

SHEET INDEX

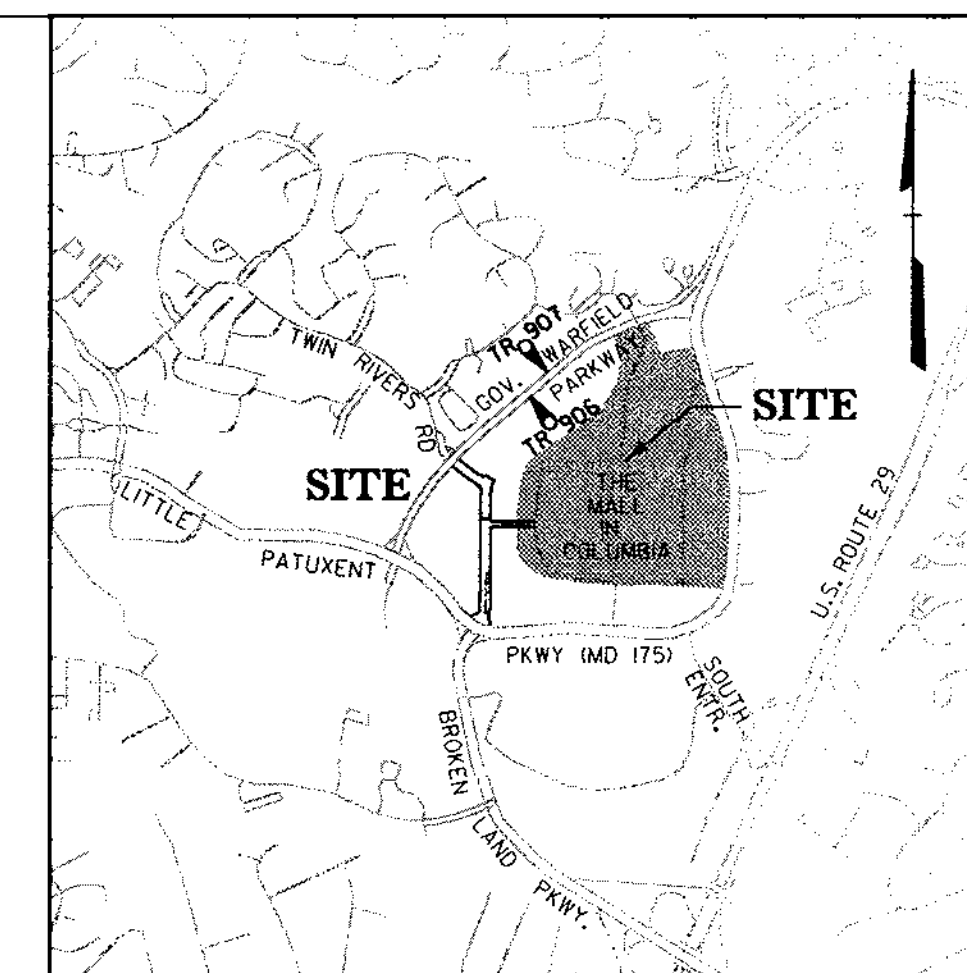
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5	SITE DEVELOPMENT PLAN
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29	PLANTING, LIGHTING & STRIPING PLAN
30	PLANTING, LIGHTING & STRIPING PLAN

ADDRESS CHART

LOT / PARCEL	STREET ADDRESS
38	10300 LITTLE PATUXENT PARKWAY

GENERAL NOTES

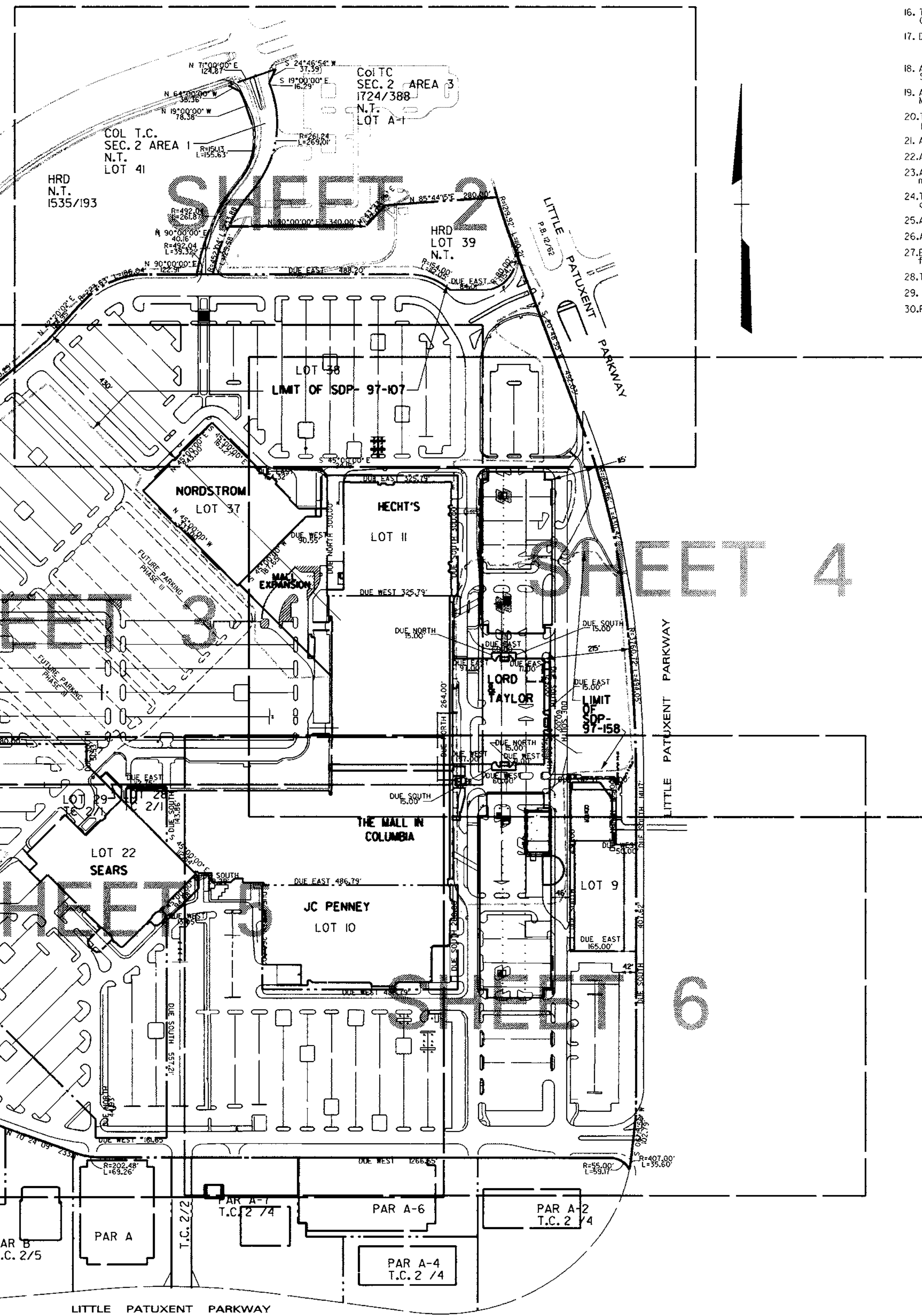
- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
- The contractor shall notify the Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior 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 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 Deft-McCune-Walker, Inc. in July 1995, and Plans, Collins & Carter, Inc. in 1994, Expanded Per SDP 97-107 & SDP 97-158.
- Coordinates and bearings shown herein are referred to the Maryland Coordinate system (NAD 27) as projected from the following Whitman, Requardt & Assoc. traverse stations:
TR 101 N 503690.8580 E 83902.2750
TR 102 N 503690.7000 E 83834.2860
- Stormwater management is provided on-site by an underground detention facility for quantity, per SDP 97-107. Quality control provided by stormceptors, per SDP 97-107.
- Stormwater management facilities are privately maintained.
- No wetlands exist within the limits of disturbance.
- The existing utilities were located from available records and field survey prepared by Deft-McCune-Walker, Inc. The contractor must dig test pits by hand, or quality 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.
- 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 620.
- Department of Planning and Zoning reference file numbers:
FDP 47-A-VI, FDP Ph. 10A, FDP Phase 224, SDP 80-01, F-97-19, F-97-153, F-97-25, F-97-159, S-96-09, SDP 97-101, SDP 97-158
- 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.
- No building setbacks 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 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 per SDP 97-107 & SDP 97-158 to be relocated as necessary. See sheets 26-30 for proposed lights. Outdoor lighting shall conform to Section 154 of the Zoning Regulations.
- There is no floodplain on this site.
- Traffic study was prepared by Wells and Assoc. dated 10-28-97.
- Public Water and Sewer is utilized for this site.



LOCATION MAP

SCALE: P = 200'

ELEVATIONS SHOWN HEREON ARE BASED ON THE FOLLOWING TRAVERSE STATIONS ESTABLISHED BY FISHER, COLLINS AND CARTER, INC. (NGVD 29 VERTICAL DATUM)
TR 906 N 504280.1630 E 838560.3680 ELEV. 381.500
TR 907 N 504400.6700 E 838647.1701 ELEV. 394.150



SITE ANALYSIS

- Zoning: New Town - Commercial (Per FDP Ph. 47-A-VI)
- Phase II Expansion Area/Limit of Disturbance = 19.2
- Proposed Use: Proposed Building Expansion and Parking
- Parking Tabulation

a. Parking Required = Ex. Mall = 638,050 SF + Prop. Retail = 399,177 = 1,037,227 SF. 1,037,227 / 1000 X 5 = 5186 Spaces req. (64 HC)	
b. Parking Provided	
Proposed II Parking	Total Proposed
Parking Spaces 6621	6621
Handicap Spaces 83 (1 van)	83 (1 van)
Total 6704	6704
c. Parking spaces to be removed = 676 Sp.	
d. Parking spaces to be added = 2485 (includes 1812 decks, 139 restriping & 534 additional spaces)	

- Area Tabulation

a. Phase II Expansion Area/Limit of Disturbance	19.2 Ac.
b. Proposed building area	399,177 SF
c. Impervious area	1128 Ac.
d. Temporary green area in Phase II	1.9 Ac.

Lot	Owner	Area	Plot Reference
10	J.C. Penney	2,906 AC.	18/39
11	Columbia Mall, Inc. (Hecht Co.)	2,244 AC.	18/39
22	Sears Roebuck and Company	11,433 AC.	4859
28	Sears Roebuck and Company	0,233 AC.	4859
29	Sears Roebuck and Company	0,033 AC.	4859
36	Howard Research and Development Corp. and Columbia Mall	2,225 AC.	
37	Howard Research and Development Corp. and Columbia Mall	1,444 AC.	
38	Howard Research and Development Corp. and Columbia Mall	70,207 AC.	
41	Howard Research and Development Corp. and Columbia Mall	0,620 AC.	
Total Project Area =		89.10 AC.	

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE Dec. 3, 1997
RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division MK 1/13/98
 Chief, Division of Land Development 1/13/98
 Director 1/14/98

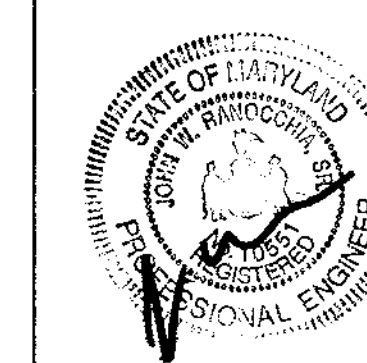
4-27-98 REV. SITE ANALYSIS PER EAST ENTRY REV.
 7-15-98 REVISE PARKING TABULATION

THE MALL IN COLUMBIA
 PHASE II EXPANSION
 COLUMBIA MALL
 SECTION 2 AREA 1
 HOWARD COUNTY, MD
 LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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

DMW
 Deft-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-3333
 Fax 286-4705
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

12/19/97
 Date



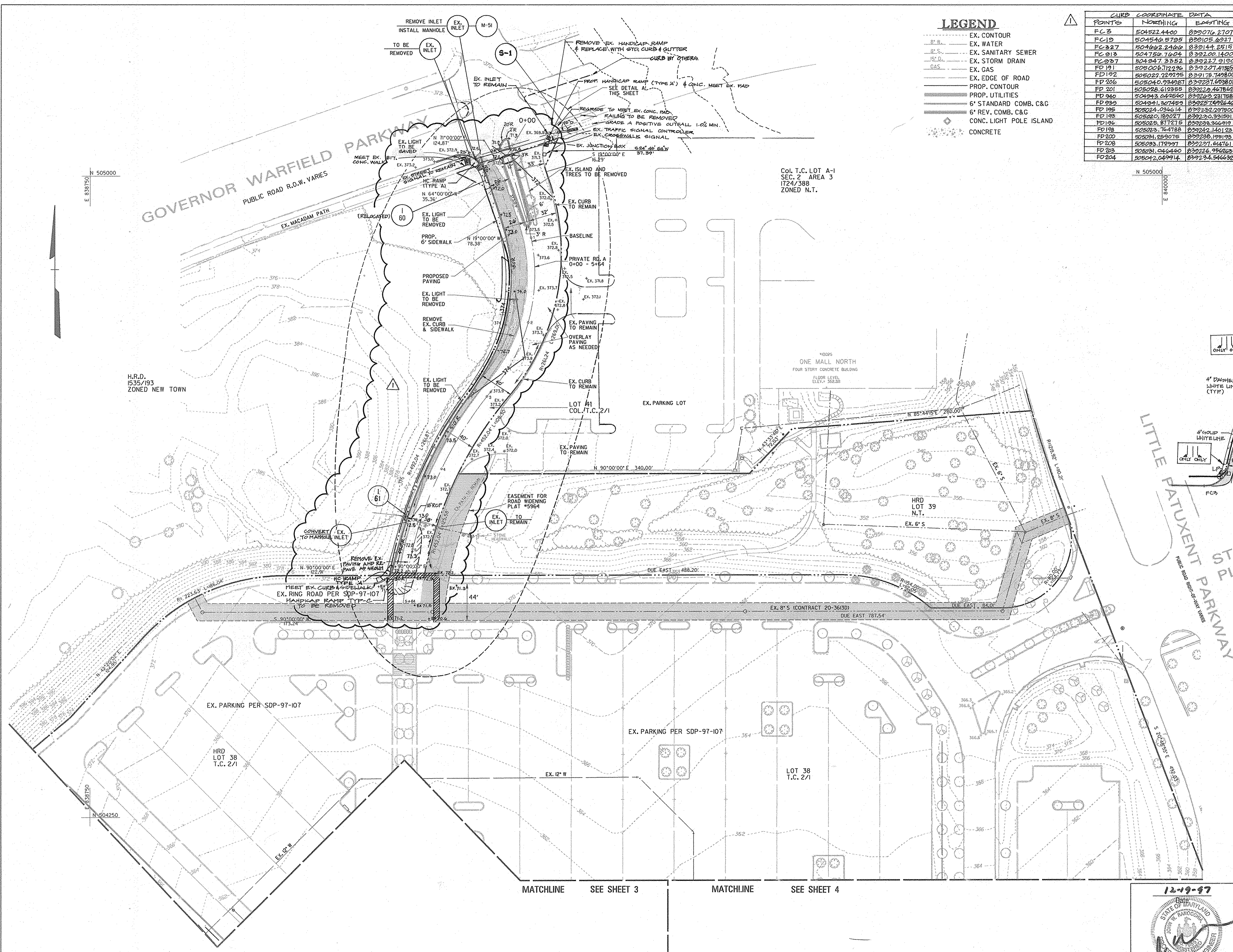
SUBDIVISION NAME COLUMBIA TOWN CTR.	SECTION 21	DATE 12-15-97	SCALE AS SHOWN	PROJECT NO. 95019B
TRACER MAP 30.36	PLAT NO. 12-15-97	DATE 12-15-97	PROJECT NO. 95019B	
WATER CODE 6054	SEWER CODE 6054			

TITLE
**PHASE II
 SITE DEVELOPMENT PLAN
 COVER SHEET**

Des By MJP	Scale AS SHOWN	Proj. No. 95019B
Dwn By ADL	Date 12-15-97	
Chk By JWR	Approved	1 OF 30

Professional Engr. No. 10551

VICINITY MAP
 1" = 200'

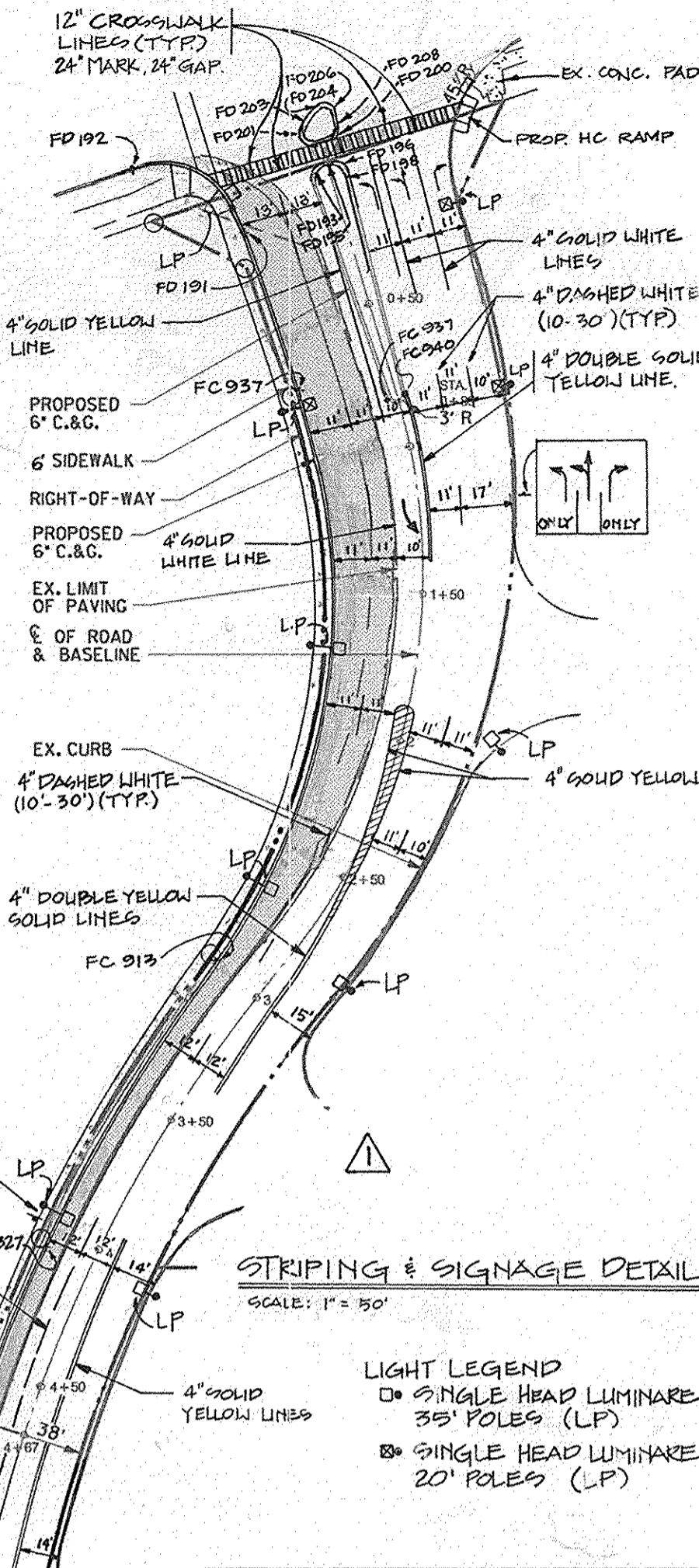


LEGEND

- 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
- CONC. LIGHT POLE ISLAND
- CONCRETE

CURB COORDINATE DATA

POINTS	NORTHING	EASTING
FC 3	504522.4400	829076.2707
FC 19	504546.5705	829105.6927
FC 27	504662.2460	829144.2519
FC 913	504786.7604	829202.1400
FC 937	504947.2352	829227.9190
FD 191	505006.71926	829207.41306
FD 192	505027.229295	829175.749800
FD 206	505040.934287	829227.452801
FD 201	505028.612955	829222.467502
FD 940	504943.042560	829222.231758
FD 939	504941.307459	829227.490246
FD 195	505024.036614	829222.297500
FD 193	505020.189027	829220.231501
FD 196	505025.871275	829228.366919
FD 198	505025.764788	829222.140129
FD 202	505021.959015	829222.192193
FD 208	505023.172997	829227.614761
FD 203	505021.046440	829222.956629
FD 204	505042.049914	829234.546692



APPROVED
PLANNING BOARD
 of HOWARD COUNTY
 DATE Dec. 3, 1997
 RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Chief, Development Engineering Division MK	<i>[Signature]</i>	1/10/98
Chief, Division of Land Development	<i>[Signature]</i>	1/13/98
Director	<i>[Signature]</i>	1/14/98

3-24-98 REV. PRIVATE DRIVE ON LOT 41 & DETAIL
 07-08-98 REV. PRIVATE DRIVE ON LOT 41 & DETAIL

THE MALL IN COLUMBIA
 PHASE II EXPANSION
 TOWN CENTER
 SECTION 2 AREA 1
 HOWARD COUNTY, MD
 LOTS 10, 11, 22, 28, 29, 30, 37, 38, 41
 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) 296-3233
 Fax 296-4705
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

12-09-97

 Professional Engr. No. 1091

TITLE

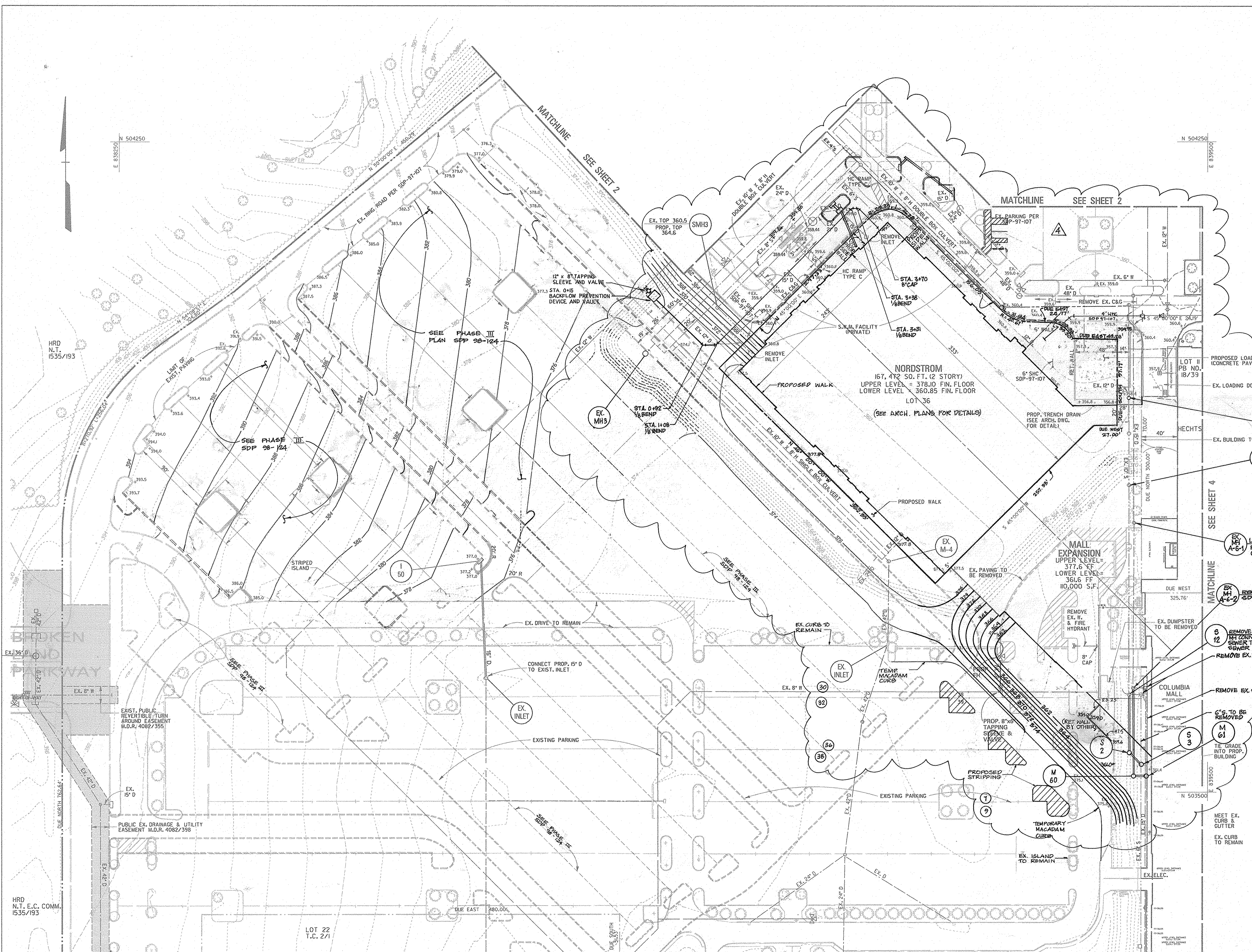
**PHASE II
 SITE DEVELOPMENT PLAN**

Des By	MJP,RLH	Scale	1" = 50'	Proj. No.	950195
Dim By	FJZ	Date	12-15-97		
Chk By	JWR	Approved			

2 OF 30
 SDP-98-44

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
- CONC. LIGHT POLE ISLAND
- FUTURE PHASE III PARKING
- CONCRETE



12/1/97
Date

John W. Hancock, Jr.
Professional Engr. No. 10551

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE Dec. 3, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John W. Hancock, Jr. 1/2/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
DATE

John W. Hancock, Jr. 1/3/98
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

John W. Hancock, Jr. 1/14/98
DIRECTOR
DATE

4-20-98	4	REVISE NORDSTROM MALL EXP. & PARKING LOT
Date	No.	Revision Description

THE MALL IN COLUMBIA
PHASE II EXPANSION
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 10, 11, 22, 28, 29, 30, 37, 38, 41

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 296-4706

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

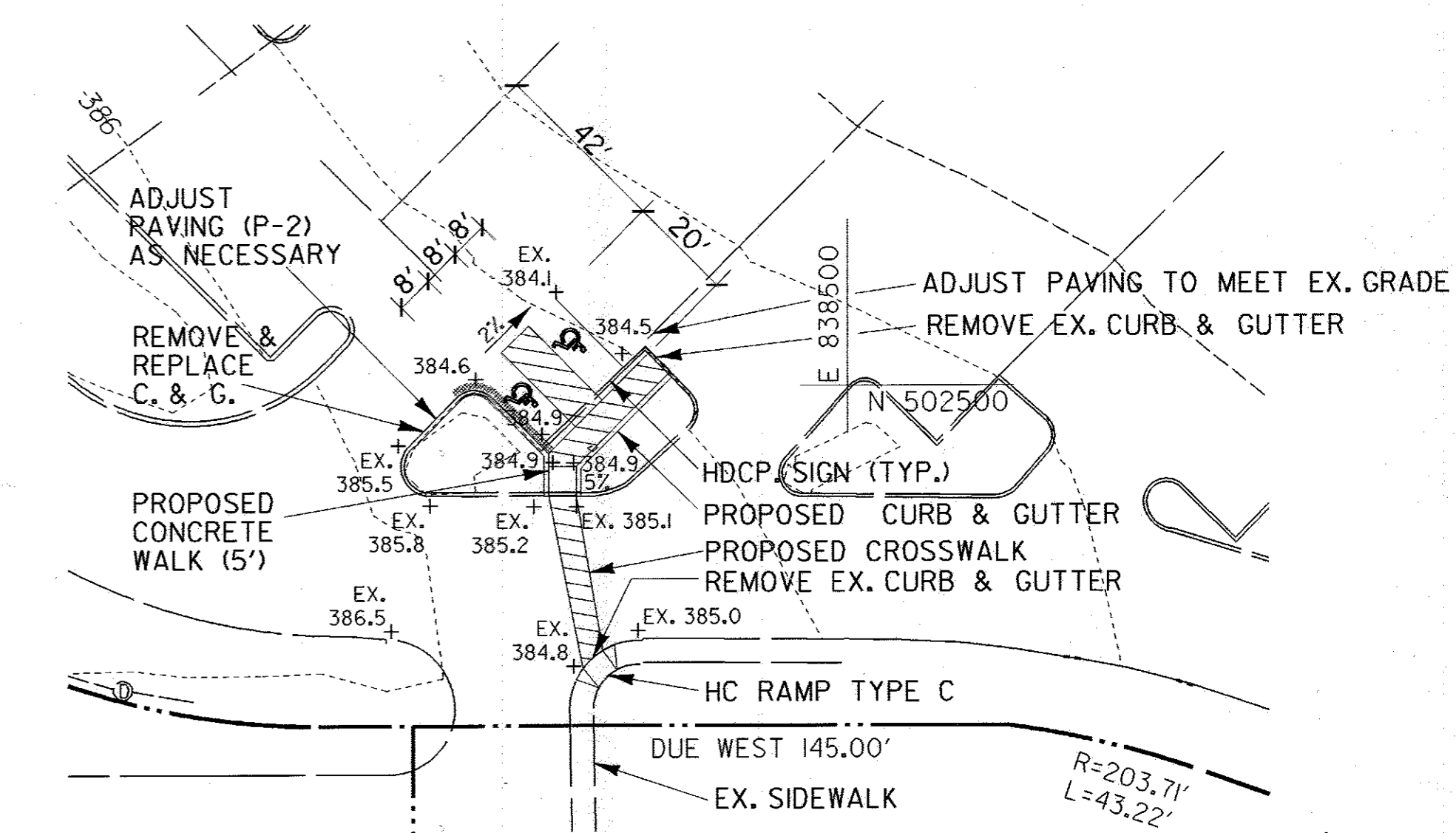
TITLE
**PHASE II
SITE DEVELOPMENT PLAN**

Des By	MJP,RLH	Scale	1" = 50'	Proj. No.	95019B
Dm By	FJZ	Date	12-15-97	3 OF 30	
Chk By	JWR	Approved			

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
- - - - - CONC. LIGHT POLE ISLAND
- - - - - CONCRETE

N 503250
E 839250



DETAIL A
SCALE: 1" = 30'

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE Dec. 3, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>[Signature]</i>	1/10/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	1/10/98
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	1/14/98
DIRECTOR	DATE

Date	No.	Revision Description
04/30/98	4	REVISED FOR WIRELESS CARRIER

THE MALL IN COLUMBIA
PHASE II EXPANSION
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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

DMW
Duff-McCann-Walker, Inc.
300 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax: 306-4705

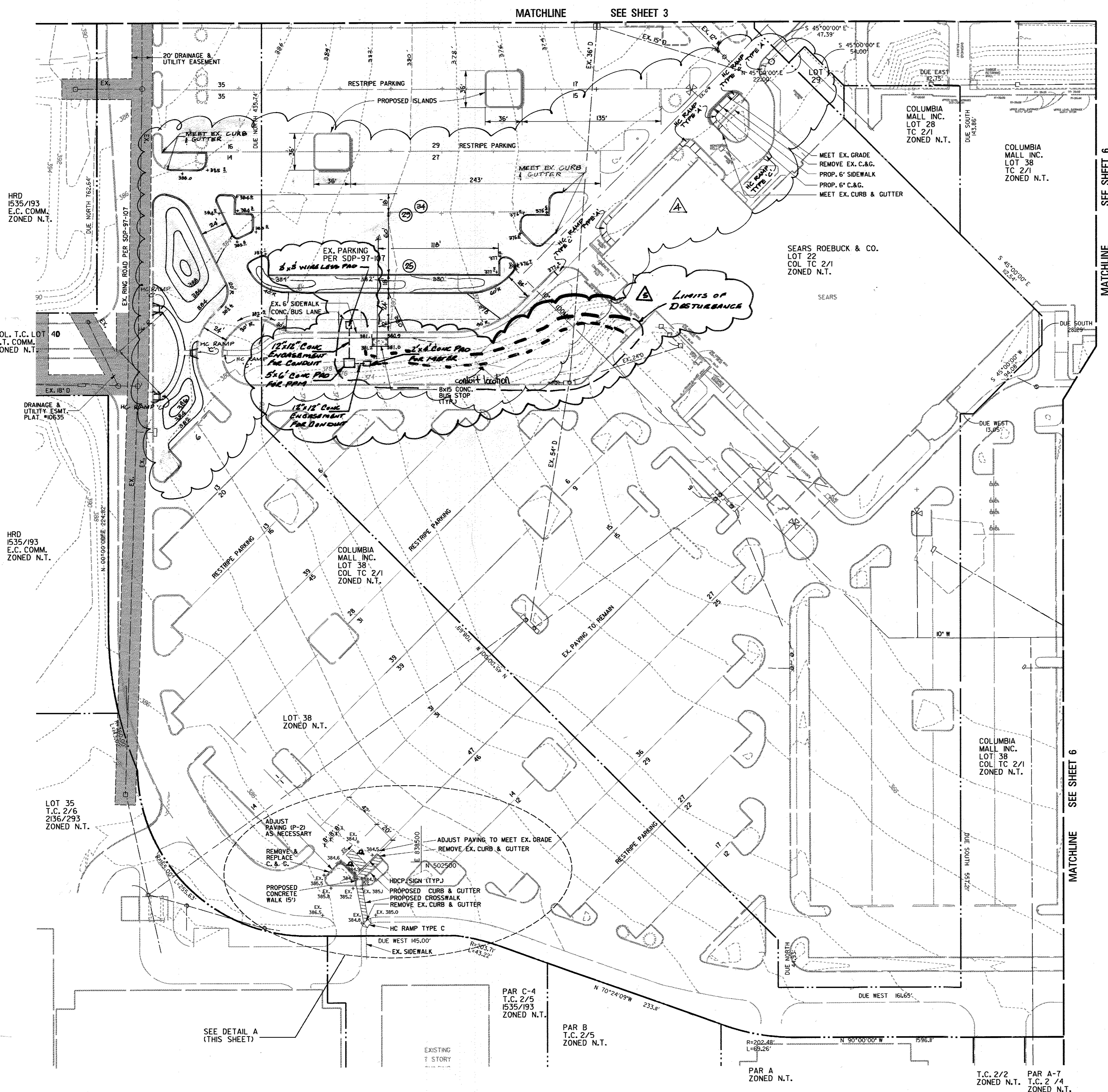
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

NOTE: SEE WIRELESS CARRIER PLANS FOR DETAILS NOT SHOWN

12-17-97
Date

Professional Engr. No. 10991

PHASE II SITE DEVELOPMENT PLAN			
Des By	MJP, RLH	Scale	1" = 50'
Dm By	WHJ, FJZ	Date	12-15-97
Proj. No.	95019B	Page	5 of 30
Chk By	JWR	Approved	



SEE DETAIL A (THIS SHEET)

EXISTING 1 STORY

PAR C-4
T.C. 2/5
1535/193
ZONED N.T.

PAR B
T.C. 2/5
ZONED N.T.

PAR A
ZONED N.T.

T.C. 2/2
ZONED N.T.

PAR A-7
T.C. 2/4
ZONED N.T.

HRD 1535/193
E.C. COMM.
ZONED N.T.

COL. T.C. LOT
N.T. COMM.
ZONED N.T.

HRD 1535/193
E.C. COMM.
ZONED N.T.

LOT 35
T.C. 2/6
2136/293
ZONED N.T.

LOT 38
ZONED N.T.

COLUMBIA MALL INC.
LOT 38
COL. T.C. 2/1
ZONED N.T.

SEARS ROEBUCK & CO.
LOT 22
COL. T.C. 2/1
ZONED N.T.

COLUMBIA MALL INC.
LOT 28
T.C. 2/1
ZONED N.T.

COLUMBIA MALL INC.
LOT 38
T.C. 2/1
ZONED N.T.

