COLUMBIA GATEWAY
PARCELS T-1, T-2, T-4 & T-5
SITE DEVELOPMENT PLAN

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 Department of Public Works, 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. The contractor shall notify the Howard County Department of Public Works, Bureau of Utilities at (410) 313-4900 at least five (5) working days prior to starting any excavation work.
5. Site area: Parcel T-1 = 5.7588 acres
   Parcel T-2 = 14.5674 acres.
6. All plan dimensions are to face of curb unless otherwise noted.
7. Existing topography is shown per field run survey information by Gutshcick, Little Weber, P.A. August 1998
8. Coordinates and bearings are based upon the MD State plane system (NAD '27).
9. Water and sewer shown is public.
10. Stormwater management for this site is proposed on Parcel T-5
11. All existing water and sewer is per Contracts 24-1629-D and 24-3748-D.
12. All existing public storm drain is per F-87-125 and F-86-182.
13. All curb radii is 5' unless noted otherwise.
14. Sidewalks adjacent to perpendicular parking shall be 6' wide. All other sidewalks shall be 4' wide except where dimensioned otherwise.
15. Contractor shall utilize PVC pipe for all sewer house connections. Contractor shall utilize D.I.P. (CL 51) for water house connections.
16. Use trench bedding class "C" for storm drains.
17. Paved areas indicated are private except as noted.
18. Project background: See Dept. of Planning & Zoning File Numbers: VP-84-150, VP-85-34, VP-85-35, S-84-44, F-85-63, P-86-22, VP-86-22, VP-86-61, VP-86-73, F-86-17, S-85-28, F-86-182, VF-86-119, WP-88-47, F-87-125 & WP-99-34 WP 01-83, WP 02-70, WP 03-111, WP 04-111, WP 05-104 & WP 06-109
19. Recording reference: Plat No's. 13462-13464
20. All proposed ramps shall be in accordance with current A.D.A. standards. Maximum sidewalk cross slope shall be two percent. Provide a five-foot by five-foot level (2 percent max.) landing at the top and bottom of all ramps and building entrances and exits.
21. All proposed water meters shall be located inside buildings.
22. All proposed site utilities are to terminate 5' from the building. The building plumber shall connect to and extend these utilities to the inside of the building.
23. Existing utilities are based on approved design plans for construction and field location by Gutschick, Little & Weber, P.A.
24. There is no floodplain on Parcel T-1 or Parcel T-2.
25. There are no wetlands on Parcel T-1 or Parcel T-2.
26. All exterior lighting will comply with Zoning Regulations section 134.
27. (2) On February 28, 2001, WP 01-82, a waiver of section 16.156(m)(1) which requires that within 2 years of signature approval of the site development plan original, the developer shall apply to the Department of Inspections, Licenses & Permits for building permits for all construction on the site and section 16.156(m)(2) which states that if the developer does not apply for building permits within 2 years of signature approval of the site development plan, the plan shall expire and a new site development plan will be required was approved. Subject to one condition on the approval letter.
28. (2) On March 22, 2002, WP 02-70, a waiver of section 16.156(m)(2) to reactivate SDP 99-54 & grant a one year extension to apply for building permit(s) for Parcel T-1 was approved. Subject to two conditions in the approval letter.
29. (3) On August 7, 2003, WP 03-111, A waiver of section 16.156.m.1. (ii) which requires a developer to apply for building permits of improvements shown on a site plan for non-residential development within 2 years of signature approval of the site plan was approved. The new deadline date by which application for permits on Parcel T-1 shall be made is March 22, 2004. Approval is subject to two conditions in the approval letter.
30. (3) On July 2, 2004, WP 04-111, A waiver of section 16.156(m)(1)(ii) to grant a one year extension to apply for a building permit to initial construction on Parcel T-1 in accordance with SDP 99-054 was approved. The new deadline date to apply for building permits to initiate construction on Parcel T-1 is March 22, 2005. Approval is subject to three conditions in the approval letter.
31. (3) On April 27, 2005, WP 05-104, A waiver of section 16.156(m)(1) which requires that within 2 years of signature approval of the site development plan original the developer shall apply to The Department of Inspections, Licenses and Permits for building permits to initate construction of the site, and section 16.156(m)(2) which states that if the Developer does not apply for building permits within 2 years of signature approval of the site development plan, the plan shall expire and a new site development plan will be required was approved. Application for the permits necessary to start construction must be made by April 27, 2006. Approval is subject to two conditions in the approval letter.
32. (3) On May 30, 2006, WP 06-109, a waiver of section 16.156(m)(1) which requires that within 2 yrs. of signature approval of the site development plan original, the developer shall apply to the department of Inspections, Licenses and Permits for building permits to initiate construction on the site, and section 16.156(m)(2) which states that if the developer does not apply for building permits within 2 yrs. of signature approval of the site development plan, the plan shall expire and a new site development plan will be required; was approved. Application for the permits necessary to start construction must be made by May 30, 2007. Approval is subject to three conditions in the approval letter.

Site Analysis

1. Site Area: 1589114 Ac.
   Parcel T-1: 5.7588 Ac.
   Parcel T-2: 14.5674 Ac.
   Combined Total: 20.3262 Ac. (T-1 and T-2)
2. Site Zoning: M-1
3. Limit of submission Area: 31.5 Ac.
4. Building Coverage:
   Parcel T-1: 8.85 % (3)
   Parcel T-2: 7.90 %
   Combined: 8.17 % (3)
5. Floor Area Ratio:
   Parcel T-1: 0.4165 * (3)
   Parcel T-2: 0.3930 **

*Net Building Area Parcel T-1: 104,470 sf (3)
**Net Building Area Parcel T-2: 249,408 sf

6. Parking Tabulation:

Parcel T-1
Gross Floor Area: 110,197 s.f. (3)
Req'rd. Parking spaces: 3.3/1000 x 110,197 = 364 spaces
Req'rd. Handicap spaces: 8 spaces (3)
Req'rd. Handicap Van spaces: 2 spaces (3)
Proposed Parking spaces (Total): 398 spaces
Proposed Handicap spaces: 9 spaces (3)
Proposed Handicap Van spaces: 4 spaces

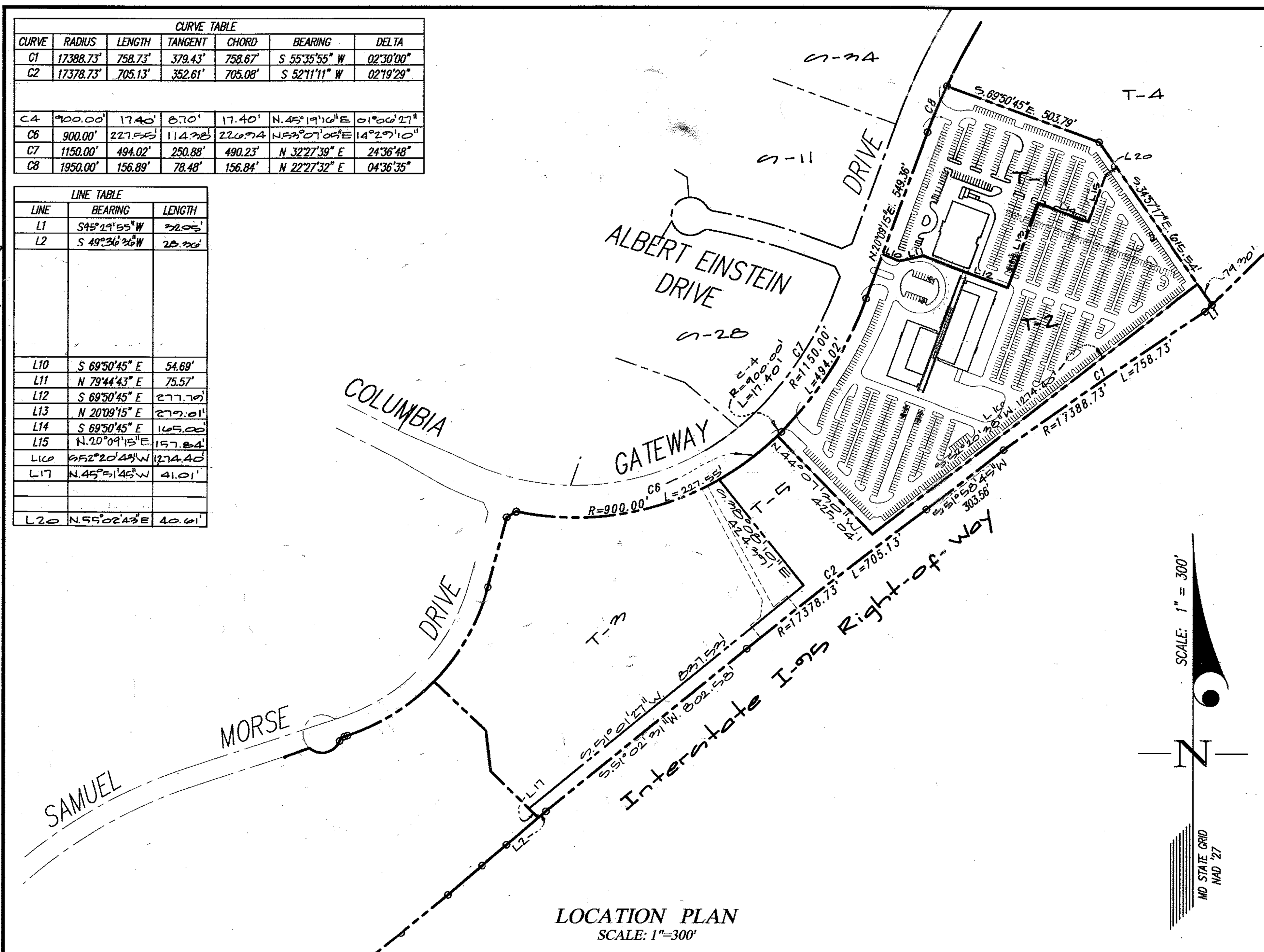
Parcel T-2
Gross Floor Area: 263,003 s.f.
Req'rd. Parking spaces: 3.3/1000 x 263,003 = 869 spaces
Req'rd. Handicap spaces: 20 spaces
Req'rd. Handicap Van spaces: 3 spaces
Proposed Parking spaces (Total) 1016 spaces
Proposed Handicap spaces: 20 spaces
Proposed Handicap Van spaces: 3 spaces

Phase I Proposed Parking spaces: (Total): 1040 spaces
Phase I Proposed Handicap spaces: 20 spaces
Phase I Proposed Handicap Van spaces: 3 spaces

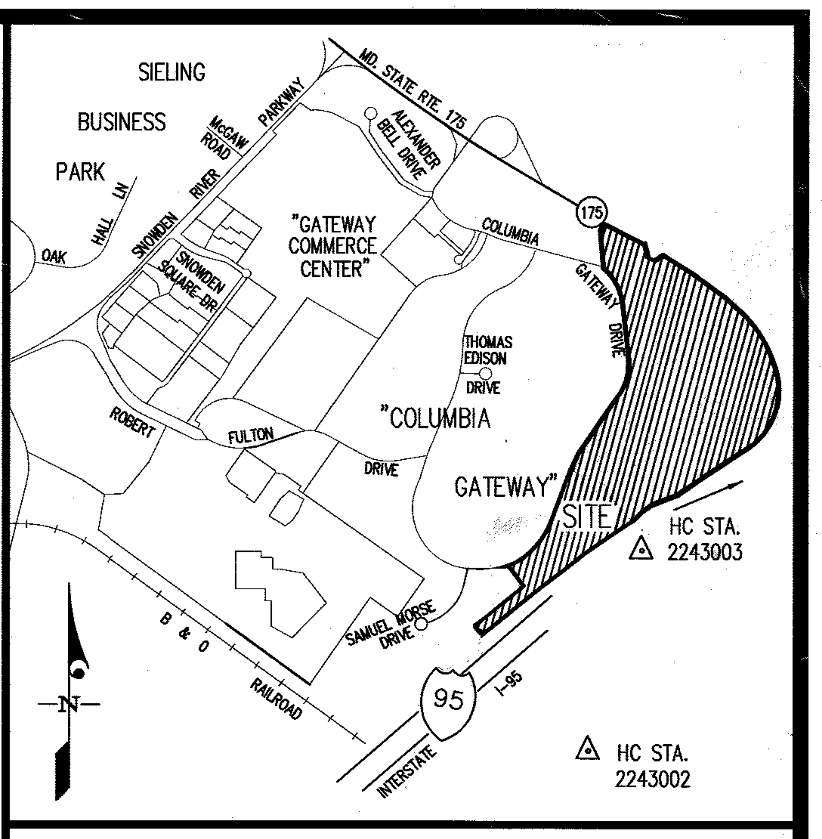
Combined: (3)
Gross Floor Area: 373,200 s.f. (3)
Req'rd. Parking spaces: 3.3/1000 x 373,200 = 1,232 spaces
Req'rd. Handicap spaces: 25 spaces (3)
Req'rd. Handicap Van spaces: 7 spaces (3)
Proposed Parking spaces (Total): 1,414 spaces (3)
Proposed Handicap spaces: 29 spaces (3)
Proposed Handicap Van spaces: 7 spaces

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	17388.73'	758.73'	379.43'	758.67'	S 55°35'55" W	02°30'00"
C2	17378.73'	705.13'	352.61'	705.08'	S 52°11'11" W	02°19'29"
C4	900.00'	17.40'	8.70'	17.40'	N.45°19'16"E	01°06'27"
C6	900.00'	227.55'	114.38	226.94	N.53°07'05"E	14°29'10"
C7	1150.00'	494.02'	250.88'	490.23'	N 32°27'39" E	24°36'48"
C8	1950.00'	156.89'	78.48'	156.84'	N 22°27'32" E	04°36'35"

LINE TABLE		
LINE	BEARING	LENGTH
L1	S45°29'55"W	32.05'
L2	S 49°36'36"W	28.36'
L10	S 69°50'45" E	54.69'
L11	N 79°44'43" E	75.57'
L12	S 69°50'45" E	277.79'
L13	N 20°09'15" E	279.01'
L14	S 69°50'45" E	165.00'
L15	N.20°09'15"E	157.84'
L16	S52°20'43"W	1274.40'
L17	N.45°51'45"W	41.01'
L20	N.55°02'43"E	40.61'



LOCATION PLAN
SCALE: 1"=300'



VICINITY MAP
1"=2000'

Legend

- Standard curb & Gutter
- Reverse Curb & Gutter
- Depressed curb Entrance (Flush curb & Gutter)
- Header curb
- Proposed sidewalk (conc.)
- Proposed Paving in Right of Way (P-5 Paving)
- Existing Paving
- Proposed screen Wall
- Patron Access
- ×347 Proposed spot Elev.
- 346 Existing Contour
- 346 Proposed Contour
- Proposed Water Connection
- Proposed Sewer Connection
- Proposed Storm Drain
- Land. Area: Proposed Landscape Area
- Proposed Tree Grates
- Proposed Bollard Lights
- Proposed Light Pole
- L.O.S.: Limit of submission

Sheet Index

1) Cover Sheet
2) Site Development Plan
3) Partial Site Development Plan
4) Grading Plan
5) Site Details
6) Handicap/Site Details & Paving Plan
7) Handicap Accessibility Details
8) Landscape Plan
9) Landscape Detail Sheet
10) Sediment Control Plan (Site Plan)
11) Sediment Control Plan (SWM Plan)
12) Sediment Control Plan (Grading Plan)
13) Sediment Control Detail Sheet
14) Stormwater Management Plan & Details
15) Stormwater Management Details
16) Stormwater Management/Sediment Control Notes
17) Storm Drain Profiles
18) Storm Drain Profiles
19) Storm Drain Manifold Plan
20) Utility Profiles
21) Drainage Area Map (Storm Drain)
22) Drainage Area Map (SWM)

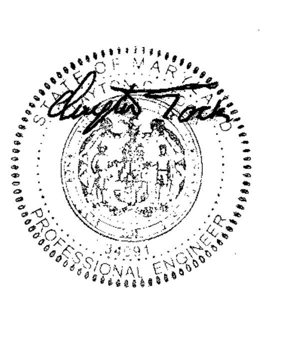
Benchmark #1
Traverse Station 912
Elevation = 319.31

Benchmark #2
Traverse Station 914
Elevation = 334.09

(3) Owner Parcel T-2:
Columbia Gateway Office Corp.
c/o Lasalle Investment Mgmt.
100 E. Pratt Street
Baltimore, Md. 21202

Owner/Parcels T-5, T-12, & T-13 (3)
The Howard Research and Development Corporation
10275 Little Patuxent Parkway
Columbia, Maryland 21044
Attn.: Al Edwards
(410) 992-6027
(3) (T-12 and T-13 formerly part of T-4)

(3) Owner Parcel T-11:
Copt T-11 LLC
8815 Centre Park Drive
Suite 400
Columbia, Md. 21045
(Formerly T-3)



FOR 09/06/16 REVISION ONLY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/3/99
Chief, Development Engineering Division MK	Date 3/6/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\98067C1.DWG | DES. SJG | DRN. CAD | CHK. MJT

DATE	REVISION	BY	APP'R.
09/06/16	REVISED PLAN TO ELIMINATE PREVIOUSLY SHOWN GREASE TRAP AND SANITARY CONECTION TO BUILDING A-2		
9/19/06	Rev. General Notes, site analysis & owners information (3)	WSJ	
5/8/02	Add detailed notes for WP 01-82 & WP 02-70 (2)	WSJ	

(3) Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL. 60606
(312) 669-6445

ADDRESS CHART	
PARCEL NUMBER	STREET ADDRESS
T-1	Bldg. B 7021 Columbia Gateway Dr.
T-2	Bldg. A-1 7041 Columbia Gateway Dr. Bldg. A-2 7031 Columbia Gateway Dr.

WATER CODE:	SEWER CODE:
E06	3380000

SUBDIVISION NAME:	SECTION/AREA	PARCELS
COLUMBIA GATEWAY	N/A	T-1 & T-2

PLAT	ZONE	TAX MAP	BLOCK	ELEC. DIST.	CENSUS TRACT
13462 thru 13464 & 18716	M-1	43	1 & 7	6	6067.03

COVER SHEET

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP – GRID	SHEET
November, 1998	43	1 OF 22

SDP 99-54

Entrance Construction Tab.		
No.	Estation	Offset
1	75+09	8' Left
2	75+01	0' Left
3	75+02	4' Left
4	75+27	8' Right
5	74+22	4' Left
6	74+24	0' Left
7	74+22	8' Left
8	72+50	4' Left
9	71+75	8' Right
10	75+35	32' Left
11	75+00	50' Left
12	74+49	50' Left
13	74+19	32' Left
14	72+42	32' Left
15	69+00	50' Left
16	69+60	32' Left
17	69+50	50' Left
18	69+40	32' Left
19	69+04	50' Left
20	68+98	32' Left
21	68+98	4' Left
22	69+00	0' Left
23	68+98	8' Left
24	68+92	8' Left
25	66+12	4' Right
26	66+18	8' Right
27	66+80	4' Left
28	64+74	32' Left
29	64+48	50' Left
30	63+80	50' Left
31	63+48	32' Left

Note: For Property Boundary information see sheet 1.

Rebar W/cap el = 319.31 B.M. #1

Note: For stormwater Management Facility see sheet 14.

For continuation see sheet 14.

For continuation see sheet 4

Match Line See sheet 4 For Continuation

Interstate Route 95 Right-of-Way

Note: This site has been mass graded under SDP 97-75.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/3/99

Chief, Development Engineering Division MK — Date 3/26/99

FOR 09/06/16 REVISION ONLY

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL.: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\98067SP1.DWG | DES. | DRN. WeJ | CHK.

DATE	REVISION	BY	APP'R.
09/06/16	REVISED PLAN TO ELIMINATE PREVIOUSLY SHOWN GREASE TRAP AND SANITARY CONECTION TO BUILDING A-2	WeJ	
01/21/00	Rev. Parcel T-1 Building, add drop-off area and loading area (A)	WeJ	
11/6/99	Rev. Location of Utility connection, sidewalks, Loading dock & Generator Loc.	GT.	
12/22/98	Rev. Per Ho. Co. Comments	WeJ	
12/10/98	Sidewalk revisions per HRD's ARC comments	WeJ	
12/8/98	Remove & Relocate FH's Per MJT mtg. with Fire Marshall	WeJ	

(A) Owner Parcel T-1:
Onix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL 60606
(312) 660-6445

SITE DEVELOPMENT PLAN

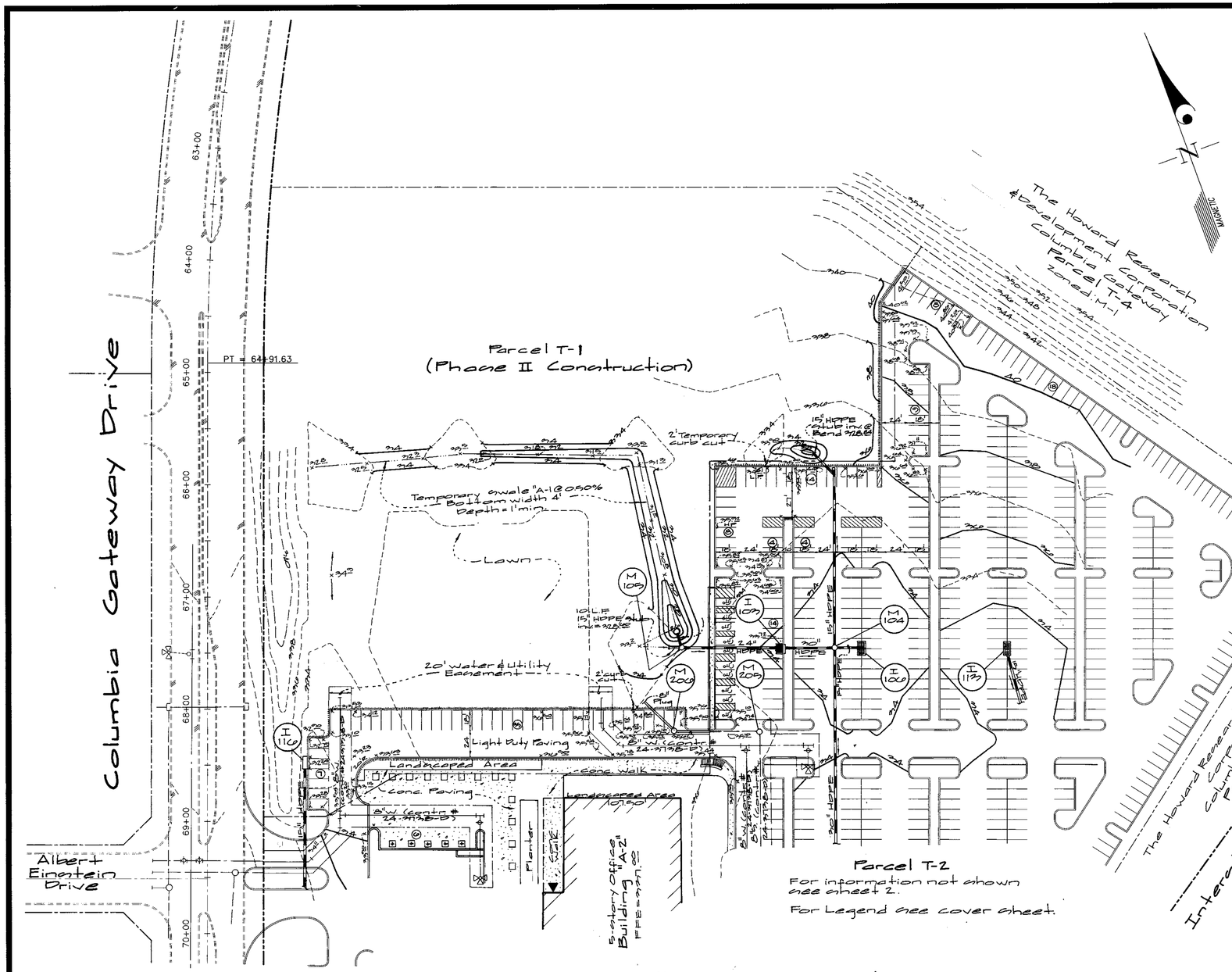
COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 and T-5
Plat #13402 thru 13404
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP - GRID	SHEET
November, 1998	43 - 1,2,7,8	2 OF 22

SDP 97-54

Entrance Construction Table		
No.	Station	offset
1	03+00	4' Left
2	03+08	6' Left
3	03+06	8' Left
4	02+00	8' Left
5	01+25	4' Right
6	01+25	8' Right
7	02+00	4' Left



Plan ~ Phase I Limits
scale: 1" = 50'

Plan ~ Columbia Gateway Improvements Cont.
scale: 1" = 50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/3/99 R
Chief, Development Engineering Division MK	Date 3/6/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\XXXXX\..... | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
12/8/98	Rev. water, add F.H. & Cont. No's.	WJ	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
PHONE: 202-289-1401

PHASE 1 SITE DEVELOPMENT PLAN LIMITS

COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 & T-5

Plat #13402 thru 13404

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP - GRID	SHEET
NOVEMBER 1998	43-1,2,7,8	3 OF 22

SDP 99-54

The Howard Research & Development Corp.
Columbia Gateway
Parcel T-4
Zoned: M-1

Interstate Route 95 Right of Way

Note: This site has been mass graded under GP-99-75

Approved: Howard County Department of Planning & Zoning

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/3/99

Chief, Development Engineering Division — Date 3/2/99

STATE OF MARYLAND — CARLTON K. GUTSCHICK — REG. NO. 10775 — REGISTERED PROFESSIONAL ENGINEER

Owner Parcels T-4 & T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn.: Al Edwardsen
(410)992-6027

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD. 20866
TELEPHONE: (301)421-4024 NO.VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186

DATE	REVISION	BY	APP'R.

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H Street N.W.
Suite 550
Washington, DC 20005
(202)289-1401

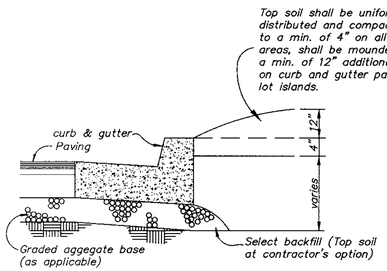
Grading Plan

Columbia Gateway

Parcels T-1, T-2, T-4 & T-5
Plat #13402 thru 13404
Election District No. 6 — Howard County, Maryland

DES.:	SCALE	ZONING	G.L.W. FILE No.
DRN.: WCJ	1" = 50'	M-1	98-006
CHK.:	DATE	TAX MAP No.	SHEET
	November, 1998	43 1,2,7,8	4 of 22

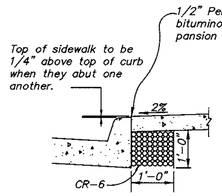
SDP 99-54



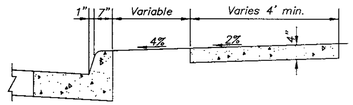
Topsoiling Detail
N.T.S.

Materials:

Top soil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand or other soil as approved by an Agronomist or soil scientist. It shall not have a mixture of contrasting textured subsoil and contain no more than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash or other extraneous materials larger than 1 1/2" in dia.. Top soil must be free of plants or plant parts of bermuda grass, quack grass, johnson grass, nutsedge, poison ivy, thistles, or others as specified. All top soil shall be tested by a recognized laboratory for organic matter content, pH and soluable salts. A pH of 6.0 to 7.5 and an organic content of not less than 6.0, lime shall be applied and incorporated with the top soil to adjust the pH to 6.5 or higher. Top soil containing soluble salts greater than 500 parts per million shall not be used.



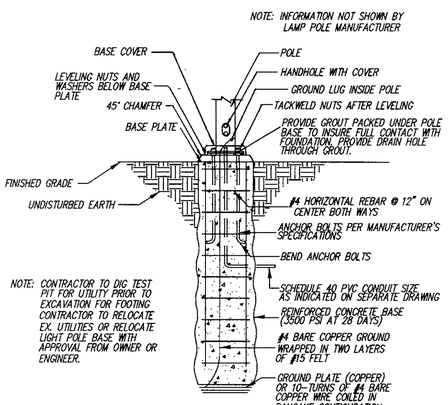
Detail A
N.T.S.



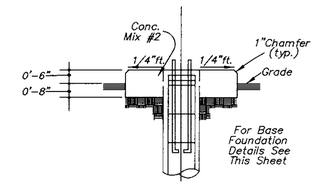
Sidewalk Detail
N.T.S.

Notes:

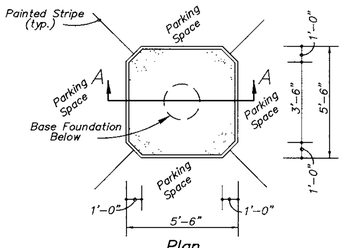
1. Sidewalk to be scribed scribed in 5' maximum squares.
2. Expansion joints across the sidewalk not to be more than 15' apart.
3. 1/2" preformed bituminous expansion material in expansion loints to be kept 1/4" below surface of sidewalk.
4. Concrete to be mix No.2
5. When sidewalk abuts curb, walk shall be 1/4" above curb with performed bituminous expansion material between sidewalk and curb and resting on a compacted crushed stone base. See detail A this sheet.
6. On longitudinal sidewalk grades of 5% or greater, a concrete header, 6" thick and 6" deep below the normal 4" sidewalk thickness shall be constructed for the full width of the sidewalk at intervals of 48'. The headers shall be placed at expansion joint locations and shall be monolithic with the sidewalk.



POLE BASE DETAIL
(N.T.S.)

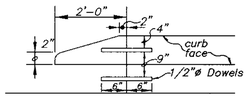


Typical Section A-A
NTS

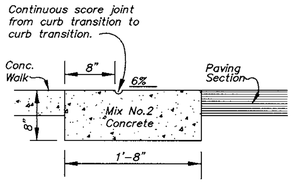


Plan
NTS

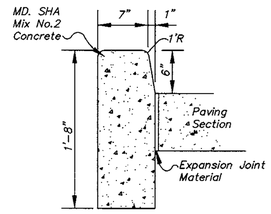
Concrete Light Pole Island Detail



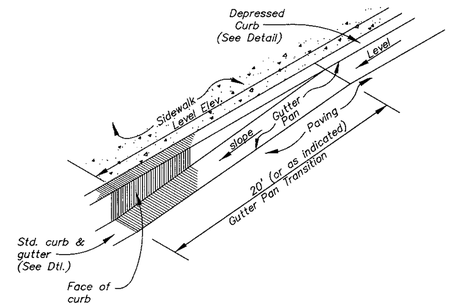
Nose Down Curb Detail
N.T.S.



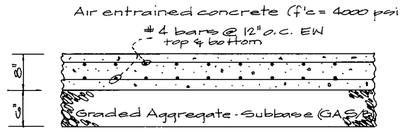
Depressed Curb Entrance
N.T.S.
(FLUSH CURB)



Barrier Curb
(on-site)
N.T.S.
(HEADER CURB)

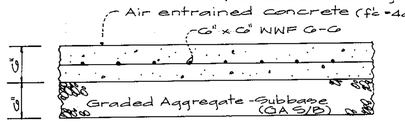


Gutter Transition - Isometric
N.T.S.



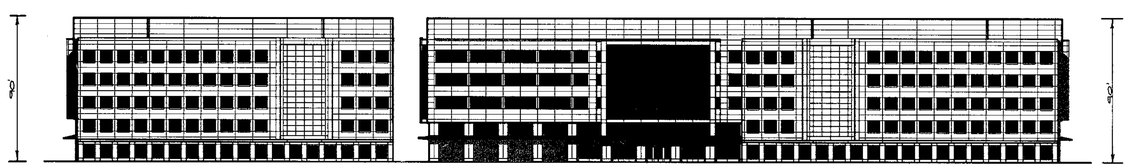
Conc. Paving Section - Loading Area

Notes:
1. Provide contraction joints @ 15'-20' intervals maximum.
2. Provide doweled construction joints w/ #4 smooth bars @ 12" o.c. (one side wrapped in bldg. paper)
3. Provide premoulded isolation joint fillers as required)

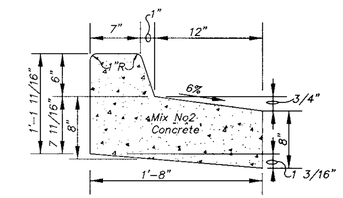


Conc. Paving Section - Entry Court Area

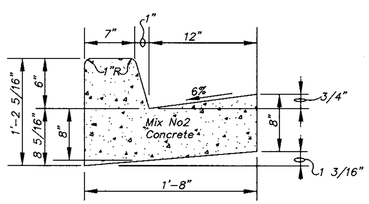
Notes:
1. Provide contraction joints @ 12' to 15' intervals maximum.
2. Provide keyed construction joints
3. Provide premoulded isolation joint filler as required.
4. Coordinate joint pattern w/ Arch. & Landscape.



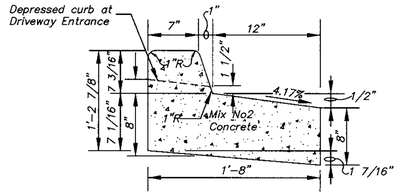
SCHEMATIC BUILDING ELEVATION
NO SCALE



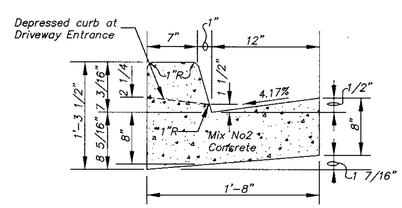
Reverse 6" Combination Curb & Gutter
N.T.S.



Standard 6" Combination Curb & Gutter
N.T.S.



Reverse 7" Combination Curb & Gutter
N.T.S.
(FOR RIGHT-OF-WAY ONLY)



Standard 7" Combination Curb & Gutter
N.T.S.
(FOR RIGHT-OF-WAY ONLY)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/3/99

Chief, Development Engineering Division MK — Date 3/2/99

STATE OF MARYLAND — CURTIS K. GUTSCHICK — No. 12978 — REGISTERED PROFESSIONAL ENGINEER

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067SD | DES. | DRN. CLB | CHK.

DATE	REVISION	BY	APP'R.

Owner Parcels T-1 & T-2 & Developer
Orix Construction Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
202-289-1401

SITE DETAILS

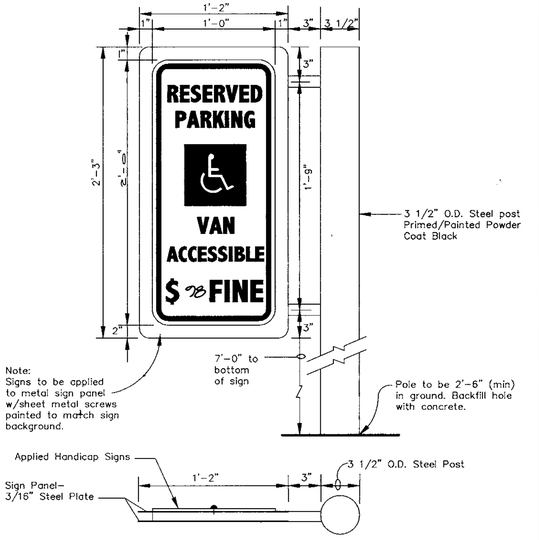
COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 & T5
PLAT No. 19462 thru 19464

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

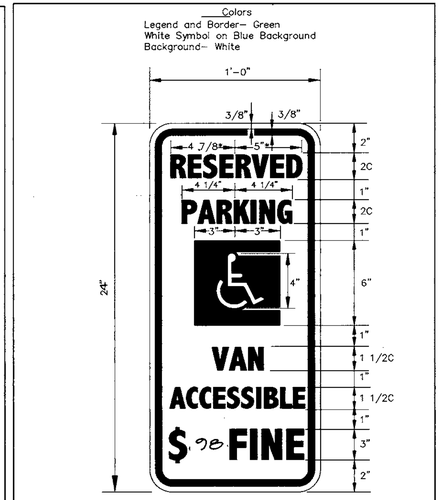
SCALE	ZONING	G. L. W. FILE No.
1"=20'	M-1	98067
DATE	TAX MAP - GRID	SHEET
NOVEMBER 1998	43 1,2,7,8	5 OF 22

SDP 99-54



Mounting Detail For Parking Restriction Sign

N.T.S.

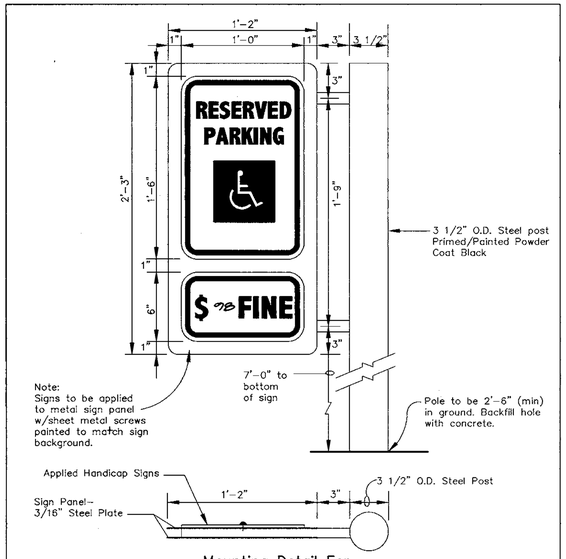


Note: Fine amount to be determined by Howard County Resolution. Contact Howard County Department of Inspections Licenses & Permits.

*Reduce Spacing 50 Percent.

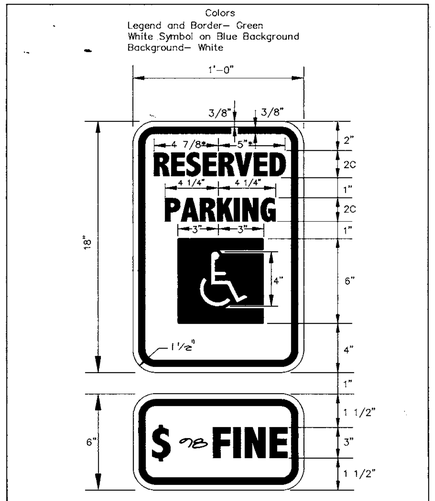
Parking Restriction Sign for Van Handicapped Parking

N.T.S.



Mounting Detail For Parking Restriction Sign

N.T.S.

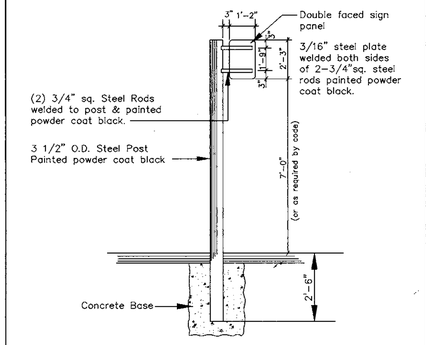


Note: Fine amount to be determined by Howard County Resolution. Contact Howard County Department of Inspections Licenses & Permits.

*Reduce Spacing 50 Percent.

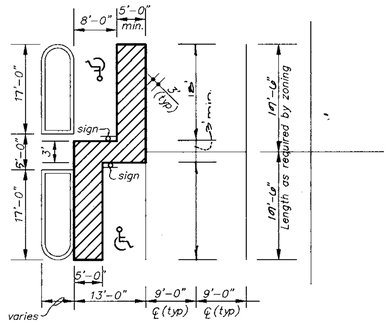
Parking Restriction Sign for Handicapped Parking

N.T.S.



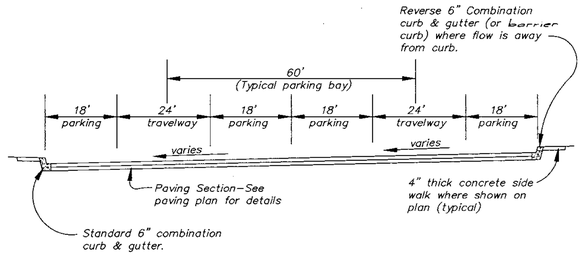
Post & Sign Panel Detail For Parking Restriction Sign

N.T.S.



Typical Striping of Parking Lot and Handicap Parking Detail

Note: 4" wide white stripes typical (unless noted otherwise)



Typical Section-Private Parking

N.T.S.

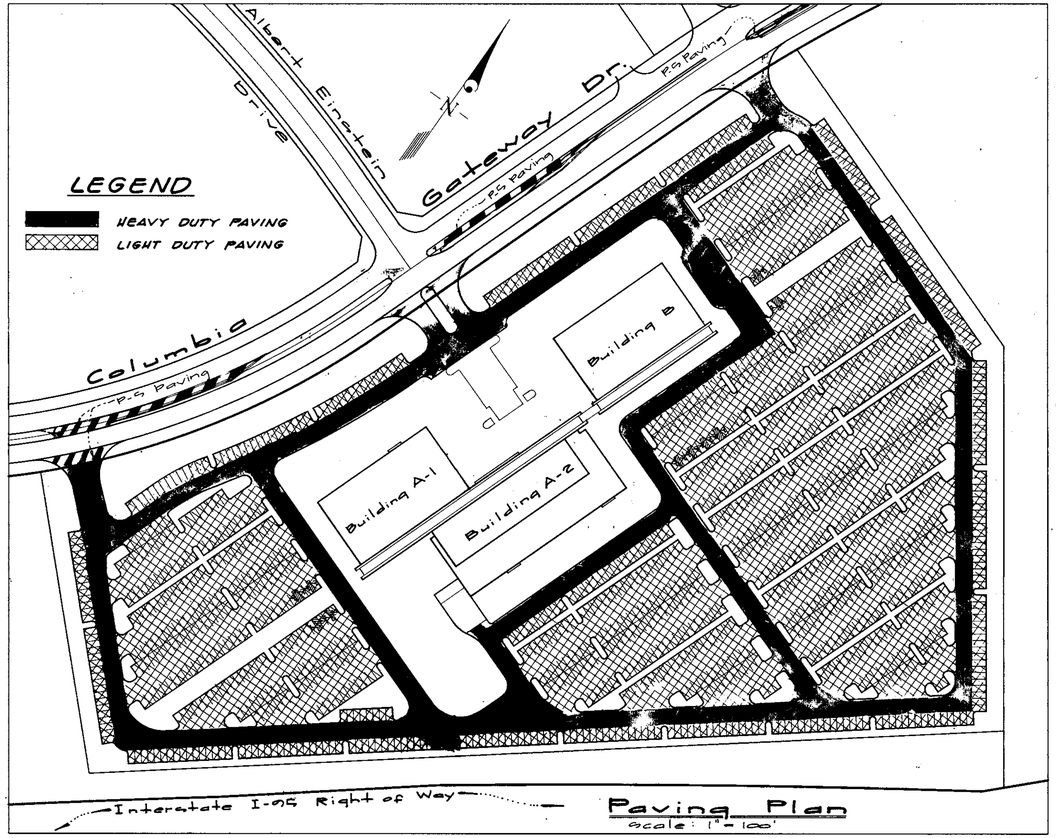
PAVING SECTIONS

PAVEMENT MATERIAL	THICKNESS (INCHES)	
	HEAVY DUTY	LIGHT DUTY
HOT MIX ASPHALT SURFACE COARSE OR FINE (SC OR SF)	2.0	3.0
HOT MIX ASPHALT BASE FINE (BF)	3.0	—
GRADED AGGREGATE - SUBBASE (GA SIB)	5.0	5.0
TOTAL PAVEMENT THICKNESS	10.0	8.0
EQUIVALENT FULL DEPTH ASPHALT	7.0 *	5.0 *

* FOR FULL DEPTH ASPHALT THE UPPER 2 INCHES SHOULD CONSIST OF HOT MIX ASPHALT SURFACE - COARSE OR FINE (SC OR SF) WITH THE REMAINING DEPTH CONSISTING OF HOT MIX ASPHALT BASE - FINE (BF).

PAVING SECTIONS TAKEN FROM A REPORT OF SUBSURFACE EXPLORATION & GEOTECHNICAL ENGINEERING ANALYSIS PREPARED BY ECS, LTD DATED OCTOBER 16, 1998.

NOTE: P-5 PAVING SECTION IS NOMINAL & MAY VARY DUE TO SUBGRADE CONDITIONS.



Paving Plan

scale: 1"=100'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/1/99

Chief, Development Engineering Division MK — Date 2/26/99

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL.: 301-421-4024 BALT: 410-880-1820 DC/MC 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067SD0 | DES. | DRN. KLP BC | CHK.

DATE	REVISION	BY	APP'R.

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
202-289-1401

Handicap/site Details & Paving Plan

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13461 thru 13464

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

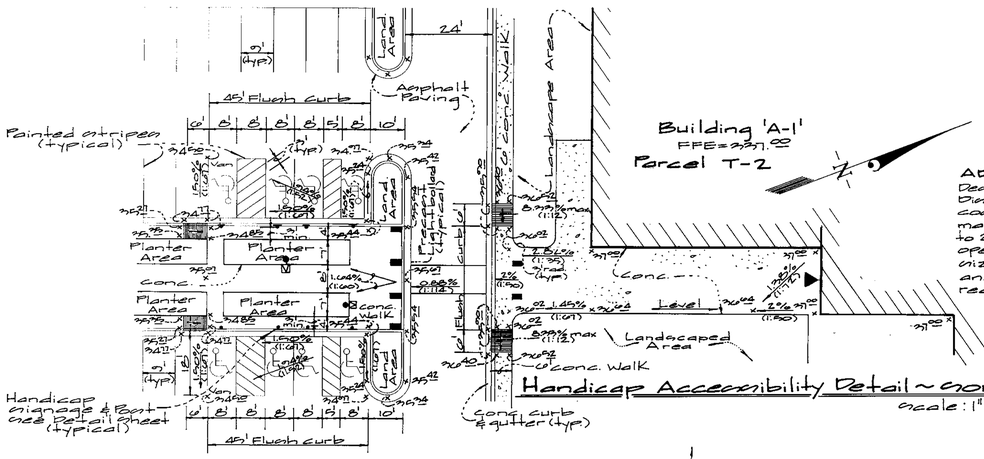
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
NOV. 1998	43 1,2,7,8	6 OF 22

SDP 97-54

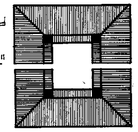
Notes:

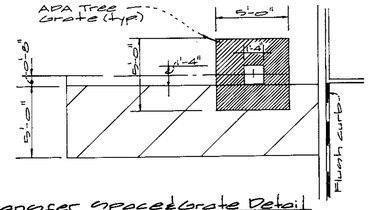
1. Maximum sidewalk crosslope is 2% (1:50).
2. A 5'x5' minimum level (2%) Landing is required at the top and bottom of all ramps. Ramps are slopes greater than 5%.
3. Maximum slope in any direction of the handicap accessible parking is 2%.

ADA: 1/2" slots
Designed to meet the Americans with Disabilities Act guidelines at minimum cost. Tree openings for 36" size is 12" and may be ordered with or later expanded to 20". Others: 48" size offers 16" and 22" openings, 60" size ... 16" and 26" openings, 72" size ... 22" and 36" openings, 96" size ... 24" and 36" openings. Quarter sections require supportive frames.

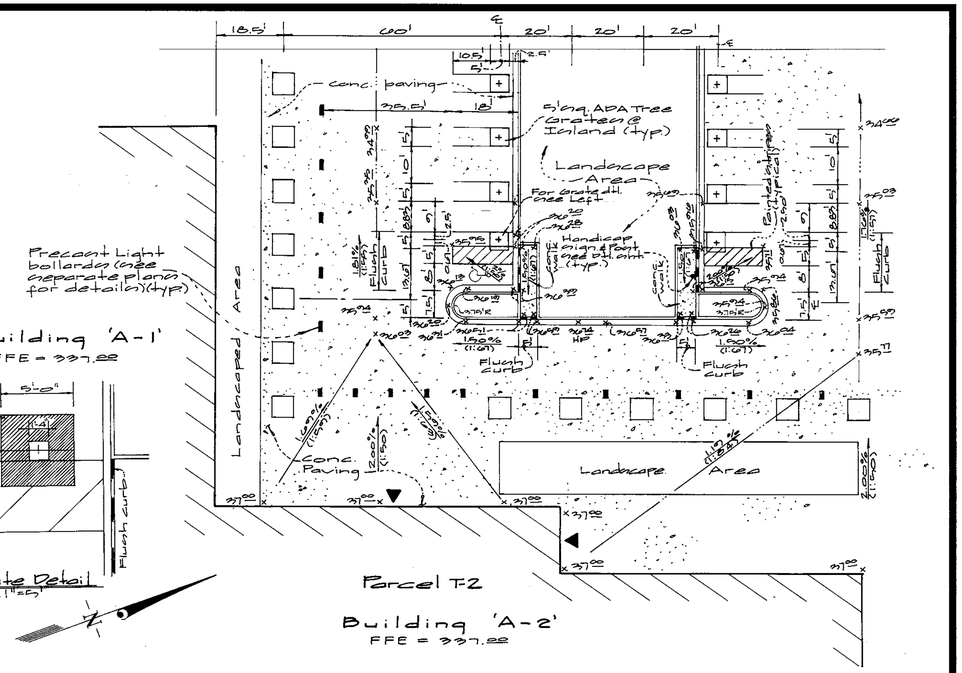


Handicap Accessibility Detail ~ South Lot
Scale: 1" = 20'

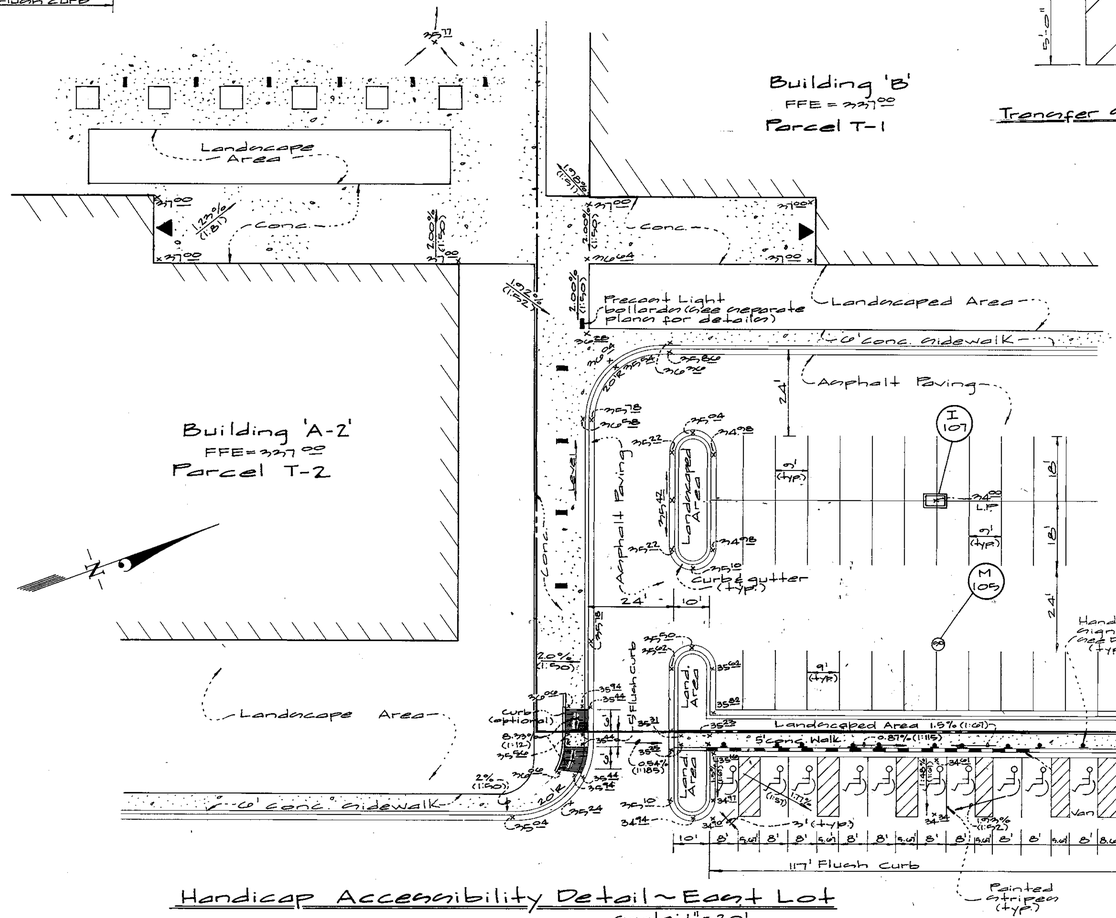




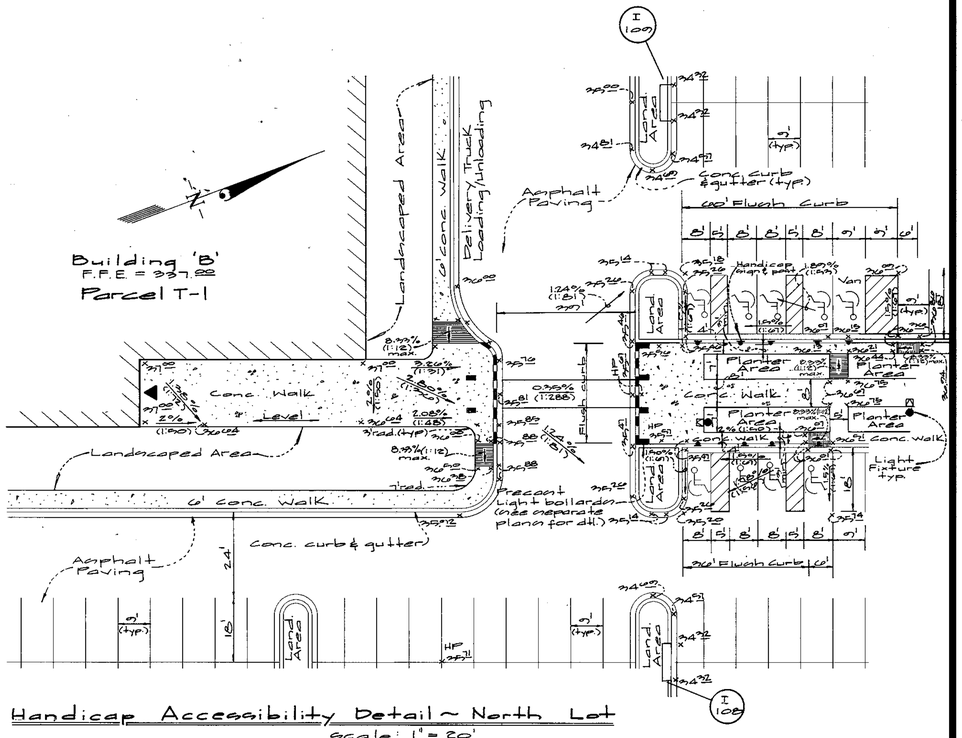
Transfer Space & Grate Detail
Scale: 1" = 5'



Handicap Accessibility Detail ~ Courtyard
Scale: 1" = 20'



Handicap Accessibility Detail ~ East Lot
Scale: 1" = 20'



Handicap Accessibility Detail ~ North Lot
Scale: 1" = 20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	3/3/99 Date
Chief, Division of Land Development	3/3/99 Date
Chief, Development Engineering Division MK	3/2/99 Date

STATE OF MARYLAND — CARLTON K. GUTSCHICK — 12977 — REGISTERED PROFESSIONAL ENGINEER

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
1/8/98	Rev. sidewalk Bldg. A-1(s) Bldg. A-2(N)	WSJ	
12/16/98	Rev. sidewalk Per HRD's ARC comments; rev. handicap in courtyard & East Lot	WSJ	
12/8/98	Add string of Dim. to bldg. 'B' Planter area & add 3' min sign to walk dim.	WSJ	

\DRAWINGS\XXXXX\..... DES. DRN. WSJ CHK.

