Site Development Plan

for

Emerson

Parcel G–1

(Revitz Property)

Howard County Maryland

General Notes

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.

2. The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at 410-313-1880 at least five (5) working days prior to the start of work.any excavation work being done.

4. The Contractor shall test pit existing utilities as least five (5) days prior to the start of construction to verify their location and elevation. The Contractor shall notify the engineer immediately if the location is different than shown.

5. The Contractor shall coordinate the location of all water, sewer and drain house connections with the mechanical drawings.

6. Traffic control devices, markings and signing shall be in accordance with the latest edition of the Maryland Manual of Uniform Traffic Control Devices (MUTCD).

7. All paving markings shall be "Traffic white", unless otherwise noted.

8. All plan dimensions are to face of curb unless otherwise noted.

9. The existing topography is taken from field run survey with two foot contour intervals prepared by Shanaberger & Lane on January 24, 2005 and field verified by Daft McCune Walker, Inc in November 2010.

10. The courses and coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System. Howard County monument No's 47DA, 47E4, and 47G2 were used for this project.

11. The Contractor shall maintain a minimum of a 2.0 foot protective cover over all utilities during construction.

12. Refer to Architectural drawings for exact building dimensions.

13. There is no floodplain, wetlands, streams, buffers or 25% steep slopes located within the subject parcel.

14. Project background information:
    Tax Map: 47
    Zoning: PEC
    Election District: 6
    Subdivision Name: Revitz Property Parcel G-1
    Lot/Parcel: 165
    Total Parcel Area: 9.710 Acres
    File Numbers: Plat #18684, 18685, F-07-055, S-99-12, PB 339 and ZB 979M, PB-359, F-02-111, SP-01-12, F-02-131, F-07-55, F-08-93, F-08-207, SDP-10-096 and F-11-019.

15. All outdoor lighting shall comply with the requirements of Zoning Section 134. All exterior light fixtures shall be oriented to direct light inward and downward on-site and away from all adjoining residential properties and public roads in accordance with Section 134 of the Howard County Zoning Regulations.

16. Handicap parking details and signage shall be in accordance with ADAAG (Americans with Disabilities Act Accessibility Guidelines) and COMAR (Code of Maryland Regulations) Section 5.02.02.

17. Any damage to the county owned right-of-way shall be corrected at the contractor's expense.

18. All sidewalks shall be cross sloped at¼inch per foot.

19. Trench bedding for storm drainage structures shall be in accordance with Howard County Standard G2.01.

20. All inlets shall be constructed in accordance with Howard County standards or MSHA standards as specified on the structure.

21. All materials and construction shall be in strict accordance with the Howard County Design Manual, Volume IV.

22. Building setback restrictions from property lines and right-of-way lines of any public road shall be in accordance with the PEC Zoning Regulations and Record Plat.

23. All onsite driveways and parking areas to be privately maintained.

24. All curb radii are to be 5 feet unless otherwise labeled and all curbs are to be 6 inches in height.

25. All equipment and tools to be placed so as not to interfere with vehicular or pedestrian movement unless specified.

26. The contractor shall be responsible for any damage to existing property which may occur as a result of negligence during the execution of work.

27. All proposed handicap ramps shall be in accordance with current ADA standards.

28. This property is located within the Metropolitan District.

29. Electric, gas, cable, telephone and lighting lines are designed by others.

30. This plan has been prepared in accordance with the provisions of section 16.124 of the Howard County Code and Landscape Manual.Landscaping shall be provided in accordance with the Landscape Plan and financial surety shall be paid with the DPW, Developer's Agreement in the amount of $14,310.00 for 35 shade trees and 127 shrubs.

31. (From plat #15783) As a result of the Preliminary Equivalent Sketch Plan, SP-01-12, being submitted to the County for review prior to 11/15/01, on 04/14/01. This subdivision is subject to compliance with the fourth edition of the Subdivision and Land Development Regulations. In addition, because SP-01-12 did not obtain a signature approval prior to 11/01/01. This subdivision is subject to compliance with County Bill 50-2001, which amends the Zoning Regulations, and the amended Zoning Regulations which became effective on 01/08/02. This SDP is subject to the amended Fifth Edition of the Subdivision and Land Development Regulations and the development or construction on this property must comply with the setback and buffer regulations in effect at the time of submission of the SDP, waiver or grading and building permits.

32. The Forest Conservation requirements for this development were previously addressed under DPZ File #'s F-02-111 with 26.42 acres of retention and 5.20 acres of reforestation planting provided as part of the Revitz Property Plan.

33. An existing SWM pond, privately owned and maintained, designed and approved under F-02-11 meets the requirements for WQv and Cpv Management. Existing SWM pond is owned and maintained by the Emerson Community Association. Rev will be met as shown on the Stormwater Management plan with stone recharge trenches, which shall be owned and maintained by the owner.

34. Stormwater management is provided in accordance with the 2000 Maryland Stormwater Design Manual. This project meets the criterias outlined in the MDE Guidelines to grant an administrative waiver. The existing pond located on parcel P was constructed prior to May 4, 2010. A grading permit shall be approved prior to May 4, 2013. This plan is also subject to the expiration of this waiver unless all stormwater practices are constructed by May 4, 2017.

35. The existing utilities shown within Sterling Drive are based on approved Water Drawings, Contract No. 24-4698-D and were field located by DMW, Inc on May 13, 2010.

36. The open space requirements for this development were previously addressed under DPZ file no. F-02-111, Plat #15783 recorded on January 27, 2003. A total of 40.275 of open space is provided on Parcels J, O, P, Q, R, I, K, L, M and N. No open space exists on Parcel 'G-1'.

37. No cemeteries or historic structures exist within the boundaries of the site.

38. The proposed building shall have an Automatic Fire Protection Sprinkler System (by others).

39. Street light placement and the type of fixture and poles shall be in accordance with the Howard County Design Manual, Volume III (2006), section 5.5A. A minimum of 20' shall be maintained between any street light and any tree.

40. All sign posts used for traffic control signs installed within the county right-of-way shall be mounted on a 2" galvanized steel, perforated, square tube post(14 gauge) installed into A 2-1/2" galvanized steel, perforated, tube sleeve (12 gauge) 3' long. A galvanized steel pole cap shall be mounted on top of each post.

41. Site deed reference : Deed 11479/1 Plat no. 15787, 21277 & 21278.

42. This site complies with the Howard County Green Building law set forth under Title 3, Subtitle 10 of the Howard County Code and section 3.1005(a) of the Code. Registration with the Green Building Council and the applicable LEED registration fee was paid on 12/21/2010. The LEED New Construction checklist was prepared, signed and dated by the project LEED accredited professional and was received by DPZ on January 4, 2011. The proposed building is tentatively certified by LEED with a Silver rating.

43. The Traffic Study for this project was updated by Traffic Concepts, Inc. in January 2011.

44. The proposed project is in compliance with the APFO Study for the Revitz property prepared by Wells & Associates and Approved Feb. 1, 2002.

45. The subject property is zoned PEC per the Comprehensive Plan, Feb. 2, 2004. The plan is subject to the Comp Lite Zoning Regulation Amendments effective on July 28, 2006.

46. No grading, removal of vegetative cover or trees, paving and new structures shall be permitted within the required wetlands, stream(s) or there buffers, forest conservation easement areas and 100 year floodplain.

47. Trash collection, trash pick-up and recycling services will be provided for this building. At full occupancy, pick-up can occur daily.

⚠1 48. A VARIANCE (RESOLUTION NO. 118-2011) PURSUANT TO SECTIONS 16.301 AND 16.200 (a) OF THE HOWARD COUNTY CODE WAS GRANTED ON JULY 28, 2011 FOR GOVERNT USES FROM THE STRUCTURE AND USE SETBACK FOR A FENCE.

Fri Feb 08 ... \ENGR\SDP Sheets\95054SDP01.COV1

THERE IS NO AS BUILT INFORMATION SHOWN ON THIS SHEET
AS BUILT NOT REQUIRED
DuVal and Associates, P.A.
By: DOUGLAS W. DuVal- REG.# 10764

STATE OF MARYLAND · DOUGLAS WELTY DUVAL · No. 10764 · PROFESSIONAL LAND SURVEYOR

10-08-14

AS BUILT CERTIFICATION FOR PSWM

NOTE:THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED Paul Hudson RE# 8061

PAUL L. HUDSON

THE PURPOSE
FOR REVISION #3
REVISED SITE ANALYSIS DATA CHART, NOTE #2 C. TOTAL IMPERVIOUS AREA
REVISED THE SHEET INDEX.

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. 45292 Expiration Date: 5-21-18

7-14-2016

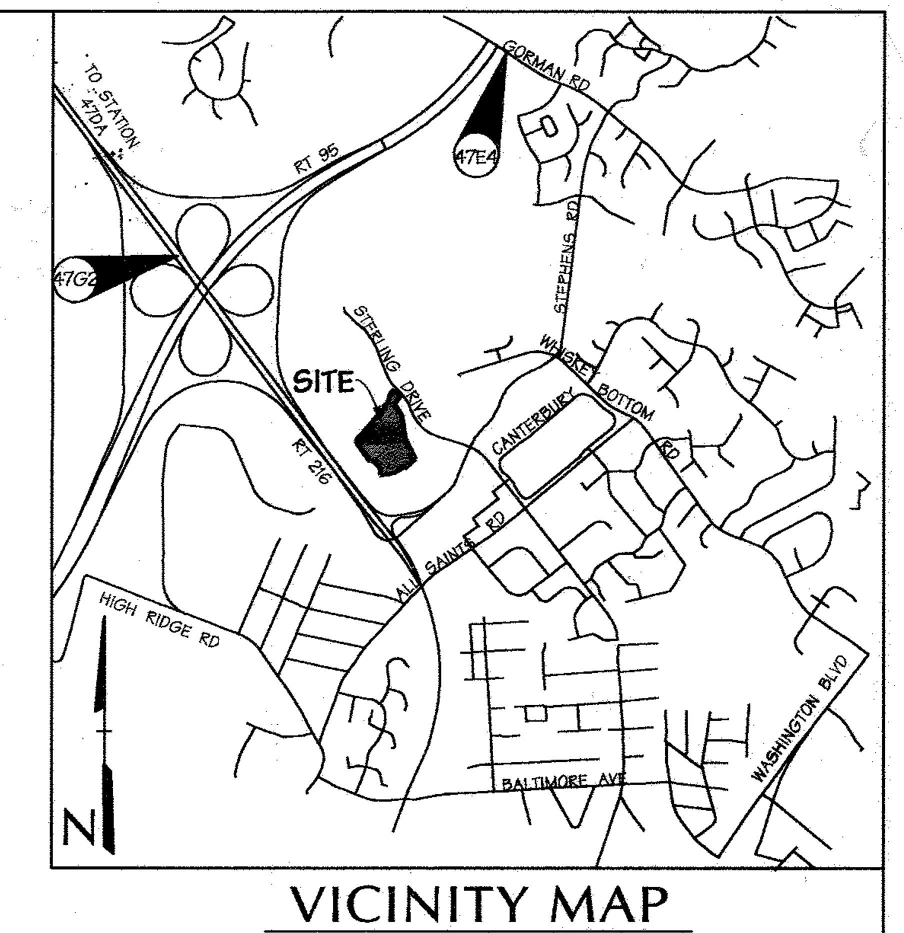
⚠4 PROFESSIONAL CERTIFICATION FOR REV #4

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. 45292 EXPIRATION DATE: 05/21/2018

STATE OF MARYLAND · ROBERT A. CROWLEY · 45292 · PROFESSIONAL ENGINEER

11-22-16

⚠4 THE PURPOSE OF REVISION #4 IS TO SHOW THE WORK ASSOCIATED WITH THE EMERSON CAMPUS VCP. SDP-16-005



VICINITY MAP

Scale: 1"=2000'

HOWARD COUNTY ADC MAP NUMBER 5053, BLOCK H9

BENCHMARK

DESCRIPTION

COORDINATES IN MARYLAND NAD83(91) (HORIZONTAL) AND NGVD29 (VERTICAL) DATUMS.

47G2 NORTHING: 162440.1212
EASTING: 411853.9279
ELEVATION: 364.210ft.

47E4 NORTHING: 163326.2295
EASTING: 413136.2550
ELEVATION: 338.909ft.

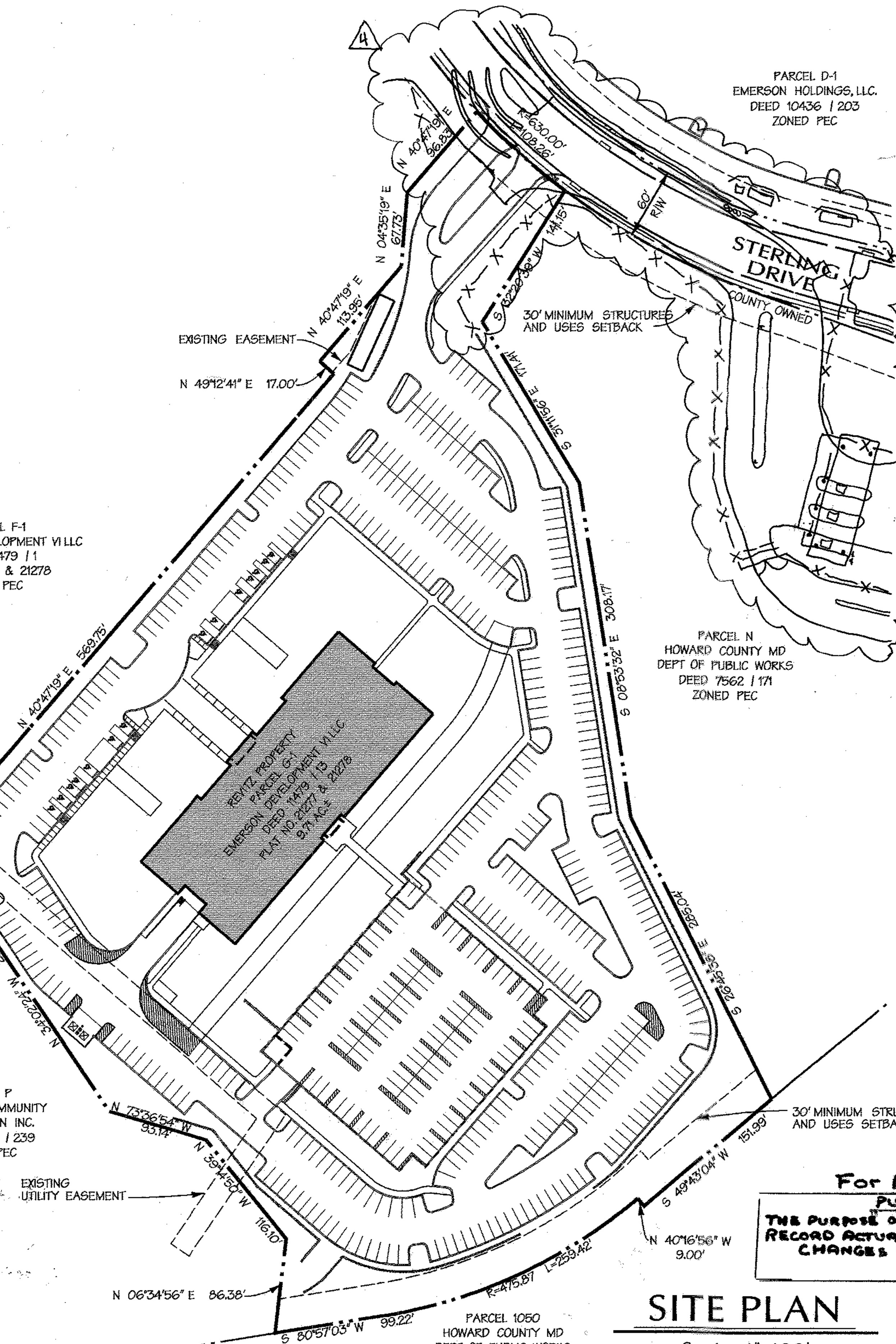
47DA NORTHING: 163191.9104
EASTING: 411286.5759
ELEVATION: 96.2879ft.

ADDRESS CHART

PARCEL NUMBERS	STREET ADDRESS
PARCEL G-1	9025 STERLING DRIVE

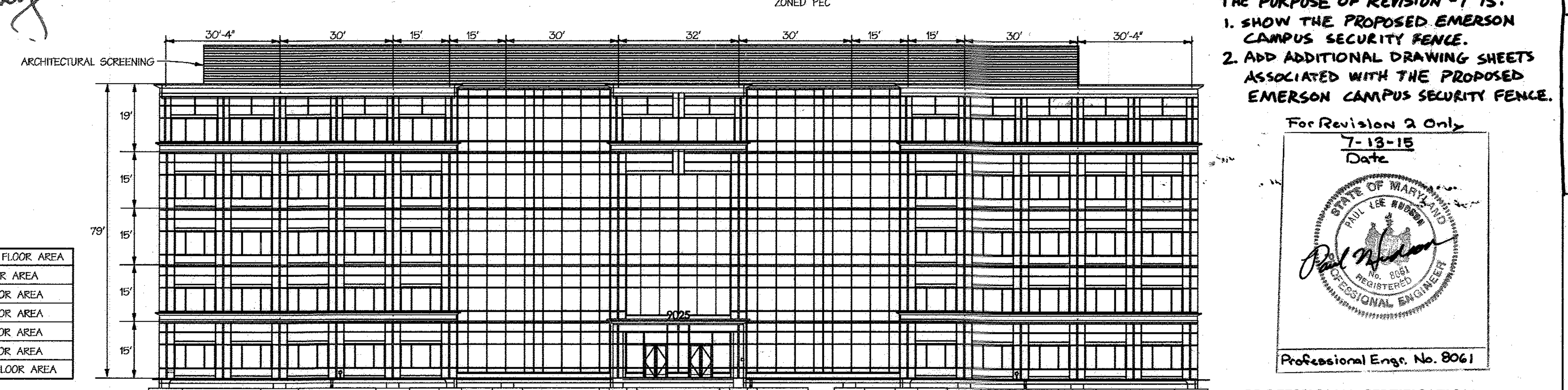
Sheet Index

	SHEET	DESCRIPTION
⚠2	1	COVER SHEET
⚠2	2	SITE PLAN
⚠2	3	GRADING AND UTILITY PLAN
⚠2	4	SITE DETAILS
⚠2	5	SITE DETAILS
	6	SITE DETAILS
	7	SITE DETAILS
	8	SITE DETAILS
	9	EROSION & SEDIMENT CONTROL PLAN
	10	EROSION & SEDIMENT CONTROL DETAILS
	11	EROSION & SEDIMENT CONTROL DETAILS
	12	EROSION & SEDIMENT CONTROL DRAINAGE AREA MAP & DETAILS
	13	STORM DRAIN DRAINAGE AREA & SOILS MAP
	14	STORM DRAIN PROFILES
⚠2	15	STORM DRAIN PROFILES
⚠2	16	SANITARY SEWER PROFILE AND DETAILS
⚠2	17	LANDSCAPE PLAN
	18	LANDSCAPE DETAILS
⚠2	~~19~~	~~RETAINING WALL SITE PLAN~~
⚠2	~~20~~	~~RETAINING WALL ELEV. #1 & #3~~
⚠2	~~21~~	~~RETAINING WALL ELEV. #2 & #3~~
⚠2	~~22~~	~~RETAINING WALL CONSTRUCTION DETAILS~~
⚠2	~~23~~ 21	SITE LIGHTING PLAN
⚠1	~~23A~~ 22	FENCE LAYOUT PLAN
⚠1	~~23B~~ 23	SITE DETAILS
⚠1	~~23C~~ 24	SITE DETAILS
⚠2	~~23D~~ 25	SITE DETAILS
⚠2	19	RETAINING WALL PLAN AND CONSTRUCTION DETAILS
⚠2	20	RETAINING WALL ELEVATION
⚠4	26	UTILITY PROFILES
	27	ENCLOSURE PLAN DETAILS
	28	STRUCTURAL DETAILS
	29	STRUCTURAL SECTIONS AND DETAILS
	30	MECHANICAL EQUIPMENT ENCLOSURE - SLAB AND FOUNDATION PLAN
	31	STORMWATER MANAGEMENT DETAILS



SITE PLAN

Scale: 1"=100'



BUILDING ELEVATION

Not to Scale

BUILDING FACADE TO BE CONCRETE/MASONRY AND GLASS

PROPOSED BUILDING FLOOR AREA	
30,566 SF	1ST FLOOR AREA
30,722 SF	2ND FLOOR AREA
30,722 SF	3RD FLOOR AREA
30,722 SF	4TH FLOOR AREA
30,722 SF	5TH FLOOR AREA
153,454 SF	TOTAL FLOOR AREA

Site Analysis Data Chart

1. General Site Data
   a. Present Zoning: PEC per the Comprehensive Plan, Feb. 2, 2004. The plan is subject to the Comp Lite Zoning Regulation amendments effective on July 28, 2006.
   b. Applicable DPZ File References: Plat # 18684, 18685, F-07-055, ZB-979M, S-99-12, P-01-25, SP-01-12, PB-339, PB-359, F-02-111, F-07-55, F-08-93, F-08-207, SDP-10-096, F-11-019, F-11-094.
   c. Proposed Use: 5-Story commercial office building
   d. Proposed Water: Public
   e. Proposed Sewer: Public
   f. Any other relevant information: N/A
   g. Area of steep slopes: 0 Acres
   h. Area of floodplain: 0 Acres
2. Area Tabulation
   a. Total Site Area: Existing - 9.71 Acres
   b. Limit of Disturbed Area: ±422,254 Sf. / 9.67 Acres
   c. Total Impervious Area: ±268,330 Sf. / 6.16 Acres
   d. Building Coverage of Site: 0.70 Acres and 7.2% of Site Area
3. Parking Space Data
   a. Number of Parking Spaces Required by Zoning Regulations and Criteria: 153,454 SF Office @ 3.3/1000 = 507 spaces
   b. Total Number of Parking Spaces Provided On-Site: ~~659~~ 632
   Total includes:
   583 ~~610~~ Standard spaces
   508 ~~535~~ Surface spaces (33 FEV/LEV, 14 H/C, ~~203~~ 191 Compact, ~~285~~ 270 Regular)
   124 Deck spaces (2 H/C, 96 Compact, 26 Regular)
   Total spaces = ~~659~~ 632

For Revision #2

PURPOSE STATEMENT

THE PURPOSE OF THIS REVISION (REVISION #2) IS TO RECORD ACTUAL AS-BUILT SITE CONDITIONS DUE TO CHANGES MADE DURING CONSTRUCTION.

⚠1 PROFESSIONAL CERTIFICATION FOR REV #1

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. 45292 EXPIRATION DATE: 05/21/2016

⚠1 THE PURPOSE OF REVISION #1 IS:
1. SHOW THE PROPOSED EMERSON CAMPUS SECURITY FENCE.
2. ADD ADDITIONAL DRAWING SHEETS ASSOCIATED WITH THE PROPOSED EMERSON CAMPUS SECURITY FENCE.

For Revision 2 Only
7-13-15
Date

STATE OF MARYLAND · PAUL LEE HUDSON · No. 8061 · REGISTERED · PROFESSIONAL ENGINEER

Professional Engr. No. 8061

FOR REVISION ⚠1

STATE OF MARYLAND · ROBERT A. CROWLEY · 45292 · PROFESSIONAL ENGINEER

10-1-2014

2-07-13
Date

STATE OF MARYLAND · PAUL LEE HUDSON · No. 8061 · REGISTERED · PROFESSIONAL ENGINEER

Professional Engr. No. 8061

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. 8061, EXPIRATION DATE: 8-26-~~13~~ 15

Date	No.	Revision Description
9-22-16	⚠4	EMERSON CAMPUS VCP
		RENUMBER 23A - 23D
7-9-15	⚠2	DELETE SHEETS 19 TO 22, REDLINE REVISIONS, ADD NEW SHEETS 19 AND 20
9/22/16	4	EMERSON CAMPUS VCP
10/1/14	⚠1	CAMPUS PERIMETER SECURITY FENCE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

DIRECTOR — DATE 3/6/13

EMERSON PARCEL G–1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER INC
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL #
REVITZ PROPERTY		LOT G-1 / PAR. 165

PLAT# OR L/F	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903

WATER CODE — SEWER CODE

TITLE: **COVER SHEET**

Des. By THR/JDF	Scale AS SHOWN	Proj. No. 95054.30	
Drn. By JSS	Date 2-07-13	1 of ~~23~~ ~~25~~ 31	
Chk. By	Approved		

SDP-11-025

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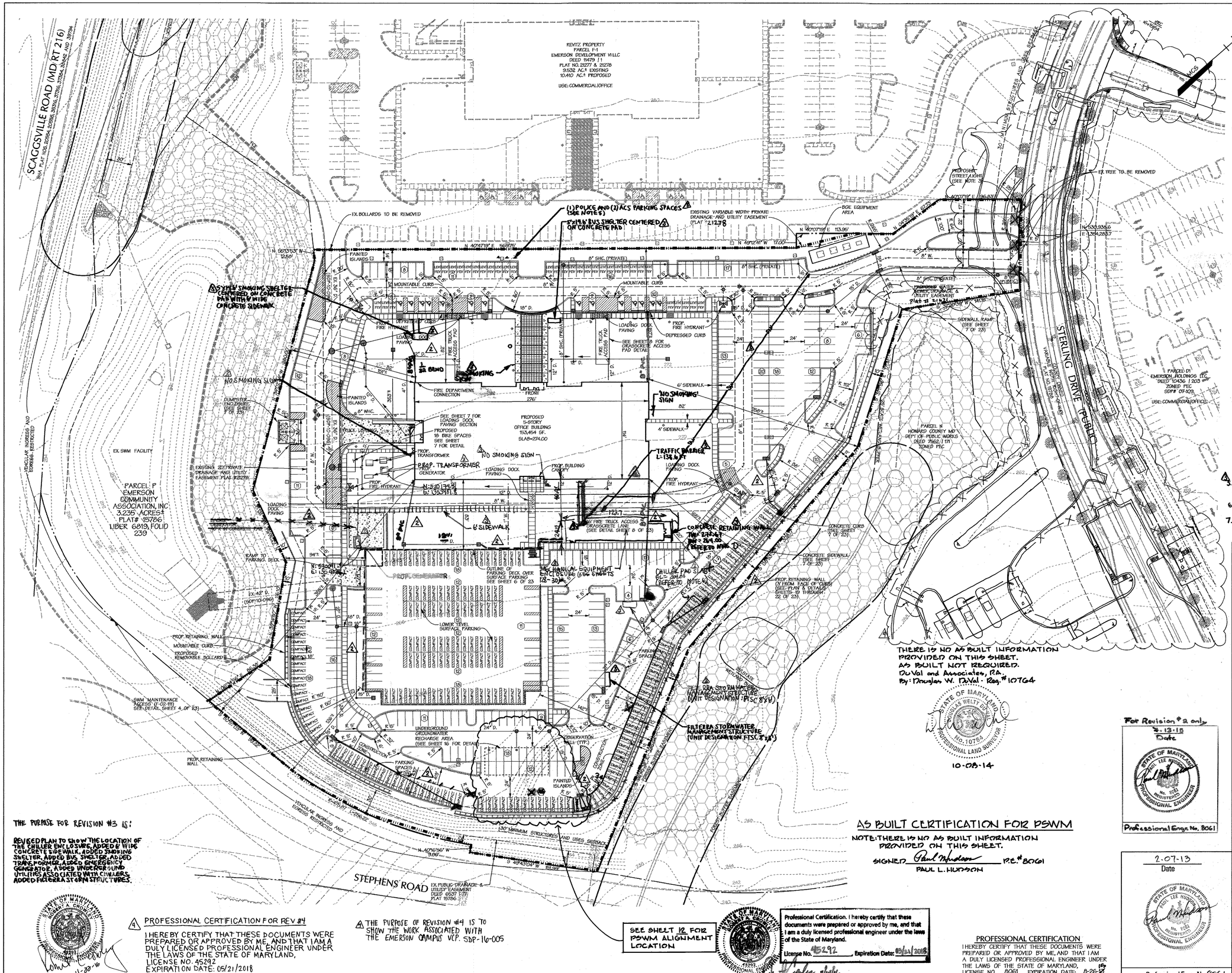

LEGEND

- PROPERTY BOUNDARY
- EX. RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- EX. ROADS AND WALKS
- 280 — EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- FCE — FOREST CONSERVATION EASEMENT
- PROP. BUILDING
- PROP. CURB / EDGE OF PAVING
- PROP. DEPRESSED CURB
- PROP. REVERSE CURB
- PROP. GROUP LIGHT (BY OTHERS)
- PROP. SINGLE LIGHT (BY OTHERS)
- PROP. LIGHT (BY OTHERS)
- EX. STREET TREE TO BE REMOVED
- PAINTED ISLAND
- LIMIT OF DISTURBANCE

NOTES:

1. UNLESS LABELED OTHERWISE ALL CURB RADII ARE FIVE (5) FOOT.
2. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING AND PARKING DECK DIMENSIONS.
3. STREET LIGHT SHALL BE A 250 WATT HPS VAPOR COBRA FIXTURE (CUTOFF) MOUNTED ON A 30' BRONZE FIBERGLASS POLE USING A 12' ARM. STREET LIGHT SHALL BE INSTALLED BY BGE AND PAID FOR BY THE DEVELOPER AS PART OF THE DEVELOPER'S AGREEMENT.
4. ALL PAINTED ISLANDS SHOWN ARE TO ALLOW FOR TRUCK MOVEMENT AROUND THE SITE AND TO ALLOW FOR DELIVERIES.
5. CONTRACTOR TO PROVIDE ONE (1) 12"x18" POLICE PARKING ONLY AND TWO (2) 12"x18" ACS PARKING ONLY SIGNS IN ACCORDANCE WITH MUTCD STANDARDS FOR TEXT HEIGHT AND SPACING.
6. CHILLER PAD CONCRETE SLAB SHALL BE SET AT ELEVATION 264.00 AND SLOPED TO AREA DRAINS.
7. TOP OF CONCRETE RETAINING WALL SHALL BE SET AT ELEVATION 272.67 ACROSS THE SLOPE OF THE ENTIRE WALL.

LIMIT OF DISTURBANCE = ±422,254 SF. / 9.69 AC.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/25/13

DIRECTOR — DATE 3/7/13

Date	No.	Revision Description
9/22/16	4	EMERSON CAMPUS VCP
7.10.15	3	REVISE DRAINS, REMOVE RET. WALL, GUARD RAIL PARKING SPACES, ADD FOUND'T'N DRAINS

EMERSON PARCEL G-1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

For Revision #2 only
7-13-15
Date

STATE OF MARYLAND PAUL LEE HUDSON No. 8061 REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

DMW
DAFT MCCUNE WALKER, INC.
200 EAST PENNSYLVANIA AVENUE, TOWSON, MD 21286
P: 410.296.3333 F: 410.296.4705 WWW.DMW-INC.COM
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL SCIENTISTS

SUBDIVISION NAME	SECTION / AREA	LOT/PARCEL #
REVITZ PROPERTY	47	PARCEL G-1 / PAR. 165

PLAT# OR LF	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903

WATER CODE — SEWER CODE

TITLE: **SITE PLAN**

Des. By THR/JDF	Scale 1"=50'	Proj. No. 95054.3	
Dm. By JSS	Date 2-07-13	2 of ~~23~~ 21	
Chk. By	Approved		

2-07-13
Date

STATE OF MARYLAND PAUL LEE HUDSON No. 8061 REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

THE PURPOSE FOR REVISION #3 IS:

REVISED PLAN TO SHOW THE LOCATION OF THE CHILLER ENCLOSURE, ADDED 6' WIDE CONCRETE SIDEWALK, ADDED SMOKING SHELTER, ADDED BUS SHELTER, ADDED TRANSFORMER, ADDED EMERGENCY GENERATOR, ADDED UNDERGROUND UTILITIES ASSOCIATED WITH CHILLERS, ADDED FILTERRA STORM STRUCTURES.

STATE OF MARYLAND JOHN A. CROSS No. 45292 PROFESSIONAL ENGINEER
11-20-16

PROFESSIONAL CERTIFICATION FOR REV #4

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. 45292 EXPIRATION DATE: 05/21/2018

THE PURPOSE OF REVISION #4 IS TO SHOW THE WORK ASSOCIATED WITH THE EMERSON CAMPUS VCP. SDP-16-005

SEE SHEET 12 FOR PSWM ALIGNMENT LOCATION

STATE OF MARYLAND JOHN A. CROSS No. 45292 PROFESSIONAL ENGINEER
9/19/16

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. 45292, Expiration Date: 05/21/2018

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED, Paul Hudson P.E.# 8061
PAUL L. HUDSON

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. 8061, EXPIRATION DATE: 8-28-15

SDP-11-025

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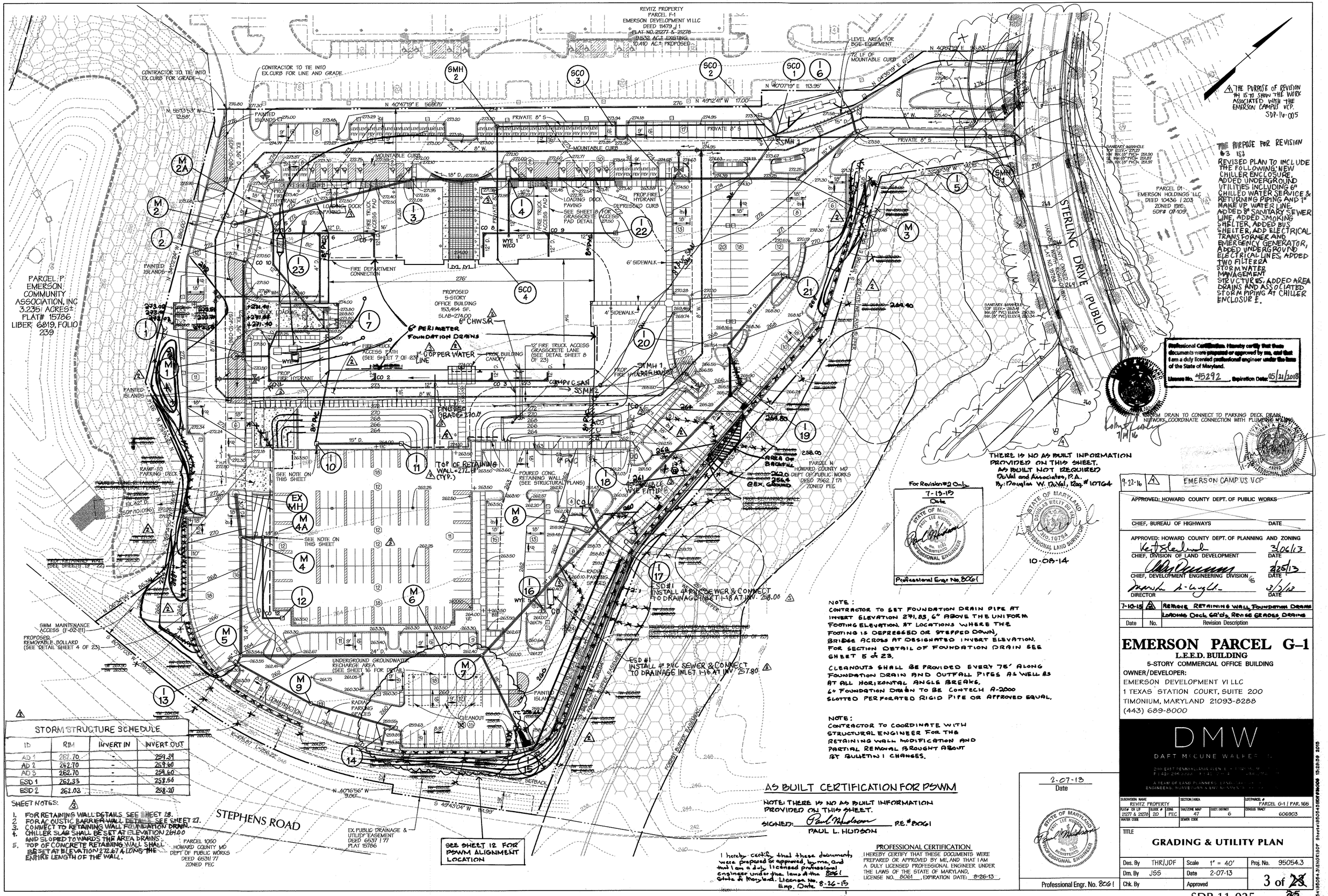
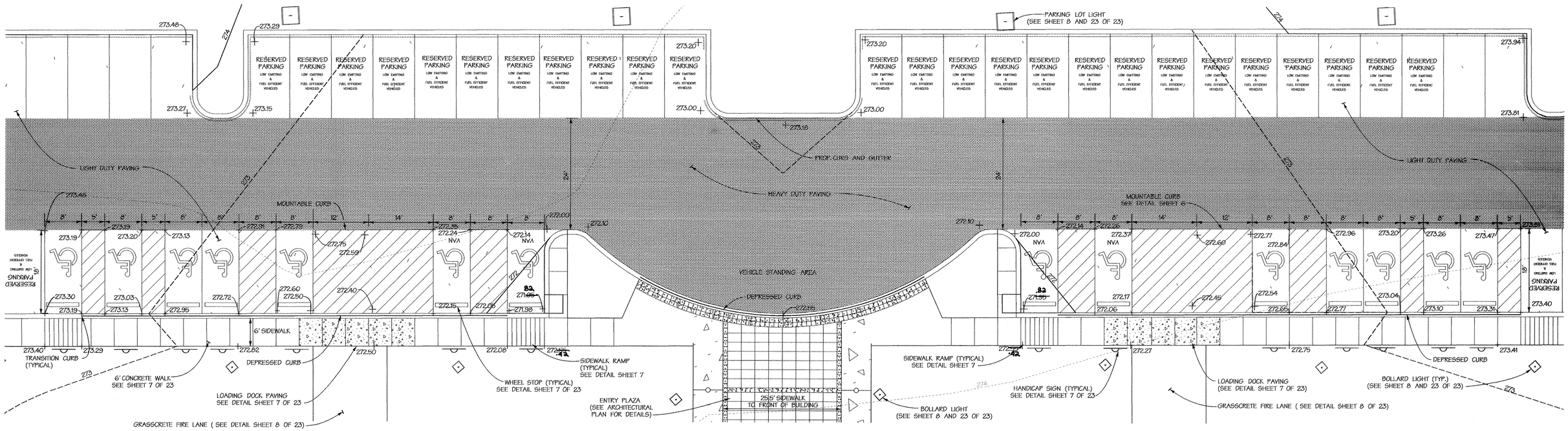

REVITZ PROPERTY
PARCEL F-1
EMERSON DEVELOPMENT VI LLC
DEED 11479 / 1
PLAT NO. 21277 & 21278
9.532 AC± EXISTING
10.410 AC± PROPOSED
PARCEL P
EMERSON COMMUNITY ASSOCIATION, INC
3.235± ACRES±
PLAT# 15786
LIBER 6819, FOLIO 239
PROPOSED 5-STORY OFFICE BUILDING
153,454 SF.
SLAB=274.00
6" PERIMETER FOUNDATION DRAINS
6" CHWS/R
1" COPPER WATER LINE
FINISHED GRADE=270.0
TOP OF RETAINING WALL=272.67 (TYP.)
STERLING DRIVE (PUBLIC)
PARCEL D1
EMERSON HOLDINGS LLC
DEED 10436 / 203
ZONED EMP.
SDP# 07-109
PARCEL N
HOWARD COUNTY MD
DEPT OF PUBLIC WORKS
DEED 7562 / 171
ZONED PEC
STEPHENS ROAD
PARCEL 1050
HOWARD COUNTY MD
DEPT OF PUBLIC WORKS
DEED 6531 / 77
ZONED PEC
EX. PUBLIC DRAINAGE & UTILITY EASEMENT
DEED 6531 / 77
PLAT 15786
SEE SHEET 12 FOR PSWM ALIGNMENT LOCATION
SWM MAINTENANCE ACCESS (F-02-111)
PROPOSED REMOVABLE BOLLARD (SEE DETAIL SHEET 4 OF 23)
UNDERGROUND GROUNDWATER RECHARGE AREA (SEE SHEET 16 FOR DETAIL)
RAMP TO PARKING DECK
POURED CONC. RETAINING WALL (SEE STRUCTURAL PLANS)
PROP. RETAINING WALL (SEE SHEETS 19 - 22)
LOADING DOCK PAVING
SEE SHEET 8 FOR GRASSCRETE PAD DETAIL
12' FIRE TRUCK ACCESS GRASSCRETE LANE (SEE DETAIL SHEET 8 OF 23)
FIRE TRUCK ACCESS PATH (SEE SHEET 7 OF 23)
FIRE DEPARTMENT CONNECTION
PROP. BUILDING CANOPY
PROP. FIRE HYDRANT
DEPRESSED CURB
MOUNTABLE CURB
6' SIDEWALK
4' SIDEWALK
PAINTED ISLANDS
RADIAL PARKING SPACES
CLEANOUT
ESD #1 INSTALL 4" PVC SEWER & CONNECT TO DRAINAGE INLET I-18 AT INV. 258.00
ESD #1 INSTALL 4" PVC SEWER & CONNECT TO DRAINAGE INLET I-16 AT INV. 257.80
LEVEL AREA FOR BGE EQUIPMENT
72 LF OF MOUNTABLE CURB
SANITARY MANHOLE
SEE SHEET 12 FOR PSWM ALIGNMENT LOCATION
THE PURPOSE OF REVISION #4 IS TO SHOW THE WORK ASSOCIATED WITH THE EMERSON CAMPUS VCP.
SDP-14-005
THE PURPOSE FOR REVISION #3 IS:
REVISED PLAN TO INCLUDE NEW CHILLER ENCLOSURE, ADDED UNDERGROUND UTILITIES INCLUDING 6" CHILLED WATER SERVICE & RETURNING PIPING AND 1" MAKE UP WATER LINE, ADDED 8" SANITARY SEWER LINE, ADDED SMOKING SHELTER, ADDED BUS SHELTER, ADD ELECTRICAL TRANSFORMER AND EMERGENCY GENERATOR, ADDED UNDERGROUND ELECTRICAL LINES, ADDED TWO FILTERRA STORMWATER MANAGEMENT STRUCTURES, ADDED AREA DRAINS AND ASSOCIATED STORM PIPING AT CHILLER ENCLOSURE E.
Professional Certification. 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. 45292 Expiration Date: 05/21/2018
STORM DRAIN TO CONNECT TO PARKING DECK DRAIN NETWORK. COORDINATE CONNECTION WITH PLUMBING PLANS
THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET. AS BUILT NOT REQUIRED
DuVal and Associates, P.A.
By: Douglas W. DuVal, Reg. # 10764
10-08-14
For Revision #2 Only
7-13-13
Date
Professional Engr No. 8061
9-22-16 4 EMERSON CAMPUS VCP
APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 3/06/13
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 3/25/13
DIRECTOR DATE 3/3/13
7-10-15 3 REMOVE RETAINING WALL, FOUNDATION DRAINS, LOADING DOCK GA'DS, REVISE GRADES, DRAINS
Date No. Revision Description
EMERSON PARCEL G-1
L.E.E.D. BUILDING
5-STORY COMMERCIAL OFFICE BUILDING
OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000
DMW
DAFT MCCUNE WALKER, INC.
200 EAST PENNSYLVANIA AVENUE
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTALISTS
SUBDIVISION NAME: REVITZ PROPERTY
SECTION/AREA
LOT/PARCEL #: PARCEL G-1 / PAR. 165
PLAT# OR LOT: 21277 & 21278
BLOCK #: 20
ZONE: PEC
TAX/ZONE MAP: 47
ELECT. DISTRICT: 6
CENSUS TRACT: 606803
WATER CODE
SEWER CODE
TITLE
GRADING & UTILITY PLAN
Des. By THR/JDF
Scale 1" = 40'
Proj. No. 95054.3
Dm. By JSG
Date 2-07-13
Chk. By
Approved
3 of 25
STORM STRUCTURE SCHEDULE
ID | RIM | INVERT IN | INVERT OUT
AD 1 | 262.70 | - | 259.39
AD 2 | 262.70 | - | 259.60
AD 3 | 262.70 | - | 259.60
ESD 1 | 262.33 | - | 258.56
ESD 2 | 262.03 | - | 258.20
SHEET NOTES: 3
1. FOR RETAINING WALL DETAILS SEE SHEET 28.
2. FOR ACOUSTIC BARRIER WALL DETAILS SEE SHEET 27.
3. CONNECT TO RETAINING WALL FOUNDATION DRAIN.
4. CHILLER SLAB SHALL BE SET AT ELEVATION 264.00 AND SLOPED TOWARDS THE AREA DRAINS.
5. TOP OF CONCRETE RETAINING WALL SHALL BE SET AT ELEVATION 272.67 ALONG THE ENTIRE LENGTH OF THE WALL.
NOTE:
CONTRACTOR TO SET FOUNDATION DRAIN PIPE AT INVERT ELEVATION 271.83, 6" ABOVE THE UNIFORM FOOTING ELEVATION. AT LOCATIONS WHERE THE FOOTING IS DEPRESSED OR STEPPED DOWN, BRIDGE ACROSS AT DESIGNATED INVERT ELEVATION. FOR SECTION DETAIL OF FOUNDATION DRAIN SEE SHEET 5 & 23.
CLEANOUTS SHALL BE PROVIDED EVERY 75' ALONG FOUNDATION DRAIN AND OUTFALL PIPES AS WELL AS AT ALL HORIZONTAL ANGLE BREAKS.
6" FOUNDATION DRAIN TO BE CONTECH A-2000 SLOTTED PERFORATED RIGID PIPE OR APPROVED EQUAL.
NOTE:
CONTRACTOR TO COORDINATE WITH STRUCTURAL ENGINEER FOR THE RETAINING WALL MODIFICATION AND PARTIAL REMOVAL BROUGHT ABOUT BY BULLETIN 1 CHANGES.
AS BUILT CERTIFICATION FOR PSWM
NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
SIGNED: PAUL L. HUDSON P.E. #8061
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. 8061 Exp. Date 8-26-13
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. 8061, EXPIRATION DATE: 8-26-13
2-07-13
Date
Professional Engr. No. 8061
SDP-11-025
25



PROPOSED HANDICAP PARKING AND ACCESS (FRONT)

1"=10'

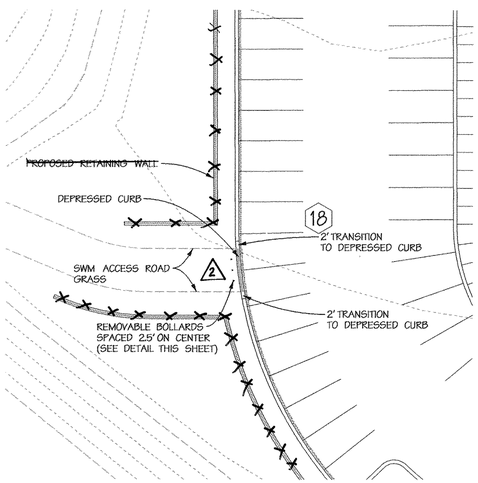
AS BUILT CERTIFICATION FOR DSWM

NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED Paul Hudson P.E.# 8061
PAUL L. HUDSON

