Construction Notes & General Notes

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.
2. ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
3. THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
4. CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE AND FINISH.
5. ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.
6. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
7. THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.
8. THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT G. W. STEPHENS AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES, IF NECESSARY, SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.
9. CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.
10. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OFFSITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLAN.
12. ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE EXCEPTING THOSE ASSOCIATED WITH LANDSCAPE BERMING, ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER .
13. CONTRACTOR SHALL PROVIDE MINIMUM 4 FOOT BENCH AT EDGE OF PAVING IN FILL AREAS. MAXIMUM SLOPE OF BENCH SHALL BE 4% (1/4 IN PER FOOT).
14. MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.
15. CONTRACTOR SHALL PLACE 4" MINIMUM TOPSOIL IN LANDSCAPE AREAS.
16. CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.
17. CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.
18. ALL TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES." ALL STREET AND REGULATORY SIGNS SHALL BE INSTALLED PRIOR TO INSTALLATION OF FINISHED PAVING.
19. THE CONTRACTOR SHALL REPLACE ANY EXISTING BITUMINOUS PAVING OR SUB-BASE WHICH IS DAMAGED OR REMOVED DURING CONSTRUCTION. ALL EXCAVATED AREAS SHALL BE BACKFILLED AND IN ACCORDANCE WITH THE SOILS REPORT AND/OR AS DIRECTED BY GEOTECHNICAL ENGINEER. ANY AREAS TO BE PAVED WHICH EXHIBIT UNSTABLE SUBGRADE CONDITIONS SHALL BE EXCAVATED TO BEARING SOIL, REFILLED AND COMPACTED.
20. IN AN AREA WHERE EXCAVATION IS NEEDED WITHIN THE ROAD RIGHT-OF-WAY, EXCAVATION MUST BE MADE WITHIN ONE (1) FOOT OF THE FINAL SUBGRADE.
21. WHERE FILL IS PROPOSED WITH IN THE ROAD RIGHT-OF-WAY, THE FILL SHALL BE A MINIMUM OF TWO (2) FEET BELOW THE FINAL ROAD SUBGRADE.
22. ALL LIGHTING TO COMPLY WITH ZONING REGULATION SPECIFICATIONS SECTION 134 OUTDOOR LIGHTING.
23. ALL STORM DRAINS TO BE RCCP OR HDPE UNLESS OTERWISE NOTED.
24. STORMWATER MANAGEMENT IS EXISTING PER PRIOR SITE DEVELOPMENT PLAN SDP 88-235.
25. THERE ARE NO CEMETERIES OR BURIAL GROUND LOCATED ON THIS SITE.
26. THIS PROJECT IS EXEMPT FROM THE FOREST CONSERVATION ORDINANCE IN ACCORDANCE WITH SECTION 16.1202.b.1. (v). A PLANNED BUSINESS PARK WHICH HAS A PRELIMINARY PLAN APPROVAL BEFORE DECEMBER 31, 1992, AND WHICH MEETS THE INTENT OF THIS SUBTITLE BY RETAINING FOREST IN HIGH PRIORITY LOCATIONS.
27. PREVIOUS FILES RELATED TO THIS PROPERTY ARE F 86-127, F 87-04, F 88-270, F 01-95 , SDP 88-235.

Site Data

1. TOTAL AREA PARCEL 'H-8' = 84,323 SQ.FT. OR 1.9358 AC. +/-
2. EXISTING ZONING = M-1
3. PROPERTY REFERENCE = LIBER 5435 FOLIO 464
4. EXISTING USE = VACANT
5. PROPOSED USE = NEW OFFICE
6. BUILDING COVERAGE = 15,243 SQ. FT. OR 0.35 AC.
7. % OF BUILDING COVERAGE = 18.07%
8. FLOOR AREA = 15,243 S.F. OR 0.35 AC.
9. FLOOR AREA RATIO = 18.07%
10. AREA TO BE PAVED PLUS BUILDING AREA = 40,946.40 SQ. FT. OR 0.94 AC.
11. OPEN SPACE = 0.00
12. TOTAL AREA OF PARKING LOT = 26,136 SQ. FT. OR 0.6 AC.
13. % OF PARKING LOT COVERAGE= 30.99%
14. NUMBER OF PARKING SPACES REQUIRED = 50
15. NUMBER OF PARKING SPACES PROVIDED = 55 INCLUDING 3 HANDICAPPED
16. AREA TO BE DISTURBED= 71,002.80 SQ. FT. OR 1.63 AC.
17. AREA TO BE VEGETATIVELY STABILIZED = 43,377.05 SQ. FT. OR 0.9958 AC.

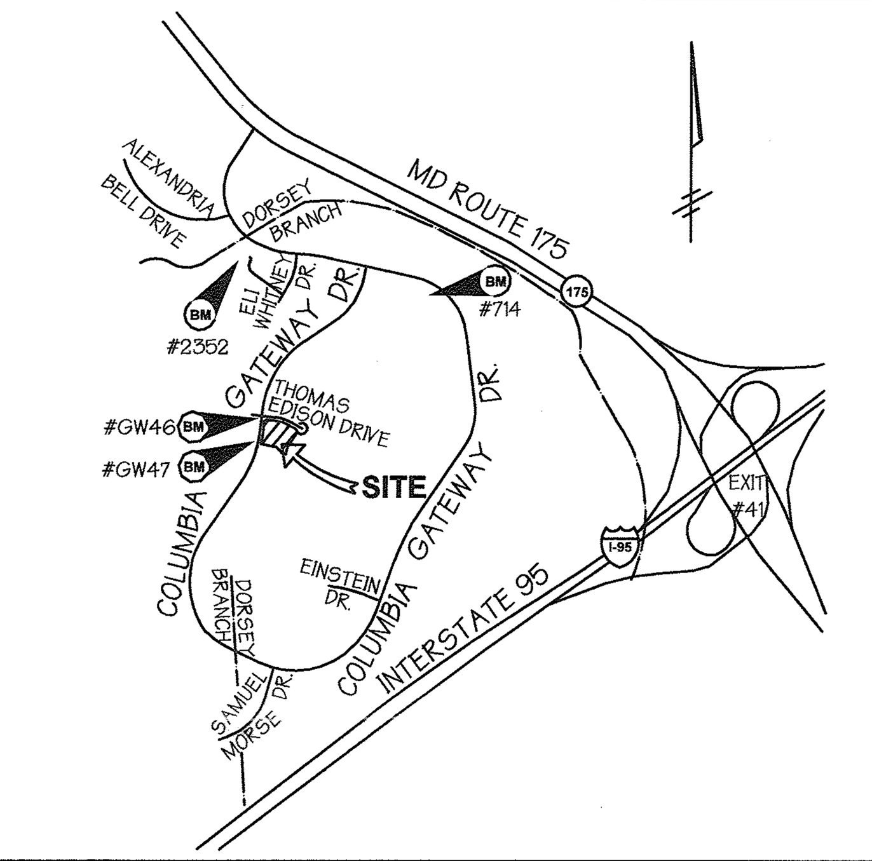
BENCHMARKS

WR & A BM #2352 ELEVATION : 338.29'
IRON PIPE 240 FEET RIGHT OF CENTERLINE
STA. 15+00, COLUMBIA GATEWAY DRIVE

WR & A BM #714 ELEVATION : 315.29'
230 FEET RIGHT OF CENTERLINE
STA. 34+30 COLUMBIA GATEWAY DRIVE

BM #GW46 ELEVATION 340.29
GWS PIN+CAP SET BACK CURB
N 490,284.01 E 854,629.46

BM #GW47 ELEVATION 334.75
GWS PIN+CAP SET BACK CURB
N 489,928.47 E 854,623.99



Location Map
SCALE 1" = 2,000'

Site Development Plans

for

Columbia Gateway

Parcel H - 8

Howard County, Maryland

SDP 01-150

Index of Sheets

SHEET NO. 1 - COVER SHEET
SHEET NO. 2 - EXISTING CONDITIONS PLAN
SHEET NO. 3 - SITE PLAN
SHEET NO. 4 - SITE PLAN DETAILS
SHEET NO. 5 - EXISTING AND PROPOSED DRAINAGE AREA MAPS
SHEET NO. 6 - DRAINAGE AREA MAP AND PROFILES
SHEET NO. 7 - WATER QUALITY PLAN & DETAILS
SHEET NO. 8 SEDIMENT EROSION CONTROL PLAN
SHEET NO. 9 SEDIMENT EROSION CONTROL NOTES & DETAILS
SHEET NO. 10 LANDSCAPE PLAN & DETAILS
(4) SHEET NO. 11 - ADDITIONAL STORM DRAIN PROFILES
SHEET NO. 12 - TRENCH DRAIN DETAILS AND PROFILES
SHEET NO. 13 - STORM DRAIN AND TRENCH DRAIN DETAILS
SHEET NO. 14 - GRADING PLAN AND SEDIMENT CONTROL
SHEET NO. 15 - LANDSCAPING REVISION
(5) SHEET NO. 16 - PARKING LOT REVISION
SHEET NO. 17 - LANDSCAPING REVISION - PARKING LOT

Parking Tabulation

PARKING REQUIRED:
PROPOSED BUILDING TOTAL SQ. FT. 15,243
GENERAL OFFICE = 3.3 SPACES/1,000 = 50 SPACES REQUIRED

PARKING PROVIDED = 55 SPACES (INCLUDES 3 HANDICAPPED)

Reviewed for Howard SCD and meets Technical Requirements

Jim Myers 12/26/01
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

Geoffrey W. Schoning 12/26/01
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: Howard County Department of Planning and Zoning

[signature] for 12/28/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Cindy Hamilton 1/8/02
CHIEF, DIVISION OF LAND DEVELOPMENT HB DATE

[signature] 1/8/02
DIRECTOR DATE

PREPARED BY :

GWS
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — JAMES ADRIAN MARKLE, JR. — No. 11865 — REGISTERED PROFESSIONAL ENGINEER
12/12/01

NOTE:
The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building, shown on this site development plan who will discharge non-domestic waste to the public sewerage system if each separate and independent sewer connection shall include a standard manhole and other waste pretreatment devices as required and approved by Howard County. Waste lines on the interior of the building shall be designed, constructed or modified such that non-domestic waste will be discharged to the separate and independent sewer connection. No tenant or occupant of any building shown on this site development plan shall discharge regulated non-domestic waste to the public sewerage system prior to installation of the separate and independent sewer connection and related interior waste lines. The above statement shall apply to all initial and future occupants or tenants.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 19908, Expiration Date: ~~01-06-2019~~ 1-6-2021

(4) STATE OF MARYLAND — BRIAN KEITH DAVILA — 19908 — PROFESSIONAL ENGINEER
10-19-2018
9/11/19 BKD

REVISION "4 & 5" BY:
CHARLES P. JOHNSON & ASSOCIATES
1751 ELTON RD., STE. 300 SILVER SPRING, MARYLAND 20903 301-434-7000

(5) REVISION
MAINTENANCE OF SIDEWALKS AND PAVING. ADDED LANDSCAPING AND INLET TO RELIEVE PUDDLE. ADDED SHEETS 16 & 17 BY CPDA DATED 9/11/19

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.

(4) REVISIONS
ADDED PLAZA, PRIVATE STORM DRAIN AND LANDSCAPING ADDED SHEETS 11-15. BY CPJ DATED 10/18/2018

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06	SEWER CODE 3390000

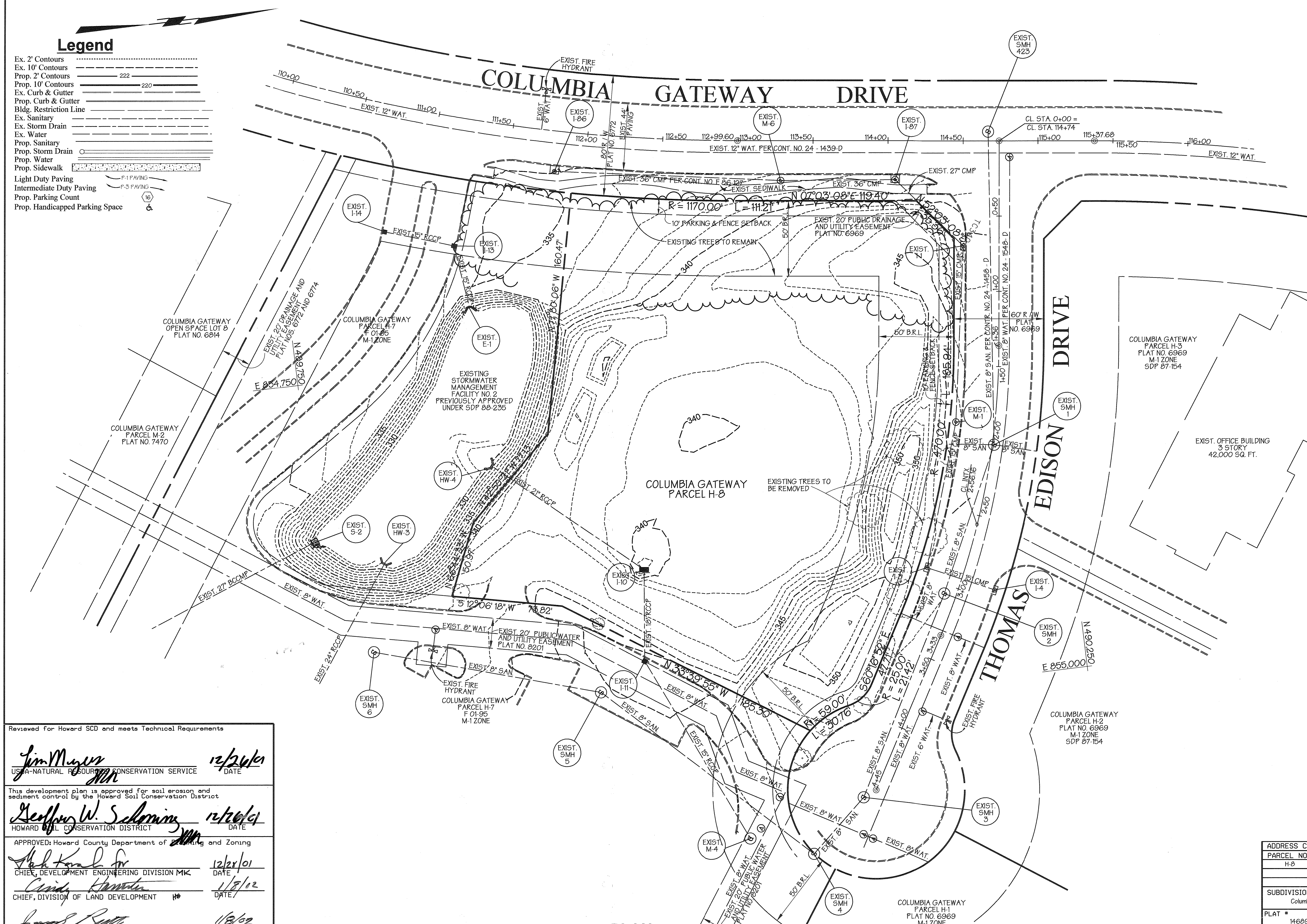
Cover Sheet
(REVISED SHEET)
COLUMBIA GATEWAY
PARCEL H-8
PREVIOUS FILE # 'S: F 86-127, F 87-04, F 88-270, F 01-95, SDP 88-235
ELECTION DISTRICT : 6
HOWARD CO., MARYLAND
SHT. 1 OF ~~10~~ ~~15~~ 17
SCALE : As Shown
DATE : MARCH 08, 2001

SDP 01-150

File Name : 9663coversheet.s01

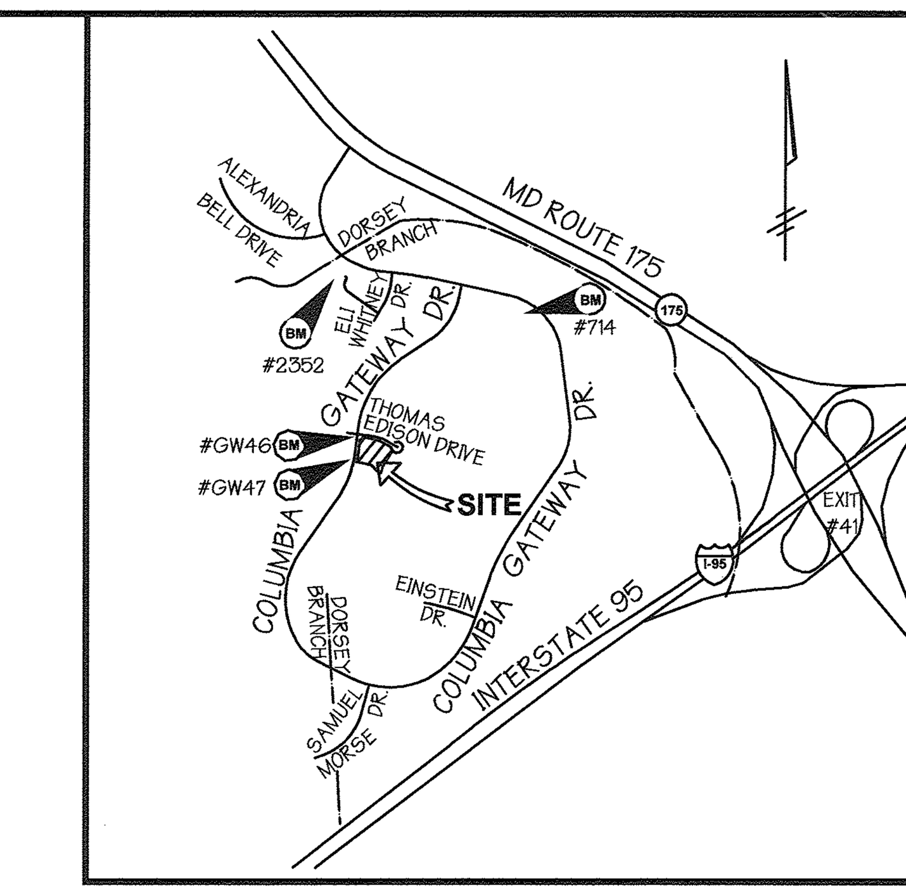
Legend

Ex. 2' Contours	
Ex. 10' Contours	
Prop. 2' Contours	222
Prop. 10' Contours	220
Ex. Curb & Gutter	
Prop. Curb & Gutter	
Bldg. Restriction Line	
Ex. Sanitary	
Ex. Storm Drain	
Ex. Water	
Prop. Sanitary	
Prop. Storm Drain	
Prop. Water	
Prop. Sidewalk	
Light Duty Paving	P-1 PAVING
Intermediate Duty Paving	P-3 PAVING
Prop. Parking Count	16
Prop. Handicapped Parking Space	♿



PLAN

SCALE : 1" = 30'



Location Map

SCALE 1" = 2,000'

Reviewed for Howard SCD and meets Technical Requirements

Jim Myers — 12/26/01
USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

Geoffrey W. Schoming — 12/26/01
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: Howard County Department of Planning and Zoning

Mark Koval for — 12/28/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE

Cindy Hamilton — 1/8/02
CHIEF, DIVISION OF LAND DEVELOPMENT HO — DATE

[signature] — 1/8/02
DIRECTOR — DATE

PREPARED BY :

GWS

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — JAMES ADRIAN MARKLE, JR. — No. 11006 — REGISTERED PROFESSIONAL ENGINEER — 12/12/01

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06 | SEWER CODE 3390000

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS

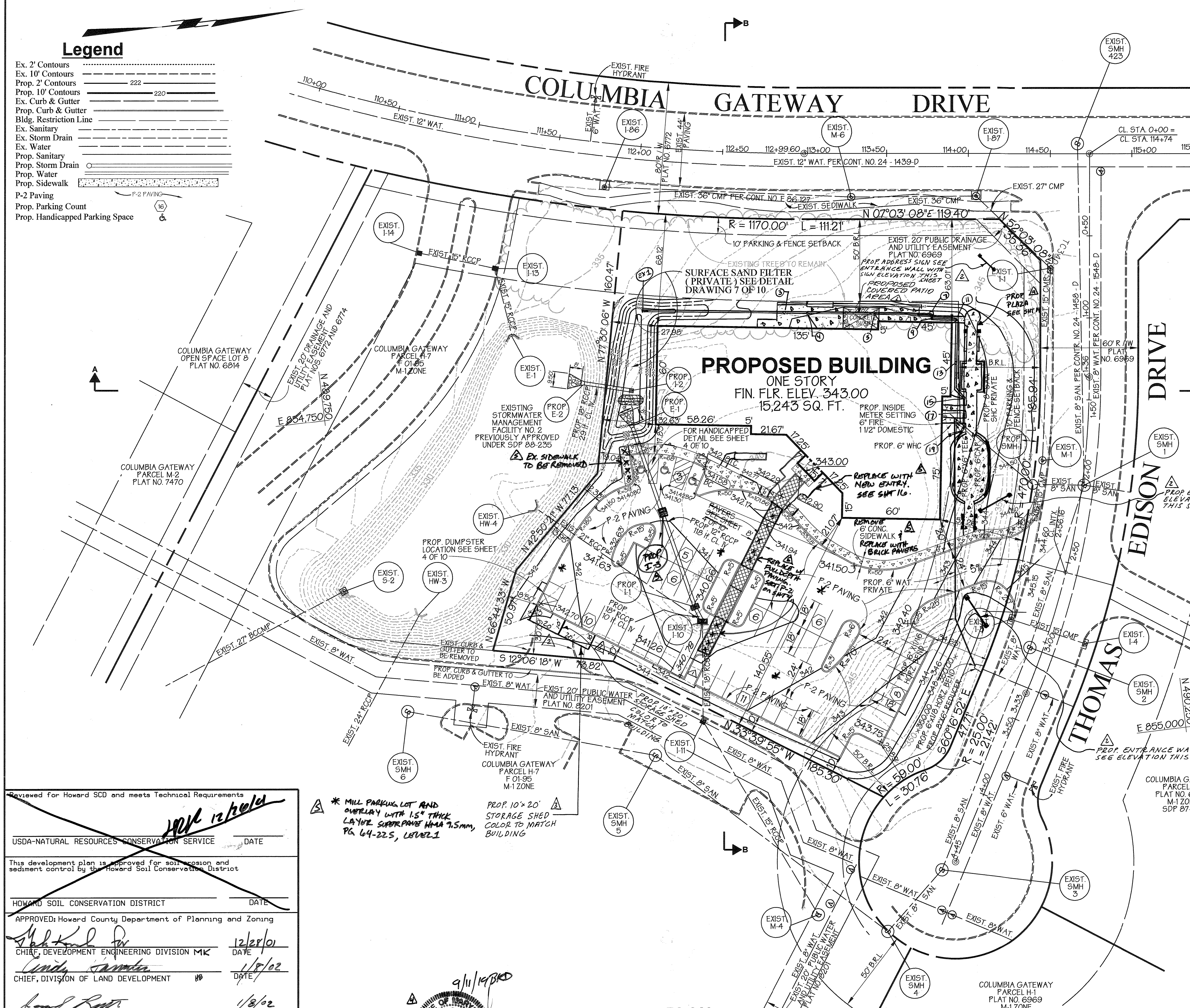
Existing Conditions Plan

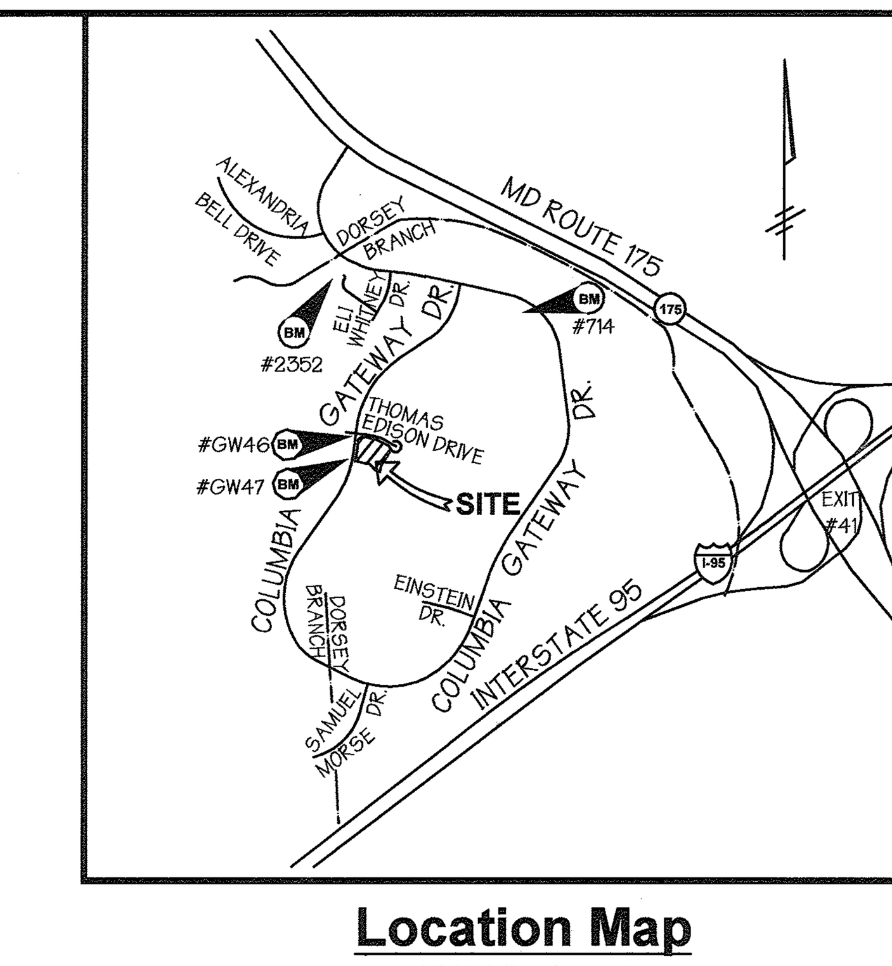
COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND
SHT. 2 OF ~~10~~ 17
SCALE : As Shown
DATE : MARCH 08, 2001

