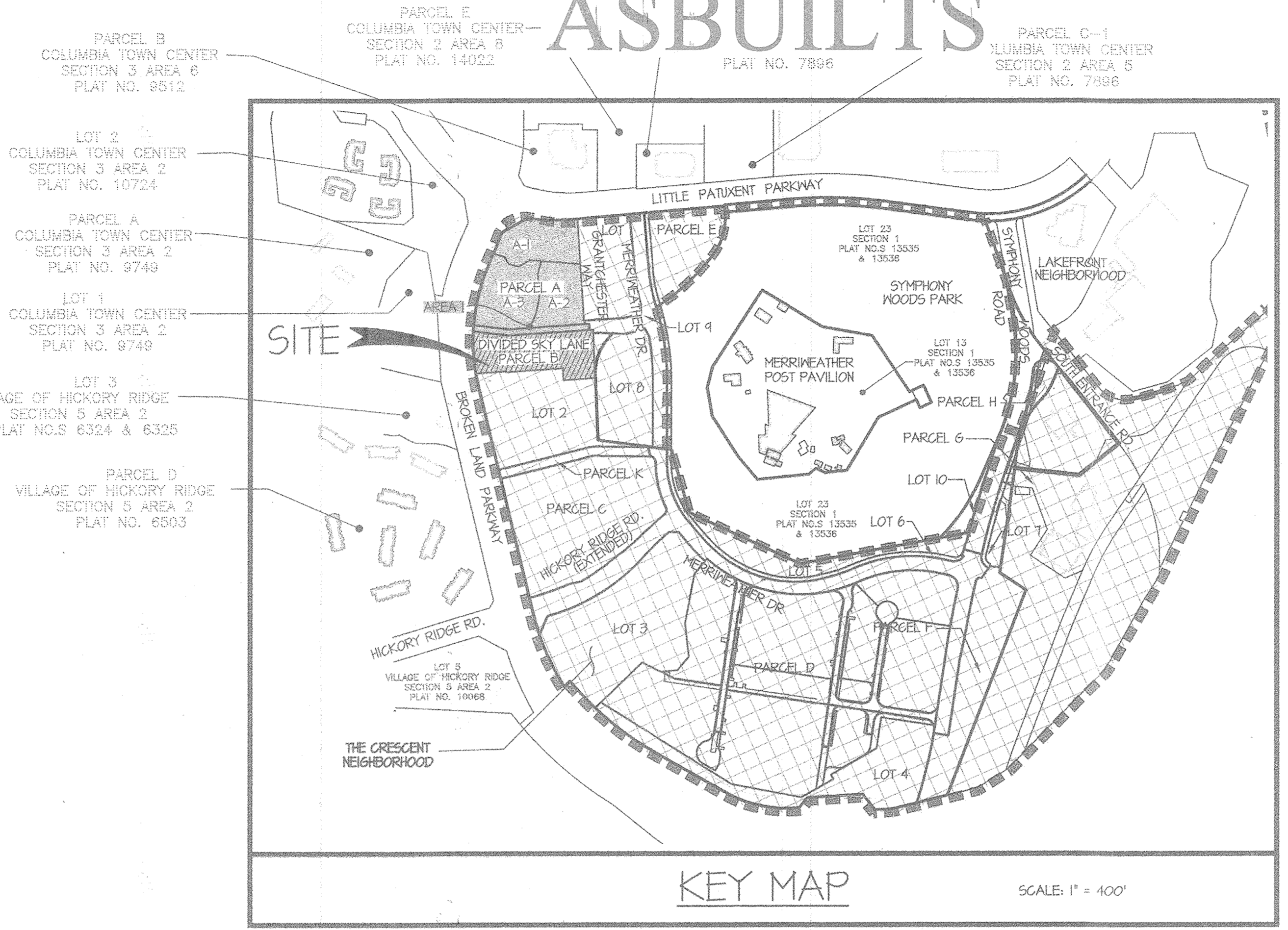


**GENERAL NOTES**

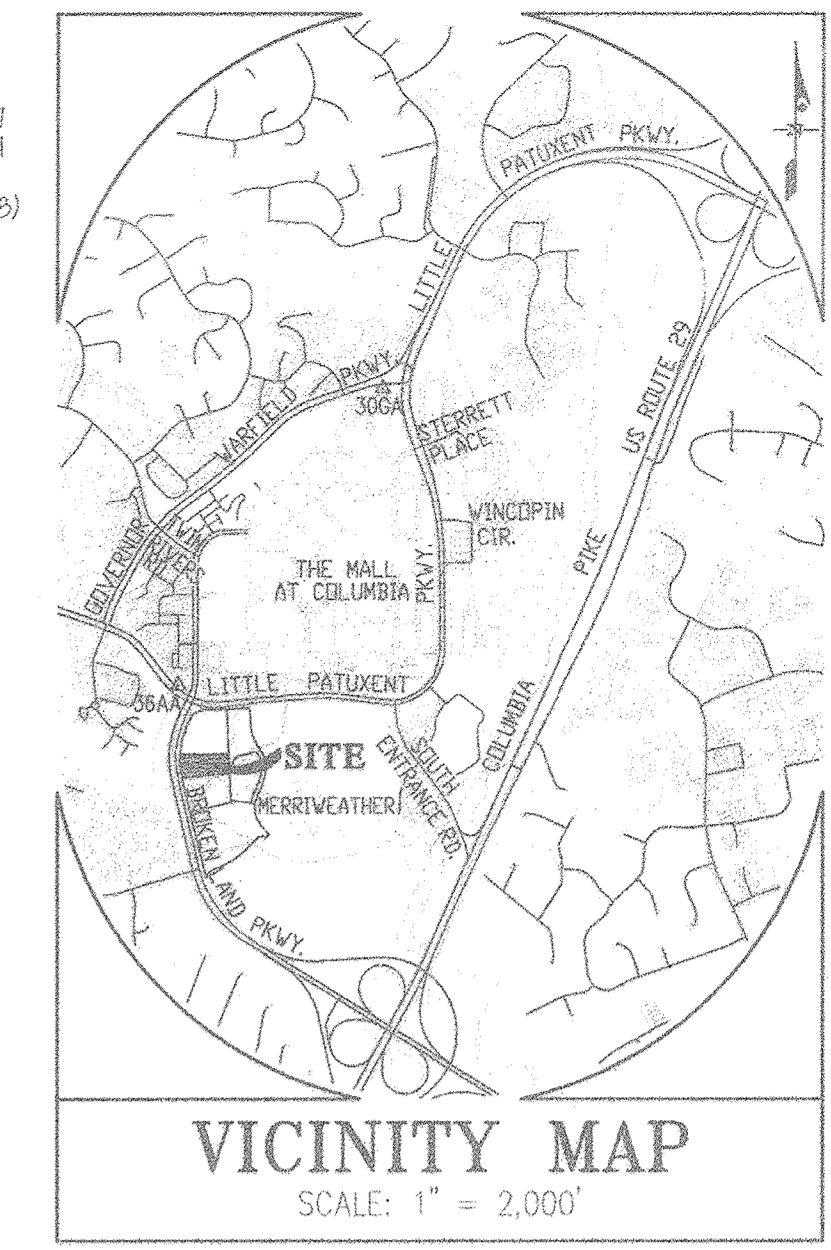
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST 48 HOURS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-251-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
4. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES AT (410) 313-4900 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
5. PROJECT BACKGROUND:  
LOCATION: TAX MAP 36  
ZONING: PROPERTY IS ZONED "NH TOWN" PER THE 2013 COMPREHENSIVE ZONING PLAN AND IS DESIGNATED AS DOWNTOWN MIXED USE AREA. ADDITIONALLY, THE PROJECT AREA IS SUBJECT TO THE DOWNTOWN COLUMBIA PLAN - A GENERAL PLAN AMENDMENT EFFECTIVE APRIL 6, 2010.  
ELECTION DISTRICT: FIFTH ELECTION DISTRICT  
AREA OF BILLABLE LOTS: PARCEL 19-199 AC  
RECORD PLAT NO.: 23945  
DPZ REF. FILE NO.: FDP-DC-CRESCENT-1A, ECP 15-014, F 15-016, F 15-016, ECP 17-027
6. TOPOGRAPHIC AERIAL SURVEY WAS PERFORMED ON MARCH 2007 BY MCKENZIE SNYDER AND TOPOGRAPHIC FIELD SURVEY ON AUGUST, 2011 BY GUTSCHICK, LITTLE AND WEBER.
7. COORDINATES ARE BASED ON NAD '83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATION NUMBERS 36AA AND 36BA.
8. THE EXISTING UTILITIES SHOWN HEREIN WERE DERIVED FROM AVAILABLE PUBLIC RECORDS AND FIELD LOCATIONS BY GUTSCHICK, LITTLE & WEBER, P.A. THE CONTRACTOR MUST DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS AND CONNECTION POINTS TO VERIFY EXACT LOCATION.
9. SPOT ELEVATIONS SHOWN FOR CURBS ARE BOTTOM OF CURB UNLESS OTHERWISE NOTED.
10. ALL PLAN DIMENSIONS ARE TO THE FACE OF BUILDING OR CURB UNLESS OTHERWISE NOTED. DIMENSIONS ARE MEASURED PERPENDICULAR OR RADIAL BETWEEN ITEMS UNLESS NOTED OTHERWISE.
11. THERE ARE NO KNOWN GRAVE SITES, CEMETERIES, FLOOD PLAINS OR WETLANDS ON SITE. WETLANDS AND FLOODPLAIN ARE PRESENT ADJACENT TO THIS SITE BUT ARE NOT BEING DISTURBED UNDER THIS PLAN.
12. CURB RADI ARE AS NOTED ON SHEET 2.
13. A TRAFFIC IMPACT STUDY IS NOT REQUIRED FOR THIS SITE PLAN AS NO BUILDINGS ARE PROPOSED, THEREFORE NO ADDITIONAL TRAFFIC WILL BE GENERATED.
14. THE PROJECT IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE SECTION 16.1200(B)(1)(V) (PAID WITH A FDP APPROVED PRIOR TO 12/31/02).
15. THE CONTRACTOR SHALL TEST PIT ALL EXISTING UTILITIES AT LEAST (5) DAYS PRIOR TO STARTING ANY WORK SHOWN ON THESE DRAWINGS AND NOTIFY THE ENGINEER OF ANY CONFLICTS.
16. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
17. NOTE: IN CASE OF DISCREPANCIES BETWEEN THE PLAN AND THE PLANS, THE PLAN SHALL GOVERN.
18. ALL OUTDOOR LIGHTING SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS ON-SITE AWAY FROM ALL ADJOINING PUBLIC ROADS AND IN ACCORDANCE WITH SECTION 154 OF THE HOWARD COUNTY ZONING REGULATIONS.
19. THE LANDSCAPE PLAN WAS PREPARED ACCORDING TO THE ALTERNATIVE COMPLIANCE SECTION OF THE LANDSCAPE MANUAL, THE LANDSCAPE PLANS HAVE BEEN PREPARED BY A REGISTERED LANDSCAPE ARCHITECT AND IS CERTIFIED TO MEET THE DESIGN INTENT OF THE CRESCENT NEIGHBORHOOD DESIGN GUIDELINES.
20. THIS PROPERTY IS SUBJECT TO THE CRESCENT NEIGHBORHOOD SPECIFIC DESIGN GUIDELINES (NSDG), RECORDED IN L. 16305, F. 415, THE CRESCENT NEIGHBORHOOD SPECIFIC IMPLEMENTATION PLAN (NSIP), RECORDED IN L. 16306, F. 1, THE CRESCENT NEIGHBORHOOD CONCEPT PLAN (NCP) RECORDED AS PLAT NOS. 23941 THRU 23942 AND THE CRESCENT FINAL DEVELOPMENT PLAN (FDP-DC-CRESCENT-I), RECORDED AS PLAT NOS. 23943 THRU 23944.
21. SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF \$8,700 SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENTS. LANDSCAPING WITHIN THE STORMWATER MANAGEMENT FACILITIES SHALL BE ASSESSED AS PART OF THE DEPARTMENT OF PUBLIC WORKS BIO-RETENTION SURETY.
22. AT THE TIME OF SDP APPROVAL, THE SITE IS UNDER PHASE 1 OF THE DOWNTOWN REVITALIZATION PHASING PROGRESSION.
23. THERE ARE HIGHLY ERODIBLE SOILS ON SITE. MORE STRINGENT SEEDING AND STABILIZATION METHODS MAY BE EXPECTED. SOIL TABLE PROVIDED ON SHEET 5.
24. REQUIREMENTS FOR SECTION 16.144(B)(4) HAVE BEEN WAIVED FOR AREAS 1 AND 2, DEFINED AS PARCELS A-C ON THE FINAL DEVELOPMENT PLAN BY WAIVER NP-15-144 GRANTED BY THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING.
25. A DESIGN MANUAL WAIVER FOR THIS SITE CONSISTS OF A WAIVER OF VOL. 3-SECTION 2.5.3.4--CURB FILLET DESIGN, SUBMITTED ON MARCH 7, 2017 AND APPROVED ON MARCH 21, 2017. THERE ARE NO CONDITIONS OF THIS WAIVER.
26. SITE AREA FALLS WITHIN HOWARD COUNTY SCD SOIL MAP #8.
27. DOWNTOWN COMMUNITY COMMONS REQUIREMENTS FOR THIS PARCEL WERE SATISFIED BY SDP-15-060. ADDITIONAL OR ALTERNATIVE DOWNTOWN COMMUNITY COMMONS MAY BE CONSIDERED WITH FUTURE REDEVELOPMENT.
28. STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED IN ACCORDANCE WITH CHAPTER 5 OF THE MDE STORMWATER MANAGEMENT DESIGN MANUAL, VOLUMES 1 AND 2. FOR THIS SITE A SUBMERGED GRAVEL WETLAND (M-2) FACILITY HAS BEEN PROPOSED. A P6 VALUE OF 2.60" WAS CALCULATED AS THE TARGET FOR THIS SITE. THE SUBMERGED GRAVEL WETLAND WILL BE PRIVATELY OWNED AND PRIVATELY MAINTAINED.
29. GENERAL TRAFFIC CONTROL NOTES:  
29.1. THE 18" (51007) SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.  
29.2. THE TRAFFIC CONTROL DEVICES SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2450) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.  
29.3. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).  
29.4. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED SQUARE (1/8" SLEEVE ID) GALVANIZED 3" LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO (2) "X" INCHES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.  
30. A PRE-EMMISSION COMMUNITY MEETING FOR THIS PROPERTY WAS HELD ON NOVEMBER 15, 2016.
31. PARCEL B IS INCLUDED WITHIN THE PARKING EASEMENT AGREEMENT RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY IN BOOK 1728 AT PAGE 15 AND IS AVAILABLE PRIOR TO ITS REDEVELOPMENT, TOWARDS THE 3000 TOTAL PARKING SPACES REQUIRED FOR MERRIWEATHER EVENTS, BEGINNING WITH THE 2018 OPERATING SEASON. AVAILABILITY OF SPACES FOR MERRIWEATHER EVENTS WILL BE DETERMINED PURSUANT TO THE DOWNTOWN REVITALIZATION SHARED PARKING METHODOLOGY. THE 181 SPACES ARE NON-EXCLUSIVE, ARE PROVIDED IN FURTHERANCE OF THE "PARK ONCE" APPROACH IN THE DOWNTOWN COLUMBIA PLAN, AND ARE ABOVE AND BEYOND ZONING REQUIREMENTS.

# SITE DEVELOPMENT PLAN DOWNTOWN COLUMBIA CRESCENT NEIGHBORHOOD

## PARCEL B TEMPORARY PARKING LOT ASBUILTS

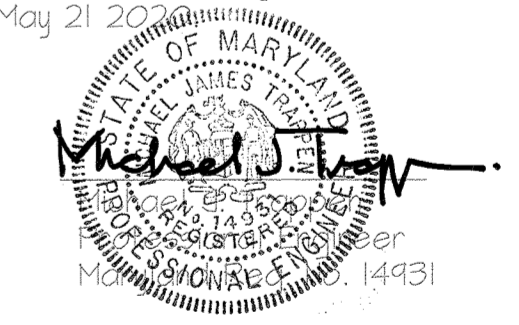


**HC CONTROL STATIONS**  
 306A NORTHING: 566,053.9471 EASTING: 13521715307 ELEVATION: 334.870 (LATEST ADJ. NOV. 2008)  
 36AA NORTHING: 562,804.8537 EASTING: 1344,106,1101 ELEVATION: 354.151 (LATEST ADJ. NOV. 2008)



- SHEET INDEX**
- 1. COVER SHEET
  - 2. SITE DEVELOPMENT PLAN
  - 3. GRADING PLAN
  - 4. SEDIMENT CONTROL PLAN
  - 5. SEDIMENT CONTROL NOTES & DETAILS
  - 6. STORM DRAIN PROFILES
  - 7. STORMWATER MANAGEMENT PLAN
  - 8. STORMWATER MANAGEMENT NOTES & DETAILS
  - 9. LANDSCAPE PLAN
  - 10. SITE DETAILS
1. GENERAL SITE DATA  
 A. TOTAL PROJECT AREA: 198 AC.  
 B. LIMIT OF DISTURBED AREA: 2.04 AC.  
 C. PRESENT ZONING: NT (FDP-DC-CRESCENT-1A)  
 D. PROPOSED USE OF SITE: INTERIM PARKING LOT
2. PARKING REQUIREMENTS: THERE ARE NO REQUIREMENTS FOR PARKING AS THERE ARE NO BUILDINGS BEING PROPOSED ON THIS SITE PLAN.
3. PARKING PROVIDED:  
 181 SPACES TOTAL  
 (5 STD. HANDICAP SPACES)  
 (2 VAN HANDICAP SPACES)  
 (174 STANDARD SPACES)

**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. 14431, Expiration Date: May 21, 2020.



10/22/19  
 Date

**APPROVED**  
**PLANNING BOARD OF HOWARD COUNTY**  
 Date: JULY 6, 2017

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: Valdis J. Jolly 9-21-17  
 Date: 9-21-17  
 Chief, Division of Land Development  
 Date: 9-15-17  
 Chief, Development Engineering Division

**ESDv SUMMARY TABLE**

FACILITY	DRAINAGE AREA (SF)	MAX. ESDv (CF) (Pe=2.60")	MIN. ESDv (CF) (Pe=1.00")	ESDv PROVIDED (CF)
SEM-1	71,410	12,453	4,790	10,052
TOTAL ESDv PROVIDED:				10,052
REDEVELOPMENT ESDv REQUIRED:				425
NEW DEVELOPMENT ESDv REQUIRED:				9,059
TOTAL ESDv REQUIRED:				9,484

✓ TARGET Pe FOR THIS SITE = 2.60 IN.

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20886  
 TEL: 301-421-4024 FAX: 410-680-1820 DC/WA: 301-589-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

OWNER/PREPARED FOR:  
 THE HOWARD HUGHES CORPORATION  
 10480 LITTLE PATUXENT PARKWAY  
 SUITE 400  
 COLUMBIA, MD 21044  
 ATTN: MR. BILL ROWE  
 410-964-4800

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE PLANS 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. 12915, EXPIRATION DATE: MAY 26, 2020.

