

NOTE:

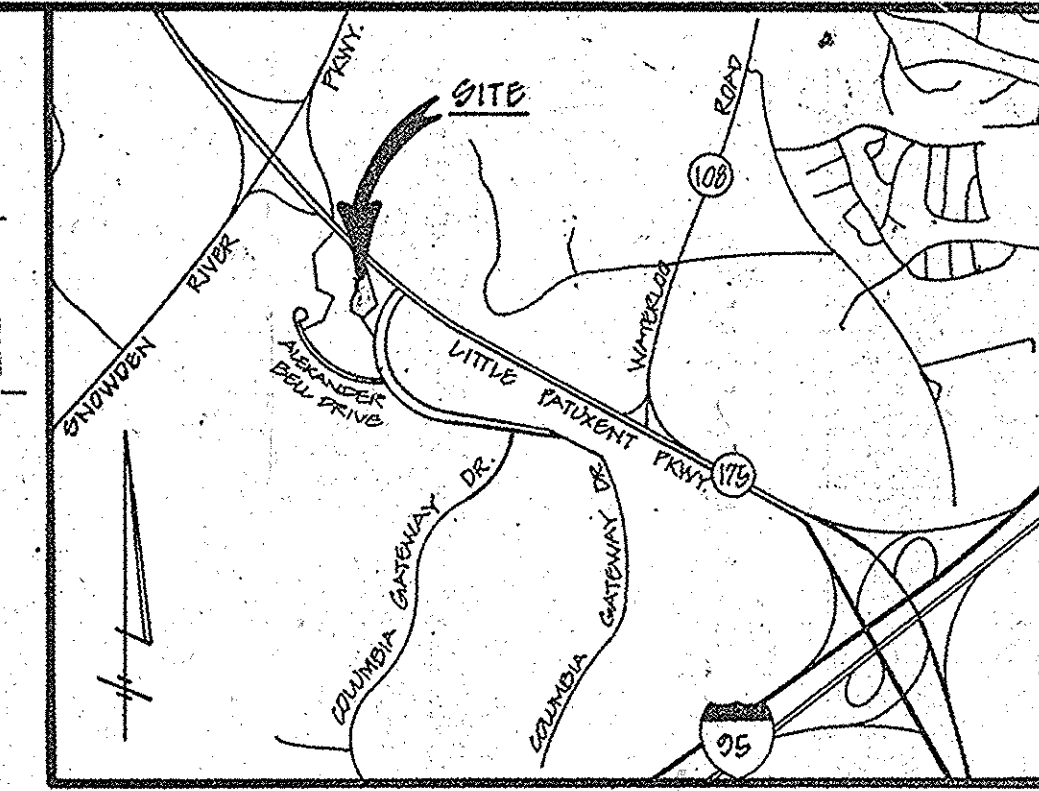
The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building, shown on this site development plan, who will discharge non-domestic waste to the public sewerage system if this waste is regulated under Section 18.122A of the Howard County Code. Each separate 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 requirements shall apply to all initial and future occupants or tenants.

GENERAL NOTES

- Maximum building height = 50'.
- All areas not being paved or receiving building coverage shall be stabilized in accordance with the plans approved by Howard Soil Conservation District.
- Any damage to public right-of-way and/or adjacent properties shall be repaired immediately at the contractor's expense.
- The contractor shall maintain at least a 1' level bench behind all curb and gutters in fill areas.
- The contractor shall verify all existing utilities to his own satisfaction before starting construction.
- All slopes shall be 2:1 or flatter.
- All work shall be done in accordance with Howard County Standard Specifications and Details for Construction, or as shown on these plans.
- The contractor shall notify the City Telephone Co. and the Gas and Electric Company five days prior to starting work shown on these plans by calling "Miss Utility". Call collect 1-555-0100.
- For details of ramps and signs for the handicapped see the Maryland Building Code for the Handicapped and Aged as shown herein. See sheet of the contractor shall maintain a minimum of 4' cover over all proposed water lines.
- All signs shall be placed on filter cloth.
- The contractor or developer shall contact the Construction Inspection/Survey Division, 24 hours in advance of commencement of work at 992-2617 or 792-7272.
- The contractor shall remove all existing paving, curb and gutter, etc. that may interfere with proposed construction.
- All utilities installed shall receive full trench compaction.
- All water main, sewer, hand, gas, etc. shall be buttressed in accordance with Howard County Design requirements.
- All sidewalks will be 6' wide (see architectural plans for details).
- 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 this waste is regulated under Section 18.122A of the Howard County Code. 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 requirements shall apply to all initial and future occupants or tenants.

LEGEND

- EX. GROUND
- PROP. GRADE
- PROPERTY LINE
- BASEMENTS
- EX. CURB & GUTTER
- PROP. CURB & GUTTER
- EX. STORM DRAINS
- EX. WATER
- EX. SEWER
- # OF PARKING SPACES
- INDICATES HOOP PARKING



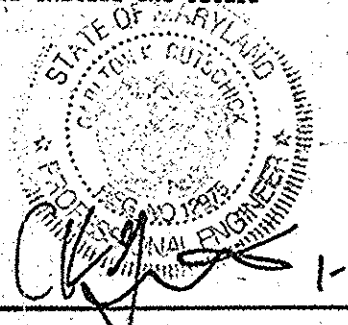
VICINITY MAP
SCALE: 1"=2000'

BENCH MARKS

- WR. P.A.B.M.#2 ELEV. 306.28
- R.R. SINK IN BASE OF 14" POLAR, 20' RIGHT OF ALEXANDER BELL DRIVE P.T. STA. 11+23.92
- WR. P.A.B.M.#3 ELEV. 293.26
- TOT. BOLT @ TOP OF LIGHT POST FOOTER, 140' OF COLUMBIA GATEWAY DRIVE STA. 11+50

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, 2016.



NOTE: THIS PLAN IS A REVISION TO S.O.P.# 87-49, & 87-160.

FOR LANDSCAPING PLAN SEE SHEET 10 OF 10 S.O.P.# 87-49, RELOCATING ONLY THE FOUR JAPANESE PINES AND ONE ACER RUBRUM 'REO SUNSET' AS SHOWN ON THIS PLAN.

Parcel C-1 SITE DATA (OVERALL)

Total Area of Site = 56,539 s.f. / 12.98 Ac.
 Existing Zoning = M-1
 Property Reference = Plat #6766 & #6767 + 7996
 Existing Use = Research/Development
 Total Floor Area = 159,409 s.f. (excludes bldg. D)
 Parking Required = 527 p.s.
 Parking Provided = 629 p.s.
 Floor Area Ratio = 2.66 s.f./Ac. = 2.0%
 % Open Space = 4.17 Ac. / 12.98 Ac. = 32.1%
 % Building Coverage w/ Paving = 8.14 Ac. / 12.98 Ac. = 62.7%
 % Building Coverage = 1.91 Ac. / 12.98 Ac. = 14.7%
 Total Area of Paving = 128,209 s.f. = 2.94 Ac.
 Total Area of Landscaped Islands = 29,319 s.f. = 0.67 Ac.
 AREA TO BE VEGETATIVELY STABILIZED = 211,525 s.f. / 4.84 Ac.

SITE DATA

(FOR ADDITION TO BUILDING 'C')

Total Area of Submittal = 11,761 s.f. / 0.27 Ac.
 Existing Zoning = M-1
 Property Reference = Plat #6766 & 6767 + 7996
 Existing Use = Research/Development
 Proposed Use = Research/Development
 Total Floor Area of Building C = 51,409 s.f. / 1.18 Ac.
 Parking Required for Building C = (INCLUDES EXISTING AND PROPOSED) Office = 51,409 s.f. @ 270/1,000 = 170
 Parking Provided: See overall site data for Total Parking Provided.

Note - for any additional information pertaining to Building 'C' addition, see overall site data.

APPROVED: For public water and public sewerage systems Howard County Health Department.

County Health Officer: [Signature] 11-6-87 Date

APPROVED: Howard County Office of Planning & Zoning. [Signature] 11-12-87 Date

Director: [Signature] 11-9-87 Date

APPROVED: For public water and public sewerage storm drainage systems and public roads Howard County Department of Public Works. [Signature] 11-2-87 Date

Director: [Signature] 10-30-87 Date

Chief Bureau of Engineering: [Signature] 10-30-87 Date

ADDRESS CHART

BUILDING # STREET ADDRESS
 'C' 6706 ALEXANDER BELL DRIVE

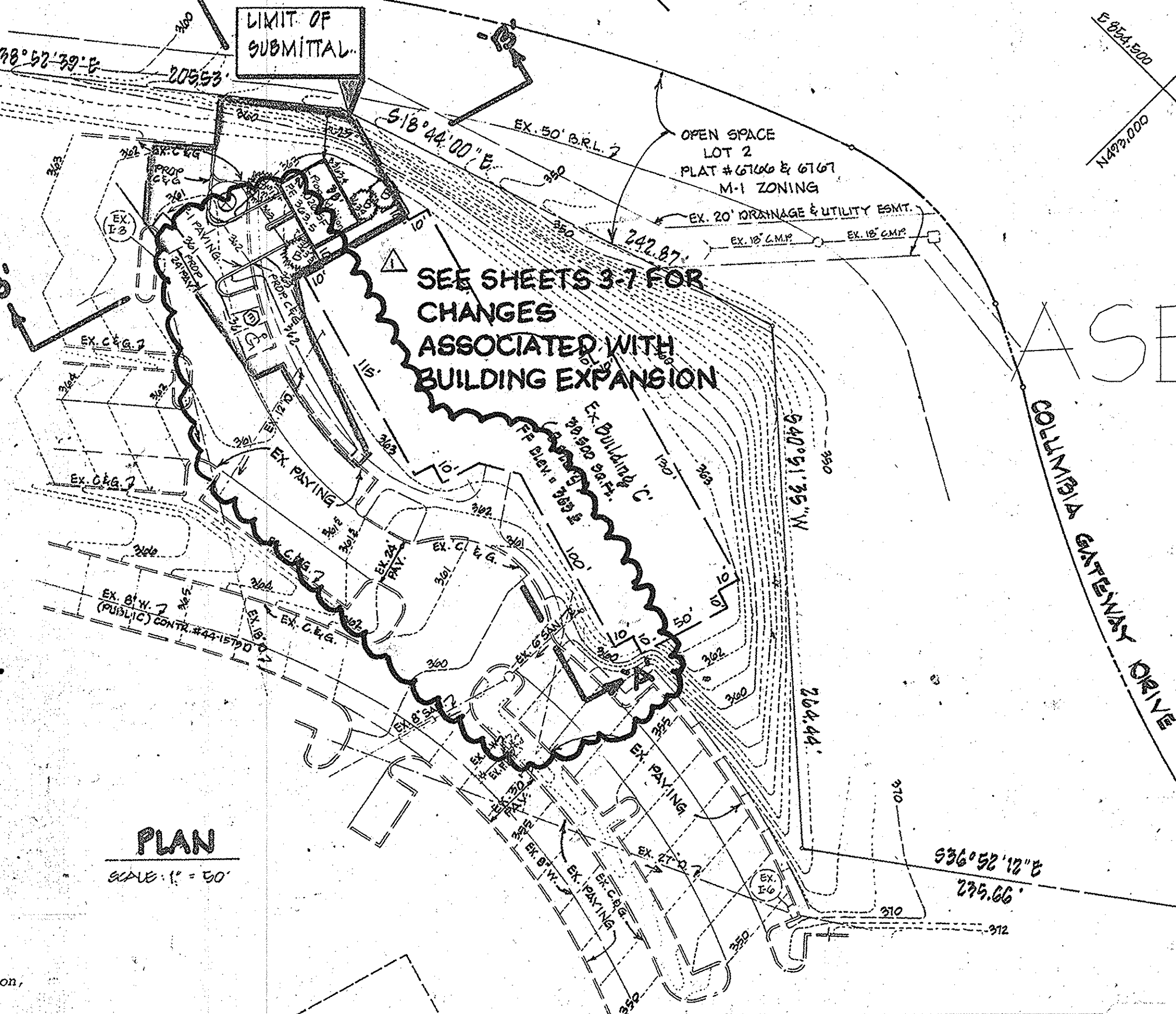
SUBDIVISION NAME COLUMBIA GATEWAY

PLAT # OR L/E BLOCK # ZONE TAX/ZONE MAP SECT. AREA LOT/PARCEL # PARCEL 'C'
 6706 & 6707 24119 M-1 36137 6065.02

WATER CODE E06 SEWER CODE 239000

GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC. CIVIL ENGINEERS & LAND SURVEYORS

303 ALLEGHENY AVENUE TOWSON, MARYLAND 21204 (301)825-8120



SEE SHEETS 3-7 FOR CHANGES ASSOCIATED WITH BUILDING EXPANSION

ASBUILTS

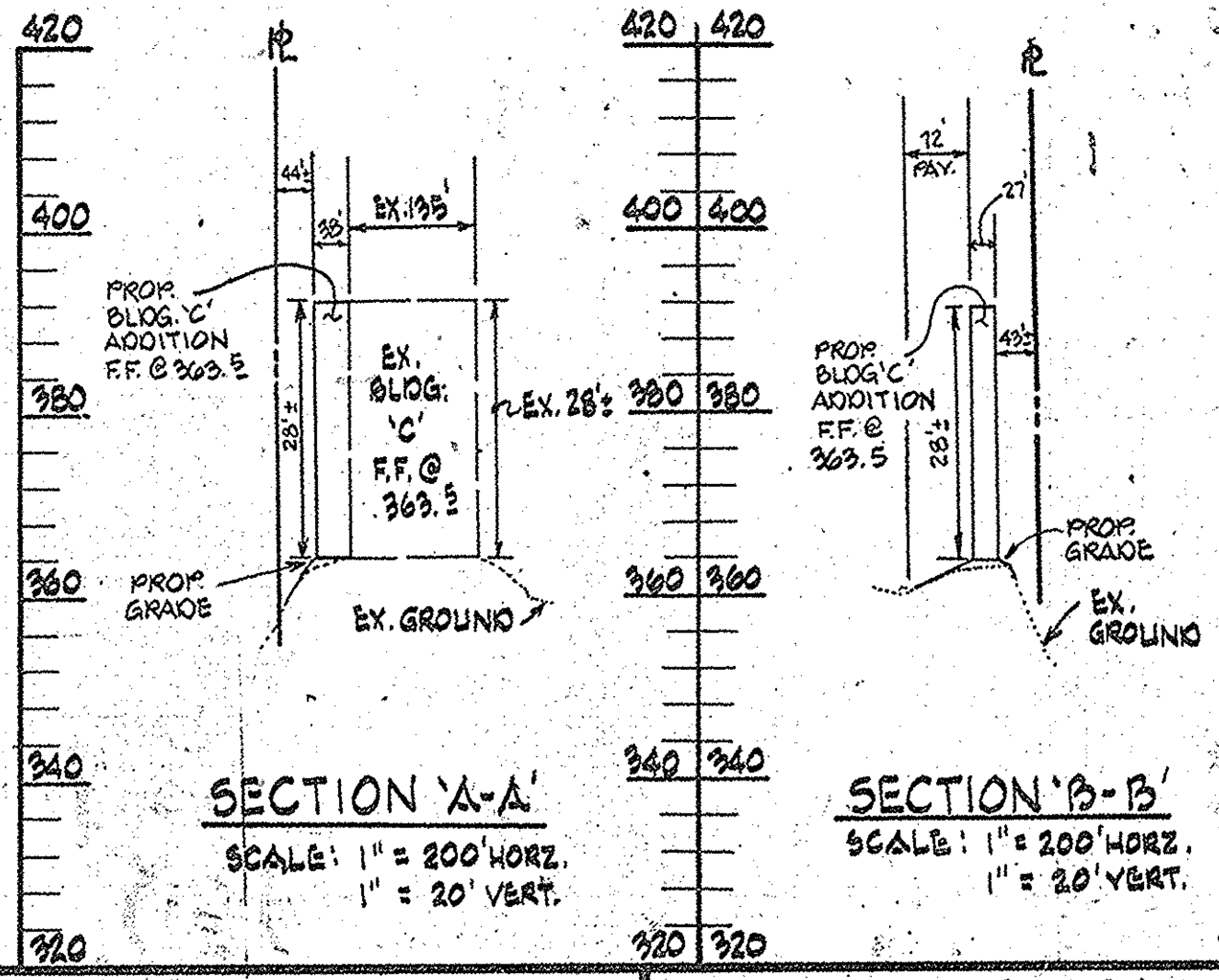
PLAN

SCALE: 1" = 50'

NOTE: STORMWATER HAS BEEN PROVIDED UNDER S.O.P.# 87-49.

SITE DATA

(FOR ADDITION TO BLDG. 'C' ONLY)
 TOTAL FLOOR AREA: 1,026 S.F. / 10.02 AC.
 PARKING REQUIRED: 1,026 S.F. = 6 EMP. @ 170 PER 10 EMP. = 6 EMP.
 PARKING PROVIDED: SEE OVERALL SITE DATA. See sheet 7 for updated parking analysis.