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
202-289-1401

HANDICAP ACCESSIBILITY Details
COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=20'	M-1	98067
DATE	TAX MAP – GRID	SHEET
NOVEMBER 1998	43 1,2,7,8	7 OF 22

SDP 99-54

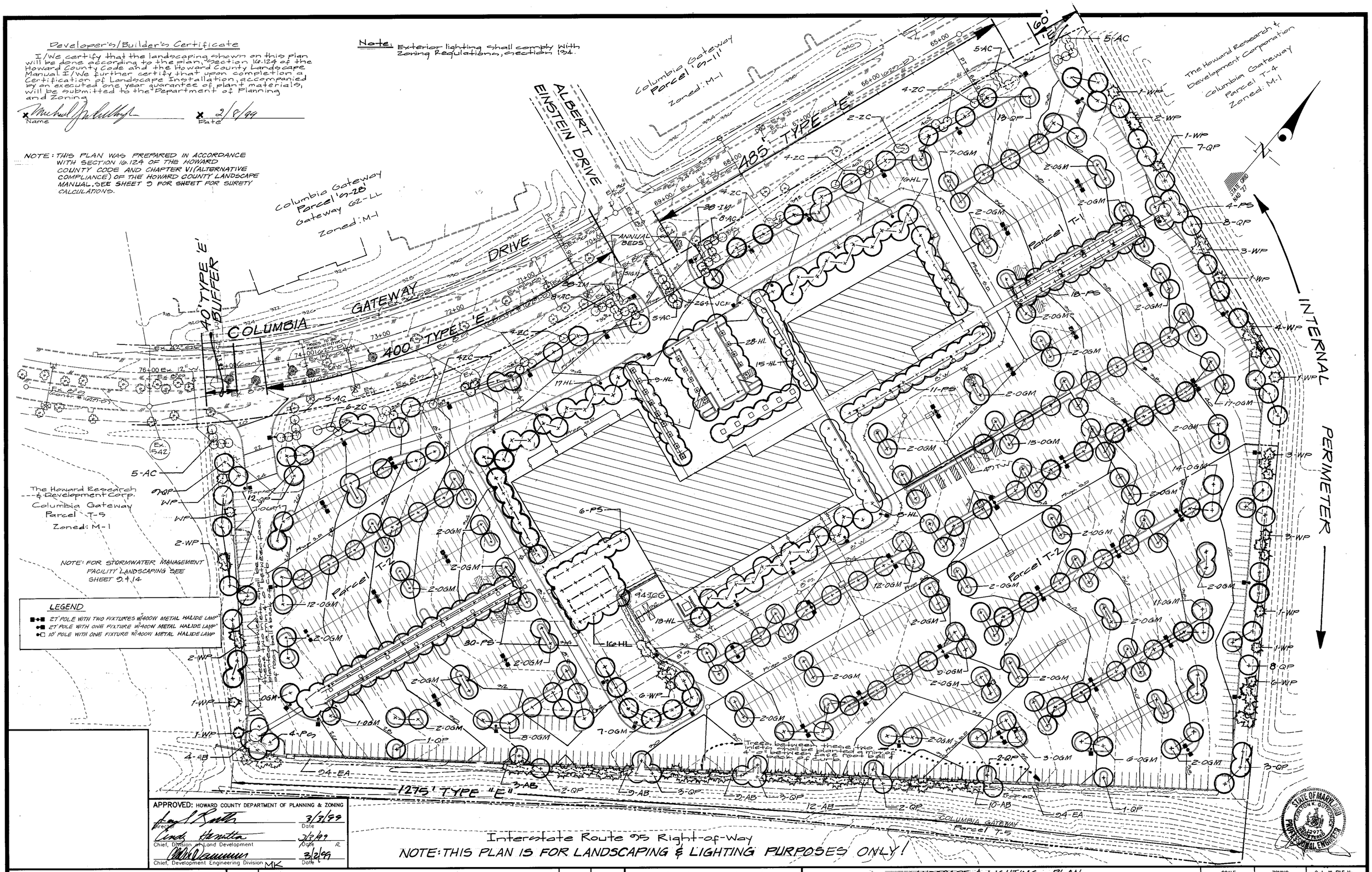
Developer's/Builder's Certificate

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

× _____ Name × 2/8/99 Date

NOTE: THIS PLAN WAS PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND CHAPTER VI (ALTERNATIVE COMPLIANCE) OF THE HOWARD COUNTY LANDSCAPE MANUAL. SEE SHEET 5 FOR SHEET FOR SURETY CALCULATIONS.

Note: Exterior lighting shall comply with Zoning Regulations, Section 134.



LEGEND

- 27' POLE WITH TWO FIXTURES W/400W METAL HALIDE LAMP
- 27' POLE WITH ONE FIXTURE W/400W METAL HALIDE LAMP
- 10' POLE WITH ONE FIXTURE W/400W METAL HALIDE LAMP

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/3/99

Chief, Development Engineering Division — Date 3/2/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\98067SP1.DWG | DES. | DRN. HKJ | CHK.

DATE	REVISION	BY	APP'R.
1/20/99	Revise Landscaping	GT.	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
(202) 289-1401

LANDSCAPE & LIGHTING PLAN

COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 & T-5
Plat No. 134602 thru 134604

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP – GRID	SHEET
November, 1998	43 – 1,2,7,8	8 OF 22

SDP 99-54

PLANT MATERIALS AND PLANTING METHODS

A. Plant Materials

The landscape contractor shall furnish and install and/or dig, ball, burlap and transplant all of the plant materials called for on drawings and/or listed in the Plant Schedule.

1. Plant Names

Plant names used in the Plant Schedule shall conform with "Standardized Plant Names," latest edition.

2. Plant Standards

All plant material shall be equal to or better than the requirements of the "USA Standard for Nursery Stock" latest edition, as published by the American Association of Nurserymen (hereafter referred to as AAN Standards). All plants shall be typical of their species and variety, shall have a normal habit of growth and shall be first quality, sound, vigorous, well-branched and with healthy, well-furnished root systems. They shall be free of disease, insect pests and mechanical injuries.

All plants shall be nursery grown and shall have been grown under the same climate conditions as the location of this project for at least two years before planting. Neither heeled-in plants nor plants from cold storage will be accepted.

3. Plant Measurements

All plants shall conform to the measurements specified in the Plant Schedule as approved by the ARC.

a. Caliper measurements shall be taken six inches (6") above grade for trees under four-inch (4") caliper and twelve (12") above grade for trees four inches (4") in caliper and over.

b. Minimum branching height for all trees shall be six feet (6'), maximum eight feet (8').

c. Minimum size for planting shade trees shall be 3-3 1/2" caliper, 14'-16' in height.

d. Minimum size for planting minor or intermediate focus trees (pines, crabapples, etc.) shall be 3"-3 1/2" caliper, 10'-12' in height.

e. Minimum size for planting shrubs shall be 18" - 24" spread unless noted otherwise.

f. Caliper, height, spread and size of ball shall be generally as follows:

CALIPER	HEIGHT	SPREAD	SIZE OF BALL
3" - 3 1/2"	14'-16'	6'-8'	32" diameter
3 1/2"- 4"	14'-16'	8'-10'	36" diameter
4" - 4 1/4"	16'-18'	8'-10'	40" diameter
4 1/2"- 5"	16'-17'	10'-12'	44" diameter
5" - 5 1/2"	16'-20'	10'-12'	48" diameter
5 1/2"- 6"	18'-20'	12'-14'	52" diameter

All plant material shall generally average the median for the size ranges indicated above as indicated in the "AAN Standards".

4. Plant Identification

Legible labels shall be attached to all shade trees, minor trees, specimen shrubs and bundles or boxes of other plant material giving the botanical and common names, size and quantity of each. Each shipment of plants shall bear certificates of inspection as required by Federal, State and County authorities.

5. Plant Inspection

The ARC may, upon request by the builder or developer, at least ten (10) days prior to the installation of any proposed plant material, inspect all proposed plant material at the source of origin.

B. Planting Methods

All proposed plant materials that meet the specifications in Section A are to be planted in accordance with the following methods during the proper planting seasons as described in the following:

1. Planting Seasons

The planting of deciduous trees, shrubs and vines shall be from March 1st to June 15th and from September 15th to December 15th. Planting of deciduous material may be continued during the winter months providing there is no frost in the ground and frost-free topsoil planting mixtures are used.

The planting of evergreen material shall be from March 15th to June 15th and from August 15th to December 1st. No planting shall be done when ground is frozen or excessively moist. No frozen or wet topsoil shall be used at any time.

2. Digging

All plant material shall be dug, balled and burlapped (B+B) in accordance with the "AAN Standards".

3. Excavation of Plant Pits

The landscaping contractor shall excavate all plant pits, vine pits, hedge trenches and shrub beds in accordance with the following schedule:

a. Locations of all proposed plant material shall be staked and approved in the field by the landscape architect before any of the proposed plant material is installed by the landscape contractor.

b. All pits shall be generally circular in outline, vertical sides; depth shall not be less than 6" deeper than the root ball, diameter shall not be less than two times the diameter of the root ball as set forth in the following schedule.

c. If areas are designated as shrub beds or hedge trenches, they shall be excavated to at least 18" depth minimum. Areas designated for ground covers and vines shall be excavated to at least 12" in depth minimum.

d. Diameter and depth of tree pits shall generally be as follows:

PLANT SIZE	ROOT BALL	PIT DIAMETER	PIT DEPTH
3" - 3 1/2" cal.	32"	64"	28"
3 1/2"- 4" cal.	36"	72"	32"
4" - 4 1/2" cal.	40"	80"	36"
4 1/2"- 5" cal.	44"	88"	40"
5" - 5 1/2" cal.	48"	96"	44"
5 1/2"- 6" cal.	52"	104"	48"

A 20% compaction figure of the soil to be removed is assumed and will be allowed in calculation of extra topsoil. The tabulated pit sizes are for purposes of uniform calculation and shall not override the specified depths below the bottoms of the root balls.

4. Staking, Guying and Wrapping

All plant material shall be staked or guyed, and wrapped in accordance with the following specifications:

a. Stakes: Shall be sound wood 2" x 2" rough sawn oak or similar durable woods, or lengths, minimum 7'-0" for major trees and 5'-0" minimum for minor trees.

b. Wire and Cable: Wire shall be #10 ga. galvanized or bethanized annealed steel wire. For trees over 3" caliper, provide 5/16" turn buckles, eye and eye with 4" take-up. For trees over 5" caliper, provide 3/16", 7 strand cable cadmium plated steel, with galvanized "eye" thimbles of wire and hose on trees up to 3" in caliper.

c. Hose: Shall be new, 2 ply reinforced rubber hose, minimum 1/2" I.D. "Plastic Lock Ties" or "Paul's Trees Braces" may be used in place of wire and hose on trees up to 3" in caliper.

d. All trees under 3" in caliper are to be planted and staked in accordance with the attached "Typical Tree Staking Detail". All trees over 3" in caliper are to be planted and guyed in accordance with the attached "Typical Tree Guying Detail".

5. Plant Pruning, Edging and Mulching

a. Each tree, shrub or vine shall be pruned in an appropriate manner to its particular requirements, in accordance with accepted standard practice. Broken or bruised branches shall be removed with clean cuts flush with the adjacent trunk or branches. All cuts over 1" in diameter shall be painted with an approved antiseptic tree wound dressing.

b. All trenches and shrub beds shall be edged and cultivated to the lines shown on the drawing. The areas around isolated plants shall be edged and cultivated to the full diameter of the pit. Sod which has been removed and stacked shall be used to trim the edges of all excavated areas to the neat lines of the plant pit saucers, the edges of shrub areas, hedge trenches and vine pockets.

c. After cultivation, all plant materials shall be mulched with a 2" layer of fine, shredded pine bark, peat moss, or another approved material over the entire area of the bed or saucer.

6. Plant Inspection and Acceptance

The ARC shall be responsible for inspecting all planting projects on a periodic basis to assure that all work is proceeding in accordance with the approved plans and specifications.

7. Plant Guarantee

All plant material shall be guaranteed for the duration of one full growing season, after final inspection and acceptance of the work in the planting project. Plants shall be alive and in satisfactory growing condition at the end of the guarantee period.

a. For this purpose, the "growing season" shall be that period between the end of the "Spring" planting season, and the commencement of the "Fall" planting season.

b. Guarantee for planting performed after the specified end of the "Spring" planting season, shall be extended through the end of the next following "Spring" planting season.

Sodding

All sodding shall be in accordance to the "Landscape Specification Guidelines for Baltimore-Washington metropolitan Areas" latest edition, approved by the Landscape Contractors Association of Metropolitan Washington and the American Society of Landscape Architects.

All sod shall be strongly rooted sod, not less than two years old and free of weeds and undesirable native grasses. Provide only sod capable of growth development when planted and in strips not more than 18" wide x 4" long. Provide sod composed principally of improved strain Kentucky bluegrass, such as, Columbia, Victa, or Escort.

LANDSCAPING NOTES

1. This plan has been prepared in accordance with Section 16.124 of the Howard County Code and Chapter VI (Alternative Compliance) of the Howard County Landscape Manual.
2. Contractor shall notify all utilities at least (5) five days before starting work. All General Notes, especially those regarding utilities, on Sheet 1 shall apply.
3. Field verify underground utility locations and existing conditions before staring planting work. Contact owner or his representative if any relocations are required.
4. Plant quantities shown on Plant List are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on the plan and those shown on the plant list, the quantities on the plan shall take precedence.
5. All plant material shall be full, heavy, well formed, and symmetrical, and conform to the A.A.N. Specifications, and be installed in accordance with project specifications.
6. No substitution shall be made without written consent of the owner or his representative.
7. All areas disturbed by construction activities but not otherwise planted, paved, or mulched shall be seeded or sodded in accordance with project specifications.
8. The contractor shall notify the owner in writing if he/she encounters soil drainage conditions which may be detrimental to the growth of the plants.
9. All exposed earth within limits of planting beds shall be mulched with shredded hardwood mulch per Planting Details.
10. "Schedule A - Perimeter Landscape Edge", "Schedule B - Parking Lot Internal Landscaping" and "Schedule D - Stormwater Management Area Landscaping" is provided for landscape surety calculation purposes only.

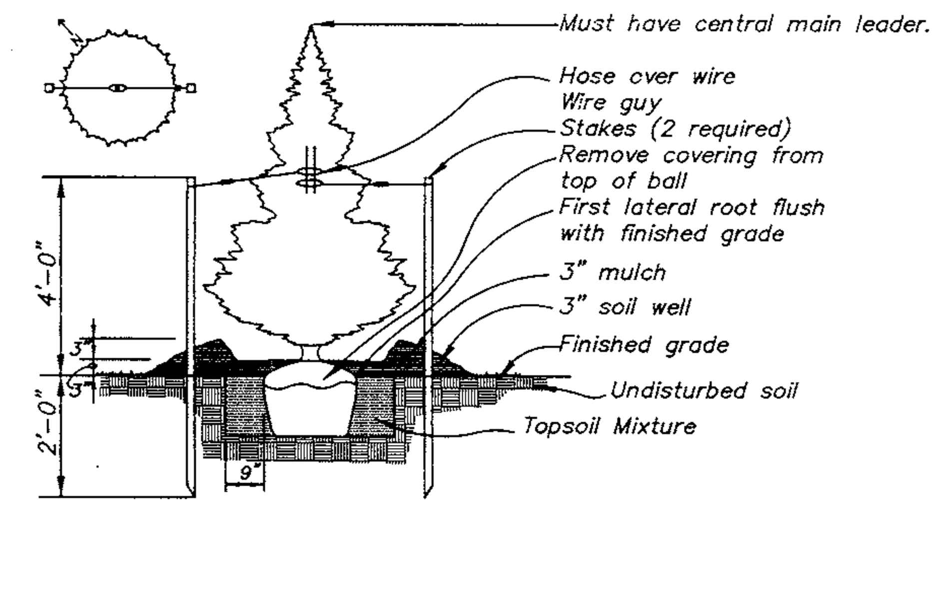
Financial surety for the required landscaping has been posted as part of the DPW Developer's Agreement in the amount of $62,220.00 *

11. Tabulation for landscape shown:

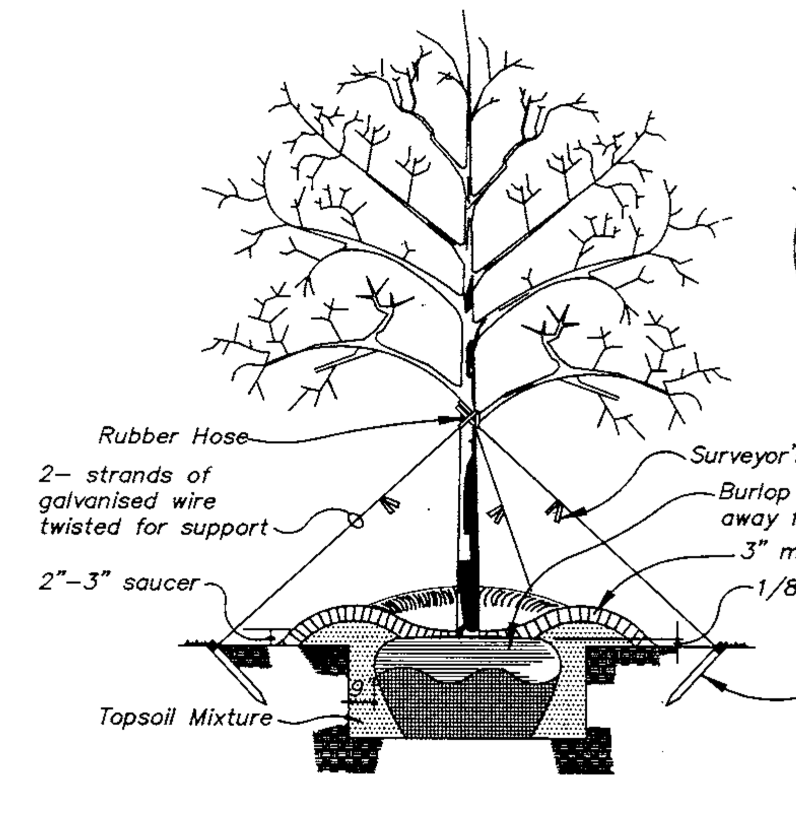
Required planting by HRD for 24.32± ac of R&D use at 22 trees/ac = 535 shade trees (or equivalent)

Planting provided:
shade trees 433
ornamental trees: 142 = 71 E.S.T.
evergreen trees (existing and proposed): 147 = 74 E.S.T.
584 E.S.T.[1]

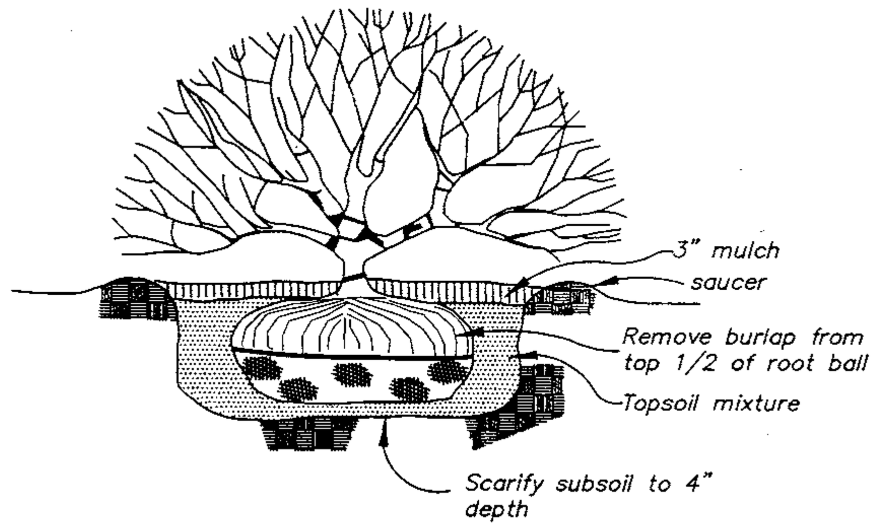
[1] E.S.T. - Equivalent Shade Trees
The proposed shrubs and ground covers are counted towards a portion of the required planting by HRD.



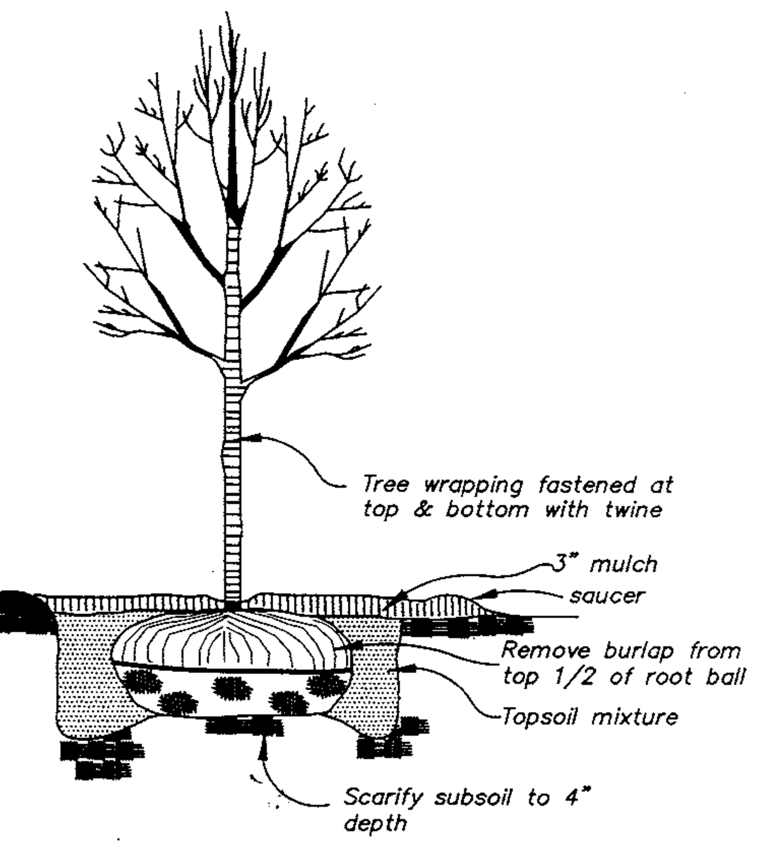
Evergreen Planting Detail
N.T.S.



Typical Tree Guying Detail
N.T.S.



Shrub Planting Detail
N.T.S.



Typical Deciduous Tree Planting
N.T.S.

SWM POND PLANTING NOTES

1. Upon conversion of sediment control pond to stormwater management pond, the contractor shall remove any stones, debris, or construction material larger than two inches (2") in any dimension. The ponds shall be flooded and left undisturbed for a period of 10 days prior to planting.
2. One once of 18-6-25 slow release fertilizer shall be incorporated into the soil for each plant at the time of planting.
3. Soil shall be saturated with water during and after planting, or the planting area may be completely flooded at this time (wet planting). Planting soil shall be firmly pressed around each to prevent flotation.
4. The source of all aquatic and emergent plants shall be approved by the owner or landscape architect prior to ordering. These plants shall be grown in pots (container specified) or nursery growing beds (bare rood specified) for a minimum of 12 months prior to installation and shall have been wet cultivated during the entire period.
5. All plant material shall be guaranteed for a period of one year after formal acceptance. Plants which have greater and 33% dieback or have not grown so as to emerge from the water surface shall be replaced at the next planting season.
6. Remove litter and debris as required during the first growing season and at the beginning of the second growing season.

The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in goof growing condition, and where necessary, replaced with new material to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.

SCHEDSULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	E		N/A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	1,075 LF	1,275 LF	N/A
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED	No	No	N/A
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED	Yes Berm (at least 3' high)	No	N/A
NUMBER OF PLANTS REQUIRED SHADE TRES EVERGREEN TREES SHRUBS	@ 1/40=27 None None	@1/40=32 None @1/4=319	N/A
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IS NEEDED)	Per alternate compliance -HRD's standards		N/A

LANDSCAPE SURETY FOR SCHEDULE A REQUIRED PLANTINGS: 59X $300.00 = $17,700
319 x $30= 9,570
$27,270.00

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	1,414
NUMBER OF TREES REQUIRED	@ 1/20 = 71
NUMBER OF TREES PROVIDED SHADE TREES OTHER SHADE TREES (2:1 SUBSTITUTION)	PER ALTERNATIVE COMPLIANCE —HRD'S STANDARDS

LANDSCAPE SURETY FOR SCHEDULE B REQUIRED PLANTINGS: 71 X $300.00 = $21,300.00

SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

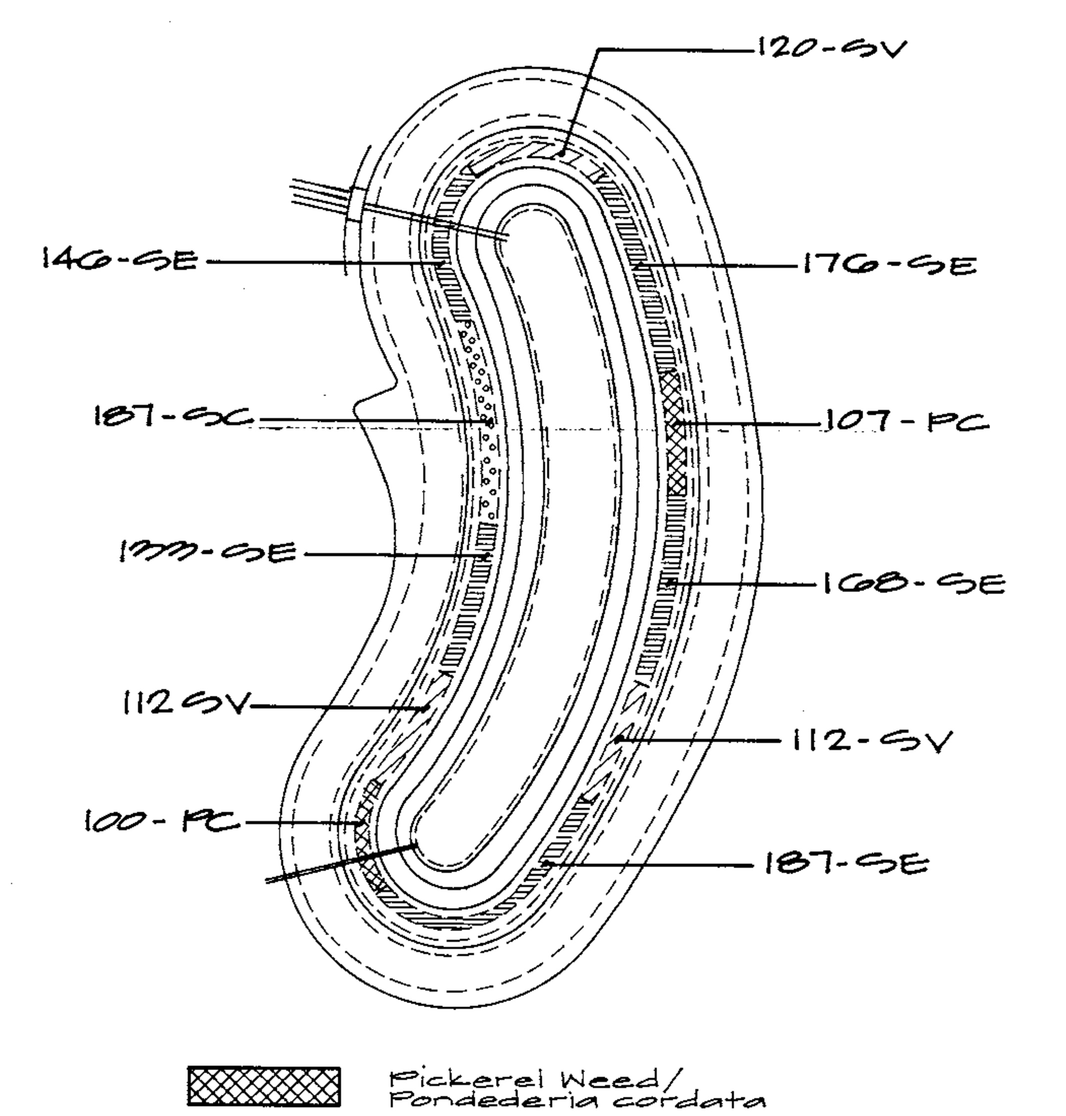
LINEAR FEET OF PERIMETER	1380
NUMBER OF TREES PROVIDED (TYPE B) SHADE TREES (1:50) EVREGREEN TREES (1:40)	28 35
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	0 0
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	0 0
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	PER ALTERNATIVE COMPLIANCE HRD'S STANDARD

LANDSCAPE SURETY FOR SCHEDULE-D REQUIRED PLANTINGS: 28X 300 = 8,400.00
35X 150 5,250.00
13,650.00

Owner Parcel T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn.: Al Edwards
410:992-6027

Plant List (Parcels T-1, T-2 & T-5)

Quan.	Symbol	Botanical Name	Common Name	Remarks
		Trees		
186	OGM	Acer saccharum 'Green Mountain'	Green Mountain Maple	2 1/2 - 3" cal., 13-15' hgt.
122	HL	Gleditsia triacanthos inermis 'halka'	Halka Honeylocust	2 1/2-3" cal., 12-14' hgt.
28	ZC	Malus sieboldi zumi	Zumi Crabapple	2 - 2 1.2" cal., 6-8' hgt.
84	AB	Picea abies	Norway Spruce	6-8' hgt. (not sheared)
62	WP	Pinus strobus	White Pine	6-8' hgt.
41	AC	Prunus subhirtella 'Autumnalis	Autumn Flowering Cherry	2 - 2 1/2" cal., 8-10' hgt.
86	QP	Quercus palustris	Pin Oak	2 1/2 - 3" cal., 12-14 hgt.
15	SG	Liquidambar styraciflua	Sweet Gum	2 1/2 - 3" cal, 13-15' hgt.
73	PS	Prunus serrulata 'Kwanzan'	Kwanzan Cherry	2 1/2 -3" cal., 12-14 hgt.
		Shrubs		
188	EA	Euonymus alatus	Winged Euonymus	18-24", plant 3' oc.
94	IGC	Ilex glabra compacta 'Shamrock'	'Shamrock' Inkberry Holly	18-24", plant 3' oc.
76	IM	Ilex meserveae 'Blue Girl'	'Blue Girl' Holly	18-24", plant 3' oc.
264	JCF	Juniperus conferta 'Blue Pacific'	'Blue Pacific' Shore Juniper	15-18", plant 3' oc.
49	TW	Taxus Wardi	Wardi Yew	15-18" Plant 2'-6" o.c.
		Groundcover		



Pickerel Weed/ Pondederia cordata
Lizards Tail/ Saururus cernvus
Giant Bur-reed/ Sparganum eurycarpum
Soft Stem Bullrush/ Scirpus validus

SWM Planting Detail

SWM POND PLANT LIST

KEY	QTY	NAME (COMMON/BOTANICAL)	REMARKS
PC	207	Pickerel Weed/ Pondederia cordata	Bare Root @ 18" O.C.±
SC	187	Lizards Tail/ Saururus cernvus	Bare Root @ 18" O.C.±
SE	810	Giant Bur-reed/ Sparganum eurycarpum	Bare Root @ 18" O.C.±
SV	344	Soft Stem Bullrush/ Scirpus validus	Bare Root @ 18" O.C.±

Financial surety for Parcels T-1 & T-2 has been posted as a part of the DPW Developer's Agreement in the amount of $48,570.00 (schedules A & B).
Financial surety for Parcel T-5 has been posted as a part of The DPW Developer's Agreement in the amount of $13,050.00 (schedule D).

STATE OF MARYLAND — CARLTON K. GUTSCHICK — 12975 — REGISTERED PROFESSIONAL ENGINEER

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/3/99
Chief, Development Engineering Division MK	Date 3/2/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067LD.DWG | DES. | DRN. | CHK.

DATE	REVISION	BY	APP'R.
1/6/99	Revise Landscape schedule B and Coordinate Plant List	GT	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
202-289-1401

LANDSCAPE NOTES, DETAILS & SCHEDULES

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
PLAT# 13462 thru 13464

ELECTION DISTRICT No. 6 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP No.	SHEET
NOVEMBER 1998	43-1,2,7,8	9 of 22

SDP 99-54

SEDIMENT TRAP NO. 1 (Existing)
Rip-Rap Outlet Sediment Trap

Drainage Area = 9.4 Ac. (Pre-Development) 10.0 Ac. (Post Development)

Storage Required = 10 (1800) = 18,000 cu. ft.
Storage Depth = 9 Feet
Cleanout Elevation = 316.50
Outlet Elevation = 318.00
Bottom Elevation = 315.00
Side Slopes = 2:1
Surface Area @ Elevation 318.00 (*L.O.S.) = 9800 sq. ft. (70 x 140)
Surface Area @ Elevation 315.00 (bottom) = 7424 sq. ft. (58 x 128)

Volume Provided = 7424 + 9800 / 2 x 9 = 25,830 cu. ft.

Outlet Length = 16'
Embankment Elevation = 324.20
(Weir Throat Elev = 322.20
*L.O.S. = Limit of Storage

SEDIMENT TRAP NO. 2 (Existing)
Rip-rap Outlet Sediment Trap

Drainage Area = 6.5 Ac. (Pre-Development) 2.4 Ac. (Post Development)

Storage Required = 6.5 (1800) = 11,700 cu. ft.
Storage Depth = 9 Feet
Cleanout Elevation = 318.50
Outlet Elevation = 320.00 (L.O.S.)
Bottom Elevation = 311.00
Side Slopes = 2:1
Surface Area @ Elevation 320.00 (*L.O.S.) = 10,710 sq. ft. (98' x 102')
Surface Area @ Elevation 311.00 (bottom) = 5,040 sq. ft. (56' x 90')

Volume Provided = 10,710 + 5,040 / 2 x 9 = 17,044 cu. ft.

Outlet Length = 16'
Embankment Elevation = 322.50
Weir Throat Elev = 320.50
*L.O.S. = Limit of Storage

SEDIMENT TRAP NO. 3 (Existing)
Rip-Rap Outlet Sediment Trap

Drainage Area = 0.5 Ac. (Pre-Development) 10.4 Ac. (Post Development)

Storage Required = 10.4 (1800) = 18,720 cu. ft.
Storage Depth = 1.5 Feet
Cleanout Elevation = 312.75
Outlet Elevation = 313.50
Bottom Elevation = 312.00
Side Slopes = 2:1
Surface Area @ Elevation 313.50 (*L.O.S.) = 14,054 sq. ft.
Surface Area @ Elevation 312.00 (bottom) = 12,942 sq. ft.

Volume Provided = 14,054 + 12,942 / 2 x 1.5 = 20,097 cu. ft.

Outlet Length = 16'
Embankment Elevation = 318.00
Weir Throat Elev = 316.25
*L.O.S. = Limit of Storage

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. ~~[illegible]~~ I also will allow periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer/Builder — 11/23/98 Date

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~[illegible]~~ erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~[illegible]~~"

11-20-98 Date

These Plans for ~~[illegible]~~ soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

John R Robertson — 2/25/99
Howard Soil Conservation District — Date

These plans were reviewed for the Howard Soil Conservation District and meet the technical guidelines set for ~~[illegible]~~ soil erosion and sediment control.

Cheryl Simmons — 2/25/99
Natural Resources Conservation Service — Date

Ex. 15 LF Class I Rip-Rap over Geotextile Fabric Class C
d50 = 9½" d100 = 15" thickness = 19"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — 3/3/99 Date
Chief, Division of Land Development — 3/3/99 Date
Chief, Development Engineering Division — 3/2/99 Date

Owner Parcels T-4 & T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy
Columbia, Maryland 21044
Attn.: Al Edwards
410:992-6027

Ex 10 LF Class I Riprap over Geotextile Fabric Class C
d50 = 9½" d100 = 15" thickness = 19"

Interstate Route 95 Right-of-Way

NOTE: FOR LEGEND SEE SHEET 12
NOTE: FOR SEDIMENT CONTROL PURPOSES ONLY!

Match Line See Sheet 4 For Continuation

For Continuation See Sheet 11

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-822-1820 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\98067SP1.DWG	DES.	DRN.	CHK.

DATE	REVISION	BY	APP'R.
12/16/98	Rev Per Ho. Co. Comments	WJW	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
(202) 289-1401

Sediment Control Plan
COLUMBIA GATEWAY
PARCELS T-1, T-2, T-4 and T-5
Plat No. 13462 thru 13464
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP – GRID	SHEET
November 1998	43 – 1,2,7,8	10 OF 22

SDP 99-54

STANDARD AND SPECIFICATIONS
FOR TOPSOIL DEFINITION

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

PURPOSE

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

CONDITIONS WHERE PRACTICE APPLIES

I. This practice is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplied of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the respective soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
   i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by a agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
   ii. Topsoil must be free of plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
   iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate if 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

II. For sites having disturbed areas under 5 acres:
   i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization – Section 1 – Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:
   i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
      a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
      b. Organic content of topsoil shall be not less than 1.5 percent by weight.
      c. Topsoil having soluble salt greater than 500 parts per mill shall not be used.
      d. No sod or seed shall be placed on soil which has been with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of photo-toxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

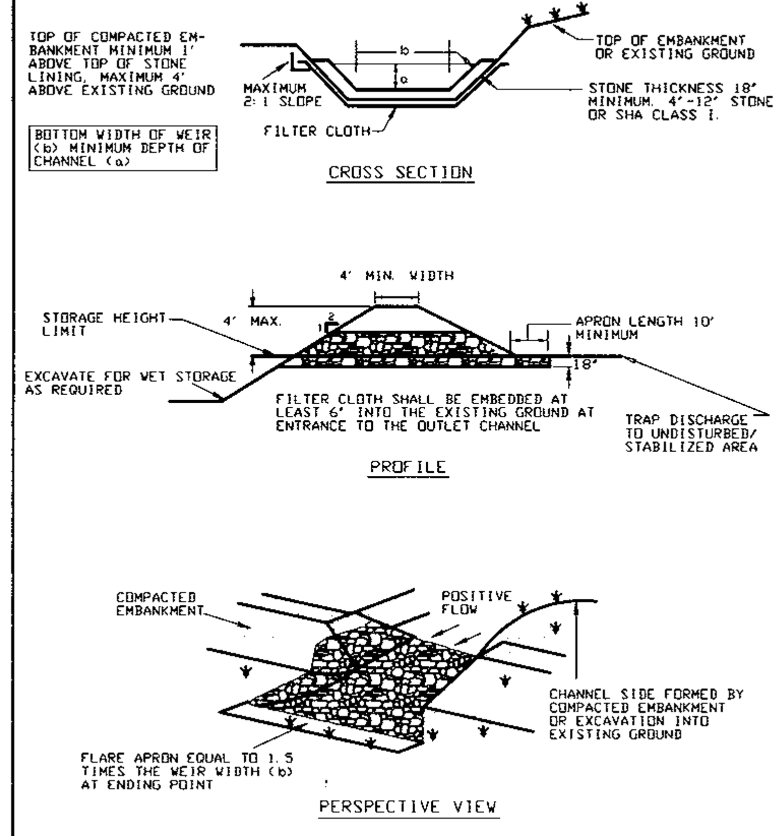
   ii. Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization – Section I – Vegetative Stabilization Methods and Materials.

V. Topsoil Application
   i. When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
   ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" – 8" higher in elevation.
   iii. Topsoil shall be uniformly distributed in a 4' -8' layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoilling or other operations shall be corrected in order to prevent the formation of depressions or water
   iv. Topsoil shall not be placed while the topsoil or subsoil is frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for Permanent Seeding – Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
   i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
      a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
      b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
      c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
   iv. Composted sludge shall be amended with a potassium fertilizer applied at a rate of 4lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

DETAIL 10 - RIP-RAP OUTLET SEDIMENT TRAP - ST III



NOTE: MAXIMUM DRAINAGE AREA= 10 ac.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 9 - 13	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

RIP-RAP OUTLET SEDIMENT TRAP - ST III

Constuction Specifications

1. The area under 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 over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be 4', measured at centerline of embankment.

3. All cut and fill slopes shall be 2:1 or flatter.

4. Elevation of the top of any dike directing water into trap must equal or exceed the height of trap embankment.

5. Storage area provided shall be figured by computing the volume measured from top of excavation. (For storage requirements see Table 10).

6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Section of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be embedded at least 6' into existing ground at entrance of outlet channel.

7. Stone used in the outlet channel shall be 4" - 12" placed 18" thick.

8. Outlet - An outlet shall be provided, which includes a means of conveying the discharge in an erosion free manner to an existing stable channel. Protection against scour at the discharge end shall be provided as necessary.

9. Outlet channel must have positive drainage from the trap.

10. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/4 of the wet storage depth of the trap (1350 cf/ac). Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

11. The structure shall be inspected periodically after each rain and repaired as needed.

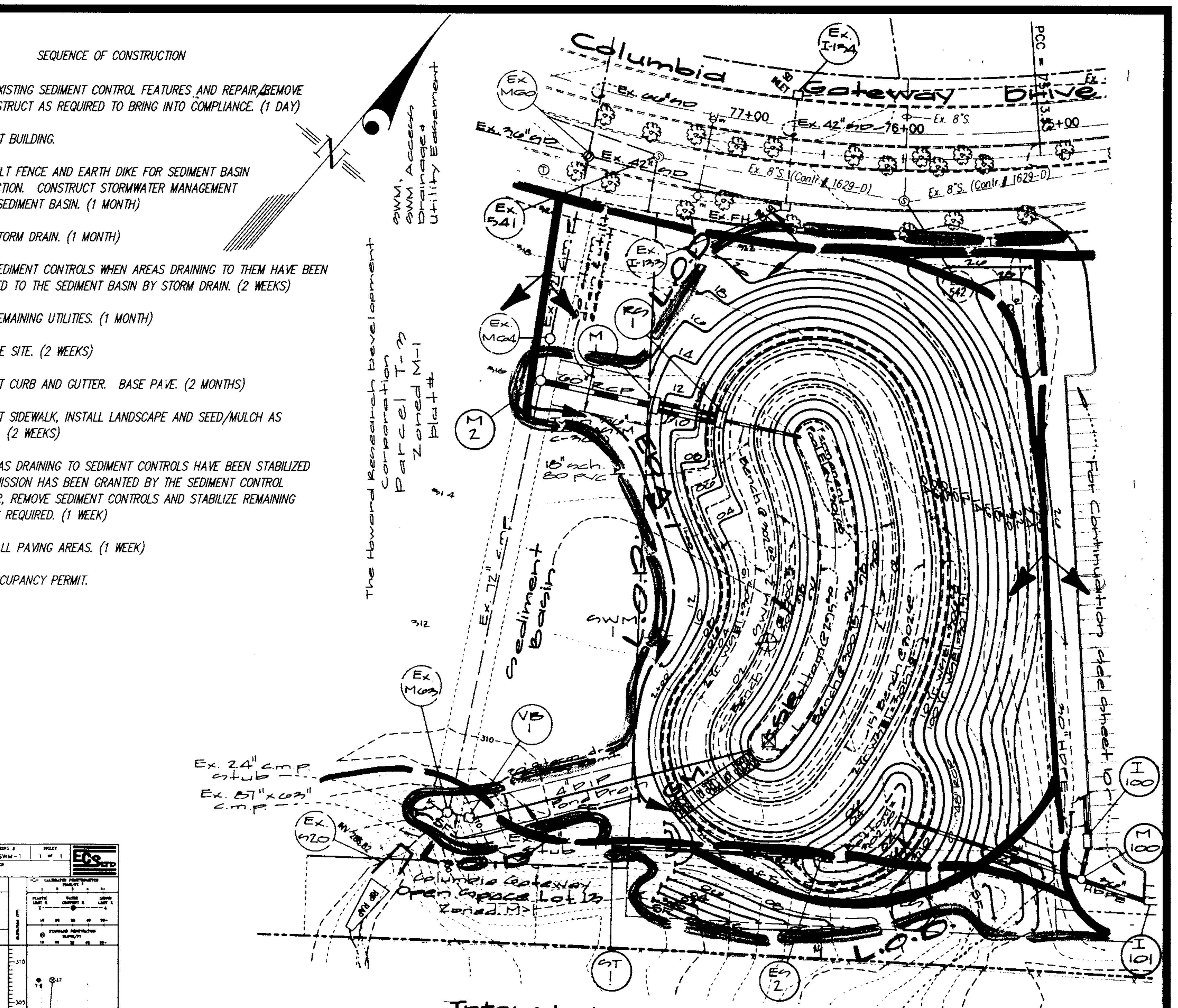
12. Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. 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.

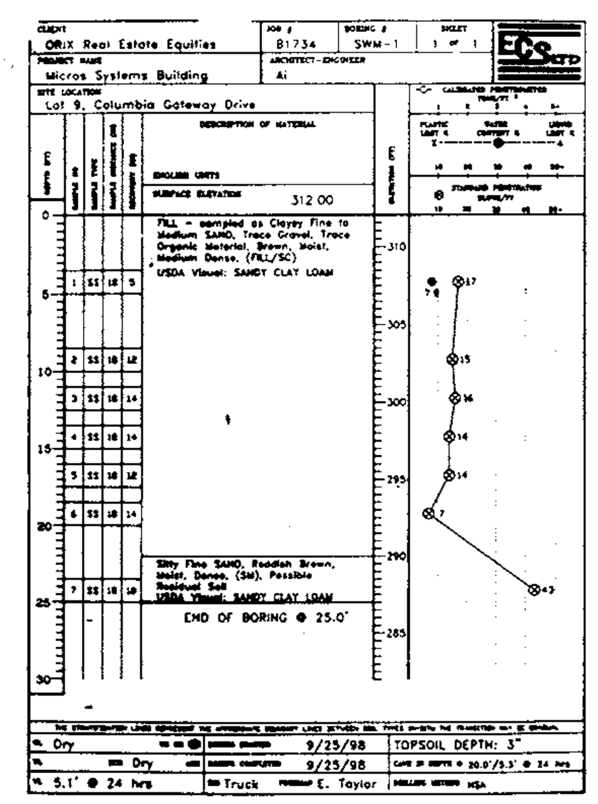
13. The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.

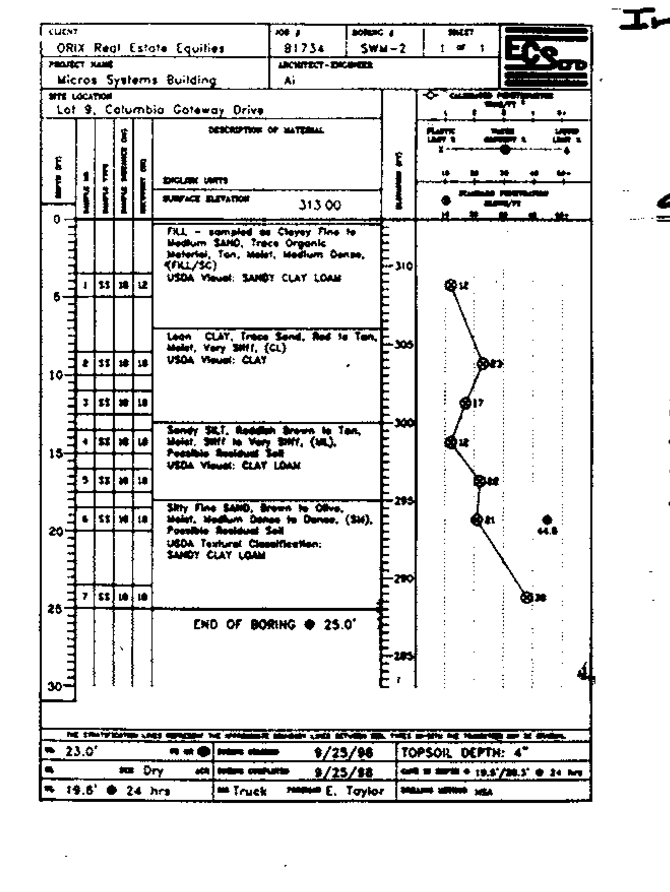
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 9 - 13A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

1. INSPECT EXISTING SEDIMENT CONTROL FEATURES AND REPAIR/REMOVE SILT/CONSTRUCT AS REQUIRED TO BRING INTO COMPLIANCE. (1 DAY)
2. CONSTRUCT BUILDING.
3. INSTALL SILT FENCE AND EARTH DIKE FOR SEDIMENT BASIN CONSTRUCTION. CONSTRUCT STORMWATER MANAGEMENT FACILITY/SEDIMENT BASIN. (1 MONTH)
4. INSTALL STORM DRAIN. (1 MONTH)
5. REMOVE SEDIMENT CONTROLS WHEN AREAS DRAINING TO THEM HAVE BEEN RE-ROUTED TO THE SEDIMENT BASIN BY STORM DRAIN. (2 WEEKS)
6. INSTALL REMAINING UTILITIES. (1 MONTH)
7. FINE GRADE SITE. (2 WEEKS)
8. CONSTRUCT CURB AND GUTTER. BASE PAVE. (2 MONTHS)
9. CONSTRUCT SIDEWALK, INSTALL LANDSCAPE AND SEED/MULCH AS INDICATED. (2 WEEKS)
10. WHEN AREAS DRAINING TO SEDIMENT CONTROLS HAVE BEEN STABILIZED AND PERMISSION HAS BEEN GRANTED BY THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS AND STABILIZE REMAINING AREAS AS REQUIRED. (1 WEEK)
11. SURFACE ALL PAVING AREAS. (1 WEEK)
12. OBTAIN OCCUPANCY PERMIT.





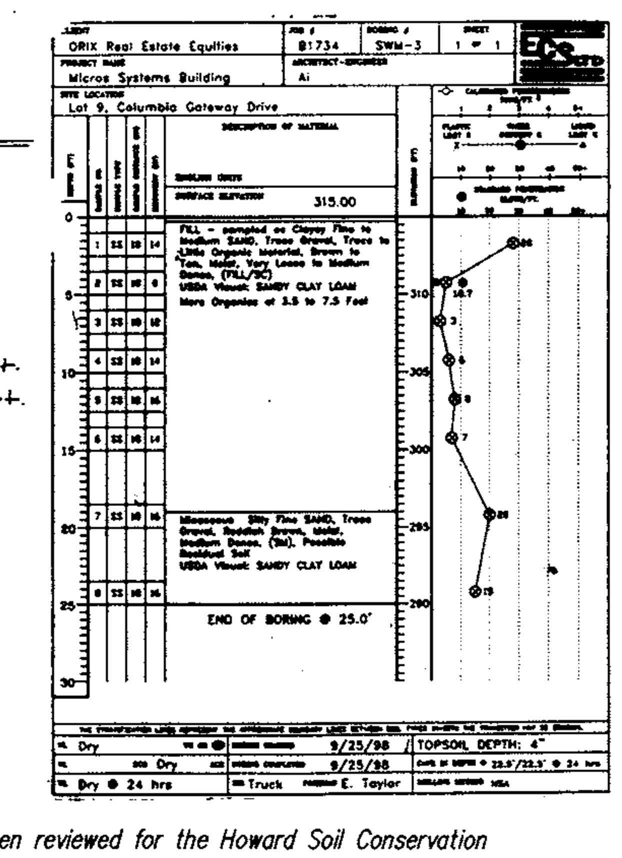


Sediment Control Plan

Scale: 1" = 50'

Basin Data:

Drainage Area	: 29.1 Ac.
Storage Required	: 104,760 cu.ft.
Storage Provided	: 291,000 cu.ft.
clean out elevation	: 298.92
Top of Dam	: 309.50
Bottom Elevation	: 295.50
Riser Crest Elevation	: 305.10
Permanent Pool Elevation	: 301.60



DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. ~~I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.~~ I also authorize periodic on-site inspections by the Howard Soil Conservation District.

[signature] × 2/8/99
Signature of Developer/Builder — Date

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction~~, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."~~

[signature] 2-8-99
Date

These Plans for ~~small pond construction~~, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

[signature] 2/25/99
Howard Soil Conservation District — Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction~~, soil erosion and sediment control.

[signature] 2/25/99
Natural Resources Conservation Service — Date

Owner Parcels T-4 & T5
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
10275 LITTLE PATUXENT PKWY.
COLUMBIA, MD 21044
ATTN: AL EDWARDS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[signature] Director	3/3/99 Date
[signature] Chief, Division of Land Development	3/3/99 Date
[signature] Chief, Development Engineering Division MK	3/22/99 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\9867SDS2.DWG	DES.	DRN. GT	CHK.

DATE	REVISION	BY	APP'R.
2-9-99	change A12 cmp to sch. 80 PVC	WGJ	
12-22-98	Rev. Per Ho. Co. Comments	WGJ	

PREPARED FOR:
Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005

Sediment Control Plan, Details & Soils Boring Profiles

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
PLAT# 13462 thru 13464

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

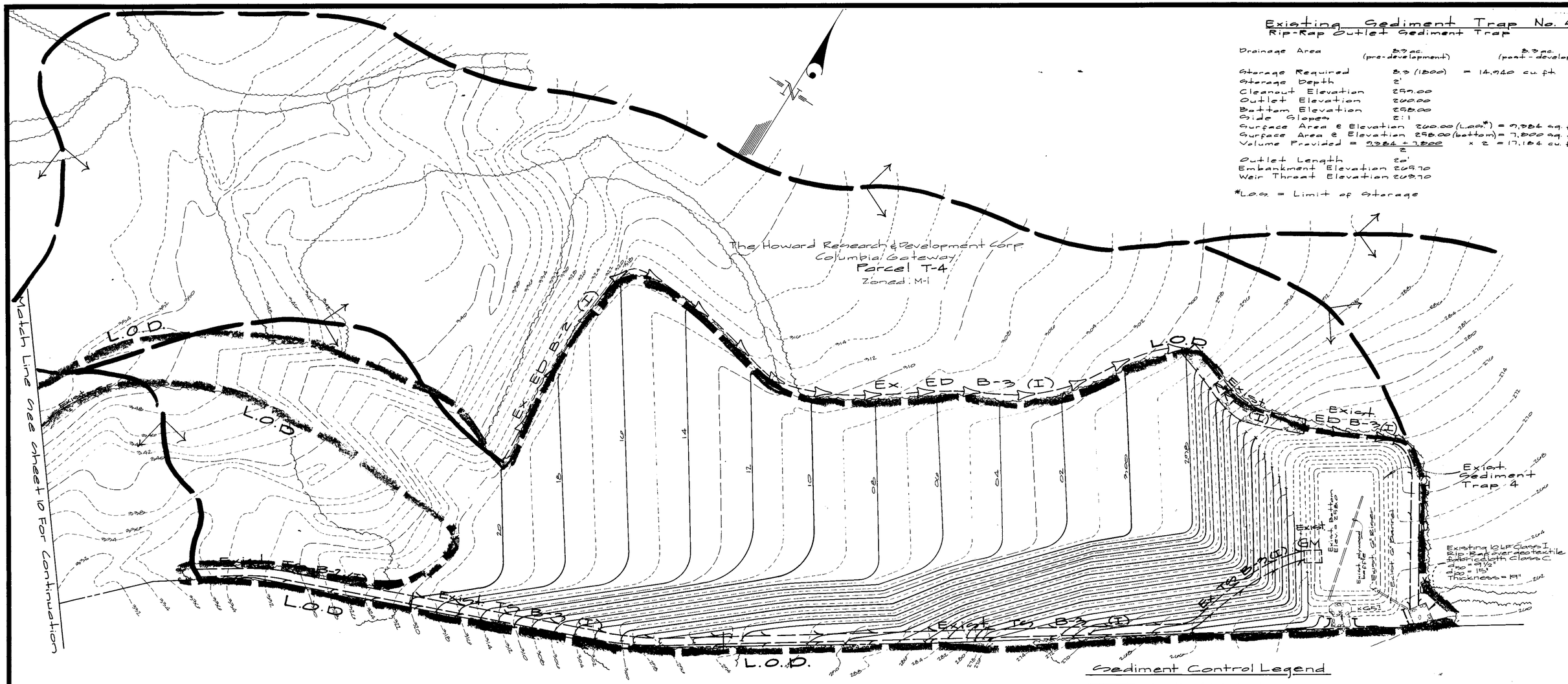
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP - GRID	SHEET
NOVEMBER 1998	43 - 1,2,7,8	11 OF 21

SDP 99-54

Existing Sediment Trap No. 4
Rip-Rap Outlet Sediment Trap

Drainage Area	8.7 ac. (pre-development)	8.3 ac. (post-development)
Storage Required	8.3 (1800)	= 14,940 cu. ft.
Storage Depth	2'	
Cleanout Elevation	297.00	
Outlet Elevation	296.00	
Bottom Elevation	295.00	
Side Slopes	2:1	
Surface Area @ Elevation	296.00 (L.O.D.*)	= 9,384 sq. ft.
Surface Area @ Elevation	295.00 (bottom)	= 7,800 sq. ft.
Volume Provided = $\frac{9384 + 7800}{2}$		x 2 = 17,184 cu. ft.
Outlet Length	20'	
Embankment Elevation	299.70	
Weir Throat Elevation	298.70	

*L.O.D. = Limit of Storage



Sediment Control Legend

- Limit of Disturbance
- SF — Silt Fence
- Earth Dike
- T.S. D-1 — Temporary Swale
- Existing Drainage Divide
- GP — Gabion Inflow Protection
- RRP — Rip-Rap Protection

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. ~~I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an as-built plan of the pond within 30 days of completion.~~ I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer/Builder — 2-8-99 Date

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction~~, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as built" plan of the pond within 30 days of completion.~~"

2-8-99 Date

These Plans for ~~small pond construction~~, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

John R. Robertson — 2/25/99
Howard Soil Conservation District — Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction~~, soil erosion and sediment control.