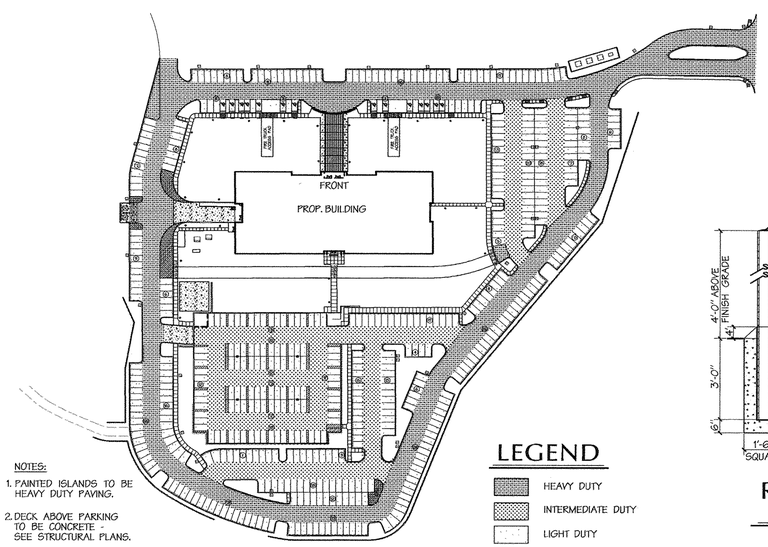
THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET. AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. DuVal - Reg.# 10764

10-08-14



SWM ACCESS

1"=20'



NOTES:

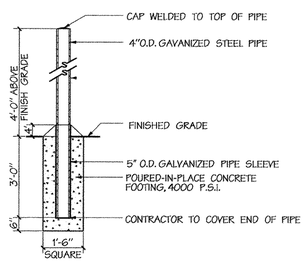
1. PAINTED ISLANDS TO BE HEAVY DUTY PAVING.
2. DECK ABOVE PARKING TO BE CONCRETE - SEE STRUCTURAL PLANS.
3. FOR PAVING SECTIONS SEE SHEET 7 OF 23

SITE PAVING DETAIL

1"=100'

LEGEND

- HEAVY DUTY
- INTERMEDIATE DUTY
- LIGHT DUTY
- LOADING DOCK



REMOVABLE BOLLARD

N.T.S

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. 45292, Expiration Date: 05/21/2013

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. 8061, EXPIRATION DATE: 8-26-13

For Revision #2 Only
7-13-15
Date
Professional Engr. # 8061

2-07-13
Date
Professional Engr. No. 8061

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/25/13

DIRECTOR — DATE 3/7/13

Date	No.	Revision Description
7-10-15	2	REMOVE RETAINING WALL, ELEVATIONS

EMERSON PARCEL G-1

L.E.E.D. BUILDING
5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER
200 EAST PENNSYLVANIA AVENUE
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL SCIENTISTS

SUBDIVISION NAME		SECTION/AREA		LOT/PARCEL #
REVITZ PROPERTY				PARCEL G-1 / PAR. 165
MAP/GRID/PARCEL 21277 & 21278	BLOCK # 20	ZONE PEC	TAX/ZONE MAP 47	ELECT. DISTRICT 6	CENSUS TRACT 606903
WATER CODE		SEWER CODE		

TITLE
SITE DETAILS

Des. By THR/JDF	Scale AS NOTED	Proj. No. 95054.3	
Drn. By JSS	Date 6-16-11	4 of 23	
Chk. By	Approved		

SDP-11-025

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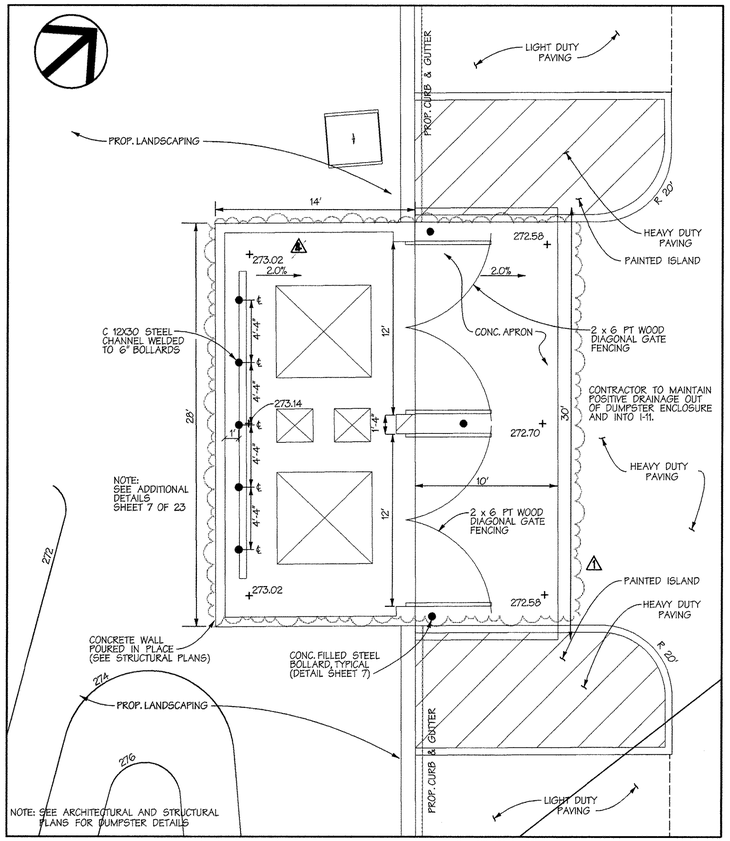
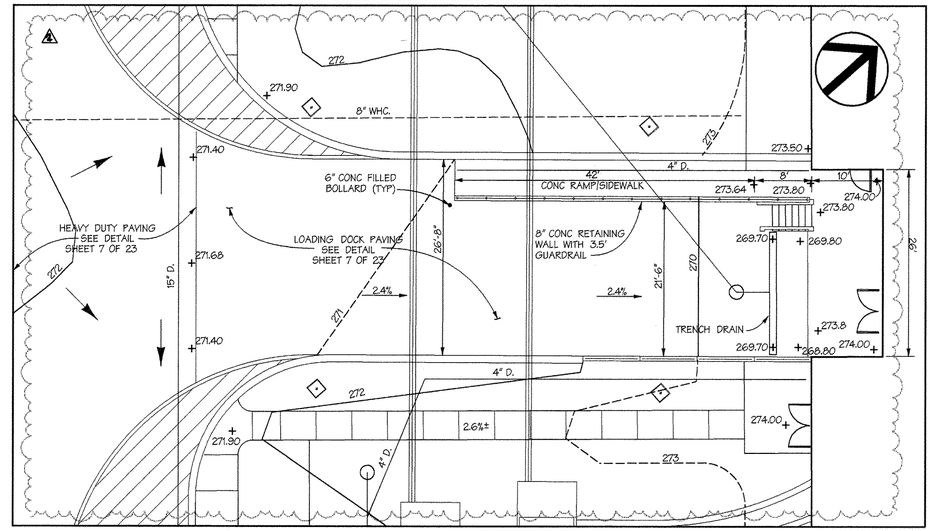


DUMPSTER ENCLOSURE DETAIL

SCALE: 1"=5'



LOADING DOCK DETAIL

SCALE: 1"=10'

AS BUILT CERTIFICATION FOR PSWM

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED Paul Hudson P.E.#8061

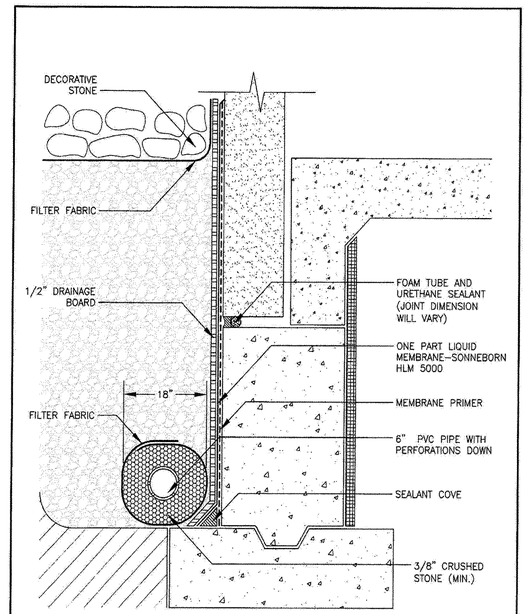
PAUL L. HUDSON

GENERAL NOTES: EMERSON 6 – REVISION 3

NOTES:

1. CONTRACTOR TO VERIFY FIELD CONDITIONS AND DIMENSIONS.
2. INVERT OF PERFORATED PIPE MAY VARY TO SUIT FLOW TO OUT FALL. SET LEVEL AT PREDETERMINED ELEVATION. INVERT TO BE MINIMUM 6" BELOW FINISHED SLAB HEIGHT.
3. NEW WATERPROOFING AND DRAINAGE BOARD TO BE EXTENDED TO GRADE. TAPE OFF PRECAST PANELS AT GRADE IN ORDER TO CREATE UNIFORM TERMINATION FOR PRIMER AND LIQUID MEMBRANE.
4. PRIMER TO BE SOLVENT DILUTED HLM 5000. APPLY TO CAST IN PLACE AND PRECAST CONCRETE. ALLOW TO DRY TACK FREE. COVER WITH MEMBRANE DURING THE NEXT WORK PERIOD. CONTAMINATED SURFACES TO BE REPRIMED.
5. SEALANT COVE BEAD AT FOOTING AND SEALANT JOINT AT BOTTOM OF PRECAST TO BE URETHANE BASED AS APPROVED OR PROVIDED BY THE MEMBRANE MANUFACTURER. SURFACES OF PRECAST–TO–FOUNDATION JOINT TO BE GROUND AND PRIMED.
6. REMOVE DIRT, DUST, MOISTURE AND OTHER MATERIALS FROM THE SURFACES OF THE CAST IN PLACE AND PRECAST CONCRETE THAT COULD COMPROMISE THE ADHESION OR PERFORMANCE OF THE NEW FLUID APPLIED MATERIAL.
7. MIX LIQUID MEMBRANE THOROUGHLY PRIOR TO APPLICATION. STORE IN A HEATED AREA UNTIL THE TIME OF APPLICATION. APPLY AT THE SPECIFIED WET FILM THICKNESS SUCH THAT THE COMPLETED DRY FILM MEMBRANE IS A CONSTANT 60 MILS.
8. ALLOW MEMBRANE TO CURE THOROUGHLY. CURE WILL BE AFFECTED BY TEMPERATURE AND HUMIDITY.
9. APPLY DRAINAGE BOARD OVER COMPLETED MEMBRANE FROM FOOTING TO GRADE.
10. INSTALL CONTECH A–2000 8" SLOTTED PERFORATED RIGID PIPE (OR APPROVED EQUAL), WITH PERFORATIONS DOWN. INSTALL STONE WRAP AND FILTER FABRIC AS SHOWN. OVERALL DIAMETER SHALL BE 18 INCHES. SET PIPE DEAD LEVEL AT PREDETERMINED ELEVATION. INSTALL CLEAN OUTS AT EACH CORNER.
11. INSTALL COLUMN OF CRUSHED STONE OVER COMPLETED FOOTING DRAIN. GRADE LEVEL, APPLY FILTER FABRIC LAYER AND SALVAGED DECORATIVE STONE AND MOWER GUARDS.
12. INSPECT EACH PRECAST TO PRECAST AND PRECAST TO METAL FACADE JOINT. REMOVE DEFECTIVE AND DAMAGED MATERIAL. PREPARE APPLICATION SURFACES WITH GRINDER AND SOLVENT AS REQUIRED AND APPLY NEW ELASTOMER TO MATCH EXISTING. NOTE PRECAST TO PRECAST AND PRECAST TO CAST IN PLACE JOINTS THAT WILL BE BELOW GRADE ARE TO BE DETAILED WITH URETHANE SEALANT.
13. CONTRACTOR SHALL FOLLOW MANUFACTURER'S RECOMMENDATIONS REGARDING THE IMPACT OF TEMPERATURE ON THE CURING PROCESS.
14. AN ELASTOMER PROVIDED BY SONNEBORN IS TO BE USED AT RIGHT ANGLE, JOINTS, AND AROUND ANY PENETRATIONS PER THE MANUFACTURER'S REQUIREMENTS.
15. MANUFACTURER LITERATURE AND STANDARD DETAILS ARE TO BE FOLLOWED AT WALL PENETRATIONS, I.E. ELASTOMERIC COVE BEAD, FOLLOWED BY LIQUID MEMBRANE.

CSG ConsultingEngineers	DRAWN BY: MTC CHECKED BY: CCE DATE: 11–25–13 PROJECT #: 13–201	EMERSON 6 LAUREL, MARYLAND
N–1R		



FOUNDATION WATERPROOFING (REVISION 3)

SCALE: N.T.S.

CSG ConsultingEngineers	DRAWN BY: MTC CHECKED BY: CCE DATE: 11–25–13 JOB #: 13–201	EMERSON 6 LAUREL, MARYLAND
D–1R		

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
AS BUILT NOT REQUIRED.
DeVal and Associates, P.A.
By: Douglas W. DeVal - Reg.# 10764

STATE OF MARYLAND DOUGLAS WELTY DEVAL No. 10764 PROFESSIONAL LAND SURVEYOR

10-08-14

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11-23-15

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11-16-15

DIRECTOR — DATE 11-23-15

Date	No.	Revision Description
7-10-15	2	ALL LOADING DOCK GRADING; DUMPSTER GRADES REVISED
		ADD FOUNDATION DRAIN (REPLACEMENT SHEET)

For Revision #2 Only

7-13-15
Date

STATE OF MARYLAND PAUL LEE HUDSON No. 8061 REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

2-07-13
Date

STATE OF MARYLAND PAUL LEE HUDSON No. 8061 REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

EMERSON PARCEL G–1

L.E.E.D. BUILDING

5–STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:

EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER INC
200 EAST PENNSYLVANIA AVENUE • TOWSON, MD 21286
P: 410 296 3333 F: 410 296 4705 WWW.DMW.COM
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS

SUBDIVISION NAME: REVITZ PROPERTY		SECTION / AREA		LOT / PARCEL #: PARCEL G-1 / PAR. 165
PLAT # OR LOT: 21277 & 21278	BLOCK #: 20	ZONE: PEC	TAX / ZONE MAP: 47	ELECT. DISTRICT: 6	CENSUS TRACT: 606903
WATER CODE		SEWER CODE		

TITLE: **SITE DETAILS**

Des. By THR/JDF	Scale AS SHOWN	Proj. No. 95054.3	5 of 25
Drn. By JSS	Date 6-16-11		
Chk. By	Approved		

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. 45292, Expiration Date: 08/21/18

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. 8061, EXPIRATION DATE: 8-26-15

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. 8061, EXPIRATION DATE: 8-26-13

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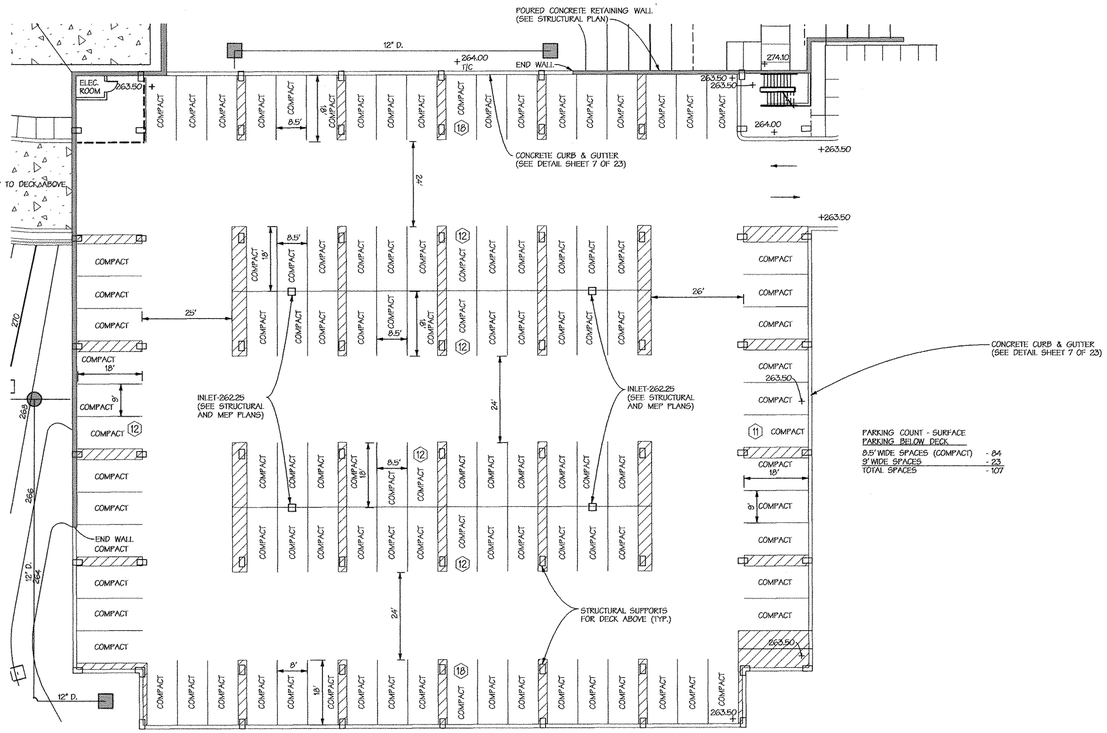
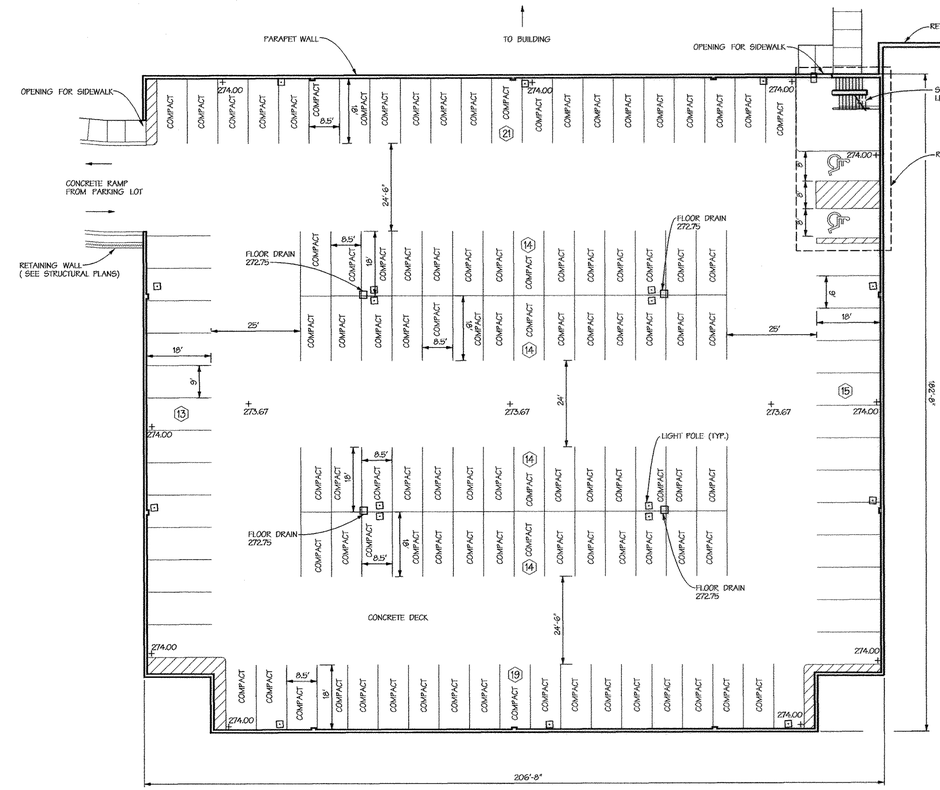


PARKING COUNT - SURFACE
PARKING BELOW DECK

8.5' WIDE SPACES (COMPACT)	- 84
9' WIDE SPACES	- 23
TOTAL SPACES	- 107

SURFACE PARKING BELOW DECK

1"=20'



PARKING COUNT - DECK

8.5' WIDE SPACES (COMPACT)	- 96
9' WIDE SPACES	- 26
HC SPACES	- 2
TOTAL SPACES	- 124

NOTE: FOR DETAILS SEE STRUCTURAL DECK PLANS. THIS DETAIL IS FOR REFERANCE ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.

UPPER PARKING DECK (ONE LEVEL)

1"=20'

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED Paul Nicholson PE.# 8061

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET. AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. DuVal - REG.# 10764

STATE OF MARYLAND DOUGLAS WELTY DUVAL No. 10764 PROFESSIONAL LAND SURVEYOR

10-08-14

For Revision No. 2 Only

7-13-13
Date

STATE OF MARYLAND PAUL LEE HUDSON No. 8061 REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

2-07-13
Date

STATE OF MARYLAND PAUL LEE HUDSON No. 8061 REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/25/13

DIRECTOR — DATE 3/7/13

Date	No.	Revision Description

EMERSON PARCEL G-1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER, INC.
200 EAST PENNSYLVANIA AVENUE, TOWSON, MD 21286
P: 410.296.3333 F: 410.296.8705 WWW.DMW-INC.COM
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL SCIENTISTS

SUBDIVISION NAME		SECTION / AREA		LOT/PARCEL #
REVITZ PROPERTY				PARCEL G-1 / PAR. 165
PLAT# OR L/F	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903
WATER CODE			SEWER CODE		

TITLE

SITE DETAILS

Des. By THR/JDF	Scale 1"=20'	Proj. No. 95054.3	
Dm. By JSS	Date 6-16-11	6 of ~~23~~ 25	
Chk. By	Approved		

SDP-11-025 ~~25~~ 21

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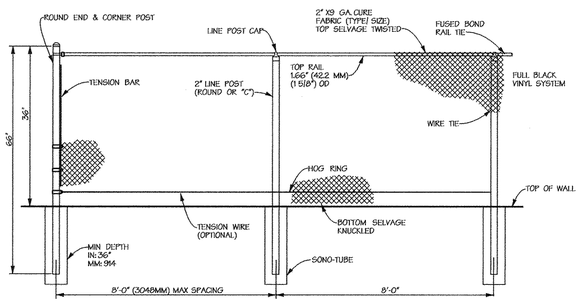
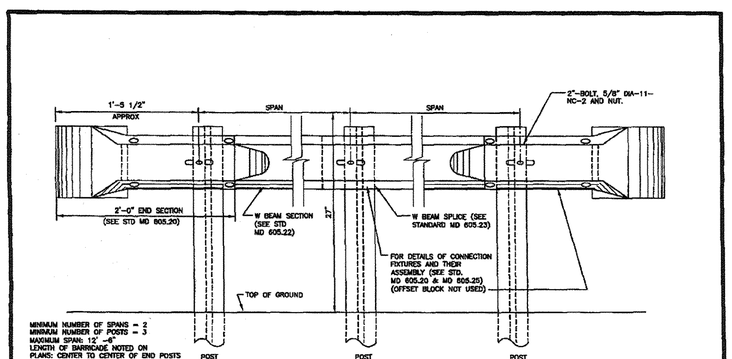


NOTE:
1. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
2. SPECIFICATIONS SHOWN CAN BE CHARGED BY THE MANUFACTURER ONLY.
3. FOOTING WIDTH TO BE (4) X POST WIDTH.

RETAINING WALL FENCE DETAIL

NTS



Revised	Howard County, Maryland Department of Public Works	BARRICADE ALONG RETAINING WALL	Detail R-5.11 (MODIFIED)
Revised	Approved: Chief, Bureau of Engineering		
5/17/2007 Approved			

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. _____ Expiration Date: _____

PROFESSIONAL CERTIFICATION
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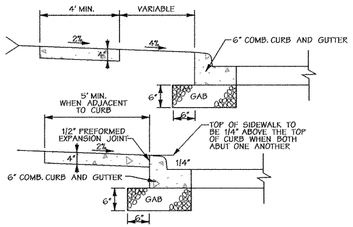
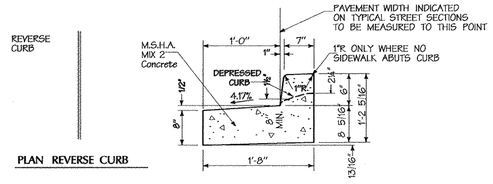


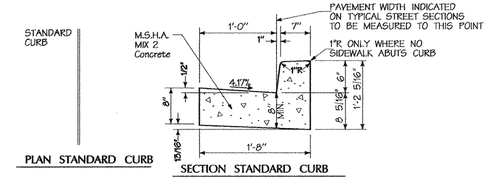
NOTES:
1. SIDEWALK TO BE SCRIBED IN 5'-0" MAXIMUM SQUARES.
2. EXPANSION JOINTS ACROSS SIDEWALK NOT TO BE MORE THAN 15' APART.
3. ½" PREFORMED EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT¼" BELOW SURFACE OF SIDEWALK.
4. CONCRETE TO BE MIX NO.3.
5. WHEN SIDEWALK ABUTS CURB, SIDEWALK SHALL BE ¼" ABOVE CURB WITH ½" PERFORMED EXPANSION JOINT BETWEEN SIDEWALK AND CURB.
6. ON LONGITUDINAL SIDEWALK GRADES OF 5% OR GREATER, A CONCRETE HEADER, 6" THICK AND 6" DEEP BELOW THE NORMAL 4" SIDEWALK THICKNESS SHALL BE CONSTRUCTED FOR THE FULL WIDTH OF THE SIDEWALK AT INTERVALS OF 46 FEET. THE HEADERS SHALL BE PLACED AT THE EXPANSION JOINT LOCATIONS AND SHALL BE MONOLITHIC WITH THE SIDEWALK.
7. 4' SIDEWALK REQUIRES A PASSING AREA (SEE HO.CO.STD. DETAIL R-4.01)
8. SEE SITE PLAN FOR PROPOSED SIDEWALK WIDTHS.

Concrete Sidewalk
Not to Scale



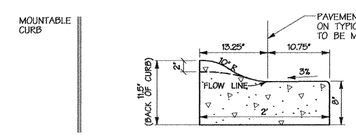
PLAN REVERSE CURB

SECTION REVERSE CURB



PLAN STANDARD CURB

SECTION STANDARD CURB

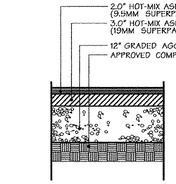


PLAN MOUNTABLE CURB

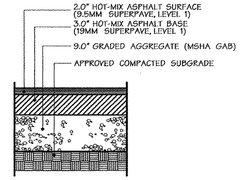
SECTION MOUNTABLE CURB

NOTE:
1. A REVERSE GUTTER PAN SHALL HAVE A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE, AND SHALL NOT BE USED WHERE THIS DRAINAGE CREATES A HAZARDOUS CONDITION.
2. GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPER ELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPER ELEVATED SECTION AND THE RATE OF SUPER ELEVATION IS GREATER THAN 3% FOR MOUNTABLE CURB AND GUTTER.
3. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EARTH, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
4. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.

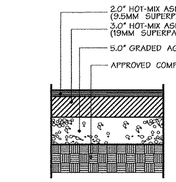
6" Combination Curb & Gutter
Not to Scale



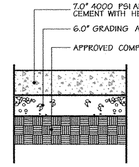
HEAVY DUTY PAVING
(FOR THE ENTRANCEWAYS AND TRAVEL LANES SUBJECTED TO REGULAR HEAVY TRUCK TRAFFIC)



INTERMEDIATE DUTY PAVING
(DRIVE AISLES AND ENTRANCEWAYS SUBJECTED TO PASSENGER VEHICLE TRAFFIC, PLUS OCCASIONAL BUS OR DELIVERY BOX TRUCK TRAFFIC)



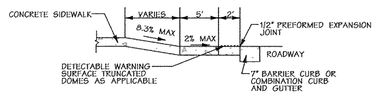
LIGHT DUTY PAVING
(PARKING LOTS AREAS SUBJECTED TO PASSENGER VEHICLE TRAFFIC ONLY)



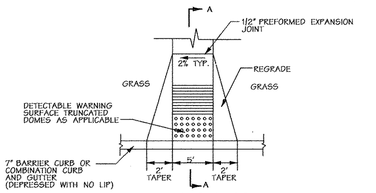
LOADING DOCK PAVING
(TRUCK LOADS UNKNOWN AT THIS TIME)

NOTE:
1. PAVING SECTIONS WERE DESIGNED BY HERBST BENSON & ASSOCIATES ON JANUARY 2011.
2. CONTRACTOR TO VERIFY WITH GEOTECHNICAL ENGINEER ON-SITE PRIOR TO PAVING.

Paving Details
Not to Scale



SECTION A-A



RAMP PERPENDICULAR TO CURB

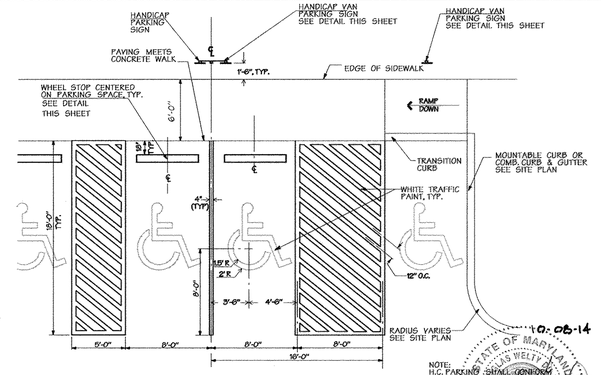
NOTES:
1. ALL RAMPS SHALL HAVE A WARNING TEXTURE EXTENDING THE FULL WIDTH AND DEPTH OF RAMP (SEE HO. CO. STD. DETAIL R-4.07).
2. GRASS AREA ADJACENT TO SIDEWALK MUST BE SLOPED TO MEET RAMP.
3. 4' SIDEWALK REQUIRES PASSING AREA (SEE HO. CO. STD. DETAIL R-4.07).

Sidewalk Ramp - Type 'A'
Not to Scale

NOTES:
1. DISTANCE FROM GROUND TO BOTTOM OF SIGN SHALL BE 7'-0".
2. SEE HANDICAPPED PARKING SPACE DETAIL THIS SHEET FOR LOCATION OF HANDICAPPED SIGN.
3. SIGNS SHALL CONFORM TO CURRENT ADAAG & COMAR CRITERIA.

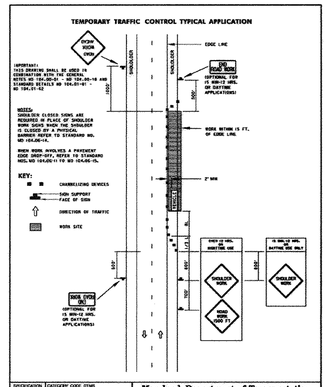
SIGN COLORS:
LETTERS AND BORDER - GREEN
WHITE H.C. SYMBOLS ON BLUE BACKGROUND
BACKGROUND - WHITE

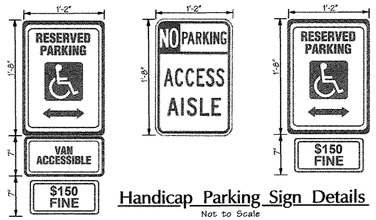
Handicap Parking Sign
Not to Scale



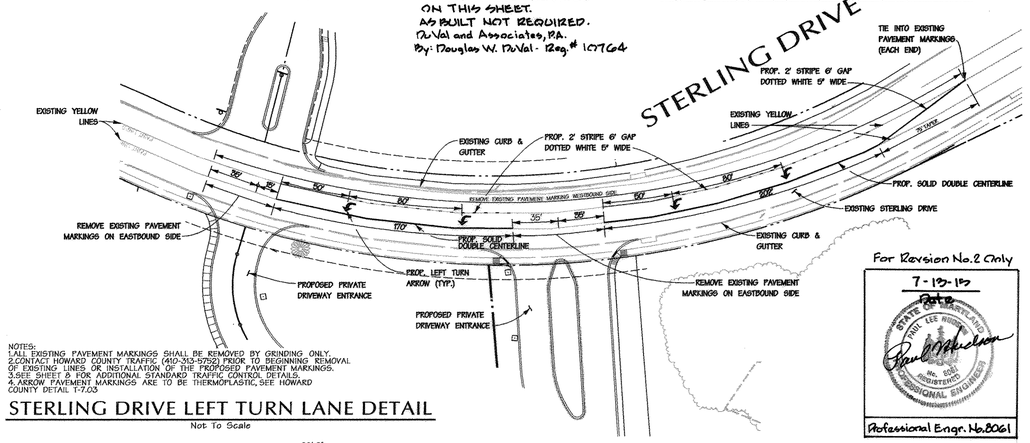
NOTE:
H.C. PARKING SHALL CONFORM TO CURRENT ADAAG & COMAR CRITERIA

Handicap Parking: Van & Standard
Not To Scale





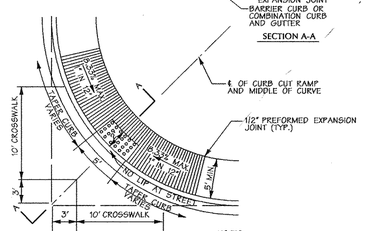
Handicap Parking Sign Details
Not to Scale



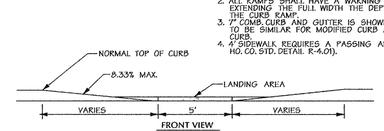
NOTES:
1. ALL EXISTING PAVEMENT MARKINGS SHALL BE REMOVED BY GRINDING ONLY.
2. CONTACT HOWARD COUNTY TRAFFIC (410-313-5752) PRIOR TO BEGINNING REMOVAL OF EXISTING LINES OR INSTALLATION OF THE PROPOSED PAVEMENT MARKINGS.
3. SEE SHEET 8 FOR ADDITIONAL STANDARD TRAFFIC CONTROL DETAILS.
4. ARROW PAVEMENT MARKINGS ARE TO BE THERMOPLASTIC, SEE HOWARD COUNTY DETAIL T-7.03.

STERLING DRIVE LEFT TURN LANE DETAIL
Not To Scale

For Revision No.2 Only
7-19-13
Date
Professional Engr. No.8061

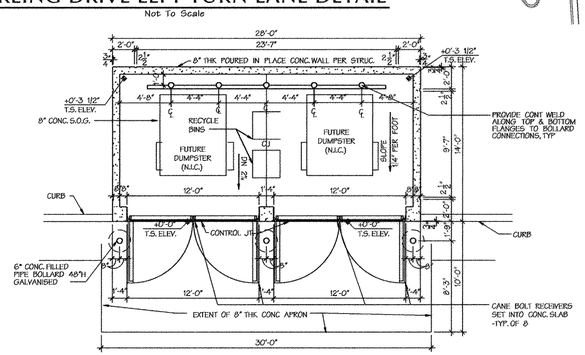


NOTES:
1. TYPE C SIDEWALK RAMP IS TO BE USED AT LOCATIONS WHERE THE SIDEWALK MUST BE PLACED IMMEDIATELY ADJACENT TO THE BACK OF THE CURB. THE SIDEWALK SHALL BE AT LEAST 5' IN WIDTH.
2. ALL RAMPS SHALL HAVE A WARNING TEXTURE EXTENDING THE FULL WIDTH THE DEPTH OF THE CURB RAMP.
3. 7" COMB. CURB AND GUTTER IS SHOWN. DETAILS TO BE SIMILAR FOR MODIFIED CURB AND BITUMINUS CURB.
4. 4' SIDEWALK REQUIRES A PASSING AREA (SEE HO. CO. STD. DETAIL R-4.01).



FRONT VIEW

Sidewalk Ramp - Type 'C'
Not to Scale



PLAN VIEW

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

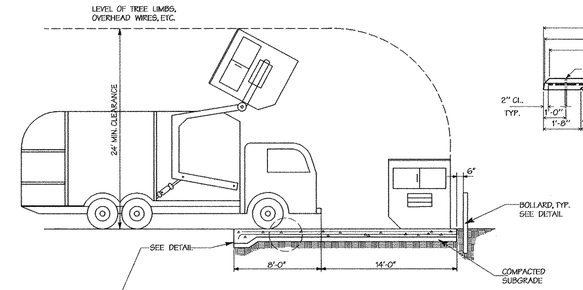
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2.25.13

DIRECTOR — DATE 3/5/13

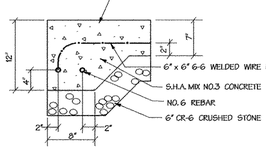
Date	No.	Revision Description

EMERSON PARCEL G-1
L.E.E.D. BUILDING
5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

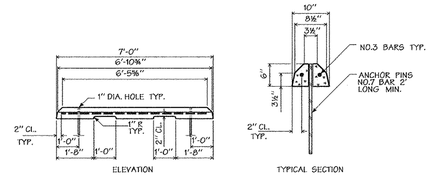


NOTE: SEE STANDARD HOWARD COUNTY DETAIL R11.01 FOR ADDITIONAL DIMENSIONS



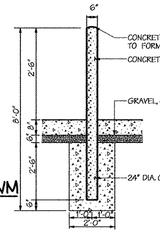
Section

Service Pad and Dumpster Bin
Not to Scale

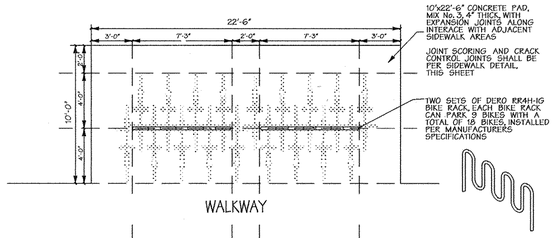


ELEVATION — TYPICAL SECTION

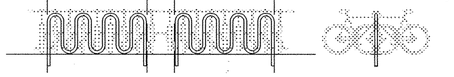
Concrete Cast Wheel Stop
Not to Scale



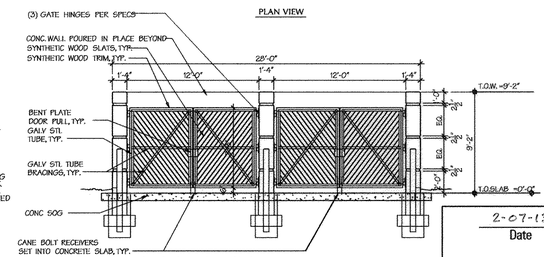
Bollard Section
Not to Scale



WALKWAY



Bike Rack
Not to Scale



FRONT ELEVATION

Dumpster Enclosure
Not to Scale

AS BUILT CERTIFICATION FOR PSWM
THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
SIGNED Paul Hudson P.E. #8061
PAUL L. HUDSON

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. 8061, EXPIRATION DATE: 8-26-15

2-07-13
Date
Professional Engr. No. 8061

THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET. AS-BUILT NOT REQUIRED. DuVal and Associates, P.A. By: Douglas W. DuVal - Reg.# 10764
10-08-14

DMW
DAFT MCCUNE WALKER
200 EAST PENNSYLVANIA AVENUE
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL #
REVITZ PROPERTY		PARCEL G-1 / PAR. 165

PLAT # OR LOT	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903

WATER CODE — SEWER CODE

TITLE
SITE DETAILS

Des. By THR/JDF	Scale AS NOTED	Proj. No. 95054.3	
Drn. By JSS	Date 6-16-11	7 of 23	
Chk. By	Approved		

SDP-11-025

25
31

Fri Feb 08 13:35:09 2013 J:\ENGR\SDP Sheets\95054.3\ENGR\SDP Sheets\95054.3SDP07.DWG
J:\95054\95054.3\ENGR\SDP Sheets\95054.3SDP07.DWG 13:35:24 2013

Ⓔ COOPER LIGHTING - LUMARK®

Catalog #	MPTR-SL-350-MT-DP	Type	S1
Project	EMERSON		
Comments		Date	
Prepared by			

DESCRIPTION

The Lumark Tribute is the most versatile, functionally designed, universally adaptable outdoor luminaire available. The Tribute brings outstanding performance to walkways, parking lots, roadways, loading docks, building areas, and any security lighting application. U.L. listed and CSA certified for wet locations.

SPECIFICATION FEATURES

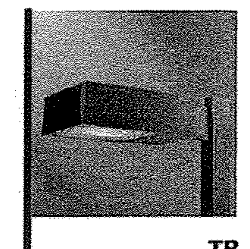
Construction
Rugged one-piece die-cast aluminum housing and door frame. One-piece silicone gasket protects the optical chamber from performance degrading contaminants. One (1) stainless spring latch and two (2) stainless hinges allow toolless opening and removal of door frame.

Reflector
Choice of nine (9) high efficiency optical distributions, including five (5) segmented optical systems constructed of premium 95% reflective anodized aluminum sheet. Optical segments are rigidly mounted inside a thick gauge aluminum housing for superior protection. All segment faces are clean of rivet heads, tabs or other means of attachment which may cause streaking in the light distribution. Optical modules are field rotatable in 90° increments and offered standard with mogul-base lampholders for 150-400W assemblies or medium-base lampholders for 100W and below.

Electrical
Ballast and related electrical componentry are hard mounted to die-cast housing for optimal heat transfer and operating efficiency. Optional swing-down galvanized steel power tray with integral handle and quick disconnects allows tray to be completely removed from housing providing ample room for fixture installation and maintenance.

Mounting
Extruded 8" aluminum arm features internal bolt guides for easy positioning of fixture during installation to pole or wall surface. Standard single carton packaging of housing, square pole arm and round pole adapter allow for consolidated product arrival to site. Optional internal mast arm mount accepts a 1 1/4" to 2 3/8" O.D. horizontal tenon, while a 4-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment.

Finish
Housing and arm finished in a 5 stage premium TGIC bronze polyester powder coat paint. Optional colors include black, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.



TR
TRIBUTE

70 - 400W
High Pressure Sodium
Pulse Start Metal Halide
Metal Halide

AREA LUMINAIRE

DARK SKY COMPLIANT FCO

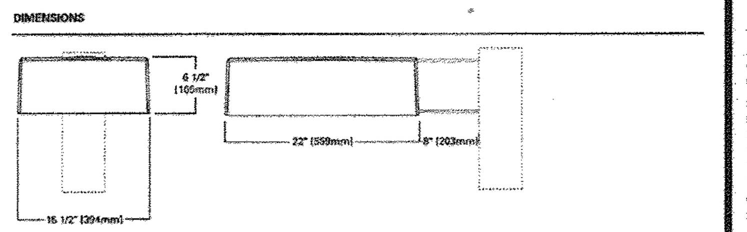
TECHNICAL DATA
UL Wet Locations Listed
CSA Certified
EISA Compliant Ⓔ

ENERGY DATA
Hi-Reactance Ballast Input Watts
70W HPS HPF (95 Watts)
100W HPS HPF (130 Watts)
150W HPS HPF (190 Watts)
150W MP HPF (185 Watts)
CWI Ballast Input Watts
250W HPS HPF (300 Watts)
CWA Ballast Input Watts
175W MH HPF (210 Watts)
200W MP HPF (227 Watts) Ⓔ
200W HPS HPF (250 Watts)
250W MH HPF (295 Watts)
250W MP HPF (283 Watts) Ⓔ
320W MP HPF (365 Watts) Ⓔ
350W MP HPF (397 Watts) Ⓔ
400W MP HPF (452 Watts) Ⓔ
400W MH HPF (455 Watts)
400W HPS HPF (465 Watts)

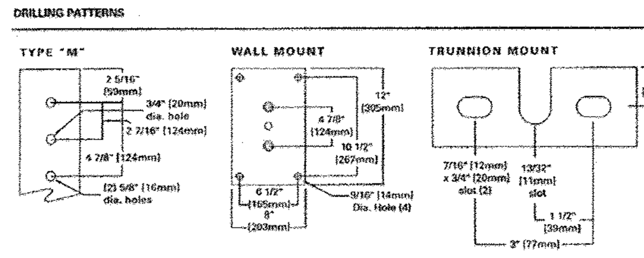
EPA
Effective Projected Area: (Sq. Ft.)
Without Arm: 1.10

SHIPPING DATA
Approximate Net Weight:
39 lbs. (17.73 kgs.)

DIMENSIONS



DRILLING PATTERNS



COOPER Lighting
www.cooperlighting.com

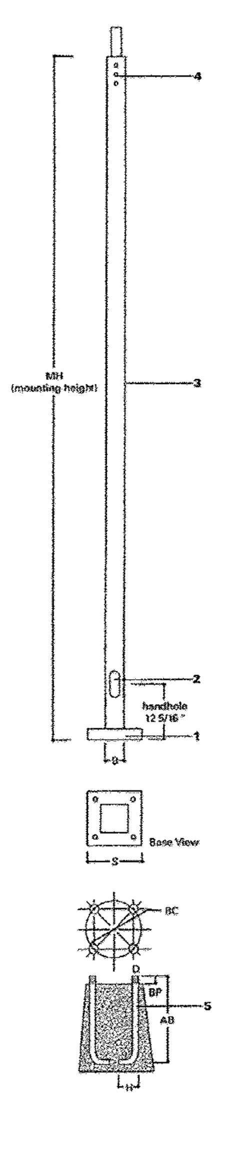
Specifications and Dimensions subject to change without notice.
Consult your representative for additional options and finishes.

ADH082320
01/02/2009 4:35:20 PM

TYPE: CATALOG #:

COOPER LIGHTING®

DETAILS



SSSSQUARE
STRAIGHT STEEL

10'-39'
Mounting Height

SQUARE STRAIGHT STEEL

SPECIFICATION FEATURES

1 ···ASTM Grade steel base plate with ASTM A366 base cover.
2 ···Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole.
3 ···ASTM A500 grade "B" steel shaft. Shot blasted and painted with polyester powder coat.
4 ···Drilled or Tenon (specify).
5 ···Anchor bolt per ASTM A576 with (2) nuts, (2) flat washer, and (1) lock washer. Nuts, washers and threaded portion of bolt are hot dip galvanized. 3" hook for 3/4" bolt. 4" hook for 1" bolt.