SEE SHEET 6

MATCHLINE

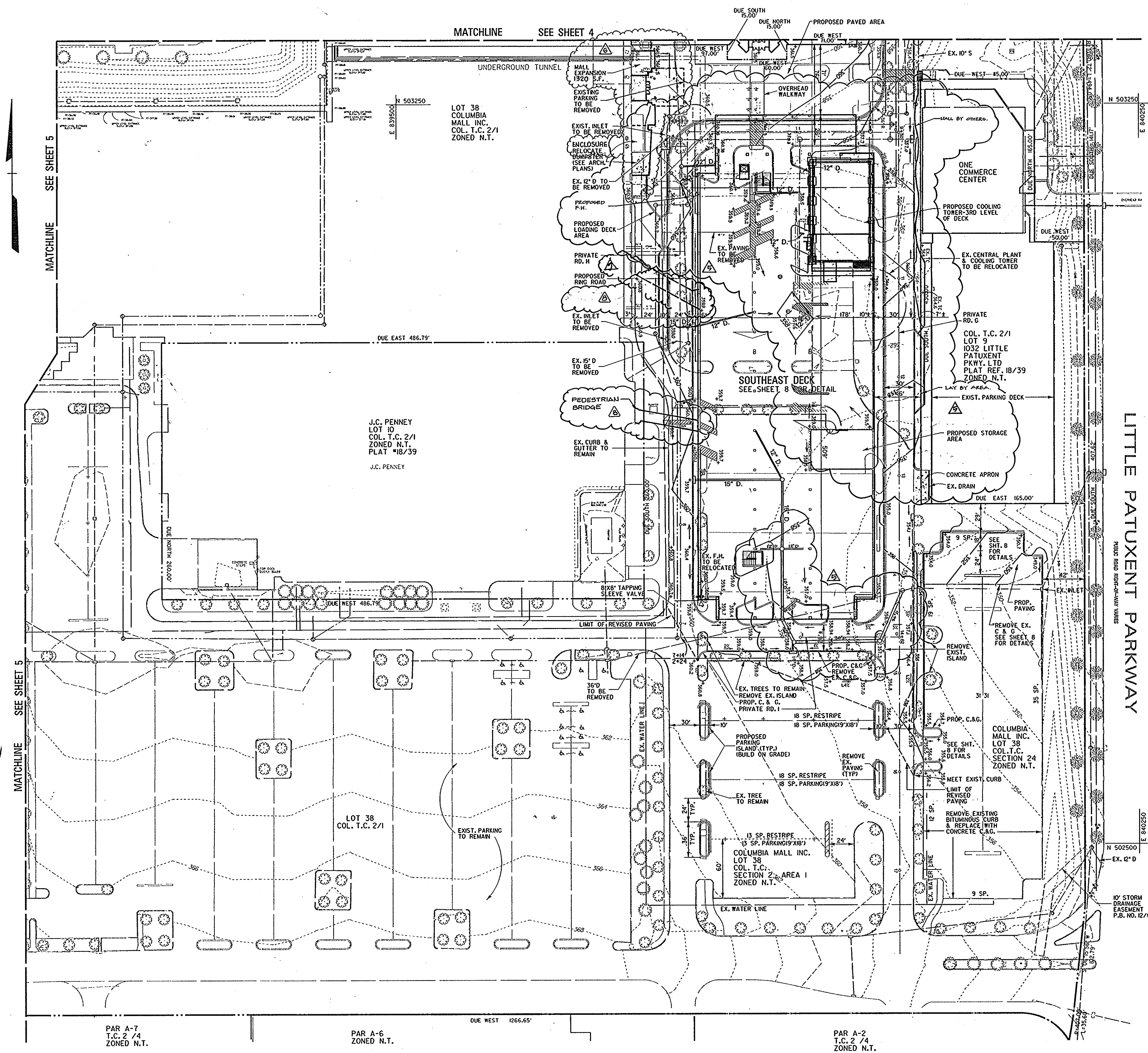
SEE SHEET 6

MATCHLINE

MATCHLINE SEE SHEET 3

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
- CONC. LIGHT POLE ISLAND
- CONCRETE



APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE Dec. 3, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[Signature] 1/10/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MKK DATE

[Signature] 1/10/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 1/14/98
 DIRECTOR DATE

Date	No.	Revision Description
4-27-99	1	REV. EAST ENTRY
9-16-98	2	REV. ROAD GRADE P2 ROAD G&H REV. PAVING

THE MALL IN COLUMBIA
 PHASE II EXPANSION
 TOWN CENTER
 SECTION 2 AREA 1
 HOWARD COUNTY, MD
 LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

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

A Team of Land Planners,
 Landscape Architects,
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 Environmental Professionals

12/17/97
 Date

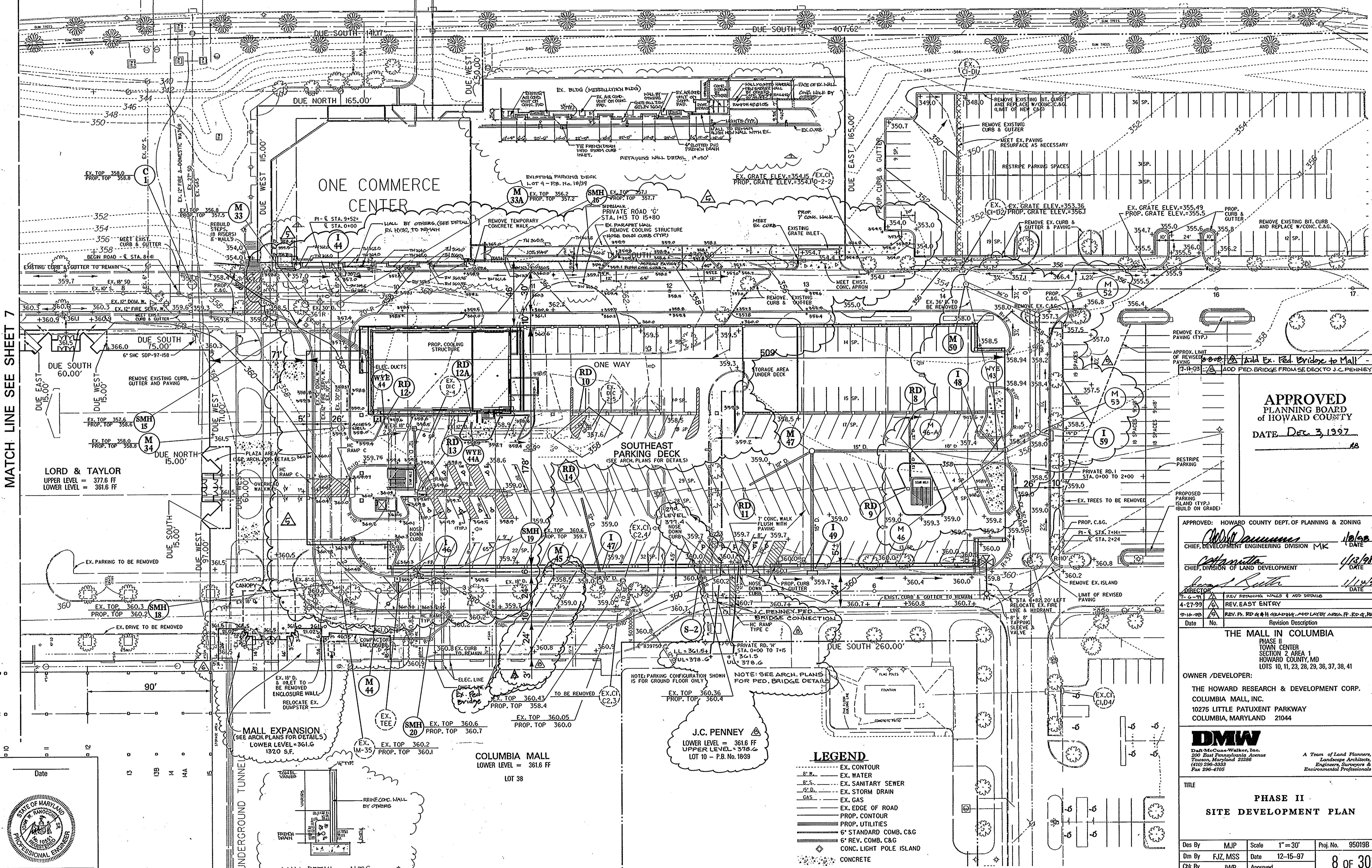
Professional Engr. No. J5551

Date	No.	Revision Description
8-8-99	1	Add Ped. Bridge to Mall
7-11-03	2	ADDED PED. BRIDGE TO J.C. PENNEY

TITLE			
PHASE II SITE DEVELOPMENT PLAN			
Des By	MJP, RLH	Scale	1" = 50'
Proj. No.	95019B	Date	12-15-97
Chk By	JWR	Approved	
			6 OF 30

LITTLE PATUXENT PARKWAY

MATCH LINE SEE SHEET 7



Date: _____

Professional Engr. No. 10881

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE Dec 3, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Chief, Development Engineering Division	MK	10/19/97	DATE
Chief, Division of Land Development		1/13/98	DATE
Director		1/14/98	DATE
4-27-99	REV. EAST ENTRY		
9-16-99	REV. P. RD. 4 & H. 4RD. 414, ADD LANE AREA FF. RD. 4, REV. P.		

THE MALL IN COLUMBIA
PHASE II
TOWN CENTER
SECTION 2, AREA 1
HOWARD COUNTY, MD
LOTS 10, 11, 23, 28, 29, 36, 37, 38, 41

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

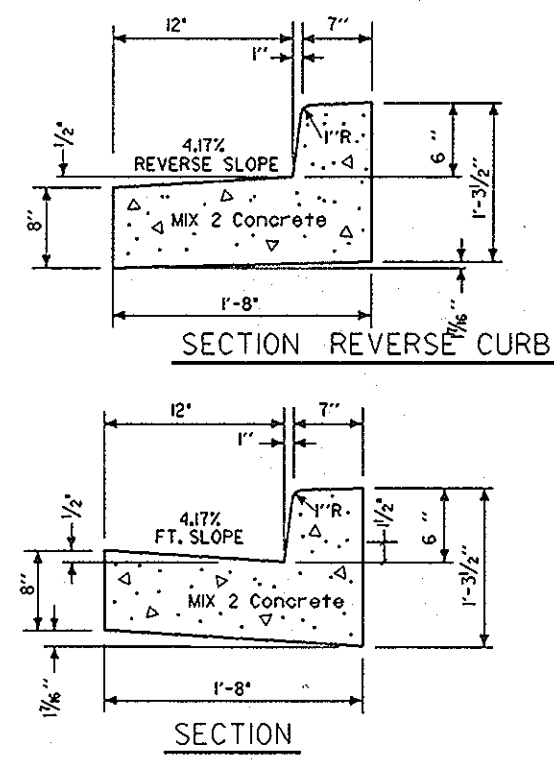
DMW
Darr McCreary-Walkers, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3833
Fax 296-4705

A Team of Land Planners,
Landscape Architects,
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Environmental Professionals

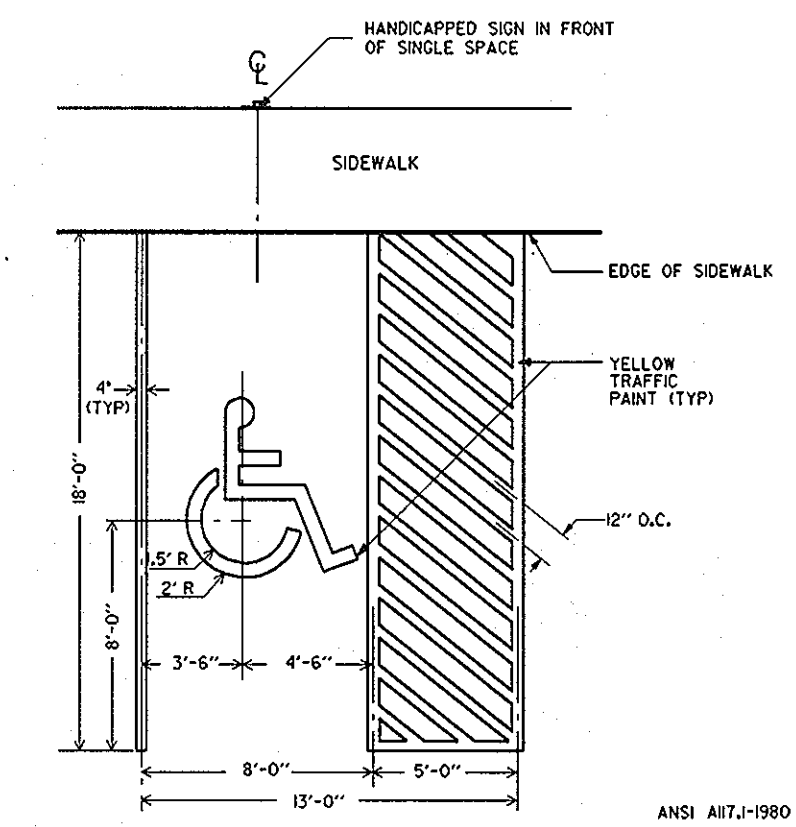
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PHASE II SITE DEVELOPMENT PLAN			
Des By	MJP	Scale	1"=30'
Om By	FJZ, MSS	Date	12-15-97
Chk By	JWR	Approved	
Proj. No.	95019B	8 OF 30	

- LEGEND**
- EX. CONTOUR
 - EX. WATER
 - EX. SANITARY SEWER
 - EX. STORM DRAIN
 - EX. GAS
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 - 6" REV. COMB. C&G
 - CONC. LIGHT POLE ISLAND
 - CONCRETE

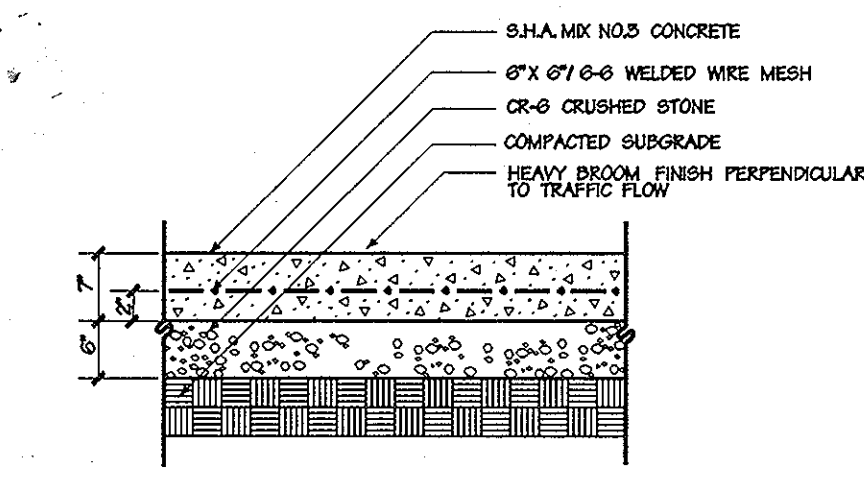
SDP-98-44



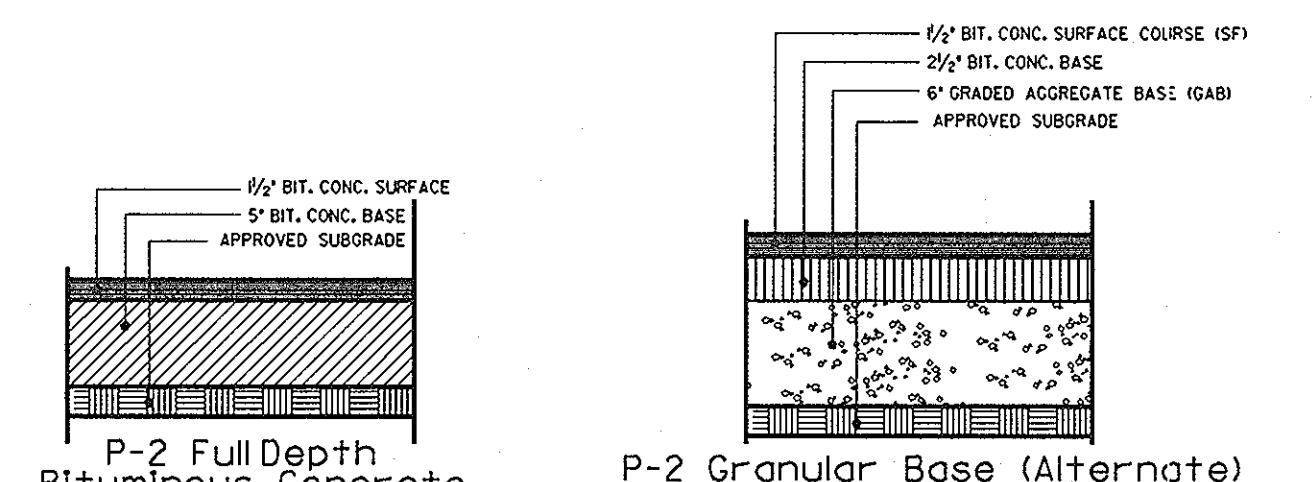
Concrete Curb, Typ.
Not To Scale



Handicapped Parking Space
Not To Scale

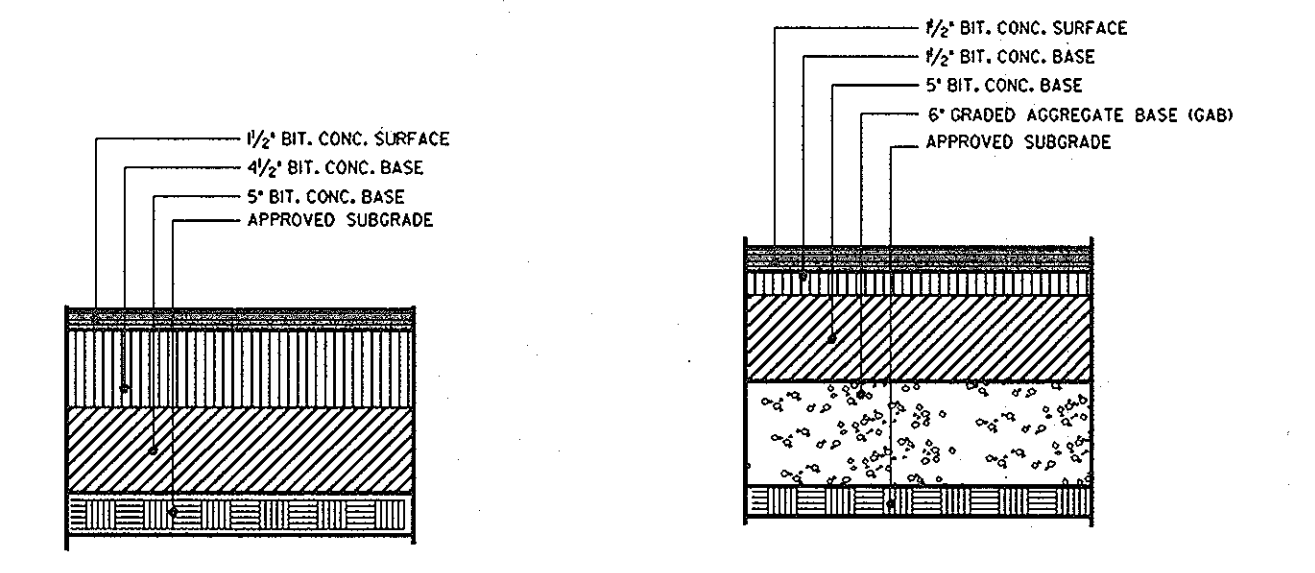


Loading Dock Concrete Paving
Not To Scale



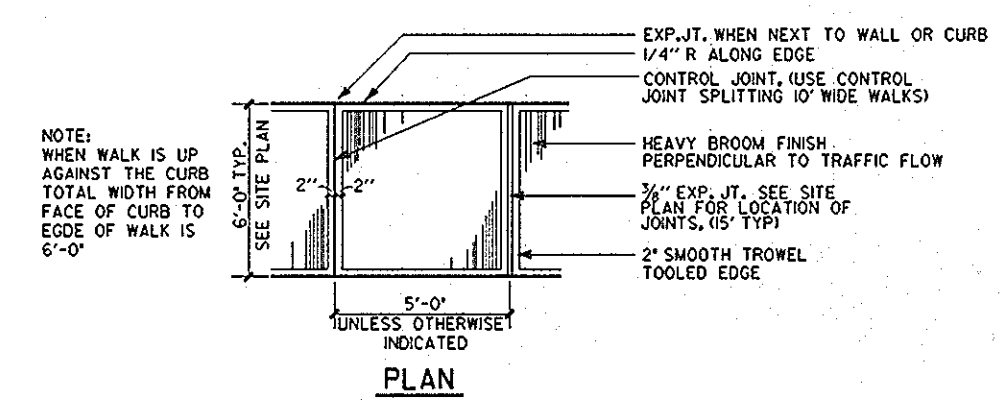
Typical Paving Section (P-2)
Not To Scale

See Sheet 8 For Paving Legend

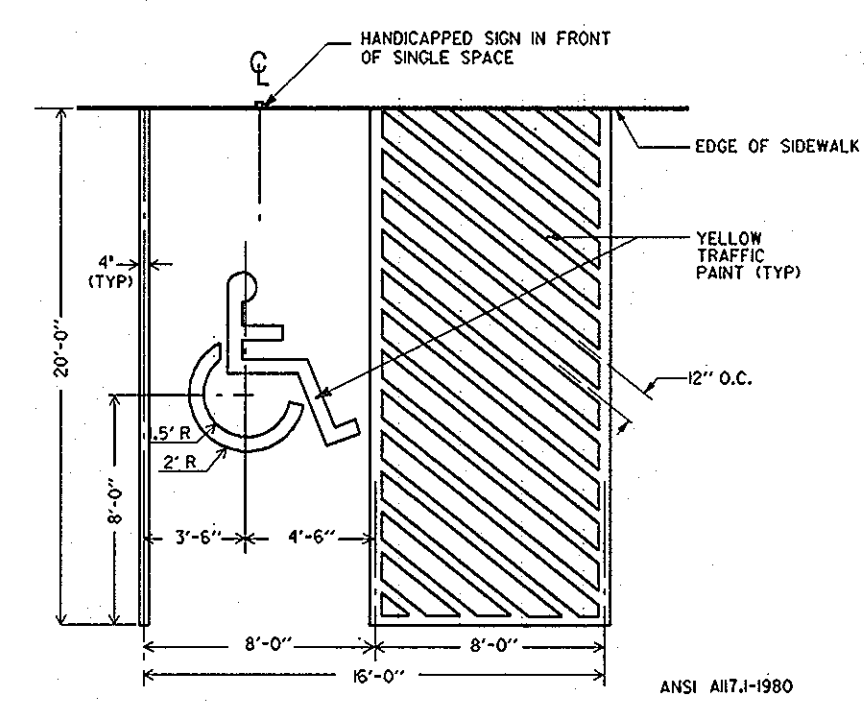


Typical Paving Section (P-5)
Not To Scale

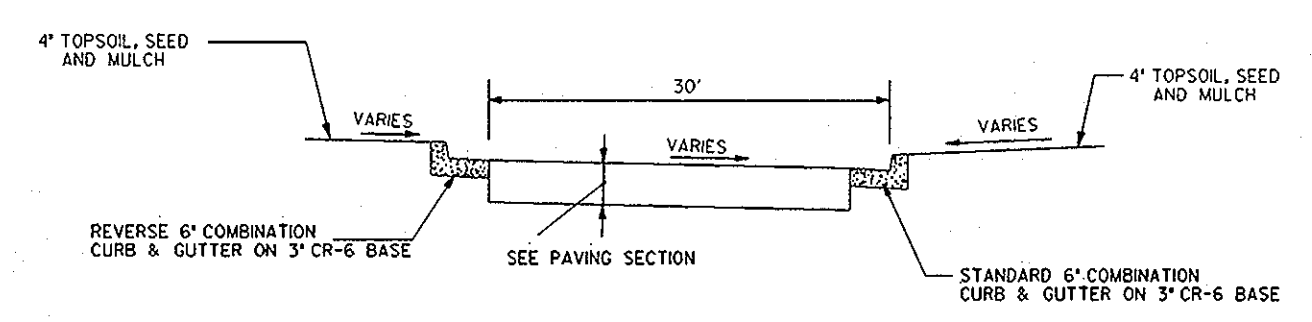
- NOTES:
- 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK
 - CONCRETE TO BE MIX NO. 2
 - WHEN SIDEWALK ADJUTS CURB, WALK SHALL BE 1/4" ABOVE CURB WITH 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL BETWEEN SIDEWALK AND CURB
 - CONCRETE WALK WITHIN 5' OF BUILDING SHALL HAVE 5' OF #6 STONE OR APPROVED EQUAL AS A BASE COURSE



Concrete Walk
Not To Scale

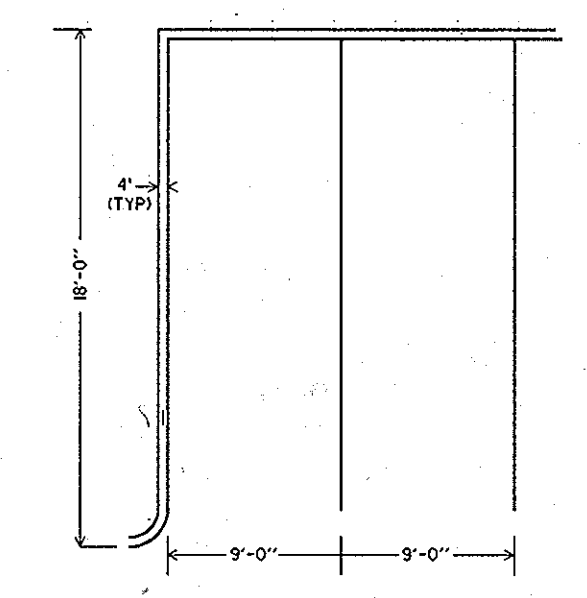


Handicapped Van Parking Space
Not To Scale

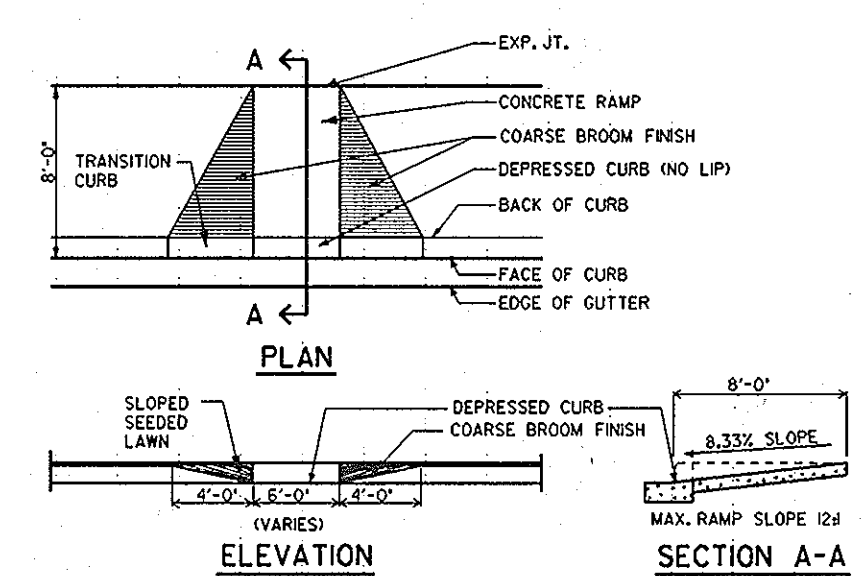


Typical Section
Ring Road (Private Drive)
Not To Scale

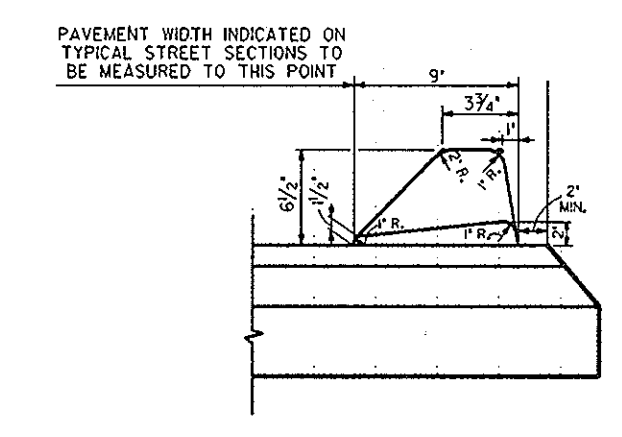
APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE Dec. 3, 1997



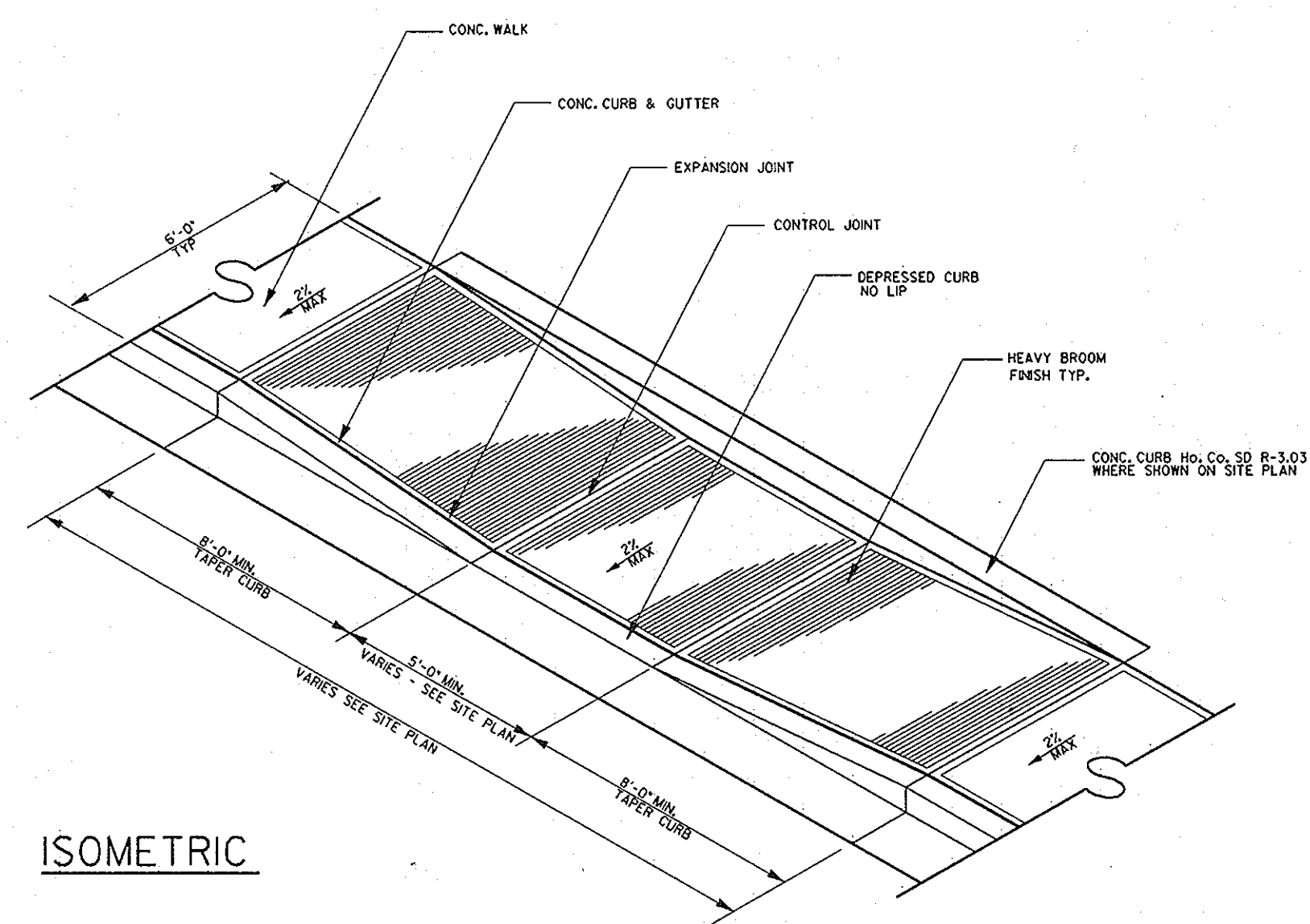
Standard Parking Space
Not To Scale



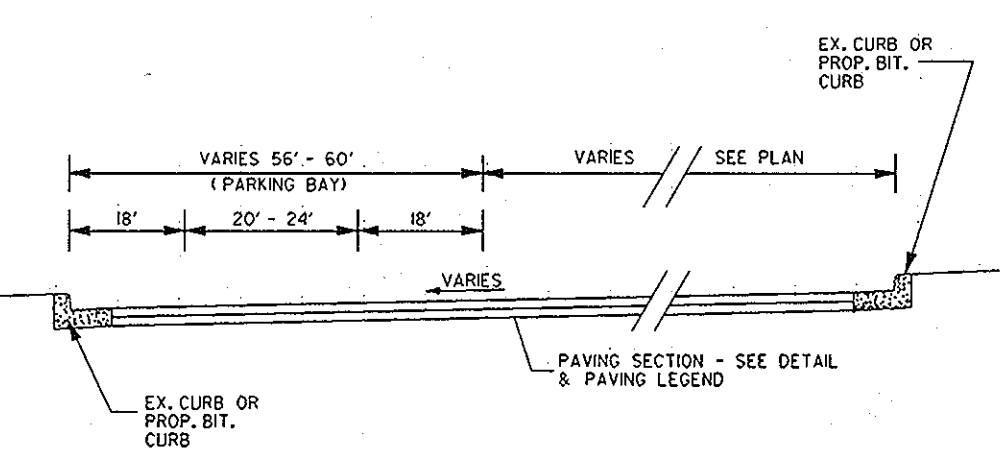
Handicapped Ramp - C
Not To Scale



Standard Bituminous Curb
Not To Scale



Handicapped Ramp - A
Not To Scale



Typical Section
Private Parking
Not To Scale

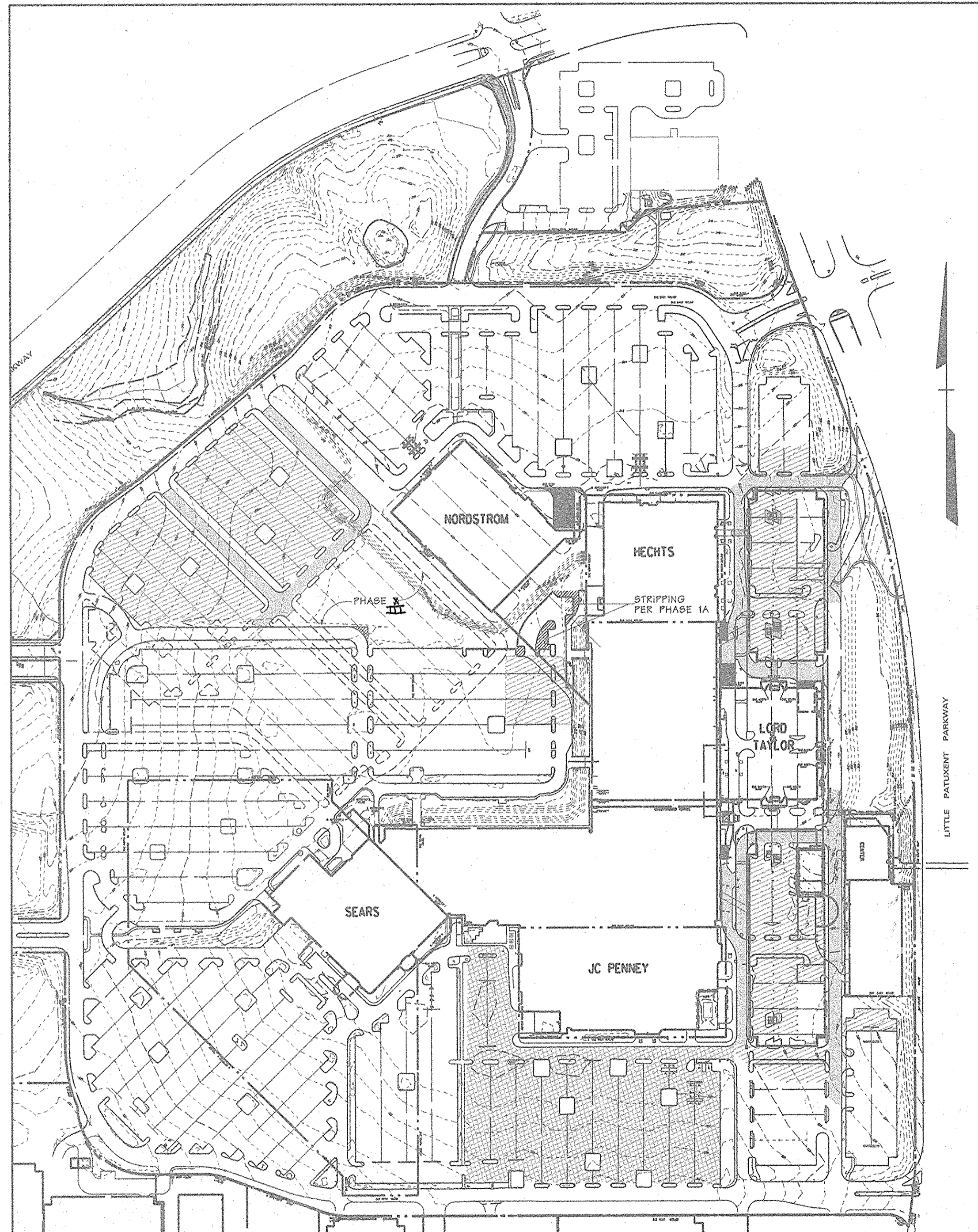
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Chris Dammann 1/10/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
John W. Miller 1/13/98
 CHIEF, DIVISION OF LAND DEVELOPMENT
James R. Rutter 1/14/98
 DIRECTOR

Date No. Revision Description
THE MALL IN COLUMBIA
 PHASE II
 TOWN CENTER
 SECTION 2 AREA 1 & SECTION 2 AREA 2
 HOWARD COUNTY, MD
 LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41
 OWNER /DEVELOPER:
 THE HOWARD RESEARCH & DEVELOPMENT CORP.
 COLUMBIA MALL, INC.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

DMW
 Draft McCreary-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-3333
 Fax 296-4705
 A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

12/17/97
 Date
 PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 J. W. RUTTER
 1959
 PROFESSIONAL ENGINEER

TITLE
PHASE II
SITE DETAILS
 Des By MJP Scale AS SHOWN Proj. No. 95019 B
 Dwn By CLZ Date 12 /15 /97
 Chk By JWR Approved 9 OF 30