Sheet Index

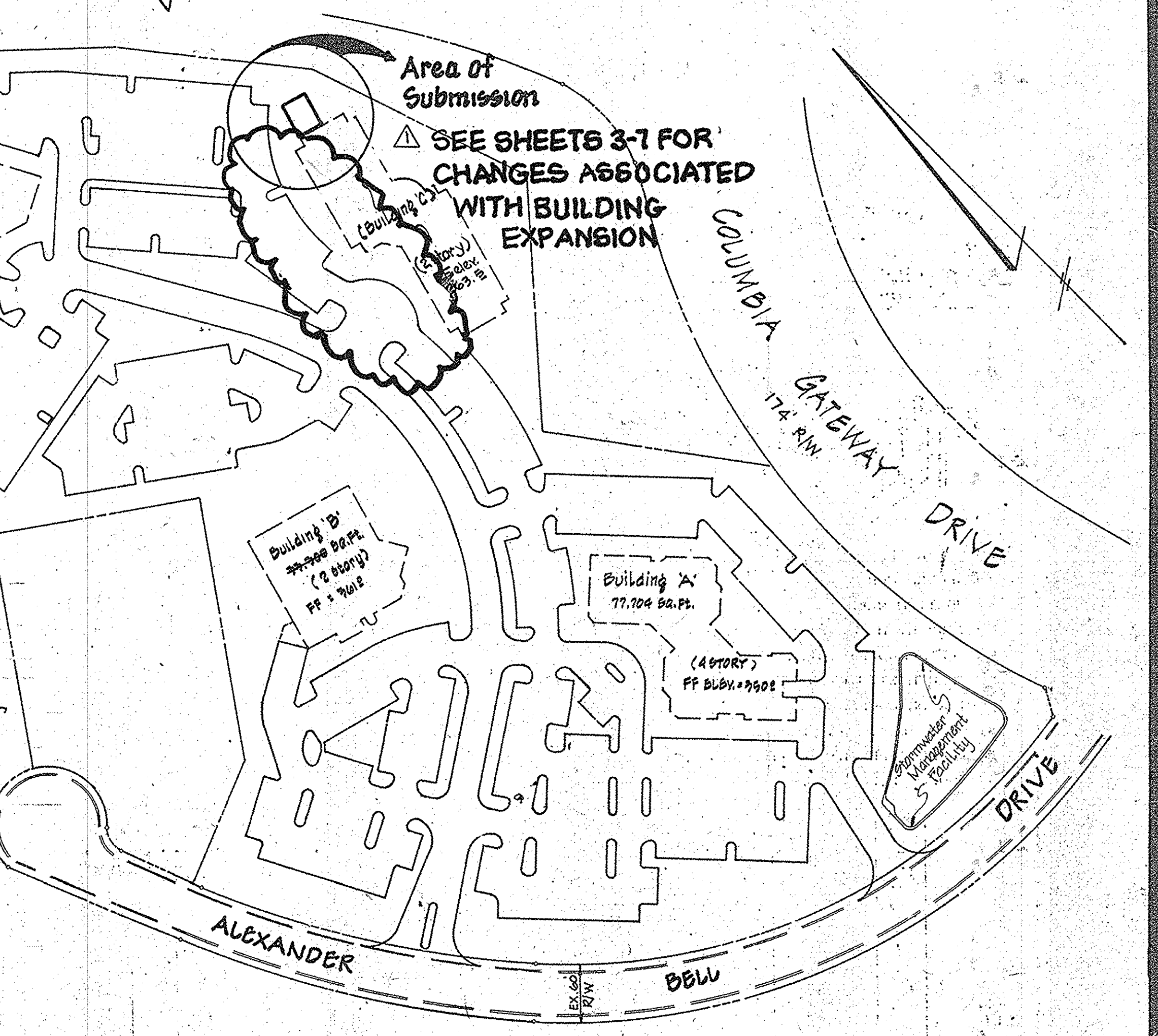
- Site Plan
- Sediment Control Plan
- Site Development Plan
- Curb & Paving delineation, Demolition Plan & site Details
- Bio-retention Plan & Details
- Sediment Control Plan
- Overall Parking Analysis

Date	Rev. site data info for bldg C expansion	GLW	By
11-1-2016			

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. 12475, Expiration Date: May 26, 2016.

9/25/15 Date
 Carl K. Gutschick Professional Engineer Maryland Reg. No. 12475

11-14-14 Add note to see sheets 3-7 for building expansion. [Signature] GLW



Location Map
SCALE: 1"=100'

ASBUILT SHEET 1 OF 2

Howard County Soil Conservation District

The Development is approved for soil erosion & sediment control by the Howard County Soil Conservation District.

Approved: [Signature] 10/20/87 Date

Reviewed for Howard Soil Conservation District and meets technical requirements.

[Signature] 10/20/87 Date

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES 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 OR OTHER AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A RED-LINED "AS-BUILT" OF THE POND WITHIN 30 DAYS OF COMPLETION.

DESIGNED: KLB
 DRAWN: RBM/KLB
 CHECKED: TC
 REVISIONS

SEP. 2015

ADDITION TO BUILDING 'C' AND S.O.P.# 87-49 & 87-160
 RESEARCH & DEVELOPMENT OFFICE PARK
 COLUMBIA GATEWAY
 PARCEL 'C'
 TAX MAP # 42343
 HOWARD CO., MARYLAND ELECTION DISTRICT #6
 SCALE: AS SHOWN AUGUST 24, 1987
 P.N. 06466 SHEET 1 OF 7

DATE: 9/25/15

DATE: 9/25/15

SEP. 2015

SDP #88-36 ASBUILTS

GENERAL NOTES

- Refer to "1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control" for standard details and detailed specifications of each practice specified herein.
- With the approval of the sediment control inspector, minor field adjustments can and will be made to insure the control of any sediment. Changes in sediment control practices require prior approval of the sediment control inspector and the Baltimore County Soil Conservation District.
- At the end of each working day, all sediment control practices will be inspected and left in operational condition.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a.) seven calendar days as to the surface of all permanent concrete, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and b.) fourteen days as to all other disturbed or graded areas on the project site.
- Any change to the grading proposed on this plan requires re-submission to Baltimore County Soil Conservation District for approval.
- Dust control will be provided for all disturbed areas. Refer to 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control, by 24.01 and 24.02 for acceptable methods and specifications for dust control.
- Any variation from the sequence of operations stated on this plan requires the approval of the sediment control inspector and the Baltimore County Soil Conservation District prior to the initiation of the change.
- Excess cut or borrow material shall go to or come from, respectively, a site with an approved sediment control plan. The following items may be used as applicable:
 - Refer to "Maryland's Guidelines to Waterway Construction" by the Water Resources Administration (WRA), dated January, 1986 for standard details and detailed specifications of each practice specified herein for waterway construction.

SEQUENCE OF CONSTRUCTION

1. NOTIFY HOWARD COUNTY, DEPT. OF INSPECTIONS, PERMIT INSPECTOR 48 HOURS PRIOR TO BEGINNING WORK - 2 DAYS.
2. CLEAR AND GRUB FOR SEDIMENT CONTROL ONLY - 1 DAY.
3. USE EXISTING STABILIZED CONSTRUCTION ENTRANCES (BUILT UNDER SDP # 81-49 SHEET 3 OF 10).
4. INSTALL STRAW BALE DIKES - 1 DAY.
5. BEGIN GRADING - ADJUSTING DIKES AS NECESSARY - 1 DAY.
6. STABILIZE AREAS NOT RECEIVING PAVING - 1 DAY.
7. FINE GRADE AND INSTALL SUBBASE MATERIAL IN BUILDING AND PAVING AREAS - 2 DAYS.
8. STABILIZE AND FINE GRADE ANY REMAINING AREAS - 1 DAY.
9. AFTER OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, REMOVE THE SEDIMENT CONTROL DEVICES AND STABILIZE - 1 DAY.

APPROVED
 DIVISION OF LAND DEVELOPMENT &
 ZONING ADMINISTRATION
 HOWARD COUNTY, MARYLAND
 DATE 10-1-87

Howard County Soil Conservation District

The Development is approved for soil erosion & sediment control by the Howard County Soil Conservation District.

Stephen L. Archer 10/26/87
 Approved: Howard Soil Conservation District Date

Reviewed for Howard Soil Conservation District and meets technical requirements.

J. Anita McHale 10/21/87
 The United States Soil Conservation Services Date

APPROVED: For public water and public sewerage storm drainage systems and public roads Howard County Department of Public Works.

James J. Shaw 10/26/87
 Director Date

Richard B. Ray 10-30-87
 Chief Bureau of Engineering Date

APPROVED: For public water and public sewerage systems Howard County Health Department.

Joseph J. Boyle 11-6-87
 County Health Officer Date

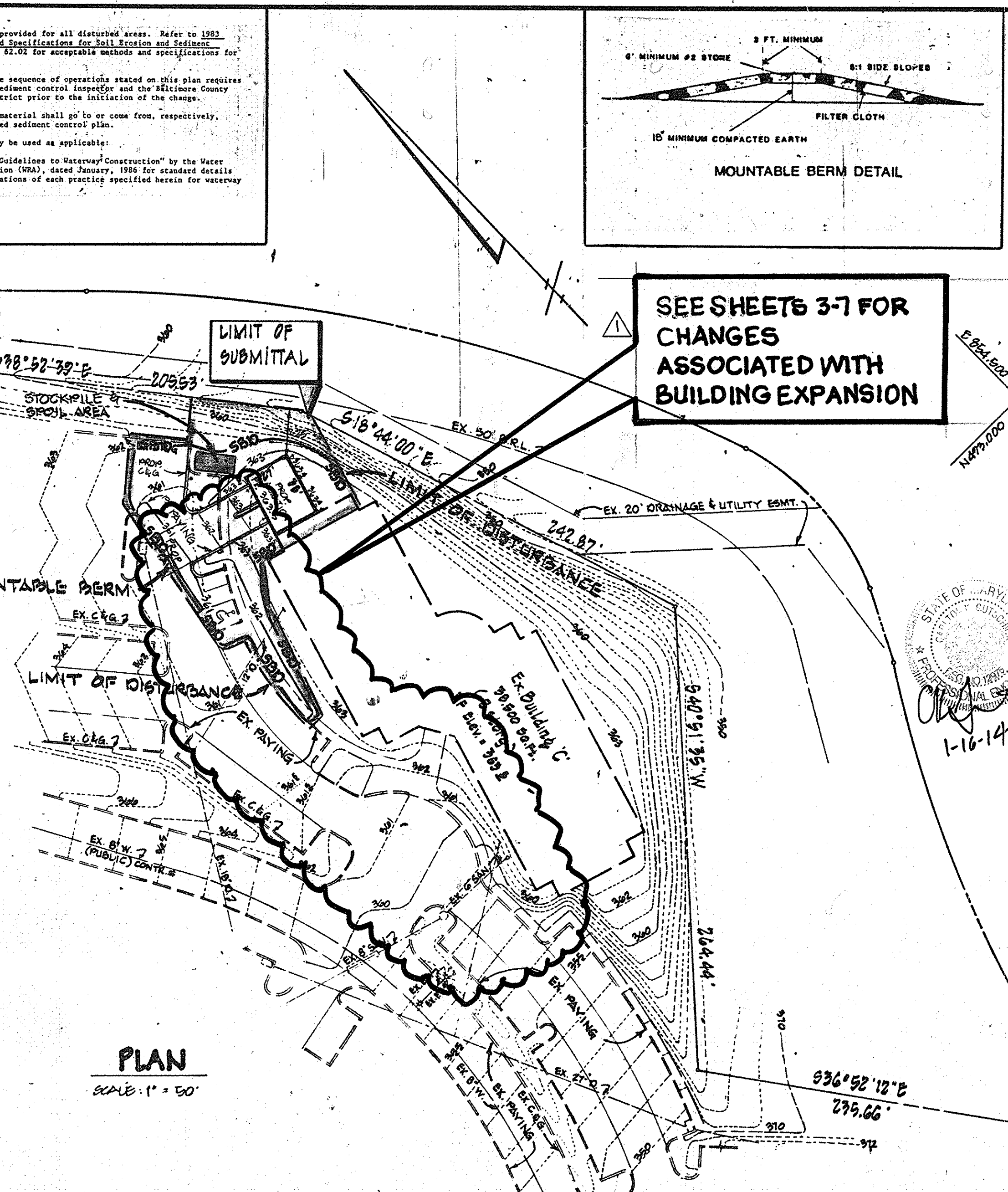
APPROVED: Howard County Office of Planning & Zoning.

William H. ... 11-12-87
 Director Date

John W. ... 11-9-87
 Chief Division of Land Development & Zoning Administration Date

GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC.
 CIVIL ENGINEERS & LAND SURVEYORS

303 ALLEGHENY AVENUE
 TOWSON, MARYLAND 21204
 (301)825-8120



PERMANENT SEEDING NOTES

Seeding Preparation: Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.

Soil Amendments: Use one of the following schedules:

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

TEMPORARY SEEDING NOTES

Seeding Preparation: Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.

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

Seeding: For periods March 1 thru April 30 and from August 15 thru Nov. 15, seed with 25 lb. per acre of annual ryegrass (2.2 lbs./1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Seed with 80 lbs./acre Kentucky 31 tall fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1 1/2 to 2 tons per acre (70-90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using notch anchoring tool or 2 1/2 gallon per acre C-6 per/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 3 feet or higher, use 2 1/2 gallon per acre (8 gal./1000 sq. ft.) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacement and reseedings.

LEGEND

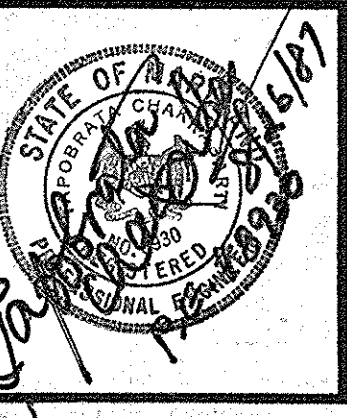
STRAW BALE DIKE SBD — SBD

LIMIT OF DISTURBANCE

EX. STABILIZED CONSTRUCTION ENTRANCE

MOUNTABLE BERM

1-15-2014 Add note to see sheets 3-7 for changes associated with building expansion
 Date Revision By: GLW



ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A RED-LINED "AS-BUILT" OF THE POND WITHIN 30 DAYS OF COMPLETION.

George William Stephens, Jr. 8930 8/26/87
 ENGINEER (APPROPRIATE QUALIFICATION) REG. NO. DATE

OWNER/DEVELOPER

M.O.R. XLT PARTNERSHIP
 C/O MANEKIN CORPORATION
 10210 OLD COLUMBIA ROAD
 COLUMBIA, MARYLAND 21046
 (301) 998-6707

DEVELOPER'S CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. OF NATURAL RESOURCES 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 OR OTHER AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A RED-LINED "AS-BUILT" OF THE POND WITHIN 30 DAYS OF COMPLETION.

DEVELOPER: *Richard A. ...* DATE: 8/26/87

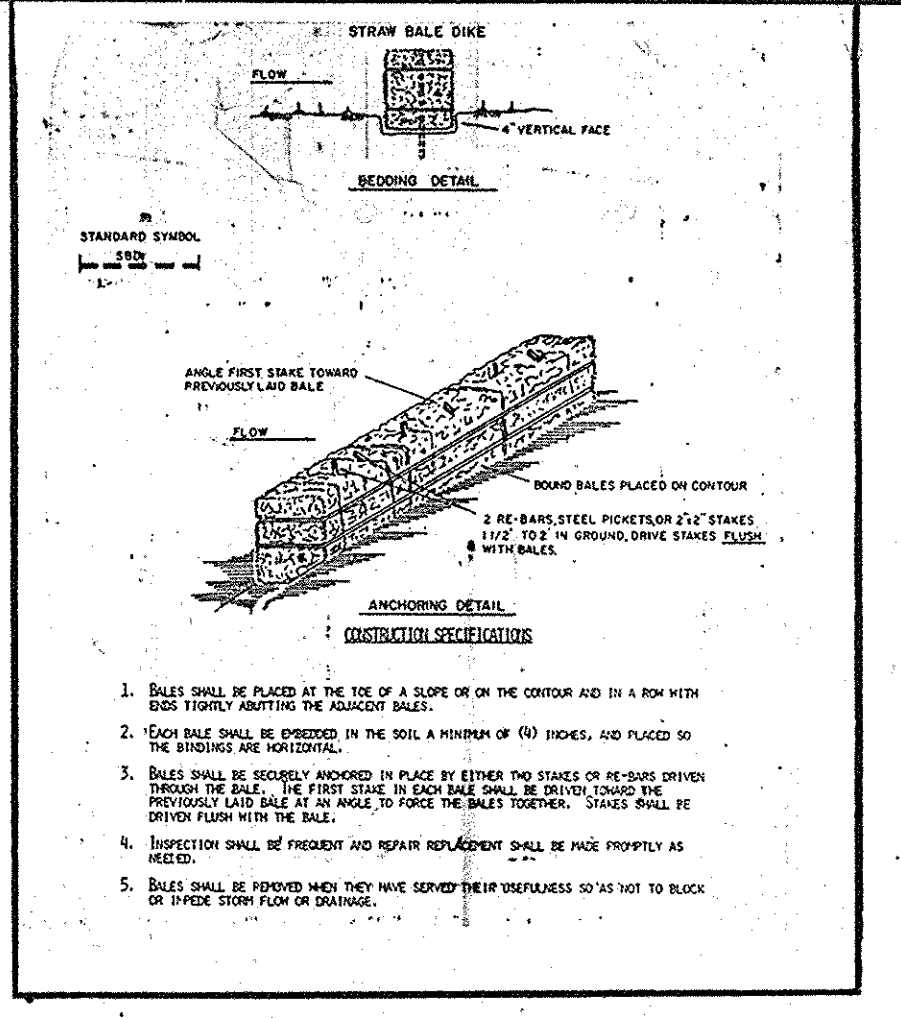
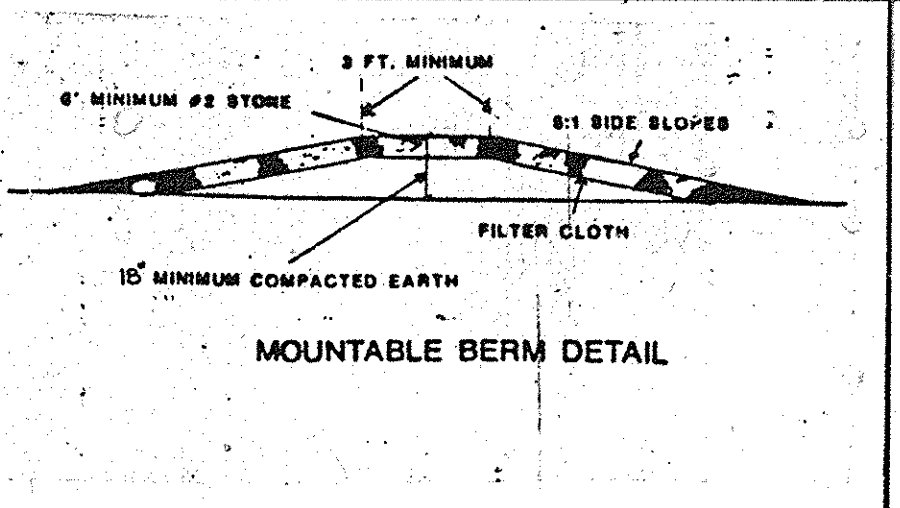
DESIGNED BY: KLB
 DRAWN BY: RDM/KLB
 CHECKED BY: TC
 REVISIONS

