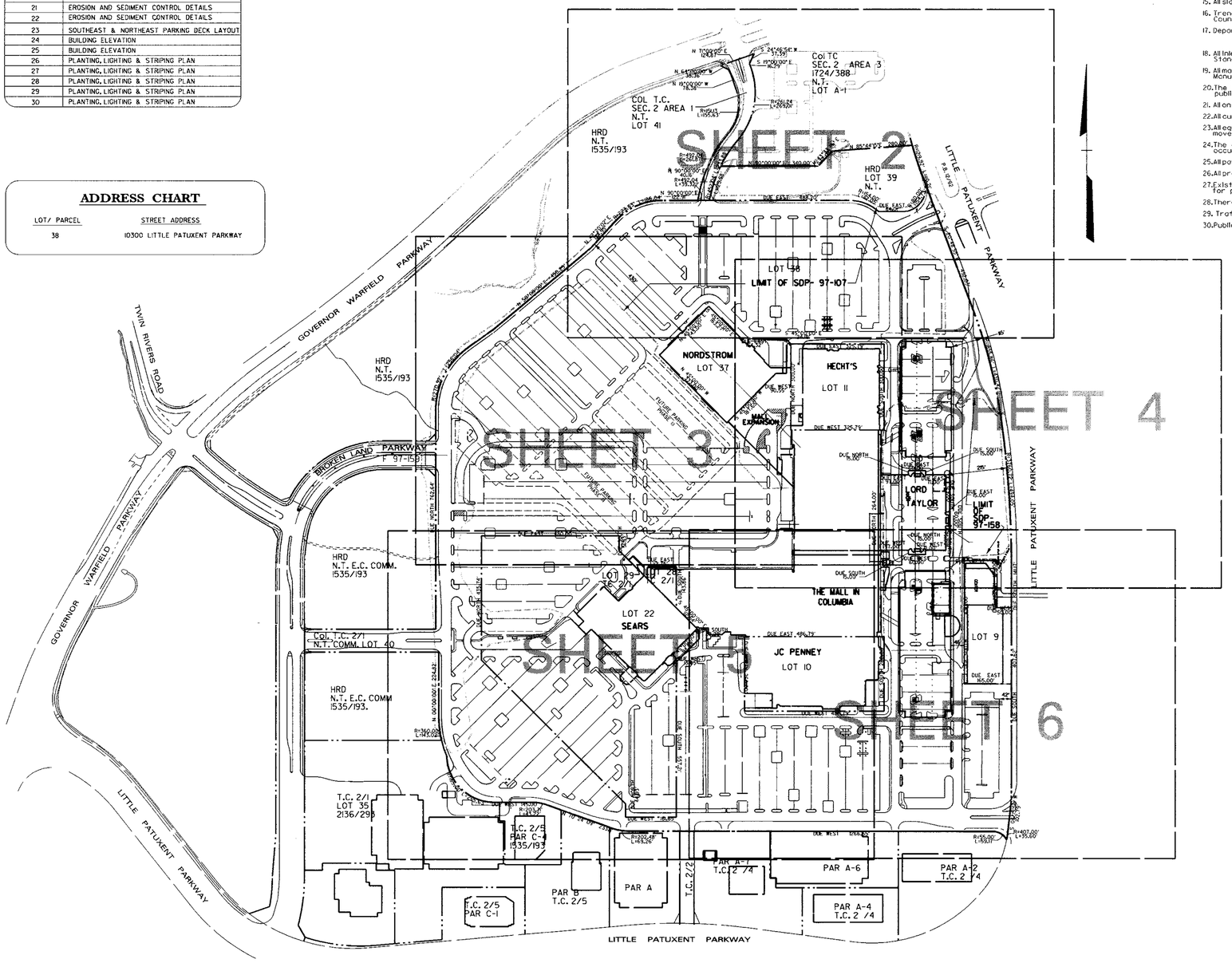
SHEET INDEX

SHEET	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	SITE DEVELOPMENT PLAN
4	SITE DEVELOPMENT PLAN
5	SITE DEVELOPMENT PLAN
6	SITE DEVELOPMENT PLAN
7	SITE DEVELOPMENT PLAN (30 SCALE)
8	SITE DEVELOPMENT PLAN (30 SCALE)
9	SITE DETAILS
10	PAVING LEGEND & SITE DETAILS
11	STORM DRAINAGE PROFILES
12	STORM DRAINAGE & SEWER PROFILES
13	STORM DRAINAGE AREA MAP & SOILS MAP
14	EROSION AND SEDIMENT CONTROL PLAN
15	EROSION AND SEDIMENT CONTROL PLAN
16	EROSION AND SEDIMENT CONTROL PLAN
17	EROSION AND SEDIMENT CONTROL PLAN
18	EROSION AND SEDIMENT CONTROL PLAN
19	EROSION AND SEDIMENT CONTROL DETAILS
20	EROSION AND SEDIMENT CONTROL DETAILS
21	EROSION AND SEDIMENT CONTROL DETAILS
22	EROSION AND SEDIMENT CONTROL DETAILS
23	SOUTHEAST & NORTHEAST PARKING DECK LAYOUT
24	BUILDING ELEVATION
25	BUILDING ELEVATION
26	PLANTING, LIGHTING & STRIPING PLAN
27	PLANTING, LIGHTING & STRIPING PLAN
28	PLANTING, LIGHTING & STRIPING PLAN
29	PLANTING, LIGHTING & STRIPING PLAN
30	PLANTING, LIGHTING & STRIPING PLAN

ADDRESS CHART

LOT/ PARCEL	STREET ADDRESS
38	10300 LITTLE PATUXENT PARKWAY



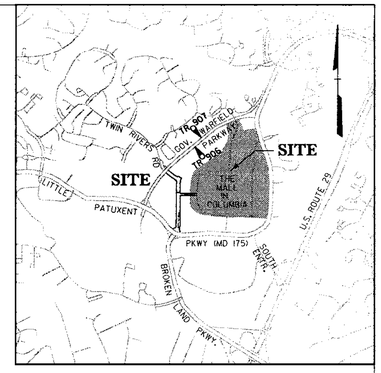
VICINITY MAP
1" = 200'

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
2. 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.
3. The contractor shall notify 'Miss Utility' at 1-800-257-7777 at least 48 hours prior to any excavation work.
4. Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
5. All plan dimensions are to the face of curb unless otherwise noted.
6. Topography was field run surveyed by Daft-McCune-Walker, Inc. in July 1995, and Fisher, Collins & Carter in 1994. Expanded Per SDP 97-107 & SDP 97-158
7. Coordinates and bearings shown hereon 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 839102.2760
TR 102	N 503690.7010	E 838314.2660

8. 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.
9. Stormwater management facilities are privately maintained.
10. No wetlands exist within the limits of disturbance.
11. The existing utilities were located from available records and field Survey prepared by Daft-McCune-Walker, Inc. The contractor must do test pits, by hand, at all utility crossings and connection points at least 5 days prior to starting work to verify exact location.
12. The Soils analysis was prepared by R. Baiter Group.
13. Handicap parking details shall be in accordance with the 'Maryland Building Code for the Handicapped', Section 5.08-1.05.
14. Any damage to County owned right-of-way to be corrected at the contractor 's expense.
15. All sidewalks shall be cross sloped at ¼ inch per foot.
16. Trench bedding for storm drainage structures shall be in accordance with Howard County Standard D2.04.
17. Department of Planning and Zoning reference file numbers:
    FDP ph 47-A-VI, FDP Ph. NHA, FDP Phase 524A, SDP 80-01, F-97-19, F-97-153, F-97-155, F-97-159, S-96-09, SDP-97-107, SDP-97-158
18. All inlets shall be constructed in accordance with Howard County standards or MSHA Standards as specified on the structure schedule.
19. All materials and construction is to be in accordance with the Howard County Design Manual Volume IV.
20. The building setback restrictions from the property lines and right-of-way lines of any public road shall be in accordance with FDP Phase 47-A-VI.
21. All on-site driveways and parking areas to be privately maintained.
22. All curb radii are five foot unless otherwise labeled.
23. All equipment and tools shall be placed as not to interfere with vehicular or pedestrian movement unless specified.
24. 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.
25. All paving areas indicated are private.
26. All proposed handicap ramps shall be in accordance with the current A.D.A. Standards.
27. 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 134 of the Zoning Regulations.
28. There is no floodplain on this site.
29. Traffic study was prepared by Wells and Assoc. dated 10-28-97.
30. Public Water and Sewer is utilized for this site.



LOCATION MAP

SCALE: 1" = 2000'

ELEVATIONS SHOWN HEREON ARE BASED ON THE FOLLOWING TRAVERSE STATIONS ESTABLISHED BY FISHER, COLLINS AND CARTER, INC. NGVD 29 VERTICAL DATUM)

TR 906	N 504280.1530	E 838550.3680	ELEV. 381.500
TR 907	N 504400.6700	E 838647.7700	ELEV. 394.150

SITE ANALYSIS

1. Zoning: New Town - Commercial (Per FDP Ph. 47-A-VI)
2. Phase II Expansion Area/Limit of Disturbance = 19.2
3. Proposed Use: Proposed Building Expansion and Parking
4. 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) (6)
   b. Parking Provided

	Proposed II Parking	Total Proposed
Parking Spaces	6621	6621
Handicap Spaces	83 (11 van)	83 (11 van)
Total	6704	6704

   c. Parking spaces to be removed = 676 Sp.
   d. Parking spaces to be added = 2685 (Includes 1812 decks, 179 restriping, & 534 additional spaces)

5. Area Tabulation

a.	Phase II Expansion Area/Limit of Disturbance	19.2 Ac.
b.	Proposed building area	399,177 SF (6)
c.	Impervious area	17.25 Ac.
d.	Temporary green area in Phase II	1.9 Ac.

6. Lot Tabulation

Lot	Owner	Area	Plat 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 A.C.	

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/8/98 DATE

DIRECTOR — 1/14/98 DATE

Date	No.	Revision Description
4-27-98	6	REV. SITE ANALYSIS PER EAST ENTRY REV.
7-15-98	4	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

12/17/97
Date

Professional Engr. No. 10551

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

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

SUBDIVISION NAME: COLUMBIA TOWN CTR.		SECTION/AREA: 21	LOT/PARCEL #: SEE SITE ANALYSIS #6
FDP: 3054A-442	BLOCK #: 99.20% 1,2	ZONE: N.T.	TAX/ZONE MAP: 30,36
ELECTION DISTRICT: 5TH	CENSUS TRACT: 6054	WATER CODE:	SEWER CODE:

TITLE
PHASE II
SITE DEVELOPMENT PLAN
COVER SHEET

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

SDP-98-44

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LEGEND

- EX. CONTOUR
- 8"W. EX. WATER
- 8"S. EX. SANITARY SEWER
- 15"D. EX. STORM DRAIN
- GAS 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
FC3	504522.4400	839076.2707
FC19	504540.8795	838105.6927
FC327	504062.24466	839144.2515
FC 913	504756.7604	839200.1400
FC 937	504047.3552	839227.9190
FD 191	505006.712296	839227.473856
FD192	505027.229295	839179.749800
FD 206	505040.934087	839237.693801
FD 201	505028.612355	839229.467842
FD 940	504943.042560	839269.231758
FD 939	504941.307455	839258.749264.46
FD 195	505024.093614	839232.297500
FD 193	505020.180027	839230.331591
FD196	505025.871275	839228.364919
FD 198	505023.764788	839242.140123
FD 200	505031.259076	839238.198193
FD 208	505039.172997	839227.640761
FD 203	505031.046440	839226.956629
FD204	505042.049914	839234.546632

GOVERNOR WARFIELD PARKWAY
PUBLIC ROAD R.O.W. VARIES
EX. MACADAM PATH
MEET EX. BIT. CONC. WALK
EX. STREET TO REMAIN
HC RAMP (TYPE A)
(RELOCATED) I 60
I 61
REMOVE INLET INSTALL MANHOLE
EX. INLET
M-5I
TO BE REMOVED
S-1
REMOVE EX. HANDICAP RAMP & REPLACE WITH STD. CURB & GUTTER
CURB BY OTHERS
EX. INLET TO REMAIN
PROP. HANDICAP RAMP (TYPE A) & CONC. MEET EX. PAD
SEE DETAIL A1 THIS SHEET
REGRADE TO MEET EX. CONC. PAD
RAILING TO BE REMOVED
GRADE A POSITIVE OUTFALL 1.0% MIN.
EX. TRAFFIC SIGNAL CONTROLLER
EX. CROSSWALK SIGNAL
EX. JUNCTION BOX
EX. ISLAND AND TREES TO BE REMOVED
EX. CURB TO REMAIN
BASELINE
PRIVATE RD. A 0+00 - 5+64
EX. PAVING TO REMAIN
OVERLAY PAVING AS NEEDED
EX. LIGHT TO BE REMOVED
PROP. 6' SIDEWALK
PROPOSED PAVING
REMOVE EX. CURB & SIDEWALK
LOT A1 COL./T.C. 2/1
EX. PARKING LOT
EX. PAVING TO REMAIN
EASEMENT FOR ROAD WIDENING PLAT #5964
CONVERT EX. TO MANHOLE
EX. INLET TO REMAIN
18"RCP
REMOVE EX. PAVING AND RE-PAVE AS REQUIRED
RC RAMP TYPE A1
MEET EX. CURB & SIDEWALK
EX. RING ROAD PER SDP-97-107
HANDICAP RAMP TYP. C TO BE REMOVED
44'
EX. 8" S (CONTRACT 20-3613D)
DUE EAST 787.54'
DUE EAST 488.20'
DUE EAST 84.01'
Col. T.C. LOT A-1
SEC. 2 AREA 3
1724/388
ZONED N.T.
ONE MALL NORTH
FOUR STORY CONCRETE BULDING
FLOOR LEVEL ELEV.= 362.88
N 85°44'15" E 260.00'
HRD LOT 39 N.T.
EX. 6" S
EX. 8" S
LITTLE PATUXENT PARKWAY
PUBLIC ROAD RIGHT-OF-WAY VARIES
STERRETT PLACE
EX. PARKING PER SDP-97-107
HRD LOT 38 T.C. 2/1
LOT 38 T.C. 2/1
EX. 12" W
MATCHLINE SEE SHEET 3
MATCHLINE SEE SHEET 4
H.R.D. 1535/193 ZONED NEW TOWN
N 505000
E 838750
N 504250

12" CROSSWALK LINES (TYP) 24' MARK, 24' GAP.
EX. CONC. PAD
PROP. HC RAMP
4" SOLID WHITE LINES
4" DASHED WHITE (10'-30') (TYP)
4" DOUBLE SOLID YELLOW LINE.
4" SOLID YELLOW LINE
PROPOSED 6' C.&G.
6' SIDEWALK
RIGHT-OF-WAY
EX. LIMIT OF PAVING
℄ OF ROAD & BASELINE
EX. CURB
4" DOUBLE YELLOW SOLID LINES
4" DASHED WHITE LINE (TYP)
4" SOLID WHITE LINE
4" SOLID YELLOW LINES
ONLY
STRIPING & SIGNAGE DETAIL
SCALE: 1" = 50'

LIGHT LEGEND
- SINGLE HEAD LUMINARE 35' POLES (LP)
- SINGLE HEAD LUMINARE 20' POLES (LP)

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/2/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/2/98 DATE

DIRECTOR — 1/14/98 DATE

Date	No.	Revision Description
3-24-98	1	REV. PRIVATE DRIVE. ON LOT 41 & DEMO LA
07-08-98	4	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
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

12-19-97
Date
STATE OF MARYLAND — JOHN W. RAMCCHINI — REGISTERED PROFESSIONAL ENGINEER
Professional Engr. No. 15551

TITLE
PHASE II SITE DEVELOPMENT PLAN

Des By	MJP,RLH	Scale	1" = 50'	Proj. No.	95019B
Dm By	FJZ	Date	12-15-97	2 OF 30	
Chk By	JWR	Approved			

SDP-98-44

Fri Dec 19 15:28:59 1997 dv950198\950198.tsl

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

12/17/97
Date

STATE OF MARYLAND — JOHN W. RANOCCHIA — REGISTERED PROFESSIONAL ENGINEER
John W. Ranocchia, Sr.
Professional Engr. No. 10557

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	1/8/98 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	1/13/98 DATE
DIRECTOR	1/14/98 DATE

Date	No.	Revision Description
4-30-98	4	REVISE NORDSTROM MALL EXP. & PARKING LOT

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:
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TITLE

PHASE II SITE DEVELOPMENT PLAN

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

SDP-98-44

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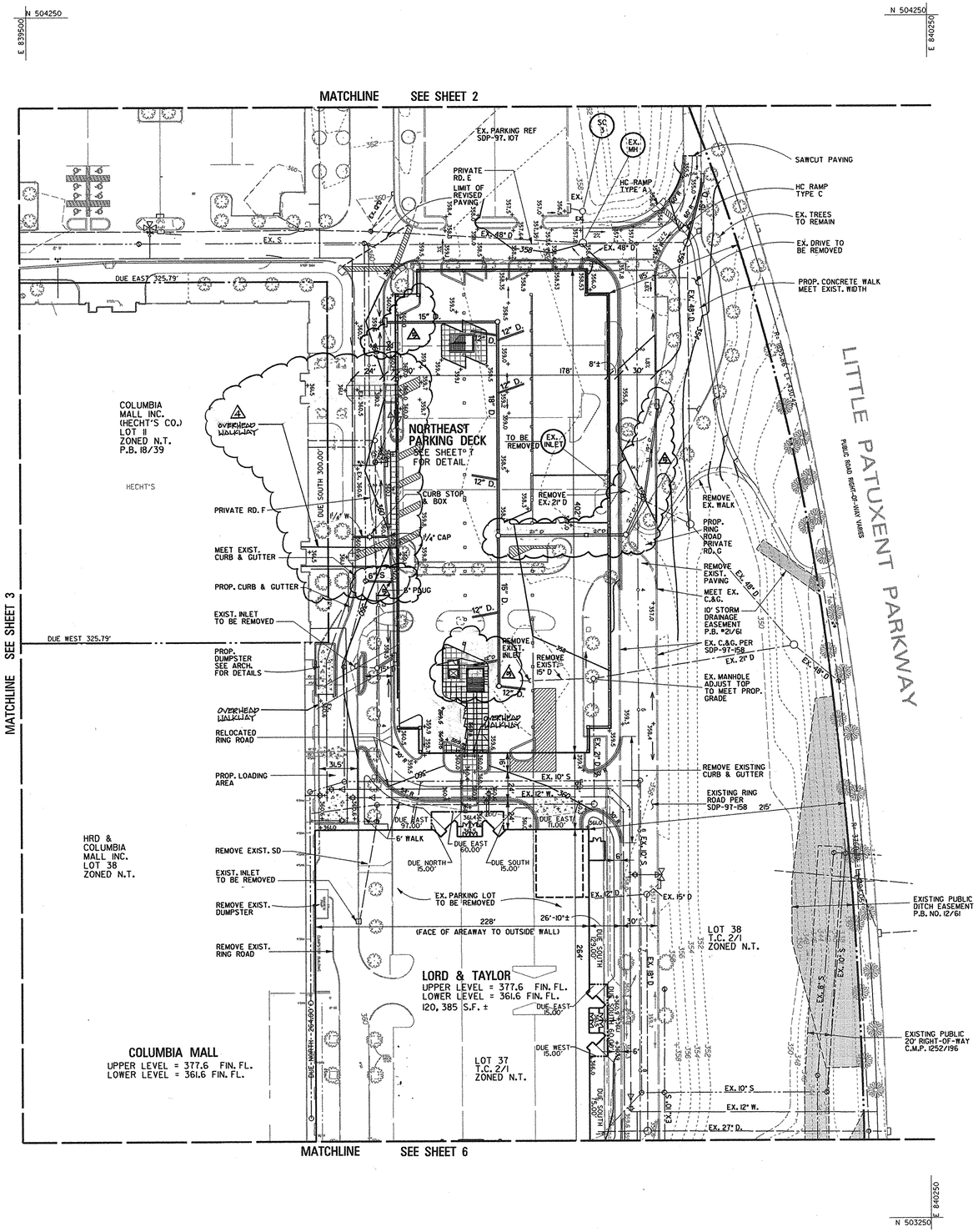

LEGEND

- EX. CONTOUR
- 8" W. — EX. WATER
- 8" S. — EX. SANITARY SEWER
- 15" D. — EX. STORM DRAIN
- GAS — 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
RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 11/26/97 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 11/3/97 DATE

DIRECTOR — 11/14/97 DATE

Date	No.	Revision Description
9-16-98	6	REVISED STORM DRAIN & SANITARY SEWER
07-08-98	5	REVISED PEDESTRIAN BRIDGE TO HECHTS

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:
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Fax 296-4705

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

12/17/97
Date

STATE OF MARYLAND — JOHN W. RANDOLPH — 10551 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10551

TITLE

PHASE II SITE DEVELOPMENT PLAN

Des By	MJP, RLH	Scale	1" = 50'	Proj. No.	95019B
Drn By	WHJ, FJZ	Date	12-15-97	4 OF 30	
Chk By	JWR	Approved			