8/20/19  
 [Signature]

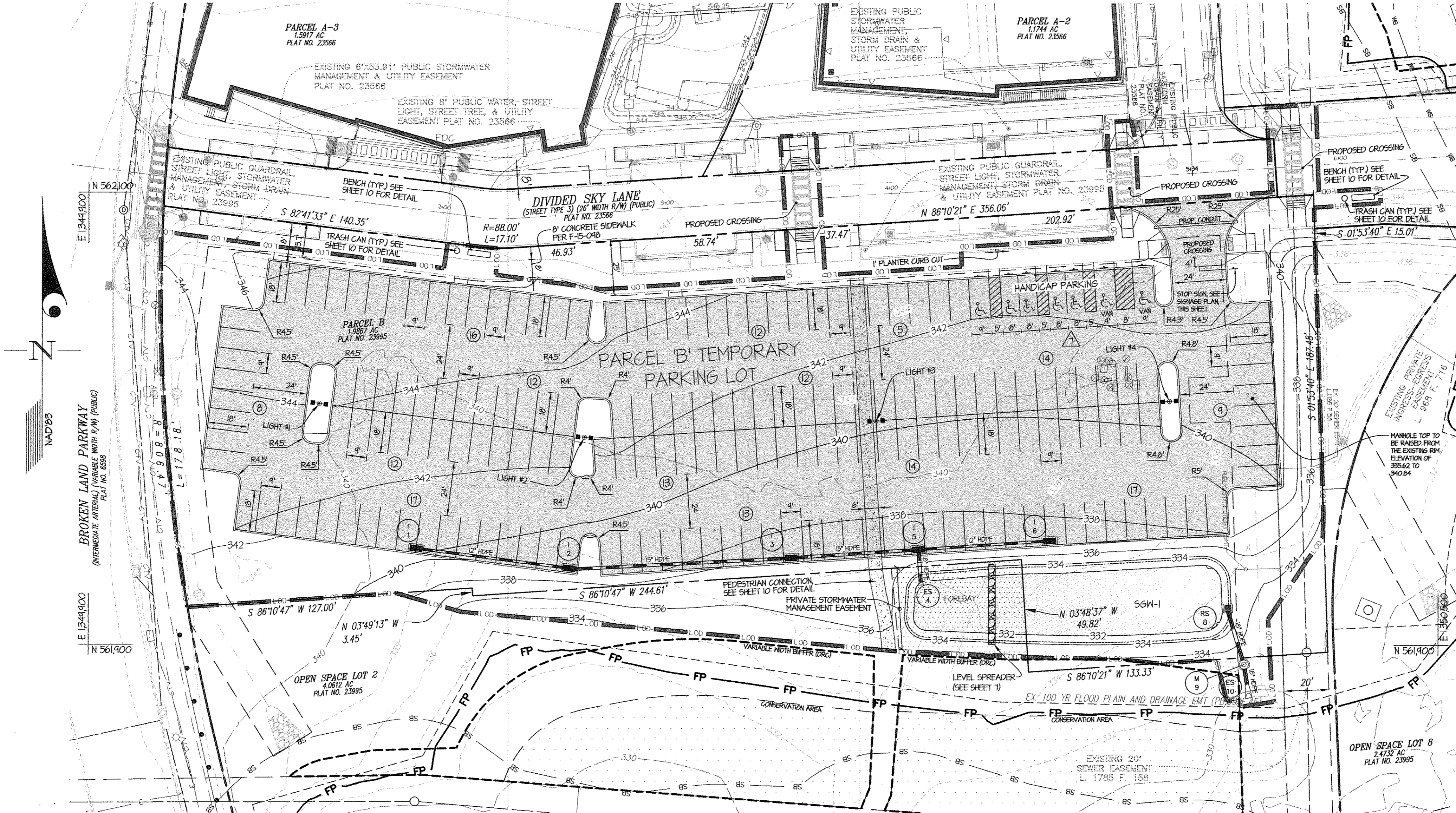
**ASBUILTS**  
**COVER SHEET**  
**DOWNTOWN COLUMBIA**  
**CRESCENT NEIGHBORHOOD**  
**PARCEL B**  
**TEMPORARY PARKING LOT**  
**(PART OF TAX PARCEL 527)**

PERMIT INFORMATION CHART						
SUBDIVISION NAME: DOWNTOWN COLUMBIA		SECTION/AREA: N/A		PARCEL: PARCEL B		
PLAT No. 23945	PARCEL 527	ZONE NT	TAX MAP 36	BLOCK 1	ELEC. DIST. 5	CENSUS TRACT 6054
WATER CODE: EBI			SEWER CODE: 9521000			
ASBUILT SHEET 1 OF 3						
SCALE AS SHOWN	ZONING NT	G. L. W. FILE No. 15019		SHEET 1 OF 10		
DATE OCT. 2019 AUG. 2017	TAX MAP - GRID 36 - 01	SHEET 1 OF 10				

PARKING TABLE		
SYMBOL	TYPE OF PARKING SPACE	NUMBER OF SPACES
⊕	STANDARD SPACE (4' x 18')	174
△	HANDICAP SPACE (VARIABLE WIDTH x 18')	7
		181

**LEGEND**

- 100-YR FLOODPLAIN
- LIMITS OF DISTURBANCE
- STREAM BUFFER
- WETLANDS BUFFER
- PROPOSED BUILDING
- PROPOSED SWM AREA
- PROPOSED PAVING (P-3)
- PROPOSED CONCRETE WALK
- PROPOSED PERMEABLE PAVEMENT
- EX. CONTOUR
- PROP. CONTOUR
- STORM DRAIN
- EX. CURB & GUTTER
- CONCRETE CURB & GUTTER
- PROPOSED FLUSH CURB
- SPOT ELEVATION
- SUBMERGED GRAVEL WETLANDS MDE STANDARD, M-2
- PROPOSED SIGN
- PARKING BAY SPACE DESIGNATION AND COUNT (SEE PARKING TABLE, THIS PAGE)



LIGHT LOCATIONS		
LIGHT #	COORDINATES	TYPE
LIGHT #1	N 562.006 E 1350.004	A
LIGHT #2	N 561.991 E 1350.021	A
LIGHT #3	N 561.991 E 1350.250	A
LIGHT #4	N 562.007 E 1350.381	A

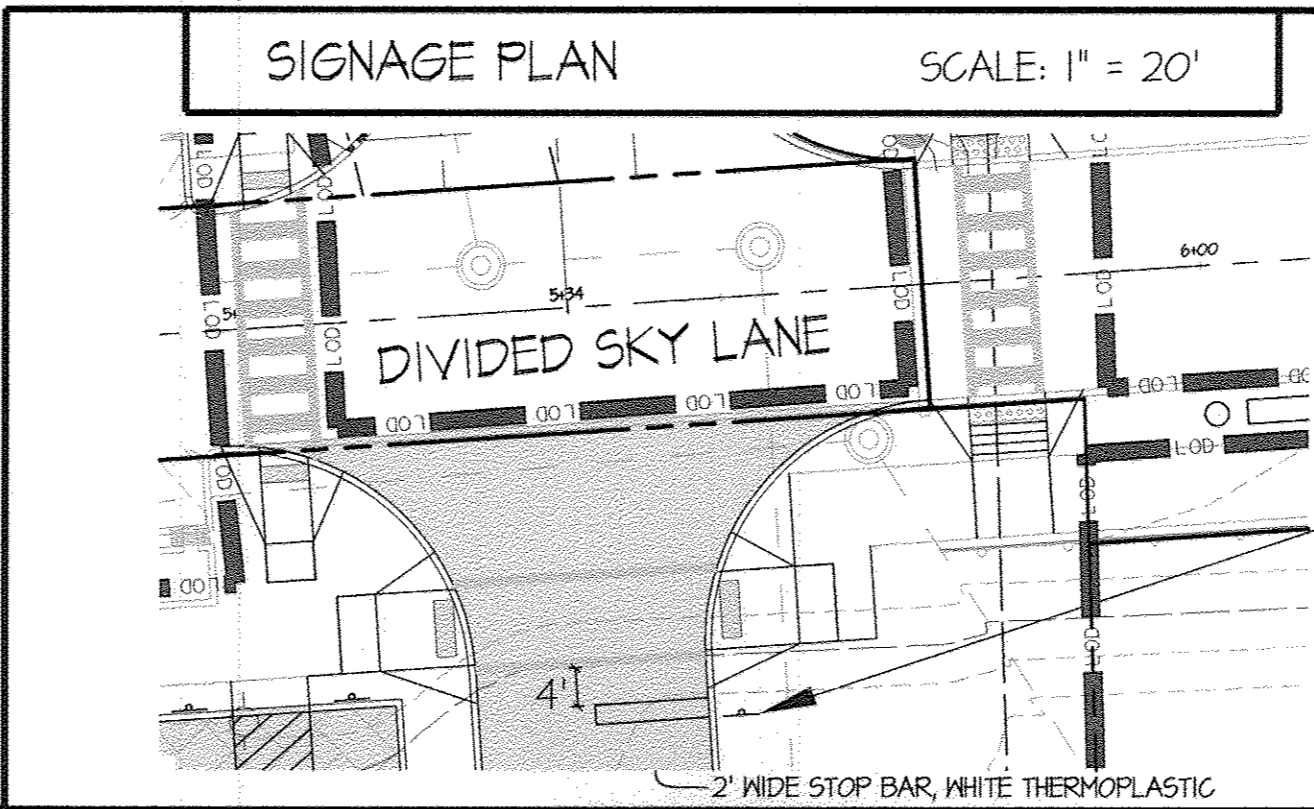
LIGHTING SCHEDULE					
TYPE	SYMBOL	MANUFACTURER / CAT. NUMBER	LED MODULES	LUMENS	MOUNTING
A	⊕	EATON-MCGRAW-EDISON / 6LEON-AF-06-LED-EI-T3-BZ-1090-600-R-0NRA1016-LCF	46	20,764 lm	30', ROUND POLE

**APPROVED**  
**PLANNING BOARD OF HOWARD COUNTY**  
 Date:       JULY 6, 2017      

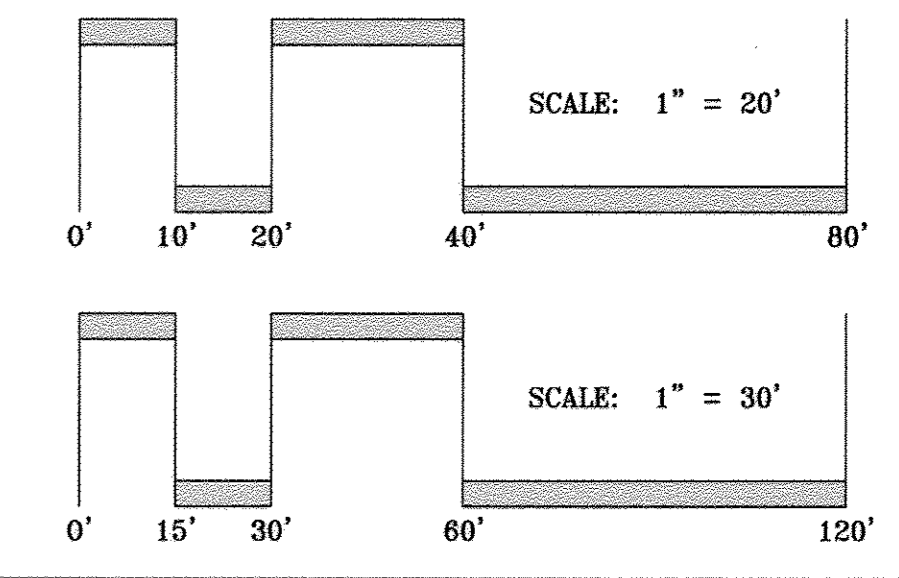
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*[Signature]* 9-21-17  
 Director Date  
*[Signature]* 9-21-17  
 Chief, Division of Land Development Date  
*[Signature]* 9-15-17  
 Chief, Development Engineering Division Date

- NOTES:**
- ONE 4" CONDUIT SHALL BE INSTALLED AT A DEPTH OF 36" UNDER THE PROPOSED DRIVEWAY ENTRANCE TO THIS PARKING LOT AT THE LOCATION SHOWN.

- PAVEMENT MARKING NOTES:**
- SEE SHEET 10 FOR PAVEMENT MARKING DETAILS
  - ALL LONG LINE MARKINGS TO BE APPLIED USING THERMOPLASTIC MATERIAL
  - THE CROSSWALK AND ARROWS TO BE INSTALLED USING PREFORMED HEAT APPLIED TAPE OR THERMOPLASTIC
  - ALL PAVEMENT MARKINGS ARE TO BE LOCATED OR APPROVED BY THE TRAFFIC DIVISION PRIOR TO THE PLACEMENT OF ANY MARKINGS
  - ALL EXISTING PAVEMENT MARKING IN CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS ARE TO BE REMOVED BY GRINDING ONLY. HOWARD COUNTY TRAFFIC (410-313-5152) WILL DETERMINE WHICH EXISTING MARKINGS SHALL BE REMOVED



SIGN SCHEDULE			
TYPE	SIZE	STATION	OFFSET
RI-1	30" x 30"	5+44 DIVIDED SKY LANE	43.0' R.T.



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

DATE	REVISION	BY	APPR.

OWNER/PREPARED FOR:  
 THE HOWARD HUGHES CORPORATION  
 10480 LITTLE PATUXENT PARKWAY  
 SUITE 400  
 COLUMBIA, MD 21044  
 ATTN: MR. BILL ROWE  
 410-964-4800

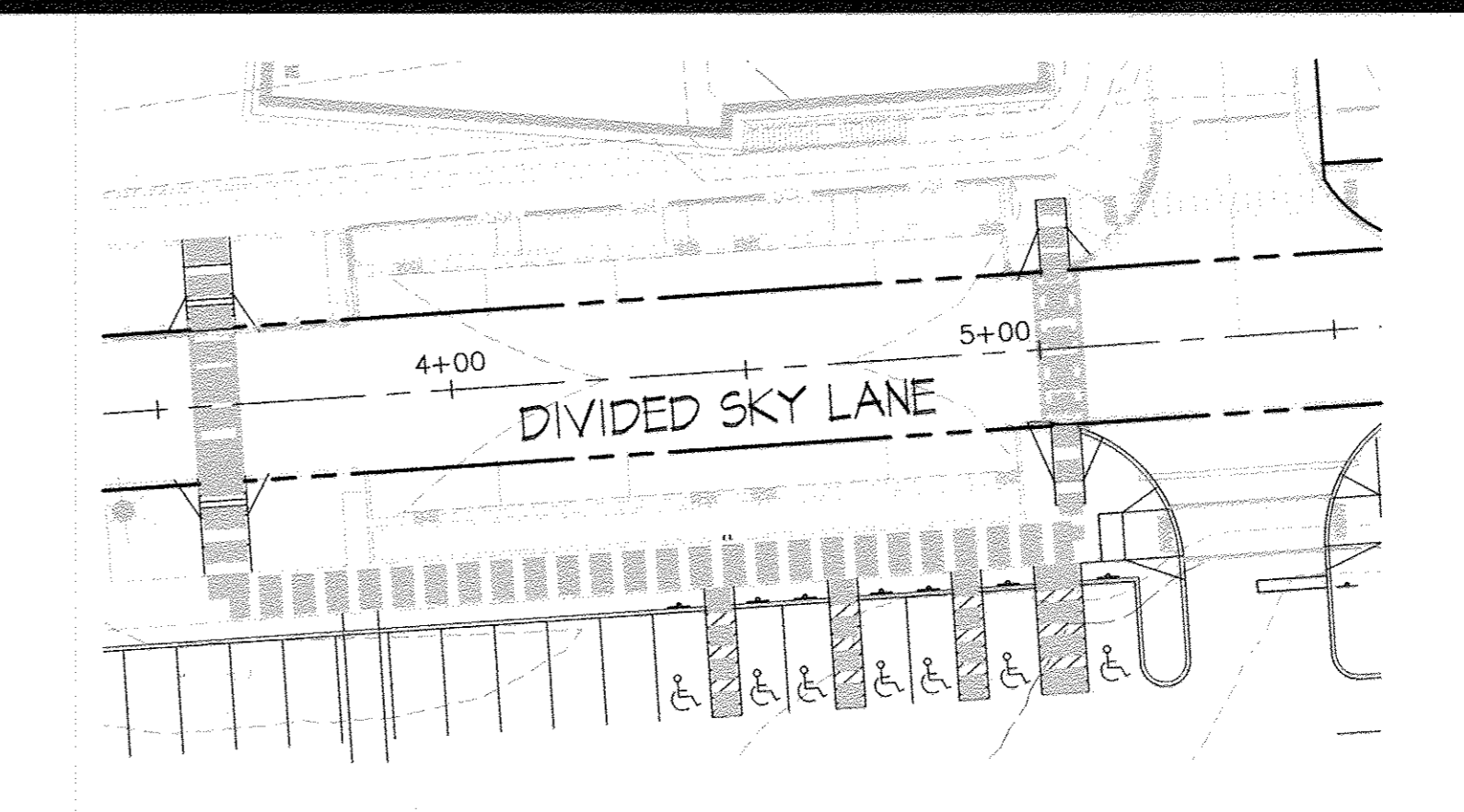
PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 LICENSE NO. 12478  
 EXPIRATION DATE: MAY 26, 2018  
 8/28/17

**SITE DEVELOPMENT PLAN**  
**DOWNTOWN COLUMBIA**  
**CRESCENT NEIGHBORHOOD**  
**PARCEL B**  
**TEMPORARY PARKING LOT**  
 (PART OF TAX PARCEL 527)

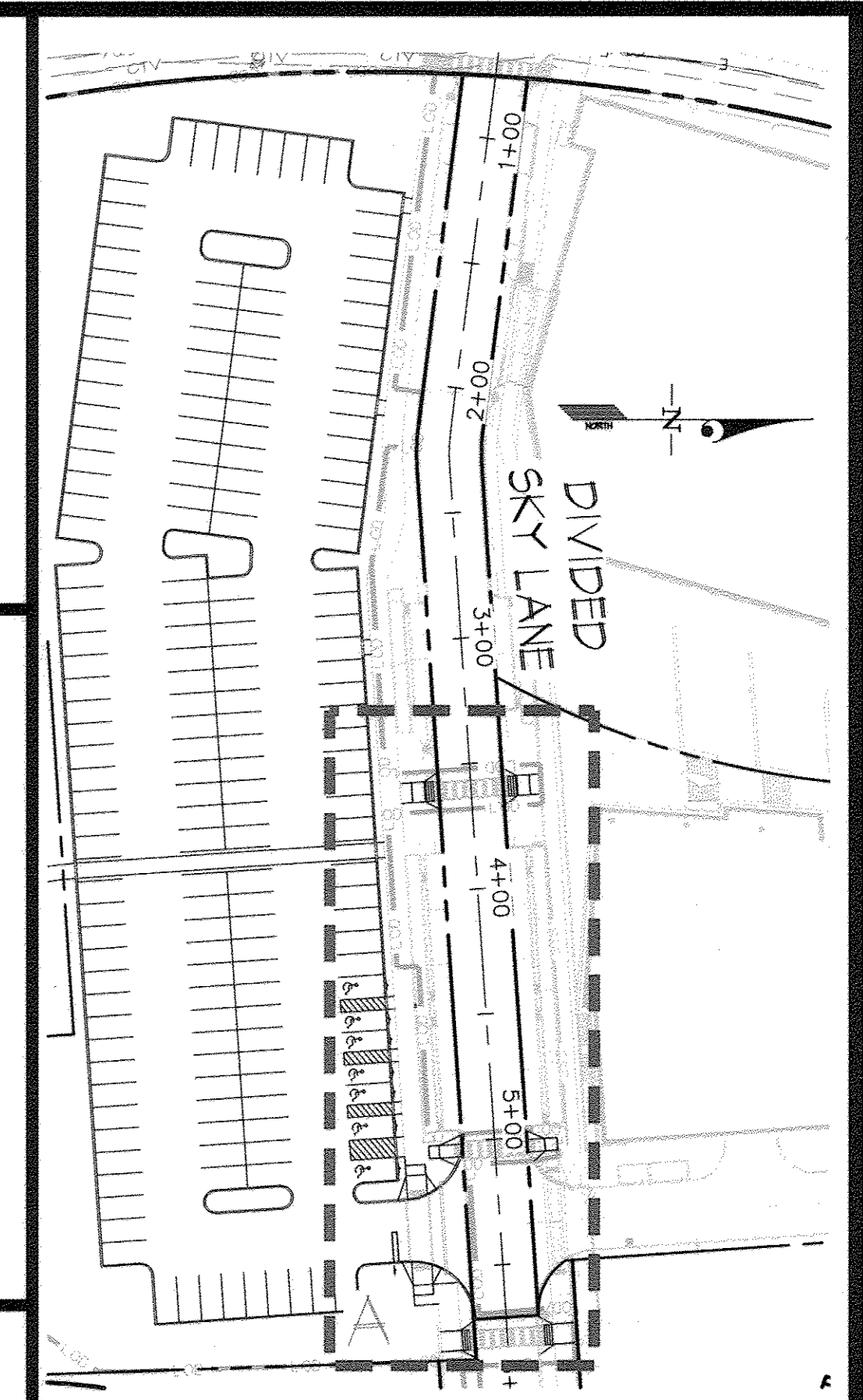
SCALE	ZONING	G. L. W. FILE No.
1" = 30'	NT	15019
DATE	TAX MAP - GRID	SHEET
AUG., 2017	36 - 01	2 OF 10