SDP 01-150

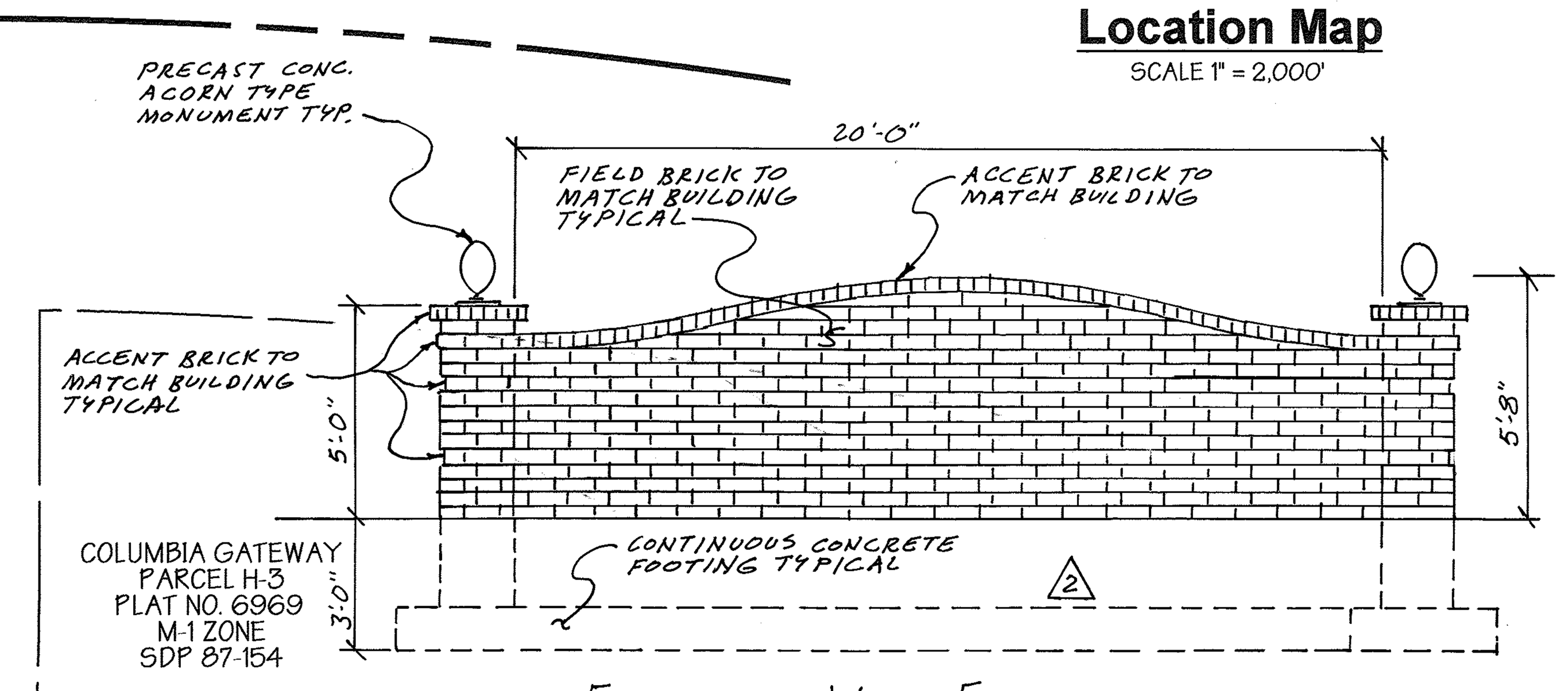
File Name : 9663existingconditionsplan.s01





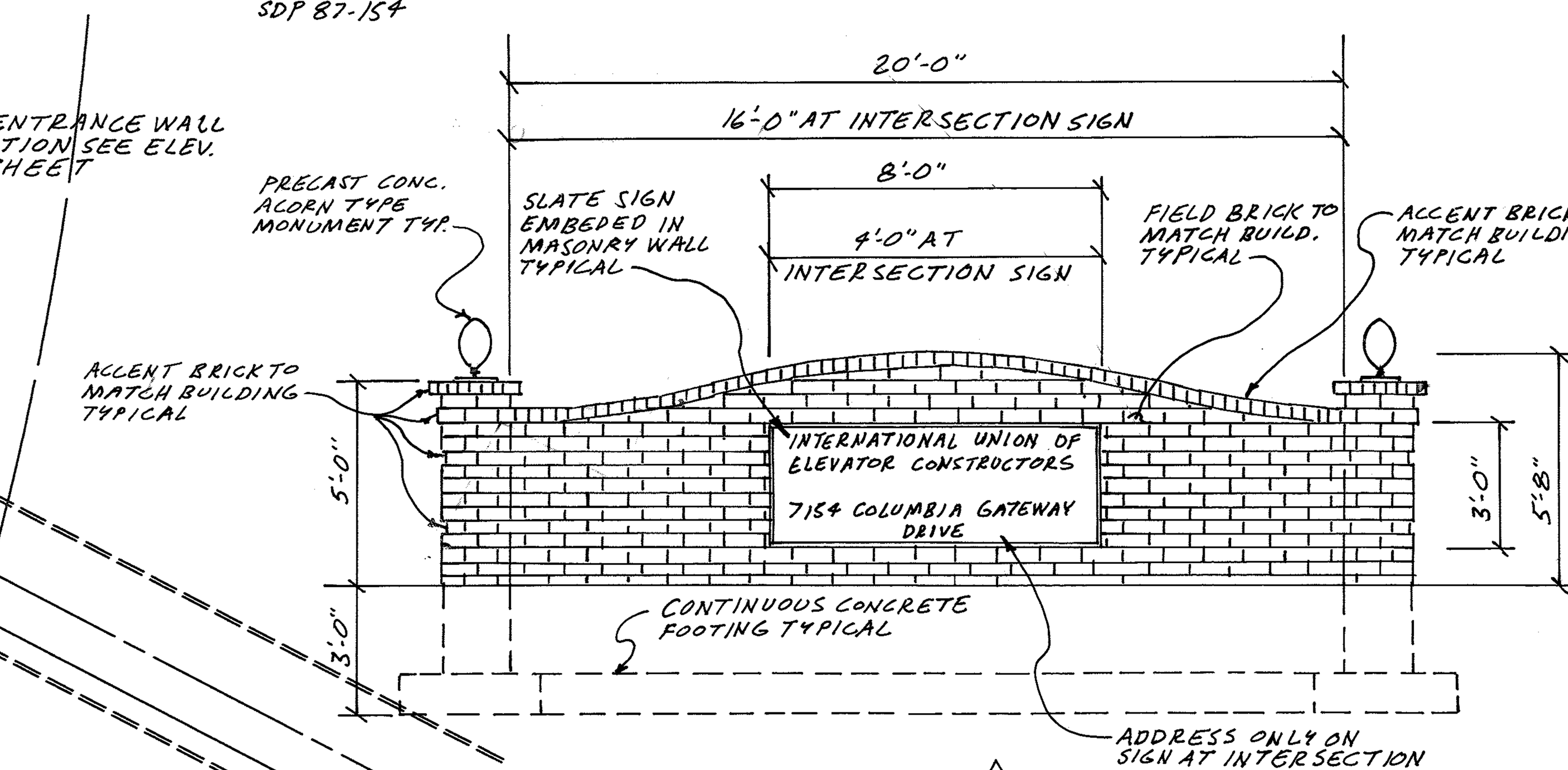
Location Map

SCALE 1" = 2,000'



ENTRANCE WALL ELEVATION

N.T.S.



ENTRANCE WALL WITH SIGN ELEVATION

N.T.S.

5 * MILL PARKING LOT AND OVERLAY WITH 1.5" THICK LAYER SUPERPAVE HMA 9.5mm, PG 64-22S, LEVEL 1

5 REVISION
MAINTENANCE OF SIDEWALKS AND PAVING. ADDED LANDSCAPING AND INLET TO RELIEVE PUDDLE. ADDED SHEETS 16 & 17 BY CPJA DATED 9/11/19

4 REVISION:
ADDED PLAZA, PRIVATE STORM DRAIN AND LANDSCAPING. ADDED SHEETS 11-15. BY CPJ DATED 10/18/18

REVISION:
3 ADDED 10'x20' STORAGE SHED ADJACENT TO EX. STORAGE SHED BEHIND DUMPSTER BY GWS DATED 11/07/08

REVISIONS:
2 ADDED ADDRESS SIGN AND ENTRANCE SIGNS, PROVIDED SIGN ELEVATIONS, AND ADDED STORAGE SHED BEHIND DUMPSTER BY GWS DATED 2/26/03

~~Reviewed for Howard SCD and meets Technical Requirements~~ 12/26/01

~~USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE~~

~~This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District~~

~~HOWARD SOIL CONSERVATION DISTRICT — DATE~~

APPROVED: Howard County Department of Planning and Zoning

Signature	Date
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	12/28/01
CHIEF, DIVISION OF LAND DEVELOPMENT HB	1/8/02
DIRECTOR	1/8/02

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — JAMES ADRIAN MARKLE — No. 11085 — REGISTERED PROFESSIONAL ENGINEER — 12/12/01

4 STATE OF MARYLAND — BRIAN KEITH DAVIS — 19908 — PROFESSIONAL ENGINEER — 10-18-2018 — 9/11/19 BKD

[redacted] Certification. I hereby certify that [redacted] documents were prepared or approved by me, [redacted] a duly licensed professional engineer under [redacted] State of Maryland.
[redacted] No. 19908, Expiration Date: ~~01-06-2019~~ 1-6-2021

REVISION "4 & 5" BY:
CHARLES P. JOHNSON & ASSOCIATES
1751 ELTON RD., STE. 300 SILVER SPRING
MARYLAND 20903 301-434-7000

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS
3.15.02
1 ADDED NOTE TO CONCRETE SLAB, PROP. COVERED PATIO AREA AT REAR OF BLDG. AND REV. TOP ELEVATION OF I-10 (CONVERTED TO MANHOLE) TO 340.78 BY GWS

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

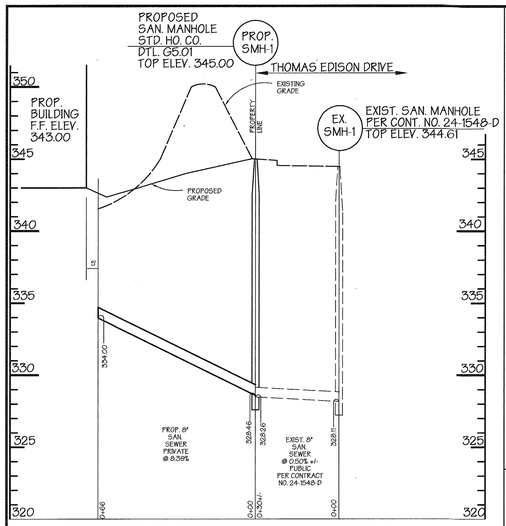
SUBDIVISION NAME			SECTION NAME		PARCEL #
Columbia Gateway			N/A		H-8
PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02
WATER CODE E-06			SEWER CODE 3390000		

Site Plan
(REVISED SHEET)
COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND
SHT. 3 OF ~~10~~ 17   SCALE : As Shown   DATE : MARCH 08, 2001

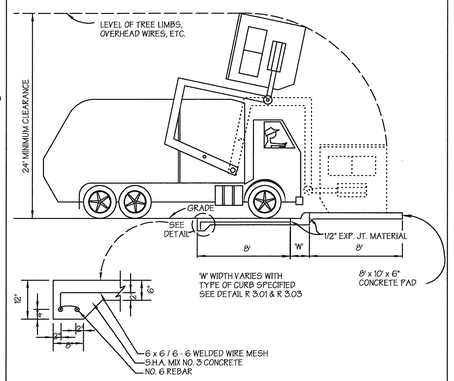
File Name : 9663siteplan.s01

SDP 01-150



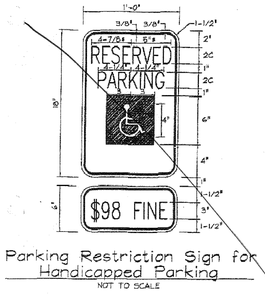
PRIVATE SANITARY SEWER PROFILE

SCALE: HORZ. 1" = 30'
VERT. 1" = 5'

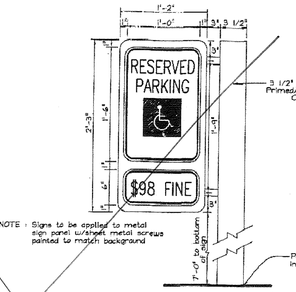


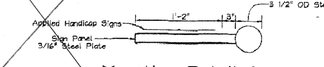
SOLID WASTE SERVICE PAD

NOT TO SCALE

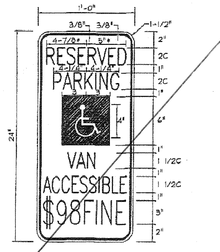


Parking Restriction Sign for Handicapped Parking
NOT TO SCALE





Mounting Detail for Parking Restriction Sign
NOT TO SCALE



Parking Restriction Sign for Van Handicapped Parking
NOT TO SCALE

SEE SHEET 16 FOR REVISED SIGN DETAIL

$98 FINE SIGN / VAN ACCESSIBLE SIGN

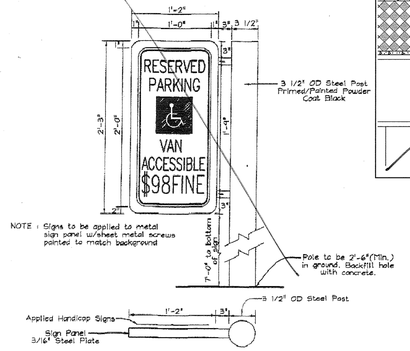
THE TEXT AND BORDER SHALL BE STANDARD GREEN TO MATCH THAT ON R7-8 AND, THE BACKGROUND SHALL BE REFLECTIVE WHITE. TEXT SHALL BE IN 3" CHARACTERS

SIGN SHALL BE MOUNTED DIRECTLY BELOW THE STANDARD R7-8 RESERVED PARKING FOR HANDICAPPED SIGN. IT'S BOTTOM EDGE SHALL BE NO LESS THAN 7 FEET ABOVE GROUND. IF THE SIGN IS PLACED AGAINST A BUILDING, STRUCTURE, OR OTHER LOCATION WHERE VEHICLE OR PEDESTRIAN TRAFFIC IS NOT OBSTRUCTED THE BOTOM EDGE OF THE SIGN SHALL BE AT LEAST 6 FEET BUT NOT MORE THAN 10 FEET ABOVE GROUND

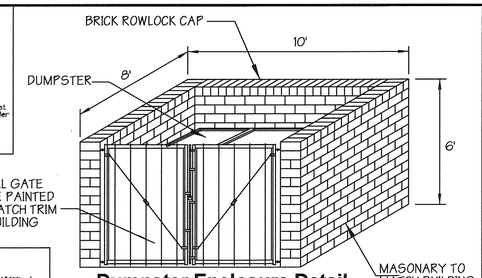
COLORS
GREEN - LEGEND AND BORDER
WHITE - SYMBOL ON BLUE BACKGROUND
WHITE - BACKGROUND

HANDICAPPED SIGN DETAIL

NOT TO SCALE

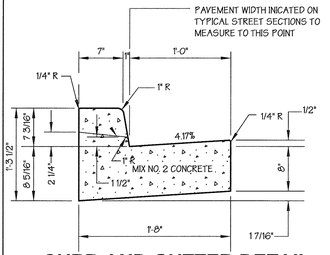


Mounting Detail for Parking Restriction Sign
NOT TO SCALE



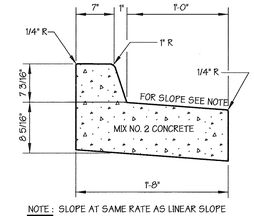
Dumpster Enclosure Detail

NOT TO SCALE



CURB AND GUTTER DETAIL

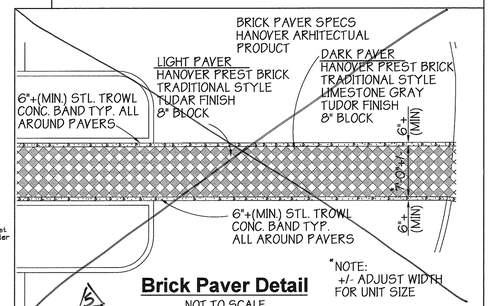
NOT TO SCALE
SEE HO. CO. STD. DTL. R-3.01



NOTE : SLOPE AT SAME RATE AS LINEAR SLOPE ACCROSS PAVING

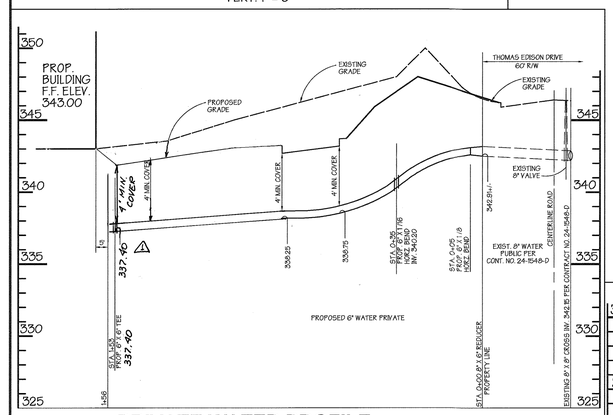
REVERSE SLOPE CURB AND GUTTER

NOT TO SCALE



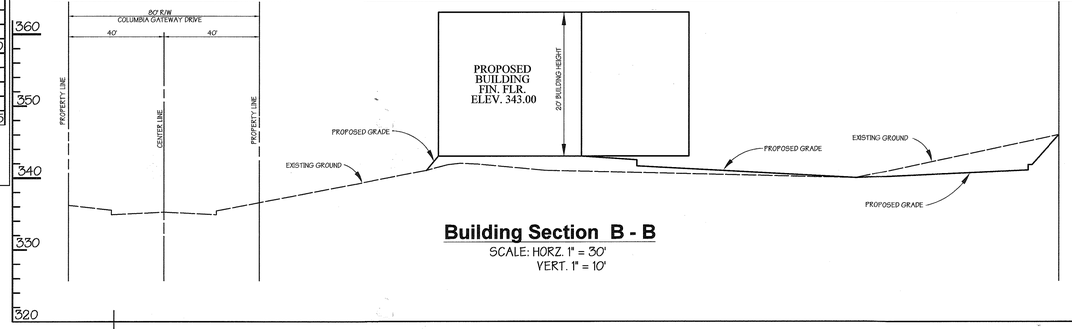
Brick Paver Detail

NOT TO SCALE



PRIVATE WATER PROFILE

SCALE: HORZ. 1" = 30'
VERT. 1" = 5'



Building Section B - B

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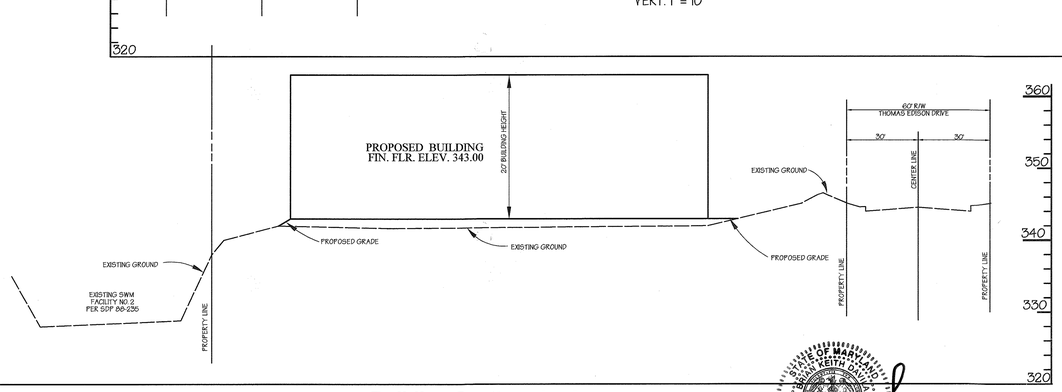
VERT. 1" = 10'



Building Section A - A

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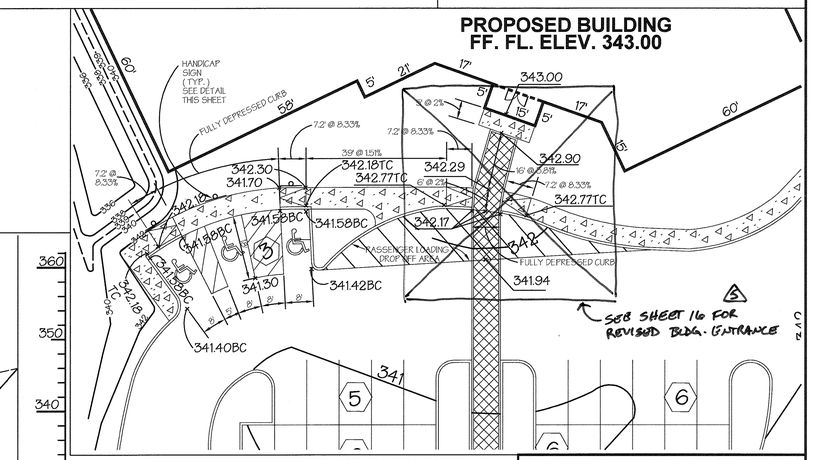
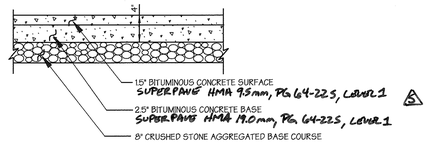


HANDICAPPED DETAIL

SCALE: 1" = 20'



P-2 Pavement Section

NOT TO SCALE

REVISION
MAINTENANCE OF SIDEWALK AND PAVING. ADDED LANDSCAPING AND INLET TO RELIEVE PUDDLE. ADDED SHEETS 16 & 17 BY CPJA DATED 9/11/19

Reviewed for Howard SCD and meets Technical Requirements

JRM 12/26/01

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 12/28/01

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/8/02

DIRECTOR — DATE 1/8/02

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX MAP / ZONE	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06 — SEWER CODE 3390000

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — MEL NORM HANKE — No. 11148 — REGISTERED PROFESSIONAL ENGINEER — 12/12/01

REVISION 5
CHARLES P. JOHNSON & ASSOCIATES
1751 ELTON ROAD, STE 300
SILVER SPRING, MD 20903
301-434-7000

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 19908, Expiration Date 1-6-21

STATE OF MARYLAND — BRIAN KEITH DAVIS — 19908 — PROFESSIONAL ENGINEER — 9/11/19

1-6-21

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS
5 REVISED WATER PROFILE BY GWS DATED 3/15.02

Site Plan Details

COLUMBIA GATEWAY PARCEL H-8

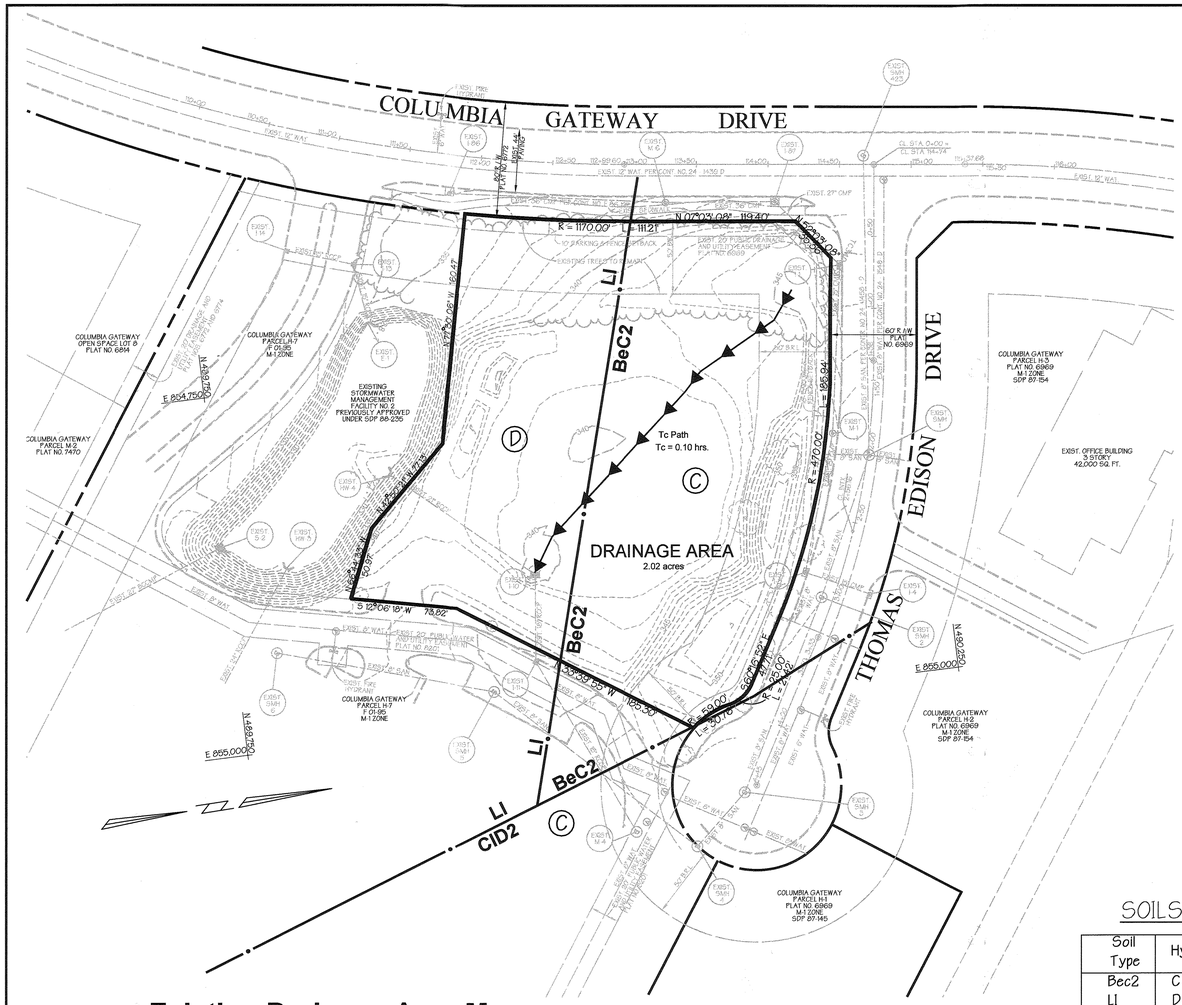
ELECTION DISTRICT : 6
HOWARD CO., MARYLAND