Cheryl Simmons — 2/25/99
Natural Resources Conservation Service — Date

Approved: Howard County Department of Planning & Zoning

Director — 2/3/99 Date
Chief, Division of Land Development — 3/2/99 Date
Chief, Development Engineering Division — 3/2/99 Date

Note: This plan has been Mass Graded under GP. 99-75A.

Owner Parcels T-4 & T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn.: Al Edwards
410-992-6027

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD 20866
TELEPHONE (301)421-4024 NO.VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186

DATE	REVISION	BY	APP'R.
12-22-98	Rev. Per Ho. Co. Comments	WGJ	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H Street N.W.
Suite 550
Washington, D.C. 20005
202-289-1401

Sediment Control Plan

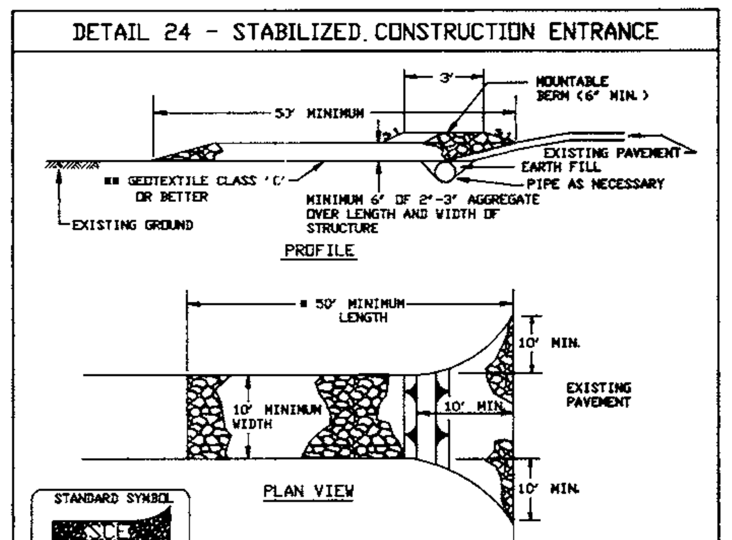
Columbia Gateway

Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
Election District No. 6 — Howard County, Maryland

DES.:	SCALE	ZONING	G.L.W. FILE No.
DRN.: WGJ	1" = 50'	M-1	98-067
CHK.:	DATE	TAX MAP No.	SHEET
	November 1998	43 1,2,7,8	12 of 22

SDP 99-54

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



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 (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.

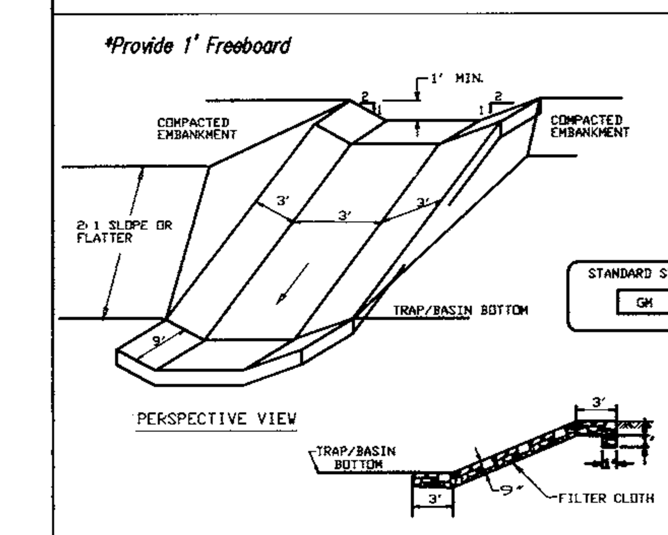
5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone 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	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 6 - GABION INFLOW PROTECTION

*Provide 1' Freeboard



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.

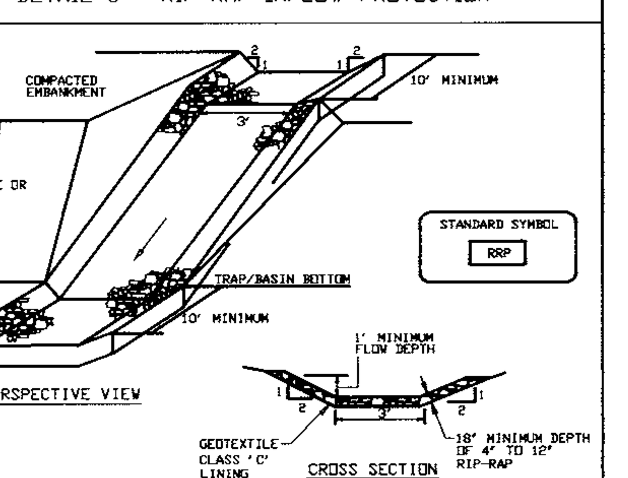
3. The stone used to fill the gabion baskets shall be 4" - 7".

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	PAGE B - 7 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 5 - RIP-RAP INFLOW PROTECTION



Construction Specifications

1. Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3' (min.) bottom width. The channel shall be lined with 4" to 12" rip-rap to a depth of 18".

2. Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.

3. Entrance and exit sections shall be installed as shown on the detail section.

4. Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.

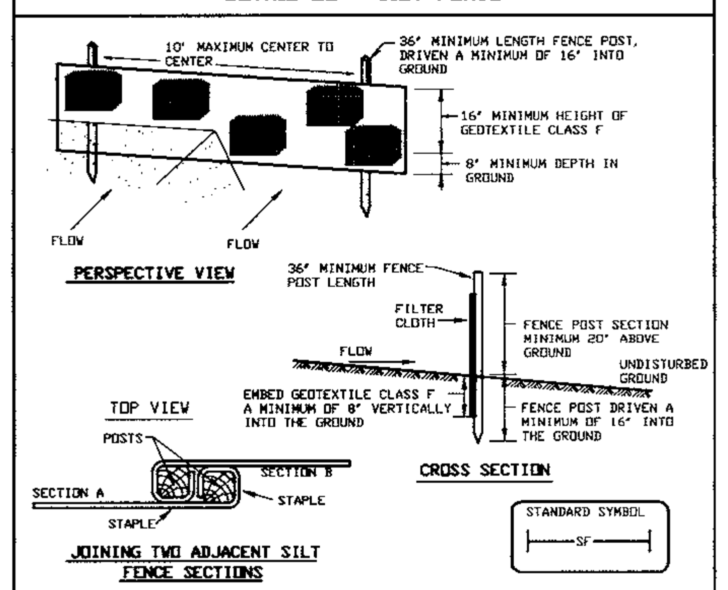
5. Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.

6. Rip-rap should blend into existing ground.

7. Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE B - 6 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" 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:

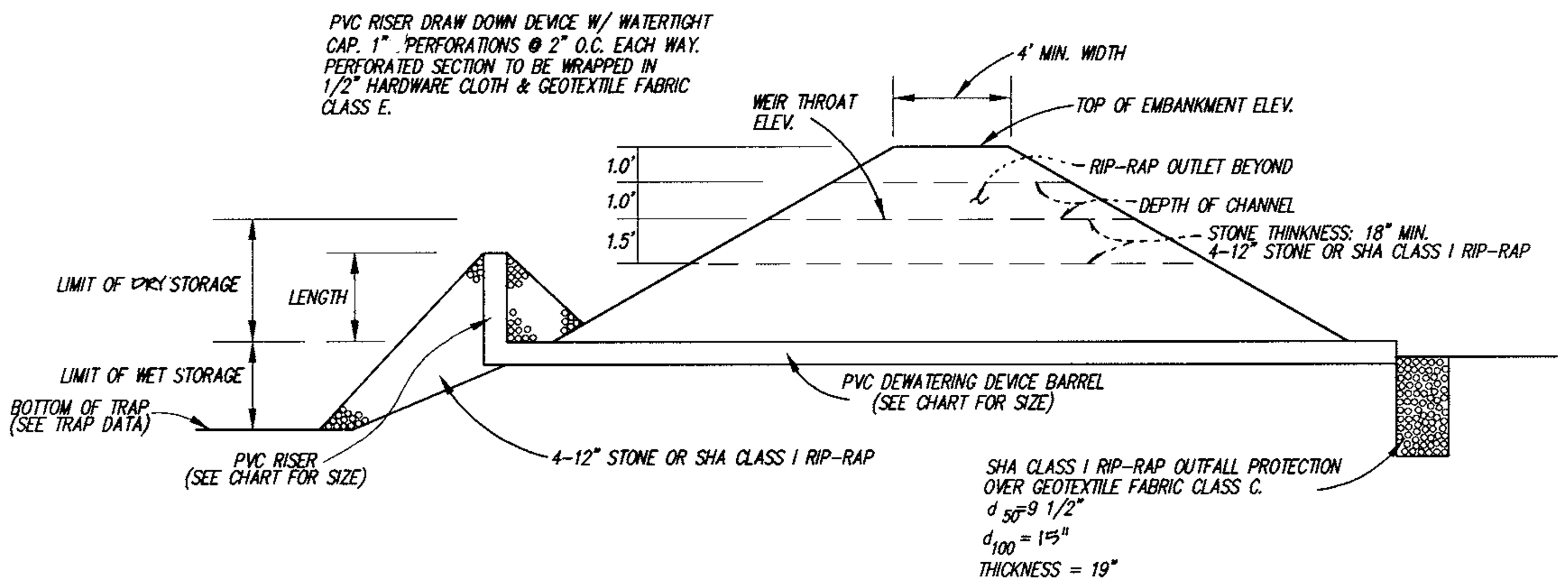
Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

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	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

TEMPORARY SWM DEWATERING DEVICE DETAIL

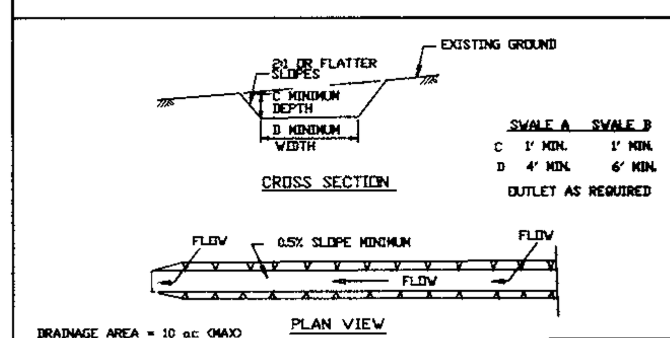


TRAP#	RISER SIZE	LENGTH	TOTAL# PERFORATIONS	BARREL SIZE	INVERT	OUTFALL PROTECTION LENGTH
1	6"	2.64	143	6"	318.00	15'
2	8"	2.96	248	8"	320.00	10'
3	16"	2.96	395	10"	313.50	10'
4	6"	2.64	143	6"	260.00	10'

TEMPORARY SWM DEWATERING DEVICE DETAIL

NTS

DETAIL 2 - TEMPORARY SWALE



FLOW CHANNEL STABILIZATION

GRADE 0.5% MIN. 10% MAX.

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.

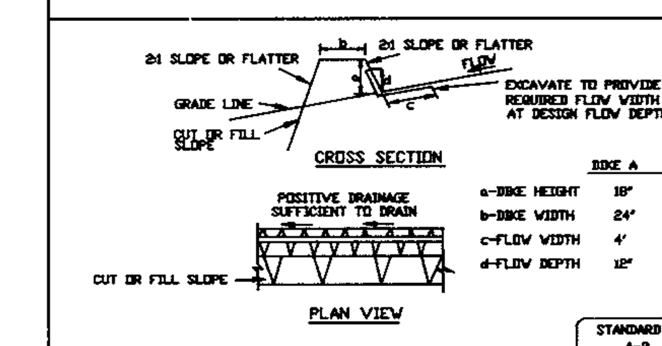
6. Fill, if necessary, shall be compacted by earth moving equipment.

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	PAGE A - 2 - 4	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 1 - EARTH DIKE



FLOW CHANNEL STABILIZATION

GRADE 0.5% MIN. 10% MAX.

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 objectional 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	PAGE A - 1 - 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Dust Control

Definition

Controlling dust blowing and movement on construction sites and roads.

Purpose

To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies

This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

Temporary Methods

1. Mulches – See standards for vegetative stabilization with mulches only. Mulches should be crimped.

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" apart, spring-toothed harrows, and similar lows 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 that runoff begins to flow.

5. Barriers – Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing. Barriers placed at the right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.

6. Calcium Chloride – Apply at rates 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.

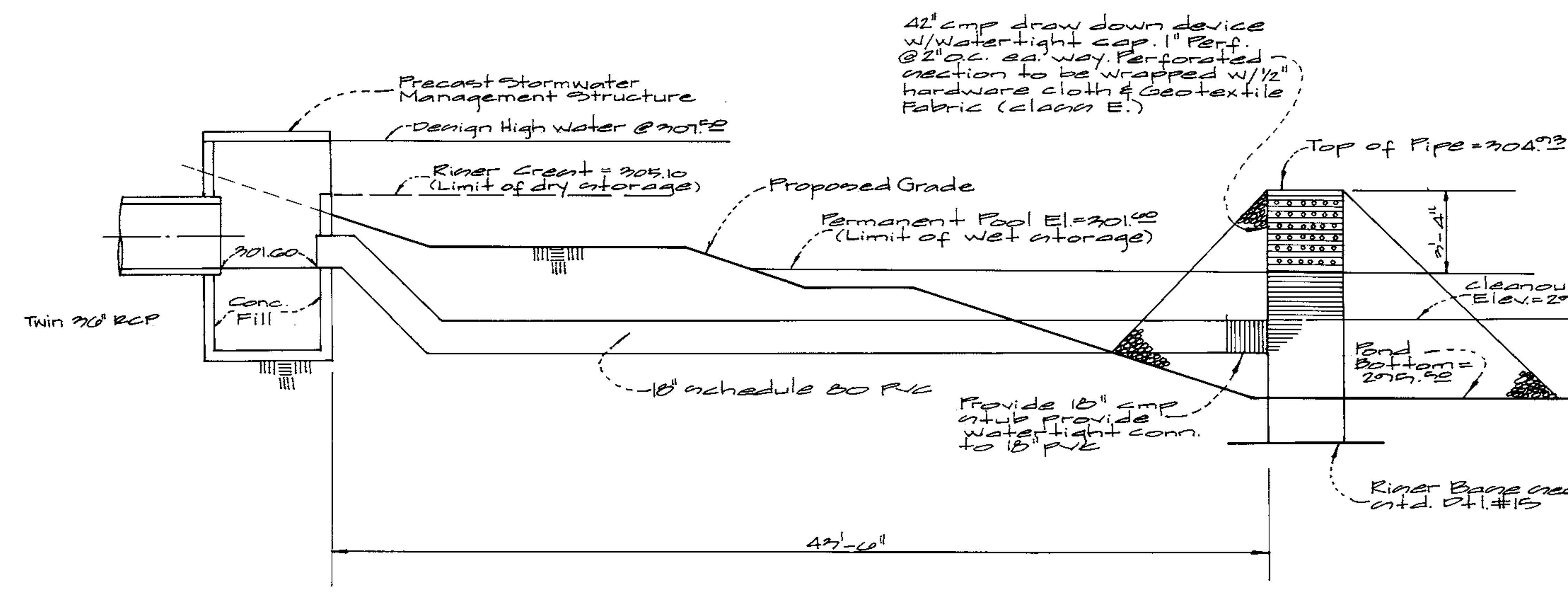
2. Topsoiling – Covering with less erosive soil materials. See standards topsoiling.

3. Stone – Cover surface with crushed stone or coarse gravel.

References

1. Agriculture Handbook 346. Wind Erosion Forces in the United States and Their use in Predicting Soil Loss.

2. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA-ARS.



Riser Structure Modification Sediment Control

scale: 1" = 5'

For information not shown see sheet 13.

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. ~~I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.~~ I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer/Builder — 11/23/98 Date

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction,~~ erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.~~"

11-20-98 Date

STATE OF MARYLAND — CARLTON K. GUTSCHICK — No. 12975 — REGISTERED PROFESSIONAL ENGINEER

These Plans for ~~small pond construction,~~ soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District — 2/25/99 Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction,~~ soil erosion and sediment control.

Natural Resources Conservation Service — 2/25/99 Date

Owner Parcels T-4 & T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn.: Al Edwards
410-992-6027

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	3/3/99 Date
Chief, Division of Land Development	3/3/99 Date
Chief, Development Engineering Division MK	3/2/99 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\9867SDS1.DWG | DES. | DRN. | CHK.

DATE	REVISION	BY	APP'R.
2-07-99	change A/2 cmp to 18" sch. 80 PVC & show 18" cmp stub	WCJ	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
202-289-1401

SEDIMENT CONTROL DETAIL SHEET

COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 & T-5

PLAT# 13462 thru 13464

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP - GRID	SHEET
NOVEMBER 1998	43 - 1,2,7,8	13 OF 22

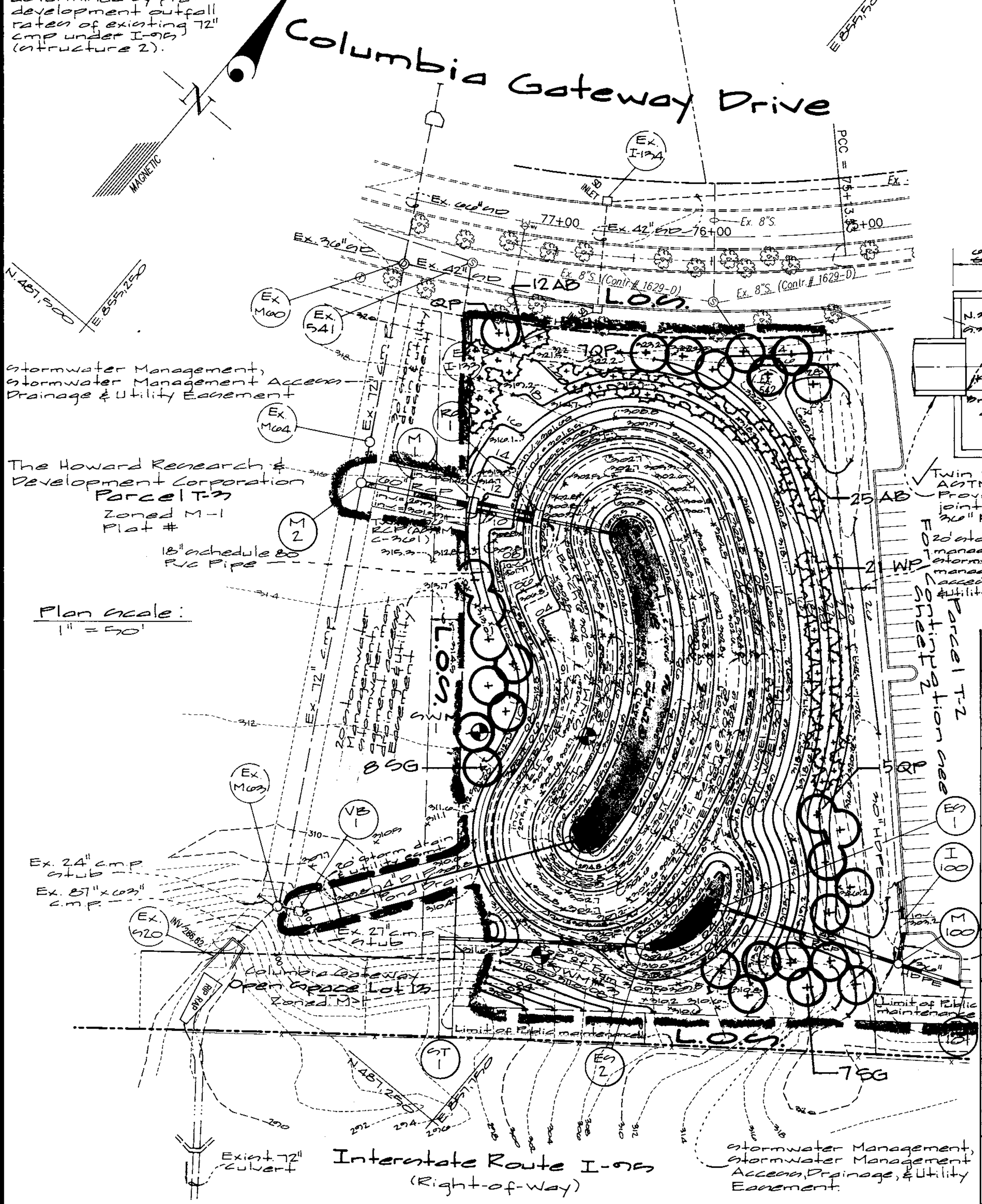
SDP 99-54

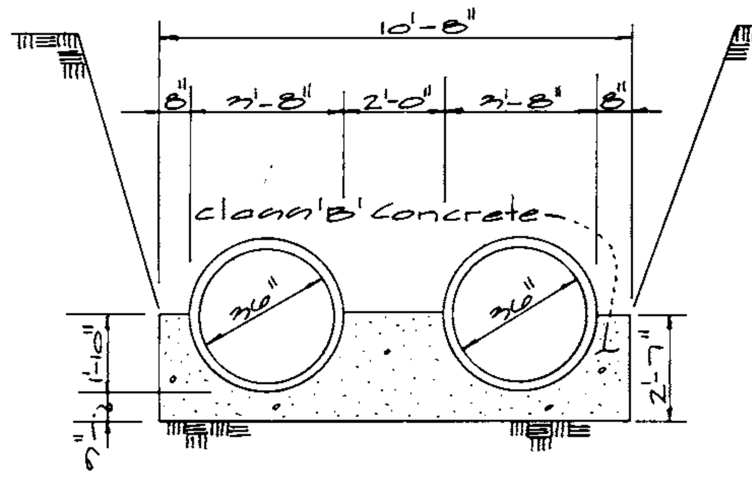
Summary Table

Storm	Allowable Release	Inflow	Discharge	Elev	Storage
2 Yr.	*	81 cfs	14 cfs	305.10	2.43 Ac.ft.
10 Yr.	*	153 cfs	71 cfs	306.54	3.72 Ac.ft.
100 Yr.	*	226 cfs	137 cfs	307.51	4.71 Ac.ft.

*Allowable release rate determined by pre-development outfall rates of existing 72" cmp under I-95 (structure 2).

Pond Notes:
A. Water Quantity control is provided by a hazard class A retension facility.
B. Water quality is provided by a wet pool.
C. This facility is to be publicly maintained.



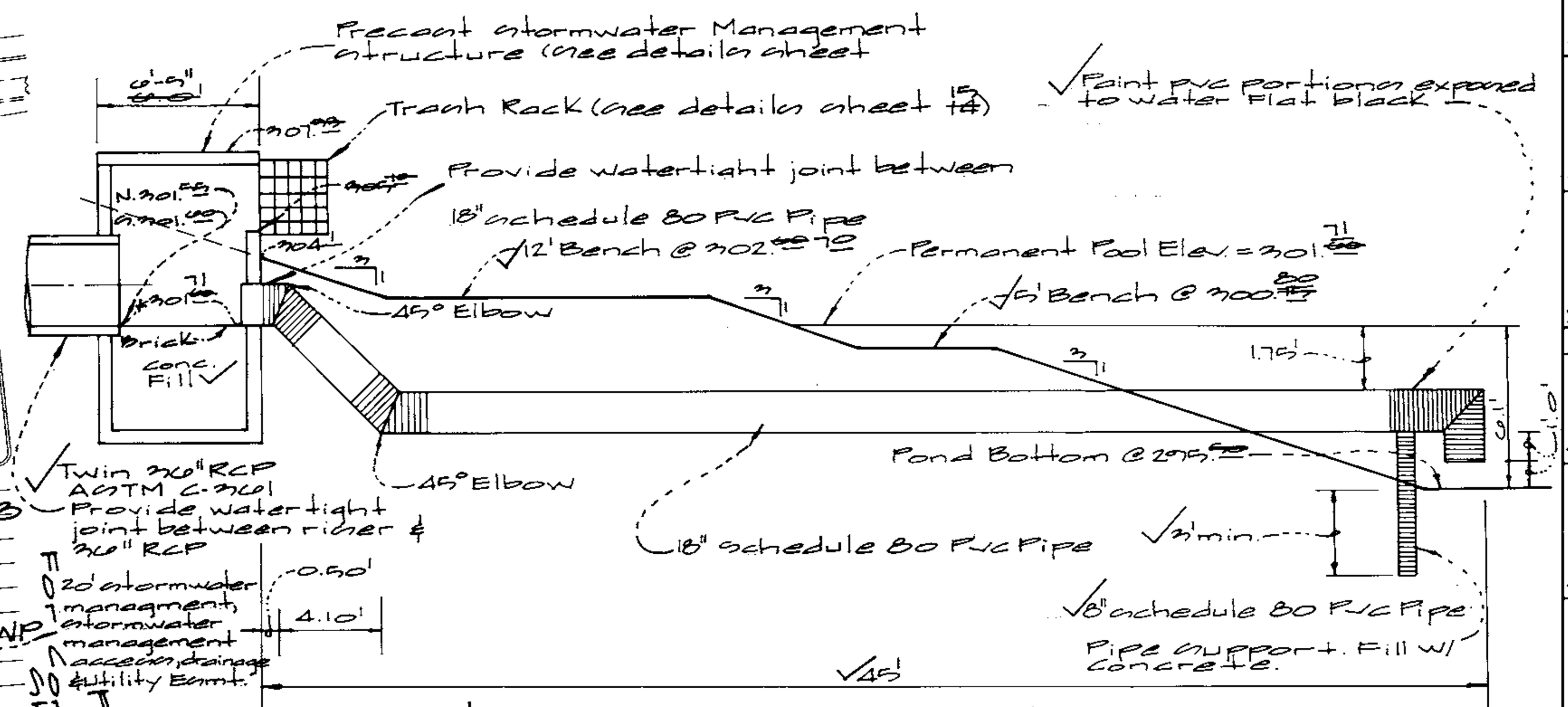


Concrete Cradle Detail
NTS
(see A-2 Concrete cradle)

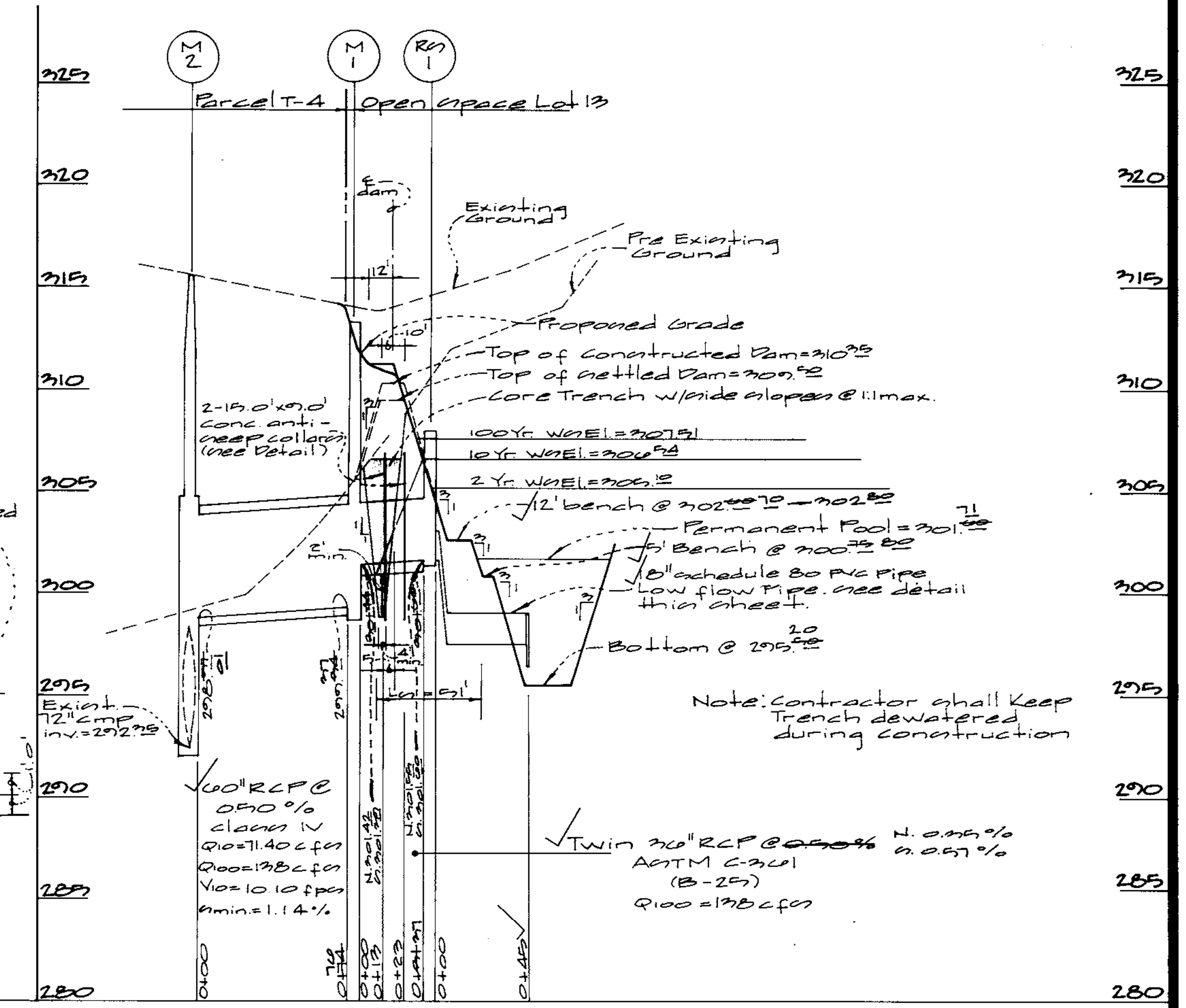
As Built

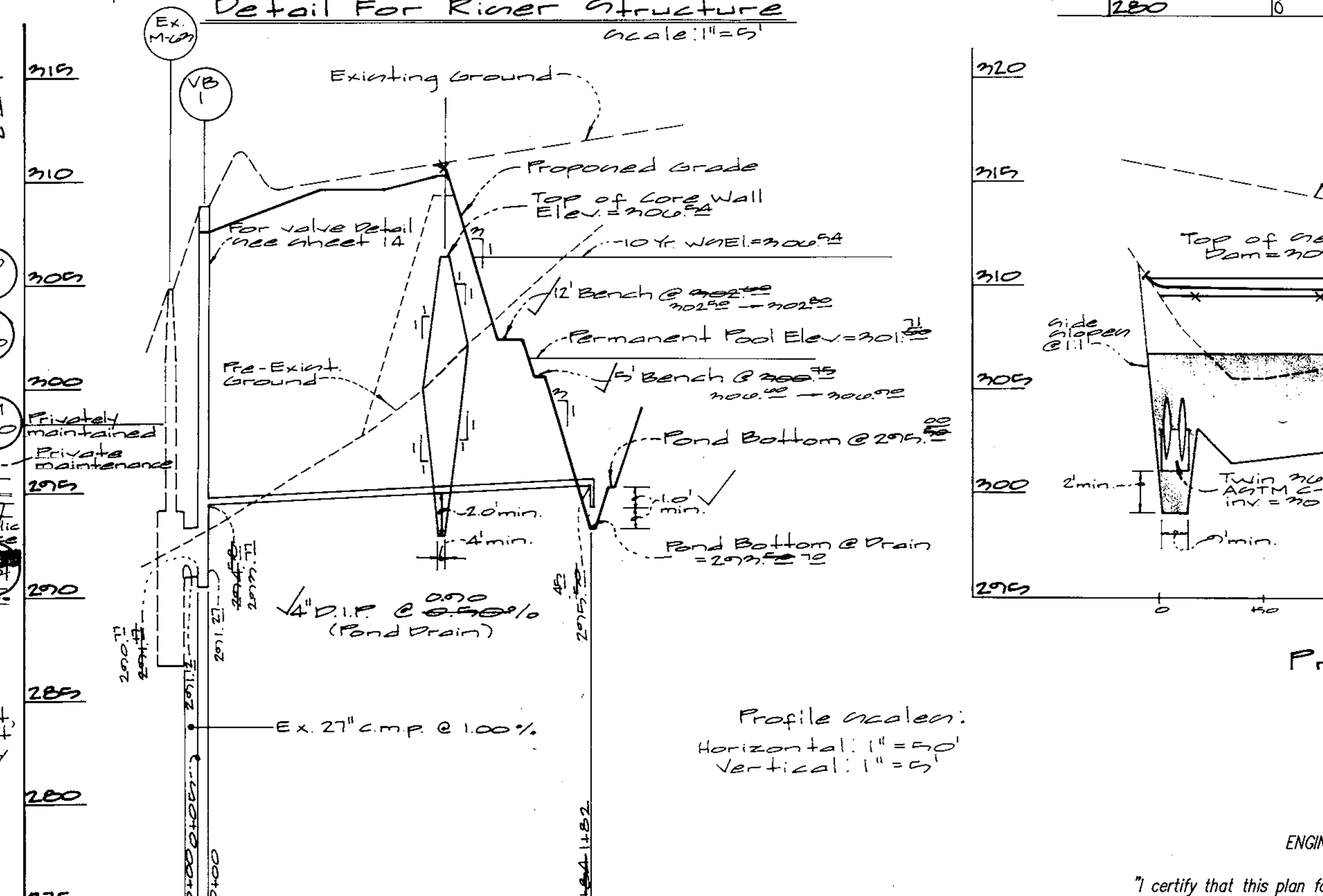
Carlton K. Gutschick
Professional Engineer
Registration No. 12975

1-18-01
Date



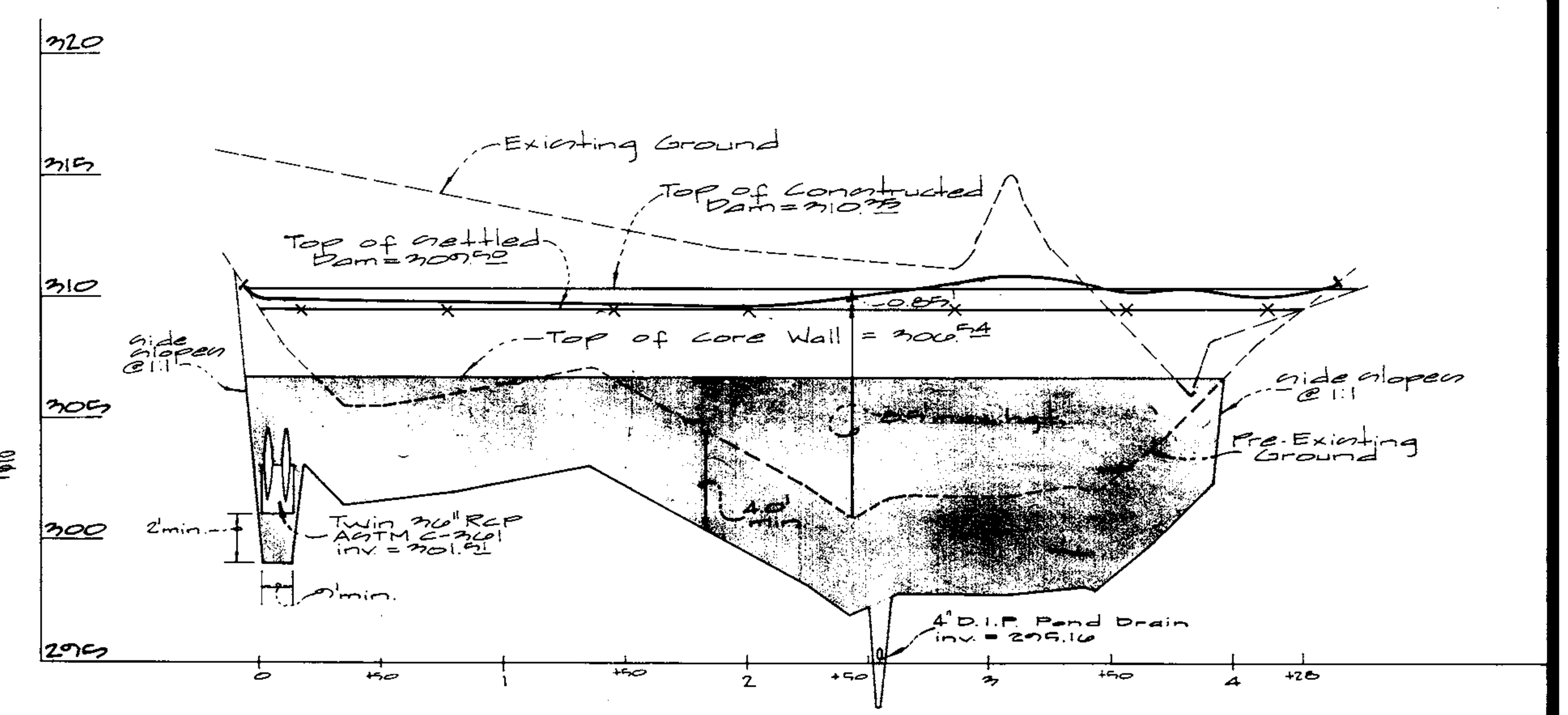
Detail For Riser Structure
Scale: 1" = 5'





Profile Along Pond Drain

Profile Scales:
Horizontal: 1" = 50'
Vertical: 1" = 5'



Profile Along ℄ of Dam

Developer's/Builder's Certificate

I/We certify that the landscaping shown on this plan will be done according to the plan, section 16.124 of the Howard County code and the Howard County Landscape Manual. I/We further certify that upon completion of a certification of Landscape Installation, accompanied by an executed one guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

x [signature] Name   x 2/8/99 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[signature] Director — 3/3/99 Date
[signature] Chief, Division of Land Development — 3/3/99 Date
[signature] Chief, Development Engineering Division — 3/2/99 Date
MK

Owner Parcels T-3, T-4 & T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn.: Al Edwards
410-992-6027

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction~~, soil erosion and sediment control.

[signature] Natural Resources Conservation Service — 2/25/99 Date

These Plans for ~~small pond construction,~~ soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

[signature] Howard Soil Conservation District — 2/25/99 Date

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction,~~ erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as built" plan of the pond within 30 days of completion.~~"

[signature] — 2-8-99 Date

DEVELOPER'S/BUILDER'S CERTIFICATE

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x [signature] Signature of Developer/Builder — x 2/8/99 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES.	DRN. WJ	CHK.

DATE	REVISION	BY	APP'R.
1/19/01	AS BUILT	WSJ	
1/5/00	Add maint. esmt. notes & change pipe from cmp to sch. 80 pvc	WSJ	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
202-289-1401

STORMWATER MANAGEMENT PLAN & DETAILS

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

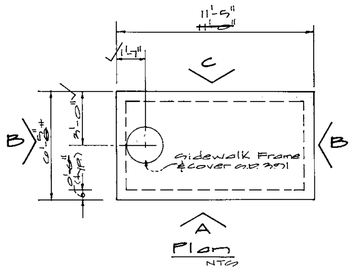
SCALE	ZONING	G. L. W. FILE No.
As shown	M-1	98067
DATE	TAX MAP – GRID	SHEET
NOVEMBER 1998	43-1,2,7,8	14 OF 22

SDP 99-54

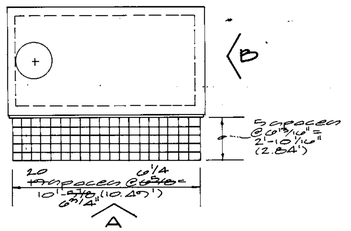
SWM Structure Schedule							
No.	Type	Width (ID or Dia. inside)	Top Elev.		Inv. Elev.	Standard Detail	Remarks
			—	—	Upper	Lower	
R-1	Riser structure	5'-0"	307.99		305.10	301.60	Mod. SHA 4.41	Precast
M-1	Manhole	5'-0"	319.00		301.44	297.94	Mod. SHA 4.41	Precast
M-2	Manhole	100.0	314.90		298.97	295.47	Mod SHA MD 380.11	Dog House
VB-1	Valve Box (A)	5'-0"	309.00		304.58	301.17	W.S.G.C.	Precast

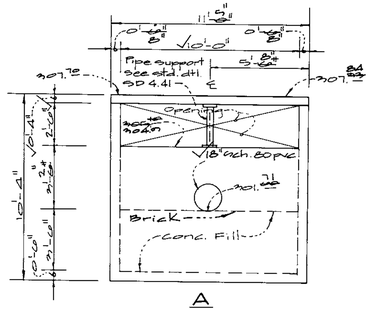
Trash Rack Notes

1) Trash racks to be hot dip galvanized after fabrication painted w/2 coats of black paint.
2) Vertical bars shall be on the outside of horizontal bars.
3) Trash rack to be securely bolted to riser structure with 1/2" ϕ bolts embedded 9" (6 locations min. per rack).
4) All rebar intersections to be spot welded.
5) All rebar to plate intersections or plate to plate intersections to be securely welded.
6) Minimum Opening size 6"x6"

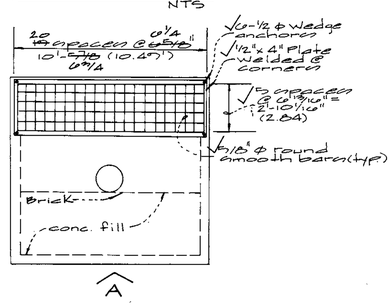


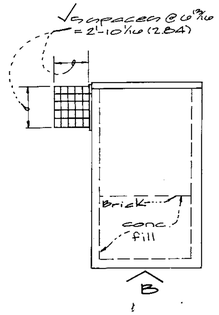
Note: Provide steps Per SHA 4.40

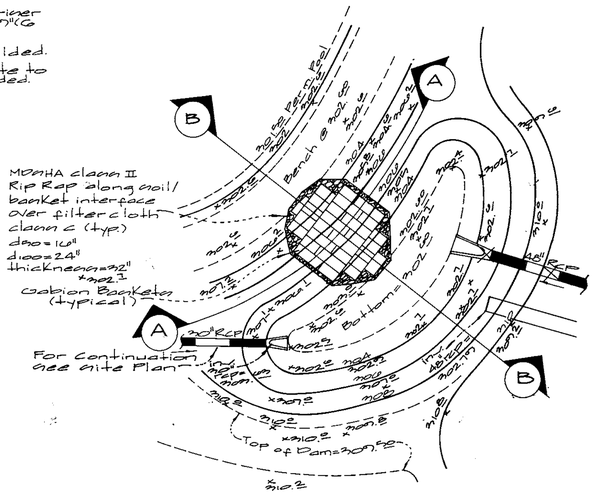




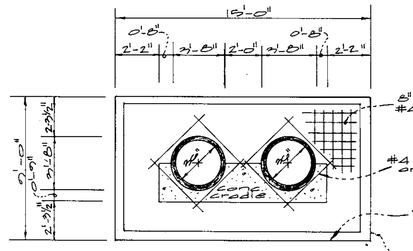
Plan-Trash Rack
NTS







Plan ~ Gabion Basket
scale: 1" = 20'

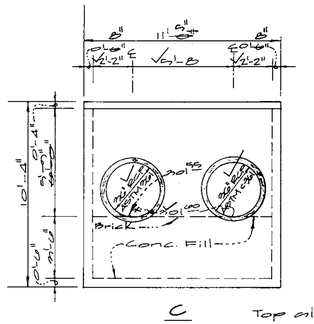


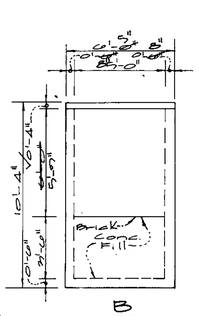
Front View

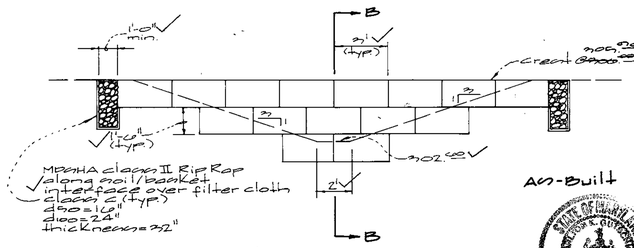
Anti-Seep Collar Detail
NTS

Notes For Anti-Seep Collar

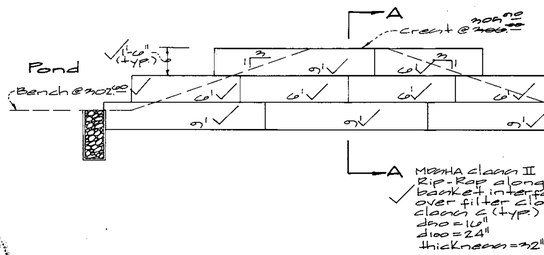
1) Pour concrete to undisturbed earth.
2) Remove sheeting before pouring concrete.
3) Fc = 4000 psi @ 28 days.
4) Pour collars with pipe in place.
5) Backfill evenly on both sides of collars.
6) Locate collars a min. of 2' from pipe joints.



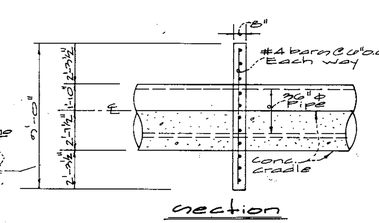


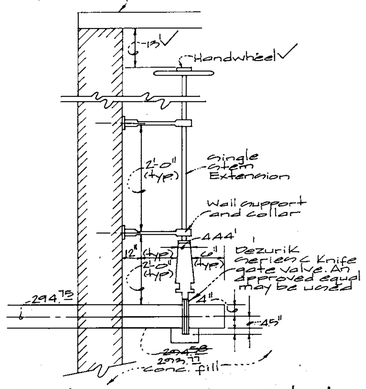


Section A-A
scale: 1" = 4'



Section B-B
scale: 1" = 4'





Pond Drain Valve Detail
NTS

As-Built

Carlton K. Gutschick
Professional Engineer
Registration No. 12976

1-18-01
Date

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction~~, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as built" plan of the pond within 30 days of completion.~~"

2/8/99
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

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~~X~~ _____ ~~X~~ 2/8/99
Signature of Developer/Builder — Date

These Plans for ~~small pond construction~~, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

2/25/99
Howard Soil Conservation District — Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction~~, soil erosion and sediment control.

2/25/99
Natural Resources Conservation Service — Date

Owner Parcels T-4 & T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn.: Al Edwards
410-992-6027

Owner Parcels T-1 & T-2 & Developer
Orix Columbia Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
(202) 289-1401

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — 3/3/99 Date
Chief, Division of Land Development — 3/3/99 Date
Chief, Development Engineering Division MK — 3/2/99 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067SWM.DWG | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
1/19/01	As Built	WSJ	
2-19-99	Change Alarm to each Riser	WSJ	
12-22-98	Rev. Per Ho. Co. Comments	WSJ	

Stormwater Management Details

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP - GRID	SHEET
November 1998	43 1,2,7,8	15 of 22

SDP 99-54

POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of these plans. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

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

Earth Fill

Material – The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement – Area on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated in to the embankment.

Compaction – The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within ±2 % of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench – The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe – All of the following criteria shall apply for corrugated metal pipe:

1. Materials – (Steel Pipe) – This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon, Plasti-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

   Materials – (Aluminum Coated Steel Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

   Material – (Aluminum Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. Connections – All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe & riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

   All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

   Helically corrugated pipe shall have either continuously welded seams or have lock seams.

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

5. Backfilling shall conform to "Structure Backfill".

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe – All of the following criteria shall apply for reinforced concrete pipe:

1. Materials – Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

2. Bedding – All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

3. Laying pipe – Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. the first joint must be located within 2 feet from the riser.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be shown on the drawings.

Polyvinyl Chloride (PVC) Pipe – All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. Materials – PVC pipe shall be PVC – 1120 or PVC – 1220 conforming to ASTM D-1785 or ASTM D-2241.

2. Joints and connections to anti-seep collars shall be completely watertight.

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

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standards Specifications for Construction and Materials, Section 608, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The rip rap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (410) 313-1855

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 and revisions thereto.

3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sod, temporary seedings and mulching (Sec. G).
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	: 158.0	Acres
Area Disturbed	: 21.5	Acres
Area to be roofed or paved	: 14.9	Acres
Area to be vegetatively stabilized	: 17.2	Acres
Total Cut	: 20,000	Cu. Yds.
Total Fill	: 20,000	Cu. Yds.
Off-site waste/borrow area location:	N/A	

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 control 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.

11. Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within 1 working day, whichever is shorter.

PERMANENT SEEDING NOTES

Apply to graded or cleared area 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, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

1) Preferred – Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 unreaform fertilizer (9 lbs/1000 sq ft).

2) Acceptable – Apply 2 tons per acre 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 disc 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 application 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 seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

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

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

Seeding: For periods March 1 thru April 30 and from August 15 thru 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 asphalt 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 rate and methods not covered.

STORMWATER MANAGEMENT FACILITY OPERATIONS AND MAINTENANCE GUIDELINES

Operations:

1. Owner shall keep accurate records of inspections and maintenance type repairs. These records should also include a copy of the "as-built" plans and small pond summary sheet.
2. Owner shall make a visual inspection of the facility at least twice a year. Once in the summer after the facility has been mowed and during the winter when the vegetation is inactive. Additional inspections shall be made during and after extreme rainfalls.
3. During the extreme weather or rainfall events, the owner shall check for overtopping, seepage, or dam failure. In order to avoid overtopping, either place sandbags on top of the embankment or lower the water elevation by using a dewatering device.
4. If a severe problem develops, the owner shall contact a Professional Engineer to assess the problem and make a suggestion to remedy the situation. The Howard Soil Conservation District or Maryland Dam Safety Division shall be contacted before major repairs are made.

Maintenance

During the semi-annual visual inspections, the following items must be checked and documented by the owner:

I. Spillways and Outlet Device
   1. Pipes – check for sagging, misalignment, gaps at joints, cracks, leaks, and wear along inside surface of pipes. Also remove any blockages.
   2. Trash Racks – inspect and replace if necessary. Actual time for removal of trash racks should be limited. Trash racks shall be painted once a year.
   3. Concrete Surfaces – check for cracks or any other signs of failure.
   4. Forebay and Spillway – check for stone & wire mesh deterioration or loss and spillway failure.
   5. Rip Rap Outlet – check for stone deterioration or stone loss.
   6. Dewatering Device – remove blockages.

II. Embankments
   1. Vegetation – proper vegetative cover is required on all embankments. The owner shall follow proper seeding specifications for reseeding.
   2. Trees and Brush – trees and brush shall be removed from the embankment. Stumps can be removed using silvicide.
   3. Mowing – mowing is necessary to control the establishment of woody growth and to maintain the vegetative cover. The embankment, a 25-foot wide (except in wetland/stream buffers) strip adjacent to the toe, upstream and downstream of the embankment, and the area within 50 feet of the control structures need to be mowed. Mowing shall be done at least once a year (mid to late summer) but may be done more often.
   4. Seepage – the following warning signs should be looked for when inspecting for seepage problems: cracks (longitudinal and vertical), soft spots or boggy areas on downstream embankment, seepage along downstream toe of embankment.
   5. Stability – large cracks, slides, sloughing and excessive settlement are signs of embankment instability and a need for repair. Repairs must be approved by Howard Soil Conservation District.
   6. Rodents – check for burrows, which can lead to seepage, and remove rodents when encountered.

Note: All stormwater management facility construction shown on these plans shall be performed under the supervision of an approved Maryland registered geotechnical engineer who is responsible for certifying that the construction of the facilities is in accordance with these plans and specifications at the completion of the construction. Gutschick, Little & Weber will provide the as-built survey of the surface features of the facilities.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 7/3/99

Chief, Division of Land Development and Research — Date 3/3/99

Chief, Development Engineering Division MK — Date 3/6/99

Owner Parcels T-4 & T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn.: Al Edwards
410-992-6027

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction~~, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.~~"

STATE OF MARYLAND — CARLTON K. GUTSCHICK — No. 12973 — REGISTERED PROFESSIONAL ENGINEER

11-20-98 Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. ~~I will engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.~~ I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer/Builder — 11/23/98 Date

These Plans for ~~small pond construction~~, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District — 2/25/99 Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction~~, soil erosion and sediment control.

Natural Resources Conservation Service — 2/25/99 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES. | DRN. | CHK.