FOUR BOLT ANCHORAGE (see ordering information)
BC=Bolt Circle
BP=Bolt Projection
AB=Bolt Dimensions
D=Bolt Diameter
H=Bolt Dimensions

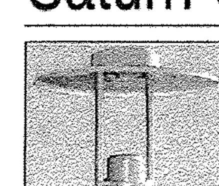
FINISH COLORS
F=Dark Bronze
G=Galvanized
V=Grey
W=White
Y=Black

COOPER LIGHTING

ADH020021

Saturn Cutoff

se'lux



Project: EMERSON
Type: S5 **Qty:**

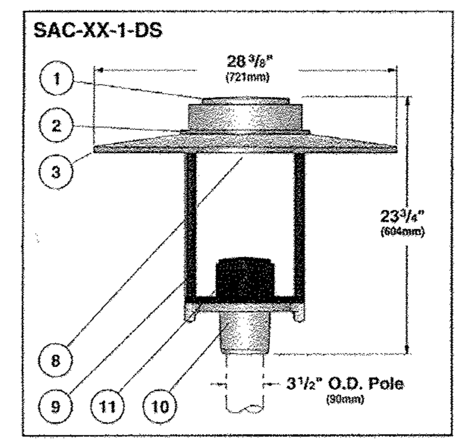
SAC - R5 - 1 - H070T6 - 830 - SV - X - DS -
Series, Reflector, Mounting, Lamping, Lamp Color, Finish, Voltage, Option, Option

A35 - 12 - SV - BC4 - -
Pole Series, Height, Finish, Pole Options

Series	Reflector	Mounting	Lamping	Lamp Color	Finish	Voltage	Options
SAC Saturn Cutoff	R2 Type II Aluminum reflector R5 Type V Aluminum reflector	1 Single 2 Double W Wall Mount	T6 Metal Halide H039T6[1] 39W T6 G12 H070T6 70W T6 G12 H150T6 150W T6 G12	830 3000° K NOL Lamp not included	WH White BK Black BZ Bronze SV Silver SP Specify RAL#	120 208 240 277 347	DS Full Cutoff Optics HS[2] House Side Shield (180°)

[1]Only available in 120v and 277v [2]Only available with R2 reflector

SAC-XX-1-DS



1. **Fixture Cover** - Die cast aluminum cover removes easily for access to field rotatable optics (rotatable 90 degrees).

2. **Gasketing** - Continuous gasket provides weatherproofing, dust and insect control at all fixture connections.

3. **Fixture Hood** - Aluminum shade with white painted interior.

4. **Reflector** - (Not shown) Precision formed, completely sealed aluminum reflector system with a Type II or Type V distribution. IDA-Approved™ dark sky friendly.

5. **Lamp** - (Not shown) Choose between 39 to 150 watt T6 (or T7.5) G12 base ceramic metal halide lamps. Fixtures suplied with 3000 degree K lamps, other color temperatures are available, please consult factory. Horizontal lamp for R2 reflector; base-up vertical lamp for R5 reflector.

6. **Socket** - (Not shown) Pulse rated porcelain G12 base socket. Socket is pre-wired to ballast at factory.

7. **Ballast** - (Not shown) A high power factor, open core and coil ballast regulates voltage for H.I.D. lamp. Consult factory for detailed ballast information.

8. **Access Door** - Hinged tempered glass lens, secured to fixture with two tool-less latches. Lens gasketed to die cast aluminum shade stabilizer.

9. **Hood Supports** - Two aluminum arms support shade and optic assembly and attach to the die cast aluminum pole fitter (shown painted matte black for DS option).

10. **Pole Fitter** - Self-leveling, die-cast aluminum, fitter base secured to pole with two, stainless steel, Allen head set screws. Fitter for 3 1/2" (90mm) O.D. poles.

11. **Ballast cover** - Die cast aluminum ballast cover removes easily for access to ballast. Ballast secured to removable tray for ease of maintenance (shown painted matte black for DS option).

Exterior Luminaire Finish - SELUX utilizes a high quality Polyester Powder Coating. All SELUX luminaires and poles undergo a five stage intensive pretreatment process where product is thoroughly cleaned, phosphated and sealed. SELUX powder coated products provide excellent salt and humidity resistance as well as ultra violet resistance for color retention. All products are tested in accordance with test specifications for coatings from ASTM and PCI.

Standard exterior colors are White (WH), Black (BK), Bronze (BZ), and Silver (SV). Custom RAL colors are available upon request. Please provide RAL#.

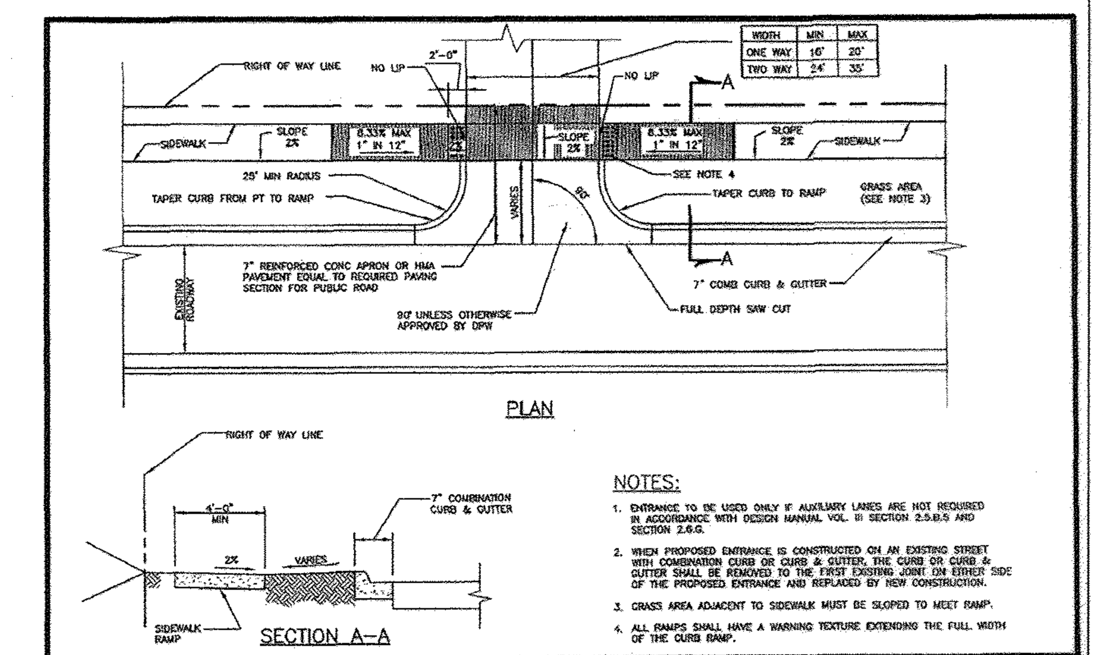
SELUX Corp. © 2009
TEL (845) 691-7723
FAX (845) 691-6749
www.selux.com/usa
SAC-1009-01 (SS-v2.31)

NRTL Listed (i.e. UL, CSA)
Union Made Affiliated with IBEW Local 363

In a continuing effort to offer the best product possible, we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product. Specification sheets found at www.selux.com/usa are the most recent versions and supercede all other printed or electronic versions.

LIGHTING SPECS AND DETAILS
NTS

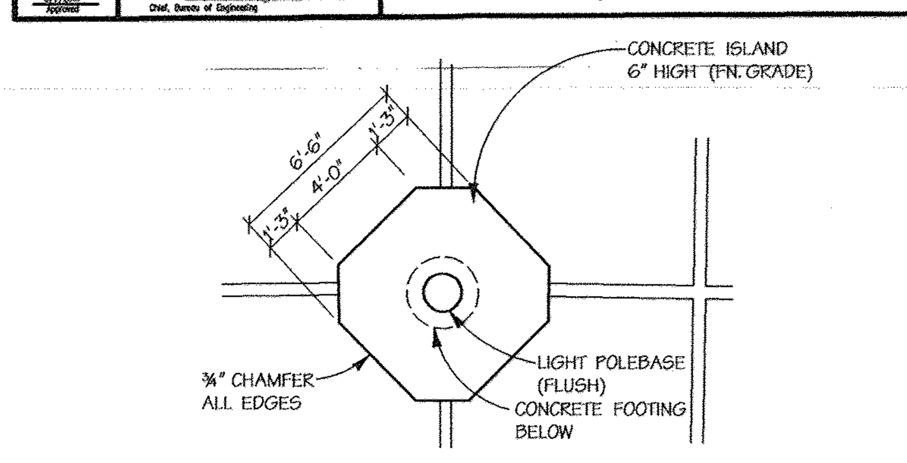
NOTE:
1. CONFIRM INSTALLATION DETAILS WITH ARCHITECT PRIOR TO COMMENCEMENT OF SITE LIGHTING WORK.
2. SIGHT LIGHTING TO BE 4000K COLOR.



WIDTH	MIN	MAX
ONE WAY	16'	20'
TWO WAY	24'	35'

NOTES:
1. ENTRANCE TO BE USED ONLY IF AUXILIARY LANES ARE NOT REQUIRED IN ACCORDANCE WITH DESIGN MANUAL VOL. III SECTION 2.5.B.5 AND SECTION 2.6.G.
2. WHEN PROPOSED ENTRANCE IS CONSTRUCTED ON AN EXISTING STREET WITH COMBINATION CURB OR CURB & GUTTER, THE CURB OR CURB & GUTTER SHALL BE REMOVED TO THE FIRST EXISTING JOINT ON EITHER SIDE OF THE PROPOSED ENTRANCE AND REPLACED BY NEW CONSTRUCTION.
3. GRASS AREA ADJACENT TO SIDEWALK MUST BE SLOPED TO MEET RAMP.
4. ALL RAMPS SHALL HAVE A WARNING TEXTURE EXTENDING THE FULL WIDTH OF THE CURB RAMP.

Revised / Revised / Approved	Howard County, Maryland Department of Public Works Approved: [signature] Chief, Bureau of Engineering	COMMERCIAL–INDUSTRIAL–APARTMENT Entrance on Closed Section Roadway (<200 V.P.H.)	Detail R–6.09



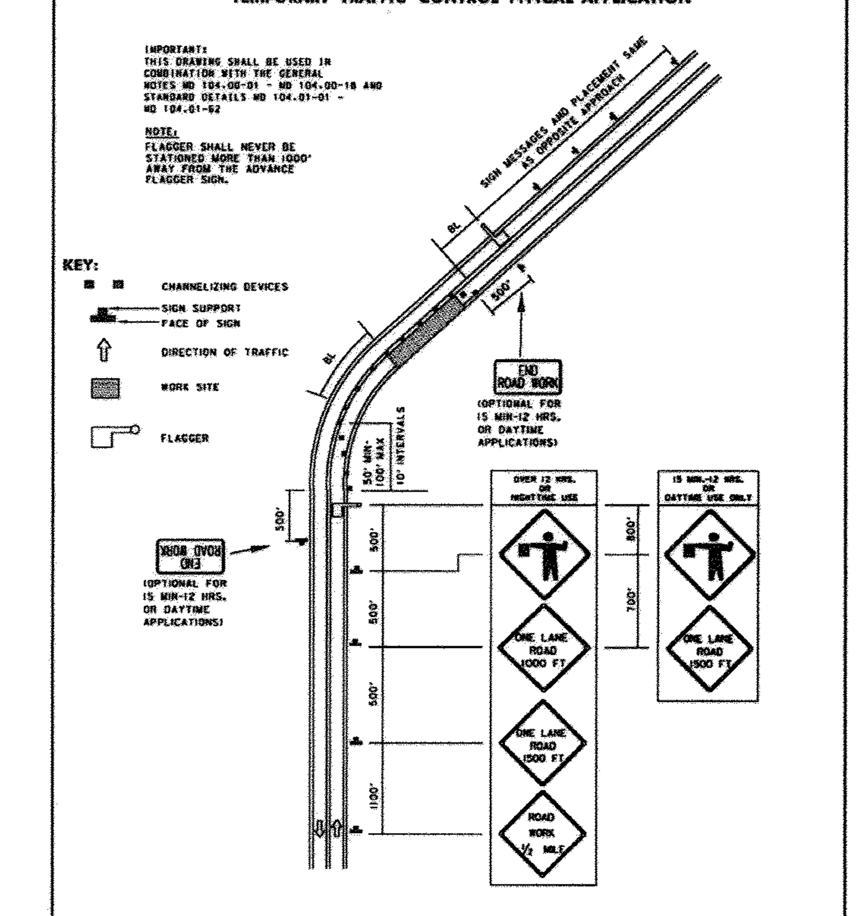
Pavement Area Light Pole Base Detail
NTS

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION

IMPORTANT:
THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES MD 104.00-01 - MD 104.00-18 AND STANDARD DETAILS MD 104.01-01 - MD 104.01-62

NOTE:
FLAGGER SHALL NEVER BE STATIONED MORE THAN 1000' AWAY FROM THE ADVANCE FLAGGER SIGN.

KEY:
CHANNELIZING DEVICES
SIGN SUPPORT
FACE OF SIGN
DIRECTION OF TRAFFIC
WORK SITE
FLAGGER

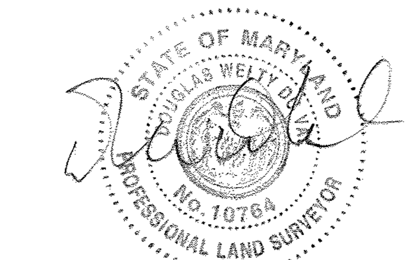


SPECIFICATION 104	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES FLAGGING OPERATION/2-LANE, 2-WAY EQL/LESS THAN 40 MPH
APPROVED	DIRECTOR - OFFICE OF TRAFFIC AND SAFETY	STANDARD NO. MD 104.02-10

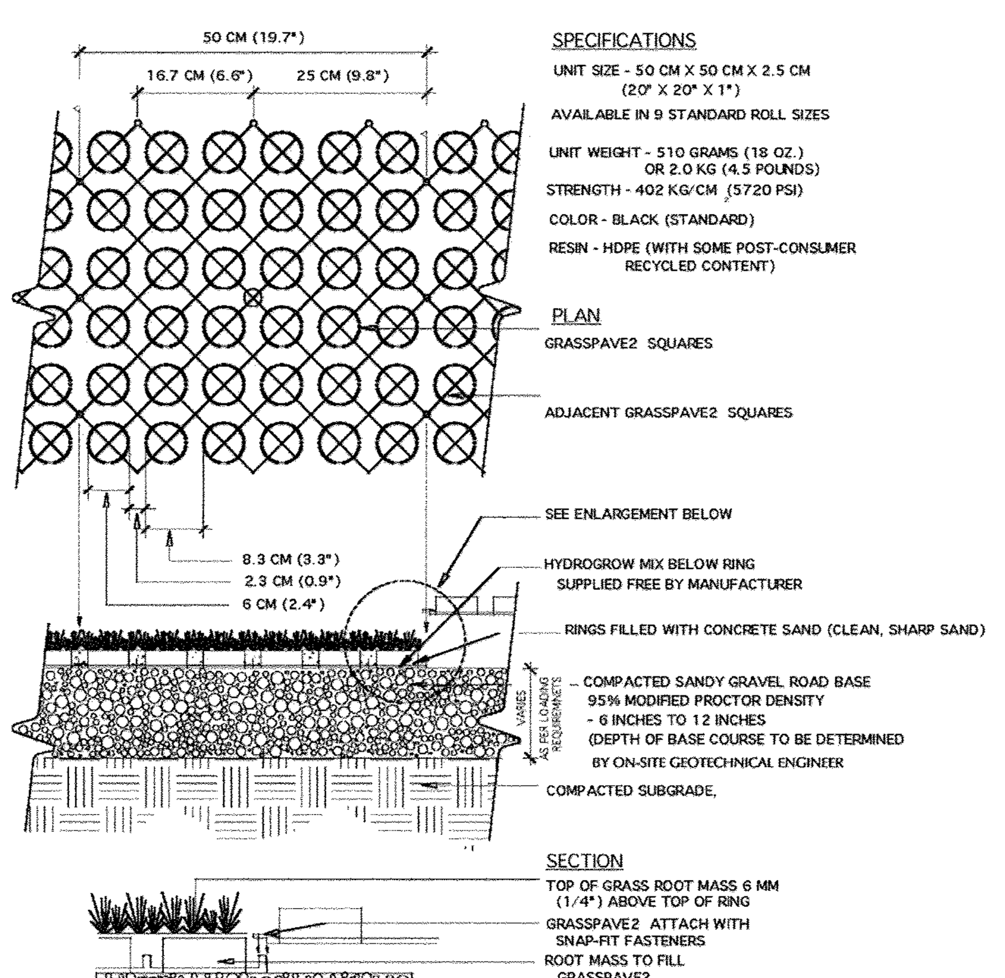
AS BUILT CERTIFICATION FOR PSWM

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
SIGNED [signature] P.E.# 8061
PAUL L. HUDSON

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. DuVal - REG.# 10764



10-08-14



SPECIFICATIONS
UNIT SIZE - 50 CM X 50 CM X 2.5 CM (20" X 20" X 1")
AVAILABLE IN 9 STANDARD ROLL SIZES
UNIT WEIGHT - 510 GRAMS (18 OZ.) OR 2.0 KG (4.5 POUNDS)
STRENGTH - 402 KG/CM (5720 PSI)
COLOR - BLACK (STANDARD)
RESIN - HDPE (WITH SOME POST-CONSUMER RECYCLED CONTENT)

PLAN
GRASSPAVE2 SQUARES
ADJACENT GRASSPAVE2 SQUARES

SEE ENLARGEMENT BELOW
HYDROGROW MIX BELOW RING SUPPLIED FREE BY MANUFACTURER
RINGS FILLED WITH CONCRETE SAND (CLEAN, SHARP SAND)
COMPACTED SANDY GRAVEL ROAD BASE 95% MODIFIED PROCTOR DENSITY - 6 INCHES TO 12 INCHES (DEPTH OF BASE COURSE TO BE DETERMINED BY ON-SITE GEOTECHNICAL ENGINEER
COMPACTED SUBGRADE.

SECTION
TOP OF GRASS ROOT MASS 6 MM (1/4") ABOVE TOP OF RING
GRASSPAVE2 ATTACH WITH SNAP-FIT FASTENERS
ROOT MASS TO FILL GRASSPAVE2
COMPACTED SANDY GRAVEL
BASE COURSE (DEPTH OF BASE COURSE TO BE DETERMINED BY ON-SITE GEOTECHNICAL ENGINEER)

ENLARGEMENT

CONTRACTOR TO FOLLOW PERMANENT SEEDING SPECS FOR STABLIZATION IN AREA OF GRASS PAVE.

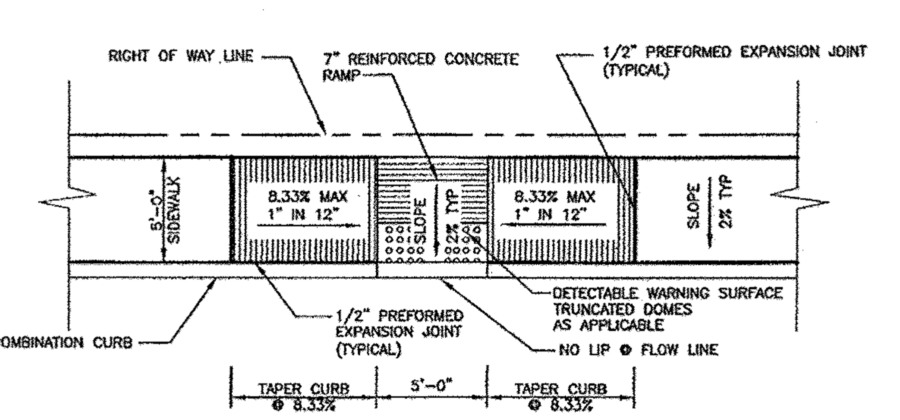
TYPICAL GRASSPAVE2 DETAIL (1 / 1 OF 1)

CHOOSE THIS PRODUCT FOR REINFORCING GRASS WEARING SURFACES

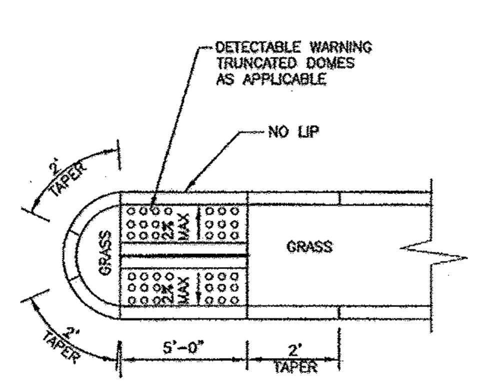
NOT TO SCALE
Invisible Structures, Inc.
GPDET.DWG

1600 Jackson St., Ste. 310
GOLDEN, COLORADO 80401
800-233-1510 OR 303-233-8383
FAX: 800-233-1522 OR 303-233-8282
www.invisiblestructures.com
rev. 10/05

FIRE TRUCK AND BGE TRUCK ACCESS PAD DETAIL
NTS



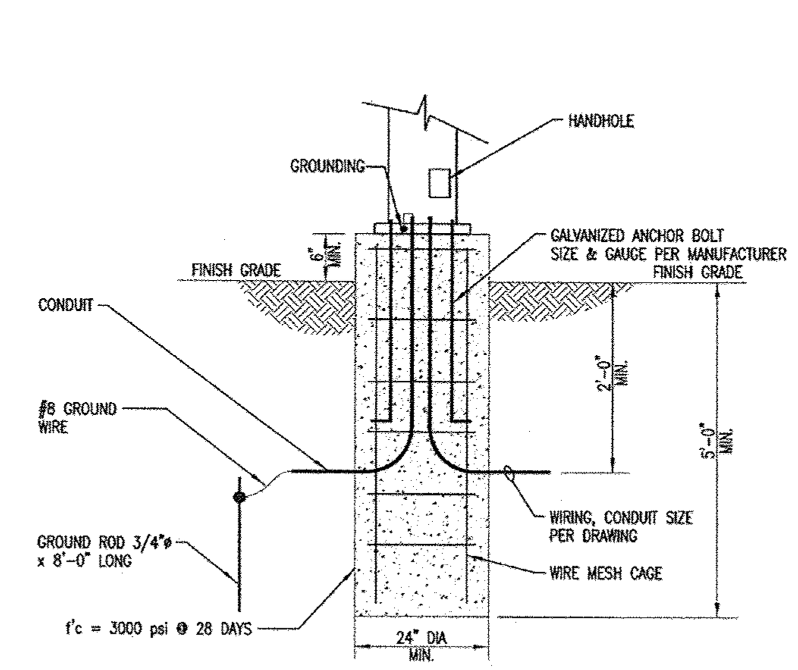
RAMP PARALLEL TO CURB



RAMP THRU MEDIAN

NOTES:
1. ALL RAMPS SHALL HAVE DETECTABLE WARNING SURFACES. SEE DETAIL R-4.07.
2. GRASS AREA ADJACENT TO SIDEWALK MUST BE SLOPED TO MEET RAMP.

Revised / Revised 5/7/2007 / Approved	Howard County, Maryland Department of Public Works Approved: [signature] Chief, Bureau of Engineering	SIDEWALK RAMP Layout & Grading Parallel to Curb & Thru Median	Detail R–4.06



SITE LIGHTING POLE MOUNTING
NOT TO SCALE

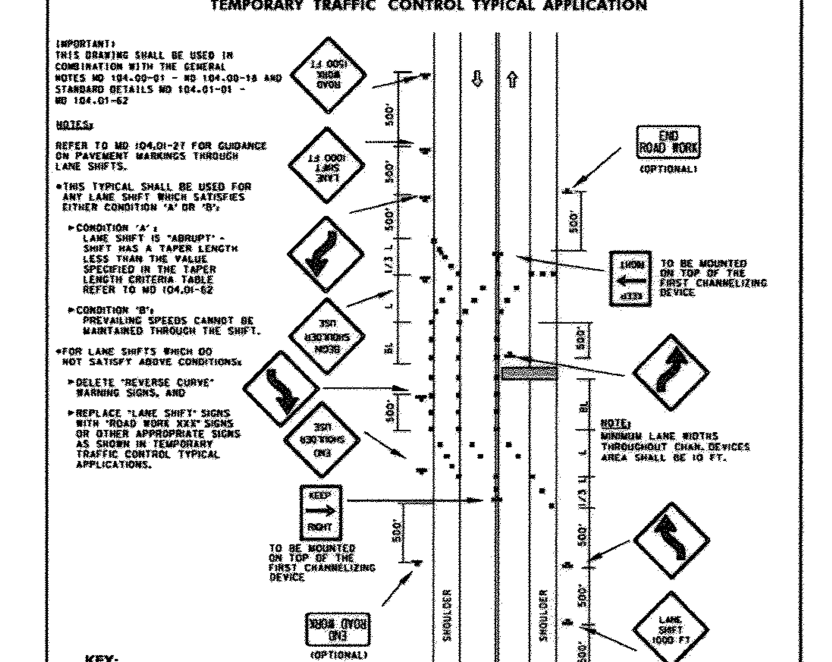
NOTE: CONFIRM BASE HEIGHT, OTHER INSTALLATION DETAILS WITH ARCHITECT PRIOR TO COMMENCEMENT OF SITE LIGHTING WORK

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION

IMPORTANT:
THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES MD 104.00-01 - MD 104.00-18 AND STANDARD DETAILS MD 104.01-01 - MD 104.01-62

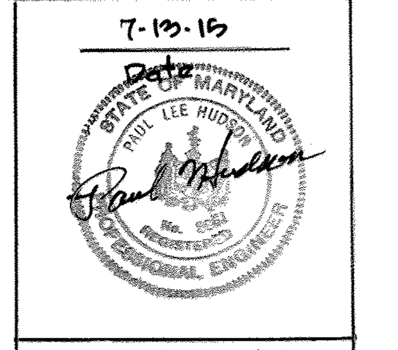
NOTES:
REFER TO MD 104.01-27 FOR GUIDANCE ON PAVEMENT MARKINGS THROUGH LANE SHIFTS.
•THIS TYPICAL SHALL BE USED FOR ANY LANE SHIFT WHICH SATISFIES EITHER CONDITION 'A' OR 'B':
▸CONDITION 'A': LANE SHIFT IS "ABRUPT" - SHIFT HAS A TAPER LENGTH LESS THAN THE VALUE SPECIFIED IN THE TAPER LENGTH CRITERIA TABLE REFER TO MD 104.01-62
▸CONDITION 'B': PREVAILING SPEEDS CANNOT BE MAINTAINED THROUGH THE SHIFT.
•FOR LANE SHIFTS WHICH DO NOT SATISFY ABOVE CONDITIONS:
▸DELETE "REVERSE CURVE" WARNING SIGNS, AND
▸REPLACE "LANE SHIFT" SIGNS WITH "ROAD WORK XXX" SIGNS OR OTHER APPROPRIATE SIGNS AS SHOWN IN TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATIONS.

KEY:
CHANNELIZING DEVICES
SIGN SUPPORT
FACE OF SIGN
DIRECTION OF TRAFFIC
WORK SITE



SPECIFICATION 104	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES LANE SHIFT RIGHT OR LEFT SIDE/2-LANE, 2-WAY EQL/LESS THAN 40 MPH/15 MIN - 12 HRS. OR DAYTIME ONLY
APPROVED	DIRECTOR - OFFICE OF TRAFFIC AND SAFETY	STANDARD NO. MD 104.02-04

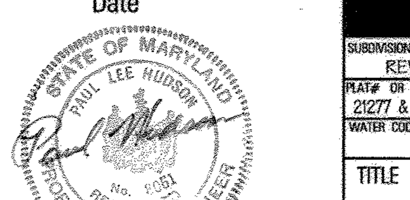
For Revision No. 2 Only
7-13-15
Date



Professional Engr. No. 8061

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. 8061, EXPIRATION DATE: 8-26-~~16~~ 17

2-07-13
Date



Professional Engr. No. 8061

~~APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS~~
~~CHIEF, BUREAU OF HIGHWAYS~~ ~~DATE~~

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT [signature] DATE 3/06/13
CHIEF, DEVELOPMENT ENGINEERING DIVISION [signature] DATE 2/5/13
DIRECTOR [signature] DATE 3/7/13

Date	No.	Revision Description

EMERSON PARCEL G-1
L.E.E.D. BUILDING
5-STORY COMMERCIAL OFFICE BUILDING
OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER
200 EAST PENNSYLVANIA AVENUE · TOWSON, MD
P: 410 296 3333 F: 410 296 4705
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS

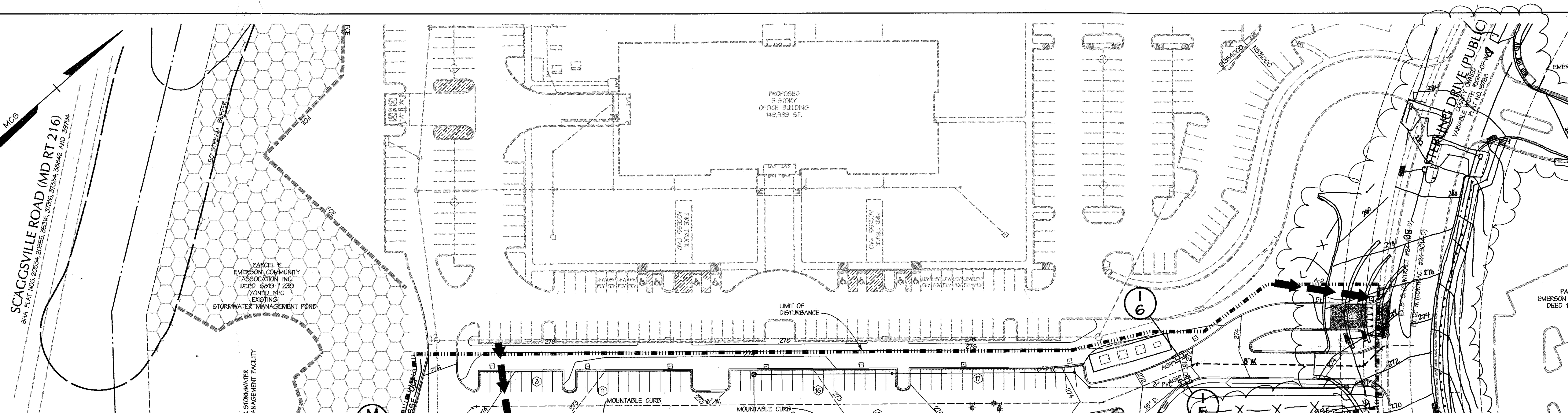
SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL #
REVITZ PROPERTY					PARCEL G-1 / PAR. 165
PLAT# OR L/F	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903
WATER CODE			SEWER CODE		

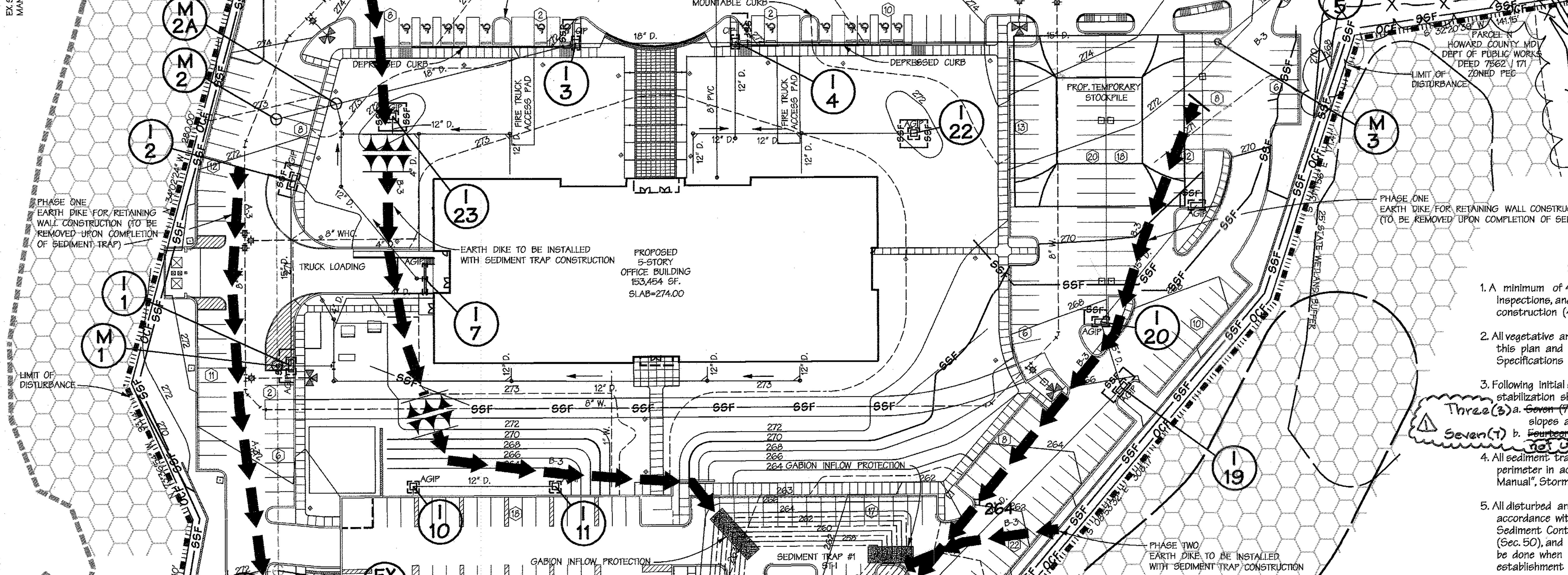
TITLE
SITE DETAILS

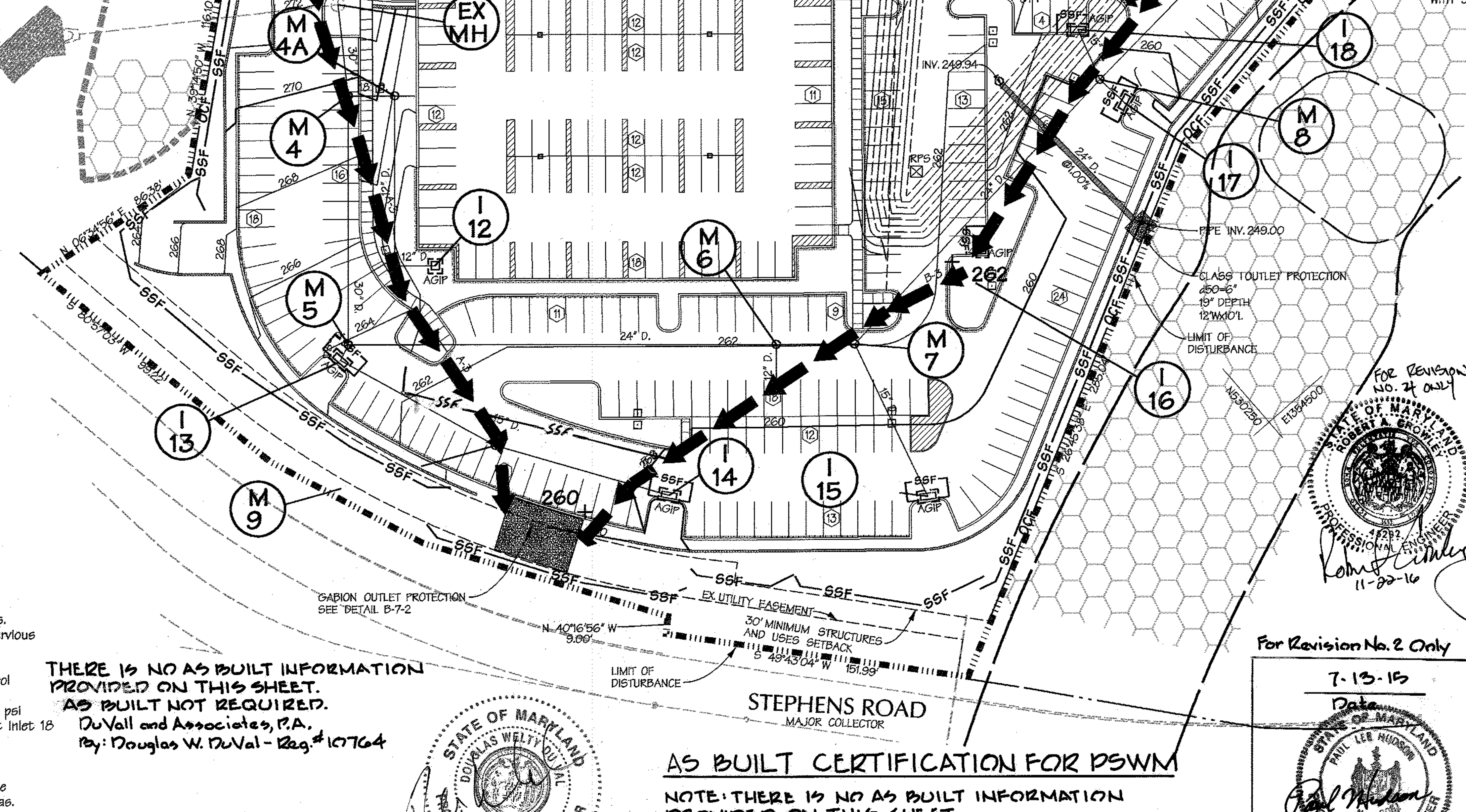
Des. By THR/JDF	Scale AS NOTED	Proj. No. 95054.3
Drn. By JSS	Date 6-16-11	8 of ~~23~~ 25
Chk. By	Approved	

SDP-11-025

95054\95054.3\ENGR\SDP Sheets\95054.3 15:35:59 2015







SEQUENCE OF CONSTRUCTION

1. Obtain a grading permit for the proposed work.
2. Notify the Howard County Department of Permits and Licenses (DILP) at least 48 hours prior to beginning work. (2 days)
3. Install the Stabilized Construction Entrance and Super Silt Fence as shown on the plans. (5 days)
4. Manually install the Orange Construction Fence along the limits of the Forest Conservation Easements. This shall be completed and inspected at the Pre-Construction Meeting. (3 days)
5. With permission from the Sediment Control Inspector, install the phase one earthen diversion dikes in the vicinity of the proposed retaining walls to divert clean runoff from entering the retaining wall construction area. (2 days)
6. Upon completion of the earthen dikes, begin to clear and grub the retaining wall construction areas. Stockpile any excavated materials at locations shown on the plan. (3 days)
7. Begin construction of the retaining walls. As wall construction progresses, and with permission of the Sediment Control Inspector, place earth fill behind the retaining walls per the contract documents and begin to bring the site up to proposed grades, taking care to prevent the release of sediment laden runoff onto adjacent areas. Install the 24" RCCP (Class IV) drain pipe for Sediment Trap 1 per the plans at the appropriate time during construction of the walls and grading operations and place a temporary cap at the upstream end. Also place the temporary riprap outlet protection for this pipe.(8 weeks)
8. Begin construction of the storm sewer from the Existing Manhole to proposed Manhole 8, utilizing standard "Utility Construction Outside Sediment Control Practices" operations. (3 weeks) Install SSF around inlets 15-17.
9. When wall construction and earthwork has reached appropriate grades, construct the storm drains from Manhole 5 to Inlet 14. Also, install the proposed groundwater recharge bed per the plans, but do not connect to Manhole 6 at this time. Cap the 12" PVC pipe leading to the facility for connection at a later time. (8 days). Install SSF around inlets 13 and 14.
10. As wall construction nears completion and the disturbed area has reached proposed grade, temporarily stabilize the disturbed areas behind the wall. Stabilize the areas below the wall with seed and mulch. (7 days)
11. When temporary stabilization of the wall construction areas is achieved, begin construction of Sediment Trap 1. The riser structure for Trap 1 will connect to the 24" RCCP (Class IV) installed during step 7. Upon completion of the sediment trap, install the phase two earthen diversion dikes that will direct sediment laden stormwater runoff from upstream excavations to the trap. (10 days)
12. Upon completion of the sediment trap and with permission of the Sediment Control Inspector, begin clearing and grubbing operations across the remaining site area. Stockpile excavated material in the designated locations. Continue grading operations to bring the site to proposed grades. (10 days)
13. The contractor shall take care to direct runoff from disturbed areas to the sediment trap or perimeter sediment control devices at all times during construction.
14. Begin construction of the remaining site utilities including concrete storm sewer, sanitary sewer lateral, water mains, electric/telecom duct bank and the gas service line. Install SSF around inlets 1-4 and 19-23. (45 days)
15. Construction of the proposed building and parking deck can begin at this time. (120 days)
16. Begin construction of the curbs and sidewalks across the site and place the gravel subbase and asphalt pavement base courses. (20 days)
17. As grading operations and utility construction near completion, install the PVC area drains and roof drain leaders around the building and parking structure. (8 days)
18. Fine grade the site and install permanent seed and mulch on lawn areas. Establish a minimum 70% uniform cover of vegetative species in the pervious areas. (14 days)
19. Upon stabilization of the site and with permission of the sediment control inspector, remove the sediment trap. Cap the downstream end of the 24" RCCP drain line from the trap, fill the pipe with a minimum 2,000 psi grout and abandon both pipes in place. Backfill the trap areas, construct Inlet 18 with SSF to Manhole 8, and install the concrete curb, gravel subbase, and asphalt pavement base courses in the trap areas.
20. Make the final connection from the groundwater recharge bed to Manhole 6 after placement of the asphalt base course in the sediment trap areas.
21. Install the site landscaping per the plans.
22. Upon final stabilization of all remaining areas and with the permission of the Sediment Control Inspector, remove the remaining sediment control measures and stabilize any areas disturbed by doing so.
23. Proceed with final paving operations.

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
AS BUILT NOT REQUIRED.
DuVall and Associates, P.A.
By: Douglas W. DuVal - Reg.# 10764

STATE OF MARYLAND · DOUGLAS WELTY DUVAL · No. 10764 · PROFESSIONAL LAND SURVEYOR

10-08-14

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED ____ P.E.# 8061
PAUL L. HUDSON

For Revision No. 2 Only
7-13-15
Date
STATE OF MARYLAND · PAUL LEE HUDSON · No. 8061 · REGISTERED · PROFESSIONAL ENGINEER
Professional Engr. No. 8061

LEGEND

	PROPERTY BOUNDARY
	EX. RIGHT OF WAY
	ADJACENT PROPERTY BOUNDARY
	EX. ROADS AND WALKS
280	EX. MAJOR CONTOUR
	EX. MINOR CONTOUR
	FOREST CONSERVATION EASEMENT
	PROP. BUILDING
	PROP. CURB / EDGE OF PAVING
	PROP. DEPRESSED CURB
	PROP. GROUP LIGHT
	PROP. SINGLE LIGHT
	PROP. LIGHT
280	PROP. MAJOR CONTOUR
	PROP. MINOR CONTOUR
	LIMIT OF DISTURBANCE
SSF — SSF	SUPER SILT FENCE
OCF — OCF	ORANGE CONSTRUCTION FENCE
AGIP	AT GRADE INLET PROTECTION
AGIP/CIP	AT GRADE INLET PROTECTION/ CURB INLET PROTECTION
SCE	STABILIZED CONSTRUCTION ENTRANCE
	EROSION CONTROL MATTING
	EARTH DIKE
RPS	RPS (REMOVABLE PUMPING STATION)

DEVELOPER'S CERTIFICATE

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

Signature of Developer — Date 4/26/11
JAMES F. KNOTT, JR.
Print Name

ENGINEER'S CERTIFICATE

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

Signature of Engineer — Date 4-21-11
PAUL HUDSON
Print Name

LOD= 422,254 S.F. OR 9.69 Ac.±

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

Howard Soil Conservation District — Date 4/27/11

STANDARD SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, and Permits, Sediment Control Division prior to the start of any construction (410-313-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "Maryland Standards and Specifications for Soil Erosion and Sediment Control" and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within:
   a. ~~Seven (7)~~ Three (3) calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1.
   b. ~~Fourteen (14) days as to all other~~ Seven (7) disturbed of graded areas on the project site, not under active grading
4. All sediment traps/basin shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12 of the "Howard County Design Manual", Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the "1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control" for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50), and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:

Total Area of Site	9.70 Acres
Area Disturbed	9.67 Acres
Area to be roofed or paved	6.12 Acres
Area to be vegetatively stabilized	3.58 Acres
Total Cut	19,036 Cu. Yds.
Total Fill	19,405 Cu. Yds.
Off-site waste/borrow area location:	Parcel F-1 (Adjacent Site)

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. Trenching for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.