SHT. 4 of 15 17

SCALE : As Shown
DATE : MARCH 08, 2001

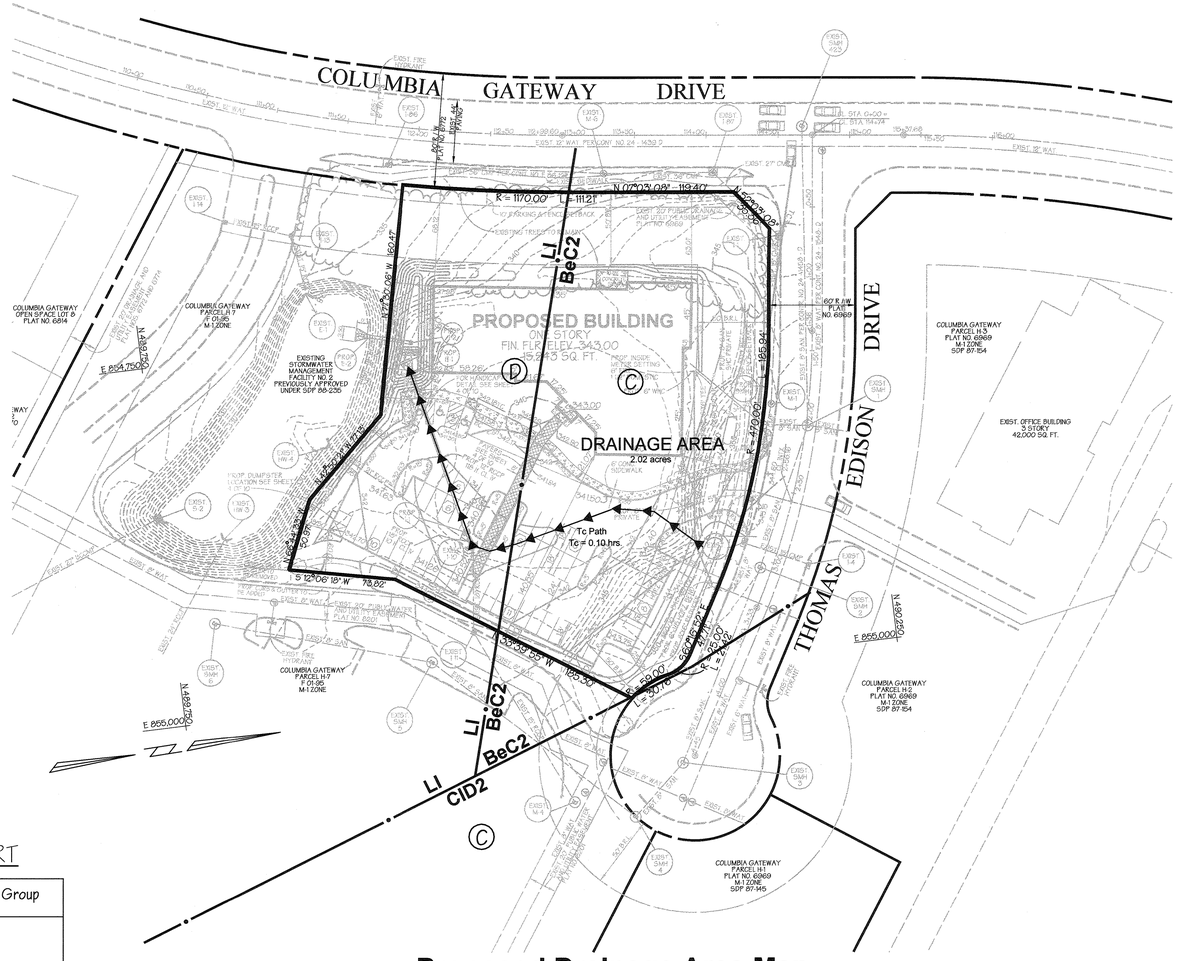
FILE NAME: 9663sitedetails.s01

SDP 01-150



Existing Drainage Area Map

SCALE: 1"= 50'



Proposed Drainage Area Map

SCALE: 1"= 50'

SOILS CHART

Soil Type	Hydrologic Group
BeC2	C
LI	D
CID2	C

LEGEND

SOILS

DRAINAGE AREA LINES

Tc PATH

Soil Group Ⓒ

Soil Symbol **NeB2**

Reviewed for Howard SCD and meets Technical Requirements

Jim Myers — USDA-NATURAL RESOURCES CONSERVATION SERVICE — 12/26/01 DATE

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

Geoffrey W. Schmitz — HOWARD SOIL CONSERVATION DISTRICT — 12/26/01 DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 12/28/01 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT HB — 1/15/02 DATE

DIRECTOR — 1/18/02 DATE

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — No. 11365 — REGISTERED PROFESSIONAL ENGINEER — 12/12/01

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS

ADDRESS CHART					
PARCEL NO.	STREET ADDRESS				
H-8	7154 COLUMBIA GATEWAY DRIVE				
SUBDIVISION NAME	SECTION NAME			PARCEL #	
Columbia Gateway	N/A			H-8	
PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02
WATER CODE E-06			SEWER CODE 3390000		

Existing and Proposed Drainage Area Maps

COLUMBIA GATEWAY PARCEL H-8

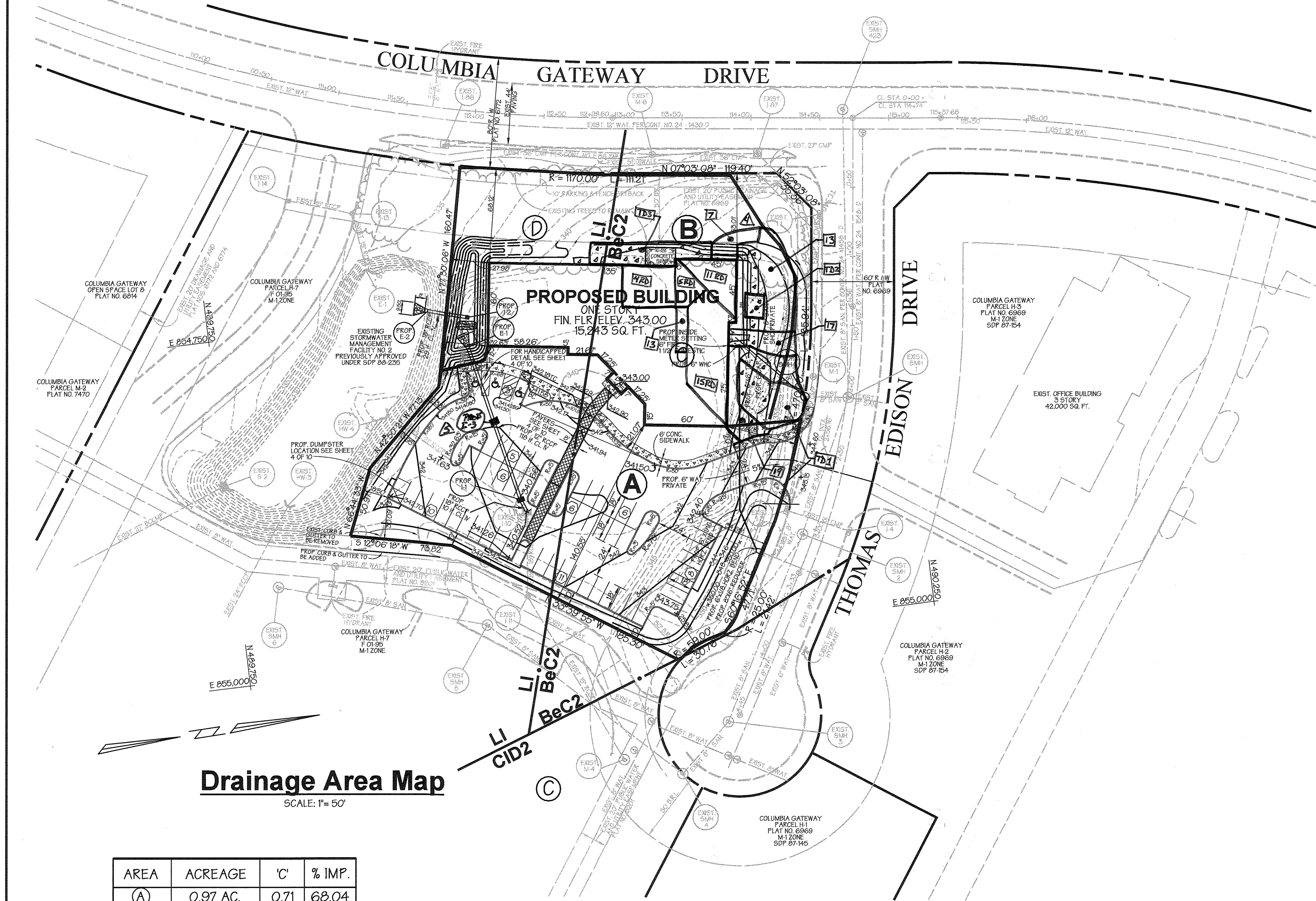
ELECTION DISTRICT : 6
HOWARD CO., MARYLAND

SHT. 5 OF 10 — 1517

SCALE : As Shown
DATE : MARCH 08, 2001

File Name : 9663existpropdrimaps.s01

SDP 01-150



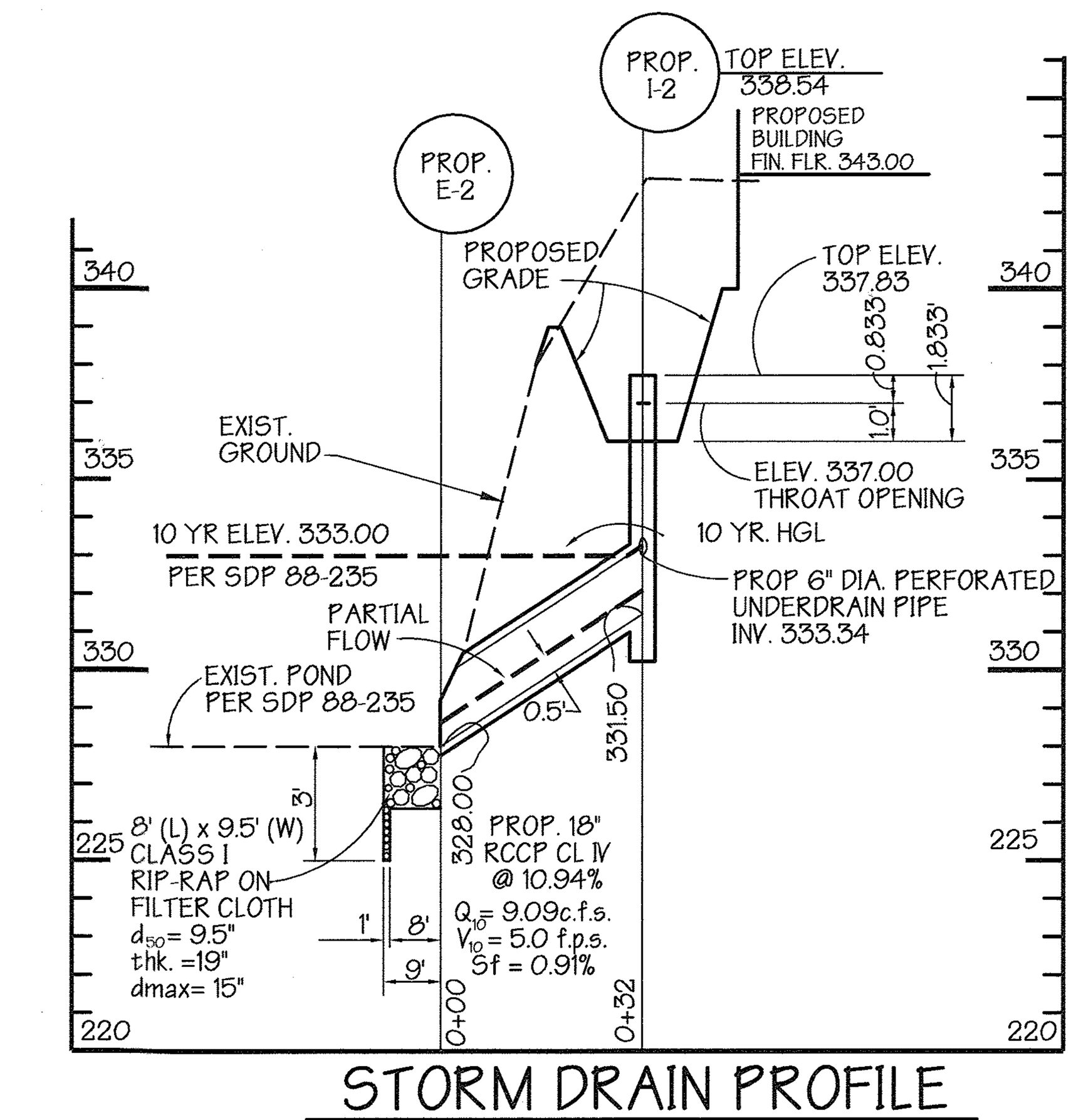
Drainage Area Map

SCALE: 1"= 50'

AREA	ACREAGE	'C'	% IMP.
(A)	0.97 AC.	0.71	68.04
(B)	0.84 AC.	0.60	40.48

△4

AREA	ACREAGE	'C'	IMP%
TD1	0.03 AC	0.55	46.1
19	0.04 AC	0.42	26.1
17	0.02 AC	0.41	24.6
TD2	0.01 AC	0.90	100.0
13	0.06 AC	0.39	21.0
7	0.01 AC	0.34	13.8
5RD	0.01 AC	0.90	100.0
4RD	0.03 AC	0.90	100.0
TD3	0.03 AC	0.83	89.8
15RD	0.05 AC	0.90	100.0
11RD	0.02 AC	0.90	100.0



STORM DRAIN PROFILE

SCALE: HORIZ. 1" = 30'
VERT. 1" = 5'

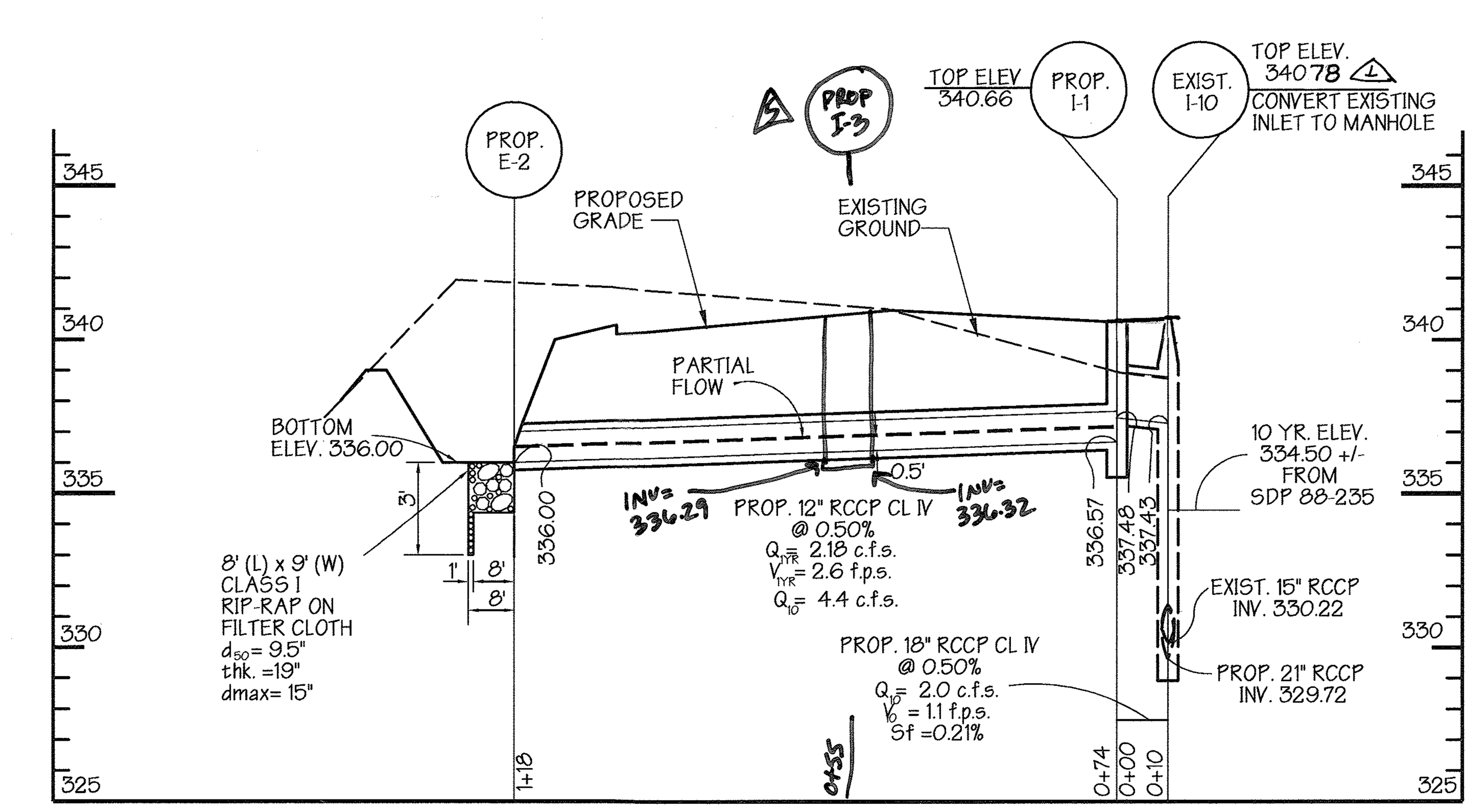
INLET SCHEDULE

NO.	TYPE	TOP ELEV.	INV. IN	INV. OUT	Q.c.f.s.	HO. CO. DTL.
I-1	DOUBLE TYPE 'S'	340.66	337.48	336.57	6.6	SD-4.23
I-2	TYPE 'D' INLET	338.54	——	331.50	9.09	SD-4.11
△5 I-3	SINGLE TYPE S	340.60	336.32	336.29		D-4.24

SEE DETAIL SHT 16

STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV.	INV. IN	INV. OUT	HO. CO. DTL.
E-1	12" CONC. END SECTION	——	——	335.50	SD-5.51
E-2	18" CONC. END SECTION	——	——	228.00	SD-5.51



STORM DRAIN PROFILE

SCALE: HORIZ. 1" = 30'
VERT. 1" = 5'

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — 12/26/01 — DATE

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

HOWARD SOIL CONSERVATION DISTRICT — 12/26/01 — DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 12/28/01 — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT HB — 1/8/02 — DATE

DIRECTOR — 1/8/02 — DATE

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.

Civil Engineers and Land Surveyors

1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

12/12/01

△4 9/11/19 BD

[redacted] Certification. I hereby certify that [redacted] were prepared or approved by me, and [redacted] licensed professional engineer under [redacted] of Maryland. 1-6-2021

[redacted] 19908 [redacted] Date: 01-06-2019

10-19-2018

REVISION "4 & 5 B4":
CHARLES P. JOHNSON AND ASSOCIATES
1751 ELTON RD., STE. 300 SILVER SPRING
MARYLAND 20903 301-434-7000

△5 REVISION
MAINTENANCE OF SIDEWALKS AND PAVING. ADDED LANDSCAPING AND INLET TO RELIEVE PUDDLE. ADDED SHEETS 16-17 BY CPJA DATED 9/11/19

△4 REVISION: BY CPJ 10/18/18
ADDED PLAZA, PRIVATE STORMDRAIN AND LANDSCAPING
ADDED SHEETS 11-15.

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06 — SEWER CODE 3390000

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.

REVISIONS
△1 REVISED TOP ELEV. AT CONVERTED INLET TO MANHOLE 3/15.02

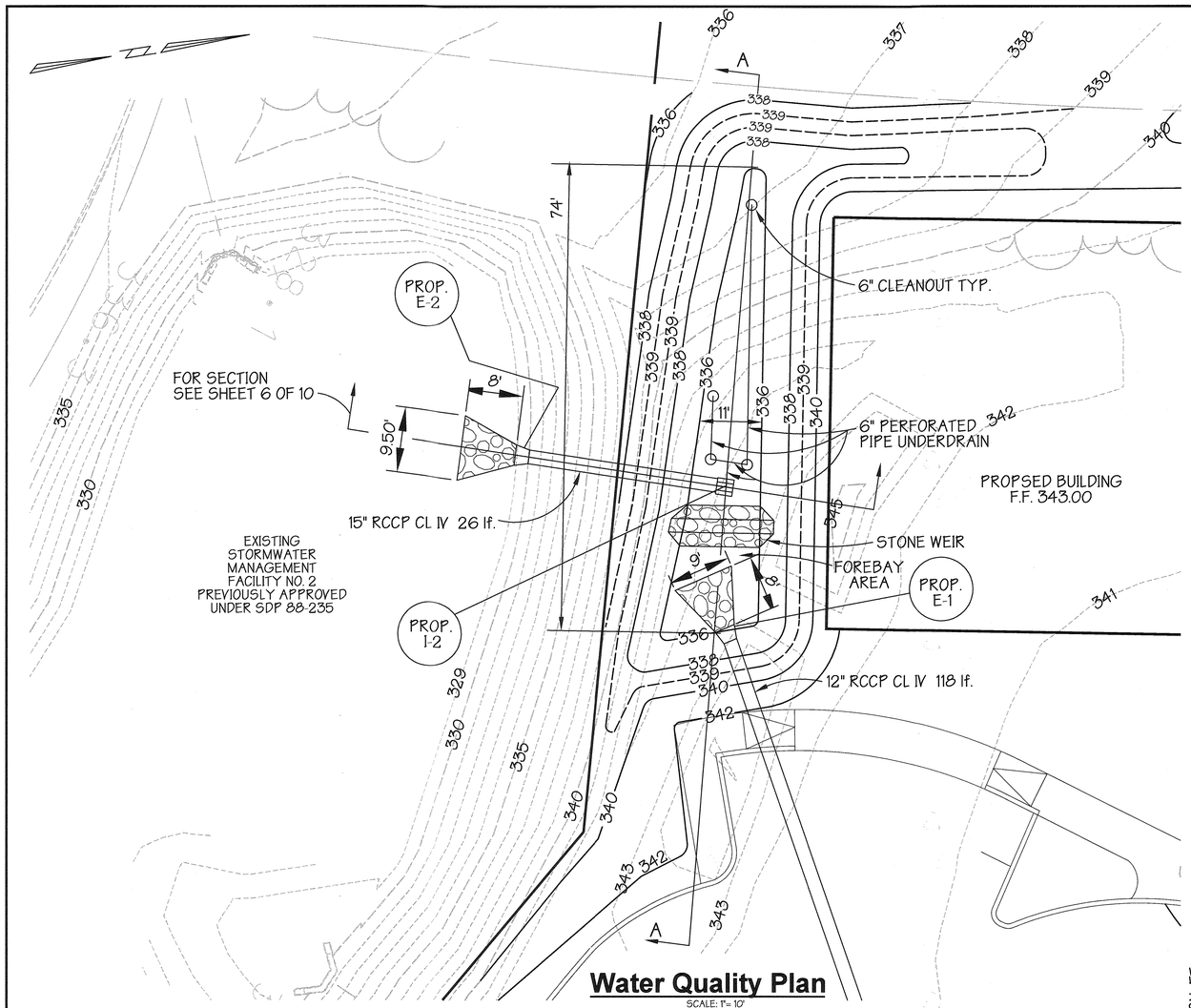
Drainage Area Map and Profiles
(REVISED SHEET)

COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND
SHT. 6 OF ~~10~~ 15 17
SCALE : As Shown
DATE : MARCH 08, 2001

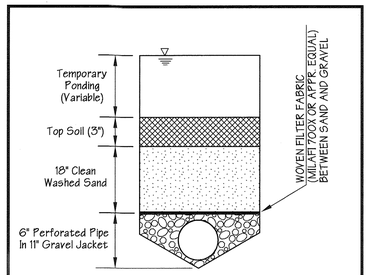
File Name : 9663drainmapprofiles.s01

SDP 01-150



Water Quality Plan

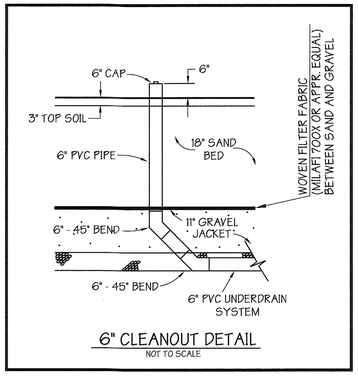
SCALE: 1"= 10'



TYPICAL SECTION (A - A)

ABOVE GROUND SAND FILTER

NOT TO SCALE



6" CLEANOUT DETAIL

NOT TO SCALE

3.4.6 Filtering Maintenance Criteria

The sediment chamber outlet devices shall be cleaned/repaired when drawdown times within the chamber exceed 36 hours. Trash and debris shall be removed as necessary.