DATE	REVISION	BY	APP'R.
12-22-98	Rev Per Ho. Co. Comments	WEJ	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
(202) 289-1401

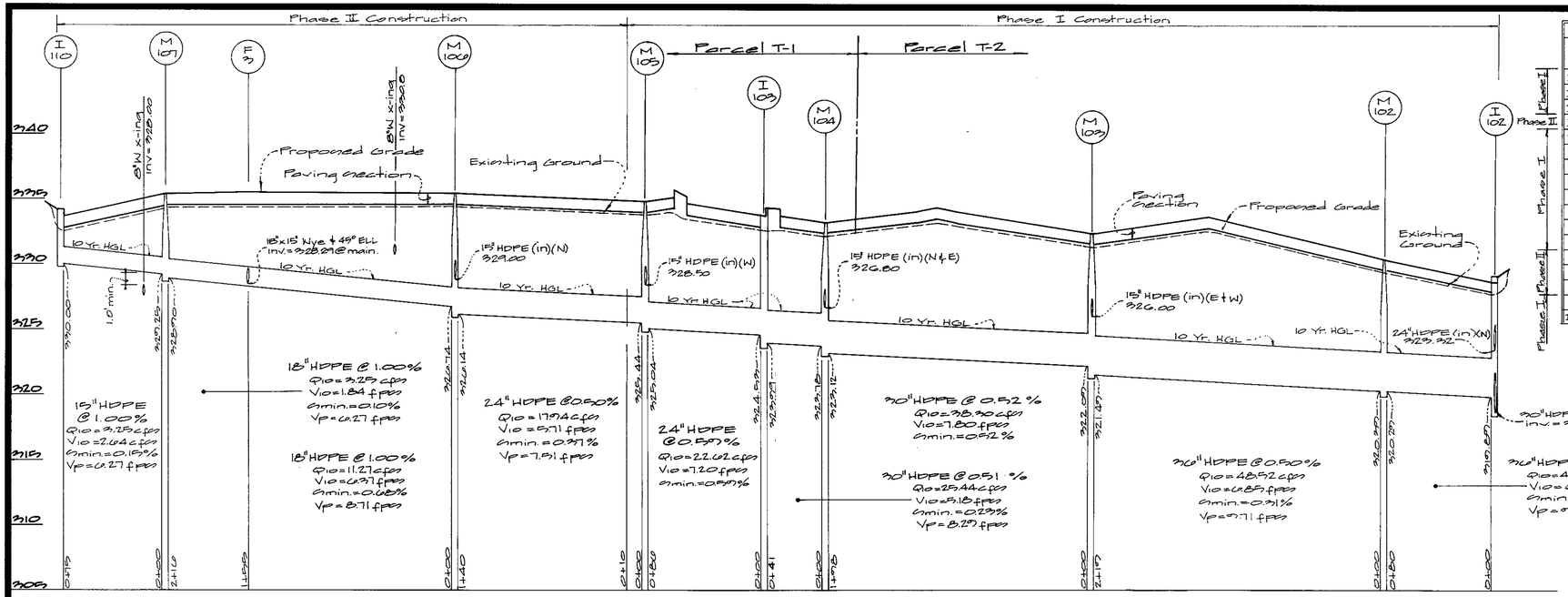
STORMWATER MANAGEMENT NOTES / SEDIMENT CONTROL NOTES

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464

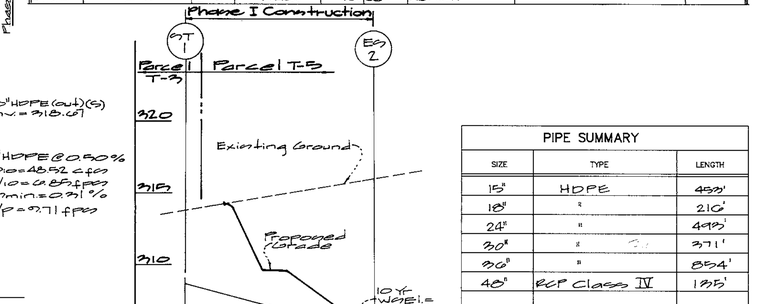
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP – GRID	SHEET
NOVEMBER 1998	43 1,2,7,8	16 OF 22

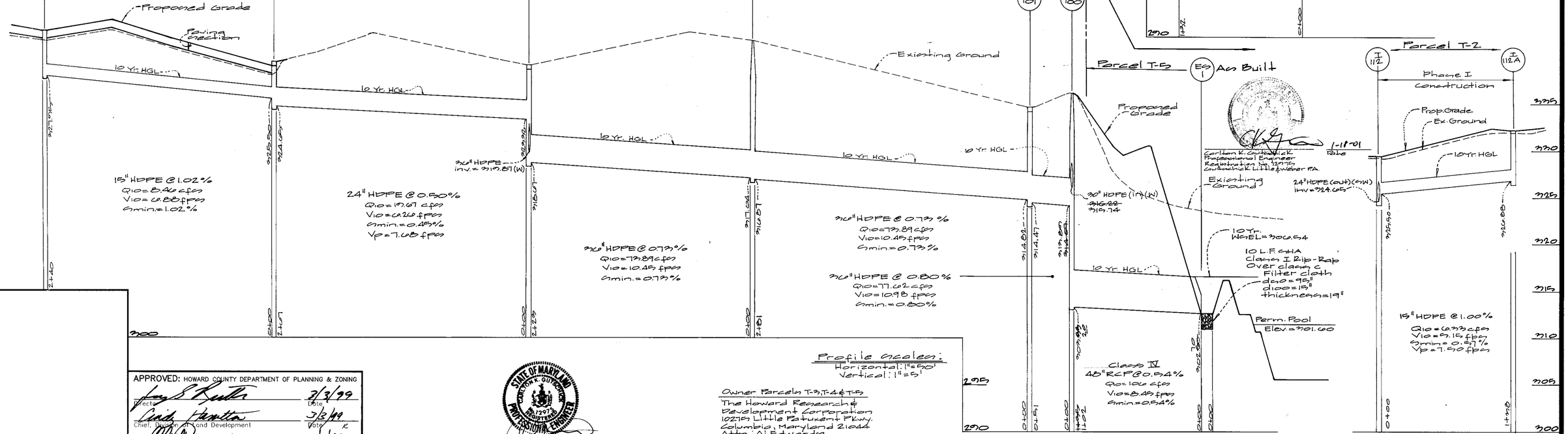
SDP 99-54



NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION UPPER	TOP ELEVATION LOWER	INVERT ELEVATION UPPER	INVERT ELEVATION LOWER	STD. DETAIL	LOCATIONS	REMARKS
I-101	A-10	4'-0"	324.00		314.82	314.47	C.D. 4.41	See Plan	
I-102	A-10	4'-0"	329.12		323.92	318.67	C.D. 4.41		
I-103	WR	2'-0 7/8"	331.22		324.53	323.93	C.D. 4.98		
I-110	A-10	2'-0"	334.14		——	330.00	C.D. 4.41		
I-112	A-10	4'	329.50		325.50	324.65	S.D. 4.41		
I-113	Triple WR	2'-0 1/8"	332.77 (grade)		——	327.95	MD. SHA NO. MD. 374.46		
M-100	Manhole	6'	326.22=24		316.22	309.92			
M-101		5'	331.75		317.04	316.67	C.D. 5.11 & C.D. 5.12		
M-102		5'	330.90		320.97	320.25			
M-103		5'	332.35		326.00	321.49			
M-104		5'	333.14		328.80	328.12			
M-105		5'	334.78		328.50	328.04			
M-106		4'	333.93		329.00	328.14	C.D. 5.11 & C.D. 5.12		
M-107		4'	333.36		329.25	328.80			
F3	Wye Fitting	15"*		——	328.29		HDPE Wye (Fabricated)		
EG-1	End Section	48"		——	307.50		C.D. 5.51 or C.D. 5.52		
I 112A	A-10	2'-0"	332.20		328.20		C.D. 4.41		



PIPE SUMMARY		
SIZE	TYPE	LENGTH
15"	HDPE	459'
18"	"	210'
24"	"	495'
30"	"	371'
36"	"	854'
48"	RCP Class IV	195'



Profile Scales:
Horizontal: 1"=50'
Vertical: 1"=5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/2/99
Chief, Development Engineering Division MK	Date 3/2/99

STATE OF MARYLAND — CARLTON K. GUTSCHICK — NO. 12770 — REGISTERED PROFESSIONAL ENGINEER

Owner Parcels T-3, T-4 & T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn.: Al Edwards
410-992-6027

Owner Parcels T-1 & T-2 & Developer
Orix: Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
202-289-1401

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\9806\9806SDB | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
1/19/01	As Built	WJ	
12/22/98	Rev. Per Ho. Co. Comments	WJ	

Storm Drain Profiles

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13402 thru 13404

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
November, 1998	43 1,2,7,8	17 OF 22

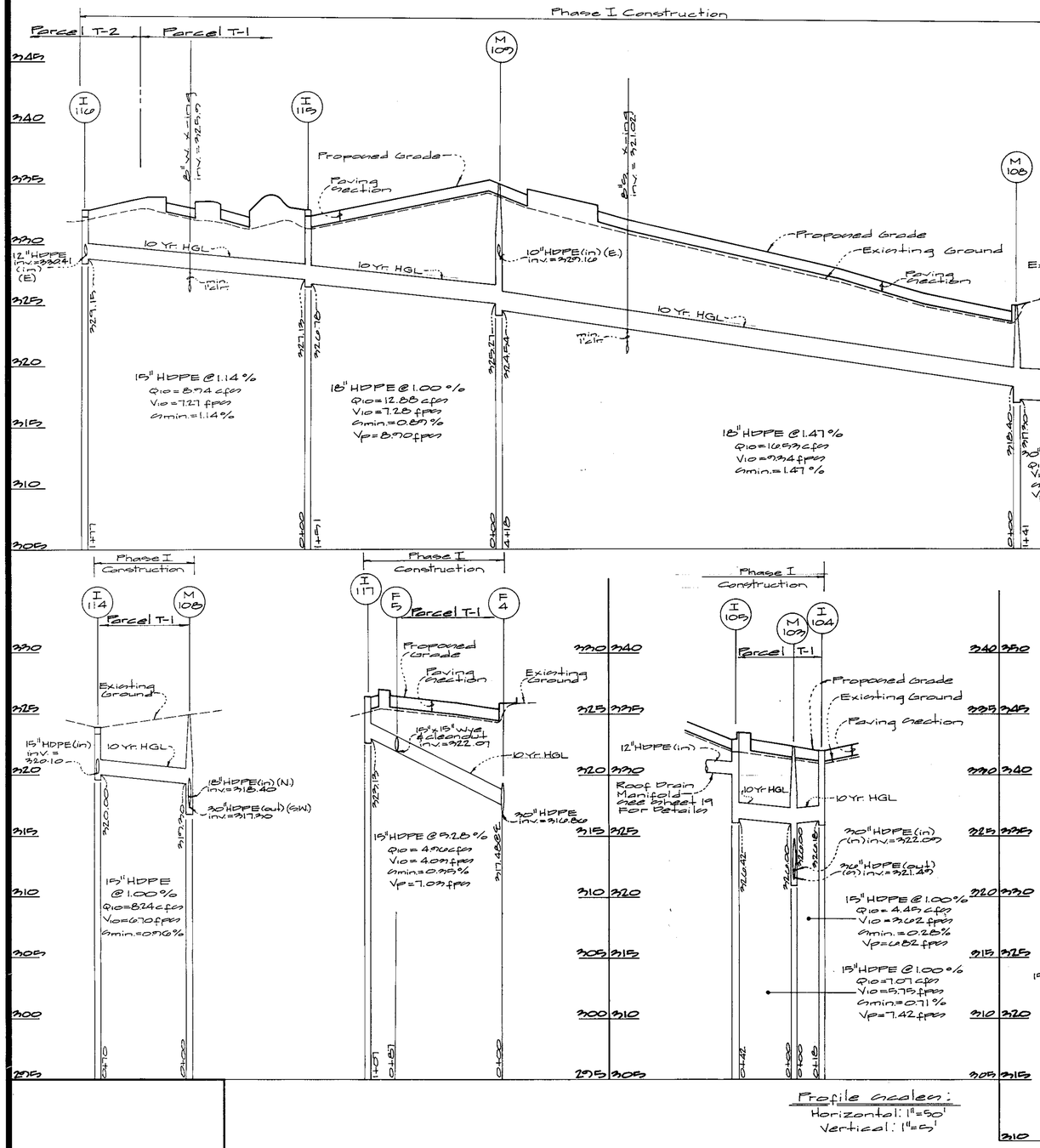
GDP 99-54

PIPE SUMMARY

SIZE	TYPE	LENGTH
15"	HDPE	846'
18"	↓	151'
30"	↓	185'

STRUCTURE SCHEDULE

NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION UPPER	TOP ELEVATION LOWER	INVERT ELEVATION UPPER	INVERT ELEVATION LOWER	STD. DETAIL	LOCATIONS	REMARKS
I-100	A-10	4'-0"	332.70		316.50	316.39	CO. 4.41	See Plan	
I-104	Double 'B'	2'-7½"	332.02(grate)	—	326.18	CO. 4.23			Fc. Alt. Acceptable
I-105	WR	2'-0⅜"	333.42	330.00	326.42	CO. 4.38			
I-106	Double 'B'	2'-7½"	332.77(grate)	—	327.00	CO. 4.23			Fc. Alt. Acceptable
I-107	Double 'B'	2'-7½"	334.00(grate)	—	328.85	CO. 4.23			" "
I-108	A-10	2'-0"	334.82	—	329.30	CO. 4.41			
I-109	A-10	2'-0"	334.82	—	328.71	CO. 4.41			
I-111	WR	2'-0⅜"	334.82	—	331.00	CO. 4.38			
I-111A	WR	2'-0⅜"	335.20	330.95	328.78	CO. 4.38			
I-114	A-15	2'-0"	329.83	—	321.00	MD 394A MD 394B			
I-115	A-10	2'-0"	332.81	327.13	326.78	CO. 4.41			
I-116	A-10	2'-0"	332.74	—	327.15	CO. 4.41			
I-117	WR	2'-0⅜"	332.72	—	329.15	CO. 4.38			
M-108	Manhole	5'	329.00	316.40	311.90	CO. 5.11 & CO. 5.12			
M-109	Manhole	4'	334.99	325.27	324.54	CO. 5.11 & CO. 5.12			
I-114A	A-10	2'-0"	326.30	—	322.10	STD. 4.41			



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 2/7/99

Chief, Division of Land Development — Date 3/5/99

Chief, Development Engineering Division MK — Date 2/26/99

STATE OF MARYLAND — CARLTON K. GUTSCHICK — 12078 — REGISTERED PROFESSIONAL ENGINEER

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\9806\A\9806ST30 | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
12-22-98	Rev. Per Ho. Co. Comments	WJ	
12-8-98	Added Water crossings & sewer x-ing	WJ	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
202-289-1401

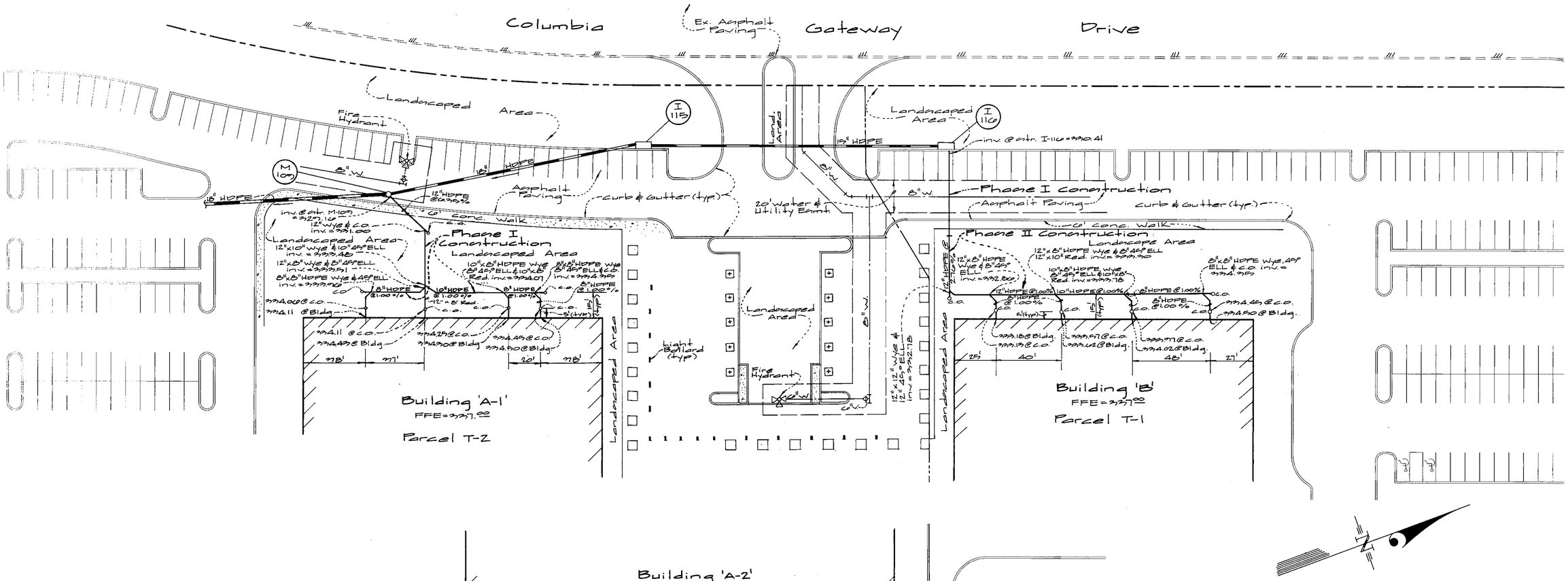
Storm Drain Profiles

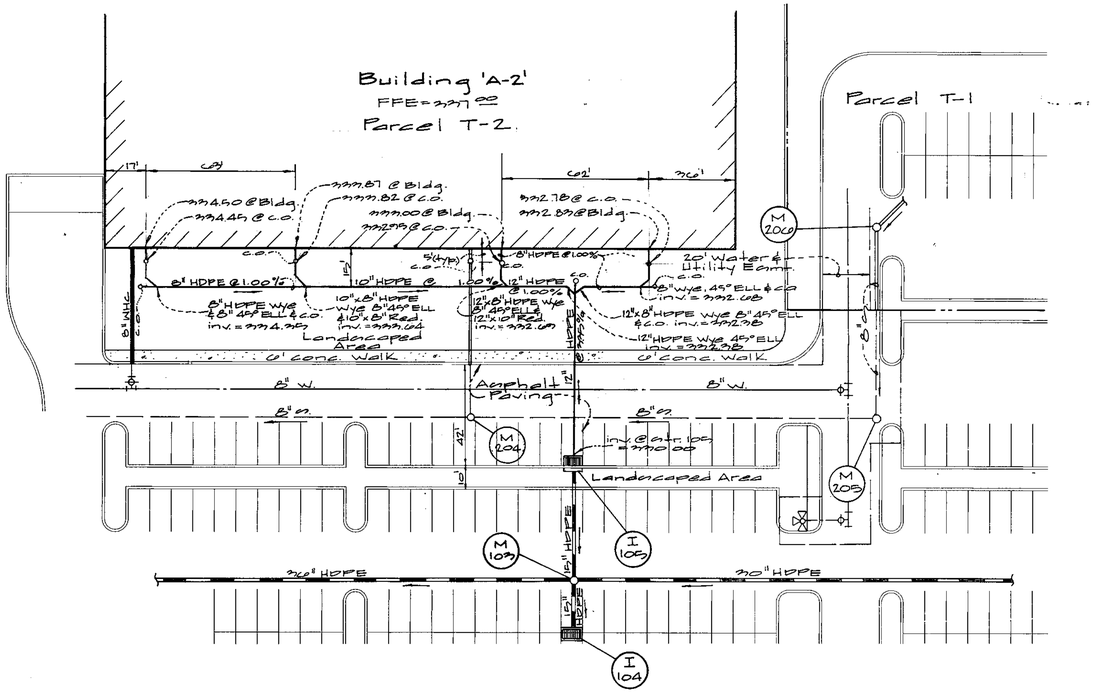
COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13402 thru 13404

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
November, 1998	43 1,2,7,8	18 OF 22

SDP 99-54





APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/2/99

Chief, Development Engineering Division MK — Date 3/2/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067SDD | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
1/8/99	Rev. G.D. + Water Locations Bldg. A-1 & A-2	Gt.	
12/8/98	Rev. Water, remove FH & Add FH	WGJ	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
(202) 289-1401

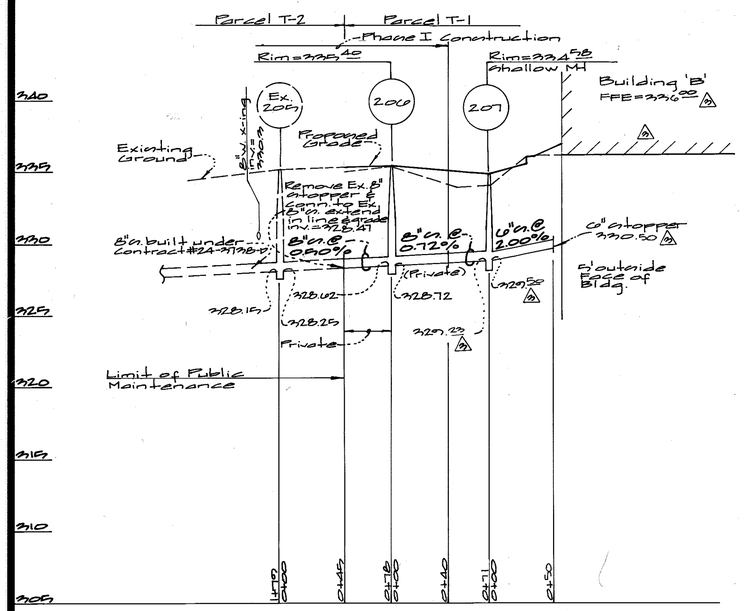
STORM DRAIN MANIFOLD PLAN

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
PLAT No. 13462 thru 13464

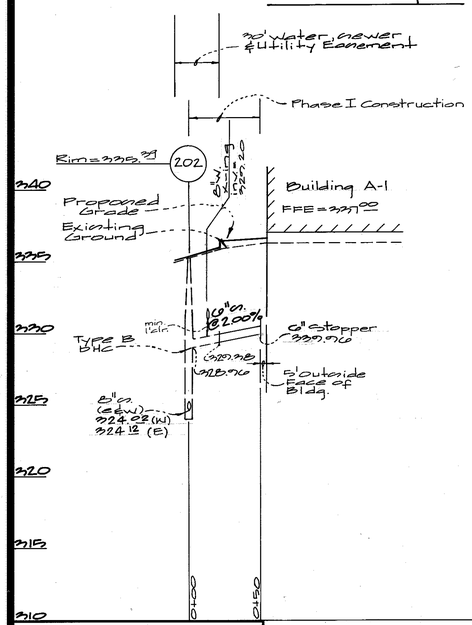
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 30'	M-1	98067
DATE	TAX MAP - GRID	SHEET
Nov., 1998	43 1,2,7,8	19 of 22

SDP 99-54



Sewer Profile



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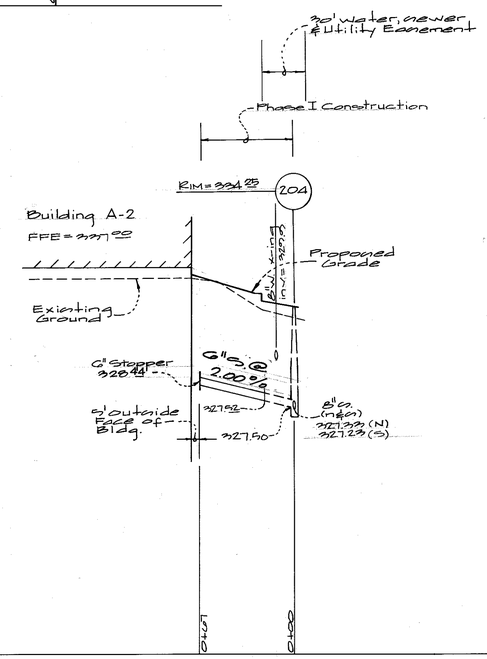
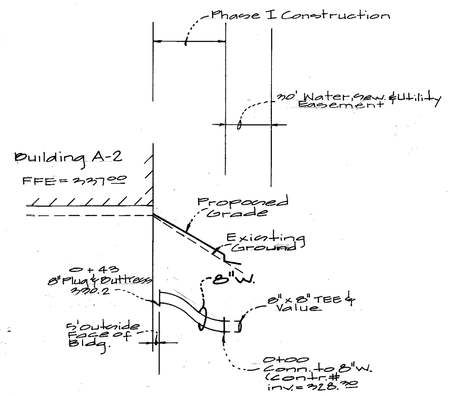
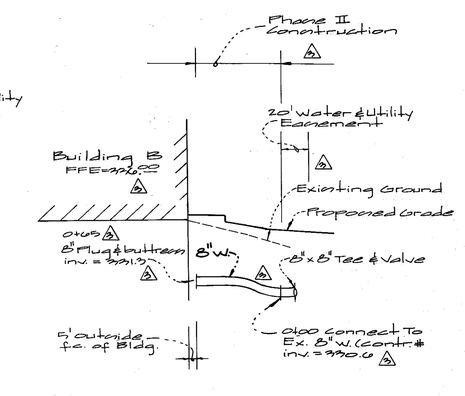


Sewer Profile





Water Profile

Profile Scales:
Horizontal: 1" = 50'
Vertical: 1" = 5'

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
Lloyd Roth

FOR 09/06/16 REVISION ONLY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/3/99
Chief, Development Engineering Division MK	Date 3/2/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067SDD | DES. WJ | DRN. WJ | CHK.

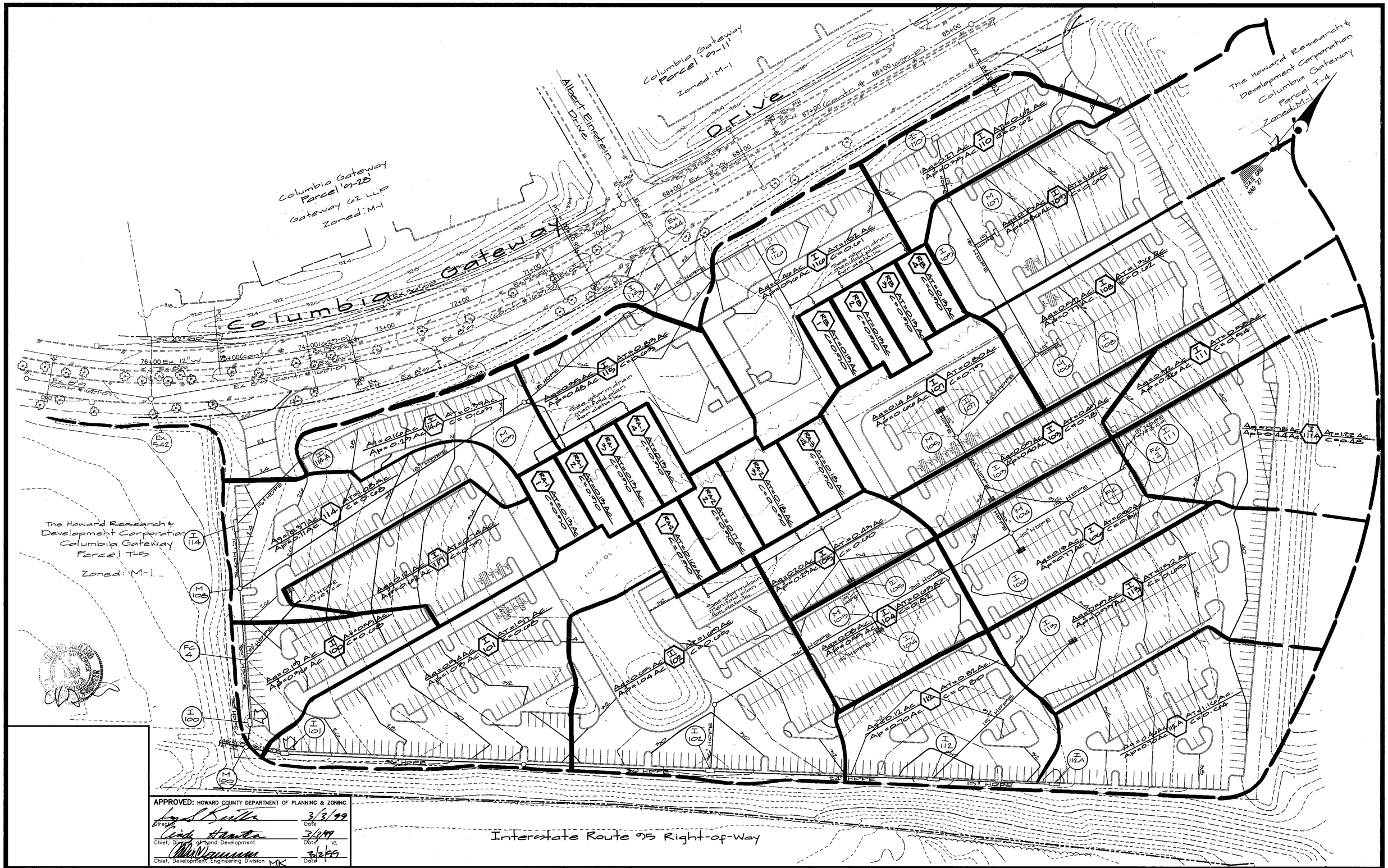
DATE	REVISION	BY	APP'R.
09/06/16	REVISED PLAN TO ELIMINATE PREVIOUSLY SHOWN GREASE TRAP NOTES AND DETAILS AND SANITARY PROFILE OF THE CONECTION TO BUILDING A-2		
9/21/00	Rev. Water & Sewer Profile For T-1	WJ	
1/15/99	Remove Sewer Profile that will be Public	WJ	
1/8/99	Rev. MH 202 Location to accomodate revised Loc. of Sewer Line	GT	
12/8/98	Add Water x-ings G.P. x-ing & Lower Sew. MH 201 to MH 202	WJ	

Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL 60606
(312) 669-6445

Utility Profiles
COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
& Plat No. 18716
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
November, 1998	43 1,2,7,8	20 OF 22

SDP 99-54



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/4/99

Chief, Development Engineering Division MK — Date 3/2/99

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\98067SP1.DWG	DES.	DRN. W.J	CHK.

DATE	REVISION	BY	APP'R.
12/22/98	Rev. Per Ho. Co. Comments	WGJ	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 Hstreet NW.
SUITE 550
WASHINGTON, D.C. 20005
202-289-1401

Storm Drain Drainage Area Map

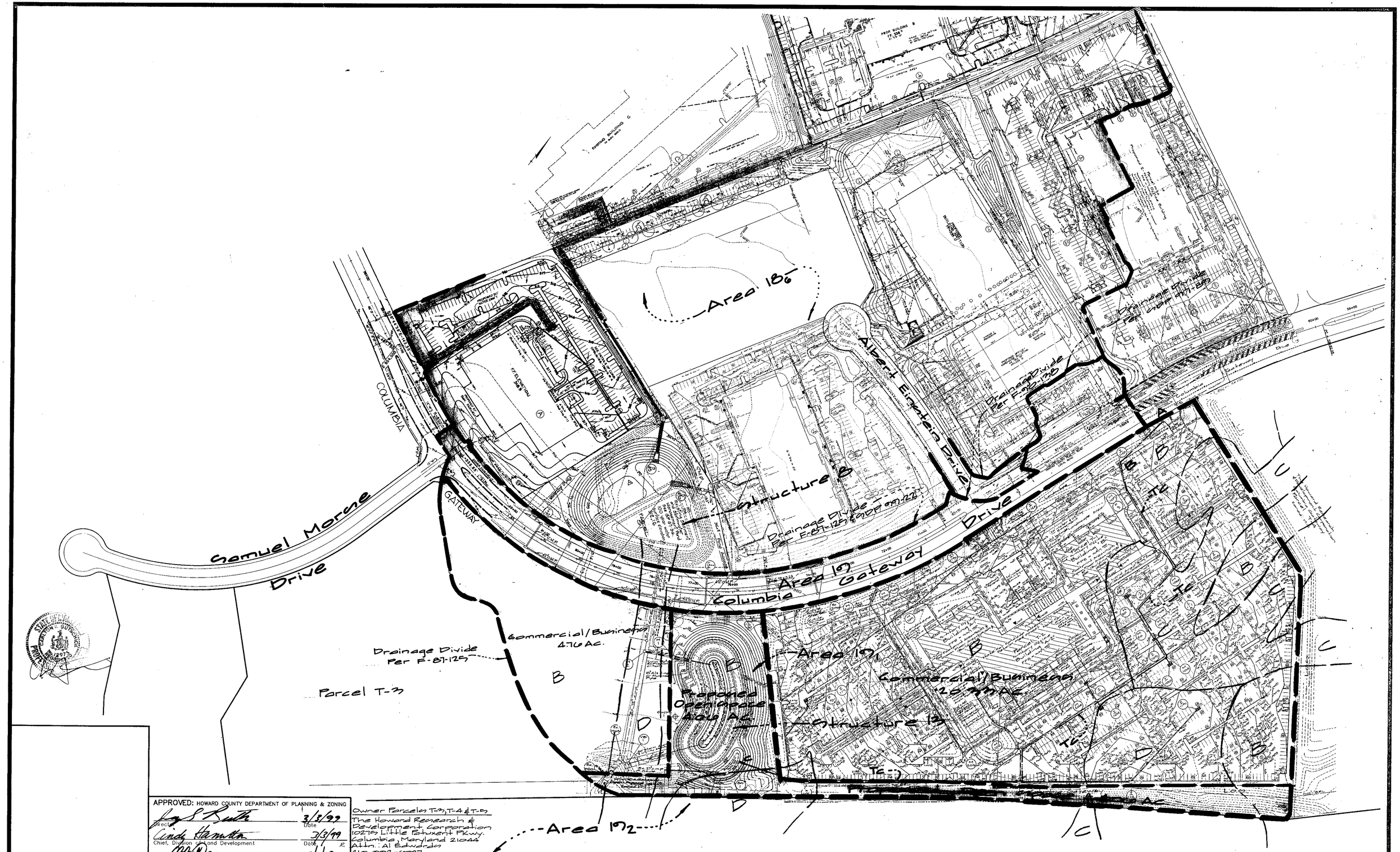
COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 & T-5
Plat No. 13402 thru 13404

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP - GRID	SHEET
November, 1998	43 - 1,2,7,8	21 OF 22

SDP 99-54



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/3/99
Chief, Development Engineering Division MK	Date 3/2/99

Owner Parcels T-3, T-4 & T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn: Al Edwards
410-992-6027

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
(202) 289-1401

Proposed

STORMWATER MANAGEMENT DRAINAGE AREA MAP

COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 and T-5
Plat No. 13402 thru 13404

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	M-1	98067
DATE	TAX MAP - GRID	SHEET
NOVEMBER 1998	43-1,2,7,8	22 OF 22

SDP 99-54

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT. 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\XXXXX\..... | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.

COLUMBIA GATEWAY
PARCELS T-1, T-2, T-4 & T-5
SITE DEVELOPMENT PLAN

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 Department of Public Works, 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. The contractor shall notify the Howard County Department of Public Works, Bureau of Utilities at (410) 313-4900 at least five (5) working days prior to starting any excavation work.
5. Site area: Parcel T-1 = 5.7588 acres
   Parcel T-2 = 14.5674 acres.
6. All plan dimensions are to face of curb unless otherwise noted.
7. Existing topography is shown per field run survey information by Gutshcick, Little Weber, P.A. August 1998
8. Coordinates and bearings are based upon the MD State plane system (NAD '27).
9. Water and sewer shown is public.
10. Stormwater management for this site is proposed on Parcel T-5
11. All existing water and sewer is per Contracts 24-1629-D and 24-3748-D.
12. All existing public storm drain is per F-87-125 and F-86-182.
13. All curb radii is 5' unless noted otherwise.
14. Sidewalks adjacent to perpendicular parking shall be 6' wide. All other sidewalks shall be 4' wide except where dimensioned otherwise.
15. Contractor shall utilize PVC pipe for all sewer house connections. Contractor shall utilize D.I.P. (CL 51) for water house connections.
16. Use trench bedding class "C" for storm drains.
17. Paved areas indicated are private except as noted.
18. Project background: See Dept. of Planning & Zoning File Numbers: VP-84-150, VP-85-34, VP-85-35, S-84-44, F-85-63, P-86-22, VP-86-22, VP-86-61, VP-86-73, F-86-17, S-85-28, F-86-182, VP-86-110, WP-88-47, F-87-125 & WP-99-34
19. Recording reference: Plat Nos. 13462 thru 13464
20. All proposed ramps shall be in accordance with current A.D.A. standards. Maximum sidewalk cross slope shall be two percent. Provide a five-foot by five-foot level (2 percent max.) landing at the top and bottom of all ramps and building entrances and exits.
21. All proposed water meters shall be located inside buildings.
22. All proposed site utilities are to terminate 5' from the building. The building plumber shall connect to and extend these utilities to the inside of the building.
23. Existing utilities are based on approved design plans for construction and field location by Gutschick, Little & Weber, P.A.
24. There is no floodplain on Parcel T-1 or Parcel T-2.
25. There are no wetlands on Parcel T-1 or Parcel T-2.
26. All exterior lighting will comply with Zoning Regulations section 134.
27. (2) On February 28, 2001, WP 01-82, a waiver of section 16.156(m)(1) which requires that within 2 years of signature approval of the site development plan original, the developer shall apply to the Department of Inspections, Licenses & Permits for building permits for all construction on the site and section 16.156(m)(2) which states that if the developer does not apply for building permits within 2 years of signature approval of the site development plan, the plan shall expire and a new site development plan will be required was approved. Subject to one condition on the approval letter.
28. (2) On March 22, 2002, WP 02-70, a waiver of section 16.156(m)(2) to reactivate SDP 99-54 & grant a one year extension to apply for building permit(s) for Parcel T-1 was approved. Subject to two conditions in the approval letter.

Site Analysis

1. Site Area: 158.114 Ac.
   Parcel T-1: 5.7588 Ac.
   Parcel T-2: 14.5674 Ac.
   Combined Total: 20.3262 Ac. (T-1 and T-2)
2. Site Zoning: M-1
3. Limit of submission Area: 31.5 Ac.
4. Building Coverage:
   Parcel T-1: 7.84%
   Parcel T-2: 7.90%
   Combined: 7.88%
5. Floor Area Ratio:
   Parcel T-1: 0.4178 *
   Parcel T-2: 0.3930 **

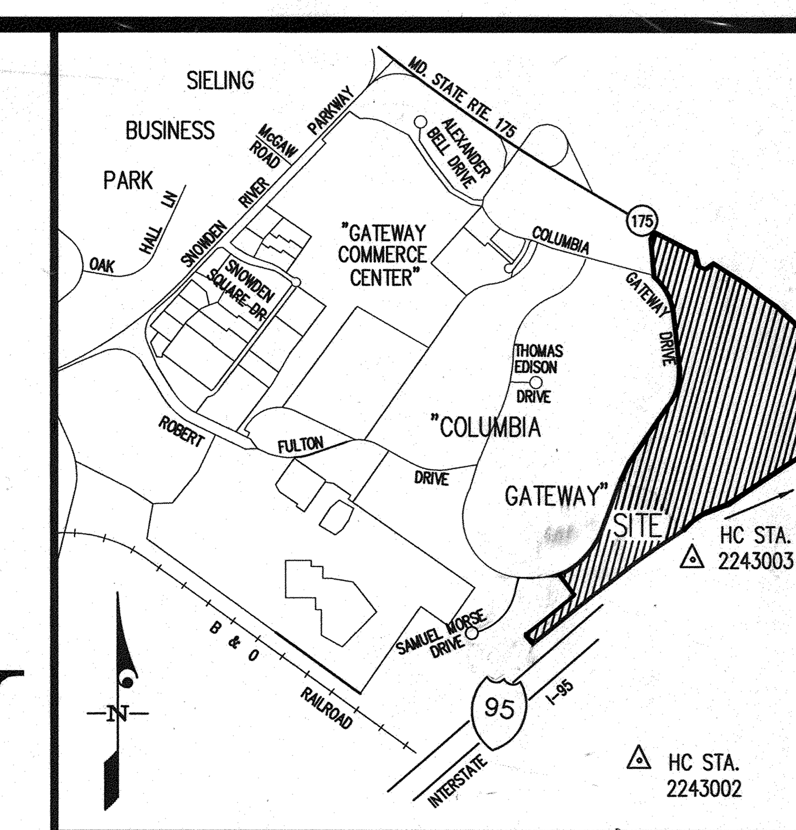
*Net Building Area Parcel T-1: 104,803 sf
**Net Building Area Parcel T-2: 249,408 sf

6. Parking Tabulation:

Parcel T-1
Gross Floor Area: 110,198 s.f.
Req'rd. Parking spaces: 3.3/1000x110,198=364 spaces
Req'rd. Handicap spaces: 9 spaces
Req'rd. Handicap Van spaces: 2 spaces
Proposed Parking spaces (Total): 409 spaces
Proposed Handicap spaces: 9 spaces
Proposed Handicap Van spaces: 1 space

Parcel T-2
Gross Floor Area: 263,063 s.f.
Req'rd. Parking spaces: 3.3/1000x263,063 = 869 spaces
Req'rd. Handicap spaces: 20 spaces
Req'rd. Handicap Van spaces: 3 spaces
Proposed Parking spaces (Total) 1016 spaces
Proposed Handicap spaces: 20 spaces
Proposed Handicap Van spaces: 3 spaces
Phase I Proposed Parking spaces: (Total): 1040 spaces
Phase I Proposed Handicap spaces: 20 spaces
Phase I Proposed Handicap Van spaces: 3 spaces

Combined:
Gross Floor Area: 373,261 s.f.
Req'rd. Parking spaces: 3.3/1000x373,261=1,232 spaces
Req'rd. Handicap spaces: 28 spaces
Req'rd. Handicap Van spaces: 4 spaces
Proposed Parking spaces (Total): 1,416 spaces
Proposed Handicap spaces: 29 spaces
Proposed Handicap Van spaces: 4 spaces



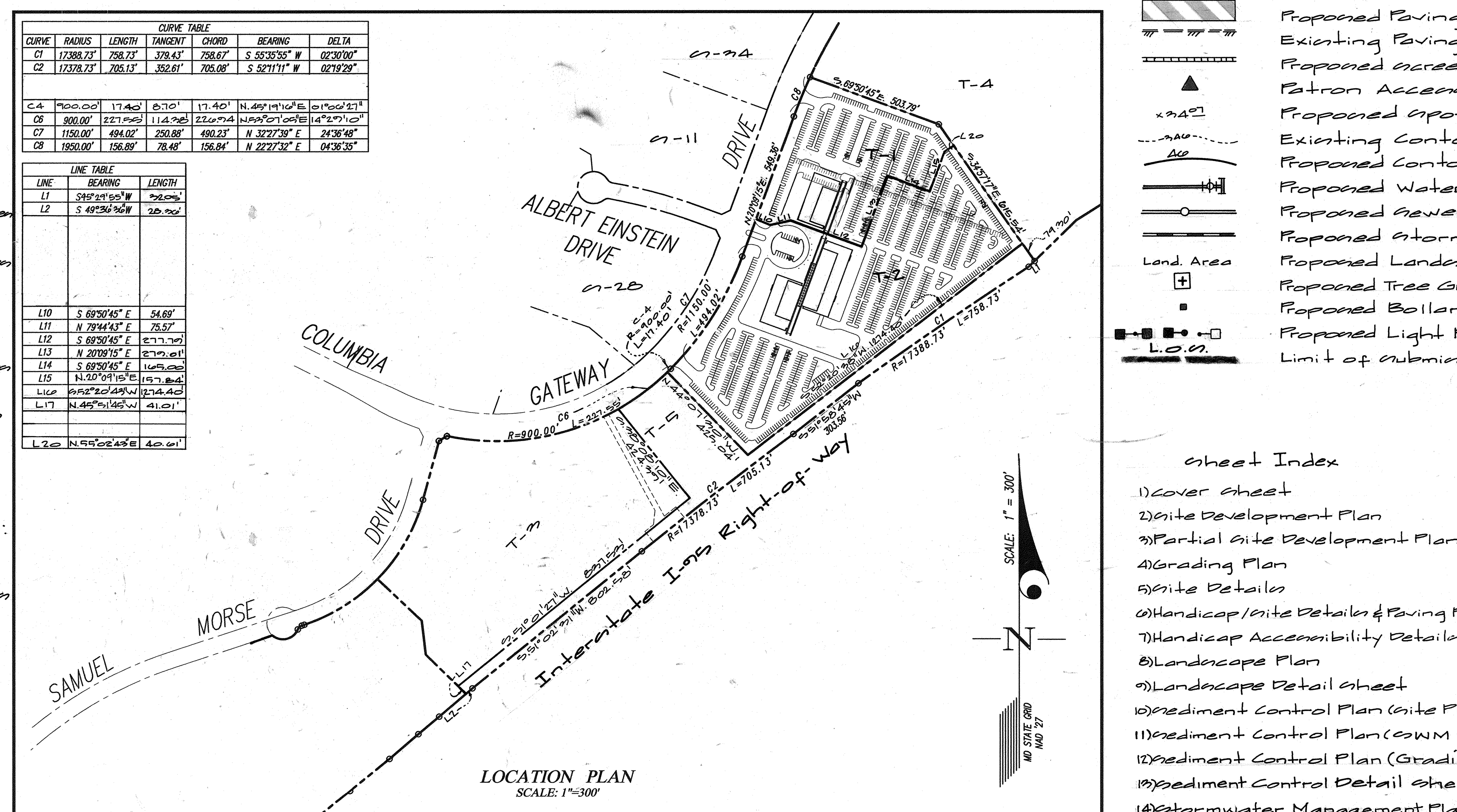
VICINITY MAP
1"=2000'

Legend

- Standard curb & Gutter
- Reverse Curb & Gutter
- Depressed curb Entrance (Flush curb & Gutter)
- Header Curb
- Proposed Sidewalk (conc.)
- Proposed Paving in Right of Way (P-5 Paving)
- Existing Paving
- Proposed Screen Wall
- Patron Access
- Proposed Spot Elev. (x34.07)
- Existing Contour
- Proposed Contour
- Proposed Water Connection
- Proposed Sewer Connection
- Proposed Storm Drain
- Proposed Landscape Area (Land. Area)
- Proposed Tree Grates
- Proposed Bollard Lights
- Proposed Light Pole
- Limit of Submission (L.O.S.)

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	17388.73'	758.73'	379.43'	758.67'	S 55°35'55" W	02°30'00"
C2	17378.73'	705.13'	352.61'	705.08'	S 52°11'11" W	02°19'29"
C4	900.00'	17.40'	8.70'	17.40'	N.45°19'16"E	01°06'27"
C6	900.00'	227.55'	114.38	226.94	N.53°07'09"E	14°29'10"
C7	1150.00'	494.02'	250.88'	490.23'	N 32°27'39" E	24°36'48"
C8	1950.00'	156.89'	78.48'	156.84'	N 22°27'32" E	04°36'35"

LINE TABLE		
LINE	BEARING	LENGTH
L1	S45°29'55"W	32.05'
L2	S 49°36'36"W	28.30'
L10	S 69°50'45" E	54.69'
L11	N 79°44'43" E	75.57'
L12	S 69°50'45" E	277.79'
L13	N 20°09'15" E	279.01'
L14	S 69°50'45" E	165.00'
L15	N.20°09'15"E	157.84'
L16	S52°20'43"W	1274.40'
L17	N.45°51'45"W	41.01'
L20	N.55°02'43"E	40.61'



LOCATION PLAN
SCALE: 1"=300'

Benchmark #1
Traverse Station 912
Elevation = 319.31

Benchmark #2
Traverse Station 914
Elevation = 334.09

Sheet Index

1) Cover Sheet
2) Site Development Plan
3) Partial Site Development Plan
4) Grading Plan
5) Site Details
6) Handicap/Site Details & Paving Plan
7) Handicap Accessibility Details
8) Landscape Plan
9) Landscape Detail Sheet
10) Sediment Control Plan (Site Plan)
11) Sediment Control Plan (SWM Plan)
12) Sediment Control Plan (Grading Plan)
13) Sediment Control Detail Sheet
14) Stormwater Management Plan & Details
15) Stormwater Management Details
16) Stormwater Management/Sediment Control Notes
17) Storm Drain Profiles
18) Storm Drain Profiles
19) Storm Drain Manifold Plan
20) Utility Profiles
21) Drainage Area Map (Storm Drain)
22) Drainage Area Map (SWM)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director (signature)	Date 3/3/99
Chief, Division of Land Development (signature)	Date 3/3/99
Chief, Development Engineering Division (signature) MK	Date 3/2/99

STATE OF MARYLAND — CARLTON K. GUTSCHICK — No. 12975 — REGISTERED PROFESSIONAL ENGINEER

Owner/Parcels T-3, T-4 & T-5
The Howard Research and Development Corporation
10275 Little Patuxent Parkway
Columbia, Maryland 21044
Attn.: Al Edwards
(410) 992-6027

ADDRESS CHART	
PARCEL NUMBER	STREET ADDRESS
T-1	Bldg. B 7021 Columbia Gateway Dr.
T-2	Bldg. A-1 7041 Columbia Gateway Dr. Bldg. A-2 7031 Columbia Gateway Dr.

WATER CODE:	SEWER CODE:				
E06	3380000				
SUBDIVISION NAME: COLUMBIA GATEWAY			SECTION/AREA N/A		PARCELS T-1 & T-2
PLAT 13462 thru 13464	ZONE M-1	TAX MAP 43	BLOCK 1 & 7	ELEC. DIST. 6	CENSUS TRACT 6067.03

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\98067C1.DWG | DES. SJG | DRN. CAD | CHK. MJT

DATE	REVISION	BY	APP'R.
5/8/02	Add detailed notes for WP 01-82 & WP 02-70 (2)		

Owner/Parcels T-1 & T-2 and Developer
Orix Columbia Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
(202)-289-1401

COVER SHEET
COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP – GRID	SHEET
November, 1998	43	1 OF 22

SDP 99-54

Developer's/Builder's Certificate

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Name _____ Date 2/9/99

NOTE: THIS PLAN WAS PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND CHAPTER VI (ALTERNATIVE COMPLIANCE) OF THE HOWARD COUNTY LANDSCAPE MANUAL. SEE SHEET 5 FOR SHEET FOR SURETY CALCULATIONS.

Note: Exterior lighting shall comply with Zoning Regulations, Section 134.

NOTE: FOR STORMWATER MANAGEMENT FACILITY LANDSCAPING SEE SHEET 9 & 14

LEGEND

- 27' POLE WITH TWO FIXTURES W/400W METAL HALIDE LAMP
- 27' POLE WITH ONE FIXTURE W/400W METAL HALIDE LAMP
- 10' POLE WITH ONE FIXTURE W/400W METAL HALIDE LAMP

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/3/99

Chief, Development Engineering Division MK — Date 3/2/99

Interstate Route 95 Right-of-Way

NOTE: THIS PLAN IS FOR LANDSCAPING & LIGHTING PURPOSES ONLY!

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

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DATE	REVISION	BY	APP'R.
1/21/01	Revise Landscaping for certification	GT.	
1/6/99	Revise Landscaping		

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
(202) 289-1401

LANDSCAPE & LIGHTING PLAN

COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 & T-5
Plat No. 13460 thru 13464

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP - GRID	SHEET
November 1998	43 - 1,2,7,8	8 OF 22

SDP 99-54

PLANT MATERIALS AND PLANTING METHODS

A. Plant Materials

The landscape contractor shall furnish and install and/or dig, ball, burlap and transplant all of the plant materials called for on drawings and/or listed in the Plant Schedule.

1. Plant Names

Plant names used in the Plant Schedule shall conform with "Standardized Plant Names," latest edition.

2. Plant Standards

All plant material shall be equal to or better than the requirements of the "USA Standard for Nursery Stock" latest edition, as published by the American Association of Nurserymen (hereafter referred to as AAN Standards). All plants shall be typical of their species and variety, shall have a normal habit of growth and shall be first quality, sound, vigorous, well-branched and with healthy, well-furnished root systems. They shall be free of disease, insect pests and mechanical injuries.

All plants shall be nursery grown and shall have been grown under the same climate conditions as the location of this project for at least two years before planting. Neither heeled-in plants nor plants from cold storage will be accepted.

3. Plant Measurements

All plants shall conform to the measurements specified in the Plant Schedule as approved by the ARC.

a. Caliper measurements shall be taken six inches (6") above grade for trees under four-inch (4") caliper and twelve (12") above grade for trees four inches (4") in caliper and over.

b. Minimum branching height for all trees shall be six feet (6'), maximum eight feet (8').

c. Minimum size for planting shade trees shall be 3–3 1/2" caliper, 14'–16' in height.

d. Minimum size for planting minor or intermediate focus trees (pines, crabapples, etc.) shall be 3"–3 1/2" caliper, 10'–12' in height.

e. Minimum size for planting shrubs shall be 18" – 24" spread unless noted otherwise.

f. Caliper, height, spread and size of ball shall be generally as follows:

CALIPER	HEIGHT	SPREAD	SIZE OF BALL
3" – 3 1/2"	14'–16'	6'–8'	32" diameter
3 1/2"– 4"	14'–16'	8'–10'	36" diameter
4" – 4 1/4"	16'–18'	8'–10'	40" diameter
4 1/2"– 5"	16'–17'	10'–12'	44" diameter
5" – 5 1/2"	16'–20'	10'–12'	48" diameter
5 1/2"– 6"	18'–20'	12'–14'	52" diameter

All plant material shall generally average the median for the size ranges indicated above as indicated in the "AAN Standards".

4. Plant Identification

Legible labels shall be attached to all shade trees, minor trees, specimen shrubs and bundles or boxes of other plant material giving the botanical and common names, size and quantity of each. Each shipment of plants shall bear certificates of inspection as required by Federal, State and County authorities.

5. Plant Inspection

The ARC may, upon request by the builder or developer, at least ten (10) days prior to the installation of any proposed plant material, inspect all proposed plant material at the source of origin.

B. Planting Methods

All proposed plant materials that meet the specifications in Section A are to be planted in accordance with the following methods during the proper planting seasons as described in the following:

1. Planting Seasons

The planting of deciduous trees, shrubs and vines shall be from March 1st to June 15th and from September 15th to December 15th. Planting of deciduous material may be continued during the winter months providing there is no frost in the ground and frost-free topsoil planting mixtures are used.

The planting of evergreen material shall be from March 15th to June 15th and from August 15th to December 1st. No planting shall be done when ground is frozen or excessively moist. No frozen or wet topsoil shall be used at any time.

2. Digging

All plant material shall be dug, balled and burlapped (B+B) in accordance with the "AAN Standards".

3. Excavation of Plant Pits

The landscaping contractor shall excavate all plant pits, vine pits, hedge trenches and shrub beds in accordance with the following schedule:

a. Locations of all proposed plant material shall be staked and approved in the field by the landscape architect before any of the proposed plant material is installed by the landscape contractor.

b. All pits shall be generally circular in outline, vertical sides; depth shall not be less than 6" deeper than the root ball, diameter shall not be less than two times the diameter of the root ball as set forth in the following schedule.

c. If areas are designated as shrub beds or hedge trenches, they shall be excavated to at least 18" depth minimum. Areas designated for ground covers and vines shall be excavated to at least 12" in depth minimum.

d. Diameter and depth of tree pits shall generally be as follows:

PLANT SIZE	ROOT BALL	PIT DIAMETER	PIT DEPTH
3" – 3 1/2" cal.	32"	64"	28"
3 1/2"– 4" cal.	36"	72"	32"
4" – 4 1/2" cal.	40"	80"	36"
4 1/2"– 5" cal.	44"	88"	40"
5" – 5 1/2" cal.	48"	96"	44"
5 1/2"– 6" cal.	52"	104"	48"

A 20% compaction figure of the soil to be removed is assumed and will be allowed in calculation of extra topsoil. The tabulated pit sizes are for purposes of uniform calculation and shall not override the specified depths below the bottoms of the root balls.

4. Staking, Guying and Wrapping

All plant material shall be staked or guyed, and wrapped in accordance with the following specifications:

a. Stakes: Shall be sound wood 2" x 2" rough sawn oak or similar durable woods, or lengths, minimum 7'–0" for major trees and 5'–0" minimum for minor trees.

b. Wire and Cable: Wire shall be #10 ga. galvanized or bethanized annealed steel wire. For trees over 3" caliper, provide 5/16" turn buckles, eye and eye with 4" take-up. For trees over 5" caliper, provide 3/16", 7 strand cable cadmium plated steel, with galvanized "eye" thimbles of wire and hose on trees up to 3" in caliper.

c. Hose: Shall be new, 2 ply reinforced rubber hose, minimum 1/2" I.D. "Plastic Lock Ties" or "Paul's Trees Braces" may be used in place of wire and hose on trees up to 3" in caliper.

d. All trees under 3" in caliper are to be planted and staked in accordance with the attached "Typical Tree Staking Detail". All trees over 3" in caliper are to be planted and guyed in accordance with the attached "Typical Tree Guying Detail".

5. Plant Pruning, Edging and Mulching

a. Each tree, shrub or vine shall be pruned in an appropriate manner to its particular requirements, in accordance with accepted standard practice. Broken or bruised branches shall be removed with clean cuts flush with the adjacent trunk or branches. All cuts over 1" in diameter shall be painted with an approved antiseptic tree wound dressing.

b. All trenches and shrub beds shall be edged and cultivated to the lines shown on the drawing. The areas around isolated plants shall be edged and cultivated to the full diameter of the pit. Sod which has been removed and stacked shall be used to trim the edges of all excavated areas to the neat lines of the plant pit saucers, the edges of shrub areas, hedge trenches and vine pockets.

c. After cultivation, all plant materials shall be mulched with a 2" layer of fine, shredded pine bark, peat moss, or another approved material over the entire area of the bed or saucer.

6. Plant Inspection and Acceptance

The ARC shall be responsible for inspecting all planting projects on a periodic basis to assure that all work is proceeding in accordance with the approved plans and specifications.

7. Plant Guarantee

All plant material shall be guaranteed for the duration of one full growing season, after final inspection and acceptance of the work in the planting project. Plants shall be alive and in satisfactory growing condition at the end of the guarantee period.