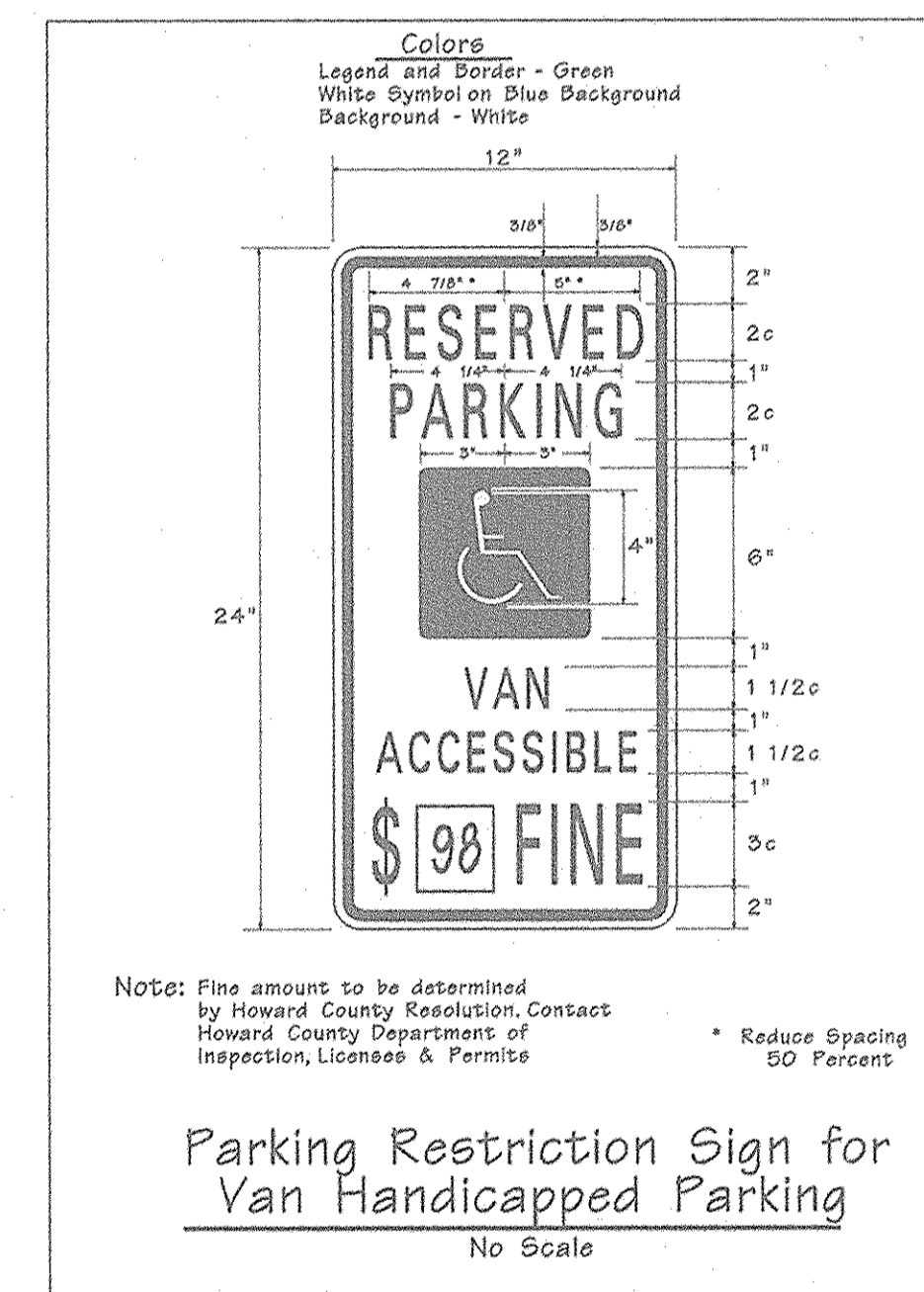
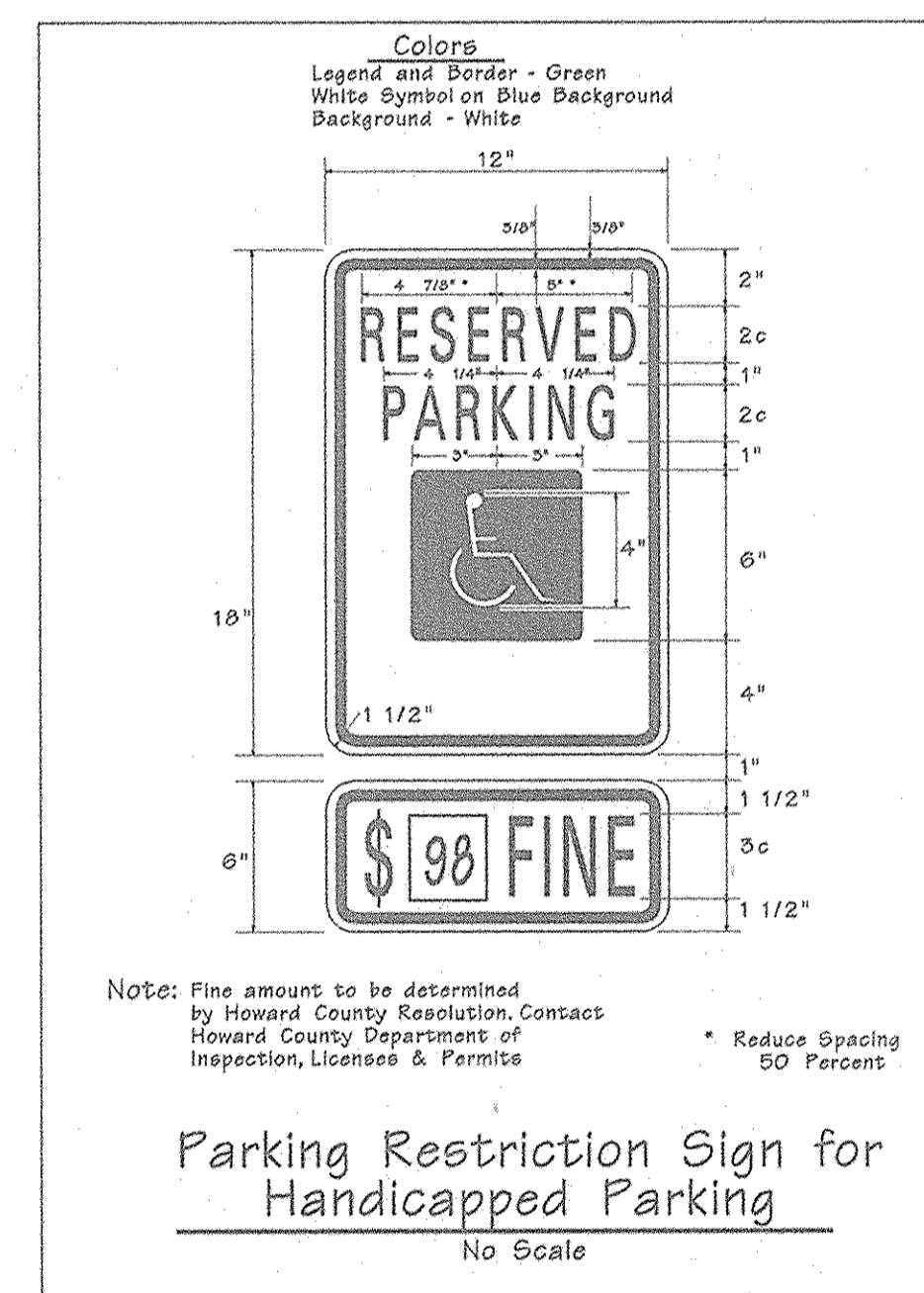
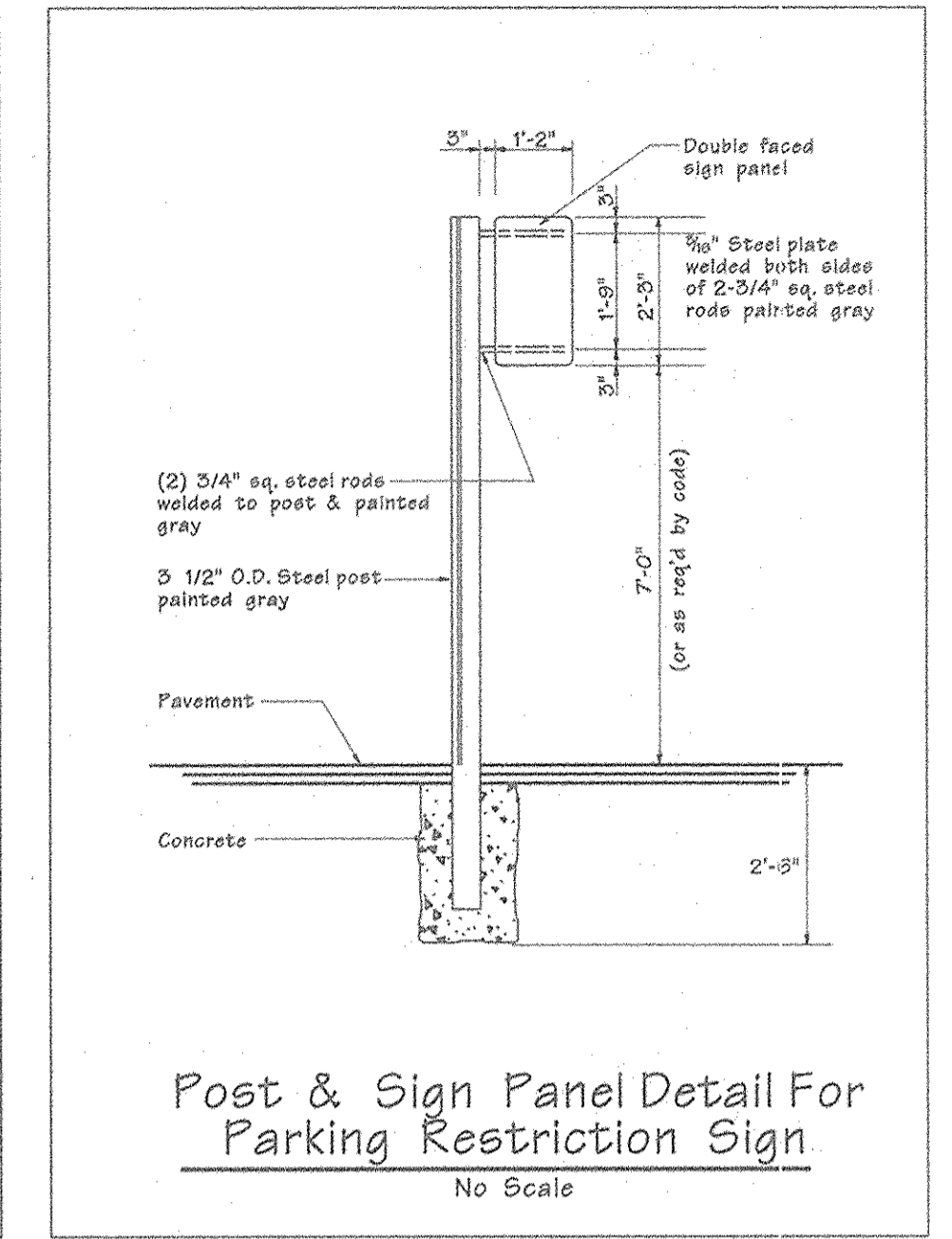
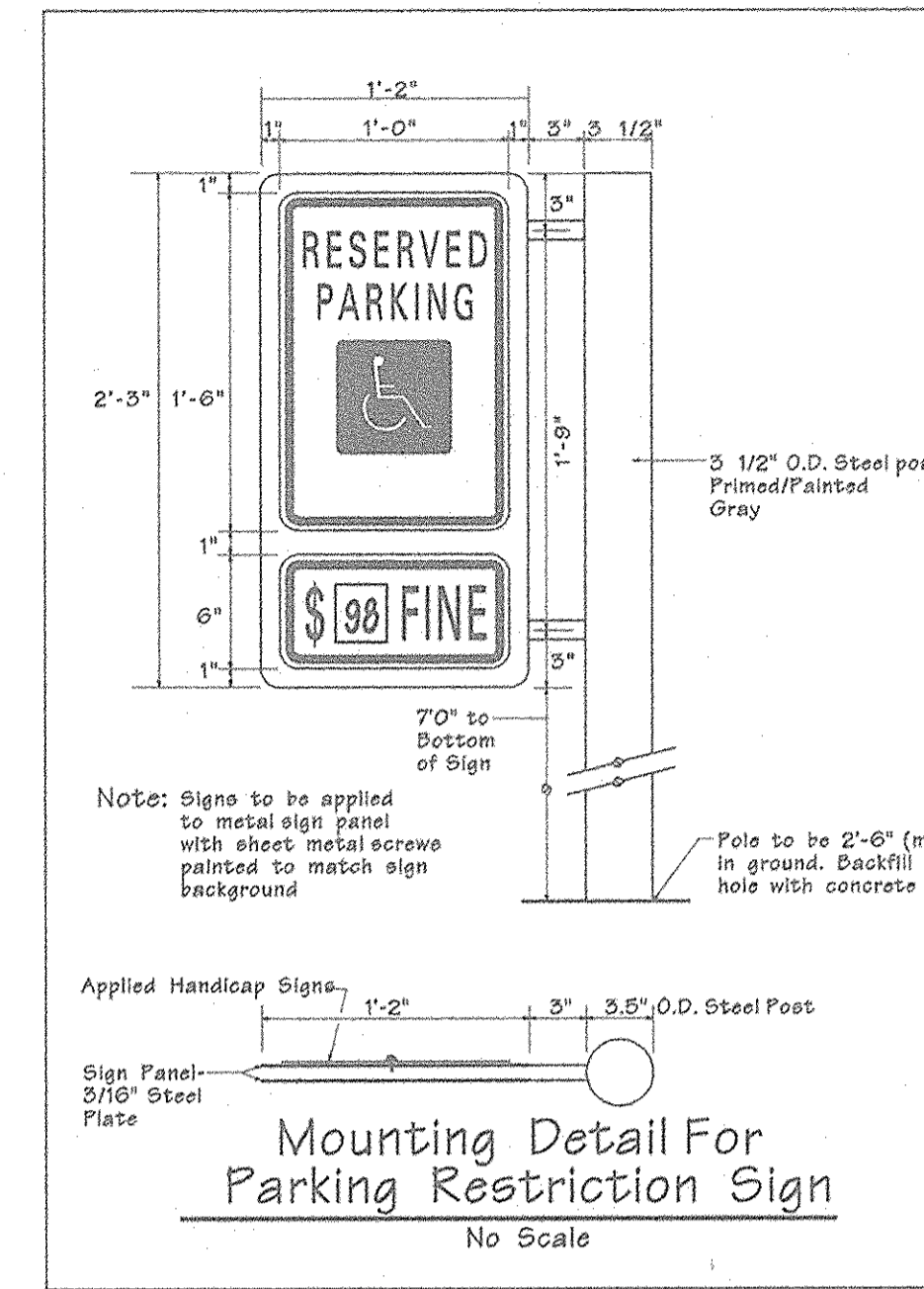
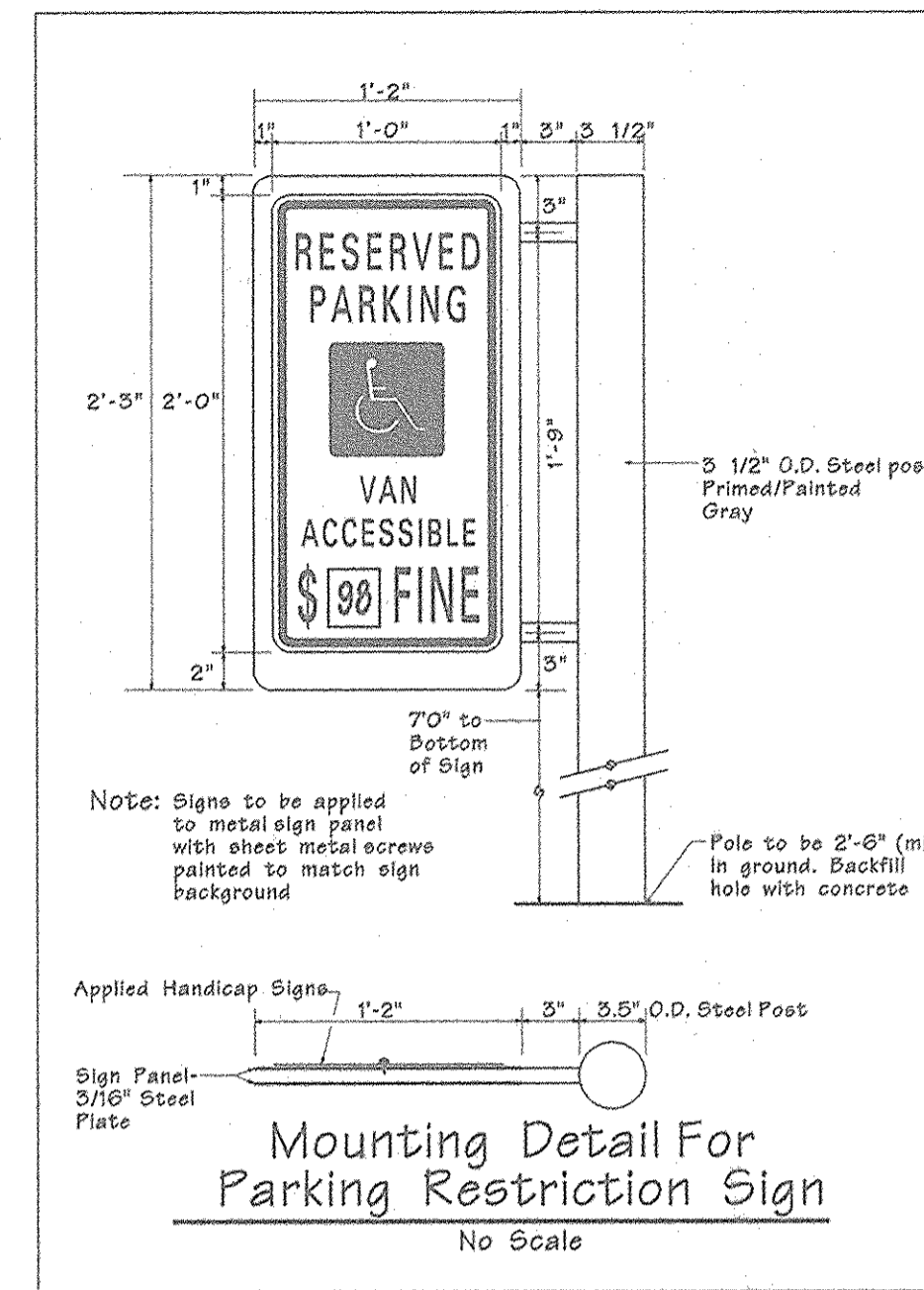


PAVING LEGEND

SCALE: 1" = 200'
SEE SHEETS 2-6 FOR SAW CUT LOCATIONS

SYMBOL	DESCRIPTION
	P-6 PAVING
	P-2 PAVING
	1" ± OVERLAY
	CONCRETE

SEE SHEET 9 FOR PAVING DETAILS.



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE Dec 3, 1997
RS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	1/13/98 DATE
<i>[Signature]</i> CHIEF, DIVISION OF LAND DEVELOPMENT	1/13/98 DATE
<i>[Signature]</i> DIRECTOR	1/14/98 DATE

Revision Description

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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
Fossom, Maryland 21266
(410) 296-8333
Fax 296-4706

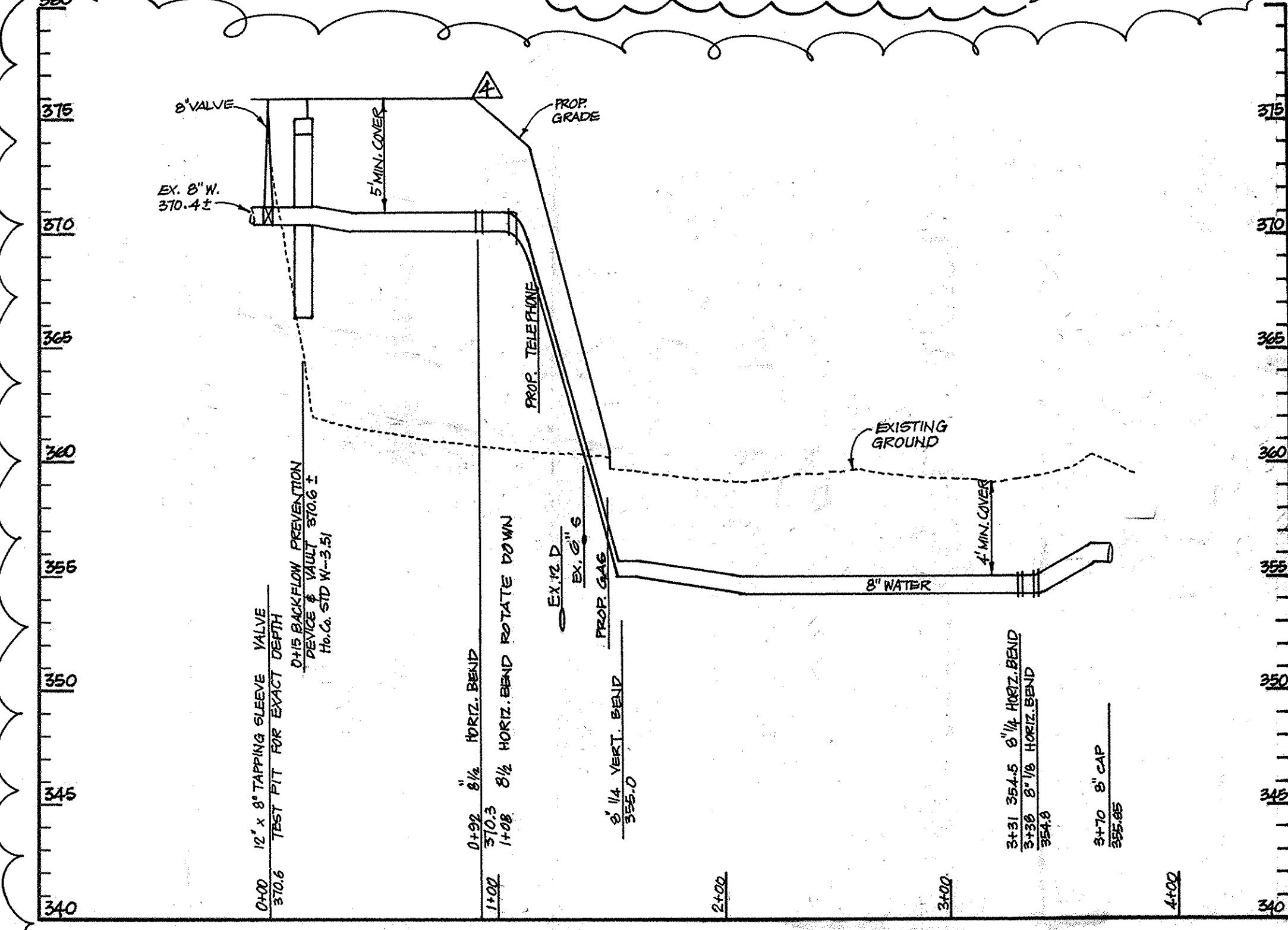
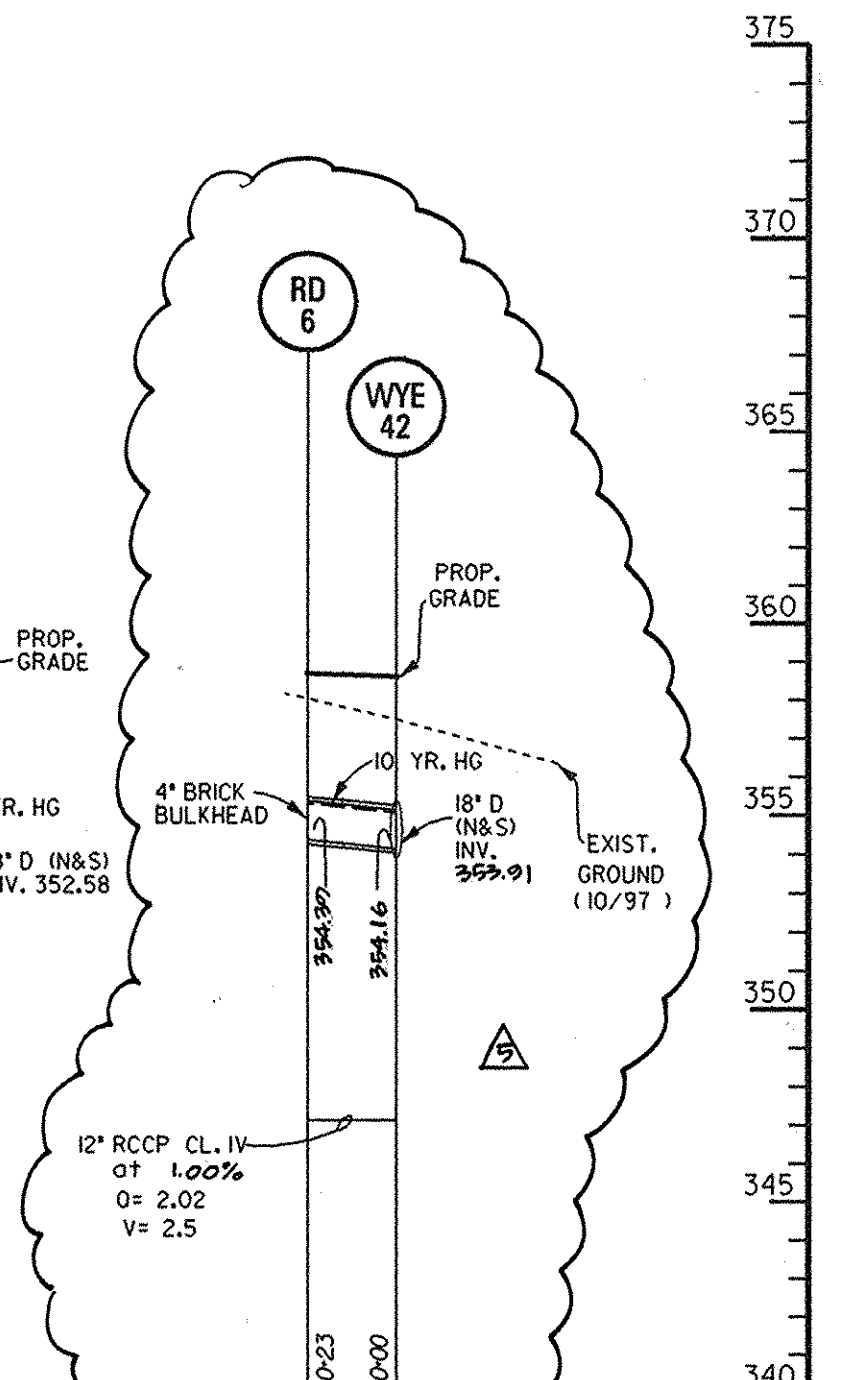
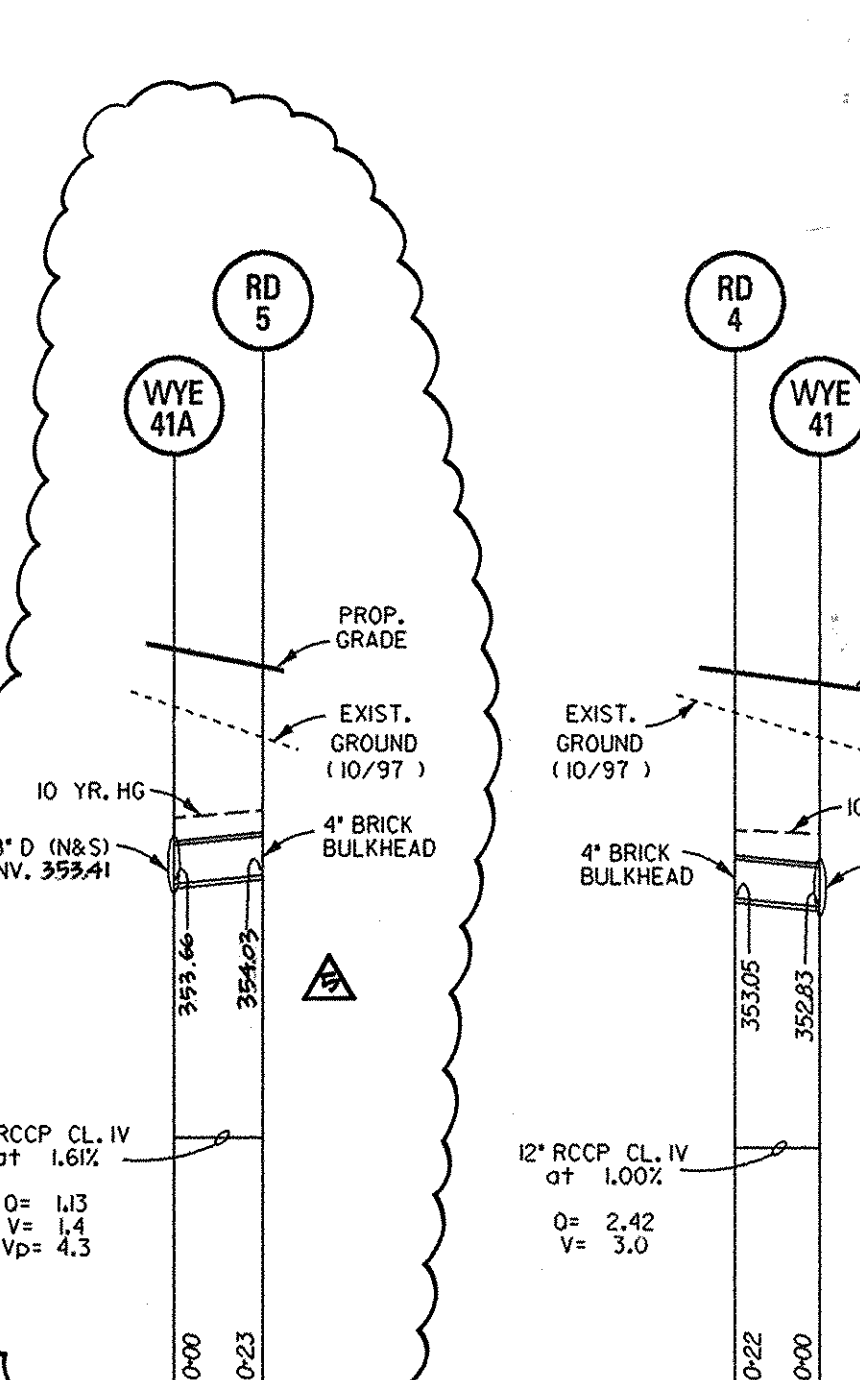
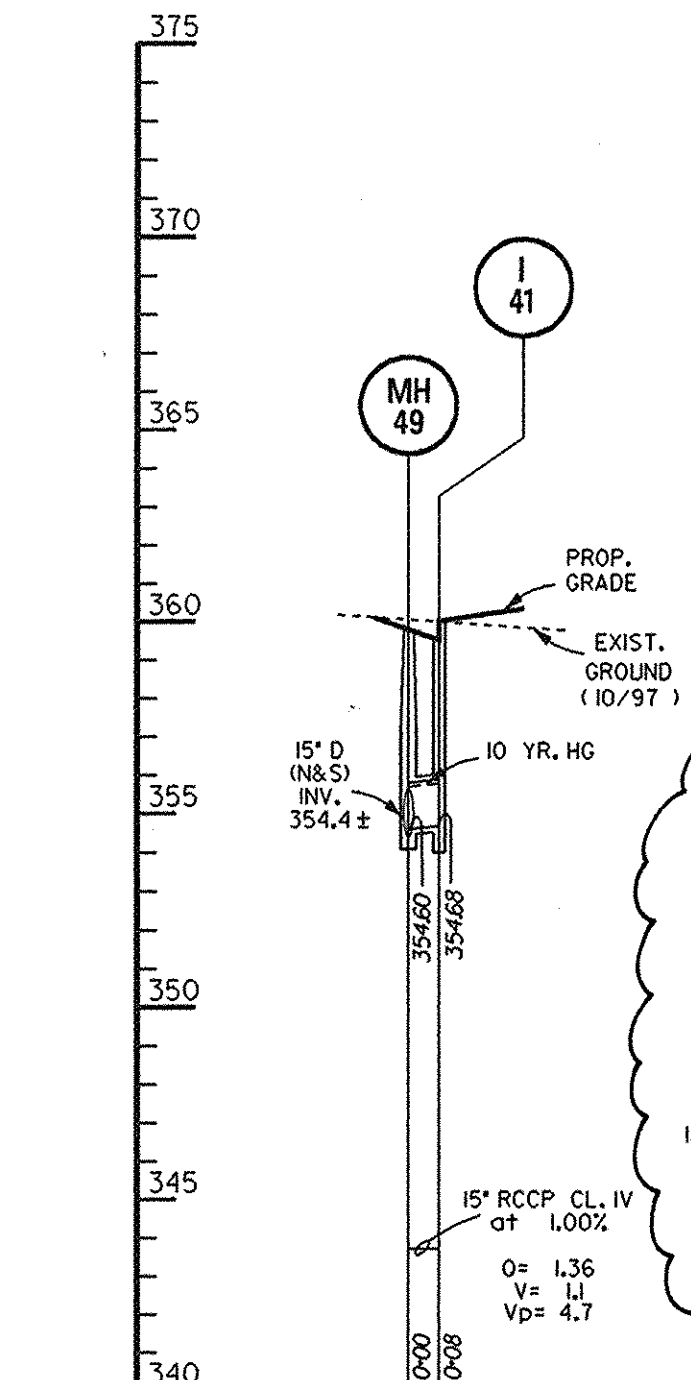
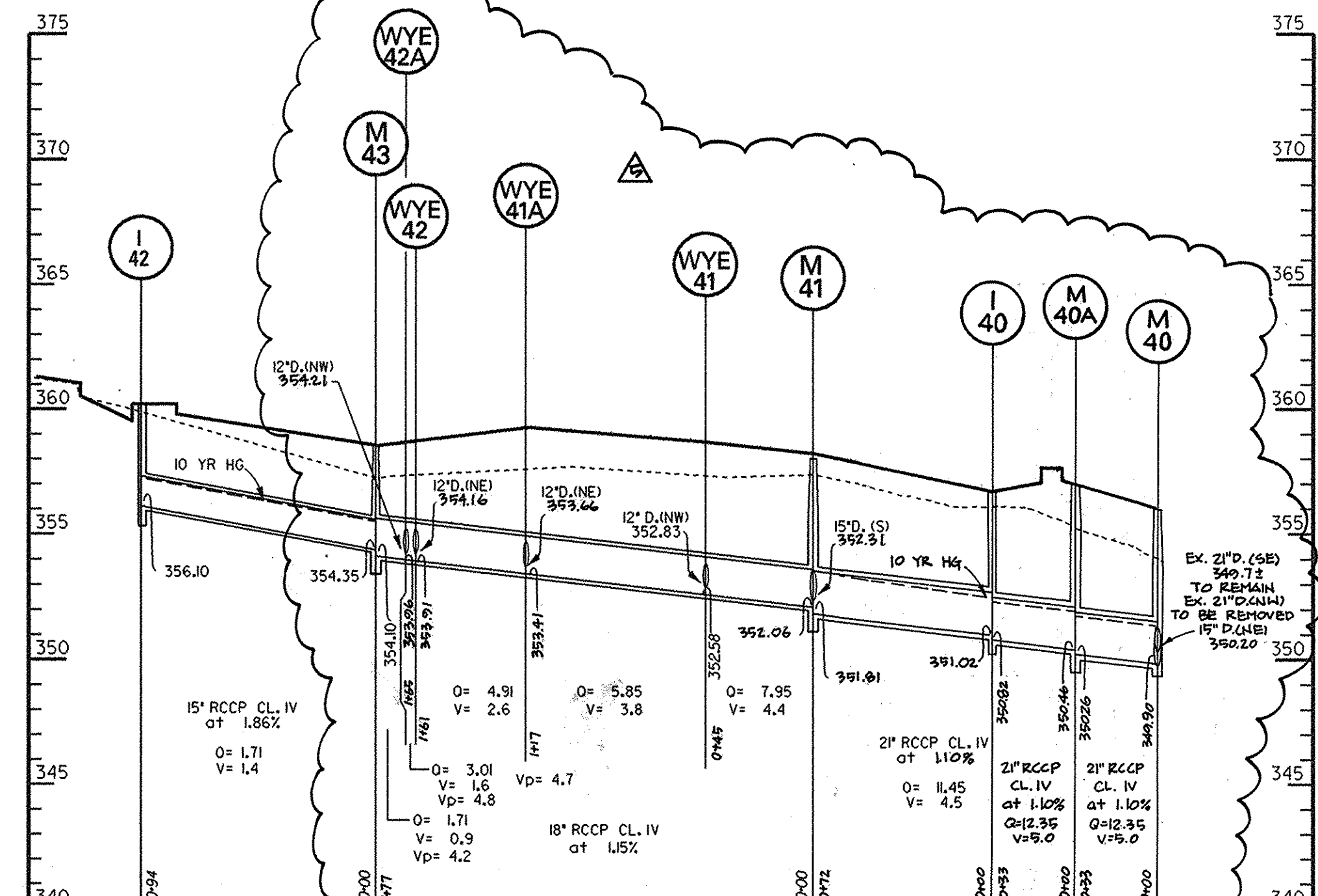
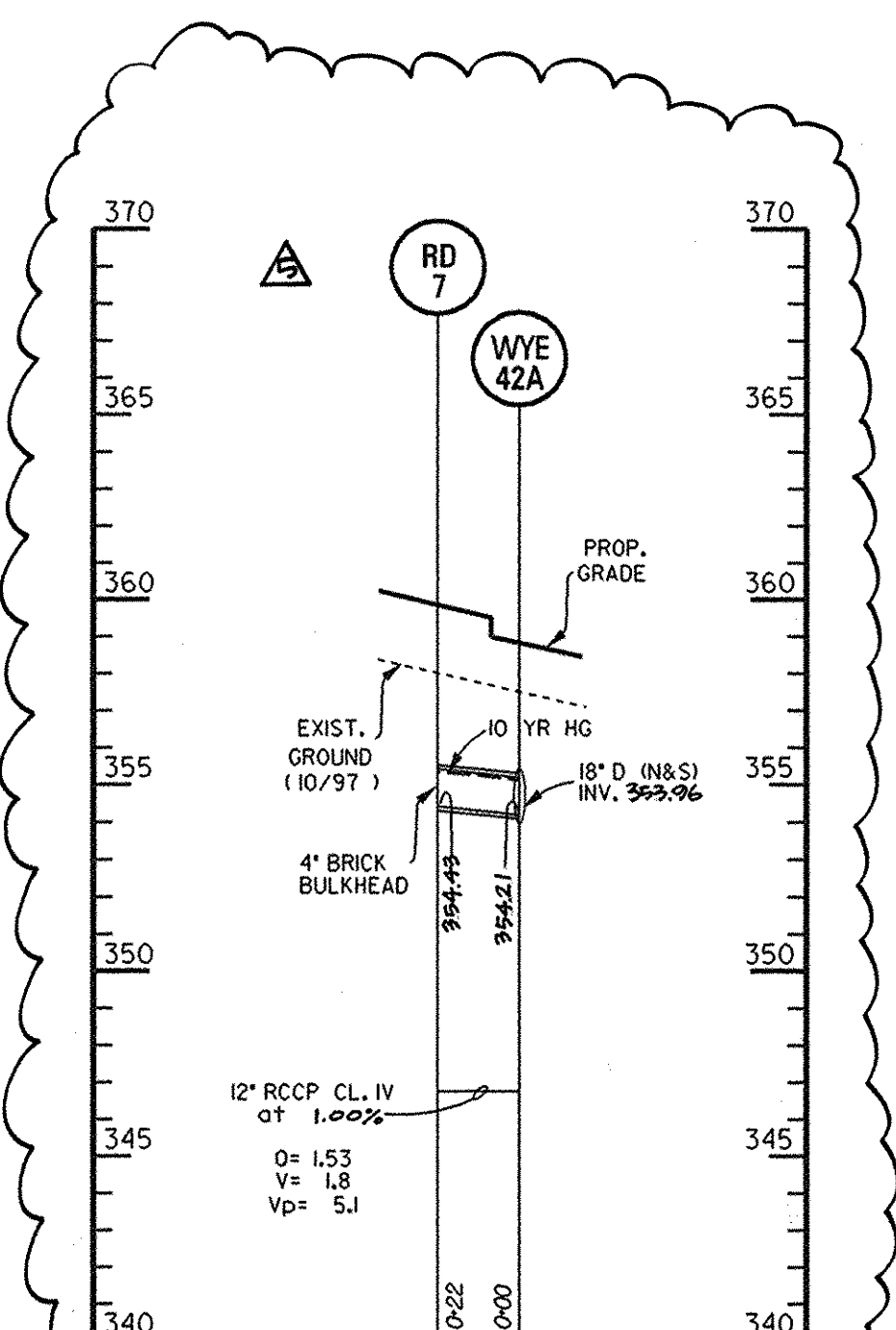
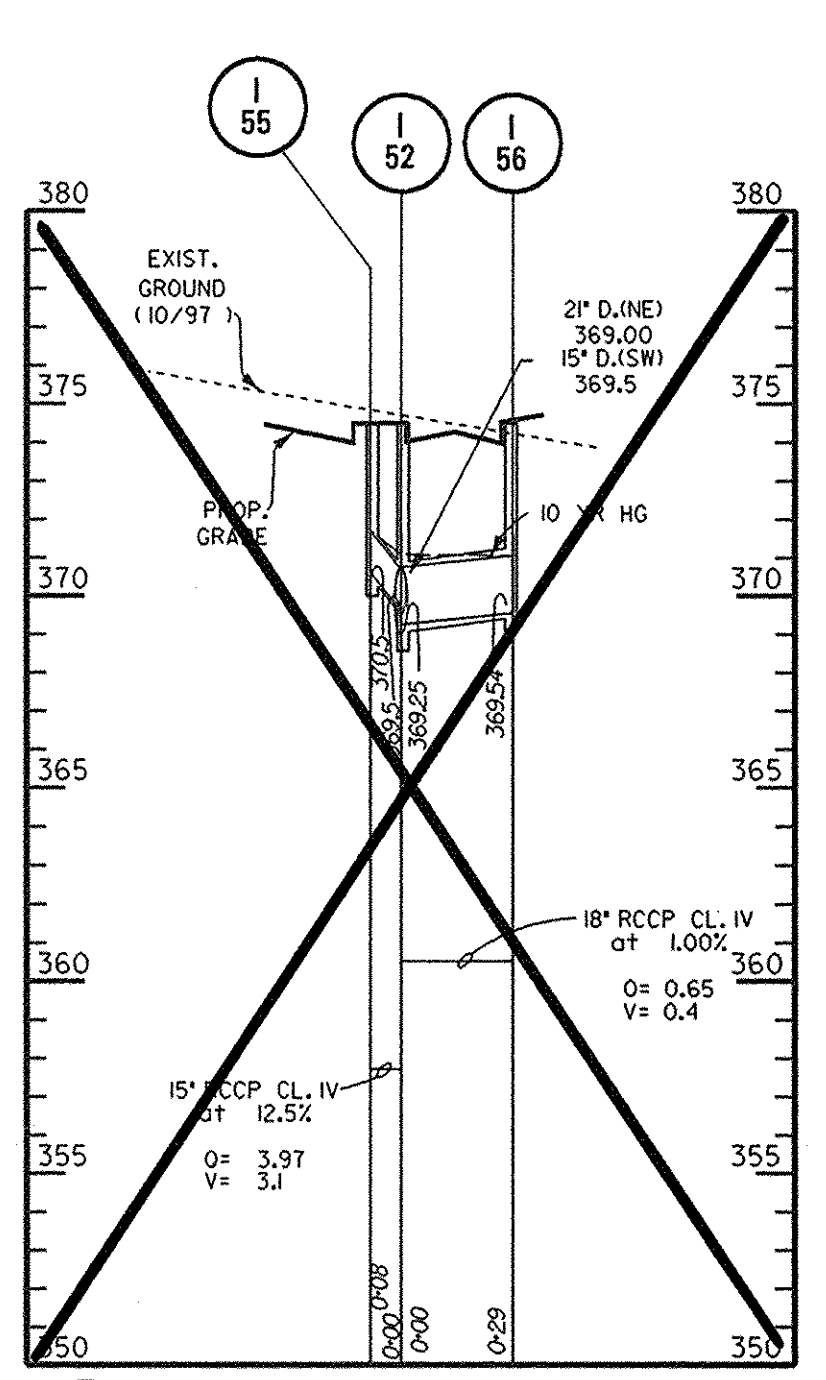
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