SDP-98-44

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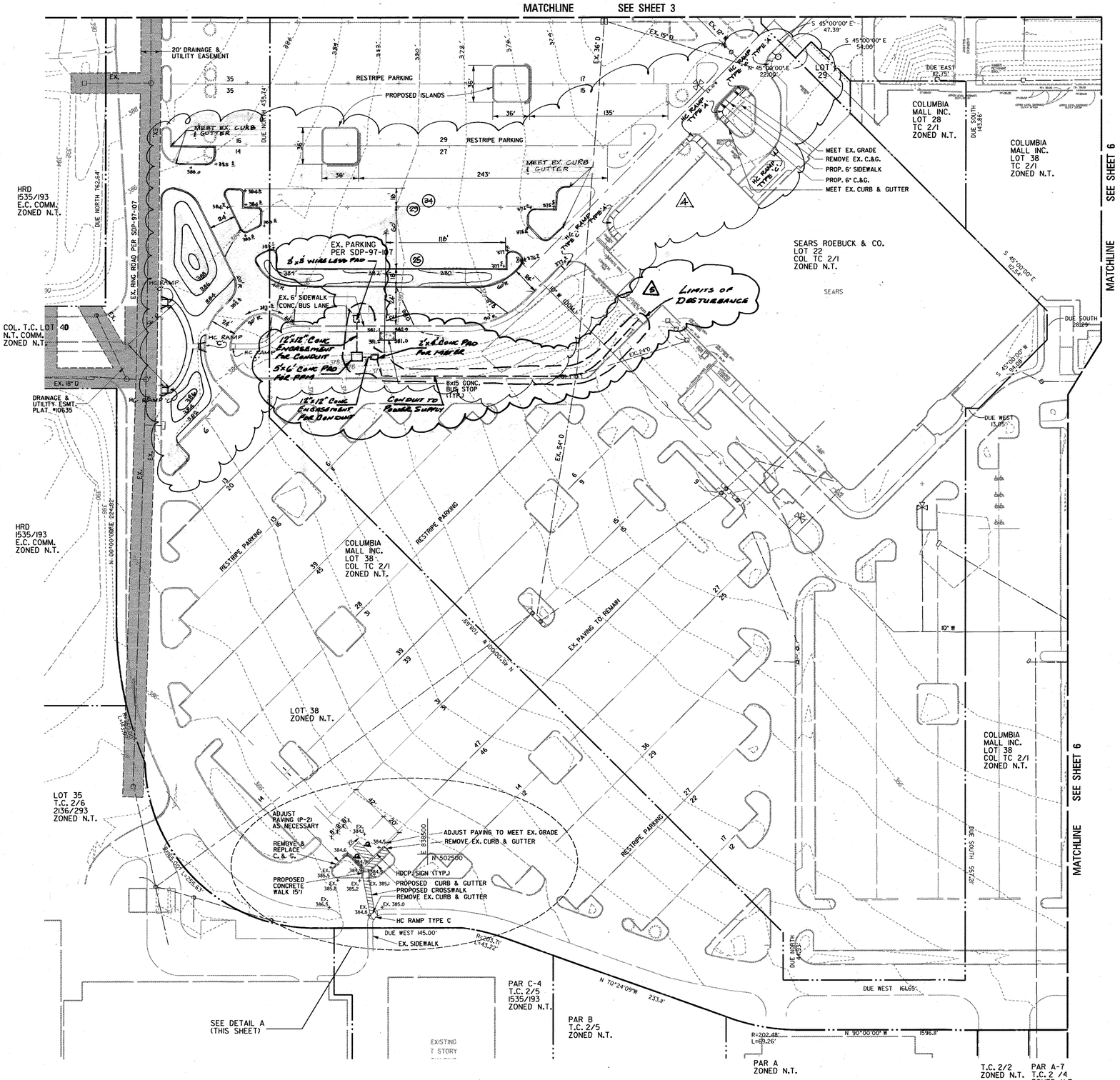

LEGEND

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- PROP. CONTOUR
- PROP. UTILITIES
- 6' STANDARD COMB. C&G
- 6' REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE

DETAIL A

SCALE: 1"=30'

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 1/6/98

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/6/98

DIRECTOR — DATE 1/14/98

Date	No.	Revision Description
10/01/98	5	REVISED FOR WIRELESS CHARGER
04/30/98	4	REVISED BUS LANE 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.
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200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

12-19-97
Date

STATE OF MARYLAND — JOHN M. BAMGBOSE — PROFESSIONAL ENGINEER

Professional Engr. No. 19851

TITLE

PHASE II
SITE DEVELOPMENT PLAN

Des By	MJP, RLH	Scale	1"=50'	Proj. No.	95019B
Drn By	WHJ, FJZ	Date	12-15-97		5 OF 30
Chk By	JWR	Approved			

SDP-98-44

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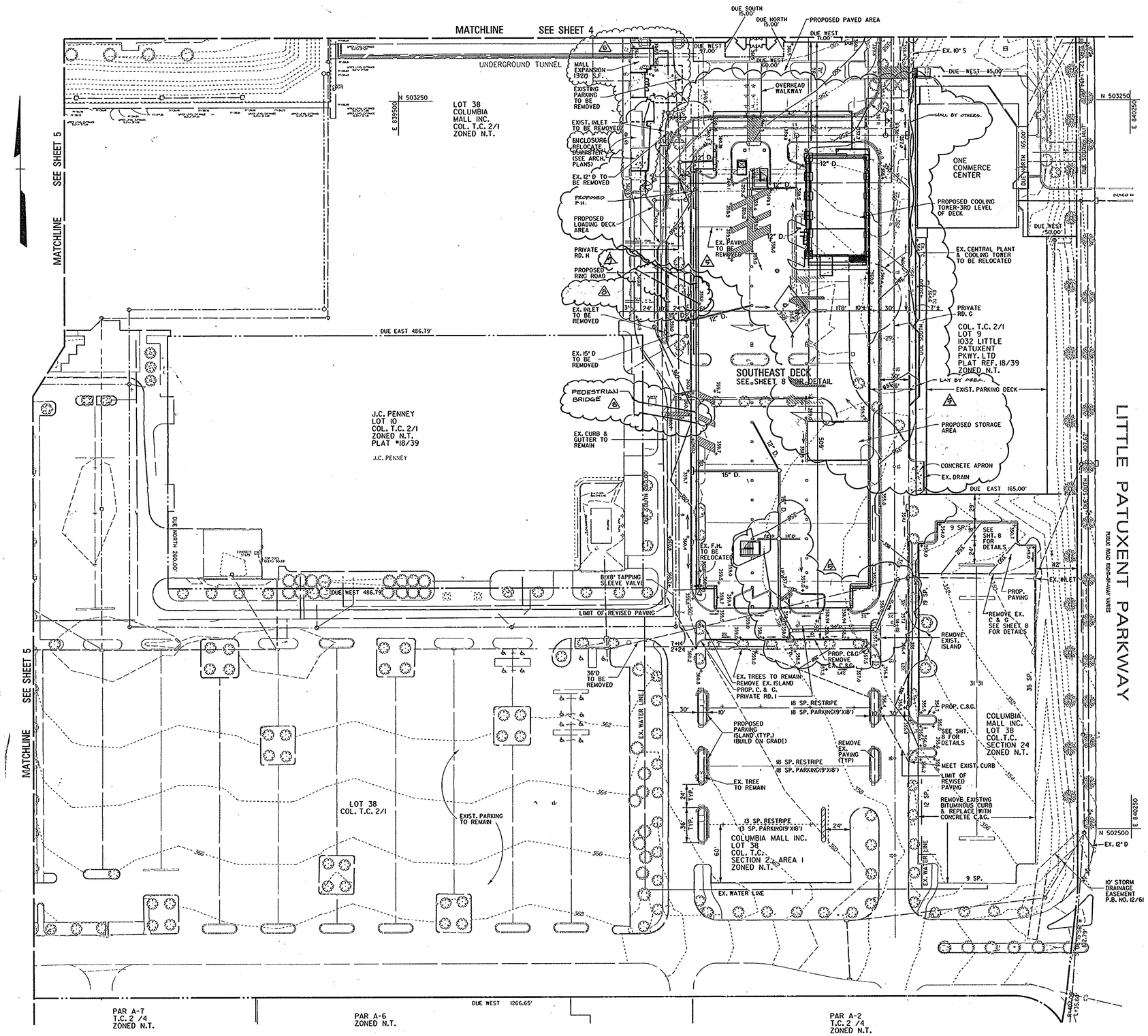

LEGEND

- EX. CONTOUR
- 8" W. — EX. WATER
- 8" S. — EX. SANITARY SEWER
- 15" D. — EX. STORM DRAIN
- GAS — EX. GAS
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- 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
RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/12/98 DATE

DIRECTOR — 1/14/98 DATE

Date	No.	Revision Description
4-27-99	6	REV. EAST ENTRY
9-16-98	5	REV. ROAD GRADES PR. ROAD G & H REV. PARKWAY
8-8-08	9	Add Ped. Bridge to Mall
7-14-03	8	ADDED PED. BRIDGE TO J.C. PENNEY

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 MacCune Walker, Inc.
200 East Pennsylvania Avenue
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Fax 296-4705
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

12/17/97
Date

STATE OF MARYLAND — RICHARD L. HOFFMAN — No. 10551 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10551

TITLE

PHASE II SITE DEVELOPMENT PLAN

Des By	MJP, RLH	Scale	1" = 50'	Proj. No.	95019B
Drn By	WHJ, FJZ	Date	12-15-97		6 OF 30
Chk By	JWR	Approved			

SDP-98-44

Wed Dec 17 08:47:56 1997 F:\CADNET\DCF\projects\geof Clapton dr\95019b\26s5.hpm

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

R= 1855.86' L= 430.42'
R= 3760.00' L= 994.05'

LIMIT OF FIELD RUN TOPO
SAWCUT PAVING & STA. 3+15.2
REMOVE EXISTING CURB, GUTTER AND PAVING
HC RAMP TYPE A
PROP. 5' CONC. WALK
PI = & STA. 2+23 = & STA. 1+87.5
EXISTING DRIVE TO BE REMOVED
PROPOSED SIDEWALK MEET EXISTING WIDTH
EXISTING INLET TO BE REMOVED
EXISTING 15" D TO BE REMOVED
EXISTING 15" DRAIN TO BE REMOVED
EX. INLET TO BE REMOVED
EXISTING WALKWAY TO BE REMOVED
10' STORM DRAINAGE EASEMENT P.B. *21/61
HC RAMP TYPE C
CAST MH OVER EX. SD
PROP. C.&G.
MEET EXISTING CURB & GUTTER
PRIVATE ROAD 'G' (*13 EXISTING ROAD PER SDP-97-158
PI = & STA. 5+63.7 = & STA. 6+48
EXISTING CURB & GUTTER TO BE REMOVED
PROPOSED 6' SIDEWALK
EX. 12" (FIRE)
EX. 12" W. (DOM.)
EX. 18" D.
EX. 10" S.
EX. 48" D.
EX. 30" D.
EX. 15" D.
EX. 10" D.
EX. 10" S.
EX. 8" W.
EX. 8" S.
EX. 12" D.
EX. 18" D.
EX. C.&G. & INLET TO REMAIN
APPROX. LIMIT OF OVERLAY
REMOVE EXIST. CURB & GUTTER
OVERLAY PAVING
REMOVE EXIST. CURB & GUTTER
REMOVE & REPLACE EXIST. ISLAND
5' SIDEWALK
EXISTING PARKING PER SDP 97-107
PRIVATE ROAD E 0+00-3+15.2
EX. ROAD PER SDP-97-107
LIMIT OF PROPOSED PAVING
PRIVATE ROAD F 0+00-6+48
EXISTING CURB & GUTTER TO REMAIN
OVERHEAD WALKWAY
ADJUST TOP OF MANHOLE TO NEW GRADE
EXISTING 12" D. AND INLET TO BE REMOVED
RELOCATED DUMPSTER (SEE ARCH. PLANS)
REMOVE EXISTING CURB & GUTTER
PROPOSED LOADING AREA
RELOCATE EXISTING DUMPSTER
REMOVE EXISTING RING ROAD
EXISTING INLET TO BE REMOVED
EX. STORM DRAIN TO BE REMOVED
EXISTING PAVING TO BE REMOVED
OVERHEAD WALKWAY

16 SPACES
18 SPACES
20 SPACES
18 SPACES
11 SPACES
12 SPACES
23 SPACES
24 SPACES
14 SP.
4 SP.
5 SP.
RAMP TO SECOND LEVEL
UNDER RAMP STORAGE
6" CONC. CURB & CONCRETE ISLAND
ADJUST TOP OF EXISTING MANHOLE TO NEW GRADE
EXISTING S.D. & INLET TO BE REMOVED
GROUND LEVEL PARKING
NORTHEAST PARKING DECK
(SEE ARCHITECT PLANS)
ONE WAY
NOSE DOWN CURB
6" PLUG
CURB STOP & BOX
1-1/4" CAP
HC RAMP TYP.
FLOWERING CHERRY
5' SYCAMORES
DUE SOUTH 300.00'
DUE EAST 325.79'
DUE WEST 325.79'
DUE NORTH 264.00'
DUE SOUTH 129.00'
DUE EAST 71.00'
DUE SOUTH 15.00'
DUE EAST 60.00'
DUE NORTH 15.00'
402'
178'
228'
264'
30'
64'
24'
33'
45'
62'
6'
18" D.
15" D.
12" D.
12" HT. ENCLOSURE
LOADING DOCK
4" WHC SDP-97-158
8" FHC SDP-97-158
HC RAMP TYPE C
LORD & TAYLOR
UPPER LEVEL = 377.6 FF
LOWER LEVEL = 361.6 FF
HECHT'S
COLUMBIA MALL
E 840000
N 504250
E 839750
N 504250
E 839750
N 503500
MATCH LINE SEE SHEET 8

LEGEND

- EX. CONTOUR
- 8" W. EX. WATER
- 8" S. EX. SANITARY SEWER
- 15" D. EX. STORM DRAIN
- GAS 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

12-19-97
Date

STATE OF MARYLAND
JOHN W. RANCOURT
No. 10551
REGISTERED
PROFESSIONAL ENGINEER

Professional Engr. No. 10551

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT — 1/12/98 DATE
DIRECTOR — 1/14/98 DATE

Date	No.	Revision Description
9-16-98	3	REVISE STORM DRAIN LAYOUT.
07-08-98	2	REVISED PEDESTRIAN BRIDGE TO HECHTS

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

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

TITLE

PHASE II
SITE DEVELOPMENT PLAN

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Drn By	FJZ, MSS	Date	12-15-97		7 OF 30
Chk By	JWR	Approved			

SDP-98-44

Fri Dec 19 15:00:00 1997 d:\950198\950198zs6
Fri Dec 19 14:54:37 1997 F:\CADNET\DCF\project\dgn\95019b\2bs5.hpm

LITTLE PATUXENT PARKWAY

E 840250 / N 503000 — E 840250 / N 502500

MATCH LINE SEE SHEET 7

ONE COMMERCE CENTER

SOUTHEAST PARKING DECK
(SEE ARCH. PLANS FOR DETAILS)

LORD & TAYLOR
UPPER LEVEL = 377.6 FF
LOWER LEVEL = 361.6 FF

MALL EXPANSION
(SEE ARCH. PLANS FOR DETAILS)
LOWER LEVEL = 361.6
1320 S.F.

COLUMBIA MALL
LOWER LEVEL = 361.6 FF
LOT 38

J.C. PENNEY
LOWER LEVEL = 361.6 FF
UPPER LEVEL = 378.6
LOT 10 – P.B. No. 1839

J.C. PENNEY PED. BRIDGE CONNECTION

PRIVATE ROAD 'G' STA. 1+13 TO 1+80

PRIVATE RD. 'H' STA. 0+00 TO 7+15

EX. BLDG (MERRILLYNCH BLDG)

EXISTING PARKING DECK
LOT 9 – P.B. No. 18/39

RETAINING WALL DETAIL 1"=50'

WALL DETAIL N.T.S.

JNDERGROUND TUNNEL

DUE SOUTH 141.17'
DUE NORTH 165.00'
DUE WEST 115.00'
DUE WEST 59.00'
DUE SOUTH 407.62'
DUE EAST 165.00'
DUE SOUTH 75.00'
DUE SOUTH 60.00'
DUE EAST 15.00'
DUE WEST 15.00'
DUE WEST 71.00'
DUE SOUTH 15.00'
DUE WEST 97.00'
DUE SOUTH 260.00'

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

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 12/8/98

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11/13/98

DIRECTOR — DATE 11/14/98

Date	No.	Revision Description
7-6-99	4	REV RETAINING WALLS & ADD DETAILS
4-27-99	3	REV. EAST ENTRY
9-16-98	2	REV. PR. RD G & H GRADING, ADD LAYBY AREA AT RD G, REV PAVING
7-11-03	5	ADD PED. BRIDGE FROM SE DECK TO J.C. PENNEY
5-8-00	4	Add Ex. Ped. Bridge to Mall

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.
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COLUMBIA, MARYLAND 21044

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Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

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

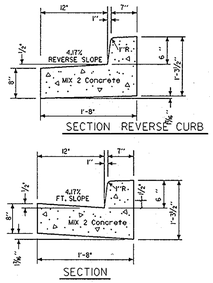
TITLE
PHASE II SITE DEVELOPMENT PLAN

Des By	MJP	Scale	1"=30'	Proj. No.	95019B
Dm By	FJZ, MSS	Date	12-15-97		8 OF 30
Chk By	JWR	Approved			

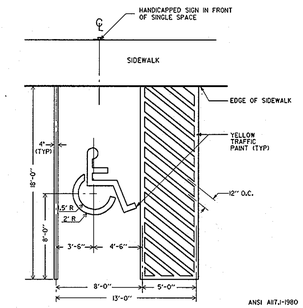
Professional Engr. No. 10551

SDP-98-44

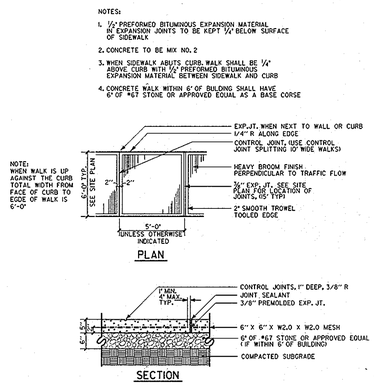
Mon Dec 22 09:13:16 1997 F:\CADNET\OCP\projects\dr95019b\26z7.dgn



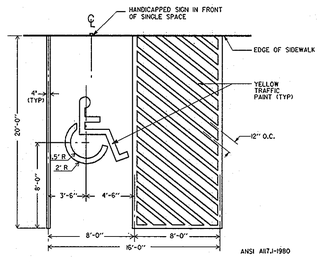
Concrete Curb, Typ.
Not To Scale



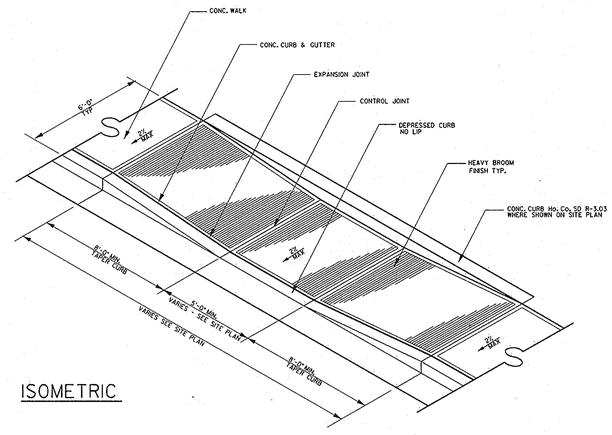
Handicapped Parking Space
Not To Scale



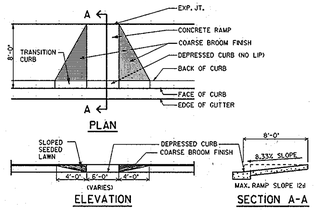
Concrete Walk
Not To Scale



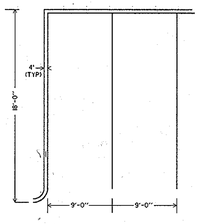
Handicapped Van Parking Space
Not To Scale



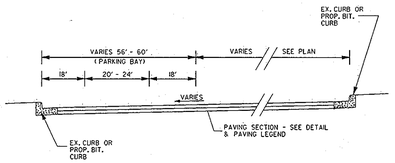
Handicapped Ramp – A
Not To Scale



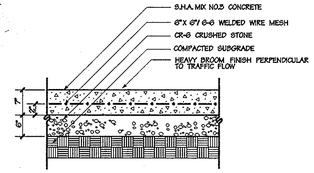
Handicapped Ramp – C
Not To Scale



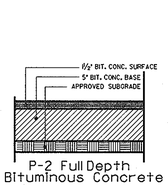
Standard Parking Space
Not To Scale



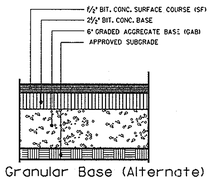
Typical Section
Private Parking
Not To Scale



Ⓕ Loading Dock Concrete Paving
Not To Scale



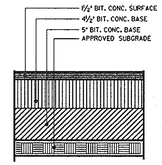
P-2 Full Depth Bituminous Concrete



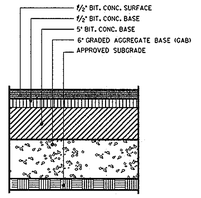
P-2 Granular Base (Alternate)

Parking & Travel Lane
Typical Paving Section (P–2)
Not To Scale

See Sheet 8 For Paving Legend

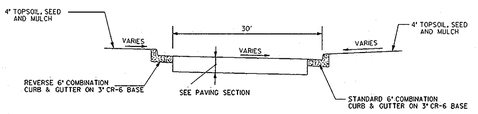


P-5 Full Depth Bituminous Concrete

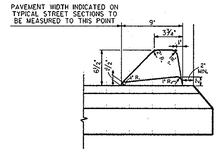


P-5 Granular Base (Alternate)

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



Typical Section
Ring Road (Private Drive)
Not To Scale



Standard Bituminous Curb
Not To Scale

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 11/6/98
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11/3/98
DIRECTOR — DATE 11/4/98