- NOTES:
1. ALL SPOT ELEVATIONS AT CURBS ARE FLOW LINE ELEVATIONS
  2. IN ALL ADA ACCESSIBLE AREAS, SLOPES ARE TO BE LESS THAN 2.0% IN ALL DIRECTIONS
  3. SEE SHEET 10 FOR CURB RAMP, TRUNCATED DOME, AND CROSSWALK STRIPING DETAILS



ADA ROUTES TO DEVELOPMENT ON NORTH SIDE OF DIVIDED SKY LANE SCALE: 1"=30'

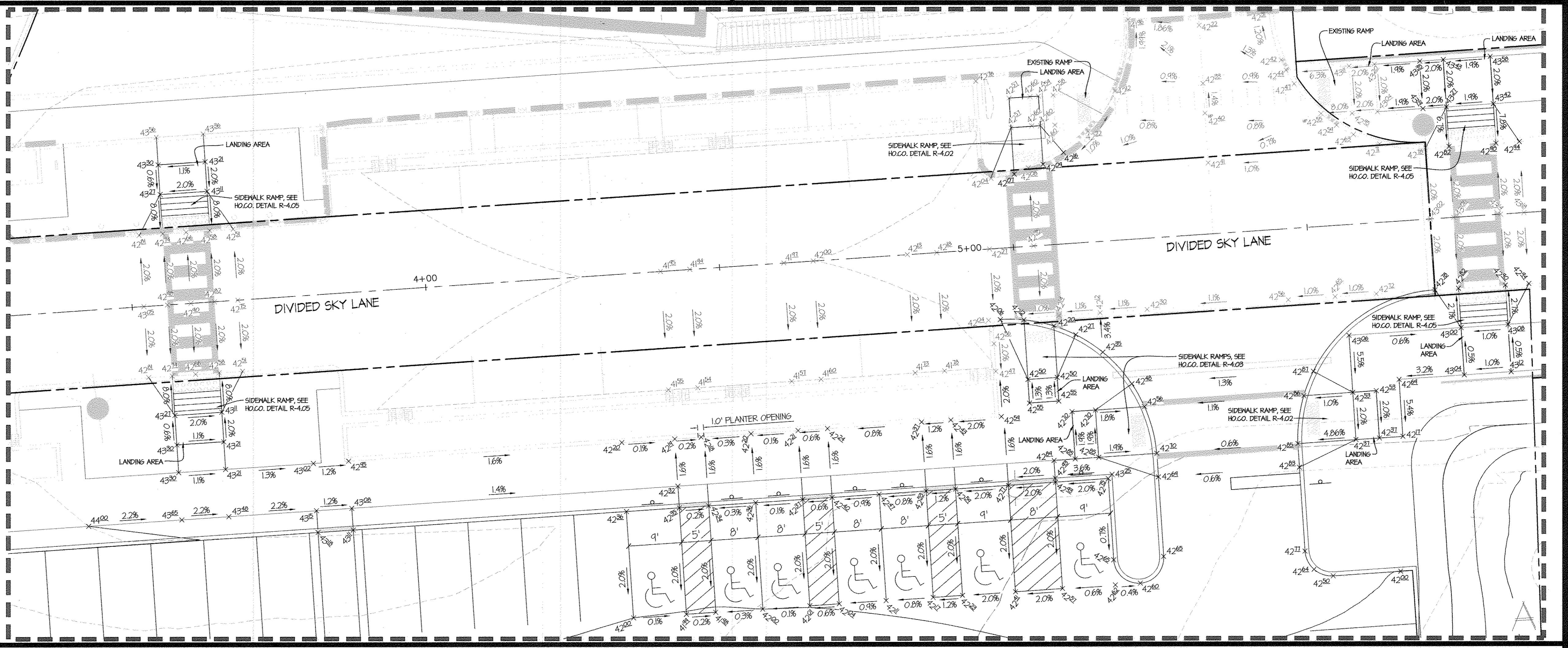


KEY MAP SCALE: 1"=60'

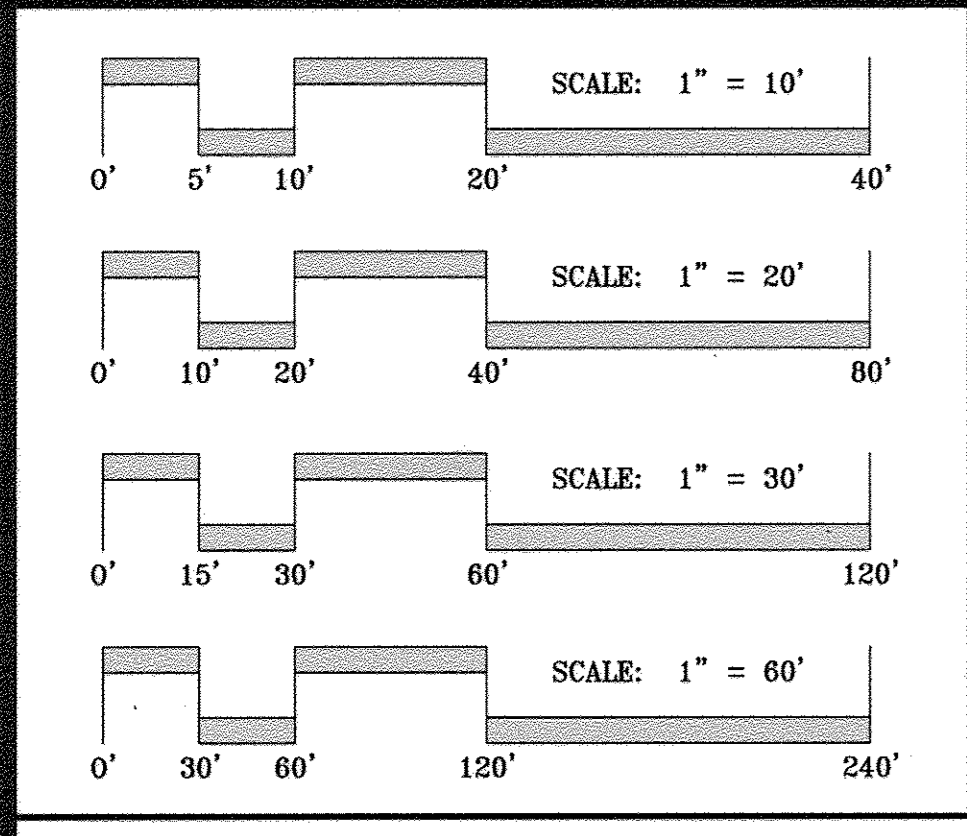
**LEGEND**

FP	100-YR FLOODPLAIN	PROPOSED FLUSH CURB
LOO	LIMITS OF DISTURBANCE	PROPOSED SPOT ELEVATION
SB	STREAM BUFFER	EXISTING SPOT ELEVATION
WB	WETLANDS BUFFER	EX. CURB & GUTTER
366	EX. CONTOUR	CONCRETE CURB & GUTTER
---	WATERLINE	PROP. CONTOUR
---	PROP. 4" UNDERDRAIN	EXIST. STORM DRAIN
---	PROP. 6" UNDERDRAIN	SANITARY SEWER
---	ADA ROUTE	PROP. TREELINE

GRADING PLAN SCALE: 1"=30'



AREA - A SCALE: 1"=10'



APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
Date: JULY 6, 2017

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Valerie Zylber* 4-21-17  
 Director Date  
*Kathleen* 7-21-17  
 Chief, Division of Land Development Date  
*Chad* 9-15-17  
 Chief, Development Engineering Division Date

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
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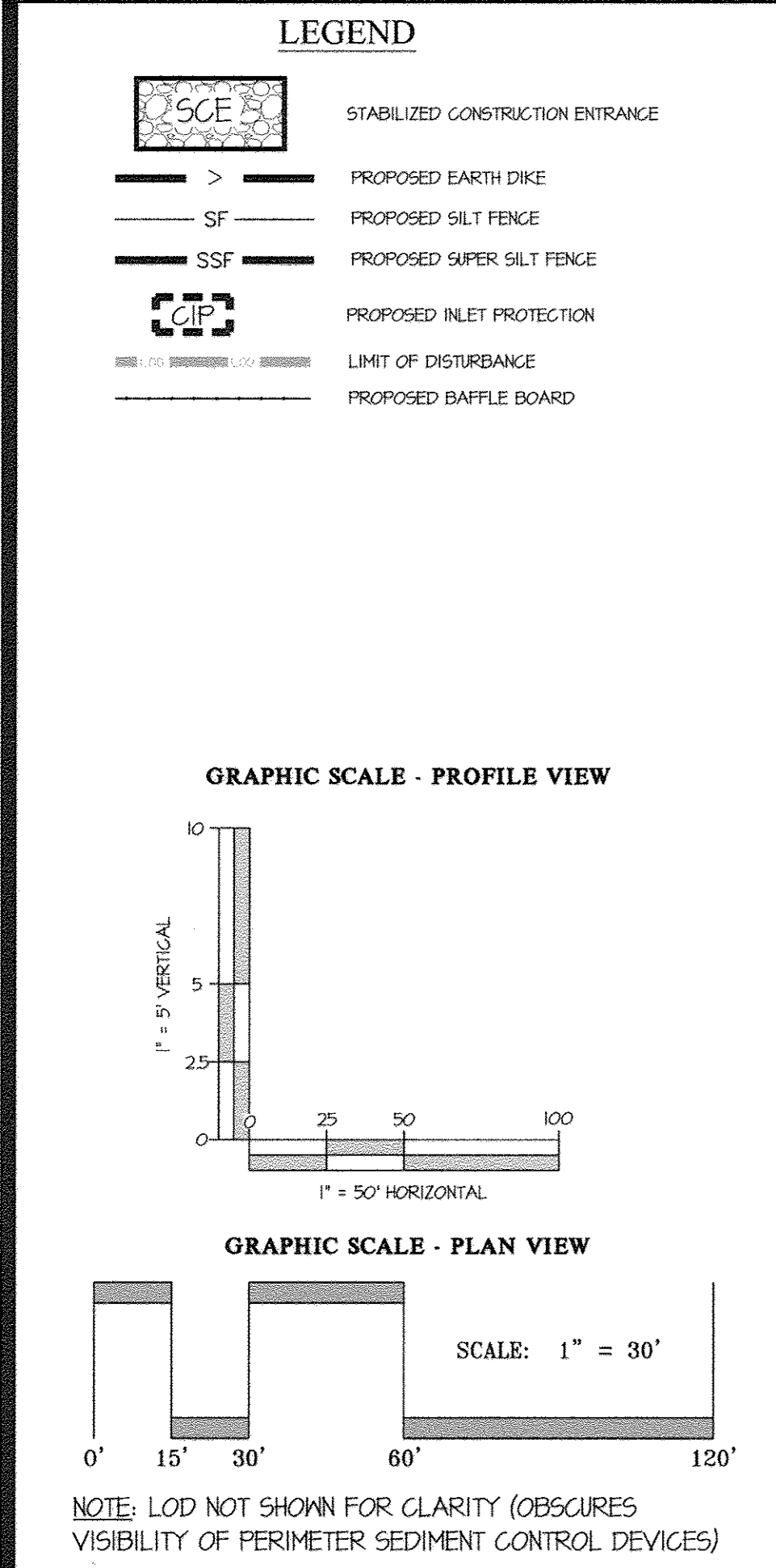
DATE	REVISION	BY	APP'R.

OWNER/PREPARED FOR:  
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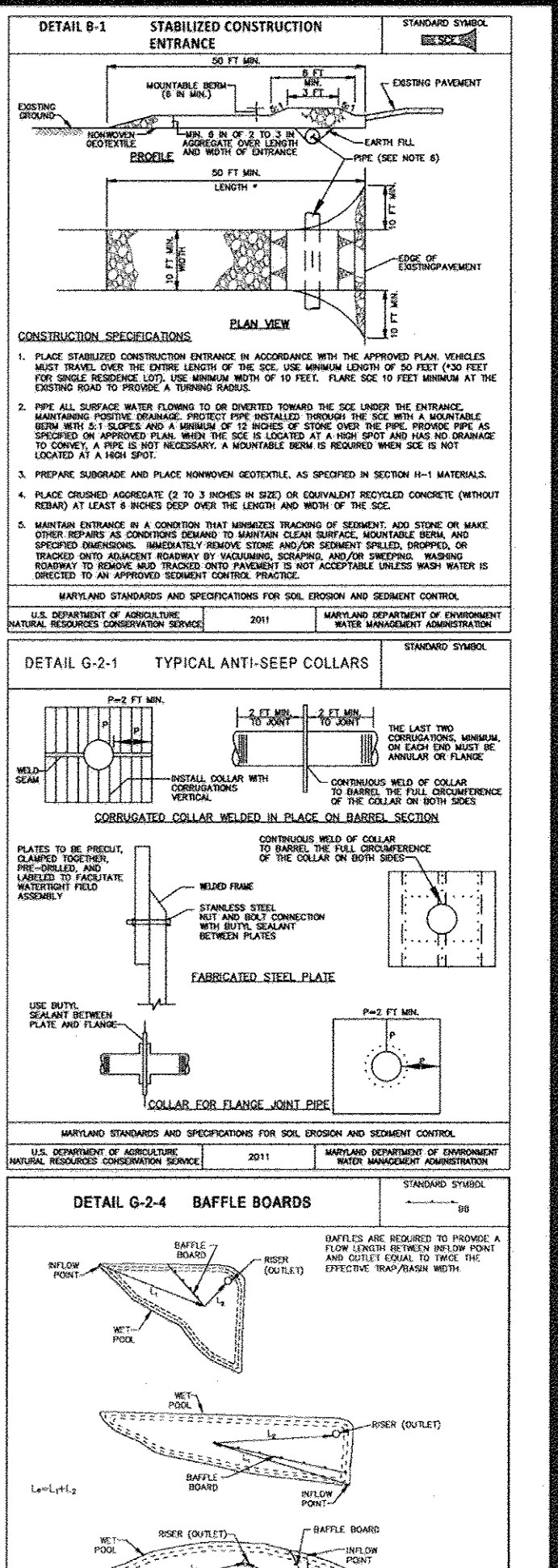
PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 LICENSE NO. 12315  
 EXPIRATION DATE: MAY 26, 2018  
 8/28/17

**GRADING PLAN**  
**DOWNTOWN COLUMBIA**  
**CRESCENT NEIGHBORHOOD**  
**PARCEL B**  
 TEMPORARY PARKING LOT  
 (PART OF TAX PARCEL 527)  
 ELECTION DISTRICT No. 5  
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	NT	15019
DATE	TAX MAP - GRID	SHEET
AUG., 2017	36 - 01	3 OF 10



- ### SEQUENCE OF CONSTRUCTION:
- OBTAIN GRADING PERMIT. (1 DAY)
  - ARRANGE FOR AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. (1 DAY)
  - INSTALL THE STONE CONSTRUCTION ENTRANCES AND SUPER SILT FENCES. (1 WEEK)
  - AS GRADING ALLOWS, INSTALL EARTH DIKES 1 AND 2 AND SEDIMENT TRAP 1 AND THE CORRESPONDING STORM DRAIN AND OUTFALLS. (1 WEEK)
  - PERFORM ROUGH GRADING AND RAISE EXISTING MANHOLE 75 TO MEET THE NEWLY PROPOSED GRADE. (2 WEEKS)
  - INSTALL THE STORM DRAIN AND PROVIDE INLET PROTECTION. (2 WEEKS)
  - PERFORM FINE GRADING AND CONSTRUCT THE PARKING LOT. (4 WEEKS)
  - STABILIZE THE DISTURBED AREAS AS NECESSARY AND AS REQUIRED. (2 WEEKS)
  - WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES BESIDES THOSE DOWNSTREAM OF THE SEDIMENT TRAPS. (3 DAYS)
  - WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, BEGIN CONVERTING THE SEDIMENT TRAP INTO FINAL STORMWATER MANAGEMENT FACILITIES AND IMMEDIATELY STABILIZE ANY AREAS DISTURBED AS A RESULT. (2 WEEKS)
  - FLUSH ALL STORM DRAIN SYSTEMS. (1 WEEK)
- \*ITEMS 1-11 CAN BE PERFORMED CONCURRENTLY AS THE CONTRACTOR SEES FIT\*



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

*John C. Edenton* 9/12/17  
Howard S.C.D. Date

### ENGINEER'S CERTIFICATE

I HEREBY 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.