12/1/97
Date

Professional Engr. No. _____

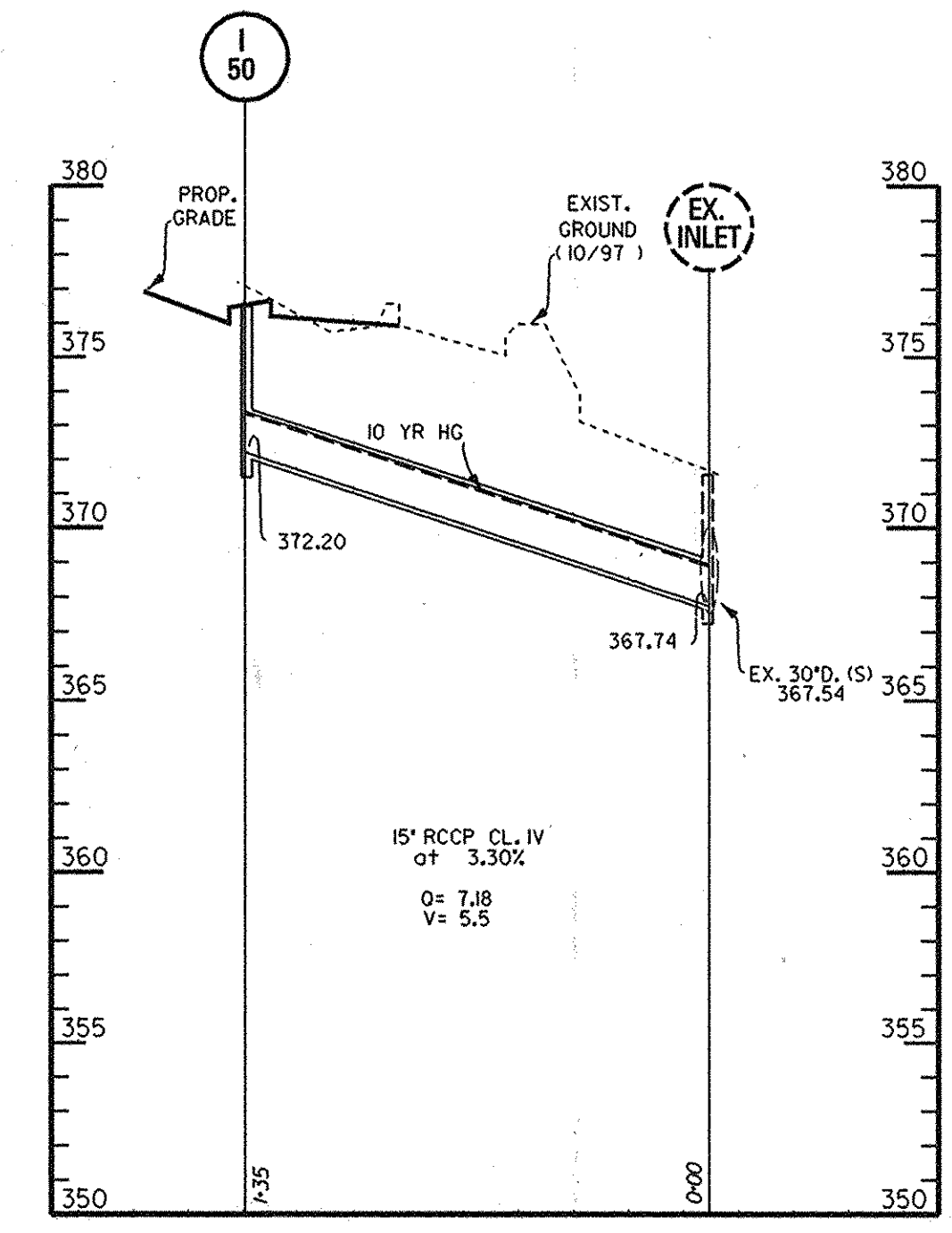
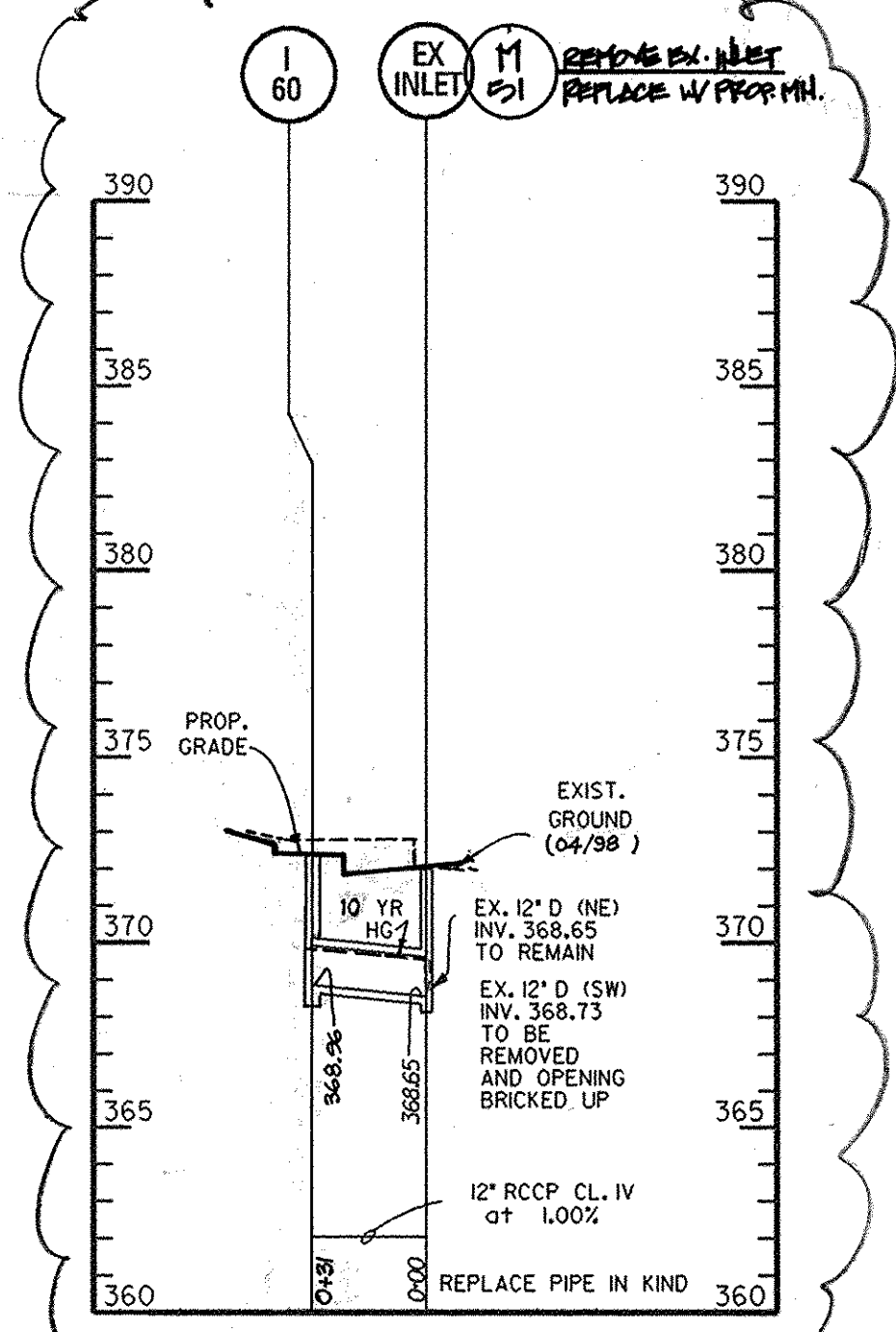
TITLE			
PHASE II PAVING LEGEND & SITE DETAILS			
Des By	MJP	Scale	AS SHOWN
Drn By	CLZ	Date	10 / 29 / 97
Chk By	JWR	Approved	
			Proj. No. 95019 B 10 OF 30

SDP-98-44



WATER LINE COORDINATE TABLE

STATION	BEND	COORDINATES
0+00	EX. 12\"/>	
0+92	1/8\"/>	
1+08	1/8\"/>	
2+31	1/8\"/>	
3+38	1/8\"/>	
3+70	8\"/>	



APPROVED
PLANNING BOARD
 of HOWARD COUNTY
 DATE Dec. 3, 1997

 RB

9-16-98 **REVISE SD PROFILES & SCHEDULES.**
 07-08-98 **4 SD. PROFILE FROM I-60 TO M51**
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 _____ 1/18/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
 _____ 1/12/98
 CHIEF, DIVISION OF LAND DEVELOPMENT
 _____ 1/14/98
 DIRECTOR

STRUCTURE SCHEDULE

NO.	TYPE	SIZE	INV. OUT	TOP ELEV.	LOCATION
WYE40	WYE CONN.	12"x15"	353.62	HO. CO. SD. LI	
WYE41	WYE CONN.	12"x18"	352.58	HO. CO. SD. LI	
WYE41A	WYE CONN.	12"x18"	353.18	HO. CO. SD. LI	
WYE42	WYE CONN.	12"x18"	353.68	HO. CO. SD. LI	
WYE42A	WYE CONN.	12"x18"	353.73	HO. CO. SD. LI	

MANHOLE SCHEDULE

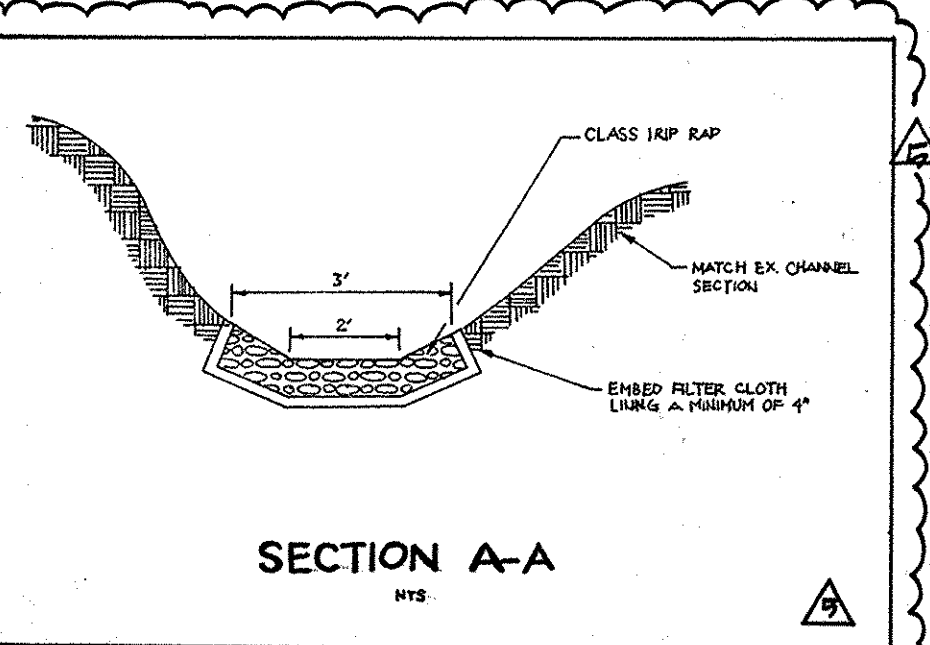
NO.	TYPE	SIZE	INV. OUT	TOP ELEV.	DETAIL	LOCATION
M-40	PRECAST	48"	349.75	356.0	G-5.12	ROAD 'C' STA. 3125-4' LT.
M-41	PRECAST	48"	351.81	358.2	G-5.12	ROAD 'C' STA. 3125-4' LT.
M-42	PRECAST	48"	354.57	358.8	G-5.12	N 503819.0 E 839891.7
M-43	PRECAST	48"	354.10	358.7	G-5.12	N 503883.0 E 839891.7
M-44	PRECAST	48"	353.2 ±	359.6	G-5.12	N 503996.4 E 839891.7
M-45	PRECAST	48"	354.4 ±	358.2	G-5.12	ROAD 'H' STA. 3197-7' LT. ±
M-46	PRECAST	60"	348.2 ±	358.9	G-5.13	ROAD 'I' STA. 118-19' RT. ±
M-46A	PRECAST	48"	353.92	358.1	G-5.12	N 502707.5 E 839889.3
M-47	PRECAST	48"	354.49	358.7	G-5.12	N 502869.3 E 839889.3
M-49	PRECAST	48"	354.4 ±	359.8	G-5.12	ROAD 'H' STA. 118-19' RT. ±
M-50	PRECAST	60"	350.1 ±	357.0	G-5.13	ROAD 'G' STA. 1417-4' LT. ±
EX. M-3						
M-60	PRECAST	48"	352.91 ±	362.0	G-5.12	

INLET SCHEDULE

NO.	TYPE	Q. 2YR	INV. OUT	**TOP ELEV.	DETAIL	WIDTH	LOCATION
I-40	A-5	0.83	350.83	356.1	SD 4.22	2'-6"	ROAD 'C' STA. 3125-4' LT.
I-41	A-5	0.94	354.68	360.1	SD 4.01	2'-6"	ROAD 'C' STA. 3125-4' LT.
I-42	A-10	1.18	356.10	360.1	SD 4.01	2'-6"	ROAD 'F' STA. 118-19' RT.
I-43	A-10	2.59	354.97	359.0	SD 4.01	2'-6"	ROAD 'F' STA. 3+44
I-44	DOUBLE 'S'	3.42	353.00	357.0	SD 4.34		ROAD 'G' STA. 3+59 ±
I-46	A-10	1.95	353.27	358.8	SD 4.01	2'-6"	ROAD 'H' STA. 3197-7' LT. ±
I-47	A-5	2.06	354.85	358.5	SD 4.01	2'-6"	ROAD 'H' STA. 3197-7' LT. ±
I-48	A-10	0.0	339.36	357.5	SD 4.02	6'-0"	ROAD 'H' STA. 3+99
I-49	A-5	0.94	356.20	360.2	SD 4.01	2'-6"	ROAD 'H' STA. 5+55
I-50	A-10	4.95	372.20	377.5	SD 4.02	2'-6"	ROAD 'H' STA. 118-19' RT. ±
I-51	A-10	5.03	370.41	374.5	SD 4.02	2'-6"	ROAD 'H' STA. 118-19' RT. ±
I-52	A-10	2.01	369.00	374.5	SD 4.02	2'-6"	ROAD 'D' STA. 1+52
I-53	A-5	1.53	372.60	376.6	SD 4.01	2'-6"	ROAD 'C' STA. 3+63
I-54	A-5	1.42	370.50	374.5	SD 4.01	2'-6"	ROAD 'D' STA. 1+52
I-55	A-10	0.77	370.50	374.5	SD 4.01	2'-6"	ROAD 'D' STA. 1+52
I-56	A-5	0.47	369.54	374.5	SD 4.01	2'-6"	ROAD 'D' STA. 1+52
I-57	A-10	2.59	351.00	355.5	SD 4.02	2'-6"	ROAD 'E' STA. 2+98
I-58	A-10	2.30	351.00	355.5	SD 4.02	2'-6"	ROAD 'G' STA. 2+46
I-59	A-10	1.42	354.00	358.5	SD 4.02	2'-6"	ROAD 'I' STA. 118-19' RT. ±
I-60	A-5	0.68	368.96	372.5	SD 4.01	2'-6"	ROAD 'A' STA. 0+20
I-61	A-5	0.68	368.30	372.9	SD 4.01	2'-6"	ROAD 'A' STA. 1+67

LOCATION SCHEDULE

No.	LOCATION
RD 1	N 501750.8 E 839869.7
RD 2	N 503710.0 E 839869.7
RD 3	N 503650.5 E 839915.8
RD 4	N 503868.7 E 839869.6
RD 5	N 503944.9 E 839931.8
RD 6	N 503989.0 E 839931.8
RD 7	N 503989.0 E 839869.6
RD 8	N 502797.5 E 839931.2
RD 9	N 502797.5 E 839869.6
RD 10	N 5030391.0 E 83996.8
RD 11	N 50294.8 E 839865.2
RD 12	N 50380.5 E 83991.8
RD 12A	N 50381.0 E 83992.3
RD 13	N 50359.2 E 839867.8
RD 14	N 503037.9 E 839855.9
S-1	ROAD 'F' STA. 2102-19' LT.
S-2	ROAD 'H' STA. 4177-19' LT.
W-1	ROAD 'F' STA. 2143-19' LT.



MANHOLE SCHEDULE (Continued)

M-61	PRECAST	48"	353.12	362.0	G-5.12	BUILD OVER EX. PIPE
M-61	PRECAST	48"	368.02	372.3	G-5.12	
M-40A	PRECAST	48"	352.26	357.0	G-5.12	ROAD 'G' STA. 3194-11' RT. ±
M-92	PRECAST	60"	339.52	357.6	G-5.13	ROAD 'I' STA. 0+19-8' LT. ±
M-93	PRECAST	60"	340.04	358.1	G-5.13	ROAD 'I' STA. 1+05-8' LT. ±

ALL INVERTS TO BE FULLY DEVELOPED
 • PROVIDE GRANITE BOTTOM
 • TC ELEV. UNLESS NOTED
 • PROVIDE RETICULAR GRATE

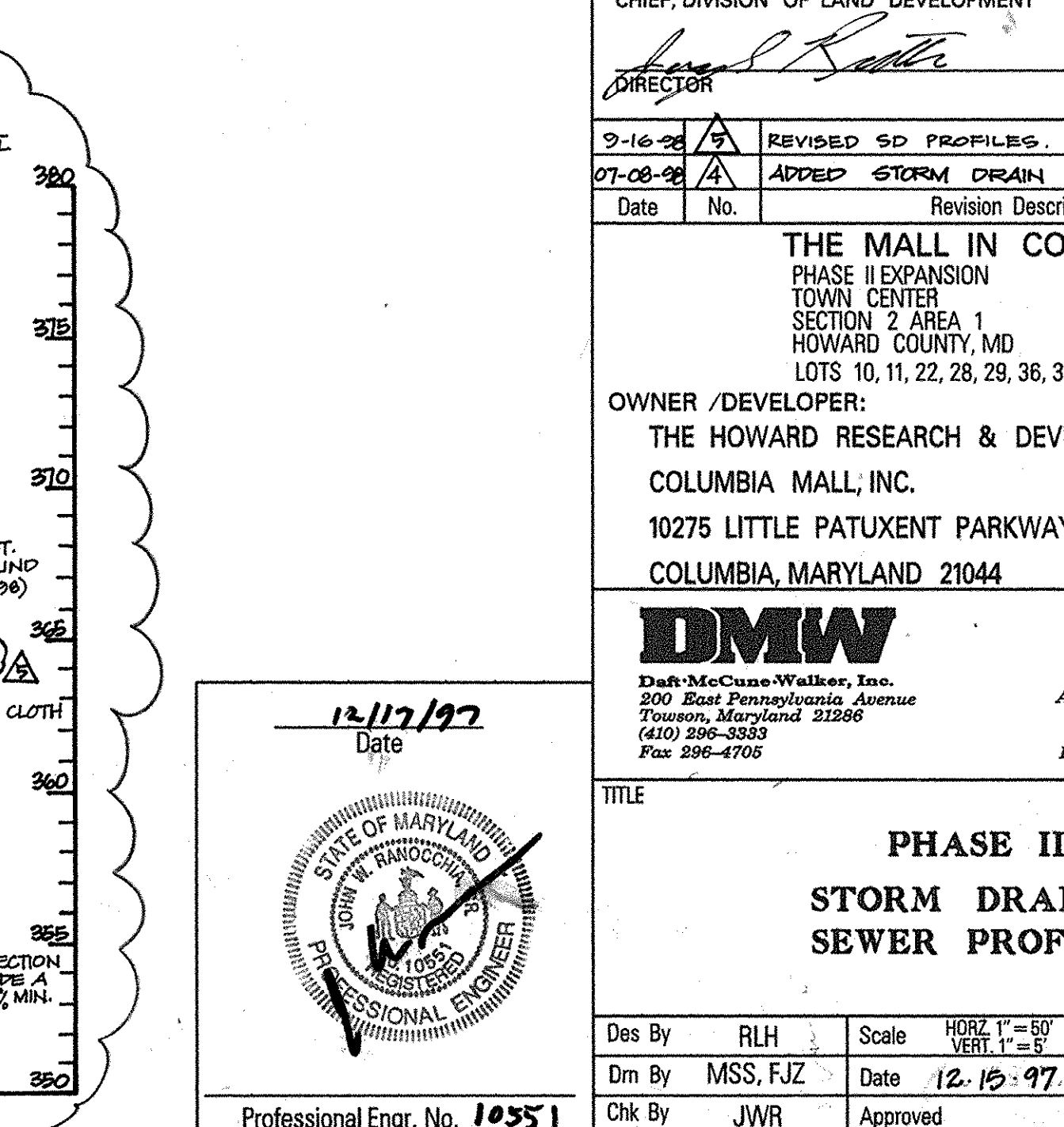
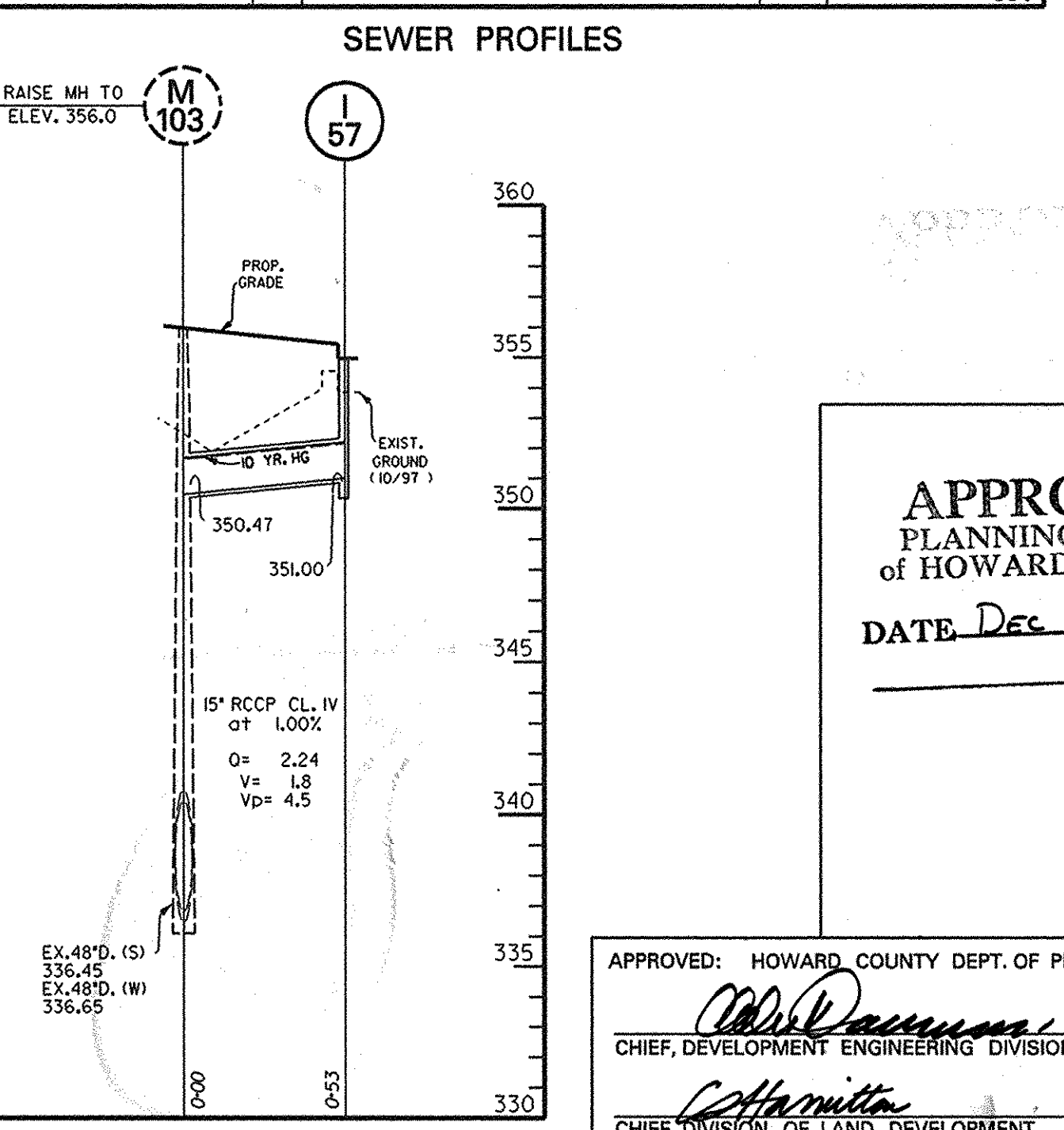
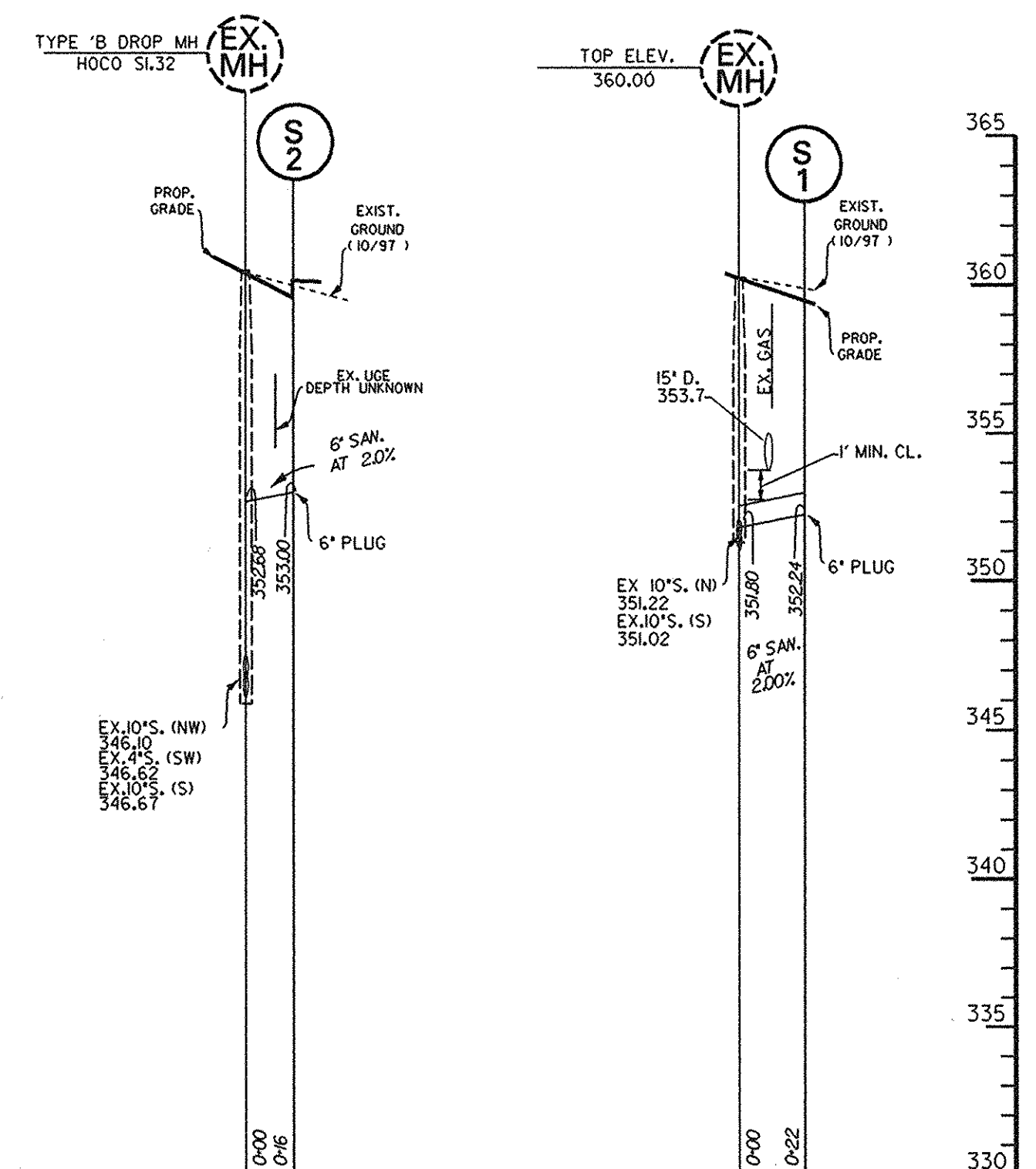
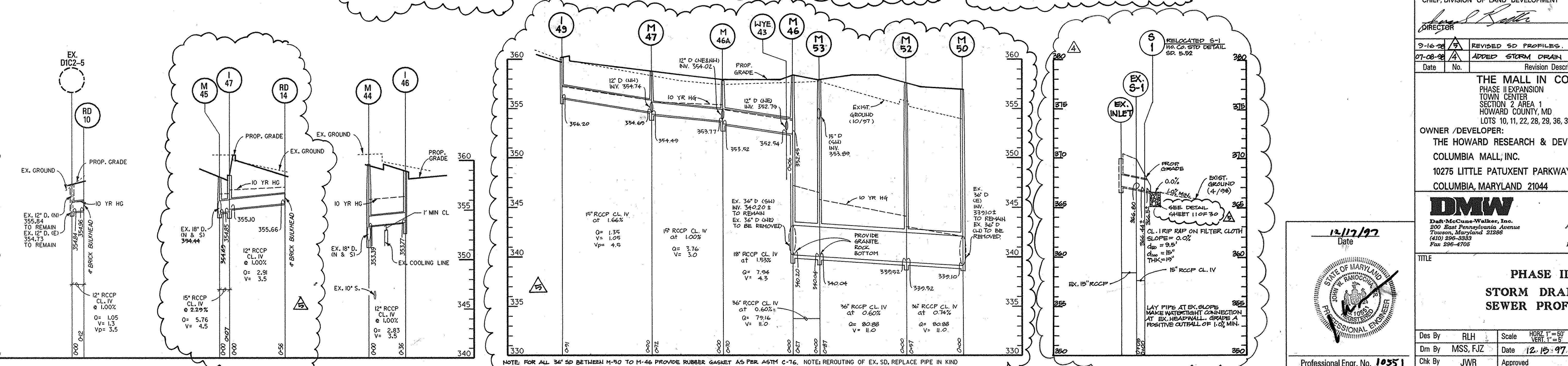
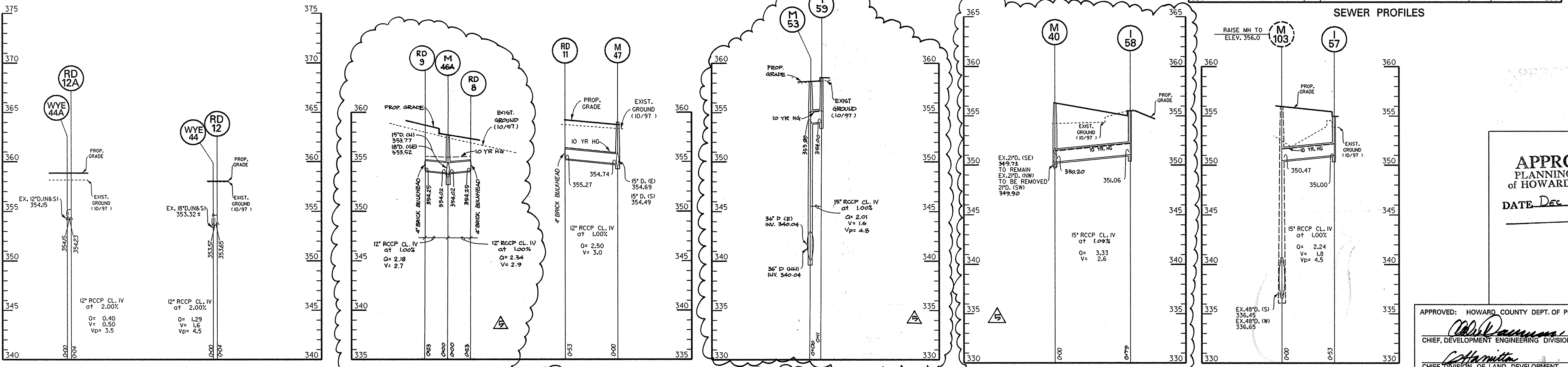
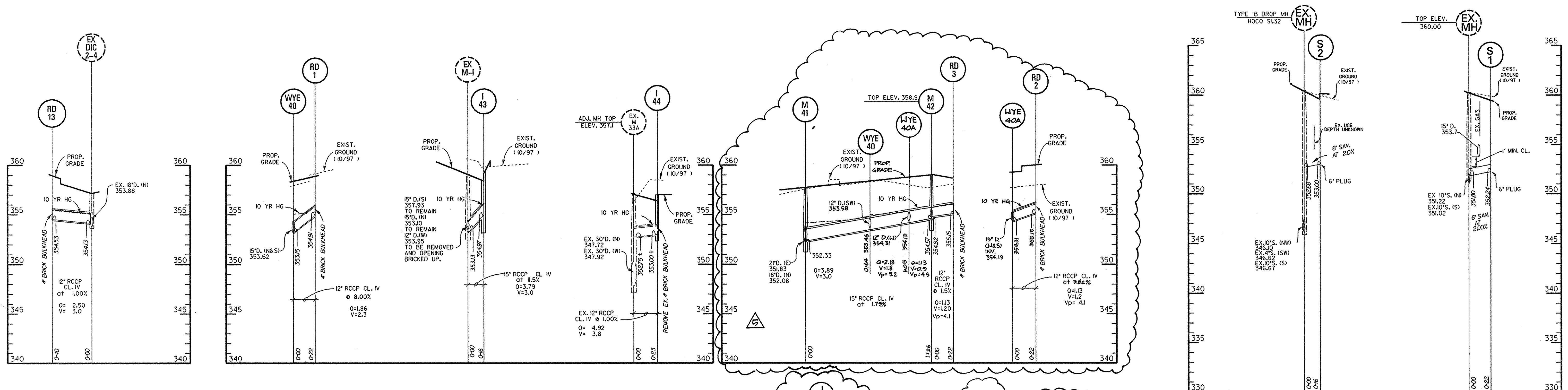
12/17/97
 Date
 Professional Engr. No. 10551

THE MALL IN COLUMBIA
 PHASE II EXPANSION
 TOWN CENTER
 SECTION 2 AREA 1
 HOWARD COUNTY, MD
 LOTS 10, 11, 22, 28, 36, 37, 38, 41
 OWNER / DEVELOPER:
 THE HOWARD RESEARCH & DEVELOPMENT CORP.
 COLUMBIA MALL, INC.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

DMW
 Date: McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax: 296-4706
 A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

TITLE
PHASE II
STORM DRAIN PROFILES

Des By RLH Scale HORIZ 1"=50'
 Dm By MSS, FJZ Date 12/15/97 VERT. 1"=5'
 Chk By JWR Approved
 Proj. No. 95019B
 11 OF 30



APPROVED
PLANNING BOARD
OF HOWARD COUNTY
 DATE Dec 3, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Chad Dammann 1/6/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MKK
Colleen Miller 1/13/98
 CHIEF, DIVISION OF LAND DEVELOPMENT
James R. Kauter 1/14/98
 DIRECTOR

9-16-97 / 07-08-97
 REVISIONS:
 1. REVISED SD PROFILES.
 2. ADDED STORM DRAIN PROFILE

THE MALL IN COLUMBIA
 PHASE II EXPANSION
 TOWN CENTER
 SECTION 2 AREA 1
 HOWARD COUNTY, MD
 LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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

DMW
 Dan McCaskey-Walton, Inc.
 300 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-4339
 Fax 296-4706

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

12/17/97
 Date

Professional Engr. No. 10551

12 OF 30

NOTE: FOR ALL 36" SD BETWEEN M-50 TO M-46 PROVIDE RUBBER GASKET AS PER ASTM C-76. NOTE: REROUTING OF EX. SD, REPLACE PIPE IN KIND

SOILS LEGEND

HYDROLOGIC SOILS	KEY	NAME	SLOPE
D	Ba	BAILE SILT LOAM	8 TO 15 PERCENT SLOPES, MODERATELY ERODED
C	BrC2	BRANDYWINE LOAM	8 TO 15 PERCENT SLOPES, MODERATELY ERODED
C	BrD3	BRANDYWINE LOAM	15 TO 25 PERCENT SLOPES, SEVERELY ERODED
B	ChB2	CHESTER SILT LOAM	3 TO 8 PERCENT SLOPES, MODERATELY ERODED
B	GIB2	GLENELG LOAM	3 TO 8 PERCENT SLOPES, MODERATELY ERODED
B	GIC2	GLENELG LOAM	8 TO 15 PERCENT SLOPES, MODERATELY ERODED
C	GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES, MODERATELY ERODED
B	MC2	MANOR LOAM	8 TO 15 PERCENT SLOPES, MODERATELY ERODED
B	MD2	MANOR LOAM	15 TO 25 PERCENT SLOPES, MODERATELY ERODED

SEE SOILS MAP 24

NO.	AREA	C	% IMP
RD-1	0.23	0.95	100
RD-2	0.14	0.95	100
RD-3	0.14	0.95	100
RD-4	0.30	0.95	100
RD-5	0.14	0.95	100
RD-6	0.25	0.95	100
RD-7	0.19	0.95	100
RD-8	0.29	0.95	100
RD-9	0.26	0.95	100
RD-10	0.13	0.95	100
RD-11	0.31	0.95	100
RD-12	0.16	0.95	100
RD-12A	0.05	0.95	100
RD-13	0.33	0.95	100
RD-14	0.36	0.95	100
L-1	0.41	0.95	100
L-2	0.32	0.95	100
L-3	0.33	0.95	100
L-4	0.28	0.95	100
CI-DI	0.67	0.88	90
I-CC	0.41	0.88	90
I-40	0.15	0.95	100
I-41	0.20	0.80	80
I-42	0.24	0.84	85
I-43	0.49	0.91	95
I-44	0.61	0.95	100
I-46	0.35	0.95	100
I-47	0.37	0.93	100
I-48	0.0		
I-49	0.23	0.69	65
I-50	0.96	0.88	90
I-51	1.68	0.91	95
I-52	0.40	0.84	85
I-53	0.36	0.72	70
I-54	0.32	0.76	75
I-55	0.55	0.84	85
I-56	0.08	0.95	100
I-57	0.29	0.91	95
LD-1	0.14	0.95	100
I-58	0.43	0.91	95
I-59	0.26	0.91	95

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE Dec 3, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
John D. ... 1/15/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE
John ... 1/12/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
John ... 1/14/98
 DIRECTOR DATE

Date No. Revision Description
 THE MALL IN COLUMBIA
 PHASE II EXPANSION
 TOWN CENTER
 SECTION 2 AREA 1
 LOTS 10, 11, 22, 28, 29, 36, 37, 38 & 41
 OWNER /DEVELOPER:
 THE HOWARD RESEARCH & DEVELOPMENT CORP.
 COLUMBIA MALL, INC.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

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 200 East Pennsylvania Avenue
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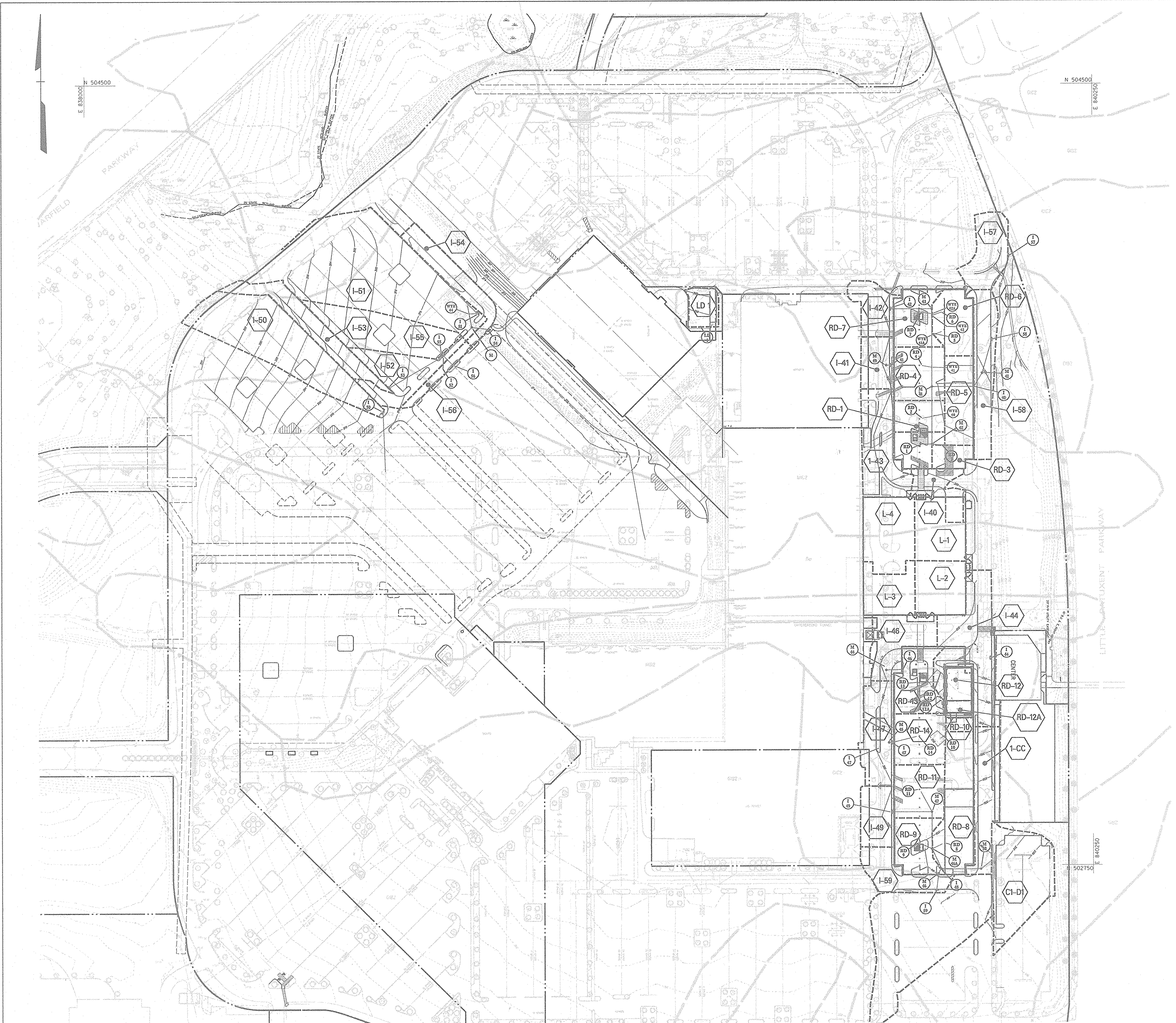
12/11/97
 Date



TITLE
 PHASE II
 STORM DRAIN
 DRAINAGE AREA MAP

Des By	JS	Scale	1" = 100'	Proj. No.	95019B
Dwn By	LEF, MSS	Date	12-15-97	13 OF 30	
Chk By	JWR	Approved			

Professional Engr. No. SDP-98-44



GOVERNOR WARFIELD PARKWAY
PUBLIC ROAD R.O.W. VARIES

NOTE:
WORK IS TO BE STABILIZED AT
THE END OF EACH WORK DAY.