Sediment should be cleaned out of the sedimentation chamber when it accumulates to a depth of more than six inches. Vegetation within the sedimentation chamber should be limited to a height of 18 inches.

When the filtering capacity of the filter diminishes substantially (e.g., when water ponds on the surface of the filter bed for more than 72 hours), the top few inches of discolored material shall be removed and shall be replaced with fresh material. The removed sediments should be disposed in an acceptable manner (e.g., landfill). Silt/sediment should be removed from the filter bed when the accumulation exceeds one inch.

Organic filters (F-4) or surface sand filters (F-1) that have a grass cover should be mowed a minimum of 3 times per growing season to maintain maximum grass heights less than 12 inches.

A drop of at least six inches shall be provided at the inlet of bioretention facilities (F-6) (stone diaphragm). Dead or diseased plan material shall be replaced. Areas devoid of mulch should be re-mulched on an annual basis.

Direct maintenance access shall be provided to the pretreatment area and the filter bed.

Construction of sand filters and bioretention areas shall conform to the specifications outlined in Appendix B.5.

B.5.A Sand Filter Specifications

1. Material Specifications for Sand Filters

The allowable materials for sand filter construction are detailed in Table B.5.1

2. Sand Filter Testing Specifications

Underground sand filters, facilities within sensitive groundwater aquifers, and filters designed to serve urban hot spots are to be tested for water tightness prior to placement of filter media. Entrances and exits should be plugged and the system completely filled with water to demonstrate water tightness. Water tightness means no leakage for a period of 8 hours.

All overflow weirs, multiple orifices and flow distribution slots are to be field-tested to verify adequate distribution of flows.

3. Sand Filter Construction Specifications

Provide sufficient maintenance access (i.e., 12-foot-wide road with legally recorded easement). Vegetated access slopes are to be a maximum of 10%; gravel slopes to 15%; paved slopes to 25%.

Absolutely no runoff is to enter the filter until all contributing drainage areas have been stabilized.

Surface or filter bed is to be level.

All underground sand filters should be clearly delineated with signs so that they may be located when maintenance is due.

Surface sand filters may be planted with appropriate grasses; see Appendix A.

"Pocket" sand filters (and residential bioretention facilities treating areas larger than an acre) shall be sized with a stone "window" that covers approximately 10% of the filter area. This "window" shall be filled pea gravel (3/4 inch stone).

Material Specifications

The allowable materials to be used in bioretention area are detailed in Table B.5.2.

Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the bioretention area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, Mugwort, Nutsedge, Poison Ivy, Canadian Thistle, Tearthumb, or other, noxious weeds.

The planting soil shall be tested and shall meet the following criteria:

pH range	5.2 - 7.0
organic matter	1.5 - 4%
magnesium	35 lb/ac.
phosphorus P2O5	75 lb/ac.
potassium K2O	85 lb/ac.
soluble salts	not to exceed 500 ppm

All bioretention areas shall have a minimum of one test. Each test shall consist of both the standard soil tests for pH, Phosphorus, And potassium and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the top soil was excavated.

Since different labs calibrate their testing equipment differently, all testing results shall come from the same testing facility.

Should the pH fall out of the acceptable range, it may be modified (higher) with lime or (lower) with iron sulfate plus sulfur.

Compaction

It is very important to minimize compaction of both the base of the bioretention area and the required backfill. When possible, use excavation hoes to remove original soil. If bioretention areas are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction resulting in reduced infiltration rates and storage volumes and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the required sand layer. Pump any ponded water before preparing (rototilling) base.

When back filling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When back filling the bioretention facility, place soil in lifts 12" or greater. Do not use heavy equipment within the bioretension basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention material with light equipment such as a compact loader or a dozer/loader with marsh tracks.

Plant Material

Plant material should conform to the American Standard Nursery Stock, published by the American Association of Nurserymen, and should be selected from certified, reputable nurseries.

Plant Installation

Shredded hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretion area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

The plant root ball should be planted so 10tch of the ball is above the final grade surface. Root stock of the plant material shall be kept moist during transport and on-site storage. Planting pits shall follow LCA planting guidelines. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed shall be tilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch is used to amend the soil. Rototill area fertilizer at a rate of 2 pounds per 1000 square feet.

Underdrains

Underdrains to be placed on a 3'-0" wide section of filter cloth. Pipe is placed next, followed by the gravel bedding. The ends of underdrain pipes not terminating in an observation well shall be capped.

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out-pipes must be provided (one minimum per every 1000 square feet of surface area).

Filter Strips

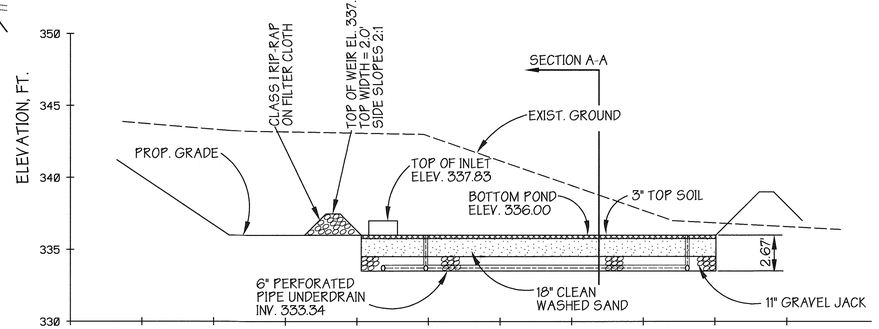
Construct pea gravel diaphrams 12" wide, minimum, and 24" deep minimum.

Pervious berms to be a sand/gravel mix. See bioretention planting media specifications; add 20% gravel; reduce clay component accordingly. Berms to have overflow weirs with 6 inch minimum head.

Slope range to be 2% minimum to 6% maximum.

Miscellaneous

The bioretention facility facility may not be constructed until all contributing drainage area has been stabilized.



Section A-A

SCALE: HORIZONTAL 1" = 10'
VERTICAL 1"=5'

Materials Specifications for Sand Filters

PARAMETER	SPECIFICATION	SIZE	NOTES
Sand	AASHTO M-6 or ASTM C-33 33 concrete sand	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.
Peat			The material must be reed-sedge hemic peat, shredded, uncompacted, uniform, and clean.
Leaf Compost		n/a	
Underdrain Gravel	AASHTO M-43	0.35" TO 0.75"	
Geotextile Fabric (if required)	ASTM-D-4833 (puncture strength - 125 lbs ASTM-D-4632 (tensile strength - 300 lbs	0.08" thick equilivant opening size of #80 sieve	Must maintain 125 gpm per sq. ft. flow rate. Note: a 4" pea gravel layer may be substituted for geotextiles meant to "separate" sand filter layers.
Impermeable liner (if required)	ASTM-D-4833 (puncture ASTM-D-4122 (tensile strength 1,100 lbs., elongation 200%) ASTM-D-624 (Tear resistance 150 lbs./in) ASTM-D-471 (water adsorption; +8 to -2 % mass)		
underdrain piping	F 758, Type PS 28 or AS55HTO-M-278	4" - 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
concrete (cast in place)	MHSA Standard and Spec, Section 902 - Mix No. 3; f'c = 3500 psi., normal weight, air-entrained; re-enforcing to meet ASTM 615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.R/89; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking
concrete (pre-cast)	per pre-cast manufacturer	n/a	SEE ABOVE NOTE
non-rebar steel	ASTM A-36	n/a	structural steel to be hot-dipped galvanized ASTM -A 123

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE 12/26/01

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 12/27/01

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/8/02

DIRECTOR — DATE 1/8/02

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06 — SEWER CODE 3390000

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — JAMES ANTHONY MARKLE JR. — No. 11005 — REGISTERED PROFESSIONAL ENGINEER
12/12/01

ENGINEER CERTIFICATION:

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

Signature of Engineer — Date 12/12/01

Print Name JAMES A. MARKLE JR. — PE # 11005

DEVELOPER CERTIFICATION:

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

Signature of Developer — Date 6/12/2001

Print Name DANA A BRIGHAM

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-8000

DESIGNED BY: P.R.C.
DRAWN BY: K.E., K.P.S.
CHECKED BY: P.R.C.
REVISIONS

Water Quality Plan and Details

COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND

1517
SHT. 7 OF 10

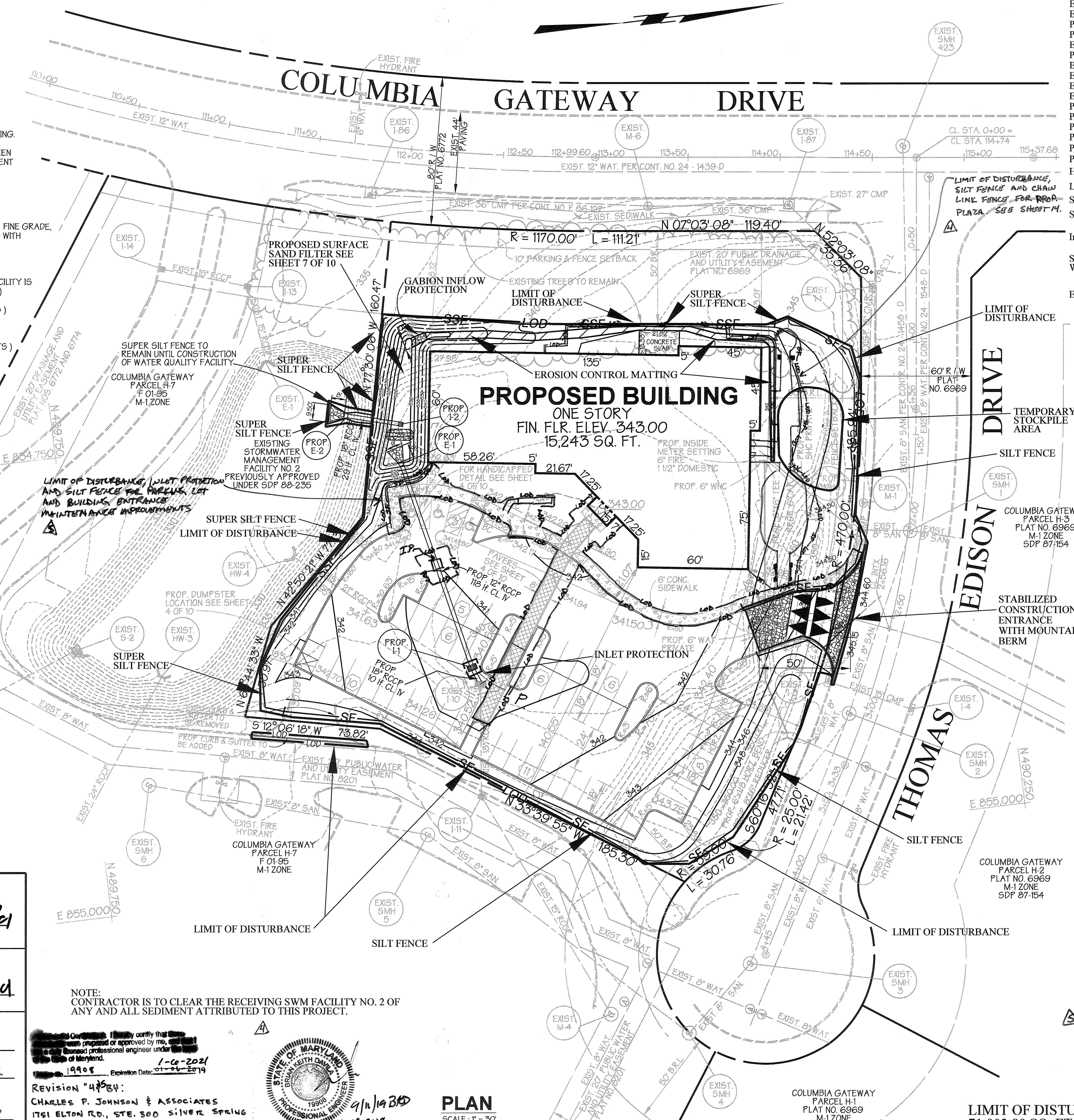
SCALE : As Shown
DATE : MARCH 08, 2001

SDP 01-150

File Name : 9663waterquality.s01

Sequence of Operation

1. OBTAIN GRADING PERMIT. (1 DAY)
2. NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS AND LICENSES 48 HOURS BEFORE BEGINNING WORK. (1 DAY)
3. WITH PERMISSION FROM SEDIMENT CONTROL INSPECTION, INSTALL STABILIZED CONSTRUCTION ENTRANCE. (2 DAYS)
4. WITH PERMISSION FROM SEDIMENT CONTROL INSPECTOR CLEAR AND GRUB AND INSTALL SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES. (4 DAYS)
5. WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB THE REMAINDER OF THE SITE. (10 DAYS)
6. BEGIN GRADING SITE ONLY, BEGIN FOOTINGS FOR THE PROPOSED BUILDING. CONTINUE BUILDING CONSTRUCTION. (15 DAYS). WATER QUALITY FACILITY TO BE CONSTRUCTED ONLY AFTER SITE HAS BEEN PERMANENTLY STABILIZED AND PERMISSION IS GRANTED BY THE SEDIMENT CONTROL INSPECTOR.
7. BEGIN INSTALLATION OF UTILITIES INCLUDING STORMDRAINS AND PROVIDE INLET PROTECTION AT I-1 . (7 DAYS)
8. PLACE STONE SUBBASE IMMEDIATELY AFTER AREA HAS BEEN GRADED, UTILITIES HAVE BEEN INSTALLED AND CONTINUE BUILDING CONSTRUCTION. FINE GRADE, INSTALL STONE SUBBASE, AND CONCRETE CURB AND GUTTER. PROCEED WITH LANDSCAPING AND STABILIZATION OPERATION. (10 DAYS)
9. PROCEED WITH PAVING OPERATIONS. (10 DAYS)
10. ONCE PAVING OPERATIONS ARE COMPLETED AND THE WATER QUALITY FACILITY IS COMPLETE, REMOVE INLET PROTECTION AT PROPOSED INLET I-1. (2 DAYS)
11. PROCEED WITH CONSTRUCTION OF THE WATER QUALITY FACILITY. (10 DAYS)
12. COMPLETE REMAINING LANDSCAPING AND PERMANENT STABILIZATION. WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES. (10 DAYS)



NOTE:
CONTRACTOR IS TO CLEAR THE RECEIVING SWM FACILITY NO. 2 OF ANY AND ALL SEDIMENT ATTRIBUTED TO THIS PROJECT.

PLAN
SCALE : 1" = 30'

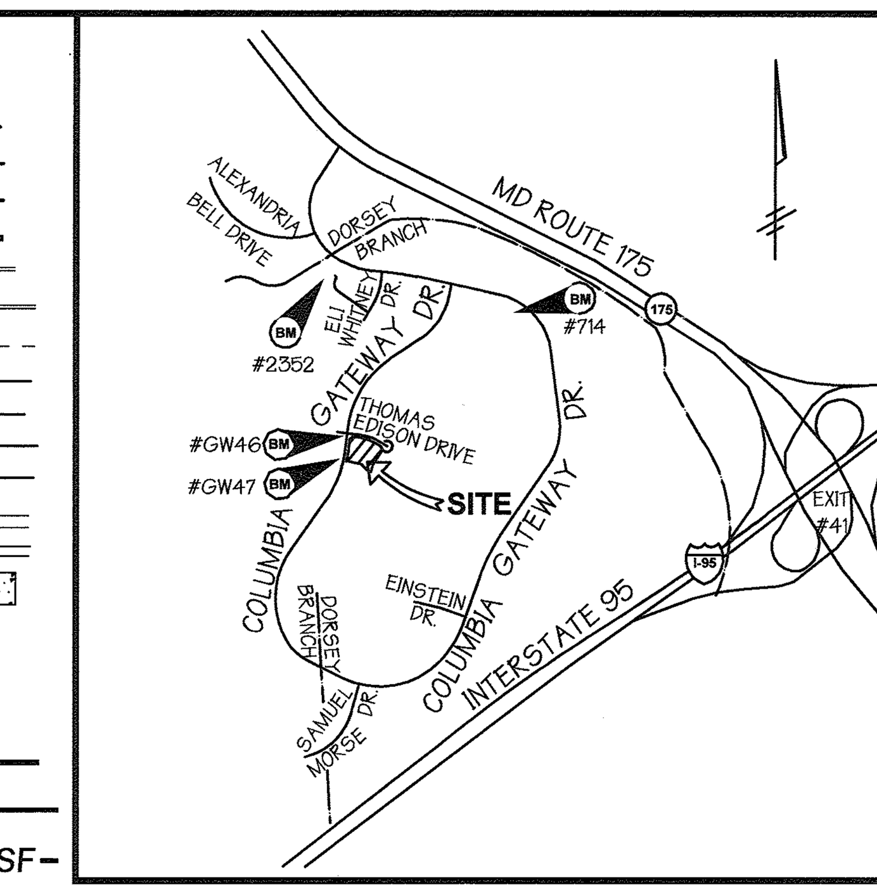
[redacted] I hereby certify that [redacted] were prepared or approved by me, [redacted] duly licensed professional engineer under [redacted] of Maryland.
License No. 19908, Expiration Date: ~~01-06-2019~~ 1-6-2021

Revision "4 & 5" BY:
CHARLES P. JOHNSON & ASSOCIATES
1751 ELTON RD., STE. 300 SILVER SPRING
MARYLAND 20903 301-434-7000

9/11/19 BKD
10-19-2018

Legend

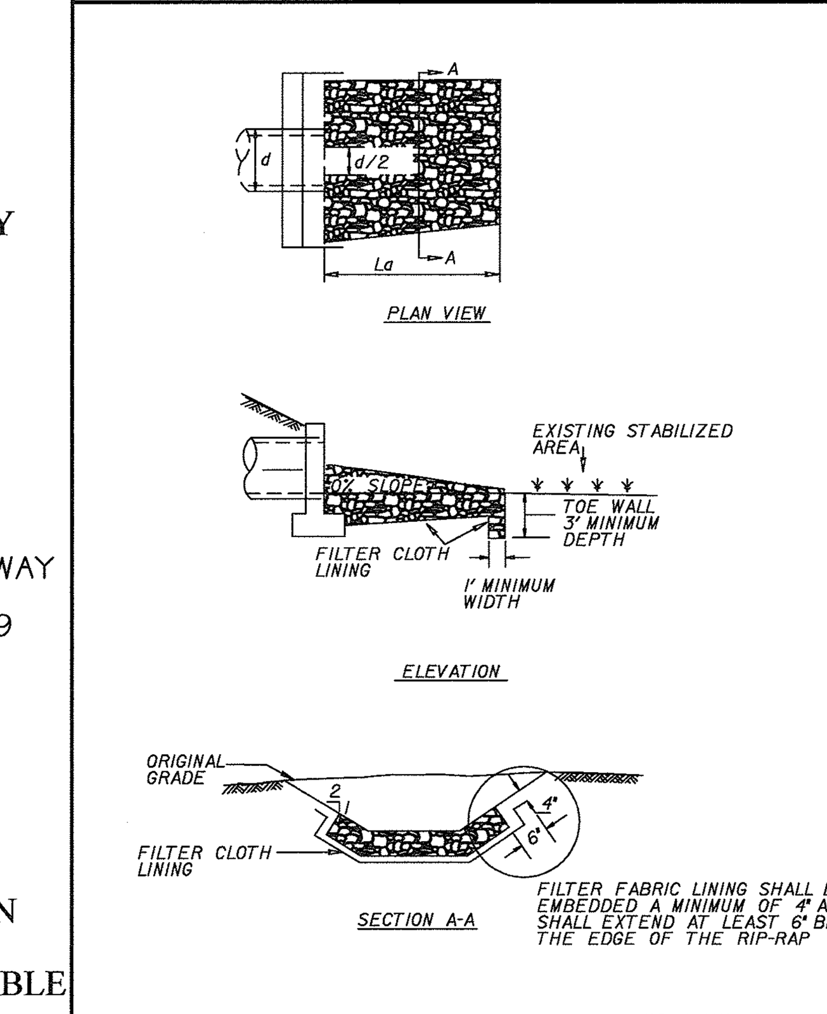
- Ex. 2' Contours
- Ex. 10' Contours
- Prop. 2' Contours — 222
- Prop. 10' Contours — 220
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Bldg. Restriction Line
- Ex. Sanitary
- Ex. Storm Drain
- Ex. Water
- Prop. Sanitary
- Prop. Storm Drain
- Prop. Water
- Prop. Sidewalk
- P-2 Paving — P-2 PAVING
- Proposed Parking Count — 16
- Handicapped Parking Space
- Limit of Disturbance — LOD
- Silt Fence — SF
- Super Silt Fence — SSF
- Inlet Protection — IP
- Stabilized Construction Entrance With Mountable Berm — S.C.E.
- Erosion Control Matting



Location Map

SCALE 1" = 2,000'

DETAIL 27 - ROCK OUTLET PROTECTION III	ROCK OUTLET PROTECTION III

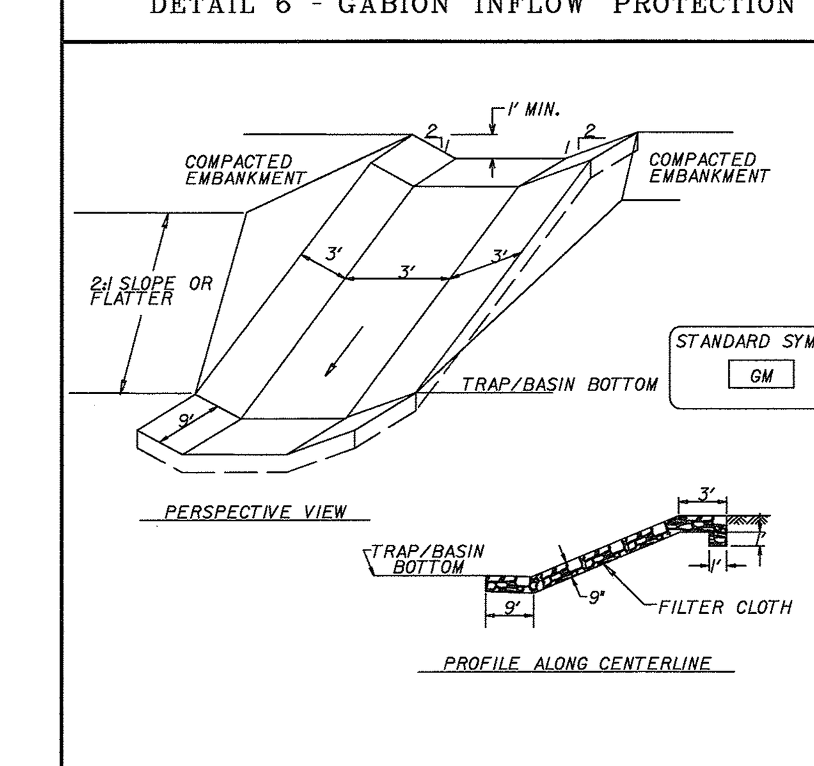


Construction Specifications

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

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 18 - 10	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 18 - 10A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 6 - GABION INFLOW PROTECTION



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

5 REVISION
MAINTENANCE OF SIDEWALKS AND PAVING. ADDED LANDSCAPING AND INLET TO RELIEVE PUDDLE. ADDED SHEETS 16 & 17 BY CPJA DATED 9/11/19

LIMIT OF DISTURBANCE / SUBMITTAL:
71,002.80 SQ. FT. OR 1.63 ACRES

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME			SECTION NAME		PARCEL #
Columbia Gateway			N/A		H-8
PLAT # 14689	BLOCK # 1	ZONE M-1	TAX/ZONE MAP 43	ELECT. DIST. 6	CENSUS TRACT 6065.02
WATER CODE E-06			SEWER CODE 3390000		

Reviewed for Howard SCD and meets Technical Requirements

USDA NATURAL RESOURCES CONSERVATION SERVICE — DATE 12/26/01

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

HOWARD SOIL CONSERVATION DISTRICT — DATE 12/26/01

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 12/28/01

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/8/02

DIRECTOR — DATE 1/8/02

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

12/12/01

ENGINEER CERTIFICATION:

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

Signature of Engineer ________ Date 12/12/01
Print Name JAMES A. MARKLE JR. PE # 11005

DEVELOPER CERTIFICATION:

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

Signature of Developer ________ Date 6/12/2001
Print Name DANA A BRIGHAM

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.

4 REVISIONS
ADDED PLAZA. PRIVATE STORM DRAIN AND LANDSCAPING. ADDED SHEETS 11-15. BY CPJ DATED 10/18/18

Erosion and Sediment Control Plan
(REVISED SHEET)
COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND
SHT. 8 OF ~~10~~ ~~15~~ 17
SCALE : As Shown
DATE : MARCH 08, 2001

SDP 01-150

File Name : 9663sedcontrolplan.s01

Stabilization Specifications

Section I - Vegetative Stabilization Methods and Materials

A. Site Preparation

i. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.

ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.

iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

i. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 areas. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples may be taken for engineering purposes may also be used for chemical analysis.

ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.

iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98 - 100% will pass through a #20 mesh sieve.

iv. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.

v. Soil Amendments : Use only one of the following schedules

i. Preferred - Apply 2 tons per acre dolomtic limestone (92 lbs. / 100 s.f.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. / 100 s.f.). Before seeding, harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 auriform fertilizer (9.1 lbs / 100 s.f.).

ii. Acceptable - Apply 2 tons per acre dolomtic limestone (92lbs. / 1000 s.f.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. / 1000 s.f.) before seeding, harrow or disc upper three inches of soil.