*CVL* 8/28/17  
ENGINEER'S SIGNATURE DATE

### DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*JD* 8-30-17  
SIGNATURE OF DEVELOPER/BUILDER DATE

### APPROVED PLANNING BOARD OF HOWARD COUNTY

Date:       JULY 6, 2017      

### APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

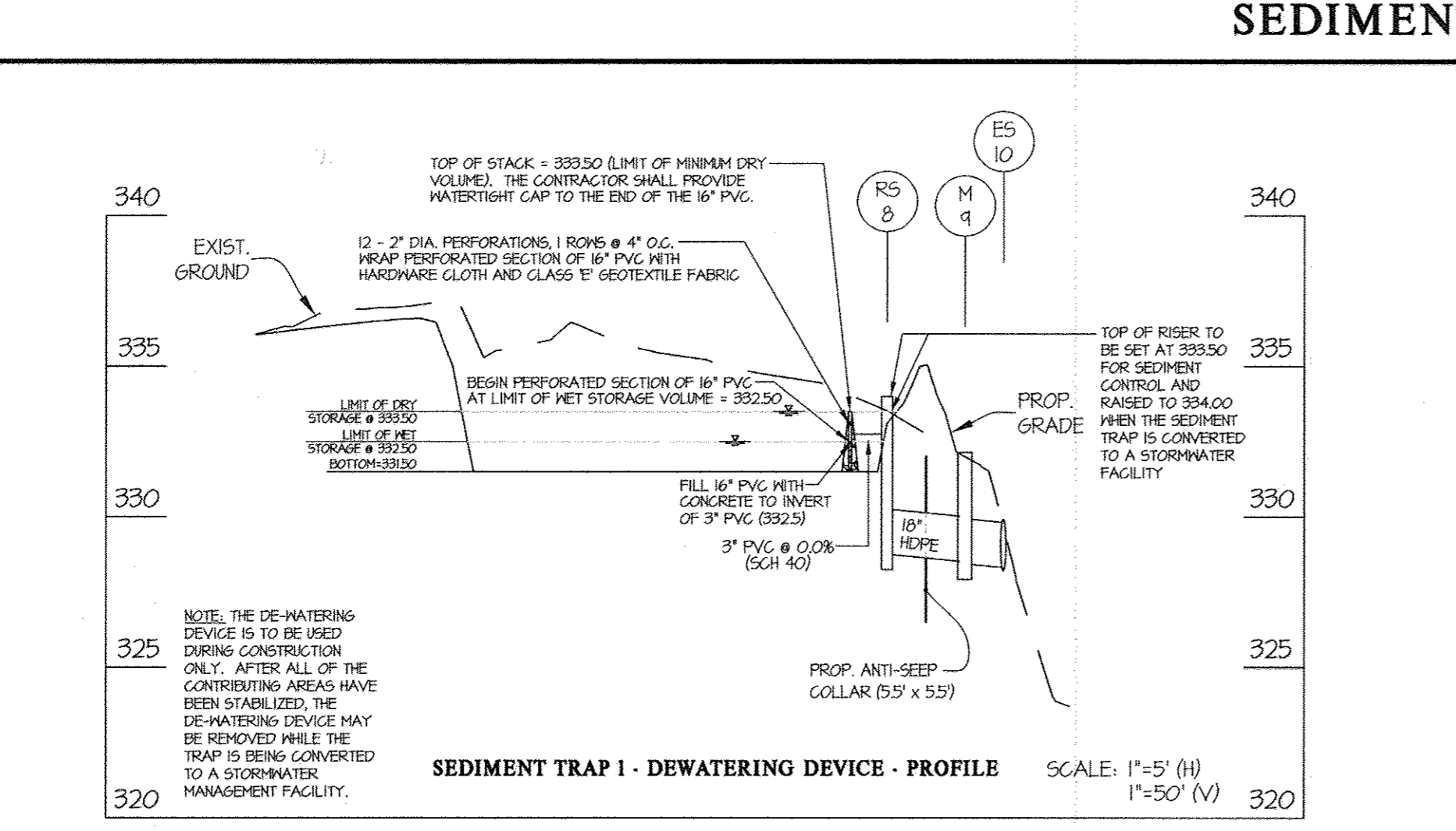
*Vallie J. Hill* 9-21-17  
Director Date

*Kathleen* 9-21-17  
Chief, Division of Land Development Date

*Chad* 9-15-17  
Chief, Development Engineering Division Date

### GLWGUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK  
BURTNSVILLE, MARYLAND 20886  
TEL: 301-421-4024 FAX: 301-989-2524

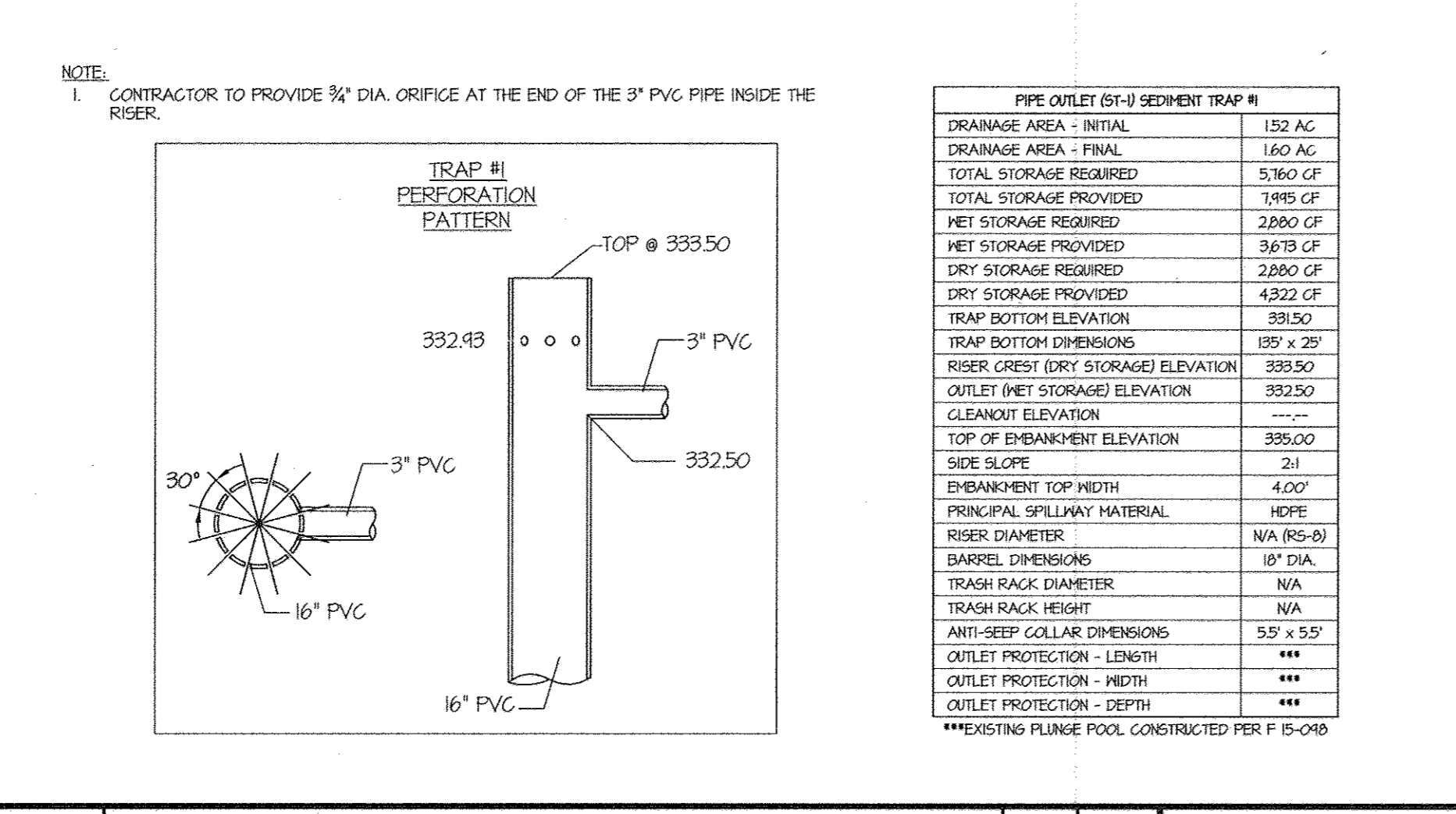


### EARTH DIKES

No.	MAXIMUM DRAINAGE AREA	AVG. SLOPE	TREATMENT	WEAR STRESS AT OUTFALL
ED #1	0.92 AC	3.5%	A-2	0.42 LB/FT <sup>2</sup>
ED #2	0.11 AC	11.7%	A-2	2.80 LB/FT <sup>2</sup>

### BAFFLE BOARD COMPUTATIONS

SEDIMENT TRAP	TRAP #1
AREA	4,652 SQ. FT.
EFFECTIVE WIDTH	48 FT
2x EFFECTIVE WIDTH	46 FT
FLOW LENGTH	10 FT
FLOW LENGTH AFTER BAFFLE INSTALLATION	116 FT



### LANDLOK®

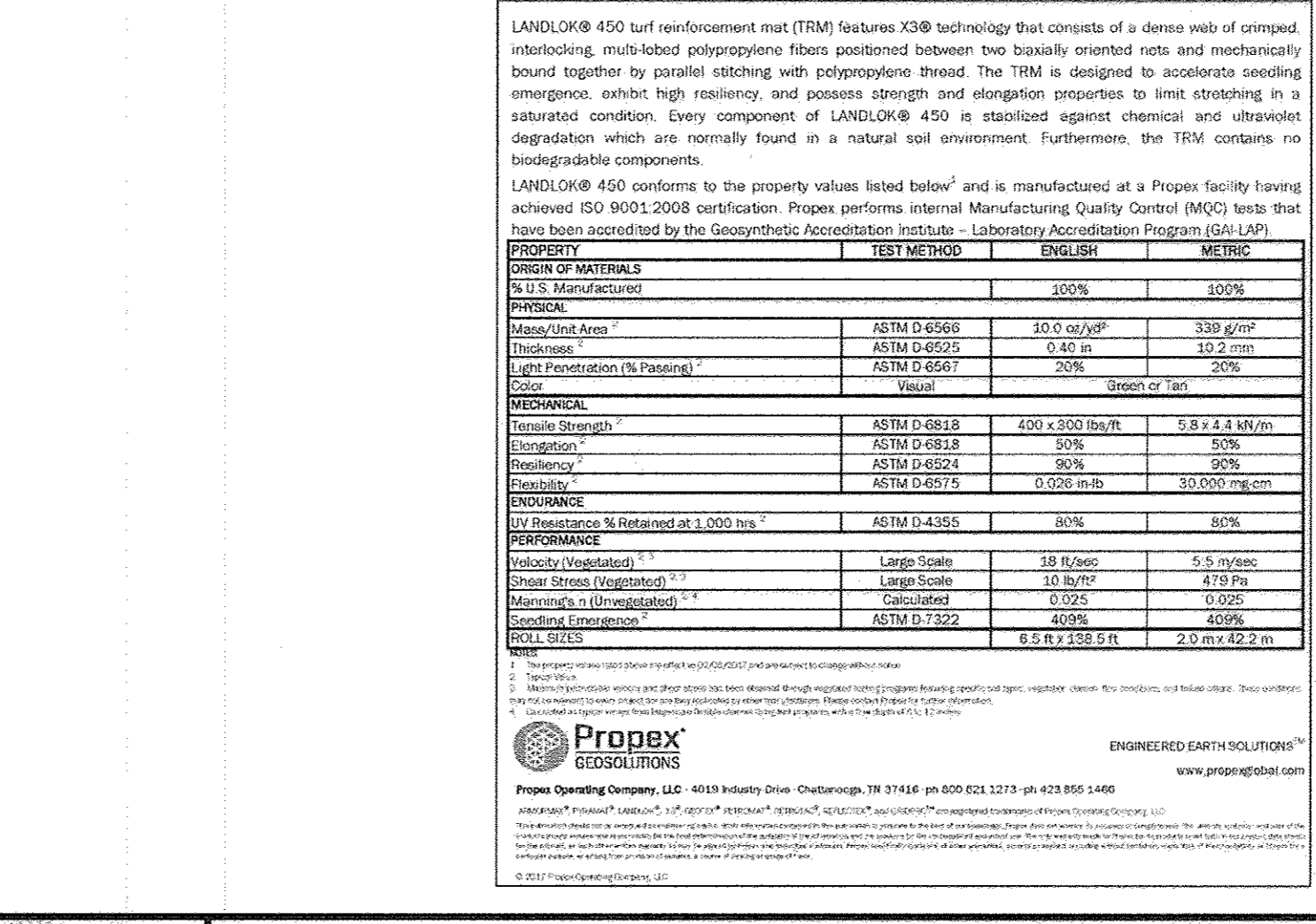
Product Data  
LANDLOK® 450 TRM

LANDLOK® 450 TRM features X38® technology that consists of a dense mesh of crimped interlocking, multi-layered polypropylene fibers positioned between two basally oriented nets and mechanically bound together by parallel stitching with polypropylene thread. The TRM is designed to accelerate sedimentation, improve high retention and possess strength and elongation properties to limit straining in a saturated condition. Every component of LANDLOK® 450 is stabilized against chemical and ultraviolet degradation which are normally found in a natural soil environment. Furthermore, the TRM contains no biodegradable components.

LANDLOK® 450 conforms to the property values listed below and is manufactured at a Propex facility having achieved ISO 9001:2008 certification. Propex performs internal Manufacturing Quality Control (MQC) tests that have been accredited by the Geosynthetic Acceptance Institute - Laboratory Accreditation Program (GI-LAP).

PROPERTY	TEST METHOD	ENGLISH	METRIC
PERCENTAGE OF OPENINGS		100%	100%
Perforation	ASTM D-5566	10.00 sq/ft	332 cm <sup>2</sup>
Thickness	ASTM D-5527	0.40 in	10.2 mm
Light Penetration (% Passing)	ASTM D-5566	20%	20%
Stitch		1/8" (3.18 mm)	3.18 mm
Tensile Strength	ASTM D-5818	400 x 300 lbs/ft	5.8 x 2.4 kN/m
Elongation	ASTM D-5818	50%	50%
Resistance	ASTM D-5524	90%	90%
Stitch	ASTM D-5574	0.038 in	0.96 mm
UV Resistance (% Retained at 1,000 hrs)	ASTM D-4353	90%	80%
Velocity (Installation)	Large Scale	18 ft/min	5.5 m/min
Small Scale (Installation)	Large Scale	10 ft/min	4.0 m/min
Manufacture (Installation)	Calculated	0.25%	0.25%
Sealing (Installation)	ASTM D-332	100%	100%
Roll Weight		5.8 x 11.5 lbs/ft	23.0 x 42.2 g/m

Propex Geosolutions ENGINEERED EARTH SOLUTIONS™



### OWNER/PREPARED FOR:

THE HOWARD HUGHES CORPORATION  
10480 LITTLE PATUMENT PARKWAY  
SUITE 400  
COLUMBIA, MD 21044  
ATTN: MR. BILL ROWE  
410-964-4800

### PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12415. EXPIRATION DATE: MAY 26, 2018.

8/28/17 *CVL*

### SEDIMENT CONTROL PLAN

## DOWNTOWN COLUMBIA CRESCENT NEIGHBORHOOD PARCEL B TEMPORARY PARKING LOT (PART OF TAX PARCEL 527)

SCALE: 1" = 30'

ZONING: NT

G. L. W. FILE NO.: 15019

DATE: AUG, 2017

TAX MAP - GRID: 36 - 01

SHEET: 4 OF 10

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

SEDIMENT CONTROL DRAINAGE AREA INFORMATION		
SEDIMENT CONTROL DEVICE	PRE-DEVELOPMENT DRAINAGE AREA	POST-DEVELOPMENT DRAINAGE AREA
SEDIMENT TRAP #1	152 AC.	160 AC.
EARTH DIKE #1	0.42 AC.	0.71 AC.
EARTH DIKE #2	0.11 AC.	0.08 AC.



**SCALE: 1" = 30'**

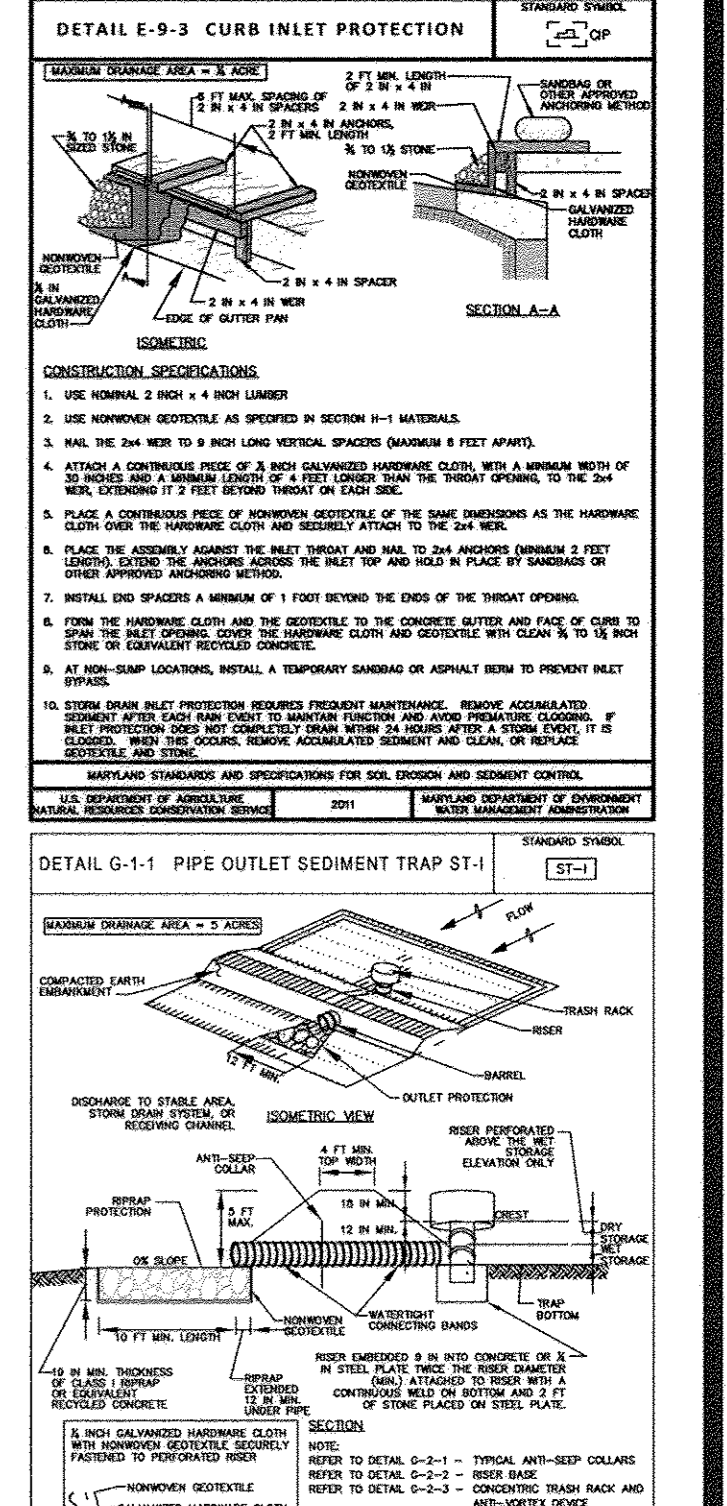
**SOIL TYPES**

Symbol	Description	Soil Type	K Factor
Ha	Hatboro Gadsden, 0 to 3 percent slopes	D	0.31
G6B	Gladstone Loam, 3 to 8 percent slopes	B	0.20

**LEGEND**

- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED EARTH DIKE
- PROPOSED SILT FENCE
- PROPOSED SAFER SILT FENCE
- PROPOSED INLET PROTECTION
- LIMIT OF DISTURBANCE
- SLOPES 15% to 25%
- SLOPES GREATER THAN 25%
- PRE-DEVELOPMENT DRAINAGE AREA
- POST-DEVELOPMENT DRAINAGE AREA
- SOIL TYPE AND HYDROLOGIC GROUPING
- SOIL BOUNDARY

**NOTE: LOD NOT SHOWN FOR CLARITY (OBSOLETE VISIBILITY PERMETER SEDIMENT CONTROL DEVICES)**



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

*John S. C. D.* 9/12/17  
Date

**ENGINEER'S CERTIFICATE**

I HEREBY 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 HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*John S. C. D.* 9/12/17  
Date

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*John S. C. D.* 8/30/17  
Date

**APPROVED PLANNING BOARD OF HOWARD COUNTY**

Date: JULY 4, 2017

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING**

Date: 9-21-17

Director: *Walter J. ...*

Chief, Division of Land Development: *Walter J. ...*

Chief, Development Engineering Division: *Walter J. ...*

**B-4.2 STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS**

**DEFINITION:** THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

**PURPOSE:** TO PROVIDE A SUITABLE MEDIUM FOR VEGETATIVE GROWTH.

**CONDITIONS WHERE PRACTICE APPLIES:** WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

**CRITERIA:**

- SOIL PREPARATION
- TEMPORARY STABILIZATION
- PERMANENT STABILIZATION

**B-4.3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING**

**DEFINITION:** THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

**PURPOSE:** TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

**CONDITIONS WHERE PRACTICE APPLIES:** TO THE SURFACE OF ALL PERMETER CONTROL SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

**CRITERIA:**

- MULCHING
- SEEDING
- ANCHORING

**B-4.4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION**

**DEFINITION:** TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

**PURPOSE:** TO USE FAST-GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

**CONDITIONS WHERE PRACTICE APPLIES:** AREAS SUBJECT TO DUST BLOWING AND MOVEMENT OF SOIL PARTICLES FROM CONSTRUCTION ACTIVITIES.