H.R.D.
1535/193
ZONED NEW TOWN

Col. T.C. LOT A-1
SEC. 2 AREA 3
1724/388
ZONED N.T.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT (2 DAYS)
2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES. CLEAN AND REPAIR EXISTING ESC MEASURES. (4 DAYS)
3. ROUGH GRADE SITE (30 DAYS)
4. CONSTRUCT UTILITIES, PROPOSED RING ROAD, PARKING LOTS AND BUILDINGS. INSTALL INLET PROTECTION AFTER PARKING LOT IS STABILIZED AND STORM DRAINS INSTALLED REMOVE TEMP. BITUMINOUS BERM AT RING ROAD. (30 DAYS)
5. FLUSH STORM DRAIN SYSTEM (1 DAY)
6. STABILIZE ALL REMAINING DISTURBED AREAS. (2 DAYS)
7. UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES AND STABILIZE. (14 DAYS)

LEGEND

- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. UTILITIES
- PROP. EDGE OF ROAD
- SILT FENCE
- SUPER SILT FENCE
- INLET PROTECTION
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENT.
- MOUNTABLE BERM
- TEMPORARY SWALE
- EARTH DIKE
- LIMIT OF DISTURBANCE
- TEMP DIKE/SWALE
- PROPOSED CONTOUR
- SPOT ELEVATION
- INLET PROTECTION

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.

Al Edwards 12/15/97
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. Kanuch III 12/11/97
Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Keyl Simmons 12/31/97
Date

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

John R. Rutherford 12/31/97
Date

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE DEC 3, 1997
RB

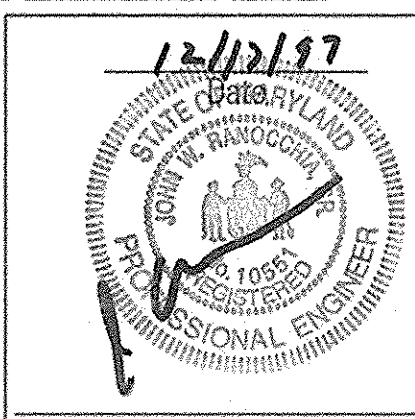
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
John R. Rutherford 1/13/98
DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
John R. Rutherford 1/13/98
DATE
CHIEF, DIVISION OF LAND DEVELOPMENT
John R. Rutherford 1/14/98
DATE
DIRECTOR

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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

DMW
Deft'McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3553
Fax 296-4705

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



TITLE
PHASE II
EROSION AND
SEDIMENT CONTROL PLAN

Des By	MJP,RLH	Scale	1" = 50'	Proj. No.	95019B
Dim By	FJZ	Date	12/15/97		
Chk By	JWR	Approved			14 OF 30

Professional Engr. No.

SEDIMENT TRAP DATA

Trap Number	Trap Type	POST
Existing Drainage Area Ac.		5.8
Interim Drainage Area Ac.		5.8
Proposed Drainage Area Ac.		5.8
Storage Required C.F.	Wet	10,240
	Dry	10,240
	Total	20,480
Storage Provided C.F.	Wet	14,600
	Dry	15,400
	Total	26,500
Existing Ground Elev.		372.0
Top Embankment Elev.		372.0
Water Cross Elev.		370.0
Wet Storage / Outlet Elev.		369.5
Storage Elev.		372.5
Bottom Elev.		368.0
Depth of Channel (ft)		N/A
Outlet Width (ft)		N/A
Bottom Dimension		80' x 30'
Trap Slopes		1% to 2%
Trap Depth	Wet	1.5
	Dry	1.5
Barrel Diameter		18" x 24"
Riser Diameter		24"
Wet Storage Zone Elev.		368.0-369.5
Dry Storage Zone Elev.		369.5-372.0

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
- CONC. LIGHT POLE ISLAND
- SIP
- INLET PROTECTION
- AGIP
- RPS
- REMOVABLE PUMPING STATION
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- MOUNTABLE BERM
- BITUMINOUS CURB DIVERSION
- EARTH DIKE
- INLET PROTECTION

NOTE:
EXISTING SEDIMENT CONTROL
WAS TAKEN FROM PREVIOUSLY
APPROVED SDP 97-107

DEVELOPERS CERTIFICATION
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 following persons to be inspected by the Howard Soil Conservation District.

John W. Rameo 12/15/97 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. Rameo 12/15/97 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.
Sheyl Simmons 12/31/97 Date
Natural Resources Conservation Service

This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
John W. Rameo 12/31/97 Date
Howard Soil Conservation District

Date



Professional Engr. No. 10557

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE Dec. 3, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Mark D. ... 1/8/98 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
William ... 1/8/98 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT
Robert ... 1/14/98 DATE
DIRECTOR

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

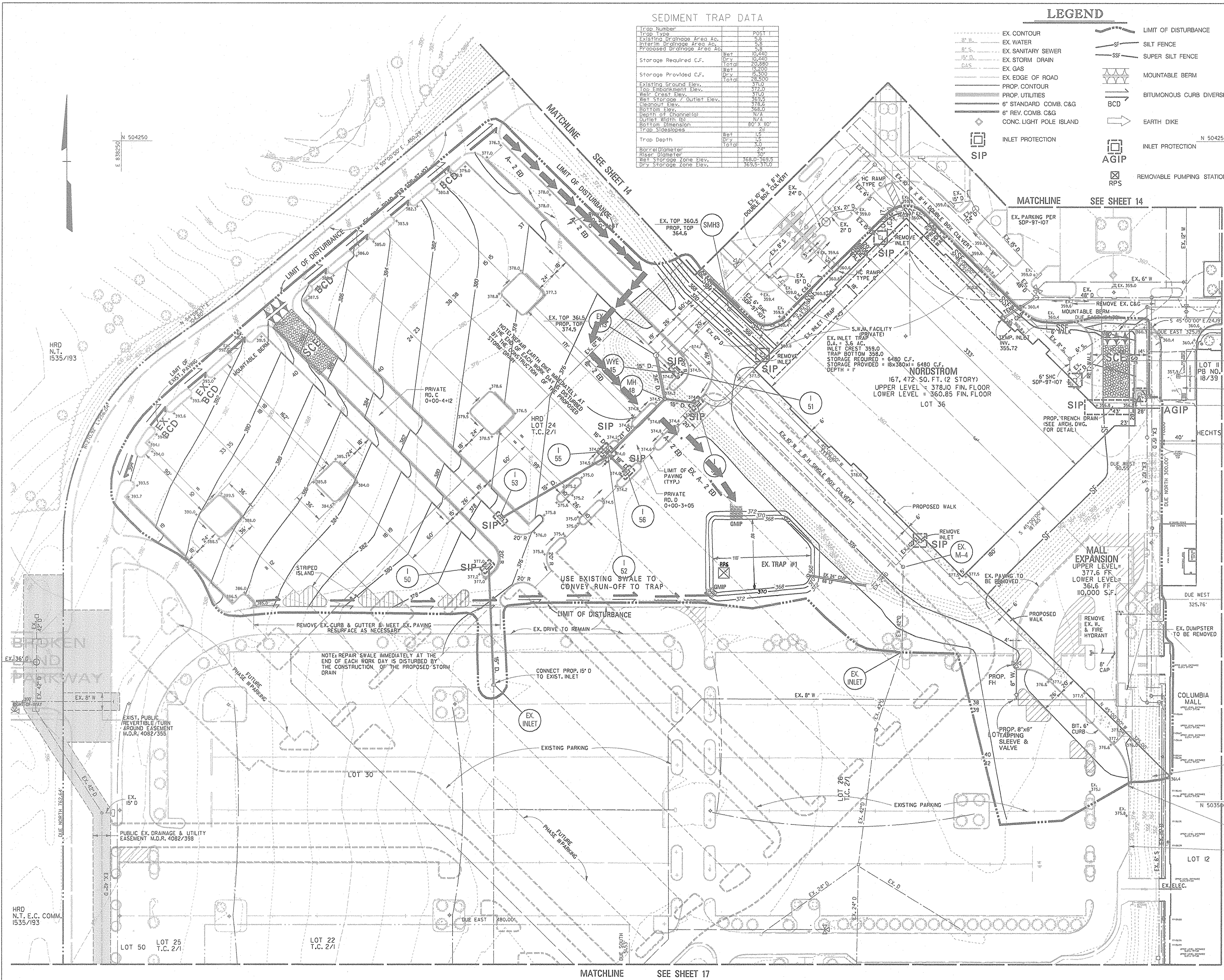
OWNER / DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

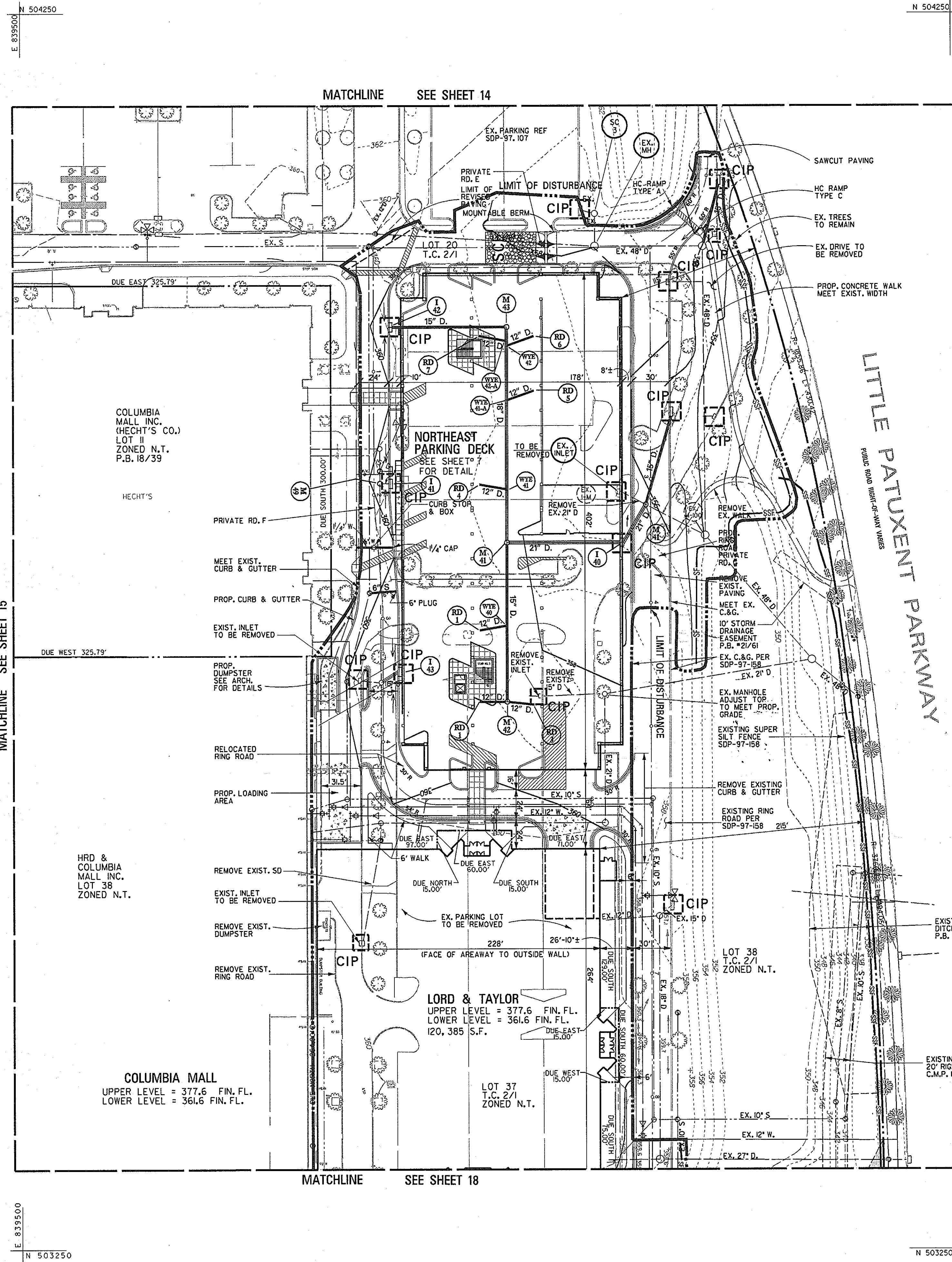
DMW
Duff-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-5333
Fax 296-4705

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

TITLE
PHASE II
EROSION AND
SEDIMENT CONTROL PLAN

Des By MJP, RLH Scale 1" = 50' Proj. No. 95019B
Dn By FJZ, MSS Date 12/15/97
Chk By JWR Approved 15 OF 30





DEVELOPER'S 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.'

Alfred J. Edwards 12/19/97
 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. Ranuchia, S 12-17-97
 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Paul Simmons 12/31/97
 Date

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District
John R. Paster 12/31/97
 Date

- 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
 - ◆ CONC. LIGHT POLE ISLAND
 - - - LIMIT OF DISTURBANCE
 - - - SILT FENCE
 - - - SUPER SILT FENCE
 - ◆ MOUNTABLE BERM
 - BITUMINOUS CURB DIVERSION
 - INLET PROTECTION
 - INLET PROTECTION
 - SIP

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE Dec. 3, 1997
 EB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
John W. Ranuchia 1/6/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE
John W. Ranuchia 1/13/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
John W. Ranuchia 1/14/98
 DIRECTOR DATE

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

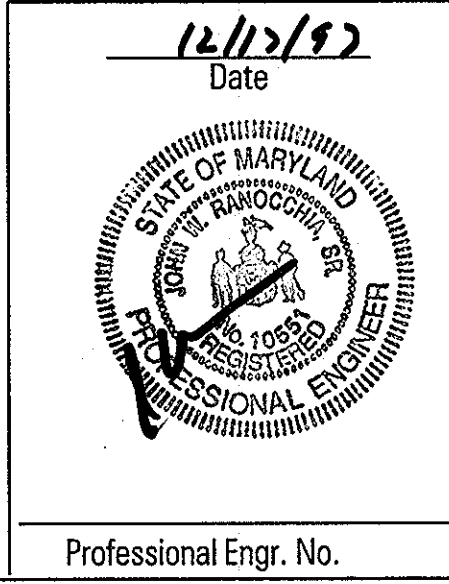
OWNER / DEVELOPER:
 THE HOWARD RESEARCH & DEVELOPMENT CORP.
 COLUMBIA MALL, INC.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

DMW
 Draft McQuinn Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax: 296-4706

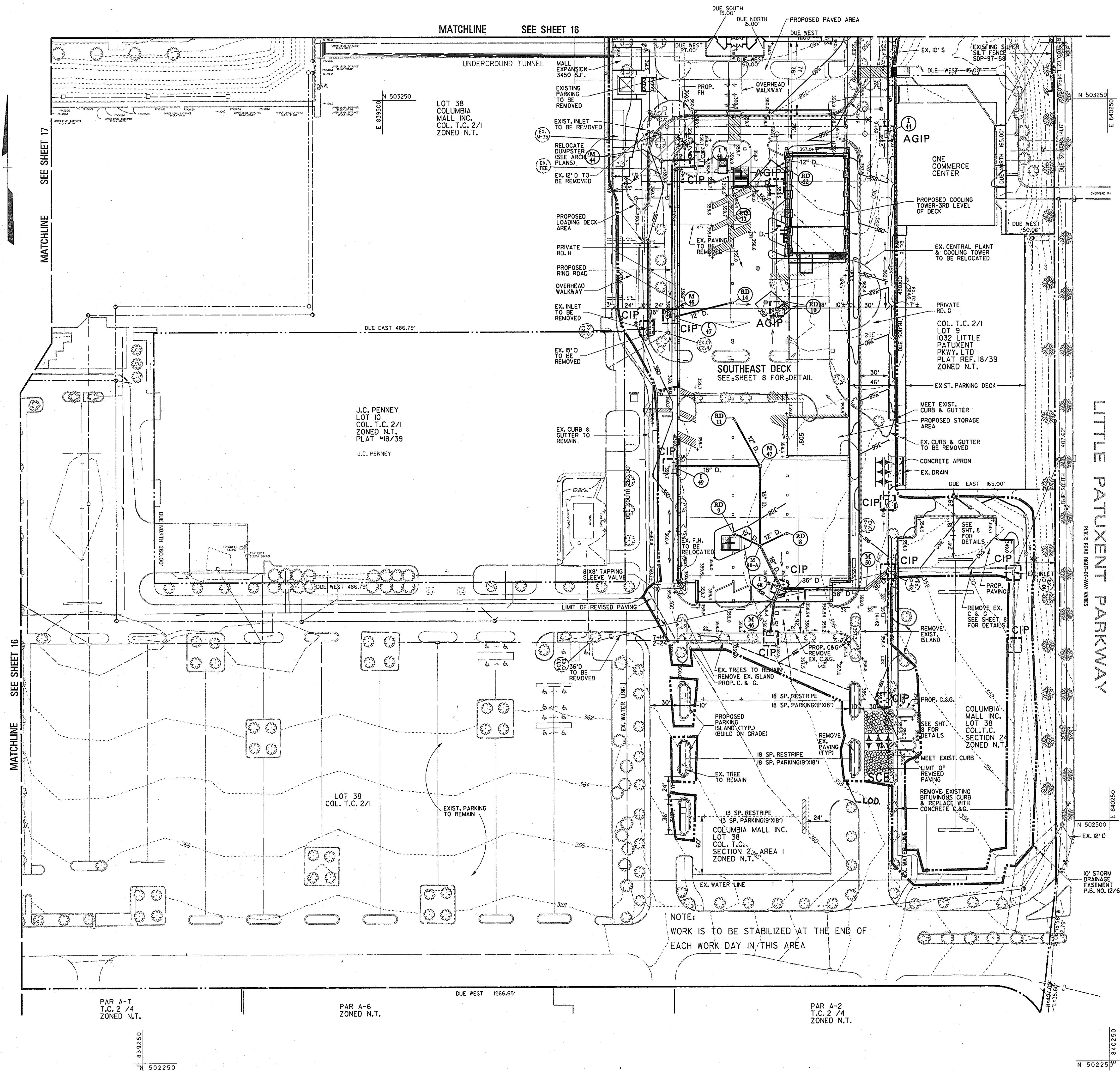
A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

TITLE
**PHASE II
 EROSION AND
 SEDIMENT CONTROL PLAN**

Des By	MJP, RLH	Scale	1" = 50'	Proj. No.	95018B
Drn By	FJZ, MSS	Date	12/15/97		
Chk By	JWR	Approved			16 OF 30



Professional Engr. No.



- 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
 - CONC. LIGHT POLE ISLAND
 - LIMIT OF DISTURBANCE
 - SILT FENCE
 - SUPER SILT FENCE
 - MOUNTABLE BERM
 - BITUMINOUS CURB DIVERSION
 - INLET PROTECTION
 - AGIP
 - CIP

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.
Albert Edwards 12/15/97
 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.
Robert W. Ransochie 12/17/97
 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.
Cheryl Simmons 12/31/97
 Natural Resources Conservation Service
 Date

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
John P. Deaton 12/31/97
 Date

APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE Dec 3, 1997
rs

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Cheryl Simmons 1/9/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE
John P. Deaton 1/13/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
James W. Deaton 1/19/98
 DIRECTOR DATE

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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) 296-3383
 Fax: 296-4706
 A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

TITLE
**PHASE II
 EROSION AND
 SEDIMENT CONTROL PLAN**

Des By	MJP,RLH	Scale	1" = 50'	Proj. No.	95019B
Dwn By	WHJ, MSS	Date	12 / 15 / 97		18 OF 30
Chk By	JWR	Approved			

12/17/97
 Date

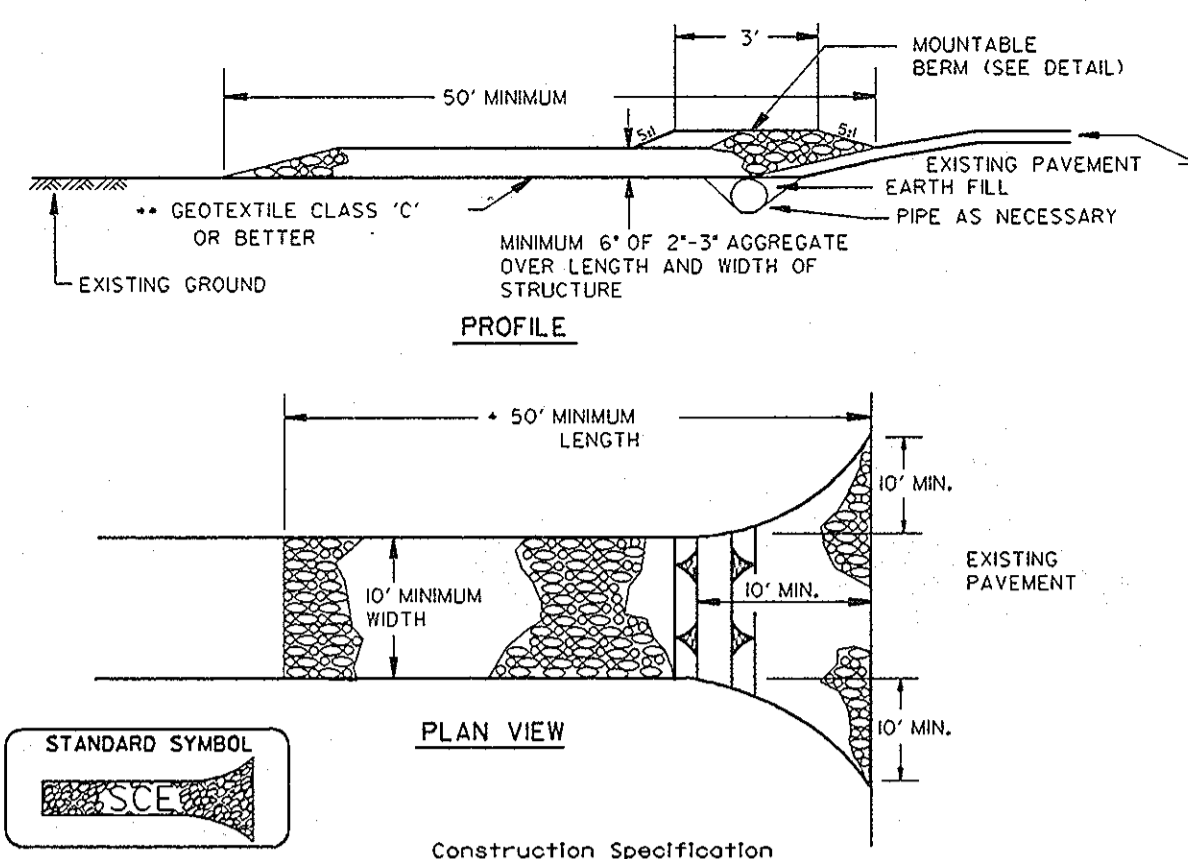
 Professional Engr. No.

NOTE:
 WORK IS TO BE STABILIZED AT THE END OF
 EACH WORK DAY IN THIS AREA

PAR A-7
 T.C. 2 / 4
 ZONED N.T.

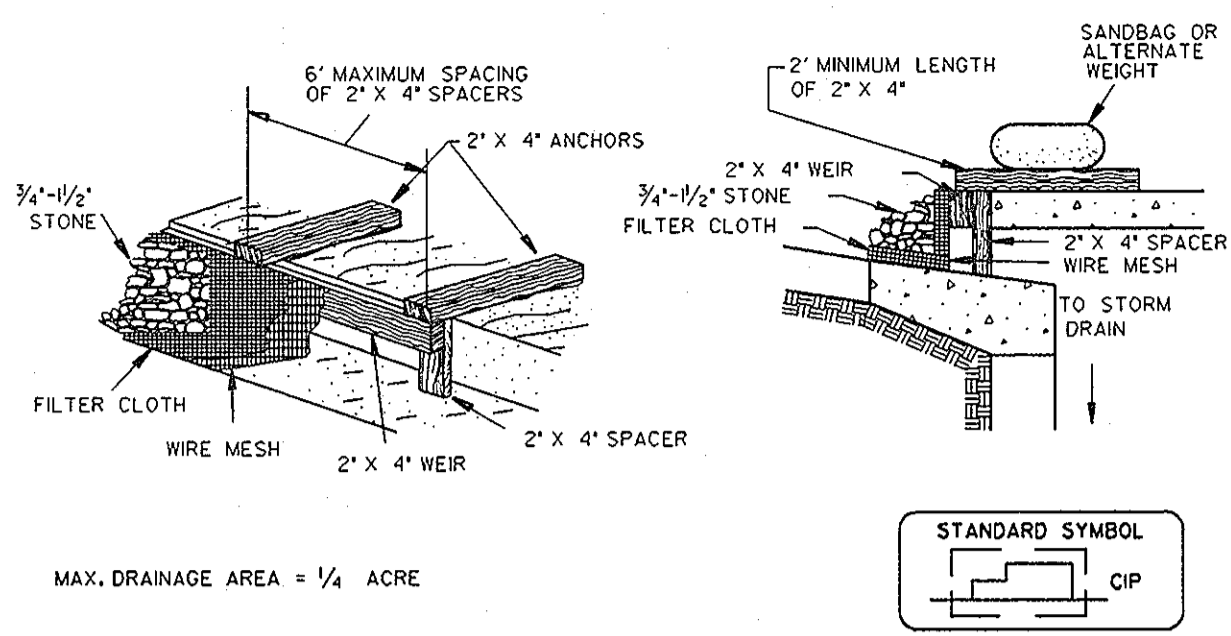
PAR A-6
 ZONED N.T.

PAR A-2
 T.C. 2 / 4
 ZONED N.T.



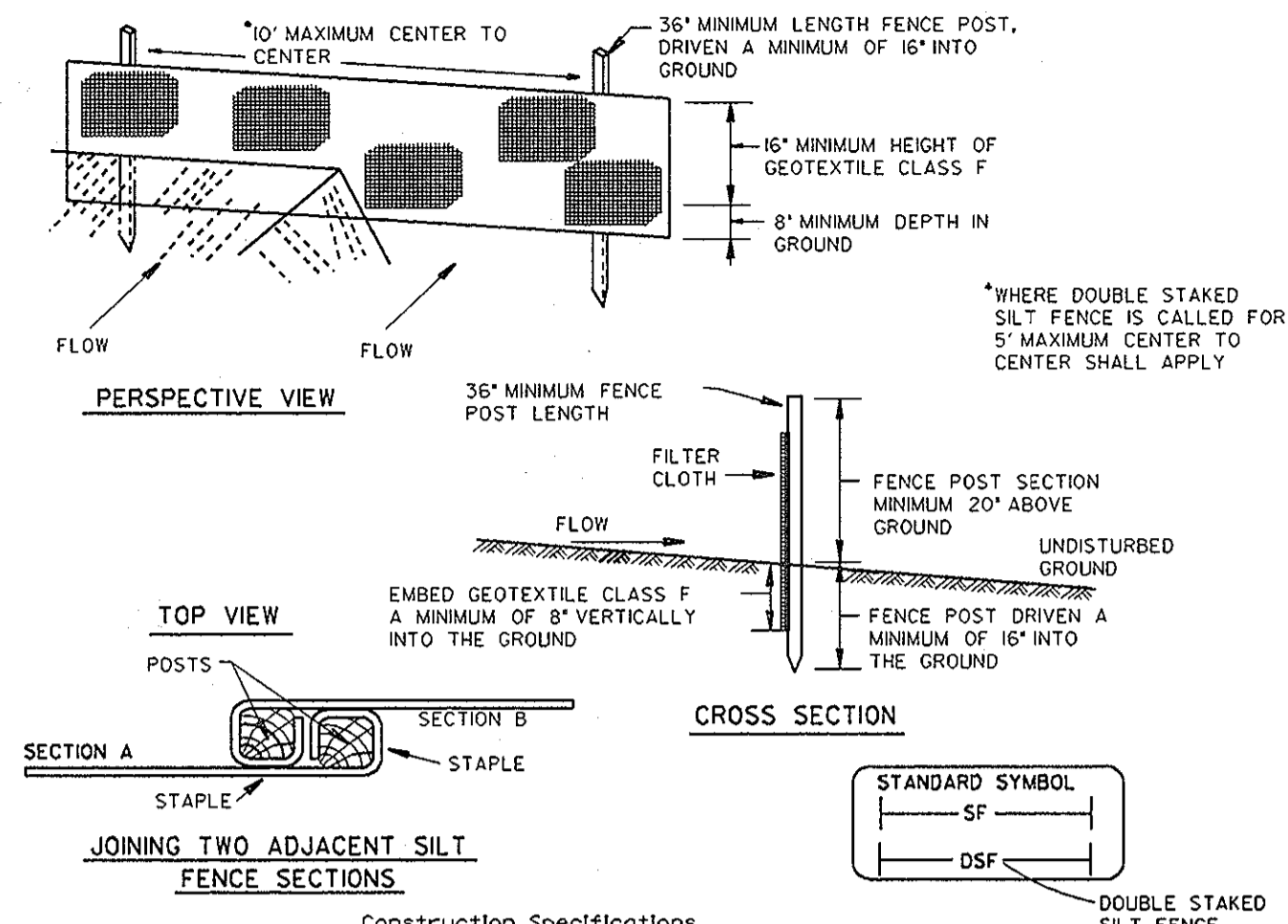
- Construction Specifications
- Length - minimum of 50' (+30' for single residence lot).
 - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 - Geotextile fabric Class C (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval 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



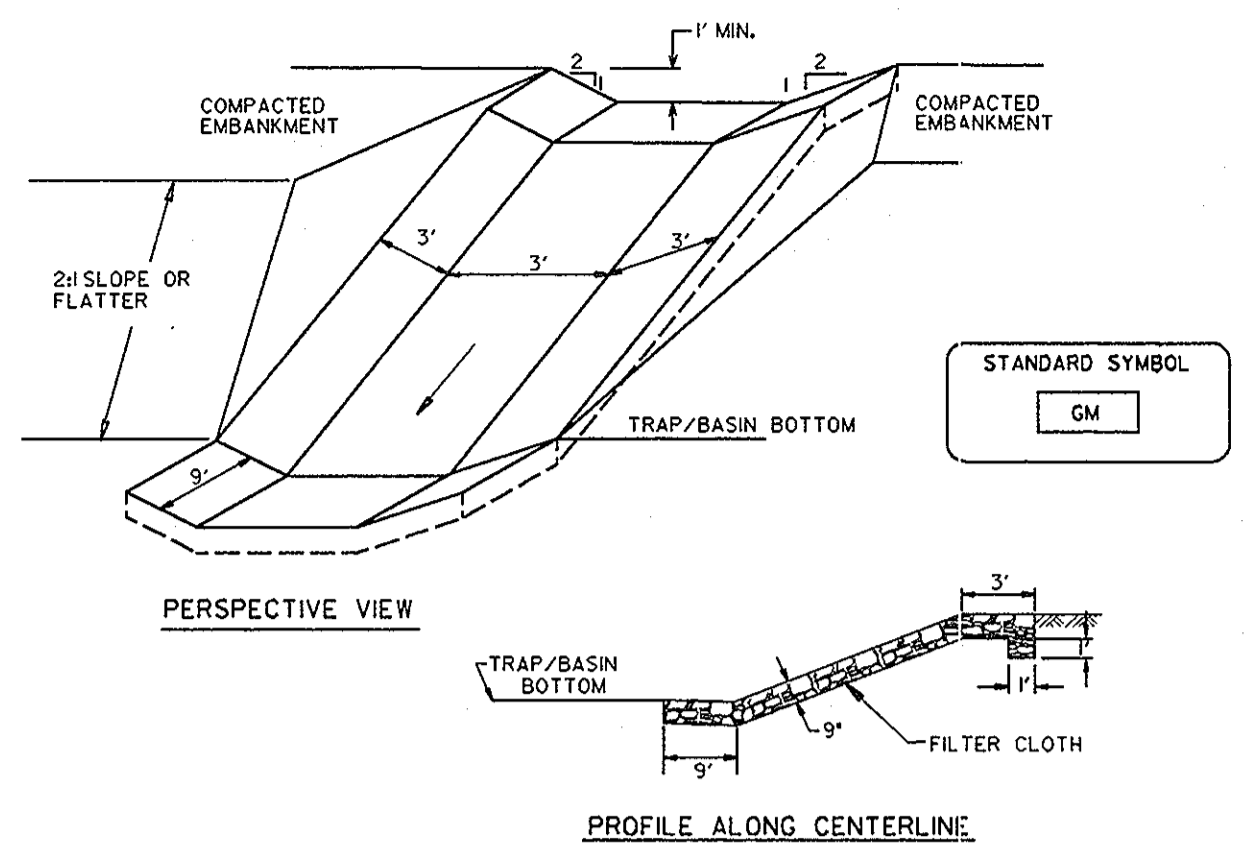
- Construction Specifications
- Attach a continuous piece of 1/2" x 1/2" wire mesh (30' minimum width by throat length plus 4') to the 2' x 4' weir (measuring throat length plus 2') as shown on the standard drawing.
 - Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2' x 4' weir.
 - Securely nail the 2' x 4' weir to a 9' 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-16-5B 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: MSM 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-15-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
SILT FENCE NOT TO SCALE



- Construction Specifications
- Gabion inflow protection shall be constructed of 9' x 3' x 3' gabion baskets forming a trapezoid across section 1' deep, with 2:1 side slopes, and a 3' bottom width.
 - Geotextile Class C shall be installed under gabion baskets.
 - The stone used to fill the gabion baskets shall be 4' - 7'.
 - Gabions shall be installed in accordance with manufacturers recommendations.
 - Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE B-7-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
GABION INFLOW 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 at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I/also authorize my/our site inspection by the Howard Soil Conservation District.