④ THE PURPOSE OF REVISION #4 IS TO SHOW THE WORK ASSOCIATED WITH THE EMERSON CAMPUS VCP. SDP-16-005

PIPE OUTLET SEDIMENT TRAP (ST I)

	TRAP #1
EXISTING DA	1.20 AC.
PROPOSED DA (MAX.)	5.00 AC.
STORAGE REQUIRED	47,500 CF
STORAGE PROVIDED	48,562 CF
WET STORAGE REQUIRED	9,000 CF
WET STORAGE PROVIDED	7,888 CF
WET STORAGE ELEVATION	257 TO 258.50
DRY STORAGE REQUIRED	38,500 CF
DRY STORAGE PROVIDED	40,674 CF
DRY STORAGE ELEVATION	258.50 TO 263
SIZE BARREL	24"
SIZE RISER	24"
SIZE TRASH RACK	36"
BOTTOM DIMENSION	102' x 50'
TOP EMBANKMENT ELEVATION	263 (MIN)
TOP EMBANKMENT WIDTH	4 FT. (MIN)
RISER ELEVATION	263
CLEANOUT STORAGE REQUIRED	3,944 CF
CLEANOUT STORAGE PROVIDED	3,944 CF
CLEANOUT ELEVATION	257.9
SIDE SLOPES	3:1
BOTTOM ELEVATION	257
MIN. ELEVATION OF EXIST. GROUND	262.5

For Revision No. 4 only
STATE OF MARYLAND · ROBERT A. CROWLEY · PROFESSIONAL ENGINEER
11-22-16

UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL PRACTICES

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

PROFESSIONAL CERTIFICATION FOR REV #4 ④

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. 45292
EXPIRATION DATE: 05/21/2018

FOR REVISION ①
4-19-13
DATE
STATE OF MARYLAND · PAUL LEE HUDSON · No. 8061 · REGISTERED · PROFESSIONAL ENGINEER

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. 8061, EXPIRATION DATE: 08-26-~~2011~~ 2013

4-21-11
Date
STATE OF MARYLAND · PAUL LEE HUDSON · No. 8061 · REGISTERED · PROFESSIONAL ENGINEER
Professional Engr. No. 8061

~~APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS~~

~~CHIEF, BUREAU OF HIGHWAYS — DATE~~

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/25/13

DIRECTOR — DATE 3/7/13

Date	No.	Revision Description
9-22-16	4	EMERSON CAMPUS VCP
3-28-13	1	UPDATE SED. CONTROL NOTES

EMERSON PARCEL G–1

L.E.E.D. BUILDING

5–STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER INC
200 EAST PENNSYLVANIA AVENUE • TOWSON, MD 21286
P: 410 296 3333 F: 410 296 4705 WWW.DMW.COM
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL #
REVITZ PROPERTY		PARCEL G-1 / PAR. 165

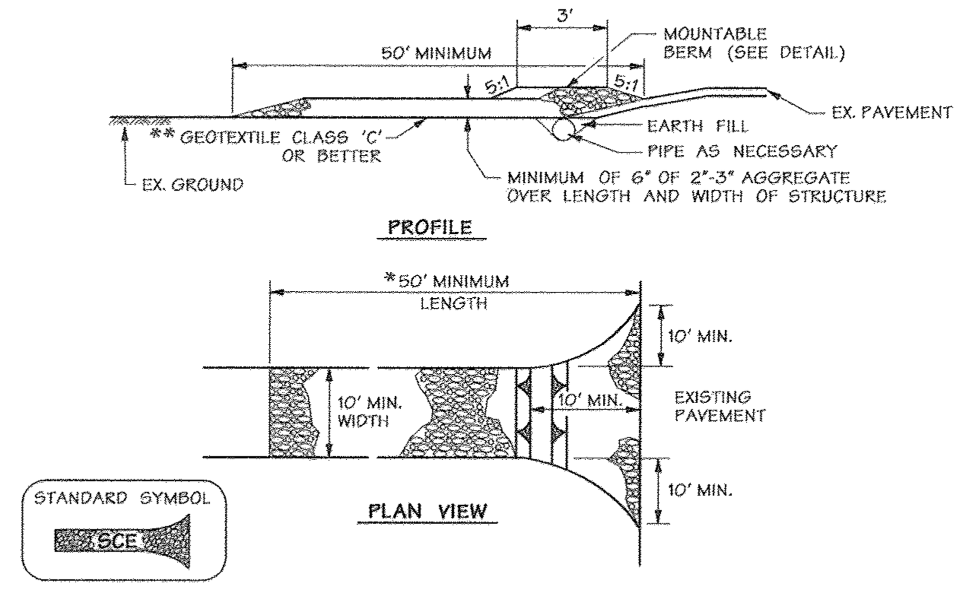
PLAT# OR L/F	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	6903

WATER CODE — SEWER CODE

TITLE
EROSION & SEDIMENT CONTROL PLAN

Des. By	THR/JDF	Scale	1"=50'	Proj. No.	95054.3
Drn. By	JSS	Date	4-11-11		
Chk. By		Approved			

95054.3\ENGR\SDP Sheets\95054.3 SDR09.dgn 09:09:33 2011



STANDARD SYMBOL
SCE

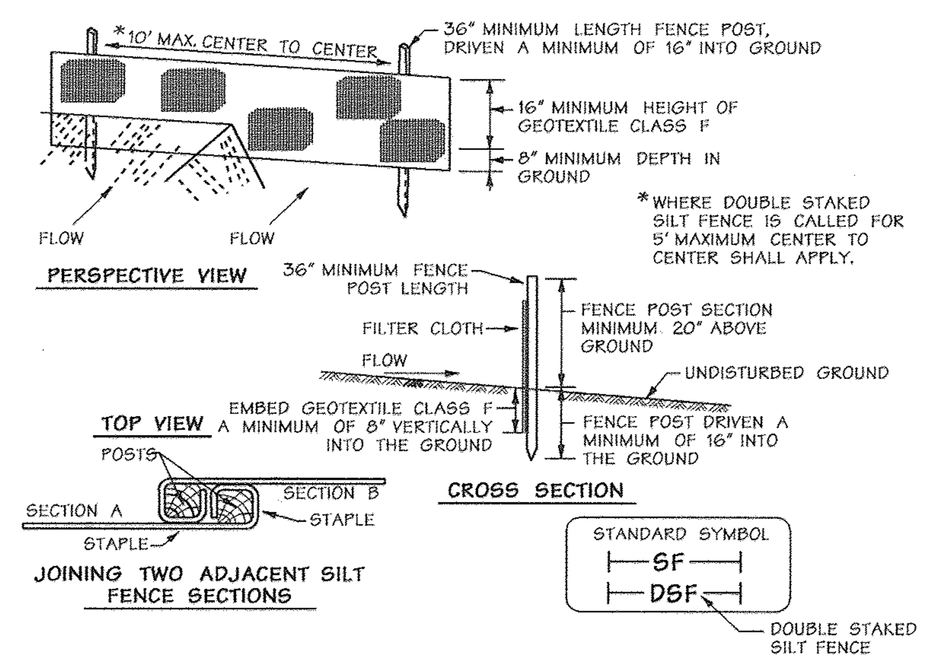
CONSTRUCTION SPECIFICATIONS

1. LENGTH - MINIMUM OF 50' (*30' FOR SINGLE RESIDENCE LOT).
2. WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC CLASS C (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE.** THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
4. STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
6. LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — F - 17 - 3 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Stabilized Construction Entrance

Not To Scale



STANDARD SYMBOL
SF
DSF
DOUBLE STAKED SILT FENCE

CONSTRUCTION SPECIFICATIONS

1. FENCE POSTS SHALL BE A MINIMUM OF 36" LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1½" x 1½" SQUARE (MINIMUM) CUT, OR 1¾" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHTING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

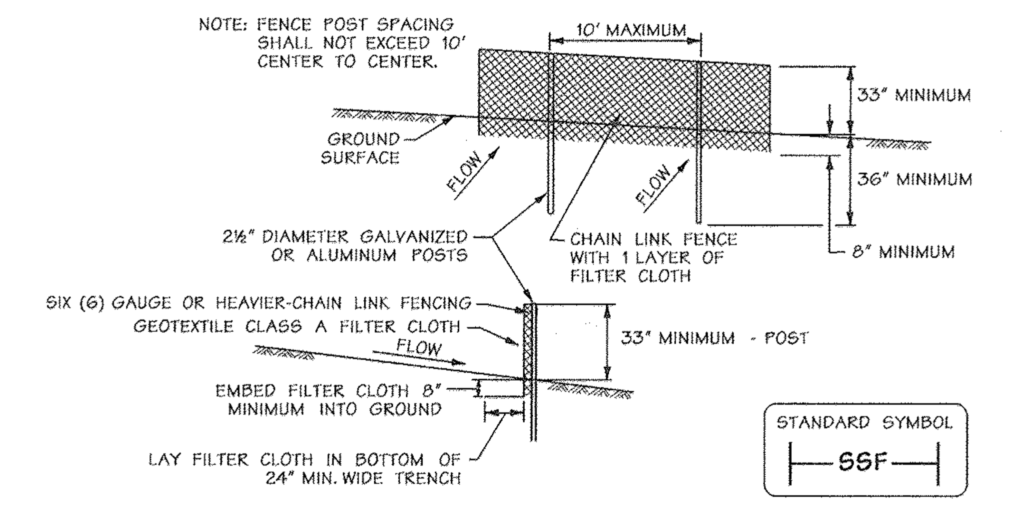
TENSILE STRENGTH	50 LBS./IN. (MIN.)	TEST: MSMT 509
TENSILE MODULUS	20 LBS./IN. (MIN.)	TEST: MSMT 509
FLOW RATE	0.3 GAL. FT./MIN. (MAX.)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN.	TEST: MSMT322

3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — E - 15 - 3 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Silt Fence

Not To Scale



STANDARD SYMBOL
SSF

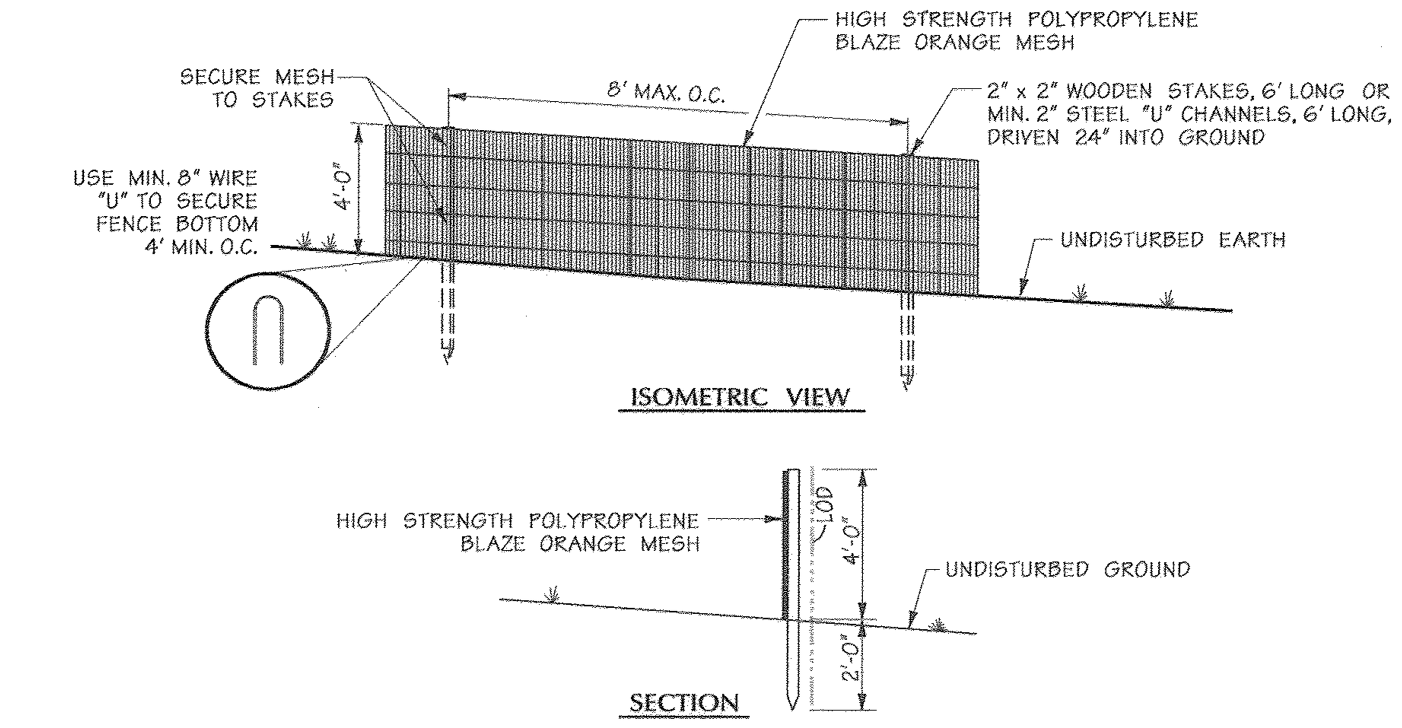
CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42 INCHES IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY (SHA) DETAILS FOR CHAIN LINK FENCING. THE SHA SPECIFICATIONS FOR A 6 FOOT FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6 FOOT LENGTH POSTS.
2. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. CHAIN LINK FANCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE. THE CHAIN LINK FENCING SHALL BE SIX (6) GAUGE OR HEAVIER.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
5. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
6. WHEN TWO SECTIONS OF GEOTEXTILE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — MODIFIED — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Super Silt Fence

Not To Scale



NOTES:

1. This detail is for Orange Construction Fence Device only.
2. Forest retention area will be set as part of the review process.
3. Boundaries of forest retention area should be staked and flagged prior to installing the device.
4. Root damage shall be avoided.
5. Protection signage may also be used.
6. Orange Construction fence shall be maintained throughout construction.

Orange Construction Fence

Not To Scale

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

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

PURPOSE

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

CONDITION WHERE PRACTICE APPLIES

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

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

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. Topsoil salvaged from the existing site may be used provided that it meets the standard 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-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil specifications - soil to be used as topsoil must meet the following:
   A. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand, other appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other material larger than 1 59/64 " in diameter.
   B. Topsoil must be free of plants or plat parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

C. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rerate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

III. For sites having disturbed areas under 5 acres:
   I. Place topsoil (if required) and apply soil amendment s as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

IV. For sites having disturbed areas over 5 acres:
   I. On site meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
      A. PH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a PH of less than 6.0, sufficient lime shall be prescribed to raise the PH to 6.5 or higher.
      B. Organic content of topsoil shall be not less than 1.5 percent by weight.
      C. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
      D. No sod or seed shall 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.
   II. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application
   I. When topsoiling, maintain needed erosion and sediment control practices such as diversion, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.
   II. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.
   III. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
   IV. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for permanent seeding - instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendment s may be applied as specified below:
   I. Composted sludge material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
      A. Composted sludge shall be supplied by, or originated from a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
      B. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a PH of 7.0 to 8.0 If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
      C. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
   II. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb. /1,000 square feet and 1/3 the normal lime application rate.

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

DUST CONTROL SPECIFICATIONS

Temporary Methods:
1. Mulches - see Standards for Vegetative Stabilization with Mulches only. Mulch should be crimped or tacked to prevent blowing.
2. Vegetative cover - see Standards for Temporary Vegetative Cover.
3. Tillage - to roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
4. Irrigation - this is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point the runoff begins to flow.
5. Barriers - solid board fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are affective in controlling soil blowing.
6. Calcium Chloride - apply at a rate that will keep surface moist. May need retreatment.

Permanent Methods:
1. Permanent Vegetation - see Standards for Vegetative Cover and Permanent Stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
2. Topsoiling - covering with less erosive soil material. See Standards for Topsoiling.
3. Stone - cover surface with crushed or coarse gravel.

AS BUILT CERTIFICATION FOR PSWM

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED *Paul Hudson* P.E.# 8061
PAUL L. HUDSON

PERMANENT / TEMPORARY SEEDING NOTES

Permanent Seeding Notes

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use on of the following schedule :
1. Preferred - apply 2 tons per acre dolomitic limestone (92 lbs. /1,000 square feet) and disk into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs/1,000 square feet).
2. Acceptable - apply 2 tons per acre dolomitic limestone (92 lbs. /1,000 square feet) and 1,000 lbs. per acre 10-10-10 fertilizer (23 lbs. /1,000 square feet) before seeding. Harrow or disk into upper three inches of soil.

Seeding - for the period March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. /1,000 square feet) of Kentucky 31 Tall Fescue. For the period of May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs. /1,000 square feet) of Weeping Lovegrass. During the period of October 16 thru February 28, protect site by:
Option (1) - 2 tons per acre of well anchored straw. Mulch and seed as soon as possible in the spring. Option (2) - use sod.
Option (3) - seed with 60 lbs. /acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching - Apply 1 1/2 to 2 tons per acre (70 - 90 lbs. /1,000 square feet) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after applications using mulch anchoring tool or 218 gallons per acre (5 gal. /1,000 square feet) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal. /1,000 square feet) for anchoring.

Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

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

Seedbed preparation - loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments - apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. /1,000 square feet).

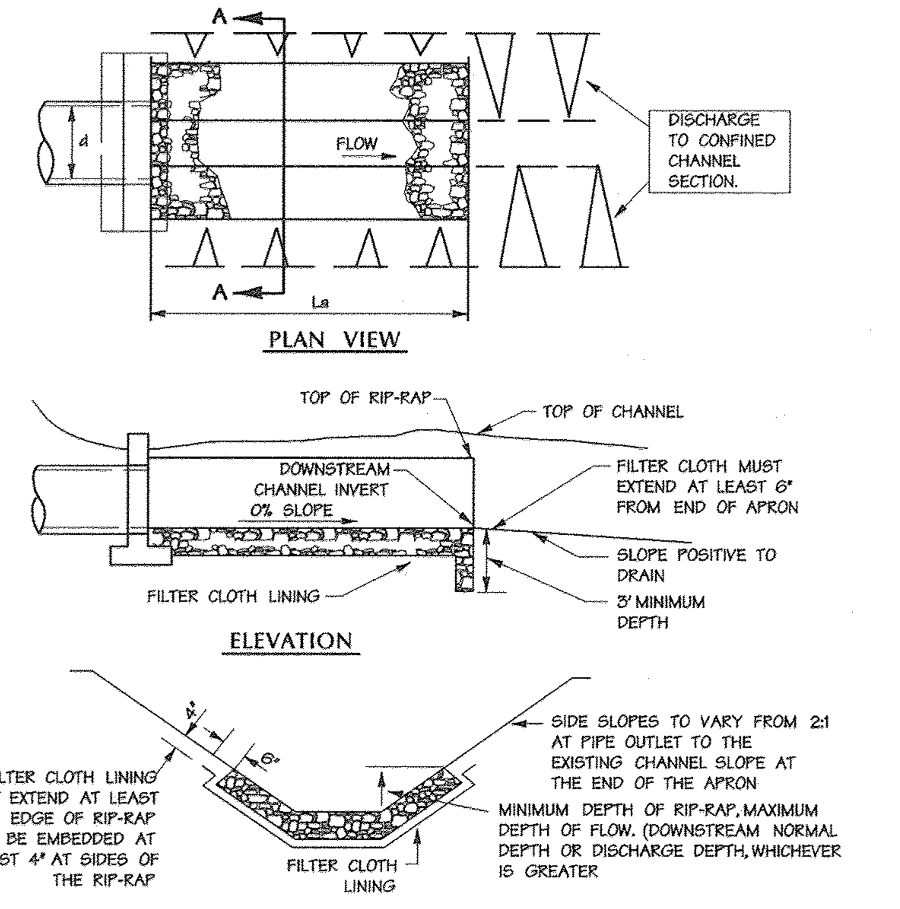
Seeding - for the periods March 1 thru April 30, and August 15 thru October 15, seed with 2 1/2 bushels per acre of annual rye (3.2 lbs./1,000 square feet) the period May 1 thru August 14, seed with 3 lbs. per acre Weeping Lovegrass (.07 lbs./1,000 square feet). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw. Mulch and seed as soon as possible in the spring, or use sod.

Mulching - apply 1 1/2 to 2 tons per acre (70 - 90 bs. /1,000 square feet) of unrotted weed-free, small-grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. /1,000 square feet) of emulsified asphalt on flat areas, on slopes 8 ft. or higher, use 348 gal. per acre (8 gal. /1,000 square feet) for anchoring.

Refer to the "1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control" for additional rates and methods not covered.

Temporary Methods:
1. Mulches - see Standards for Vegetative Stabilization with Mulches only. Mulch should be crimped or tacked to prevent blowing.
2. Vegetative cover - see Standards for Temporary Vegetative Cover.
3. Tillage - to roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
4. Irrigation - this is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point the runoff begins to flow.
5. Barriers - solid board fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are affective in controlling soil blowing.
6. Calcium Chloride - apply at a rate that will keep surface moist. May need retreatment.

Permanent Methods:
1. Permanent Vegetation - see Standards for Vegetative Cover and Permanent Stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
2. Topsoiling - covering with less erosive soil material. See Standards for Topsoiling.
3. Stone - cover surface with crushed or coarse gravel.

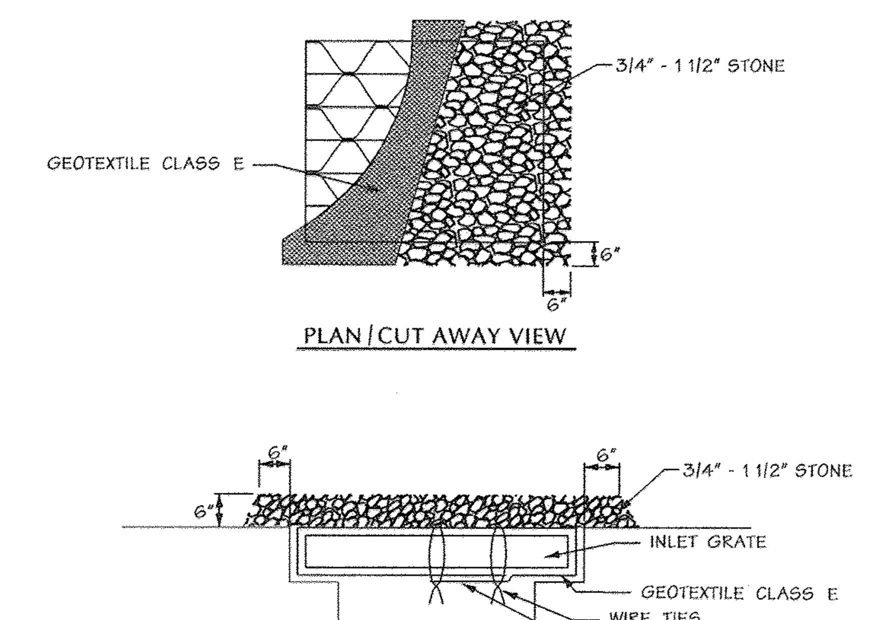


NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — F - 18 - 9A — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Rock Outlet Protection II

Not To Scale



STANDARD SYMBOL
AGIP

MAX. DRAINAGE AREA = 1/4 ACRE

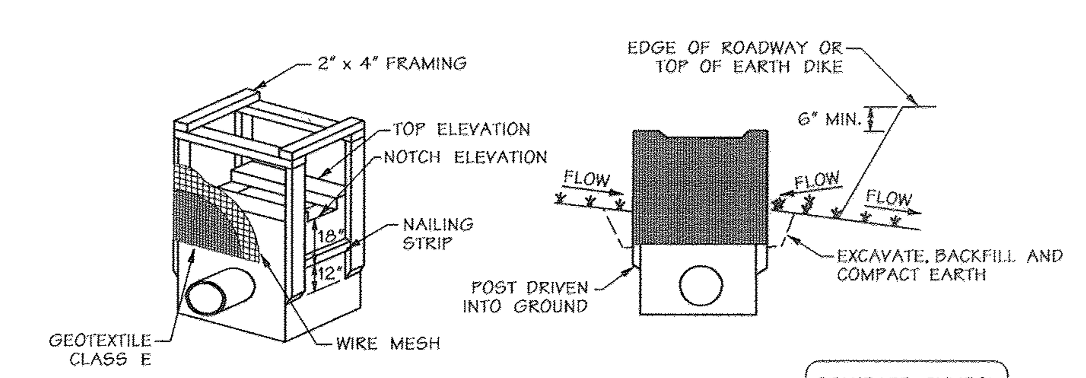
CONSTRUCTION SPECIFICATIONS

1. LIFT GRATE AND WRAP WITH GEOTEXTILE CLASS E TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.
2. PLACE ¾" TO 1½" STONE, 4"-6" THICK ON THE GRATE TO SECURE THE FABRIC AND PROVIDE ADDITIONAL FILTRATION.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — E - 16 - 5A — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

At Grade Inlet Protection

Not To Scale



MAX. DRAINAGE AREA = 1/4 ACRE

STANDARD SYMBOL
SIP

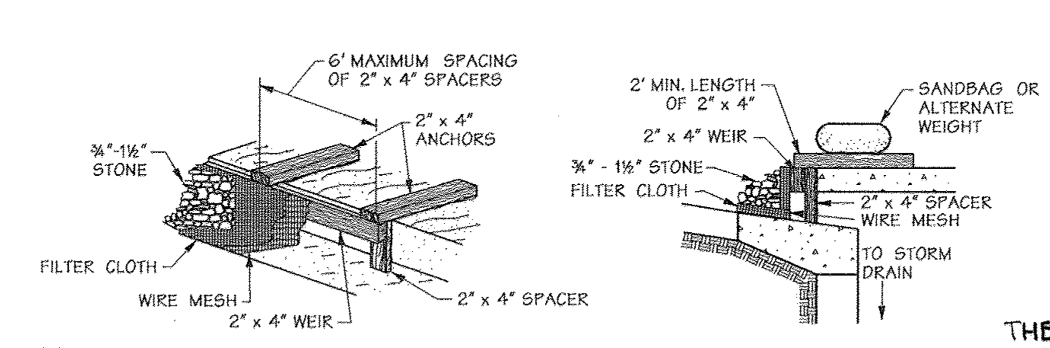
CONSTRUCTION SPECIFICATIONS

1. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18" BELOW THE NOTCH ELEVATION.
2. DRIVE THE 2" x 4" CONSTRUCTION GRADE LUMBER POSTS 1' INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2" x 4" FRAME USING THE OVERLAP JOINT SHOWN ON DETAIL. THE TOP OF THE FRAME (WEIR) MUST BE 6" BELOW ADJACENT ROADWAYS WHERE FLOODING AND SAFETY ISSUES MAY ARISE.
3. STRETCH THE ½" x ½" WIRE MESH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. THE ENDS MUST MEET AND OVERLAP AT A POST.
4. STRETCH THE GEOTEXTILE CLASS E TIGHTLY OVER THE WIRE MESH WITH THE GEOTEXTILE EXTENDING FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. FASTEN THE GEOTEXTILE FIRMLY TO THE FRAME. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED DOWN.
5. BACKFILL AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE LAYER OF EARTH IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
6. IF THE INLET IS NOT IN A SUMP, CONSTRUCT A COMPACTED EARTH DIKE ACROSS THE DITCH LINE DIRECTLY BELOW IT. THE TOP OF THE EARTH DIKE SHOULD BE AT LEAST 6" HIGHER THAN THE TOP OF THE FRAME.
7. THE STRUCTURE MUST BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND THE GEOTEXTILE REPLACED WHEN IT BECOMES CLOGGED.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — E - 16 - 5 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Standard Inlet Protection

Not To Scale



MAX. DRAINAGE AREA = 1/4 ACRE

STANDARD SYMBOL
CIP

CONSTRUCTION SPECIFICATIONS

1. ATTACH A CONTINUOUS PIECE OF ½" x ½" WIRE MESH (30" MINIMUM WIDTH BY THROAT LENGTH PLUS 4') TO THE 2" x 4" WEIR (MEASURING THROAT LENGTH PLUS 2') AS SHOWN ON THE STANDARD DRAWING.
2. PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS E THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2" x 4" WEIR.
3. SECURELY NAIL THE 2" x 4" WEIR TO A 9" LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAX. 4' APART).
4. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2' LENGTHS OF 2" x 4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THESE 2" x 4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
5. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1' BEYOND BOTH ENDS OF THE THROAT OPENING.
6. FORM THE ½" x ½" WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN ¾" X 1½" STONE OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
8. ASSURE THAT STORM FLOW DOES NOT BYPASS THE INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE TO DIRECT THE FLOW OF THE INLET.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — E - 16 - 5B — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

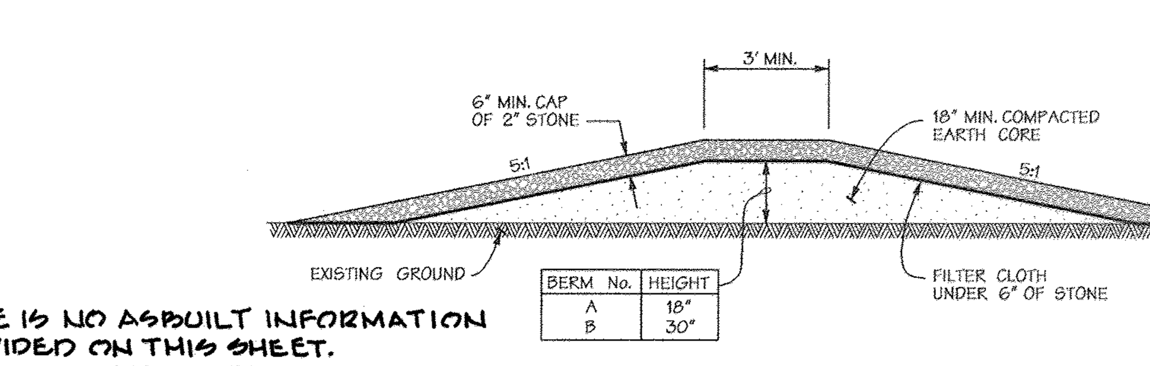
Curb Inlet Protection (COG or COS Inlets)

Not To Scale

THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET.
AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. DuVal - REG.# 10764

STATE OF MARYLAND · DOUGLAS WELTY DU VAL · No. 10764 · PROFESSIONAL LAND SURVEYOR

10-08-14



BERM No.	HEIGHT
A	18"
B	30"

FILTER CLOTH SHALL BE GEOTEXTILE CLASS 'C', OR BETTER

Sedctrl.cel / F175

Mountable Berm Detail

NOT TO SCALE

For Revision No. 2 Only
7-13-15
Date
STATE OF MARYLAND · PAUL LEE HUDSON · No. 8061 · REGISTERED PROFESSIONAL ENGINEER
Professional Engr. No. 8061

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. 8061, EXPIRATION DATE: 08-26-~~2011~~ 2015.

4-21-11
Date
Professional Engr. No. 8061

SILT FENCE DESIGN CRITERIA

SLOPE STEEPNESS	(MAXIMUM) SLOPE LENGTH	(MAXIMUM) SILT FENCE LENGTH
FLATTER THAN 50:1 (2%)	UNLIMITED	UNLIMITED
50:1 TO 10:1 (2-10%)	125 FEET	1,000 FEET
10:1 TO 5:1 (10-20%)	100 FEET	750 FEET
5:1 TO 3:1 (20-33%)	60 FEET	500 FEET
3:1 TO 2:1 (33-50%)	40 FEET	250 FEET
2:1 AND STEEPER (> 50%)	20 FEET	125 FEET

NOTE: IN AREAS OF LESS THAN 2% SLOPE AND SANDY SOILS (USDA GENERAL CLASSIFICATION SYSTEM, SOIL CLASS A) MAXIMUM SLOPE LENGTH AND SILT FENCE LENGTH WILL BE UNLIMITED. IN THESE AREAS A SILT FENCE MAY BE THE ONLY PERIMETER CONTROL REQUIRED

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — E - 15 - 3A — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Silt Fence

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
John R Robertson 4/26/11
Howard Soil Conservation District — Date

~~APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS~~
~~CHIEF, BUREAU OF HIGHWAYS — DATE~~

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/25/13
DIRECTOR — DATE 3/7/13

Date	No.	Revision Description

EMERSON PARCEL G-1
L.E.E.D. BUILDING
5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER INC
200 EAST PENNSYLVANIA AVENUE • TOWSON, MD 21286
P: 410 296 3333 F: 410 296 4705 WWW.DMW.COM
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL #
REVITZ PROPERTY		PARCEL G-1 / PAR. 165

PLAT# OR L/F	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	6903

WATER CODE — SEWER CODE

TITLE: EROSION & SEDIMENT CONTROL DETAILS

Des. By	THR/JDF	Scale	1"=100'	Proj. No.	95054.3
Drn. By	JSS	Date	4-11-11	10 of ~~23~~	
Chk. By		Approved			

SDP-11-025 ~~25~~ 31

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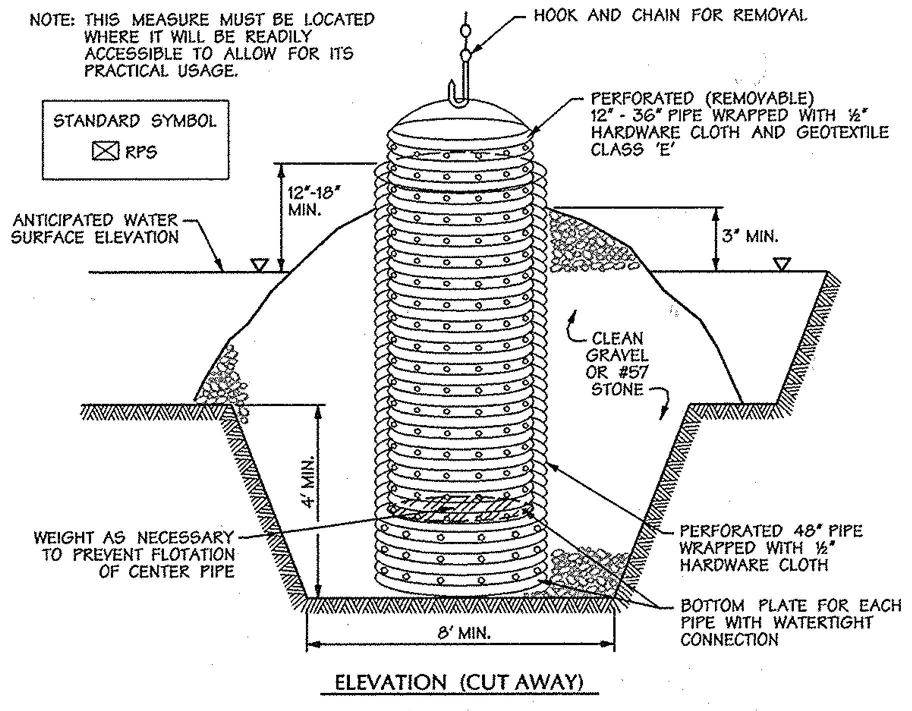


ELEVATION (CUT AWAY)

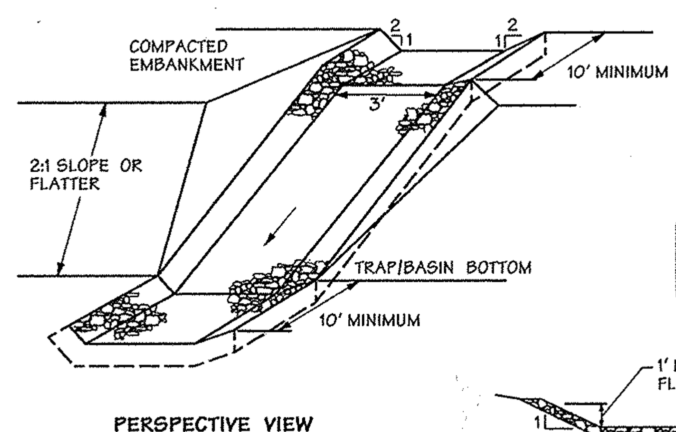
CONSTRUCTION SPECIFICATIONS

1. THE OUTER PIPE SHOULD BE 48" DIAMETER OR SHALL, IN ANY CASE, BE AT LEAST 4" GREATER IN DIAMETER THAN THE CENTER PIPE. THE OUTER PIPE SHALL BE WRAPPED WITH ½" HARDWARE CLOTH TO PREVENT BACKFILL MATERIAL FROM ENTERING THE PERFORATIONS.
2. AFTER INSTALLING THE OUTER PIPE, BACKFILL AROUND OUTER PIPE WITH 2" AGGREGATE OR CLEAN GRAVEL.
3. THE INSIDE STAND PIPE (CENTER PIPE) SHOULD BE CONSTRUCTED BY PERFORATING A CORRUGATED OR PVC PIPE BETWEEN 12" AND 36" IN DIAMETER. THE PERFORATIONS SHALL BE ½" x 6" SLITS OR 1" DIAMETER HOLES 6" ON CENTER. THE CENTER PIPE SHALL BE WRAPPED WITH ½" HARDWARE CLOTH FIRST, THEN WRAPPED AGAIN WITH GEOTEXTILE CLASS E.
4. THE CENTER PIPE SHOULD EXTEND 12" TO 18" ABOVE THE ANTICIPATED WATER SURFACE ELEVATION OR RISER CREST ELEVATION WHEN DEWATERING A BASIN.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — D - 12 - 5 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

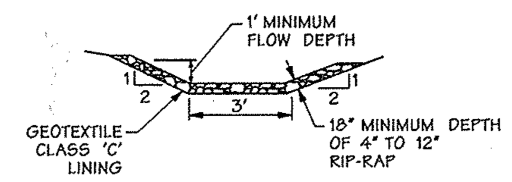
Removable Pumping Station

NOT TO SCALE



PERSPECTIVE VIEW

STANDARD SYMBOL
RRP



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

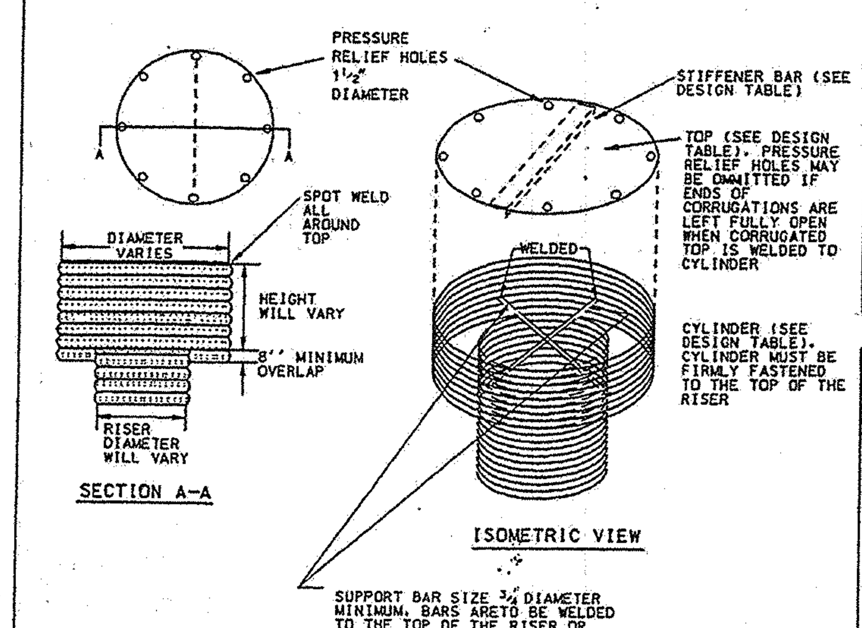
1. RIP-RAP LINED INFLOW CHANNELS SHALL BE 1' IN DEPTH, HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND 3' (MIN.) BOTTOM WIDTH. THE CHANNEL SHALL BE LINED WITH 4" TO 12" RIP-RAP TO A DEPTH OF 18".
2. FILTER CLOTH SHALL BE INSTALLED UNDER ALL RIP-RAP. FILTER CLOTH SHALL BE GEOTEXTILE CLASS C.
3. ENTRANCE AND EXIT SECTIONS SHALL BE INSTALLED AS SHOWN ON THE DETAIL SECTION.
4. RIP-RAP USED FOR THE LINING MAY BE RECYCLED FOR PERMANENT OUTLET PROTECTION IF THE BASIN IS TO BE CONVERTED TO A STORMWATER MANAGEMENT FACILITY.
5. GABION INFLOW PROTECTION MAY BE USED IN LIEU OF RIP-RAP INFLOW PROTECTION.
6. RIP-RAP SHOULD BLEND INTO EXISTING GROUND.
7. RIP-RAP INFLOW PROTECTION SHALL BE USED WHERE THE SLOPE IS BETWEEN 4:1 AND 10:1, FOR SLOPES FLATTER THAN 10:1 USE EARTH DIKE OR TEMPORARY SWALE LINING CRITERIA.

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

RipRap Inflow Protection

Not To Scale

DETAIL 16 - CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 10 - 26	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

1994

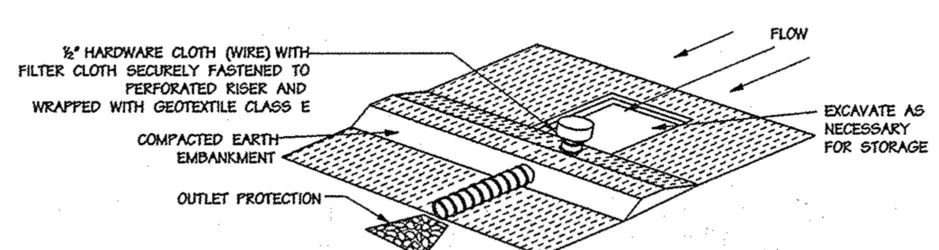
DETAIL 16 CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE (continued)

Riser Diam., In.	Trash Rack Cylinder Diam. In.	Thick. gage	H. In.	Minimum Size Support Bar	Minimum Top Thickness	Minimum Top Stiffener
12	18	16	6	#6 Rebar	16 ga.	—
15	21	16	7	"	"	—
18	27	16	8	"	"	—
21	30	16	11	"	"	—
24	36	16	13	"	14 ga.	—
27	42	16	15	"	14 ga.	—
36	54	14	17	#8 Rebar	12 ga.	—
42	60	14	19	"	"	—
48	72	12	21	1-1/4" pipe or 1-1/4 x 1-1/4 x1/4 angle	10 ga.	—
54	78	12	25	"	"	—
60	90	12	29	1-1/2" pipe or 1-1/2 x 1-1/2 x1/4 angle	8 ga.	—
66	96	10	33	2" pipe or 2x2x3/16 angle	8 ga., w/stiffener	2x2x1/4 angle
72	102	10	36	"	"	2-1/2x2-1/2x1/4 angle
78	114	10	39	2-1/2" pipe or 2x2x1/4 angle	"	"
84	120	10	42	2-1/2" pipe or 2-1/2x2-1/2x1/4 angle	"	2-1/2 x2-1/2x 5/16 angle

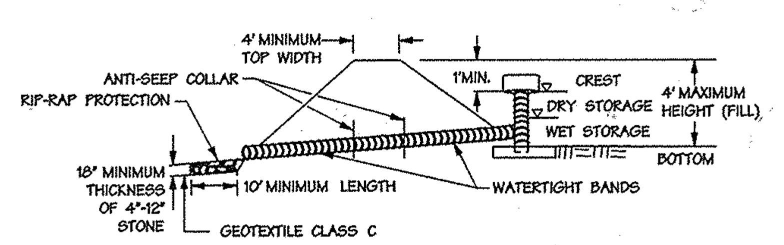
Note: The above trash rack and anti-vortex device information is only for corrugated metal pipe. Concrete risers must meet the requirements of MD 378.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 10 - 26A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

1994



PERSPECTIVE VIEW



EMBANKMENT SECTION THROUGH RISER

NOTE: RISER EMBEDDED 9" INTO CONCRETE OR ¼" STEEL PLATE ATTACHED TO RISER WITH A CONTINUOUS WELD ON BOTTOM AND 2' OF STONE PLACED ON STEEL PLATE TWICE THE RISER DIAMETER (MIN.).

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — C - 9 - 7 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

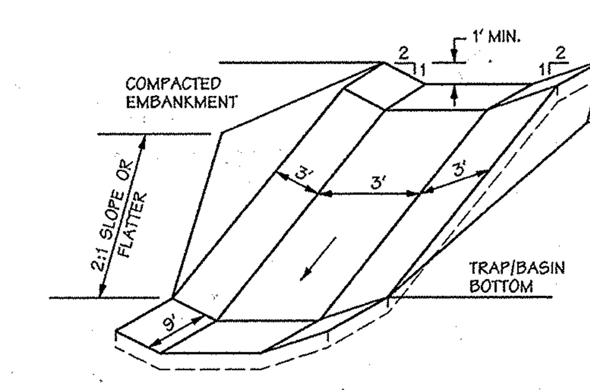
Pipe Outlet Sediment Trap – ST I

CONSTRUCTION SPECIFICATIONS

1. THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. THE TOTAL TRAP VOLUME AS MEASURED FROM THE BOTTOM TO RISER CREST ELEVATION SHALL BE 3600 CUBIC FEET PER ACRE OF DRAINAGE AREA (SEE TABLE 9). THE TOP OF EMBANKMENT MUST BE * 1' ABOVE THE RISER CREST ELEVATION.
4. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF OF THE WET STORAGE DEPTH OF THE TRAP (900 CF/AC). THE SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
5. THE STRUCTURE SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND REPAIRS MADE AS NECESSARY.
6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATED INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE DURING THE LIFE OF THE TRAP.
7. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
8. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.
10. ABOVE THE WET STORAGE ELEVATION, THE RISER SHALL BE PERFORATED WITH ½" WIDE BY 6" LONG SLITS OR 1" DIAMETER HOLES SPACED 6" VERTICALLY AND HORIZONTALLY. NO PERFORATIONS WILL BE ALLOWED WITHIN 6" OF THE HORIZONTAL BARREL.
11. THE RISER SHALL BE WRAPPED WITH ½" HARDWARE CLOTH (WIRE) THEN WRAPPED WITH GEOTEXTILE CLASS E. THE FILTER CLOTH SHALL EXTEND 6" ABOVE THE HIGHEST SILT AND 6" BELOW THE LOWEST SILT. WHERE ENDS OF FILTER CLOTH COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND FASTENED TO PREVENT BYPASS. FILTER CLOTH SHALL BE REPLACED AS NECESSARY TO PREVENT CLOGGING.
12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH.
13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN 4" LAYERS. A MINIMUM OF 2' OF HAND-COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. CONCRETE BASES SHALL BE AT LEAST TWICE THE RISER DIAMETER AND 12" DEEP WITH THE RISER EMBEDDED 9". STEEL PLATE BASES SHALL BE AT LEAST TWICE THE RISER DIAMETER, ¼" MINIMUM THICKNESS AND ATTACHED TO THE BOTTOM OF THE RISER BY A CONTINUOUS WELD TO FORM A WATERTIGHT CONNECTION. THEN PLACE 2' OF STONE, GRAVEL OR TAMPED EARTH ON THE PLATE.
15. ANTISEEP COLLARS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLANS (REF. TABLE 16 AND DETAIL C-10-23 AND C-10-24).
16. CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE DESIGN DETAILS ARE ON DETAIL C-10-26 AND C-10-26A.
17. REFER TO SECTION D FOR DEWATERING REQUIREMENTS OF SEDIMENT TRAPS.
18. OUTLET - AN OUTLET SHALL BE PROVIDED, WHICH INCLUDES A MEANS OF CONVEYING THE DISCHARGE IN AN EROSION FREE MANNER TO AN EXISTING STABLE CHANNEL.
19. WHERE DISCHARGE OCCURS AT THE PROPERTY LINE, LOCAL ORDINANCES AND DRAINAGE EASEMENT REQUIREMENTS SHALL BE MET.

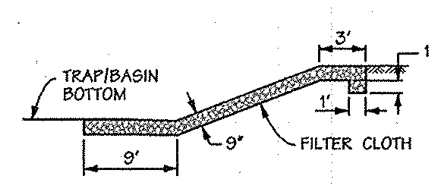
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — C - 9 - 7A — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Pipe Outlet Sediment Trap – ST I



STANDARD SYMBOL
GM

PERSPECTIVE VIEW



PROFILE ALONG CENTERLINE

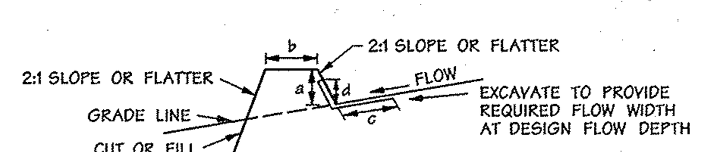
CONSTRUCTION SPECIFICATIONS

1. GABION INFLOW PROTECTION SHALL BE CONSTRUCTED OF 9' x 3' x 9" GABION BASKETS FORMING A TRAPEZOIDAL CROSS SECTION 1' DEEP, WITH 2:1 SIDE SLOPES, AND A 3' BOTTOM WIDTH.
2. GEOTEXTILE CLASS C SHALL BE INSTALLED UNDER ALL GABION BASKETS.
3. THE STONE USED TO FILL THE GABION BASKETS SHALL BE 4" - 7".
4. GABIONS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
5. GABION INFLOW PROTECTION SHALL BE USED WHERE CONCENTRATED FLOW IS PRESENT ON SLOPES STEEPER THAN 4:1.

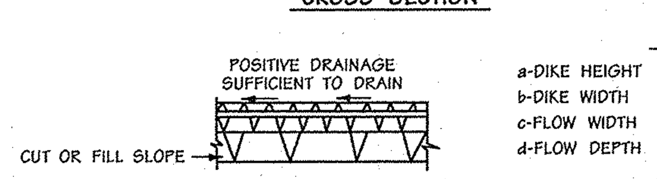
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — B - 7 - 2 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Gabion Inflow Protection

NOT TO SCALE



CROSS SECTION



PLAN VIEW

	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

STANDARD SYMBOL
E.D. A-2
E.D. B-3

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

1. SEED AND COVER WITH STRAW MULCH.
2. SEED AND COVER WITH EROSION CONTROL MATTING OR LINE WITH SOD.
3. 4" - 7" STONE OR RECYCLED CONCRETE EQUIVALENT PRESSED INTO THE SOIL 7" MINIMUM.

CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY EARTH DIKES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%.
2. RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. RUNOFF DIVERTED FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED, STABILIZED AREA AT A NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONAL MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIKE.
5. THE DIKE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIKE.
8. INSPECTION AND MAINTENANCE MUST BE PROVIDED PERIODICALLY AND AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — A - 1 - 6 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Earth Dike

Not To Scale

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. DuVal - REG.# 10764
STATE OF MARYLAND DOUGLAS WELTY DU VAL No. 10764 PROFESSIONAL LAND SURVEYOR
10-08-14

AS BUILT CERTIFICATION FOR PSWM

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
SIGNED Paul Hudson P.E.# 8061
PAUL L. HUDSON

For Revision No. 2 Only
7-13-15
Date
STATE OF MARYLAND PAUL LEE HUDSON No. 8061 REGISTERED PROFESSIONAL ENGINEER
Professional Engr. No. 8061

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. 8061, EXPIRATION DATE: 08-26-~~2011~~ 2015

4-21-11
Date
STATE OF MARYLAND PAUL LEE HUDSON No. 8061 REGISTERED PROFESSIONAL ENGINEER
Professional Engr. No. 8061

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
Howard Soil Conservation District — 4/26/11 Date

~~APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS~~
~~CHIEF, BUREAU OF HIGHWAYS — DATE~~

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — 3/06/13 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION — 2/25/13 DATE
DIRECTOR — 3/7/13 DATE

Date	No.	Revision Description

EMERSON PARCEL G-1
L.E.E.D. BUILDING
5-STORY COMMERCIAL OFFICE BUILDING
OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER INC
200 EAST PENNSYLVANIA AVENUE • TOWSON, MD 21286
P: 410 296 3333 F: 410 296 4705 WWW.DMW.COM
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS

SUBDIVISION NAME: REVITZ PROPERTY	SECTION/AREA	LOT/PARCEL #: PARCEL G-1 / PAR. 165
PLAT# OR L/F: 21277 & 21278; BLOCK #: 20; ZONE: PEC	TAX/ZONE MAP: 47; ELECT. DISTRICT: 6	CENSUS TRACT: 6903
WATER CODE	SEWER CODE	

TITLE
EROSION & SEDIMENT CONTROL DETAILS

Des. By THR/JDF	Scale NTS	Proj. No. 95054.3
Drn. By JSS	Date 4-11-11	11 of ~~23~~ 25
Chk. By	Approved	

SDP-11-025

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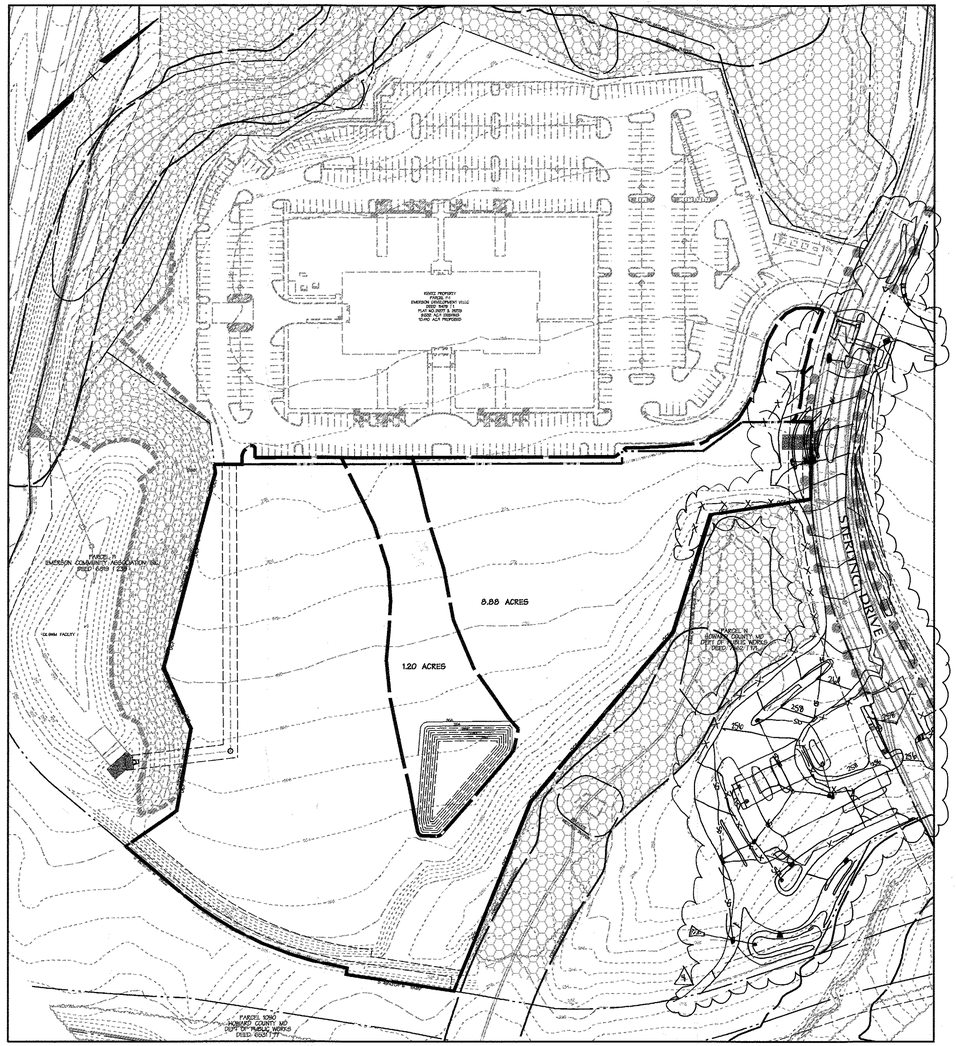
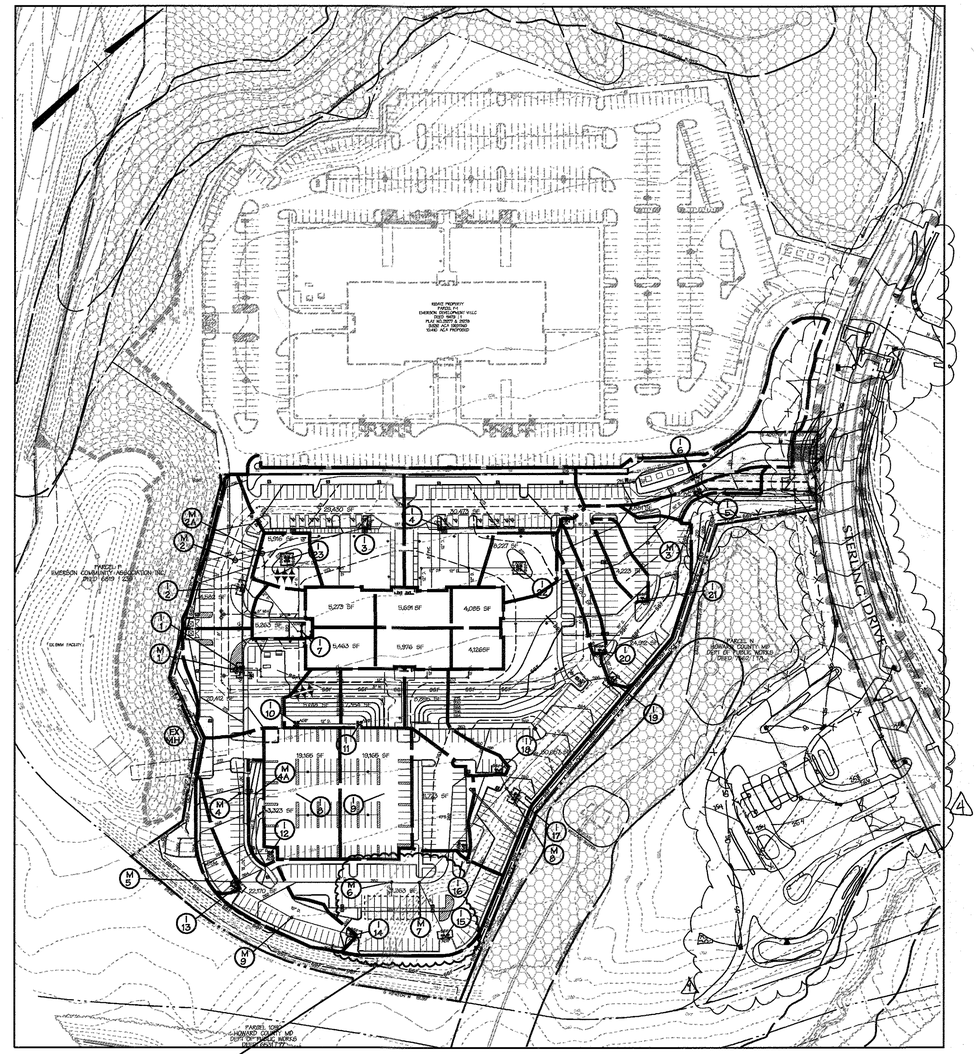


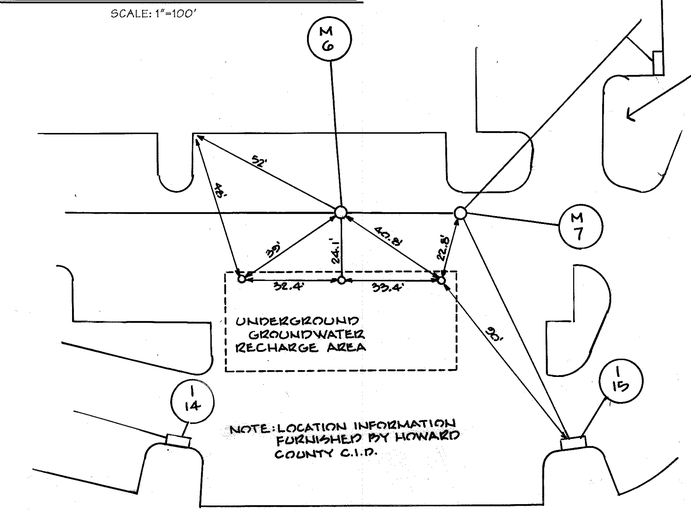
EXISTING DRAINAGE AREA MAP

SCALE: 1"=100'



PROPOSED DRAINAGE AREA MAP

SCALE: 1"=100'



THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET. AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. DuVal, REG.# 10764

STATE OF MARYLAND — DOUGLAS WELTY DUVAL — No. 10764 — PROFESSIONAL LAND SURVEYOR

10-08-14

4 PROFESSIONAL CERTIFICATION FOR REV #4

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. 46292
EXPIRATION DATE: 05/21/2018

4 THE PURPOSE OF REVISION #4 IS TO SHOW THE WORK ASSOCIATED WITH THE EMERSON CAMPUS VCP. SDP-16-005

STATE OF MARYLAND — 46292 — PROFESSIONAL ENGINEER

10-22-16

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PRESENTED ON THIS SHEET.

SIGNED _____ P.E.# 8061
PAUL L. HUDSON

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. 8061, EXPIRATION DATE: 08-26-2011

For Revision No. 2 Only

7-19-15
Date

STATE OF MARYLAND — PAUL LEE HUDSON — No. 8061 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

4-21-11
Date

STATE OF MARYLAND — PAUL LEE HUDSON — No. 8061 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Approved: John R. Robertson
Howard S.C.D. Date 10/13/11

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

Howard Soil Conservation District — Date

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/25/13

DIRECTOR — DATE 3/7/13

Date	No.	Revision Description
9-22-16	4	EMERSON CAMPUS VCP

EMERSON PARCEL G-1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER INC
200 EAST PENNSYLVANIA AVENUE • TOWSON, MD 21286
P : 410 296 3333 F : 410 296 4705 WWW.DMW.COM
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS

SUBDIVISION NAME			SECTION / AREA		LOT/PARCEL #
REVITZ PROPERTY					PARCEL G-1 / PAR. 165
PLAT OR LR	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21271 & 21278	20	PEC	47	6	6903
WATER CODE			SEWER CODE		

TITLE
EROSION & SEDIMENT CONTROL DRAINAGE AREA MAP & DETAILS

Des. By	THR/JDF	Scale	1"=100'	Proj. No.	95054.3
Dm. By	JSS	Date	4-11-11	12 of ~~23~~ 25	
Chk. By		Approved			

SDP-11-025

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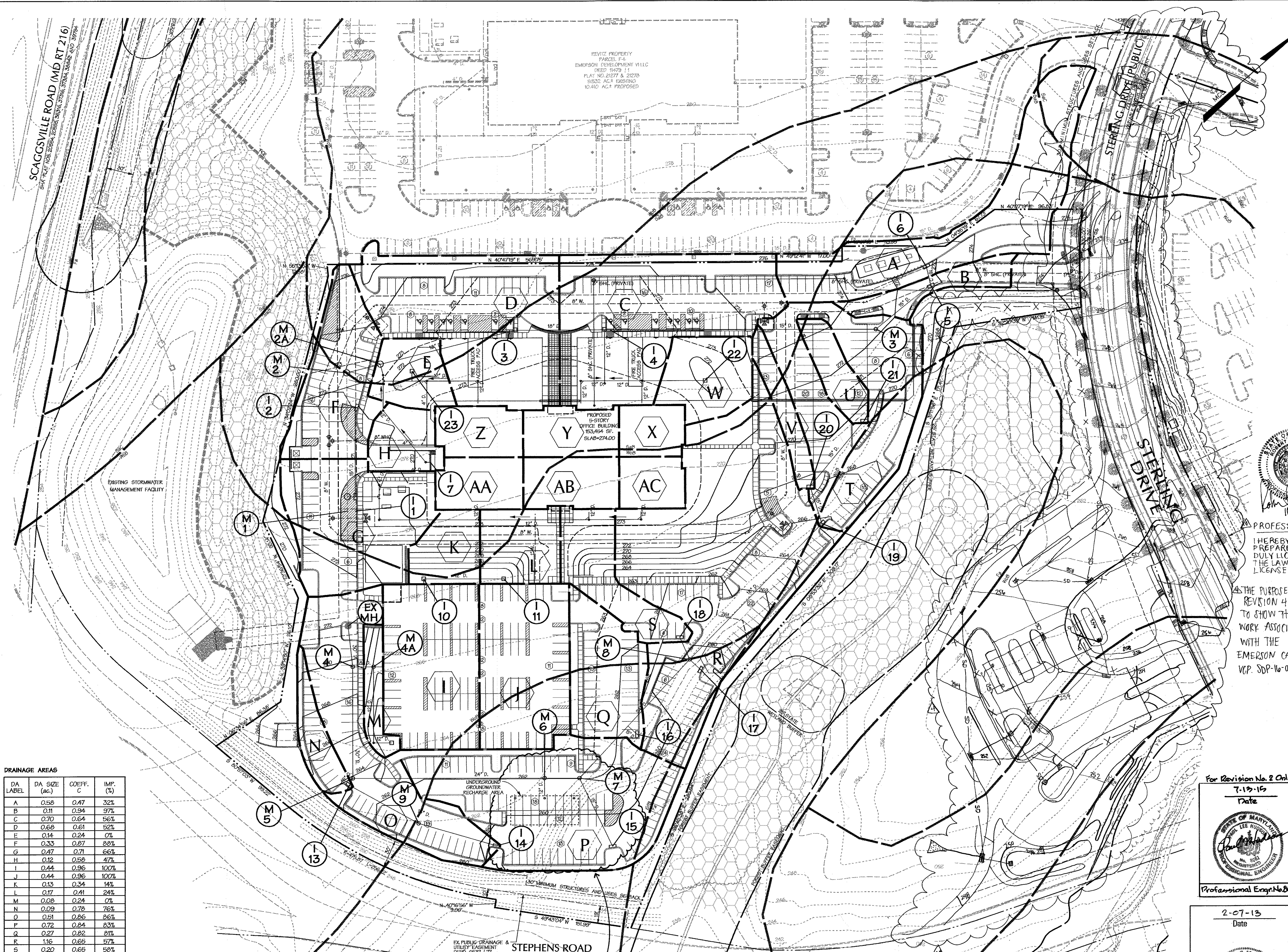

LEGEND

- PLATTED PROPERTY BOUNDARY
- PROPERTY BOUNDARY
- EX. RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- EX. ROADS AND WALKS
- 280 — EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- FCE — FOREST CONSERVATION EASEMENT
- PROP. BUILDING
- PROP. CURB / EDGE OF PAVING
- PROP. DEPRESSED CURB
- 280 — PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- PROP. GROUP LIGHT (BY OTHERS)
- PROP. SINGLE LIGHT (BY OTHERS)
- PROP. LIGHT (BY OTHERS)
- PROP. DRAINAGE DIVIDES
- SOIL LIMITS
- (A) DRAINAGE AREA LABEL
- 12" D. PROP. STORM DRAINS
- 6" S. PROP. SANITARY SEWER
- 8" W. PROP. WATER

AS BUILT NOT REQUIRED
THERE IS NO AS BUILT INFORMATION
PRESENTED ON THIS SHEET.
DuVal and Associates, P.A.
By: Douglas W. Duval - REG# 10764

STATE OF MARYLAND · ROBERT A. CROWLEY · 45292 · PROFESSIONAL ENGINEER
11-22-16

STATE OF MARYLAND · DOUGLAS WELTY DUVAL · No. 10764 · PROFESSIONAL LAND SURVEYOR
10-08-14

4 PROFESSIONAL CERTIFICATION FOR REV#4

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. 45292 EXPIRATION DATE: 05/21/2018

4 THE PURPOSE OF REVISION 4 IS TO SHOW THE WORK ASSOCIATED WITH THE EMERSON CAMPUS VCP. SDP-16-005

~~APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS~~

~~CHIEF, BUREAU OF HIGHWAYS~~ ~~DATE~~

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/25/13

DIRECTOR — DATE 3/7/13

Date	No.	Revision Description
9/22/16	4	EMERSON CAMPUS VCP

EMERSON PARCEL G–1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:

EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER
200 EAST PENNSYLVANIA AVENUE · TOWSON, MD
P: 410 296 3333 F: 410 296 4705
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS

SUBDIVISION NAME	SECTION/AREA		LOT/PARCEL #
REVITZ PROPERTY			PARCEL G-1 / PAR. 165
PLAT# OR L/F: 21277 & 21278; BLOCK #: 20; ZONE: PEC	TAX/ZONE MAP: 47	ELECT. DISTRICT: 6	CENSUS TRACT: 606903
WATER CODE	SEWER CODE		

TITLE

STORM DRAIN DRAINAGE AREA & SOILS MAP

Des. By THR/JDF	Scale 1"=50'	Proj. No. 95054.3
Drn. By JSS	Date 6-16-11	13 of ~~23~~ 25
Chk. By	Approved	

For Revision No. 2 Only
7-13-15
Date
STATE OF MARYLAND · PAUL LEE HUDSON · No. 8061 · REGISTERED PROFESSIONAL ENGINEER
Professional Engr. No. 8061

2-07-13
Date
STATE OF MARYLAND · PAUL LEE HUDSON · No. 8061 · REGISTERED PROFESSIONAL ENGINEER
Professional Engr. No. 8061

PROFESSIONAL CERTIFICATION

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DRAINAGE AREAS

DA LABEL	DA SIZE (ac.)	COEFF. C	IMP. (%)
A	0.58	0.47	32%
B	0.11	0.94	97%
C	0.70	0.64	56%
D	0.68	0.61	52%
E	0.14	0.24	0%
F	0.33	0.87	88%
G	0.47	0.71	66%
H	0.12	0.58	47%
I	0.44	0.96	100%
J	0.44	0.96	100%
K	0.13	0.34	14%
L	0.17	0.41	24%
M	0.08	0.24	0%
N	0.09	0.78	76%
O	0.51	0.86	86%
P	0.72	0.84	83%
Q	0.27	0.82	81%
R	1.16	0.65	57%
S	0.20	0.65	58%
T	0.57	0.86	86%
U	0.10	0.93	96%
V	0.09	0.96	100%
W	0.19	0.24	0%
X	0.09	0.96	100%
Y	0.13	0.96	100%
Z	0.12	0.96	100%
AA	0.13	0.96	100%
AB	0.14	0.96	100%
AC	0.09	0.96	100%

SOILS CLASSIFICATION

Symbol	Soil Type	Slope	K-factor	Hydraulic Group	Comments
Fa	Fallsington sandy loam	0-2%	.02	D	Hydric
SaB	Sassafras loam	2-5%	.37	B	
SaC	Sassafras loam	5-10%	.24	B	
SfB	Sassafras gravelly Sandy loam	2-5%	.24		
SrC	Sassafras gravelly Sandy loam	5-10%	.37		
UaF	Udorthents	0-65%			
WoB	Woodstown sandy loam	2-5%	.24	C	Hydric

SEE SHEET 12 FOR PSWM ALIGNMENT LOCATION.

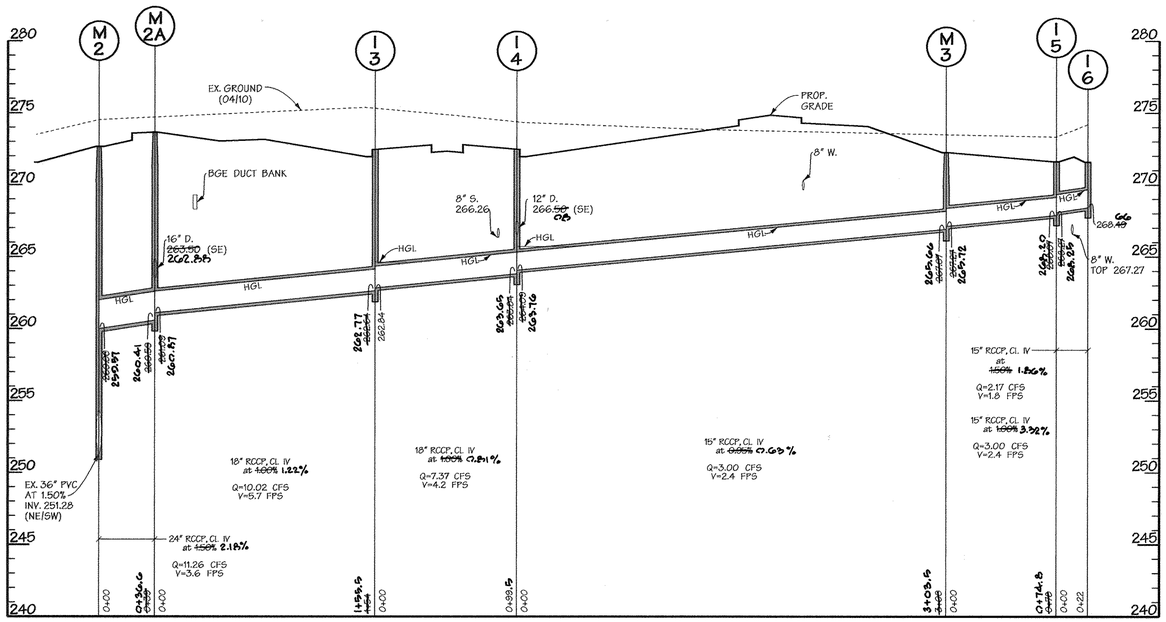
AS BUILT CERTIFICATION FOR PSWM

THERE IS NO ASBUILT INFORMATION PRESENTED ON THIS SHEET.

SIGNED________________ P.E.#8061
PAUL L. HUDSON

SDP-11-025

95054\95054.3\ENGR\SDP Sheets\95054SDP13.dgn 15:58:00 2015



PROFILES

SCALE: HORIZ. 1"=50'
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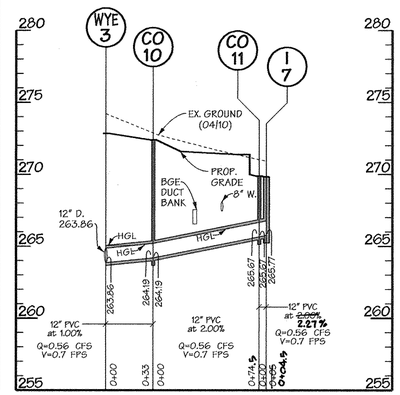

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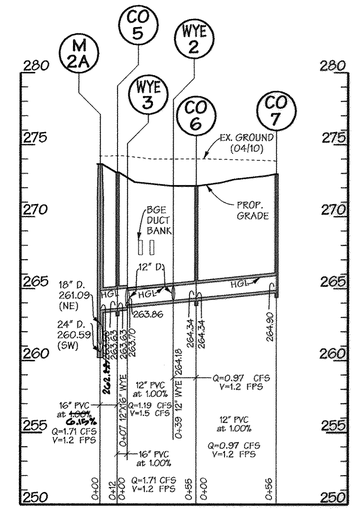

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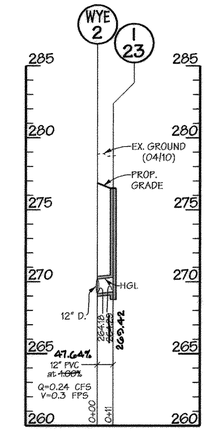
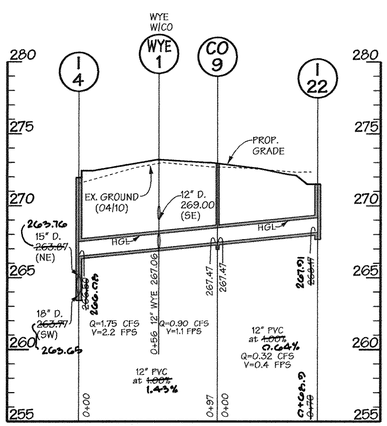


PROFILES

SCALE: HORIZ. 1"=50'
VERT. 1"=5'

RED LINE AS BUILT
DuVal and Associates, P.A.
1720 YORK RD. SUITE 205
LUTHERVILLE, MD 21093
410-666-5467
410-583-4688

10-08-14



PROFILES

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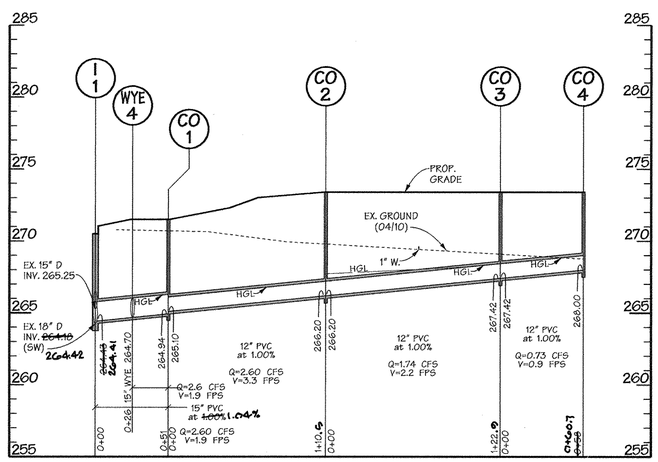

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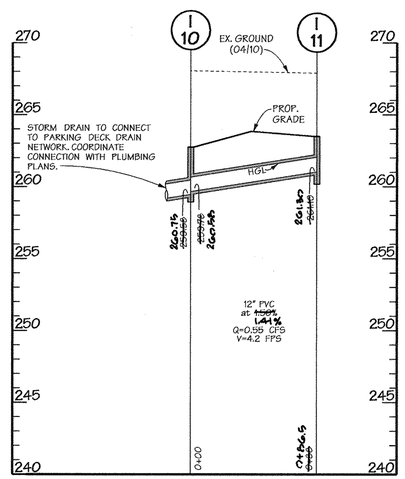
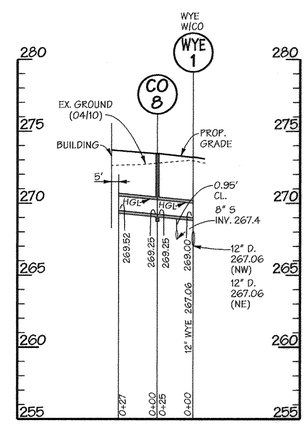


PROFILES

SCALE: HORIZ. 1"=50'
VERT. 1"=5'

For Revision No. 2 Only
7-13-13
Date

Professional Engr. No. 8061



PROFILES

SCALE: HORIZ. 1"=50'
VERT. 1"=5'

AS BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN IS CONSTRUCTED AS SHOWN ON THE AS BUILT PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY

SIGNED: Paul Hudson P.E.# 8061
PAUL L. HUDSON

AS BUILT DATE: 10-08-14

2-07-13
Date

Professional Engr. No. 8061

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. 8061, EXPIRATION DATE: 8-26-15

HGL NOTE: UNLESS OTHERWISE SPECIFIED, THE 10-YR. HGL IS EQUAL TO THE CROWN OF THE PIPE.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3/25/13

DIRECTOR — DATE 3/7/13

Date	No.	Revision Description

EMERSON PARCEL G-1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER, INC.
200 EAST PENNSYLVANIA AVENUE
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL SCIENTISTS

SUBDIVISION NAME		SECTION/AREA		LOT/PARCEL #
REVITZ PROPERTY				PARCEL G-1 / PAR. 165
PLAT# OR LOT	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903
WATER CODE			SEWER CODE		

TITLE: **STORM DRAIN PROFILES**

Des. By THR/JDF	Scale AS SHOWN	Proj. No. 95054.3	
Drn. By JSS	Date 2-07-13	14 of ~~23~~ 25	
Chk. By	Approved		

SDP-11-025

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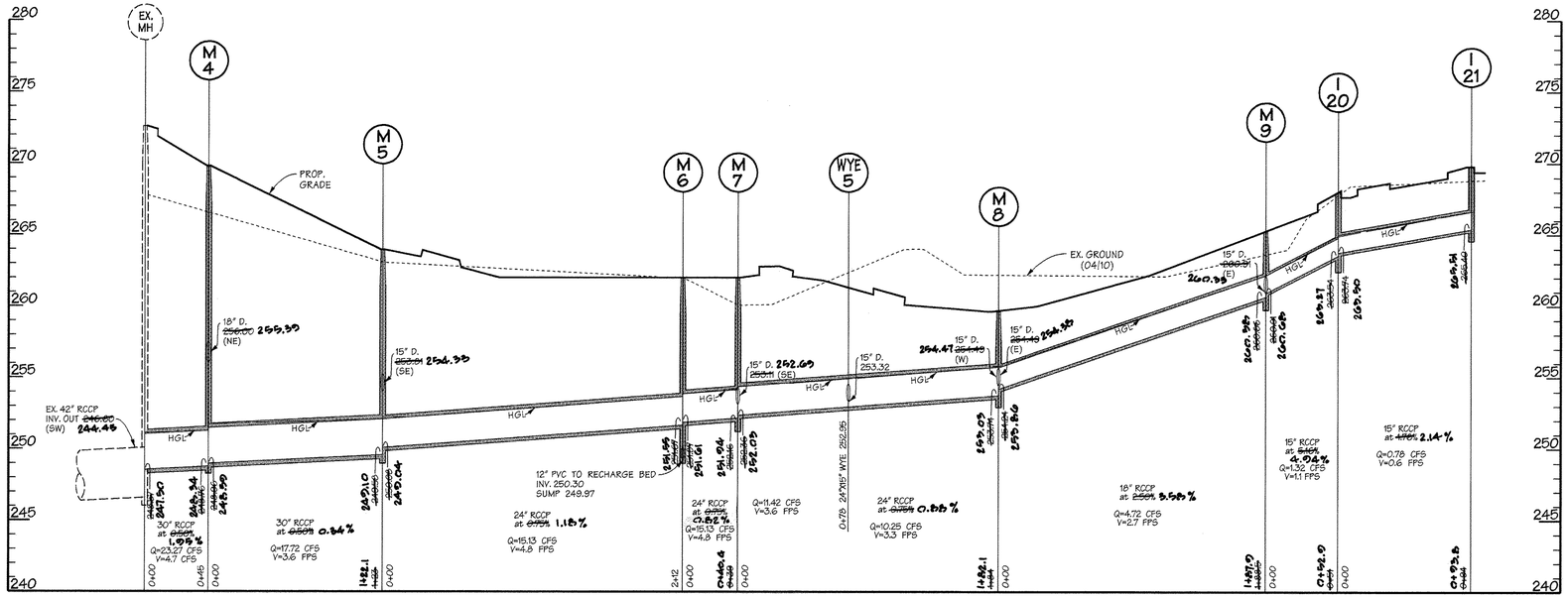

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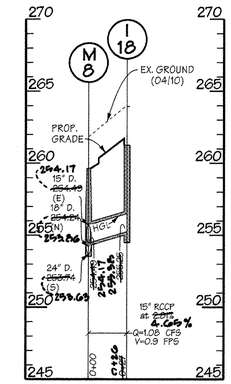

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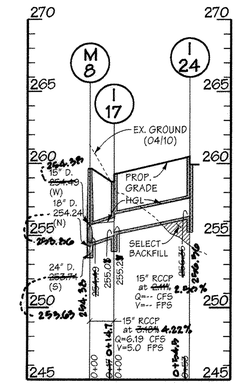

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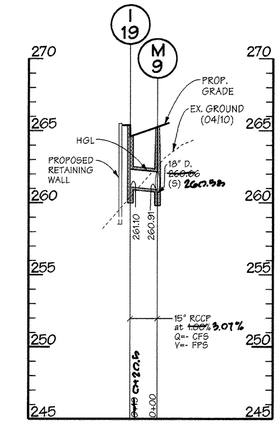

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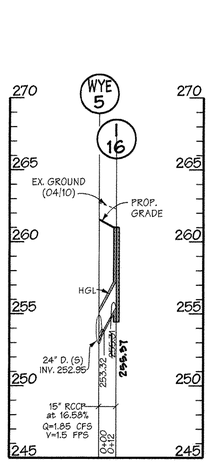

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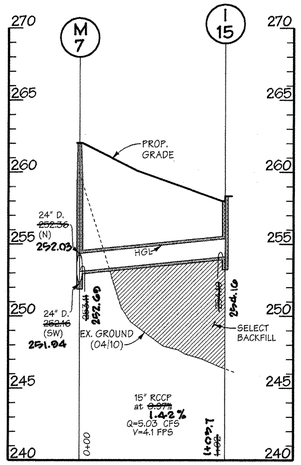

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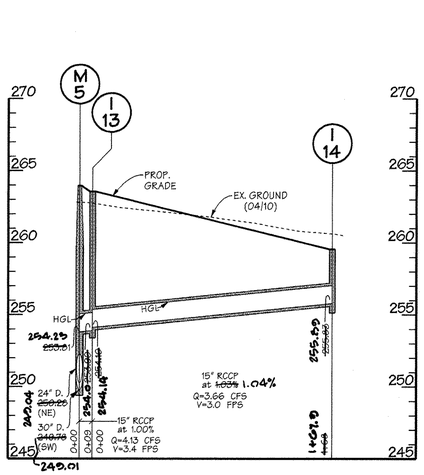

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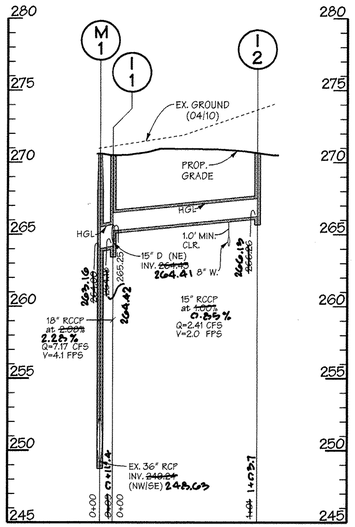

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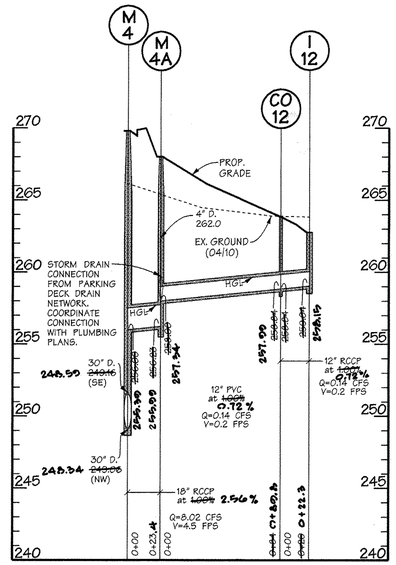

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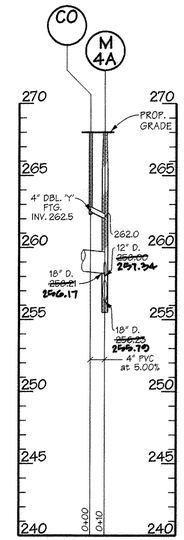

PROFILES

SCALE: HORIZ. 1"=50'
VERT. 1"=5'

REDLINE AS BUILT
DuVal and Associates, P.A.
1720 YORK ROAD, SUITE 205
LUTHERVILLE, MD 21093
410-666-5467
410-583-4688

STATE OF MARYLAND — DOUGLAS WEIST DUVAL — No. 10754 — PROFESSIONAL LAND SURVEYOR

10-08-14

AS BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE AS BUILT PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

SIGNED Paul Hudson P.E.# 8061
PAUL L. HUDSON
AS BUILT DATE: 10-08-14

FOR REVISION #2 ONLY

7-13-15
Date

STATE OF MARYLAND — PHIL LEE HUDSON — No. 8061 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

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. 8061, EXPIRATION DATE: 8-26-15.

PROFESSIONAL CERTIFICATION

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2-07-13
Date

STATE OF MARYLAND — PHIL LEE HUDSON — No. 8061 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

HGL NOTE: UNLESS OTHERWISE SPECIFIED, THE 10-YR. HGL IS EQUAL TO THE CROWN OF THE PIPE.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11-23-15

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11-16-15

DIRECTOR — DATE 11-23-15

Date	No.	Revision Description
7-10-15	2	REVISE DRAINS (REPLACEMENT SHEET)

EMERSON PARCEL G-1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER INC
200 EAST PENNSYLVANIA AVENUE • TOWSON, MD 21286
P: 410 296 3333 F: 410 296 4705 WWW.DMW.COM
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL #
REVITZ PROPERTY		PARCEL G-1 / PAR. 165

POST OFFICE	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21077 & 21076	20	PEC	47	6	606903

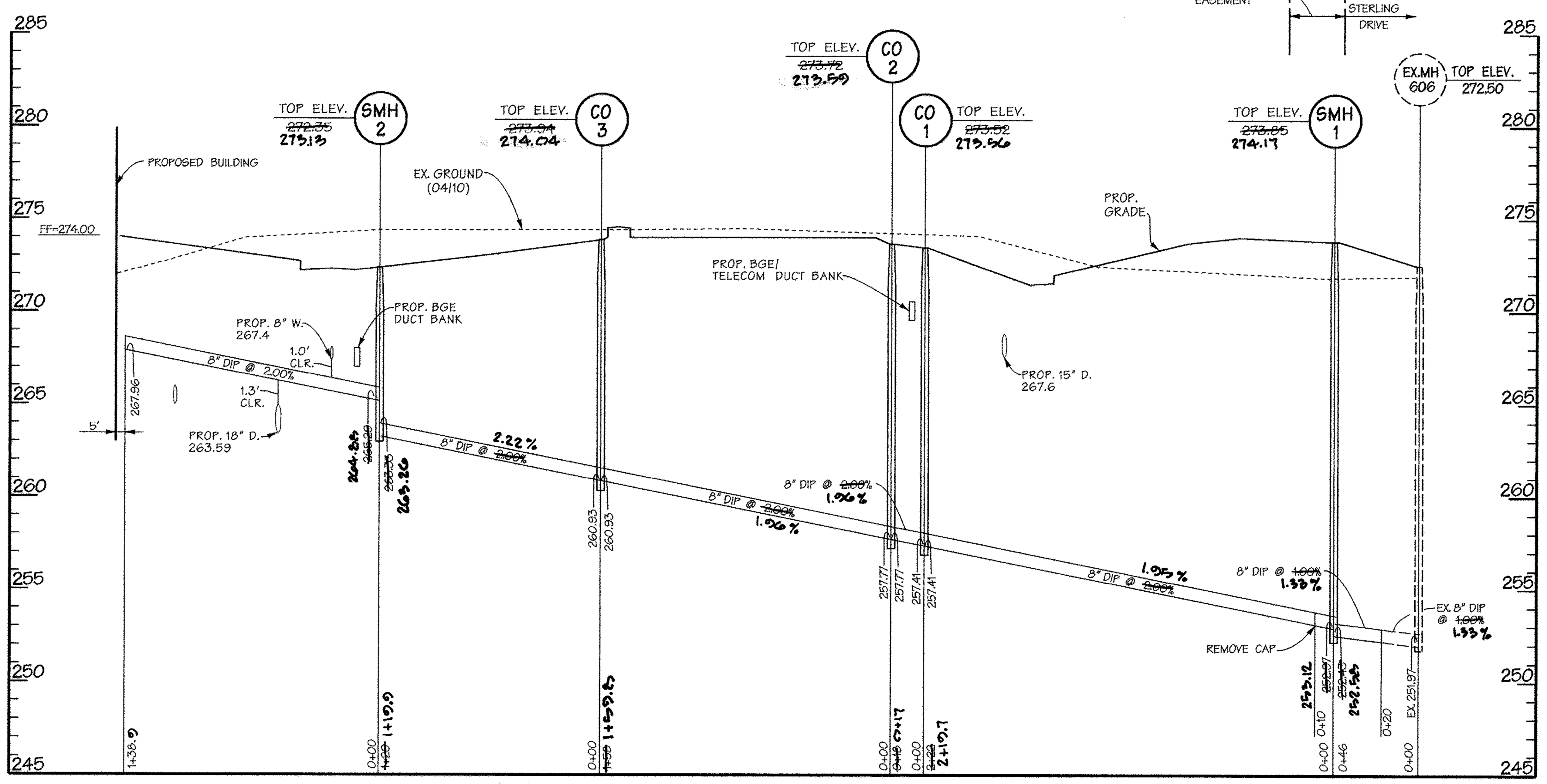
WATER CODE / SEWER CODE

TITLE: **STORM DRAIN PROFILES**

Des. By THR/JDF	Scale AS SHOWN	Proj. No. 95054.3	
Drn. By JSS	Date 2-07-13	15 of 25	
Chk. By	Approved		

SDP-11-025 31

95054\95054.3\ENGR\SDP Sheets\95054.3SDP11SDP04 08:34:23 2015

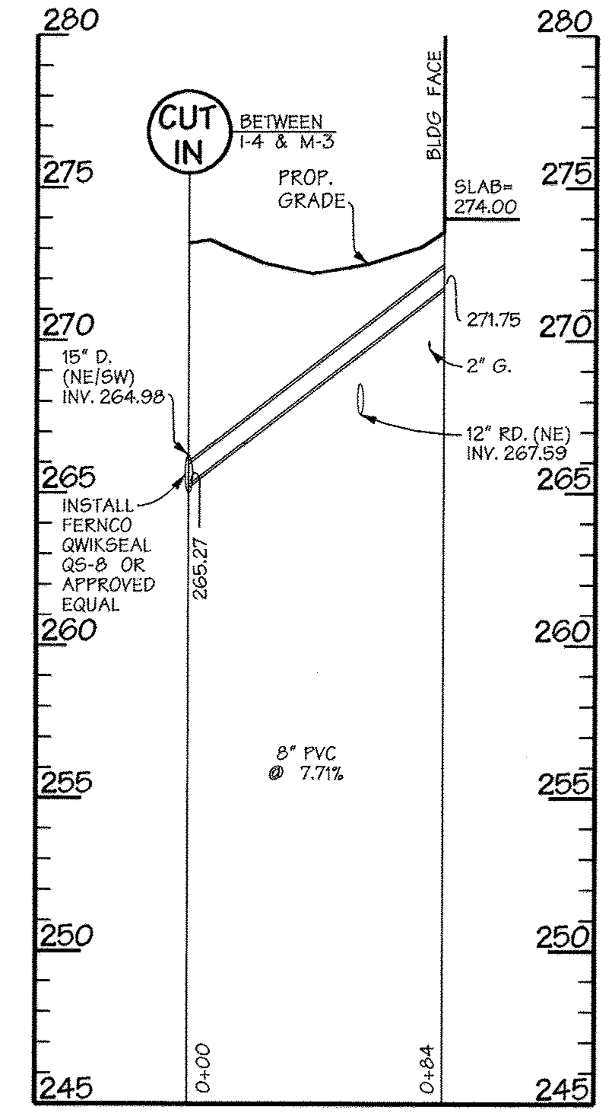


SANITARY SEWER PROFILE

SCALE: HORIZ. 1"=50'

AS BUILT CERTIFICATION FOR PSWM

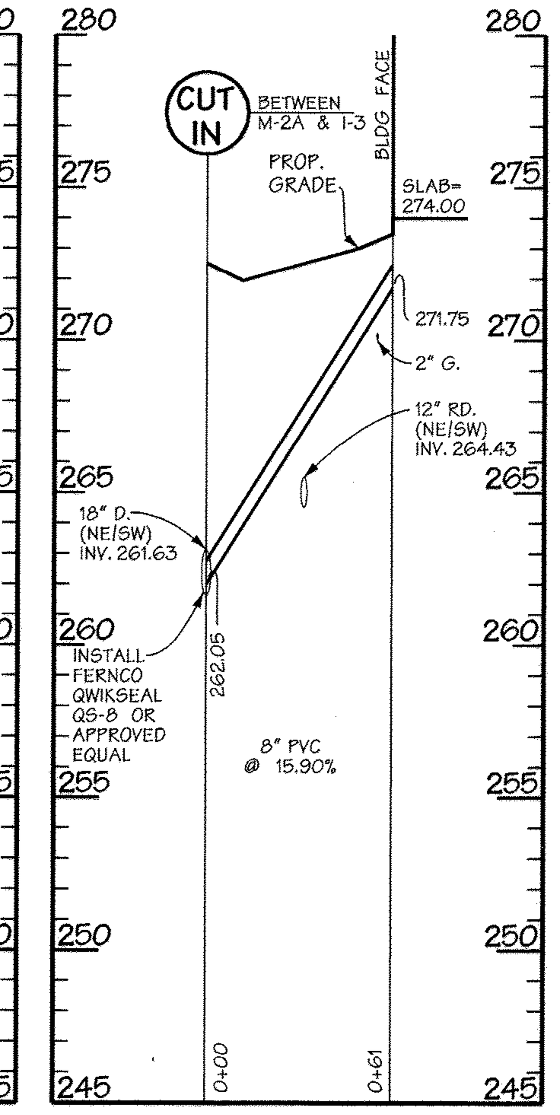
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE AS BUILT PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
SIGNED [signature] P.E. #8061
PAUL L. HUDSON AS BUILT DATE: 10-08-14



FOUNDATION DRAIN NORTH PROFILE

SCALE: HORIZ. 1"=50' VERT. 1"=5'

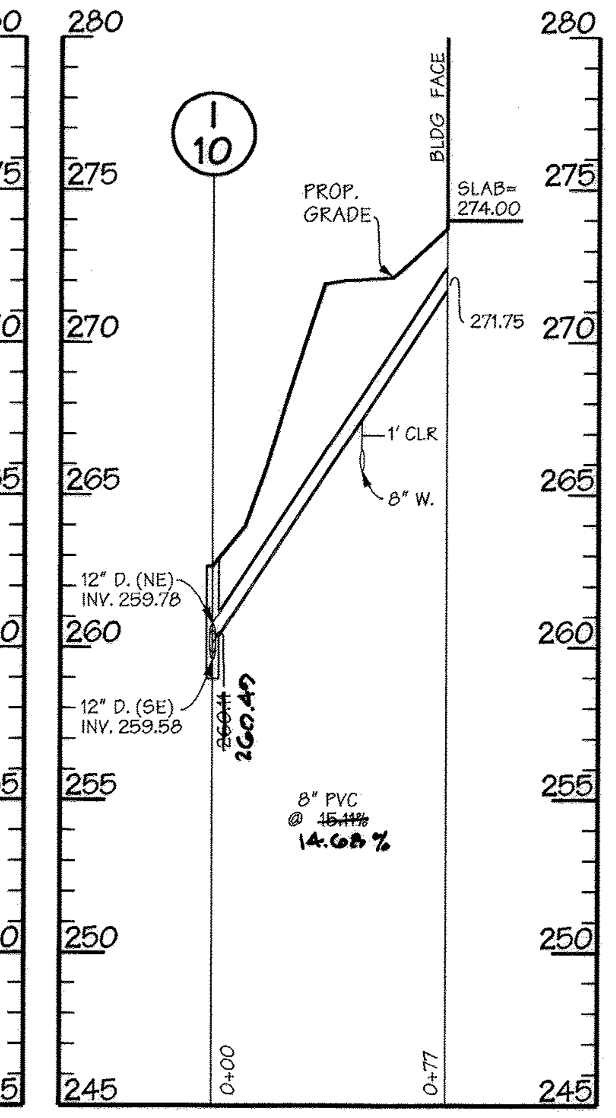
NOTE: LOCATION DEPTH OF GAS AND ELECTRIC ARE ASSUMED TO HAVE 3' COVER.