**CRITERIA:**

- SEED MIXTURES
- TEMPORARY STABILIZATION
- ANCHORING

**SEDIMENT CONTROL NOTES**

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, PLANNING AND ZONING DIVISION PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL VEGETATIVE AND STRUCTURAL MATERIALS TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THE CURRENT "MATERIALS SPECIFICATIONS AND REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL" AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE, TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 DAYS FOR ALL PERMETER CONTROL SLOPES AND ALL SLOPES GREATER THAN 15%.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAVE BEEN OBTAINED FROM THE HOWARD COUNTY DEPARTMENT OF INSPECTION, PLANNING AND ZONING DIVISION.

**B-4.5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION**

**DEFINITION:** TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

**PURPOSE:** TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GRASS COVER ON DISTURBED AREAS.

**CONDITIONS WHERE PRACTICE APPLIES:** EXPOSED SOILS WHERE GRASS COVER IS NEEDED FOR 6 MONTHS OR MORE.

**CRITERIA:**

- SEED MIXTURES
- TEMPORARY STABILIZATION
- ANCHORING

**TEMPORARY SEEDING SUMMARY**

No.	SPECIES	APPLICATION RATE (lb/1000 sq ft)	SEEDING DATE	SEEDING DEPTH (inches)	FERTILIZER (lb/1000 sq ft)	LIME RATE (lb/1000 sq ft)
1	PEARL MILLET	20 lb/ac	May 16 to July 31	0.5 INCHES	100 lb N/1000 sq ft	2000 lb Ca/1000 sq ft

**TEMPORARY SEEDING SUMMARY**

No.	SPECIES	APPLICATION RATE (lb/1000 sq ft)	SEEDING DATE	SEEDING DEPTH (inches)	FERTILIZER (lb/1000 sq ft)	LIME RATE (lb/1000 sq ft)
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**TEMPORARY SEEDING SUMMARY**

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**TEMPORARY SEEDING SUMMARY**

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**GLWGUTSCHICK LITTLE & WEBER, P.A.**

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE, SUITE 250 - BURTONTWILE OFFICE PARK  
BURTONTWILE, MARYLAND 20866

TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 410-889-2524 PA: 301-421-4186

DATE	REVISION	BY	APPR

**OWNER/PREPARED FOR:**

THE HOWARD HUGHES CORPORATION  
10480 LITTLE PATENT PARKWAY  
SUITE 400  
COLUMBIA, MD 21044  
ATTN: MR. BILL ROWE  
410-964-4800

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12345, EXPIRATION DATE: MAY 26, 2018.

8/20/17 *[Signature]*

**SEDIMENT CONTROL NOTES & DETAILS**

**DOWNTOWN COLUMBIA CRESCENT NEIGHBORHOOD PARCEL B**

TEMPORARY PARKING LOT (PART OF TAX PARCEL 527)

ELECTION DISTRICT No. 5

SCALE: 1" = 30'

ZONING: NT

G. L. W. FILE NO. 15019

DATE: AUG, 2017 TAX MAP - GRID: 36-01 SHEET: 5 OF 10

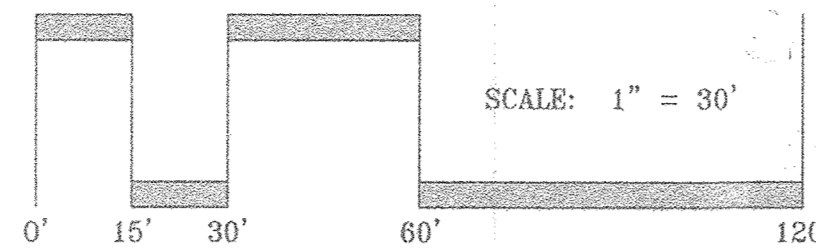
SDP-17-042

DRAINAGE AREA INFORMATION	
STRUCTURE	DRAINAGE AREA (ACRES)
I-1	0.24
I-2	0.24
I-3	0.20
I-5	0.41
I-6	0.26
RS-8	0.21

FROM NO.	TO NO.	DIA. (IN) & TYPE OF PIPE	L (FT)
I-1	I-2	12" HDPE	68
I-2	I-3	18" HDPE	43
I-3	I-5	18" HDPE	51
I-6	I-5	12" HDPE	53
I-5	ES-4	18" HDPE	14
RS-8	M-4	18" HDPE	23
M-4	ES-10	18" HDPE	11

MINIMUM RIP-RAP REQUIREMENTS				
END SECTION	CLASS	LENGTH	D <sub>50</sub>	THICKNESS
ES-4	CL-1	18'	4.8"	14"
ES-10*	"	"	"	"

\*OUTFALLS INTO AN EXISTING PLUNGE POOL CONSTRUCTED PER F 15-048 PLANS



PIPE SCHEDULE			
SIZE	TYPE	QUANTITY (LF)	REMARKS
12"	HDPE	116	
15"	HDPE	144	
18"	HDPE	48	

HDPE Indicates High Density Polyethylene pipe, such as N-12 by ADS, or H-Q by Hancon or an approved equal. Trench bedding to be provided per Howard County Detail 6-2-01, Trench for P.V.C. pipe and HDPE.

STRUCTURE SCHEDULE											
NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT		AS-BUILT		STD. DETAIL	LOCATIONS	REMARKS
			PROPOSED	LOWER	PROPOSED	LOWER	PROPOSED	LOWER			
I-1	DOUBLE TYPE 'S' INLET	2'-15"	340.14	340.01	---	336.02	---	---	HO.CO. D-4.23	N 561,940 E 1,350,046	
I-2	DOUBLE TYPE 'S' INLET	2'-15"	338.50	---	---	335.08	334.83	---	HO.CO. D-4.23	N 561,931 E 1,350,114	
I-3	DOUBLE TYPE 'S' INLET	2'-15"	337.00	---	---	333.43	333.33	---	HO.CO. D-4.23	N 561,936 E 1,350,208	
I-5-4	CONCRETE END SECTION	1'-3"	333.25	---	---	332.00	---	331.47	HO.CO. D-5.51	N 561,923 E 1,350,214	
I-5	DOUBLE TYPE 'S' INLET	2'-15"	331.00	---	331.23	333.66	332.14	332.28	331.97	HO.CO. D-4.23	N 561,940 E 1,350,210
I-6	DOUBLE TYPE 'S' INLET	2'-15"	337.42	---	---	334.45	---	---	HO.CO. D-4.23	N 561,944 E 1,350,328	
RS-8	TYPE 'S' RISER	2'-15"	334.00	---	333.91	---	328.75	---	328.61	HO.CO. D-4.22	N 561,916 E 1,350,407
M-4	STANDARD MANHOLE	4'-0"	331.96	---	332.00	328.52	328.42	332.04	332.08	HO.CO. 6-512	N 561,891 E 1,350,414
ES-10	CONCRETE END SECTION	1'-6"	324.81	---	---	328.31	---	327.61	HO.CO. D-5.51	N 561,878 E 1,350,416	

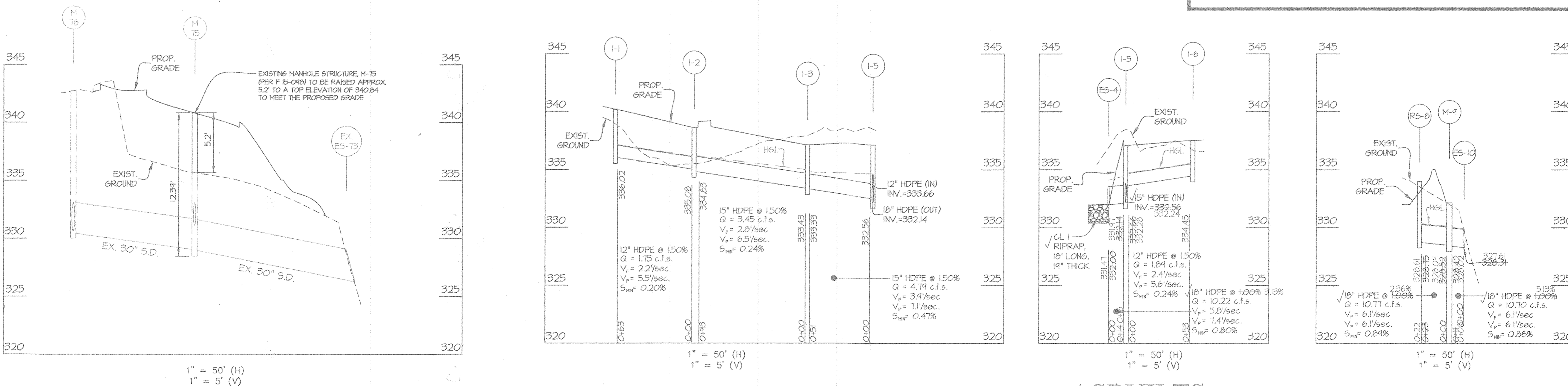
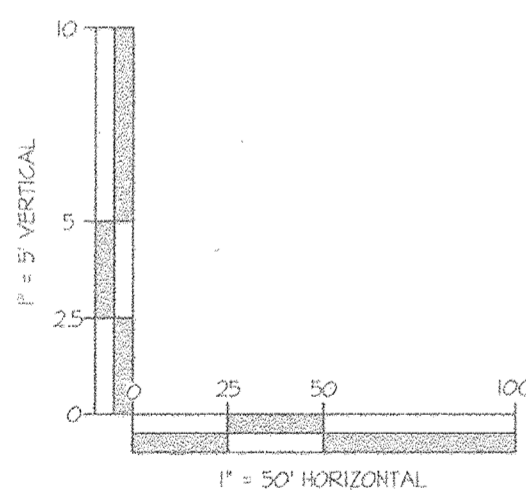
NOTE: TOP ELEVATION FOR INLETS GIVEN TO THE TOP OF GRATE OR IN THE CASE OF CURB OPENING INLETS TO THE TOP OF SLAB

COORDINATE POINT GIVEN IS TO THE CENTERLINE OF STRUCTURE AT THE FACE OF CURBS FOR INLETS AND TO THE CENTERLINE OF STRUCTURE FOR MANHOLES AND END SECTIONS.



SCALE: 1" = 30'

GRAPHIC SCALE - PROFILE VIEW



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. 14931, Expiration Date: May 21, 2022.

10/22/19  
Date



ENLARGED PLAN OF OUTFALL AT EXISTING PLUNGE POOL

SCALE: 1" = 5'

APPROVED  
PLANNING BOARD OF HOWARD COUNTY

Date: JULY 6, 2017

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Walter J. Taylor* 9-21-17  
Date: 9-21-17  
Chief, Division of Land Development: *Walter J. Taylor*  
Date: 9-15-17  
Chief, Development Engineering Division: *Walter J. Taylor*  
Date: 9-15-17

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DES. JH DRN. JH CHK. XXX

OWNER/PREPARED FOR:

THE HOWARD HUGHES CORPORATION  
10480 LITTLE PATUXENT PARKWAY  
SUITE 400  
COLUMBIA, MD 21044  
ATTN: MR. BILL ROWE  
410-964-4800

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12215, EXPIRATION DATE: MAY 21, 2019.



ELECTION DISTRICT No. 5

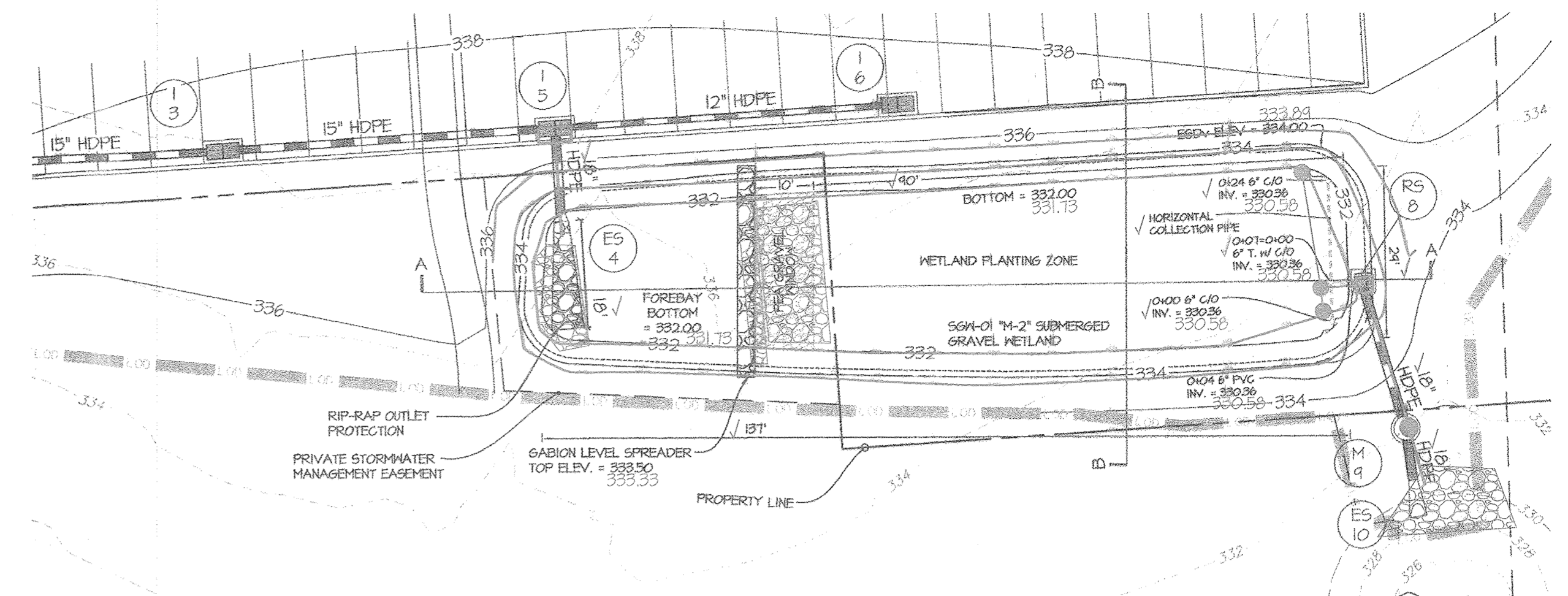
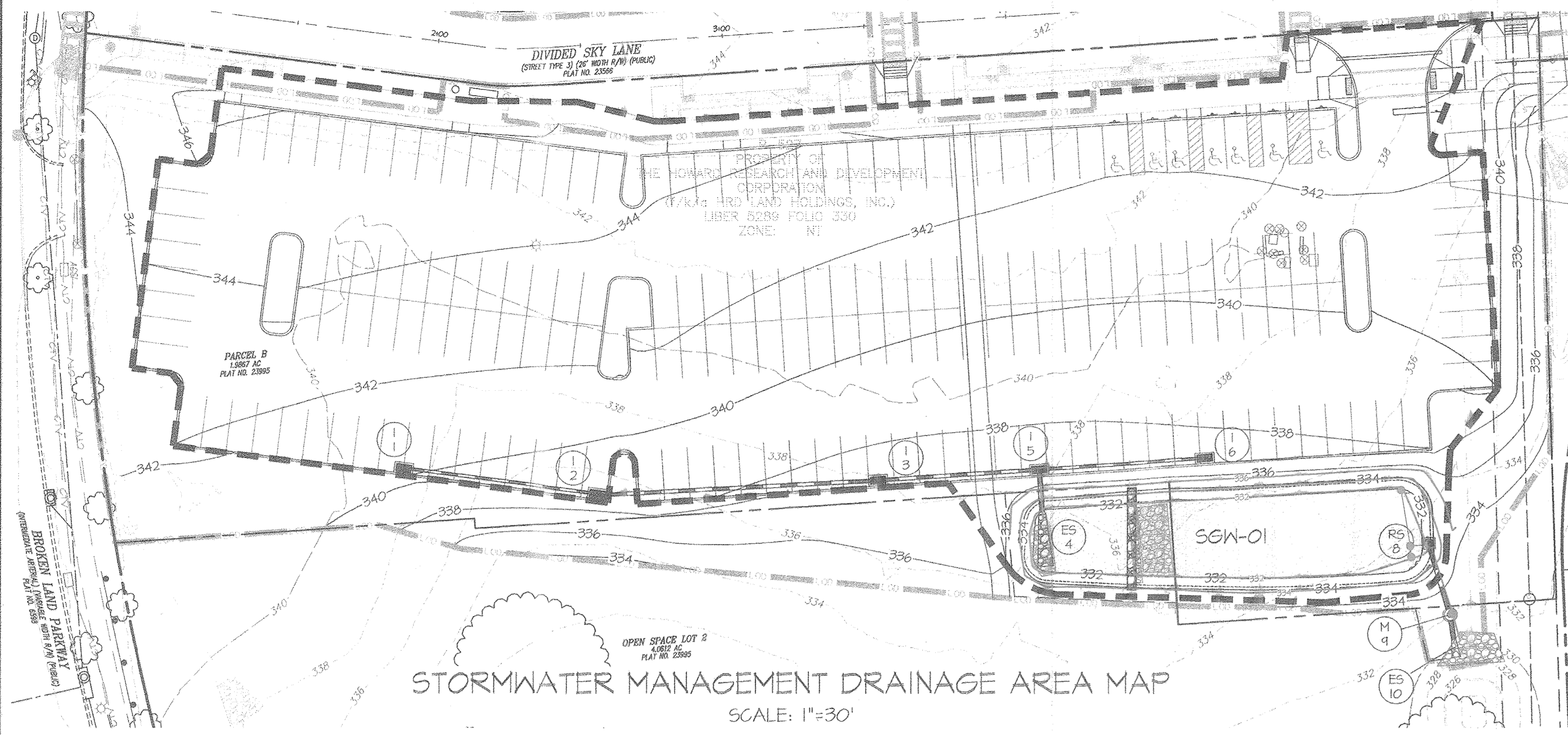
ASBUILTS  
STORM DRAIN PROFILES

DOWNTOWN COLUMBIA  
CRESCENT NEIGHBORHOOD  
PARCEL B  
TEMPORARY PARKING LOT  
(PART OF TAX PARCEL 527)

ASBUILT SHEET 2 OF 3

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	NT	15019
DATE	TAX MAP - GRID	SHEET
OCT., 2019 AUG., 2017	36 - 01	6 OF 10