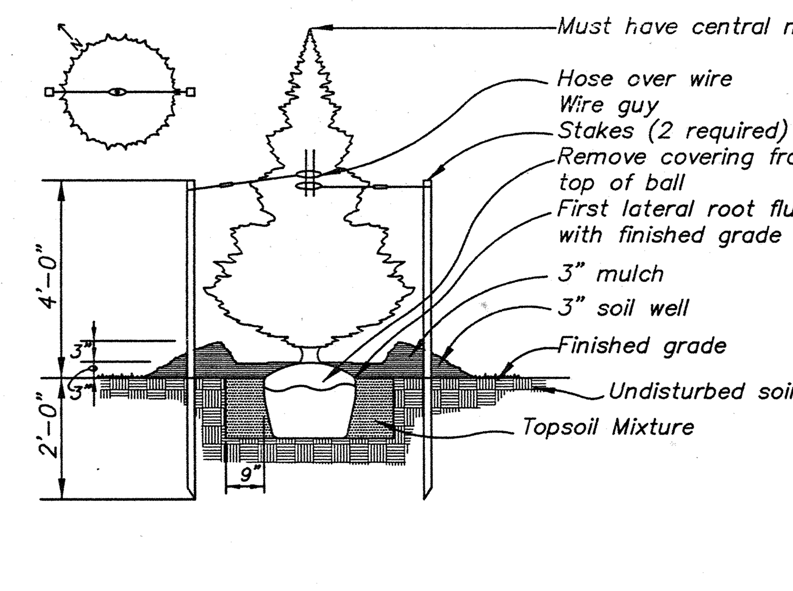
a. For this purpose, the "growing season" shall be that period between the end of the "Spring" planting season, and the commencement of the "Fall" planting season.

b. Guarantee for planting performed after the specified end of the "Spring" planting season, shall be extended through the end of the next following "Spring" planting season.

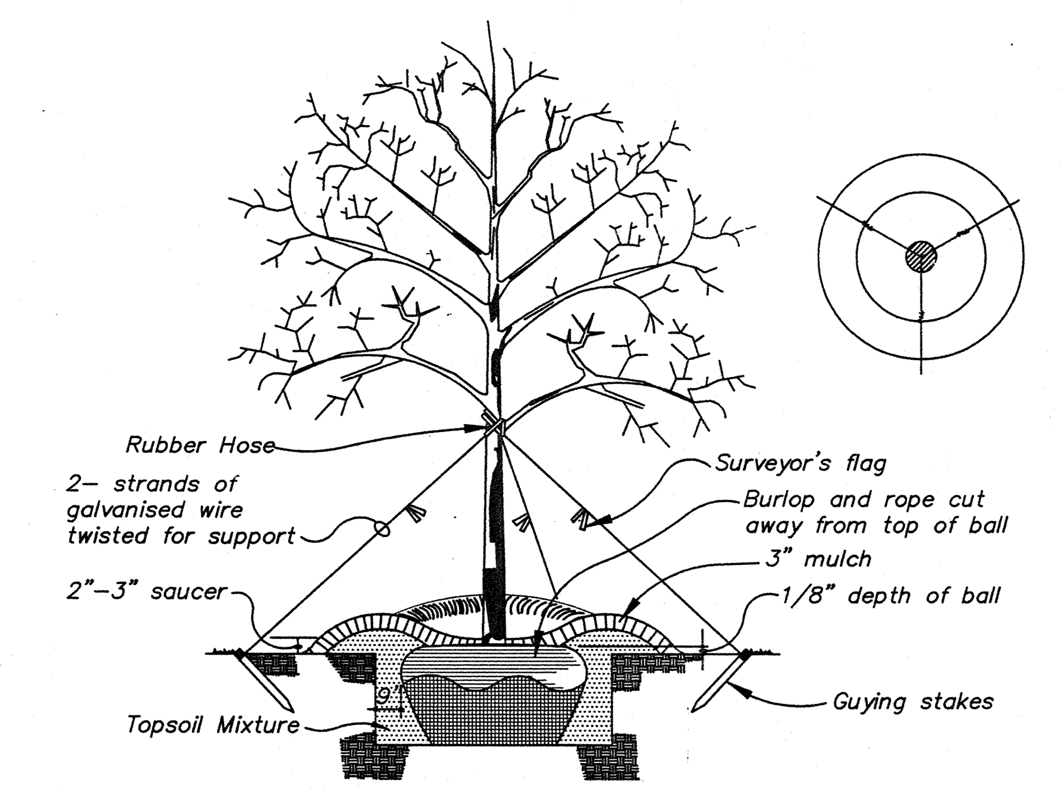
Sodding

All sodding shall be in accordance to the "Landscape Specification Guidelines for Baltimore–Washington metropolitan Areas" latest edition, approved by the Landscape Contractors Association of Metropolitan Washington and the American Society of Landscape Architects.

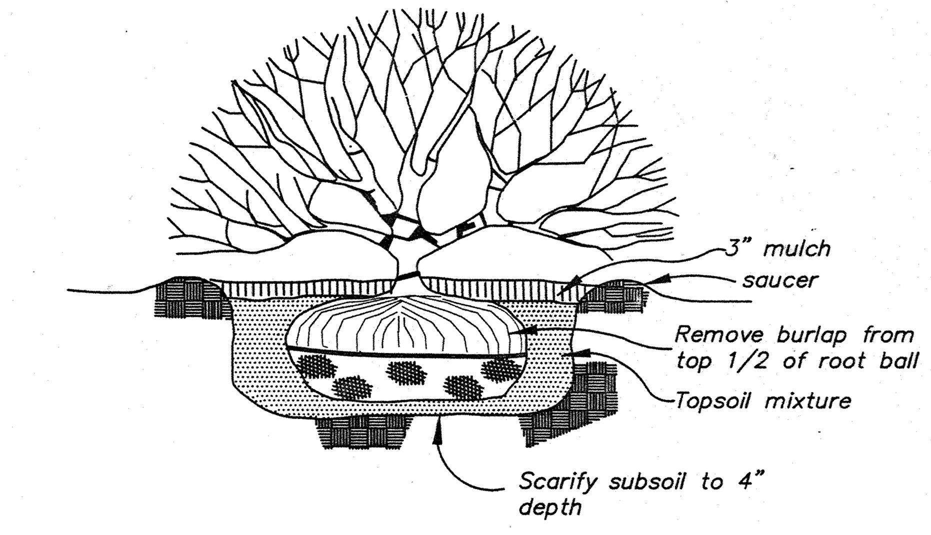
All sod shall be strongly rooted sod, not less than two years old and free of weeds and undesirable native grasses. Provide only sod capable of growth development when planted and in strips not more than 18" wide x 4" long. Provide sod composed principally of improved strain Kentucky bluegrass, such as, Columbia, Victa, or Escort.



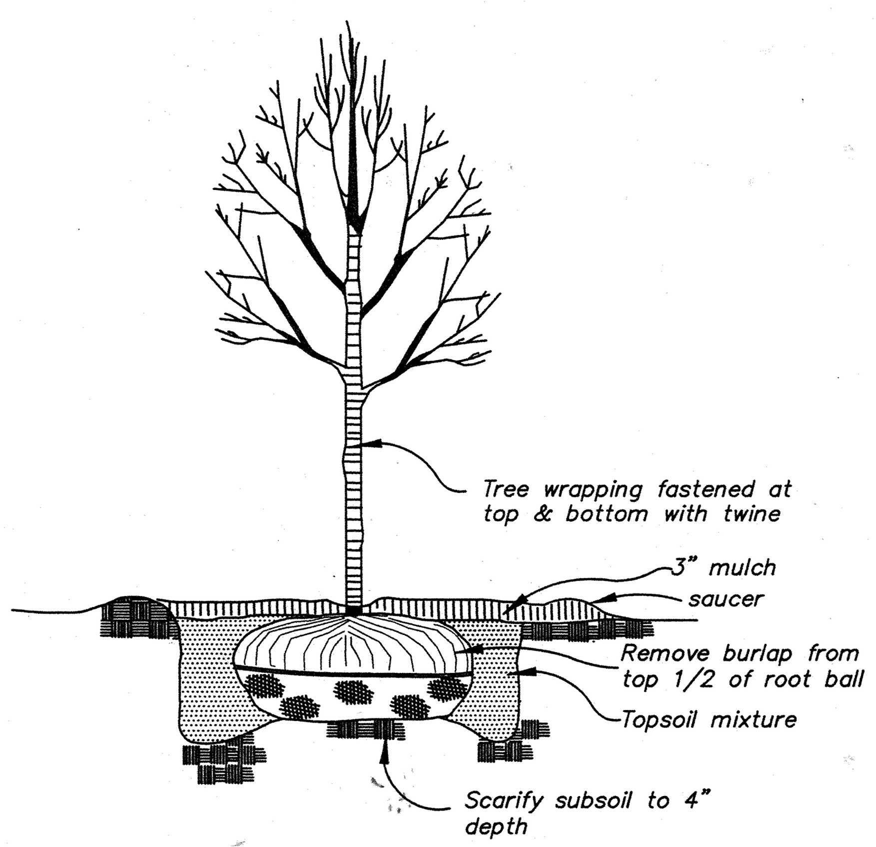
Evergreen Planting Detail
N.T.S.



Typical Tree Guying Detail
N.T.S.



Shrub Planting Detail
N.T.S.



Typical Deciduous Tree Planting
N.T.S.

Plant List (Parcels T-1, T-2 & T-5)				
Quan.	Symbol	Botanical Name	Common Name	Remarks
		Trees		
186	OGM	Acer saccharum 'Green Mountain'	Green Mountain Maple	2 1/2 – 3" cal., 13–15' hgt.
128	HL	Gleditsia triacanthos inermis 'halka'	Halka Honeylocust	2 1/2–3" cal., 12–14' hgt.
27	ZC	Malus sieboldi zumi	Zumi Crabapple	2 – 2 1.2" cal., 6–8' hgt.
84	AB	Picea abies	Norway Spruce	6–8' hgt. (not sheared)
62	WP	Pinus strobus	White Pine	6–8' hgt.
42	AC	Prunus subhirtella 'Autumnalis	Autumn Flowering Cherry	2 – 2 1/2" cal., 8–10' hgt.
72	QP	Quercus palustris	Pin Oak	2 1/2 – 3" cal., 12–14 hgt.
15	SG	Liquidambar styraciflua	Sweet Gum	2 1/2 – 3" cal, 13–15' hgt.
67	PS	Prunus sorrulata 'Kwanzan'	Kwanzan Cherry	2½ - 3" cal., 12-14 hgt.
		Shrubs		
188	EA	Euonymus alatus	Winged Euonymus	18–24", plant 3' oc.
94	IGC	Ilex glabra compacta 'Shamrock'	'Shamrock' Inkberry Holly	18–24", plant 3' oc.
76	IM	Ilex meserveae 'Blue Girl'	'Blue Girl' Holly	18–24", plant 3' oc.
264	JCF	Juniperus conferta 'Blue Pacific'	'Blue Pacific' Shore Juniper	15–18", plant 3' oc.
49	TW	Taxus Wardi	Wardi Yew	15-18" Plant 2'-6" o.c.
		Groundcover		

SCHEDSULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	E		N/A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	1,075 LF	1,275 LF	N/A
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED	No	No	N/A
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED	Yes Berm (at least 3' high)	No	N/A
NUMBER OF PLANTS REQUIRED SHADE TRES EVERGREEN TREES SHRUBS	@ 1/40=27 None None	@1/40=32 None @1/4=319	N/A
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IS NEEDED)	Per alternate compliance -HRD's standards		N/A

LANDSCAPE SURETY FOR SCHEDULE A REQUIRED PLANTINGS: 59X $300.00 = $17,700
319 x $30 = 9,570
$27,270.00

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	400 (T-1)	1010 (T-2)
NUMBER OF TREES REQUIRED @ 1/20 sp	20	51
NUMBER OF TREES PROVIDED SHADE TREES OTHER SHADE TREES (2:1 SUBSTITUTION)	PER ALTERNATIVE COMPLIANCE ---HRD'S STANDARDS	

Total LANDSCAPE SURETY FOR SCHEDULE B REQUIRED PLANTINGS: 71 X $300.00 = $21,300.00

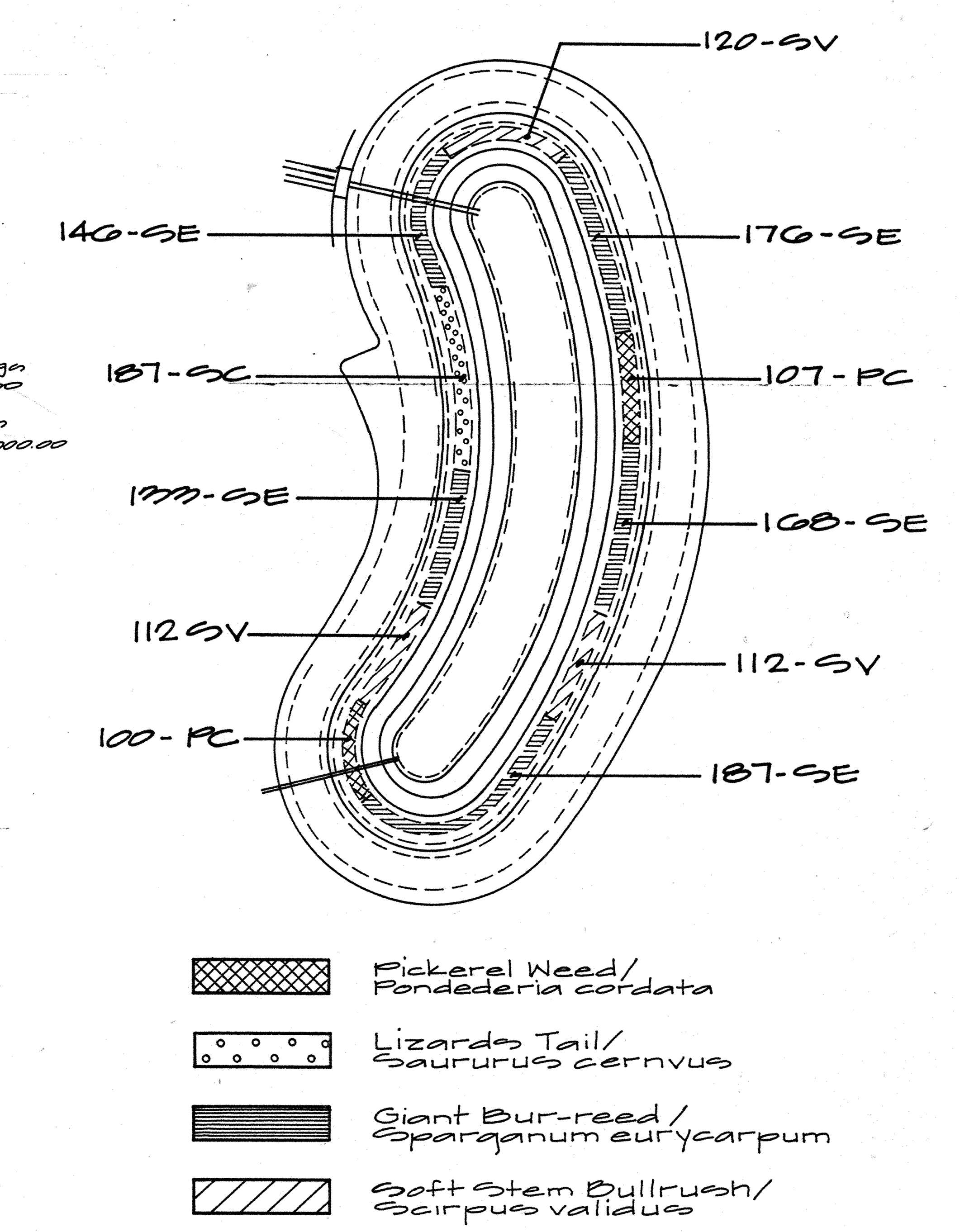
Landscape surety for schedule B required plantings for Parcel T-1: 20 x $300.00 = $6,000.00

Landscape surety for schedule B required plantings for Parcel T-2: 51 x $300.00 = $15,300.00

SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	1780
NUMBER OF TREES PROVIDED (TYPE B) SHADE TREES (1:50) EVREGREEN TREES (1:40)	28 35
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	0 0
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	0 0
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	PER ALTERNATIVE COMPLIANCE HRD'S STANDARD

LANDSCAPE SURETY FOR SCHEDULE-D REQUIRED PLANTINGS: 28X 300 = 8,400.00
35X 150 = 5,250.00
13,650.00



SWM Planting Detail

LANDSCAPING NOTES

1. This plan has been prepared in accordance with Section 16.124 of the Howard County Code and Chapter VI (Alternative Compliance) of the Howard County Landscape Manual.

2. Contractor shall notify all utilities at least (5) five days before starting work. All General Notes, especially those regarding utilities, on Sheet 1 shall apply.

3. Field verify underground utility locations and existing conditions before staring planting work. Contact owner or his representative if any relocations are required.

4. Plant quantities shown on Plant List are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on the plan and those shown on the plant list, the quantities on the plan shall take precedence.

5. All plant material shall be full, heavy, well formed, and symmetrical, and conform to the A.A.N. Specifications, and be installed in accordance with project specifications.

6. No substitution shall be made without written consent of the owner or his representative.

7. All areas disturbed by construction activities but not otherwise planted, paved, or mulched shall be seeded or sodded in accordance with project specifications.

8. The contractor shall notify the owner in writing if he/she encounters soil drainage conditions which may be detrimental to the growth of the plants.

9. All exposed earth within limits of planting beds shall be mulched with shredded hardwood mulch per Planting Details.

10. "Schedule A - Perimeter Landscape Edge", "Schedule B - Parking Lot Internal Landscaping" and "Schedule D - Stormwater Management Area Landscaping" is provided for landscape surety calculation purposes only.

Financial surety for the required landscaping has been posted as part of the DPW Developer's Agreement in the amount of $62,220.00 *

11. Tabulation for landscape shown:

Required planting by HRD for 24.32± ac of R&D use at 22 trees/ac = 535 shade trees (or equivalent)

Planting provided:
shade trees 439
ornamental trees: 142 = 71 E.S.T.
evergreen trees (existing and proposed): 147 = 74 E.S.T.
584 E.S.T.[1]

[1] E.S.T. - Equivalent Shade Trees
The proposed shrubs and ground covers are counted towards a portion of the required planting by HRD.

SWM POND PLANTING NOTES

1. Upon conversion of sediment control pond to stormwater management pond, the contractor shall remove any stones, debris, or construction material larger than two inches (2") in any dimension. The ponds shall be flooded and left undisturbed for a period of 10 days prior to planting.

2. One once of 18-6-25 slow release fertilizer shall be incorporated into the soil for each plant at the time of planting.

3. Soil shall be saturated with water during and after planting, or the planting area may be completely flooded at this time (wet planting). Planting soil shall be firmly pressed around each to prevent flotation.

4. The source of all aquatic and emergent plants shall be approved by the owner or landscape architect prior to ordering. These plants shall be grown in pots (container specified) or nursery growing beds (bare rood specified) for a minimum of 12 months prior to installation and shall have been wet cultivated during the entire period.

5. All plant material shall be guaranteed for a period of one year after formal acceptance. Plants which have greater and 33% dieback or have not grown so as to emerge from the water surface shall be replaced at the next planting season.

6. Remove litter and debris as required during the first growing season and at the beginning of the second growing season.

The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in goof growing condition, and where necessary, replaced with new material to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.

Owner Parcel T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn.: Al Edwards
410: 992-6027

SWM POND PLANT LIST

KEY	QTY	NAME (COMMON/BOTANICAL)	REMARKS
PC	207	Pickerel Weed/ Pondederia cordata	Bare Root @ 18" O.C.±
SC	187	Lizards Tail/ Saururus cernvus	Bare Root @ 18" O.C.±
SE	810	Giant Bur-reed/ Sparganum eurycarpum	Bare Root @ 18" O.C.±
SV	344	Soft Stem Bullrush/ Scirpus validus	Bare Root @ 18" O.C.±

Financial surety for Parcels T-1 & T-2 has been posted as a part of the DPW Developer's Agreement in the amount of $48,570.00 (schedules A & B).
Financial surety for Parcel T-5 has been posted as a part of The DPW Developer's Agreement in the amount of $13,650.00 (schedule D).

STATE OF MARYLAND — CARLTON K. GUTSCHICK — No. 12975 — REGISTERED PROFESSIONAL ENGINEER

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/3/99
Chief, Development Engineering Division MK	Date 3/2/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067LD.DWG | DES. | DRN. | CHK.

DATE	REVISION	BY	APP'R.
7/31/01	Revise Landscape Plant List & schedule B		
1/6/99	Revise Landscape schedule B and Coordinate Plant List	GT	

Owner Parcels T-1 & T-2 & Developer
Orix Columbia, Inc.
1401 H STREET N.W.
SUITE 550
WASHINGTON, D.C. 20005
202-289-1401

LANDSCAPE NOTES, DETAILS & SCHEDULES

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
PLAT# 13462 thru 13464

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP No.	SHEET
NOVEMBER 1998	43–1,2,7,8	9 of 22

SDP 99-54

Entrance Construction Tab.		
No.	Estation	Offset
1	75+09	8' Left
2	75+01	0' Left
3	75+02	4' Left
4	75+27	8' Right
5	74+22	4' Left
6	74+24	0' Left
7	74+22	8' Left
8	72+50	4' Left
9	71+75	8' Right
10	75+35	32' Left
11	75+00	50' Left
12	74+49	50' Left
13	74+19	32' Left
14	70+32	32' Left
15	69+60	50' Left
16	69+60	32' Left
17	69+50	50' Left
18	69+40	32' Left
19	69+04	50' Left
20	68+98	32' Left
21	68+98	4' Left
22	69+00	0' Left
23	68+98	8' Left
24	66+92	8' Left
25	66+12	4' Right
26	66+18	8' Right
27	66+20	4' Left
28	64+74	32' Left
29	64+48	50' Left
30	63+80	50' Left
31	63+49	32' Left

Note: For Property Boundary information see sheet 1.

Rebar W/cap el. 319.31 B.M. #1

Columbia Gateway Parcel '67-28 Gateway 62-LLP SDP 89-22 Zoned: M-1

Albert Einstein Drive

B.M. #2

Columbia Gateway Parcel '67-111 Zoned: M-1

Drive

Gateway

Columbia

The Howard Research & Development Corporation Columbia Gateway Parcel T-5 Zoned: M-1

Note: For stormwater Management Facility see sheet 14.

For continuation see sheet 14.

Limit of Phase II

Limit of Phase I

Parcel T-2 Office Building "A" FFE = 321.00 Footprint Area = 12,407 Floor Area = 12,407 (Building "A" # A-22)

Parcel T-2 Office Building "B" FFE = 321.00 Footprint Area = 12,407 Floor Area = 12,407 (Building "B" # A-21)

Note: For Handicap Ramp detail see sheet 11

Parcel T-2 Office Building "A" FFE = 321.00 Footprint Area = 12,407 Floor Area = 12,407 (Building "A" # A-22)

Note: For Handicap Ramp detail see sheet 11

Parcel T-2 Office Building "A" FFE = 321.00 Footprint Area = 12,407 Floor Area = 12,407 (Building "A" # A-22)

Note: For Handicap Ramp detail see sheet 11

Limit of Phase II

Limit of Phase II

Limit of Phase II

Columbia Gateway Parcel T-5

Interstate Route 95 Right-of-Way

Note: This site has been mass graded under SDP 89-75.

Match Line see sheet 4 For Continuation

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/3/99

Chief, Development Engineering Division MK — Date 3/6/99

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK

BURTONSVILLE, MARYLAND 20866

TEL.: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\98067SP1.DWG | DES. | DRN. WeJ | CHK.

DATE	REVISION	BY	APP'R.
01/2/00	Rev. Parcel T-1 Building, add drop-off area and loading area Δ	WeJ	
11/8/99	Rev. Location of Utility conn.'s, sidewalks, Loading dock & Generator Loc.	GA	
12/22/98	Rev. Per Ho. Co. Comments	WeJ	
12/16/98	Sidewalk revisions per HCDPZ ARC Comments	WeJ	
12/8/98	Remove & Relocate FH's Per MJT mtg. with Fire Marshall	WeJ	

Δ Owner Parcel T-1: Orix Gateway Columbia, LLC, 100 N. Riverside Plaza, Suite 400, Chicago, IL 60606-1615 (312) 466-6445

SITE DEVELOPMENT PLAN

COLUMBIA GATEWAY

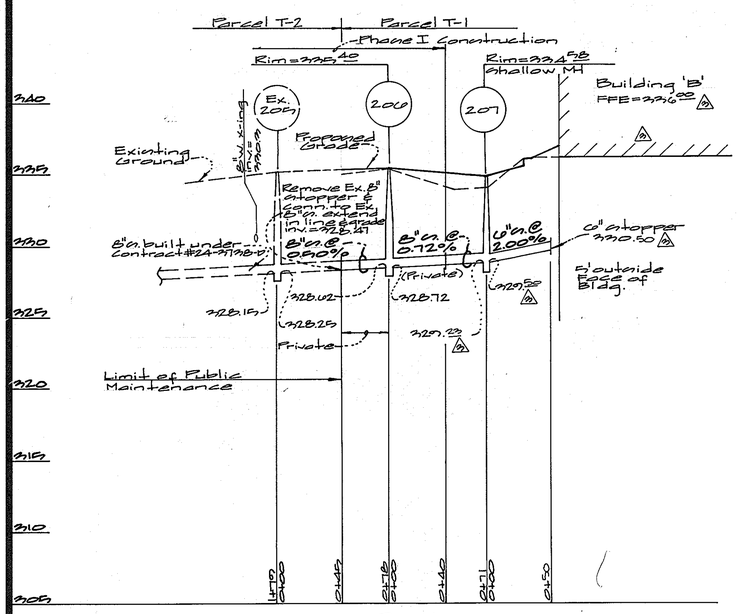
Parcels T-1, T-2, T-4 and T-5

Plat #13402 thru 13404 & Plat No. 18716

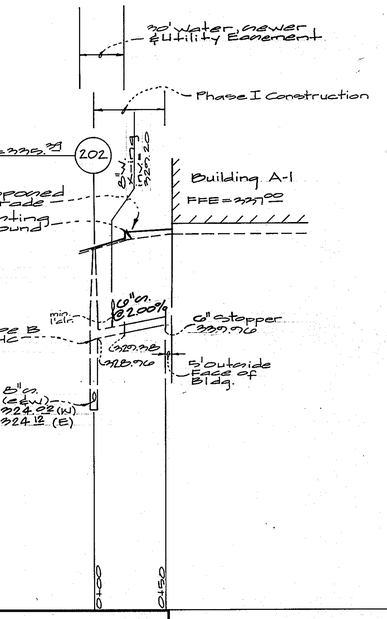
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP – GRID	SHEET
November, 1998	43 – 1,2,7,8	2 OF 22

SDP 99-54



Sewer Profile



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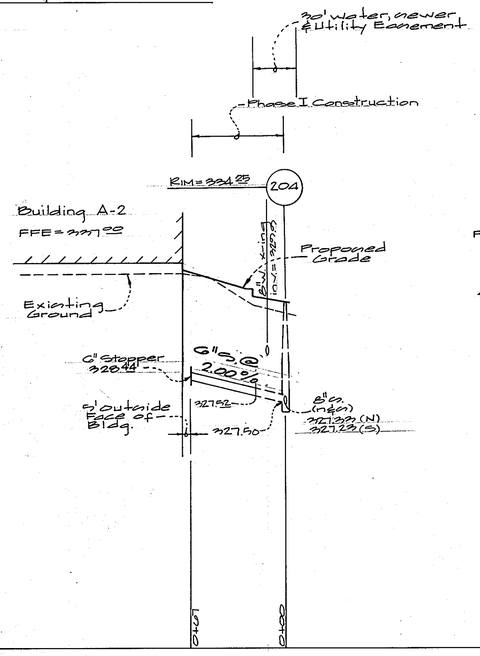

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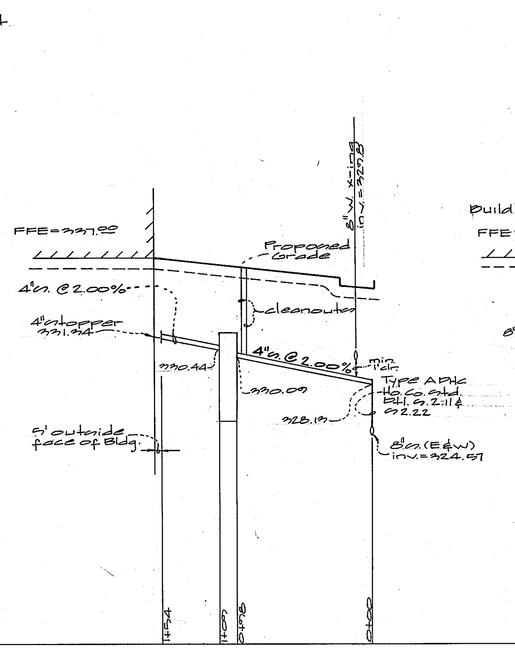

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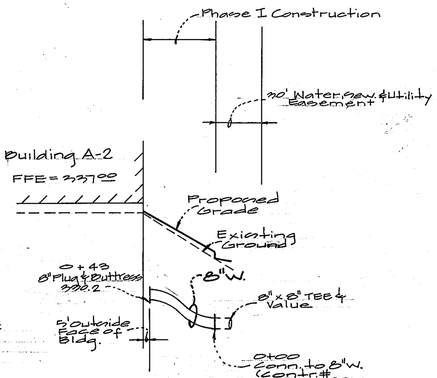
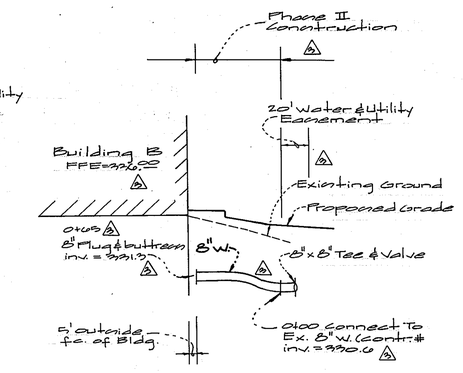
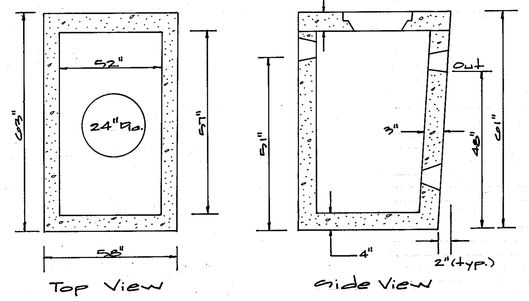


Water Profile



500 Gallon Wenc Grease, Oil, Sand Interceptor



This interceptor is precast with 5000 lb. psi concrete and reinforced with (6"x6") #8 Gauge wire mesh. The top has #3 reinforcement rods 6" on center. The sides and bottom have #3 reinforcement rods 12" on center. The side walls taper from 4" thick at the bottom to 3" thick at the top.

The lower outlet is located 24" from the bottom for use as SAND and OIL INTERCEPTOR - 12" for use as a GREASE and OIL INTERCEPTOR.

Traffic Bearing: The top slab is 8" thick with a double matt of reinforcement rods and the floor is 4" thick.

Specifications For Wenc Grease or Sand/Oil Interceptor

1. Tanks in traffic-bearing locations shall meet or exceed H20 (HA) loading design.
2. Bedding shall be MD #6 or smaller aggregate, min. 6" in depth.
3. Tank shall be backfilled with aggregate (MD #6 or smaller) on all sides to level with top of tank.
4. Inlet and outlet baffles shall be 16 gauge (.064") or heavier, Type 302 or Type 304 stainless steel, formed from 24"x12" stock.
5. Inlet and outlet baffles tracks shall be 3/16" or 1" stainless steel or aluminum, track anchors shall be welded to back of track to anchor in the wall casting.
6. Manhole openings shall be per Wenc std. Dtl. 61-01, 61-02, 61-12.
7. Manhole frame and covers shall meet or exceed H20 (HA) loading design. The assembly shall be gasketed and the cover shall be cast iron with the word "INTERCEPTOR" cast in.
8. No auxiliary cleanouts are required, other than those required by Code Section 501.7. The outlet baffle shall serve as the outlet cleanout.
9. A two (2) inch vent shall be connected to the inlet (inside the building). See Approved Plans.

Variation for Sand/Oil Interceptor

When sand/oil interceptor serves a drainage system containing no traps (typically a parking garage), the manufacturer and plumber shall make the following adjustments.

1. Manufacturer shall not install the inlet baffle.
2. Plumber shall field install a 90° on the inlet pipe just inside the tank, and down with a pipe 24" long.
3. Plumber shall relocate the required vent in one of two ways:
   A. The relocated vent may connect to tank directly through either manhole riser.
   B. Alternately, the vent may also connect to the outlet pipe.
4. Refer to Approved Plans for additional details.

Profile scales:
Horizontal: 1" = 50'
Vertical: 1" = 5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99
Chief, Division of Land Development — Date 3/3/99
Chief, Development Engineering Division MK — Date 3/2/99

STATE OF MARYLAND — JOHN K. GUTSCHICK — No. 7971 — REGISTERED PROFESSIONAL ENGINEER

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067SD0 | DES. WJ | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
01211200	Rev. Water & Sewer Profile For T-1 △	WeJ	
11151999	Remove sewer Profile that will be Public	WeJ	
11/8/99	Rev. MH 202 Location to accomodate revised Loc. of sewer Line	GT	
12/8/1998	Add Water x-ings o.d. x-ing & Lower sew. MH 201 to MH 202.	WeJ	

△ Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL. 60606
(312) 466-4445

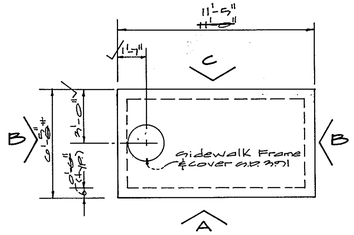
Utility Profiles

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
& Plat No. 18716

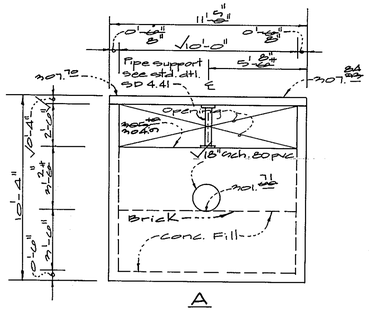
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

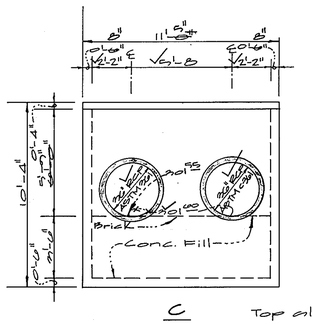
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
November, 1998	43 1,27,8	20 OF 22

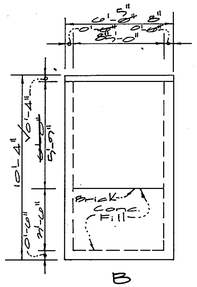
SDP 99-54

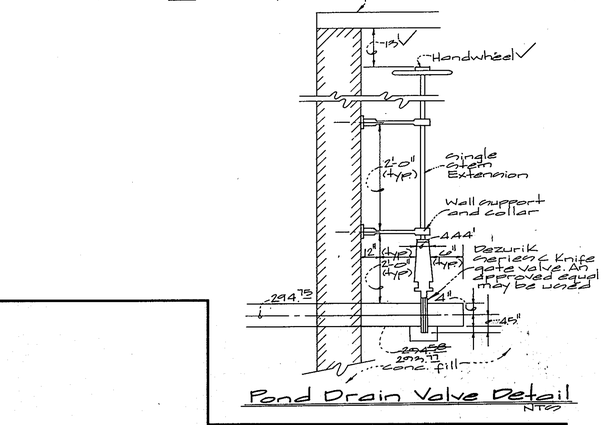


Note: Provide steps per STD 4.40





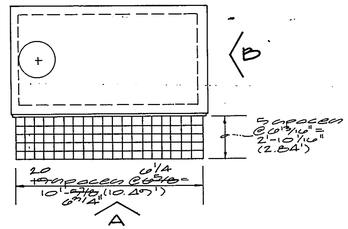




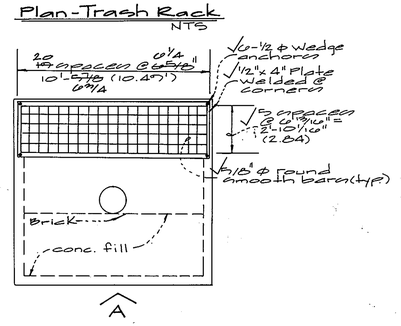
Pond Drain Valve Detail
NTS

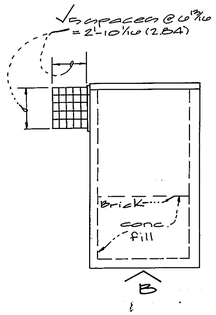
Trash Rack Notes

1) Trash racks to be hot dip galvanized after fabrication painted w/2 coats of black paint.
2) Vertical bars shall be on the outside of horizontal bars.
3) Trash rack to be securely bolted to riser structure with 1/2" ϕ bolts embedded 9" (6 locations min. per rack).
4) All rebar intersections to be spot welded.
5) All rebar to plate intersections or plate to plate intersections to be securely welded.
6) Minimum opening size 6"x6"

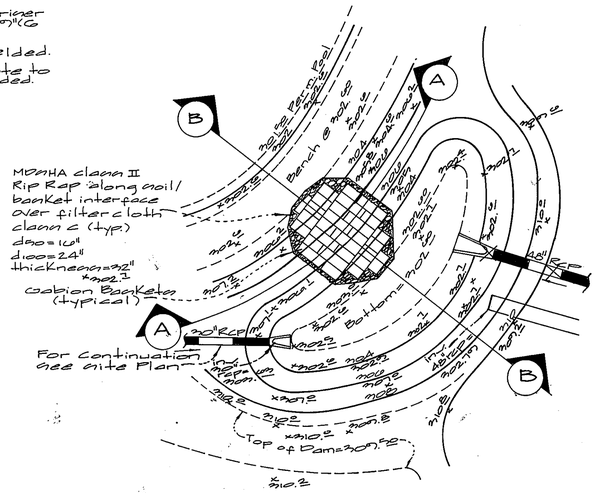


Plan - Trash Rack
NTS

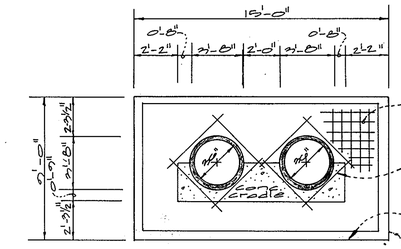




SWM Structure Schedule						
No.	Type	Width (ID) or (Inside)	Top Elev.	Inv. Elev.	Standard Detail	Remarks
			— / —	Upper / Lower		
R-1	Riser structure	5'-0"	307.93	305.10 / 301.00	Mod. STD 4.41	Precast
M-1	Manhole	5'-0"	313.00	301.44 / 297.94	Mod. STD 4.41	Precast
M-2	Manhole	10'dia.	314.90	298.97 / 292.97	Md. SHA MD 380.11	Dog House
VB-1	Valve Box (A)	5'-0"	309.00	294.58 / 291.17	W.S.G.C.	Precast



Plan ~ Gabion Basket
scale: 1" = 20'

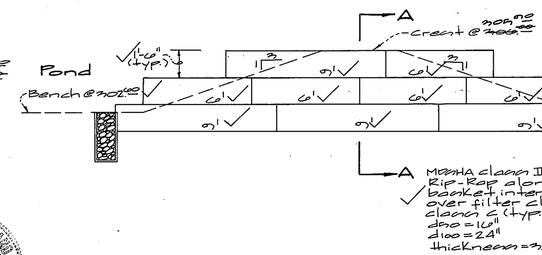


Front View

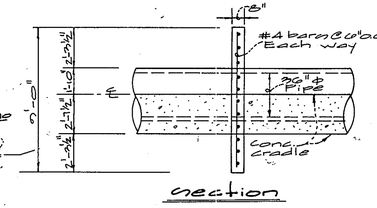
Anti-Seep Collar Detail
NTS

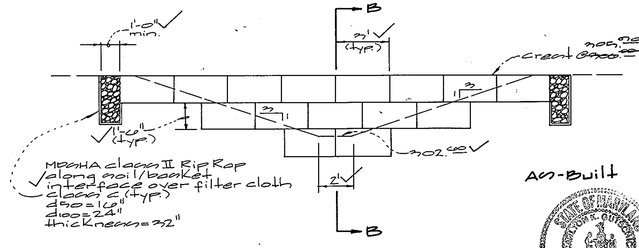
Notes For Anti-Seep Collar

1) Pour concrete to undisturbed earth.
2) Remove sheeting before pouring concrete.
3) f'_c = 4000 psi @ 28 days.
4) Pour collars with pipe in place.
5) Backfill evenly on both sides of collars.
6) Locate collars a min. of 2' from pipe joints.



Section B-B
scale: 1" = 4'





Section A-A
scale: 1" = 4'

As-Built

Carlton K. Gutschick
Professional Engineer
Registration No. 12973

1-18-01
Date

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction~~, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.~~"

2/8/99
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. ~~I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.~~ I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer/Builder — 2/8/99 Date

These Plans for ~~small pond construction~~, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District — 2/25/99 Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction~~, soil erosion and sediment control.

Natural Resources Conservation Service — 2/25/99 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — 3/3/99 Date

Chief, Division of Land Development — 3/6/99 Date

Chief, Development Engineering Division MK — 2/26/99 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067SWM.DWG | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
9/22/00	Change owner info. Ⓐ	WSJ	
11/9/01	AS BUILT	WSJ	
2-07-02	Change Alamo to each approx.	WSJ	
12-22-08	Rev. Per Ho. Co. Comments	WSJ	

Ⓐ Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL 60606
(312) 609-0445

Stormwater Management Details

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13402 thru 13404
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

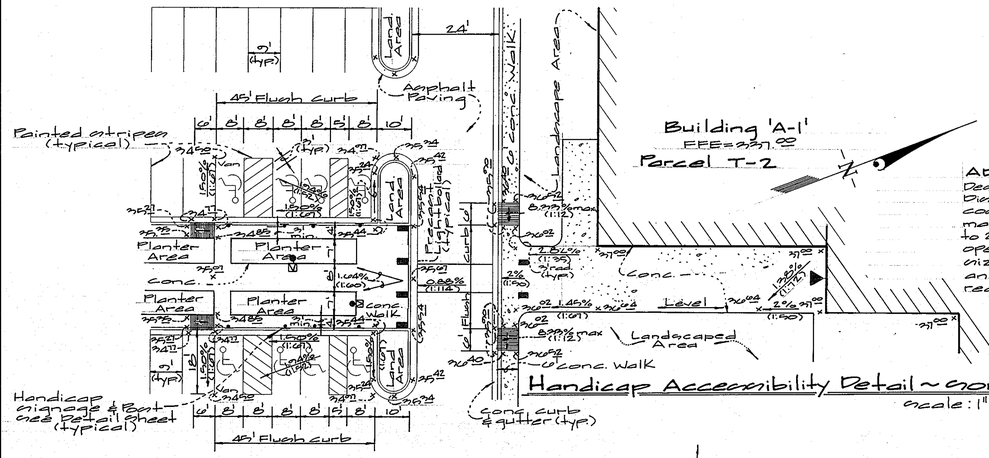
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP - GRID	SHEET
November, 1998	43 1,2,7,8	15 of 22

SDP 99-54

Notes:

1. Maximum sidewalk cross slope is 2% (1:50).
2. A 5'x5' minimum level (2%) Landing is required at the top and bottom of all ramps. Ramps are slopes greater than 5%.
3. Maximum slope in any direction of the handicap accessible parking is 2%.

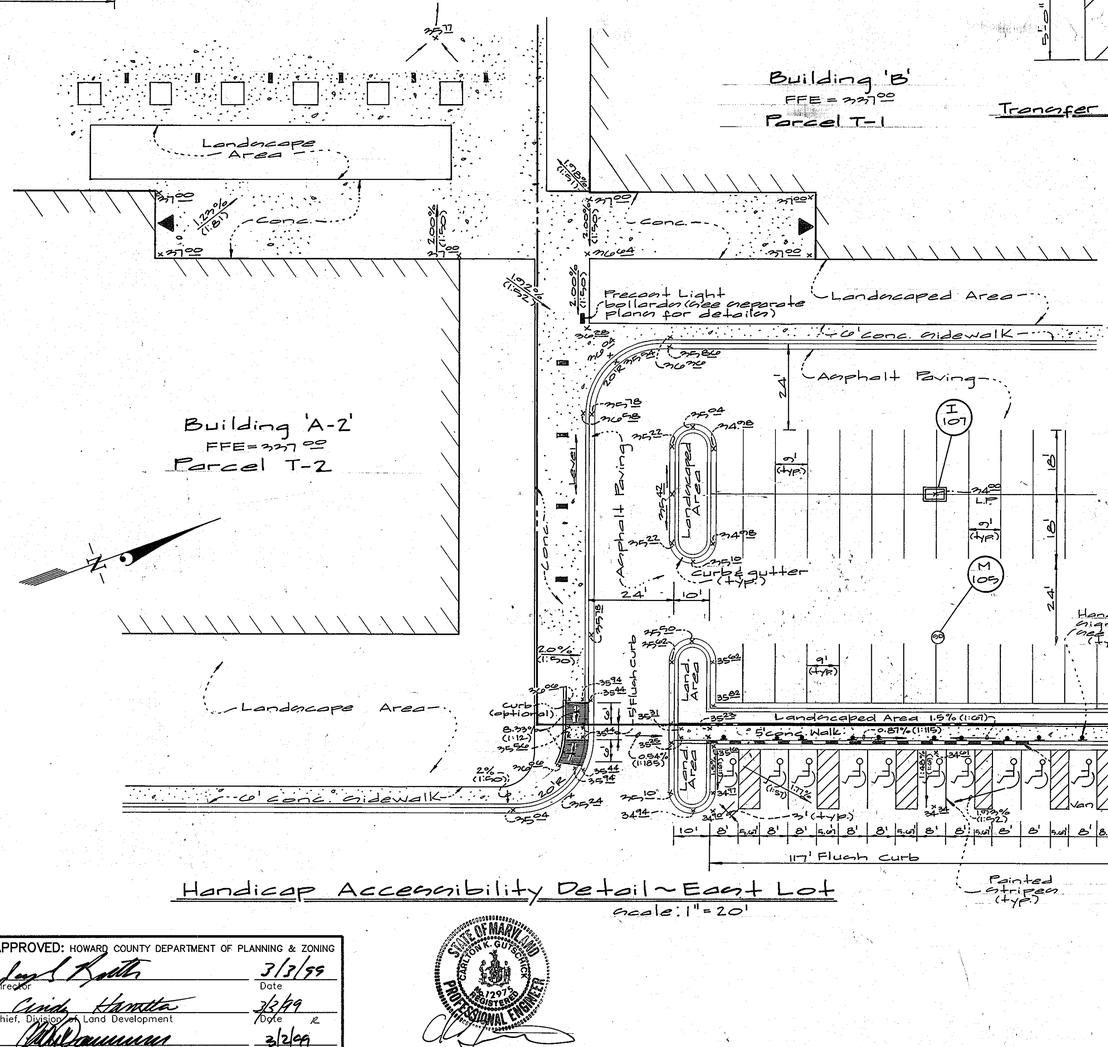
ADA: 1/2" slots
Designed to meet the Americans with Disabilities Act guidelines at minimum cost. Tree openings for 36" size in 12" and may be ordered with or later expanded to 20". others: 48" size offers 16" and 22" openings, 60" size ...16" and 20" openings; 72" size...22" and 36" openings, 96" size...24" and 36" openings. Quarter sections require supportive frames.



Handicap Accessibility Detail ~ South Lot
scale: 1" = 20'

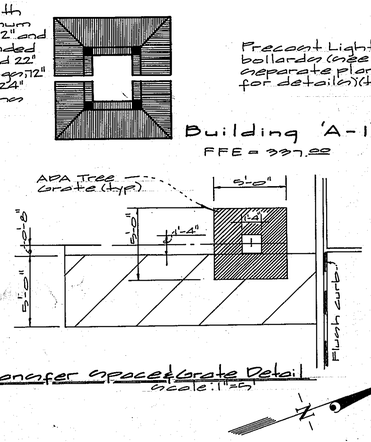
Building 'A-1'
FFE = 337.00
Parcel T-2

Building 'A-2'
FFE = 337.00

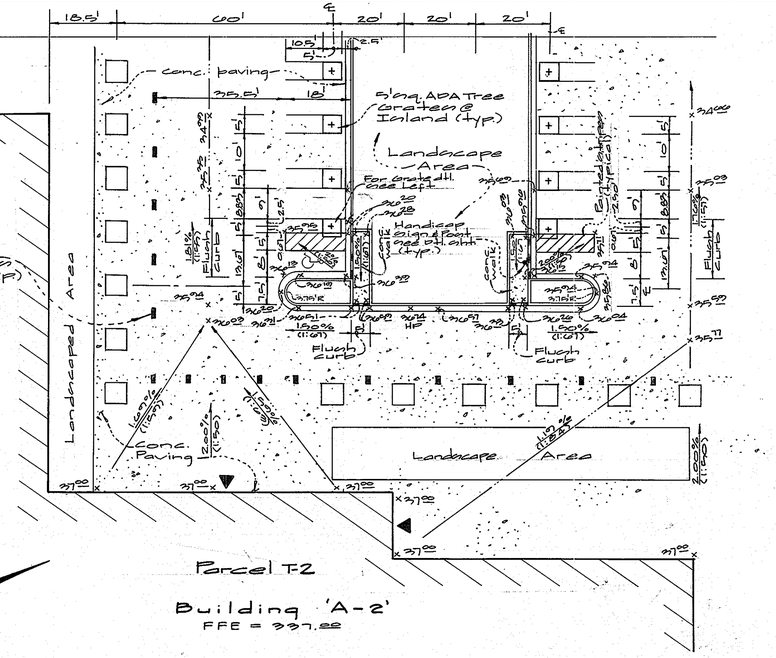


Handicap Accessibility Detail ~ East Lot
scale: 1" = 20'

Precast Light bollards (see separate plans for details) (typ.)



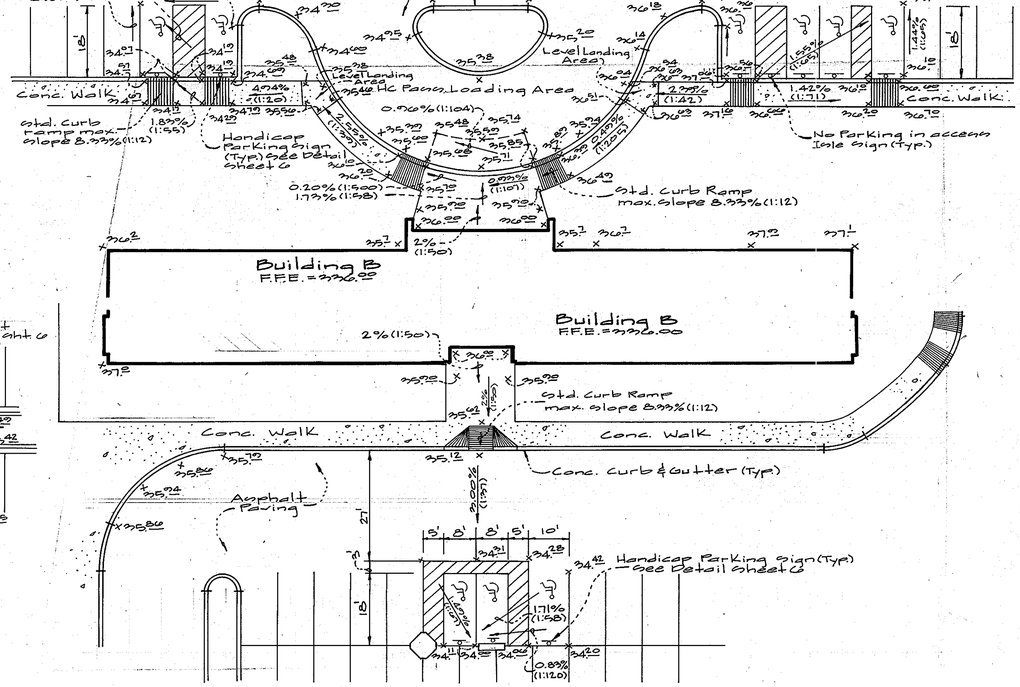
Transfer space & Grate Detail
scale: 1" = 20'



Parcel T-2

Building 'A-2'
FFE = 337.00

Handicap Accessibility Detail ~ Courtyard
scale: 1" = 20'



Handicap Accessibility Detail ~ Parcel T-1
scale: 1" = 20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 2/5/99
Chief, Development Engineering Division	Date 3/2/99

MK

STATE OF MARYLAND — CARLTON K. GUTSCHICK — No. 12973 — REGISTERED PROFESSIONAL ENGINEER

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\XXXXX\..... | DES. | DRN. WSJ | CHK.