FOUNDATION DRAIN WEST PROFILE

SCALE: HORIZ. 1"=50' VERT. 1"=5'

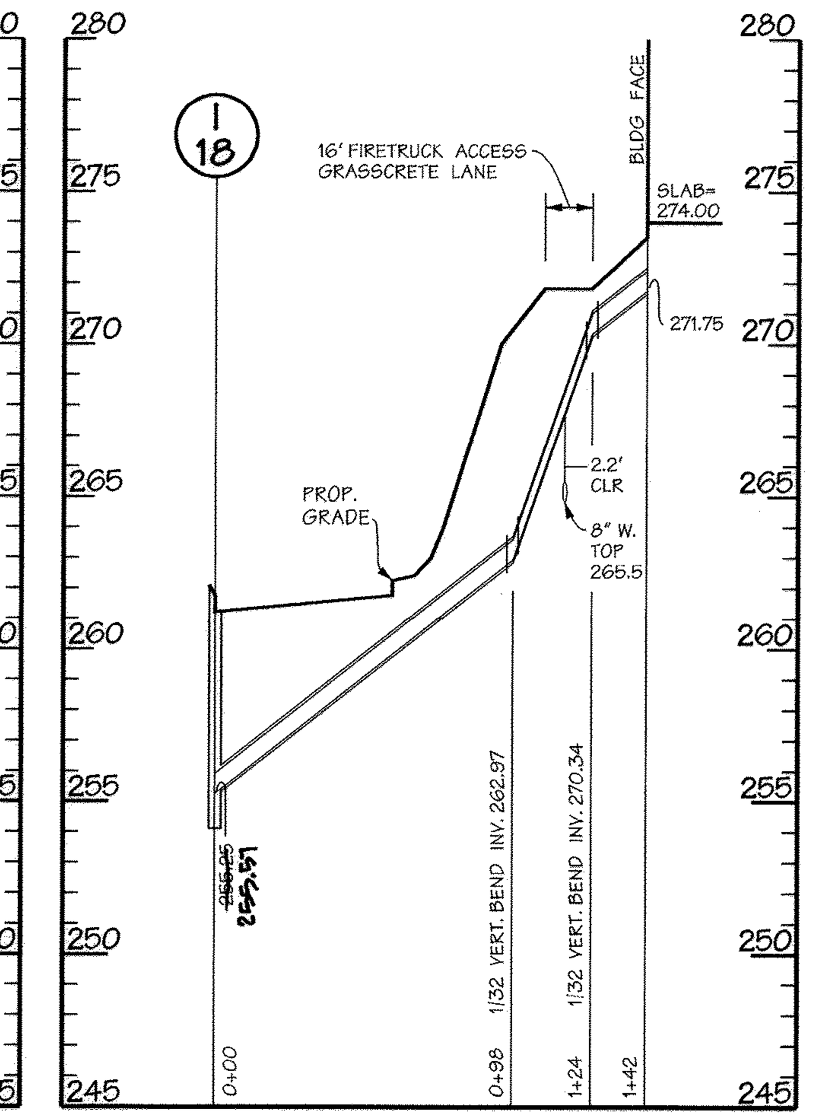
NOTE: LOCATION DEPTH OF GAS AND ELECTRIC ARE ASSUMED TO HAVE 3' COVER.



FOUNDATION DRAIN SOUTH PROFILE

SCALE: HORIZ. 1"=50' VERT. 1"=5'

NOTE: LOCATION DEPTH OF GAS AND ELECTRIC ARE ASSUMED TO HAVE 3' COVER.



FOUNDATION DRAIN EAST PROFILE

SCALE: HORIZ. 1"=50' VERT. 1"=5'

NOTE: LOCATION DEPTH OF GAS AND ELECTRIC ARE ASSUMED TO HAVE 3' COVER.

10-08-14
RED LINE AS BUILT
DuVal and Associates, P.A.
1729 YORK RD., SUITE 205
LUTHERVILLE, MD. 21093
410-666-5467
410-583-4688

SEE SHEET 12 FOR PSWM ALIGNMENT LOCATION

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. 8061, EXPIRATION DATE: 8-26-15.

PIPE SCHEDULE

SIZE	TYPE	LENGTH
4"	PVC SCH 40	146 LF
12"	PVC SCH 40	810 LF
16"	PVC SCH 40	55 LF
15"	RCCP, CL IV	1044 LF
18"	RCCP, CL IV	474 LF
24"	RCCP, CL IV	474 LF
30"	RCCP, CL IV	168 LF

STORM INLET COORDINATES

Inlet #	NORTH	EAST
I-1	530127.97	1353951.81
I-2	530203.78	1353866.92
I-3	530385.80	1353913.95
I-4	530469.38	1353986.07
I-5	530769.64	1354182.60
I-6	530780.51	1354160.46
I-7	530225.05	1353964.76
I-10	530135.09	1354057.01
I-11	530201.71	1354114.91
I-12	529989.49	1354169.98
I-13	529921.88	1354174.61
I-14	529980.21	1354332.51
I-15	530095.86	1354435.41
I-17	530306.90	1354331.78
I-18	530304.94	1354292.56
I-19	530495.32	1354320.34
I-20	530522.85	1354261.99
I-21	530615.31	1354246.67
I-22	530512.96	1354096.57
I-23	530275.66	1353875.76
I-24	530359.98	1354341.56

*AT CENTER BOTTOM OF CURB, IF APPLICABLE

STORM MANHOLE COORDINATES

MH #	NORTH	EAST
M-1	~~530120.29~~ 530123.61	~~1353945.13~~ 1353938.57
M-2	~~530219.04~~ 530220.24	~~1353829.54~~ 1353825.89
M-2A	~~530254.32~~ 530253.16	~~1353840.80~~ 1353845.96
M-3	~~530090.30~~ 530695.78	~~1354177.04~~ 1354170.76
M-4	530012.00	1354078.45
M-4A	530029.36	1354093.54
M-5	529931.40	1354171.17
M-6	530091.42	1354310.28
M-7	530120.60	1354335.64
M-8	530304.14	1354316.60
M-9	530492.26	1354301.49

STRUCTURE SCHEDULE

STRUCTURE #	TYPE	SIZE	INV. IN	INV. OUT	REMARKS
WYE-1	PVC 90º WYE	12"X12"	267.06	267.06	SCH. 40 PVC BY CHARLOTTE PIPE OR EQUAL
WYE-2	PVC 90º WYE	12"X12"	264.18	264.18	SCH. 40 PVC BY CHARLOTTE PIPE OR EQUAL
WYE-3	PVC 90º WYE	16"X12"	263.86	263.86	SCH. 40 PVC BY CHARLOTTE PIPE OR EQUAL
WYE-4	PVC 90º WYE	16"X16"	264.70	264.70	SCH. 40 PVC BY CHARLOTTE PIPE OR EQUAL
WYE-5	CONCRETE 90º WYE	24"X15"	253.38	252.83	RINKER MATERIALS REINFORCED CONCRETE WYE

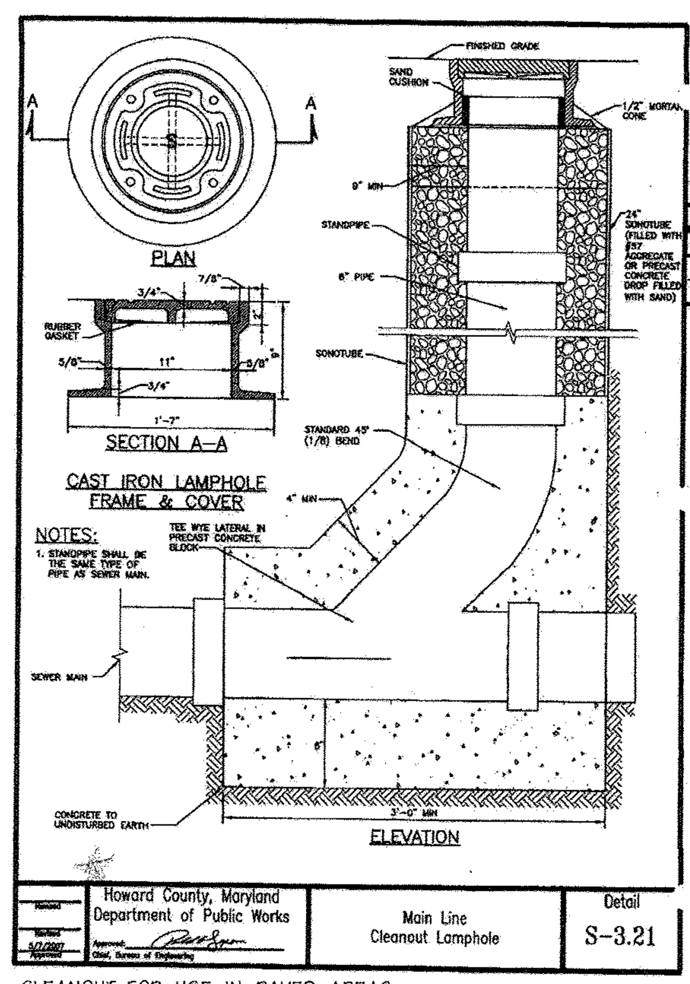
INLET SCHEDULE

Inlet #	TYPE	INV. IN	INV. OUT	~~GRATE ELEV.*~~	REMARKS	GRATE ELEV.
I-1	DBL. 'S' COMB.	265.25	264.18	~~270.06~~	SEE MD SHA STD. DETAIL 374.71	271.17
I-2	DBL. 'S' COMB.	N/A	266.39	~~270.06~~	SEE MD SHA STD. DETAIL 374.71	270.08
I-3	TYPE A-5	262.67	262.57	~~271.02~~	SEE H.C. DETAIL D-4.02	–
I-4	TYPE A-5	264.02	263.77	~~271.02~~	SEE H.C. DETAIL D-4.02	–
I-5	DBL. 'S' COMB.	267.79	267.69	~~271.58~~	SEE MD SHA STD. DETAIL 374.71	271.63
I-6	DBL. 'S' COMB.	N/A	268.12	~~271.58~~	SEE MD SHA STD. DETAIL 374.71	271.64
I-7	TRENCH DRAIN	N/A	265.77	~~268.08~~	ACO DRAIN-POWER S300K (SLOTTED DUCTILE IRON-CLASS F)	269.81
I-10	YARD	259.68	259.58	~~262.75~~	ADS DRAINTECH 24" SQUARE BASIN W/ GRATE	262.85
I-11	YARD	N/A	261.00	~~260.50~~	ADS DRAINTECH 24" SQUARE BASIN W/ GRATE	263.54
I-12	YARD	N/A	259.04	~~262.80~~	ADS DRAINTECH 24" SQUARE BASIN W/ GRATE	263.00
I-13	DBL. 'S' COMB.	254.19	254.09	~~263.56~~	SEE MD SHA STD. DETAIL 374.71	263.86
I-14	DBL. 'S' COMB.	N/A	255.83	~~260.56~~	SEE MD SHA STD. DETAIL 374.71	259.66
I-15	DBL. 'S' COMB.	N/A	254.10	~~257.80~~	SEE MD SHA STD. DETAIL 374.71	257.83
I-16	DBL. 'S' COMB.	N/A	255.31	~~261.00~~	SEE MD SHA STD. DETAIL 374.71	260.91
I-17	DBL. 'S' COMB.	N/A	254.61	~~258.79~~	SEE MD SHA STD. DETAIL 374.71	258.79
I-18	DBL. 'S' COMB.	N/A	255.25	~~261.26~~	SEE MD SHA STD. DETAIL 374.71	261.47
I-19	DBL. 'S' COMB.	N/A	261.10	~~264.00~~	SEE MD SHA STD. DETAIL 374.71	264.92
I-20	DBL. 'S' COMB.	263.00	261.54	~~267.66~~	SEE MD SHA STD. DETAIL 374.71	267.59
I-21	DBL. 'S' COMB.	N/A	264.88	~~269.40~~	SEE MD SHA STD. DETAIL 374.71	269.65
I-22	YARD	N/A	268.11	~~271.50~~	ADS DRAINTECH 24" SQUARE BASIN W/ GRATE	270.96
I-23	YARD	N/A	264.29	~~271.50~~	ADS DRAINTECH 24" SQUARE BASIN W/ GRATE	271.18
I-24	DBL. 'S' COMB.	N/A	256.35	~~260.05~~	SEE MD SHA STD. DETAIL 374.71	260.12

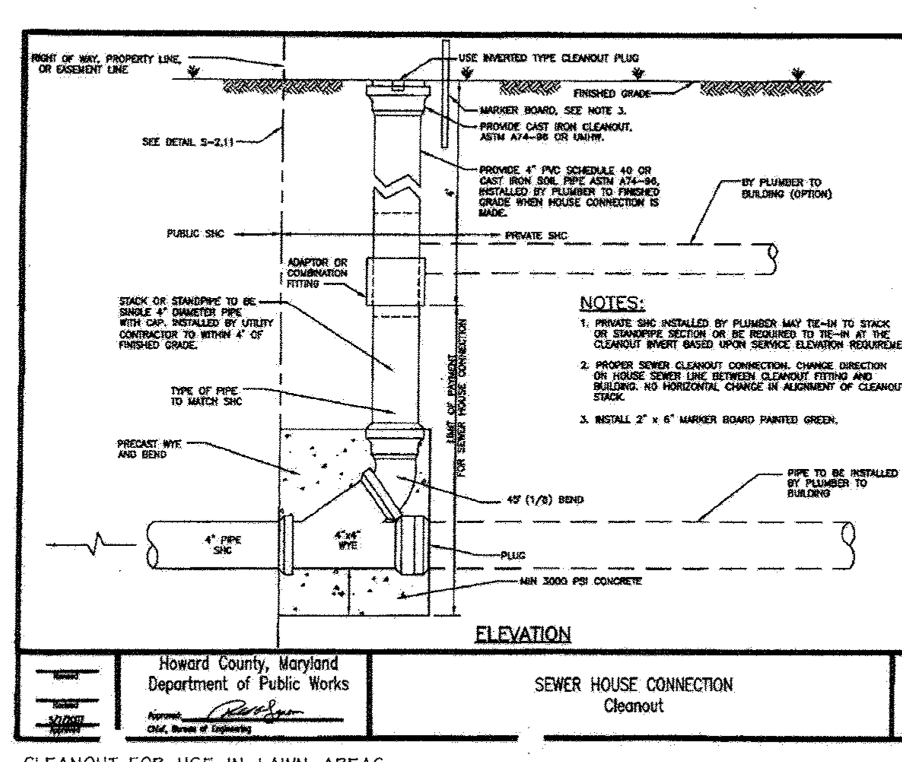
*AT CENTER BOTTOM OF CURB, IF APPLICABLE

MANHOLE SCHEDULE

MH #	TYPE	INTERNAL DIAMETER	INV. IN	INV. OUT	~~RIM ELEV.~~	REMARKS	RIM ELEV.
M-1	DOGHOUSE DROP MH	72"	264.00	249.01	~~270.60~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.11 WITH G-5.13	271.31
M-2	DOGHOUSE DROP MH	72"	260.00	251.30	~~272.05~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.11 WITH G-5.16	272.72
M-2A	STD. MANHOLE	48"	261.09	260.59	~~273.65~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.11	273.63
M-3	STD. MANHOLE	48"	266.91	266.81	~~272.25~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.11	271.20
M-4	DROP MANHOLE	60"	249.16	249.06	~~269.90~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.11 WITH G-5.13	269.59
M-4A	STD. MANHOLE	48"	258.00	256.23	~~268.00~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.11	268.02
M-5	STD. MANHOLE	60"	250.28	249.78	~~263.95~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.11	264.17
M-6	FLOW SPLITTER MH	48"	251.97	251.87	~~262.00~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.11	262.31
M-7	STD. MANHOLE	48"	252.36	252.26	~~262.00~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.11	262.03
M-8	SHALLOW MANHOLE	60"	254.24	253.74	~~259.03~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.12	259.47
M-9	SHALLOW MANHOLE	48"	260.91	260.66	~~265.10~~	SEE HOWARD CO. STD. DETAIL PLATE G-5.12	265.03
EX 1	STD. MANHOLE	84"	248.83	246.60	~~272.60~~	ADJUST TOP ELEVATION TO MATCH NEW GRADE	272.40



CLEANOUT FOR USE IN PAVED AREAS

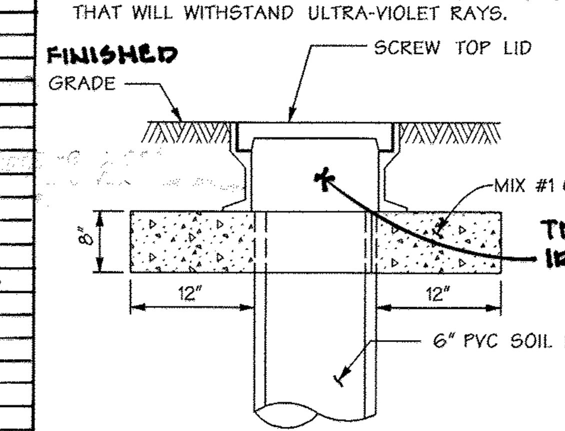


CLEANOUT FOR USE IN LAWN AREAS

For Revision #2 Only
7-13-15
Date
Professional Engr. No. 8061

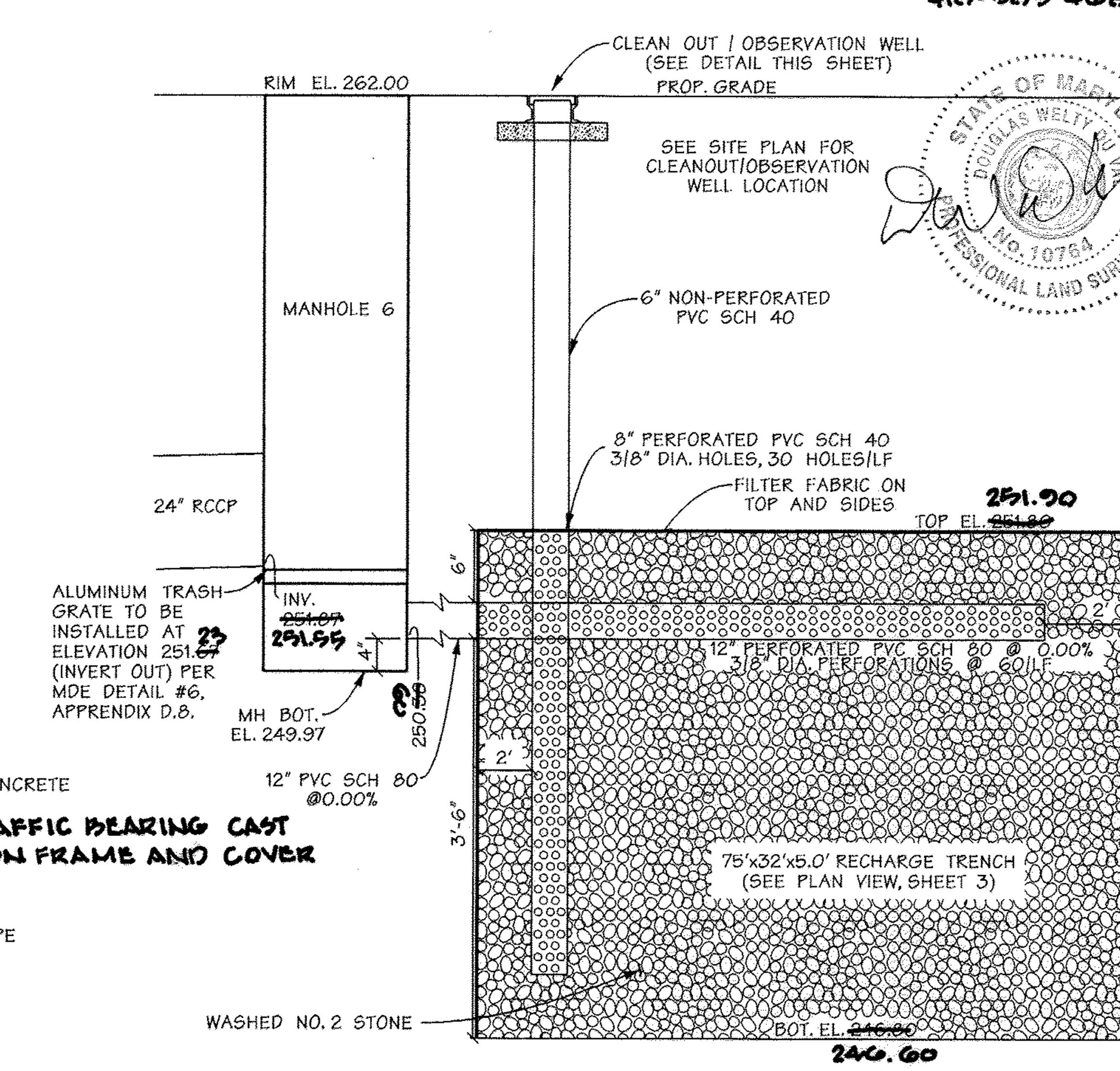
EACH CLEANOUT SHALL INCLUDE THE FOLLOWING

1. FOR AN UNDERGROUND FLUSH MOUNTED CLEANOUT, PROVIDE A TUBE MADE OF NON-CORROSIVE MATERIAL, SCHEDULE 40 OR EQUAL, AT LEAST 3-FEET LONG WITH AN INSIDE DIAMETER OF AT LEAST 6-INCHES.
2. THE TUBE SHALL HAVE A FACTORY ATTACHED CAST IRON OR HIGH IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREW TOP LID. THE SCREW TOP LID SHALL BE CAST IRON OR HIGH IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS.



CLEAN OUT DETAIL

NOT TO SCALE



RECHARGE TRENCH DETAIL

NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR RECHARGE FACILITY

1. RECHARGE FACILITY SHALL BE INSPECTED ANNUALLY AND BE REPAIRED OR CLEANED AS NEEDED.
2. REMOVE SEDIMENT AND TRASH FROM SEDIMENT TRAPPING INLET AS NEEDED AND CLEAN OPENING AT INLET BOTTOM.
3. INSPECT FACILITY EVERY OTHER MONTH AND AFTER LARGE STORM EVENTS TO OBSERVE WATER ELEVATIONS. IF STANDING WATER IS OBSERVED IN THE FACILITY RE-INSPECT AFTER 72 HOURS AND REPAIR AS NECESSARY.

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. 8061, EXPIRATION DATE: 8-26-13.

2-07-13
Date
Professional Engr. No. 8061

~~APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS~~

~~CHIEF, BUREAU OF HIGHWAYS~~ ~~DATE~~

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11-23-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11.16.15
DIRECTOR — DATE 11-23-16

Date	No.	Revision Description
		(REPLACEMENT SHEET)
7-10-15	2	FOUNDATION DRAIN PROFILES REVISE SCHEDULES

EMERSON PARCEL G-1

L.E.E.D. BUILDING
5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT McCUNE WALKER INC
200 EAST PENNSYLVANIA AVENUE • TOWSON, MD 21286
P: 410 296 3333 F: 410 296 4705 WWW.DMW.COM
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL #
REVITZ PROPERTY		PARCEL G-1 / PAR. 165

PLAT# OR L/F	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903

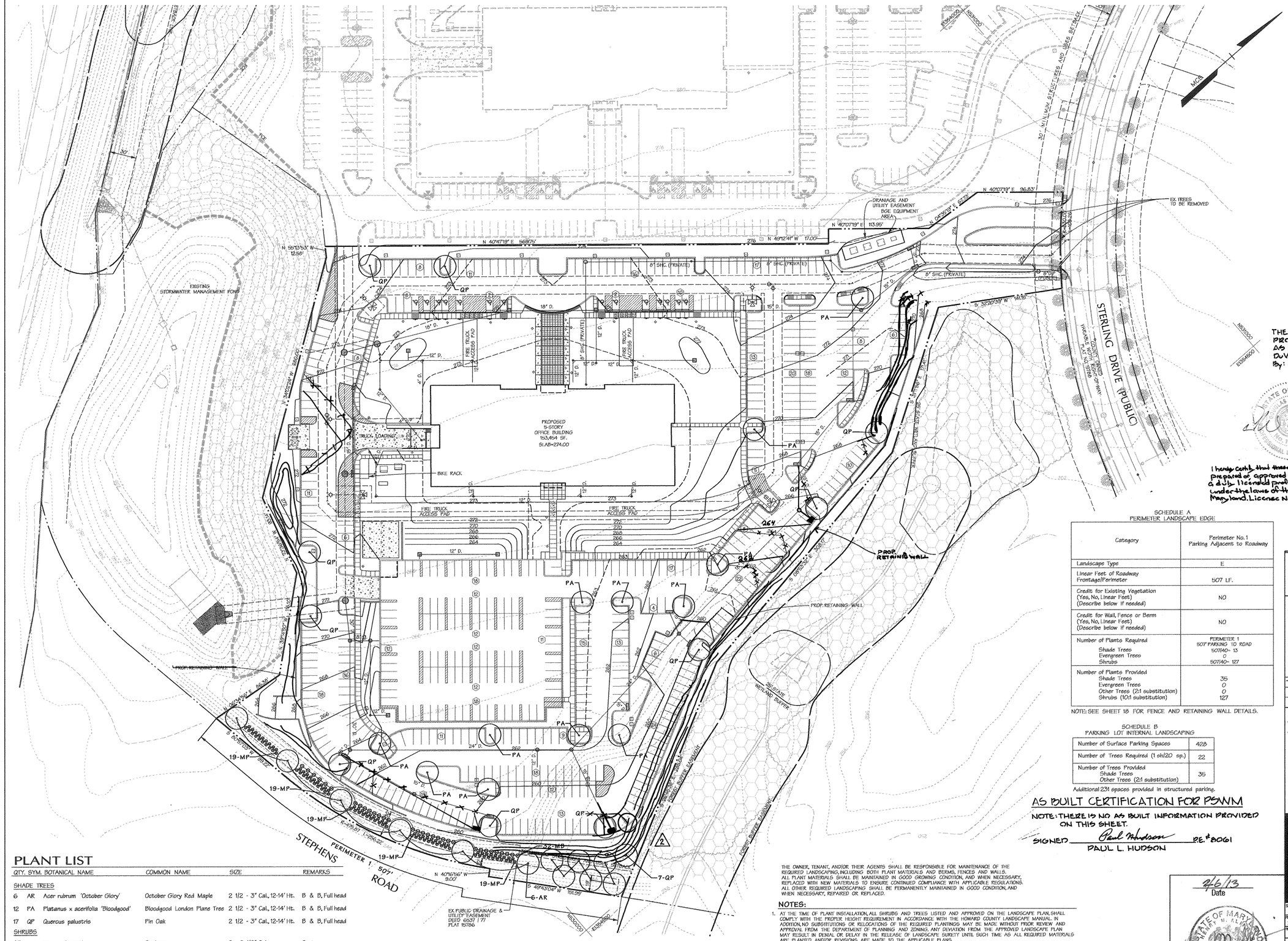
WATER CODE — SEWER CODE

TITLE: **SANITARY SEWER PROFILE AND DETAILS**

Des. By THR/JDF	Scale AS SHOWN	Proj. No. 95054.3
Drn. By JSS	Date 6-16-11	16 of ~~25~~
Chk. By	Approved	

SDP-11-025 31

95054\95054.3\ENGR\SDP Sheets\95054.3\SDP16.dwg 16:48:32 2015



LEGEND

- PLATTED PROPERTY BOUNDARY
- PROPERTY BOUNDARY
- EX. RIGHT OF WAY
- ADJACENT PROPERTY BOUNDARY
- EX. ROADS AND WALKS
- 280 — EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- FOREST CONSERVATION EASEMENT
- LIMIT OF DISTURBANCE
- PROP. BUILDING
- PROP. CURB / EDGE OF PAVING
- PROP. DEPRESSED CURB
- 280 — PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- PROPOSED OVERSTORY/SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUB

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET. AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. Duval - Reg.# 10764

10-08-14

For Revision #2 Only
7-13-15
Date

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. 8061 Exp Date 8-26-15

Professional Engr. No. 8061

SCHEDULE A
PERIMETER LANDSCAPE EDGE

Category	Perimeter No. 1 Parking Adjacent to Roadway
Landscape Type	E
Linear Feet of Roadway Frontage/Perimeter	507 LF.
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	NO
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	NO
Number of Plants Required Shade Trees Evergreen Trees Shrubs	PERIMETER 1 507' PARKING TO ROAD 507'/40= 13 0 507'/40= 127
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)	 35 0 0 127

NOTE: SEE SHEET 18 FOR FENCE AND RETAINING WALL DETAILS.

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

Number of Surface Parking Spaces	428
Number of Trees Required (1 sh/20 sp.)	22
Number of Trees Provided Shade Trees Other Trees (2:1 substitution)	 35

Additional 231 spaces provided in structured parking.

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED Paul Hudson P.E.# 8061
PAUL L. HUDSON

2/6/13
Date

Landscape Arch. No. 505

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/25/13

DIRECTOR — DATE 3/7/13

Date	No.	Revision Description
7-10-15	A	REVISE TREE LOCATION

EMERSON PARCEL G-1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT MCCUNE WALKER INC
210 EAST PENNSYLVANIA AVENUE
A TEAM OF LAND PLANNERS, LANDSCAPE ARCHITECTS, ENGINEERS, SURVEYORS

SUBDIVISION NAME	SECTION / AREA	LOT/PARCEL #
REVITZ PROPERTY		PARCEL G-1 / PAR. 165

PLAT# OR LIT	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903

WATER CODE — SEWER CODE

TITLE
LANDSCAPE PLAN

Des. By THR/JDF	Scale 1" = 50'	Proj. No. 95054.3	
Drn. By JSS	Date 6-16-11	17 of ~~23~~ 25	
Chk. By	Approved		

SDP-11-025

31

PLANT LIST

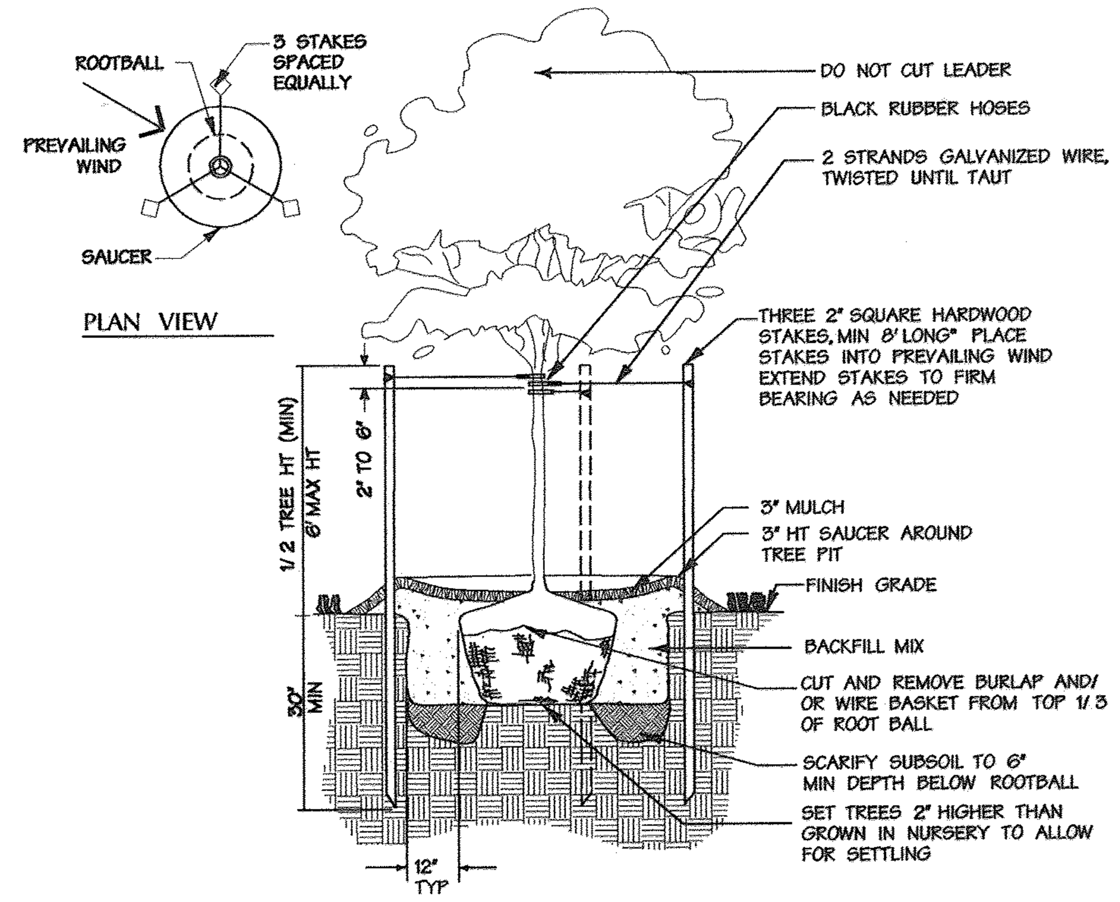
QTY.	SYM.	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
SHADE TREES					
6	AR	Acer rubrum 'October Glory'	October Glory Red Maple	2 1/2 - 3" Cal., 12-14' Ht.	B & B, Full head
12	PA	Platanus x acerifolia 'Bloodgood'	Bloodgood London Plane Tree	2 1/2 - 3" Cal., 12-14' Ht.	B & B, Full head
17	QP	Quercus palustris	Pin Oak	2 1/2 - 3" Cal., 12-14' Ht.	B & B, Full head
SHRUBS					
95	MP	Myrica Pennsylvanica	Bayberry	2 - 2 1/2" Cal.	Cont.
32	MB	Mahonia Bealei	Leatherleaf Mahonia	1 1/2 - 2" Cal.	Cont.

NOTES:
1. PLANT MATERIAL PROVIDED ABOVE COUNTY REQUIREMENTS ARE NEEDED TO FULFILL THE EMERSON CORPORATE COMMONS DESIGN AND DEVELOPMENT STANDARDS FOR LANDSCAPE REQUIREMENTS.

THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

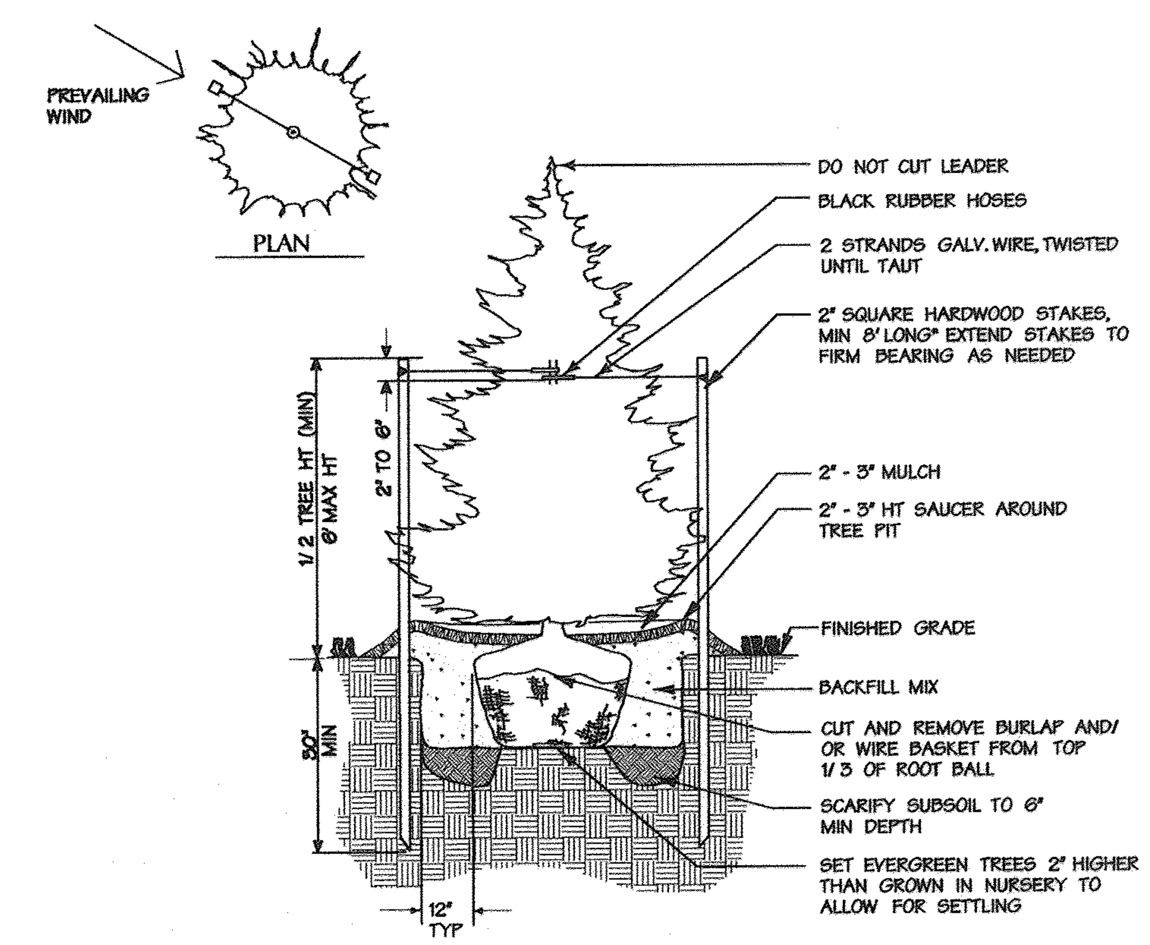
NOTES:

1. AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
2. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE EMERSON CORPORATE COMMONS LANDSCAPE DESIGN CRITERIA. FINANCIAL LANDSCAPE SURETY, IN THE AMOUNT OF $14,340 (UNLESS COUNTS CHANGE) IS TO BE POSTED FOR 35 SHADE TREES (@$300 each) AND 127 SHRUBS. SURETY MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT.
3. EMERSON IS GOVERNED BY COVENANTS WHICH REQUIRE ADDITIONAL PLANT MATERIAL AND APPROVAL FROM THE HRD ARCHITECTURAL REVIEW COMMITTEE. PLEASE REFER TO PLAN APPROVAL LETTER FROM HRD.
4. ALL PROPERTY PERIMETERS, EXCEPT STERLING DRIVE AND STEPHENS ROAD, ARE EXEMPT FROM LANDSCAPING REQUIREMENTS SINCE THIS PARCEL IS INTERNAL TO THE EMERSON (REVITZ PROPERTY) SUBDIVISION.



Deciduous Tree Planting Detail

Not to Scale



Evergreen Tree Planting Detail

Not to Scale

DEVELOPER'S | BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL.

I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

NAME [signature] 2/8/13 DATE

"THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL."

PROVIDE THE FOLLWING NOTE ON THE LANDSCAPE PLAN:

THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

PLANTING SPECIFICATIONS

1. MAINTAIN POSITIVE DRAINAGE OUT OF PLANTING BEDS AT A MINIMUM 2% SLOPE. ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR OWNER.
2. THE CONTRACTOR SHALL NOTIFY MISS UTILITY (800-257-7777) A MINIMUM OF THREE WORKING DAYS PRIOR TO PLANTING AND CONSTRUCTION.
3. THE CONTRACTOR IS ADVISED OF THE EXISTENCE OF UNDERGROUND UTILITIES ON THE SITE. THEIR EXACT LOCATION SHALL BE VERIFIED IN THE FIELD WITH THE OWNER OR GENERAL CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY DIGGING OPERATIONS. IN THE EVENT THEY ARE UNCOVERED, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE TO UTILITIES AND SUCH DAMAGE SHALL NOT RESULT IN ANY ADDITIONAL EXPENSES TO THE OWNER.
4. IF UTILITY LINES ARE ENCOUNTERED IN EXCAVATION OF TREE PITS, OTHER LOCATIONS FOR TREES SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION. NO CHANGES OF LOCATION SHALL BE MADE WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT.
5. PLANT MATERIAL SUBSTITUTIONS WILL NOT BE ACCEPTED WITHOUT WRITTEN CONSENT OF THE OWNER OR LANDSCAPE ARCHITECT.
6. PLANT QUANTITIES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES PRIOR TO THE COMMENCEMENT OF WORK. SOD QUANTITY TAKE-OFFS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING. THE CONTRACTOR SHALL FURNISH PLANT MATERIAL IN SIZES AS SPECIFIED IN PLANT LIST.
7. PLANT MATERIAL SUBSTITUTIONS WILL NOT BE ACCEPTED WITHOUT WRITTEN CONSENT OF THE OWNER OR LANDSCAPE ARCHITECT.
8. ALL PLANTS (B&B OR CONTAINER) SHALL BE PROPERLY IDENTIFIED BY WEATHER-PROOF LABELS SECURELY ATTACHED THERETO BEFORE DELIVERY TO PROJECT SITE. LABELS SHALL IDENTIFY PLANTS BY NAME, SPECIES, AND SIZE. LABELS SHALL NOT BE REMOVED UNTIL THE FINAL INSPECTION BY THE LANDSCAPE ARCHITECT OR AGENT IN CHARGE.
9. ANY MATERIAL AND/OR WORK MAY BE REJECTED BY THE LANDSCAPE ARCHITECT IF IT DOES NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS. ALL REJECTED MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
10. THE LANDSCAPE CONTRACTOR SHALL STAKE ALL MATERIAL LOCATED ON THE SITE FOR REVIEW AND POSSIBLE ADJUSTMENTS BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING. ALL LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT BEFORE EXCAVATION.
11. THE LANDSCAPE ARCHITECT OR OWNER SHALL HAVE THE RIGHT, AT ANY STAGE OF THE OPERATIONS, TO REJECT ANY AND ALL WORK AND MATERIAL WHICH, IN HIS OPINION, DOES NOT MEET THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS.
12. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR STABILITY AND CONDITIONS OF ALL TREES AND SHRUBS AND SHALL BE LEGALLY LIABLE FOR ANY DAMAGE CAUSED BY INSTABILITY OF ANY PLANT MATERIALS.
13. ALL PROPOSED TREES TO BE INSTALLED EITHER ENTIRELY IN OR ENTIRELY OUT OF PLANTING BEDS. PLANTING BED LINES ARE NOT TO BE OBSTRUCTED. ALL SHRUBS AND GROUND COVER AREAS SHALL BE PLANTED IN CONTINUOUS PREPARED BED AND TOP DRESSED WITH 3-INCH SHREDDED HARDWOOD MULCH. MULCH SHALL HAVE BEEN SHREDDED WITHIN THE LAST SIX MONTHS.
14. ALL PLANTING BEDS ADJACENT TO LAWN, SOD, OR SEEDED AREAS SHALL BE SPADE EDGED.
15. ALL SOD SHALL BE OBTAINED FROM AREAS HAVING GROWING CONDITIONS FAMILIAR TO AREAS TO BE COVERED. AREAS TO BE SODDED SHALL BE RAKED OF STONES AND DEBRIS. DEBRIS AND STONES OVER 1 INCH IN DIAMETER SHALL BE REMOVED FROM THE SITE. ALL DAMAGED SOD WILL BE REJECTED. ALL SOD MUST BE PLACED WITH STAGGERED JOINTS, TIGHTLY BUTTED, WITH NO INEQUALITIES IN GRADE. PLACE ALL SOD IN ROWS AT RIGHT ANGLES TO SLOPES (WHERE APPLICABLE).
16. MAINTENANCE SHALL BEGIN AFTER EACH PLANT HAS BEEN INSTALLED AND SHALL CONTINUE UNTIL 90 DAYS AFTER FINAL ACCEPTANCE BY THE ARCHITECT OR OWNER REPRESENTATIVE. MAINTENANCE INCLUDES MOWING OF TURF, WATERING, PRUNING, WEEDING, FERTILIZING, MULCHING, REPLACEMENT OF SICK OR DEAD PLANTS, AND ANY OTHER CARE NECESSARY FOR THE PROPER GROWTH OF THE PLANT MATERIAL. THE CONTRACTOR MUST BE ABLE TO PROVIDE CONTINUED MAINTENANCE IF REQUESTED BY THE OWNER.
17. UPON COMPLETION OF ALL LANDSCAPING, AN ACCEPTANCE OF THE WORK SHALL BE HELD. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OR OWNER FOR SCHEDULING THE INSPECTION AT LEAST SEVEN (7) DAYS PRIOR TO THE ANTICIPATED INSPECTION DATE.
18. THE LIFE AND ROBUST HEALTH OF ALL TREES, SHRUBS AND GROUND COVER SHALL BE GUARANTEED FOR 12 MONTHS FROM THE DATE OF ACCEPTANCE.
19. MAINTAIN POSITIVE DRAINAGE OUT OF PLANTING BEDS AT A MINIMUM 2% SLOPE. ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR OWNER.
20. THE CONTRACTOR SHALL INSURE THAT HIS WORK DOES NOT INTERRUPT ESTABLISHED OR PROJECTED DRAINAGE PATTERNS.
21. THE CONTRACTOR SHALL INSURE ADEQUATE VERTICAL DRAINAGE IN ALL PLANT BEDS AND PLANTERS.
22. THE CONTRACTOR SHALL REVIEW ARCHITECTURAL/ENGINEERING PLANS TO BECOME THOROUGHLY FAMILIAR WITH GRADING AND SURFACE UTILITIES.
23. ALL EQUIPMENT AND TOOLS SHALL BE PLACED SO AS NOT TO INTERFERE OR HINDER THE PEDESTRIAN AND VEHICULAR TRAFFIC FLOW.
24. THE CONTRACTOR SHALL COORDINATE WITH LIGHTING AND IRRIGATION CONTRACTORS REGARDING TIMING OF INSTALLATION OF PLANT MATERIAL.
25. DURING PLANTING OPERATIONS, EXCESS WASTE MATERIALS SHALL BE PROMPTLY AND FREQUENTLY REMOVED FROM THE SITE.
26. THE CONTRACTOR SHALL DISPOSE OF STUMPS AND MAJOR ROOTS OF ALL PLANTS TO BE REMOVED. ANY DEPRESSIONS CAUSED BY REMOVAL OPERATIONS SHALL BE REFILLED WITH FERTILE, FRIABLE SOIL PLACED AND COMPACTED SO AS TO REESTABLISH PROPER GRADE FOR NEW PLANTING AND/OR LAWN AREAS.
27. ALL AREAS WITHIN CONTRACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTINGS AND MULCH SHALL BE FINE GRADED AND SEEDED IN ACCORDANCE WITH PLANTING AND CONSTRUCTION SPECIFICATIONS.
28. EVERY POSSIBLE SAFEGUARD SHALL BE TAKEN TO PROTECT BUILDING SURFACES, EQUIPMENT, AND FURNISHING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR INJURY TO PERSON OR PROPERTY WHICH MAY OCCUR AS A RESULT OF HIS NEGLIGENCE IN THE EXECUTION OF THE WORK.
29. THE CONTRACTOR IS RESPONSIBLE FOR TESTING PROJECT SOILS. THE CONTRACTOR IS TO PROVIDE A CERTIFIED SOILS REPORT TO THE OWNER. THE CONTRACTOR SHALL VERIFY THAT THE SOILS ON SITE ARE ACCEPTABLE FOR THE PROPER GROWTH OF THE PROPOSED PLANT MATERIAL. SHOULD THE CONTRACTOR FIND POOR SOIL CONDITIONS, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE SOIL AMENDMENTS AS NECESSARY. THESE AMENDMENTS SHALL INCLUDE, BUT NOT BE LIMITED TO, FERTILIZERS, LIME, AND TOPSOIL. PROPER PLANTING SOILS MUST BE VERIFIED PRIOR TO PLANTING OF MATERIALS.
30. PLANTING MIX:
   A) PLANTING MIX SHALL BE PREPARED AT APPROVED ON-SITE STAGING AREA USING APPROVED ON-SITE EXISTING SOIL. MIX MINIMUM QUANTITIES OF 20 CUBIC YARDS OR SUFFICIENT MIX FOR ENTIRE JOB IF LESS THAN 20 CUBIC YARDS IS REQUIRED.