HOWARD COUNTY, MARYLAND

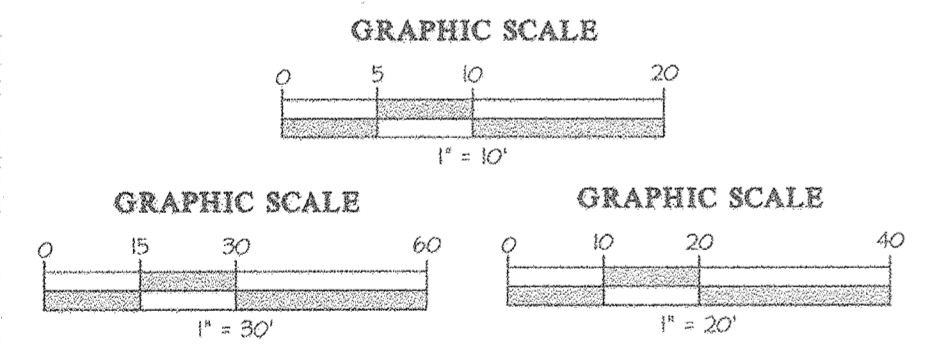


**S.D. UNDERDRAIN AND OVERFLOW DISTRIBUTION PIPE SUMMARY TABLE**

SIZE (INCHES)	TYPE	QUANTITY (LF)	REMARKS
6	SLOTTED PVC	20	COLLECTION PIPE - SCHEDULE 40

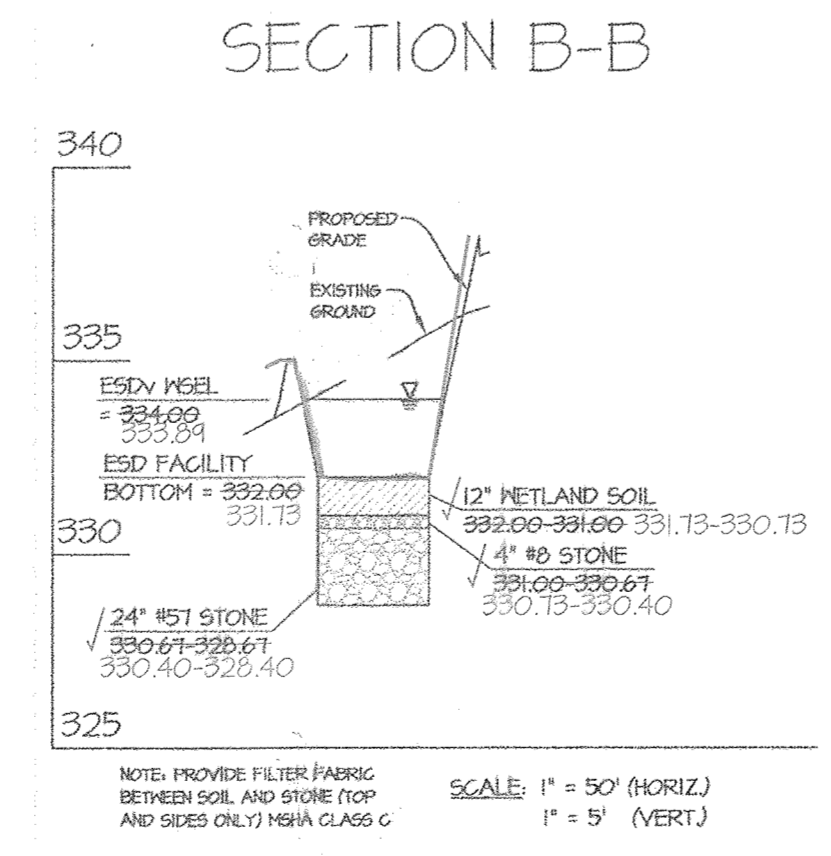
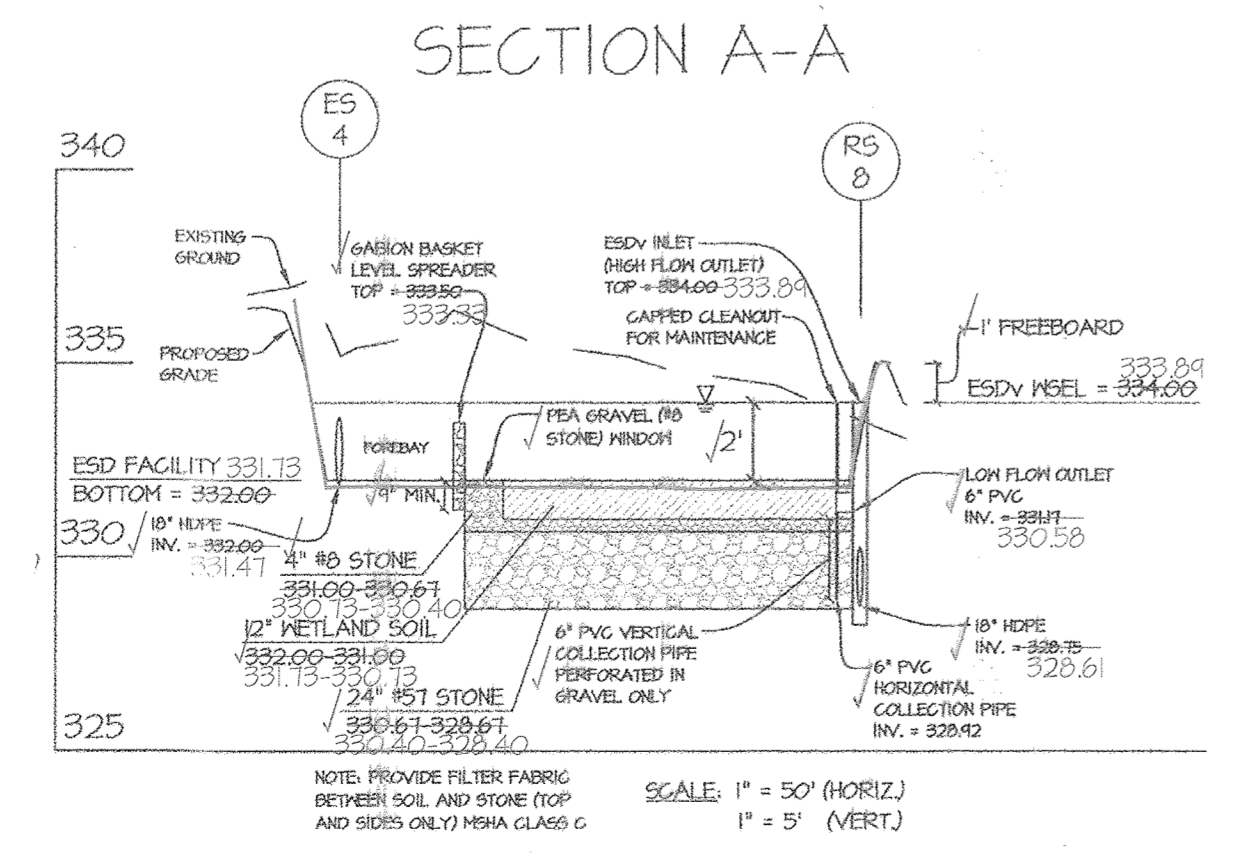
SGW-01 TYPE (PER HDE): SUBMERGED GRAVEL WETLAND (M2) NON-HDE 370 FACILITY  
 TOTAL DRAINAGE AREA TO FACILITY = 11,470 SF  
 FOREBAY ESDV = 1,245 CU-FT @ 333.50'  
 PONDING/GRAVEL ESDV = 8,807 CU-FT @ 334.00'  
 TOTAL ESDV PROVIDED = 10,052 CU-FT  
 LOW-FLOW OUTFALL: SLOTTED 6" PVC UNDERDRAIN BOTTOM OF FACILITY = 332.00'  
 HIGH-FLOW OUTFALL: RS-8 15" INLET, TOP = 334.00'

NOTE: PLEASE SEE SHEET 1 FOR ESDV SUMMARY TABLE



APPROVED  
 PLANNING BOARD OF HOWARD COUNTY  
 Date: JULY 6, 2017

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Valaris J. [Signature] 9-2-17 Date  
 Director  
 [Signature] 9-2-17 Date  
 Chief, Division of Land Development  
 [Signature] 9-15-17 Date  
 Chief, Development Engineering Division



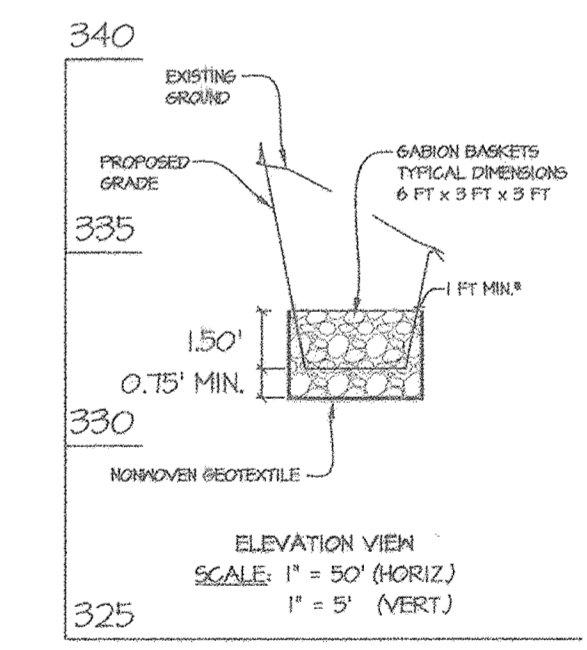
PROFESSIONAL CERTIFICATION  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14931, Expiration Date: May 21, 2020

10/22/19 Date



**GABION LEVEL SPREADER DETAIL AND CONSTRUCTION SPECIFICATIONS**

**GABION LEVEL SPREADER**



\*ONE BASKET OR MULTIPLE MATRESSES NEED TO EXTEND FROM THE GABION/EARTH INTERSECTION (TIE IN) TO A MINIMUM 1 FOOT BEYOND THE TIE IN.

**CONSTRUCTION SPECIFICATIONS:**

1. PROVIDE STORAGE VOLUME AS SPECIFIED ON APPROVED PLANS
2. USE BASKETS MADE OF 11 GAUGE WIRE OR HEAVIER
3. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN THE MD STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL MANUAL, SECTION H-1 MATERIALS
4. INSTALL GABIONS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS
5. EMBED THE GABIONS INTO THE SOIL. A MINIMUM OF 9 INCHES, PROVIDE NONWOVEN GEOTEXTILE UNDER ALL GABIONS
6. FILL GABION BASKETS WITH CLEAN 4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REBAR OR WIRE MESH
7. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 12 INCHES OF THE TOP OF THE GABIONS AND REPLACE THE GEOTEXTILE AND STONE FACING WHEN THE STRUCTURE CEASES TO FUNCTION. MAINTAIN THE LINE, GRADE AND CROSS SECTION

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

DATE	REVISION	BY	APP'R.

OWNER/PREPARED FOR:  
 THE HOWARD HUGHES CORPORATION  
 10480 LITTLE PATUXENT PARKWAY  
 SUITE 400  
 COLUMBIA, MD 21044  
 ATTN: MR. BILL ROWE  
 410-964-4800

PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS 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. 129175, EXPIRATION DATE: MAY 26, 2020  
 8/29/17 [Signature]

**ASBUILTS**  
**STORMWATER MANAGEMENT PLAN**  
**DOWNTOWN COLUMBIA**  
**CRESCENT NEIGHBORHOOD**  
**PARCEL B**  
**TEMPORARY PARKING LOT**  
 (PART OF TAX PARCEL 527)  
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
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**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SUBMERGED GRAVEL WETLANDS (M-2)**

- A. DURING THE FIRST YEAR OF OPERATION, THE OWNER SHALL INSPECT THE FACILITY AFTER EVERY HEAVY STORM AND REPLACE VEGETATION AS NEEDED.
- B. THE OWNER SHALL REMOVE SEDIMENT ACCUMULATED IN THE PRETREATMENT AREAS AS NECESSARY.
- C. SIGNS OF UNEVEN FLOW WITHIN THE WETLAND MAY MEAN THAT THE GRAVEL OR UNDERDRAIN IS CLOGGED. THE GRAVEL OR UNDERDRAIN SHALL BE REMOVED, CLEANED, AND REPLACED, AS NEEDED.
- D. THE OWNER SHALL ENSURE A DENSE STAND OF WETLAND VEGETATION IS MAINTAINED THROUGH THE LIFE OF THE FACILITY AND REPLACE VEGETATION AS NEEDED.
- E. THE OWNER SHALL ENSURE THE INLETS AND OUTLETS TO EACH GRAVEL WETLAND CELL ARE FREE FROM DEBRIS.
- F. THE OWNER SHALL REPAIR EROSION AT INFLOW POINTS AND ENSURE FLOW SPLITTERS ARE FUNCTIONAL TO PREVENT STORM WATER FROM BYPASSING THE FACILITY.

**GENERAL NOTES**

1. MATERIAL SPECIFICATIONS: THE ALLOWABLE MATERIALS TO BE USED IN THESE MICRO-BIORETENTION PRACTICES ARE DETAILED IN TABLE B.4.1.

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 MICRO-BIORETENTION PRACTICE 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, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)  
 ORGANIC CONTENT - MIN. 10% BY DRY WEIGHT (ASTM D 2914). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60-65%) AND COMPOST (35-40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).  
 CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.  
 PH RANGE - SHOULD BE BETWEEN 5.5-7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION: IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF THE BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES 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 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 REFRACATURE 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 OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE.

WHEN BACKFILLING 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 BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL: SEE PLANT LIST TABLES, SHEET 9.

5. PLANT INSTALLATION: MULCH SHOULD BE PLACED TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. FINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. 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 SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLOTS 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 ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS: UNDERDRAINS ARE 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).

**APPENDIX B.1.1 - SUPPLEMENTAL POND SPECIFICATIONS (NON-378)**

**SUPPLEMENTAL STORMWATER PONDS AND WETLAND SPECIFICATIONS (NON-378)**

THESE NOTES AND SPECIFICATIONS ARE IN ADDITION TO THE MD-378 SPECIFICATIONS. IF THERE IS ANY QUESTIONS AS TO THE APPLICABILITY, THE MD-378 SPECIFICATIONS SUPERCEDE.

- 1. IT IS PREFERRED TO USE THE SAME MATERIAL IN THE EMBANKMENT AS IS BEING INSTALLED FOR THE CORE TRENCH. IF THIS IS NOT POSSIBLE BECAUSE THE APPROPRIATE MATERIAL IS NOT AVAILABLE, A DAM CORE WITH A SHALL MAY BE USED. THE CROSS-SECTION OF THE STORMWATER FACILITY SHOULD SHOW THE LIMITS OF THE DAM CORE (UP TO 10-YEAR WATER SURFACE ELEVATION) AS WELL AS THE ACCEPTABLE MATERIALS FOR THE SHELL. THE SHAPE OF THE DAM CORE AND THE MATERIAL TO BE USED IN THE SHELL SHOULD BE PROVIDED BY THE GEOTECHNICAL ENGINEER.
- 2. IF THE COMPACTION TESTS FOR THE SITE IMPROVEMENTS IS USING MODIFIED PROCTOR (AASHTO T-180), THEN TO MAINTAIN ON-SITE CONSISTENCY, THE MODIFIED PROCTOR MAY BE USED IN LIEU OF A STANDARD PROCTOR (AASHTO T-99). THE MINIMUM DENSITY USING THE MODIFIED PROCTOR TEST METHOD SHALL BE AT LEAST 42% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF 42% OF THE OPTIMUM. THE MINIMUM REQUIRED DENSITY USING THE STANDARD PROCTOR TEST METHOD SHALL BE AT LEAST 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF 42% OF THE OPTIMUM.
- 3. FOR ALL STORMWATER MANAGEMENT FACILITIES, A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE MUST BE PRESENT TO VERIFY COMPACTION IN ACCORDANCE WITH THE SELECTED TEST METHOD. THIS INFORMATION NEEDS TO BE PROVIDED IN A REPORT TO THE DESIGN ENGINEER, SO THAT CERTIFICATION OF THE CONSTRUCTION OF THE FACILITY, IN ACCORDANCE WITH MD-378 SPECIFICATIONS, CAN BE MADE.
- 4. A 4-INCH LAYER OF TOPSOIL SHALL BE PLACED ON ALL DISTURBED AREAS OF THE DAM EMBANKMENT. SEEDING, LIMING, FERTILIZING, MULCHING, ETC. SHALL BE IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SERVICE MD-342 OR THE 1914 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL PERMANENT SEEDING SECTION IN CHAPTER 20. THE PURPOSE OF THE TOPSOIL IS TO ESTABLISH A GOOD GROWTH OF GRASS, WHICH IS NOT ALWAYS POSSIBLE WITH SOME OF THE MATERIALS THAT MAY BE PLACED FOR THE EMBANKMENT FILL.
- 5. GEOTEXTILE PLACED BENEATH RIP-RAP SHALL BE CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 24.0, MATERIAL SPECIFICATIONS, 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (MDE, 1994). SOME ACCEPTABLE GEOTEXTILES THAT MEET THE CLASS "C" CRITERIA INCLUDE:  
 AMOCO 4552                      CARTRHAGE FX-705  
 GEOLON NTO                      MIRAFI 180-N  
 WEBTEC NOT
- THIS IS ONLY A PARTIAL LISTING OF AVAILABLE GEOTEXTILES BASED ON INFORMATION PROVIDED BY THE MANUFACTURERS OF THE 1991 SPECIFIER'S GUIDE DATED DECEMBER 1996. IT IS THE RESPONSIBILITY OF THE ENGINEER TO VERIFY THE ADEQUACY OF THE MATERIAL, AS THERE ARE CHANGES IN THE MANUFACTURING PROCESS AND THE TYPE OF FABRIC USED, WHICH MAY AFFECT THE CONTINUED ACCEPTANCE.
- 6. A RULE OF THUMB TO DETERMINE WHEN AN EXCAVATED POND MAY NEED TO BE CONSIDERED AN EMBANKMENT POND IS AS FOLLOWS:  
 PROVIDE CALCULATION OF  $10H + 20$  FEET = L, WHERE H HEIGHT FROM POND BOTTOM TO TOP OF DAM. IF THE PROJECTION OF L, DOWNSTREAM IS A HORIZONTAL LINE FROM THE UPSTREAM TOE OF SLOPE IS BELOW EXISTING GROUND, THE POND CAN BE CONSIDERED AN EXCAVATED POND. IN ADDITION, THE EXISTING GROUND SLOPE, DOWNSTREAM OF THE TOE, MUST BE LESS THAN 10%.
- 7. THE DESIGN ENGINEER AND GEOTECHNICAL ENGINEER SHOULD MAKE THE DETERMINATION THAT THE SETTLEMENT OF THE POND WILL NOT CAUSE EXCESSIVE JOINT EXTENSION. FOR FURTHER INFORMATION ON JOINT ANALYSIS, SEE NRCE PUBLICATION TR-18.
- 8. FILL PLACEMENT SHALL NOT EXCEED A MAXIMUM 8-INCH. EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF THE EMBANKMENT.
- 9. THE EMBANKMENT FILL SHALL NOT BE PLACED HIGHER THAN THE CENTERLINE OF THE PRINCIPAL SPILLWAY UNTIL AFTER THE PRINCIPAL SPILLWAY HAS BEEN INSTALLED. IF THE EMBANKMENT NEEDS TO BE EXCAVATED TO INSTALL THE PRINCIPAL SPILLWAY, THE SIDE SLOPE SHALL BE NO LESS THAN 2:1.
- 10. THE SIDE SLOPES OF A CUT TO REPAIR A DAM, INSTALL A PRINCIPAL SPILLWAY FOR AN EXCAVATED POND, OR OTHER REPAIR WORK, SHALL BE NO LESS THAN 2:1.

**TABLE B.3.2**

Material	Specification	Size	Notes
Plantings	See Appendix A, Table A.4	N/A	Plantings are site-specific.
Planting soil (2.5' to 4' deep)	Sand 33 - 60% silt 30 - 55% clay 10 - 25%	N/A	USDA soil types loamy sand, sandy loam or loam
Mulch	Shredded hardwood Poa gravel ASTM-D-448 ornamental stone washed cobbles	per gravel: No. 6 stone: 2" to 2"	Aged 6 months, minimum
Geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D4632), puncture resistance (ASTM-D-4833)	N/A	For use as necessary beneath underdrains only.
Underdrain gravel	AASHTO M-43	0.375" to 0.75"	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underdrain pipes.
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 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 underdrain pipes.
Poured in place concrete (if required)	MSHA Mix No. 3, F, - 3500psi @ 28 days, normal weight, air-entrained, reinforcing 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 308 R-89; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil permeability, and analysis of potential cracking.
sand (1' deep)	AASHTO M-6 or ASTM-C-33	0.075" to 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbide or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

APPROVED  
**PLANNING BOARD OF HOWARD COUNTY**  
 Date:     JULY 6, 2017    

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Nathaniel J. J. [Signature]* 9-21-17  
 Director Date  
*Kathleen [Signature]* 9-21-17  
 Chief, Division of Land Development Date  
*Cheryl [Signature]* 9-15-17  
 Chief, Development Engineering Division Date

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

DATE	REVISION	BY	APPR.