GRADING, SEDIMENT AND EROSION CONTROL PLAN FOR
 Addition to Building 'C' and SDP #87-49 & 87-100

RESEARCH & DEVELOPMENT OFFICE PARK
 COLUMBIA GATEWAY
 PARCEL 'C'
 TAX MAP # 88-49

HOWARD CO., MARYLAND. ELECTION DISTRICT 16
 SCALE: AS SHOWN AUGUST 24, 1987
 FN-06466 SHEET 2 OF 7

SDP # 88-36

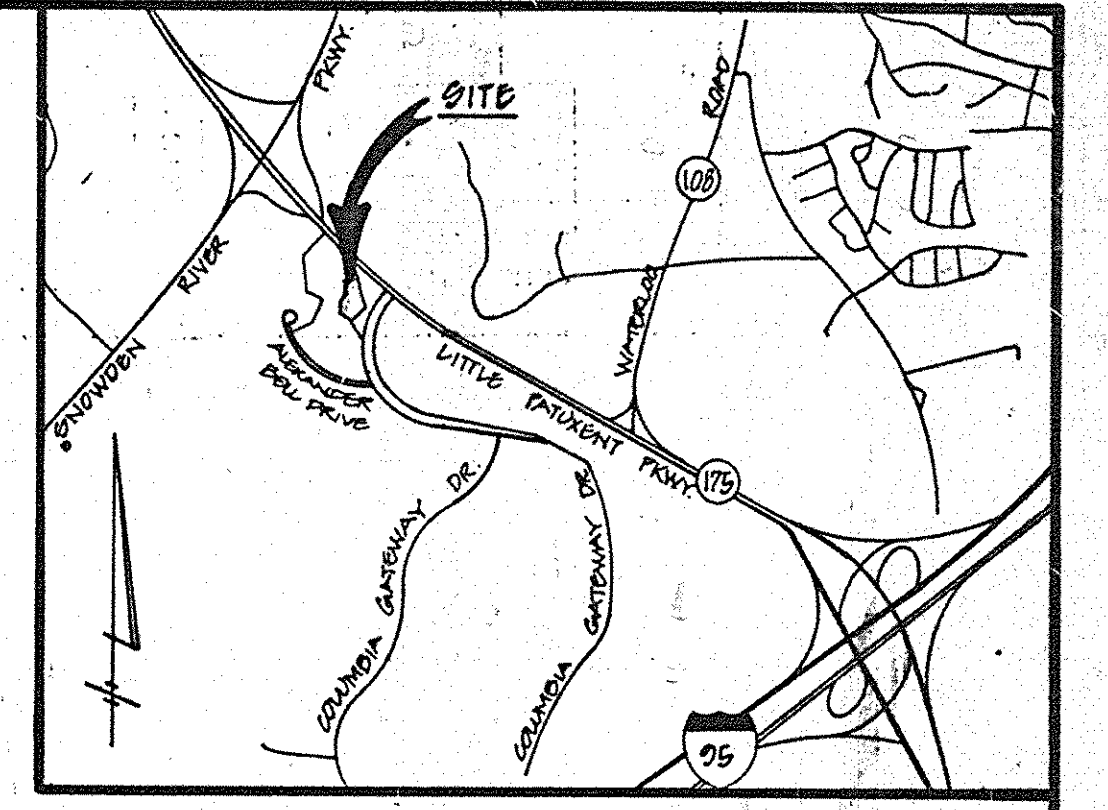


Professional Certification

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. 12975, Expiration Date: May 26, 2014.

SEDIMENT CONTROL NOTES

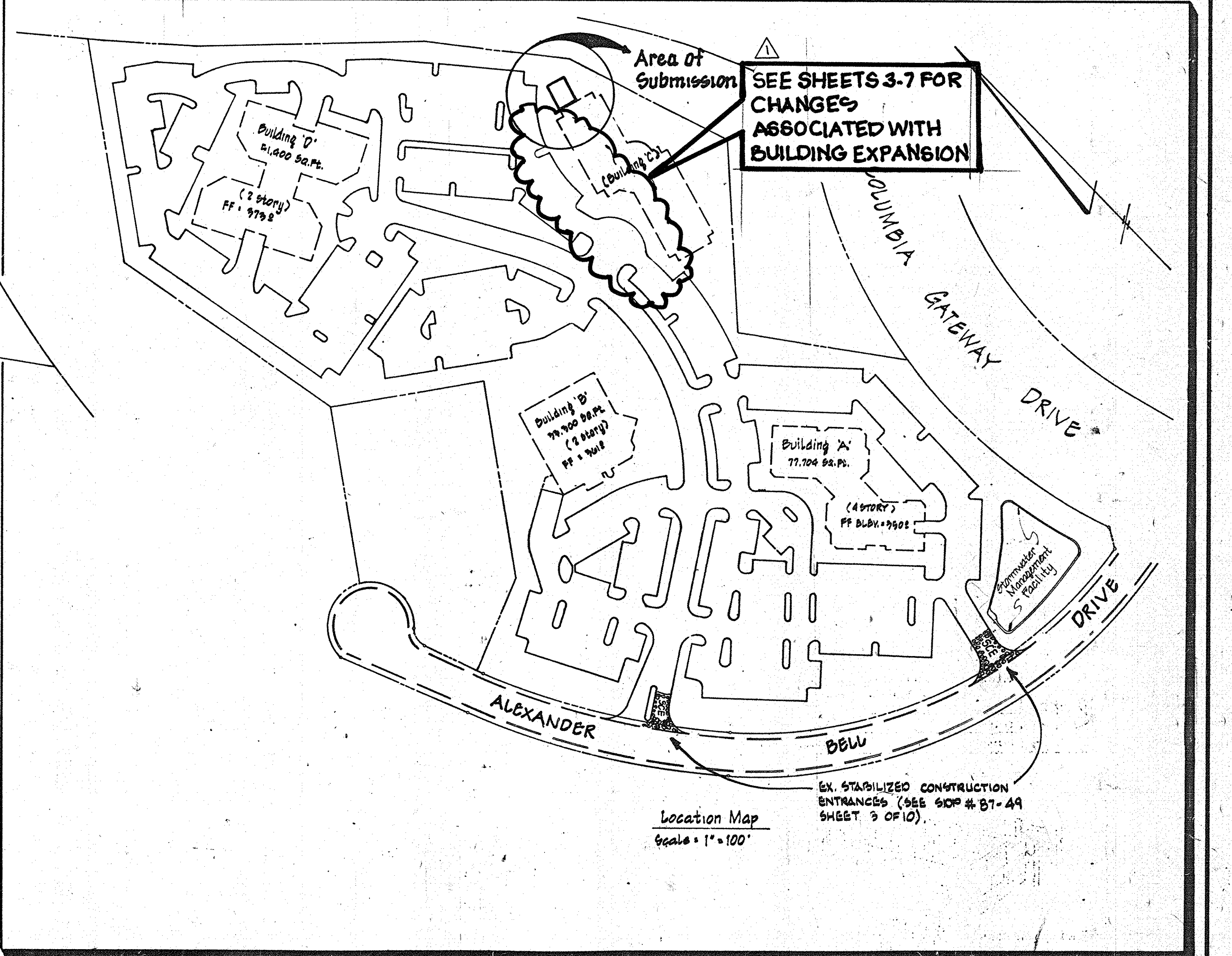
- 1) A minimum of 24 hours notice must be given to the Board County Office of Inspections and Permits prior to the start of any construction. (SOP-10-17)
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in compliance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a.) 7 calendar days for all permanent sediment structures, dikes, perimeter slopes and all slopes greater than 3:1, b.) 14 days as to all other disturbed or graded areas on the project site.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 22, 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 31) and temporary seedings (Sec. 30) and mulching (Sec. 32). Temporary stabilization with mulch alone can only be done where recommended seeding rates 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 Board County Sediment Control Inspector.
- 7) Site Analysis:
 - Total Area of Site: 15.76 acres
 - Area Disturbed: 2.11 acres
 - Area to be re-vegetated/stabilized: 13.65 acres
 - Total Cut: 20 cu. yds
 - Total Fill: 20 cu. yds
 - Disturbance/Borrow Area Location: N/A
- 8) Any sediment control practices which are not provided by the Board County Office of Inspections and Permits must be approved on the same day of disturbance.
- 9) Additional sediment control may be provided, if deemed necessary by the Board County Office of Inspections and Permits.



BENCH MARKS

W.R. & A.D.M. #2 ELEV. 366.28
 K.K. STAKE IN CORNER OF 16' FOOTING, 20' S. EIGHT OF E. ALEXANDER BELL DRIVE
 P.T. 27-11-23-93

W.R. & A.D.M. #9 ELEV. 329.26
 TOP DOUBT & TOP OLD LIGHT POST FOOTER, 40' OF E. COLUMBIA GATEWAY DRIVE
 STA. 11+50



REDEVELOPMENT GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS HMA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "M&E UTILITY" AT 1-800-251-7111 AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED. DIMENSIONS ARE MEASURED PERPENDICULAR TO RADIAL BETWEEN ITEMS UNLESS OTHERWISE NOTED.
- EXISTING TOPOGRAPHY AND FEATURES WERE DERIVED FROM AVAILABLE PUBLIC RECORDS AND FROM SURVEY D BY KGI DONE IN 2001 AND BY GUTSCHICK, LITTLE & WEBER, P.A. DONE IN SEPTEMBER 2015.
- THIS EXISTING BUILDING IS SERVED BY PUBLIC WATER & SEWER (CONTR. #44-1574).
- ALL OF THE RUNOFF FROM THE SITE CURRENTLY DRAINING TO A 210 STORAGE-TANK MANAGEMENT POND BUILT UNDER SDP-87-48. SINCE THE EXISTING POND DOES NOT MEET MDE 2000 CRITERIA, ESD IS REQUIRED. STORMWATER MANAGEMENT FOR THE PROPOSED REDEVELOPMENT WILL BE PROVIDED BY A COMBINATION OF IMPERVIOUS AREA REDUCTION AND A MICRO-BIORETENTION FACILITY LOCATED NEAR THE SOUTH WEST CORNER OF THE BUILDING-C.
- THIS PARCEL WAS PREVIOUSLY DEVELOPED AND THERE ARE NO WETLANDS, FLOODPLAIN OR STREAM ON THIS SITE.
- THE EXISTING UTILITIES SHOWN HEREIN WERE DERIVED FROM AVAILABLE PUBLIC RECORDS. THE CONTRACTOR MUST HAND DIG TEST PITS AT ALL UTILITY CROSSINGS AND CONNECTION POINTS TO VERIFY EXACT LOCATION.
- OTHER TOPICS RELATED TO THIS SITE:
 - TRAFFIC IMPACT ASSESSMENT BY WELLS & ASSOCIATES, 11/11 (DATE: JUNE 26, 2013).
 - SEWERAGE EXPLORATION AND GEOTECHNICAL EVALUATION BY EGS MID-ATLANTIC (DATED: JULY 22, 2008).
- ALL OUTSIDE LIGHTING SHALL COMPLY WITH JOINS 11-11 SECTION 104 WHICH REQUIRES LIGHTS TO BE INSTALLED TO DIRECT/REFLECT LIGHT DOWNWARDS AND INWARDS ON SITE AWAY FROM ALL ADJOINING PUBLIC STREETS AND RESIDENTIAL AREAS. SEE ELECTRICAL DRAWINGS WHICH IS PART OF THE ARCHITECTURAL PLAN SET SUBMITTED FOR BUILDING PERMIT REVIEW.
- UNLESS NOTED OTHERWISE, PROPOSED SPOT ELEVATIONS ALONG THE CONCRETE CURB & GUTTER ARE TO THE FLOW LINE (BOTTOM OF CURB) AT THE P.C./P.T'S, CORNERS AND TERMINUSES.
- ALL ON-SITE PAVING AND ROADWAYS ARE PRIVATE.
- ALL ON-SITE STORM DRAIN SYSTEMS ARE PRIVATELY OWNED & MAINTAINED.
- UNLESS NOTED OTHERWISE, ALL PLAN DIMENSIONS ARE TO THE FACE OF STRUCTURE (BLDG., CURB, ETC.). DIMENSIONS ARE MEASURED PERPENDICULAR OR BETWEEN ITEMS, UNLESS NOTED OTHERWISE.
- ALL CURB RADII ARE 5' (FACE OF CURB @ FLOW LINE) UNLESS NOTED OTHERWISE.
- THE RENOVATED BUILDING WILL BE CERTIFIED.
- THERE IS A NET INCREASE OF 8 PARKING SPACES WITH THE REDEVELOPMENT. NO ADDITIONAL PARKING LOT LANDSCAPING IS REQUIRED. HOWEVER, VOLUNTARY ENHANCEMENT LANDSCAPING WILL BE PROVIDED WITH THE BUILDING CONSTRUCTION DOCUMENT.
- THIS SITE DEVELOPMENT PLAN IS EXEMPT FROM THE FOREST CONSERVATION ORDINANCE IN ACCORDANCE WITH SECTION 16.1202(B)(1)(V). A PLANNED BUSINESS PARK OF AT LEAST 75 ACRES WHICH HAS PRELIMINARY PLAN APPROVED BEFORE DECEMBER 31, 1992.

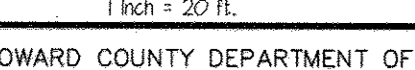
SITE DEVELOPMENT PLAN LEGEND

- 366 - EXISTING CONTOUR
- 300 - PROPOSED CONTOUR
- +32.10 - SPOT ELEVATION
- MEX. - MATCH EXISTING ELEVATION
- EXISTING TREELINE
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- EX. 8" S. - EXISTING SANITARY SEWER
- EX. 8" W. - WATERLINE (PUBLIC)
- FIRE HYDRANT
- EXISTING CURB & GUTTER TO REMAIN
- EXISTING CURB & GUTTER TO BE REMOVED
- TYPE A' CONCRETE CURB & GUTTER (DETAIL 4/4)
- FACE OF CURB
- PLYUP
- BACK OF CURB
- PROPOSED CONCRETE SIDEWALK (PER HO. CO. DET. R-3.0)
- EXISTING EASEMENT AREA (SHADED)
- NUMBER OF PARKING SPACES
- HANDICAPPED PARKING DESIGNATION
- EXISTING LIGHT FIXTURE & POLE
- EXISTING SIGN
- LIMIT OF DISTURBANCE
- HARDSCAPE AREA
- SOIL BOUNDARY
- SOIL TYPE
- BGE TRANSFORMER PAD

SOIL TYPES

- UFA - URBAN LAND-FULLSUNSHINE COMPLEX, 0 to 15 percent slopes
- D - URBAN LAND-FULLSUNSHINE COMPLEX, 0 to 2 percent slopes

GRAPHIC SCALE



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Mark A. Cagle* 4/14/14
 Date: 4-14-14
 Chief, Division of Land Development
 Chief, Development Engineering Division

GLWGuttschick Little & Weber, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-389-2524 FAX: 301-421-4186

DATE: JAN. 2014
 REVISION: 01
 BY: KLP
 APPR: KLP

PREPARED FOR:
 OWNER/DEVELOPER
 C/O COPY DEVELOPMENT & CONSTRUCTION SERVICES, LLC
 A DIVISION OF CORPORATE OFFICE PROPERTIES TRUST
 6711 COLUMBIA GATEWAY DRIVE, SUITE 300
 COLUMBIA, MD 21046
 PHONE: 443-285-5400
 Attn: TOM KELLEY

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. 129278.
 EXPIRATION DATE: MAY 26, 2014