C. Seedbed Preparation

i. Temporary Seeding

a. Seedbed preparation shall consist of loosening soil to a depth of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should not be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.

ii. Permanent Seeding

a. Minimum soil conditions required for permanent vegetative establishment:

1. Soil pH shall be between 6.0 and 7.0.
2. Soluble salts shall be less than 500 parts per million (ppm).
3. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
4. Soil shall contain 1.5% minimum organic matter by weight.
5. Soil must contain sufficient pore space to permit adequate root penetration.
6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.

b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 - 5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.

c. Apply soil amendments as per soil test or as included on the plans.

d. Mix soil amendments into the top 3 - 5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. Seed Specifications

i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material in this job.

ii. Inoculant - The inoculant for treating legume seed in the seed mixture shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. NOTE: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 - 80 degrees F. can weaken bacteria and make inoculant less effective.

NOTE: SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.

E. Methods of Seeding

i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cultipacker seeder.

a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total soluble nitrogen; P205 (phosphorus): 200 lbs./ac.; K20 (potassium): 200 lbs./ac.

b. Lime - use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.

c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mulch Specifications (In order of preference)

i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.

ii. Wood Cellulose Fiber Mulch (WCFM)

a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

c. WCFM, including dye, shall contain no germination or growth inhibiting factors.

d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

e. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.

f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

NOTE: ONLY STERILE STRAW MULCH SHOULD BE USED IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

i. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.

ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods(listed by preference), depending upon size of area and erosion hazard:

i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.

ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and on the crests of banks. The remainder of area should appear uniform after binder application. Synthetic binders - such as Acrylic DLR (Argo-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.

iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3000 feet long.

Section II - Temporary Seeding

Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

A. Seed Mixtures - Permanent Seeding

i. select one or more off the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from figure 5) and enter them in Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans, Additional planting specifications for exceptional sites such as shorelines, streambanks, dunes or for special purposes such as wildlife or asthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintainance areas, see Sections IV Sod and V Turfgrass.

ii. For sites having disturbed areas over 5 acres, the rates shownon this table shall be deleted and the rates recommended by the testing agency shall be written in.

iii. For areas recieving low maintenance, apply ureaform fertilizer (46-0-0) at 3-1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil ammendments shown in the table below, to be performed at the time of seeding

Section III - Permanent Seeding

Seeding grass and legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

A. Seed Mixtures - Permanent Seeding

i. select one or more off the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from figure 5) and enter them in Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans, Additional planting specifications for exceptional sites such as shorelines, streambanks, dunes or for special purposes such as wildlife or asthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintainance areas, see Sections IV Sod and V Turfgrass.

ii. For sites having disturbed areas over 5 acres, the rates shownon this table shall be deleted and the rates recommended by the testing agency shall be written in.

iii. For areas recieving low maintenance, apply ureaform fertilizer (46-0-0) at 3-1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil ammendments shown in the table below, to be performed at the time of seeding

Section IV - Sod: To provide quick cover on disturbed areas (2:1 grade or steeper).

A. General specifications

i. Class of turfgrass sod shall be Maryland or Virginia State Certified or Approval. Sod labels shall be made available to the job foreman and inspector.

ii. Sod shall be machine cut at a uniform soil thickness of 3/4", plus or minus 1/4", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.

iii. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.

iv. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.

v. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.

vi. Site Preparation : Fertilizer and Lime application rates will be determined by soil test. Under unusual circumstances where there is insufficent time for a complete soil test, fertilizer and lime may be applied in amounts shown under vi-b, below.

a. Prior to sodding, the surface will be cleared of all trash, debris, and of all roots,brush, wire, grade stakes and other objects that would interfere with planting, fertilizing, or maintenance operations.

b. Where soil is acid or composted of heavy clays, ground limestone will be spread at the rate of 2 tons per acre(100 lbs. / 1000 s.f.). In all soils 1000 lbs. per acre (25 lbs. / 1000 s.f.) of 10-10-10 fertilizer or equivalent will be uniformly applied and mixed into the top thre inches of soil with the required time.

c. All areas recieving sod will be uniformly fine graded. Hard packed earth will be scarified prior to placement of sod.

B. Sod Installation

i. During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.

ii. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause drying of the roots.

iii. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.

iv. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.

C. Sod Maintenance

i. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4". Watering should be done during the heat of the day to prevent wilting.

ii. After the first week, sod watering is required as necessary to maintain adequate moisture content.

iii. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2" and 3" unless otherwise specified.

Section IV - Turfgrass Establishment

Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. Areas to receive seed shall be tilled by disking or other approved methods to a depth of 2 to 4 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 1 1/2 inches in diameter shall be removed. The resulting seedbed shall be in such condition that future mowing of grasses will pose no difficulty.

NOTE: Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

A. Turfgrass Mixtures

i. Kentucky Bluegrass - Fall sun mixture - For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and eastern shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds/1000 square feet. A minimum of three bluegrass cultivars should be chosen ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye - Full sun mixture - For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/ Certified Kentucky Bluegrass Seeding rate: 2 pounds mixture/1000 square feet. A minimum of 3 Kentucky Bluegrass Cultivars must be chosen, with each cultivar ranging from 10% to 35% of the mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; certified Tall Fescue Cultivars 95 - 100%, certified Kentucky Bluegrass Cultivars 0 - 5%. Seeding rate 5 to 8 lb./1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue - Shade Mixture - For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; certified Kentucky Bluegrass Cultivars 30 - 40% and certified Fine Fescue and 60 - 70%. Seeding rate: 1 1/2 - 3 lbs./1000 square feet. A minimum of 3 Kentucky bluegrass cultivars must be chosen, with each cultivar ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

NOTE: Turfgrass varieties should be selected from those listed in the most current University of Maryland Publication, Agronomy Mimeo #77, "Turfgrass Cultivar Recommendations for Maryland".

B. Ideal times of seeding

Western MD: March 15-June 1, August 1-October 1 (Hardiness Zones - 5b, 6a)

Central MD: March 1-May 15, August 15-October 15 (Hardiness Zones - 6b)

Southern MD, Eastern Shore: March 1-May 15, August 15-October 15 (Hardiness Zones - 7a, 7b)

C. Irrigation

If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2" - 1" every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

D. Repairs and Maintenance

Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season.

i. Once the vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.

ii. If the stand provides less than 40% ground coverage, reestablish following original lime, fertilizer, seedbed preparation and seeding recommendations.

iii. If the stand provides between 40% and 94% ground coverage, overseeding and fertilizing using half of the rates originally applied may be necessary.

iv. Maintenance fertilizer rates for permanent seedings are shown in Table 24. For lawns and other medium to high maintenance turfgrass areas, refer to the University of Maryland publication "Lawn Care in Maryland" Bulletin No. 171.

NOTES:
A. USED BY SHA ON SLOPED AREAS. ADD A LEGUME FOR SLOPES > THAN 3:1.
B. USED IN MEDIAN AREAS BY SHA. SHADE TOLERANT.
C. POPULAR MIX - PRODUCES PERMANENT GROUNDCOVER QUICKLY. BLUEGRASS THICKENS STAND.
D. BEST USE ON SHADY SLOPES NOT ON POORLY DRAINED CLAYS.
E. USE ON LOW MAINTENANCE, STEEP SLOPES. USE TALL FESCUE IN DRAUGHTY CONDITIONS. CROWN VETCH BEST FOR 5b, 6a, 6b
F. SUITABLE FOR SEEDING IN MID-SUMMER.
G. WEEPING LOVEGRASS MAY BE SEEDED WITH TALL FESCUE IN MID-SUMMER. SERECIA LESPEDEZA IS BEST SUITED FOR ZONES 7a AND 7b.
H. USE ON POORLY DRAINED SOILS - DITCHES OR WATERWAYS. BIRDSFOOT TREEFOILS BEST FOR ZONES 5b, 6a, ABOVE 2,000 FEET.
I. USE IN AREAS OF MOIST SHADE. POA TRIVIALIS THRIVES IN WET SHADY AREAS.
J. TALL FESCUE MAY BE SEEDED ALONE. THE HARD FESCUE PROVIDES BETTER SHADE TOLERANCE AND PRODUCES A BETTER STAND.
K. LOW FERTILITY GRASS. REQUIRES INFREQUENT MOWING. GOOD COMPANION FOR WILDFLOWERS.

PERMANENT SEEDING RATES

FERTILIZER RATE (10-20-20) N	P205	K20	LIME RATE
90LB/AC (2.0 LB/1000 S.F.)	175 LB/AC (4.0 LB/1000 S.F.)	175 LB/AC (4.0 LB/1000 S.F.)	2 TONS/AC (100 LB/1000 S.F.)

NOTE:
FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES THE RATES SHOWN ABOVE FOR PERMANENT SEEDING SHALL BE DELETED AND THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY SHALL BE USED. SOIL TESTING SHALL BE PERFORMED AT THE TIME OF FINE GRADING AND THE RESULTS SHALL BE FURNISHED TO THE SEDIMENT CONTROL INSPECTOR.

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE 12/26/01

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

HOWARD SOIL CONSERVATION DISTRICT — DATE 12/26/01

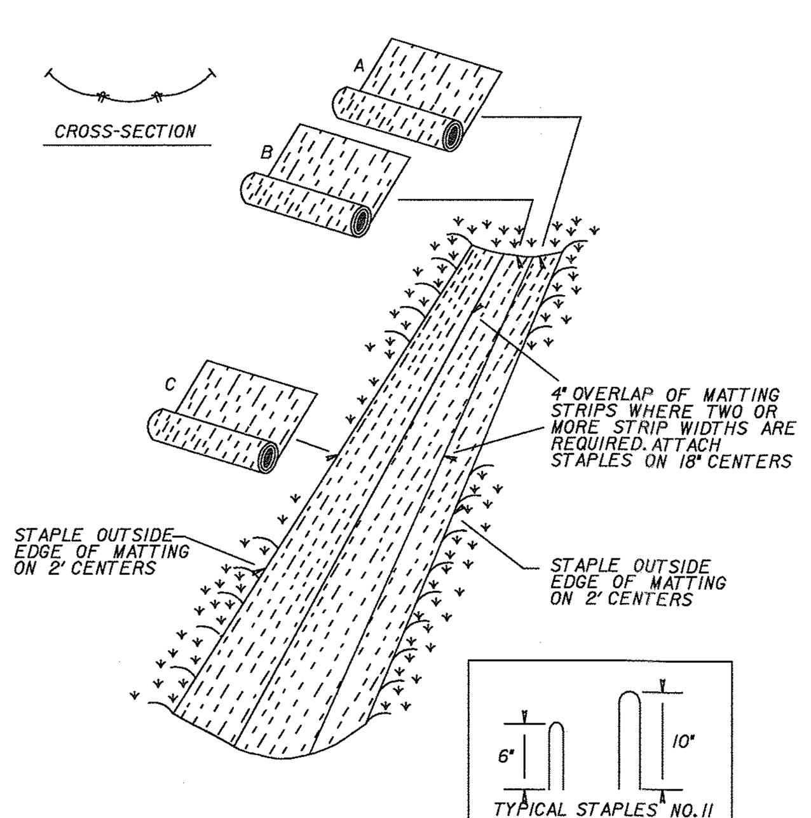
APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 12/28/01

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/8/02

DIRECTOR — DATE 1/8/02

DETAIL 30 - EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE G-22-2 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 - EROSION CONTROL MATTING

Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".

2. Staple the 4" overlap in the channel center using an 18" spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.

5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

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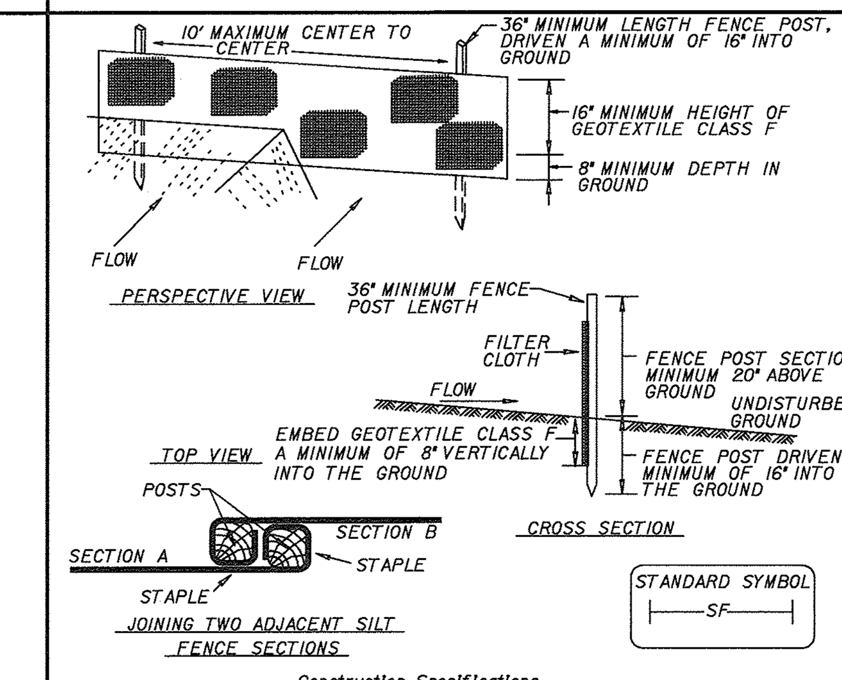
DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1½" x 1½" square (minimum) cut, or 1¾" 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.

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SILT FENCE

Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

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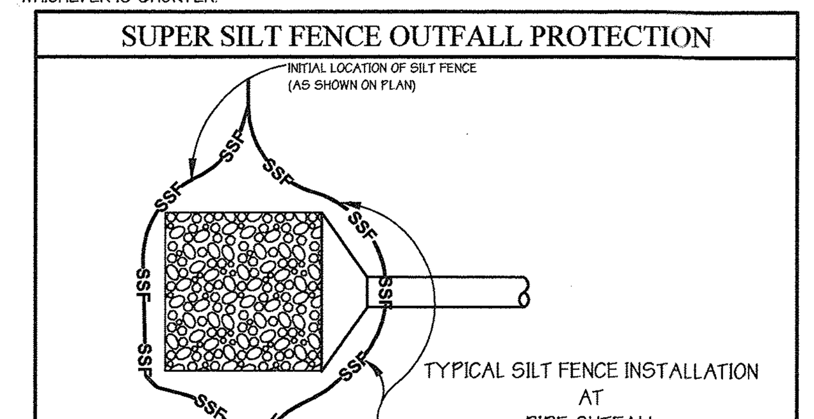
Sediment Control Notes

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (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 RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1,
B) 14 DAYS FOR 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 SEEDING, SOD, TEMPORARY SEEDING AND MULCHING (SEC G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL 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 1.9358 ACRES
AREA DISTURBED 1.63 ACRES
AREA TO BE ROOFED OR PAVED 0.94 ACRES
AREA TO BE VEGETATIVELY STABILIZED 0.9958 ACRES
TOTAL CUT 2,412 C.Y.
TOTAL FILL 1,053 C.Y. (INCLUDES 15% COMPACTION)
OFFSITE WASTE/BORROW AREA LOCATION : EXCESS CUT SHALL BE TAKEN TO A SITE WITH AN OPEN GRADING PERMIT.
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY 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 THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

SUPER SILT FENCE OUTFALL PROTECTION



24.0 MATERIALS SPECIFICATIONS

Table 27 Geotextile Fabrics

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

* US Std. Sieve CW-02215 ** 0.50 MM. MAX. FOR SUPER SILT FENCE

The properties shall be determined in accordance with the following procedures:

- Apparent opening size MSMT 323
- Grab tensile strength ASTM D 1682: 4 x 8" specimen, 1x2" clamps, 12" /min. strain rate in both principal directions of geotextile fabric.
- Burst strength ASTM D 3786

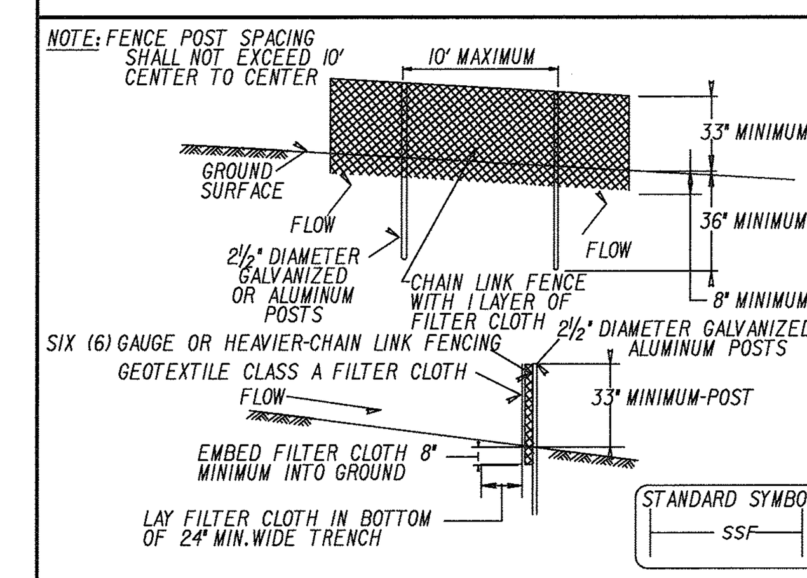
The fabric shall be inert to commonly encountered chemicals and hydrocarbons, and will be rot and mildew resistant. It shall be manufactured from fibers consisting of long chain synthetic polymers, and composed of a minimum of 85% by weight of polyolephins, polyesters, or polymides. The geotextile fabric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

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

Silt Fence
Class F geotextile fabrics for silt fence have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modules when tested in accordance with MSMT 509. The material shall also have a 0.3 gal./ft. /min. flow rate and seventy-five percent (75%) minimum filtering efficiency when tested in accordance with MSMT 322.

Geotextile fabrics used in the construction of silt fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amounts of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a temperature range of 0 to 120 degrees F.

DETAIL 33 - SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" high and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The SHA specifications for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot length posts.

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

3. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fence shall be six (6) gauge or heavier.

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

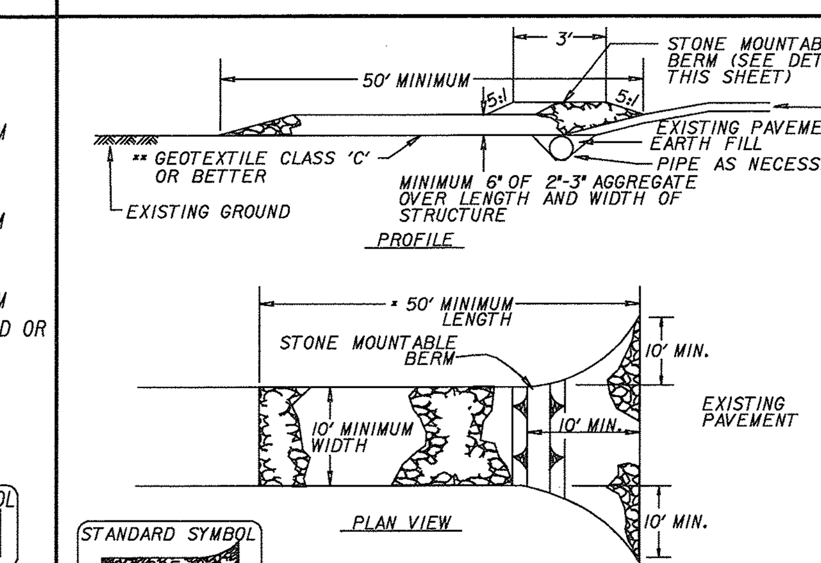
5. Filter cloth shall be embedded a minimum of 8" into the ground.

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

7. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of the fence height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | MODIFIED

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.

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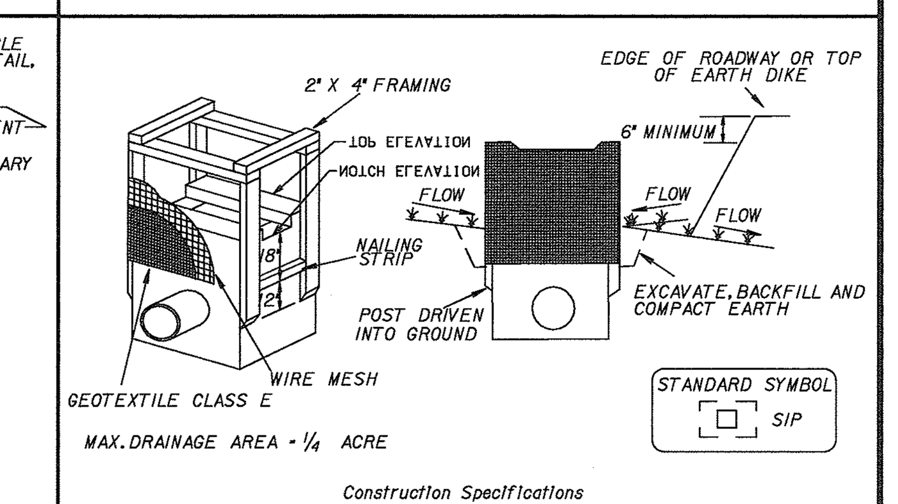
DETAIL 23A - STANDARD INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.

2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.

3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.

4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.

5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.

6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.

7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

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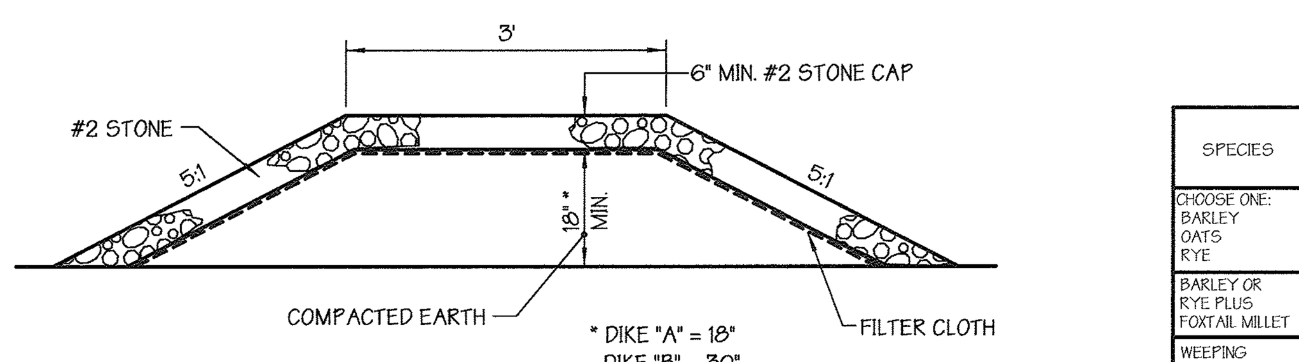


Stone Mountable Berm

SCALE: NTS.

Table 26 - Temporary Seeding Rates, Depths, and Dates

SPECIES	MINIMUM SEEDING RATES PER ACRE	LBS./1000 SQ. FT.	PLANTING DEPTH INCHES	7a and 7b 2/1 - 4/30	7a and 7b 5/1 - 8/14	7a and 7b 8/15 - 11/30	6b 3/1 - 4/30	6b 5/1 - 8/14	6b 8/15 - 11/15	6a and 5b 3/15 - 5/31	6a and 5b 6/1 - 7/31	6a and 5b 8/1 - 10/31
CHOOSE ONE: BARLEY	2.5 B.U. (122 lbs.)	2.80	1 - 2	X	-	BY 10/15	X	-	BY 10/15	X	-	BY 10/1
OATS	3 B.U. (96 lbs.)	2.21	1 - 2	X	-	-	X	-	-	X	-	-
RYE	2.5 B.U. (140 lbs.)	3.22	1 - 2	X	-	X	(X)	-	X	X	-	X
BARLEY OR RYE PLUS FOXTAIL MILLET	150 lbs.	3.45	1	X X	X X	10/15 X	X X	X X	10/15 X	X X	X X	10/1 X
WEEPING LOVEGRASS	4 lbs.	.09	1/4 - 1/2	-	X	-	-	X	-	-	X	-
ANNUAL RYEGRASS	50 lbs.	1.15	1/4 - 1/2	X	-	11/1	X	-	11/1	X	-	8/15
MILLET	50 lbs.	1.15	1/2	-	X	-	-	X	-	-	X	-

Table 25 - Permanent Seeding for Low Maintenance Areas

HARDINESS ZONE

MIX	SEED MIX (USE CERTIFIED MATERIAL IF AVAILABLE)	PLANTING RATE LBS./AC.	LBS./1000 SQ. FT.	SITE CONDITIONS	USDA HARDINESS ZONES	3/1 - 5/15	3/15 - 6/1	5/16 - 8/14	6/2 - 7/31	8/1 - 10/1	8/15 - 10/15	8/15 - 11/15	NOTES
1	TALL FESCUE (75%) CANADA BLUEGRASS (10%) KENTUCKY BLUEGRASS (10%) REDTOP (5%)	150	3.4	MOIST TO DRY	5b		X			X			A
					6a		X			X			
					6b	X					X		
					7a	X						X	
					7b	X						X	
2	KENTUCK BLUEGRASS (50%) CREEPING RED FESCUE OR A HARD FESCUE (40%) REDTOP (10%)	150	3.4	MOIST TO MODERATELY DRY TO DRY	5b		X			X			B
					6a		X			X			
					6b	X					X		
3	TALL FESCUE (85%) PERENNIAL RYEGRASS (10%) KENTUCKY BLUEGRASS (5%)	125 15 10	2.9 .34 .23	MOIST TO DRY	5B		X			X			C
					6A		X			X			
					6B	X					X		
					7A	X						X	
					7B	X						X	
4	RED FESCUE OR CHEWINGS FESCUE (80%) PERENNIAL RYEGRASS (20%)	60 60 15	.92 .92 .34	MOIST TO DRY	5b		X			X			D
					6a		X			X			
					6b	X					X		
(5)	TALL FESCUE (85%) OR PERENNIAL RYEGRASS (50%) PLUS CROWNVETCH OR FLATPEA	110 20 20 20	2.5 .46 .46 .46	MOIST TO DRY	5b		X			X			E
					6a		X			X			
					(6b)	X					X		
					7a	X						X	
					7b	X						X	
6	WEEPING LOVEGRASS (17%) SERECIA LESPEDEZA (83%)	4 20	.09 .46	DRY TO VERY DRY	6a	X		X					F
					7a	X		X					
					7b	X		X					
7	TALL FESCUE (83%) WEEPING LOVEGRASS (2%) PLUS SERECIA LESPEDEZA (15%)	110 3 20	2.5 .07 .46	DRY TO VERY DRY	5b		X		X	X			G
					6a		X		X	X			
					6b	X		X			X		
					7a	X		X				X	
					7b	X		X				X	
8	REED CANARYGRASS (75%) REDTOP (6%) PLUS BIRDSFOOT TREEFOIL (19%)	40 3 10	.92 .07 .23	WET TO MODERATELY DRY	5b		X			X			H
					6a		X			X			
					6b	X					X		
					7a	X						X	
					7b	X						X	
9	TALL FESCUE (86%) POA TRIVIALIS (7%) BIRDSFOOT TREEFOIL (7%)	125 10 10	2.9 .23 .23	WET TO MODERATELY DRY	5b		X			X			I
					6a		X			X			
					6b	X					X		
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3.4 .69	WET TO DRY	5b		X			X			J
					6a		X			X			
					6b	X					X		
					7a	X						X	
					7b	X						X	
11	HARD FESCUE (100%)	75	1.7	MOIST TO DRY	5b		X			X			K
					6a		X			X			
					6b	X					X		
					7a	X						X	

Fertilizer Rates

Temporary Seeding

Fertilizer Rate (10-10-10)	Lime Rate
600 lb/ac (15lb/1000 s.f.)	2 Tons/ac (100lb/1000 s.f.)