OWNER/PREPARED FOR:  
 THE HOWARD HUGHES CORPORATION  
 10480 LITTLE PATUXENT PARKWAY  
 SUITE 400  
 COLUMBIA, MD 21044  
 ATTN: MR. BILL ROWE  
 410-964-4800

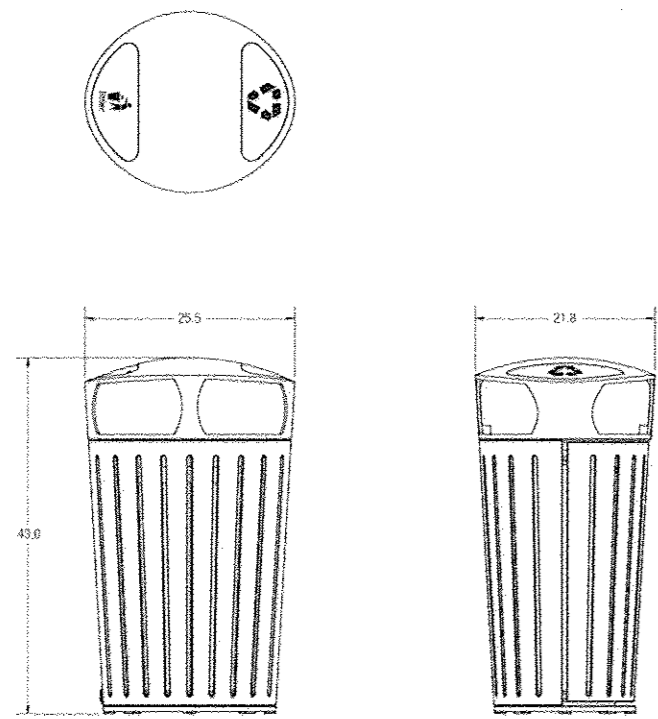
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 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. J22175, EXPIRATION DATE: MAY 26, 2018  
 8/28/17 *[Signature]*

**STORMWATER MANAGEMENT NOTES & DETAILS**  
**DOWNTOWN COLUMBIA**  
**CRESCENT NEIGHBORHOOD**  
**PARCEL B**  
**TEMPORARY PARKING LOT**  
**(PART OF TAX PARCEL 527)**  
 ELECTION DISTRICT No. 5  
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SCALE	ZONING	G. L. W. FILE No.
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AUG, 2017	36 - 01	8 OF 10



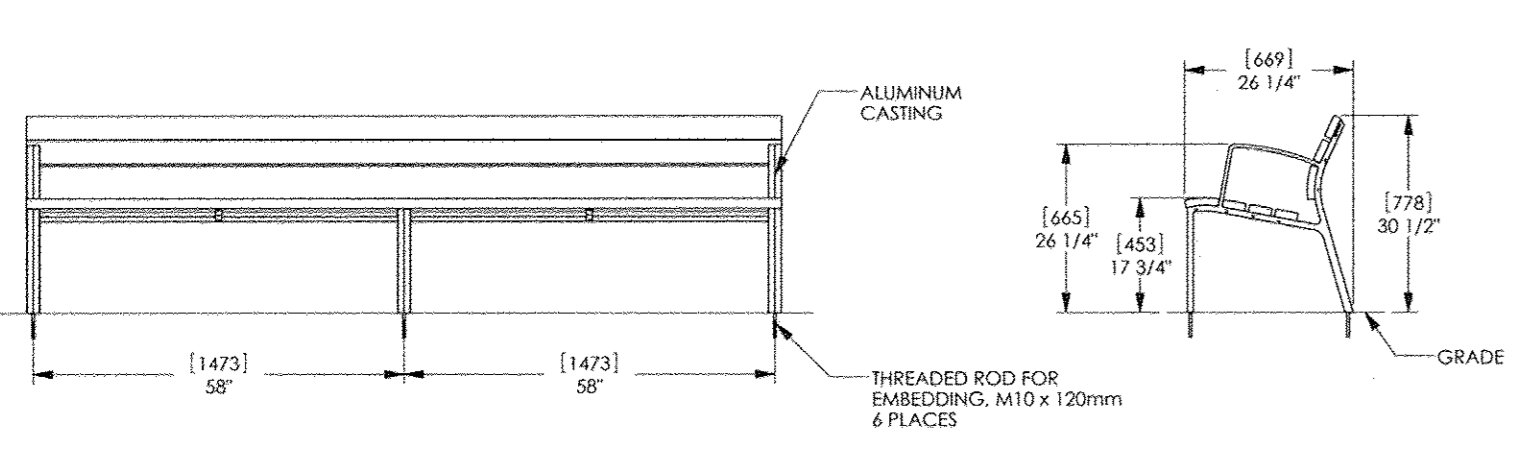
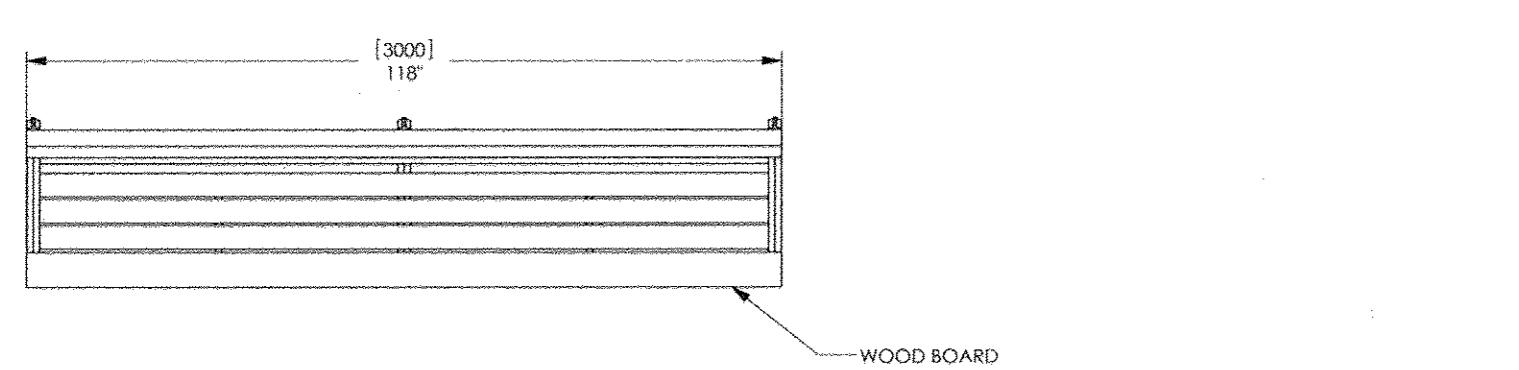




**WASTE/RECYCLING RECEPTACLE**

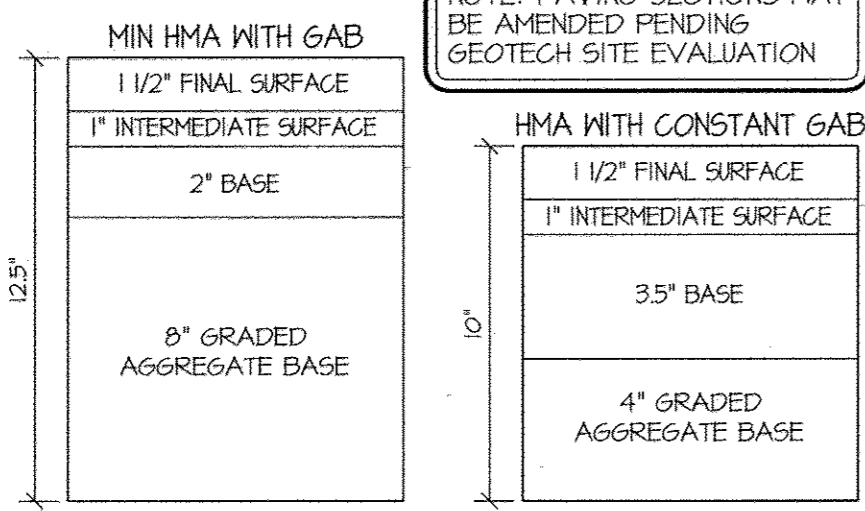
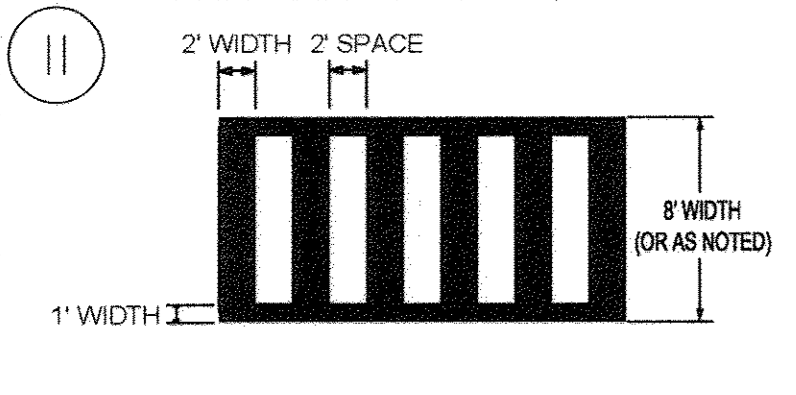
Neoliviano Backed Bench, 118in, Embedded, Wood

DATE: 8/10/2010  
PH: 800.521.2546



**2 STREET BENCH**

**PEDESTRIAN CROSSWALK DETAIL (NOT TO SCALE)**

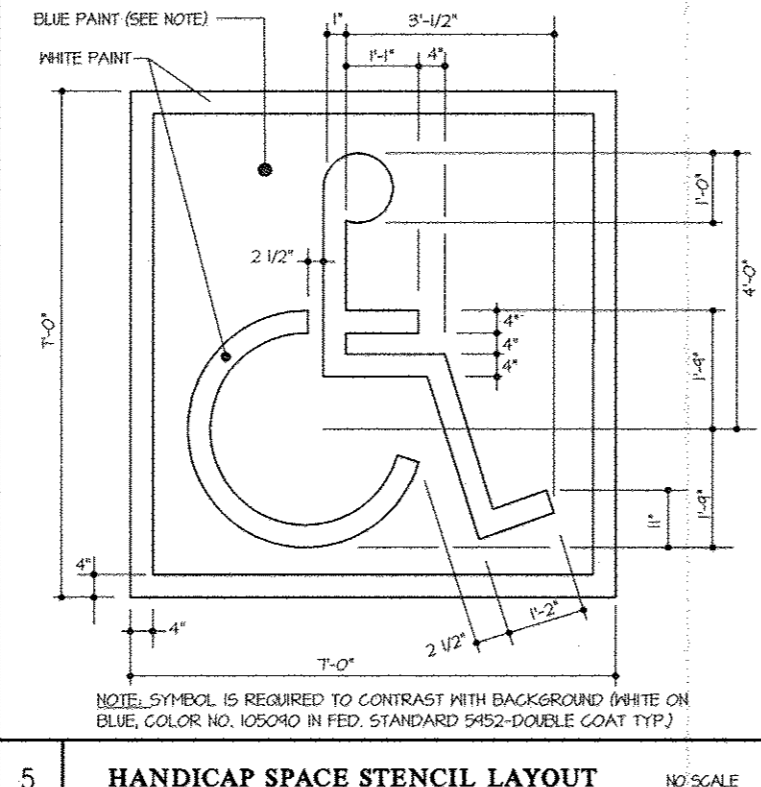


**P-2 PAVING SECTION FOR PARCEL B PARKING LOT (NOT TO SCALE)**

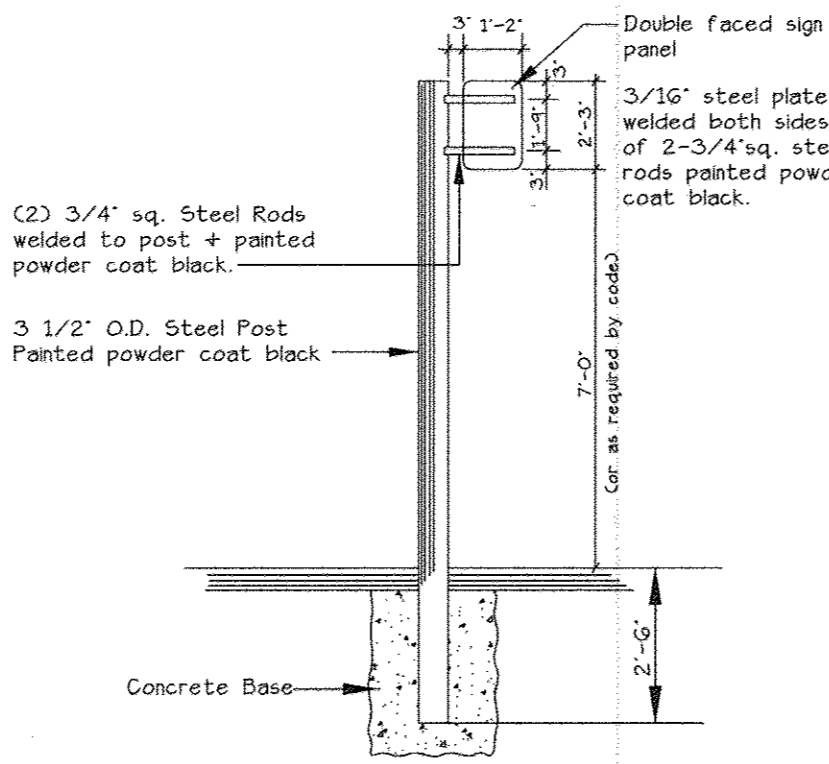
**APPROVED PLANNING BOARD OF HOWARD COUNTY**  
Date: JULY 6, 2017

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING**  
Director: Walter J. [Signature] Date: 9-21-17  
Chief, Division of Land Development: [Signature] Date: 9-21-17  
Chief, Development Engineering Division: [Signature] Date: 9-15-17

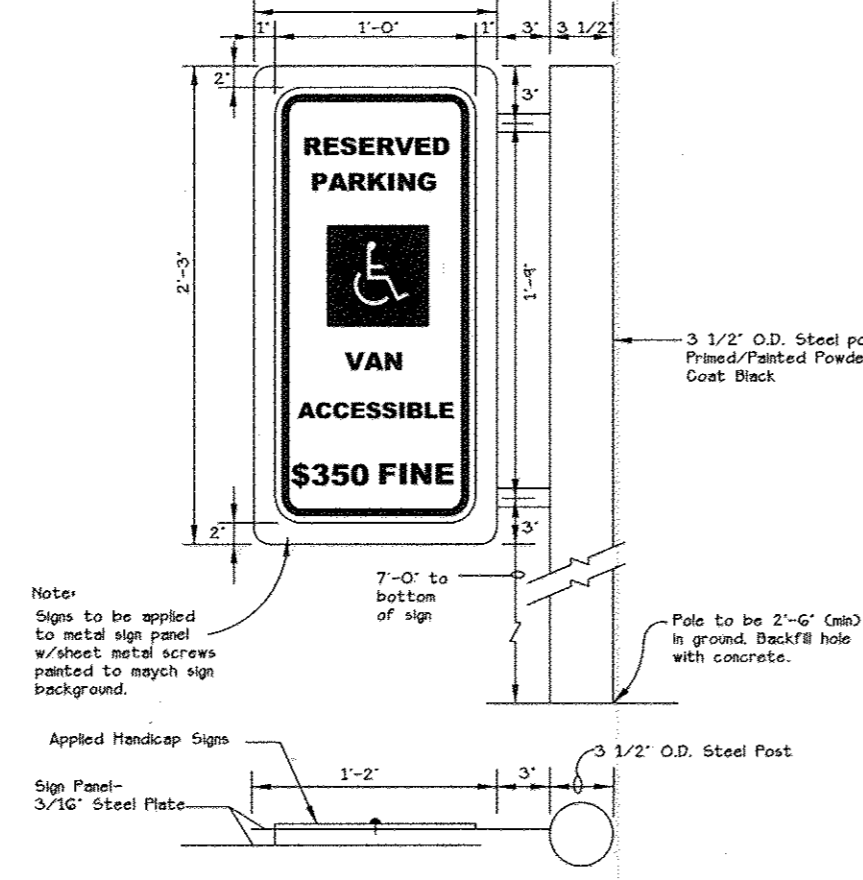
**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
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TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186