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

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

12/12/97
Date

STATE OF MARYLAND — JOHN M. HANCOCKS — 10551 — REGISTERED PROFESSIONAL ENGINEER

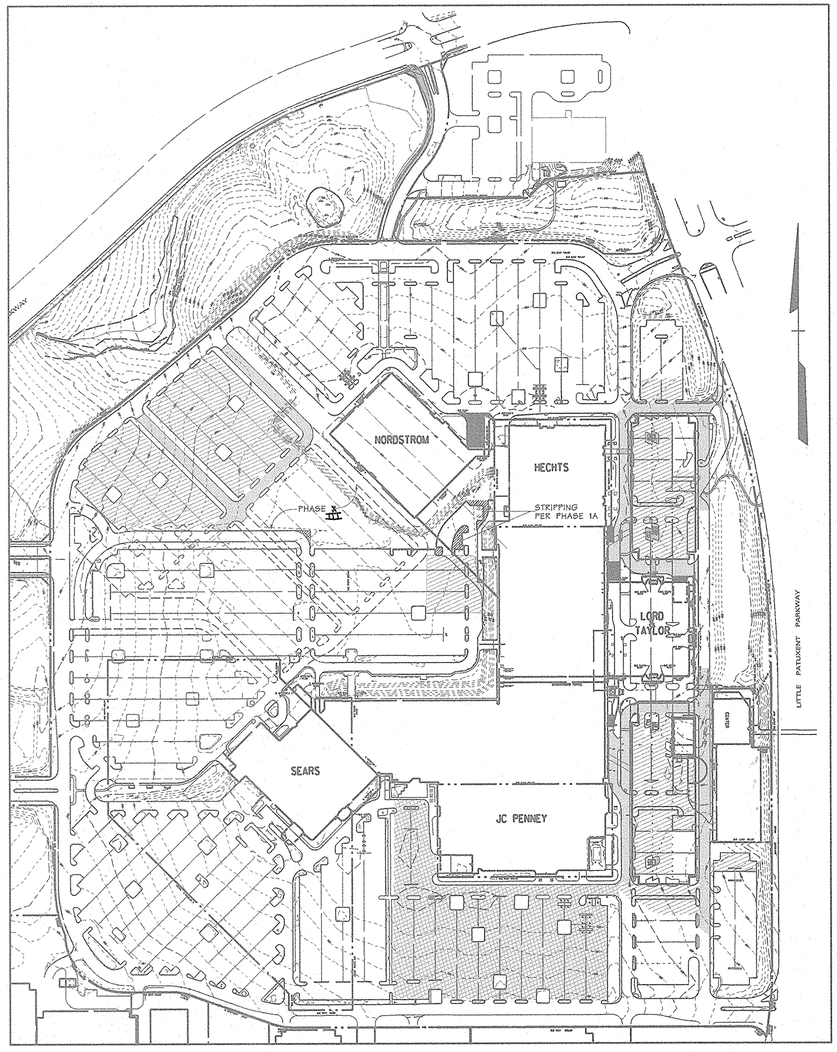
Professional Engr. No. 10551

TITLE
PHASE II
SITE DETAILS

Des By	MJP	Scale	AS SHOWN	Proj. No.	95019 B
Drn By	CLZ	Date	12/15/97	9 OF 30	
Chk By	JWR	Approved			

SDP-98-44

Wed Dec 17 09:29:20 1997 d:\95019\95019b2.dll



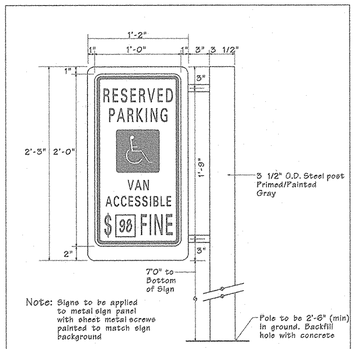
PAVING LEGEND

SCALE: 1" = 200'

SEE SHEETS 2-6 FOR SAW CUT LOCATIONS

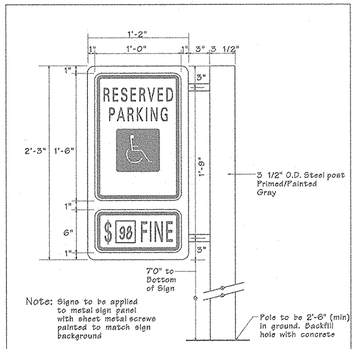
LEGEND	
SYMBOL	DESCRIPTION
	P-5 PAVING
	P-2 PAVING
	1" ± OVERLAY
	CONCRETE

SEE SHEET 9 FOR PAVING DETAILS.



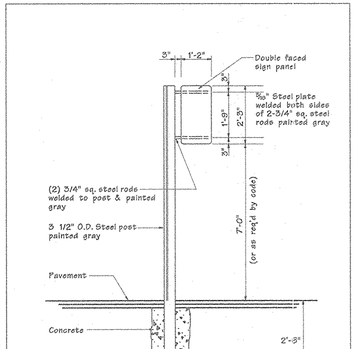
Mounting Detail For Parking Restriction Sign

No Scale



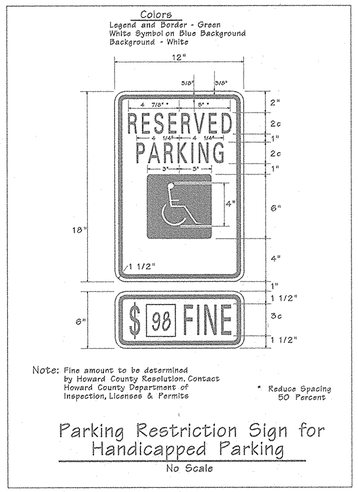
Mounting Detail For Parking Restriction Sign

No Scale



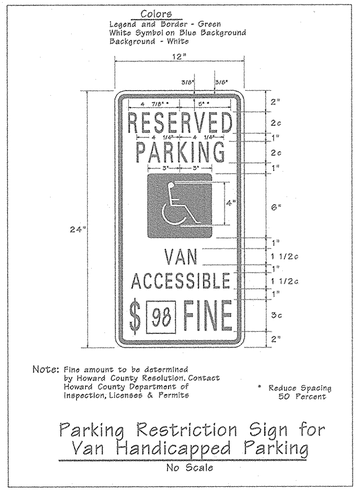
Post & Sign Panel Detail For Parking Restriction Sign

No Scale



Parking Restriction Sign for Handicapped Parking

No Scale



Parking Restriction Sign for Van Handicapped Parking

No Scale

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/13/98 DATE

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
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Fax 296-4705

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

12/19/97 Date

STATE OF MARYLAND — JOHN W. RIDGELY — No. 21431 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No.

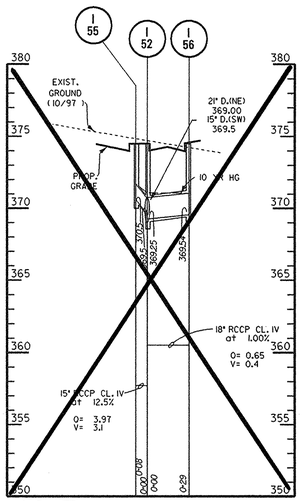
TITLE

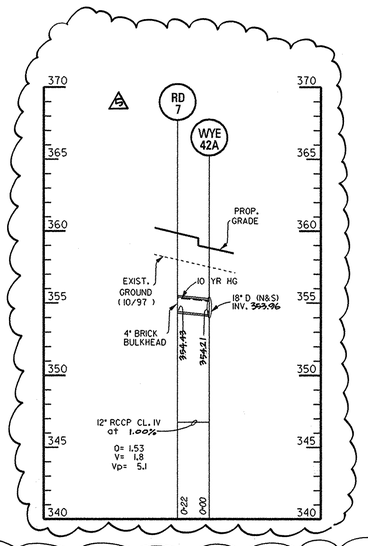
PHASE II

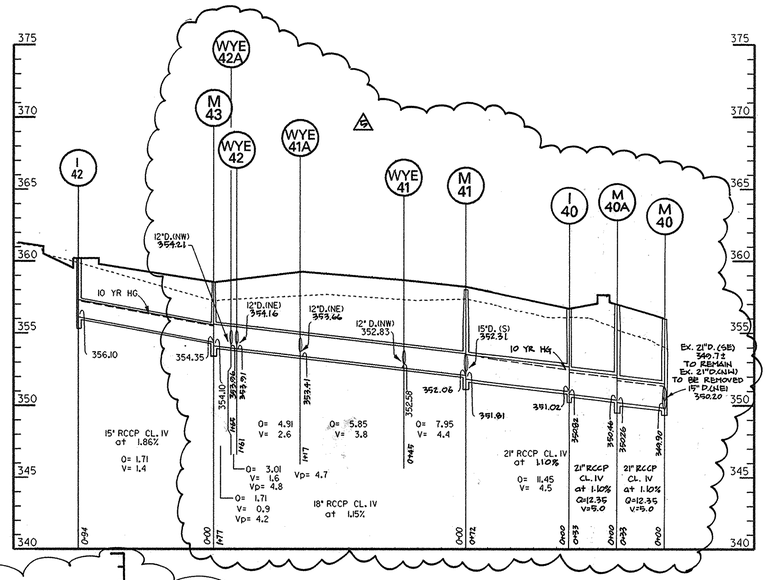
PAVING LEGEND & SITE DETAILS

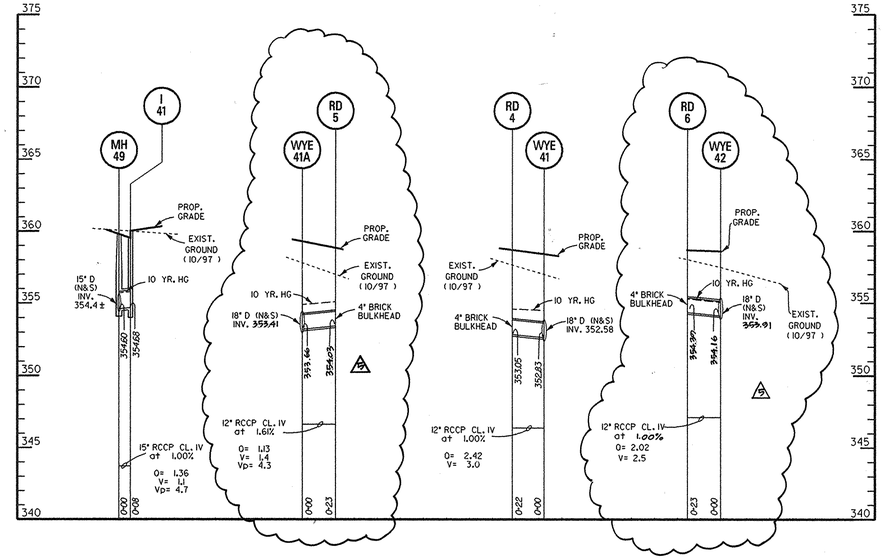
Des By	MJP	Scale	AS SHOWN	Proj. No.	95019 B
Drn By	CLZ	Date	10/29/97		10 OF 30
Chk By	JWR	Approved			

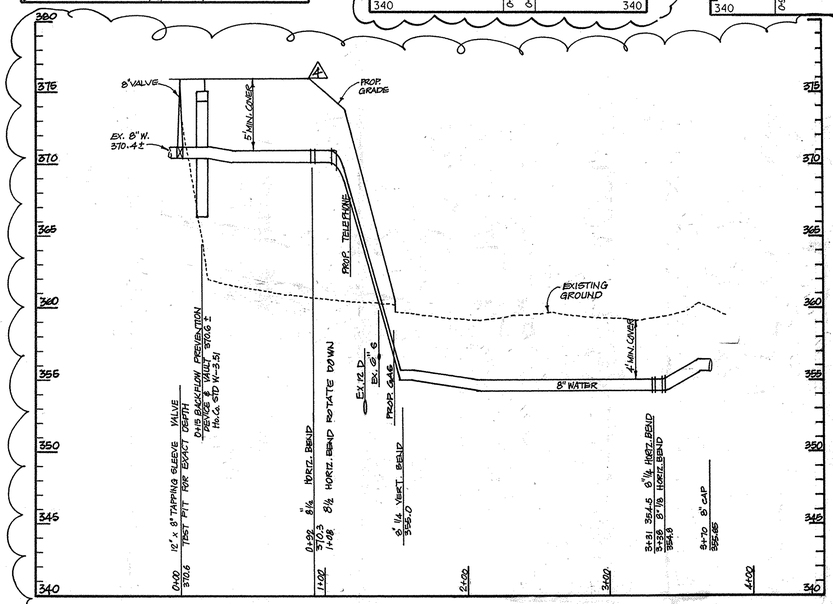
SDP-98-44









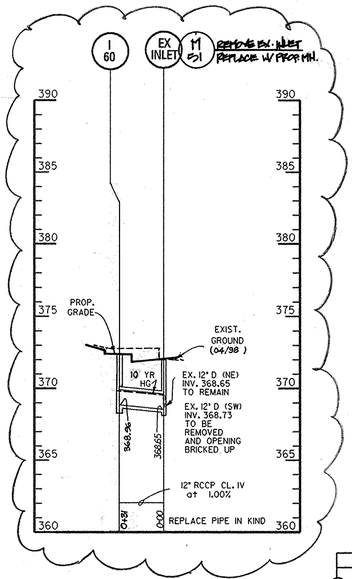


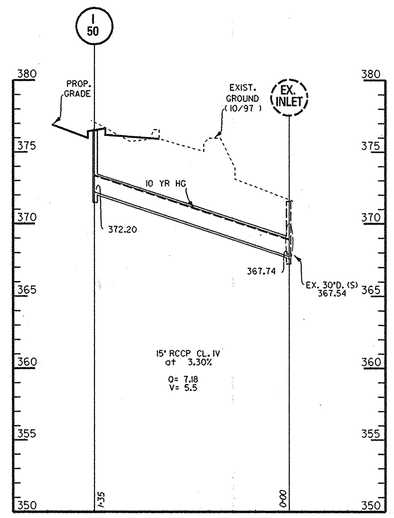
NOTE: TEST PIT EX. 12"W. BEFORE LAYING PIPE AND ADJUST WATER PIPE AS NEEDED.

USE RESTRAINED JOINTS FROM STA.0+00 TO STA.1+25

WATER LINE COORDINATE TABLE

STATION	BEND	COORDINATES
0+00	EX.12"W	N 504082.7 E 838854.3 ±
0+92	1/8	N 504011.8 E 838919.4
1+08	1/8	N 504017.9 E 838935.0
3+31	1/8	N 504175.6 E 839092.0
3+38	1/8	N 504179.6 E 839099.3
3+70	8" CAP	N 504163.3 E 839121.7





STRUCTURE SCHEDULE

NO.	TYPE	SIZE	INV. OUT	TOP ELEV.
WYE40	WYE CONN.	12"x15"	353.62	HO. CO. SD. I.II
WYE41	WYE CONN.	12"x18"	352.58	HO. CO. SD. I.II
WYE41A	WYE CONN.	12"x18"	353.18	HO. CO. SD. I.II
WYE42	WYE CONN.	12"x18"	353.68	HO. CO. SD. I.II
WYE42A	WYE CONN.	12"x18"	353.73	HO. CO. SD. I.II
~~WYE45~~	~~WYE CONN.~~	~~15"x15"~~	~~360.50~~	~~HO. CO. SD. I.II~~
6-1	CONC. END SECTION WITH CONC. RIPRAP		366.52±	SD. 5.02
WYE40A	WYE CONN.	12"x 15"	354.19	HO. CO. SD. I.II
WYE 43	WYE CONN.	12"x18"	352.08	HO. CO. SD. I.II

MANHOLE SCHEDULE

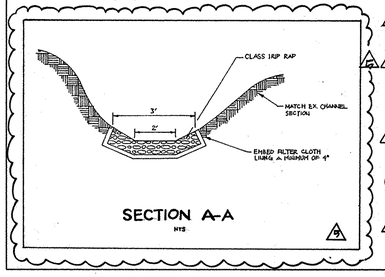
NO.	TYPE	SIZE	INV. OUT	TOP ELEV.	DETAIL	LOCATION
M-40	PRECAST	48"	349.72	356.0	G-5.12	ROAD 'G' STA. 3+25.4 LT.
M-41	PRECAST	48"	351.81	358.2	G-5.12	N 503818.0 E 839017
M-42	PRECAST	48"	354.57	358.8	G 5.12	N 503693.0 E 839891.7
M-43	PRECAST	48"	354.10	358.7	G-5.12	N 503996.4 E 839891.7
M-44	PRECAST	48"	353.9 ±	359.6	G 5.12	ROAD 'H' STA.2+36- 1' LT.±
M-45	PRECAST	48"	354.4 ±	358.2	G-5.12	ROAD 'H' STA.3+97- 7' LT.±
M-46	PRECAST	60"	346.2 ±	358.5	G-5.13	ROAD 'I' STA.1+18 - 19' LT.±
M-46A	PRECAST	48"	353.92	358.1	G 5.12	N 502707.1 E 839289.8
M-47	PRECAST	48"	354.49	358.7	G-5.12	N 502869.5 E 839889.8
~~M-48~~	~~PRECAST~~	~~48"~~	~~353.03~~	~~358.4~~	~~G-5.12~~	~~ROAD 'H' STA.5+55 - 16' LT.±~~
M-49	PRECAST	48"	354.4 ±	359.8	G-5.12	ROAD 'F' STA.1+31- 5' LT.±
M-50	PRECAST	60"	339.12	357.0	G-5.13	ROAD 'G' STA.14+17-4' LT.±
EX. M-3	——	——	——	374.5	——	
M-60	PRECAST	48"	352.91±	362.0	G-5.12	

ALL INVERTS TO BE FULLY DEVELOPED

* PROVIDE GRANITE BOTTOM

NOTE: AT ALL ROOF DRAIN CONNECTIONS CONNECT WITH 'FERNCO' COUPLING OR APPROVED EQUAL.

M-61	PRECAST	48"	355.12	362.0	G-5.12	BUILD OVER EX. PIPE
M-51	PRECAST	48"	368.63	372.3	G-5.12	
M-40A	PRECAST	48"	350.26	357.0	G-5.12	ROAD "G" STA. 3+54 - 11' RT. ±
M-42	PRECAST	60"	339.52	357.6	G-5.13	ROAD "I" STA. 0+19 - 5' LT.
M-43	PRECAST	60"	340.04	358.1	G-5.13	ROAD "I" STA. 1+05 - 5' LT.



SECTION A-A

NTS

INLET SCHEDULE

NO.	TYPE	Q 2YR	INV. OUT	**TOP ELEV.	DETAIL	WIDTH	LOCATION
I-40	"S"	0.83	350.83	358.1	SD 4.02	2'-6"	ROAD 'G' STA. 3+51-44' RT.
I-41	A-5	0.94	354.68	360.1	SD 4.01	2'-6"	ROAD 'F' STA.1+91
I-42	A-10	1.18	356.10	360.1	SD 4.02	2'-6"	ROAD 'F' STA.0+64
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.9+59 ±
I-46	A-10	1.95	353.27	358.8	SD 4.01	2'-6"	
I-47	A-5	2.06	354.85	358.5	SD 4.01	2'-6"	ROAD 'H' STA.3+99
* I-48	A-10	0.0	339.36	357.5	SD 4.02	6'-0"	*
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"~~	
I-51	A-10	2.03	370.41	374.5	SD 4.02	2'-6"	ROAD 'D' STA.1+52
I-52	A-10	2.01	369.00	374.5	SD 4.02	2'-6"	ROAD 'C' STA.3+63
I-53	A-5	1.53	372.60	376.6	SD 4.01	2'-6"	ROAD 'D' STA.0+41
I-54	A-5	1.42	370.50	374.5	SD 4.01	2'-6"	ROAD 'D' STA.1+52
I-55	A-10	0.47	370.50	374.5	SD 4.02	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.1+08
~~I-60~~	~~A-5~~		~~368.96~~	372.5	~~SD 4.01~~	~~2'-6"~~	ROAD 'A' STA. 0+20
I-61	A-5	0.66	368.30	372.9	SD 4.01	2'-6"	ROAD 'A' STA. 4+67

ALL INVERTS TO BE FULLY DEVELOPED

* PROVIDE GRANITE BOTTOM

** TC ELEV. UNLESS NOTED

***PROVIDE RETICULAR GRATE

No.	LOCATION
RD 1	N 503750.8 E 839869.7
RD 2	N 503710.2 E 839869.7
RD 3	N 503690.5 E 839913.8
RD 4	N 503868.7 E 839869.6
RD 5	N 503944.9 E 839913.8
RD 6	N 503989.0 E 839913.8
RD 7	N 503989.0 E 839869.6
RD 8	N 502797.5 E 839913.2
RD 9	N 502797.5 E 839866.4
RD 10	N 503039.1 E 839916.8
RD 11	N 502914.8 E 839865.2
RD 12	N 503180.5 E839911.8
RD 12A	N 503181.1 E 839912.3
RD 13	N 503159.2 E 839867.8
RD 14	N 503037.9 E 839855.9
S-1	ROAD 'F' STA. 2+02-13' LT.
S-2	ROAD 'H' STA. 4+77-13' LT.
W-1	ROAD 'F' STA. 2+43-13' LT.