Albert F. Edwards 10-29-97 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. Rancich, Sr. 10-28-97 Date

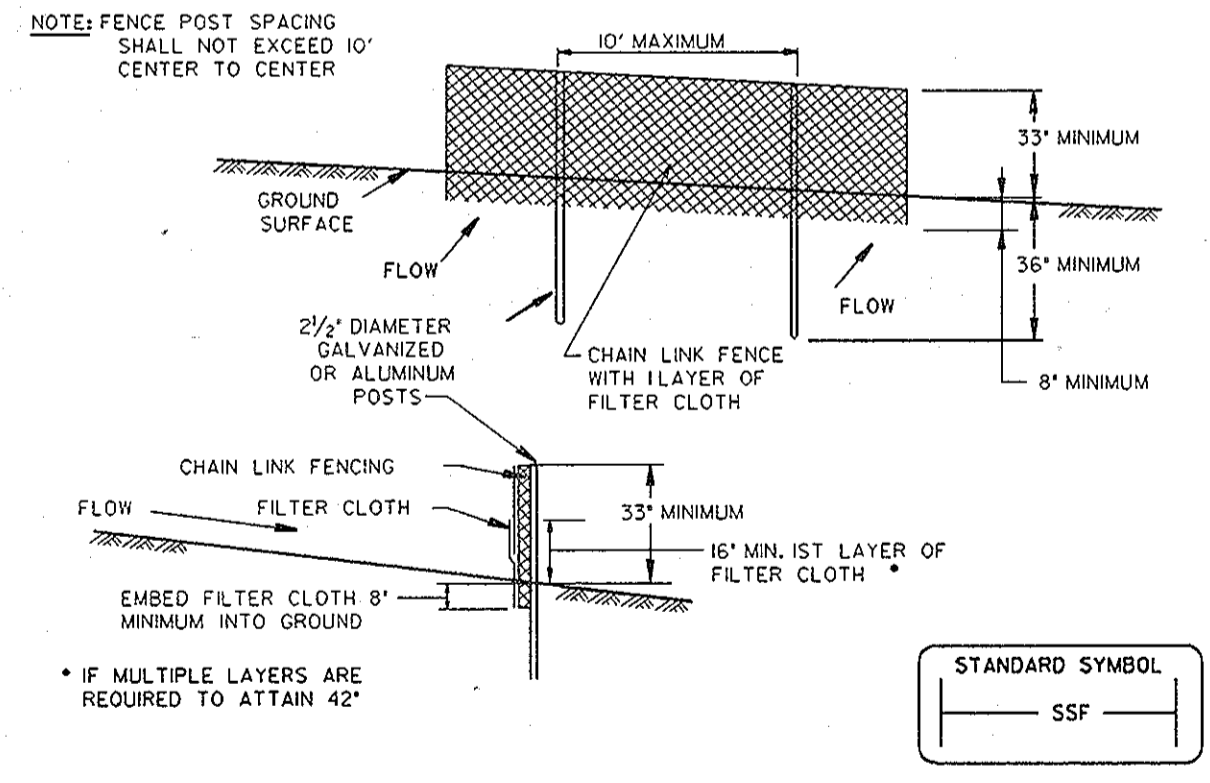
Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Cheryl Sumner 12/31/97 Date
 Natural Resources Conservation Service

The development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

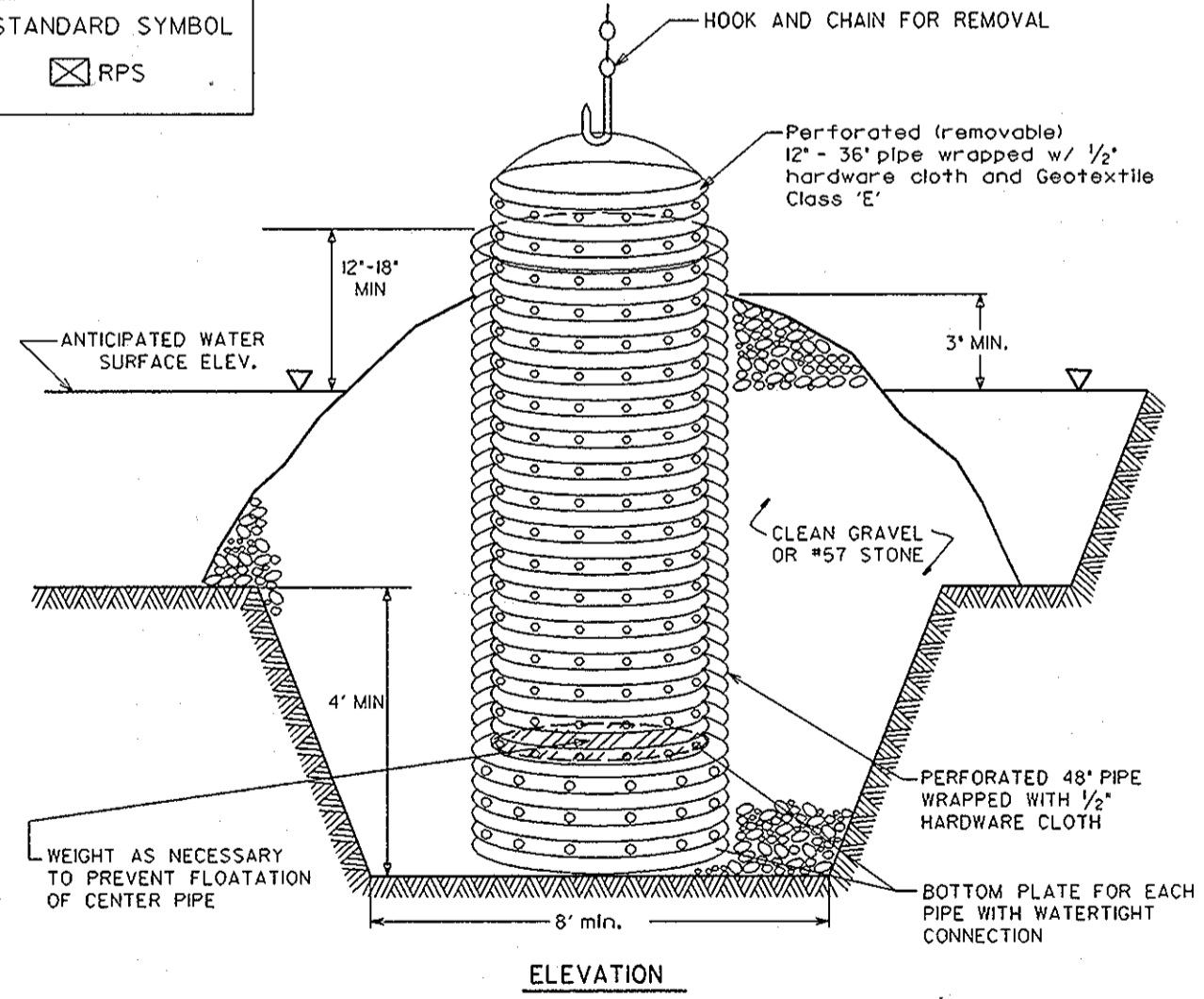
John W. Rancich, Sr. 12/31/97 Date
 Howard Soil Conservation District

APPROVED PLANNING BOARD OF HOWARD COUNTY
 DATE Dec. 3, 1997
 RB



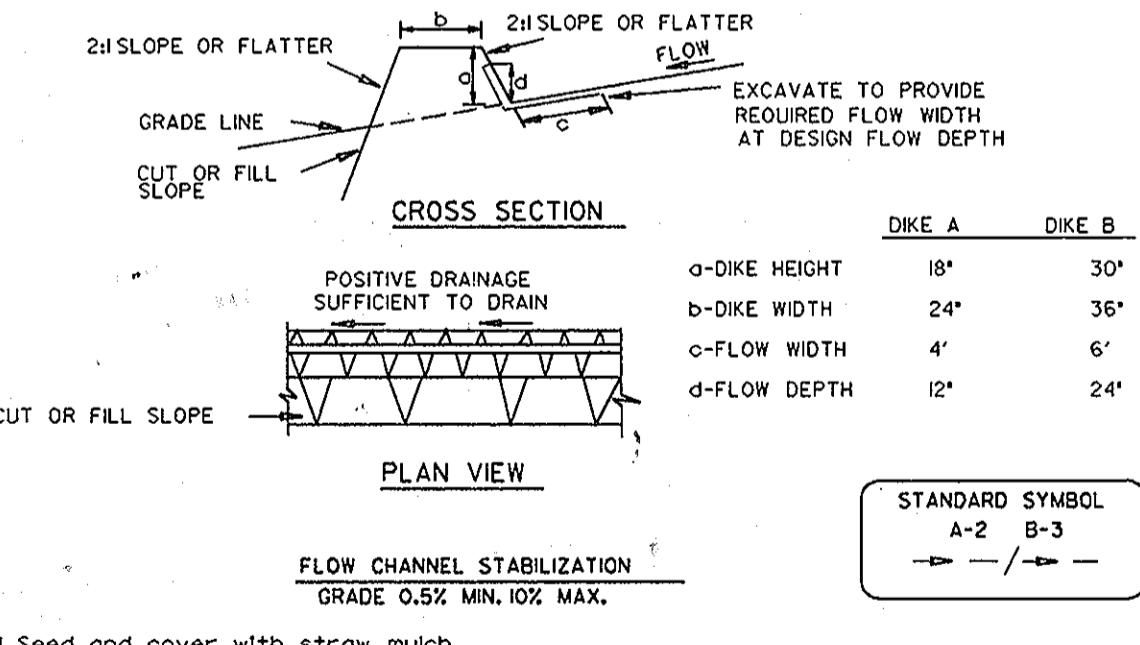
- Construction Specifications
- Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
 - The posts do not need to be set 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 buildups 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-28-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
SUPER SILT FENCE NOT TO SCALE



- Construction Specifications
- The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
 - After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
 - The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class E.
 - The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE D-23-4 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
REMOVABLE PUMPING STATION NOT TO SCALE



- Construction Specifications
- Seed and cover with straw mulch.
 - Seed and cover with Erosion Control Matting or lime with sod.
 3. 4" x 7" stone or recycled concrete equivalent pressed into the soil? minimum
- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
 - The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
 - Fill shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
 - Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE A-1-6 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
EARTH DIKE NOT TO SCALE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Albert F. Edwards 1/8/98 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

John W. Rancich, Sr. 1/13/98 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT

John W. Rancich, Sr. 1/14/98 DATE
 DIRECTOR

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 10,11,22,28,29,36,37,38,41

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

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 Fax 296-4705
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

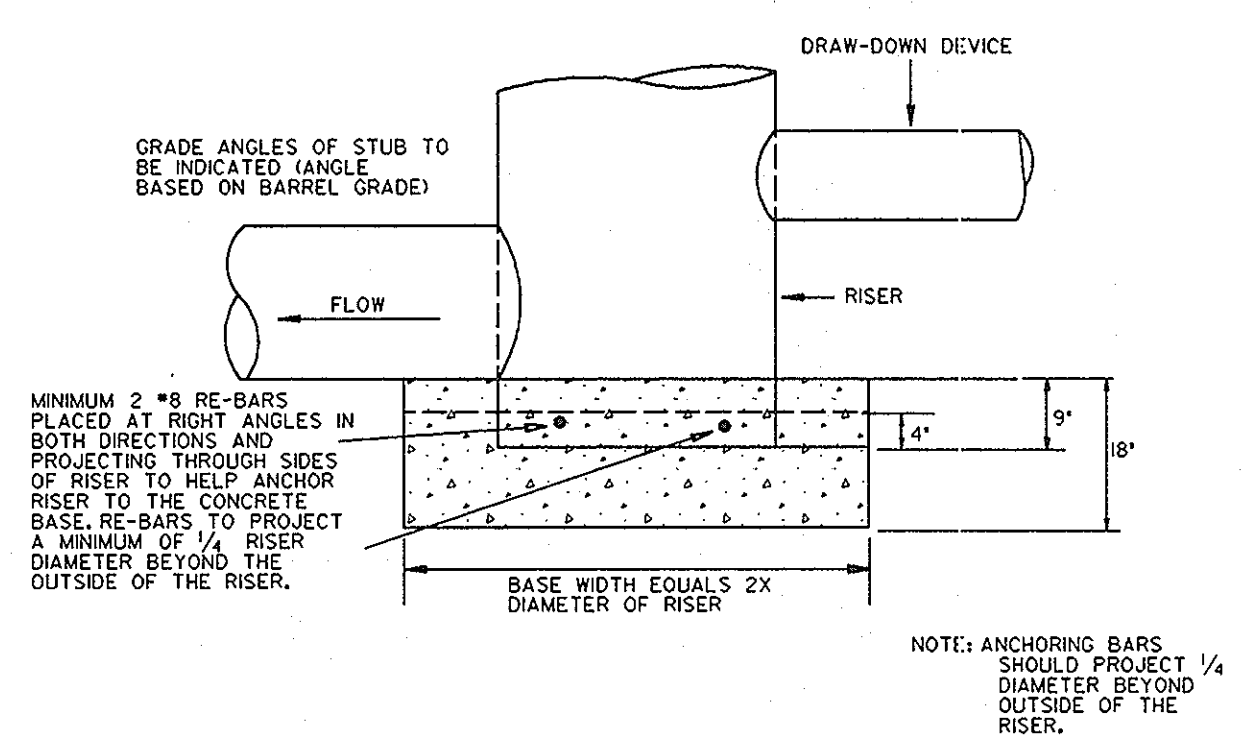
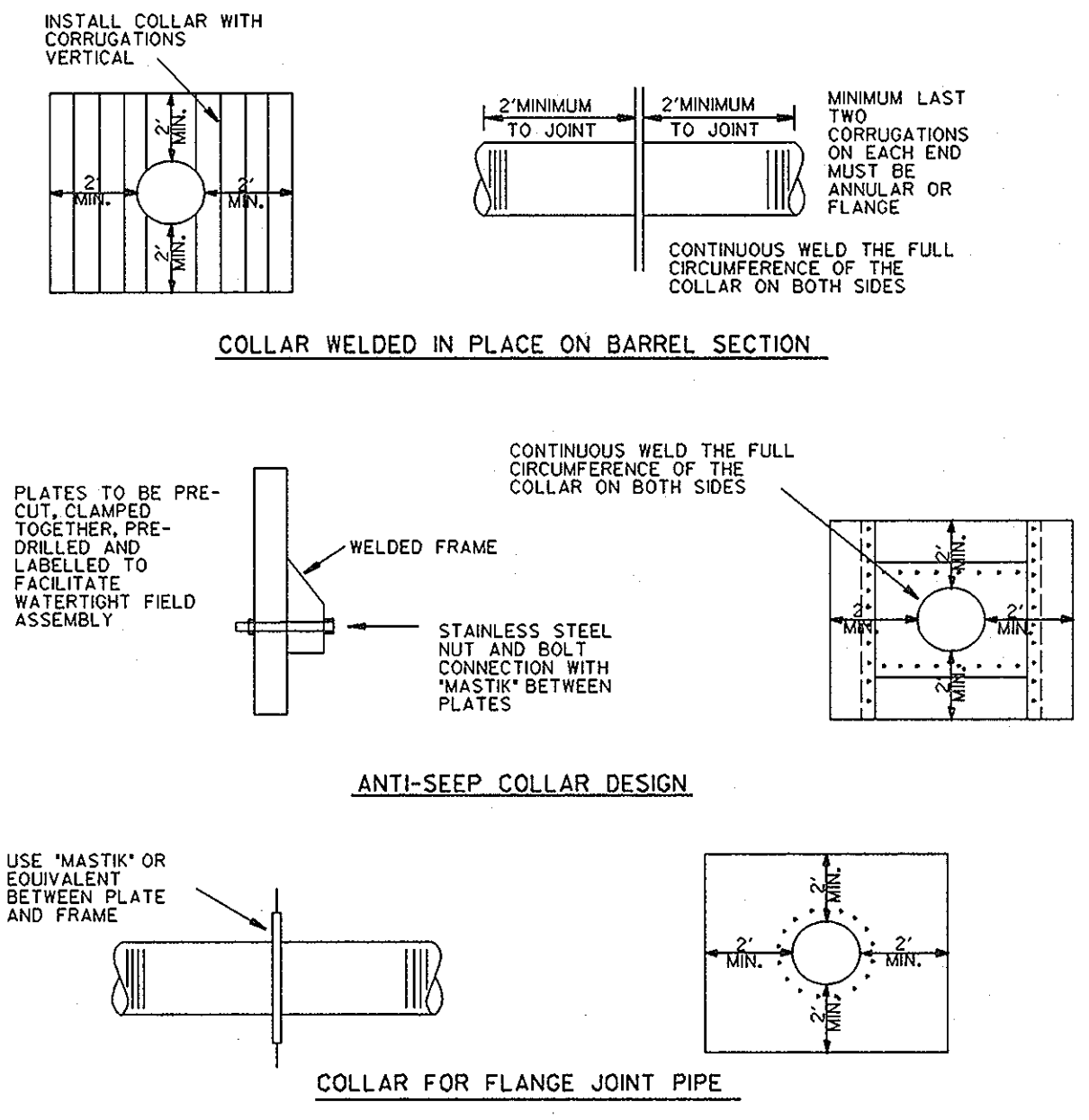
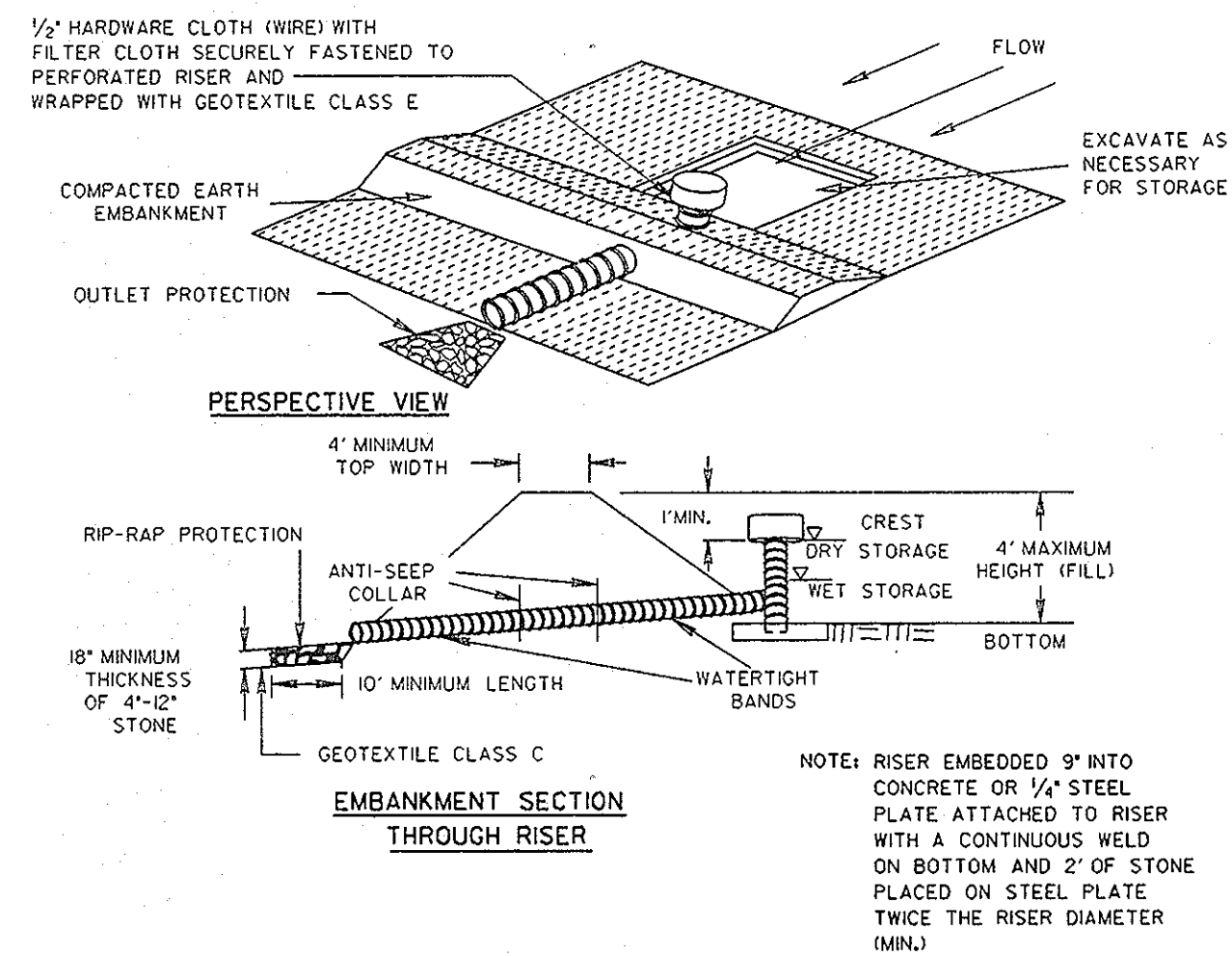
TITLE
PHASE II EROSION AND SEDIMENT CONTROL DETAIL SHEET

Des By	CRW/JLS	Scale	AS SHOWN	Proj. No.	95019B
Drn By	JEF	Date	1 2 / 1 5 / 9 7		
Chk By	JWR	Approved			

Professional Engr. No. 10591
 SDP-88-44
 19 OF 30

Construction Specifications

- The area under the embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material, or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
- The total trap volume as measured from the bottom to riser crest elevation shall be 3600 cubic feet per acre of drainage area (see Table 9). The top of embankment must be $\geq 1'$ above the riser crest elevation.
- Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap (3000 cu ft). The sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- The structure shall be inspected periodically and after each rain and repairs made as necessary.
- Construction operations shall be carried out in such a manner that erosion and water pollution are abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
- The structure shall be removed and area stabilized when the drainage area has been properly stabilized.
- All cut and fill slopes shall be 2:1 or flatter.
- All pipe connections shall be watertight.
- Above the wet storage elevation, the riser shall be perforated with $\frac{1}{2}$ " wide by 6" long slits or 1" diameter holes spaced 6" vertically and horizontally. No perforations will be allowed within 6" of the horizontal barrel.
- The riser shall be wrapped with $\frac{1}{2}$ " hardware cloth (wire) then wrapped with Geotextile Class E. The filter cloth shall extend 6" above the highest slit and 6" below the lowest slit. Where ends of filter cloth come together, they shall be overlapped, folded and fastened to prevent bypass. Filter cloth shall be replaced as necessary to prevent clogging.
- Straps or connecting bands shall be used to hold the filter cloth and wire fabric in place. They shall be placed at the top and bottom of the cloth.
- Fill material around the pipe spillway shall be hand compacted in 4" layers. A minimum of 2' of hand-compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment.
- The riser shall be anchored with either a concrete base or steel plate base to prevent flotation. Concrete bases shall be at least twice the riser diameter and 12" deep with the riser embedded 9". Steel plate bases shall be at least twice the riser diameter, $\frac{1}{4}$ " minimum thickness and attached to the bottom of the riser by a continuous weld to form a watertight connection. Then place 2' of stone, gravel or tamped earth on the plate.
- Antiseep collars shall be constructed in accordance with plans (ref. Table 16 and Details C-10-23 AND C-10-24).
- Concentric trash rack and anti-vortex device design details are on Detail C-10-26 and C-10-26A.
- Refer to Section D for dewatering requirements of sediment traps.
- Outlet - An outlet shall be provided, which includes a means of conveying the discharge in an erosion free manner to an existing stable channel.
- Where discharge occurs at the property line, local ordinances and drainage easement requirements shall be met.



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE C-9-7
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
PIPE OUTLET SEDIMENT TRAP - ST 1

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE C-9-7A
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
PIPE OUTLET SEDIMENT TRAP - ST 1 NOT TO SCALE

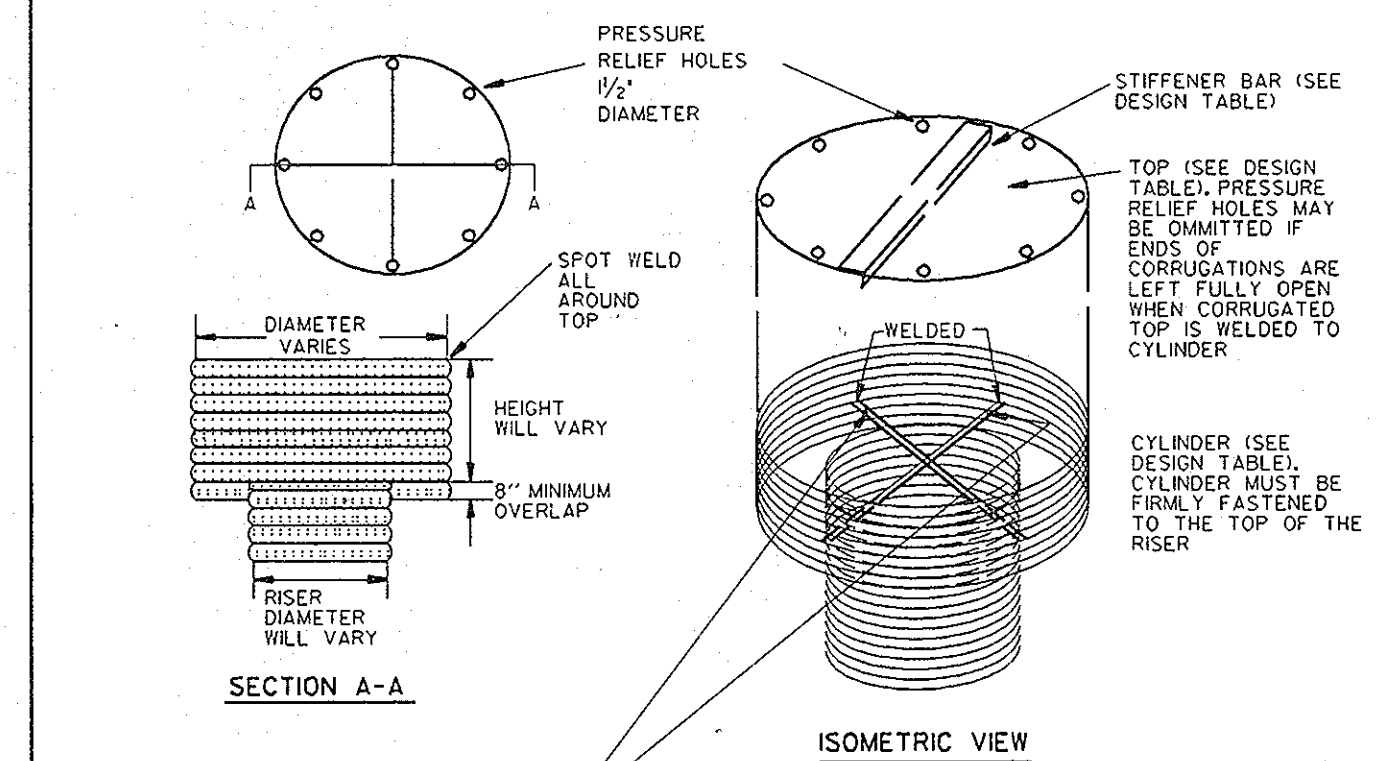
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE C-10-24
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
TYPICAL ANTI-SEEP COLLARS NOT TO SCALE

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE C-10-28
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
RISER BASE DETAIL

The riser shall have a base attached with a watertight connection and shall have sufficient weight to prevent flotation of the riser. Two approved bases for risers 10" or less in height are:

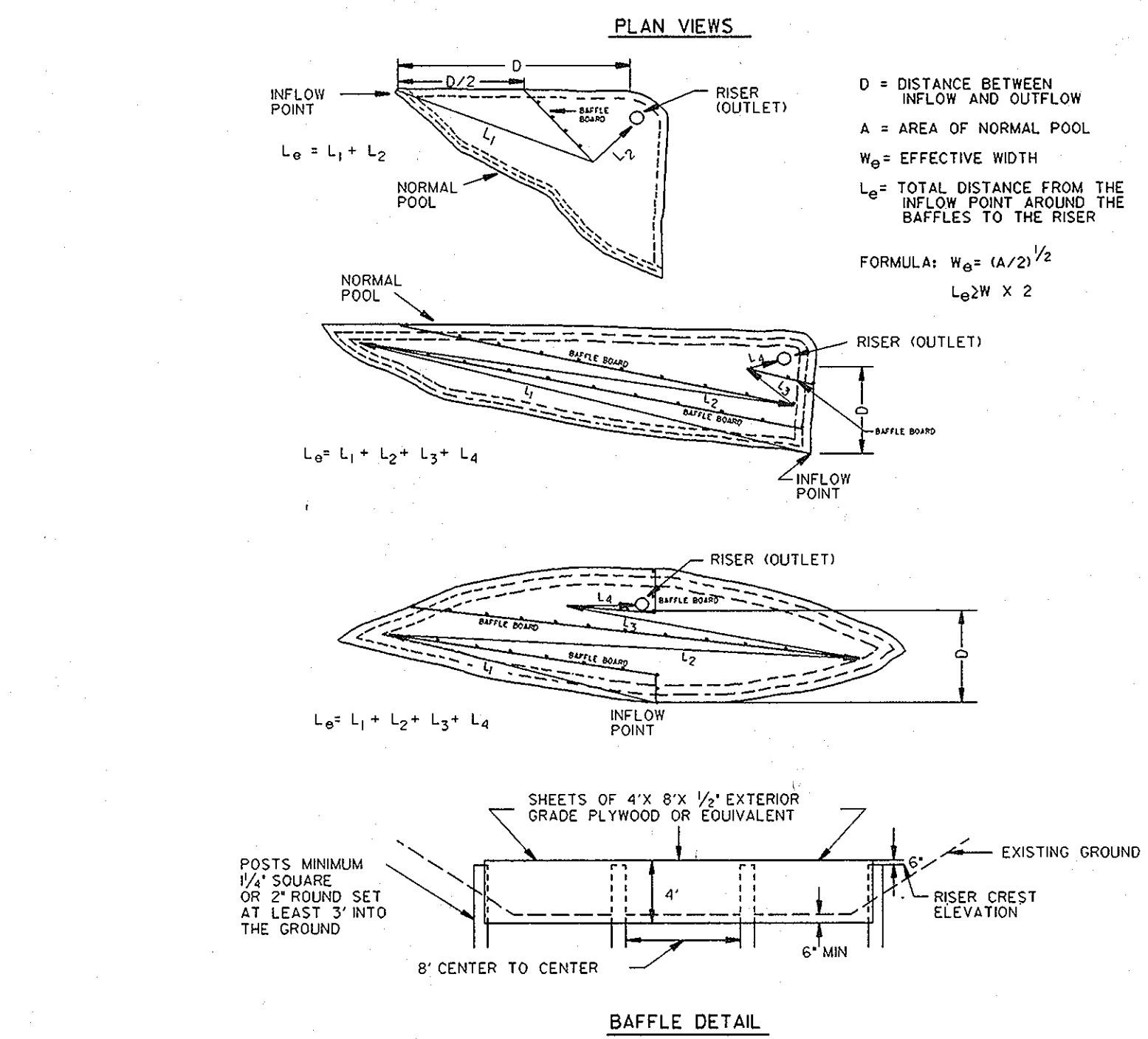
- A concrete base 18" thick with the riser embedded 9" in the base.
- A $\frac{1}{4}$ " minimum thickness steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2' of stone, gravel, or compacted earth placed on it to prevent flotation. In either case, each side of the square base shall be twice the riser diameter.

Notes: For risers greater than ten feet high computations shall be made to design a base which will prevent flotation. The minimum factor of safety shall be 1.20 (downward forces = 1.20 x upward forces).

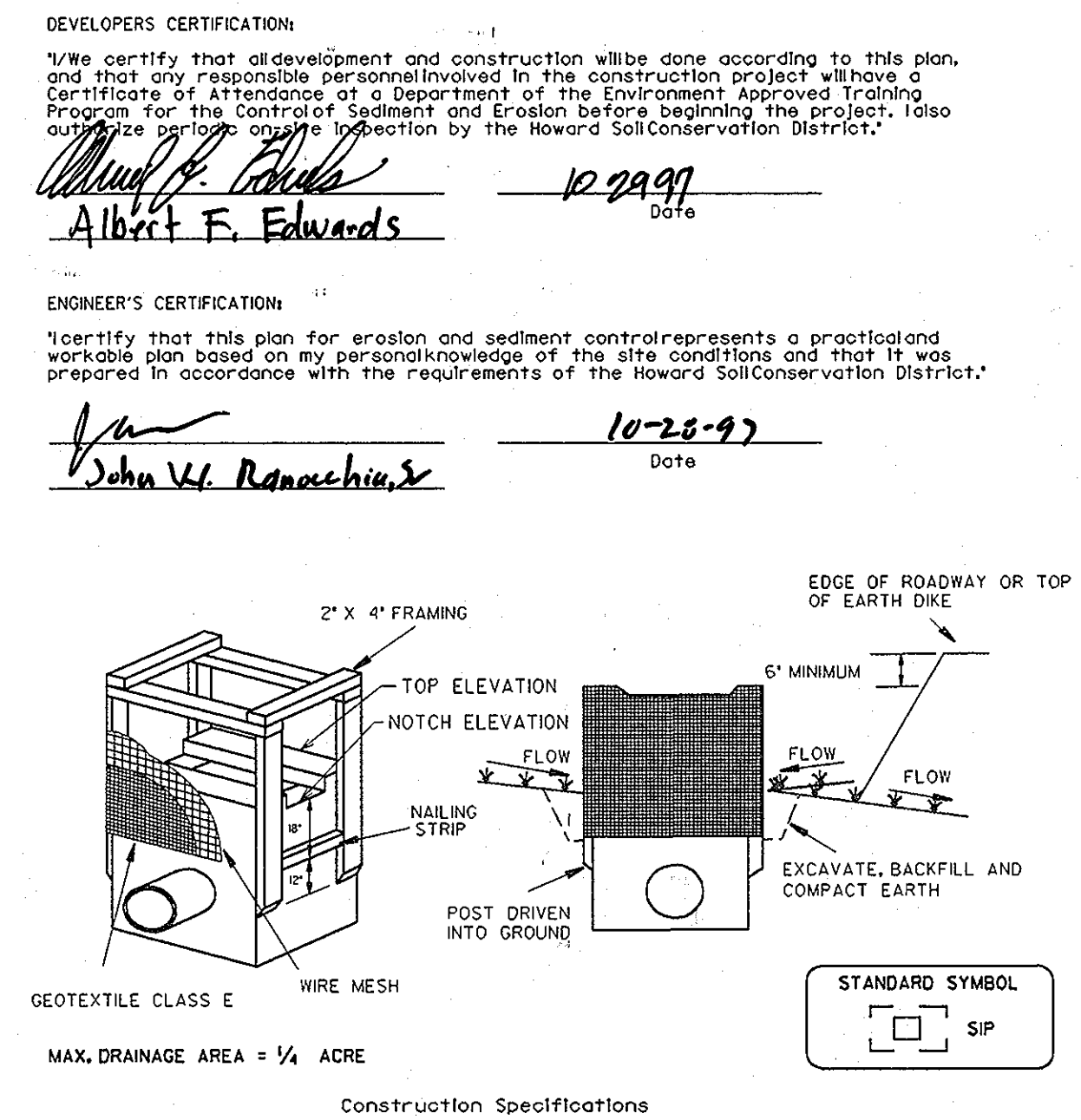


Riser Diam., In.	Trash Rack Cylinder Diam., In.	Trash Rack Thick., In.	H., In.	Minimum Size Support Bar	Minimum Top Thickness	Stiffener
12	18	16	6	#6 Rebar	16 ga.	--
15	21	16	7	"	"	"
18	27	16	8	"	"	"
21	30	16	11	"	"	"
24	36	16	13	"	14 ga.	--
27	42	16	15	"	14 ga.	--
36	54	14	17	#8 Rebar	12 ga.	--
42	60	14	19	"	"	"
48	72	12	21	1/4" pipe or 1/4" angle	10 ga.	--
54	78	12	25	"	"	"
60	90	12	29	1/2" x 1/2" x 1/4" angle or 2x2x3/16 angle	8 ga.	--
66	96	10	33	2" pipe or 2x2x3/16 angle	8 ga.	2x2x1/4 angle w/stiffener
72	102	10	36	"	"	2x2x2-1/2x1/4 angle
78	114	10	39	2-1/2" pipe or 2x2x3/16 angle	"	"
84	120	10	42	2-1/2" pipe or 2-1/2x2-1/2x1/4 angle	"	2-1/2x2-1/2x 3/8 angle

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE C-10-28
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE NOT TO SCALE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE C-10-28
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
SEDIMENT BASIN BAFFLES NOT TO SCALE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE C-16-6
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
STANDARD INLET PROTECTION NOT TO SCALE

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/We authorize the project to be inspected by the Howard Soil Conservation District.

Albert F. Edwards 10-29-97
 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 H. Ranaivosoa 10-28-97
 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Sheery Scimmon 12/31/97
 Natural Resources Conservation Service Date

John K. Ranaivosoa 12/31/97
 Howard Soil Conservation District Date

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE Dec 3, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John K. Ranaivosoa 1/8/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

John K. Ranaivosoa 1/8/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John K. Ranaivosoa 1/14/98
 DIRECTOR DATE

Revision Description

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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

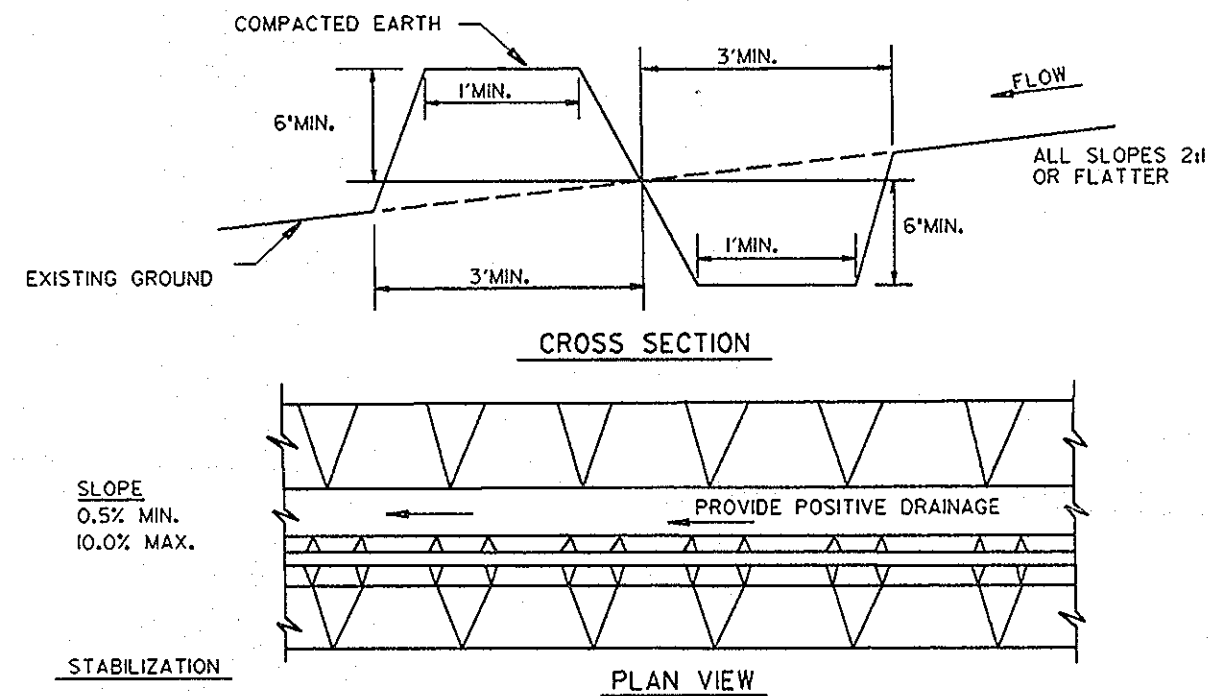
DMW
 Daft-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4706

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

TITLE
**PHASE II
 EROSION AND SEDIMENT CONTROL
 DETAIL SHEET**

Des By	CRW/JS	Scale	AS SHOWN	Proj. No.	95019B
Dm By	JEF	Date	12/15/97		
Chk By	JWR	Approved			

Professional Engr. No. 10591
 SDP-98-44
 20 OF 30



STABILIZATION PLAN VIEW
 PD/S-1 SEED AND MULCH (DRAINING ≤ 1 ACRE)
 PD/S-2 SEED AND COVER WITH SOIL
 STABILIZATION MATTING OR LINE WITH SOD (DRAINING BETWEEN 1 AND 2 ACRES)

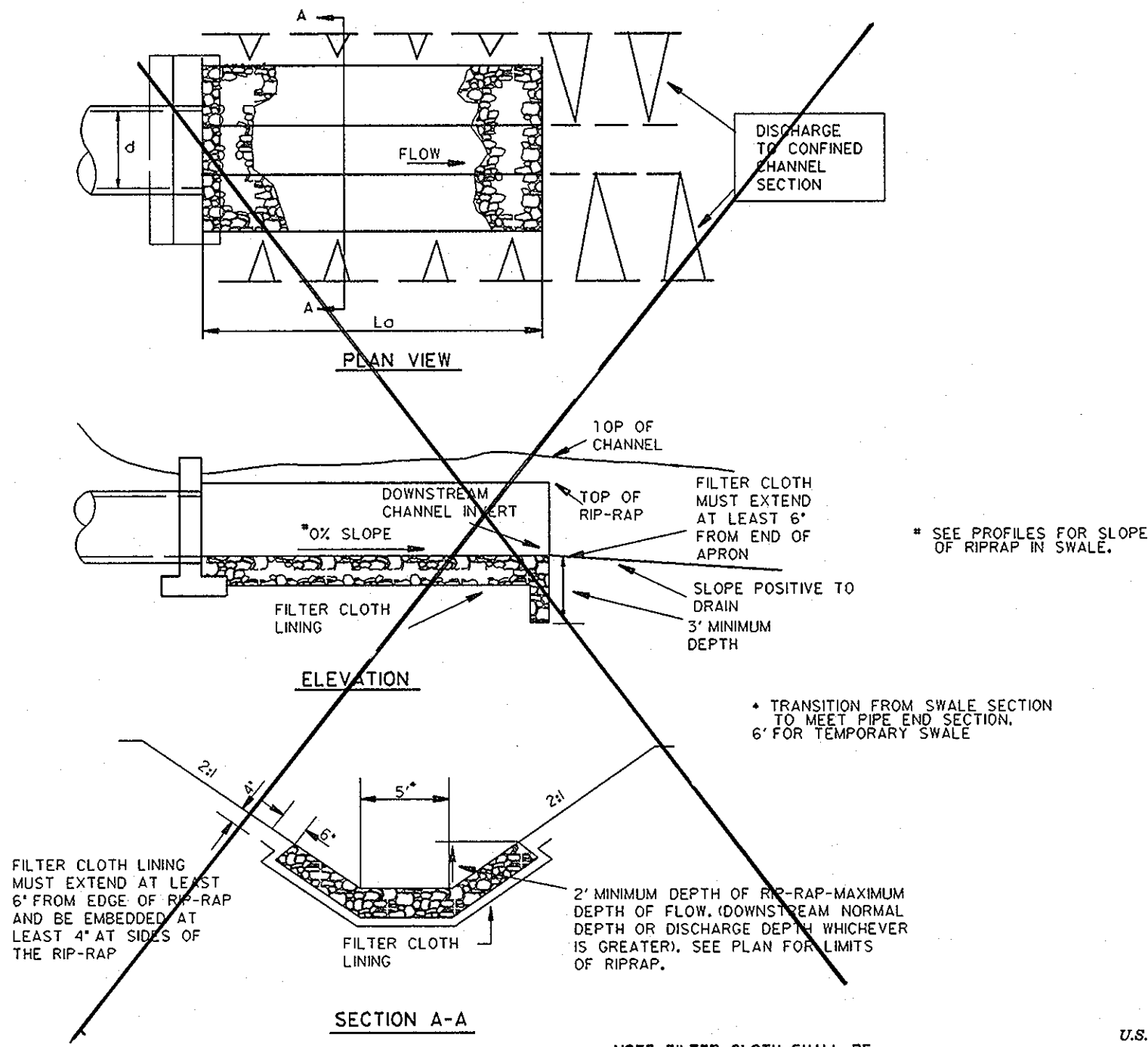
- Construction Specifications**
- All perimeter dike/swales shall have an uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet into an undisturbed stabilized area at a non-erosive velocity.
 - The swale shall be excavated or shaped to line, grade, and cross-section as required to meet the criteria specified in the standard.
 - Fill shall be compacted by earth moving equipment.
 - Stabilization with seed and mulch or as specified of the area disturbed by the dike and swale shall be completed within 7 days upon removal.
 - Inspection and required maintenance shall be provided after each rain event.
- Note: The maximum drainage area for this practice is 2 acres.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
PERIMETER DIKE / SWALE
 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 soil blowing 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. At 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 air 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 retreatment.
- 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.
 - Topselling - Covering with less erosive soil materials. See standards for topselling.
 - Stone - Cover surface with crushed stone or coarse gravel.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
DUST CONTROL SPECIFICATIONS
 NOT TO SCALE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
ROCK OUTLET PROTECTION II
 NOT TO SCALE

- Construction Specifications**
- The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
 - The rock or gabion shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
 - Geotextile class C shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for rippers or for joining two pieces of geotextile shall be a minimum of one foot.
 - Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
 - The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
ROCK OUTLET PROTECTION SPECIFICATIONS

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:

- PREFERRED - APPLY 2 TONS PER ACRE 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.)
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SO.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 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 (1/4 LBS./1000 SO.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBS. PER ACRE OF 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 SMALL GRASS 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 TO 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 GRASS 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 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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
PERMANENT SEEDING NOTES

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
SEDIMENT CONTROL GENERAL NOTES

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 the inspection by the Howard Soil Conservation District.'