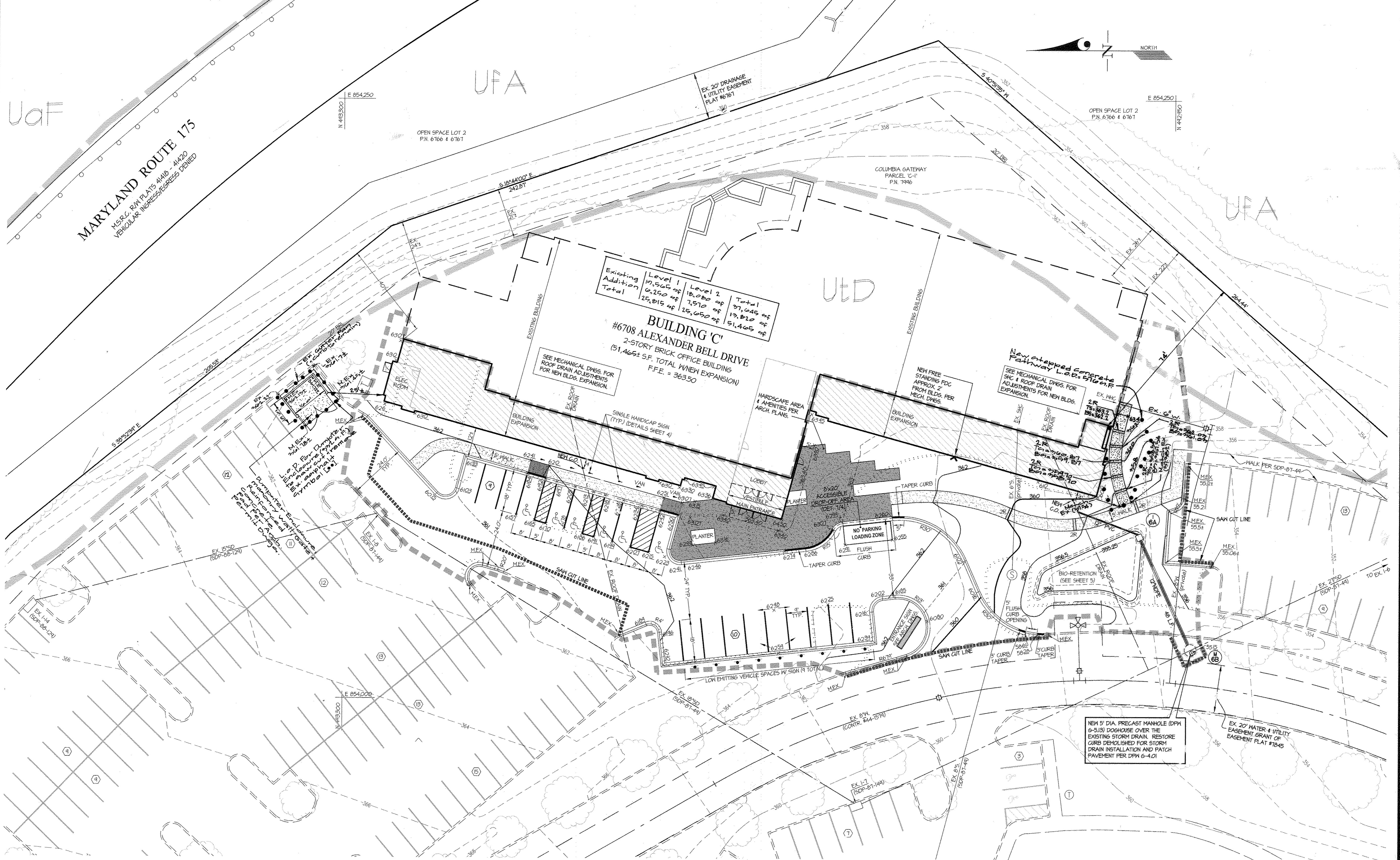
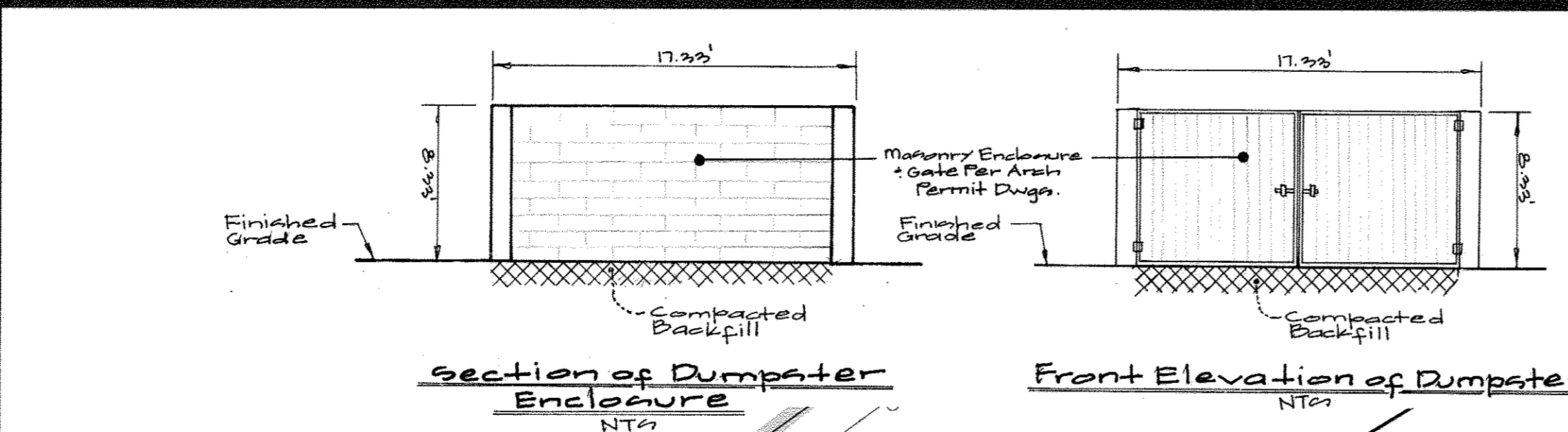
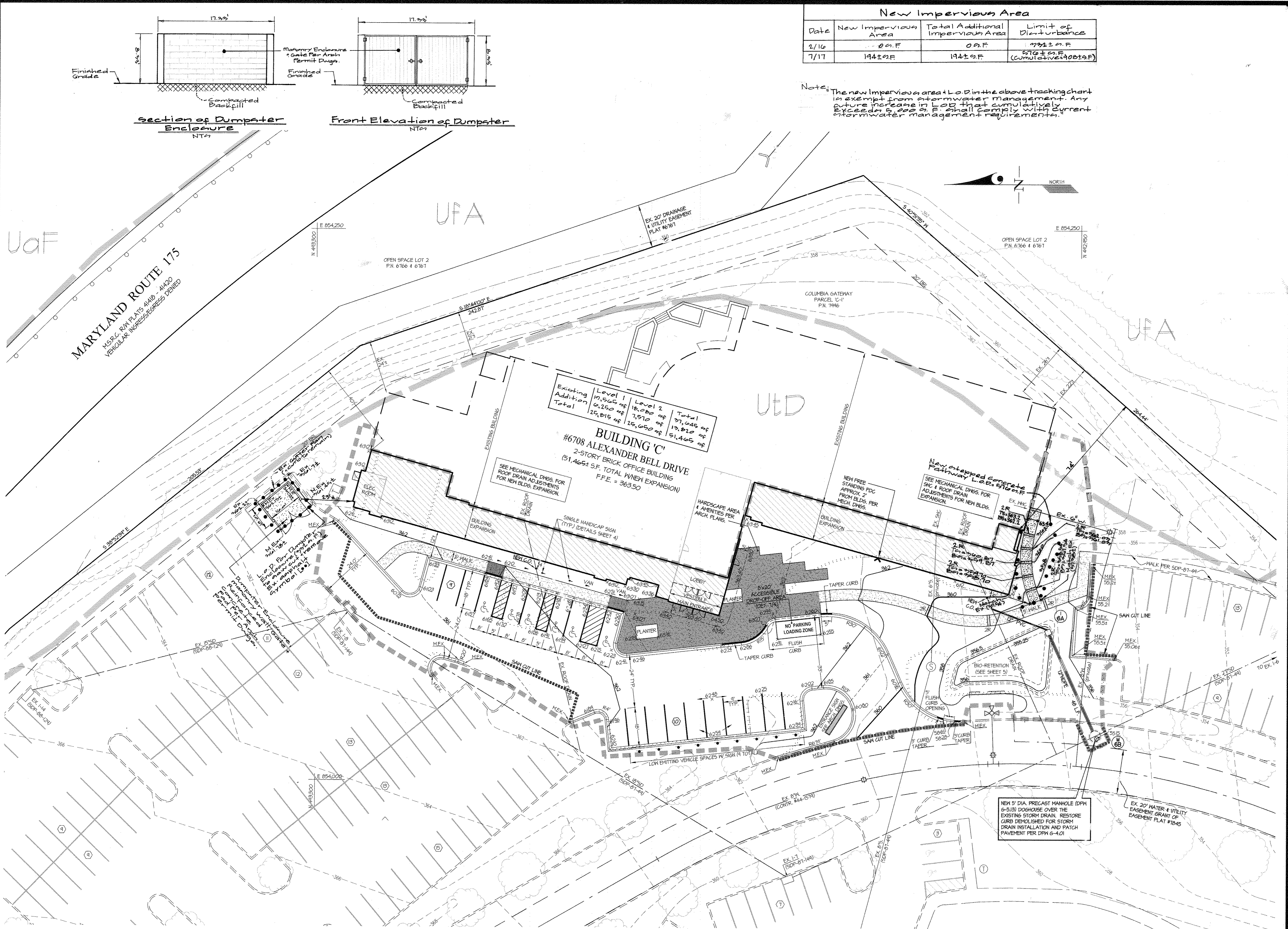


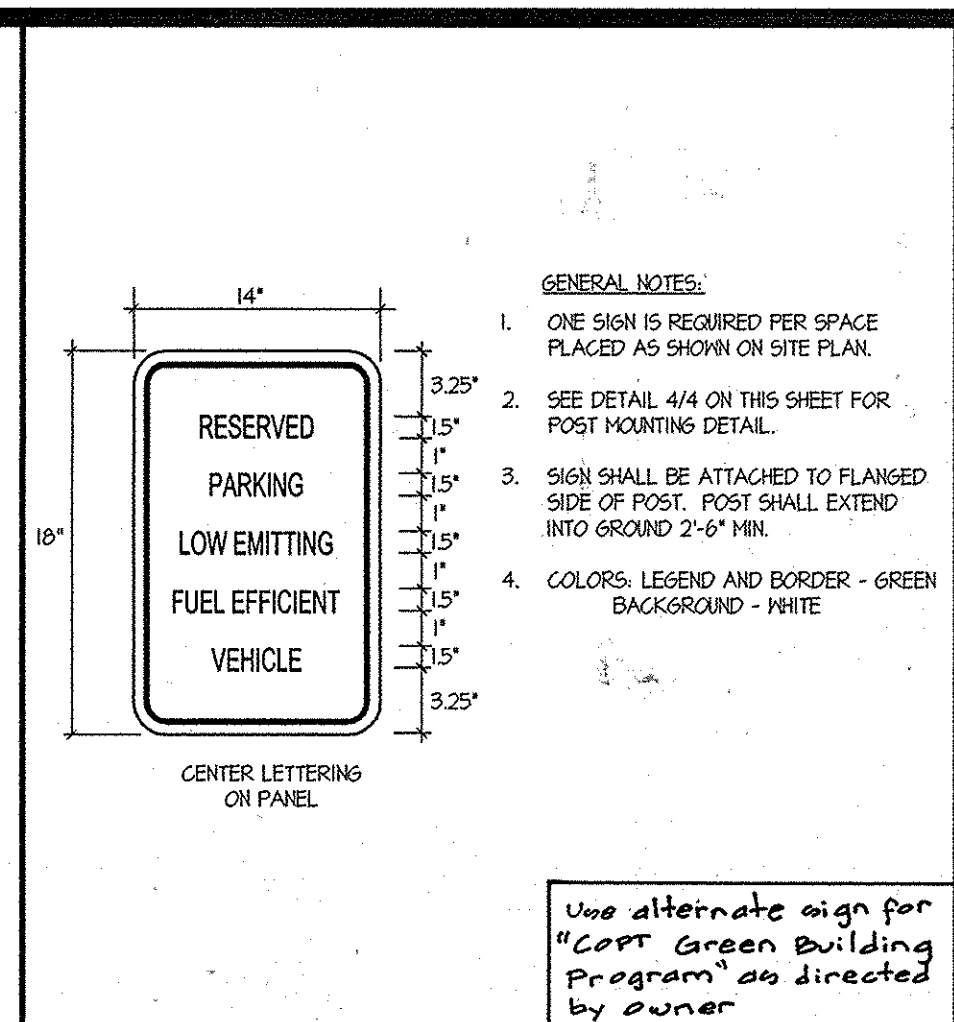
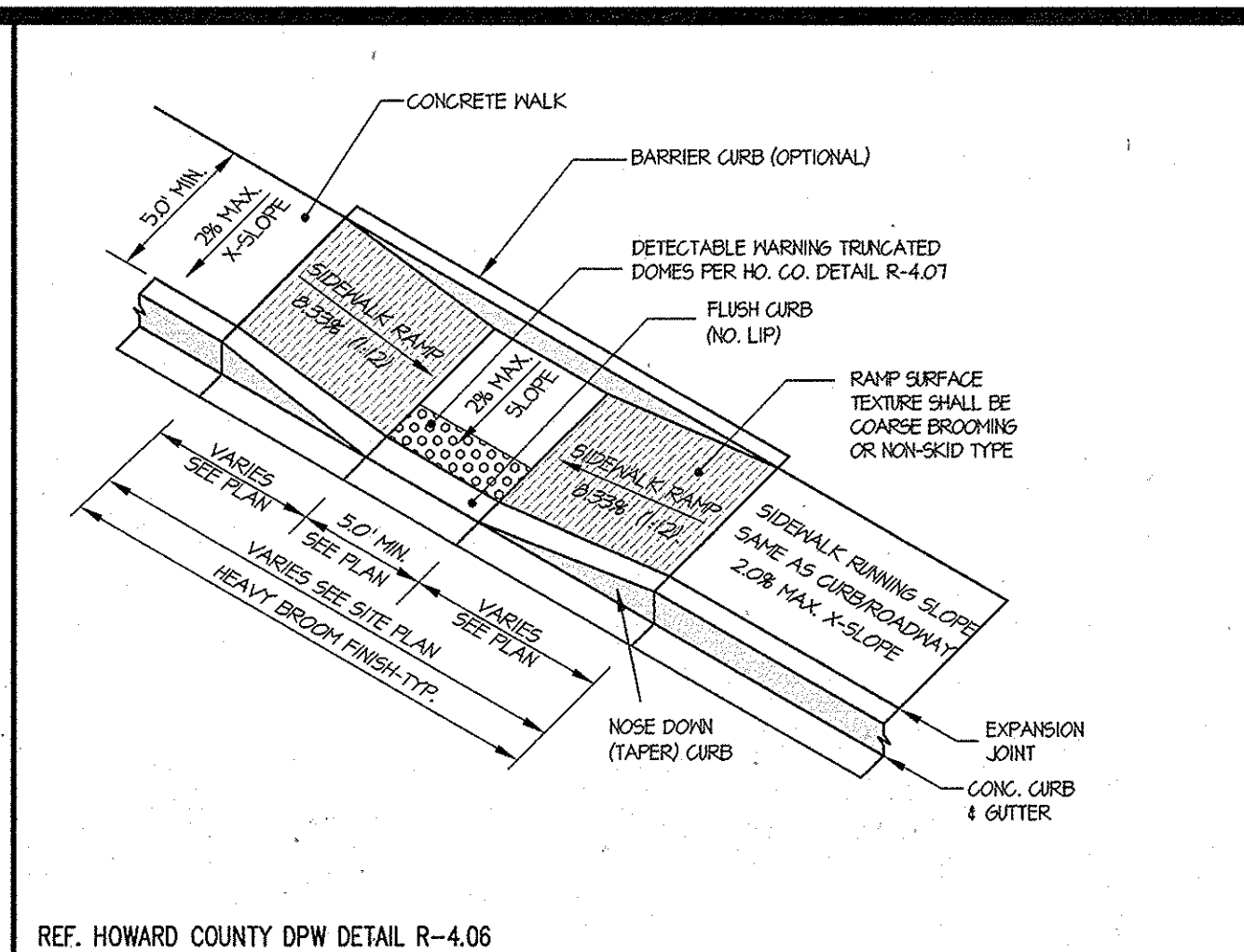
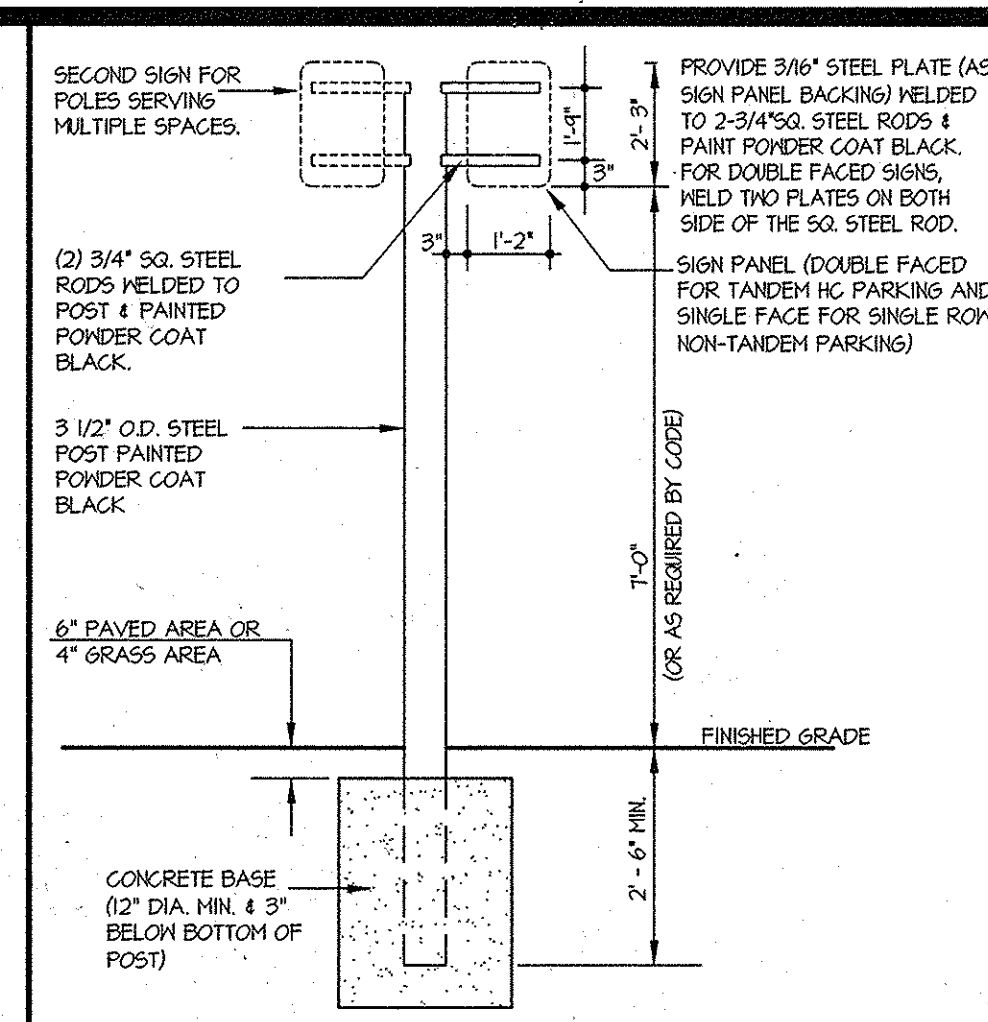
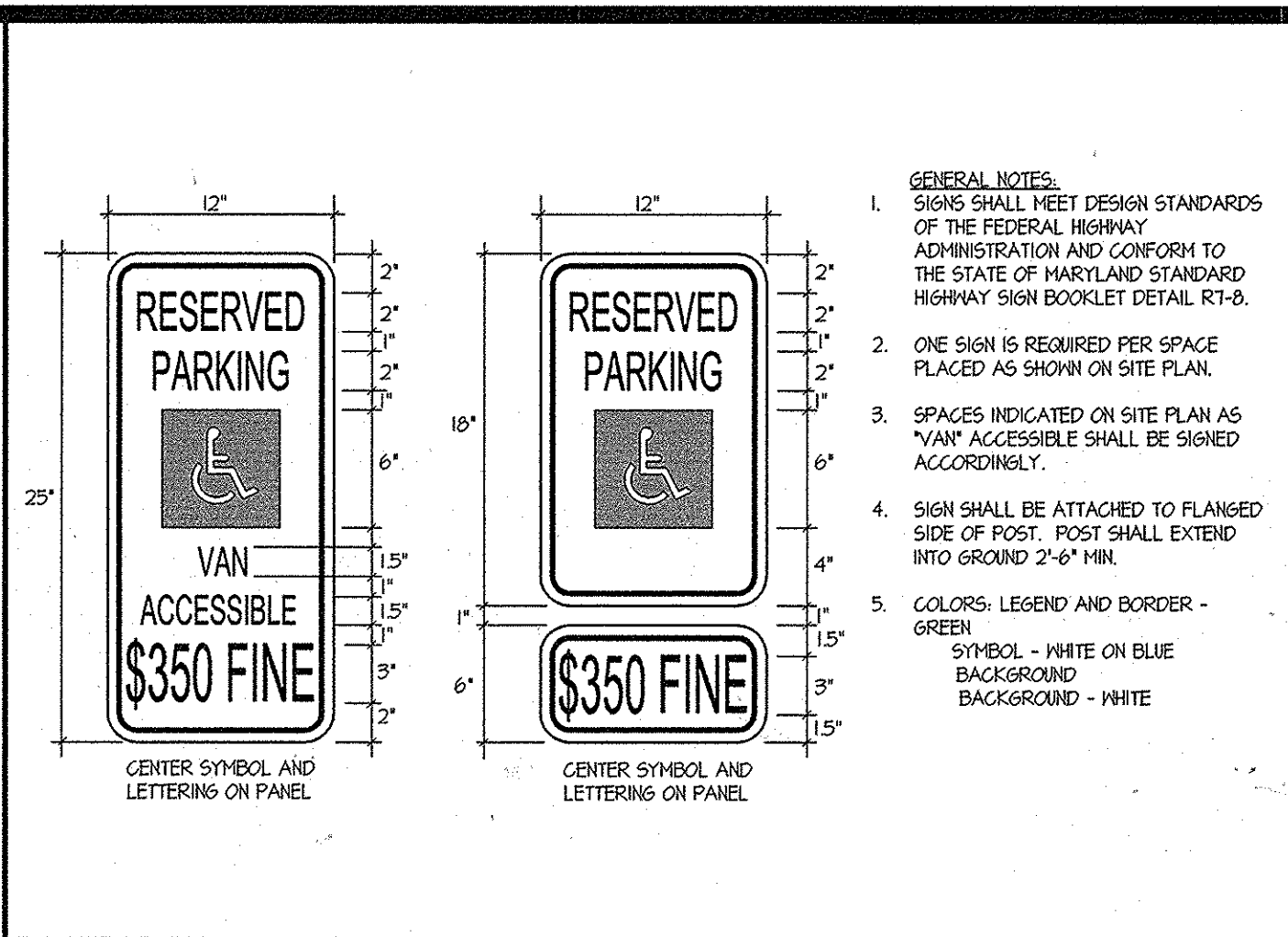
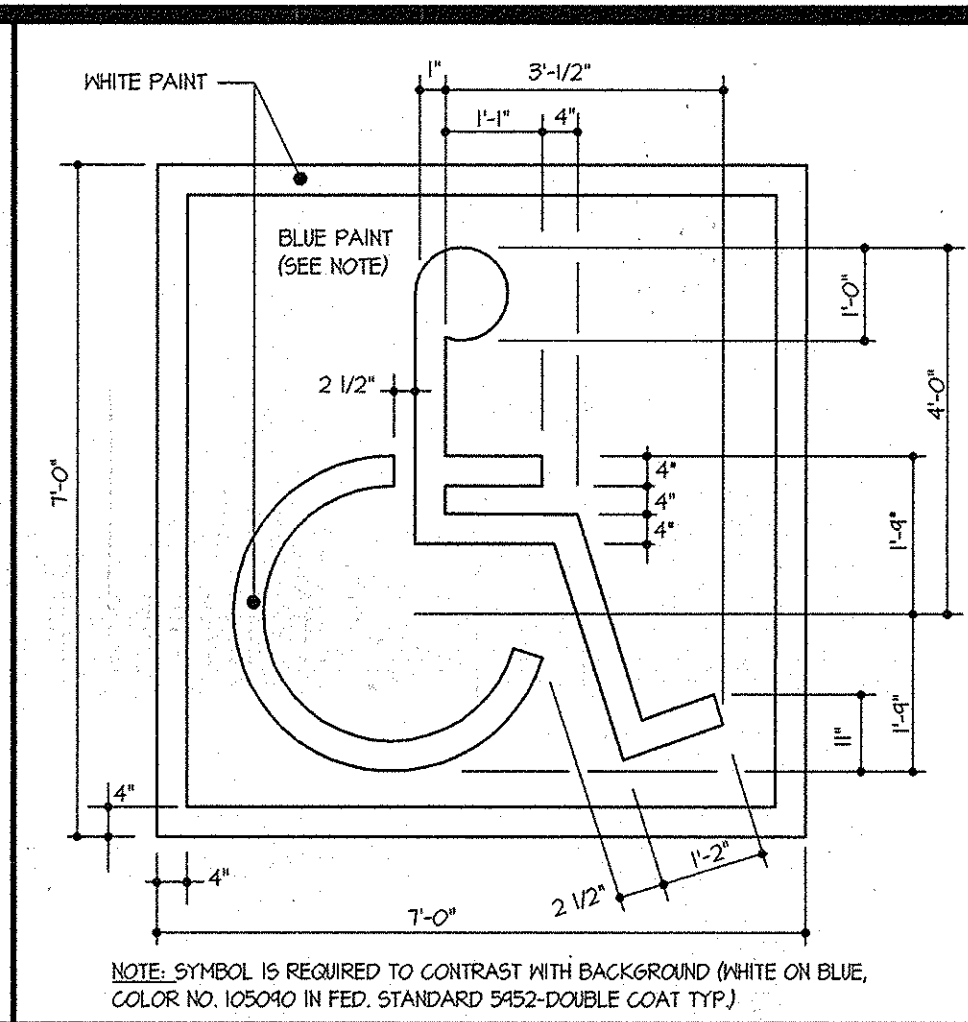
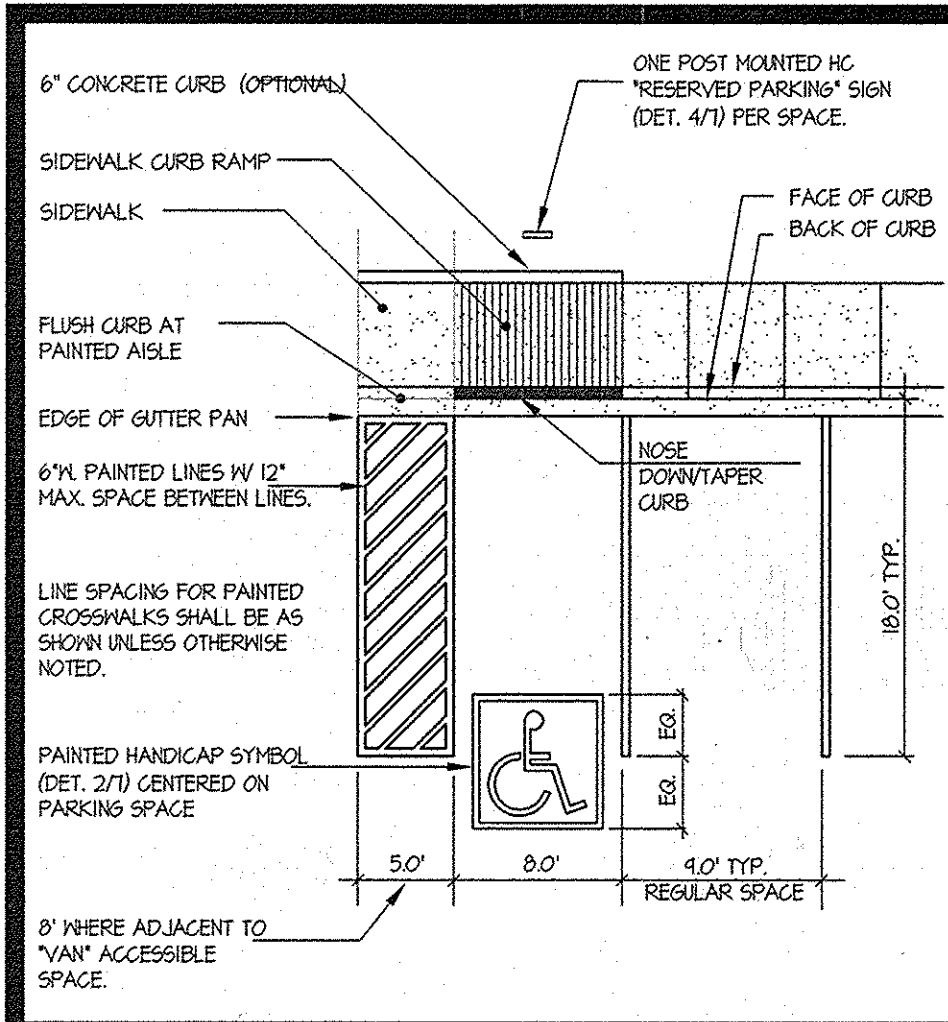
SITE REDEVELOPMENT PLAN
RESEARCH & DEVELOPMENT OFFICE PARK
 COLUMBIA GATEWAY
 PARCEL C-1
 PLAT NO. 7996