12/12/97
Date

STATE OF MARYLAND
JOHN W. RANDOLPH
No. 10551
PROFESSIONAL ENGINEER

Professional Engr. No. 10551

SDP-98-44

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

9-16-98	5	REVISE SD PROFILES & SCHEDULES.
07-08-98	4	SD. PROFILE FROM I-60 TO M-51

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/13/98 DATE

DIRECTOR — 1/14/98 DATE

3-24-98	1	ADD I-61 TO INLET SCHEDULE
1-30-98	3	REMOVED SD PROFILE & INFO FROM I-60 TO I-50 ADDED WATER PROFILE AND TABLE
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
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200 East Pennsylvania Avenue
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(410) 296-3333
Fax 296-4705

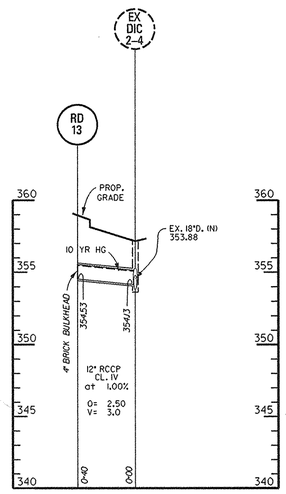
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

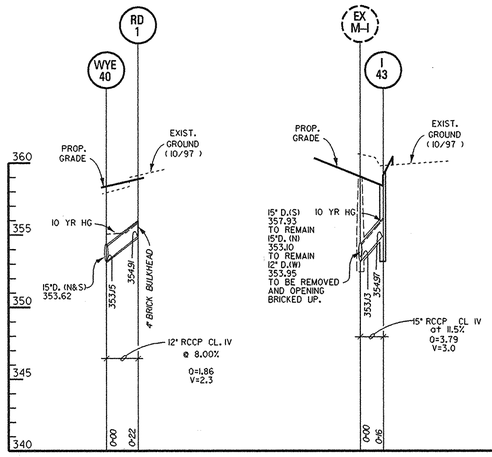
TITLE

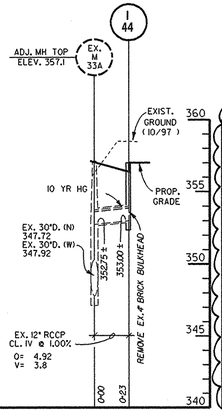
PHASE II
STORM DRAIN PROFILES

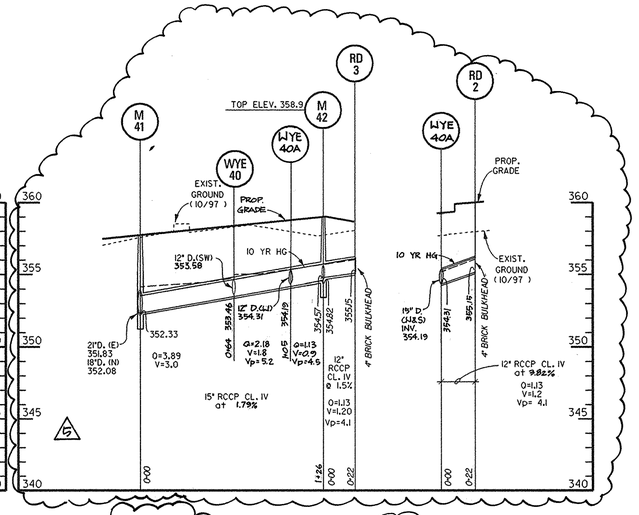
Des By RLH	Scale HORZ 1"=50' VERT 1"=5'	Proj. No. 95019B	
Drn By MSS, FJZ	Date 12/15/97	11 OF 30	
Chk By JWR	Approved		

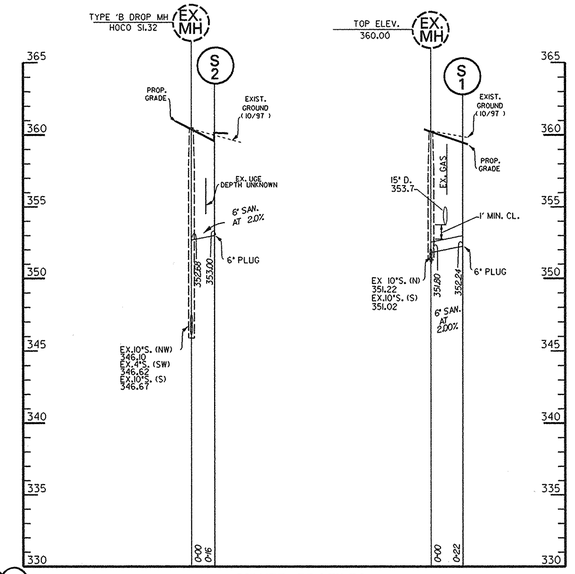
Tue Dec 16 09:32:00 1997 d:\95019\9501902.sdl



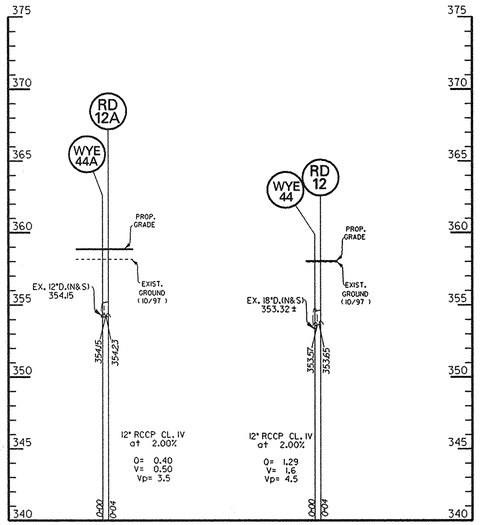


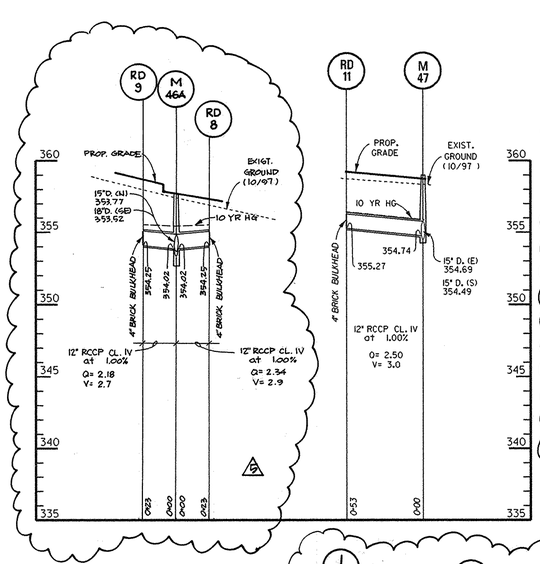


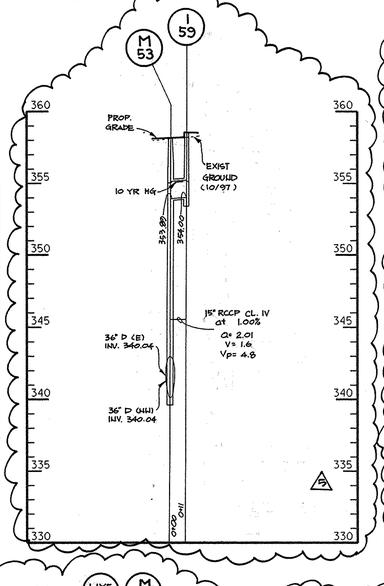


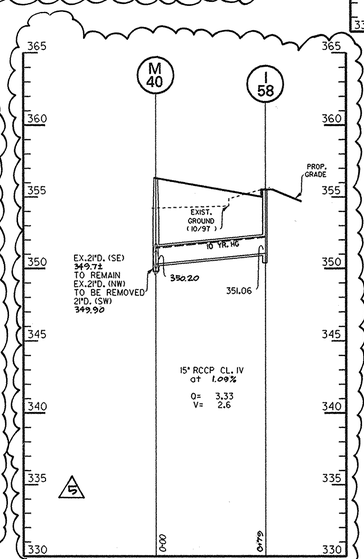


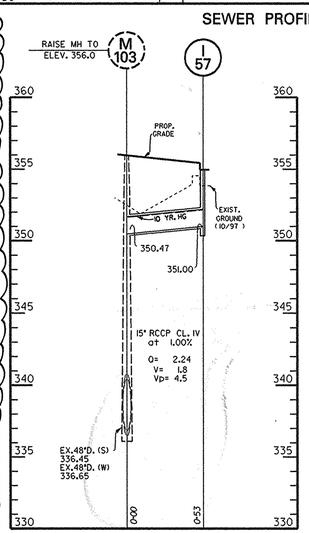
SEWER PROFILES

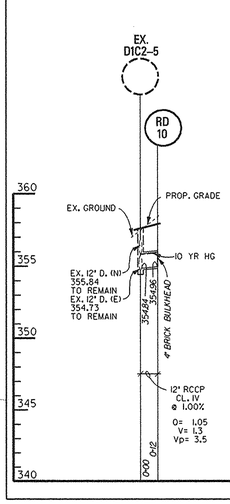


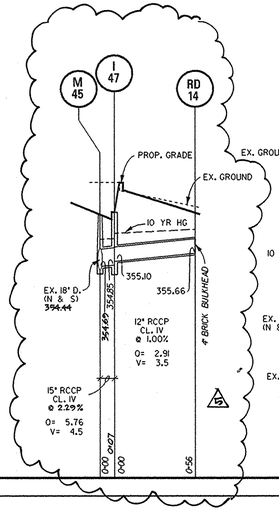


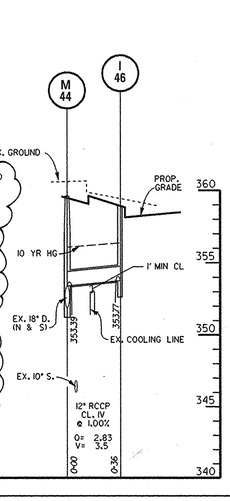


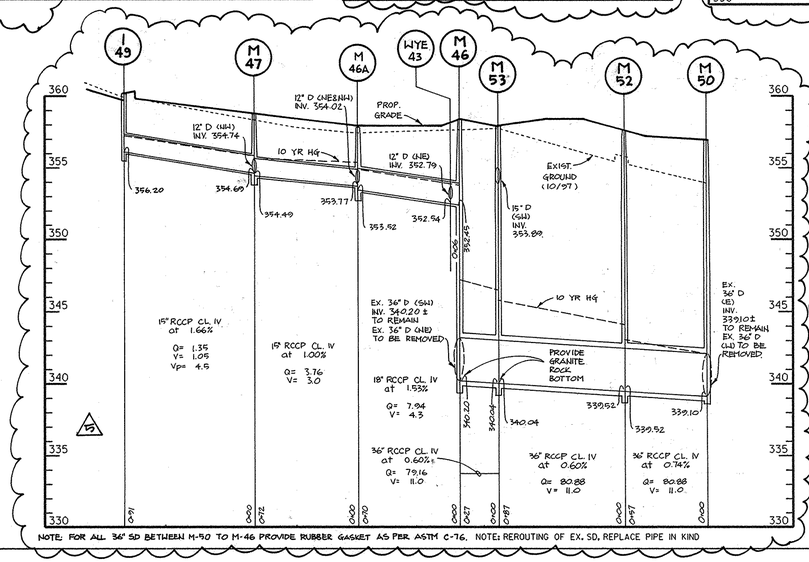




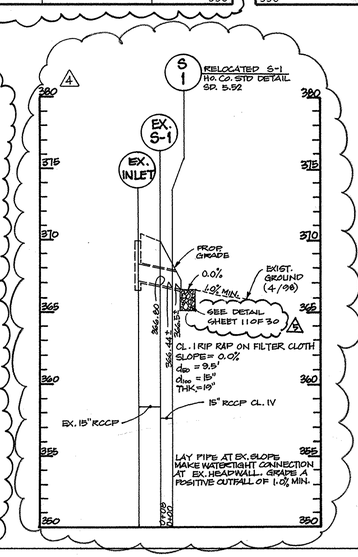








NOTE: FOR ALL 36" SD BETWEEN M-50 TO M-46 PROVIDE RUBBER GASKET AS PER ASTM C-76. NOTE: REROUTING OF EX. SD, REPLACE PIPE IN KIND



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE Dec 3, 1997

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/8/98 DATE

DIRECTOR — 1/14/98 DATE

Date	No.	Revision Description
9-16-98	5	REVISED SD PROFILES.
07-08-98	4	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
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

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

12/17/97
Date

STATE OF MARYLAND — JOHN W. MANOCCHIA — No. 10551 — PROFESSIONAL ENGINEER

Professional Engr. No. 10551

TITLE

PHASE II
STORM DRAIN &
SEWER PROFILES

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

SDP-98-44

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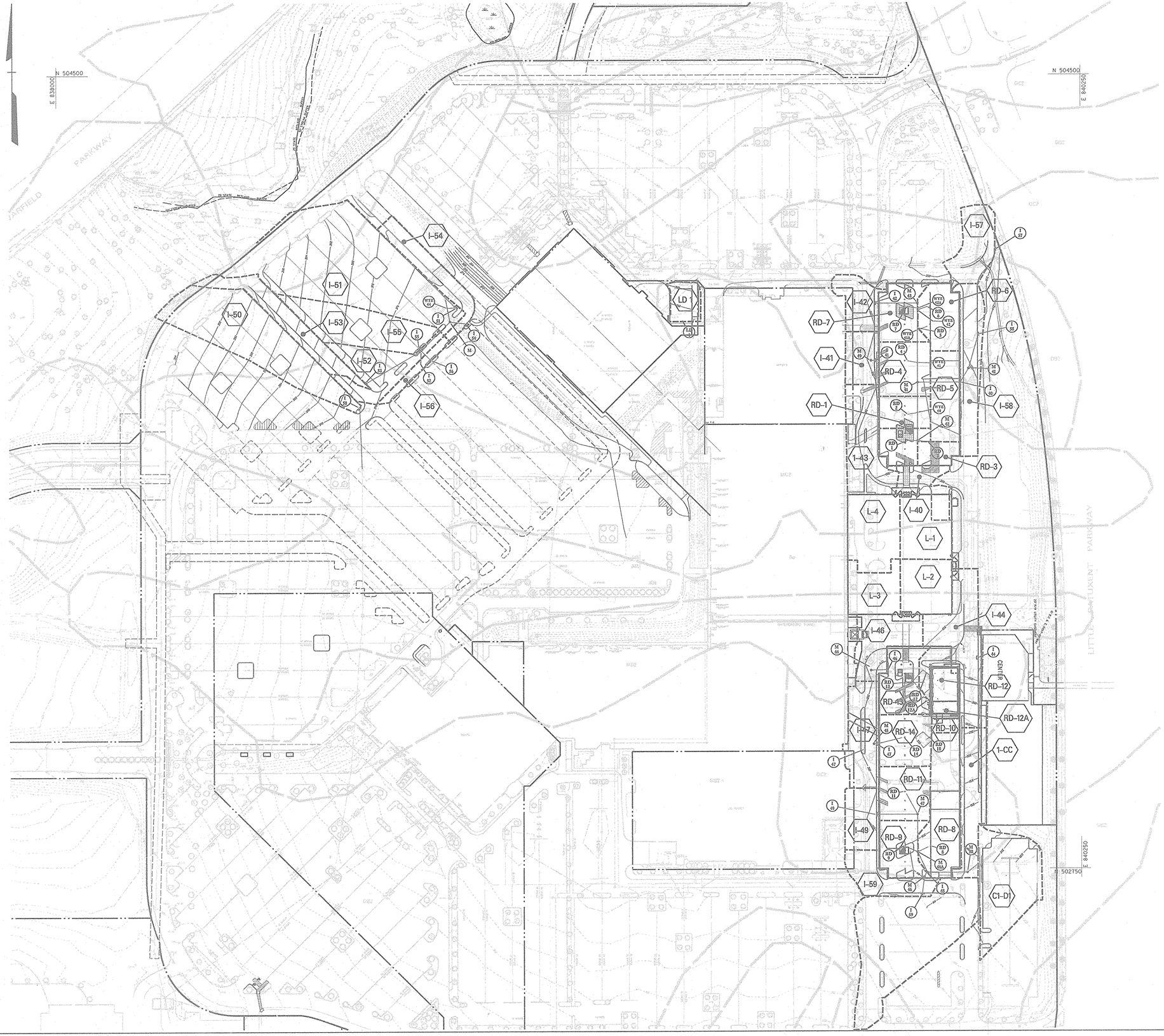

SOILS LEGEND

HYDROLOGIC SOILS	KEY	NAME	SLOPE
D	Ba	BAILE SILT LOAM	
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	GlB2	GLENELG LOAM	3 TO 8 PERCENT SLOPES, MODERATELY ERODED
B	GlC2	GLENELG LOAM	8 TO 15 PERCENT SLOPES, MODERATELY ERODED
C	GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES, MODERATELY ERODED
B	MlC2	MANOR LOAM	8 TO 15 PERCENT SLOPES, MODERATELY ERODED
B	MlD2	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
C1-D1	0.67	0.88	90
1-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
RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/13/98 DATE

DIRECTOR — 1/14/98 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
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Fax 296-4705

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

11/17/97
Date

STATE OF MARYLAND — JOHN W. RANDOLPH — 16993 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No.

SDP-98-44

TITLE

PHASE II

STORM DRAIN
DRAINAGE AREA MAP

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

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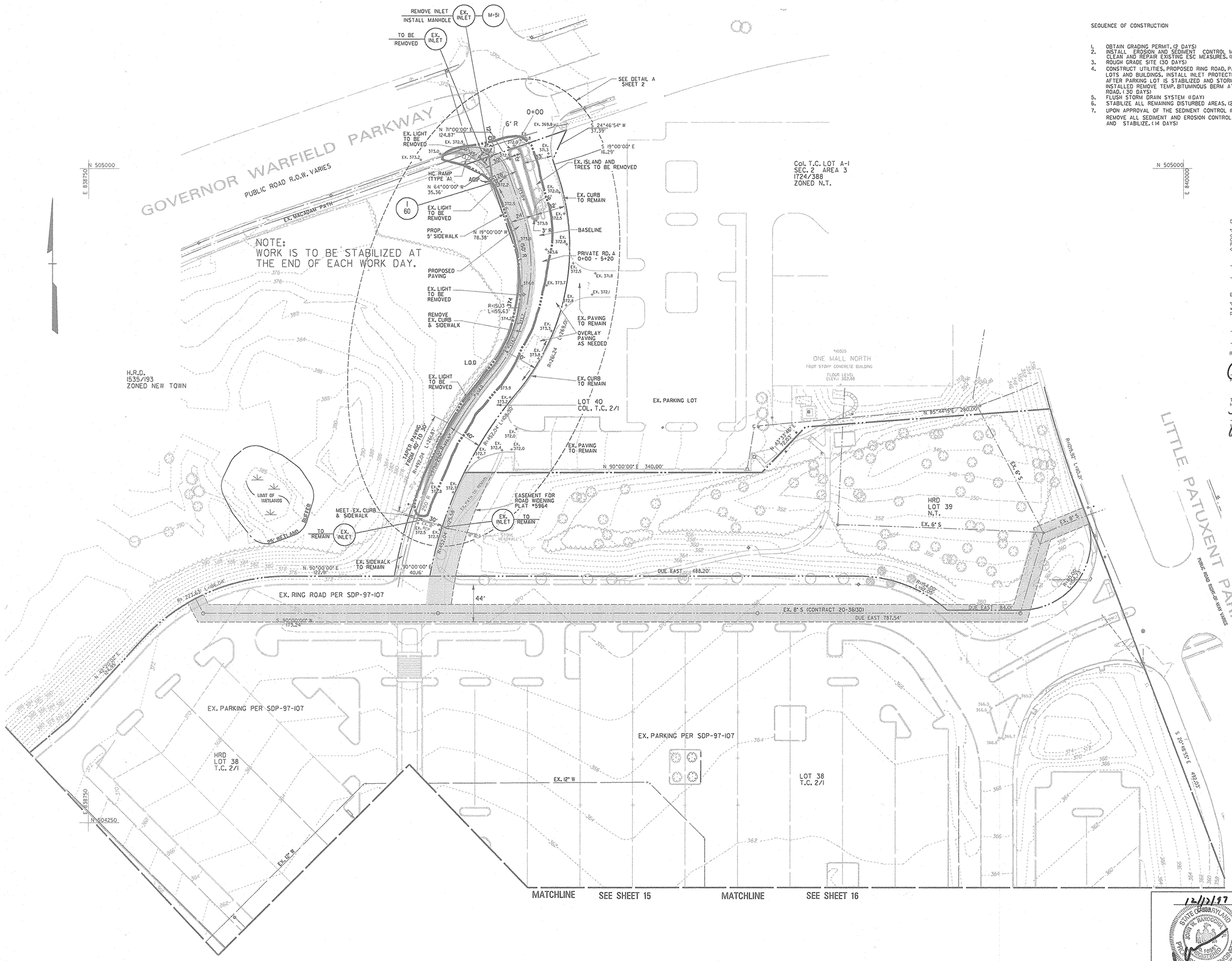

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT. (2 DAYS)
2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES. CLEAN AND REPAIR EXISTING ESC MEASURES. (14 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 (1DAY)
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
- CIP INLET PROTECTION
- SIP INLET PROTECTION
- STABILIZED CONSTRUCTION ENT.
- MOUNTABLE BERM
- TEMPORARY SWALE
- A-2 E.D. EARTH DIKE
- LIMIT OF DISTURBANCE
- TEMP DIKE/ SWALE
- PROPOSED CONTOUR
- × 360.00 SPOT ELEVATION
- AGP 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 at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

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. Ranucchio Jr. — 12/12/97 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Cheryl Simmons for Natural Resources Conservation Service — 12/31/97 Date

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

John R Robertson — 12/31/97 Date
Howard Soil Conservation District

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/12/98 DATE

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

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

12/12/97 Date
JOHN W. RANUCCHIO JR. No. 11005 STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER
Professional Engr. No.