**5 HANDICAP SPACE STENCIL LAYOUT NO SCALE**



**6 POST & SIGN PANEL DETAIL FOR PARKING RESTRICTION SIGN N.T.S.**

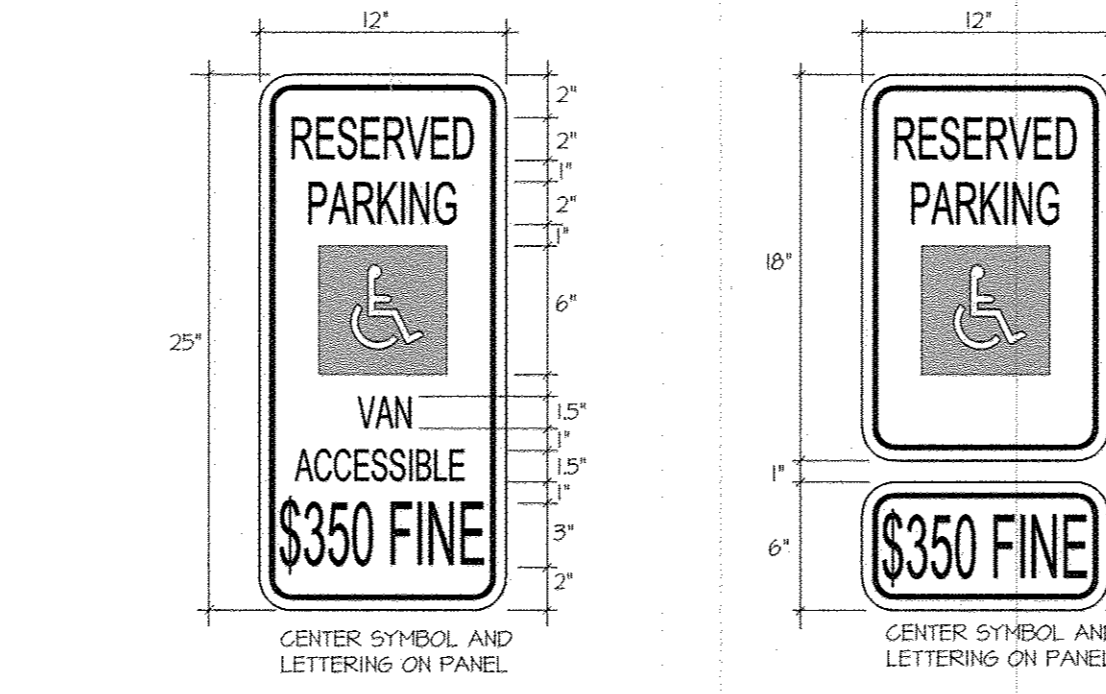


**7 MOUNTING DETAIL FOR PARKING RESTRICTION SIGN N.T.S.**

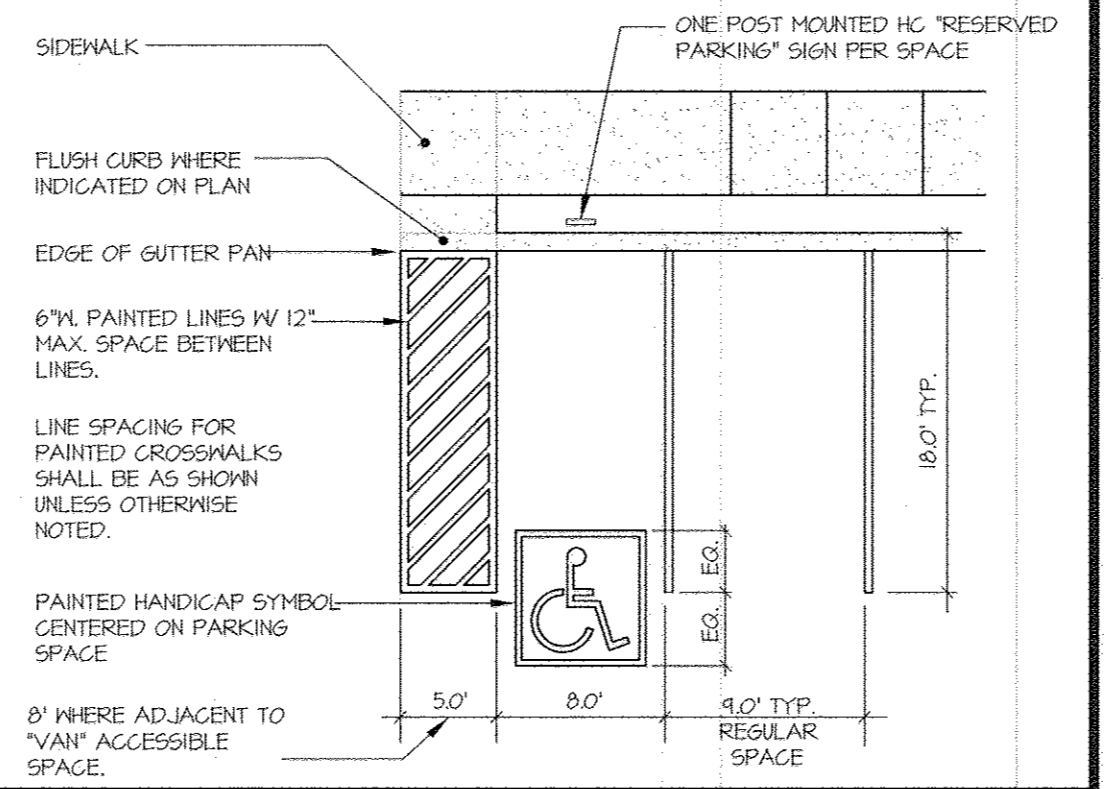


**8 CURB AND GUTTER 6" COMBINATION CURB AND GUTTER Private**

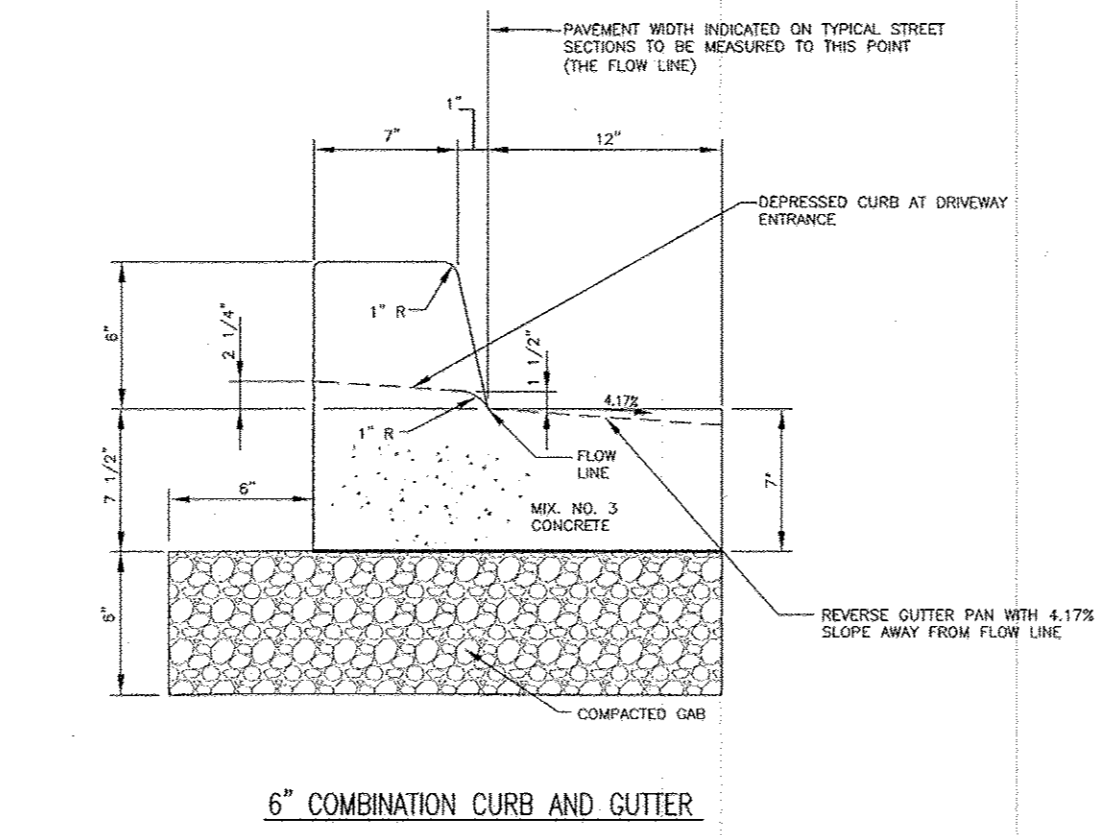
**4 Curb Flush**  
Detail R-3.07



**8 HANDICAP PARKING SIGNS DETAIL NO SCALE**

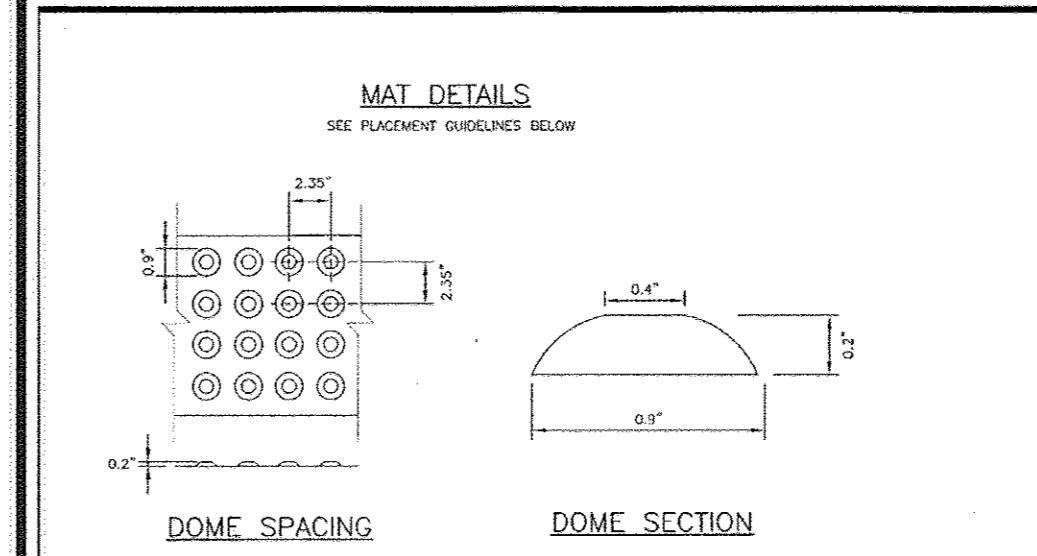


**9 PARKING SPACE LAYOUT NO SCALE**

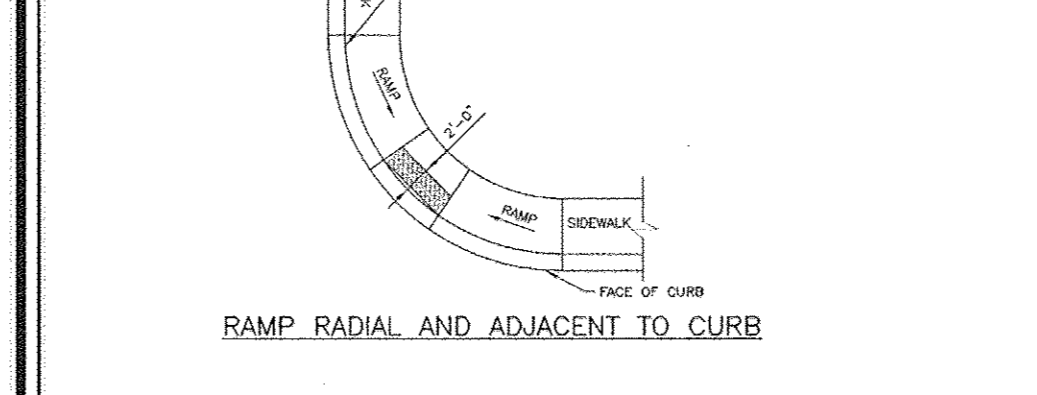


**12 PEDESTRIAN CONNECTION SECTION & DETAIL NO SCALE**

**10 CURB AND GUTTER 6" COMBINATION CURB AND GUTTER Private**  
Detail R-9.01

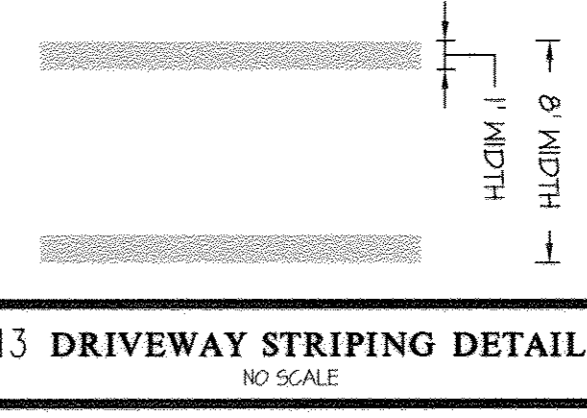


**13 DRIVEWAY STRIPING DETAIL NO SCALE**



**14 LIGHTING FIXTURE DETAILS NO SCALE**

Howard County, Maryland Department of Public Works  
Department of Public Works  
SIDWALK RAMP Type B Single Ramp  
Detail R-4.07

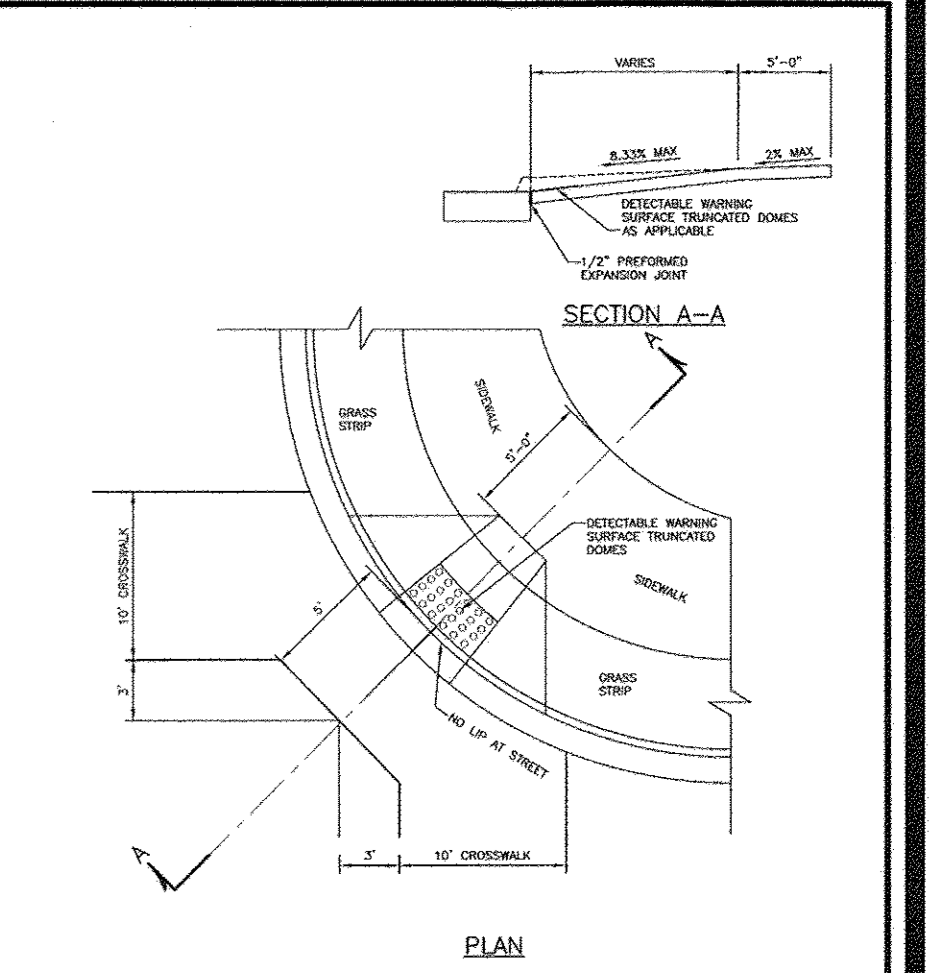


**13 DRIVEWAY STRIPING DETAIL NO SCALE**



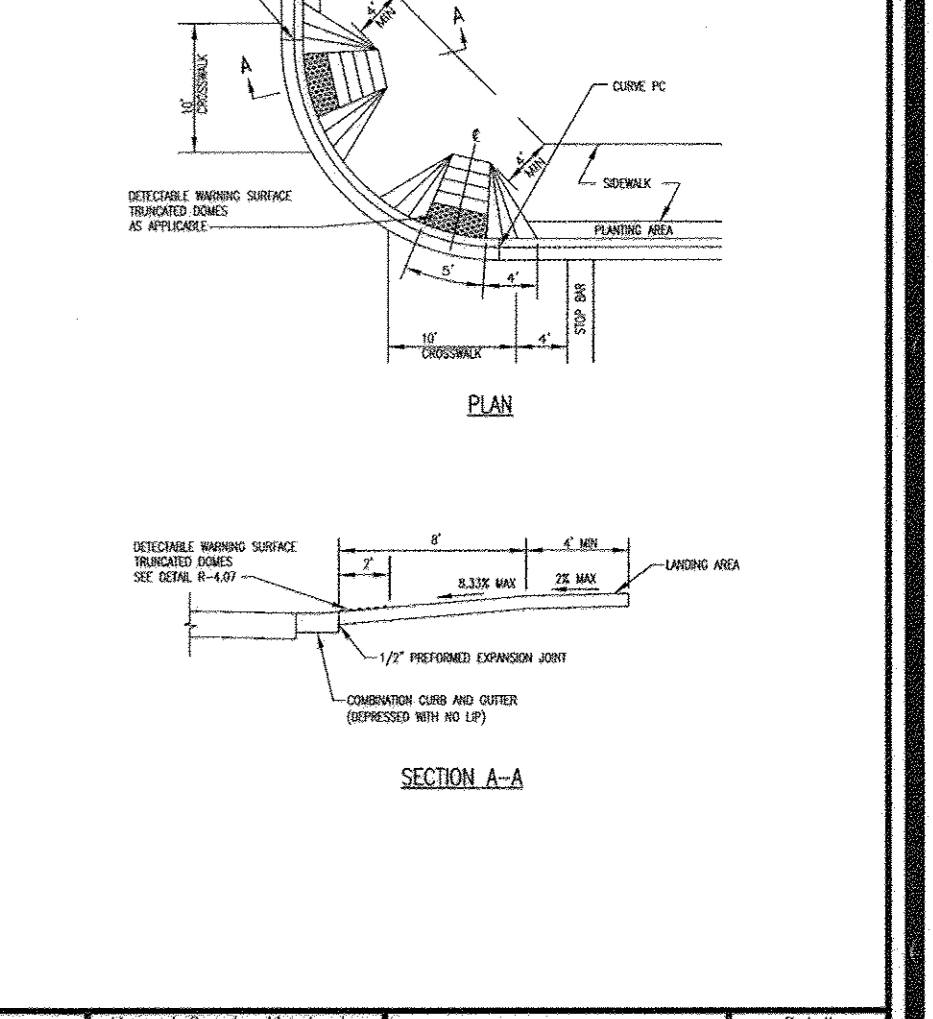
**14 LIGHTING FIXTURE DETAILS NO SCALE**

Howard County, Maryland Department of Public Works  
Department of Public Works  
SIDWALK RAMP Type B Dual Ramp  
Detail R-4.03



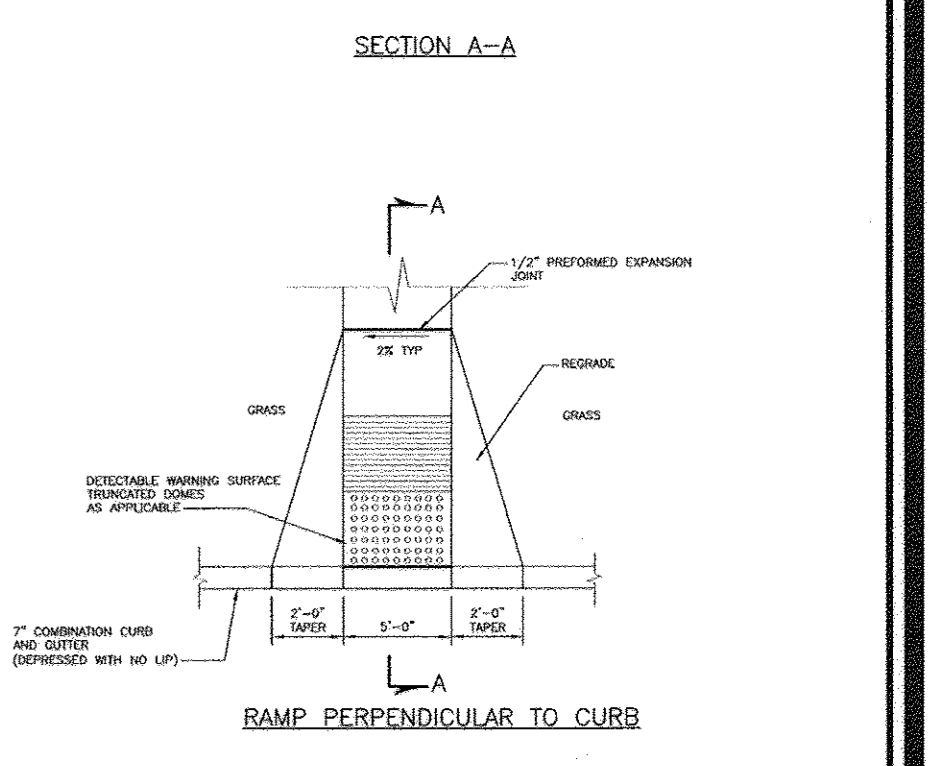
**14 LIGHTING FIXTURE DETAILS NO SCALE**

Howard County, Maryland Department of Public Works  
Department of Public Works  
SIDWALK RAMP Type B Single Ramp  
Detail R-4.02



**14 LIGHTING FIXTURE DETAILS NO SCALE**

Howard County, Maryland Department of Public Works  
Department of Public Works  
SIDWALK RAMP Type B Dual Ramp  
Detail R-4.03



**14 LIGHTING FIXTURE DETAILS NO SCALE**

Howard County, Maryland Department of Public Works  
Department of Public Works  
SIDWALK RAMP Layout & Grading Perpendicular to Curb  
Detail R-4.05

**OWNER/PREPARED FOR:**  
THE HOWARD HUGHES CORPORATION  
10480 LITTLE PATUXENT PARKWAY  
SUITE 400  
COLUMBIA, MD 21044  
ATTN: MR. BILL ROWE  
410-964-4800

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE PLANS 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. 12475, EXPIRATION DATE: MAY 26, 2018  
[Signature]

**SITE DETAILS**  
**DOWNTOWN COLUMBIA**  
**CRESCENT NEIGHBORHOOD**  
**PARCEL B**  
**TEMPORARY PARKING LOT**  
**(PART OF TAX PARCEL 527)**  
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
DATE	TAX MAP - GRID	SHEET
AUG., 2017	36 - 01	10 OF 10