[Signature] 10-29-97
 Date

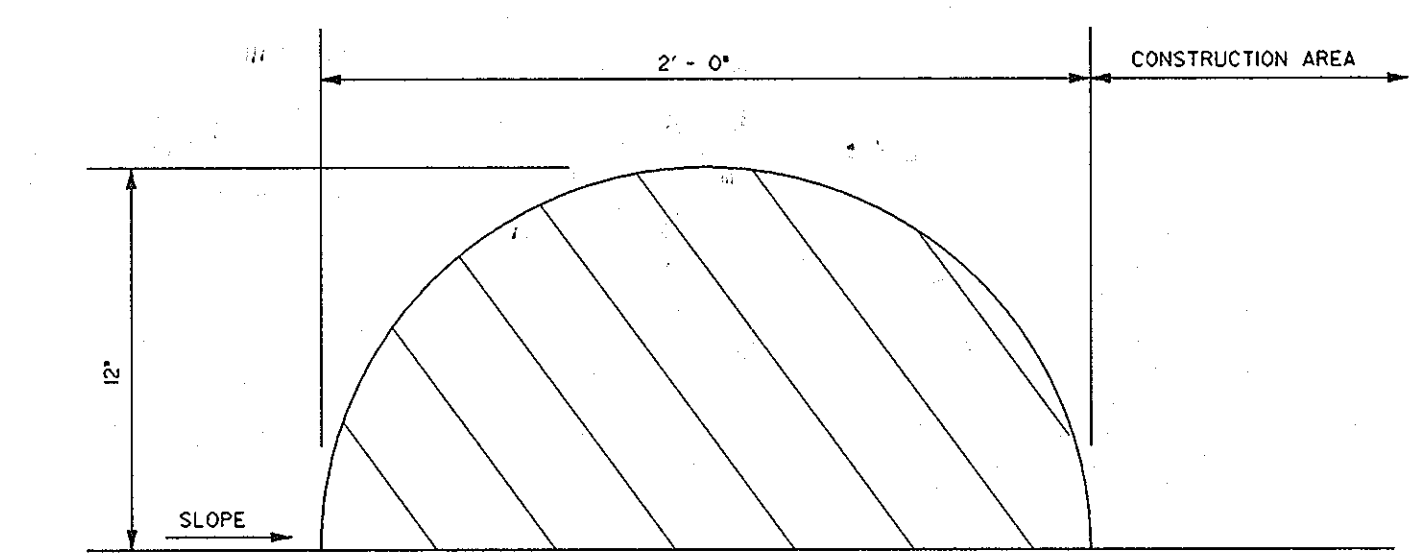
ENGINEER'S CERTIFICATION:
 'I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.'

[Signature] 10-28-97
 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.
[Signature] 12/31/97
 Date

This development has been approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
[Signature] 12/31/97
 Date

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE Dec. 3, 1997
 RB



BITUMINOUS CURB DIVERSION

- UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL PRACTICES**
- EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON UPSTREAM SIDE OF TRENCH.
 - IMMEDIATELY FOLLOWING PIPE INSTALLATION, THE TRENCH SHALL BE BACKFILLED, COMPACTED AND IMMEDIATELY STABILIZED (MULCHED, SEED, AND/OR SODDED MECHANICAL STABILIZATION) AT THE END OF EACH WORK DAY.
 - SILT FENCE SHALL BE PLACED IMMEDIATELY DOWN STREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED LONGER THAN ONE (1) WORKING DAY. (SILT FENCE AS PER SCS STANDARD DRAWING - E-15-3)
 - THE CONTRACTOR SHALL DISTURB AND OPEN TRENCH THE MINIMUM PRACTICAL AREA REQUIRED TO ACCOMPLISH THE WORK DESIGNATED FOR EACH DAY.
 - 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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL

10-26-97
 Date

Professional Engr. No. 0551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	1/10/98 DATE
<i>[Signature]</i> CHIEF, DIVISION OF LAND DEVELOPMENT	1/13/98 DATE
<i>[Signature]</i> DIRECTOR	1/14/98 DATE

Date No. Revision Description

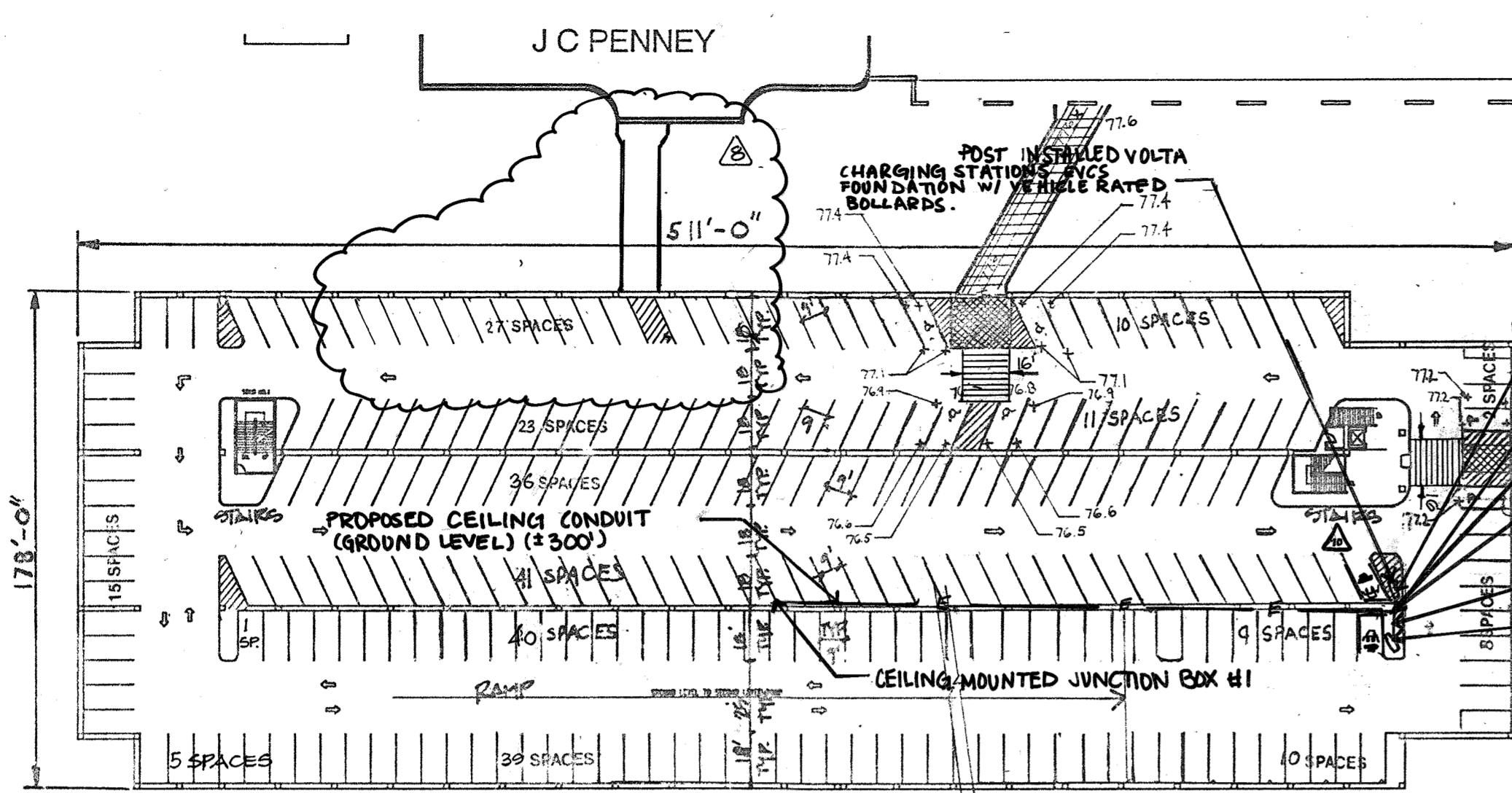
THE MALL IN COLUMBIA
 PHASE II EXPANSION
 TOWN CENTER
 SECTION 2 AREA 1
 HOWARD COUNTY, MD
 LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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

DMW
 Dan McCune-Walker, Inc.
 300 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-3383
 Fax: 286-4705

A Team of Land Planners,
 Landscape Architects,
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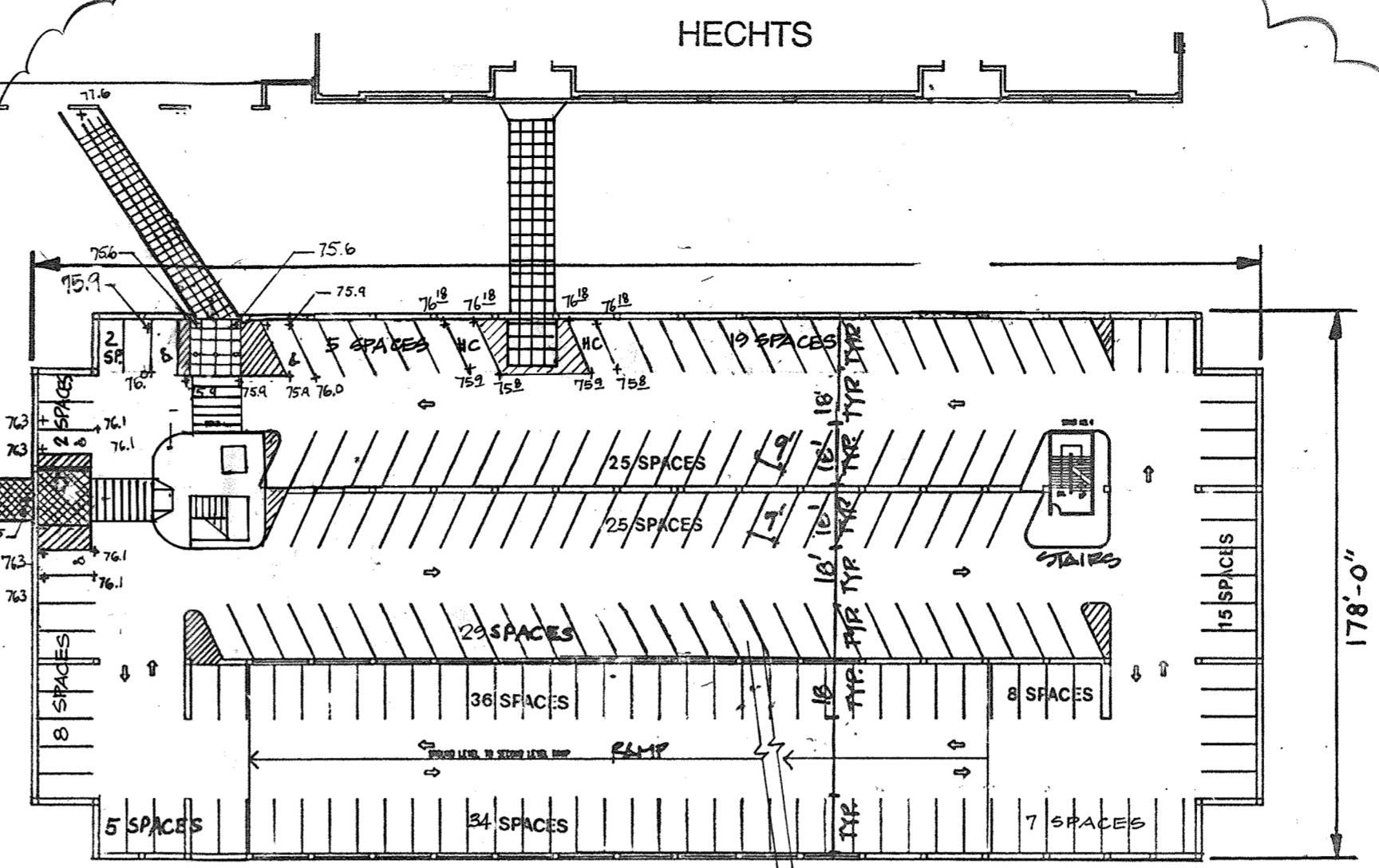
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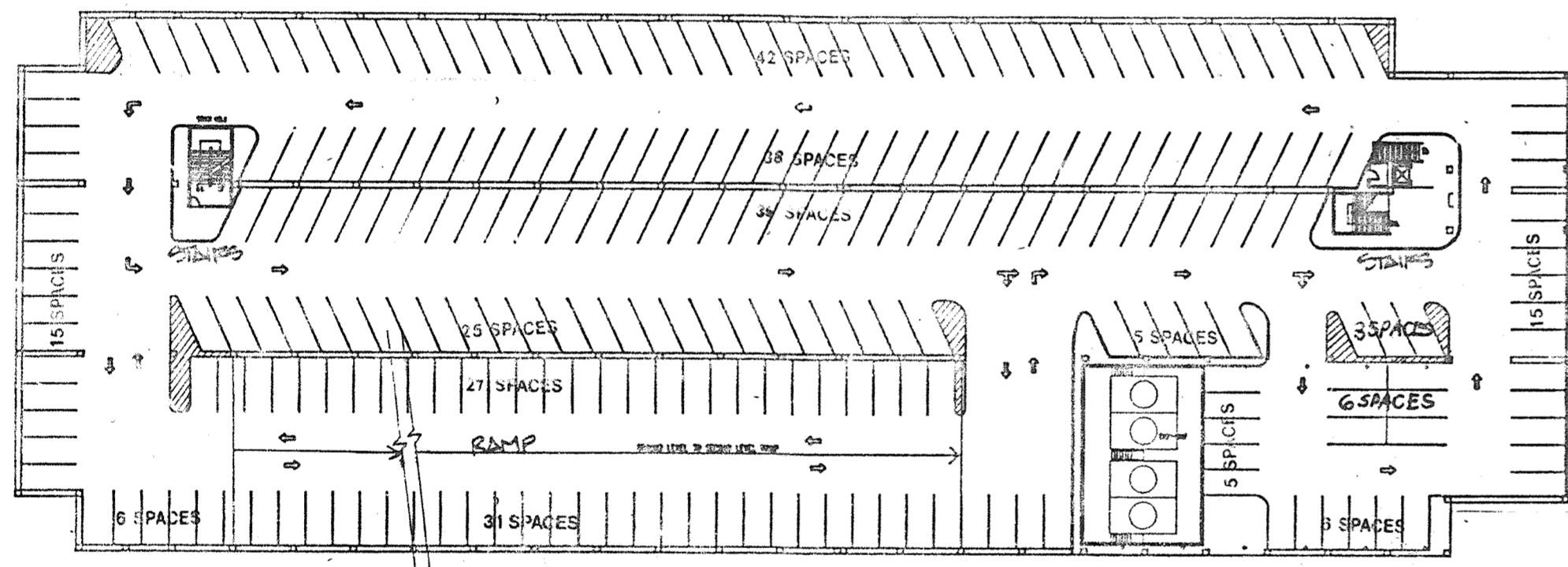
SOUTHEAST DECK
 RAMP LEVEL 1 TO LEVEL 2 = 79
 LEVEL 2 = 148
 H/C = 6
 TOTAL = 233

PROPOSED CEILING CONDUIT SECTION A (±10')
 CEILING MOUNTED JUNCTION BOX #2 (GROUND LEVEL)
 CEILING MOUNTED JUNCTION BOX #3 (LEVEL 2)
 PROPOSED VERTICAL CONDUIT (±20') FROM JUNCTION BOX #2 (GROUND LEVEL) TO JUNCTION BOX #3 (LEVEL 2). LORD & TAYLOR CONTRACTOR TO CORE DRILL THROUGH SLAB AND SEAL AROUND OPENING.
 PROPOSED CEILING CONDUIT (±10')
 POST INSTALLED VOLTA CHARGING STATION EVCS FOUNDATION W/ VEHICLE RATED BOLLARDS.

LEVEL 2

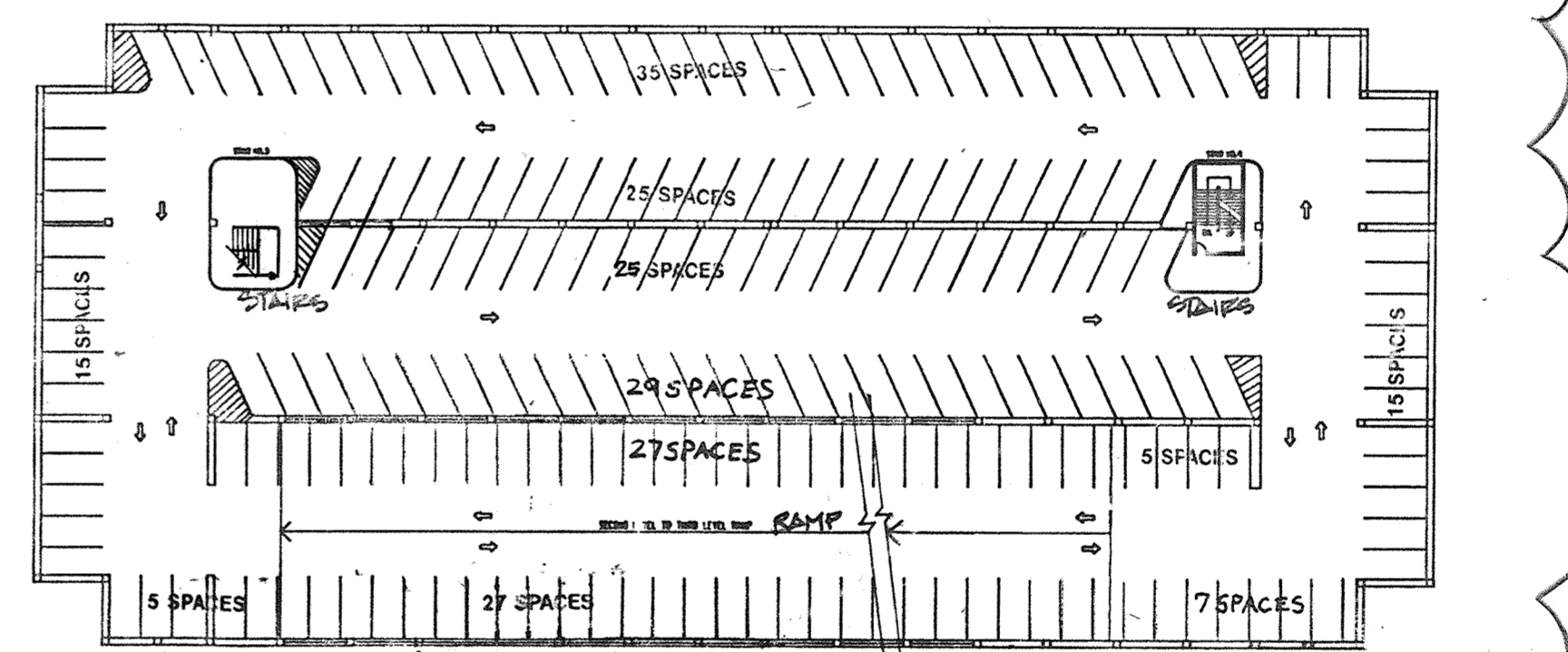


NORTHEAST DECK
 RAMP LEVEL 1 TO LEVEL 2 = 70
 LEVEL 2 = 148
 H/C = 6
 TOTAL = 224

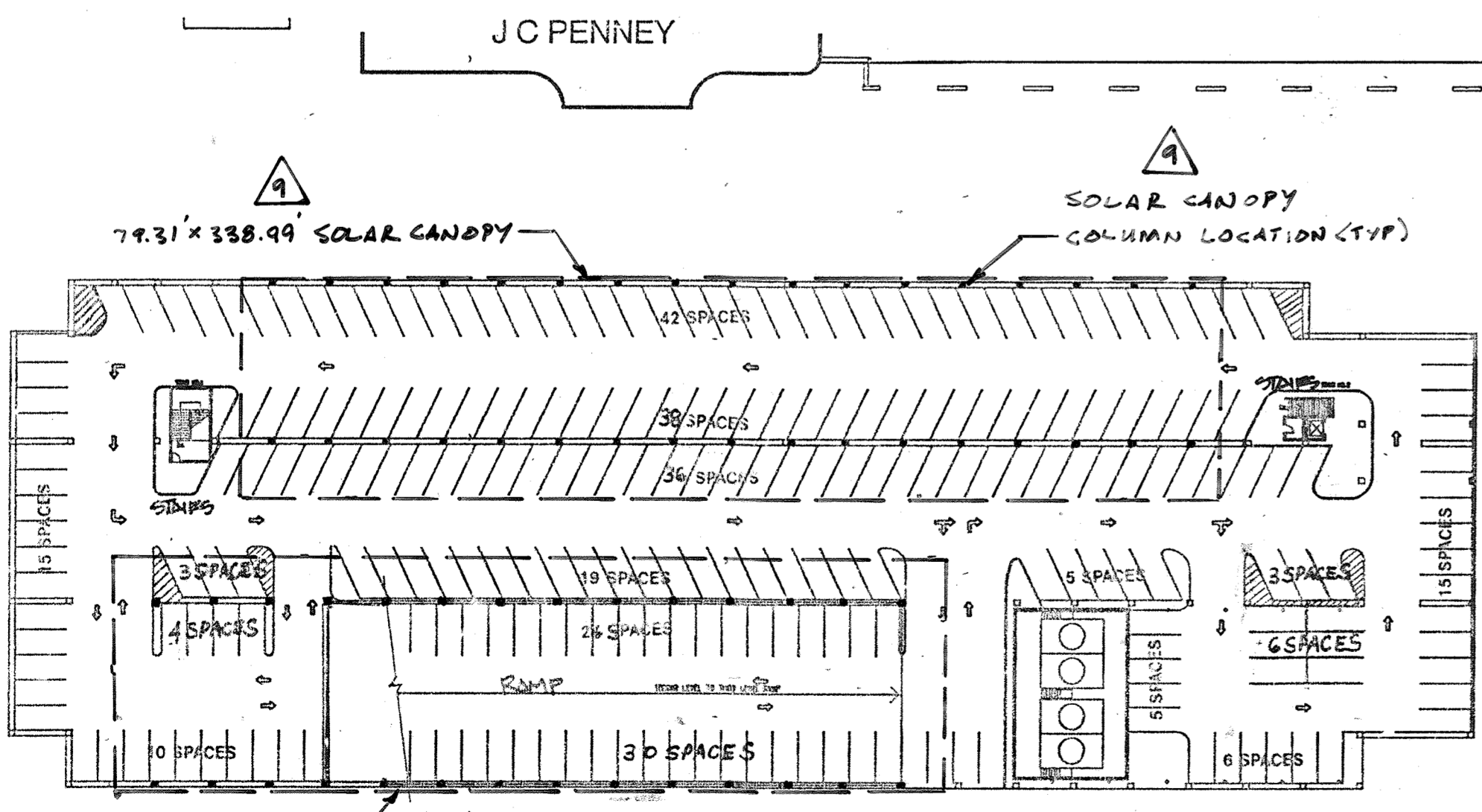


SOUTHEAST DECK
 RAMP LEVEL 2 TO LEVEL 3 = 58
 LEVEL 3 = 204
 TOTAL = 262

LEVEL 3

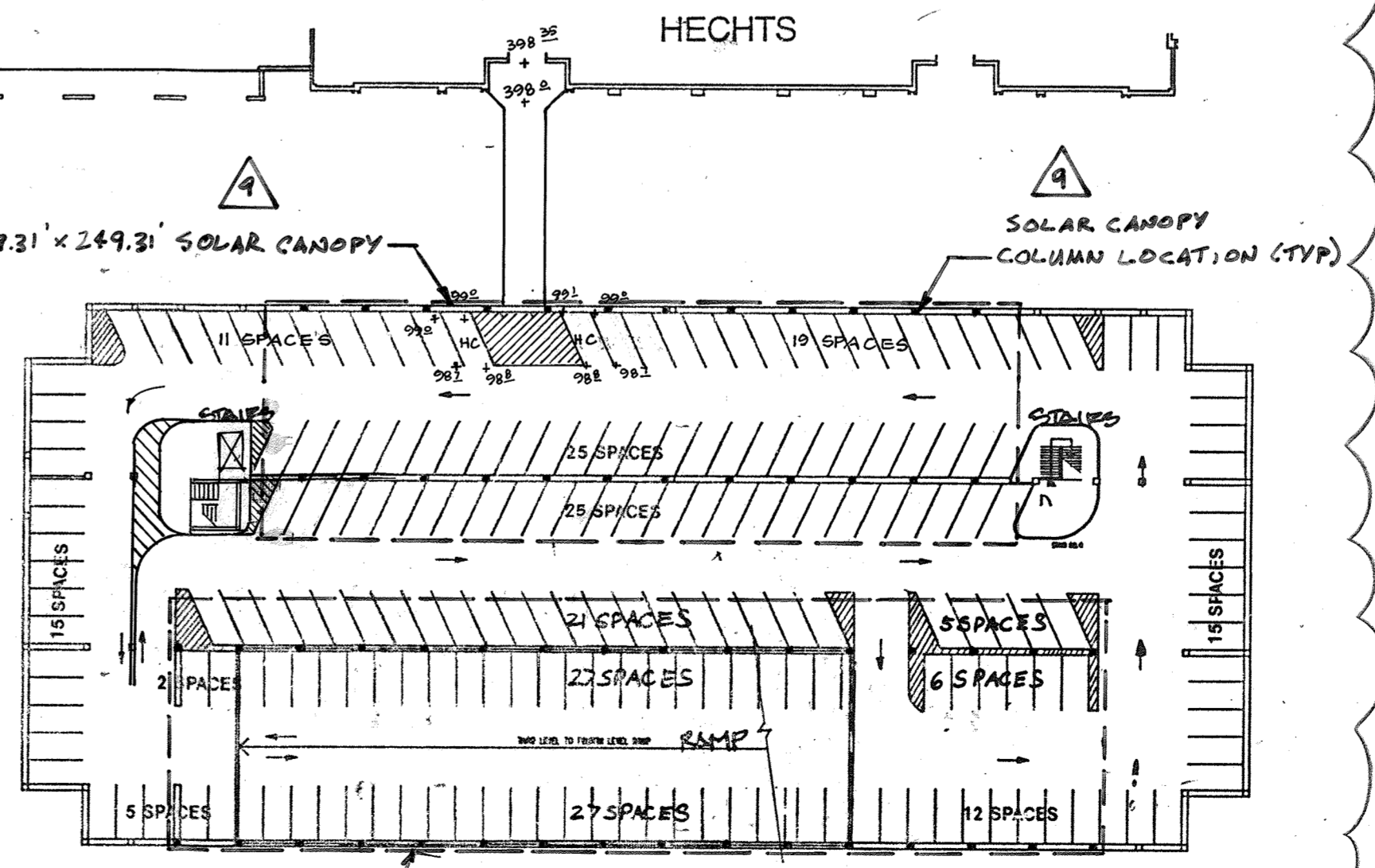


NORTHEAST DECK
 RAMP LEVEL 2 TO LEVEL 3 = 54
 LEVEL 3 = 162
 TOTAL = 216

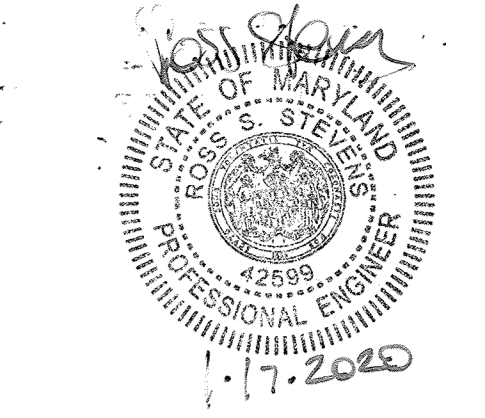


SOUTHEAST DECK
 RAMP LEVEL 3 TO LEVEL 4 = 56
 LEVEL 4 = 207
 TOTAL = 263

LEVEL 4



NORTHEAST DECK
 RAMP LEVEL 3 TO LEVEL 4 = 54
 LEVEL 4 = 161
 H/C = 2
 TOTAL = 217



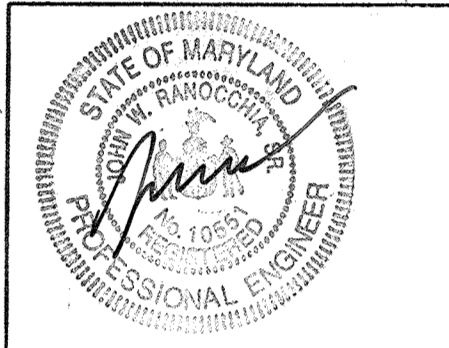
FOR REVISION NO. 10 ONLY
 1/17/97 ADDED ELEC. VER. CHG. STATIONS



JOHN M. CONWELL, JR.
 PROFESSIONAL ENGINEER NO. 13455
 FOR REVISION NO. 9 ONLY

DATE	NO.	REVISION DESCRIPTION
1/24/97	9	ADDED SOLAR CANOPIES

NOTE:
 REFER TO ARCHITECTURAL PLANS FOR DECK CONSTRUCTION AND DETAILS.



Professional Engr. No. 10559

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE DEC. 3, 1997

Date	No.	Revision Description
7-11-03	3	ADD J.C. PENNEY BRIDGE CONNECTION
07-08-98	4	REVISED PEDESTRAIN BRIDGE TO HECHTS & PARKING LAYOUT

THE MALL IN COLUMBIA
 PHASE II EXPANSION
 TOWN CENTER
 SECTION 2 AREA 1
 HOWARD COUNTY MD
 LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

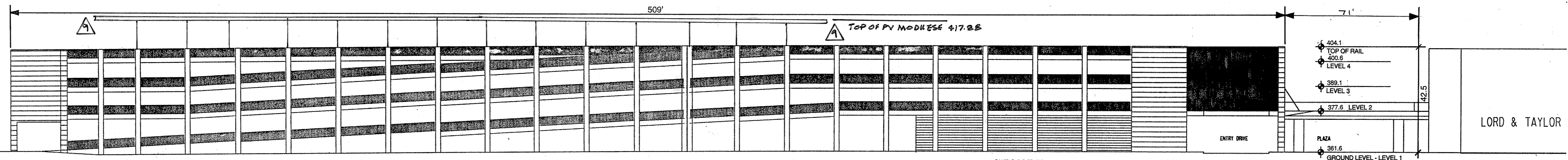
OWNER / DEVELOPER:
 THE HOWARD RESEARCH & DEVELOPMENT CORP.
 COLUMBIA MALL, INC.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

DMW
 DeWitt-MoCane-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-3333
 Fax 286-4708

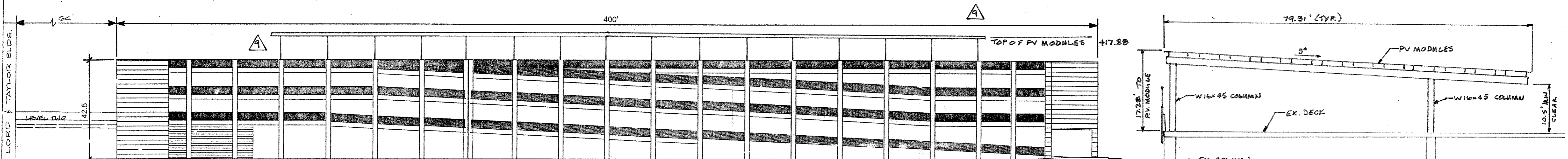
A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors and
 Environmental Professionals

TITLE
 PHASE II
 SOUTHEAST & NORTHEAST
 PARKING DECK LAYOUT

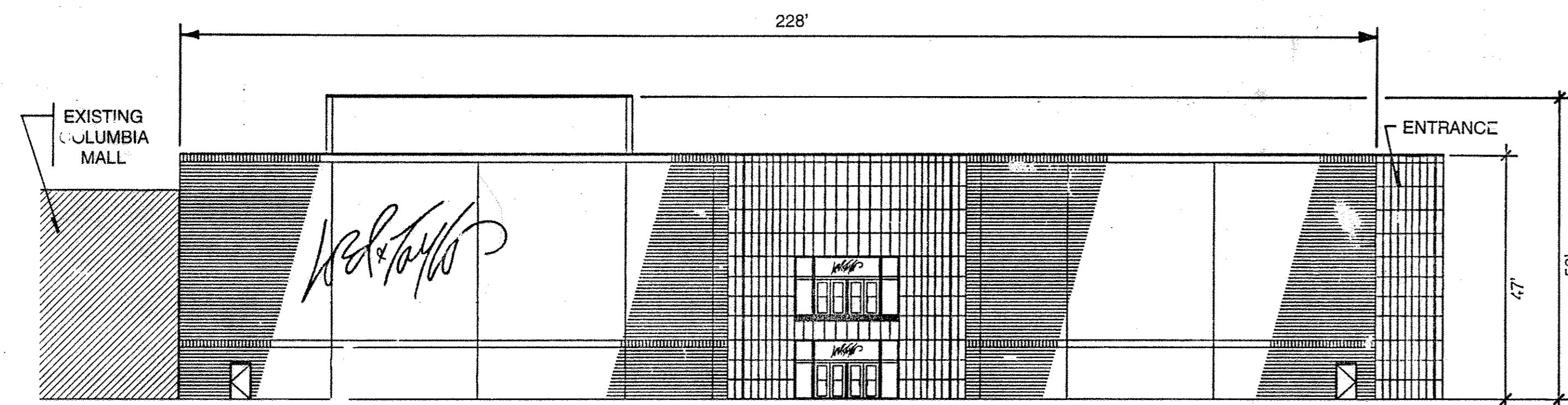
Des By	Scale NOT TO SCALE	Proj. No. 95019B
Drn By	Date 12/15/97	
Chk By	Approved	23 OF 30



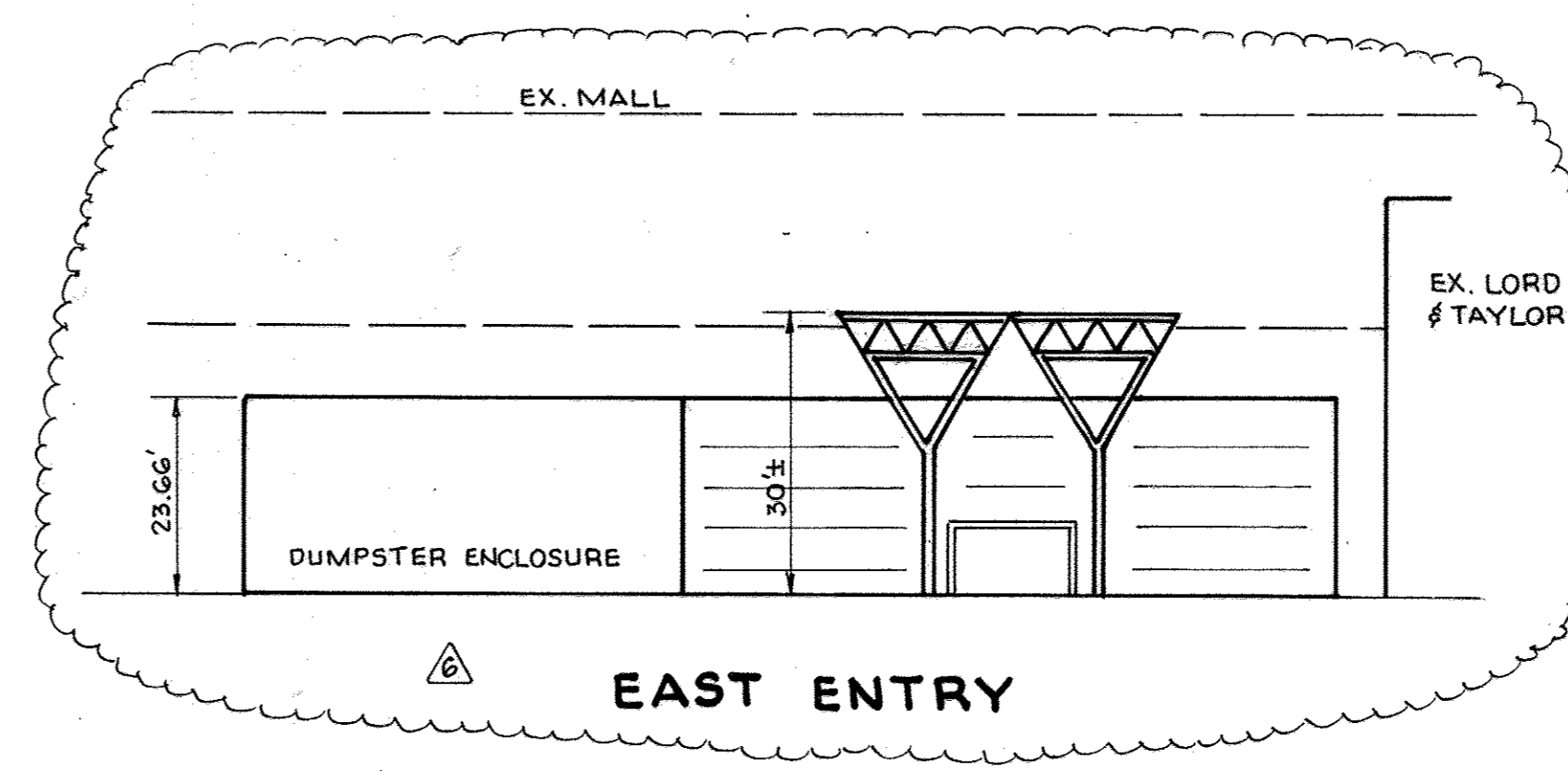
**SOUTHEAST DECK
EAST ELEVATION**



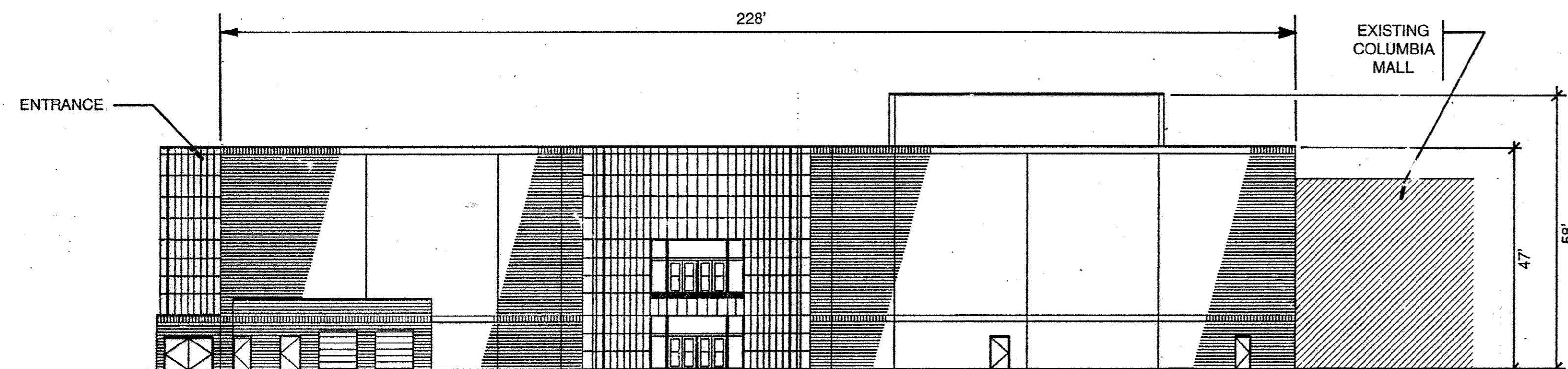
**NORTHEAST DECK
EAST ELEVATION**



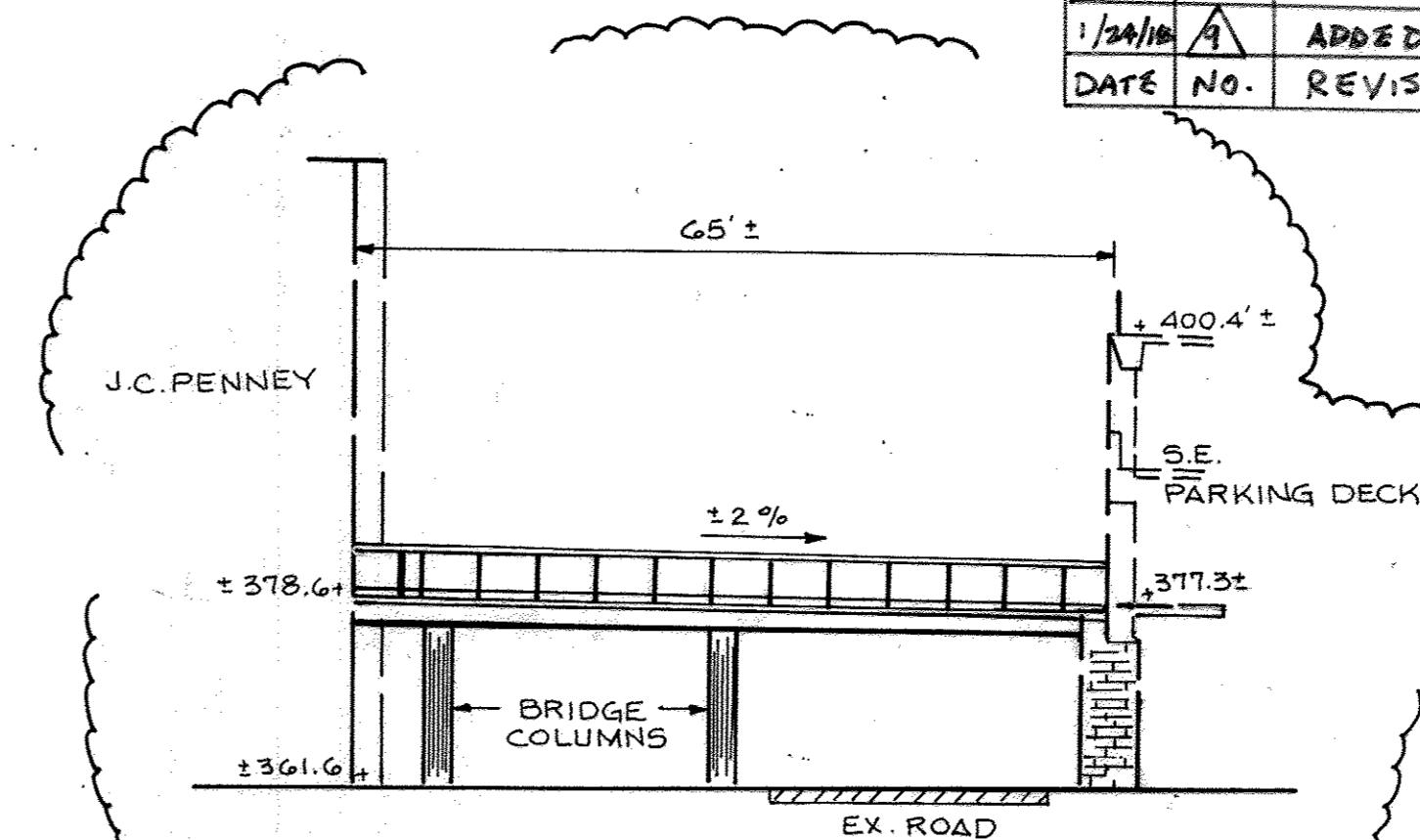
**LORD & TAYLOR
SOUTH ELEVATION**



EAST ENTRY



**LORD & TAYLOR
NORTH ELEVATION**



**J.C. PENNEY
BRIDGE CONNECTION**

NOT TO SCALE

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE Dec. 3, 1997
RB

STATE OF MARYLAND
PROFESSIONAL ENGINEER
No. 13455
12/15

JOHN M. CONNELL, JR.
PROFESSIONAL ENGR. NO. 13455
FOR REVISION NO. 9 ONLY

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>[Signature]</i>	10/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	DATE
<i>[Signature]</i>	1/13/97
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	11/14/96
DIRECTOR	DATE

Date	No.	REVISION DESCRIPTION
1/24/97	1	ADDED SOLAR CANOPIES
7-11-03	2	ADD J.C. PENNEY BRIDGE ELEV.
4-27-99	3	ADD EAST ENTRY ELEV.