TITLE

PHASE II EROSION AND SEDIMENT CONTROL PLAN

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

SDP-98-44

SEDIMENT TRAP DATA

Trap Number		POST I
Trap Type		
Existing Drainage Area Ac.		5.6
Interim Drainage Area Ac.		5.8
Proposed Drainage Area Ac.		5.8
Storage Required C.F.	Wet	10,440
	Dry	10,440
	Total	20,880
Storage Provided C.F.	Wet	13,200
	Dry	15,300
	Total	28,500
Existing Ground Elev.		371.0
Top Embankment Elev.		372.0
Weir Crest Elev.		371.0
Wet Storage / Outlet Elev.		369.5
Cleanout Elev.		378.6
Bottom Elev.		368.0
Depth of Channel(s)		N/A
Outlet Width (b)		N/A
Bottom Dimension		80' X 80'
Trap Sideslopes		2:1
Trap Depth	Wet	1.5
	Dry	1.5
	Total	3.0
Barrel Diameter		24"
Riser Diameter		30"
Wet Storage Zone Elev.		368.0-369.5
Dry Storage Zone Elev.		369.5-371.0

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
- INLET PROTECTION (SIP)
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- MOUNTABLE BERM
- BITUMONOUS CURB DIVERSION (BCD)
- EARTH DIKE
- INLET PROTECTION (AGIP)
- REMOVABLE PUMPING STATION (RPS)

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

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 periodic on-site inspection by the Howard Soil Conservation District."

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. Rancocchia, Sr. — 12/12/97 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Natural Resources Conservation Service — 12/31/97 Date

This development plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

Howard Soil Conservation District — 12/31/97 Date

Date

STATE OF MARYLAND — JOHN W. RANCOCCHIA — No. 10557 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10557

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/8/98 DATE

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

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

TITLE

PHASE II
EROSION AND SEDIMENT CONTROL PLAN

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

SDP-98-44

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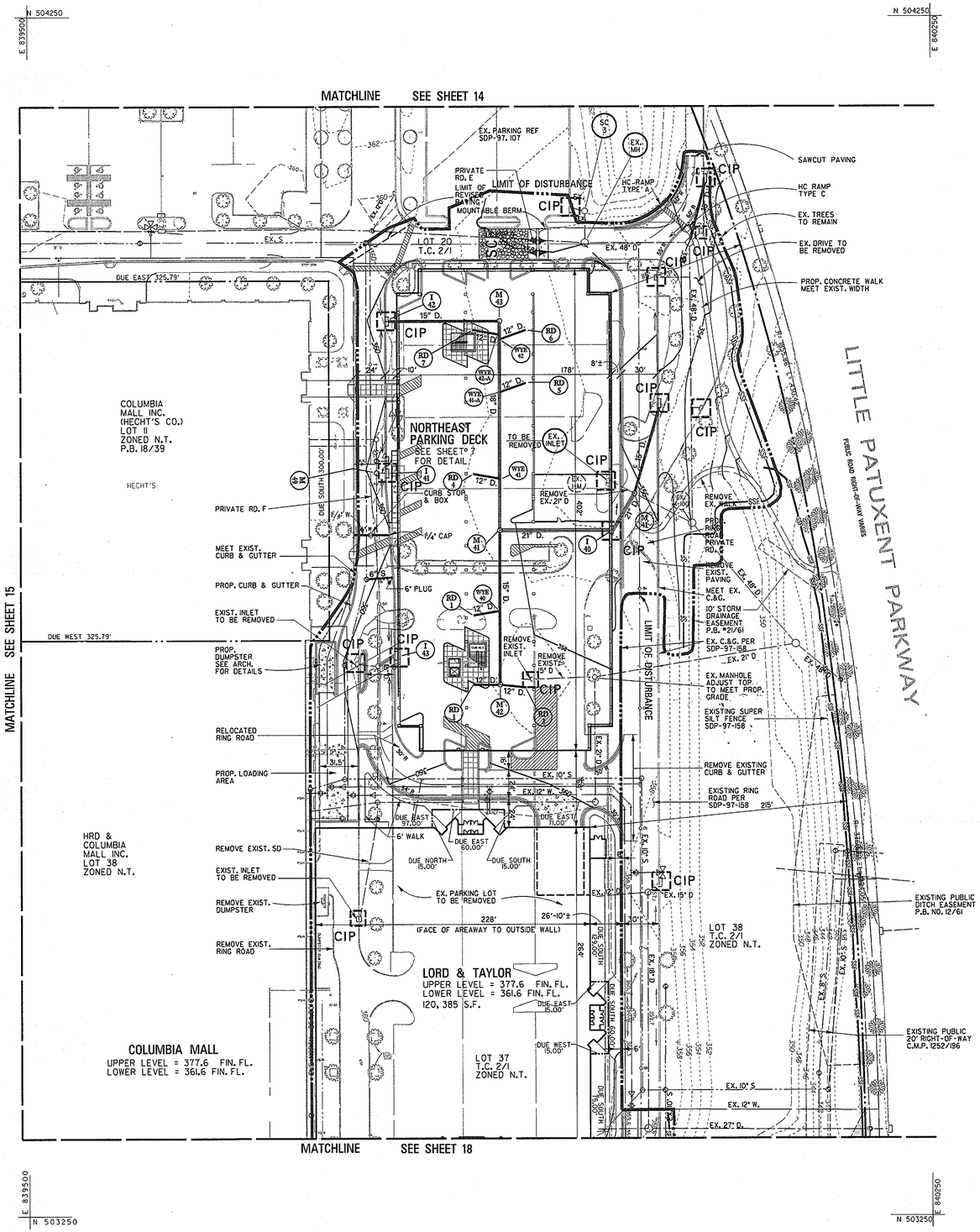

DEVELOPERS CERTIFICATION:

"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 periodic on-site inspection by the Howard Soil Conservation District."

Albert J. Edwards — 12/1997
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. Ranouchias, S — 12-17-97
Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Natural Resources Conservation Service — 12/3/97
Date

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

John R. Robertson — 12/31/97
Howard Soil Conservation District — Date

LEGEND

- EX. CONTOUR
- 8" W. — EX. WATER
- 8" S. — EX. SANITARY SEWER
- 12" D. — EX. STORM DRAIN
- GAS — 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
- SF — SILT FENCE
- SSF — SUPER SILT FENCE
- MOUNTABLE BERM
- BITUMONOUS CURB DIVERSION
- CIP — INLET PROTECTION
- SIP — INLET PROTECTION

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 12/2/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 11/3/98 DATE

DIRECTOR — 11/4/98 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
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

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

12/12/97
Date

STATE OF MARYLAND — JOHN W. RANOUCHIAS, JR. — No. 10853 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No.

TITLE

PHASE II
EROSION AND SEDIMENT CONTROL PLAN

Des By	MJP, RLH	Scale	1" = 50'	Proj. No.	95019B
Drn By	FJZ, MSS	Date	12 /15 /97		16 OF 30
Chk By	JWR	Approved			

SDP-98-44

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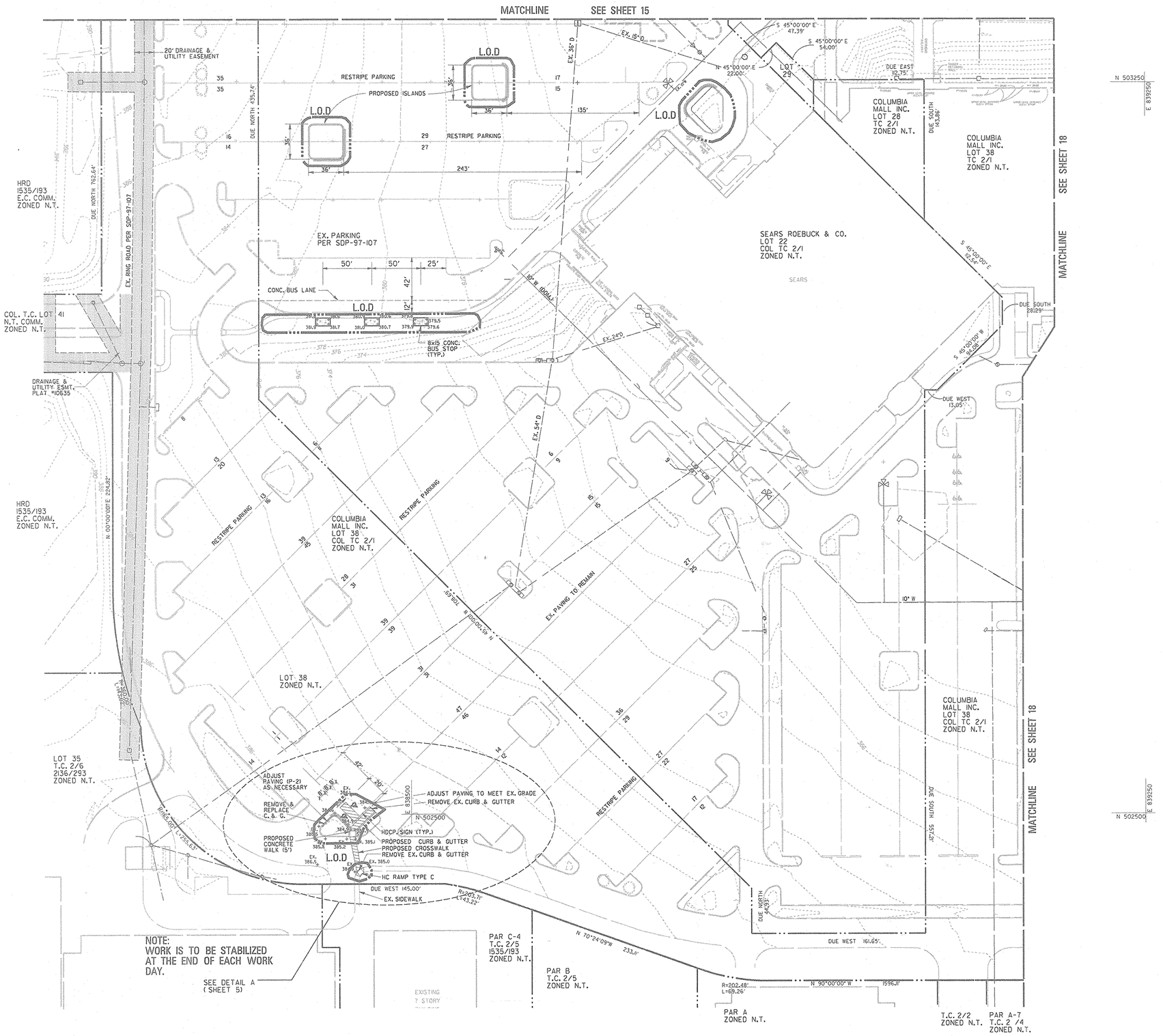

LEGEND

- 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
- SF — SILT FENCE
- SF — SUPER SILT FENCE
- CIP — INLET PROTECTION
- SIP — INLET PROTECTION
- STABILIZED CONSTRUCTION ENT.
- MOUNTABLE BERM
- TEMPORARY SWALE
- A-2 ED — EARTH DIKE
- LIMIT OF DISTURBANCE
- TEMP DIKE/ SWALE
- PROPOSED CONTOUR
- ×360.70 SPOT ELEVATION

DEVELOPERS CERTIFICATION:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Albert F. 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. Ranocchia, Jr. — 12/19/97 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Natural Resources Conservation Service — 12/31/97 Date

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

Howard Soil Conservation District — 12/31/97 Date

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/13/98 DATE

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

12/17/97 Date

STATE OF MARYLAND — JOHN W. RANOCCHIA JR. — 10651 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No.

TITLE

PHASE II
EROSION AND SEDIMENT CONTROL PLAN

Des By	MJP,RLH	Scale	1" = 50'	Proj. No.	95019B
Drn By	FJZ	Date	12 /15 /97		17 OF 30
Chk By	JWR	Approved			

SDP-98-44

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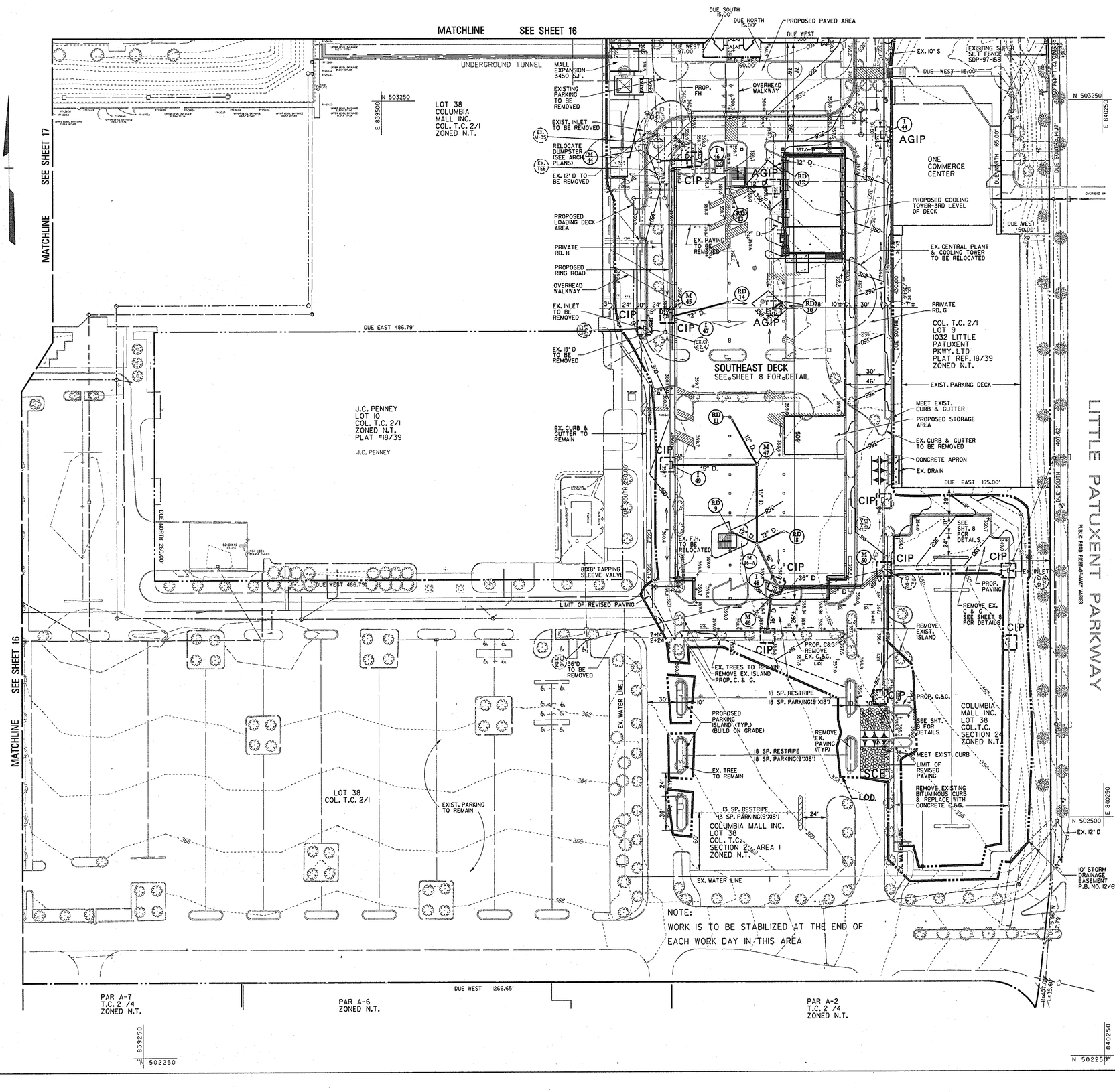

LEGEND

- EX. CONTOUR
- 8" W — EX. WATER
- 8" S — EX. SANITARY SEWER
- 15" D — EX. STORM DRAIN
- GAS — 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
- SF — SILT FENCE
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- AGIP
- CIP

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Albert F. 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 L. Hanscomb — 12/12/97 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Cheryl 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 F. Robertson — 12/31/97 Date
Howard Soil Conservation District

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 11/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 11/8/98 DATE

DIRECTOR — 11/9/98 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
Daft·McCune·Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

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

12/12/97 Date

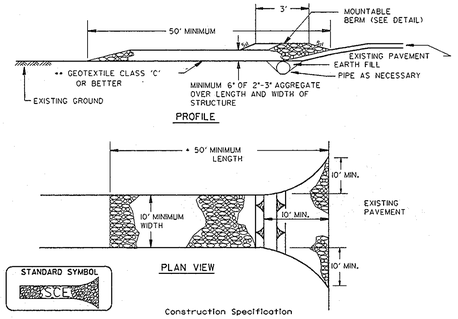
Professional Engr. No.

TITLE

PHASE II EROSION AND SEDIMENT CONTROL PLAN

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

SDP-98-44



Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).

2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.

3. 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.

4. 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.

5. 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.

6. 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.

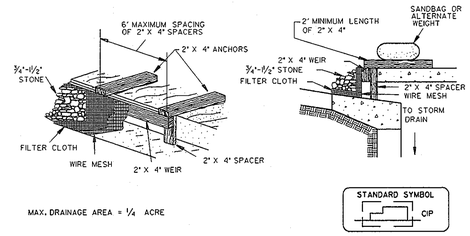
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

F - 17 - 3

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



Construction Specifications

1. 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.

2. 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.

3. 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).

4. 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.

5. The assembly shall be placed so that the end spacers are a minimum 1" beyond both ends of the throat opening.

6. 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.

7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.

8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

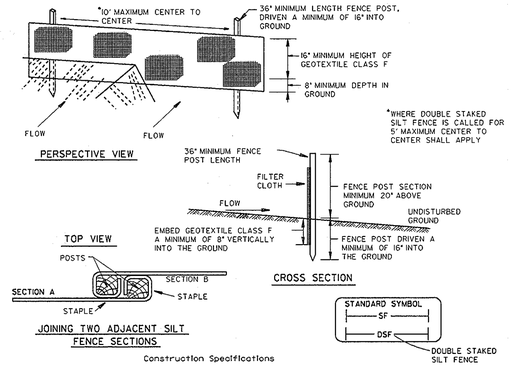
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

E - 16 - 6B

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

CURB INLET PROTECTION (COG OR COS INLETS)

NOT TO SCALE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. 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: MSTM 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

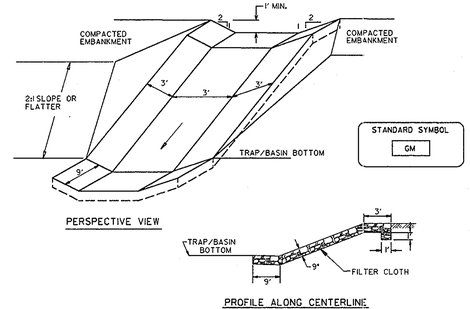
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

E - 16 - 3

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

SILT FENCE

NOT TO SCALE



Construction Specifications

1. Gabion inflow protection shall be constructed of 9' x 3' x 9" gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.

2. Geotextile Class C shall be installed under all gabion baskets.

3. The stone used to fill the gabion baskets shall be 4" - 7".

4. Gabions shall be installed in accordance with manufacturers recommendations.

5. 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 periodic on-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. Ranocchia, Sr. — 10-28-97 Date

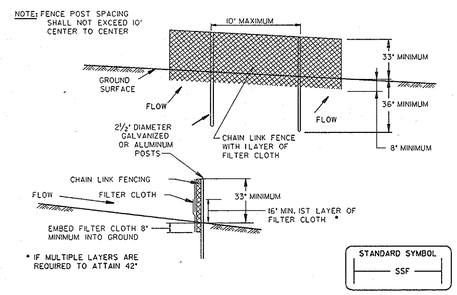
Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Natural Resources Conservation Service — 12/31/97 Date

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

John W. Robertson — Howard Soil Conservation District — 12/31/97 Date

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



Construction Specifications

1. 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.

2. The posts do not need to be set in concrete.

3. 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) guage or heavier.

4. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

5. Filter cloth shall be embedded a minimum of 8" into the ground.

6. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.

7. 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

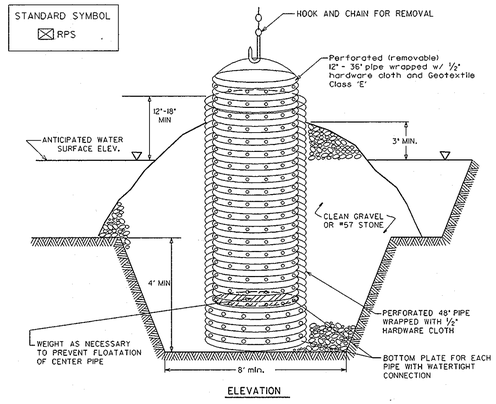
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

H - 26 - 3

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

SUPER SILT FENCE

NOT TO SCALE



Construction Specifications

1. 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.

2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.

3. 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.

4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

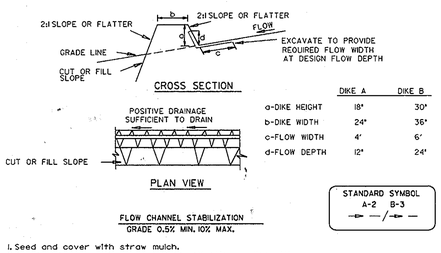
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

D - 12 - 6

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

REMOVABLE PUMPING STATION

NOT TO SCALE



1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

5. 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.

6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

8. 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

10 29 97 Date

STATE OF MARYLAND — JOHN W. RANOCCHIA, SR. — No. 10531 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10531

SDP-98-44

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/13/98 DATE

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

TITLE

PHASE II
EROSION AND SEDIMENT CONTROL DETAIL SHEET

Des By CRW/JLS	Scale AS SHOWN	Proj. No. 95019B	
Drn By JEF	Date 12/15/97		19 OF 30
Chk By JWR	Approved		

PIPE OUTLET SEDIMENT TRAP - ST I

NOTE: RISER EMBEDDED 9" INTO CONCRETE OR 1/4" STEEL PLATE ATTACHED TO RISER WITH A CONTINUOUS WELD ON BOTTOM AND 2' OF STONE PLACED ON STEEL PLATE TWICE THE RISER DIAMETER (MIN.)