   B) THOROUGHLY MIXED IN THE FOLLOWING PROPORTIONS FOR TREE AND SHRUB PLANTING MIX:
   .5 CY EXISTING SOIL
   .2 CY SHARP SAND
   .3 CY WOOD RESIDUALS
   4.5 LBS TREBLE SUPERPHOSPHATE
   5 LBS DOLMONITE LIMESTONE (ELIMINATE FOR ACID LOVING PLANTS)

   C) FOR BED PLANTING, SHRUBS AND GROUNDCOVER SPACES 24 INCHES OR CLOSER, INCORPORATE THE FOLLOWING INGREDIENTS PER 20 SF AND INCORPORATE INTO TOP 8 INCHES OF EXISTING SOILS BY ROTOTILLING OR SIMILAR METHOD OF INCORPORATION.
   .2 CY SHARP SAND
   .3 CY ORGANIC MATERIAL
   4.5 LBS TREBLE SUPERPHOSPHATE
   5 LBS DOLMONITE LIMESTONE (ELIMINATE FOR ACID LOVING PLANTS)
31. PLANTS SHALL CONFORM TO CURRENT "AMERICAN STANDARDS FOR NURSERY STOCK" BY AMERICAN ASSOCIATION OF NURSERYMEN (AAN), PARTICULARLY WITH REGARD TO SIZE, GROWTH, SIZE OF BALL, AND DENSITY OF BRANCH STRUCTURE. PLANT MATERIAL SHALL BE TAGGED AT THE SOURCE BY THE LANDSCAPE ARCHITECT UNLESS THIS REQUIREMENT IS SPECIFICALLY WAIVED.
32. ALL PLANTING PROCEDURES SHALL CONFORM TO LANDSCAPE CONTRACTORS ASSOCIATION (LCA) SPECIFICATION GUIDELINES FOR BALTIMORE / WASHINGTON METROPOLITAN AREA (LATEST EDITION). LCA LANDSCAPE SPECIFICATION GUIDELINES (4TH ED.) SECTION 1.16, REPLACEMENT AND CONDITIONS, "ITEM F. PLANT LOSSES DUE TO ABNORMAL WEATHER" DOES NOT APPLY.
33. ALL PLANTING PROCEDURES SHALL CONFORM TO DAFT MCCUNE WALKER INC. SPECIFICATIONS.
34. PLANTING RECOMMENDATIONS DELINEATED IN DMW'S STANDARD SPECIFICATIONS AND PLANTING DETAILS, WHICH ARE INCLUDED OR REFERENCED IN THESE DRAWINGS, ARE INTENDED AS A GENERAL GUIDE. THESE RECOMMENDATIONS ARE NOT BASED UPON A COMPREHENSIVE SOIL TEST OR AN EVALUATION OF THE POST-CONSTRUCTION CONDITIONS IN WHICH THE LANDSCAPE CONTRACTOR WILL BE EXPECTED TO WORK.

   IN ORDER FOR PLANT MATERIAL TO THRIVE, A SOIL TEST MAY BE NECESSARY. SOIL TESTING SHOULD ADDRESS MICRO- AND MACRO- NUTRIENT LEVELS, SOIL PH, AND A USDA SOIL TEXTURE CLASSIFICATION. FURTHER, UNDERLYING SOIL CONDITIONS IN AREAS THAT HAVE BEEN DISTURBED BY CONSTRUCTION MAY CONTAIN COMPRESSED AND POORLY DRAINED SOIL, AND THEY MAY LACK ORGANIC MATERIAL OR MICRO-ORGANISMS NECESSARY FOR SUCCESSFUL PLANT GROWTH.

   IF THESE CONDITIONS APPEAR TO THE CONTRACTOR TO BE A LIMITATION TO PLANT GROWTH, THE CONTRACTOR IS ENCOURAGED TO MAKE RECOMMENDATIONS FOR A SOIL AMENDMENT PROGRAM SUBJECT TO THE APPROVAL OF THE OWNER AND THE LANDSCAPE ARCHITECT.

   SUCCESS OF THE LANDSCAPE PLANTING WILL DEPEND UPON A COMBINATION OF NATURAL RAINFALL AND SUPPLEMENTAL IRRIGATION. IT SHOULD BE NOTED THAT RRIGATION SHOULD BE APPLIED CAUTIOUSLY, AS NEW PLANTINGS ARE PARTICULARLY VULNERABLE TO OVER-WATERING. WATER CONDITIONS SHOULD BE MONITORED SIX INCHES BELOW THE SURFACE, AND POCKET PLANTED PLANT MATERIAL SHOULD BE CAREFULLY INVESTIGATED FOR ACCUMULATION OF WATER IN THE PLANTING PITS.

   ANOTHER KEY INGREDIENT TO SUCCESSFUL PLANTING IS THE USE OF PLANT MATERIAL THAT HAS BEEN GROWN IN SIMILAR LIGHT AND WATER CONDITIONS TO THOSE PROPOSED. IN PARTICULAR, GROUNDCOVERS, ANNUALS, AND PERENNIALS -- WHICH MAY HAVE BEEN GROWN UNDER PROTECTED SHADING OR COVER AND ARE THEN SUBJECTED TO FULL WEATHER CONDITIONS -- MAY NEED CONDITIONING PRIOR TO INSTALLATION.

THERE IS NO AS BUILT INFORMATION PRESENTED ON THIS SHEET.
AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. DuVal - REG.# 10764

STATE OF MARYLAND DOUGLAS WELTY DU VAL No. 10764 PROFESSIONAL LAND SURVEYOR

10-08-14

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PRESENTED ON THIS SHEET.

SIGNED: [signature] P.E.# 8061
PAUL L. HUDSON

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. 8061 Exp. Date 8-26-15

For Revision No. 2 Only

7-19-15

STATE OF MARYLAND PAUL LEE HUDSON No. 8061 REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 8061

2/6/13
Date

STATE OF MARYLAND HENRY M. ALINGER NO. 505 REGISTERED LANDSCAPE ARCHITECT

Landscape Arch. No. 505

~~APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS~~

~~CHIEF, BUREAU OF HIGHWAYS DATE~~

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/25/13

DIRECTOR — DATE 3/7/13

Date	No.	Revision Description

EMERSON PARCEL G-1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

DMW
DAFT MCCUNE WALKER INC

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL #
REVITZ PROPERTY		PARCEL G-1 / PAR. 165

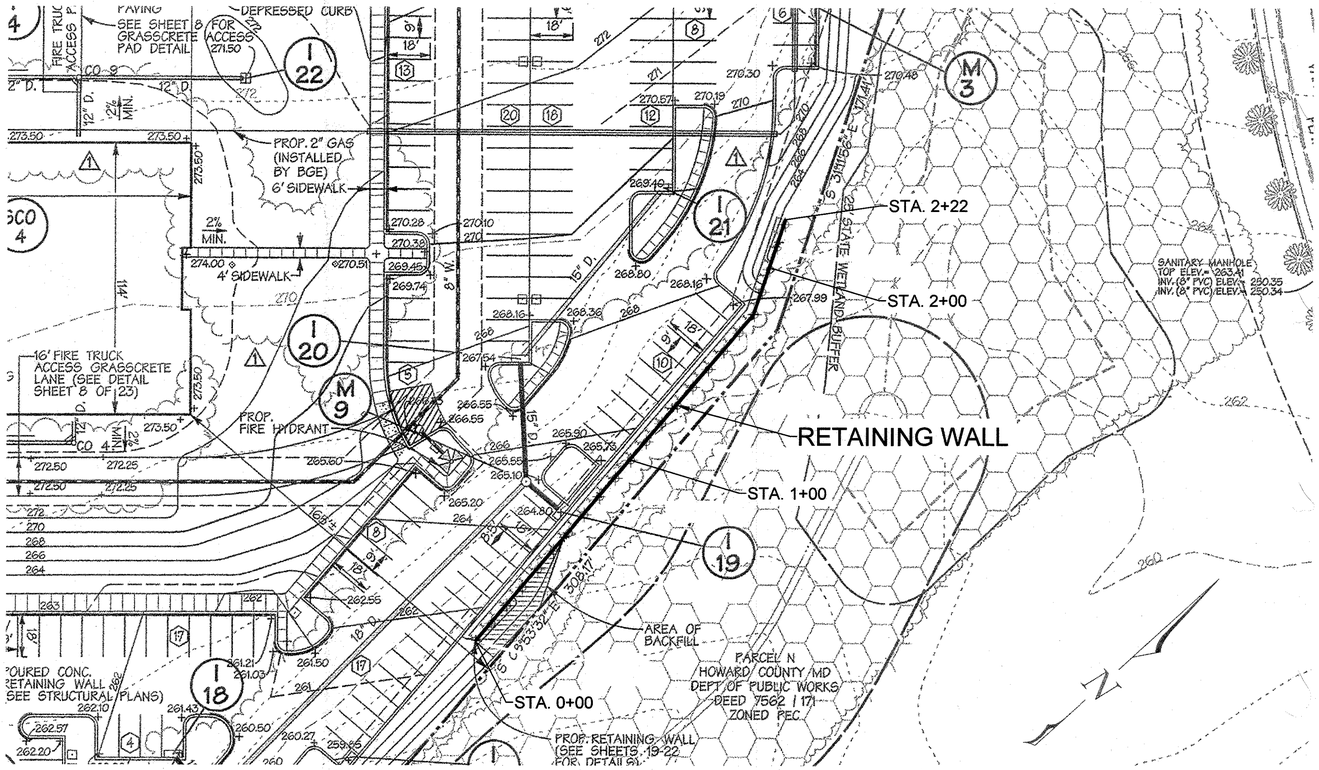
PLAT# OR L/F	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903

WATER CODE | SEWER CODE

TITLE
LANDSCAPE DETAILS

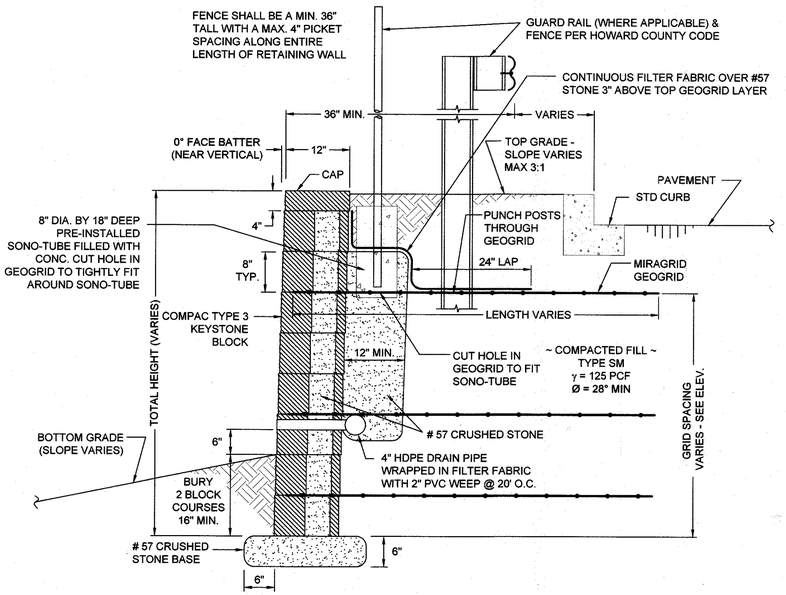
Des. By	THR/JDF	Scale	NTS	Proj. No.	95054.3
Drn. By	JSS	Date	6-16-11	18 of ~~23~~ ~~25~~ 31	
Chk. By		Approved			

SDP-11-025



WALL LOCATION PLAN

1" = 30'



TYPICAL WALL SECTION

N.T.S.

SPECIFICATIONS

MODULAR CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL

1.01 DESCRIPTION

A. WORK SHALL CONSIST OF FURNISHING AND CONSTRUCTION OF A MODULAR RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN, AND DIMENSIONS SHOWN ON THE PLANS.

B. WORK INCLUDES PREPARING FOUNDATION SOIL, FURNISHING AND INSTALLING LEVELING PAD, UNIT DRAINAGE FILL AND BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS.

C. WORK INCLUDES FURNISHING AND INSTALLING GEOGRID SOIL REINFORCEMENT OF THE TYPE, SIZE, LOCATION, AND LENGTHS DESIGNATED ON THE CONSTRUCTION DRAWINGS.

1.02 DELIVERY, STORAGE AND HANDLING

A. CONTRACTOR SHALL CHECK ALL MATERIALS UPON DELIVERY TO ASSURE THAT THE PROPER TYPE, GRADE, COLOR, AND CERTIFICATION HAS BEEN RECEIVED.

B. CONTRACTOR SHALL PROTECT ALL MATERIALS FROM DAMAGE DUE TO JOB SITE CONDITIONS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. DAMAGED MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK.

PART 2: PRODUCTS

2.01 MODULAR CONCRETE RETAINING WALL UNITS

A. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING ARCHITECTURAL REQUIREMENTS:

FACE COLOR - CONCRETE GRAY - STANDARD MANUFACTURERS' COLOR MAY BE SPECIFIED BY THE OWNER.

FACE FINISH - SCULPTURED ROCK FACE IN ANGULAR TRI-PLANER OR FLAT CONFIGURATION. OTHER FACE FINISHES WILL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL OF OWNER.

BOND CONFIGURATION - RUNNING WITH BONDS NOMINALLY LOCATED AT MIDPOINT VERTICALLY ADJACENT UNITS, IN BOTH STRAIGHT AND CURVED ALIGNMENTS. EXPOSED SURFACES OF UNITS SHALL BE FREE OF CHIPS, CRACKS OR OTHER IMPERFECTIONS WHEN VIEWED FROM A DISTANCE OF 10 FEET UNDER DIFFUSED LIGHTING.

B. MODULAR CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1372 - STANDARD SPECIFICATIONS FOR SEGMENTAL RETAINING WALL UNITS.

C. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING STRUCTURAL AND GEOMETRIC REQUIREMENTS MEASURED IN ACCORDANCE WITH APPROPRIATE REFERENCES:

COMPRESSIVE STRENGTH = 3000 PSI MINIMUM; ABSORPTION = 8% MAXIMUM (6% IN NORTHERN STATES) FOR STANDARD WEIGHT AGGREGATES;

DIMENSIONAL TOLERANCES = ±1/8" FROM NOMINAL UNIT DIMENSIONS NOT INCLUDING ROUGH SPLIT FACE, ±1/16"

UNIT HEIGHT - TOP AND BOTTOM PLANES; UNIT SIZE - 8" (H) X 18" (W) X 12 (D) MINIMUM;

UNIT WEIGHT - 75 LBS/UNIT MINIMUM FOR STANDARD WEIGHT AGGREGATES;

INTER-UNIT SHEAR STRENGTH - 1000 PLF MINIMUM AT 2 PSI NORMAL PRESSURE; AT 2 PSI NORMAL FORCE.

GEOGRID/UNIT PEAK CONNECTION STRENGTH - 1000 PLF MINIMUM

D. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING CONSTRUCTABILITY REQUIREMENTS: (IF APPLICABLE)

VERTICAL SETBACK = 1/8"± PER COURSE (NEAR VERTICAL) OR 1"+ PER COURSE PER THE DESIGN;

ALIGNMENT AND GRID POSITIONING MECHANISM - FIBERGLASS PINS, TWO PER UNIT MINIMUM;

MAXIMUM HORIZONTAL GAP BETWEEN ERECTED UNITS SHALL BE - 1/2 INCH.

2.02 SHEAR CONNECTORS (IF APPLICABLE)

A. SHEAR CONNECTORS SHALL BE 1/2 INCH DIAMETER THERMOSET ISOPTHALIC POLYESTER RESIN-PROTRUDED FIBERGLASS REINFORCEMENT RODS OR EQUIVALENT TO PROVIDE CONNECTION BETWEEN VERTICALLY AND HORIZONTALLY ADJACENT UNITS. STRENGTH OF SHEAR CONNECTORS BETWEEN VERTICAL ADJACENT UNITS SHALL BE APPLICABLE OVER A DESIGN TEMPERATURE OF 10 DEGREES F TO + 100 DEGREES F. B. SHEAR CONNECTORS SHALL BE CAPABLE OF HOLDING THE GEOGRID IN THE PROPER DESIGN POSITION DURING GRID PRE-TENSIONING AND BACKFILLING.

2.03 BASE LEVELING PAD MATERIAL

A. MATERIAL SHALL CONSIST OF A COMPACTED #57 CRUSHED STONE BASE AS SHOWN ON THE CONSTRUCTION DRAWINGS.

2.04 UNIT DRAINAGE FILL

A. UNIT DRAINAGE FILL SHALL CONSIST OF #57CRUSHED STONE

2.05 REINFORCED BACKFILL

A. REINFORCED BACKFILL SHALL TYPE SM, BE FREE OF DEBRIS AND MEET THE FOLLOWING GRADATION TESTED IN ACCORDANCE WITH ASTM D-422 AND MEET OTHER PROPERTIES SHOWN ON THE PLAN:

SIEVE SIZE	PERCENT PASSING
2 INCH	100-75
3/4 INCH	100-75
NO. 40	0-60
NO. 200	0-40

PLASTICITY INDEX (PI) <10 AND LIQUID LIMIT <40 PER ASTM D-4318.

B. MATERIAL CAN BE SITE EXCAVATED SOILS WHERE THE ABOVE REQUIREMENTS CAN BE MET. UNSUITABLE SOILS FOR BACKFILL (HIGH PLASTIC CLAYS OR ORGANIC SOILS) SHALL NOT BE USED IN THE REINFORCED SOIL MASS.

2.06 GEOGRID SOIL REINFORCEMENT

A. GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF GEOGRIDS MANUFACTURED SPECIFICALLY FOR SOIL REINFORCEMENT APPLICATIONS AND SHALL BE MANUFACTURED FROM HIGH TENACITY POLYESTER YARN.

2.07 DRAINAGE PIPE

A. THE DRAINAGE PIPE SHALL BE PERFORATED CORRUGATED HDPE PIPE MANUFACTURED IN ACCORDANCE WITH ASTM D-1248.

PART 3 EXECUTION

3.01 EXCAVATION

A. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. OWNER'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSPECTING AND APPROVING THE EXCAVATION PRIOR TO PLACEMENT OF LEVELING MATERIAL OR FILL SOILS.

3.02 BASE LEVELING PAD

A. LEVELING PAD MATERIAL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. TO A MINIMUM THICKNESS OF 6 INCHES AND EXTEND LATERALLY A MINIMUM OF 6" IN FRONT AND BEHIND THE MODULAR WALL UNIT.

B. LEVELING PAD SHALL BE PREPARED TO INSURE FULL CONTACT TO THE BASE SURFACE OF THE CONCRETE UNITS.

3.03 MODULAR UNIT INSTALLATION

A. FIRST COURSE OF UNITS SHALL BE PLACED ON THE LEVELING PAD AT THE APPROPRIATE LINE AND GRADE. ALIGNMENT AND LEVEL SHALL BE CHECKED IN ALL DIRECTIONS AND INSURE THAT ALL UNITS ARE IN FULL CONTACT WITH THE BASE AND PROPERLY SEATED.

B. PLACE THE FRONT OF UNITS SIDE-BY-SIDE. DO NOT LEAVE GAPS BETWEEN ADJACENT UNITS. LAYOUT OF CORNERS AND CURVES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

C. INSTALL SHEAR/CONNECTING DEVICES PER MANUFACTURER'S RECOMMENDATIONS.

D. PLACE AND COMPACT DRAINAGE FILL WITHIN AND BEHIND WALL UNITS. PLACE AND COMPACT BACKFILL SOIL BEHIND DRAINAGE FILL. FOLLOW WALL ERECTION AND DRAINAGE FILL CLOSELY WITH STRUCTURE BACKFILL.

E. MAXIMUM STACKED VERTICAL HEIGHT OF WALL UNITS, PRIOR TO UNIT DRAINAGE FILL AND BACKFILL PLACEMENT AND COMPACTION, SHALL NOT EXCEED THREE COURSES.

3.04 STRUCTURAL GEOGRID INSTALLATION

A. GEOGRID SHALL BE ORIENTED WITH THE HIGHEST STRENGTH AXIS PERPENDICULAR TO THE WALL ALIGNMENT.

B. GEOGRID REINFORCEMENT SHALL BE PLACED AT THE STRENGTHS, LENGTHS, AND ELEVATIONS SHOWN ON THE CONSTRUCTION DESIGN DRAWINGS OR AS DIRECTED BY THE ENGINEER.

C. THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED BACKFILL AND ATTACHED TO THE MODULAR WALL UNITS. PLACE THE NEXT COURSE OF MODULAR CONCRETE UNITS OVER THE GEOGRID. THE GEOGRID SHALL BE PULLED TAUT, AND ANCHORED PRIOR TO BACKFILL PLACEMENT ON THE GEOGRID.

D. GEOGRID REINFORCEMENTS SHALL BE CONTINUOUS THROUGHOUT THEIR EMBEDMENT LENGTHS AND PLACED SIDE-BY-SIDE TO PROVIDE 100% COVERAGE AT EACH LEVEL. SPLICED CONNECTIONS BETWEEN SHORTER PIECES OF GEOGRID OR GAPS BETWEEN ADJACENT PIECES OF GEOGRID ARE NOT PERMITTED.

3.05 REINFORCED BACKFILL PLACEMENT

A. REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE DEVELOPMENT OF SLACK IN THE GEOGRID AND INSTALLATION DAMAGE.

B. REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT TO EXCEED 6 INCHES WHERE HAND COMPACTION IS USED, OR 8 - 10 INCHES WHERE HEAVY COMPACTION EQUIPMENT IS USED. LIFT THICKNESS SHALL BE DECREASED TO ACHIEVE THE REQUIRED DENSITY AS REQUIRED.

C. REINFORCED BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE BACKFILL MATERIAL PRIOR TO AND DURING COMPACTION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL BE + 3% TO - 3% OF OPTIMUM.

D. ONLY LIGHTWEIGHT HAND-OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE TAIL OF THE MODULAR CONCRETE UNIT.

E. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY UPON THE GEOGRID REINFORCEMENT. A MINIMUM FILL THICKNESS OF 6 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOGRID. TRACKED VEHICLE TURNING SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEOGRID.

F. RUBBER TIRED EQUIPMENT MAY PASS OVER GEOGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.

G. AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LIFT OF REINFORCED BACKFILL AWAY FROM THE WALL UNITS TO DIRECT RUNOFF AWAY FROM WALL FACE. THE CONTRACTOR SHALL NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE WALL CONSTRUCTION SITE.

3.06 CAP INSTALLATION

A. CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER ADHESIVE RECOMMENDED BY THE MANUFACTURER.

3.07 FIELD QUALITY CONTROL

A. THE OWNER SHALL ENGAGE INSPECTION AND TESTING SERVICES, INCLUDING INDEPENDENT LABORATORIES, TO PROVIDE QUALITY ASSURANCE AND TESTING SERVICES DURING CONSTRUCTION.

B. AS A MINIMUM, QUALITY ASSURANCE TESTING SHOULD INCLUDE FOUNDATION SOIL INSPECTION, SOIL AND BACKFILL TESTING, VERIFICATION OF DESIGN PARAMETERS, AND OBSERVATION OF CONSTRUCTION FOR GENERAL COMPLIANCE WITH DESIGN DRAWINGS AND SPECIFICATIONS.

THERE IS NO AS BUILT INFORMATION PRESENTED ON THIS SHEET. AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. Duval - REG.# 10764

STATE OF MARYLAND DOUGLAS W. DUVAL No. 10764 PROFESSIONAL LAND SURVEYOR

10-08-14

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PRESENTED ON THIS SHEET.

SIGNED: Paul L. Hudson P.E.# 8061
PAUL L. HUDSON

NOTES:

1. No trees shall be planted within 10 feet of the top of the retaining wall.
2. Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.
3. One soil boring shall be required every one hundred feet along the entire length of the wall. Copies of all boring reports shall be provided to the Howard County Inspector Prior to the start of construction.
4. The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
5. The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
6. Walls shall not be constructed on uncertified fill materials.
7. Walls shall not be constructed within a Howard Co. right-of-way or easement.

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. 14434, EXPIRATION DATE: 05/13/17.

STATE OF MARYLAND RICHARD N. STARR No. 14434 PROFESSIONAL ENGINEER

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11-23-15

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11-16-15

DIRECTOR — DATE 11-23-15

Date	No.	Revision Description
9/22/16	4	EMERSON CAMPUS VCP
	2	REPLACEMENT SHEET

EMERSON PARCEL G-1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

HILLIS-CARNES ENGINEERING ASSOCIATES
10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL #
REVITZ PROPERTY					LOT G-1 / PAR. 165
PLAT# OR L/F	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
20277 & 20278	20	PEC	47	6	606903
WATER CODE			SEWER CODE		

TITLE **RETAINING WALL PLAN & CONSTRUCTION DETAILS**

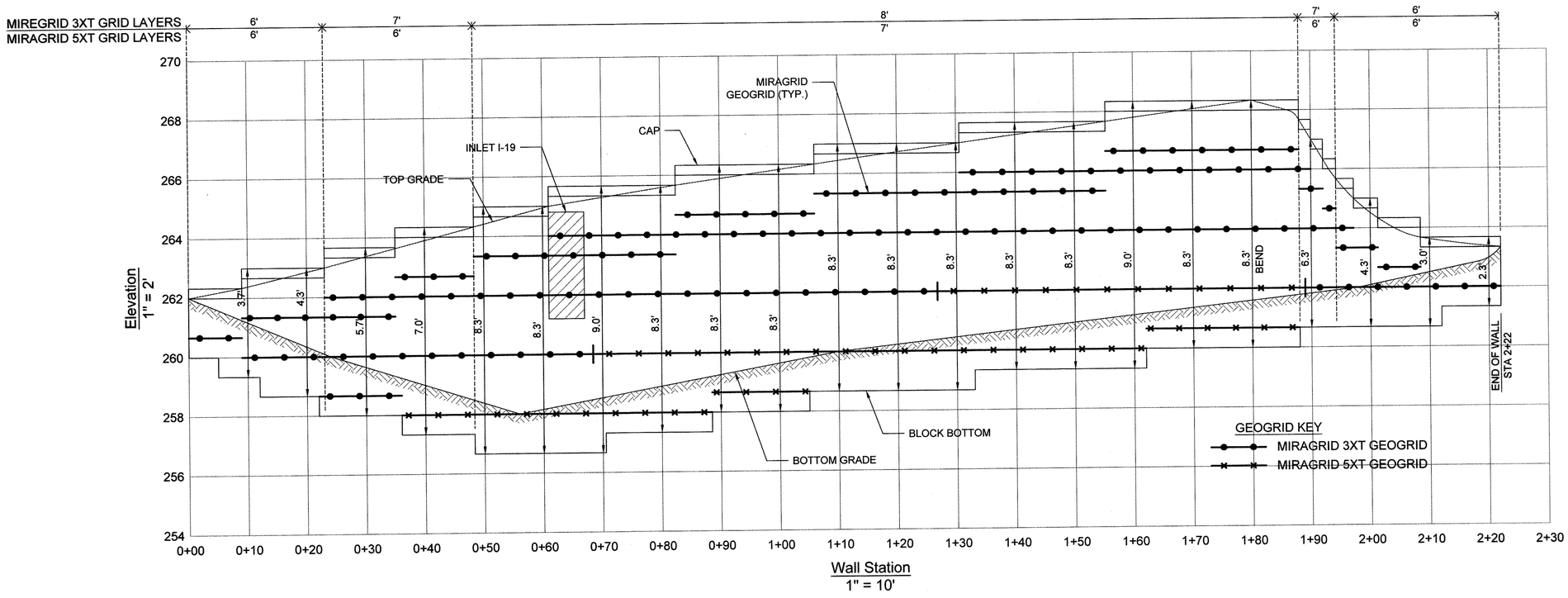
Des. By	HM	Scale	AS SHOWN	HCEA No.	11011-H
Drn. By	HM	Date	11-26-13	19 of 25	
Chk. By	RWS				

SDP-11-025

31

NOTE:
INSTALL INLET I-19 AND ASSOCIATED PIPE DURING WALL CONSTRUCTION. BACKFILL AROUND ENTIRE OUTSIDE PERIMETER OF INLET STRUCTURE FULL HEIGHT WITH A 2 FT. THICK WRAP OF COMPACTED SOIL CEMENT CONSISTING OF A RATIO OF 180 LBS. PORTLAND CEMENT THOROUGHLY MIXED WITH 1 CU. YD. OF TYPE SM SOIL AT 3% OVER OPTIMUM MOISTURE. TRIM FULL LENGTH GEOGRIDS AT FACE OF INLET STRUCTURE AND EMBED IN SOIL CEMENT. PLACE SOIL-CEMENT WITHIN 1 HOUR AFTER MIXING.

NOTE:
SLOPE TOP GEOGRID DOWN AS NEEDED TO AVOID CONFLICT WITH CURB AND PAVEMENT.



WALL ELEVATION

THERE IS NO AS BUILT INFORMATION PRESENTED ON THIS SHEET.
AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. DuVal - REG.# 10764

STATE OF MARYLAND DOUGLAS W. DUVAL No. 10764 PROFESSIONAL LAND SURVEYOR

10-08-14

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED: Paul Hudson PE# 8061
PAUL L. HUDSON

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. 14434, EXPIRATION DATE: 05/13/17.

STATE OF MARYLAND PAUL W. STAUFFER No. 14434 PROFESSIONAL ENGINEER

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 11-23-15

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 11-16-15

DIRECTOR — DATE 11-23-15

Date	No.	Revision Description
	2	REPLACEMENT SHEET

EMERSON PARCEL G-1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

HILLIS-CARNES ENGINEERING ASSOCIATES

10975 Guilford Road, Suite A — Annapolis Junction, Maryland
(410) 880-4788 — WWW.HCEA.COM — Fax: (410) 880-4098

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL #
REVITZ PROPERTY		LOT G-1 / PAR. 165

PLAT# OR L/F	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903

WATER CODE — SEWER CODE

TITLE
RETAINING WALL ELEVATION

Des. By	HM	Scale	AS SHOWN	HCEA No.	11011-H
Drn. By	HM	Date	11-26-13	20 of 25	
Chk. By	RWS				

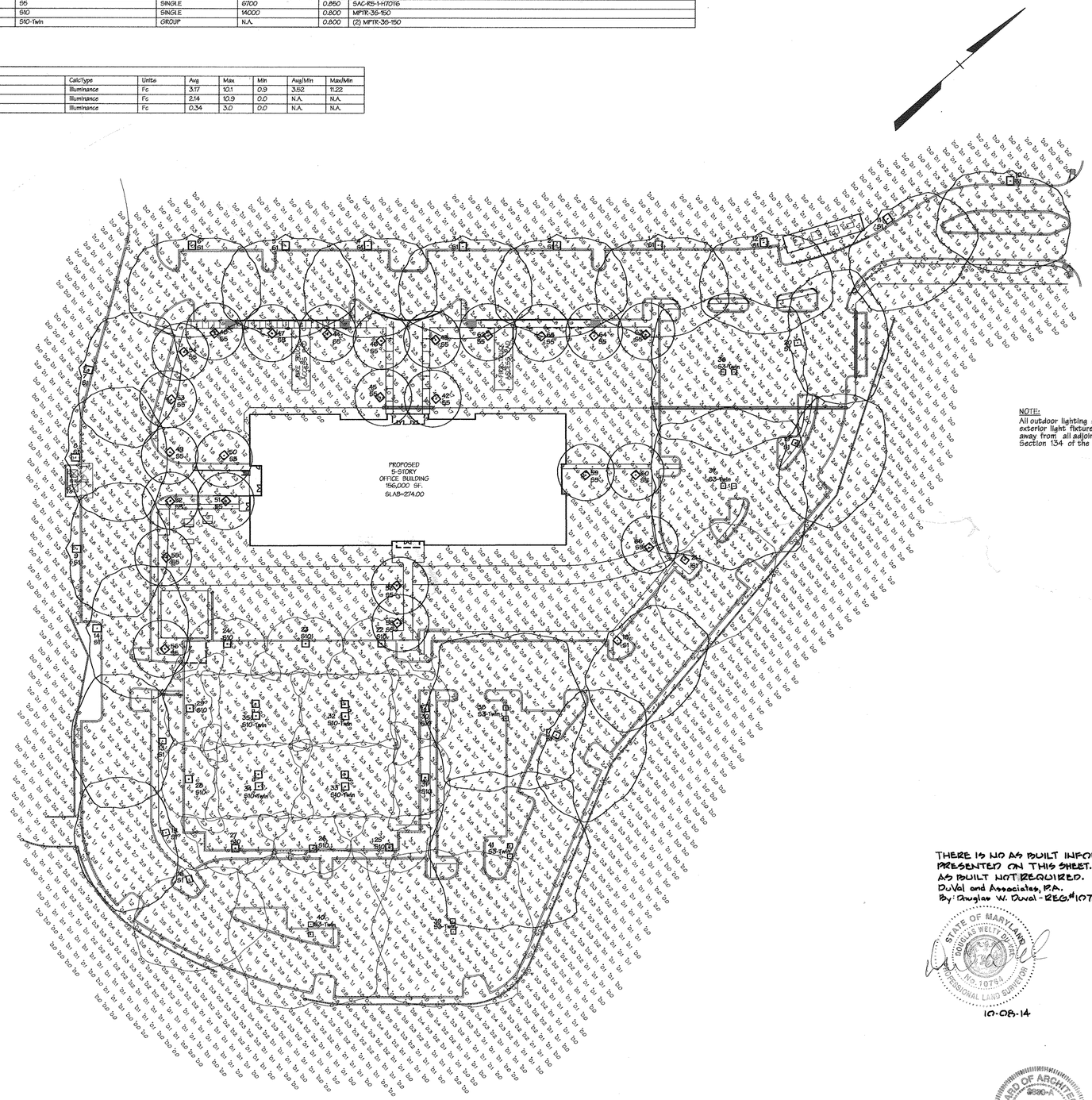
SDP-11-025

31

Luminaire Location Summary						
LumNo	Label	X	Y	Z	Orient.	Tilt
1	S1	1364045	530635	30	323.13	0
2	S1	1363987	530668	30	323.13	0
3	S1	1363934	530509	30	322.125	0
4	S1	1363879	530443	30	322.125	0
5	S1	1363832	530389	30	322.125	0
6	S1	1363778	530327	30	322.125	0
7	S1	1363801	530189	30	36.87	0
8	S1	1363861	530150	30	53.746	0
9	S1	1363911	530079	30	47.564	0
10	S1	1364204	530903	30	310.314	0
11	S1	1364159	530801	30	354.369	0
12	S1	1364103	530706	30	322.125	0
13	S1	1364086	530726	30	228.991	0
14	S1	1363975	530047	30	45	0
15	S1	1364148	529976	30	243.435	0
16	S1	1364192	529966	30	333.435	0
17	S1	1364308	530259	30	23.199	0
18	S1	1364280	530283	30	6.34	0
19	S1	1364253	530643	30	26.565	0
20	S1	1364188	530671	30	116.31	0
21	S1	1364266	530473	30	10.408	0
22	S10	1364146	530227	15	318.366	0
23	S10	1364102	530177	15	318.366	0
24	S10	1364058	530125	15	318.366	0
25	S10	1364287	530114	15	140.826	0
26	S10	1364244	530063	15	140.826	0
27	S10	1364200	530012	15	140.826	0
28	S10	1364124	530019	15	50.906	0
29	S10	1364079	530061	15	50.906	0
30	S10	1364216	530219	15	233.416	0
31	S10	1364261	530150	15	227.726	0
32	S10-Twin	1364171	530164	15	320.194	0
33	S10-Twin	1364216	530124	15	320.194	0
34	S10-Twin	1364167	530067	15	320.194	0
35	S10-Twin	1364119	530105	15	320.194	0
36	S3-Twin	1364169	530608	30	104.47	0
37	S3-Twin	1364244	530543	30	104.621	0
38	S3-Twin	1364263	530269	30	15.945	0
39	S3-Twin	1364375	530111	30	12.995	0
40	S3-Twin	1364293	530015	30	198.435	0
41	S3-Twin	1364356	530193	30	15.068	0
42	S5	1364016	530399	12	0	0
43	S5	1363977	530432	12	0	0
44	S5	1363913	530367	12	0	0
45	S5	1363987	530367	12	0	0
46	S5	1363949	530398	12	0	0
47	S5	1363881	530330	12	0	0
48	S5	1363847	530293	12	0	0
49	S5	1363903	530193	12	0	0
50	S5	1363936	530227	12	0	0
51	S5	1363969	530204	12	0	0
52	S5	1363833	530166	12	0	0
53	S5	1363869	530224	12	0	0
54	S5	1363841	530259	12	0	0
55	S5	1363966	530131	12	0	0
56	S5	1364025	530078	12	0	0
57	S5	1364120	530271	12	0	0
58	S5	1364145	530250	12	0	0
59	S5	1364152	530498	12	0	0
60	S5	1364180	530491	12	0	0
61	S5	1364180	530491	12	0	0
62	S5	1364004	530473	12	0	0
63	S5	1364094	530578	12	0	0
64	S5	1364066	530543	12	0	0
65	S5	1364035	530508	12	0	0
66	S5	1364236	530469	12	0	0

Luminaire Schedule							
Symbol		Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
S1		21	S1	SINGLE	33000	0.800	MPTR-350-MP-XX-SL COOPER TRIBUTE SINGLE WITH SPILL LIGHT CONTROL
S3-Twin		6	S3-Twin	GROUP	N.A.	0.800	(2) MPTR-350-MP-MT-4S COOPERTRIBUTE TWIN ASSEMBLY
S5		25	S5	SINGLE	6700	0.850	SAC-R5-1-H7016
S10		10	S10	SINGLE	14000	0.800	MPTR-35-150
S10-Twin		4	S10-Twin	GROUP	N.A.	0.800	(2) MPTR-35-150

Calculation Summary								
Label		CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Roof		Illuminance	Fc	3.17	10.1	0.9	3.52	11.22
Site Lighting		Illuminance	Fc	2.14	10.9	0.0	N.A.	N.A.
Spill Light		Illuminance	Fc	0.34	3.0	0.0	N.A.	N.A.



NOTE:
All outdoor lighting shall comply with the requirements of Zoning Section 134. All exterior light fixtures shall be oriented to direct light inward and downward on-site and away from all adjoining residential properties and public roads in accordance with Section 134 of the Howard County Zoning Regulations.

THERE IS NO AS BUILT INFORMATION PRESENTED ON THIS SHEET.
AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. Duval - REG.#10764

STATE OF MARYLAND
DOUGLAS WELTY DUVAL
No. 10764
PROFESSIONAL LAND SURVEYOR
10-08-14

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PRESENTED ON THIS SHEET.