SCALE: 1" = 20'
 ZONING: M-1
 G. L. W. FILE NO.: 13028
 DATE: JAN/2014
 TAX MAP - GRID: 42 - 43
 SHEET: 3 OF 7

New Impervious Area			
Date	New Impervious Area	Total Additional Impervious Area	Limit of Disturbance
2/16	0A.F	0A.F	0792± S.F.
7/17	194± S.F	194± S.F	5701± S.F. (Cumulative=6493± S.F.)

Note: The new Impervious area L.O.D. in the above tracking chart is exempt from stormwater management. Any future increase in L.O.D. that cumulatively exceeds 5,000 S.F. shall comply with current stormwater management requirements.





1 PARKING SPACE LAYOUT NO SCALE

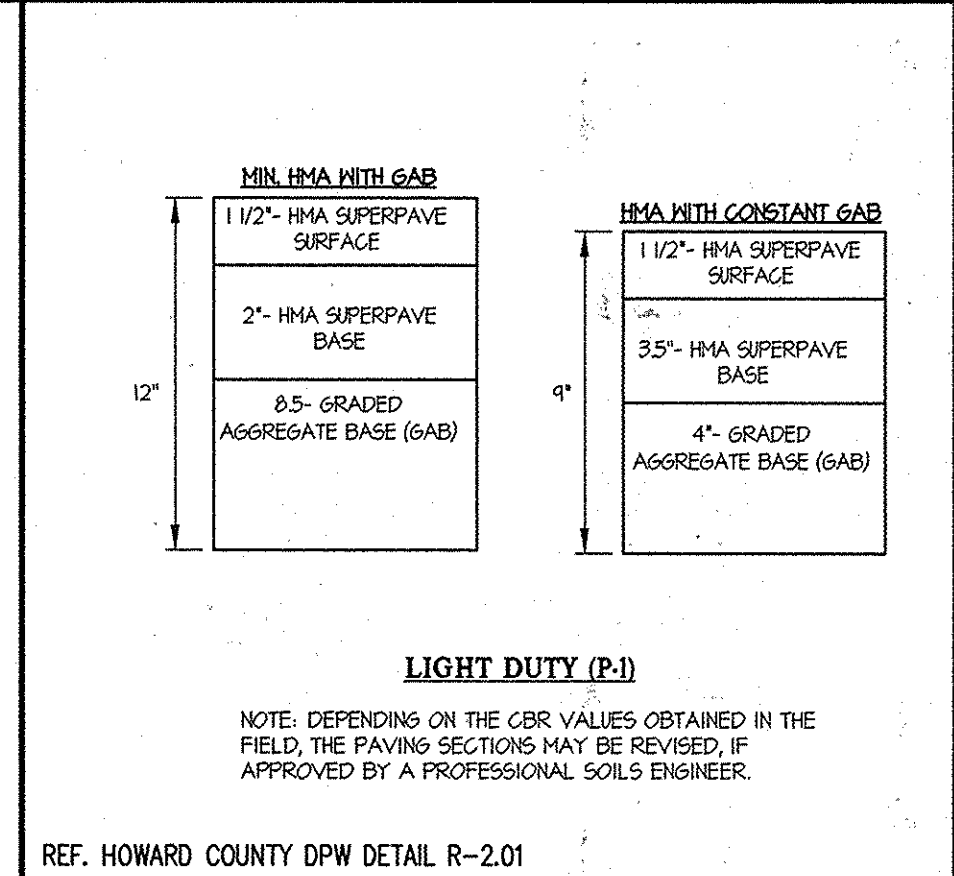
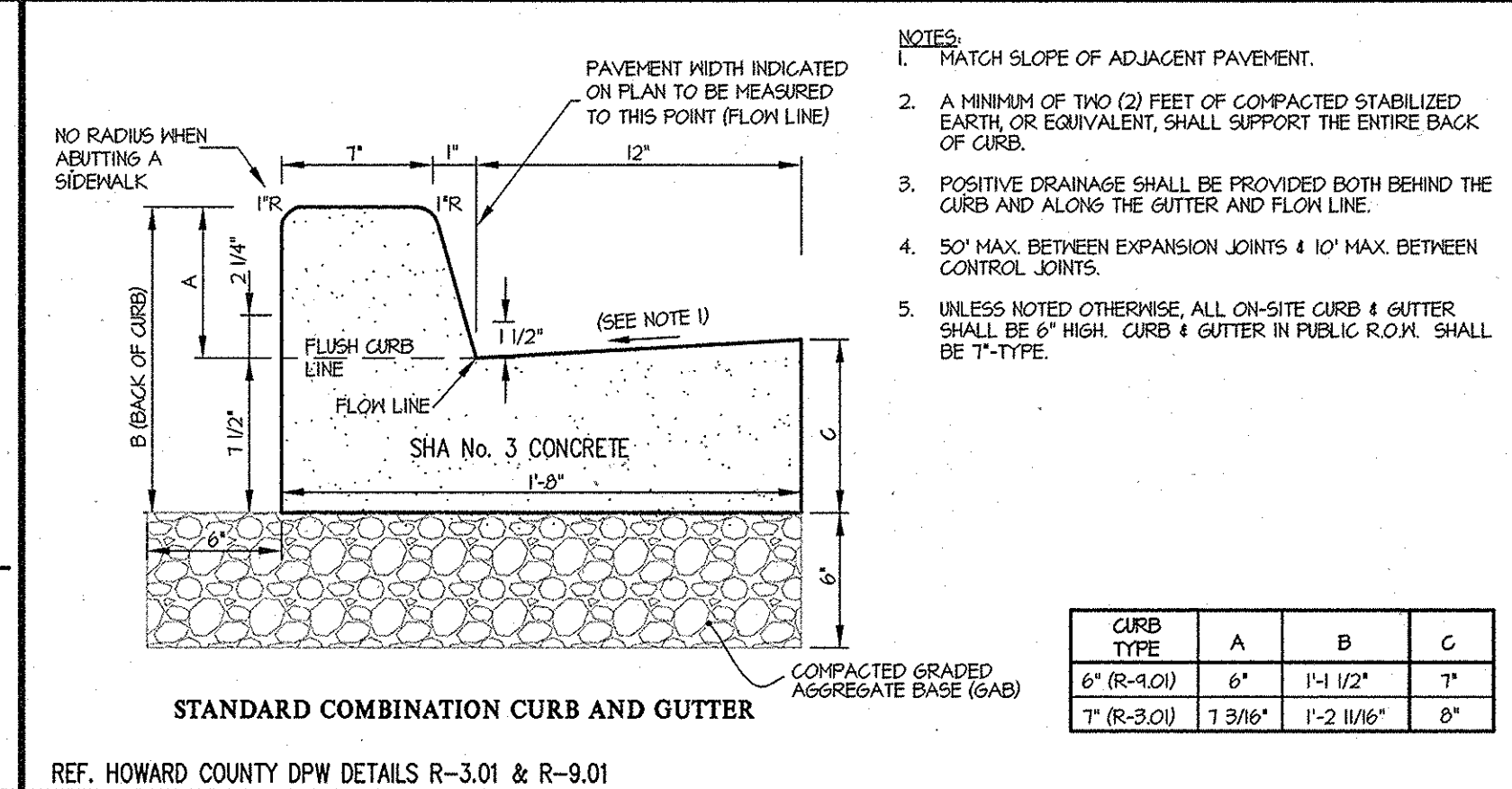
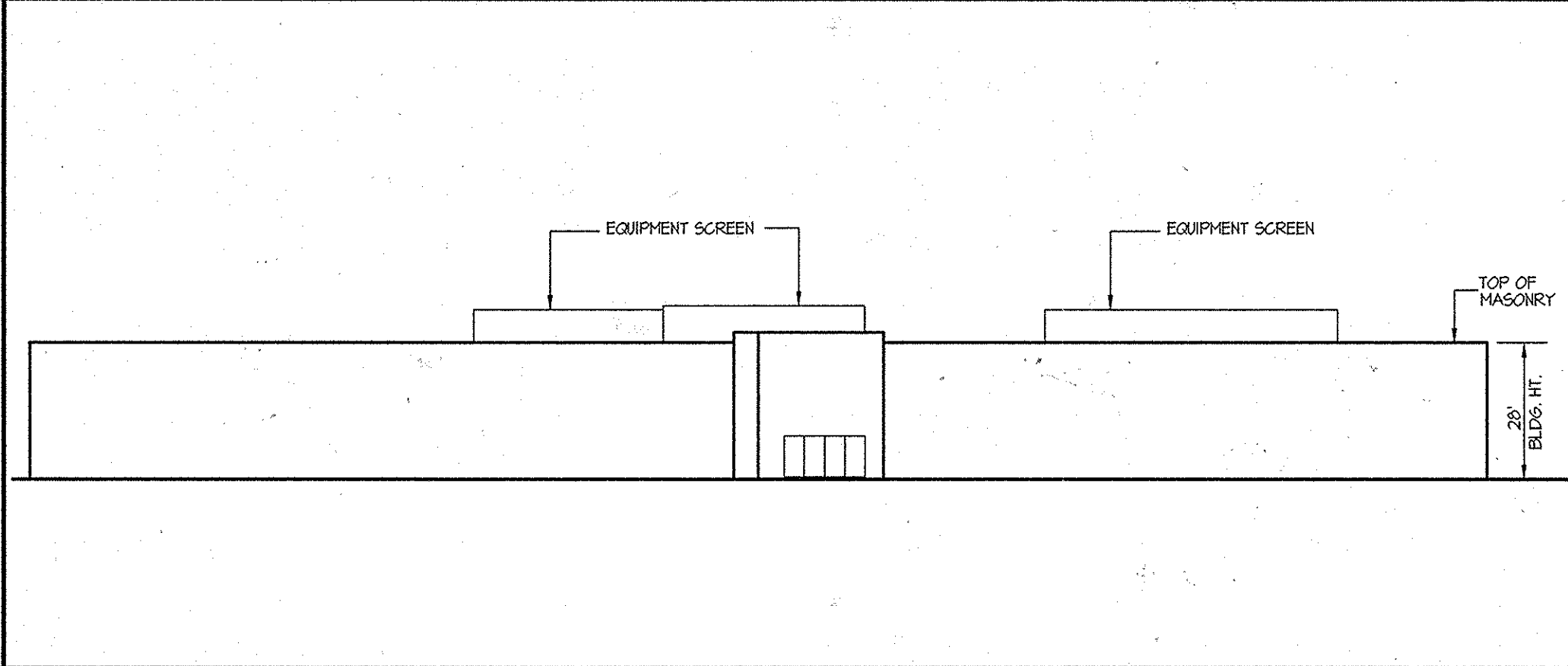
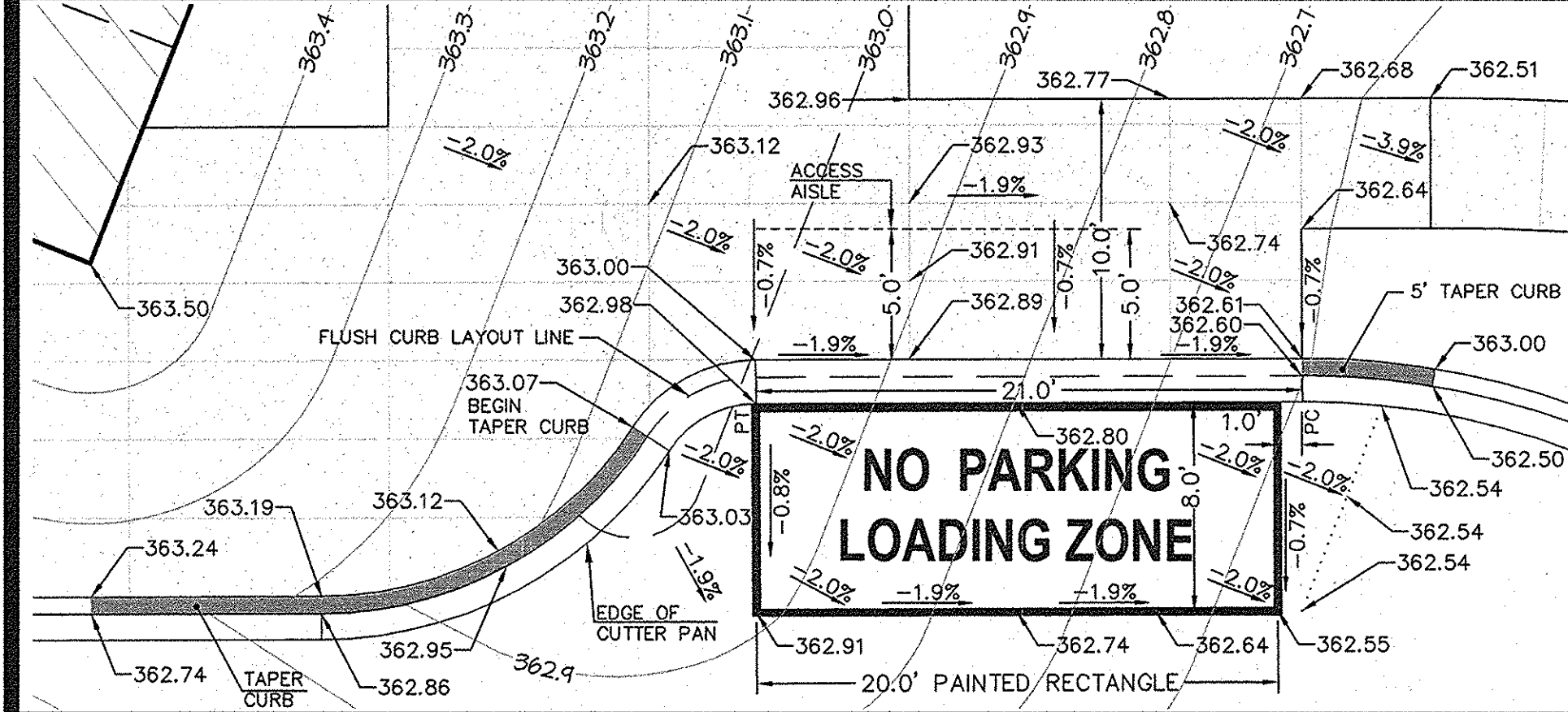
2 HANDICAP SPACE STENCIL LAYOUT NO SCALE