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

C - 9 - 7

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

PIPE OUTLET SEDIMENT TRAP - ST I

Construction Specifications

1. The area under the embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. 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.
3. 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 ≥ 1' above the riser crest elevation.
4. 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 (900cf/ac). The sediment shall be deposited in a suitable area and in such a manner that it will not erode.
5. The structure shall be inspected periodically and after each rain and repairs made as necessary.
6. 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.
7. The structure shall be removed and area stabilized when the drainage area has been properly stabilized.
8. All cut and fill slopes shall be 2:1 or flatter.
9. All pipe connections shall be watertight.
10. Above the wet storage elevation, the riser shall be perforated with 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.
11. The riser shall be wrapped with 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.
12. 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.
13. 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.
14. 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, 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.
15. Anti seep collars shall be constructed in accordance with plans (ref. table 16 and Details C-10-23 AND C-10-24).
16. Concentric trash rack and anti-vortex device design details are on Detail C-10-26 AND C-10-26A.
17. Refer to Section D for dewatering requirements of sediment traps.
18. Outlet - An outlet shall be provided, which includes a means of conveying the discharge in an erosion free manner to an existing stable channel.
19. 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 - 7A

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

PIPE OUTLET SEDIMENT TRAP - ST I NOT TO SCALE

TYPICAL ANTI-SEEP COLLARS

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

RISER BASE DETAIL

NOTE: ANCHORING BARS SHOULD PROJECT 1/4 DIAMETER BEYOND OUTSIDE OF THE RISER.

Construction Specifications

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:

1. A concrete base 18" thick with the riser embedded 9" in the base.
2. A 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.

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

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

C - 10 - 25

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

RISER BASE DETAIL

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

Note: The trash rack and anti-vortex device information is only for corrugated metal pipe. Concrete risers must meet the requirements to MD 378.

Riser Diam., In.	Trash Rack Cylinder Diam. In.	Trash Rack Cylinder Thick., gage	H. In.	Minimum Size Support Bar	Minimum Top Thickness	Minimum Top 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	1-1/4" pipe or 1-1/4 x 1-1/4 x 1/4 angle	10 ga.	--
54	78	12	25	"	"	--
60	90	12	29	1-1/2" pipe or 1-1/2 x 1-1/2 x 1/4 angle	8 ga.	--
66	96	10	33	2" pipe or 2x2x3/16 angle	8 ga., w/stiffener	2x2x1/4 angle
72	102	10	36	"	"	2-1/2x2-1/2x1/4 angle
78	114	10	39	2-1/2" pipe or 2x2x1/4 angle	"	"
84	120	10	42	2-1/2" pipe or 2-1/2x2-1/2x1/4 angle	"	2-1/2x2-1/2x 5/16 angle

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

C - 10 - 26

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE NOT TO SCALE

SEDIMENT BASIN BAFFLES

D = DISTANCE BETWEEN INFLOW AND OUTFLOW
A = AREA OF NORMAL POOL
W_e = EFFECTIVE WIDTH
L_e = TOTAL DISTANCE FROM THE INFLOW POINT AROUND THE BAFFLES TO THE RISER

FORMULA: $W_e = (A/2)^{1/2}$
$L_e \geq W \times 2$

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

C - 10 - 28

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

SEDIMENT BASIN BAFFLES 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 periodic on-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. Ranocchia, Sr — 10-28-97 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Natural Resources Conservation Service — 12/31/97 Date

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

Howard Soil Conservation District — 12/31/97 Date

STANDARD INLET PROTECTION

MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.
2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

E - 16 - 5

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

STANDARD INLET PROTECTION NOT TO SCALE

APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE Dec. 3, 1997 RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/13/98 DATE

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

10-28-97
Date

STATE OF MARYLAND JOHN W. RANOCCHIA SR. No. 10551 REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10551

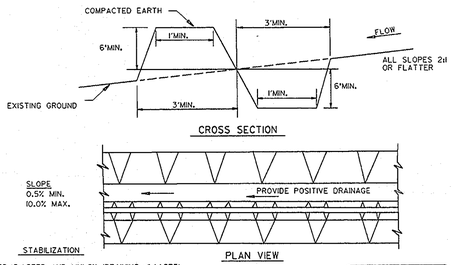
TITLE

PHASE II
EROSION AND SEDIMENT CONTROL
DETAIL SHEET

Des By	CRW/JLS	Scale AS SHOWN	Proj. No. 95019B
Drn By	JEF	Date 12/15/97	
Chk By	JWR	Approved	20 OF 30

SDP-98-44

Wed Oct 15 14:39:21 1997 d:\95019\95019b2.es7



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

1. All perimeter dike/swales shall have an uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet into an undisturbed stabilized area at a non-erosive velocity.

4. The swale shall be excavated or shaped to line, grade, and cross-section as required to meet the criteria specified in the standard.

5. Fill shall be compacted by earth moving equipment.

6. 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.

7. 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 — *A - 3 - 3*

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

PERIMETER DIKE / SWALE

NOT TO SCALE

DUST CONTROL
SPECIFICATIONS

Temporary Methods:

1. Mulches - See Standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
2. Vegetative Cover - See standards for temporary vegetative cover.
3. 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.
4. 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.
5. 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.
6. Calcium Chloride - Apply at a rate that will keep surface moist. May need retreatment.

Permanent Methods:

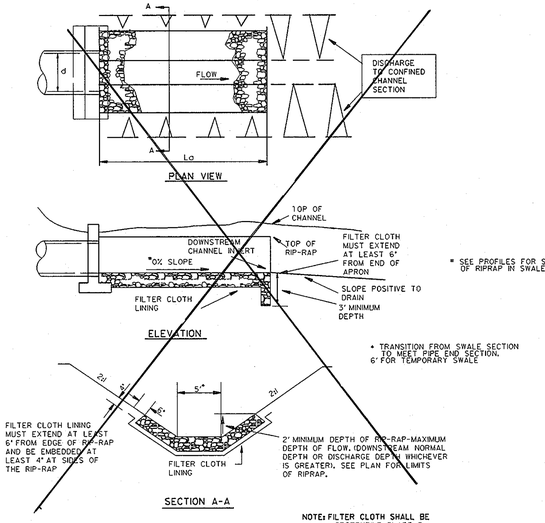
1. Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
2. Topsoiling - Covering with less erosive soil materials. See standards for topsoiling.
3. Stone - Cover surface with crushed stone or coarse gravel.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE — *H - 30 - 1*

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

DUST CONTROL SPECIFICATIONS

NOT TO SCALE



NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE — *F - 18 - 9A*

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

ROCK OUTLET PROTECTION II

NOT TO SCALE

Construction Specifications

1. 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.

2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.

3. 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 repairs or for joining two pieces of geotextile shall be a minimum of one foot.

4. 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.

5. 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 — *F - 18 - 8A, 9A, 10A*

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:
1. PREFERRED - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.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 SQ.FT.)
2. ACCEPTABLE - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.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 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS/1000 SQ.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 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATIONS USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.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 BE 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 SQ.FT.)

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

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

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

PERMANENT SEEDING NOTES

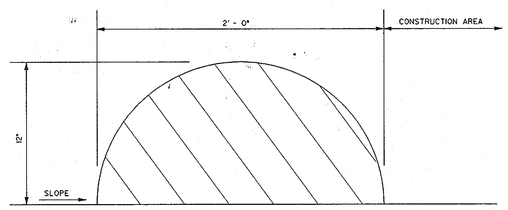
1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2437).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL."
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
   A. SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1
   B. FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE "HOWARD COUNTY DESIGN MANUAL," STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING, AND MULCHING (SECTION 0). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	89.12 ACRES
AREA DISTURBED	19.3 ACRES
AREA TO BE ROOFED OR PAVED	17.4 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.9 ACRES
TOTAL CUT	*
TOTAL FILL	*

* Site previously mass graded per SDP 97-107 & SDP 97-158. Fine grading only on this plan.

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

SEDIMENT CONTROL GENERAL NOTES



BITUMINOUS CURB DIVERSION

UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL PRACTICES

1. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON UPSTREAM SIDE OF TRENCH.
2. IMMEDIATELY FOLLOWING PIPE INSTALLATION, THE TRENCH SHALL BE BACKFILLED, COMPACTED AND IMMEDIATELY STABILIZED (MULCHED, SEEDED, AND/OR SODDED MECHANICAL STABILIZATION) AT THE END OF EACH WORK DAY.
3. SILT FENCE SHALL BE PLACED IMMEDIATELY DOWN STREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED LONGER THAN ONE (1) WORKING DAY. (SILT FENCE AS PER SCS STANDARD DRAWING - E-15-3)
4. THE CONTRACTOR SHALL DISTURB AND OPEN TRENCH THE MINIMUM PRACTICAL AREA REQUIRED TO ACCOMPLISH THE WORK DESIGNATED FOR EACH DAY.
5. ALL SEDIMENT AND EROSION CONTROL PRACTICES AND VEGETATIVE STABILIZATION SHALL BE IN ACCORDANCE WITH THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS." ANY EROSION AND SEDIMENT CONTROL PRACTICES DAMAGED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL

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 periodic on-site inspection by the Howard Soil Conservation District."

John W. Ramacchia, Jr. — 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. Ramacchia, Jr. — 10-28-97 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Natural Resources Conservation Service — 12/31/97 Date

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

Howard Soil Conservation District — 12/31/97 Date

10-28-97
Date

STATE OF MARYLAND — JOHN W. RAMACCHIA, JR. — 10551 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10551

SDP-98-99

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/6/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/13/98 DATE

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 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 296-4705
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	12/15/97		
Chk By	JWR	Approved			21 OF 30

Wed Oct 15 14:40:51 1997 d:\95019\95019e2.esd

Table 28 Stone Size

	SIZE RANGE	D_{50}	D_{100}	AASHTO	WEIGHT
NUMBER 57•	3/8" - 1½"	½"	1½"	M-43	N/A
NUMBER 1	2" - 3"	2½"	3"	M-43	N/A
RIP-RAP••	4" - 7"	5½"	7"	N/A	N/A
CLASS I	N/A	9.5"	15"	N/A	150lb max.
CLASS II	N/A	16"	24"	N/A	700lb max.
CLASS III	N/A	23"	34"	N/A	2000lb max.

• This classification is to be used on the inside face of stone outlets and check dams.
•• This classification is to be used when ever small rip-rap is required. The State Highway Administration designation for this stome is Stone For Gablons (905.01.04)

Stone For Gablon Baskets

BASKET THICKNESS		SIZE OF INDIVIDUAL STONES	
INCHES	MM	INCHES	MM
6	150	3 - 5	75 - 125
9	225	4 - 7	100 - 175
12	300	4 - 7	100 - 175
18	460	4 - 7	100 - 175
36	910	4 - 12	100 - 300

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

Table 27 Geotextile Fabrics

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

• US Std. Sieve CW-02215 •• .50 mm max. for Super Silt Fence

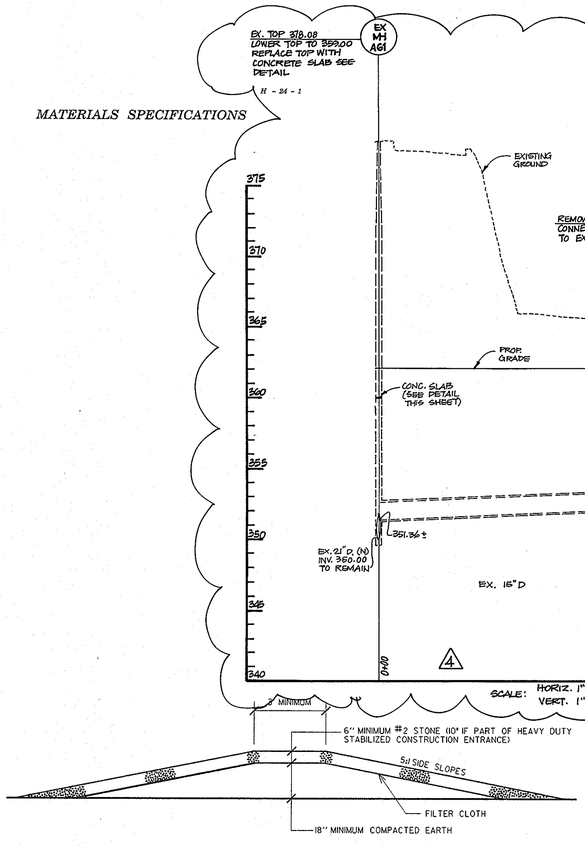
The properties shall be determined in accordance with the following procedures:
- Apparent opening size MSMT 323
- Grab tensile strength ASTMD 1682 4x8" specimen, 1x2" clamps, 12"/min. strain rate in both principal directions of geotextile fabric.
- Burst strength ASTMD D 3786

The fabric shall be inert to commonly encountered chemicals and hydrocarbons, and will be rot and mildew resistant. It shall be manufactured from fibers consisting of long chain synthetic polymers, and composed of a minimum of 85% by weight of polyolephins, polyesters, or polyamides. The geotectile fabric shall resist deterioration from ultraviolet exposure.

In addition, Classes A through E shall have a 0.01 cm./sec. minimum permeability when tested in accordance with MSMT 507, and an apparent minimum elongation of 20 percent (20%) when tested in accordance with the grab tensile strength requirements listed above.

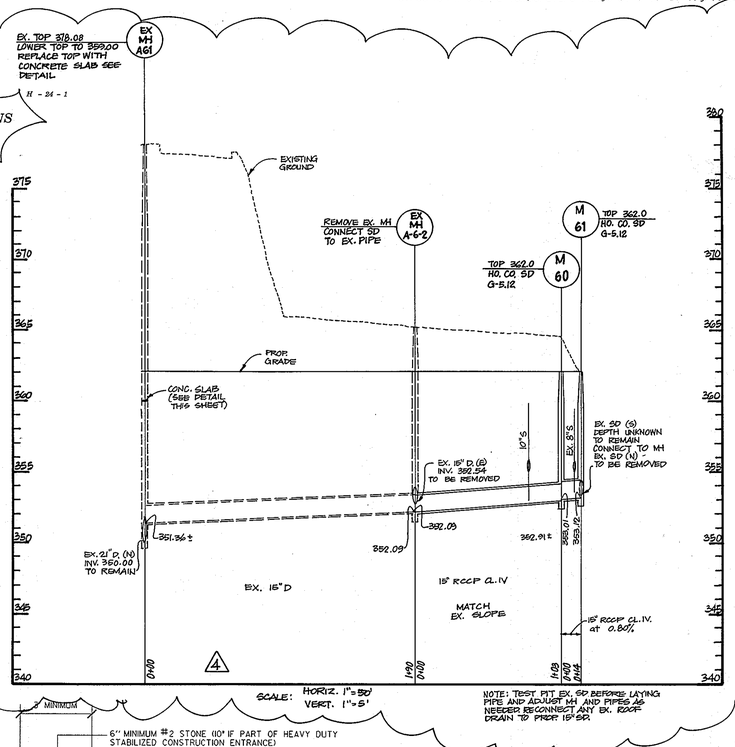
Silt Fence
Class F geotextile fabrics for silt fence shall have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modules when tested in accordance with MSMT 509. The material shall also have a 0.3 gal./ft./min. flow rate and seventy-five percent (75%) minimum filtering efficiency when tested in accordance with MSMT 322. Geotextile fabrics used in the construction of silt fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amounts of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a temperature range of 0 to 120 degrees F.

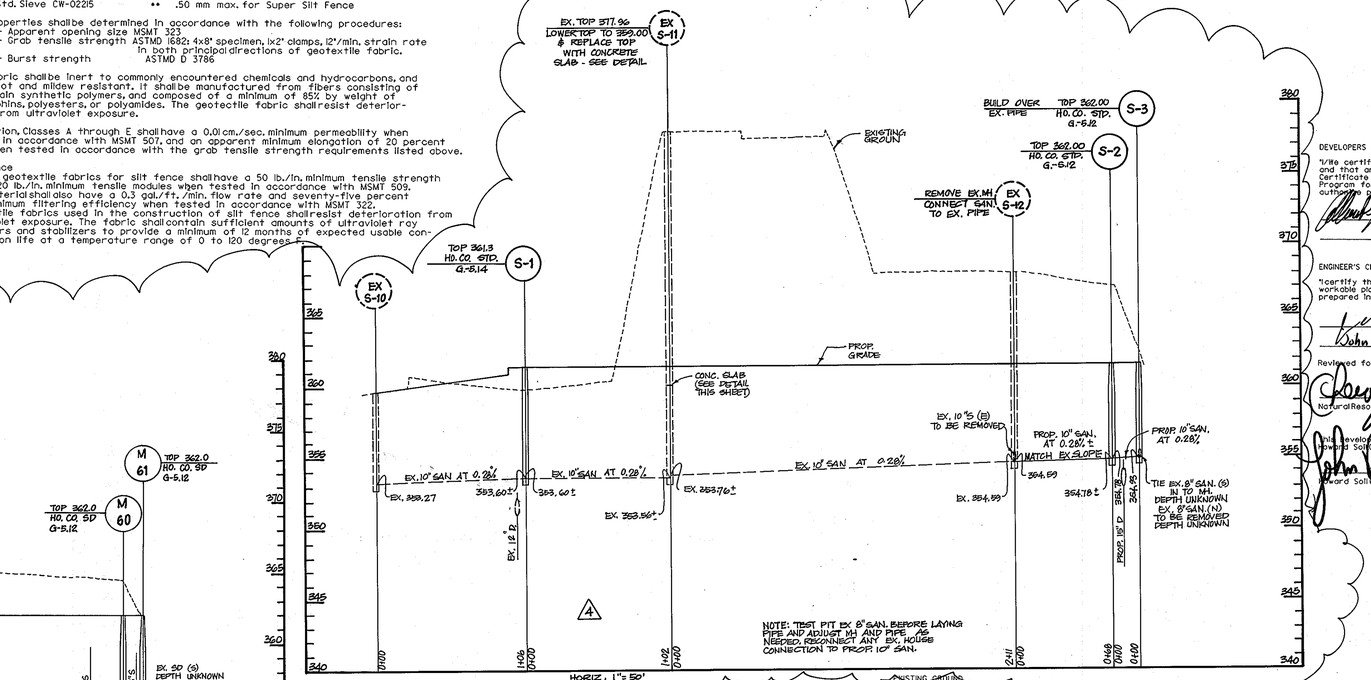
MATERIALS SPECIFICATIONS

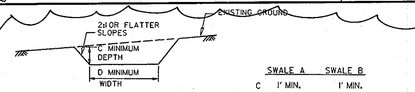


IF MOUNTABLE BERM IS PART OF A "B" CLASS DIKE, COMPACTED EARTH MUST BE 30" MINIMUM.

MOUNTABLE BERM DETAIL



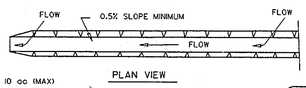




CROSS SECTION

SWALE A	SWALE B
C 1' MIN.	1' MIN.
D 4' MIN.	6' MIN.

OUTLET AS REQUIRED



PLAN VIEW

DRAINAGE AREA = 10 ac (MAX)
SLOPE = 10% (MAX)

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

STANDARD SYMBOL
A - 2 / B - 3

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4"-7" stone or recycled concrete equivalent pressed into soil in a minimum 7" layer.

Construction Specifications

1. All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.

4. 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 swale.

5. The swale 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.

6. Fill, if necessary, shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the swale.

8. Inspection and maintenance must be provided periodically and after each rain event.

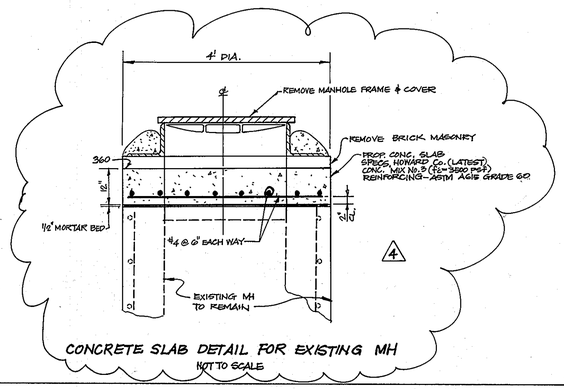
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

A - 2 - 4

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

TEMPORARY SWALE

NOT TO SCALE



CONCRETE SLAB DETAIL FOR EXISTING MH
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 periodic on-site inspection by the Howard Soil Conservation District."

