARKWAY  
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**DMW**  
Duff-McCune-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
Tel: 410-296-3258  
Fax: 410-296-4702

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

TITLE  
**PHASE 1B  
REVISED UTILITY LOCATION PLAN**

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Drn By	WHJ	Date	8/22/97		
Chk By	JWR	Approved			15 OF 15