Permanent Seeding

Fertilizer Rate (10-20-20) N	P205	K20	Lime Rate
90 lb/ac (2.0lb/ 1000 s.f.)	175 lb/ac (4.0lb/ 1000 s.f.)	175 lb/ac (4.0lb/ 1000 s.f.)	2 tons/ac (100 lb/ 1000 s.f.)

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06 SEWER CODE 3390000

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

12/12/01

ENGINEER CERTIFICATION:

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

Signature of Engineer ____ Date 12/12/01

Print Name JAMES A. MARKLE JR. PE # 11005

DEVELOPER CERTIFICATION:

"I / We certify that all development and/or construction will be done according to this plan for sediment and erosion control, and that all responsible personel involved in the construction project will have a certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspections by the Howard soil Conservation District."

Signature of Developer ____ Date 6/12/2001

Print Name DANA A BRIGHAM

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS

Erosion & Sediment Control Notes & Details

COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND SHT. 9 OF ~~16~~ 17 SCALE : As Shown DATE : MARCH 08, 2001

File Name : 9663sedimentcontrolnotesdetails.s01

SDP 01-150

Legend

Ex. 2' Contours
Ex. 10' Contours
Prop. 2' Contours 222
Prop. 10' Contours 220
Ex. Curb & Gutter
Prop. Curb & Gutter
Bldg. Restriction Line
Ex. Sanitary
Ex. Storm Drain
Ex. Water
Prop. Sanitary
Prop. Storm Drain
Prop. Water
Prop. Sidewalk

Plant Legend

EXISTING TREE
PROPOSED MAJOR DECIDUOUS TREE
PROPOSED MINOR DECIDUOUS TREE
PROPOSED EVERGREEN TREE
PROPOSED SHRUBS
PROPOSED PERENNIALS
EXISTING TREE TO BE SAVED

TREES TO BE REMOVED SCHEDULE **		
KEY	COMMON NAME	SIZE
1	Winter King Hawthorn	6"
2	American Arb. Niana	12"H
3	Kousa Dogwood	3"
4	Kousa Dogwood	3"
5	Kousa Dogwood	2"
6	Kousa Dogwood	3"

** Note: These are the trees found on-site to be removed as part of construction. These trees may not appear as part of SDP-01-150 original landscape layout. See sheet 15.

[redacted] certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 19905, Expiration Date: 07-01-2019
1-16-2001

REVISION "4" BY:
CHARLES P. JOHNSON & ASSOCIATES
1751 ELTON RD., STE. 300 Silver Spring
MARYLAND 20903 301-434-7000

STATE OF MARYLAND — DAVID KEITH DAVIS — 19905 — PROFESSIONAL ENGINEER — 10-19-2018

NOTE:
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 GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

Reviewed for Howard SCD and meets Technical Requirements

Jim Magyar — 12/26/01
USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

Geoffrey W. Schoning — 12/26/01
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 12/20/01
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/8/02
DIRECTOR — DATE 1/8/02

PREPARED BY:
GWS
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and Land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — DAVID LLOYD MARTIN — 21706 — LANDSCAPE ARCHITECT

SCHEDULE A PERIMETER LANDSCAPE EDGE				
	ROADWAYS P1		PERIMETER PROPERTIES P2	
Landscape Type	B	E	A	C
Linear Feet of Perimeter 1	485	0	0	0
Linear Feet of Perimeter 2	0	155	0	0
Linear Feet of Perimeter 3	0	0	N/A	N/A
Linear Feet of Perimeter 4	0	0	N/A	N/A
Credit for existing Vegetation, (Yes, No Linear Feet)	YES 339	NO	NO	NO
Credit for Wall, Fence, or Berm (Yes, No, Linear Feet)	NO	NO	NO	NO
Number of Plants Required				
Shade Trees	3*	1**	0	0
Evergreen Trees	3	0	0	0
Shrubs	0	39	0	0
Number of Plants Provided				
Shade Trees	4	2	0	0
Evergreen Trees	0	0	0	0
Other Trees (2:1 sub)	3	7	0	0
Shrubs (10:1 sub)	0	30	0	0

NOTES:
* EXISTING FOREST VEGETATION CREDIT ACCOUNTS FOR 339 LINEAR FEET OF ROADWAY FRONTAGE THEREBY LEAVING 150 FEET AS REQUIRED LANDSCAPE PLANTING.
** 7 OTHER TREES SUBSTITUTED FOR 2 REQUIRED SHADE TREES AND 9 SHRUBS.

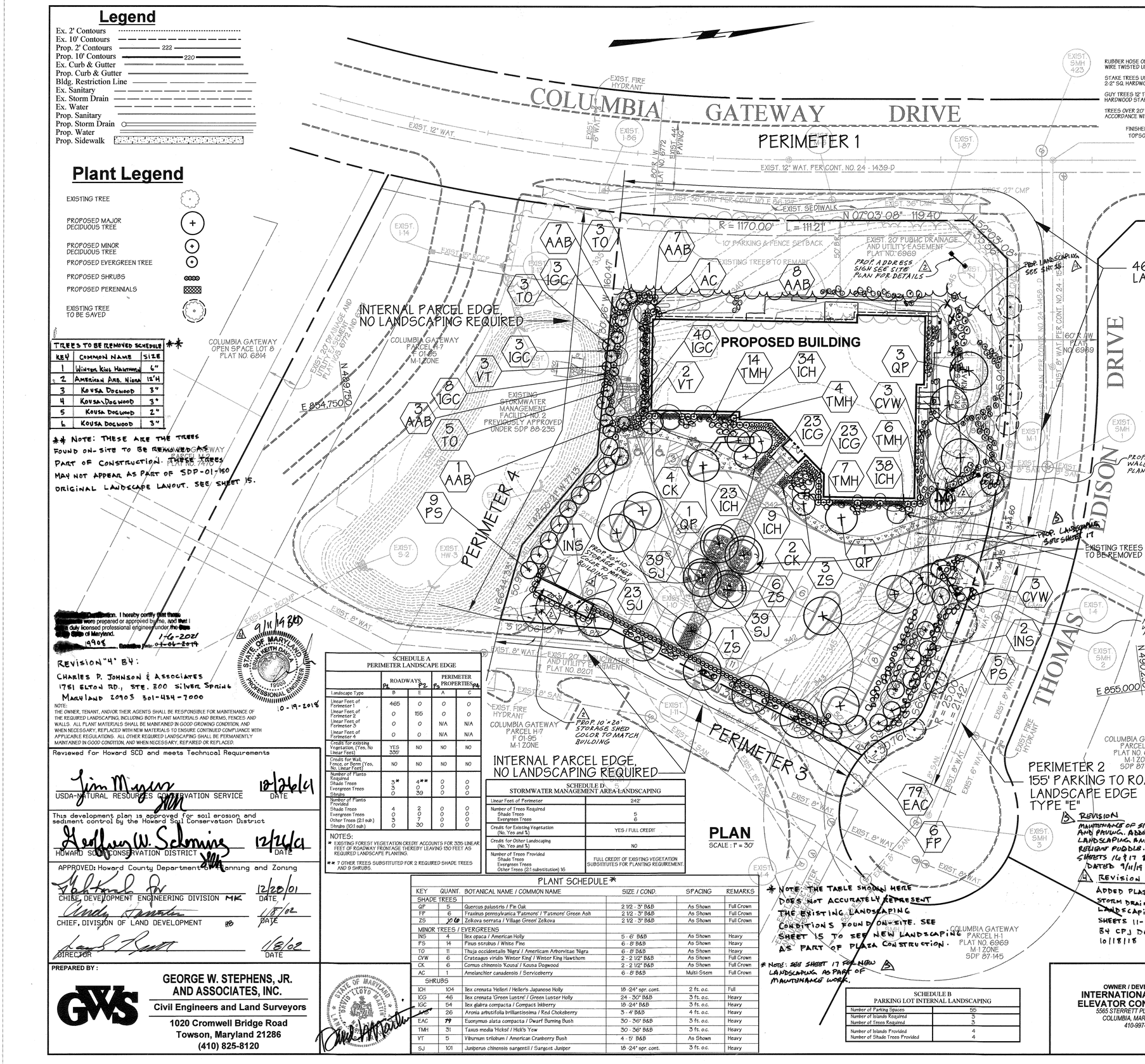
SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING	
Linear Feet of Perimeter	242'
Number of Trees Required: Shade Trees	5
Number of Trees Required: Evergreen Trees	6
Credit for Existing Vegetation (No, Yes and %)	YES / FULL CREDIT
Credit for Other Landscaping (No, Yes and %)	NO
Number of Trees Provided: Shade Trees	5
Number of Trees Provided: Evergreen Trees	6
Number of Trees Provided: Other Trees (2:1 substitution)	16
	FULL CREDIT OF EXISTING VEGETATION SUBSTITUTES FOR PLANTING REQUIREMENT.

PLANT SCHEDULE *					
KEY	QUANT.	BOTANICAL NAME / COMMON NAME	SIZE / COND.	SPACING	REMARKS
SHADE TREES					
QP	5	Quercus palustris / Pin Oak	2 1/2 - 3" B&B	As Shown	Full Crown
FP	6	Fraxinus pennsylvanica 'Patmore' / 'Patmore' Green Ash	2 1/2 - 3" B&B	As Shown	Full Crown
ZS	106	Zelkova serrata / Village Green Zelkova	2 1/2 - 3" B&B	As Shown	Full Crown
MINOR TREES / EVERGREENS					
INS	4	Ilex opaca / American Holly	5 - 6' B&B	As Shown	Heavy
PS	14	Pinus strobus / White Pine	6 - 8' B&B	As Shown	Heavy
TO	11	Thuja occidentalis 'Nigra' / Americam Arborvitae 'Nigra	6 - 8' B&B	As Shown	Heavy
CVW	6	Crataegus viridis 'Winter King' / Winter King Hawthorn	2 - 2 1/2" B&B	As Shown	Full Crown
CK	6	Cornus chinensis 'Kousa' / Kousa Dogwood	2 - 2 1/2" B&B	As Shown	Full Crown
AC	1	Amelanchier canadensis / Serviceberry	6 - 8' B&B	Multi-Stem	Full Crown
SHRUBS					
ICH	104	Ilex crenata 'Helleri / Heller's Japanese Holly	18 -24" spr. cont.	2 ft. o.c.	Full
ICG	46	Ilex crenata 'Green Lustre' / Green Luster Holly	24 - 30" B&B	3 ft. o.c.	Heavy
IGC	54	Ilex glabra compacta / Compact Inkberry	18 -24" B&B	3 ft. o.c.	Heavy
AAB	26	Aronia arbutifolia brillantissima / Red Chokeberry	3 - 4' B&B	4 ft. o.c.	Heavy
EAC	79	Euonymus alata compacta / Dwarf Burning Bush	30 - 36" B&B	3 ft. o.c.	Heavy
TMH	31	Taxus media 'Hicksi' / Hick's Yew	30 - 36" B&B	3 ft. o.c.	Heavy
VT	5	Viburnum trilobum / American Cranberry Bush	4 - 5' B&B	As Shown	Heavy
SJ	101	Juniperus chinensis sargentii / Sargent Juniper	18 -24" spr. cont.	3 ft. o.c.	Heavy

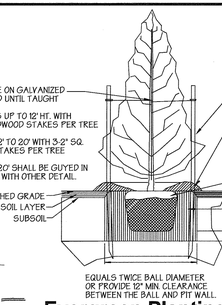
* NOTE: THE TABLE SHOWN HERE DOES NOT ACCURATELY REPRESENT THE EXISTING LANDSCAPING CONDITIONS FOUND ON-SITE. SEE SHEET 15 TO SEE NEW LANDSCAPING AS PART OF PLAZA CONSTRUCTION.

* NOTE: SEE SHEET 17 FOR NEW LANDSCAPING AS PART OF MAINTENANCE WORK.

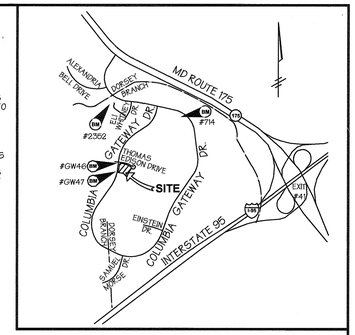
SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
Number of Parking Spaces	55
Number of Islands Required	3
Number of Trees Required	3
Number of Islands Provided	4
Number of Shade Trees Provided	4



PLAN
SCALE : 1" = 30'



Evergreen Planting Detail
NOT TO SCALE



Location Map
SCALE 1" = 2,000'

DEVELOPER'S / BUILDER'S CERTIFICATION

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 INSATALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Jane C. Brigham — 6/12/2001
NAME — DATE

DANA A BRIGHAM
PRINT NAME

465' NON-RESIDENTIAL TO ROAD LANDSCAPE EDGE TYPE "B"

STAKING DETAIL

PLANTING NOTES
PLANT LOCATIONS SHALL BE FIELD ADJUSTED TO AVOID UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO START OF WORK. ALL TREES AND SHRUBS SHALL BE MULCHED TO A MINIMUM OF 18" BEYOND THE EDGE OF THE ROOT BALL. SHRUBS MASSES SHALL BE PLANTED IN CONTINUOUS MULCH BEDS. ALL WIRE, PLASTIC AND TWINE TIES SHALL BE REMOVED FROM TOP OF THE ROOT BALL.

PLANT STANDARDS
ALL NURSERY STOCK SHALL BE TOP QUALITY AND IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. "AMERICAN STANDARDS FOR NURSERY STOCK", LATEST EDITION. INFERIOR NURSERY STOCK WILL BE SUBJECT TO REJECTION BY THE LANDSCAPE ARCHITECT. BARE-ROOT SHALL NOT BE ALLOWED FOR ANY TREE DEFINED AS MAJOR DECIDUOUS, MINOR DECIDUOUS OR EVERGREEN

CHANGES MAY IMPACT REQUIRED CERTIFICATION
PLANT TYPES (DECIDUOUS TREES, EVERGREEN, ETC.), QUANTITIES, SPACING, LOCATION, AND SPECIES SHOWN ON THE APPROVED LANDSCAPE PLAN ARE BASED ON REQUIREMENTS STATED IN THE LATEST HOWARD COUNTY LANDSCAPE MANUAL. ANY CHANGE IN THESE ITEMS MAY AFFECT THE REQUIRED APPROVAL AND CERTIFICATION OF THE INSTALLED PLANTING. OWNER IS REQUIRED TO ARRANGE AND PAY FOR CERTIFICATION BY LANDSCAPE ARCHITECT.

LANDSCAPE SPECIFICATIONS
LANDSCAPE SPECIFICATION SHALL CONFORM TO LCA LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREA, INCLUDING PLANTING PROCEDURES AND SOIL PREPARATION FOR SHRUBS AND PERENNIAL BEDS. A ONE-YEAR WARRANTY PERIOD SHALL BE REQUIRED. MAINTENANCE REQUIRED TO HONOR THE ONE YEAR WARRANTY SHALL BE PERFORMED AS PART OF THIS CONTRACT.

SPECIAL PROVISIONS TO LCA STANDARD SPECIFICATIONS
CONTRACTOR IS ENCOURAGED TO PERFORM SOIL TESTING. TEST RESULTS SHALL BE SUBMITTED 30 DAYS BEFORE PLANTING. FAILURE TO PERFORM TESTING WILL NOT VOID GUARANTEE PROVISIONS.

CONTRACTOR SHALL REVIEW AND TEST SUBSOIL DRAINAGE CHARACTERISTICS 30 DAYS PRIOR TO PLANTING AND NOTIFY OWNER UNACCEPTABLE CONDITIONS.

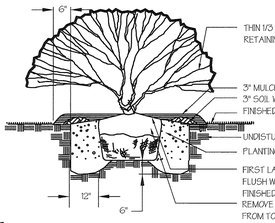
NO EXCEPTIONS TO THE GUARANTEE PROVISIONS ARE ALLOWED UNLESS AGREED TO IN WRITING PRIOR TO PLANTING.

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPE IN THE AMOUNT OF $4,620 IS PART OF THE DEVELOPER'S AGREEMENT.

PLANTS PROVIDED CALCULATIONS

SHADE TREES	10 @ 300.00	= 3,000
EVERGREEN TREES	3 @ 150.00	= 450
SHRUBS	39 @ 30.00	= 1,170
	TOTAL	= 4,620

Tree Planting Detail
NOT TO SCALE



Shrub Planting Detail
NOT TO SCALE

1 REVISION
MAINTENANCE OF SIDEWALKS AND PAVING. ADDED LANDSCAPING AND INLET TO RELIEVE PUDDLE. ADDED SHEETS 16 & 17 BY CPJ DATED 9/11/19

2 REVISION
ADDED PLAZA, PRIVATE STORM DRAIN, AND LANDSCAPING. ADDED SHEETS 11-15. BY CPJ DATED: 10/18/18

3 REVISION:
ADDED 10'x20' STORAGE SHED ADJACENT TO EX. STORAGE SHED BEHIND DUMPSTER. REVISED LANDSCAPING ACCORDING TO BY GWS DATED 11-07-08

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06 — SEWER CODE 3390000

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

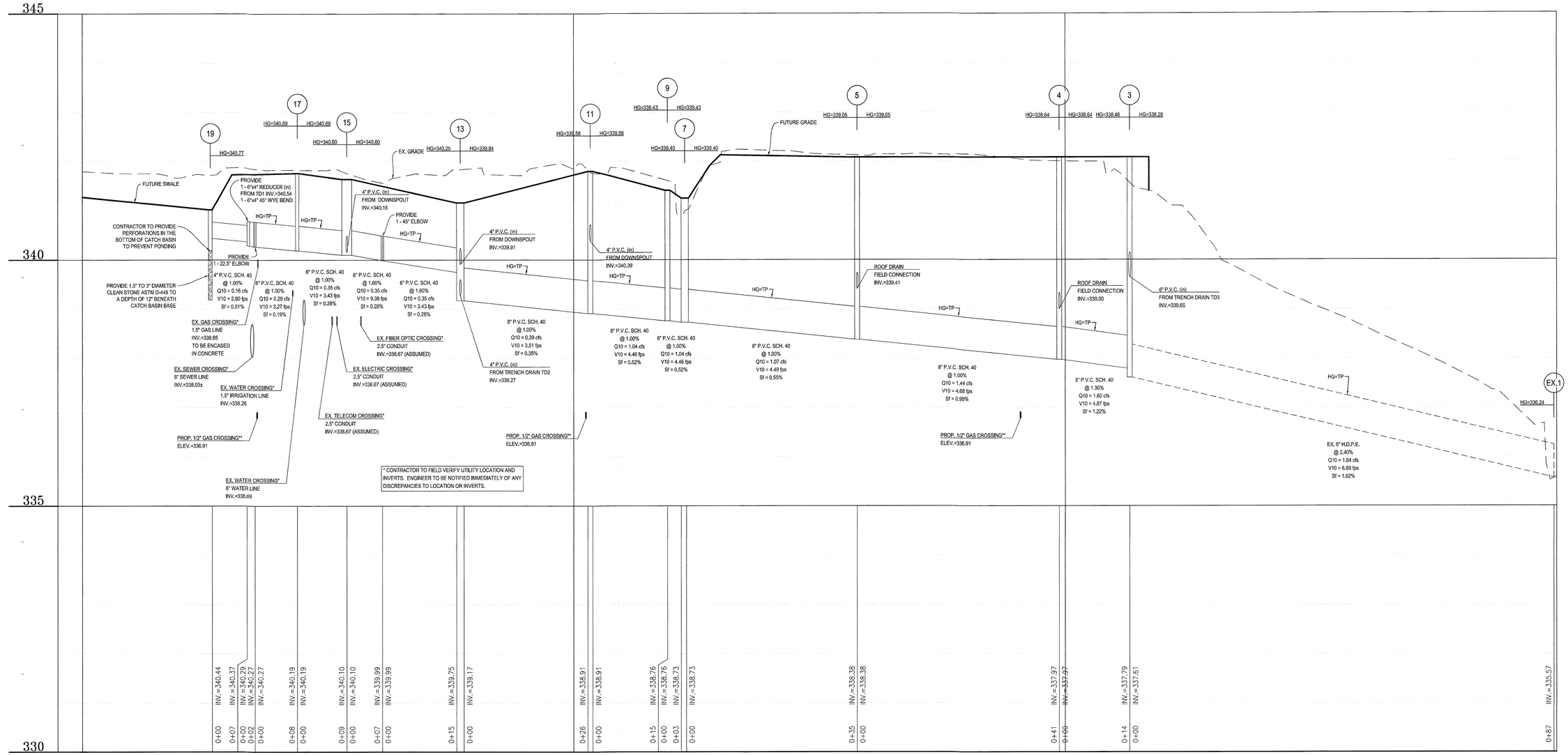
DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS
2 ADDED ENTRANCE SIGNS AND 10'x20' SHED BEHIND DUMPSTER, RELOCATED TREES AND SHRUBS AS NECESSARY BY GWS DATED 2/26/03 — WH LL

Landscape Plan
(REVISED SHEET)
COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND — SHT. 10 OF 17
SCALE : As Shown
DATE : MARCH 08, 2001

SDP 01-150

File Name : 9665landscape.s01



* CONTRACTOR TO FIELD VERIFY UTILITY LOCATION AND INVERTS. ENGINEER TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES TO LOCATION OR INVERTS.

PROFILE SCALE	
HORIZONTAL:	1"=10'
VERTICAL:	1"=1'

Profile View of STORM DRAIN

PRIVATE STRUCTURE SCHEDULE

No.	Type	Coordinates		Top Elevation		Base Diameter	Inv. Elev. Out	Notes
		Northing	Easting	Upper	Lower			
19	DRAIN BASIN	N 550881.01	E 1367224.23	GRATE=	341.02	9" x 9"	340.44	NDS 9" x 9" CATCH BASIN WITH 4" (1245 TOP) UNIVERSAL LOCKING OUTLET CONNECTION AND 9" SQUARE GRATE
17	DRAIN BASIN	N 550890.40	E 1367212.98	SLOT=	341.76	8"	340.19	NYLOPLAST (DRAIN BASIN); INCLUDE 8" DOME GRATE WITH LOCKING GRATE ASSEMBLY
15	DRAIN BASIN	N 550891.80	E 1367203.00	TOP=	341.64	24"	340.10	NYLOPLAST (DRAIN BASIN); INCLUDE 24" SOLID TOP WITH LOCKING GRATE ASSEMBLY
13	DRAIN BASIN	N 550889.63	E 1367181.51	SLOT=	341.16	18"	339.17	NYLOPLAST (DRAIN BASIN); INCLUDE 18" DOME GRATE WITH LOCKING GRATE ASSEMBLY
11	DRAIN BASIN	N 550893.33	E 1367155.07	TOP=	341.80	8"	338.91	NYLOPLAST (DRAIN BASIN); INCLUDE 8" SOLID TOP WITH LOCKING GRATE ASSEMBLY
9	DRAIN BASIN	N 550878.02	E 1367152.93	GRATE=	341.41	8"	338.76	NYLOPLAST (DRAIN BASIN); INCLUDE 8" SOLID TOP WITH LOCKING GRATE ASSEMBLY
7	DRAIN BASIN	N 550878.49	E 1367149.46	TOP=	341.25	8"	338.73	NYLOPLAST (DRAIN BASIN); INCLUDE 2' x 2' STEEL BAR GRATE WITH LOCKING GRATE ASSEMBLY
5	DRAIN BASIN	N 550843.60	E 1367145.58	TOP=	342.08	8"	338.38	NYLOPLAST (DRAIN BASIN); INCLUDE 8" SOLID TOP WITH LOCKING GRATE ASSEMBLY
4	DRAIN BASIN	N 550802.87	E 1367140.02	TOP=	342.08	8"	337.97	NYLOPLAST (DRAIN BASIN); INCLUDE 8" SOLID TOP WITH LOCKING GRATE ASSEMBLY
3	DRAIN BASIN	N 550788.91	E 1367138.12	TOP=	342.08	8"	337.61	NYLOPLAST (DRAIN BASIN); INCLUDE 8" SOLID TOP WITH LOCKING GRATE ASSEMBLY

Note: Coordinates to drain basins are to center of structure.