Mark F. Richards — 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. Ramacchia, Sr — 10-28-97 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Cheryl Simmons, Natural Resources Conservation Service — 12/31/97 Date

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

John R. Robertson — 12/31/97 Date

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/6/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/13/98 DATE

DIRECTOR — 1/14/98 DATE

Date	No.	Revision Description
4-30-98	4	ADDED SAN. SD. PROFILE & DETAIL

THE MALL IN COLUMBIA
PHASE II EXPANSION
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 10,11,22,28,29,29, 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 296-4705

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

TITLE
PHASE II
EROSION AND SEDIMENT CONTROL
DETAIL SHEET AND STORM DRAIN AND SANITARY PROFILES

10/28/97 Date

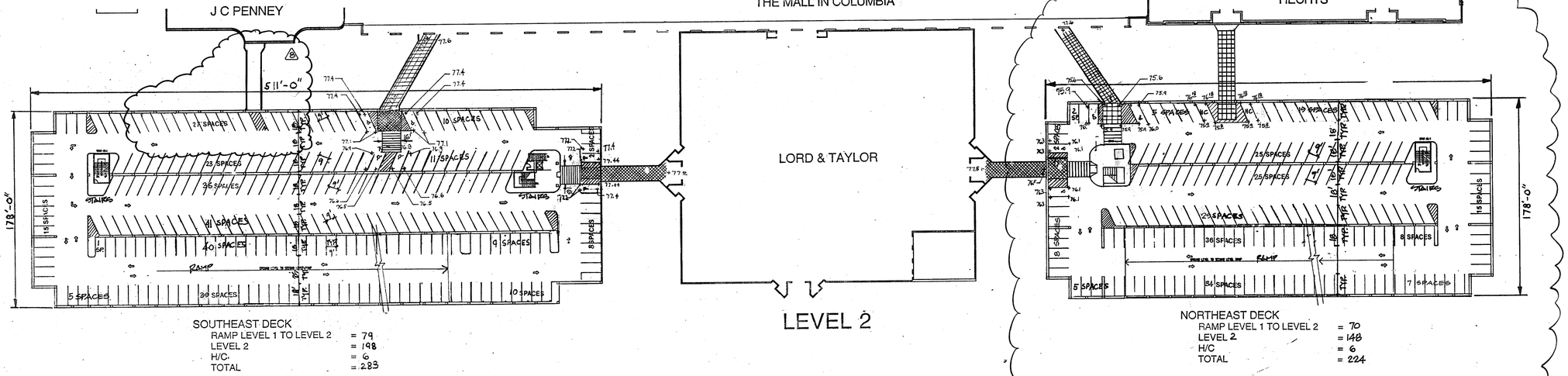
STATE OF MARYLAND — JOHN W. RAMACCHIA, SR. — No. 10551 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10551

SDP-98-94

Des By	CRW/JLS	Scale	AS SHOWN	Proj. No.	95019B
Drn By	JEF	Date	12/15/97		
Chk By	JWR	Approved			22 OF 30

Wed Oct 15 14:42:14 1997 d:\95019\9501902.ds9

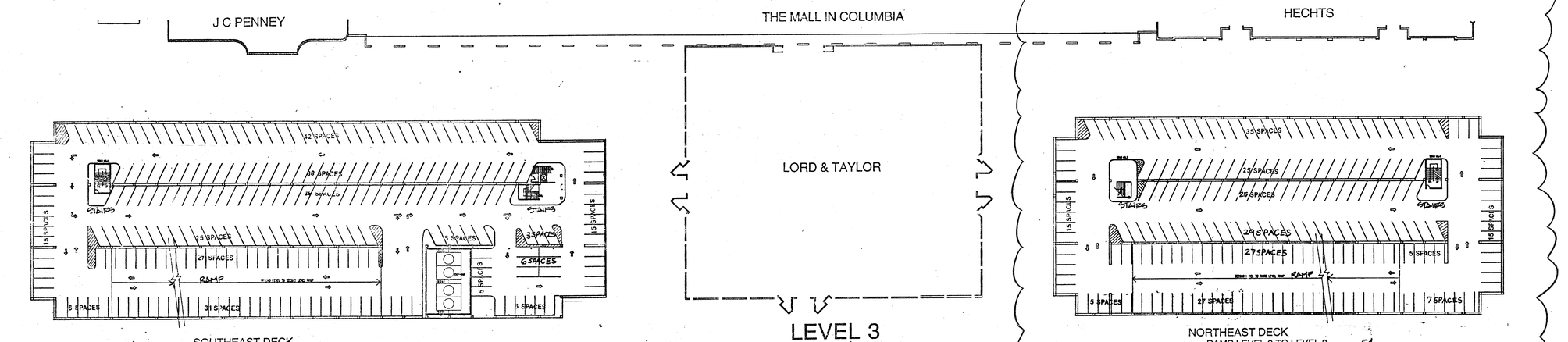


SOUTHEAST DECK

RAMP LEVEL 1 TO LEVEL 2	= 79
LEVEL 2	= 198
H/C	= 6
TOTAL	= 283

NORTHEAST DECK

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

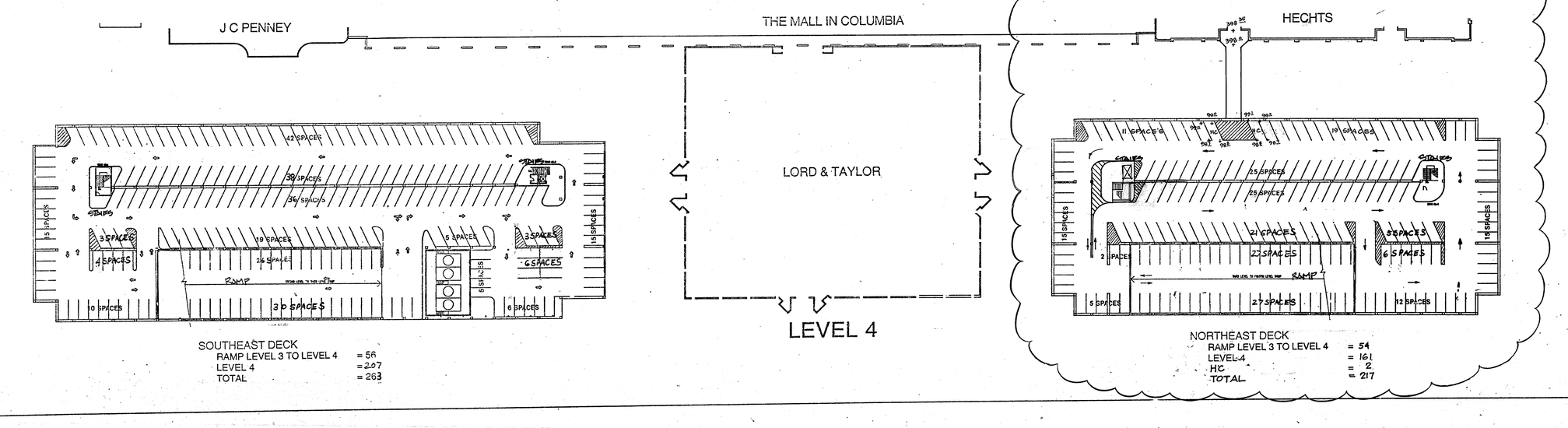


SOUTHEAST DECK

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

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

NORTHEAST DECK

RAMP LEVEL 3 TO LEVEL 4	= 54
LEVEL 4	= 161
HC	= 2
TOTAL	= 217

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

STATE OF MARYLAND
JOHN W. RANDOLPH
No. 10557
PROFESSIONAL ENGINEER

Professional Engr. No. 10557

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/13/98 DATE

DIRECTOR — 1/14/98 DATE

Date	No.	Revision Description
7-11-03	2	ADD J.C. PENNEY BRIDGE CONNECTION
07-08-98	1	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.
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COLUMBIA, MARYLAND 21044

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200 East Pennsylvania Avenue
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(410) 296-3333
Fax 296-4705

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

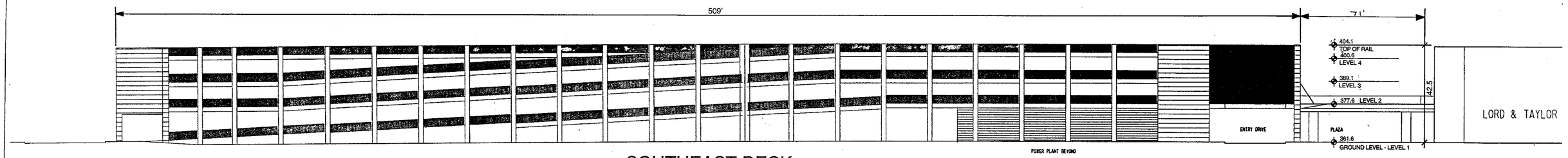
TITLE

PHASE II

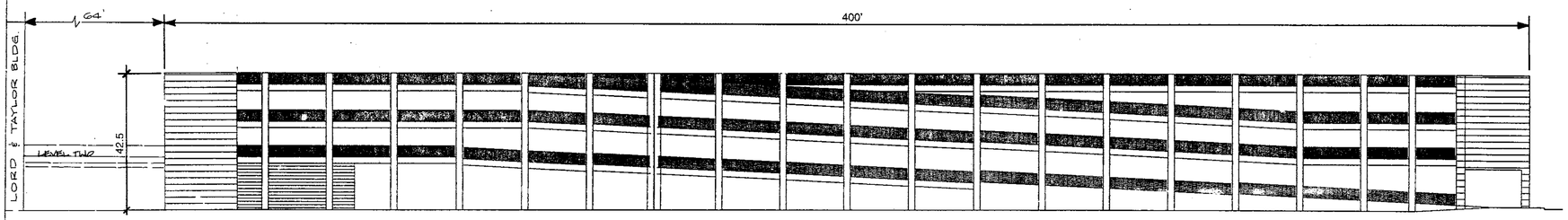
SOUTHEAST & NORTHEAST PARKING DECK LAYOUT

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

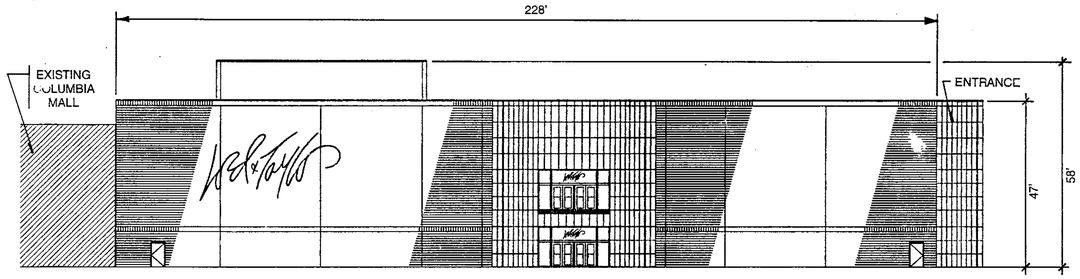
SDP-98-44



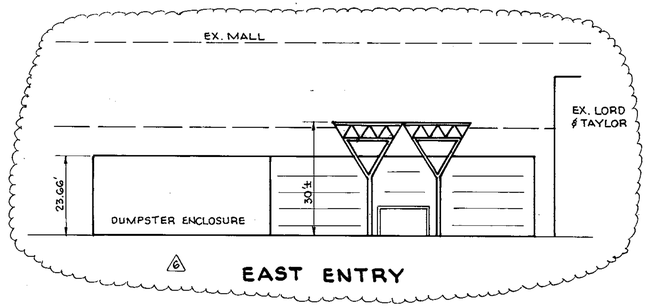
SOUTHEAST DECK
EAST ELEVATION

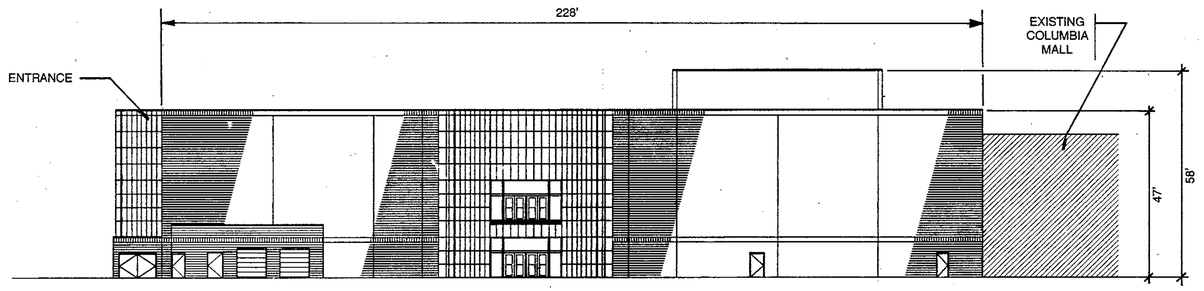


NORTHEAST DECK
EAST ELEVATION



LORD & TAYLOR
SOUTH ELEVATION





LORD & TAYLOR
NORTH ELEVATION

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 11/6/98

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11/13/98

DIRECTOR — DATE 11/14/98

Date	No.	Revision Description
4-27-98	6	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:
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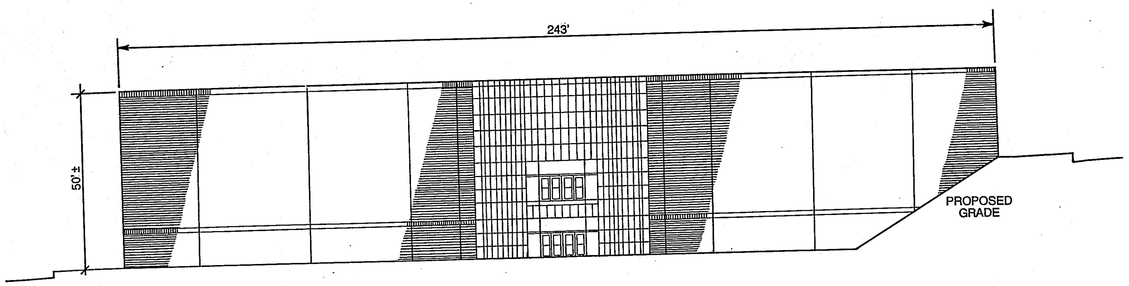
10/28/97
STATE OF MARYLAND
JOHN W. RANDOLPH, JR.
No. 10551
REGISTERED
PROFESSIONAL ENGINEER
Professional Engr. No. 10551

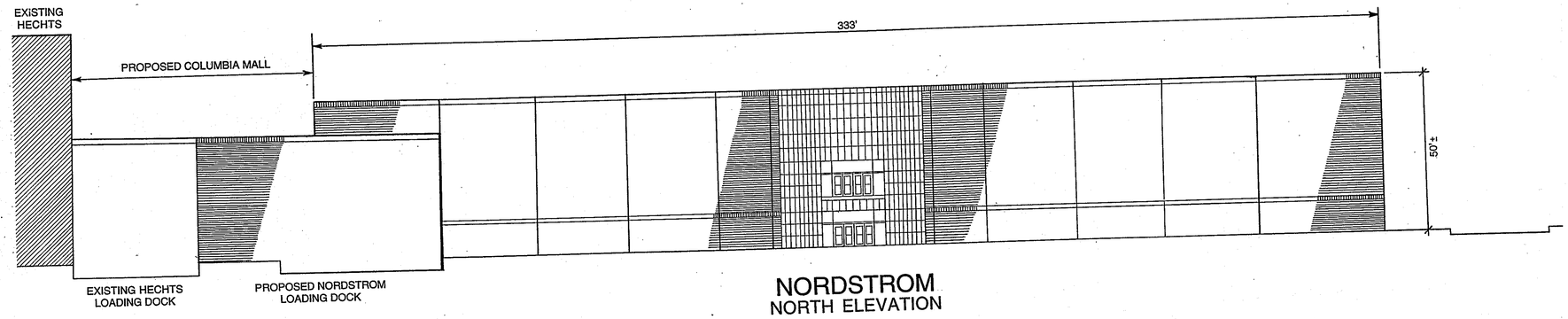
TITLE
PHASE II
BUILDING ELEVATIONS

Des By	Scale NOT TO SCALE	Proj. No. 95019B
Drn By	Date 12/15/97	24 OF 30
Chk By	Approved	

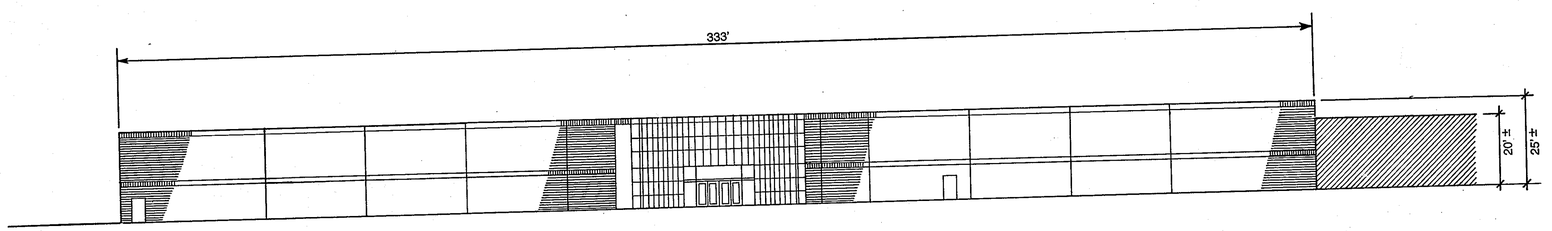
SDP-98-44



NORDSTROM
WEST ELEVATION



NORDSTROM
NORTH ELEVATION



NORDSTROM
SOUTH ELEVATION

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 1/8/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/13/98 DATE

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

10/28/97
Date

STATE OF MARYLAND
REGISTERED
PROFESSIONAL ENGINEER

Professional Engr. No. 10551

TITLE
PHASE II
BUILDING ELEVATIONS

Des By	Scale NOT TO SCALE	Proj. No. 95019B
Drn By	Date 12/15/97	25 OF 30
Chk By	Approved	

SDP-98-11

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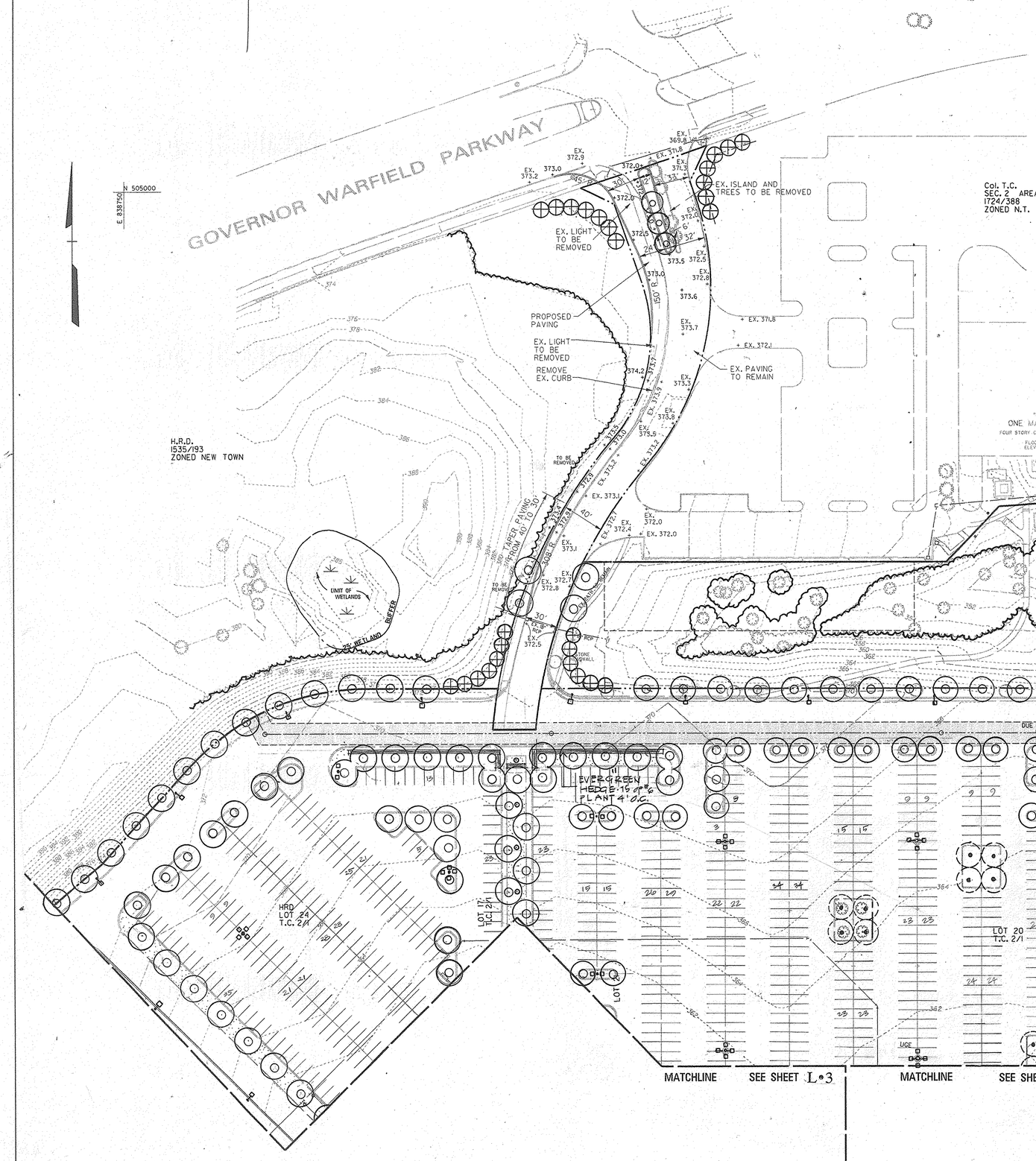


PLANT LIST - SHEETS L-1, L-2, L-3, L-4 & L-5

No.	SYMBOL	QUAN	PLANT NAMES	SIZE	ROOT	REMARKS
1		84	MALUS 'SNOWDRIFT' SNOWDRIFT CRABAPPLE	2-2½" CAL	B&B	FULL HEADS
2.		298	PLATANUS ACERIFOLIA LONDON PLANETREE	2½-3" CAL 12-14' HT	B&B	FULL HEADS
3.		16	PYRUS CALLERYANA 'REDSPIRE' REDSPIRE PEAR	2-2½" CAL 10' HT	B&B	FULL HEADS
4.		19	PINUS STROBUS WHITE PINE	6-8' HT	B&B	
5.		56	QUERUS PALUSTRIS PIN OAK	2½-3" CAL 12-14' HT	B&B	FULL HEADS
6.		315	TAXUS MEDIA HATFIELD HATFIELD YEW	24" SPR HEDGE	B&B	
7.		110	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE ZELKOVA	2½-3" CAL 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 PLANS.			