3 HANDICAP PARKING SIGNS DETAIL NO SCALE

4 POST & SIGN DETAIL FOR PARKING RESTRICTION SIGN NO SCALE

5 TYPE-C SIDEWALK RAMP NO SCALE

6 LOW EMITTING FUEL EFFICIENT VEHICLE SIGN NO SCALE

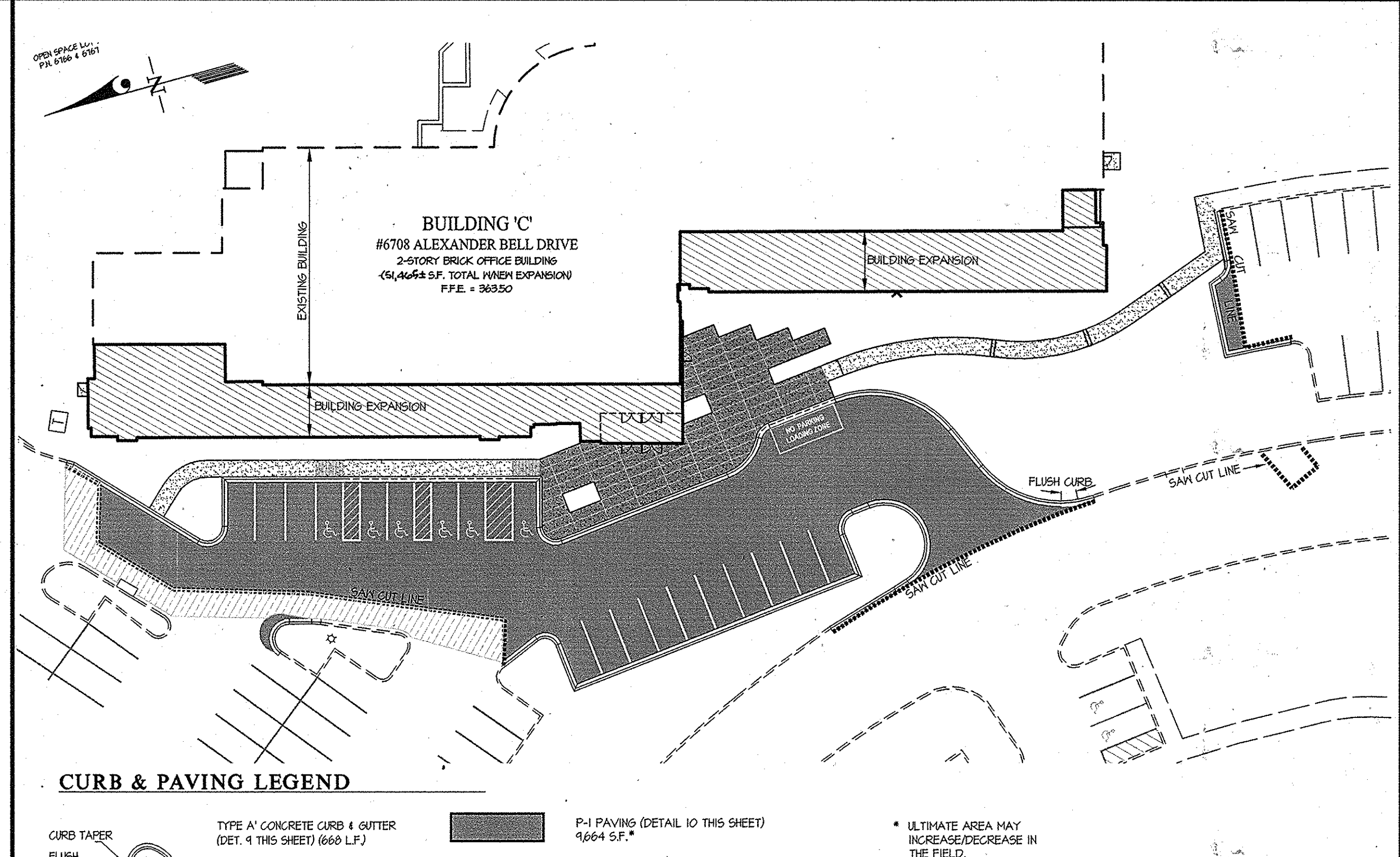
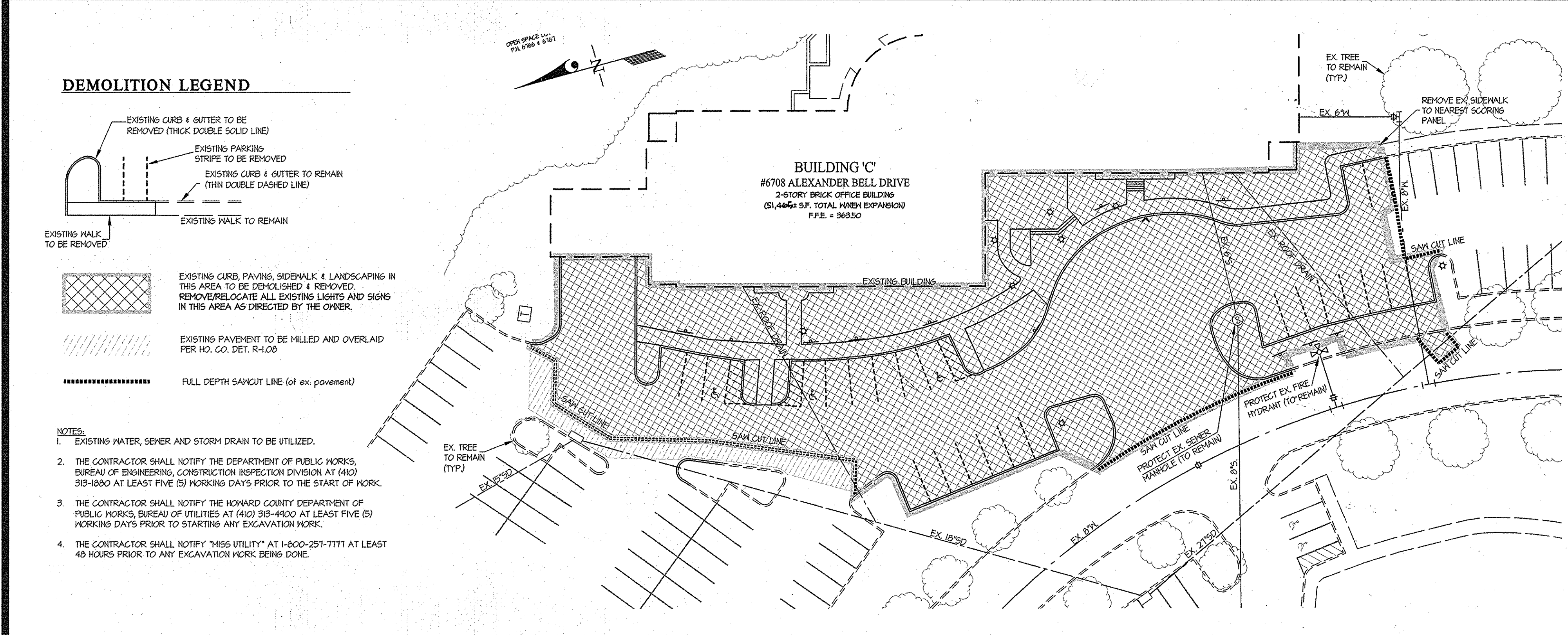


7 ACCESSIBLE DROP-OFF AREA DETAIL SCALE: 1" = 6'

8 FRONT (WEST) BUILDING PROFILE SCALE: 1" = 30'

9 TYPE-A CONCRETE CURB AND GUTTER NO SCALE

10 BITUMINOUS PAVING SECTIONS NO SCALE



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: [Signature] 4/14/14
 Chief, Division of Land Development: [Signature] 4-14-14
 Chief, Development Engineering Division: [Signature] 4.9.14

DEMOLITION PLAN 1" = 30'

PAVING DELINEATION PLAN 1" = 30'

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND, 20866
 TEL: 301-421-4024 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
JAN. 2014	New sheet for BUILDING-C addition and immediate site redevelopment.		

PREPARED FOR:
 OWNER/DEVELOPER
 C/O CORP DEVELOPMENT & CONSTRUCTION SERVICES, LLC
 A DIVISION OF CORPORATE OFFICE PROPERTIES TRUST
 5711 COLUMBIA GATEWAY DRIVE, SUITE 300
 COLUMBIA, MD 21046
 PHONE: 443-285-5400
 Attn: TOM KELLEY

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. 12975
 EXPIRATION DATE: MAY 26, 2014
 1-16-14 [Signature]

CURB & PAVING DELINEATION, DEMOLITION PLAN and SITE DETAILS
RESEARCH & DEVELOPMENT OFFICE PARK
COLUMBIA GATEWAY
PARCEL C-1
 PLAT No. 7996
 ELECTION DISTRICT No. 6
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	M-1	13028
DATE	TAX MAP - GRID	SHEET
JAN/2014	42 - 43	4 OF 7

GENERAL NOTES

1. MATERIAL SPECIFICATIONS
THE ALLOWABLE MATERIALS TO BE USED IN BIORETENTION AREA ARE DETAILED IN TABLE B.3.2.

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 AN OBSTACLE 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 06.08.01.05.
THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
PH RANGE 5.2 - 7.0
ORGANIC MATTER 15 - 4% (BY WEIGHT)
MAGNESIUM 30 LB/AC
PHOSPHORUS (PROXIMATE - P205) 15 LB/AC
POTASSIUM (POTASH - 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 TEST FOR PH, PHOSPHORUS AND POTASSIUM AND ADDITIONAL TESTS FOR 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.

3. COMPACTION
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF THE BIORETENTION AREA AND THE REINFORCED BACKFILL. WHEN POSSIBLE USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF BIORETENTION APPENDIX B.3 CONSTRUCTION SPECIFICATIONS FOR SAND FILTERS, BIORETENTION AND OPEN CHANNELS B.3.5 AREAS ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT OR LIGHT EQUIPMENT WITH TIRE 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 SHALL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION. WHEN POSSIBLE USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF BIORETENTION APPENDIX B.3 CONSTRUCTION SPECIFICATIONS FOR SAND FILTERS, BIORETENTION AND OPEN CHANNELS B.3.5 AREAS ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT OR LIGHT EQUIPMENT WITH TIRE 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 SHALL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

ROTOLOTT 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY POINDED WATER BEFORE PREPARING (ROTOLOTTING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOLOTT 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 LANDSCAPE PLAN, THIS SOP SET.

5. PLANT INSTALLATION
MULCH SHOULD BE PLACED TO A UNIFORM THICKNESS OF 2" TO 3" SHREDED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND POND CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDED 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 BOTH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DRAINAGE FIT 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 SEEDS SHALL BE PLANTED FOLLOWING THE NON-GRASS 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 POND CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOLOTT 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 0.3% OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS
THE BIORETENTION FACILITY MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

APPENDIX B.1.1 - SUPPLEMENTAL POND SPECIFICATIONS (NON-378)
SUPPLEMENTAL STORM-WATER PONDS AND WETLAND SPECIFICATIONS (NON-378)
THESE NOTES AND SPECIFICATIONS ARE IN ADDITION TO THE MD-378 SPECIFICATIONS. IF THERE IS ANY QUESTION AS TO THE APPLICABILITY, THE MD-378 SPECIFICATIONS SUPERSEDE.

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 MOOIFIED PROCTOR (AASHTO T-99), THEN TO MAINTAIN ON-SITE CONSISTENCY, THE MOOIFIED PROCTOR MAY BE USED IN LIEU OF A STANDARD PROCTOR (AASHTO T-99). THE MINIMUM DENSITY USING THE MOOIFIED PROCTOR TEST METHOD SHALL BE AT LEAST 42% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF 12% OF THE OPTIMUM. THE MINIMUM REQUIRED DENSITY USING THE STANDARD PROCTOR TEST METHOD SHALL BE AT LEAST 45% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF 12% OF THE OPTIMUM.

3. FOR ALL STORM-WATER 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 1994 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. HIGH 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:
ANOCO 4552
GECOLON 102
KEBTEC N70
GARTHAGE FX-105
MRAFI 100-N

THIS IS ONLY A PARTIAL LISTING OF AVAILABLE GEOTEXTILES BASED ON INFORMATION PROVIDED BY THE MANUFACTURERS OF THE 1994 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.