DATE	REVISION	BY	APP'R.
01/21/00	Rev. access route for Parcel T-1 (2)	WSJ	
11/8/99	Rev. sidewalk Bldg. A-1 (to) Bldg. A-2 (N.)	WSJ	
12/10/98	Rev. sidewalk per HRD's ARC comments re: handicap in courtyard & East Lot	WSJ	
12/8/98	Add string of Dim. to bldg. B' Planter areas & add 9' min sign to walk dim.	WSJ	

(2) Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL 000000
(312) 000-0000

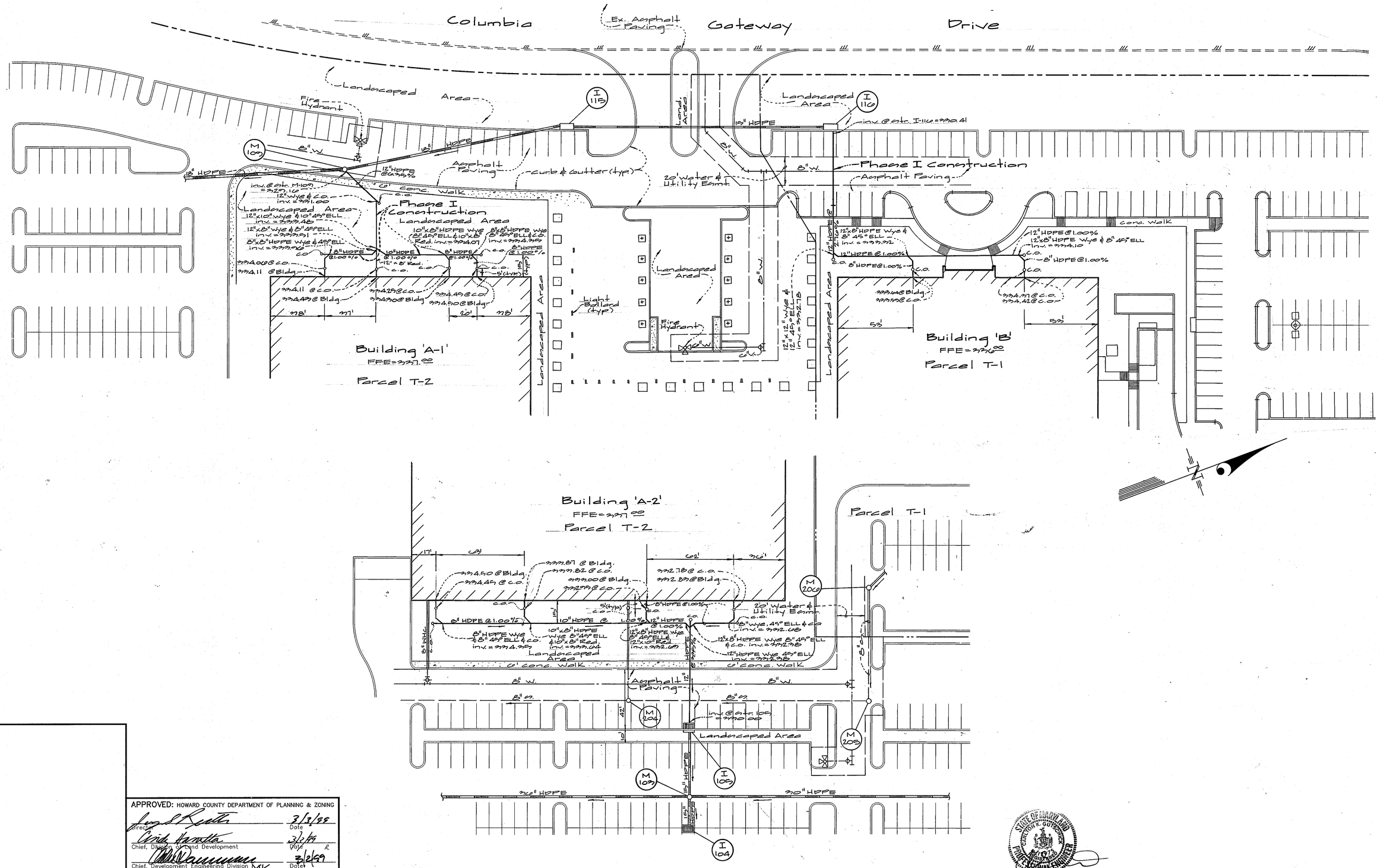
HANDICAP ACCESSIBILITY Details

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13461 thru 13464
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=20'	M-1	98067
DATE	TAX MAP – GRID	SHEET
NOVEMBER 1998	43 1,2,7,8	7 OF 22

SDP 99-54



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/2/99
Chief, Development Engineering Division MK	Date 3/2/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
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TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067SDD | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
9/21/06	Rev. Manifold For T-1	WGJ	
1/8/99	Rev. S.D. + Water Locations Bldg. A-1 & A-2	GT.	
12/8/98	Rev. Water, remove FH & Add FH	WGJ	

Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL. 60606
(312) 669-6445

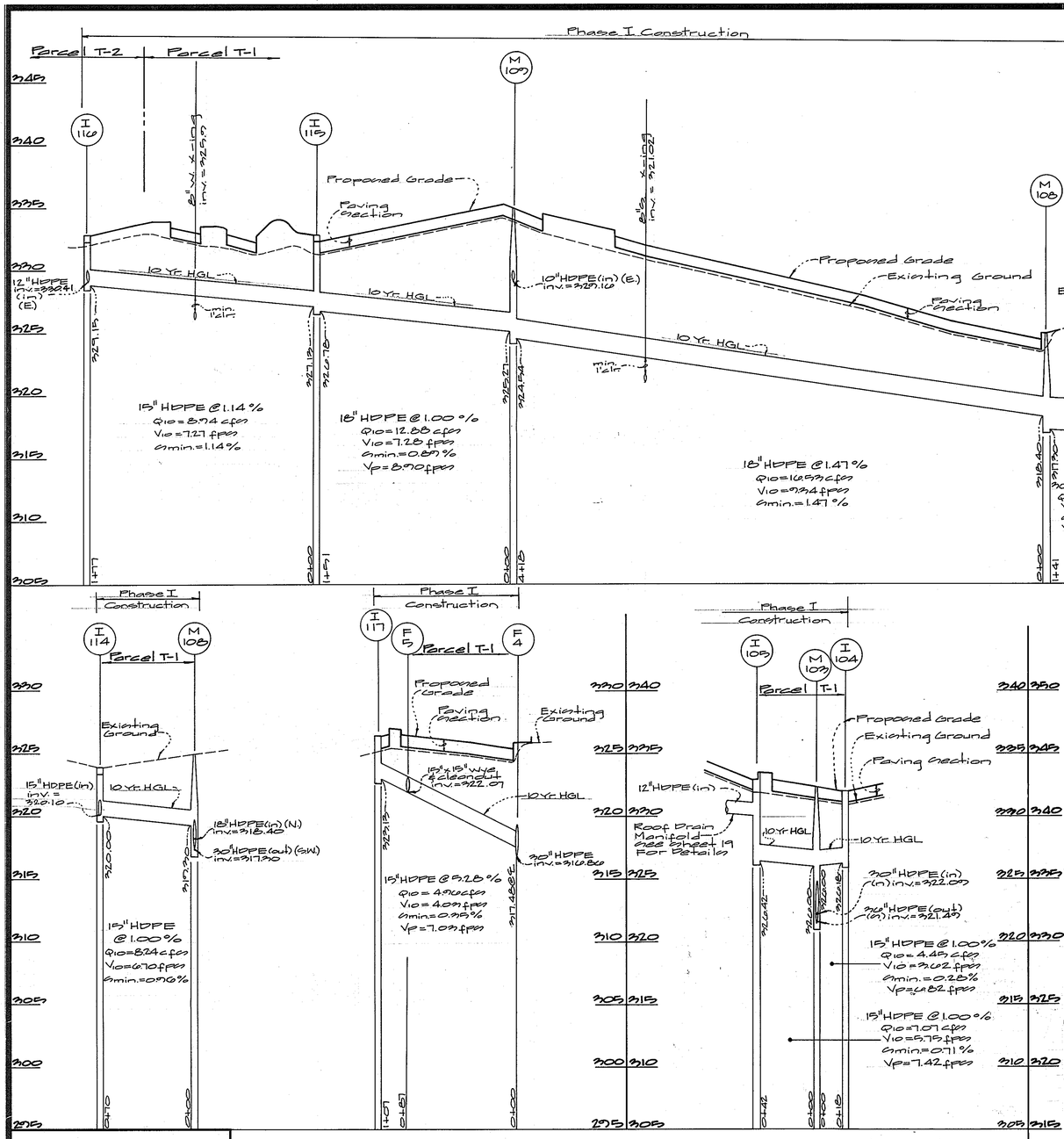
STORM DRAIN MANIFOLD PLAN

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
PLAT No. 13462 thru 13464
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 30'	M-1	98067
DATE	TAX MAP – GRID	SHEET
Nov., 1998	43 1,2,7,8	19 of 22

SDP 99-54



PIPE SUMMARY

SIZE	TYPE	LENGTH
15"	HDPE	846'
18"	↓	151'
30"	↓	185'

STRUCTURE SCHEDULE

NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION UPPER	TOP ELEVATION LOWER	INVERT ELEVATION UPPER	INVERT ELEVATION LOWER	STD. DETAIL	LOCATIONS	REMARKS
I-100	A-10	4'-0"	329.70		316.50	316.35	CO. 4.41	See. Plan	
I-104	Double 'G'	2'-7½"	329.20 (grate)	—	326.18		CO. 4.23		Fc. Alt. Acceptable
I-105	WR	2'-6⅞"	329.42		320.00	326.42	CO. 4.38		
I-106	Double 'G'	2'-7½"	329.70 (grate)	—	327.00		CO. 4.23		Fc. Alt. Acceptable
I-107	Double 'G'	2'-7½"	329.00 (grate)	—	328.85		CO. 4.23		" "
I-108	A-10	2'-0"	329.54	—	329.39		CO. 4.41		
I-109	A-10	2'-0"	329.67	329.58	328.83		CO. 4.41		
I-111	WR	2'-6⅞"	329.454	—	329.00		CO. 4.38		
I-111A	WR	2'-6⅞"	329.42	329.08	329.38		CO. 4.38		
I-114	A-15	2'-0"	329.89	—	320.00		MD SHA MD-394.63		
I-115	A-10	2'-0"	329.81	329.13	326.98		CO. 4.41		
I-116	A-10	2'-0"	329.74	—	329.15		CO. 4.41		
I-117	WR	2'-6⅞"	326.92	—	329.15		CO. 4.38		
M-108	Manhole	5'	325.00	316.40	317.90		CO. 11 & CO. 13		
M-109	Manhole	4'	329.49	325.27	329.54		CO. 11 & CO. 12		
I-114A	A-10	2'-0"	320.90	—	320.40		CO. 4.41		

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/8/99

Chief, Development Engineering Division — Date 3/4/99 MK

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067SDD | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
7/21/00	Rev. 6.12 Profile I-106 to I-111 Remove Profile F-5 to I-105 & rev. Profile M-106 to I-106 Ⓐ	WJ	
12-22-98	Rev. Per Ho. Co. Comments	WJ	
12-8-98	Added Water Crossings & Sewer x-ing	WJ	

Ⓐ Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago IL 60606
(312)609-6445

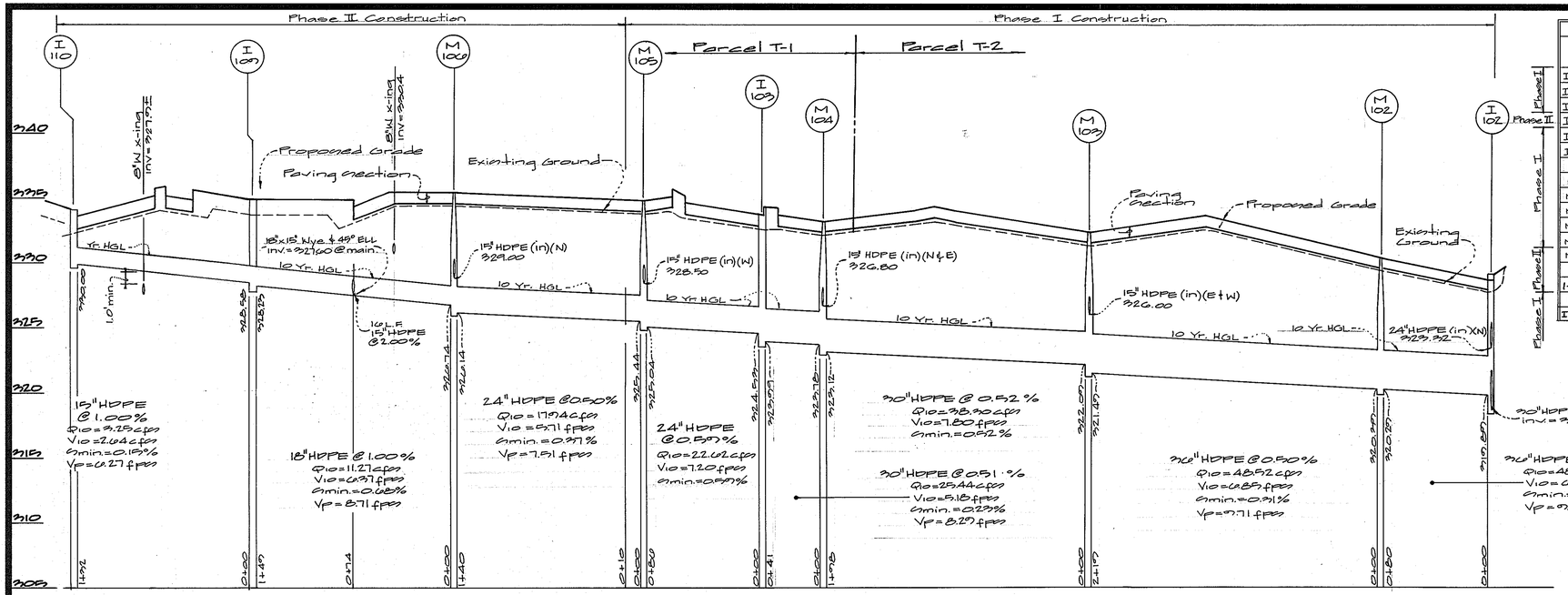
Storm Drain Profiles

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464 & Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

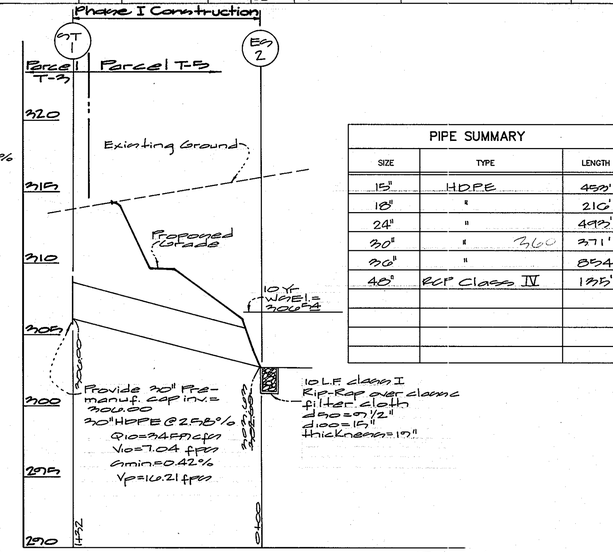
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
November 1998	43 1,2,7,8	18 OF 22

SDP 99-54

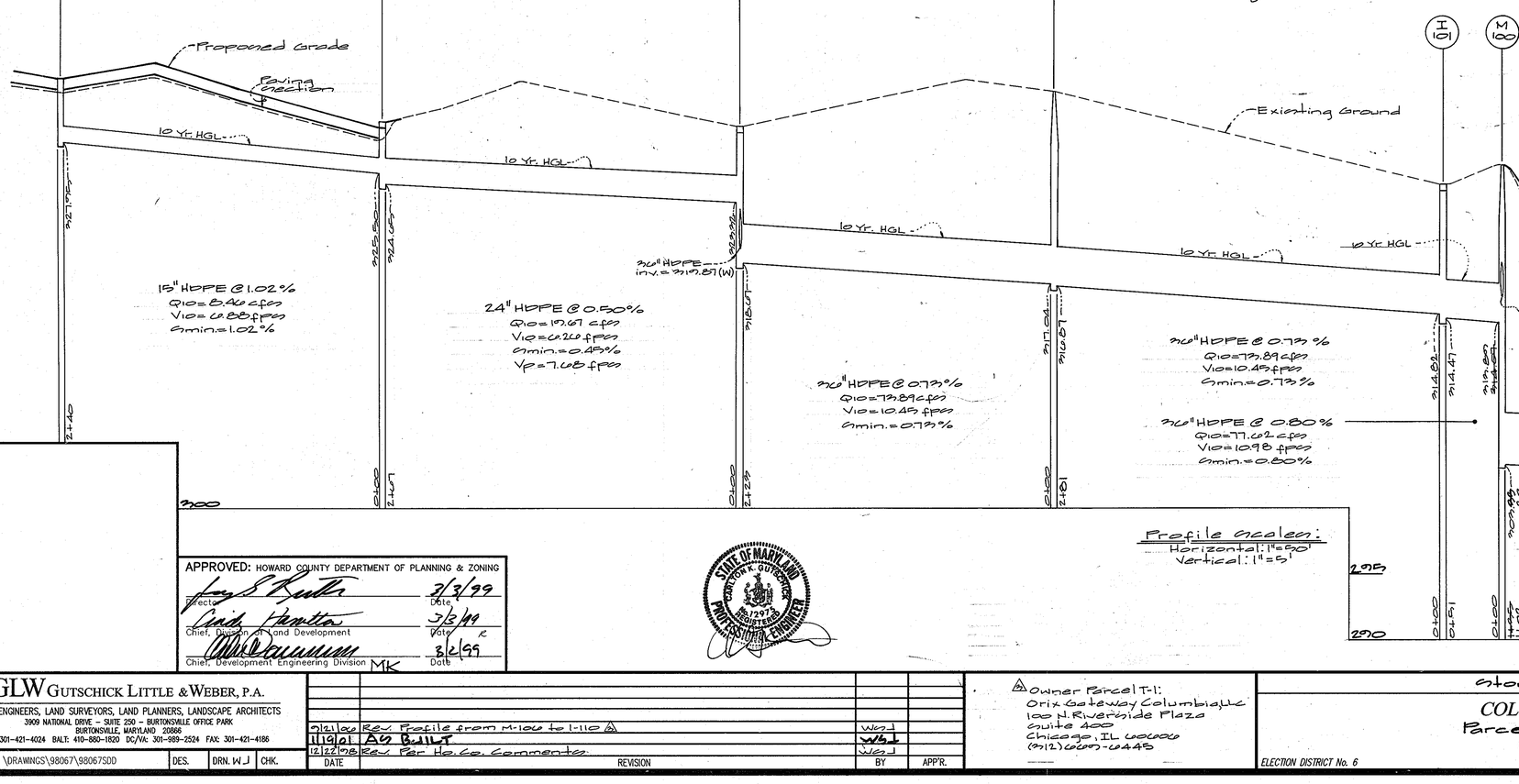


STRUCTURE SCHEDULE								
NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION UPPER	TOP ELEVATION LOWER	INVERT ELEVATION UPPER	INVERT ELEVATION LOWER	STD. DETAIL	LOCATIONS	REMARKS
I-101	A-10	4'-0"	324.00		314.82	314.47	CO. D. 4.41	See Plan	
I-102	A-10	4'-0"	329.12		323.92	318.67	CO. D. 4.41		
I-103	WR	2'-6 7/8"	333.22		324.53	323.93	CO. D. 4.35		
I-110	A-10	2'-6"	334.14	——	330.00		CO. D. 4.41		
I-112	A-10	4'	327.50	325.50	324.65		S.D. 4.41		
I-113	Triple WR	2'-7 1/8"	332.77 (grate)	——	327.75		MD SHA NO. MD 374.46		
M-100	Manhole	6'	326.22	324	316.22	309.92			
M-101		5'	331.75		317.04	316.67	CO. 5.11 & CO. 5.13		
M-102		5'	330.90		320.97	320.27			
M-103		5'	332.35		326.00	321.49			
M-104		5'	333.14		328.80	328.12			
M-105		5'	334.78		328.50	328.04			
M-106		4'	333.33		329.00	326.14	CO. 5.11 & CO. 5.12		
I-100A	Single WR	2'-7 1/4"	334.26		327.92	327.02	CO. D. 4.37		
EQ-1	End Section	48"	——		307.50		CO. D. 5.51 or CO. 5.52		
I 112A	A-10	2'-6"	332.20		328.66		CO. D. 4.41		

Phase I
Phase II
Phase I



PIPE SUMMARY		
SIZE	TYPE	LENGTH
15"	HDPE	459'
18"	"	210'
24"	"	499'
30"	" 7360	371'
36"	"	854'
48"	RCP Class IV	1375'



Profile scales:
Horizontal: 1"=50'
Vertical: 1"=5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/2/99

Chief, Development Engineering Division MK — Date 3/2/99

STATE OF MARYLAND CARLTON K. GUTSCHICK No. 12975 REGISTERED PROFESSIONAL ENGINEER

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT. 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067SDD | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
9/21/00	Rev. Profile from M-100 to I-110 △	WJ	
1/19/01	As Built	WJ	
12/27/98	Rev. Per Ho. Co. Comments	WJ	

△ Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL 60606
(312) 606-0445

Storm Drain Profiles

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
& Plat No. 18116

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
November, 1998	43 1,2,7,8	17 OF 22

SDP 99-54

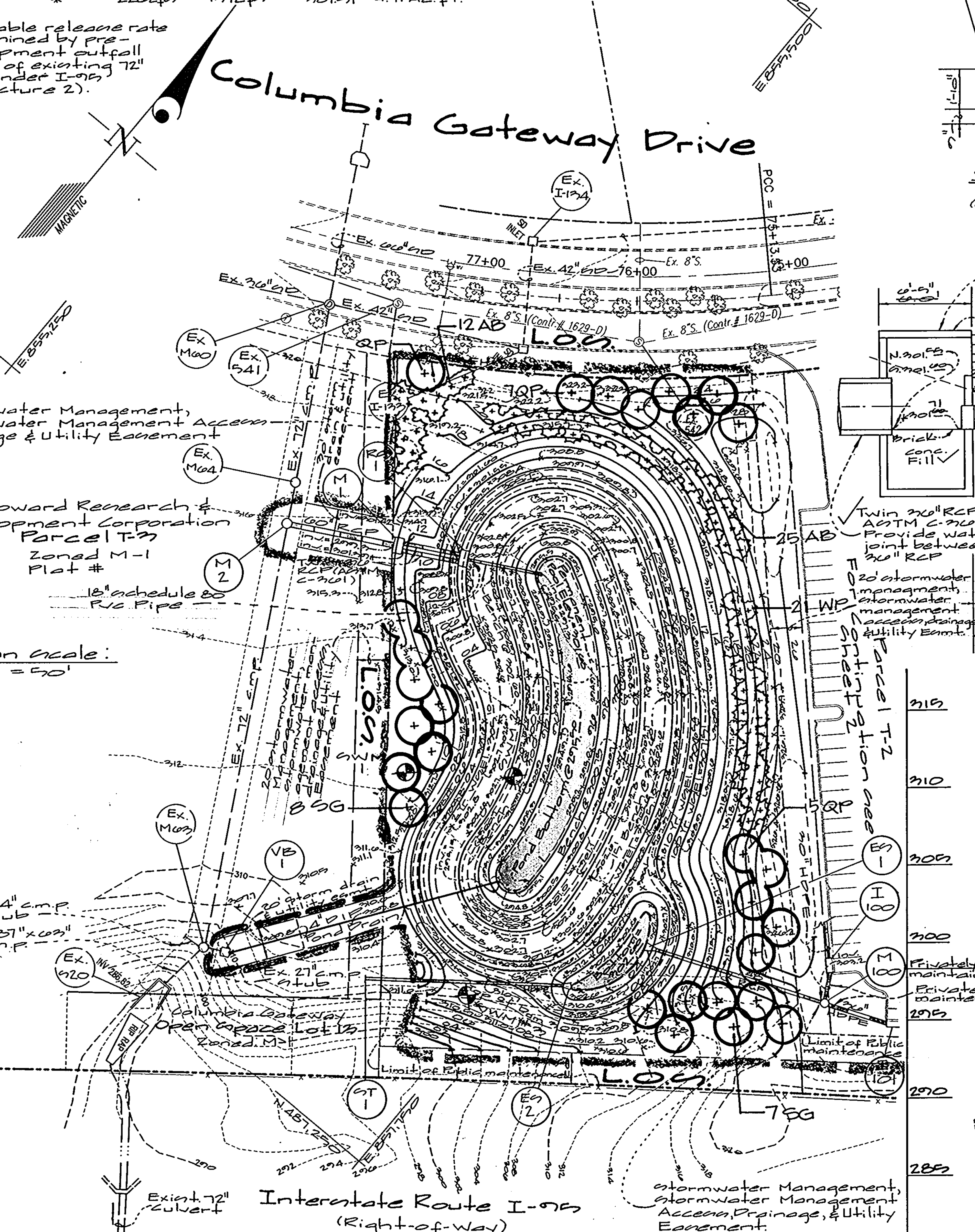
Summary Table

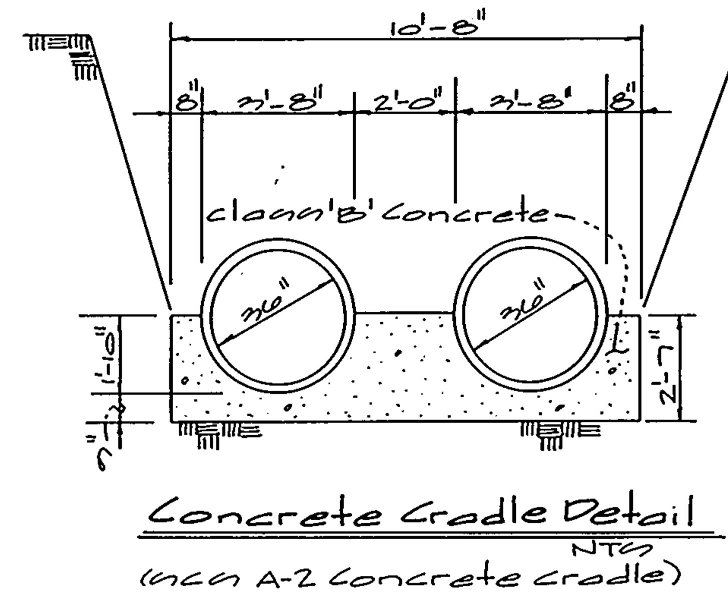
Storm	Allowable Release	Inflow	Discharge	Elev.	Storage
2 Yr.	*	81 cfs	14 cfs	305.10	2.43 Ac.ft.
10 Yr.	*	153 cfs	71 cfs	306.54	3.72 Ac.ft.
100 Yr.	*	226 cfs	137 cfs	307.51	4.71 Ac.ft.

*Allowable release rate determined by pre-development outfall rates of existing 72" cmp under I-95 (structure 2).

Pond Notes:

A. Water Quantity control is provided by a hazard class A retension facility.
B. Water quality is provided by a wet pool.
C. This facility is to be publicly maintained.

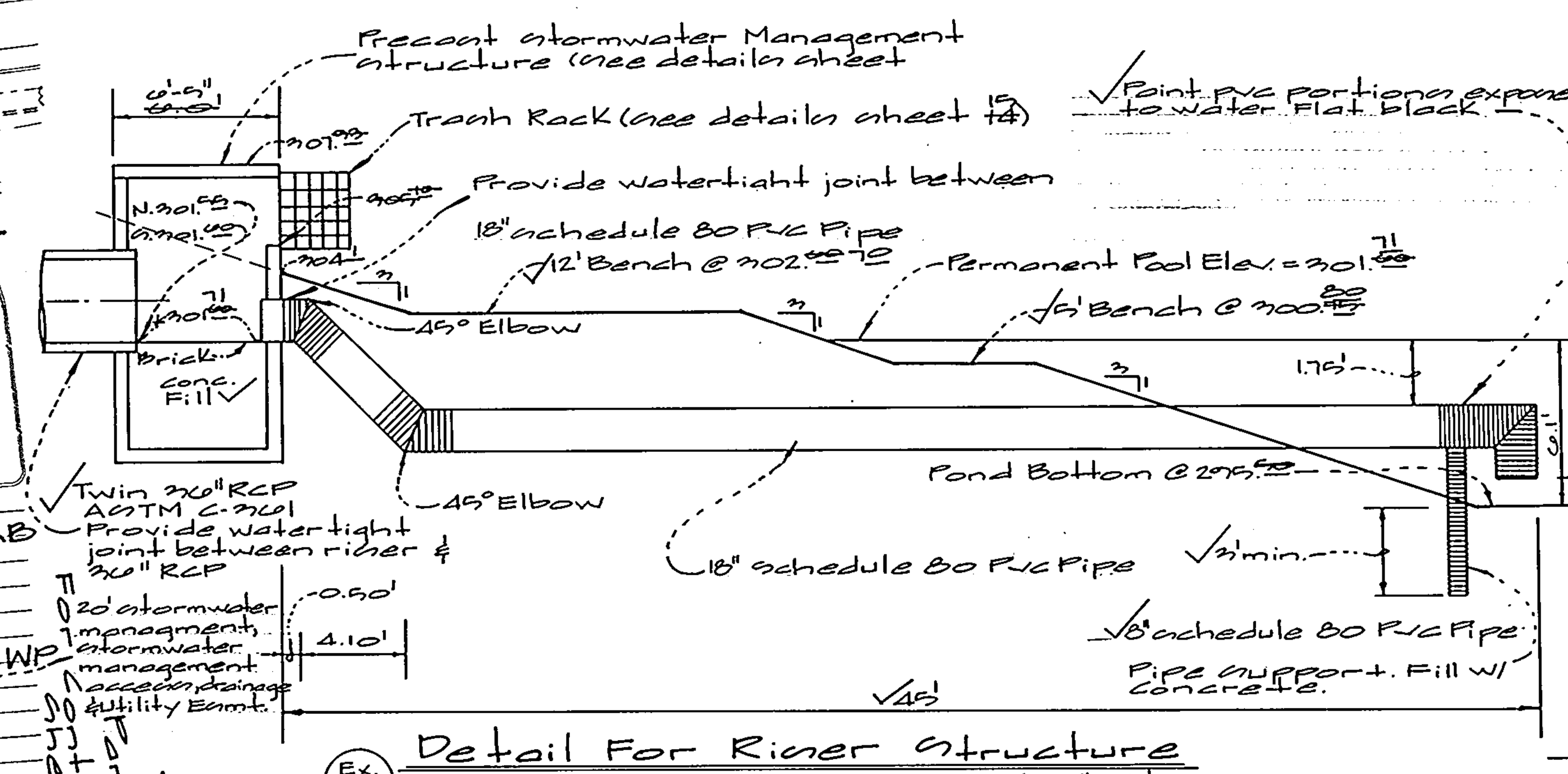


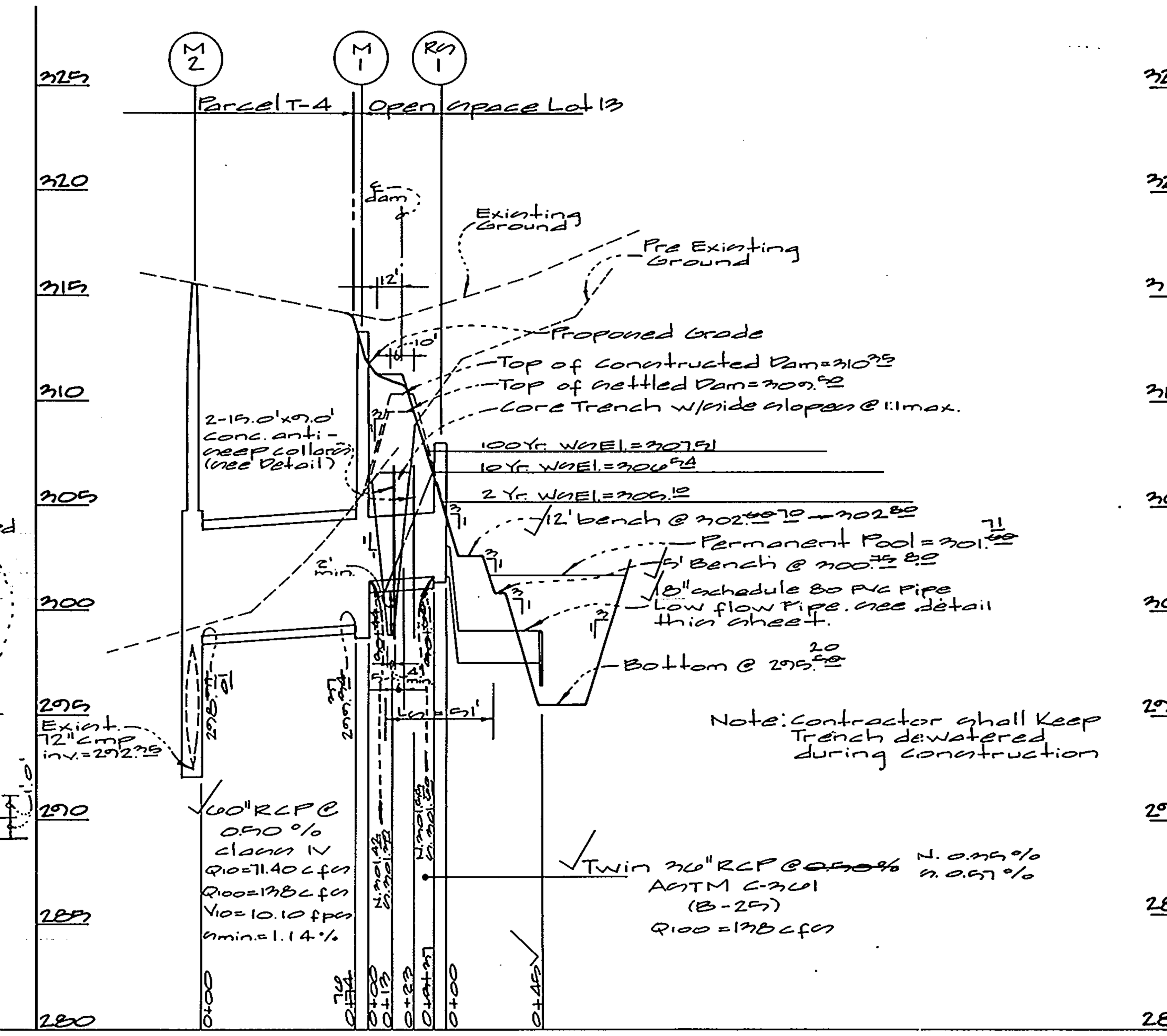


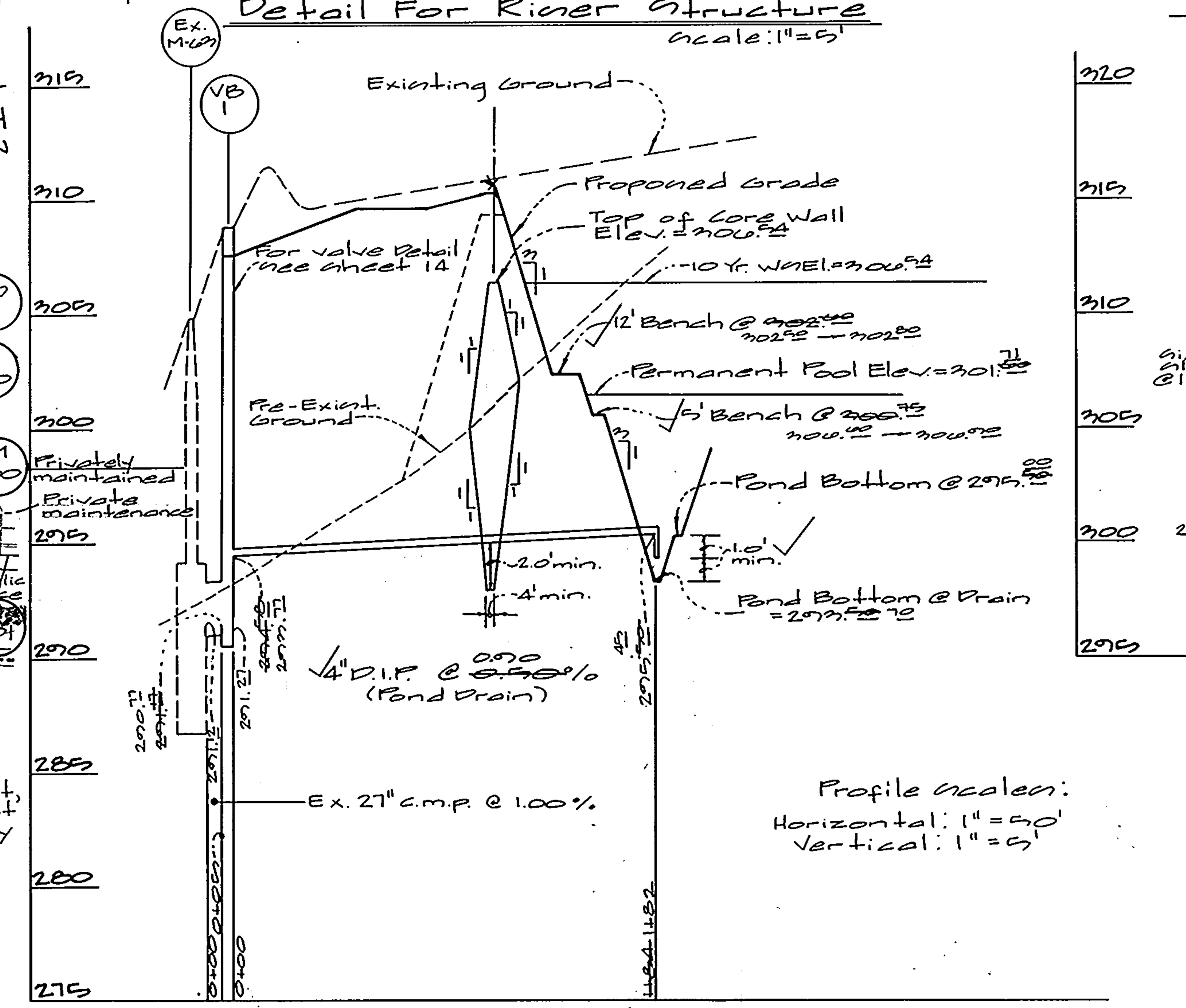
As Built

Carlton K. Gutschick
Professional Engineer
Registration No. 12975

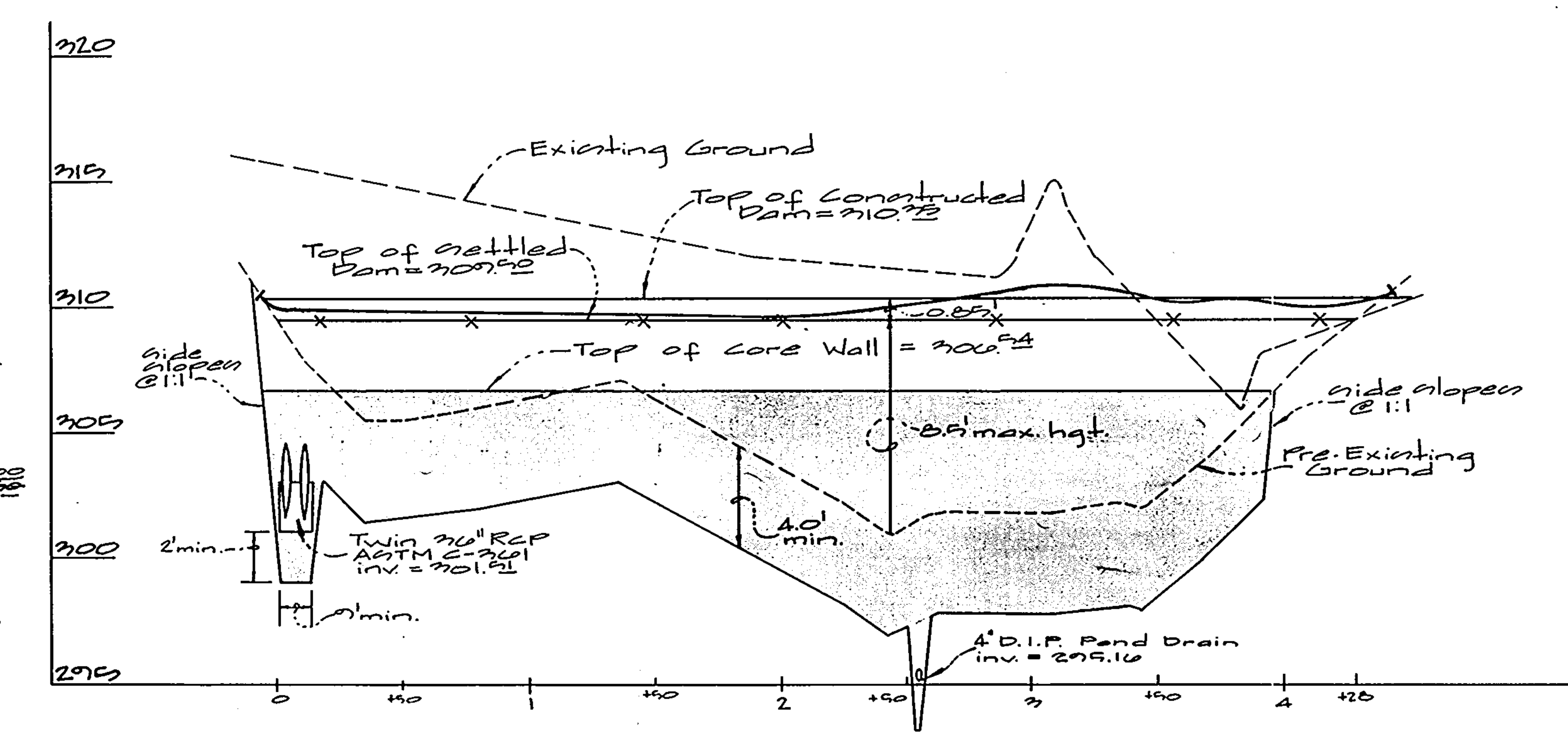
1-18-01
Date







Profile Along Pond Drain



Profile Along ℄ of Dam

Developer's/Builder's Certificate

I/We certify that the landscaping shown on this plan will be done according to the plan, section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion of a certification of Landscape Installation, accompanied by an executed one guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

x [signature] Name   x 2/8/99 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[signature] Director — 3/3/99 Date

[signature] Chief, Division of Land Development — 3/3/99 Date

[signature] Chief, Development Engineering Division MK — 3/2/99 Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction~~, soil erosion and sediment control.

[signature] Natural Resources Conservation Service — 2/25/99 Date

These Plans for ~~small pond construction,~~ soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

[signature] Howard Soil Conservation District — 2/25/99 Date

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction,~~ erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."~~

[signature] — 2-8-99 Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. ~~I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion~~. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

x [signature] Signature of Developer/Builder — x 2/8/99 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES.	DRN. WJ	CHK.

DATE	REVISION	BY	APP'R.
9/21/00	change owner info.	WSJ	
1/19/01	AS BUILT	WSJ	
1/9/00	Add maint. esmt. notes & change pipe from cmp to sch. 80 pvc	WSJ	

△ Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL 60606
(312) 669-6445

STORMWATER MANAGEMENT PLAN & DETAILS

COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
As shown	M-1	98067
DATE	TAX MAP – GRID	SHEET
NOVEMBER 1998	43-1,2,7,8	14 OF 22

SDP 99-54

STANDARD AND SPECIFICATIONS FOR TOPSOIL DEFINITION

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

PURPOSE

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

CONDITIONS WHERE PRACTICE APPLIES

I. This practice is limited to areas having 2:1 or flatter slopes where:
  a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
  b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplied of moisture and plant nutrients.
  c. The original soil to be vegetated contains material toxic to plant growth.
  d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the respective soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
  i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by a agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
  ii. Topsoil must be free of plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
  iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate if 4–8 tons/acre (200–400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

II. For sites having disturbed areas under 5 acres:
  i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization – Section 1 – Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:
  i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
    a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
    b. Organic content of topsoil shall be not less than 1.5 percent by weight.
    c. Topsoil having soluble salt greater than 500 parts per mill shall not be used.
    d. No sod or seed shall be placed on soil which has been with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of photo-toxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

  ii. Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization – Section I – Vegetative Stabilization Methods and Materials.

V. Topsoil Application
  i. When topsoilling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
  ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" – 8" higher in elevation.
  iii. Topsoil shall be uniformly distributed in a 4' –8' layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoilling or other operations shall be corrected in order to prevent the formation of depressions or water
  iv. Topsoil shall not be placed while the topsoil or subsoil is frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

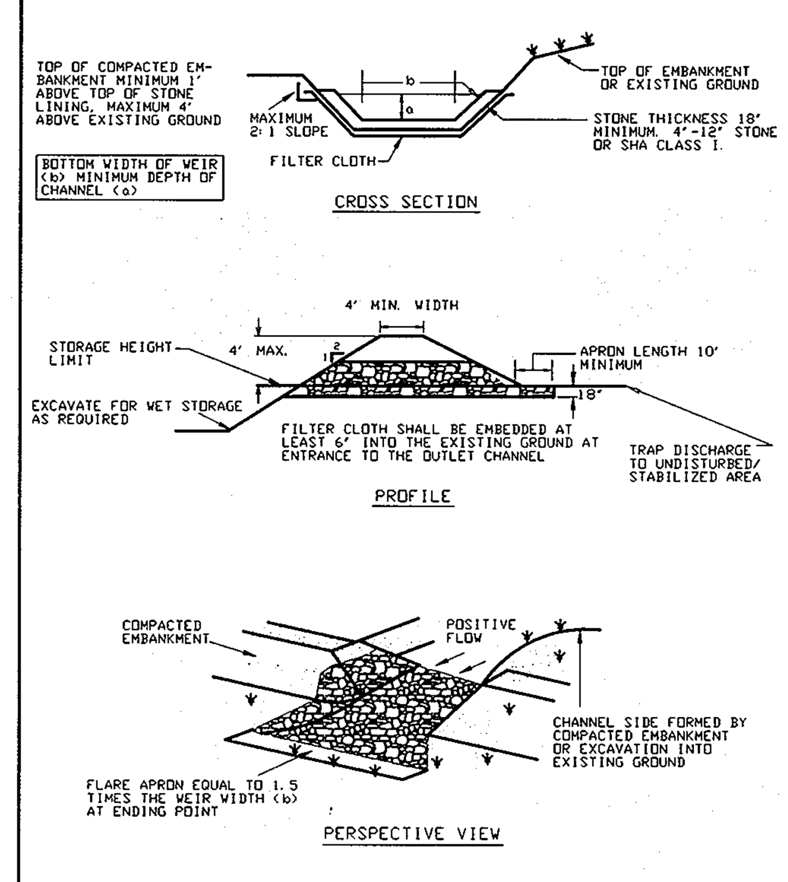
VI. Alternative for Permanent Seeding – Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
  i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
    a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
    b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
    c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
  iv. Composted sludge shall be amended with a potqssium fertilizer applied at a rate of 4lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA Pub. #1 , Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

Sediment and Erosion Control Sequence of Construction (Phase II) △3

1. Obtain grading permit & arrange pre-construction meeting with sediment control inspector (1 Day)
2. Install the stabilized construction entrance & perimeter super silt fence. (3 Days)
3. Install storm drain from M-105 to I-107 & reroute the existing temp. swale to I-107. (2 Days).
4. Install storm drain from M-105 to I-110. (1 week)
5. Surround all inlets with super silt fence & obtain permission from the sediment control inspector to remove the exist./prop. temp swale. (1 day)
6. Fine grade the site, install utilities, curbs, walks, pavement & construct building. (1 Year)
7. Remove any remaining sediment controls & stabilize any remaining disturbed areas. (1 week)

DETAIL 10 - RIP-RAP OUTLET SEDIMENT TRAP - ST III



NOTE: MAXIMUM DRAINAGE AREA= 10 ac.

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RIP-RAP OUTLET SEDIMENT TRAP - ST III

Constuction Specifications

1. The area under 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 over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be 4', measured at centerline of embankment.
3. All cut and fill slopes shall be 2:1 or flatter.
4. Elevation of the top of any dike directing water into trap must equal or exceed the height of trap embankment.
5. Storage area provided shall be figured by computing the volume measured from top of excavation. (For storage requirements see Table 10).
6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Section of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be embedded at least 6' into existing ground at entrance of outlet channel.
7. Stone used in the outlet channel shall be 4' - 12' placed 18' thick.
8. Outlet - An outlet shall be provided, which includes a means of conveying the discharge in an erosion free manner to an existing stable channel. Protection against scour at the discharge end shall be provided as necessary.
9. Outlet channel must have positive drainage from the trap.
10. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/4 of the wet storage depth of the trap (1350 cf/ac). Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
11. The structure shall be inspected periodically after each rain and repaired as needed.
12. Construction of traps shall be carried out in such a manner that sediment pollution is 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.
13. The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.

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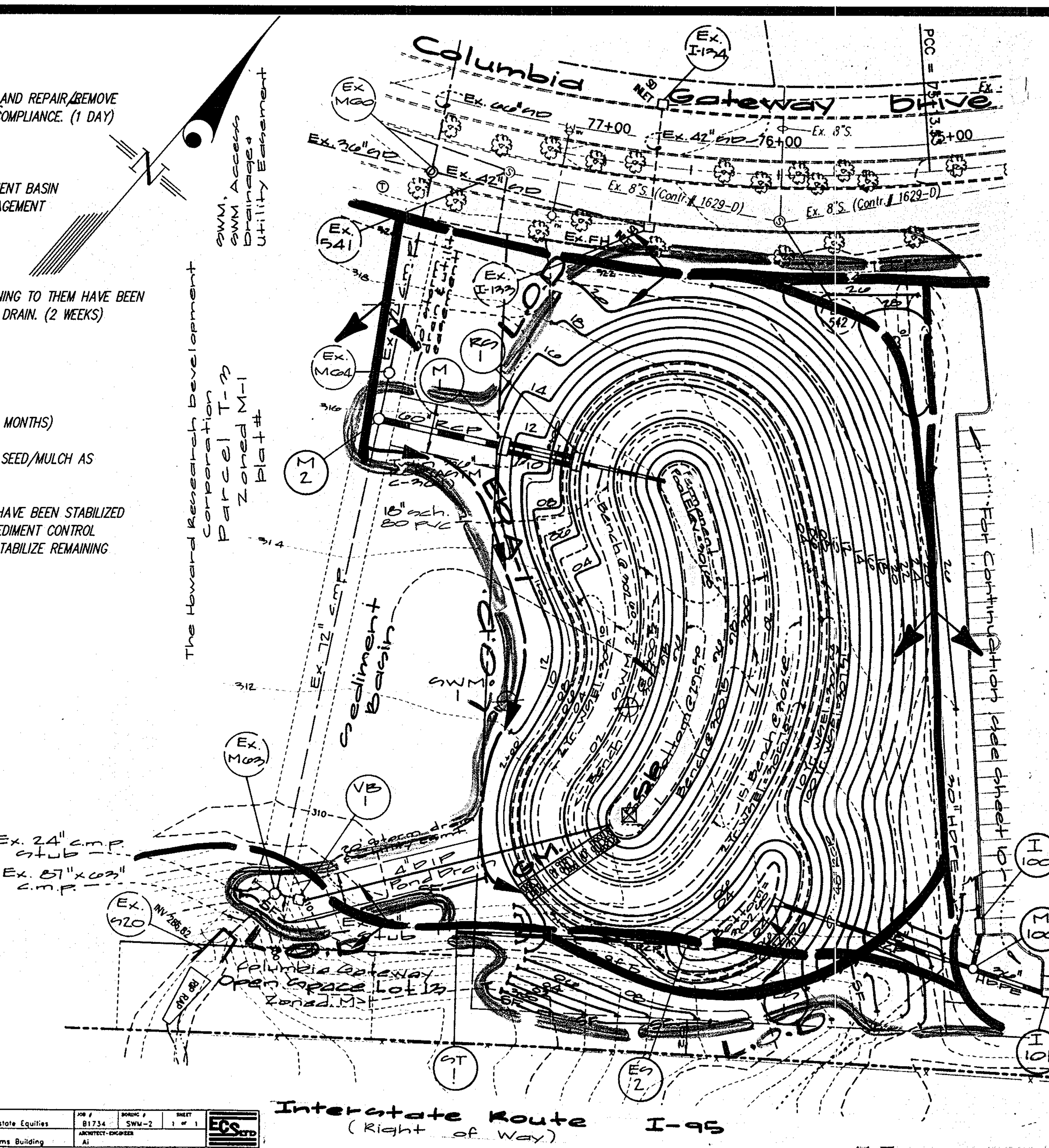
SEQUENCE OF CONSTRUCTION

1. INSPECT EXISTING SEDIMENT CONTROL FEATURES AND REPAIR/REMOVE SILT/CONSTRUCT AS REQUIRED TO BRING INTO COMPLIANCE. (1 DAY)
2. CONSTRUCT BUILDING.
3. INSTALL SILT FENCE AND EARTH DIKE FOR SEDIMENT BASIN CONSTRUCTION. CONSTRUCT STORMWATER MANAGEMENT FACILITY/SEDIMENT BASIN. (1 MONTH)
4. INSTALL STORM DRAIN. (1 MONTH)
5. REMOVE SEDIMENT CONTROLS WHEN AREAS DRAINING TO THEM HAVE BEEN RE-ROUTED TO THE SEDIMENT BASIN BY STORM DRAIN. (2 WEEKS)
6. INSTALL REMAINING UTILITIES. (1 MONTH)
7. FINE GRADE SITE. (2 WEEKS)
8. CONSTRUCT CURB AND GUTTER. BASE PAVE. (2 MONTHS)
9. CONSTRUCT SIDEWALK, INSTALL LANDSCAPE AND SEED/MULCH AS INDICATED. (2 WEEKS)
10. WHEN AREAS DRAINING TO SEDIMENT CONTROLS HAVE BEEN STABILIZED AND PERMISSION HAS BEEN GRANTED BY THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS AND STABILIZE REMAINING AREAS AS REQUIRED. (1 WEEK)
11. SURFACE ALL PAVING AREAS. (1 WEEK)
12. OBTAIN OCCUPANCY PERMIT.

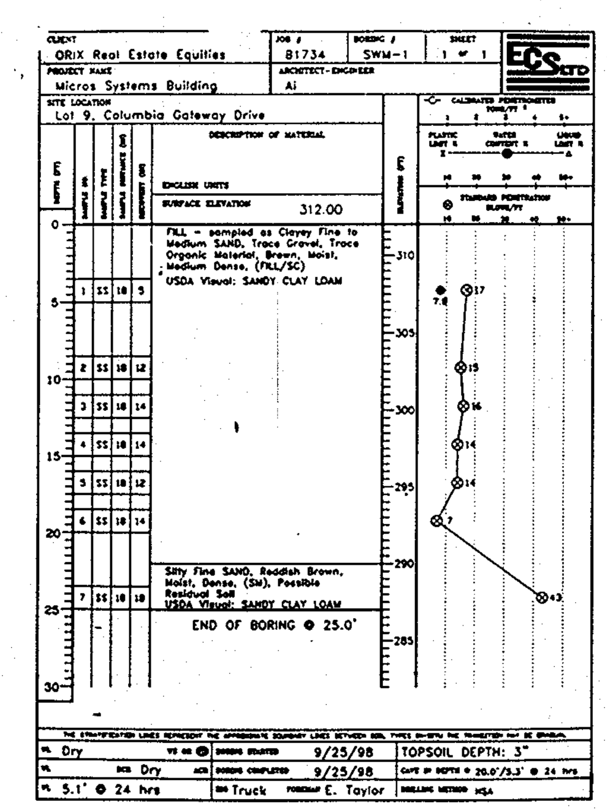


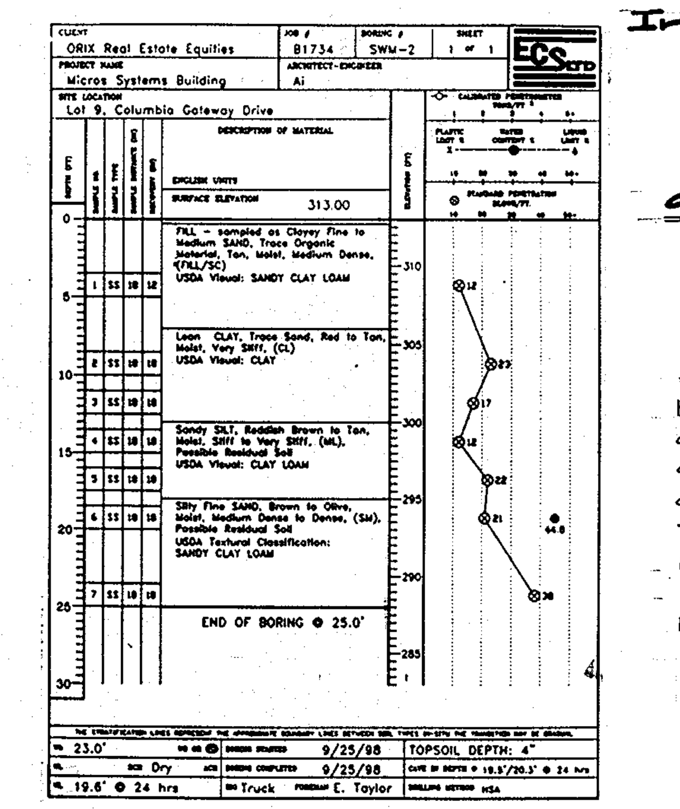
Sediment Control Plan

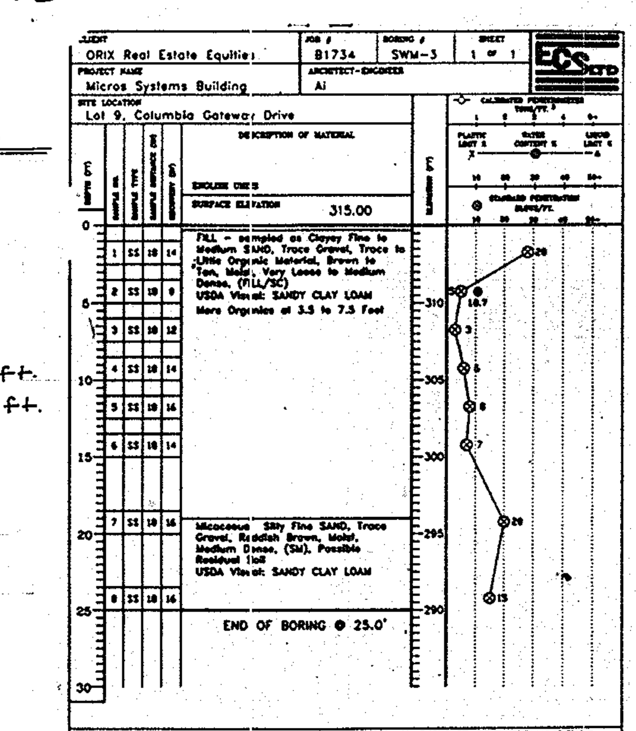
Scale: 1" = 50'

Basin Data:

Drainage Area	: 29.1 Ac.
Storage Required	: 104,760 cu.ft.
Storage Provided	: 291,000 cu.ft.
clean out elevation	: 298.92
Top of Dam	: 309.50
Bottom Elevation	: 295.50
Riser Crest Elevation	: 305.10
Permanent Pool Elevation	: 301.60







DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. ~~I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as built" plan of the pond within 30 days of completion.~~ I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer/Builder — Date 2/8/99

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction~~, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."~~

Date 2-8-99

STATE OF MARYLAND — CARLTON K. GUTSCHICK — No. 12975 — REGISTERED PROFESSIONAL ENGINEER

These Plans for ~~small pond construction~~, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District — Date 2/25/99

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction~~, soil erosion and sediment control.