NOTE: SITE LIGHTING TO BE IN ACCORDANCE WITH MECH/ELECT. DRAWING 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 NEW TOWN ALTERNATIVE COMPLIANCE METHOD. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPE TREES IN THE AMOUNT OF $61,458 MUST BE POSTED AS PART OF THE GRADING PERMIT (583 TREES, 315 SHRUBS).

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

NOTE: REFER TO SHT L-2 FOR PLANTING DETAILS

General Planting Notes

1. All plant material to meet A.A.N. Standards
2. Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMW
3. No substitutions to be made without consent of Landscape Architect or Owner
4. All beds to be topped with three inches of hardwood mulch.
5. Landscape Contractor to verify location of utilities with Owner before planting.
6. Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owners discretion, specimen and other plant material will be selected.
7. 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.
8. Contractor shall notify Miss Utility 72 hours prior to construction.
9. DEVELOPER'S / BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION/S 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

NAME — DATE 11.24.97

LEGEND

- EX. CONTOUR
- 8"W — EX. WATER
- 8"S — EX. SANITARY SEWER
- 12"D — EX. STORM DRAIN
- GAS — 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)

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 12/9/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/8/98 DATE

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

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

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

Oct. 23, 1997
Date

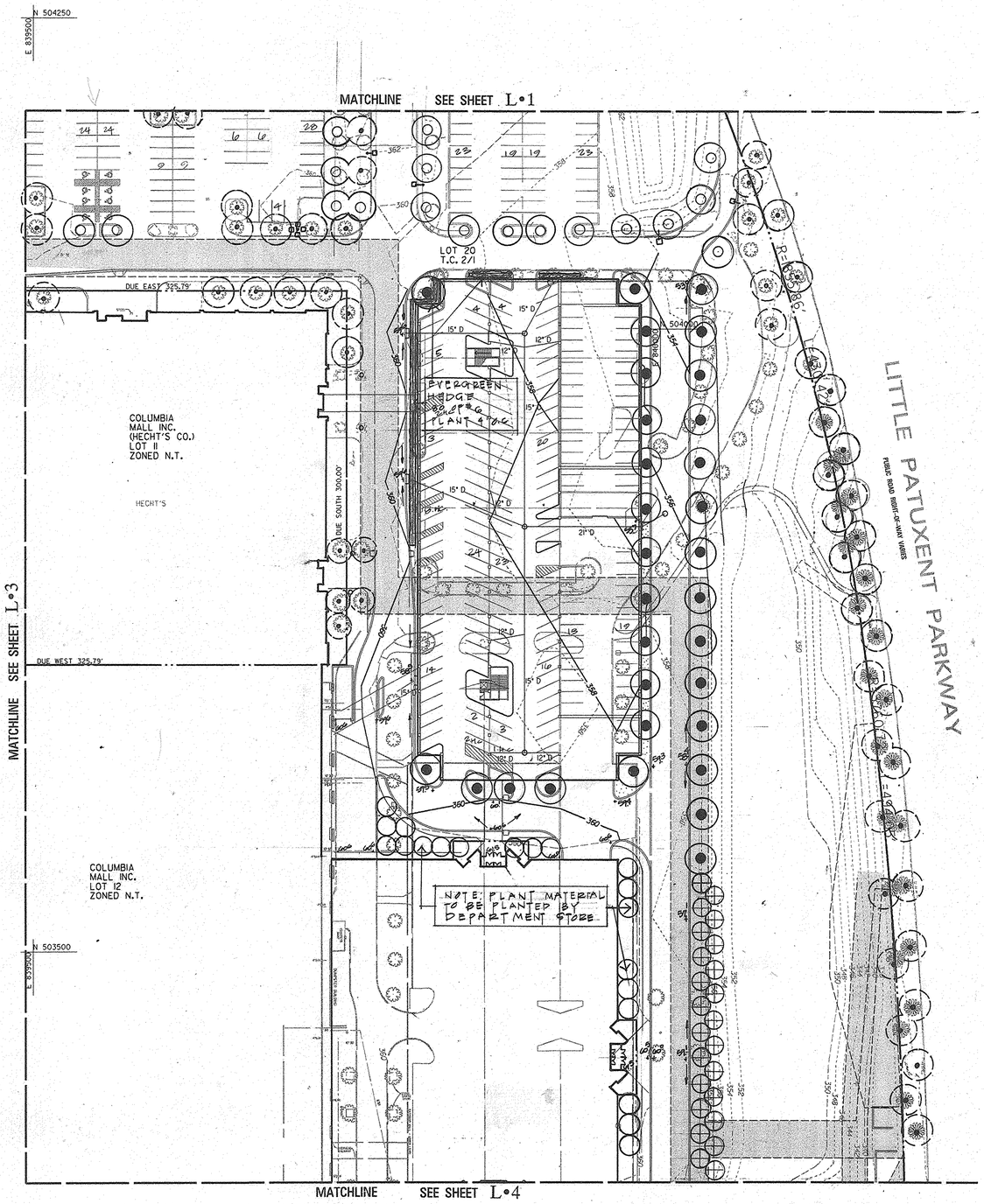
STATE OF MARYLAND — CHARLES H. SHAW — REGISTERED LANDSCAPE ARCHITECT — NO. 213

TITLE
PHASE II
PLANTING, LIGHTING & STRIPING PLAN L•1

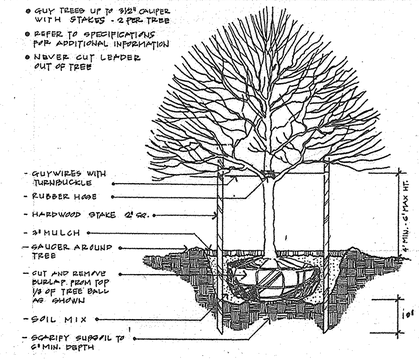
Des By SHAW	Scale 1" = 50'	Proj. No. 95019B
Drn By	Date 12/15/97	26 OF 30
Chk By	Approved	

SDP-98-44

Thu Oct 16 16:54:59 1997 d:\95019\95019b2.tpl

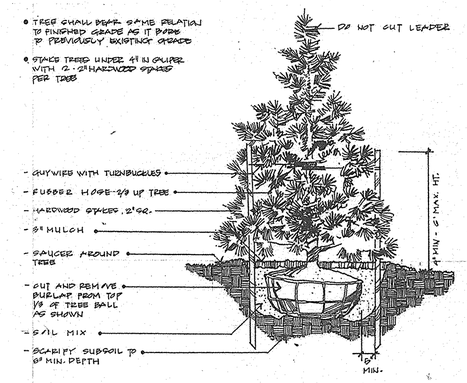


- GUY TREES UP TO 3½" CALIPER WITH STAKES - 2 PER TREE
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION
- NEVER CUT LEADER OUT OF TREE



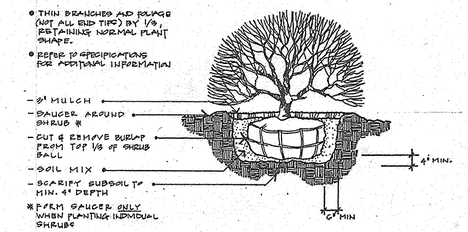
TYPICAL DECIDUOUS TREE PLANTING DETAIL

- TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUSLY EXISTING GRADE
- STAKE TREE UNDER 4" IN CALIPER WITH 2 - 2" HARDWOOD STAKES PER TREE



TYPICAL EVERGREEN TREE PLANTING DETAIL

- SHRUB SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE TO PREVIOUSLY EXISTING GRADE
- THIN BRANCHES AND FOLIAGE (NOT ALL END TIPS) BY 1/3, RETAINING NORMAL PLANT SHAPE.
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION



TYPICAL SHRUB PLANTING DETAIL

LEGEND

- EX. CONTOUR
- W — EX. WATER
- S — EX. SANITARY SEWER
- D — EX. STORM DRAIN
- G — 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
RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 11/26/98

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11/25/98

DIRECTOR — DATE 11/24/98

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 296-4705

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

Oct. 23, 1997
Date

STATE OF MARYLAND
CHARLES H. WALKER, JR.
No. 219

TITLE

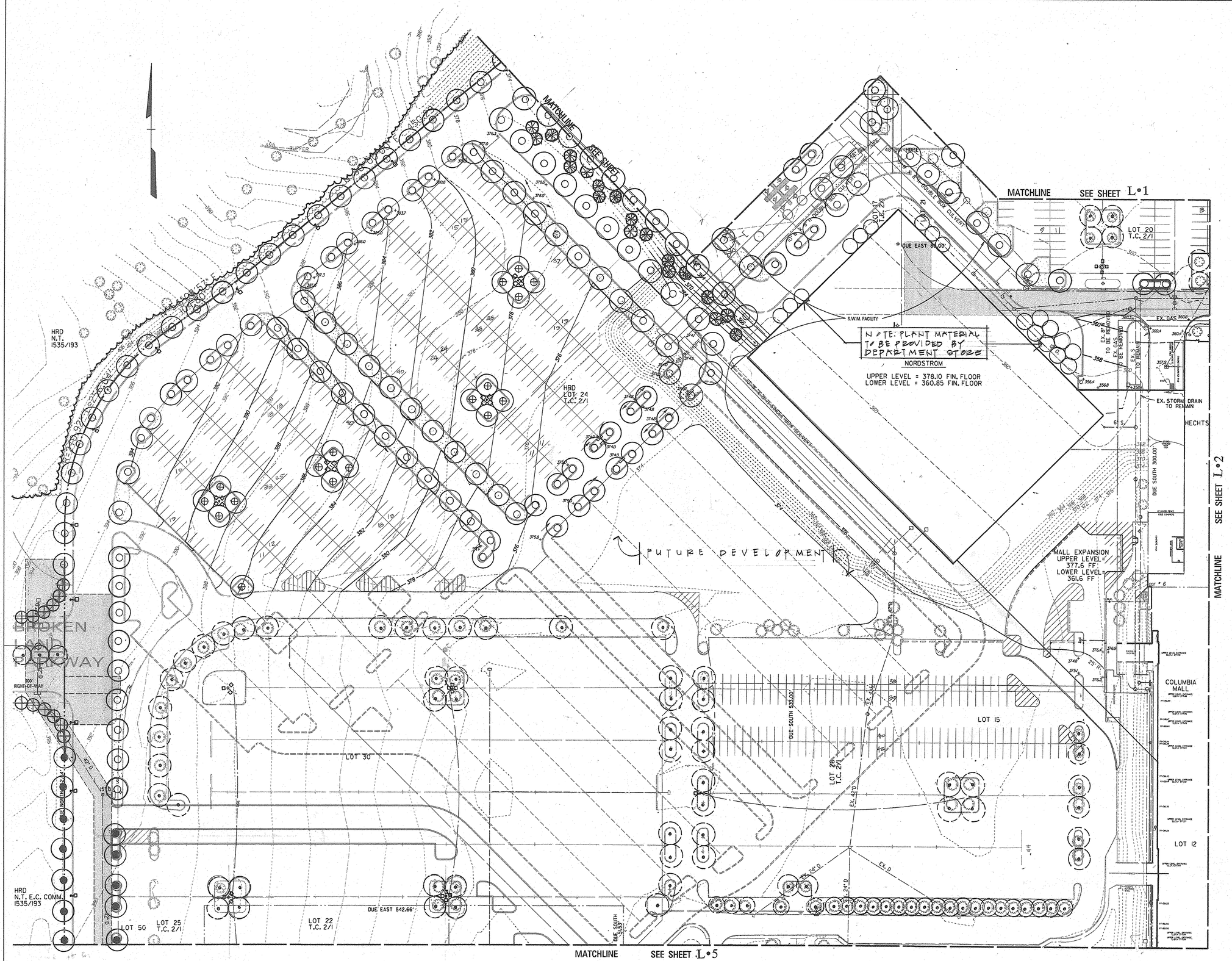
PHASE II

PLANTING, LIGHTING & STRIPING PLAN — L•2

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

SDP-98-44

Thu Oct 16 17:30:06 1997 d:\95019b\95019b2.lp3



LEGEND

- EX. CONTOUR
- 8" W. — EX. WATER
- 8" S. — EX. SANITARY SEWER
- 15" D. — EX. STORM DRAIN
- GAS — EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND

Oct. 23, 1997
Date

STATE OF MARYLAND CHARLES H. SHAW, JR. NO. 212 REGISTERED LANDSCAPE ARCHITECT

#219

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 1/8/98

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/13/98

DIRECTOR — DATE 1/14/98

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 296-4705

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

TITLE

PHASE II

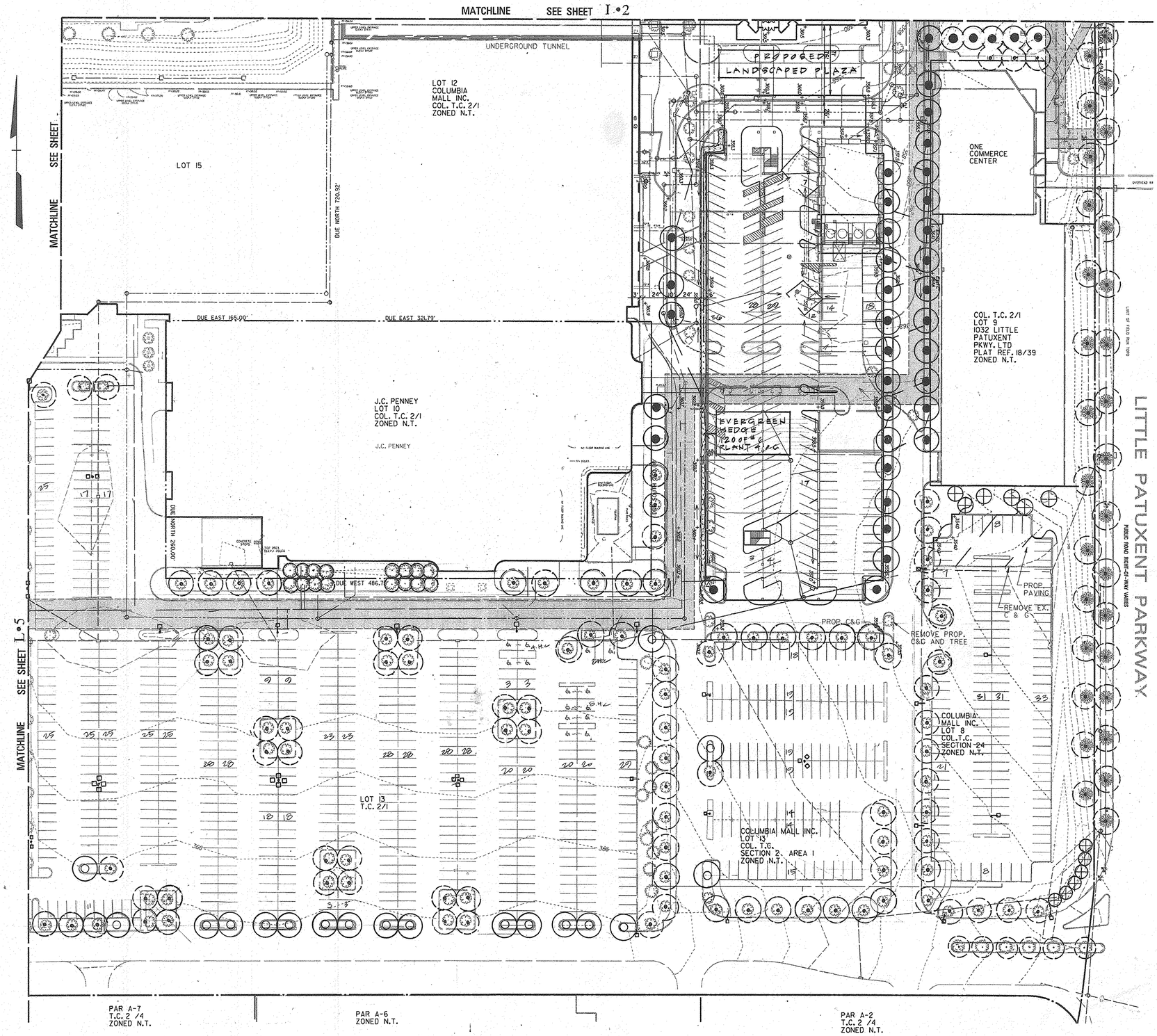
PLANTING, LIGHTING & STRIPING PLAN

L•3

Des By	Scale 1" = 50'	Proj. No. 95019B
Drn By	Date 12/15/97	28 OF 30
Chk By	Approved	

SDP-98-44

Fri Oct 17 07:10:50 1997 d:\95019b\95019b2.lp2



LEGEND

- EX. CONTOUR
- 8" W. — EX. WATER
- 8" S. — EX. SANITARY SEWER
- 15" D. — EX. STORM DRAIN
- G.A.S. — 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
RS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 1/8/98

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/13/98

DIRECTOR — DATE 1/14/98

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

Oct. 23, 1997
Date

STATE OF MARYLAND
CHARLES H. SHAW JR.
REGISTERED LANDSCAPE ARCHITECT
NO. 249

#29

TITLE

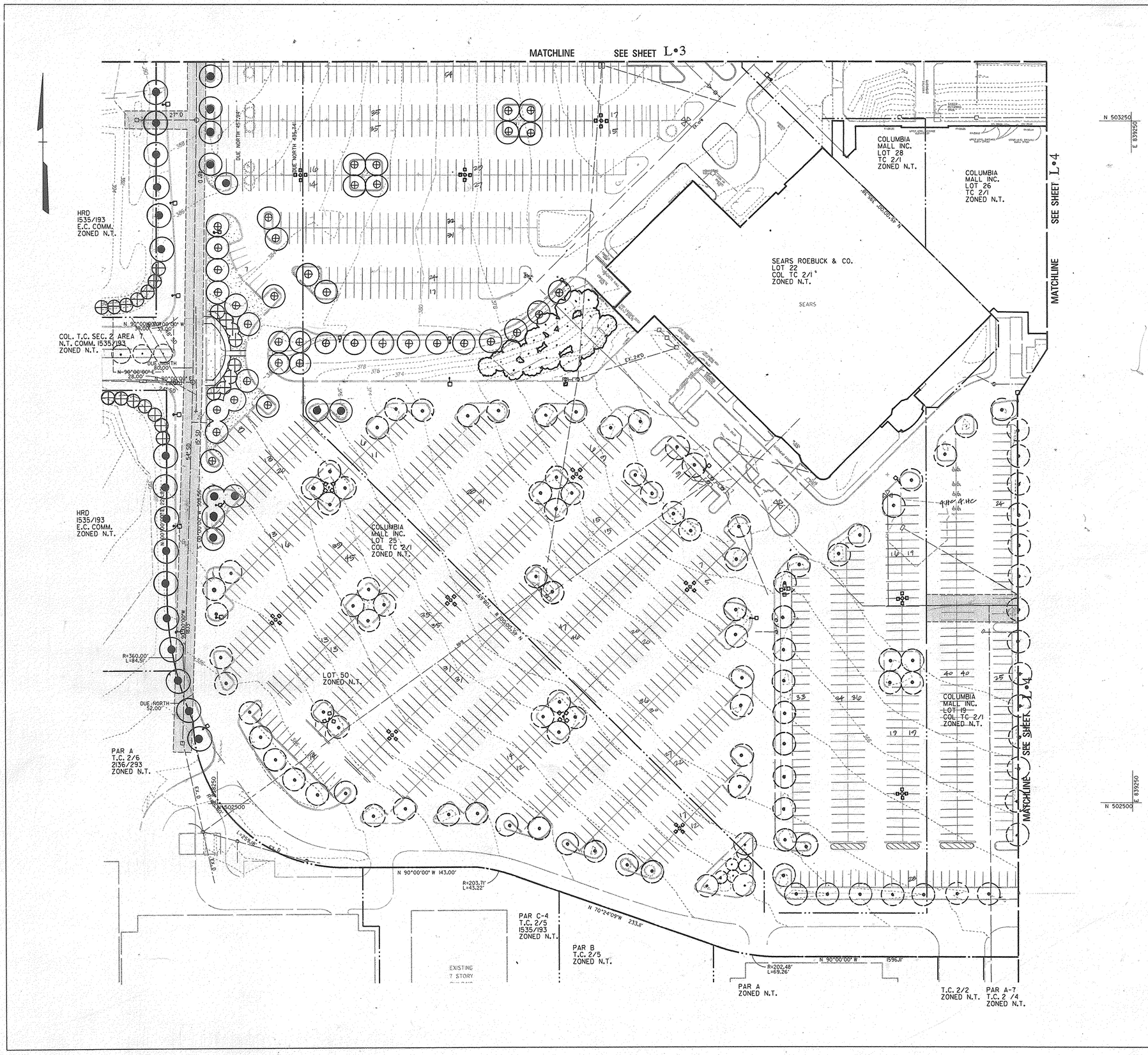
PHASE II

PLANTING, LIGHTING & STRIPING PLAN — L-4

Des By Shaw	Scale 1" = 50'	Proj. No. 95019B
Drn By	Date 12/15/97	29 OF 30
Chk By	Approved	

SDP-98-44

Thu Oct 16 17:13:16 1997 d:\95019b\95019b21p5



LEGEND

- EX. CONTOUR
- 8" W. EX. WATER
- 8" S. EX. SANITARY SEWER
- 15" D. EX. STORM DRAIN
- GAS 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
RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 1/8/98

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/13/98

DIRECTOR — DATE 1/14/98

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 296-4705

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

Oct. 23, 1997
Date

STATE OF MARYLAND CHARLES M. SHAW, JR. REGISTERED LANDSCAPE ARCHITECT

#219

TITLE

PHASE II

PLANTING, LIGHTING & STRIPING PLAN L•5

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

SDP-98-44

Thu Oct 16 16:50:02 1997