PRIVATE PIPE SUMMARY

SIZE (IN)	TYPE (CLASS)	LENGTH (FT)
4	SOLID PVC SCH. 40	35
6	SOLID PVC SCH. 40	46
8	SOLID PVC SCH. 40	221
	TOTAL	302

NOTE: STORM DRAIN PROFILE AS PART OF THIS DESIGN.

NOTE: THE LOD IS 4,999 SFT AND IS EXEMPT FROM PROVIDING STORMWATER MANAGEMENT. ANY ADDITIONAL DISTURBANCE THAT EXCEEDS A CUMULATIVE AREA OF 5,000 SFT SHALL COMPLY WITH CURRENT STORMWATER MANAGEMENT REQUIREMENTS.

UPDATES/REVISIONS :
4 REVISION: ADDITIONAL PLAZA, PRIVATE STORM DRAIN, AND LANDSCAPING. 5/29/18
5 ADDITIONAL SHEETS HAVE BEEN ADDED AS PART OF THIS REVISION. SHEET # 11, 12, 13, 14, 15.
THIS PLAN SHOWS THE PROFILE FOR THE STORM DRAIN PIPE ADDED AS PART OF THIS REVISION.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10-25-18

Chief, Division of Land Development — Date 10-29-18

Director — Date 10-29-18

REVISION "4" BY:
CPJ Associates — Charles P. Johnson & Associates, Inc
Civil and Environmental Engineers • Planners • Landscape Architects • Surveyors
1751 Elton Rd., Ste. 300 Silver Spring, MD 20903 301-434-7000 Fax: 301-434-9394
www.cpja.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

STATE OF MARYLAND — BRIAN KEITH DAVIS — 19908 — PROFESSIONAL ENGINEER — 10-19-2018

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE #: 19908
EXPIRATION DATE: 1/5/2019

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

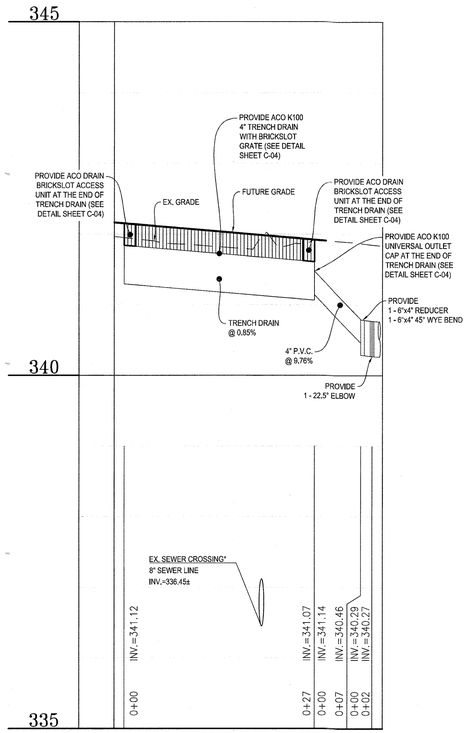
WATER CODE E-06 SEWER CODE 3390000

ADDITIONAL STORM DRAIN PROFILES
(ADDED SHEET)
COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND
SHT. 11 OF 15
SCALE : As Shown
DATE : MARCH 08, 2001

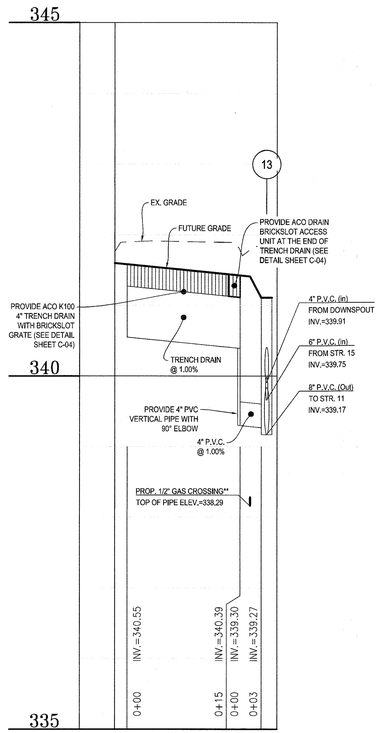
SDP 01-150

N:\2017-1394\DWG\24-02.DWG



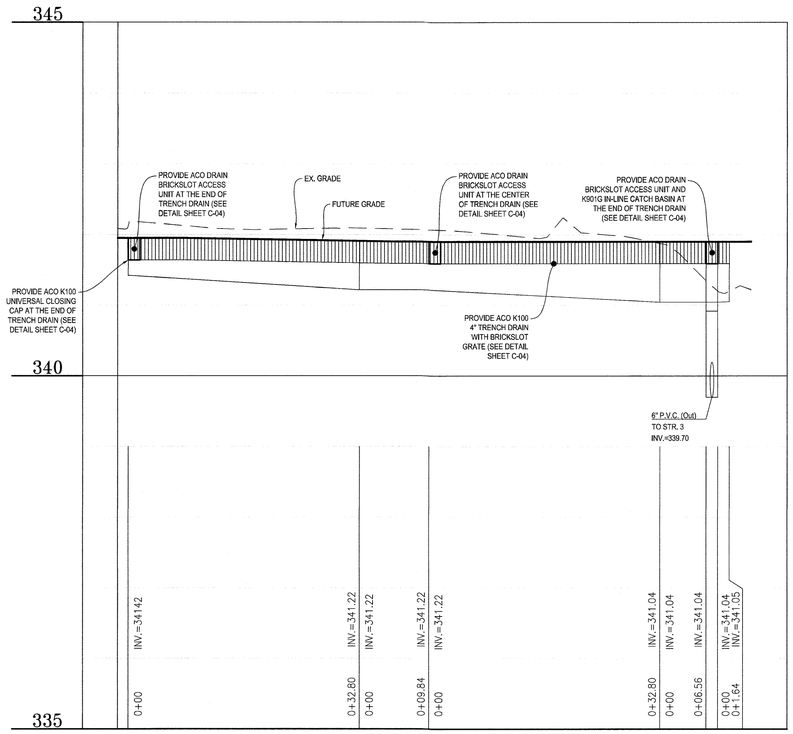
PROFILE SCALE
HORIZONTAL: 1"=10'
VERTICAL: 1"=1'

Profile View of TRENCH_DRAIN_1



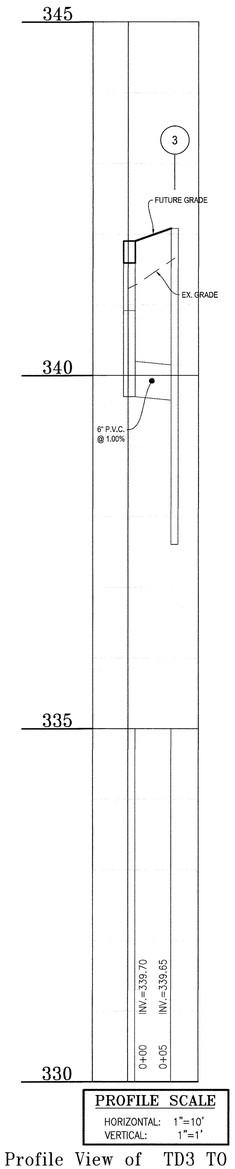
PROFILE SCALE
HORIZONTAL: 1"=10'
VERTICAL: 1"=1'

Profile View of TRENCH_DRAIN_2



PROFILE SCALE
HORIZONTAL: 1"=10'
VERTICAL: 1"=1'

Profile View of TRENCH_DRAIN_3



PROFILE SCALE
HORIZONTAL: 1"=10'
VERTICAL: 1"=1'

Profile View of TD3 TO STR.3

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10.25.18

Chief, Division of Land Development — Date 10-29-18

Director — Date 10-29-18

STATE OF MARYLAND — BRIAN KEITH DAVIS — 19908 — PROFESSIONAL ENGINEER — 10-19-2018

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE #: 19908
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REVISION "4" BY:

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www.cpja.com · Silver Spring, MD · Gaithersburg, MD · Annapolis, MD · College Park, MD · Frederick, MD · Fairfax, VA

1

NOTE: TRENCH DRAIN LAYOUT TO BE CONSTRUCTED AS PART OF THIS DESIGN.

UPDATES/REVISIONS :
4 REVISION: ADDITIONAL PLAZA, PRIVATE STORM DRAIN, AND LANDSCAPING. 5/29/18
5 ADDITIONAL SHEETS HAVE BEEN ADDED AS PART OF THIS REVISION. SHEET # 11, 12, 13, 14, 15.

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS

ADDRESS CHART						
PARCEL NO.	STREET ADDRESS					
H-8	7154 COLUMBIA GATEWAY DRIVE					
SUBDIVISION NAME		SECTION NAME			PARCEL #	
Columbia Gateway		N/A			H-8	
PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT	
14689	1	M-1	43	6	6065.02	
WATER CODE E-06			SEWER CODE 3390000			

TRENCH DRAIN DETAILS AND PROFILES
(ADDED SHEET)

COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND
SHT. 12 OF 17
SCALE : As Shown
DATE : MARCH 08, 2001

SDP 01-150

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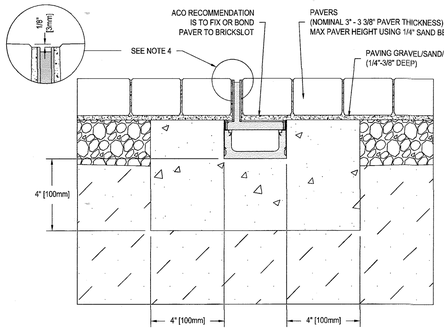


NOTES:
1. IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS. *ENGINEERING ADVICE MAY BE REQUIRED.*
2. MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
3. EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND. *ENGINEERING ADVICE MAY BE REQUIRED.*
4. FINISHED LAYER OF PAVERS MUST BE APPROX. 1/8" [3mm] ABOVE THE TOP OF THE CHANNEL EDGE.
5. CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS. ENGINEERING ADVICE MAY BE REQUIRED TO DETERMINE PROPER LOAD CLASS.
6. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.
7. THE BRICKSLOT GRATING SYSTEM SHALL BE 0.47" (12mm) NOMINAL INSIDE WIDTH WITH A 0.71" (18mm) OVERALL WIDTH AT TOP EDGE. THE BRICKSLOT GRATING SYSTEM ADDS 3.27" (83mm) TO THE OVERALL HEIGHT OF THE H100K-8 SYSTEM.

SPECIFICATION CLAUSE

H100K-8 SLABDRAIN W/BRICKSLOT 100 LOAD CLASS B

GENERAL
THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE H100K-8 CHANNEL SYSTEM WITH GALVANIZED STEEL EDGE RAILS AND BRICKSLOT AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

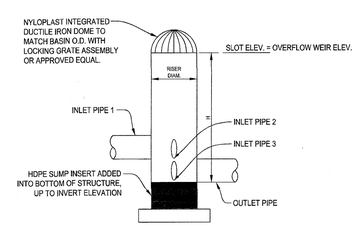
MATERIALS
CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN GALVANIZED STEEL EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:

COMPRESSIVE STRENGTH:	14,000 PSI
FLEXURAL STRENGTH:	4,000 PSI
TENSILE STRENGTH:	1,500 PSI
WATER ABSORPTION:	0.07%
FROST PROOF	YES
DILUTE ACID AND ALKALI RESISTANT	YES
B117 SALT SPRAY TEST COMPLIANT	YES

THE SYSTEM SHALL BE 4" (100mm) NOMINAL INTERNAL WIDTH WITH A 5.1" (130mm) OVERALL WIDTH. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. BRICKSLOT SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. CHANNEL AND BRICKSLOT SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.



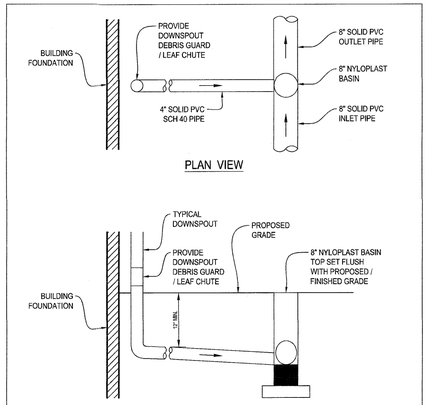
NYLOPLAST DRAIN BASIN INLET STRUCTURE DETAIL

NOT TO SCALE

NOTES:
1. ALL JOINTS SHALL BE WATER TIGHT. MANUFACTURER SHALL PROVIDE APPROPRIATE WATER TIGHT ADAPTER.
2. SUB-BASE MUST BE CHECKED BY GEOTECHNICAL ENGINEER.

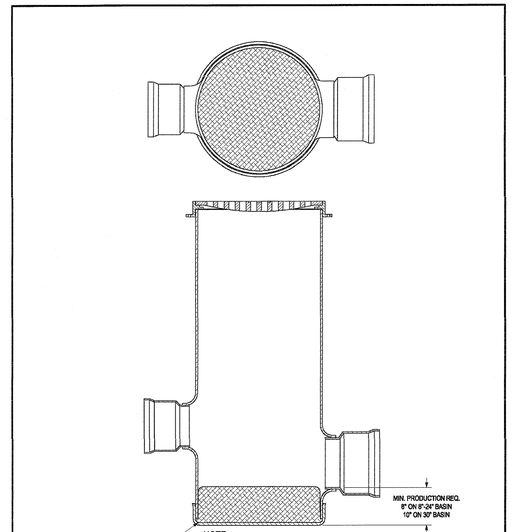
NYLOPLAST STRUCTURE TABLE

STR. #	RISER DIAMETER	SLOT ELEVATION	INLET PIPE 1 Ø & TYPE	INLET PIPE 1 INVERT	INLET PIPE 2 Ø & TYPE	INLET PIPE 2 INVERT	INLET PIPE 3 Ø & TYPE	INLET PIPE 3 INVERT	OUTLET PIPE Ø & TYPE	OUTLET PIPE INVERT	H
17	8"	341.76	6" SOLID P.V.C.	340.19	N/A	N/A	N/A	N/A	6" SOLID P.V.C.	340.19	1.57
13	18"	341.16	6" SOLID P.V.C.	339.75	4" SOLID P.V.C.	339.91	4" SOLID P.V.C.	339.27	8" SOLID P.V.C.	339.17	1.99



ROOF DRAIN DETAIL

NOT TO SCALE



NOTE:
ALL DRAIN BASINS SHALL INCLUDE SUMP INSERT WHICH SHALL BE INSTALLED AT THE TIME OF MANUFACTURE.

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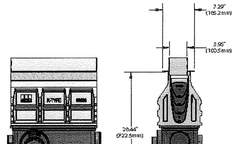
ACO DRAIN

Type 482 Brickslot 100 access unit - galvanized steel

Access unit (may be used with catch basin and can also be used with channels)



Description	Part No.	Overall Depth in	Overall Depth mm	Weight lbs.
Type 482 Brickslot 100 Access Unit - 19.69" (0.5 m)	198042	4.06	103	16.4

Specifications

General
The surface drainage system shall be ACO Drain Brickslot, as manufactured by ACO, Inc. or equal approved.

Materials
The Brickslot top is manufactured from 11 gauge galvanized steel

The nominal clear opening for Brickslot is ½" (12 mm) with overall width of 4.84" (123 mm). An offset slot helps prevent debris from being trapped. For use with K100, KS100, MembraneDrain, SlabDrain (H100-10, H100-8, H100K8, H100KS8), and the K100 Series 304 catch basin. See a separate ACO Spec info sheet for channel details. Bricks lot rests in the grate seating of the channel, the antislot lugs help prevent lateral movement and the weight of covering material keeps the unit secured. Access units have frames that fit catch basins with a separate unit that can be removed for maintenance.

Installation
The trench drain system shall be installed in accordance with the manufacturer's installation instructions and recommendations.

ACO, Inc.
Northeast Sales Office
9470 Pinecone Drive
Medina, OH 44060
Tel: (440) 639-7230
Toll free: (800) 543-4764
Fax: (440) 639-7235

West Sales Office
625 W. Beechcraft St.
Casa Grande, AZ 85122
Tel: (520) 421-9998
Toll Free: (888) 490-9652
Fax: (520) 421-8599

Southeast Sales Office
4211 Pleasant Road
Fort Mill, SC 29708
Toll free: (800) 543-4764
Fax: (803) 802-1063

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Electronic Contacts:
info-USA@aco.biz
www.ACODrain.us

April 2018

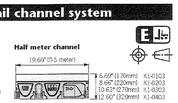
SPEC INFO ACO

ACO DRAIN

KlassikDrain - K100 Galvanized steel edge rail channel system

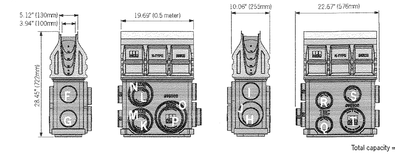
One meter channel

Half meter channel



Knock-outs included on every 5th channel

Type K901G In-line catch basin

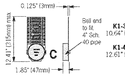


Total capacity = 10.49 gallons.

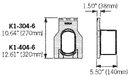
Outlet flow rates

Outlet	Product	Outlet size (Sch. 40)	Invert Depth	GPM	CFS
A	Bottom outlet - K00	4" round	3.94"	108	0.24
A	Bottom outlet - K40	4" round	11.81"	187	0.42
B	Bottom outlet - K00	6" oval	3.94"	177	0.39
B	Bottom outlet - K40	6" oval	11.81"	306	0.68
C	End outlet - K20	4" round	7.87"	132	0.29
C	End outlet - K40	4" round	11.81"	171	0.38
D	K1-308-6 6" outlet cap	6" oval	9.84"	233	0.52
E	K1-408-6 6" outlet cap	6" oval	11.81"	264	0.59
F	Type K1-901G	4" round	19.30"	226	0.50
G	Type K1-901G	4" round	25.67"	265	0.59
H	Type K1-901G	4" round	25.30"	263	0.59
I	Type K1-901G	4" round	18.56"	222	0.49
J	Type K1-901G	6" round	25.85"	586	1.30
K	Type K1-901G	4" round	26.43"	269	0.60
L	Type K1-901G	4" round	19.36"	227	0.51
M	Type K1-901G	6" round	27.30"	604	1.35
N	Type K1-901G	6" round	19.99"	505	1.12
O	Type K1-901G	8" round	27.30"	1051	2.34
P	Type K1-901G	6" round	26.43"	593	1.32
Q	Type K1-901G	4" round	27.17"	273	0.61
R	Type K1-901G	4" round	20.68"	235	0.52
S	Type K1-901G	4" round	18.99"	224	0.50
T	Type K1-901G	6" round	27.17"	602	1.34

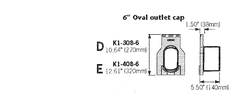
End Caps



6" Oval inlet cap



6" Oval outlet cap

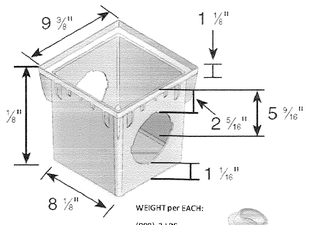


Note: These are the pipe flow rates at the specified outlet, **NOT** channel flow rates. Catch basin flow rates are without trash bucket - using trash bucket reduces flow

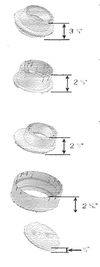
Sep 13/1

TECHNICAL SPECIFICATIONS

9" x 9" SQUARE CATCH BASIN



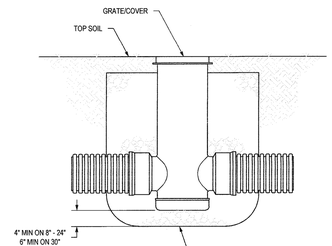
WEIGHT per EACH:
(900) 3 LBS
(900-4) 2 LBS



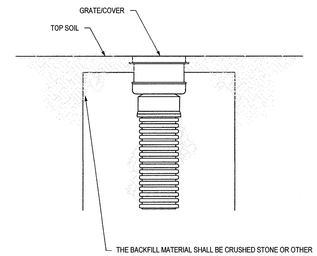
Material: Polypropylene
Colors: Black "2 Openings" (900) Black "4 Openings" (900-4)
Fits: Requires either part # 1206, # 1242, # 1243, # 1245 or #1266 Universal outlet for each opening.

NON TRAFFIC INSTALLATION

DRAIN BASIN



INLINE DRAIN



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APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10.25.18

Chief, Division of Land Development — Date 10-29-18

Director — Date 10-29-18

REVISION "4" BY:
CPJ Associates
Charles P. Johnson & Associates, Inc
Civil and Environmental Engineers • Planners • Landscape Architects • Surveyors
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www.cpja.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • College Park, MD • Frederick, MD • Fairfax, VA

STATE OF MARYLAND — KEITH DANIEL — 19908 — PROFESSIONAL ENGINEER — 10-19-2018

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE #: 19908
EXPIRATION DATE: 9/6/2019

NOTE: STORM DRAIN AND TRENCH DRAIN STRUCTURES TO BE IMPLEMENTED INTO THE DESIGN.

UPDATES/REVISIONS :
1 REVISION: ADDITIONAL PLAZA, PRIVATE STORM DRAIN, AND LANDSCAPING. 5/29/18
5 ADDITIONAL SHEETS HAVE BEEN ADDED AS PART OF THIS REVISION. SHEET # 11, 12, 13, 14, 15.

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06 SEWER CODE 3390000

STORM DRAIN AND TRENCH DRAIN DETAILS
(ADDED SHEET)
COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND

SHT. 13 OF 15

SCALE : As Shown
DATE : MARCH 08, 2001

SDP 01-150

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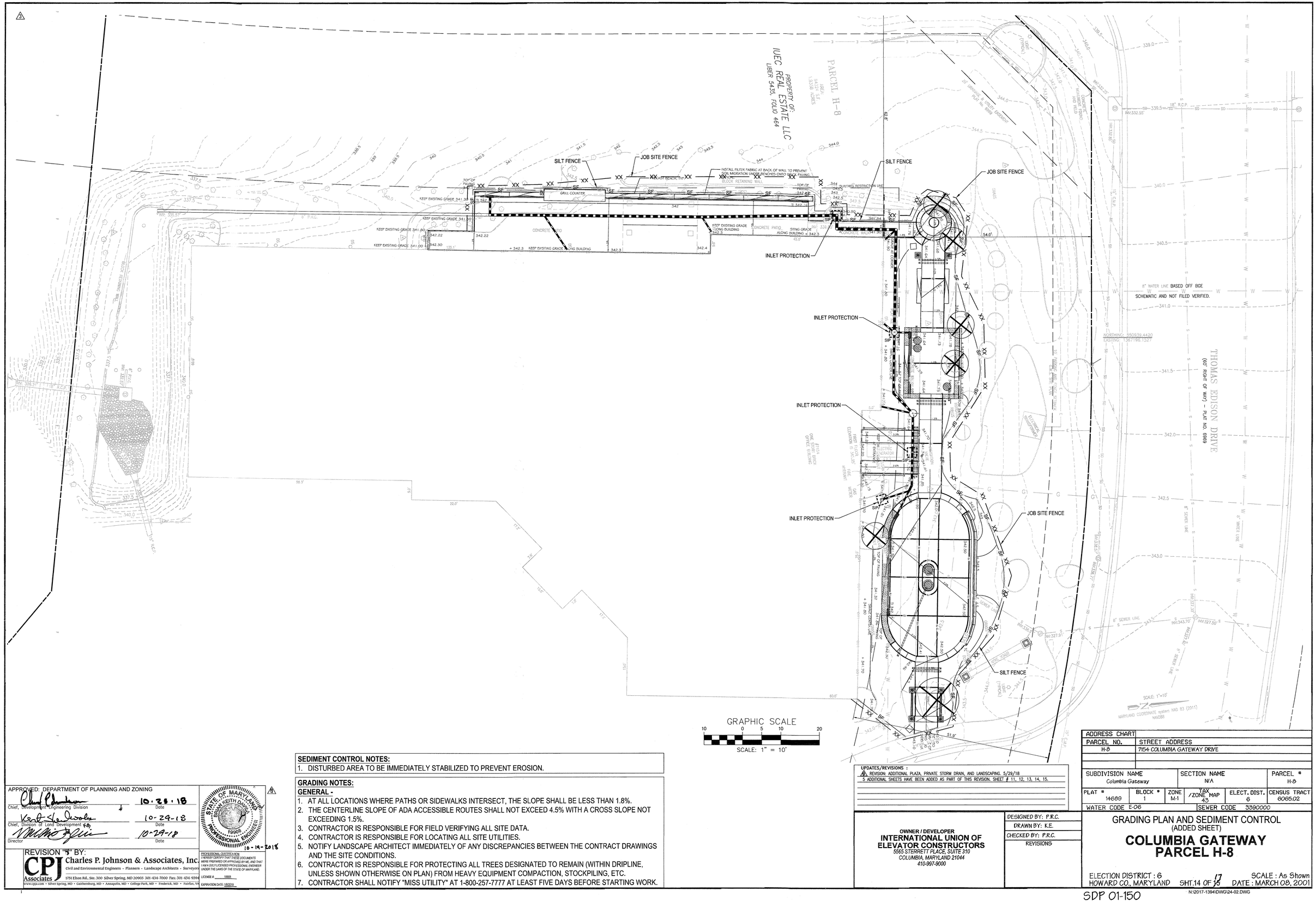

SEDIMENT CONTROL NOTES:

1. DISTURBED AREA TO BE IMMEDIATELY STABILIZED TO PREVENT EROSION.

GRADING NOTES:

GENERAL -

1. AT ALL LOCATIONS WHERE PATHS OR SIDEWALKS INTERSECT, THE SLOPE SHALL BE LESS THAN 1.8%.
2. THE CENTERLINE SLOPE OF ADA ACCESSIBLE ROUTES SHALL NOT EXCEED 4.5% WITH A CROSS SLOPE NOT EXCEEDING 1.5%.
3. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL SITE DATA.
4. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SITE UTILITIES.
5. NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE CONTRACT DRAWINGS AND THE SITE CONDITIONS.
6. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL TREES DESIGNATED TO REMAIN (WITHIN DRIPLINE, UNLESS SHOWN OTHERWISE ON PLAN) FROM HEAVY EQUIPMENT COMPACTION, STOCKPILING, ETC.
7. CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FIVE DAYS BEFORE STARTING WORK.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10.25.18

Chief, Division of Land Development — Date 10-29-18

Director — Date 10-29-18

STATE OF MARYLAND — BRIAN KEITH DAVIS — 19905 — PROFESSIONAL ENGINEER — 10-19-2018

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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE #: 19905
EXPIRATION DATE: 1/5/2019

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UPDATES/REVISIONS :
5 REVISION: ADDITIONAL PLAZA, PRIVATE STORM DRAIN, AND LANDSCAPING. 5/29/18
5 ADDITIONAL SHEETS HAVE BEEN ADDED AS PART OF THIS REVISION. SHEET # 11, 12, 13, 14, 15.