Natural Resources Conservation Service — Date 2/25/99

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

	Date
Director	3/3/99
Chief, Division of Land Development	3/3/99
Chief, Development Engineering Division MK	3/22/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\9867SDS2.DWG — DES. — DRN. GT — CHK.

DATE	REVISION	BY	APP'R.
9/21/00	Change owner info. added SWE Ph. II sequence of Construction △3	WSJ	
2-9-99	Change A12 cmp to sch. 80 PVC	WSJ	
12-22-98	Rev. Per Ho. Co. Comments	WSJ	

PREPARED FOR :
△3 Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL. 60606

Sediment Control Plan, Details & Soils Boring Profiles

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
PLAT# 13402 thru 13404
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP - GRID	SHEET
NOVEMBER 1998	43 - 1,2,7,8	11 OF 21

SDP 99-54

PLANT MATERIALS AND PLANTING METHODS

A. Plant Materials

The landscape contractor shall furnish and install and/or dig, ball, burlap and transplant all of the plant materials called for on drawings and/or listed in the Plant Schedule.

1. Plant Names

Plant names used in the Plant Schedule shall conform with "Standardized Plant Names," latest edition.

2. Plant Standards

All plant material shall be equal to or better than the requirements of the "USA Standard for Nursery Stock" latest edition, as published by the American Association of Nurserymen (hereafter referred to as AAN Standards). All plants shall be typical of their species and variety, shall have a normal habit of growth and shall be first quality, sound, vigorous, well-branched and with healthy, well-furnished root systems. They shall be free of disease, insect pests and mechanical injuries.

All plants shall be nursery grown and shall have been grown under the same climate conditions as the location of this project for at least two years before planting. Neither heeled-in plants nor plants from cold storage will be accepted.

3. Plant Measurements

All plants shall conform to the measurements specified in the Plant Schedule as approved by the ARC.

a. Caliper measurements shall be taken six inches (6") above grade for trees under four-inch (4") caliper and twelve (12") above grade for trees four inches (4") in caliper and over.

b. Minimum branching height for all trees shall be six feet (6'), maximum eight feet (8').

c. Minimum size for planting shade trees shall be 3-3 1/2" caliper, 14'-16' in height.

d. Minimum size for planting minor or intermediate focus trees (pines, crabapples, etc.) shall be 3"-3 1/2" caliper, 10'-12' in height.

e. Minimum size for planting shrubs shall be 18" - 24" spread unless noted otherwise.

f. Caliper, height, spread and size of ball shall be generally as follows:

CALIPER	HEIGHT	SPREAD	SIZE OF BALL
3" - 3 1/2"	14'-16'	6'-8'	32" diameter
3 1/2"- 4"	14'-16'	8'-10'	36" diameter
4" - 4 1/4"	16'-18'	8'-10'	40" diameter
4 1/2"- 5"	16'-17'	10'-12'	44" diameter
5" - 5 1/2"	16'-20'	10'-12'	48" diameter
5 1/2"- 6"	18'-20'	12'-14'	52" diameter

All plant material shall generally average the median for the size ranges indicated above as indicated in the "AAN Standards".

4. Plant Identification

Legible labels shall be attached to all shade trees, minor trees, specimen shrubs and bundles or boxes of other plant material giving the botanical and common names, size and quantity of each. Each shipment of plants shall bear certificates of inspection as required by Federal, State and County authorities.

5. Plant Inspection

The ARC may, upon request by the builder or developer, at least ten (10) days prior to the installation of any proposed plant material, inspect all proposed plant material at the source of origin.

B. Planting Methods

All proposed plant materials that meet the specifications in Section A are to be planted in accordance with the following methods during the proper planting seasons as described in the following:

1. Planting Seasons

The planting of deciduous trees, shrubs and vines shall be from March 1st to June 15th and from September 15th to December 15th. Planting of deciduous material may be continued during the winter months providing there is no frost in the ground and frost-free topsoil planting mixtures are used.

The planting of evergreen material shall be from March 15th to June 15th and from August 15th to December 1st. No planting shall be done when ground is frozen or excessively moist. No frozen or wet topsoil shall be used at any time.

2. Digging

All plant material shall be dug, balled and burlapped (B+B) in accordance with the "AAN Standards".

3. Excavation of Plant Pits

The landscaping contractor shall excavate all plant pits, vine pits, hedge trenches and shrub beds in accordance with the following schedule:

a. Locations of all proposed plant material shall be staked and approved in the field by the landscape architect before any of the proposed plant material is installed by the landscape contractor.

b. All pits shall be generally circular in outline, vertical sides; depth shall not be less than 6" deeper than the root ball, diameter shall not be less than two times the diameter of the root ball as set forth in the following schedule.

c. If areas are designated as shrub beds or hedge trenches, they shall be excavated to at least 18" depth minimum. Areas designated for ground covers and vines shall be excavated to at least 12" in depth minimum.

d. Diameter and depth of tree pits shall generally be as follows:

PLANT SIZE	ROOT BALL	PIT DIAMETER	PIT DEPTH
3" - 3 1/2" cal.	32"	64"	28"
3 1/2"- 4" cal.	36"	72"	32"
4" - 4 1/2" cal.	40"	80"	36"
4 1/2"- 5" cal.	44"	88"	40"
5" - 5 1/2" cal.	48"	96"	44"
5 1/2"- 6" cal.	52"	104"	48"

A 20% compaction figure of the soil to be removed is assumed and will be allowed in calculation of extra topsoil. The tabulated pit sizes are for purposes of uniform calculation and shall not override the specified depths below the bottoms of the root balls.

4. Staking, Guying and Wrapping

All plant material shall be staked or guyed, and wrapped in accordance with the following specifications:

a. Stakes: Shall be sound wood 2" x 2" rough sawn oak or similar durable woods, or lengths, minimum 7'-0" for major trees and 5'-0" minimum for minor trees.

b. Wire and Cable: Wire shall be #10 ga. galvanized or bethanized annealed steel wire. For trees over 3" caliper, provide 5/16" turn buckles, eye and eye with 4" take-up. For trees over 5" caliper, provide 3/16", 7 strand cable cadmium plated steel, with galvanized "eye" thimbles of wire and hose on trees up to 3" in caliper.

c. Hose: Shall be new, 2 ply reinforced rubber hose, minimum 1/2" I.D. "Plastic Lock Ties" or "Paul's Trees Braces" may be used in place of wire and hose on trees up to 3" in caliper.

d. All trees under 3" in caliper are to be planted and staked in accordance with the attached "Typical Tree Staking Detail". All trees over 3" in caliper are to be planted and guyed in accordance with the attached "Typical Tree Guying Detail".

5. Plant Pruning, Edging and Mulching

a. Each tree, shrub or vine shall be pruned in an appropriate manner to its particular requirements, in accordance with accepted standard practice. Broken or bruised branches shall be removed with clean cuts flush with the adjacent trunk or branches. All cuts over 1" in diameter shall be painted with an approved antiseptic tree wound dressing.

b. All trenches and shrub beds shall be edged and cultivated to the lines shown on the drawing. The areas around isolated plants shall be edged and cultivated to the full diameter of the pit. Sod which has been removed and stacked shall be used to trim the edges of all excavated areas to the neat lines of the plant pit saucers, the edges of shrub areas, hedge trenches and vine pockets.

c. After cultivation, all plant materials shall be mulched with a 2" layer of fine, shredded pine bark, peat moss, or another approved material over the entire area of the bed or saucer.

6. Plant Inspection and Acceptance

The ARC shall be responsible for inspecting all planting projects on a periodic basis to assure that all work is proceeding in accordance with the approved plans and specifications.

7. Plant Guarantee

All plant material shall be guaranteed for the duration of one full growing season, after final inspection and acceptance of the work in the planting project. Plants shall be alive and in satisfactory growing condition at the end of the guarantee period.

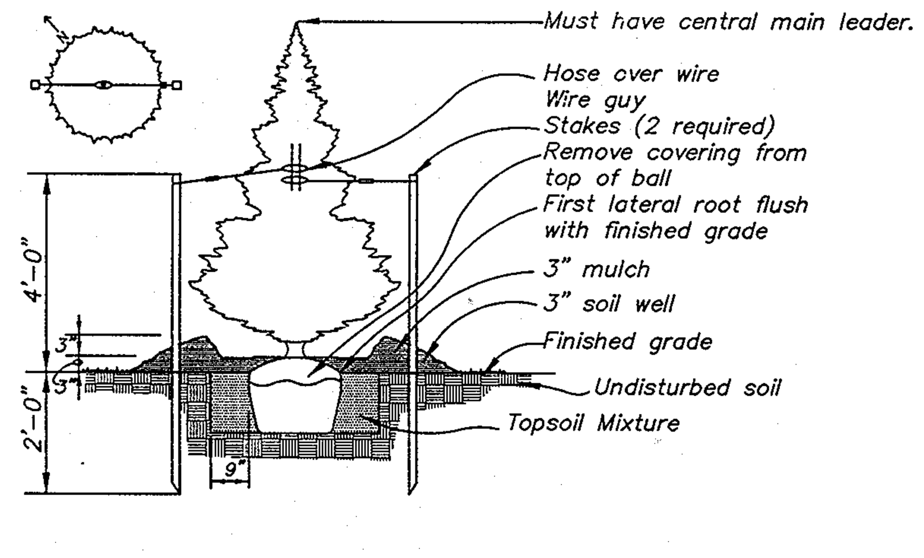
a. For this purpose, the "growing season" shall be that period between the end of the "Spring" planting season, and the commencement of the "Fall" planting season.

b. Guarantee for planting performed after the specified end of the "Spring" planting season, shall be extended through the end of the next following "Spring" planting season.

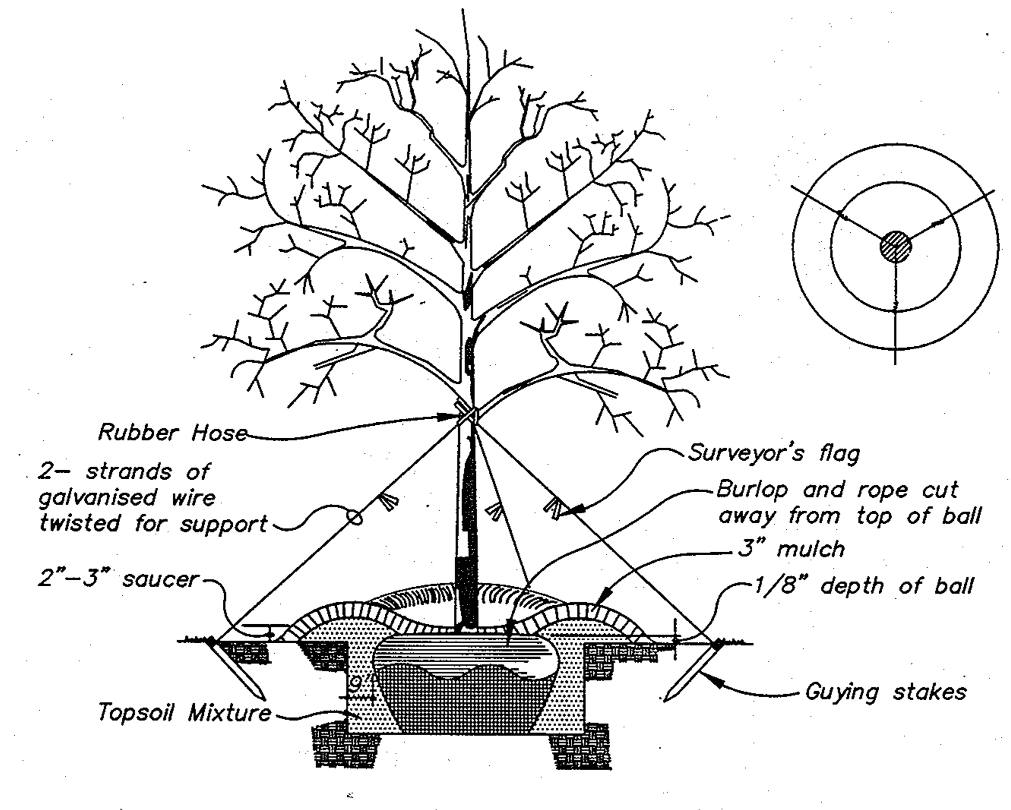
Sodding

All sodding shall be in accordance to the "Landscape Specification Guidelines for Baltimore-Washington metropolitan Areas" latest edition, approved by the Landscape Contractors Association of Metropolitan Washington and the American Society of Landscape Architects.

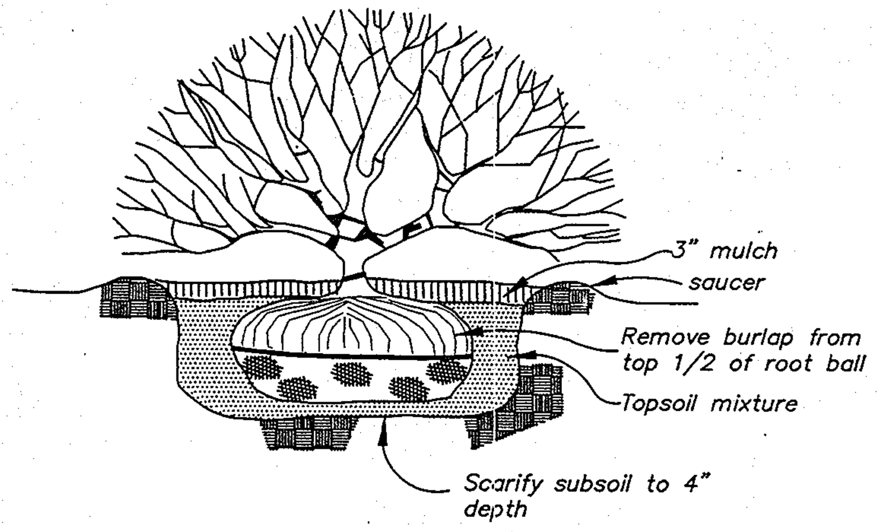
All sod shall be strongly rooted sod, not less than two years old and free of weeds and undesirable native grasses. Provide only sod capable of growth development when planted and in strips not more than 18" wide x 4" long. Provide sod composed principally of improved strain Kentucky bluegrass, such as, Columbia, Victa, or Escort.



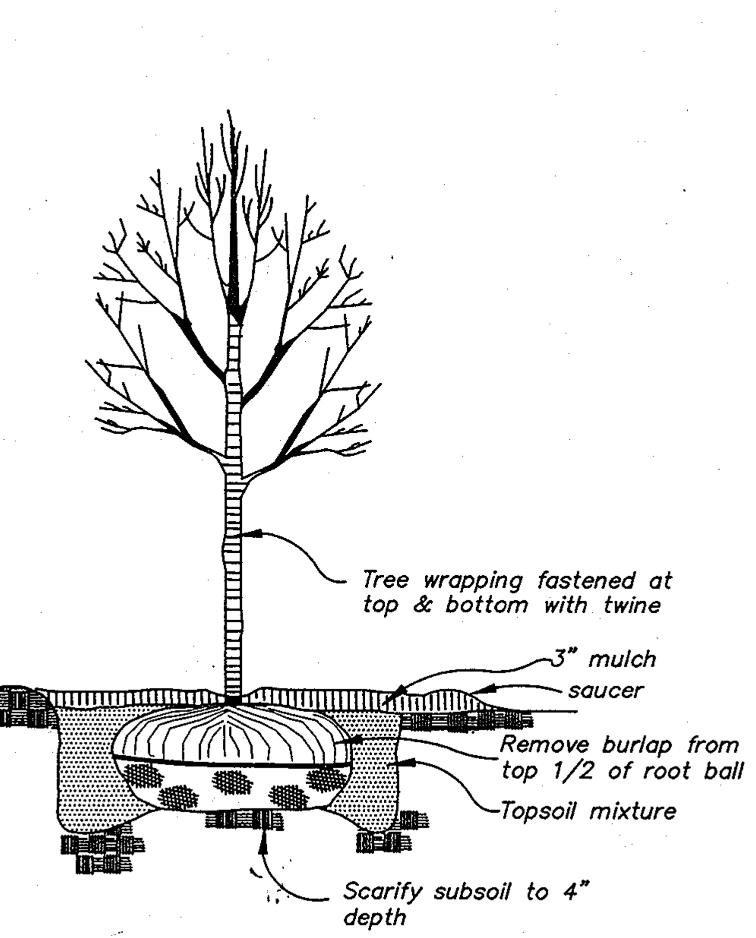
Evergreen Planting Detail
N.T.S.



Typical Tree Guying Detail
N.T.S.



Shrub Planting Detail
N.T.S.



Typical Deciduous Tree Planting
N.T.S.

Plant List (Parcels T-1, T-2 & T-5)

Quan.	Symbol	Botanical Name	Common Name	Remarks
		Trees		
186	OGM	Acer saccharum 'Green Mountain'	Green Mountain Maple	2 1/2 - 3" cal., 13-15' hgt.
128	HL	Gleditsia triacanthos inermis 'halka'	Halka Honeylocust	2 1/2-3" cal., 12-14' hgt.
27	ZC	Malus sieboldi zumi	Zumi Crabapple	2 - 2 1.2" cal., 6-8' hgt.
84	AB	Picea abies	Norway Spruce	6-8' hgt. (not sheared)
62	WP	Pinus strobus	White Pine	6-8' hgt.
42	AC	Prunus subhirtella 'Autumnalis	Autumn Flowering Cherry	2 - 2 1/2" cal., 8-10' hgt.
72	QP	Quercus palustris	Pin Oak	2 1/2 - 3" cal., 12-14 hgt.
15	SG	Liquidambar styraciflua	Sweet Gum	2 1/2 - 3" cal, 13-15' hgt.
67	PS	Prunus serrulata 'Kwanzan'	Kwanzan Cherry	2 1/2 - 3" cal., 12-14 hgt.
		Shrubs		
188	EA	Euonymus alatus	Winged Euonymus	18-24", plant 3' oc.
94	IGC	Ilex glabra compacta 'Shamrock'	'Shamrock' Inkberry Holly	18-24", plant 3' oc.
76	IM	Ilex meserveae 'Blue Girl'	'Blue Girl' Holly	18-24", plant 3' oc.
264	JCF	Juniperus conferta 'Blue Pacific'	'Blue Pacific' Shore Juniper	15-18", plant 3' oc.
49	TW	Taxus Wardi	Wardi Yew	15-18" Plant 2'-6" o.c.
		Groundcover		

SCHEDSULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	E		N/A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	1,075 LF	1,275 LF	N/A
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED	No	No	N/A
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED	Yes Berm (at least 3' high)	No	N/A
NUMBER OF PLANTS REQUIRED SHADE TRES EVERGREEN TREES SHRUBS	@ 1/40=27 None None	@ 1/40=32 None @ 1/4=319	N/A
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IS NEEDED)	Per alternate compliance -HRD's standards		N/A

LANDSCAPE SURETY FOR SCHEDULE A REQUIRED PLANTINGS: 59X $300.00 = $.17,700
319 x $30 = 9,570
$27,270.00

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	400 (T-1)	1016 (T-2)
NUMBER OF TREES REQUIRED @ 1/20 sp	20	51
NUMBER OF TREES PROVIDED SHADE TREES OTHER SHADE TREES (2:1 SUBSTITUTION)	PER ALTERNATIVE COMPLIANCE —HRD'S STANDARDS	

Total LANDSCAPE SURETY FOR SCHEDULE B REQUIRED PLANTINGS: 71 X $300.00 = $21,300.00
Landscape surety for schedule B required plantings for Parcel T-1: 20 x $300.00 = $6000.00
Landscape surety for schedule B required plantings for Parcel T-2: 51 x $300.00 = $15,300.00

SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	1380
NUMBER OF TREES PROVIDED (TYPE B) SHADE TREES (1:50) EVREGREEN TREES (1:40)	28 35
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	0 0
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	0 0
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	PER ALTERNATIVE COMPLIANCE HRD'S STANDARD

LANDSCAPE SURETY FOR SCHEDULE-D REQUIRED PLANTINGS: 28X 300 = 8,400.00
35X 150 5,250.00
13,650.00

LANDSCAPING NOTES

1. This plan has been prepared in accordance with Section 16.124 of the Howard County Code and Chapter VI (Alternative Compliance) of the Howard County Landscape Manual.

2. Contractor shall notify all utilities at least (5) five days before starting work. All General Notes, especially those regarding utilities, on Sheet 1 shall apply.

3. Field verify underground utility locations and existing conditions before staring planting work. Contact owner or his representative if any relocations are required.

4. Plant quantities shown on Plant List are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on the plan and those shown on the plant list, the quantities on the plan shall take precedence.

5. All plant material shall be full, heavy, well formed, and symmetrical, and conform to the A.A.N. Specifications, and be installed in accordance with project specifications.

6. No substitution shall be made without written consent of the owner or his representative.

7. All areas disturbed by construction activities but not otherwise planted, paved, or mulched shall be seeded or sodded in accordance with project specifications.

8. The contractor shall notify the owner in writing if he/she encounters soil drainage conditions which may be detrimental to the growth of the plants.

9. All exposed earth within limits of planting beds shall be mulched with shredded hardwood mulch per Planting Details.

10. "Schedule A - Perimeter Landscape Edge", "Schedule B - Parking Lot Internal Landscaping" and "Schedule D - Stormwater Management Area Landscaping" is provided for landscape surety calculation purposes only.

Financial surety for the required landscaping has been posted as part of the DPW Developer's Agreement in the amount of $62,220.00 *

11. Tabulation for landscape shown:

Required planting by HRD for 24.32± ac of R&D use at 22 trees/ac = 535 shade trees (or equivalent)

Planting provided:

shade trees	424	
ornamental trees:	142 = 71	E.S.T.
evergreen trees (existing and proposed):	147 = 74	E.S.T.
	584	E.S.T.[1]

[1] E.S.T. - Equivalent Shade Trees
The proposed shrubs and ground covers are counted towards a portion of the required planting by HRD.

SWM POND PLANTING NOTES

1. Upon conversion of sediment control pond to stormwater management pond, the contractor shall remove any stones, debris, or construction material larger than two inches (2") in any dimension. The ponds shall be flooded and left undisturbed for a period of 10 days prior to planting.

2. One once of 18-6-25 slow release fertilizer shall be incorporated into the soil for each plant at the time of planting.

3. Soil shall be saturated with water during and after planting, or the planting area may be completely flooded at this time (wet planting). Planting soil shall be firmly pressed around each to prevent flotation.

4. The source of all aquatic and emergent plants shall be approved by the owner or landscape architect prior to ordering. These plants shall be grown in pots (container specified) or nursery growing beds (bare rood specified) for a minimum of 12 months prior to installation and shall have been wet cultivated during the entire period.

5. All plant material shall be guaranteed for a period of one year after formal acceptance. Plants which have greater and 33% dieback or have not grown so as to emerge from the water surface shall be replaced at the next planting season.

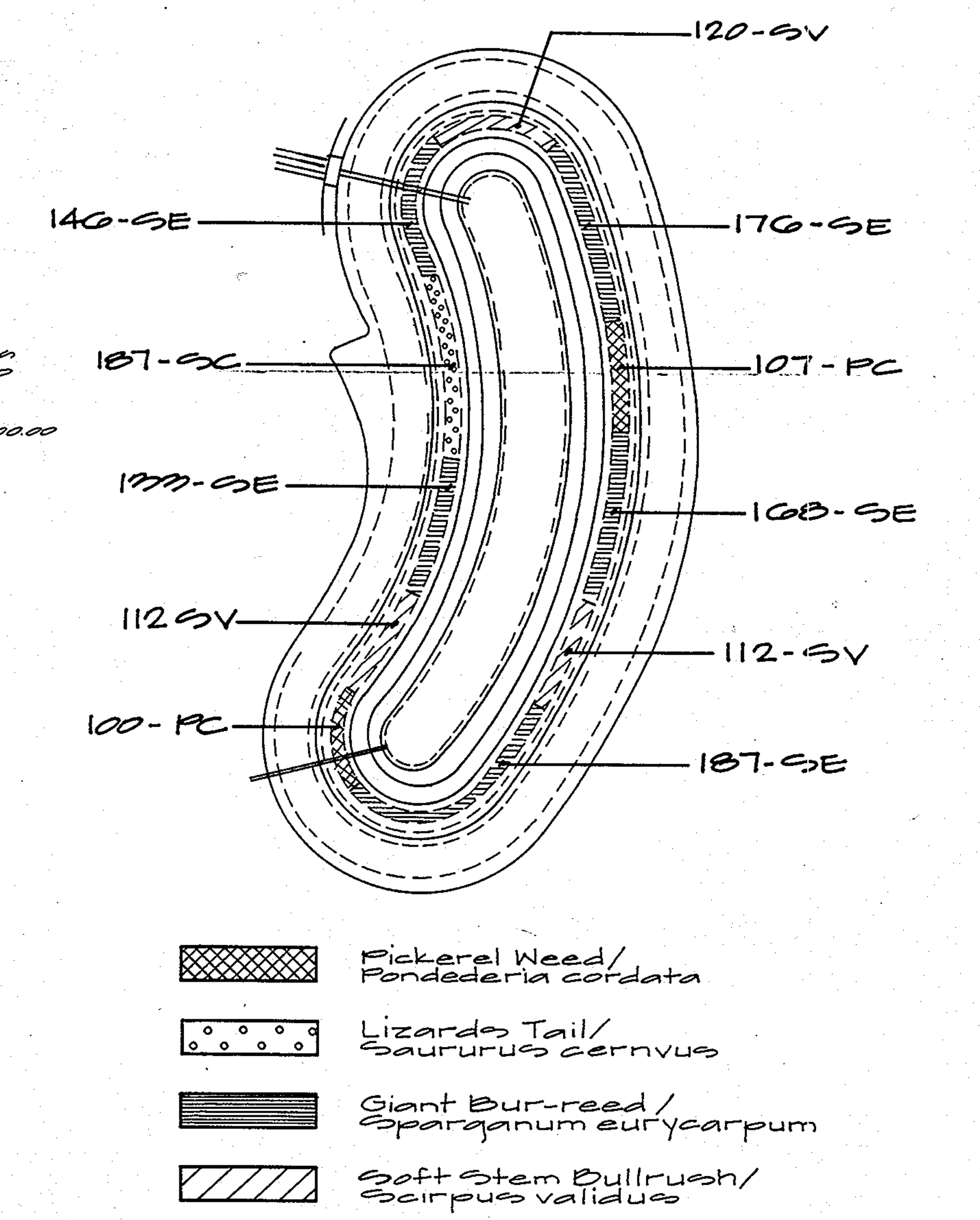
6. Remove litter and debris as required during the first growing season and at the beginning of the second growing season.

The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in goof growing condition, and where necessary, replaced with new material to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.

Owner Parcel T-5
The Howard Research & Development Corporation
10275 Little Patuxent Pkwy.
Columbia, Maryland 21044
Attn.: Al Edwards
410: 992-6027

SWM POND PLANT LIST

KEY	QTY	NAME (COMMON/BOTANICAL)	REMARKS
PC	207	Pickerel Weed/ Pondederia cordata	Bare Root @ 18" O.C.±
SC	187	Lizards Tail/ Saururus cernvus	Bare Root @ 18" O.C.±
SE	810	Giant Bur-reed/ Sparganum eurycarpum	Bare Root @ 18" O.C.±
SV	344	Soft Stem Bullrush/ Scirpus validus	Bare Root @ 18" O.C.±



SWM Planting Detail

Financial surety for Parcels T-1 & T-2 has been posted as a part of the DPW Developer's Agreement in the amount of $48,570.00 (schedules A & B).
Financial surety for Parcel T-5 has been posted as a part of The DPW Developer's Agreement in the amount of $13,650.00 (schedule D).

STATE OF MARYLAND — CARLTON K. GUTSCHICK — No. 12975 — REGISTERED PROFESSIONAL ENGINEER

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[signature] Director	3/3/99 Date
[signature] Chief, Division of Land Development	3/3/99 Date
[signature] Chief, Development Engineering Division MK	3/2/99 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\98067LD.DWG | DES. | DRN. | CHK.

DATE	REVISION	BY	APP'R.
9/21/06	Rev. owner information (3)		
7/31/01	Revise Landscape Plant List & schedule B	WSJ	
1/6/99	Revise Landscape schedule B and Coordinate Plant List	GT	

(3) Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL. 60606
(312) 669-6445

LANDSCAPE NOTES, DETAILS & SCHEDULES

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
PLAT# 13462 thru 13464
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP No.	SHEET
NOVEMBER 1998	43-1,2,7,8	9 of 22

SDP 99-54

Developer's/Builder's Certificate

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Name _____ Date 2/9/99

Note: Exterior lighting shall comply with Zoning Regulations, Section 134.

NOTE: THIS PLAN WAS PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND CHAPTER VI (ALTERNATIVE COMPLIANCE) OF THE HOWARD COUNTY LANDSCAPE MANUAL. SEE SHEET 9 FOR SHEET FOR SURETY CALCULATIONS.

NOTE: FOR STORMWATER MANAGEMENT FACILITY LANDSCAPING SEE SHEET 9.4.14

LEGEND

- 27' POLE WITH TWO FIXTURES W/400W METAL HALIDE LAMP
- 27' POLE WITH ONE FIXTURE W/400W METAL HALIDE LAMP
- 10' POLE WITH ONE FIXTURE W/400W METAL HALIDE LAMP

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/3/99

Chief, Development Engineering Division — Date 3/2/99

Interstate Route 95 Right-of-Way

NOTE: THIS PLAN IS FOR LANDSCAPING & LIGHTING PURPOSES ONLY!

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\98067SP1.DWG | DES. | DRN. HKJ | CHK.

DATE	REVISION	BY	APP'R.
2/12/1999	REVISE PARCEL T-1 LANDSCAPE (A)	HKJ	
1/20/1999	Revise Landscaping for certification	GT.	
1/6/1999	Revise Landscaping	GT.	

(A) OWNER PARCEL T-1
ORIX GATEWAY, COLUMBIA, LLC
100 N. RIVERSIDE PLAZA
SUITE 400
CHICAGO, IL 60606
(312) 669-6445

LANDSCAPE & LIGHTING PLAN

COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP - GRID	SHEET
November 1998	43 - 1,2,7,8	8 OF 22

SDP 99-54

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Signature	Date
Director	3/3/99
Chief, Division of Land Development	3/3/99
Chief, Development Engineering Division	3/2/99

MK

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
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\DRAWINGS\98067\DESIGN\98067SP1.DWG | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
07/21/00	Rev. drainage divides for T-1 building and loading area 3	WJ	
12/22/98	Rev. Per Ho. Co. Comments	WJ	

3 Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL 60606
(312) 669-6445

Storm Drain Drainage Area Map

COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP – GRID	SHEET
November, 1998	43 – 1,2,7,8	21 OF 22

SDP 99-54

POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of these plans. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

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

Earth Fill

Material – The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement – Area on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated in to the embankment.

Compaction – The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within ±2 % of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench – The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe – All of the following criteria shall apply for corrugated metal pipe:

1. Materials – (Steel Pipe) – This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon, Plasti-Cote, Blac-Klad, and Bath-Ca-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

   Materials – (Aluminum Coated Steel Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

   Material – (Aluminum Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. Connections – All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe & riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

   All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled on adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with 0-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

   Helically corrugated pipe shall have either continuously welded seams or have lock seams.

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

5. Backfilling shall conform to "Structure Backfill".

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe – All of the following criteria shall apply for reinforced concrete pipe:

1. Materials – Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

2. Bedding – All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

3. Laying pipe – Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. the first joint must be located within 2 feet from the riser.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be shown on the drawings.

Polyvinyl Chloride (PVC) Pipe – All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. Materials – PVC pipe shall be PVC – 1120 or PVC – 1220 conforming to ASTM D-1785 or ASTM D-2241.

2. Joints and connections to anti-seep collars shall be completely watertight.

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

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standards Specifications for Construction and Materials, Section 608, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The rip rap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (410) 313-1855

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 and revisions thereto.

3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sod, temporary seedings and mulching (Sec. G).
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	:158.0	Acres
Area Disturbed	: 31.5	Acres
Area to be roofed or paved	: 14.3	Acres
Area to be vegetatively stabilized	: 17.2	Acres
Total Cut	:20,000	Cu. Yds.
Total Fill	:20,000	Cu. Yds.
Off-site waste/borrow area location: N/A		

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 control 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.

11. Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within 1 workiing day, whichever is shorter.

PERMANENT SEEDING NOTES

Apply to graded or cleared area 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, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

1) Preferred – Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc 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 acre 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 disc 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 application 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 seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

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

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

Seeding: For periods March 1 thru April 30 and from August 15 thru 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 asphalt 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 rate and methods not covered.

STORMWATER MANAGEMENT FACILITY OPERATIONS AND MAINTENANCE GUIDELINES

Operations:

1. Owner shall keep accurate records of inspections and maintenance type repairs. These records should also include a copy of the "as-built" plans and small pond summary sheet.
2. Owner shall make a visual inspection of the facility at least twice a year. Once in the summer after the facility has been mowed and during the winter when the vegetation is inactive. Additional inspections shall be made during and after extreme rainfalls.
3. During the extreme weather or rainfall events, the owner shall check for overtopping, seepage, or dam failure. In order to avoid overtopping, either place sandbags on top of the embankment or lower the water elevation by using a dewatering device.
4. If a severe problem develops, the owner shall contact a Professional Engineer to assess the problem and make a suggestion to remedy the situation. The Howard Soil Conservation District or Maryland Dam Safety Division shall be contacted before major repairs are made.

Maintenance

During the semi-annual visual inspections, the following items must be checked and documented by the owner:

I. Spillways and Outlet Device
   1. Pipes – check for sagging, misalignment, gaps at joints, cracks, leaks, and wear along inside surface of pipes. Also remove any blockages.
   2. Trash Racks – inspect and replace if necessary. Actual time for removal of trash racks should be limited. Trash racks shall be painted once a year.
   3. Concrete Surfaces – check for cracks or any other signs of failure.
   4. Forebay and Spillway – check for stone & wire mesh deterioration or loss and spillway failure.
   5. Rip Rap Outlet – check for stone deterioration or stone loss.
   6. Dewatering Device – remove blockages.

II. Embankments
   1. Vegetation – proper vegetative cover is required on all embankments. The owner shall follow proper seeding specifications for reseeding.
   2. Trees and Brush – trees and brush shall be removed from the embankment. Stumps can be removed using silvicide.
   3. Mowing – mowing is necessary to control the establishment of woody growth and to maintain the vegetative cover. The embankment, a 25-foot wide (except in wetland/stream buffers) strip adjacent to the toe, upstream and downstream of the embankment, and the area within 50 feet of the control structures need to be mowed. Mowing shall be done at least once a year (mid to late summer) but may be done more often.
   4. Seepage – the following warning signs should be looked for when inspecting for seepage problems: cracks (longitudinal and vertical), soft spots or boggy areas on downstream embankment, seepage along downstream toe of embankment.
   5. Stability – large cracks, slides, sloughing and excessive settlement are signs of embankment instability and a need for repair. Repairs must be approved by Howard Soil Conservation District.
   6. Rodents – check for burrows, which can load to seepage, and remove rodents when encountered.

Note: All stormwater management facility construction shown on these plans shall be performed under the supervision of an approved Maryland registered geotechnical engineer who is responsible for certifying that the construction of the facilities is in accordance with these plans and specifications at the completion of the construction. Gutschick Little & Weber will provide the as-built survey of the surface features of the facilities.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date	3/3/99
Chief, Division of Land Development and Research	Date	3/5/99
Chief, Development Engineering Division MK	Date	3/6/99

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction~~, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that by the most unique registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with as-built plans of the pond within 30 days of completion.~~"

11-20-98
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. ~~I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with as-built plans of the pond within 30 days of completion.~~ I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer/Builder — 11/23/98 Date

These Plans for ~~small pond construction~~, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

John R. Robertson 2/25/99
Howard Soil Conservation District — Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction~~, soil erosion and sediment control.

Natural Resources Conservation Service — 2/25/99 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES. | DRN. | CHK.

DATE	REVISION	BY	APP'R.
01-21-00	change owner info. Ⓐ	WGJ	
12-22-98	Rev. Per Ho. Co. Comments	WGJ	

Ⓐ Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL 606006
(312) 2600-6485

STORMWATER MANAGEMENT NOTES /SEDIMENT CONTROL NOTES

COLUMBIA GATEWAY

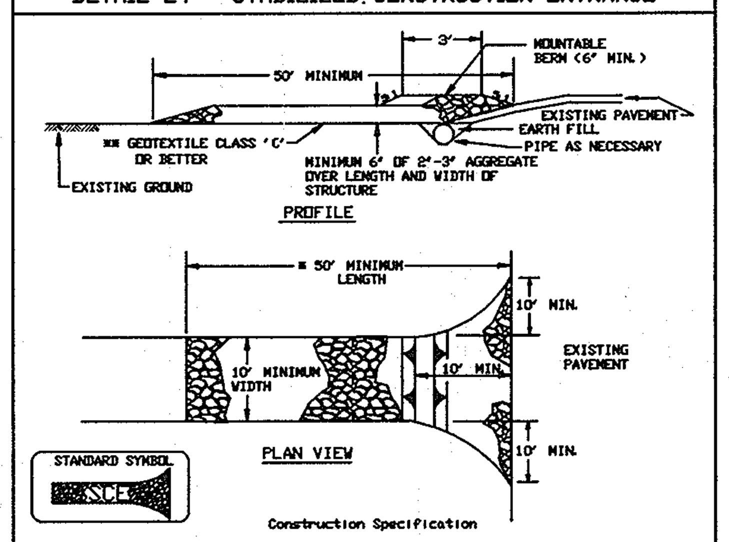
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP – GRID	SHEET
NOVEMBER 1998	43 1,2,7,8	16 OF 22

SDP 99-54

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



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 (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.

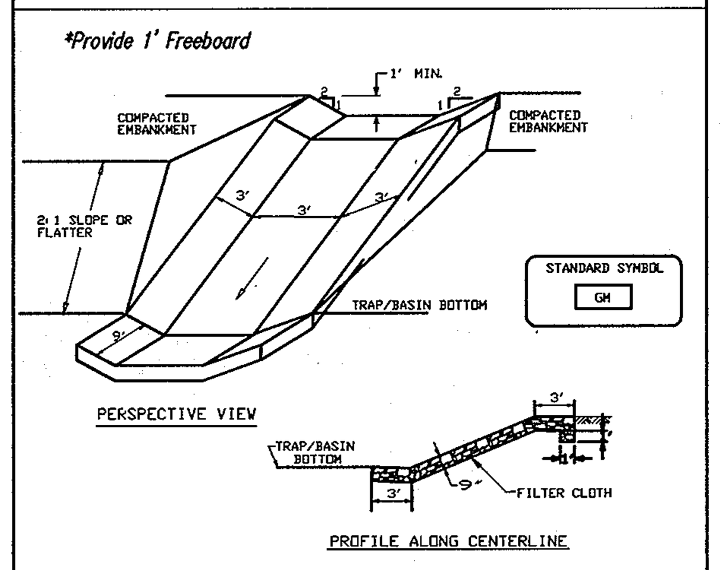
5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone 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	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 6 - GABION INFLOW PROTECTION

*Provide 1' Freeboard



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.

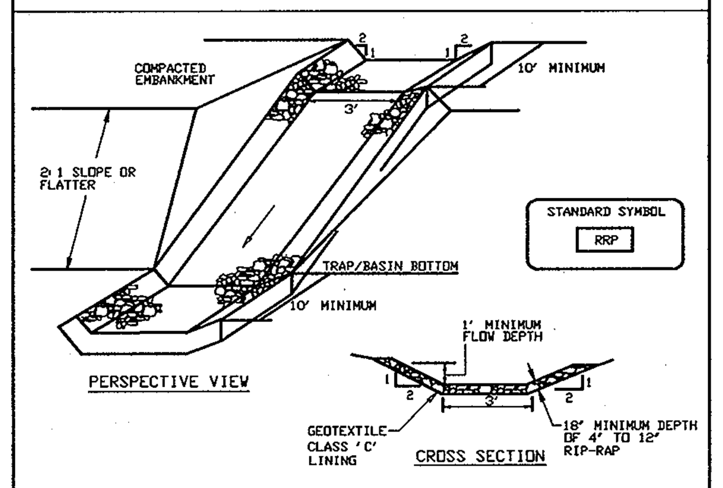
3. The stone used to fill the gabion baskets shall be 4" - 7".

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	PAGE B - 7 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 5 - RIP-RAP INFLOW PROTECTION



Construction Specifications

1. Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3' (min.) bottom width. The channel shall be lined with 4" to 12" rip- rap to a depth of 18".

2. Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.

3. Entrance and exit sections shall be installed as shown on the detail section.

4. Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.

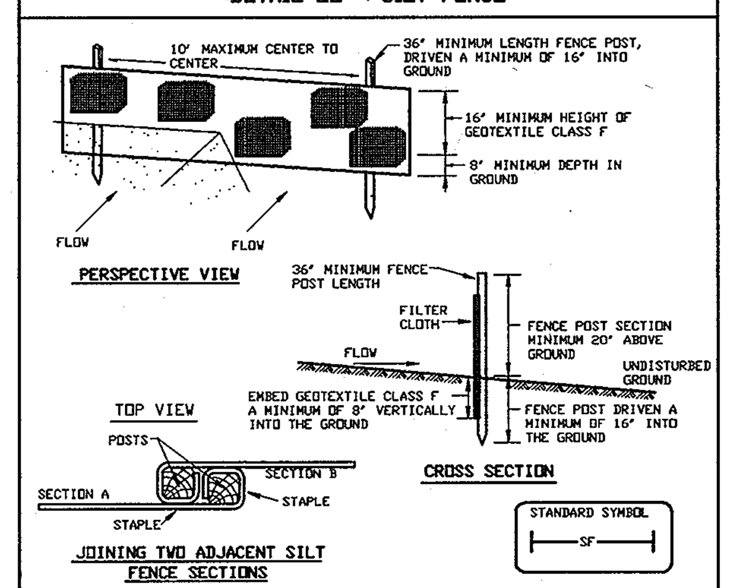
5. Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.

6. Rip-rap should blend into existing ground.

7. Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE B - 6 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" 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.

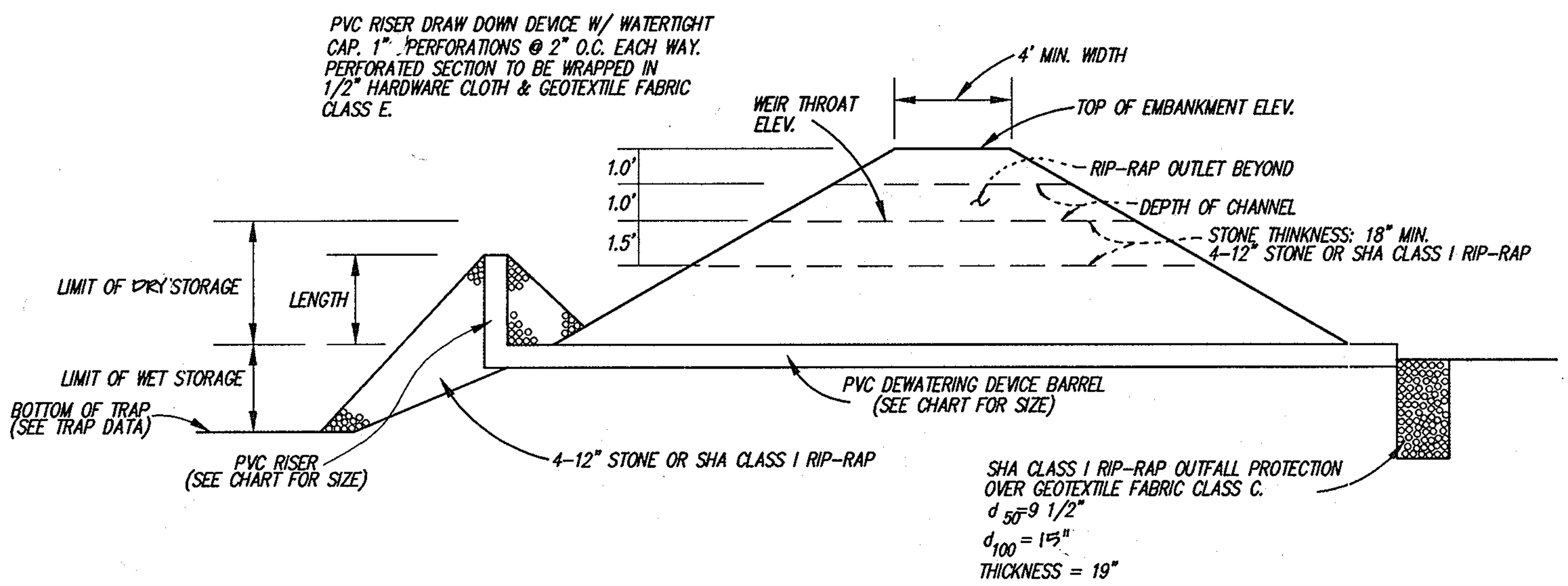
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 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	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

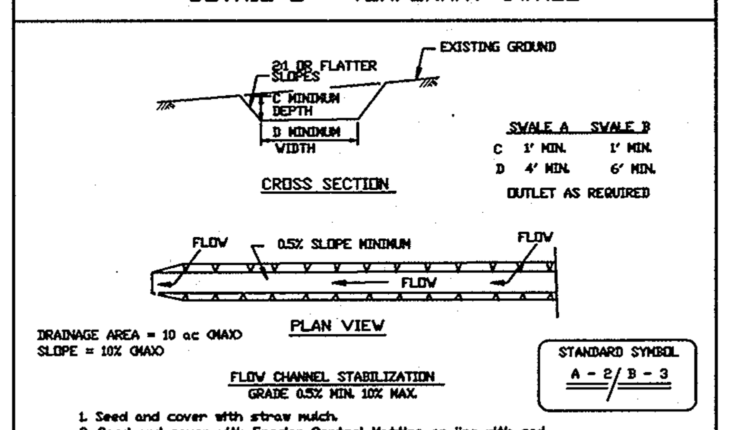


TRAP#	RISER SIZE	LENGTH	TOTAL# PERFORATIONS	BARREL SIZE	INVERT	OUTFALL PROTECTION LENGTH
1	6"	2.64	143	6"	318.00	15'
2	8"	2.96	248	8"	320.00	10'
3	16"	2.96	395	10"	313.50	10'
4	6"	2.64	143	6"	260.00	10'

TEMPORARY SWM DEWATERING DEVICE DETAIL

NTS

DETAIL 2 - TEMPORARY SWALE



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

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.

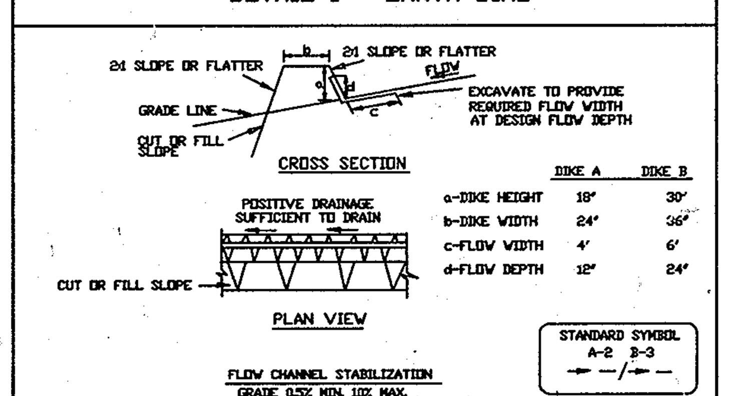
6. Fill, if necessary, shall be compacted by earth moving equipment.

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	PAGE A - 2 - 4	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 1 - EARTH DIKE



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

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 objectional 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	PAGE A - 1 - 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Dust Control

Definition

Controlling dust blowing and movement on construction sites and roads.

Purpose

To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies

This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

Temporary Methods

1. Mulches - See standards for vegetative stabilization with mulches only. Mulches should be crimped.

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" apart, spring-toothed harrows, and similar lows 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 that runoff begins to flow.

5. Barriers - Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing. Barriers placed at the right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.

6. Calcium Chloride - Apply at rates 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.

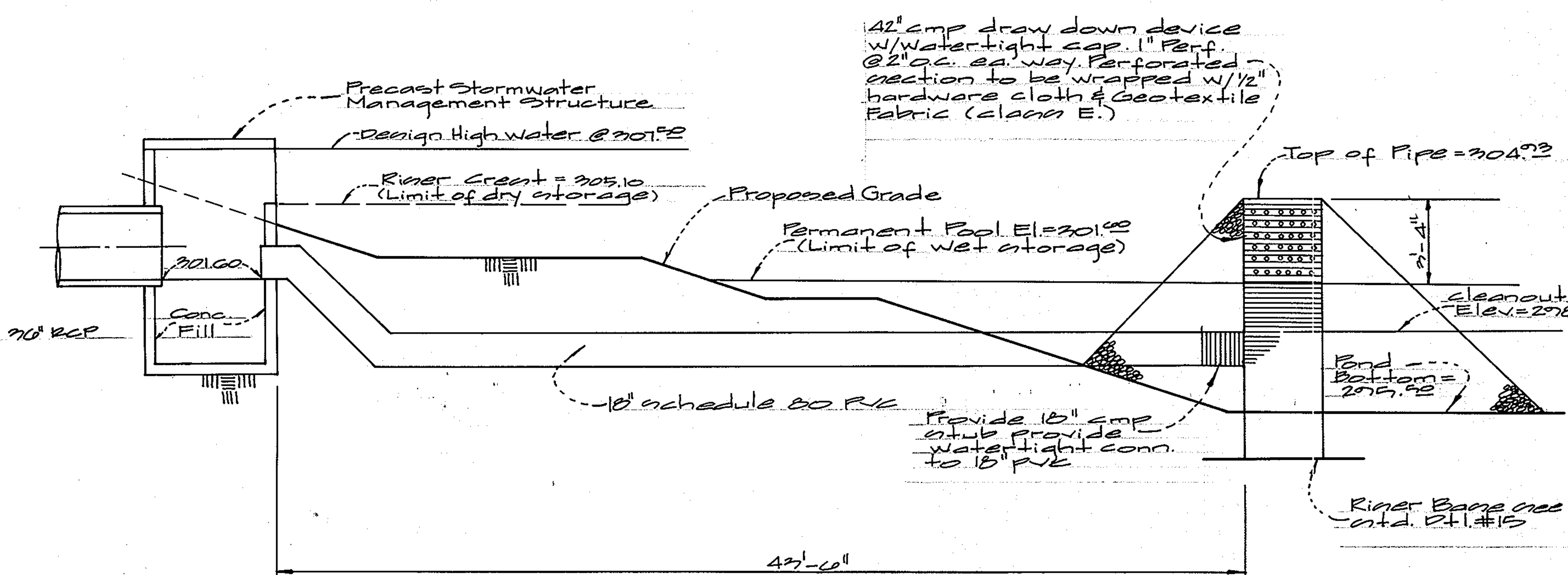
2. Topsoiling - Covering with less erosive soil materials. See standards topsoiling.

3. Stone - Cover surface with crushed stone or coarse gravel.

References

1. Agriculture Handbook 346. Wind Erosion Forces in the United States and Their use in Predicting Soil Loss.

2. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA-ARS.



Riser Structure Modification Sediment Control

scale: 1" = 5'

For information not shown see sheet 13.

DEVELOPER'S/BUILDER'S CERTIFICATE

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[signature] 11/23/98

Signature of Developer/Builder — Date

ENGINEER'S CERTIFICATE

"I certify that this plan for ~~pond construction,~~ erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. ~~I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as built" plan of the pond within 30 days of completion."~~

[signature] 11-20-98

Date

STATE OF MARYLAND — CARLTON K. GUTSCHICK — No. 12975 — REGISTERED PROFESSIONAL ENGINEER

These Plans for ~~small pond construction,~~ soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

[signature] 2/25/99

Howard Soil Conservation District — Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction,~~ soil erosion and sediment control.

[signature] 2/25/99

Natural Resources Conservation Service — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[signature] Director	3/3/99 Date
[signature] Chief, Division of Land Development	3/3/99 Date
[signature] Chief, Development Engineering Division MK	3/2/99 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\9867SDS1.DWG | DES. | DRN. | CHK.

DATE	REVISION	BY	APP'R.
9/21/00	change owner info. △	WGJ	
2-07-99	change 42" cmp to 18" sch. 80 PVC & show 18" cmp stub	WGJ	

△3 Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL. 60606
(312) 669-64

ELECTION DISTRICT No. 6

SEDIMENT CONTROL DETAIL SHEET

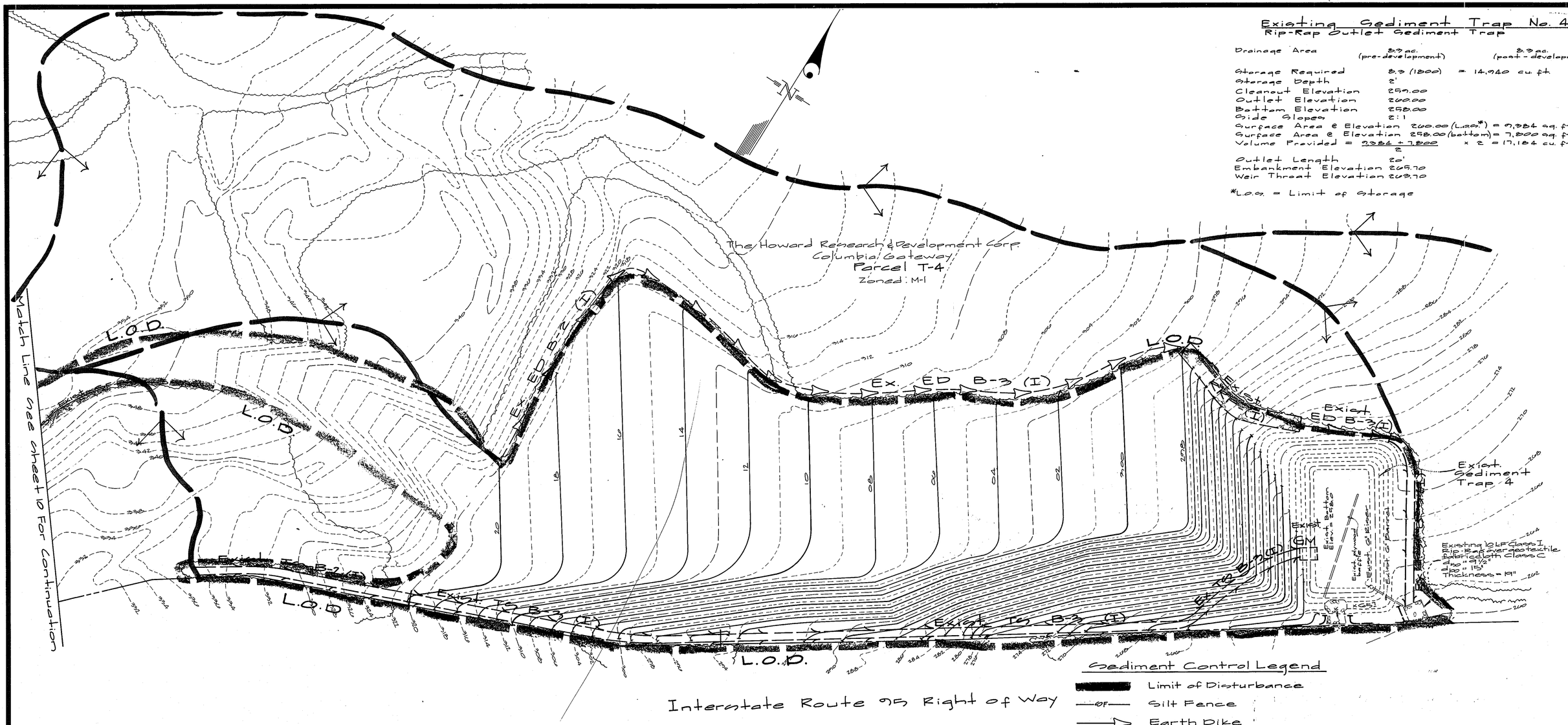
COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 & T-5
PLAT# 13462 thru 13464
& Plat No. 18716

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP - GRID	SHEET
NOVEMBER 1998	43 - 1,2,7,8	13 OF 22

SDP 99-54



Existing Sediment Trap No. 4
Rip-Rap Outlet Sediment Trap

Drainage Area	8.3 ac. (pre-development)	8.3 ac. (post-development)
Storage Required	8.3 (1800)	= 14,940 cu. ft.
Storage Depth	2'	
Cleanout Elevation	259.00	
Outlet Elevation	260.00	
Bottom Elevation	258.00	
Side Slopes	2:1	
Surface Area @ Elevation	260.00 (L.O.S.*)	= 9,384 sq. ft.
Surface Area @ Elevation	258.00 (bottom)	= 7,800 sq. ft.
Volume Provided	$= \frac{9384 + 7800}{2} \times 2$	= 17,184 cu. ft.
Outlet Length	20'	
Embankment Elevation	265.70	
Weir Throat Elevation	263.70	

*L.O.S. = Limit of Storage

Sediment Control Legend

- Limit of Disturbance
- —OF— Silt Fence
- Earth Dike
- T.S. B-1 Temporary Swale
- Existing Drainage Divide
- GP Gabion Inflow Protection
- RRP Rip-Rap Protection

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Signature of Developer/Builder — Date: 2-8-99

ENGINEER'S CERTIFICATE

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Date: 2-8-99

These Plans for ~~small pond construction~~, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District — Date: 2/25/99

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction~~, soil erosion and sediment control.