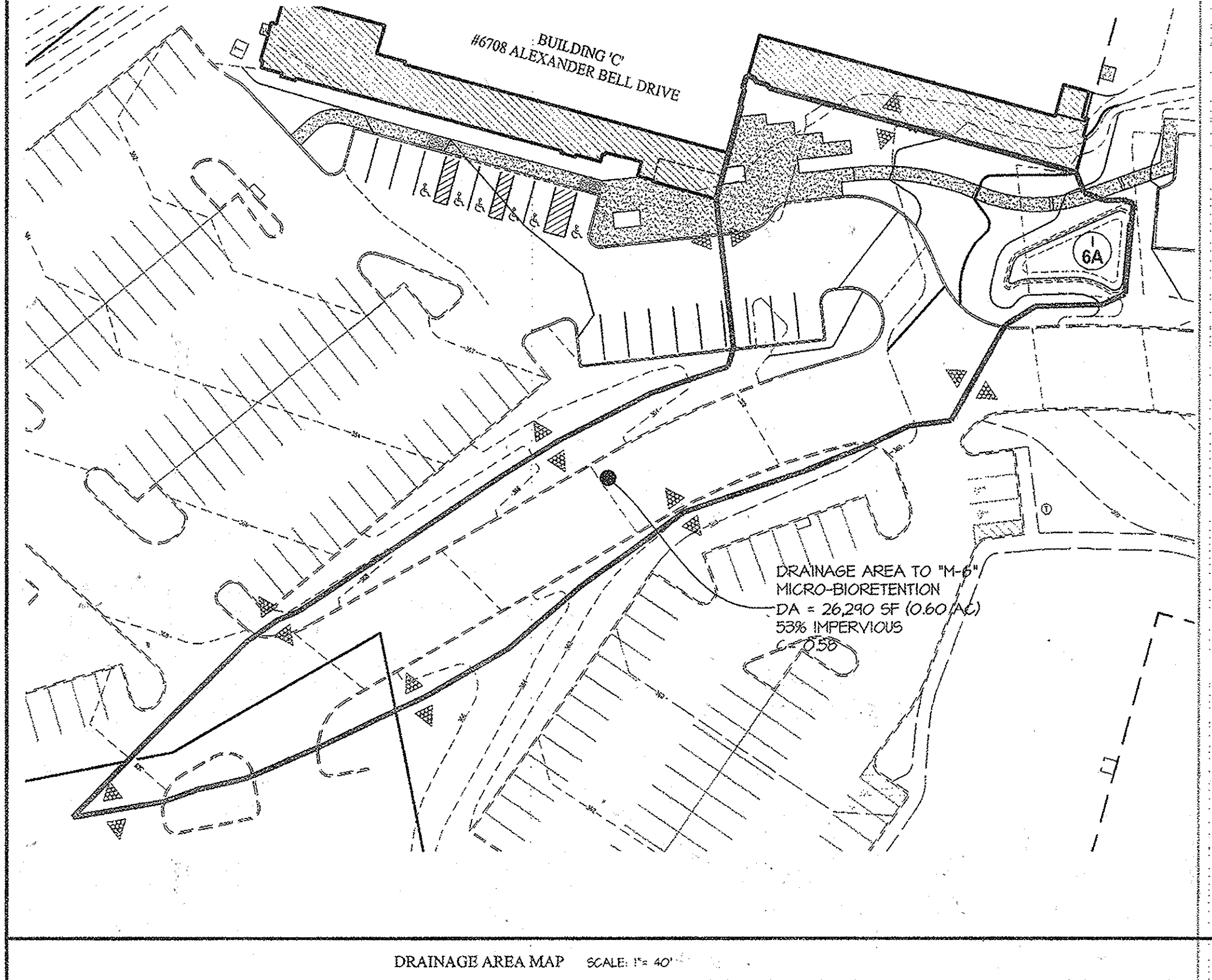
6. A RILEY OF TRENCH TO DETERMINE WHEN AN EXCAVATED POND MAY NEED TO BE CONSIDERED AN EMBANKMENT POND IS AS FOLLOWS:
PROVIDE CALCULATION OF $10H + 20 \text{ FEET} = L$, WHERE H IS HEIGHT FROM POND BOTTOM TO TOP OF DAM. IF THE PROJECTION OF L, DOWNSTREAM IS A HORIZONTAL LINE FROM THE UPSTREAM TOE OF SLOPE 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-19.

8. FILL PLACEMENT SHALL NOT EXCEED A MAXIMUM 8-INCH. EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF THE EMBANKMENT.

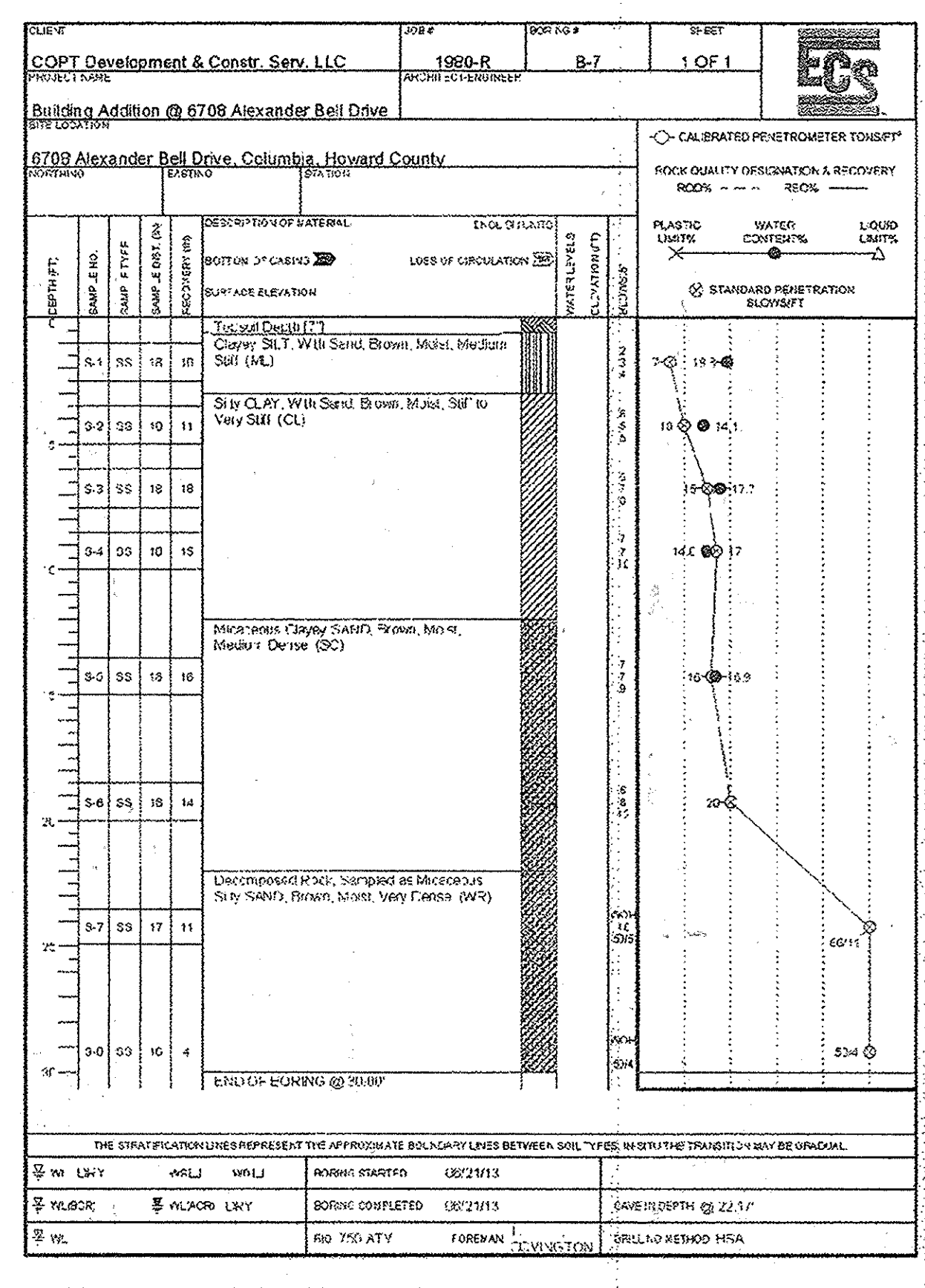
9. THE EMBANKMENT FILL SHALL NOT BE PLACED HIGHER THAN THE CENTERLINE OF THE PRINCIPAL SPILLWAY UNTIL AFTER THE PRINCIPAL SPILLWAY HAS BEEN INSTALLED. IF THE EMBANKMENT NEEDS TO BE EXCAVATED TO INSTALL THE PRINCIPAL SPILLWAY, THE SIDE SLOPE SHALL BE NO LESS THAN 2:1.

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.



**S.D. PIPE SUMMARY TABLE
PRIVATELY OWNED AND MAINTAINED**

SIZE (INCHES)	TYPE	QUANTITY (L.F.)	REMARKS
4	SLOTTED PVC	31	SCHEDULE 40
12	PVC	21	SCHEDULE 40
12	HDPE	51	ADS N2 or equiv.



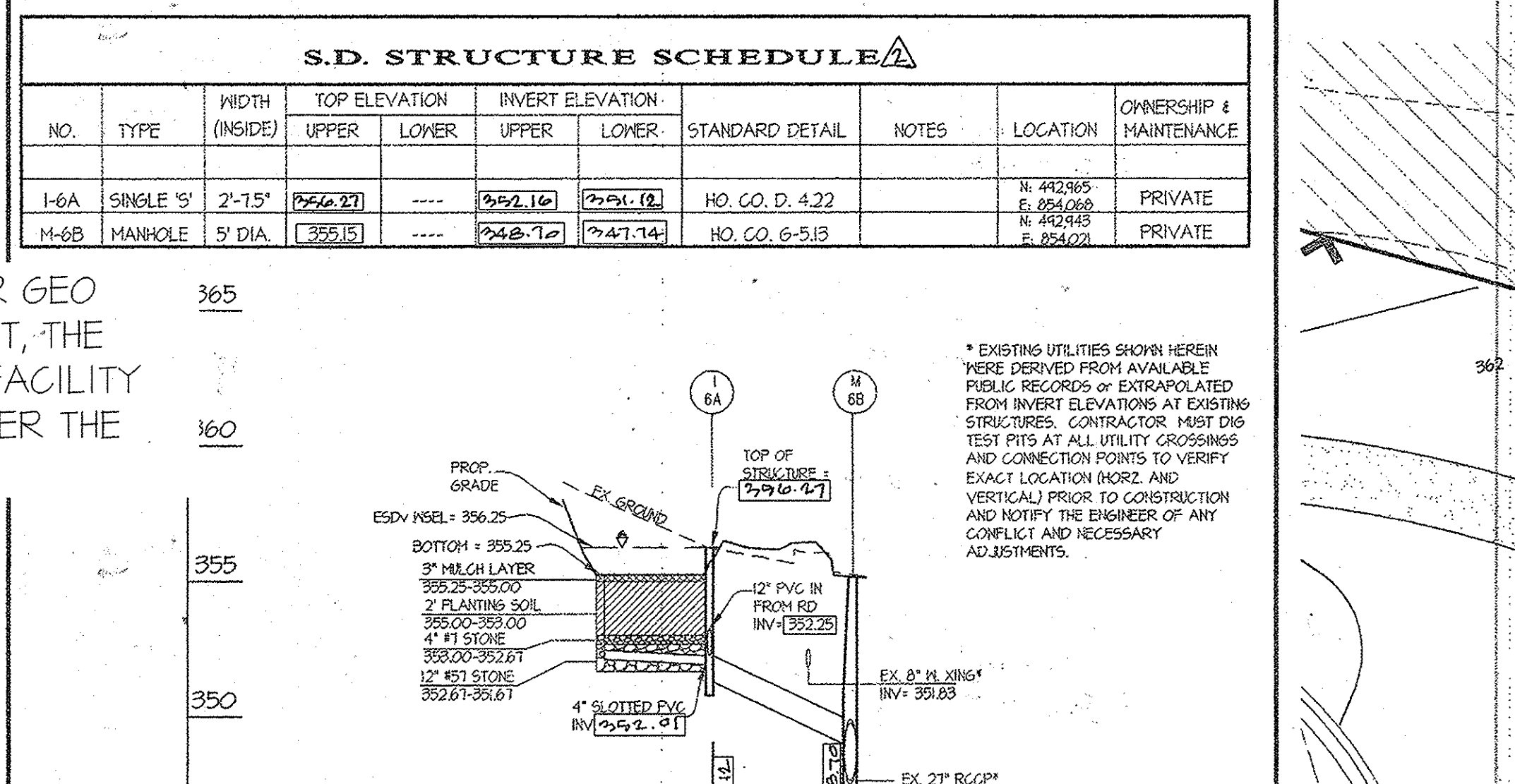
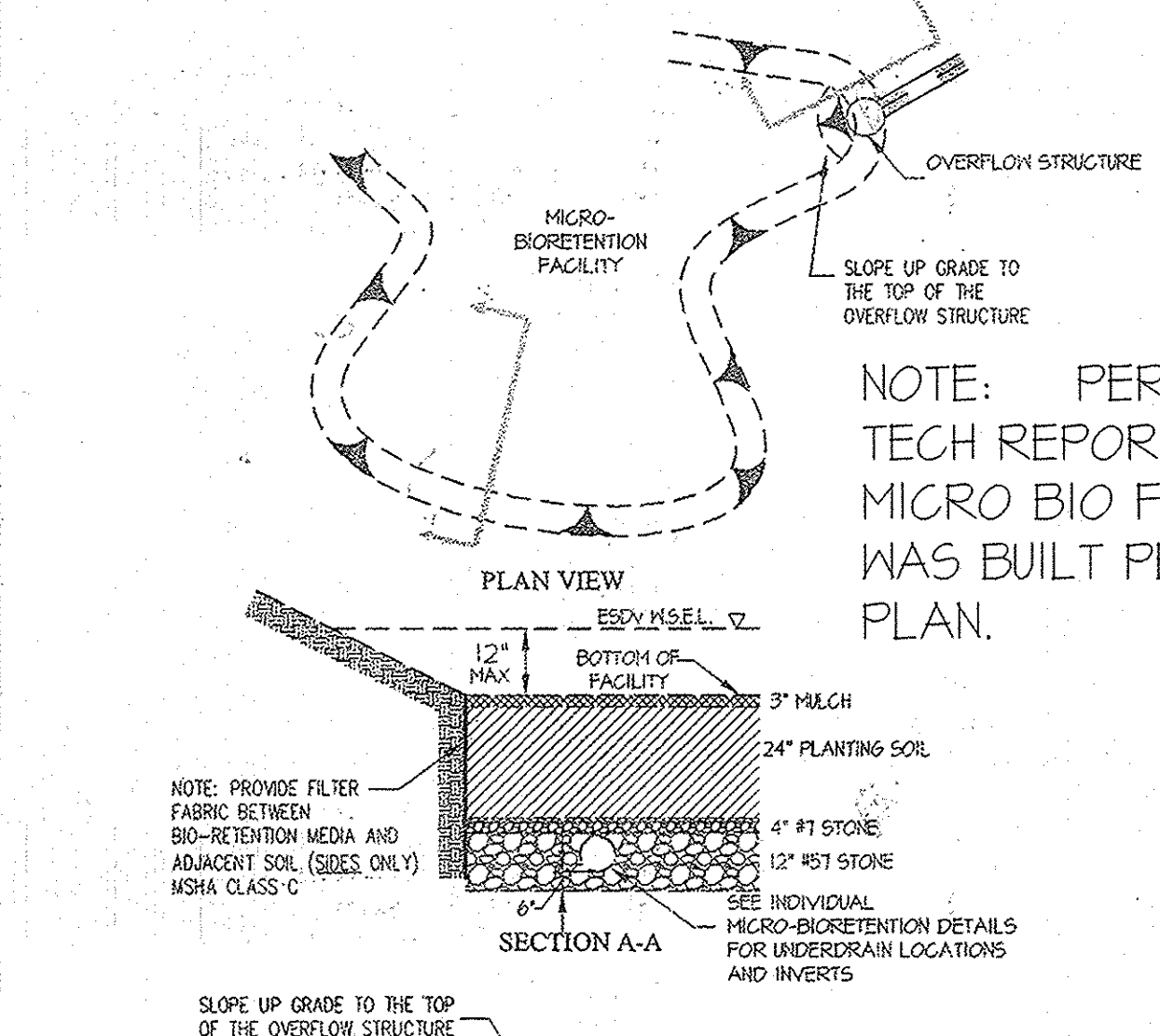
OPERATION AND MAINTENANCE SCHEDULE FOR
LANDSCAPE INFILTRATION (M-3) MICRO-BIORETENTION (M-6), RAIN GARDENS (M-1), BIORETENTION SHALE (M-8), EMBANKMENT (M-4)

A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.

B. THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND NIPES.

C. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.

D. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

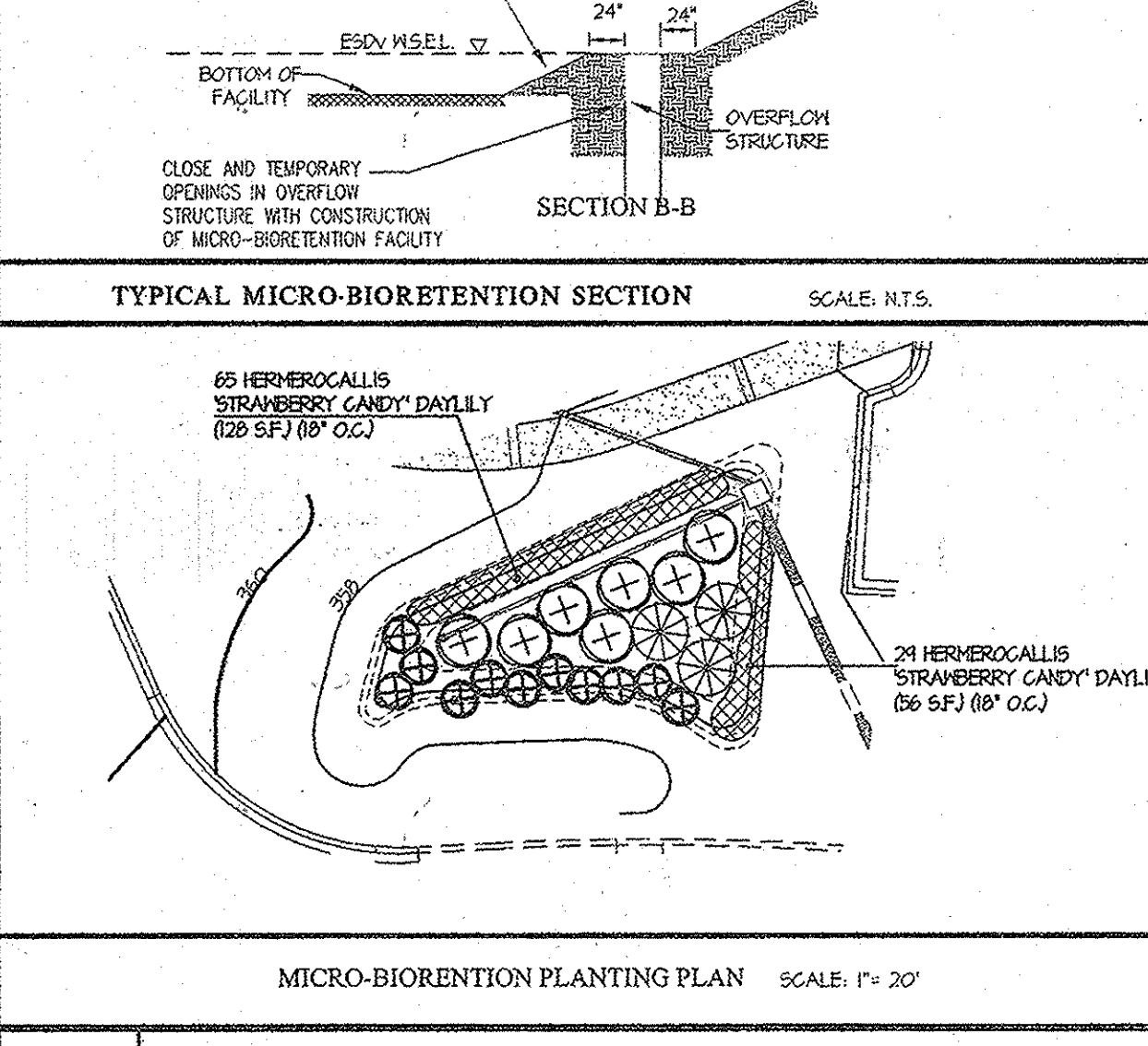


S.D. STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION UPPER	TOP ELEVATION LOWER	INVERT ELEVATION UPPER	INVERT ELEVATION LOWER	STANDARD DETAIL	NOTES	LOCATION	OWNERSHIP & MAINTENANCE
1-6A	SINGLE 3'	2'-1 1/2"	356.21	---	352.16	352.16	HO. CO. D. 4-22		N. 442945 E. 854269	PRIVATE
M-6B	MANHOLE	5' DIA.	355.15	---	348.72	347.14	HO. CO. 6-513		N. 442945 E. 854269	PRIVATE

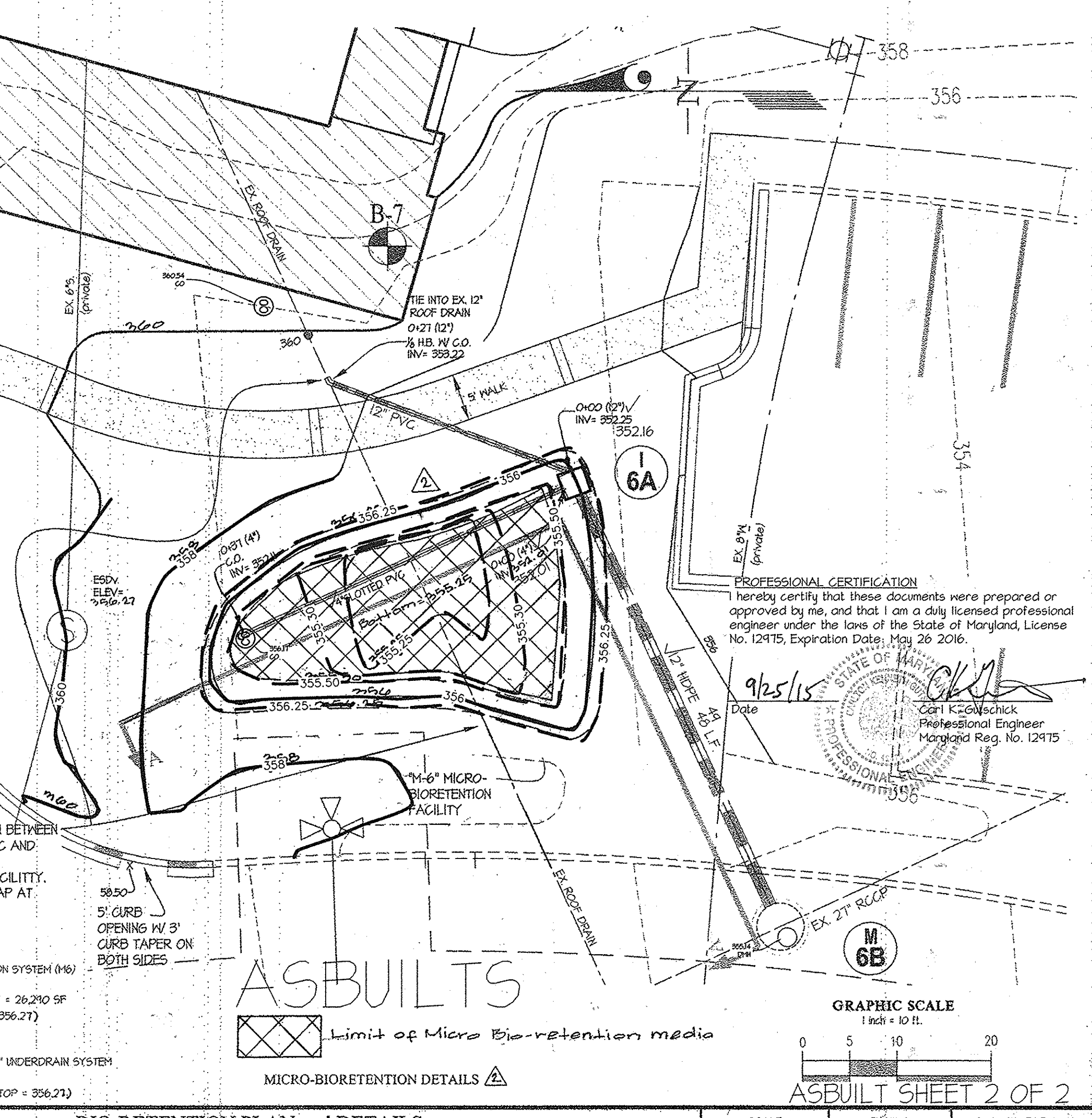
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *[Signature]* Date: 4-16-14
Chief, Division of Land Development: *[Signature]* Date: 4-9-14
Chief, Development Engineering Division: *[Signature]* Date: 4-9-14



PLANT LIST

SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT/COMMENTS
[Symbol]	12	ERIDOLEIA DAVIDI WHITE BALLY WHITE BALL DWARF BUTTERFLY BUSH	18\"-24\" SPR.	CONTAINER
[Symbol]	1	CORNUS SERICEA RUBY RUBY RED CORNER DOGWOOD	18\"-24\" SPR.	CONTAINER
[Symbol]	3	HEA VIRGINICA HENRY'S GARNET VIRGINIA SHEETSPIRE	18\"-24\" SPR.	CONTAINER
[Symbol]	44	HERMEROCALLIS STRAWBERRY CANDY DAYLILY	18\" O.G.	CONTAINER



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3809 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 301-989-2524

REVISIONS

NO.	DATE	REVISION
1	JAN/2014	New sheet for BUILDING-C addition and immediate site improvements.

PREPARED FOR:
OWNER/DEVELOPER
C/O COPT DEVELOPMENT & CONSTRUCTION SERVICES, LLC
A DIVISION OF CORPORATE OFFICE PROPERTIES TRUST
6711 COLUMBIA GATEWAY DRIVE, SUITE 300
COLUMBIA, MD 21046
PHONE: 443-285-5400
ATTN: TOM KELLEY

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. 12975
EXPIRATION DATE: MAY 26, 2014
1-14-14

**RESEARCH & DEVELOPMENT OFFICE PARK
COLUMBIA GATEWAY
PARCEL C-1
PLAT No. 7996**

SCALE: AS SHOWN
ZONING: M-1
G. L. W. FILE No.: 13028
DATE: SEP 2015
TAX MAP - GRID: 42 - 43
SHEET: 5 OF 7

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 SOIL MEDIUM FOR VEGETATIVE GROWTH.

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

CRITERIA

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

- SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AERIFIERS OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR BROKEN SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE DIRECTION OF THE SLOPE.
- APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
- A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - SOL PH BETWEEN 6.0 AND 7.0.
 - SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - SOIL CONTAINS 1.5 PERCENT ORGANIC MATTER BY WEIGHT.
- SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
- APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
- GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
- APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
- MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDING PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRAGILE. SEEDING LOOSENESS MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

2. PERMANENT STABILIZATION

- A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - SOL PH BETWEEN 6.0 AND 7.0.
 - SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
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- TOPSOILING

1. TOPSOILING

- TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
- TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE SPECIFICATIONS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
- TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS SPECIES OF GRASSES 1/2 INCH OR LESS IN DIAMETER AND THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
 - AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
- TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
 - TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAM SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CONCRETE STONES, SLAG COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TWIGS, OR OTHER MATERIALS LARGER THAN 1.5 INCHES IN DIAMETER.
 - TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERBERIS GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
 - TOPSOIL APPLICATION

2. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.

UNIFORM DISTRIBUTION OF TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES.

SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SOONER OR LATER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CONCRETE STONES, SLAG COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TWIGS, OR OTHER MATERIALS LARGER THAN 1.5 INCHES IN DIAMETER.

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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 PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING

1. SPECIFICATIONS

- ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A REGISTERED SEED LABORATORY. ALL SEED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SEEDING SUCH MATERIAL, ON ANY PRACTICE, REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE OBTAINED UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
- MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAW.
- THE INCULCANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INCULCANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER AND FRESH INCULCANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INCULCANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN KILL BACTERIA AND MAKE THE INCULCANT LESS EFFECTIVE.
- SOIL OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION

- DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
 - APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDING AREA WITH A WHEELED ROLLER TO FIRM SEED TO SOIL CONTACT.
 - DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 - CULTIPACKER SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDING MUST BE FIRM AFTER PLANTING.
 - APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
- HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
 - IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATE SHOULD NOT EXCEED THE FOLLOWING: NITROGEN: 20 POUNDS PER ACRE; TOTAL SOLUBLE NITROGEN P205 (PHOSPHORUS): 200 POUNDS PER ACRE; K2O (POTASSIUM): 200 POUNDS PER ACRE.
 - 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.
 - MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
 - WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

- STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY FREE OF COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOULDY, CAVED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE THERE ARE SPECIES OF GRASSES 1/2 INCH OR LESS IN DIAMETER.
- WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORM SPREAD SLURRY.
 - WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
 - WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AERATION AND WILL BLEND WITH SEED AND FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE WCFM MATERIAL MUST BE A GLOTTER-LIKE GROUND COVER. ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
 - WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
 - WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS; DIAMETER APPROXIMATELY 1 MILLIMETER; PH RANGE OF 4.0 TO 8.5; ASH CONTENT OF 16 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 50 PERCENT MINIMUM.
- WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AERATION AND WILL BLEND WITH SEED AND FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE WCFM MATERIAL MUST BE A GLOTTER-LIKE GROUND COVER. ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
- WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
- WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS; DIAMETER APPROXIMATELY 1 MILLIMETER; PH RANGE OF 4.0 TO 8.5; ASH CONTENT OF 16 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 50 PERCENT MINIMUM.

2. APPLICATION

- APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
- WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DEPTH AND CERTAIN 50 PERCENT OF THE SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
- WOOD CELLULOSE FIBER MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER MULCH WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

3. ANCHORING

- PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
 - A MULCH ANCHORING TOOL IS A TRACKER DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 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 FOLLOW THE CONTIGUOUS.
 - WOOD CELLULOSE FIBER MULCH MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER MULCH WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 - SYNTHETIC BINDERS SUCH AS ACRYLIC ULR (AGRO-TACK), DCA-70, TROSET, TERMA TAC, TERMA MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
 - LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

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
WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECTION OF SPECIES OR SEED MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 FULFILL FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.

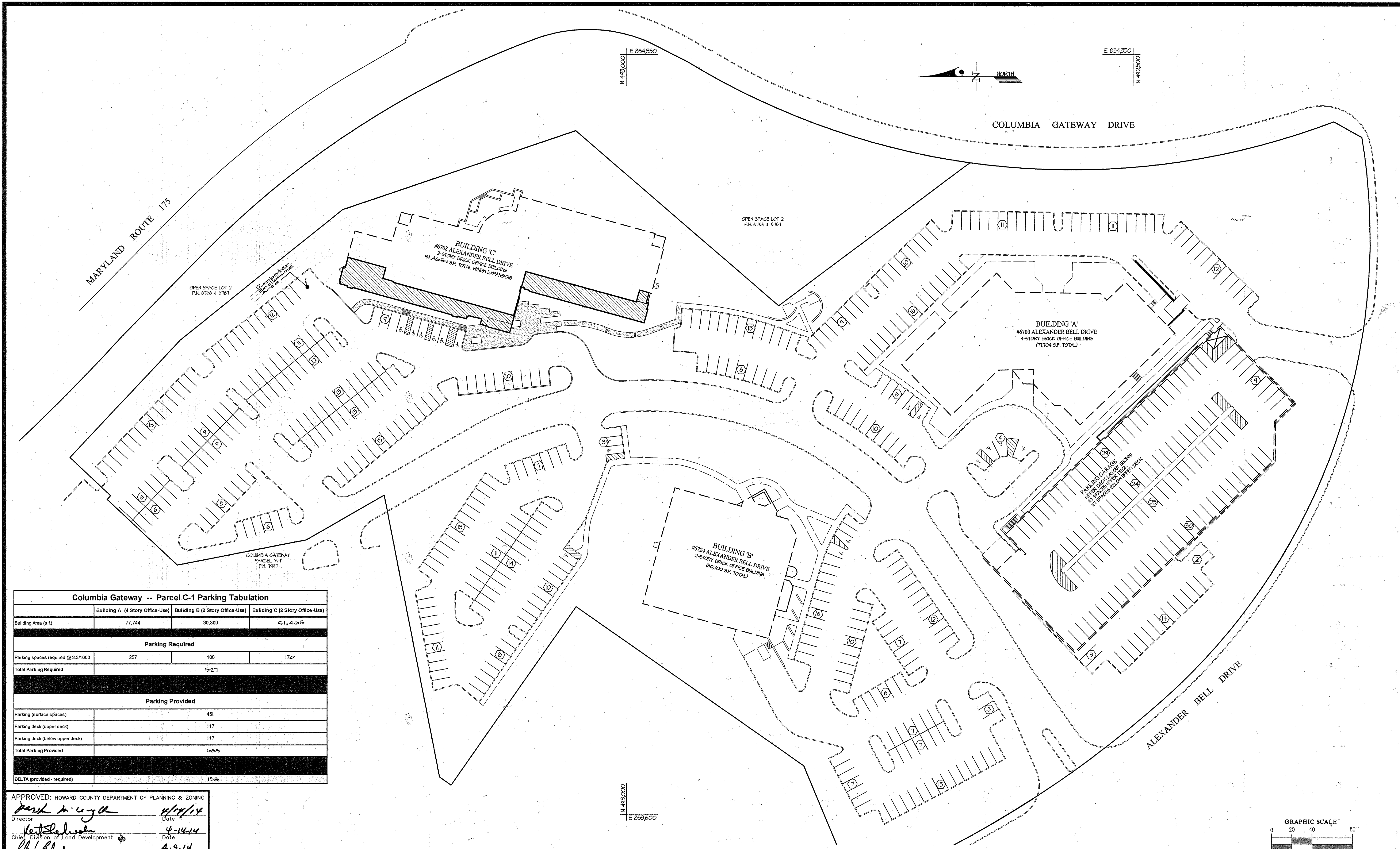
FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

HARDNESS ZONE: 6b	SEED MIXTURE:	APPLICATION RATE (lb/acre)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-10-10)	LIME RATE
No. 1	ANNUAL RYEGRASS	40 lb/acre	Mar. 1 to May 15, Aug. 1 to Oct. 15	0.5 INCHES	436 lb/acre (90 lb./1,000 sf)	2 tons/acre (90 lb./1,000 sf)
No. 2	PEARL MILLET	20 lb/acre	May 16 to July 31	0.5 INCHES		

SEEDING CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY SEEDING. (410-313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND FOLLOWING CONTROL, AND REVISIONS THEREOF.
- SEEDING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY ST



Columbia Gateway -- Parcel C-1 Parking Tabulation			
	Building A (4 Story Office-Use)	Building B (2 Story Office-Use)	Building C (2 Story Office-Use)
Building Area (s.f.)	77,744	30,300	51,465
Parking Required			
Parking spaces required @ 3.31/1000	257	100	170
Total Parking Required	527		
Parking Provided			
Parking (surface spaces)	451		
Parking deck (upper deck)	117		
Parking deck (below upper deck)	117		
Total Parking Provided	685		
DELTA (provided - required)	158		

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Mark A. Loyd 4/14/14
Director Date

Keith Johnson 4-14-14
Chief, Division of Land Development Date

Phil Green 4-9-14
Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3009 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.
Feb 2016	Revise Parking Count due to new dumpster	gk	KLP
Dec. 2013	New sheet for BUILDING-C addition and immediate site redevelopment		

PREPARED FOR:

OWNER/DEVELOPER
C/OPT DEVELOPMENT & CONSTRUCTION SERVICES, LLC
A DIVISION OF CORPORATE OFFICE PROPERTIES TRUST
5711 COLUMBIA GATEWAY DRIVE, SUITE 300
COLUMBIA, MD 21046
PHONE: 443-285-5400
Attn: TOM KELLEY

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. 12275
EXPIRATION DATE: MAY 26, 2014

1-16-14

OVERALL PARKING ANALYSIS

RESEARCH & DEVELOPMENT OFFICE PARK
COLUMBIA GATEWAY
PARCEL C-1
PLAT No. 7996

ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=40'	M-1	13028
DATE	TAX MAP - GRID	SHEET
JAN/2014	42 - 43	7 OF 7