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INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06 — SEWER CODE 3390000

GRADING PLAN AND SEDIMENT CONTROL
(ADDED SHEET)
COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND

SHT. 14 OF 17

SCALE : As Shown
DATE : MARCH 08, 2001

SDP 01-150

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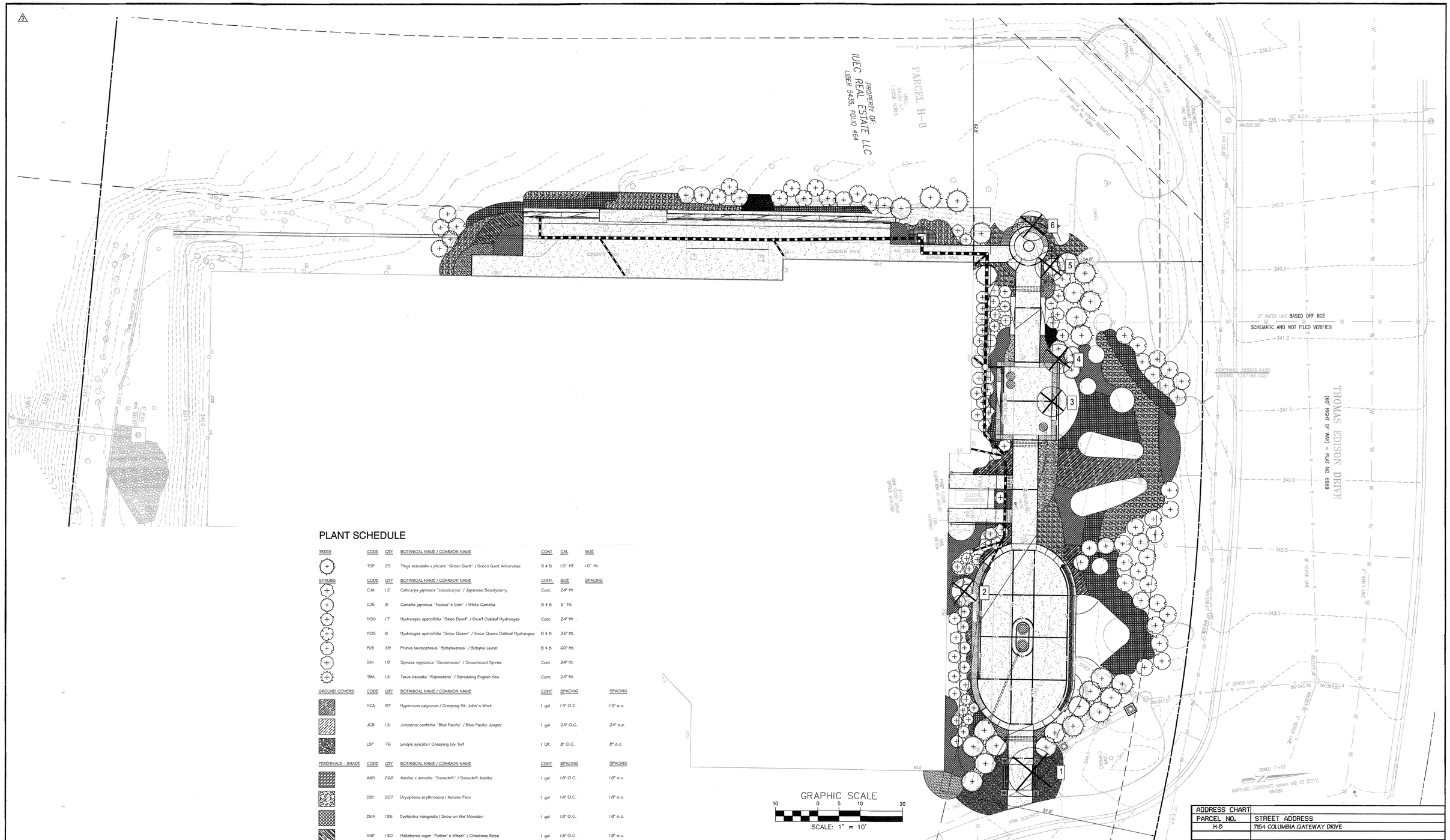

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL	SIZE
	TSP	25	*Thuja standishii x plicata* 'Green Giant' / Green Giant Arborvitae	B & B	10' HT.	10' Ht

SHRUBS	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT.	SIZE	SPACING
	CJA	12	*Callicarpa japonica* 'Leucocarpa' / Japanese Beautyberry	Cont.	24" Ht	
	CJN	8	*Camellia japonica* 'Nuccio's Gem' / White Camellia	B & B	5' Ht	
	HOU	17	*Hydrangea quercifolia* 'Sikes Dwarf' / Dwarf Oakleaf Hydrangea	Cont.	24" Ht	
	HQS	6	*Hydrangea quercifolia* 'Snow Queen' / Snow Queen Oakleaf Hydrangea	B & B	36" Ht.	
	PLS	39	*Prunus laurocerasus* 'Schipkaensis' / Schipka Laurel	B & B	60" Ht.	
	SNI	19	*Spiraea nipponica* 'Snowmound' / Snowmound Spirea	Cont.	24" Ht	
	TBA	13	*Taxus baccata* 'Repandens' / Spreading English Yew	Cont.	24" Ht	

GROUND COVERS	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT	SPACING	SPACING
	HCA	97	*Hypericum calycinum* / Creeping St. John's Wort	1 gal	15" O.C.	15" o.c.
	JCB	13	*Juniperus conferta* 'Blue Pacific' / Blue Pacific Juniper	1 gal	24" O.C.	24" o.c.
	LSP	76	*Liriope spicata* / Creeping Lily Turf	1 QT.	8" O.C.	8" o.c.

PERENNIALS - SHADE	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT	SPACING	SPACING
	AAS	268	*Astilbe x arendsii* 'Snowdrift' / Snowdrift Astilbe	1 gal	18" O.C.	18" o.c.
	DEY	207	*Dryopteris erythrosora* / Autumn Fern	1 gal	18" O.C.	18" o.c.
	EMA	196	*Euphorbia marginata* / Snow on the Mountain	1 gal	18" O.C.	18" o.c.
	HNP	130	*Helleborus niger* 'Potter's Wheel' / Christmas Rose	1 gal	18" O.C.	18" o.c.

PERENNIALS - SUN	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT	SPACING	SPACING
	AFO	24	*Agastache foeniculum* 'Alba' / White Anise Hyssop	1 gal	18" O.C.	18" o.c.
	ASY	17	*Anemone sylvestris* / Snowdrop Anemone	1 gal	18" O.C.	18" o.c.
	DPA	65	*Digitalis purpurea* 'Alba' / White Foxglove	1 gal	18" O.C.	18" o.c.
	EPU	41	*Echinacea purpurea* 'White Swan' / Coneflower	1 gal	18" O.C.	18" o.c.
	ISE	32	*Iberis sempervirens* / Candytuft	1 gal	18" O.C.	18" o.c.
	IVE	13	*Iris versicolor* / Blue Flag	1 gal	15" O.C.	15" o.c.

GRAPHIC SCALE
10 0 5 10 20
SCALE: 1" = 10'

NOTE: ADDITIONAL LANDSCAPING AS PART OF PLAZA RENOVATION.

TREES TO BE REMOVED SCHEDULE		
KEY	COMMON NAME	SIZE
1	Winter King Hawthorn	6"
2	American Arborvitae Nigra	12' H
3	Kousa Dogwood	3"
4	Kousa Dogwood	3"
5	Kousa Dogwood	2"
6	Kousa Dogwood	3"

UPDATES/REVISIONS :
4 REVISION: ADDITIONAL PLAZA, PRIVATE STORM DRAIN, AND LANDSCAPING. 5/29/18
5 ADDITIONAL SHEETS HAVE BEEN ADDED AS PART OF THIS REVISION. SHEET 7, 11, 12, 13, 14, 15.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10-25-18

Chief, Division of Land Development — Date 10-29-18

Director — Date 10-29-18

STATE OF MARYLAND — DONALD KEITH DAVIS — 19908 — PROFESSIONAL ENGINEER — 10-19-2018

REVISION "4" BY:
CPJ Associates — Charles P. Johnson & Associates, Inc.
Civil and Environmental Engineers • Planners • Landscape Architects • Surveyors
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PROFESSIONAL CERTIFICATION
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LICENSE #: 19908
EXPIRATION DATE: 9/6/2019

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX MAP / ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06 — SEWER CODE 3390000

LANDSCAPING REVISION
(ADDED SHEET)
COLUMBIA GATEWAY PARCEL H-8

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND
SHT. 15 OF 18
SCALE : As Shown
DATE : MARCH 08, 2001

SDP 01-150

N:\2017-1394\DWG\24-02.DWG

PROPOSED BUILDING
FF. FL. ELEV. 343.00

10 LP-09

HANDICAP SIGN (TYP.) SEE DETAIL THIS SHEET

FULLY DEPRESSED CURB

MEET EXISTING DOOR ON GRADE

343.00

342.90

342.77TC

342.29

342.18TC

342.30

341.70

342.18

341.58BC

341.42BC

341.40BC

341.30

342.17

341.94

341.88

341.95

PASSENGER LOADING / DROP OFF AREA

FULLY DEPRESSED CURB ACROSS ENTIRE WIDTH OF ENTRANCE WALKWAY

REMOVE AND REPLACE CURB AND GUTTER FOR NEW SIDE WALK RAMPS. EXISTING CURB AND GUTTER TO BE REMOVED TO NEAREST JOINT OR MAY BE SAW CUT IF SECTION TO REMAIN IS 5LF MINIMUM.

5

6

6 REG. SPACES

10 REG. SPACES

11 REG. SPACES

6 REG. SPACES

SD INLET

CONC. DUMPSTER PAD

BRICK WALL DUMPSTER ENCLOSURE

BRICK WALL

SCALE: 1"=10'

GRAPHIC SCALE
10 0 5 10 20
SCALE: 1" = 10'

NOTE:
SIDEWALK MAINTENANCE TO INCLUDE ADA COMPLIANT GRADES AT BUILDING ENTRANCE.

HANDICAPPED DETAIL
SCALE: 1" = 10'

Legend

- Ex. 2' Contours
- Ex. 10' Contours
- Prop. 2' Contours 222
- Prop. 10' Contours 220
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Bldg. Restriction Line
- Ex. Sanitary
- Ex. Storm Drain
- Ex. Water
- Prop. Sanitary
- Prop. Storm Drain
- Prop. Water
- Prop. Sidewalk
- P-2 Paving (P-2 PAVING)
- Prop. Parking Count (16)
- Prop. Handicapped Parking Space
- Sidewalk to be Removed
- Prop. Silt Fence SF SF SF SF

Reviewed for Howard SCD and meets Technical Requirements

USDA—NATURAL RESOURCES CONSERVATION SERVICE DATE

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9.25.19

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/30/19

DIRECTOR — DATE 9-30-19

REVISION "5" BY:

CPJ Associates — Charles P. Johnson & Associates, Inc.
Civil and Environmental Engineers · Planners · Landscape Architects · Surveyors
1751 Elton Rd., Ste. 300 Silver Spring, MD 20903 301-434-7000 Fax: 301-434-9394
www.cpja.com · Silver Spring, MD · Gaithersburg, MD · Annapolis, MD · Greenbelt, MD · Frederick, MD · Fairfax, VA

STATE OF MARYLAND — BRIAN KEITH — 19905 — PROFESSIONAL ENGINEER — 9/17/19

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE # 19905
EXPIRATION DATE: 5/7/2021

REVISION 5 LOD = 4,029sf

UPDATES/REVISIONS :
5 MAINTENANCE OF SIDEWALKS AND PAVING. ADDED LANDSCAPING AND INLET TO RELIEVE PUDDLE. ADDED SHEETS 16 – 17 BY CPJA – DATED 08/15/2019

OWNER / DEVELOPER
INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS
5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS

17-019 IUEC — Project Number / Project Name
Columbia, MD — Location
LSK-1 — Sheet Number
ADA Parking Signs — Drawing Title
Permit Plan Set, Sheet 4 of 17 — Sheet Numbering
August 23, 2019 — Date
JS — Drawn By
SR — Checked By

ANNAPOLIS LANDSCAPE ARCHITECTS, LLC
54 Southgate Avenue
Annapolis, MD 21401
contact@annapolisla.com

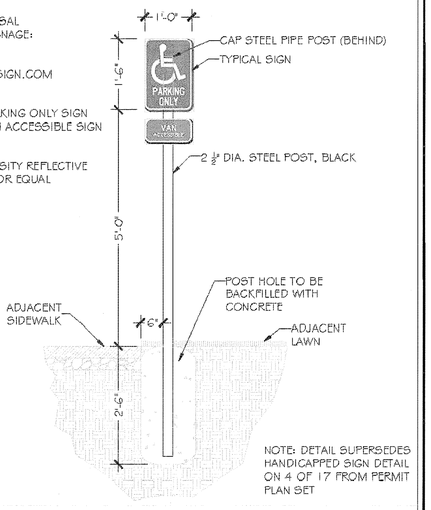
ANNAPOLIS LANDSCAPE ARCHITECTS

ADA UNIVERSAL ACCESS SIGNAGE:

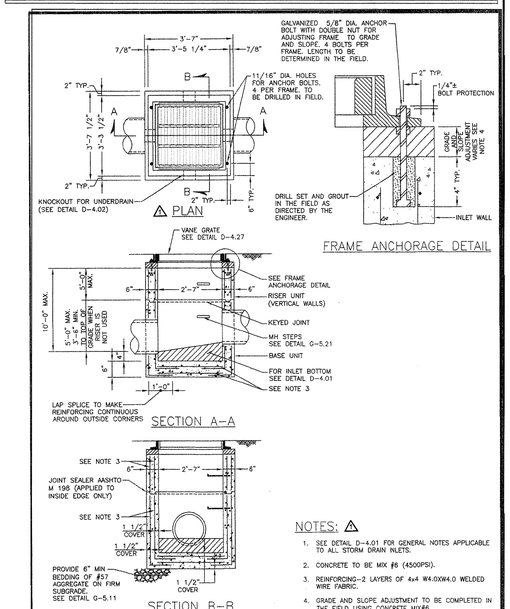
SOURCE:
MYPARKINGSIGN.COM

DESIGN:
K-1437 PARKING ONLY SIGN
K-1479 VAN ACCESSIBLE SIGN

MATERIAL:
3M HI INTENSITY REFLECTIVE ALUMINUM OR EQUAL



NOTE: DETAIL SUPERSEDES HANDICAPPED SIGN DETAIL ON 4 OF 17 FROM PERMIT PLAN SET



NOTES:
1. SEE DETAIL D-4.01 FOR GENERAL NOTES APPLICABLE TO ALL STORM DRAIN INLETS.
2. CONCRETE TO BE MIX #6 (4500PSI).
3. REINFORCING-2 LAYERS OF 4x4 W4.0XW4.0 WELDED WIRE FABRIC.
4. GRADE AND SLOPE ADJUSTMENT TO BE COMPLETED IN THE FIELD USING CONCRETE MIX#6

Revised 5/30/2017 / Revised 5/1/2007 / Approved — Howard County, Maryland Department of Public Works — Approved: Thomas E. Scuddy, Chief, Bureau of Engineering

TYPE 'S' INLET — Detail D-4.24

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
H-8	7154 COLUMBIA GATEWAY DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
Columbia Gateway	N/A	H-8

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14689	1	M-1	43	6	6065.02

WATER CODE E-06 — SEWER CODE 3390000

PARKING LOT REVISION
(ADDED SHEET)

COLUMBIA GATEWAY
PARCEL H-8
REVISED SITE DEVELOPMENT PLAN

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND

SCALE : As Shown
SHT.16 OF 17
DATE : MARCH 08, 2001

SDP 01-150

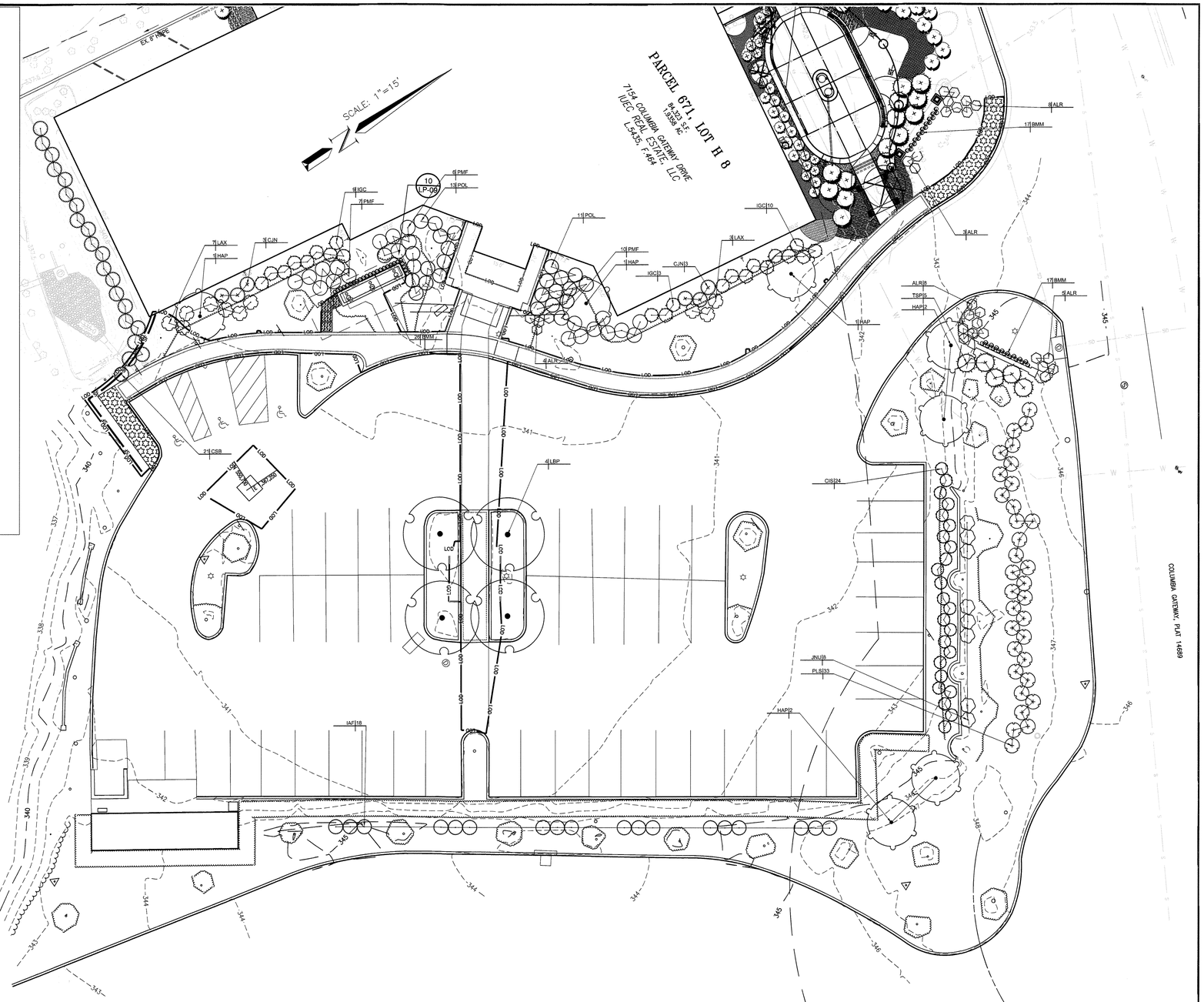
N:\2017-1394\DWG\24-03.DWG

PLANT_SCHEDULE_PARKING_LOT

EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	TSP	5	Thuja standishii x plicata `Green Giant` / Green Giant Arborvitae	B & B		10` Ht
ORNAMENTAL TREES	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**CONT**	**CAL**	**SIZE**
	HAP	7	Hamamelis x intermedia `Arnold Promise` / Arnold Promise Hybrid Witch Hazel	15 gal		10` Ht
	LBP	4	Lagerstroemia indica `Basham`s Party Pink` / Pink Flowering Crape Myrtle multi-stem, 3-5	B & B		20` Ht.
SHRUBS	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**CONT.**	**SIZE**	**SPACING**
	ALR	28	Abelia x grandiflora `Little Richard` / Little Richard Abelia	5 gal	18" Ht	3` O.C.
	BMM	60	Buxus microphylla japonica `Morris Midget` / Morris Midget Japanese Boxwood Supply not available. Substitute with Nandina Domestica "Harbor Belle"/Dwarf Heavenly Bamboo, 3 gal, 12" Ht.	2 gal	8" Ht.	12" o.c.
	CJN	6	Camellia japonica `Nuccio`s Gem` / White Camellia	B & B	5` Ht	4` O.C.
	CIS	24	Caryoptens incana `Sunshine Blue` / Common Bluebeard	5 gal	18" Ht	36" O.C.
	CSB	21	Cornus sencea `Bailey` / Red Twig Dogwood	5 gal	18" Ht	4` O.C.
	IGC	22	Ilex glabra `Compacta` / Compact Inkberry	5 gal	18" Ht	4` O.C.
	IAF	18	Ilex x attenuata `Fosten` / Foster`s Holly	5 gal	6` Ht.	4` O.C.
	JNU	8	Jasminum nudiflorum / Winter Jasmine	5 gal	24" Ht	4` O.C.
	LAX	10	Leucothoe axillans / Coastal Leucothoe	5 gal	18" Ht	4` O.C.
	PMF	23	Piens japonica `Mountain Fire` / Mountain Fire Piens	5 gal	24" Ht	4` O.C.
	POL	24	Prunus laurocerasus `Otto Luyken` / Luykens Laurel	5 gal	18" Ht	4` O.C.
	PLS	33	Prunus laurocerasus `Schipkaensis` / Schipka Laurel	B & B	30" Ht.	4` O.C.

Legend

- Ex. 2' Contours
- Ex. 10' Contours
- Prop. 2' Contours (222)
- Prop. 10' Contours (220)
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Bldg. Restriction Line
- Ex. Sanitary
- Ex. Storm Drain
- Ex. Water
- Prop. Sanitary
- Prop. Storm Drain
- Prop. Water
- Prop. Sidewalk
- P-2 Paving (P-2 PAVING)
- Prop. Parking Count (16)
- Prop. Handicapped Parking Space
- Sidewalk to be Removed
- Prop. Silt Fence (SF)



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HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9.25.19

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/30/19

DIRECTOR — DATE 9-30-19

STATE OF MARYLAND — BRIAN KEITH DAVIS — 19908 — PROFESSIONAL ENGINEER — 9/17/19

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE # 19908 EXPIRATION DATE: 8/7/2021

REVISION "5" BY:

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Civil and Environmental Engineers • Planners • Landscape Architects • Surveyors
1751 Elton Rd., Ste. 300 Silver Spring, MD 20903 301-434-7000 Fax: 301-434-9394
www.cpja.com • Silver Spring, MD • Gaithersburg, MD • Annapolis, MD • Greenbelt, MD • Frederick, MD • Fairfax, VA

GRAPHIC SCALE
15 0 7.5 15 30
SCALE: 1" = 15'

NOTE: ADDITIONAL LANDSCAPING AS PART OF PLAZA RENOVATION.

UPDATES/REVISIONS :
5 MAINTENANCE OF SIDEWALKS AND PAVING. ADDED LANDSCAPING AND INLET TO RELIEVE PUDDLE. ADDED SHEETS 16 – 17 BY CPJA – DATED 08/15/2019

OWNER / DEVELOPER
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5565 STERRETT PLACE, SUITE 310
COLUMBIA, MARYLAND 21044
410-997-9000

DESIGNED BY: P.R.C.
DRAWN BY: K.E.
CHECKED BY: P.R.C.
REVISIONS

LANDSCAPING REVISION FOR PARKING LOT
(ADDED SHEET)

COLUMBIA GATEWAY PARCEL H-8

REVISED SITE DEVELOPMENT PLAN

ELECTION DISTRICT : 6
HOWARD CO., MARYLAND
SCALE : As Shown
SHT. 17 OF 17
DATE : MARCH 08, 2001

SDP 01-150

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COLUMBIA GATEWAY, PLAT 14689