THE MALL IN COLUMBIA
PHASE II EXPANSION
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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

DMW
Dunn McCusker-Walkers, Inc.
300 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 896-8333
Fax 896-4705

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

10/25/97
Date

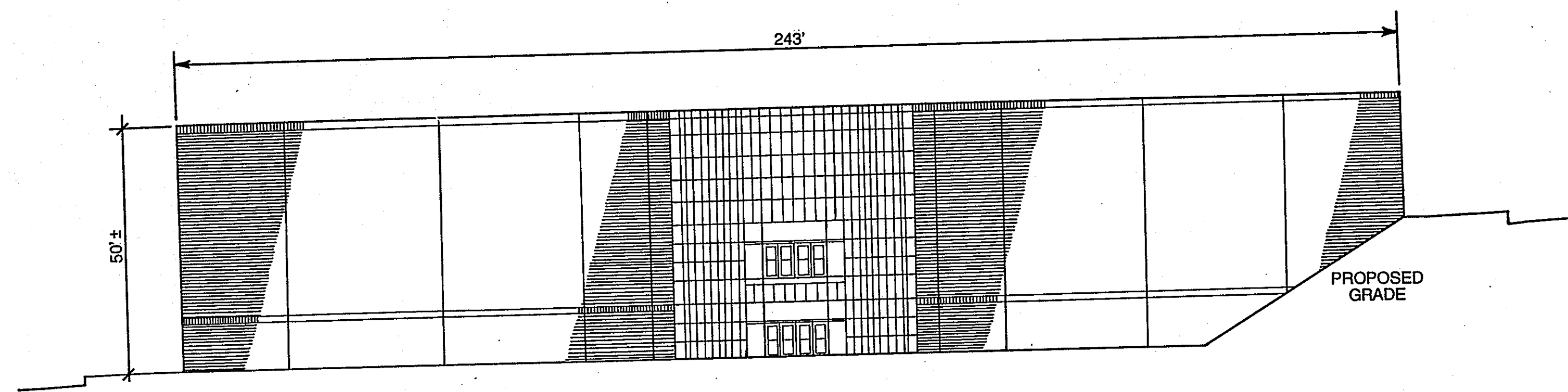
STATE OF MARYLAND
PROFESSIONAL ENGINEER
No. 10557

TITLE

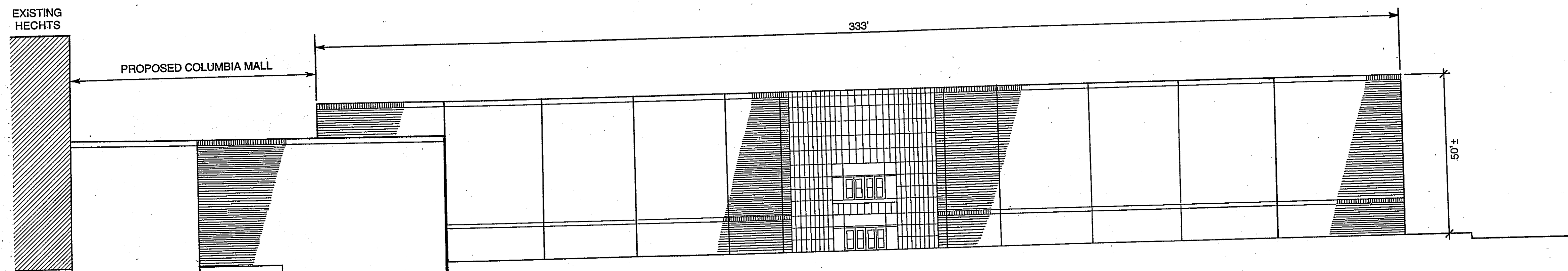
**PHASE II
BUILDING ELEVATIONS**

Des By	Scale NOT TO SCALE	Proj. No. 950193
Dim By	Date 12/15/97	
Chk By	Approved	24 OF 30

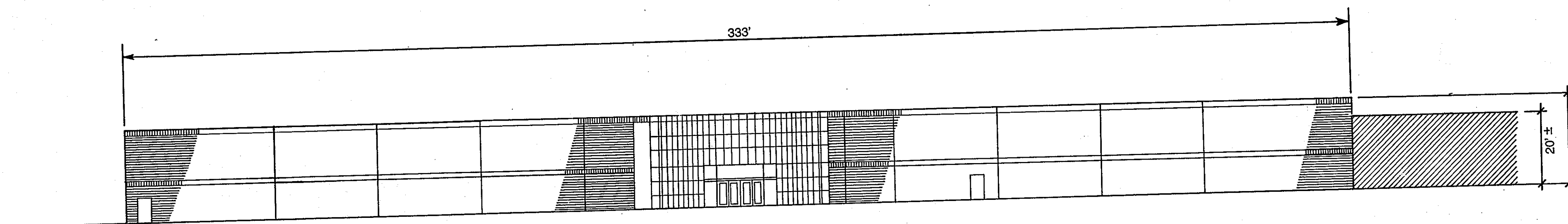
Professional Engr. No. 10557



NORDSTROM
WEST ELEVATION



NORDSTROM
NORTH ELEVATION



NORDSTROM
SOUTH ELEVATION

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE Dec. 3, 1997
LB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Chad Damm 1/8/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE
Colleen Miller 1/13/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
James R. Smith 1/14/98
 DIRECTOR DATE

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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

DMW
 DeWitt-Cause-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-5033
 Fax 296-4705
 A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

10/28/97
 Date

 Professional Engr. No. 10551

TITLE
**PHASE II
 BUILDING ELEVATIONS**

Des By	Scale NOT A SCALE	Proj. No. 95019B
Drn By	Date 12/11/97	25 OF 30
Chk By	Approved	

PLANT LIST - SHEETS L1, L2, L3, L4 & L5

NO.	SYMBOL	QUAN.	PLANT NAMES	SIZE	ROOT	REMARKS
1	⊕	84	MALUS 'SNOWDRIFT' SNOWDRIFT CRABAPPLE	2-2 1/2" AL	B&B	FULL HEADS
2	⊙	298	PLATANUS ACERIFOLIA LONDON PLANETREE	2 1/2-3" AL 12-14' HT	B&B	FULL HEADS
3	⊙	16	PYRUS CALLERYANA 'REDSPICE' REDSPIRE PEAR	2-2 1/2" AL 10' HT	B&B	FULL HEADS
4	⊙	10	PINUS STROBUS WHITE PINE	6-8' HT	B&B	
5	⊕	50	QUERUS PALUSTRIS PIN OAK	2 1/2-3" AL 12-14' HT	B&B	FULL HEADS
6	⊕	315	TAXUS MEDIA HATFIELD HATFIELD YEW	24" OPE HEDGE	B&B	
7	⊙	110	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE ZELKOVA	2 1/2-3" AL 12-14' HT	B&B	FULL HEADS
8	⊙		EXISTING TREES TO REMAIN CONTRACTOR TO PROTECT DURING CONSTRUCTION			
			ALL DISTURBED AREAS TO BE FINE GRADED & SEEDED; SEE SEDIMENT & EROSION CONTROL PLAN.			

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
⬠	CONC. LIGHT POLE ISLAND
⊕ ⊕ ⊕ ⊕	LIGHT POLES (BY OTHERS)

NOTE: SITE LIGHTING TO BE IN ACCORDANCE WITH MECH/ELECT. DRAWINGS IN ENGR. SITE PLAN SET.

NOTE: THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECT. 16.124 OF THE HOWARD COUNTY CODE & THE LANDSCAPE MANUAL, FOLLOWING THE NEWTOWN ALTERNATIVE COMPLIANCE METHOD. FINANCIAL SURETY FOR THE REQUIRED LANDS. TREES IN THE AMOUNT OF \$61,450 MUST BE POSTED AS PART OF THE GRADING PERMIT (\$63 TREES, 315 SHRUBS).

NOTE: PLANS L1, L2, L3, L4 & L5 ARE FOR LANDSCAPING ONLY.

NOTE: REFER TO SHEET L2 FOR PLANTING DETAILS.

General Planting Notes

- All plant material to meet A.A.N. Standards
- Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMW
- No substitutions to be made without consent of Landscape Architect or Owner
- All beds to be topped with three inches of hardwood mulch.
- Landscape Contractor to verify location of utilities with Owner before planting.
- Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owners discretion, specimen and other plant material will be selected.

Landscape Contractor shall coordinate plant bed filling operations and plant material installation with General Contractor and Utilities Contractor. At time of final inspection with acceptance, all electric, water, drainage, and fountain utilities, as well as all plant materials, shall remain undamaged. Likewise, Landscape Contractor and Utilities Contractor shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.

Contractor shall notify Miss Utility 72 hours prior to construction.

DEVELOPER'S / BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Charles H. Shaw 11/24/97
NAME DATE

APPROVED
PLANNING BOARD
OF HOWARD COUNTY

DATE Dec. 3, 1997
RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Michael J. ... 1/2/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

... 1/18/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

... 1/18/98
DIRECTOR DATE

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 10, 11, 22, 23, 24, 36, 37, 38, 41

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

DMW
Draft McCause-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax: 296-4706

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

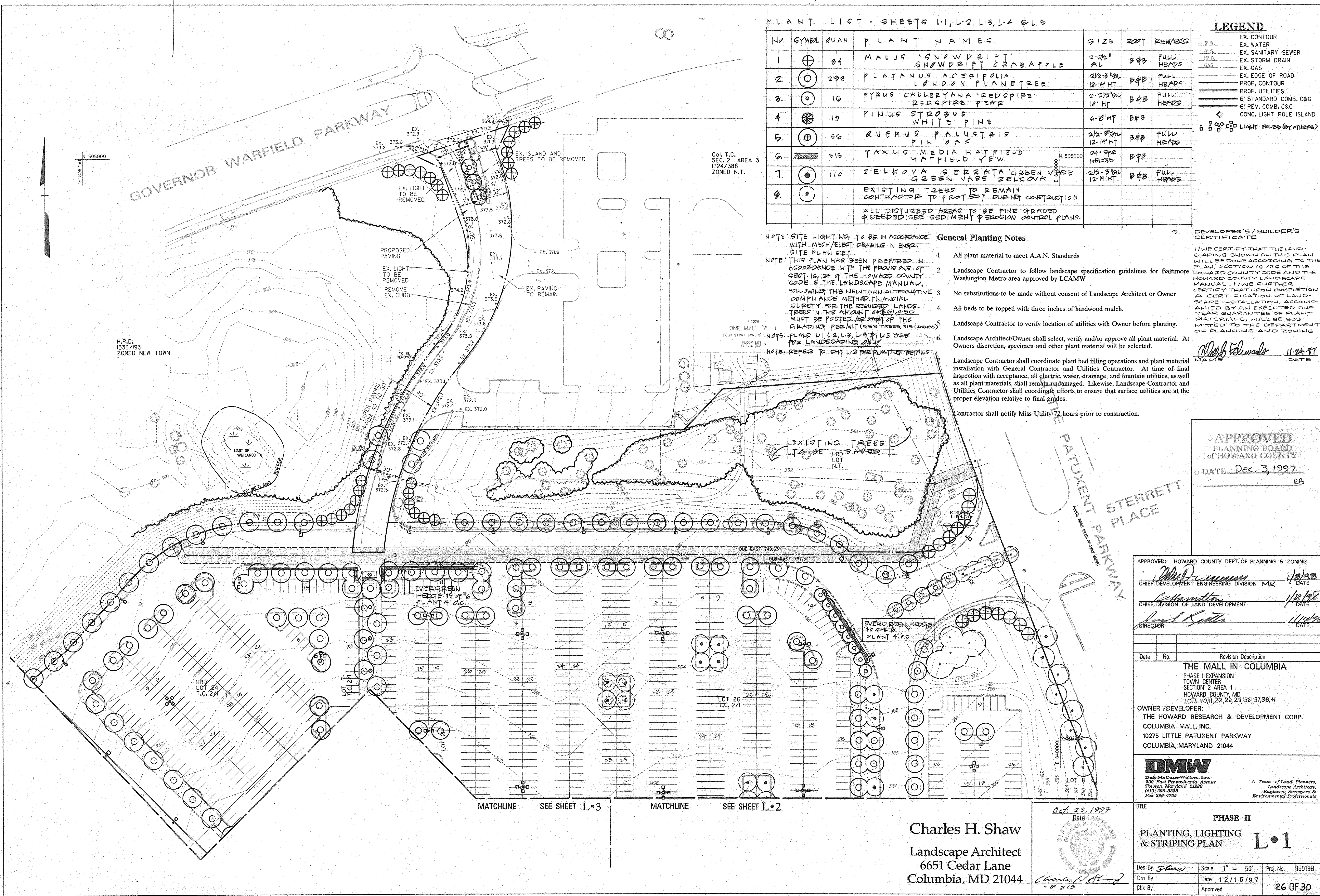
Oct 23, 1997
Date

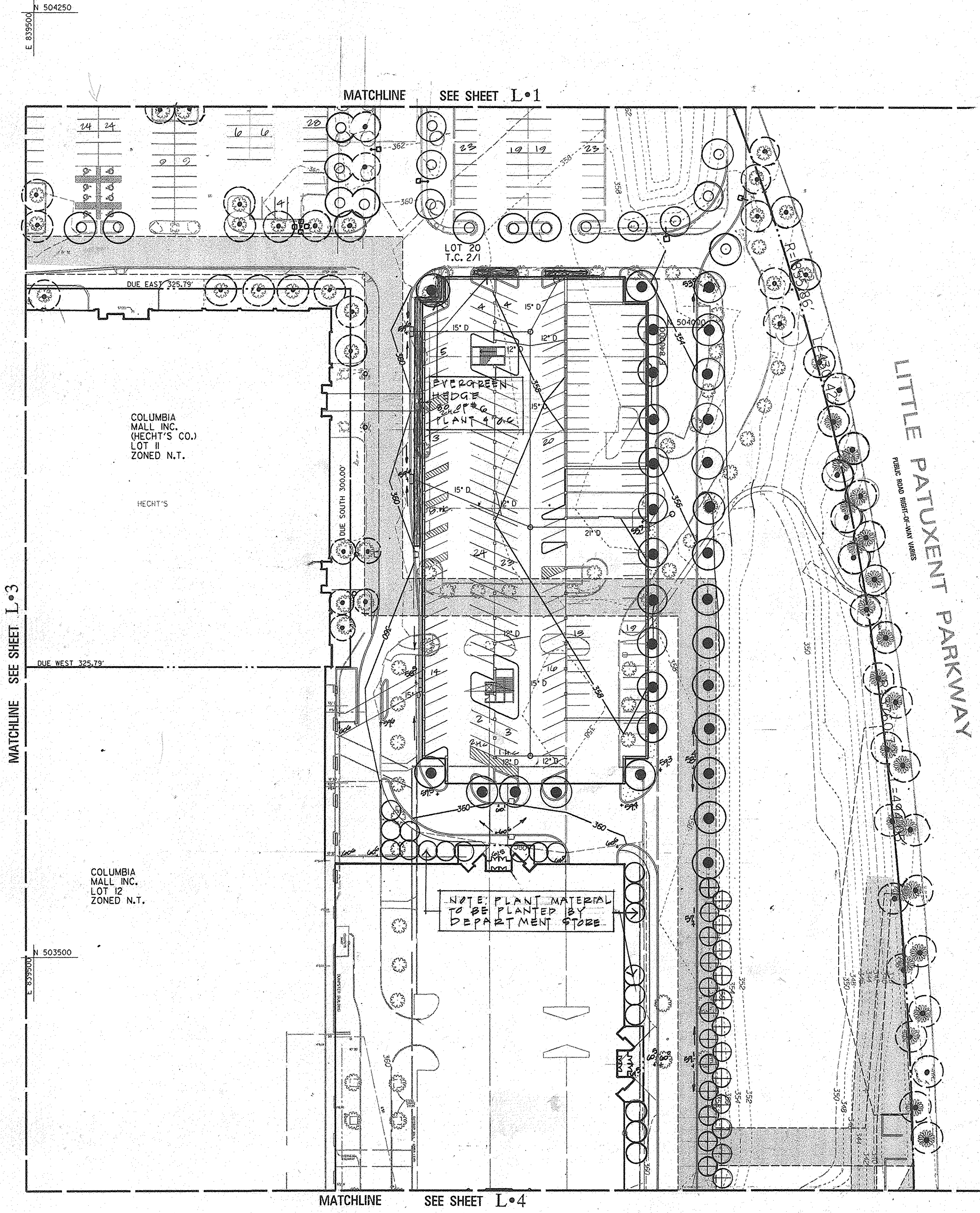
Charles H. Shaw
Charles H. Shaw
210

Charles H. Shaw
Landscape Architect
6651 Cedar Lane
Columbia, MD 21044

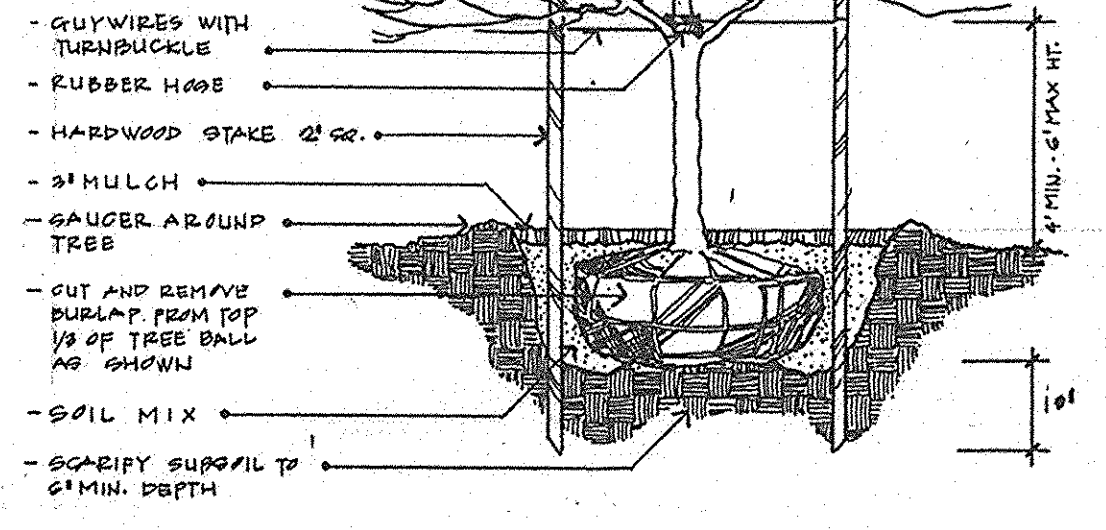
PHASE II
PLANTING, LIGHTING
& STRIPING PLAN **L.1**

Des By *Shaw* Scale 1" = 50' Proj. No. 95019B
Dwn By Date 12/15/97
Chk By Approved 26 OF 30



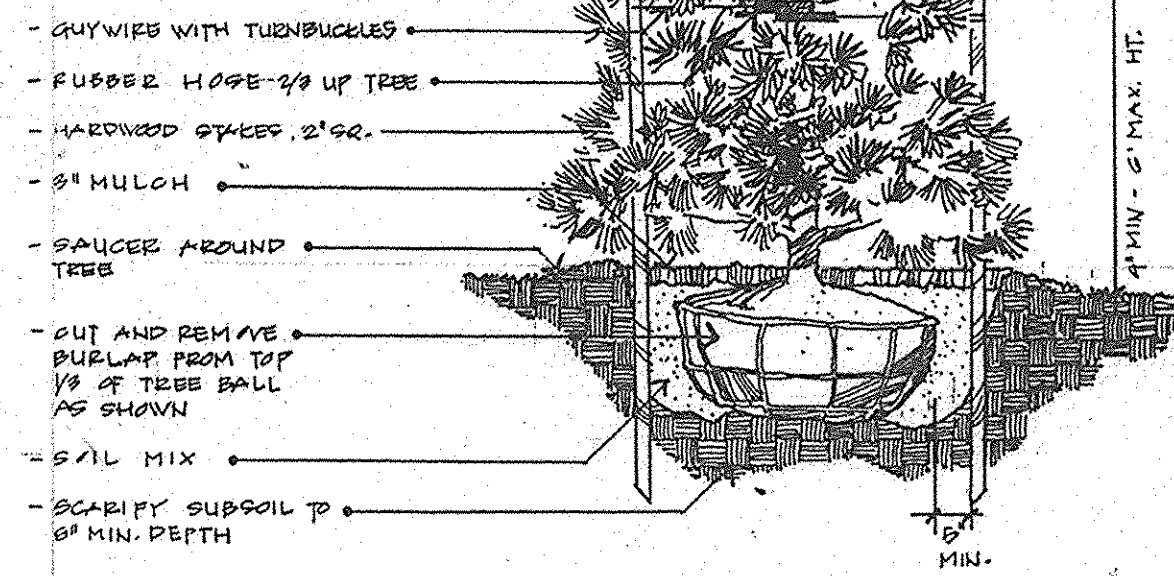


- GUY TREES UP TO 9" DBH GUER WITH STAKES - 2 PER TREE
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION
- NEVER CUT LEADER OUT OF TREE



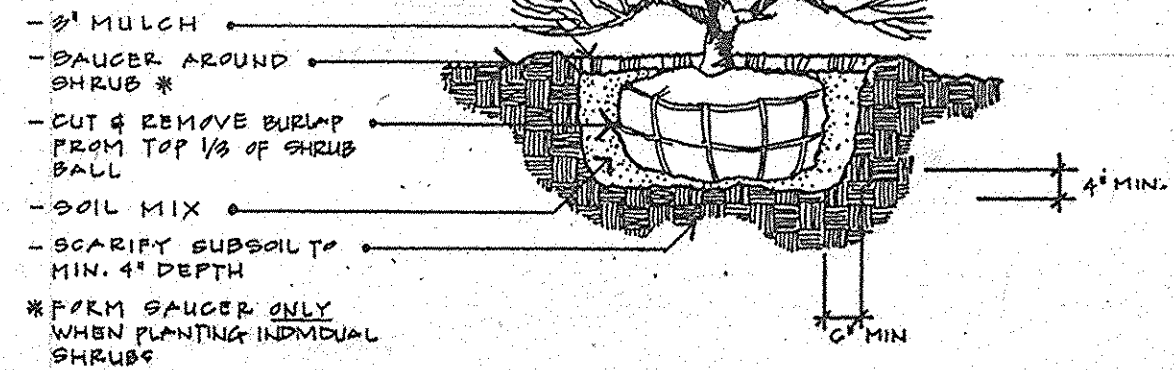
TYPICAL DECIDUOUS TREE PLANTING DETAIL

- TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUSLY EXISTING GRADE
- STAKE TREE UNDER 4\"/>



TYPICAL EVERGREEN TREE PLANTING DETAIL

- SHRUB SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE TO PREVIOUSLY EXISTING GRADE
- THIN BRANCHED AND PLAGE (NOT ALL BRN TIED) BY 1/8\"/>
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION



TYPICAL SHRUB PLANTING DETAIL

LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6\"/>
- ◆ CONC. LIGHT POLE ISLAND

APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE Dec 3, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>John Dammann</i>	1/13/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	DATE
<i>John Dammann</i>	1/13/98
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>John Dammann</i>	1/14/98
DIRECTOR	DATE

Date No. Revision Description

THE MALL IN COLUMBIA
PHASE II EXPANSION
TOWIN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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) 296-3833
Fax 296-4705

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

Oct. 23, 1997
Date

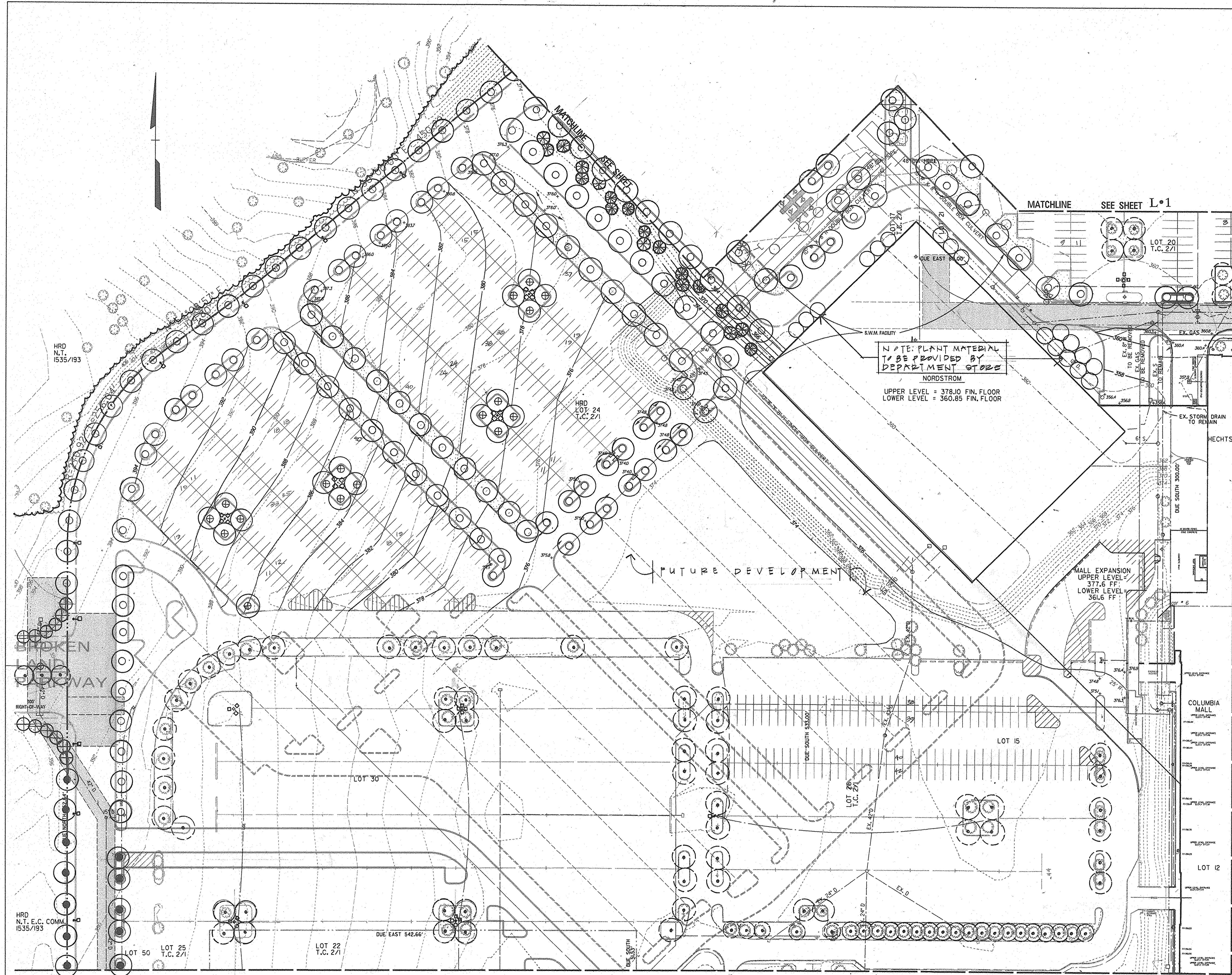
Charles A. Walker
#212

TITLE

**PHASE II
PLANTING, LIGHTING
& STRIPING PLAN L-2**

Des By <i>Shawn</i>	Scale 1" = 50'	Proj. No. 95019B
Drn By	Date 12/15/97	
Chk By	Approved	27 OF 30

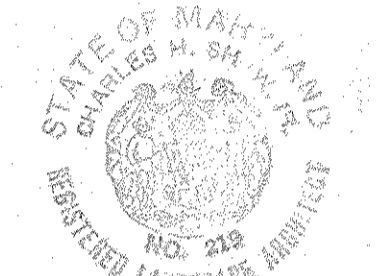
- LEGEND**
- EX. CONTOUR
 - - - EX. WATER
 - - - EX. SANITARY SEWER
 - - - EX. STORM DRAIN
 - - - EX. GAS
 - - - EX. EDGE OF ROAD
 - PROP. CONTOUR
 - PROP. UTILITIES
 - 6" STANDARD COMB. C&G
 - 6" REV. COMB. C&G
 - ◇ CONC. LIGHT POLE ISLAND



NOTE: PLANT MATERIAL
TO BE PROVIDED BY
DEPARTMENT STORE
NORDSTROM
UPPER LEVEL = 378.10 FIN. FLOOR
LOWER LEVEL = 360.85 FIN. FLOOR

MALL EXPANSION
UPPER LEVEL =
377.6 FF
LOWER LEVEL =
361.6 FF

12.23.1997
Date



Charles H. Shaw
12.19.97

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE Dec. 3, 1997
RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Michael J. ... 1/18/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

John ... 1/13/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

James ... 1/14/98
DIRECTOR DATE

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2, AREA 1 HOWARD COUNTY, MD LOTS 10, 11, 22, 28, 24, 36, 37, 38, 41

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

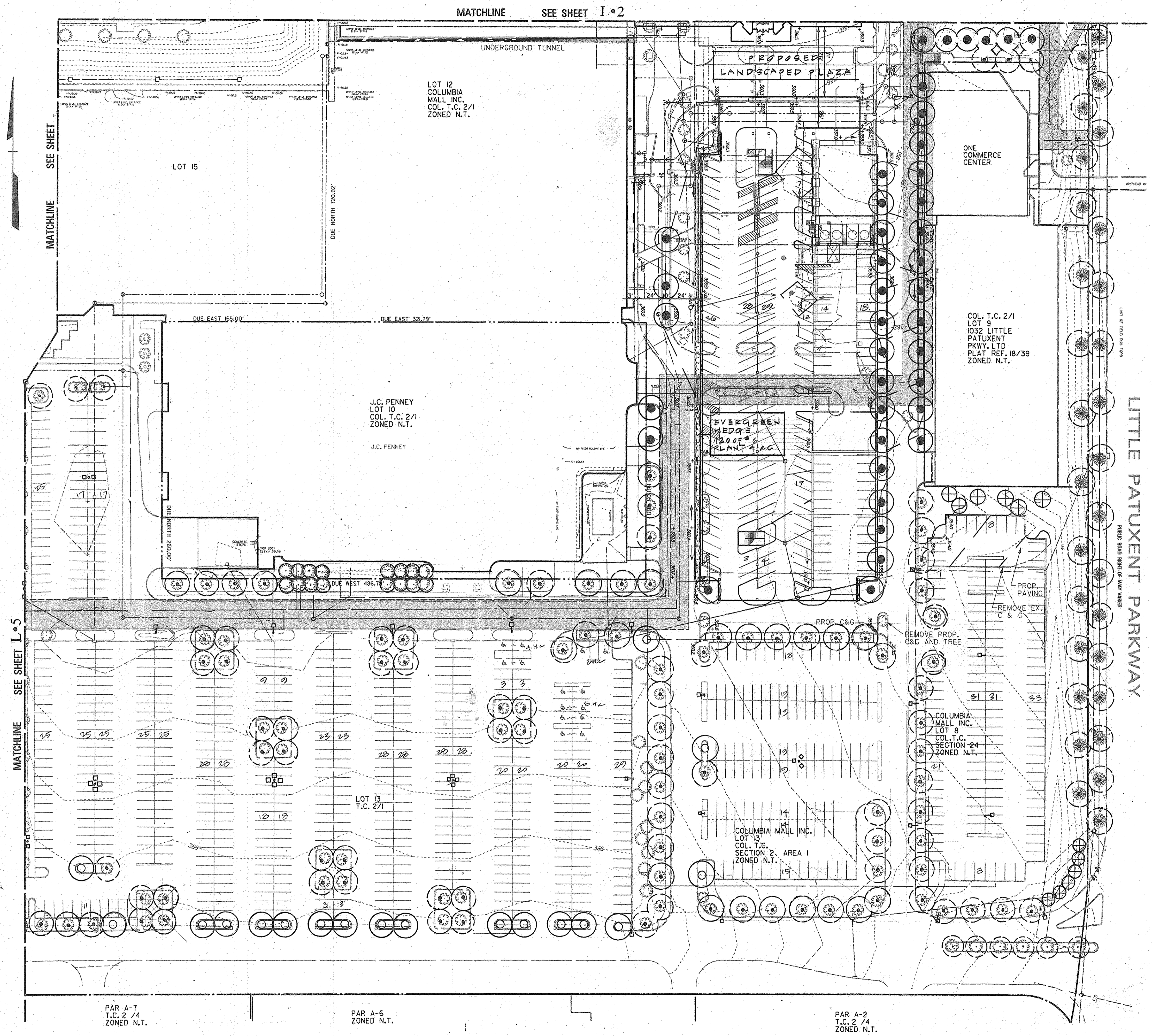
DMW
DeWitt McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

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

TITLE
**PHASE II
PLANTING, LIGHTING
& STRIPING PLAN L.3**

Des By <i>Shaw</i>	Scale 1" = 50'	Proj. No. 95019B
Dm By	Date 12/15/97	
Chk By	Approved	28 OF 30

- 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
 - ◆ CONC. LIGHT POLE ISLAND



APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE Dec. 3, 1997
 26

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division MK 1/10/98
 Chief, Division of Land Development 1/13/98
 Director 1/14/98

THE MALL IN COLUMBIA
 PHASE II EXPANSION
 TOWN CENTER
 SECTION 2 AREA 1
 HOWARD COUNTY, MD
 LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41
 OWNER / DEVELOPER:
 THE HOWARD RESEARCH & DEVELOPMENT CORP.
 COLUMBIA MALL, INC.
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MARYLAND 21044

DMW
 DeWitt-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

Oct. 23, 1997
 Date
 STATE OF MARYLAND
 CHARLES H. SHAW, JR.
 REGISTERED LANDSCAPE ARCHITECT
 Des By Shaw
 Dwn By
 Chk By Charles H. Shaw, Jr.
 Date 12/15/97
 Approved

TITLE
PHASE II
PLANTING, LIGHTING
& STRIPING PLAN **L•4**
 Des By Shaw Scale 1" = 50' Proj. No. 95019B
 Dwn By Date 12/15/97
 Chk By Charles H. Shaw, Jr. Approved 29 OF 30

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
- ◆ CONC. LIGHT POLE ISLAND

MATCHLINE SEE SHEET L•3

SEE SHEET L•4

MATCHLINE

SEE SHEET L•4

N 503250
E 839250

N 502500
E 839250

HRD 1535/193
E.C. COMM.
ZONED N.T.

COL. T.C. SEC. 2 AREA 1
N.T. COMM. 1535/193
ZONED N.T.

HRD 1535/193
E.C. COMM.
ZONED N.T.

PAR A
T.C. 2/6
2136/293
ZONED N.T.

PAR C-4
T.C. 2/5
1535/193
ZONED N.T.

PAR B
T.C. 2/5
ZONED N.T.

PAR A
ZONED N.T.

T.C. 2/2
ZONED N.T.

PAR A-7
T.C. 2/4
ZONED N.T.

COLUMBIA MALL INC.
LOT 28
TC 2/1
ZONED N.T.

COLUMBIA MALL INC.
LOT 26
TC 2/1
ZONED N.T.

SEARS ROEBUCK & CO.
LOT 22
COL TC 2/1
ZONED N.T.

SEARS

COLUMBIA MALL INC.
LOT 25
COL TC 2/1
ZONED N.T.

LOT 50
ZONED N.T.

COLUMBIA MALL INC.
LOT 19
COL TC 2/1
ZONED N.T.

APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE Dec. 3, 1997

PB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Mr. [Signature] 1/8/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Mr. [Signature] 1/13/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mr. [Signature] 1/14/98
DIRECTOR DATE

Date	No.	Revision Description
		THE MALL IN COLUMBIA PHASE II EXPANSION TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOTS 10, 11, 22, 28, 29, 36, 37, 38, 41

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) 296-3633
Fax 296-4706

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

TITLE
PHASE II
PLANTING, LIGHTING & STRIPING PLAN L•5

Des By <i>[Signature]</i>	Scale 1" = 50'	Proj. No. 95019B
Drn By	Date 12/15/97	30 OF 30
Chk By	Approved	

1/23/97
Date



[Signature]