Natural Resources Conservation Service — Date: 2/25/99

Approved: Howard County Department of Planning & Zoning

Director — Date: 3/3/99

Chief, Division of Land Development — Date: 3/3/99

Chief, Development Engineering Division — Date: 3/2/99

Note: This plan has been Mass Graded under GP. 99-75A.

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD. 20866
TELEPHONE: (301)421-4024 NO.VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186

DATE	REVISION	BY	APP'R.
9/21/06	change owner info.	WSJ	
12-22-98	Rev. Per Ho. Co. Comments	WSJ	

Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL. 60606
(312) 669-6445

Sediment Control Plan
Columbia Gateway
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464 & Plat No. 18716
Election District No. 6 — Howard County, Maryland

DES.:	SCALE	ZONING	G.L.W. FILE No.
DRN.: WSJ	1" = 50'	M-1	98-067
CHK.:	DATE: November, 1998	TAX MAP No.: 43 1,2,7,8	SHEET: 12 of 22

SDP 99-54

SEDIMENT TRAP NO. 1 (Existing)
RipRap Outlet Sediment Trap

Drainage Area =
9.4 Ac. (Pre-Development) 10.0 Ac. (Post Development)

Storage Required = 10 (1800) =18000 cu. ft.
Storage Depth = 3 Feet
Cleanout Elevation = 316.50
Outlet Elevation = 318.00
Bottom Elevation = 315.00
Side Slopes = 2:1
Surface Area @ Elevation 318.00 (*L.O.S.) = 9800 sq. ft. (70x140)
Surface Area @ Elevation 315.00 (bottom) = 7424 sq. ft. (58x128)

Volume Provided = (7424 + 9800)/2 x 3 = 25,836 cu. ft.

Outlet Length = 16'
Embankment Elevation = 304.20
Weir Throat Elev. = 322.20
*L.O.S. = Limit of Storage

SEDIMENT TRAP NO. 2 (Existing)
Rip-rap Outlet Sediment Trap

Drainage Area =
8.5 Ac. (Pre-Development) 2.4 Ac. (Post Development)

Storage Required = 8.5 (1800) =15,300 cu. ft.
Storage Depth = 3 Feet
Cleanout Elevation = 318.50
Outlet Elevation = 320.00 (L.O.S.)
Bottom Elevation = 317.00
Side Slopes = 2:1
Surface Area @ Elevation 320.00 (*L.O.S.) = 6936 sq. ft. 68'x102'
Surface Area @ Elevation 317.00 (bottom) = 5,040 sq. ft. 56'x90'

Volume Provided = (6936 x 5040)/2 x 3 = 17,964 cu. ft.

Outlet Length = 16'
Embankment Elevation = 326.25
Weir Throat Elev. = 324.25
*L.O.S. = Limit of Storage

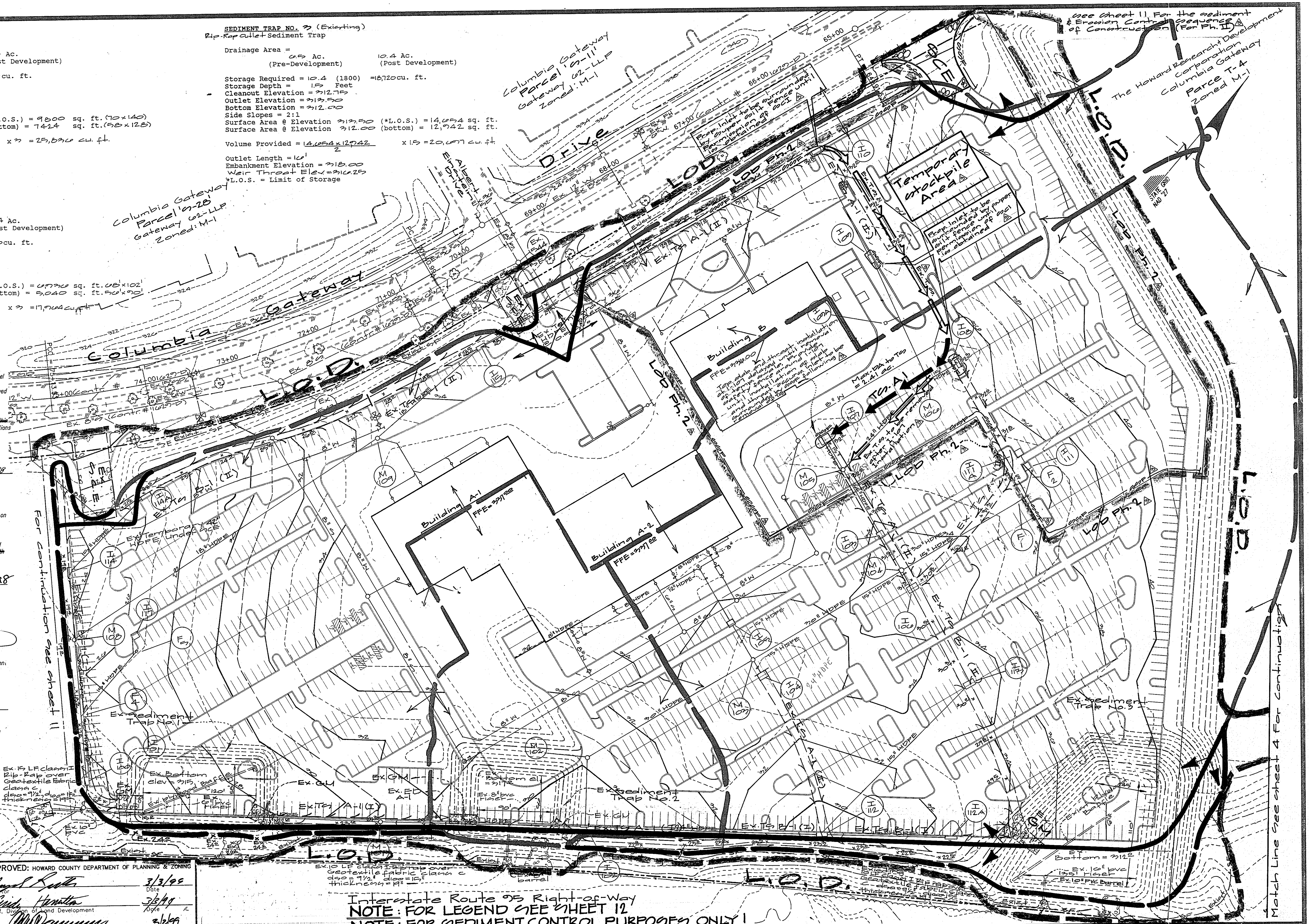
SEDIMENT TRAP NO. 3 (Existing)
Rip-Rap Outlet Sediment Trap

Drainage Area =
6.5 Ac. (Pre-Development) 10.4 Ac. (Post Development)

Storage Required = 10.4 (1800) =18,720 cu. ft.
Storage Depth = 1.5 Feet
Cleanout Elevation = 312.75
Outlet Elevation = 313.50
Bottom Elevation = 312.00
Side Slopes = 2:1
Surface Area @ Elevation 313.50 (*L.O.S.) = 14,654 sq. ft.
Surface Area @ Elevation 312.00 (bottom) = 12,942 sq. ft.

Volume Provided = (14,654 x 12,942)/2 x 1.5 = 20,697 cu. ft.

Outlet Length = 16'
Embankment Elevation = 318.00
Weir Throat Elev. = 316.25
*L.O.S. = Limit of Storage



NOTE: FOR LEGEND SEE SHEET 12
NOTE: FOR SEDIMENT CONTROL PURPOSES ONLY!

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Kathy L. Olson 11/23/98
Signature of Developer/Builder Date

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11-20-98
Date

STATE OF MARYLAND CARLTON K. GUTSCHICK No. 12975 REGISTERED PROFESSIONAL ENGINEER

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John R Robertson 2/25/99
Howard Soil Conservation District Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for ~~small pond construction,~~ soil erosion and sediment control.

Cheryl Simmons 2/25/99
Natural Resources Conservation Service Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/3/99
Chief, Development Engineering Division MK	Date 3/2/99

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\DRAWINGS\98067\DESIGN\98067SP1.DWG | DES. | DRN. | CHK.

DATE	REVISION	BY	APP'R.
9/21/00	change owner info.; rev. one to accomodate Parcel Development ③	WGJ	
12/18/98	Rev. Per Ho. Co. Comments	WGJ	

③ Owner Parcel T-1:
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Sediment Control Plan

COLUMBIA GATEWAY
PARCELS T-1, T-2, T-4 and T-5
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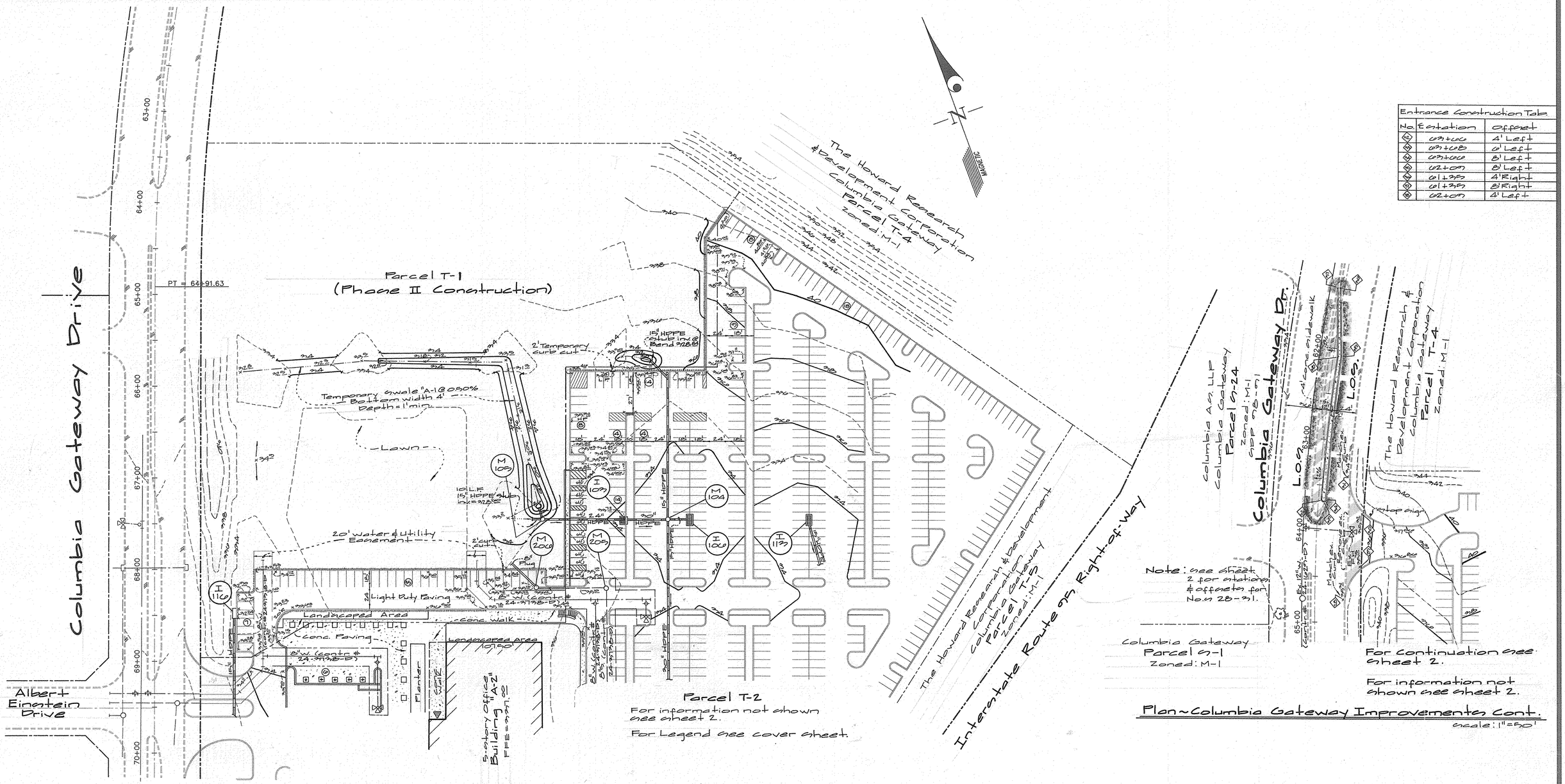
ELECTION DISTRICT No. 6 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP – GRID	SHEET
November 1998	43 – 1,2,7,8	10 OF 22

SDP 99-54



Plan ~ Phase I Limits
Scale: 1" = 50'

Plan ~ Columbia Gateway Improvements Cont.
Scale: 1" = 50'

Entrance Construction Tab.		
No.	Station	Offset
32	63+66	4' Left
33	63+68	6' Left
34	63+66	8' Left
35	62+09	8' Left
36	61+35	4' Right
37	61+35	8' Right
38	62+09	4' Left

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	3/3/99 Date
Chief, Division of Land Development	3/3/99 Date
Chief, Development Engineering Division MK	3/2/99 Date

STATE OF MARYLAND CARLTON K. GUTSCHICK REGISTERED PROFESSIONAL ENGINEER

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
9/21/06	Change owner information	WSJ	
12/8/98	Rev. water, add F.H. & Contr. No's.	WSJ	

\DRAWINGS\XXXXX\..... DES. DRN. WJ CHK.

Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 Riverside Plaza
Suite 400
Chicago, IL 60606
(312) 669-6445

PHASE 1 SITE DEVELOPMENT PLAN LIMITS

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat #13464 thru 13464
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	M-1	98067
DATE	TAX MAP - GRID	SHEET
NOVEMBER 1998	43-1,2,7,8	3 OF 22

SDP 99-54

COLUMBIA GATEWAY
PARCELS T-1, T-2, T-4 & T-5
SITE DEVELOPMENT PLAN

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 Department of Public Works, 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. The contractor shall notify the Howard County Department of Public Works, Bureau of Utilities at (410) 313-4900 at least five (5) working days prior to starting any excavation work.
5. Site area: Parcel T-1 = 5.7588 acres
   Parcel T-2 = 14.5674 acres.
6. All plan dimensions are to face of curb unless otherwise noted.
7. Existing topography is shown per field run survey information by Gutshcick, Little Weber, P.A. August 1998
8. Coordinates and bearings are based upon the MD State plane system (NAD '27).
9. Water and sewer shown is public.
10. Stormwater management for this site is proposed on Parcel T-5
11. All existing water and sewer is per Contracts 24-1629-D and 24-3748-D.
12. All existing public storm drain is per F-87-125 and F-86-182.
13. All curb radii is 5' unless noted otherwise.
14. Sidewalks adjacent to perpendicular parking shall be 6' wide. All other sidewalks shall be 4' wide except where dimensioned otherwise.
15. Contractor shall utilize PVC pipe for all sewer house connections. Contractor shall utilize D.I.P. (CL 51) for water house connections.
16. Use trench bedding class "C" for storm drains.
17. Paved areas indicated are private except as noted.
18. Project background: See Dept. of Planning & Zoning File Numbers: VP-84-150, VP-85-34, VP-85-35, S-84-44, F-85-63, P-86-22, VP-86-22, VP-86-61, VP-86-73, F-86-17, S-85-28, F-86-182, VP-86-119, WP-88-47, F-87-125 & WP-99-34, WP 01-83, WP 02-70, WP 03-111, WP 04-111, WP 05-104 & WP 06-109
19. Recording reference: Plat No's. 13462-13464
20. All proposed ramps shall be in accordance with current A.D.A. standards. Maximum sidewalk cross slope shall be two percent. Provide a five-foot by five-foot level (2 percent max.) landing at the top and bottom of all ramps and building entrances and exits.
21. All proposed water meters shall be located inside buildings.
22. All proposed site utilities are to terminate 5' from the building. The building plumber shall connect to and extend these utilities to the inside of the building.
23. Existing utilities are based on approved design plans for construction and field location by Gutschick, Little & Weber, P.A.
24. There is no floodplain on Parcel T-1 or Parcel T-2.
25. There are no wetlands on Parcel T-1 or Parcel T-2.
26. All exterior lighting will comply with Zoning Regulations section 134.
27. (2) On February 28, 2001, WP 01-82, a waiver of section 16.156(m)(1) which requires that within 2 years of signature approval of the site development plan original, the developer shall apply to the Department of Inspections, Licenses & Permits for building permits for all construction on the site and section 16.156(m)(2) which states that if the developer does not apply for building permits within 2 years of signature approval of the site development plan, the plan shall expire and a new site development plan will be required was approved. Subject to one condition on the approval letter.
28. (2) On March 22, 2002, WP 02-70, a waiver of section 16.156(m)(2) to reactivate SDP 99-54 & grant a one year extension to apply for building permit(s) for Parcel T-1 was approved. Subject to two conditions in the approval letter.
29. (3) On August 7, 2003, WP 03-111, A waiver of section 16.156.m.1.(ii) which requires a developer to apply for building permits of improvements shown on a site plan for non-residential development within 2 years of signature approval of the site plan was approved. The new deadline date by which application for permits on Parcel T-1 shall be made is March 22, 2004. Approval is subject to two conditions in the approval letter.
30. (3) On July 2, 2004, WP 04-111, A waiver of section 16.156(m)(1)(ii) to grant a one year extension to apply for a building permit to initial construction on Parcel T-1 in accordance with SDP 99-054 was approved. The new deadline date to apply for building permits to initiate construction on Parcel T-1 is March 22, 2005. Approval is subject to three conditions in the approval letter.
31. (3) On April 27, 2005, WP 05-104, A waiver of section 16.156(m)(1) which requires that within 2 years of signature approval of the site development plan original the developer shall apply to The Department of Inspections, Licenses and Permits for building permits to initate construction of the site, and section 16.156(m)(2) which states that if the Developer does not apply for building permits within 2 years of signature approval of the site development plan, the plan shall expire and a new site development plan will be required was approved. Application for the permits necessary to start construction must be made by April 27, 2006. Approval is subject to two conditions in the approval letter.
32. (3) On May 30, 2006, WP 06-109, a waiver of section 16.156(m)(1) which requires that within 2 yrs. of signature approval of the site development plan original, the developer shall apply to the department of Inspections, Licenses and Permits for building permits to initiate construction on the site, and section 16.156(m)(2) which states that if the developer does not apply for building permits within 2 yrs. of signature approval of the site development plan, the plan shall expire and a new site development plan will be required; was approved. Application for the permits necessary to start construction must be made by May 30, 2007. Approval is subject to three conditions in the approval letter.

Site Analysis

1. Site Area: 15.89114 Ac.
   Parcel T-1: 5.7588 Ac.
   Parcel T-2: 14.5674 Ac.
   Combined Total: 20.3262 Ac. (T-1 and T-2)
2. Site Zoning: M-1
3. Limit of submission Area: 31.5 Ac.
4. Building Coverage:
   Parcel T-1: 8.85 % (3)
   Parcel T-2: 7.90 %
   Combined: 8.17 % (3)
5. Floor Area Ratio:
   Parcel T-1: 0.4165 * (3)
   Parcel T-2: 0.3930 **

*Net Building Area Parcel T-1: 104,470 sf (3)
**Net Building Area Parcel T-2: 249,408 sf

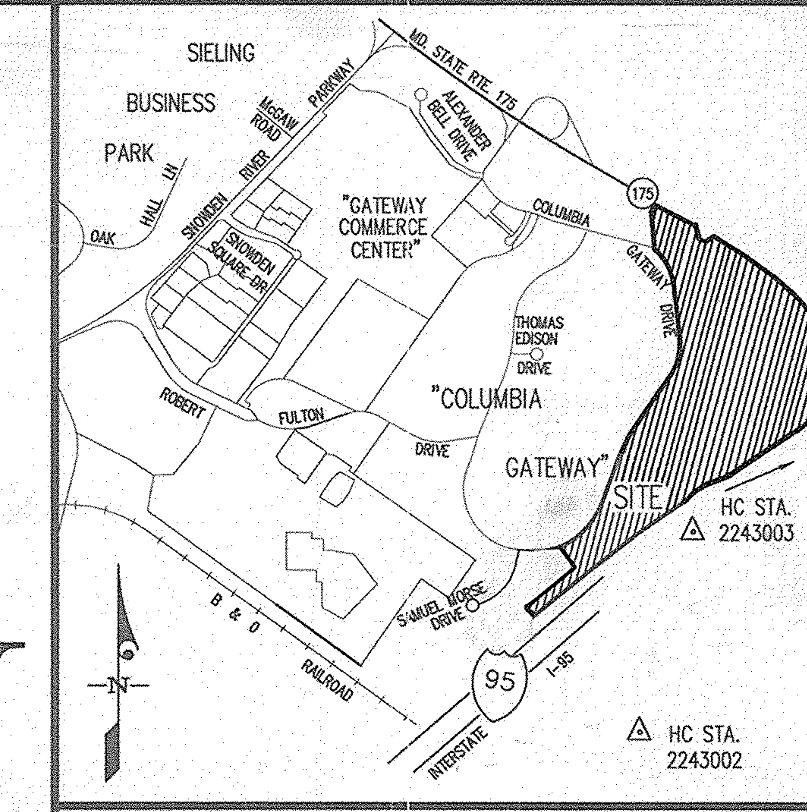
6. Parking Tabulation:

Parcel T-1
Gross Floor Area: 110,197 s.f. (3)
Req'rd. Parking spaces: 3.3/1000x110,197 = 364 spaces (3)
Req'rd. Handicap spaces: 8 spaces (3)
Req'rd. Handicap Van spaces: 2 spaces (3)
Proposed Parking spaces (Total): 398 spaces (3)
Proposed Handicap spaces: 9 spaces
Proposed Handicap Van spaces: 4 spaces (3)

Parcel T-2
Gross Floor Area: 263,063 s.f.
Req'rd. Parking spaces: 3.3/1000 x 263,063 = 869 spaces
Req'rd. Handicap spaces: 20 spaces
Req'rd. Handicap Van spaces: 3 spaces
Proposed Parking spaces (Total) 1016 spaces
Proposed Handicap spaces: 20 spaces
Proposed Handicap Van spaces: 3 spaces

Phase I Proposed Parking spaces: (Total): 1040 spaces
Phase I Proposed Handicap spaces: 20 spaces
Phase I Proposed Handicap Van spaces: 3 spaces

Combined:
Gross Floor Area: 373,260 s.f. (3)
Req'rd. Parking spaces: 3.3/1000x373,260 = 1,232 spaces (3)
Req'rd. Handicap spaces: 25 spaces (3)
Req'rd. Handicap Van spaces: 7 spaces
Proposed Parking spaces (Total): 1,414 spaces (3)
Proposed Handicap spaces: 29 spaces (3)
Proposed Handicap Van spaces: 7 spaces (3)



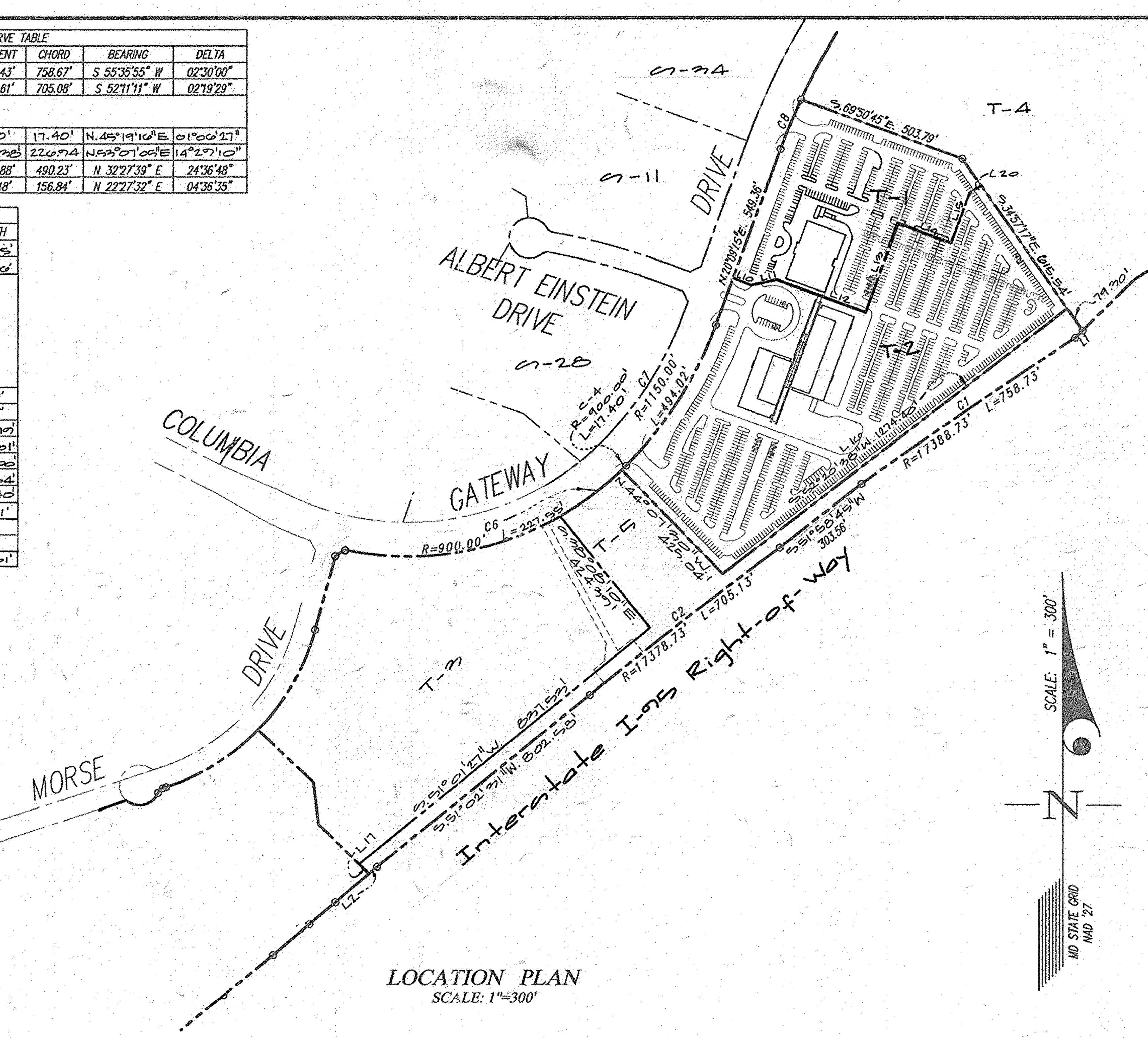
VICINITY MAP
1"=2000'

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	17388.73'	758.73'	379.43'	758.67'	S 55°35'55" W	02°30'00"
C2	17378.73'	705.13'	352.61'	705.08'	S 52°11'11" W	02°19'29"
C4	900.00'	17.40'	8.70'	17.40'	N.45°19'16"E	01°06'27"
C6	900.00'	227.56'	114.38	226.94	N.53°07'06"E	14°29'10"
C7	1150.00'	494.02'	250.88'	490.23'	N 32°27'39" E	24°36'48"
C8	1950.00'	156.89'	78.48'	156.84'	N 22°27'32" E	04°36'35"

LINE TABLE

LINE	BEARING	LENGTH
L1	S45°29'55"W	32.05'
L2	S 49°36'36"W	28.30'
L10	S 69°50'45" E	54.69'
L11	N 79°44'43" E	75.57'
L12	S 69°50'45" E	277.79'
L13	N 20°09'15" E	279.01'
L14	S 69°50'45" E	165.00'
L15	N.20°09'15"E	157.84'
L16	S52°20'43"W	1274.40'
L17	N.45°51'45"W	41.01'
L20	N.55°02'43"E	40.61'



LOCATION PLAN
SCALE: 1"=300'

Legend

- Standard curb & Gutter
- Reverse Curb & Gutter
- Depressed curb Entrance (Flush curb & Gutter)
- Header Curb
- Proposed Sidewalk (conc.)
- Proposed Paving in Right of Way (P-5 Paving)
- Existing Paving
- Proposed Screen Wall
- Patron Access
- ×340⁷ Proposed Spot Elev.
- 346 Existing Contour
- 346 Proposed Contour
- Proposed Water Connection
- Proposed Sewer Connection
- Proposed Storm Drain
- Land. Area — Proposed Landscape Area
- Proposed Tree Grates
- Proposed Bollard Lights
- Proposed Light Pole
- L.O.S. — Limit of Submission

Sheet Index

1) Cover Sheet
2) Site Development Plan
3) Partial Site Development Plan
4) Grading Plan
5) Site Details
6) Handicap/Site Details & Paving Plan
7) Handicap Accessibility Details
8) Landscape Plan
9) Landscape Detail Sheet
10) Sediment Control Plan (Site Plan)
11) Sediment Control Plan (SWM Plan)
12) Sediment Control Plan (Grading Plan)
13) Sediment Control Detail Sheet
14) Stormwater Management Plan & Details
15) Stormwater Management Details
16) Stormwater Management/Sediment Control Notes
17) Storm Drain Profiles
18) Storm Drain Profiles
19) Storm Drain Manifold Plan
20) Utility Profiles
21) Drainage Area Map (Storm Drain)
22) Drainage Area Map (SWM)

Benchmark #1
Traverse Station 912
Elevation = 319.31

Benchmark #2
Traverse Station 914
Elevation = 334.09

(3) Owner Parcel T-2:
Columbia Gateway Office Corp.
c/o Lasalle Investment Mgmt.
100 E. Pratt Street
Baltimore, Md. 21202

(3) Owner/Parcels T-5, T-12, & T-19
The Howard Research and Development Corporation
10275 Little Patuxent Parkway
Columbia, Maryland 21044
Attn.: Al Edwards
(410) 992-6027
(3) (T-12 and T-19 formerly part of T-4)

(3) Owner Parcel T-11:
Copt T-11 LLC
8815 Centre Park Drive
Suite 400
Columbia, Md. 21045
(Formerly T-3)

(3) Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL. 60606
(312) 669-6445

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[signature] Director	3/3/99 Date
[signature] Chief, Division of Land Development	3/3/99 Date R
[signature] Chief, Development Engineering Division MK	3/2/99 Date

ADDRESS CHART

PARCEL NUMBER	STREET ADDRESS
T-1	Bldg. B 7021 Columbia Gateway Dr.
T-2	Bldg. A-1 7041 Columbia Gateway Dr. Bldg. A-2 7031 Columbia Gateway Dr.

WATER CODE:	SEWER CODE:
E05	3380000

SUBDIVISION NAME:	SECTION/AREA	PARCELS
COLUMBIA GATEWAY	N/A	T-1 & T-2

PLAT	ZONE	TAX MAP	BLOCK	ELEC. DIST.	CENSUS TRACT
13462 thru 13464 & 18716	M-1	43	1 & 7	6	6067.03

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067\DESIGN\98067C1.DWG | DES. SJG | DRN. CAD | CHK. MJT

DATE	REVISION	BY	APP'R.
9/19/06	Rev. General Notes, site analysis & owners information (3)	WSJ	
5/8/02	Add detailed notes for WP 01-82 & WP 02-70 (2)	WSJ	

COVER SHEET
COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13462 thru 13464
& Plat No. 18716
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
DATE	TAX MAP – GRID	SHEET
November, 1998	43	1 OF 22

SDP 99-54

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/3/99
Chief, Development Engineering Division MK	Date 3/2/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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\DRAWINGS\XXXXX\....... | DES. | DRN. WJ | CHK.

DATE	REVISION	BY	APP'R.
01/10/06	change owner info. ⚠3	WJ	

⚠3 Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL 60606
(312) 669-6445

Proposed
STORMWATER MANAGEMENT DRAINAGE AREA MAP

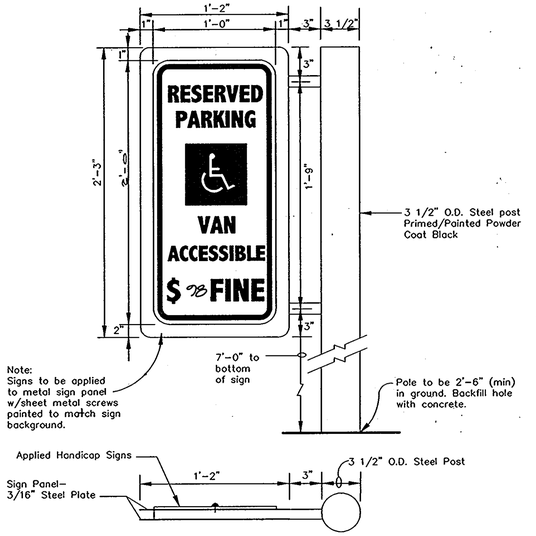
COLUMBIA GATEWAY

Parcels T-1, T-2, T-4 and T-5
Plat No. 13462 thru 13464
& Plat No. 18716

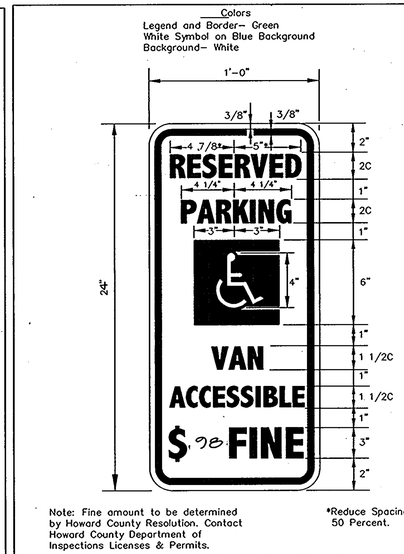
ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	M-1	98067
DATE	TAX MAP – GRID	SHEET
NOVEMBER 1998	43-1,2,7,8	22 OF 22

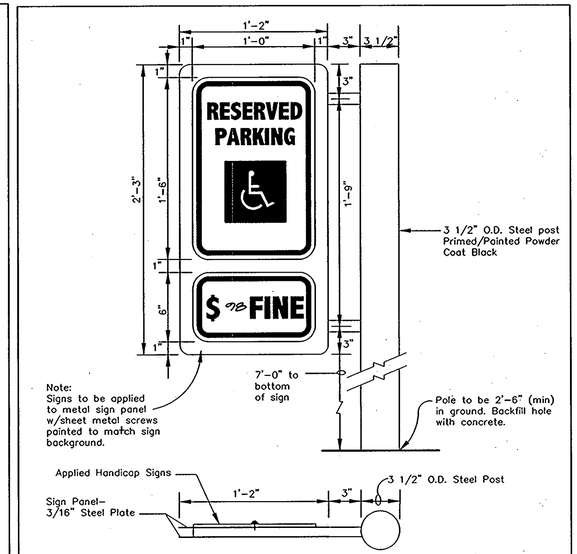
SDP 99-54



Mounting Detail For
Parking Restriction Sign
N.T.S.

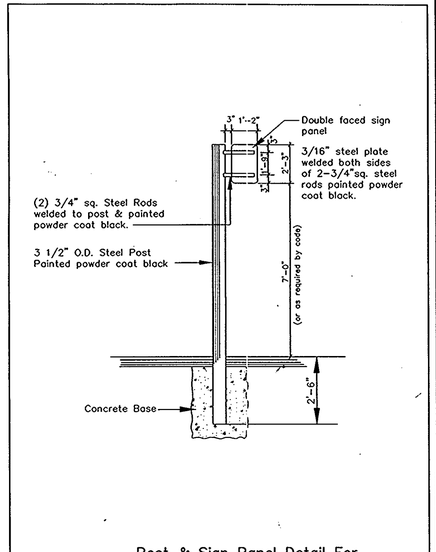


Parking Restriction Sign for
Van Handicapped Parking
N.T.S.

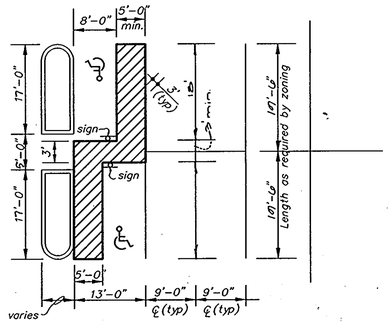


Mounting Detail For
Parking Restriction Sign
N.T.S.

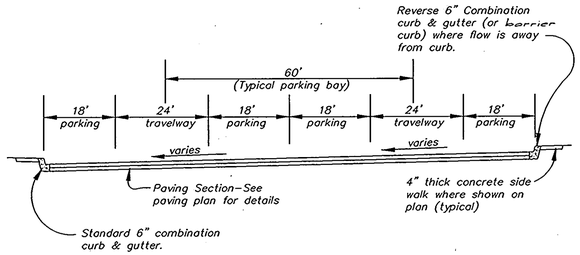
Parking Restriction Sign for
Handicapped Parking
N.T.S.



Post & Sign Panel Detail For
Parking Restriction Sign
N.T.S.



Typical Striping of Parking Lot and
Handicap Parking Detail
Note: 4" wide white stripes typical (unless noted otherwise)



Typical Section-Private Parking
N.T.S.

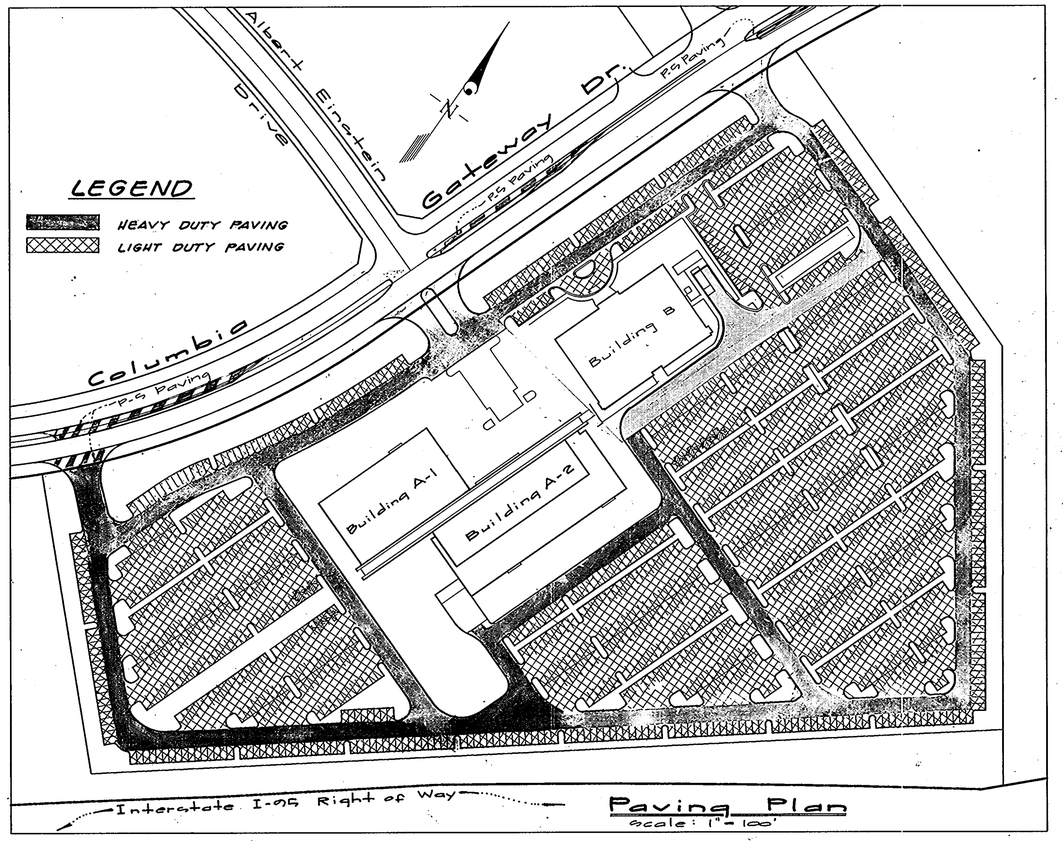
PAVING SECTIONS

PAVEMENT MATERIAL	THICKNESS (INCHES)	
	HEAVY DUTY	LIGHT DUTY
HOT MIX ASPHALT SURFACE COARSE OR FINE (SC OR SF)	2.0	3.0
HOT MIX ASPHALT BASE FINE (BF)	3.0	—
GRADED AGGREGATE - SUBBASE (GA 5/8)	5.0	5.0
TOTAL PAVEMENT THICKNESS	10.0	8.0
EQUIVALENT FULL DEPTH ASPHALT	7.0 *	5.0 *

* FOR FULL DEPTH ASPHALT THE UPPER 2 INCHES SHOULD CONSIST OF HOT MIX ASPHALT SURFACE - COARSE OR FINE (SC OR SF) WITH THE REMAINING DEPTH CONSISTING OF HOT MIX ASPHALT BASE - FINE (BF).

PAVING SECTIONS TAKEN FROM A REPORT OF SUBSURFACE EXPLORATION & GEOTECHNICAL ENGINEERING ANALYSIS PREPARED BY ECS, LTD DATED OCTOBER 10, 1998.

NOTE: P-5 PAVING SECTION IS NOMINAL & MAY VARY DUE TO SUBGRADE CONDITIONS.



Paving Plan
scale: 1" = 100'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division of Land Development — Date 3/1/99

Chief, Development Engineering Division — Date 3/2/99

MK

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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\DRAWINGS\98067\98067SDD | DES. | DRN. KLP BC | CHK.

DATE	REVISION	BY	APP'R.
01/21/00	change owner info. and update paving plan (2)	WJJ	

(2) Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 N. Riverside Plaza
Suite 400
Chicago, IL 606606
(312) 669-6445

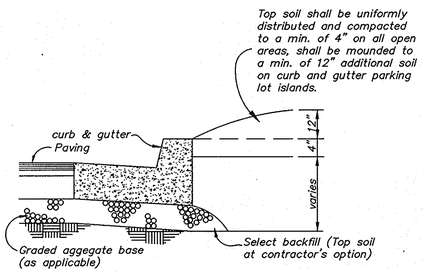
Handicap Site Details & Paving Plan

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T-5
Plat No. 13402 thru 13404
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	M-1	98067
NOV. 1998	43 1,2,7,8	10 OF 22

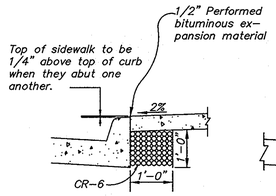
SDP 99-54



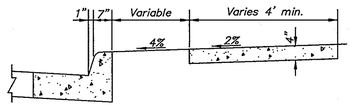
Topsoiling Detail
N.T.S.

Materials:

Top soil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand or other soil as approved by an Agronomist or soil scientist. It shall not have a mixture of contrasting textured subsoil and contain no more than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash or other extraneous materials larger than 1 1/2" in dia.. Top soil must be free of plants or plant parts of bermuda grass, quack grass, johnson grass, nutsedge, poison ivy, thistles, or others as specified. All top soil shall be tested by a recognized laboratory for organic matter content, pH and soluable salts. A pH of 6.0 to 7.5 and an organic content of not less than 6.0, lime shall be applied and incorporated with the top soil to adjust the pH to 6.5 or higher. Top soil containing soluble salts greater than 500 parts per million shall not be used.



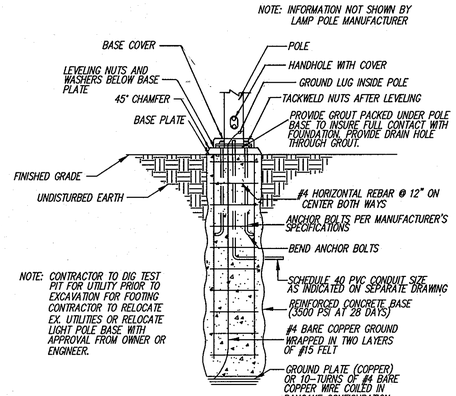
Detail A
N.T.S.



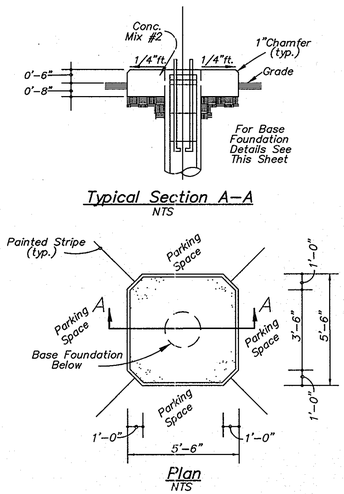
Sidewalk Detail
N.T.S.

Notes:

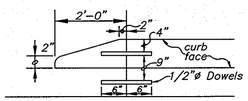
1. Sidewalk to be scribed scribed in 5' maximum squares.
2. Expansion joints across the sidewalk not to be more than 15' apart.
3. 1/2" preformed bituminous expansion material in expansion loints to be kept 1/4" below surface of sidewalk.
4. Concrete to be mix No.2
5. When sidewalk abuts curb, walk shall be 1/4" above curb with performed bituminous expansion material between sidewalk and curb and resting on a compacted crushed stone base. See detail A this sheet.
6. On longitudinal sidewalk grades of 5% or greater, a concrete header, 6" thick and 6" deep below the normal 4" sidewalk thickness shall be constructed for the full width of the sidewalk at intervals of 48'. The headers shall be placed at expansion joint locations and shall be monolithic with the sidewalk.



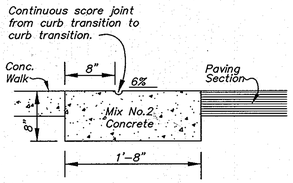
POLE BASE DETAIL
(N.T.S.)



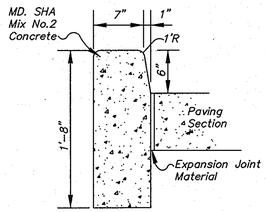
Concrete Light Pole Island Detail



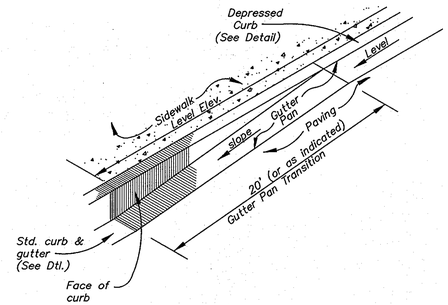
Nose Down Curb Detail
N.T.S.



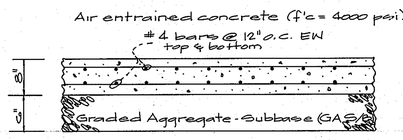
Depressed Curb Entrance
N.T.S.
(FLUSH CURB)



Barrier Curb
(on-site)
N.T.S.
(HEADER CURB)

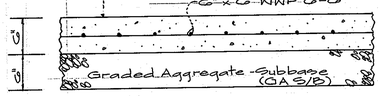


Gutter Transition - Isometric
N.T.S.



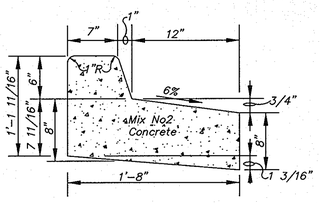
Conc. Paving Section - Loading Area

Notes:
1. Provide contraction joints @ 15'-20' intervals maximum.
2. Provide doweled construction joints w/ #4 smooth bars @ 12" o.c. (one side wrapped in bldg. paper)
3. Provide premoulded isolation joint fillers as required)

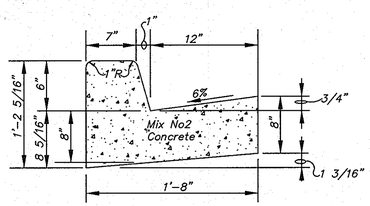


Conc. Paving Section - Entry Court Area

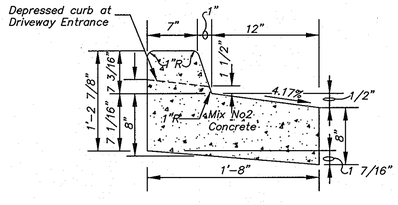
Notes:
1. Provide contraction joints @ 12' to 15' intervals maximum.
2. Provide keyed construction joints
3. Provide premoulded isolation joint filler as required.
4. Coordinate joint pattern w/ Arch. & Landscape.



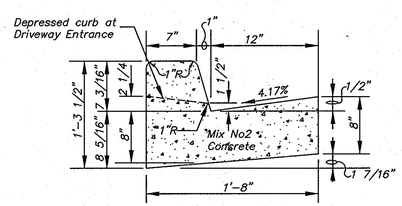
Reverse 6" Combination Curb & Gutter
N.T.S.



Standard 6" Combination Curb & Gutter
N.T.S.



Reverse 7" Combination Curb & Gutter
N.T.S.
(FOR RIGHT-OF-WAY ONLY)



Standard 7" Combination Curb & Gutter
N.T.S.
(FOR RIGHT-OF-WAY ONLY)

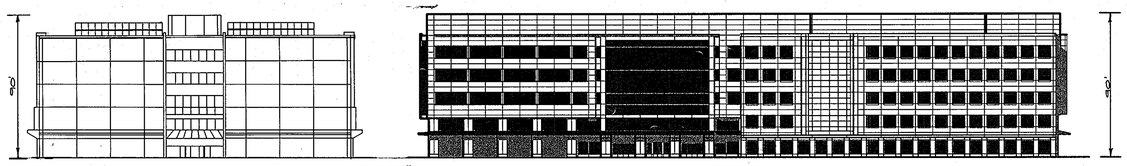
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director — Date 3/3/99

Chief, Division Of Land Development — Date 3/3/99

Chief, Development Engineering Division MK — Date 3/2/99

STATE OF MARYLAND — CARLTON K. GUTSCHICK — No. 12973 — REGISTERED — PROFESSIONAL ENGINEER



SCHEMATIC BUILDING ELEVATION
NO SCALE

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

\DRAWINGS\98067SD	DES.	DRN. CLB	CHK.

DATE	REVISION	BY	APP'R.
3/2/99	Change owner info. & update T-1 Bldg. Elev.	WEJ	

Owner Parcel T-1:
Orix Gateway Columbia LLC
100 N. Riverside Plaza
Suite 400
Chicago IL. 606006
(312) 606-0445

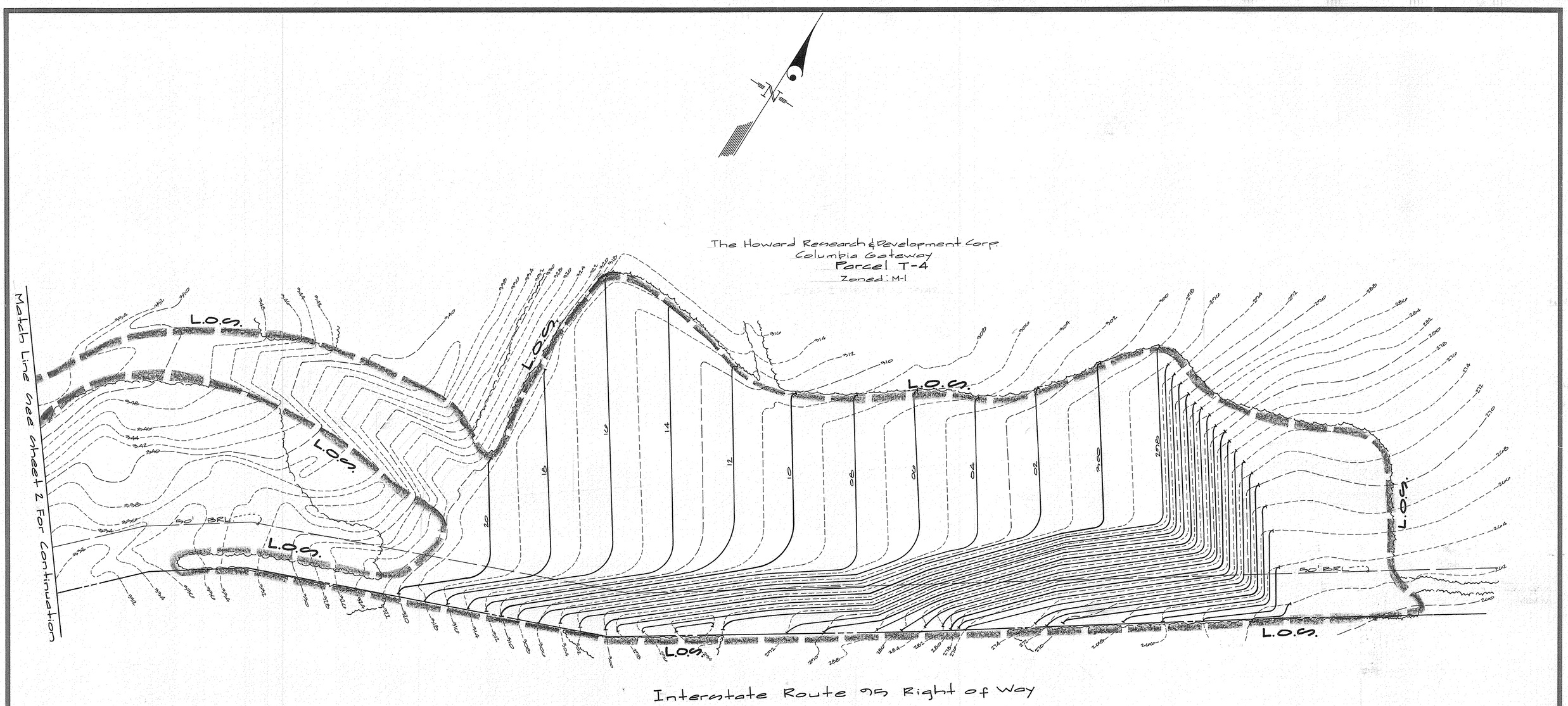
SITE DETAILS

COLUMBIA GATEWAY
Parcels T-1, T-2, T-4 & T5
PLAT No. 19402 thru 19404
& Plat No. 18716

ELECTION DISTRICT No. 6 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=20'	M-1	98067
DATE	TAX MAP - GRID	SHEET
NOVEMBER 1998	43 1,2,7,8	5 OF 22

SDP 99-54



Note: This site has been mass graded under GP-99-75

Approved: Howard County Department of Planning & Zoning

Director	Date 3/3/99
Chief, Division of Land Development	Date 3/3/99
Chief, Development Engineering Division	Date 3/2/99

STATE OF MARYLAND CARLTON K. GUTSCHICK 12975 PROFESSIONAL ENGINEER

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD. 20866

TELEPHONE: (301)421-4024 NO.VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186

DATE	REVISION	BY	APP'R.
9/21/06	Change Owner information △3	WSJ	

△3 Owner Parcel T-1:
Orix Gateway Columbia, LLC
100 Riverside Plaza
Suite 400
Chicago, IL. 60606
(312)669-6445

Grading Plan

Columbia Gateway

Parcels T-1, T-2, T-4 & T-5
Plat #13462 thru 13464
& Plat No. 18716

Election District No. 6 — Howard County, Maryland

DES.:	SCALE	ZONING	G.L.W. FILE No.
DRN.: WSJ	1" = 50'	M-1	98-067
CHK.:	DATE November, 1998	TAX MAP No. 43 1,2,7,8	SHEET 4 of 22

SDP 99-54