SIGNED: Paul Hudson
PAUL L. HUDSON
RE#8061

BOARD OF ARCHITECTS
8890-A
RICHARD A. CONNOLLY
STATE OF MARYLAND

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/06/13

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2/25/13

DIRECTOR — DATE 3/7/13

Date	No.	Revision Description

EMERSON PARCEL G-1

L.E.E.D. BUILDING

5-STORY COMMERCIAL OFFICE BUILDING

OWNER/DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

SUBDIVISION NAME		SECTION/AREA		LOT/PARCEL #
REVITZ PROPERTY				PARCEL G-1 / P/O R. 165
PLAT# OR LOT	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606803
WATER CODE		SEWER CODE			

TITLE
SITE LIGHTING PLAN

Des. By	Scale 1"=50'	Proj. No. 95054.3
Drn. By	Date 6-16-11	23 of 23
Chk. By	Approved	

SDP-11-025 21 26 31

19505A\19505A-SITE\SITE.DWG 11-16-01 2013

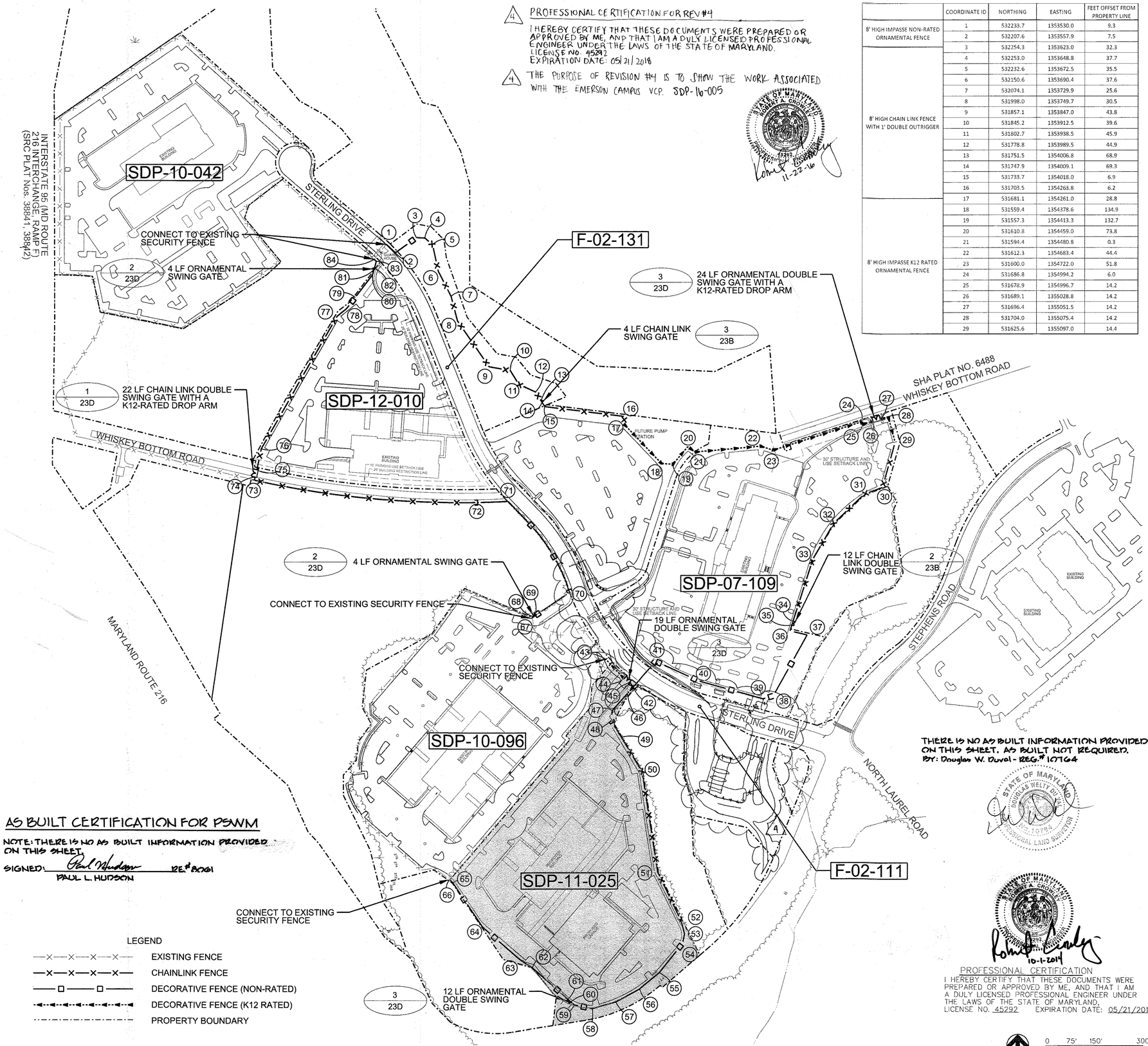
4 PROFESSIONAL CERTIFICATION FOR REV #4

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. 45292 EXPIRATION DATE: 05/21/2018

4 THE PURPOSE OF REVISION #4 IS TO SHOW THE WORK ASSOCIATED WITH THE EMERSON CAMPUS VCP. SDP-16-005

STATE OF MARYLAND ROBERT A. CROWLEY 45292 PROFESSIONAL ENGINEER

11-22-16



	COORDINATE ID	NORTHING	EASTING	FEET OFFSET FROM PROPERTY LINE
8' HIGH IMPASSE NON-RATED ORNAMENTAL FENCE	1	532233.7	1353530.0	9.3
	2	532207.6	1353557.9	7.5
8' HIGH CHAIN LINK FENCE WITH 1' DOUBLE OUTRIGGER	3	532254.3	1353623.0	32.3
	4	532253.0	1353648.8	37.7
	5	532232.6	1353672.5	35.5
	6	532150.6	1353690.4	37.6
	7	532074.1	1353729.9	25.6
	8	531998.0	1353749.7	30.5
	9	531857.1	1353847.0	43.8
	10	531845.2	1353912.5	39.6
	11	531802.7	1353938.5	45.9
	12	531778.8	1353989.5	44.9
	13	531751.5	1354006.8	68.9
	14	531747.9	1354009.1	69.3
	15	531733.7	1354018.0	6.9
	16	531703.5	1354263.8	6.2
8' HIGH IMPASSE K12 RATED ORNAMENTAL FENCE	17	531681.1	1354261.0	28.8
	18	531559.4	1354378.6	134.9
	19	531557.3	1354413.3	132.7
	20	531610.8	1354459.0	73.8
	21	531594.4	1354480.8	0.3
	22	531612.3	1354683.4	44.4
	23	531600.0	1354722.0	51.8
	24	531686.8	1354994.2	6.0
	25	531678.9	1354996.7	14.2
	26	531689.1	1355028.8	14.2
	27	531696.4	1355051.5	14.2
	28	531704.0	1355075.4	14.2
	29	531625.6	1355097.0	14.4

	COORDINATE ID	NORTHING	EASTING	FEET OFFSET FROM PROPERTY LINE
8' HIGH CHAIN LINK FENCE WITH 1' DOUBLE OUTRIGGER	29	531625.6	1355097.0	14.4
	30	531487.3	1355058.4	2.5
	31	531466.2	1355003.9	2.5
	32	531375.2	1354908.7	2.5
	33	531266.0	1354845.0	0.0
	34	531075.5	1354783.8	0.0
	35	531063.8	1354780.1	0.0
	36	531045.8	1354774.3	6.0
8' HIGH IMPASSE NON-RATED ORNAMENTAL FENCE	37	531033.3	1354827.1	6.0
	38	530846.1	1354723.0	50.0
	39	530837.3	1354691.9	33.0
	40	530891.5	1354495.6	34.4
	41	530953.0	1354360.7	26.5
8' HIGH IMPASSE K12 RATED ORNAMENTAL FENCE	42	530874.1	1354291.6	14.5
	43	530959.6	1354206.6	13.4
	44	530900.0	1354263.2	12.8
	45	530886.4	1354277.9	10.0
8' HIGH IMPASSE NON-RATED ORNAMENTAL FENCE	46	530854.5	1354274.0	7.5
	47	530802.1	1354227.0	20.0
	48	530771.7	1354223.7	12.3
	49	530720.0	1354255.0	2.0
8' HIGH CHAIN LINK FENCE WITH 1' DOUBLE OUTRIGGER	50	530615.3	1354318.4	2.0
	51	530308.5	1354367.5	2.0
8' HIGH IMPASSE NON-RATED ORNAMENTAL FENCE	52	530158.1	1354440.4	4.7
	53	530119.6	1354450.4	13.0
	54	530090.6	1354444.4	31.4
	55	530001.4	1354372.7	40.2
	56	529952.2	1354311.7	29.6
	57	529912.6	1354238.4	28.6
	58	529892.6	1354166.4	31.3
	59	529903.4	1354111.0	51.6
	60	529912.9	1354100.1	46.3
	61	529920.8	1354091.1	36.4
	62	530016.4	1353981.6	0.0
	63	530042.7	1353942.5	14.2
	64	530141.4	1353828.3	2.2
	65	530275.8	1353737.0	1.9
	66	530286.0	1353726.9	4.4
	67	531084.8	1353977.6	3.7
	68	531089.6	1353984.8	0.0
	69	531092.0	1353988.4	0.0
	70	531164.5	1354095.9	0.9
	71	531443.9	1353905.8	0.9
8' HIGH CHAIN LINK FENCE WITH 1' DOUBLE OUTRIGGER	72	531440.2	1353802.7	0.0
	73	531508.5	1353124.3	0.0
	74	531518.5	1353126.4	10.2
	75	531540.6	1353131.8	7.0
	76	531605.3	1353145.4	6.4
	77	532012.6	1353378.9	5.7
	78	532035.8	1353407.9	10.0
8' HIGH IMPASSE NON-RATED ORNAMENTAL FENCE	79	532070.3	1353434.3	4.4
	80	532140.6	1353488.1	4.7
	81	532155.9	1353492.3	1.1
	82	532160.1	1353493.5	2.7
	83	532181.5	1353499.4	7.9
	84	532187.4	1353492.6	8.5

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED: Paul L. Hudson PE# 30361
PAUL L. HUDSON

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET. AS BUILT NOT REQUIRED.
BY: Douglas W. Duval - REG.# 107164

STATE OF MARYLAND DOUGLAS WELTY DUVAL 10784 PROFESSIONAL LAND SURVEYOR

LEGEND

- EXISTING FENCE
- CHAINLINK FENCE
- DECORATIVE FENCE (NON-RATED)
- DECORATIVE FENCE (K12 RATED)
- PROPERTY BOUNDARY

STATE OF MARYLAND ROBERT A. CROWLEY 45292 PROFESSIONAL ENGINEER

10-1-2014

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. 45292 EXPIRATION DATE: 05/21/2016

0 75' 150' 300'

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 10/15/14
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 10-10-14
DIRECTOR	DATE 10/15/14

Date	No.	Revision Description
9/22/16	4	EMERSON CAMPUS VCP

EMERSON PARCEL G-1
REVITZ PROPERTY

5-STORY COMMERCIAL OFFICE BUILDING
OWNER DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

SUBDIVISION NAME			SECTION AREA		LOT PARCEL #
REVITZ PROPERTY					LOT G-1 / PAR. 165
PLAT # OR L F	BLOCK #	ZONE	TAX ZONE	ELECT. DISTRICT	CENSUS TRACT
21277 & 21278	20	PEC	47	6	606903
WATER CODE			SEWER CODE		

TITLE **FENCE LAYOUT PLAN**

Des. By	Scale 1"=150'	Proj. No. 95054.3
Drn. By	Date 09-12-14	23A
Chk. By	Approved	

US Army Corps of Engineers
Baltimore District

REAL PROPERTY SERVICES FIELD OFFICE
ANNAPOLIS JUNCTION, MARYLAND

JACOBS
1100 WILSON BLVD., ARLINGTON, VA 22201

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Mark	Description	Date	Appr.
1	NEW SHEET ADDED FOR REDLINE REVISION #1		

Rev.-

Designed by: M. WERDER
Dwn by: M. WERDER
Ckd by: R.CROWLEY
RSFO Project Manager: AMY YALE
Submitted by: NATHAN JAMES PROJECT MANAGER
Date: SEPTEMBER 18, 2014
Project No. 31435
File name:
Plot date:
Plot scale: 1:150

EMERSON - CAMPUS FENCE
FENCE LAYOUT PLAN
ROOM(S) OR FLOOR LAUREL, MD

Drawing No.
Sheet Reference No. 22 23A 31
Sheet of 35

SDP-11-025

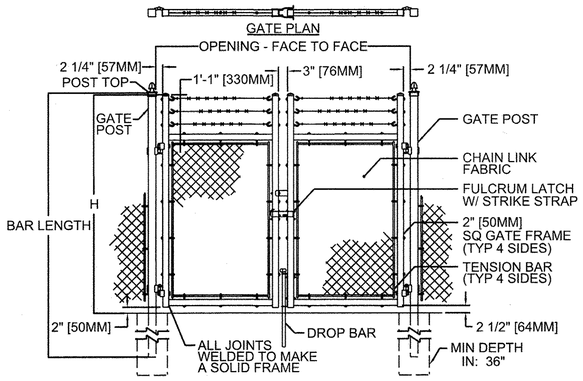
END & CORNER POST TOP OPTIONS	
STANDARD	FLAT

GATE POST

GATE LEAF WIDTH	GATE POST (OD)	FABRIC HEIGHT	"A" DIAM	"B" DEPTH	"C" POST EMBED.
3' TO 6'	2.875"	3' TO 5'	12"	38"	36"
		6' TO 9'	14"	42"	40"
		10' TO 12'	16"	46"	44"
7' TO 12'	4.000"	3' TO 5'	14"	38"	36"
		6' TO 9'	16"	42"	40"
		10' TO 12'	18"	46"	44"

NOM HEIGHT (H)
8'-0" [2438MM]

OPENING (F/F)
24' [7315MM]



GATE ELEVATION

NOTES:
1. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
2. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER HALCO ONLY.
3. FOOTING WIDTH TO BE (4)X POST WIDTH.
4. GATES MAY BE MANUALLY OR ELECTRICALLY OPERATED. HARDWARE WILL VARY FOR ELECTRICALLY OPERATED GATES.

2 SINGLE-LEAF DOUBLE SWING GATE
SCALE: NONE

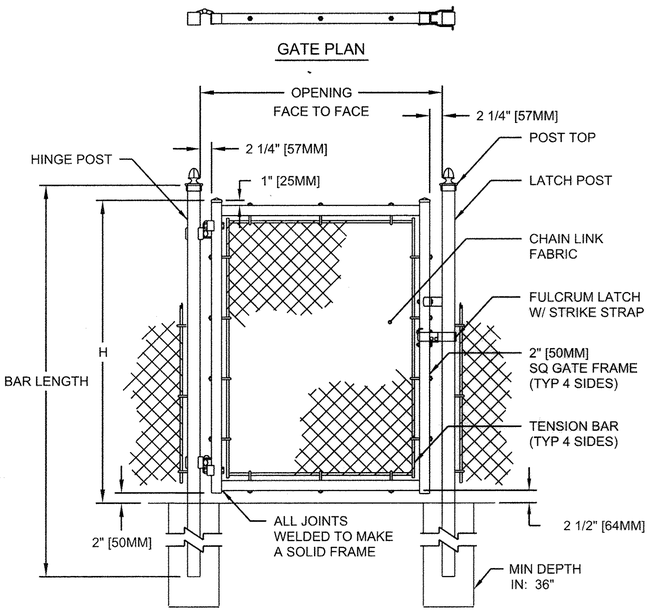
END & CORNER POST TOP OPTIONS	
STANDARD	FLAT

GATE POST

GATE LEAF WIDTH	GATE POST (OD)	FABRIC HEIGHT	"A" DIAM	"B" DEPTH	"C" POST EMBED.
3' TO 6'	2.875"	3' TO 5'	12"	38"	36"
		6' TO 9'	14"	42"	40"
		10' TO 12'	16"	46"	44"

NOM HEIGHT (H)
8'-0" [2438MM]

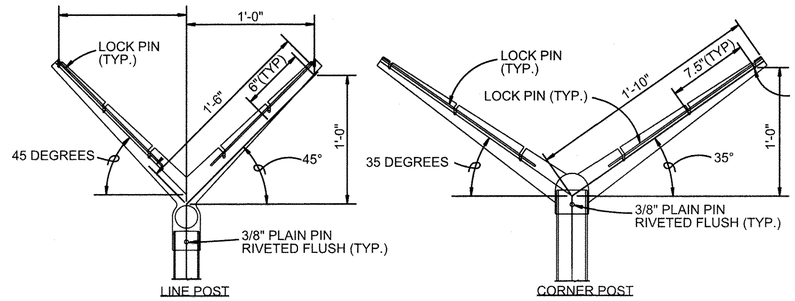
OPENING (F/F)
4'-0" [1219MM]



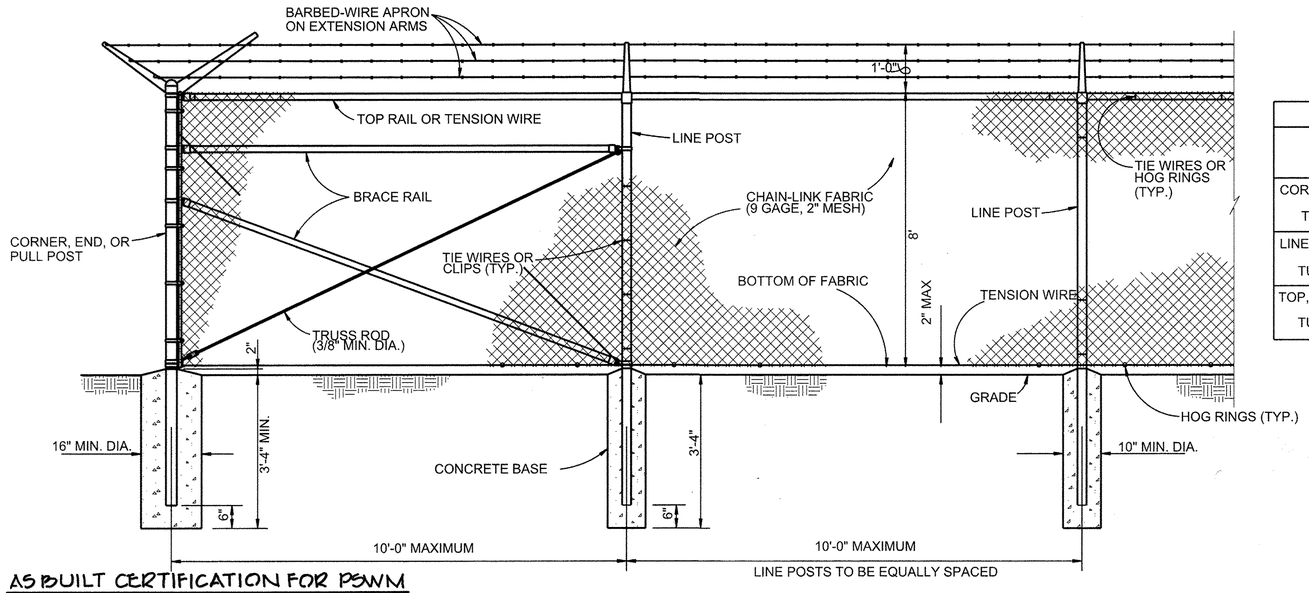
GATE ELEVATION

NOTES:
1. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
2. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER-HALCO ONLY.
3. FOOTING WIDTH TO BE (4)X POST WIDTH.
4. GATES MAY BE MANUALLY OR ELECTRICALLY OPERATED. HARDWARE WILL VARY FOR ELECTRICALLY OPERATED GATES.

3 SINGLE SWING GATE
SCALE: NONE



EXTENSION ARM DETAILS



STEEL POST SCHEDULE	
USE AND SECTION	MINIMUM OUTSIDE DIMENSIONS (NOMINAL) FABRIC WIDTH 84" TO 96"
CORNER, END & PULL POSTS TUBULAR - ROUND	2.875" O.D.
LINE POSTS TUBULAR - ROUND	2.375" O.D.
TOP, BOTTOM & BRACE RAILS TUBULAR - ROUND	1.66" O.D.

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED Paul Hudson P.E.#8061
PAUL L. HUDSON

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. DuVal - REG.#10764

STATE OF MARYLAND DOUGLAS WELLS DUVAL No. 10764 PROFESSIONAL LAND SURVEYOR

10-08-14

1 CHAIN LINK SECURITY FENCE
SCALE: NONE

STATE OF MARYLAND ROBERT A. CROWLEY 45292 PROFESSIONAL ENGINEER

10-1-2014

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. 45292 EXPIRATION DATE: 05/21/2016

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/5/14
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10-10-14
DIRECTOR — DATE 10/07/14

Date	No.	Revision Description

EMERSON PARCEL G-1 REVITZ PROPERTY

5-STORY COMMERCIAL OFFICE BUILDING
OWNER DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

REVITZ PROPERTY			SECTION AREA		LOT PARCEL # LOT G-1 / PAR. 165
PLAT# OR L F	BLOCK	ZONE	TAX ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
	20	PEC	47	6	606903
WATER CODE			SEWER CODE		

TITLE FENCE LAYOUT PLAN

Des. By	Scale 1"=150'	Proj. No. 95054.3
Drn. By	Date 09-12-14	23B
Chk. By	Approved	

US Army Corps of Engineers
Baltimore District

REAL PROPERTY SERVICES FIELD OFFICE
ANNAPOLIS JUNCTION, MARYLAND

JACOBS
1100 N GLEBE RD., ARLINGTON, VA. 22201

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No.	Date	Revision Description
1	10/7/14	NEW SHEET ADDED FOR REDLINE REVISION #1

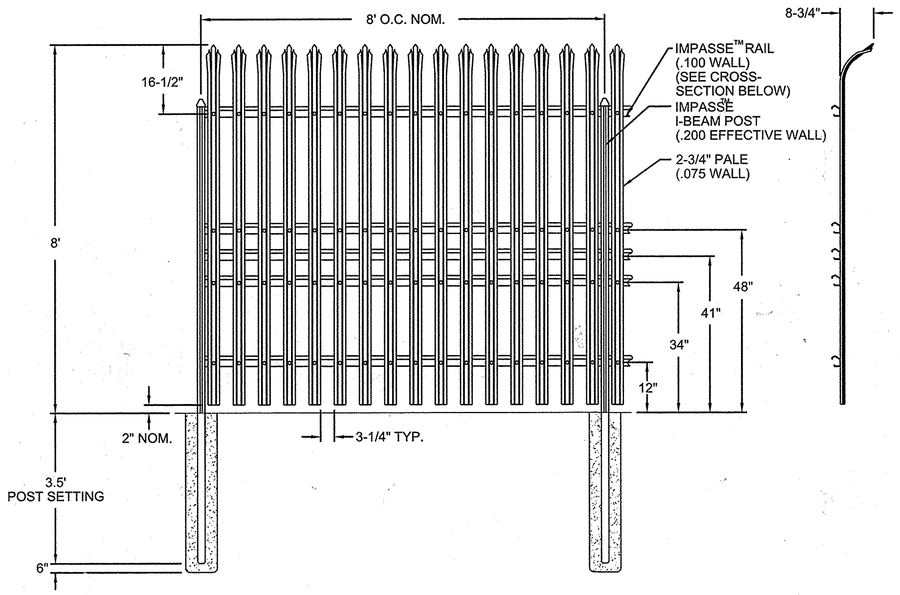
Designed by: M. WERDER	Date: SEPTEMBER 19, 2014		Rev. 1
Dwn by: M. WERDER	Ckd by: R.CROWLEY	Project No. 31435	
RSFO Project Manager AMY YALE			
Submitted by: NATHAN JAMES PROJECT MANAGER		File name: Plot scale: AS SHOWN	

EMERSON - CAMPUS FENCE
SITE DETAILS
ROOM(S) OR FLOOR
LAUREL, MD

Drawing No.

Sheet Reference No. 23B
Sheet 23 of 25

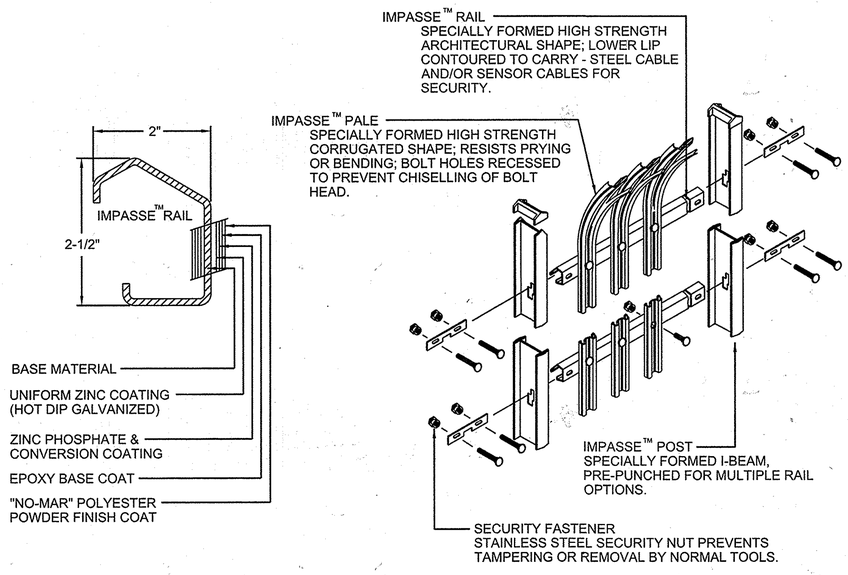
UNCLASSIFIED//FOR OFFICIAL USE ONLY



NOTES:

1. SEE DETAIL 2 ON THIS SHEET FOR K-12 ANTI-RAM CABLED STEEL BARRIER INSTALLTION FOR PORTIONS OF FENCE TO BE K-12 RATED. SEE SITE LAYOUT PLAN FOR SECTION OF FENCE THAT IS TO BE K-12 RATED.

2. IDS SYSTEM IS TO BE ATTACHED TO FENCE PICKETTS EVERY 8'. REPLACE CURVED PICKETTS WITH STRAIGHT PICKETTS AT LOCATIONS FOR IDS CONNECTIONS. FENCE HALF POSTS CAN BE USED FOR IDS CONNECTIONS. STRAIGHT PICKETTS ARE TO BE SAME HEIGHT AS CURVED PICKETTS.



1 AMERISTAR 8' HIGH IMPASSE GAUNTLET HIGH SECURITY STEEL FENCE

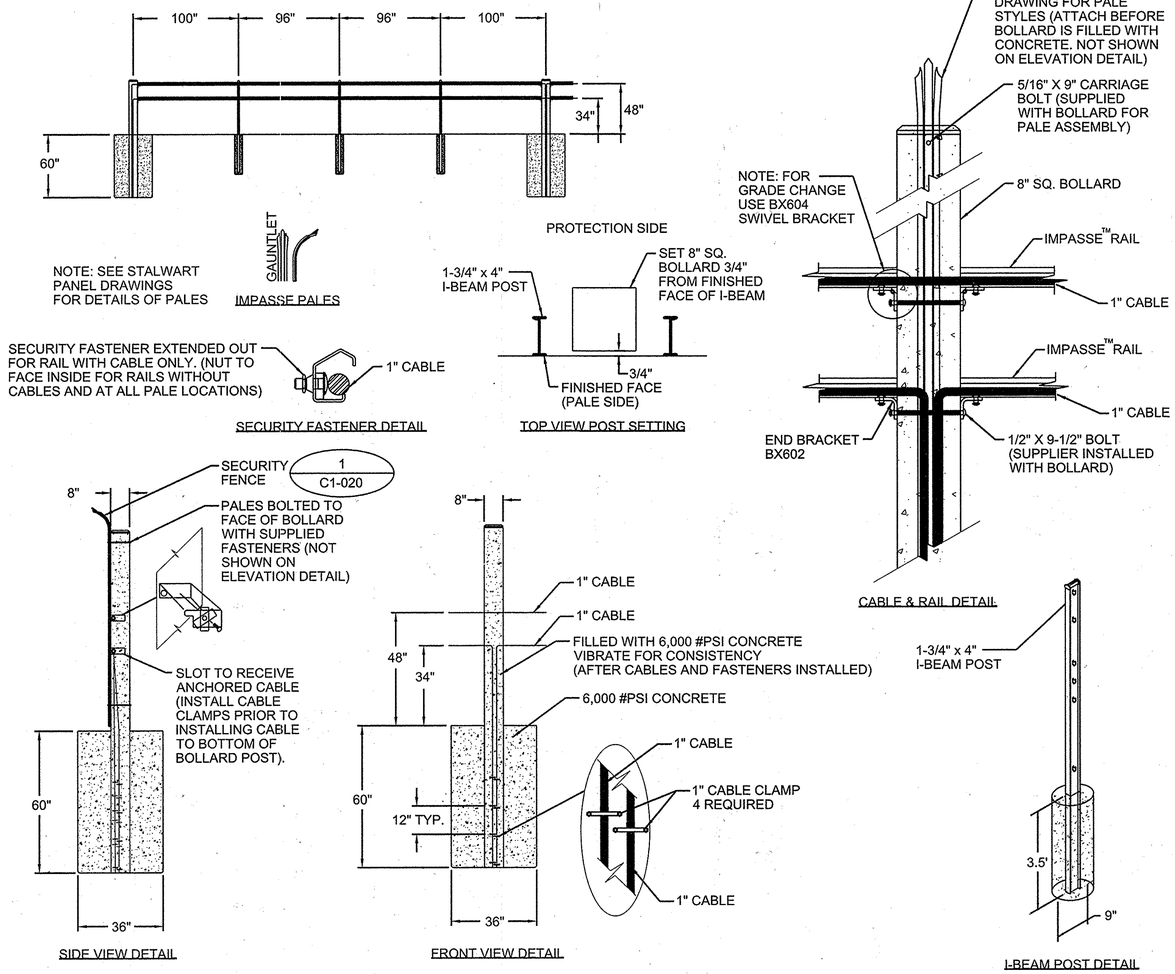
SCALE: NONE

DETAIL IS BASE DESIGN. CONCRACTOR MAY USE EQUIVALENT PRODUCT THAT MEETS PROJECT REQUIREMENTS AND SPECIFICATIONS AND AS APPROVED BY THE COR.

AS BUILT CERTIFICATION FOR PSWM

NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.

SIGNED: Paul Hudson PE #31761
PAUL L. HUDSON



2 STALLWART M40 (K12) ANTI-RAM CABLED STEEL BARRIER

SCALE: NONE

DETAIL IS BASE DESIGN. CONCRACTOR MAY USE EQUIVALENT PRODUCT THAT MEETS PROJECT REQUIREMENTS AND SPECIFICATIONS AND AS APPROVED BY THE COR.

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
DuVal and Associates, P.A.
By: Douglas W. DuVal - REG.# 10764

STATE OF MARYLAND DOUGLAS W. DUVAL No. 10764 PROFESSIONAL LAND SURVEYOR
10-08-14

STATE OF MARYLAND ROBERT A. CROWLEY No. 45292 PROFESSIONAL ENGINEER
10-1-2014

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. 45292 EXPIRATION DATE: 05/21/2016

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 10/15/14
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 10.10.14
DIRECTOR	DATE 10/15/14

Date	No.	Revision Description

EMERSON PARCEL G-1 REVITZ PROPERTY

5-STORY COMMERCIAL OFFICE BUILDING
OWNER DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

REVITZ PROPERTY			SECTION AREA		LOT/PARCEL # LOT G-1 / PAR. 165
PLAT # OR L F	BLOCK #	ZONE	TAX ZONE MAP	ELECT. DISTRICT	CENSUS TRACT
	20	PEC	47	6	606903
WATER CODE			SEWER CODE		

TITLE FENCE LAYOUT PLAN

Des. By	Scale 1"=150'	Proj. No. 95054.3
Drn. By	Date 09-12-14	23C
Chk. By	Approved	

US Army Corps of Engineers
Baltimore District

REAL PROPERTY SERVICES FIELD OFFICE
ANNAPOLIS JUNCTION, MARYLAND

JACOBS
1100 N.GLEBE RD., ARLINGTON, VA. 22201

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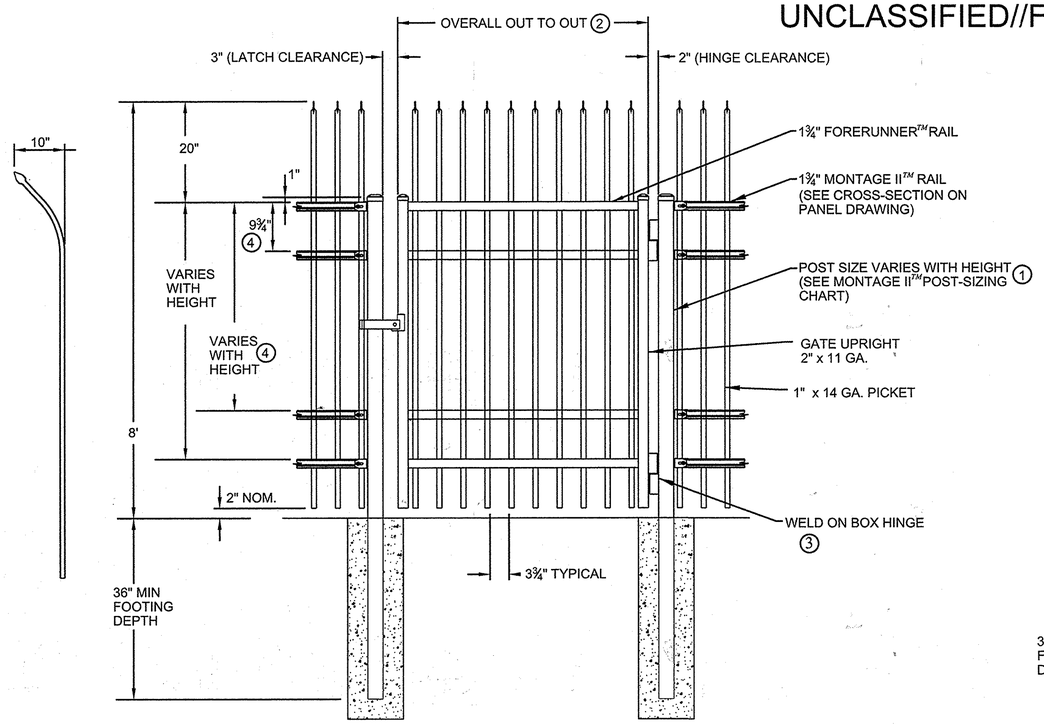
Mark	Description	Date	Appv.
1	NEW SHEET ADDED FOR REGLINE REVISION #1	10/1/2014	

Designed by: B.P.NEIGHSER
Dwn by: B.P.NEIGHSER
Ckd by: R.CROWLEY
RSFO Project Manager: AMY YALE
Submitted by: NATHAN JAMES PROJECT MANAGER
Date: SEPTEMBER 19, 2014
Project No. 31435
File name:
Plot date:
Plot scale: AS SHOWN
Rev. -

EMERSON - CAMPUS FENCE
SITE DETAILS
ROOM(S) OR FLOOR
LAUREL, MD

Drawing No.
Sheet Reference No. 24 23C 25
Sheet of ~~000~~

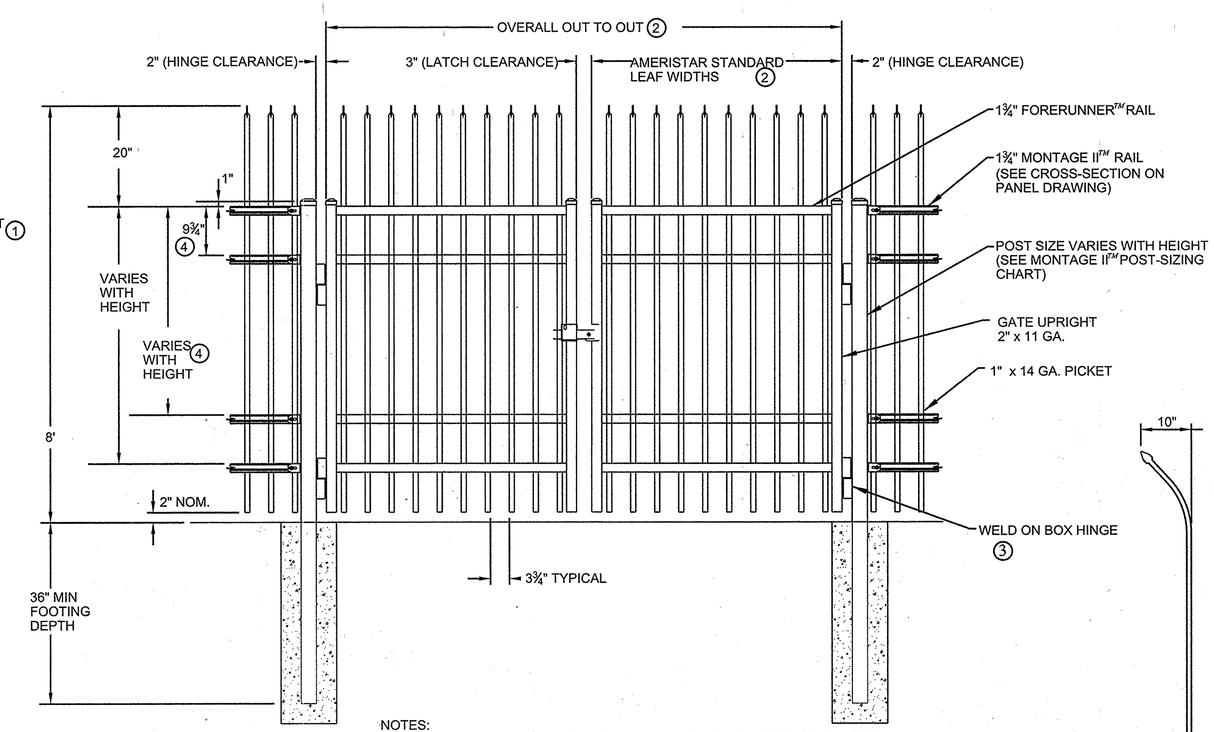


NOTES:
1.) POST SIZE DEPENDS ON FENCE HEIGHT, WEIGHT AND WIND LOADS. SEE *MONTAGE II* ™ SPECIFICATIONS FOR POST SIZING CHART.
2.) SEE *AMERISTAR* GATE TABLE FOR STANDARD OUT TO OUTS. CUSTOM GATE OPENINGS AVAILABLE FOR SPECIAL OUT TO OUT/LEAF WIDTHS.
3.) ADDITIONAL STYLES OF GATE HARDWARE ARE AVAILABLE ON REQUEST THIS COULD CHANGE THE LATCH & HINGE CLEARANCE.
4.) THIRD & FORTH RAIL OPTIONAL.

2 AMERISTAR MONTAGE II ORNAMENTAL INVINCIBLE SINGLE SWING GATE

SCALE: NONE

DETAIL IS BASE DESIGN. CONCRACTOR MAY USE EQUIVALENT PRODUCT THAT MEETS PROJECT REQUIREMENTS AND SPECIFICATIONS AND AS APPROVED BY THE COR.



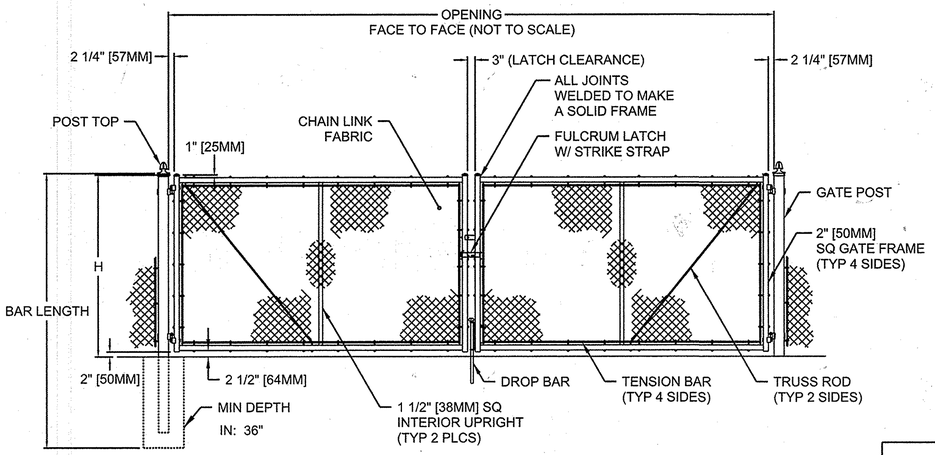
NOTES:
1.) POST SIZE DEPENDS ON FENCE HEIGHT, WEIGHT AND WIND LOADS. SEE MONTAGE II SPECIFICATIONS FOR POST SIZING CHART.
2.) SEE AMERISTAR GATE TABLE FOR STANDARD OUT TO OUTS. CUSTOM GATE OPENINGS AVAILABLE FOR SPECIAL OUT TO OUT/LEAF WIDTHS.
3.) ADDITIONAL STYLES OF GATE HARDWARE ARE AVAILABLE ON REQUEST. THIS COULD CHANGE THE LATCH AND HINGE CLEARANCE.
4.) THIRD AND FOURTH RAIL OPTIONAL.
5.) CONTRACTOR SHALL SAND DOWN END OF SCREWS ON HASPS AS NEEDED TO WELD HASP TO GATE.

3 AMERISTAR MONTAGE II ORNAMENTAL INVINCIBLE DOUBLE SWING GATE

SCALE: NONE

DETAIL IS BASE DESIGN. CONCRACTOR MAY USE EQUIVALENT PRODUCT THAT MEETS PROJECT REQUIREMENTS AND SPECIFICATIONS AND AS APPROVED BY THE COR.

GATE PLAN



GATE ELEVATION - (4) BAYS SHOWN

NOTES:
1. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
2. SPECIFICATIONS SHOWN CAN BE CHANGED BY MASTER-HALCO ONLY.
3. FOOTING WIDTH TO BE (4)X POST WIDTH.
4. GATES MAY BE MANUALLY OR ELECTRICALLY OPERATED. HARDWARE WILL VARY FOR ELECTRICALLY OPERATED GATES.

NOM HEIGHT (H)
8'-0" [2438MM]

BAYS	OPENING (F/F)
4	20'-0" [6096MM]
4	22'-0" [6706MM]
4	24'-0" [7315MM]

END & CORNER POST TOP OPTIONS

STANDARD	FLAT

GATE POST

OPENING	GATE POST (OD)	FABRIC HEIGHT	"A" DIAM	"B" DEPTH	"C" POST EMBED.
14' TO 24'	4"	3' TO 5'	12"	38"	36"
		6' TO 9'	14"	42"	40"
		10' TO 12'	16"	46"	44"

1 DOUBLE-LEAF DOUBLE SWING GATE

SCALE: NONE

THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
AS BUILT NOT REQUIRED.
DuVal and Associates, P.A.
By: Douglas W. DuVal - REG.# 10764

STATE OF MARYLAND — DOUGLAS WELLS DUVAL — No. 10764 — PROFESSIONAL LAND SURVEYOR
10-08-14

STATE OF MARYLAND — ROBERT A. CROWLEY — No. 45292 — PROFESSIONAL ENGINEER
Robert Crowley 10-1-2014

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. 45292 EXPIRATION DATE: 05/21/2016

AS BUILT CERTIFICATION FOR PSWM
NOTE: THERE IS NO AS BUILT INFORMATION PROVIDED ON THIS SHEET.
SIGNED Paul Hudson PE# 30761
PAUL L. HUDSON

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/15/14
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10.10.14
DIRECTOR — DATE 10/15/14

Date	No.	Revision Description

EMERSON PARCEL G-1 REVITZ PROPERTY

5-STORY COMMERCIAL OFFICE BUILDING
OWNER DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

REVITZ PROPERTY			SECTION AREA		LOT PARCEL # LOT G-1 / PAR. 165
PLAT# OR L F	BLOCK	ZONE	TAX ZONE	MAPLECT.	DISTRICT	CENSUS TRACT
	20	PEC	47		6	606903
WATER CODE			SEWER CODE		

TITLE **FENCE LAYOUT PLAN**

Des. By	Scale 1"=150'	Proj. No. 95054.3
Drn. By	Date 09-12-14	23D
Chk. By	Approved	

US Army Corps of Engineers
Baltimore District

REAL PROPERTY SERVICES
FORT DETRICK
ANNAPOLIS JUNCTION, MARYLAND

JACOBS
1100 N GLEBE RD., ARLINGTON, VA 22201

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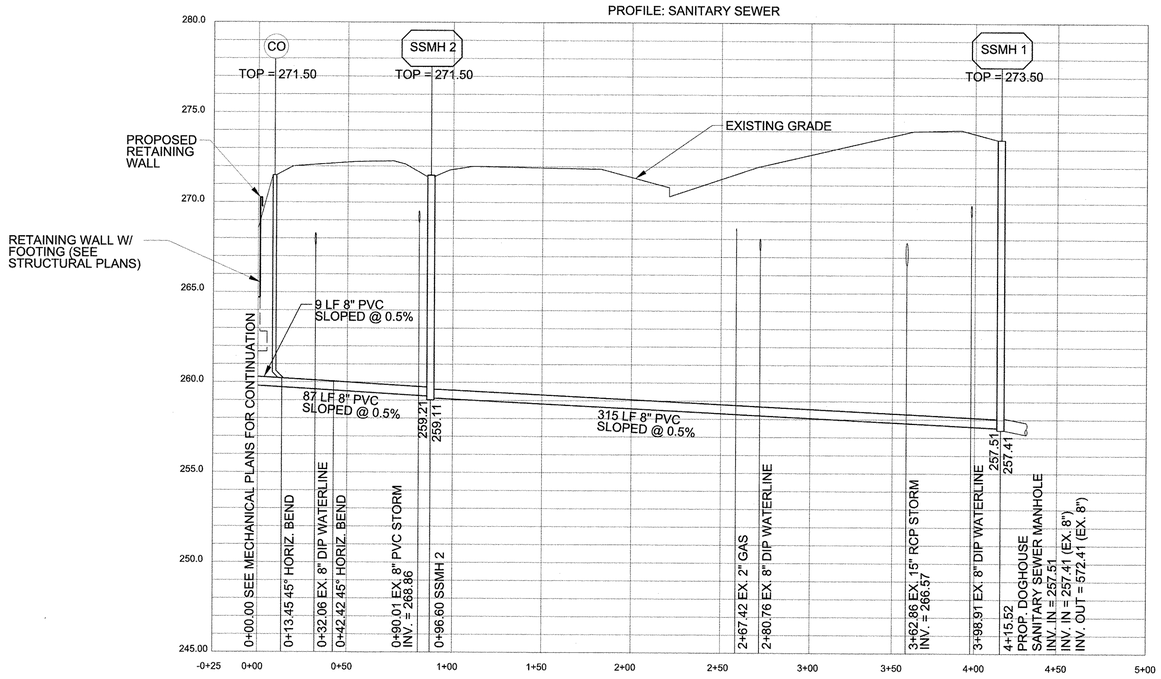
Mark	Description	Date	Appr.
1	NEW SHEET ADDED FOR REDLINE REVISION #1	10/1/2014	

Designed by: M.WERDER
Dwn by: M.WERDER
Ckd by: R.CROWLEY
RSFO Project Manager: AMY YALE
Submitted by: NATHAN JAMES PROJECT MANAGER
Date: SEPTEMBER 19, 2014
Rev: -
Project No. 31435
File name:
Plot date:
Plot scale: AS SHOWN

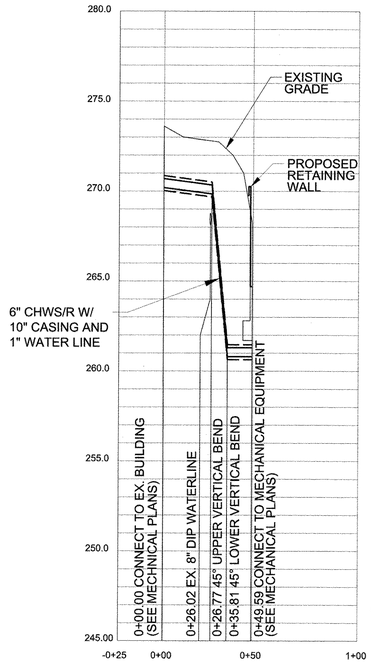
EMERSON - CAMPUS FENCE
SITE DETAILS
LAUREL, MD
ROOM(S) OR FLOOR

Drawing No.
Sheet Reference No. 25-23D
Sheet of ~~32~~ 25

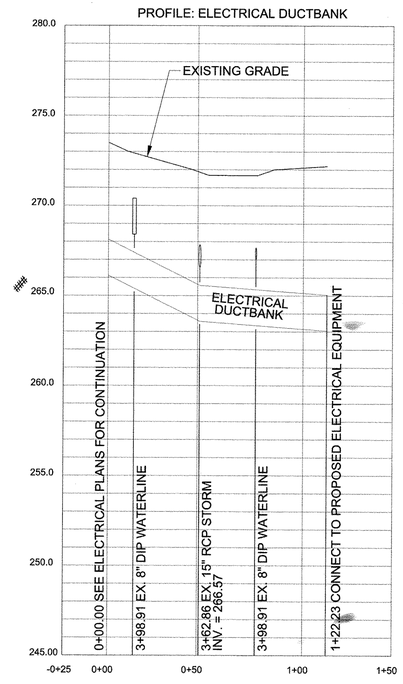
SDP-11-025



1 SANITARY SEWER PROFILE
SCALE: NONE



3 CHILLED WATER SERVICE/RETURN AND DOMESTIC WATER PROFILE
SCALE: NONE



4 ELECTRICAL DUCTBANK PROFILE
SCALE: NONE

GENERAL UTILITY NOTES:

1. FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION MATHODS, USE HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
2. CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES AND AGENCIES AND MISS UTILITY AT LEAST TWO (2) WORKING DAYS BEFORE STARTING WORK SHOWN ON THE PLANS.
4. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
5. EXCAVATIONS MUST BE SUPPORTED FOR THE PROTECTION OF WORKERS. THE CONSTRUCTION WORK AREA AND ADJACENT PROPERTY. REFER TO TEMPORARY EXCAVATIONS SUPPORT SYSTEMS UNDER SECTION 1000.03.03 OF THE STANDARD SPECIFICATIONS.
6. EXCAVATIONS MUST BE KEPT WELL DRAINED AT ALL TIMES. DEWATERING, DRAINAGE, AND PUMPING IS REQUIRED DURING CONSTRUCTION. REFER TO DEWATERING, DRAINAGAE AND PUMPING UNDER SECTION 1000.03.03 OF THE STANDARD SPECIFICATIONS. PUMPS MUST BE THE PROPER TYPE AND CAPACITY TO MAINTAIN A DRY WORK AREA.
7. THE USE OF STEEL PLATES TO PROTECT THE TRENCH AND ROADWAY SHALL BE AS SPECIFIED UNDER SECTION 1000.03.05, SECTION 104 AND STANDARD DETAIL PLATE G-4.02 OF THE STANDARD SPECIFICATIONS.
8. TEMPORARY REPAIR OF ROADWAY OPENINGS SHALL BE AS SPECIFIED UNDER SECTION 1000.03.08 AND STANDARD DETAIL PLATE G-4.01 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED BY PERMIT FROM THE AUTHORITY HAVING JURISDICTION.

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. 45292 EXPIRATION DATE: 05/21/2016

0 4 8
VERT. SCALE: 1" = 4'
0 40 80
HORIZ. SCALE: 1" = 40'

THE PURPOSE OF REDLINE REVISION #3 IS TO ADD NEW SHEET TO SDP DOCUMENTS.

STATE OF MARYLAND ROBERT A. CROWLEY No. 32237 PROFESSIONAL ENGINEER
7/14/16

ENGINEER'S SEAL BOX FOR REDLINE REVISION #3 ONLY

JACOBS

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. 45292 EXPIRATION DATE: 05/21/2018

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7-21-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7-19-16
DIRECTOR — DATE 7-25-16

Date	No.	Revision Description

EMERSON PARCEL G-1 REVITZ PROPERTY

5-STORY COMMERCIAL OFFICE BUILDING
OWNER DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

REVITZ PROPERTY	SECTION AREA	LOT PARCEL # LOT G-1 / PAR 165
PLAT # ORL 1 / BLOCK # 20 / ZONE PEC	TAX ZONE MAP 47 / ELECT. DISTRICT 6	CENSUS TRACT 606903
WATER CODE	SEWER CODE	

TITLE: UTILITY PROFILES

Des. By AEW	Scale AS SHOWN	Proj. No. 95054.3
Drn. By AEW	Date 06-16-2016	
Chk. By RAC	Approved	

US Army Corps of Engineers
Baltimore District

REAL PROPERTY SERVICES
FIELD OFFICE
ANNAPOLIS JUNCTION, MARYLAND

JACOBS
1100 N GLEBE RD., ARLINGTON, VA. 22201

Mark	Description	Date	Appr.
	100% BACKCHECK	5/6/2016	

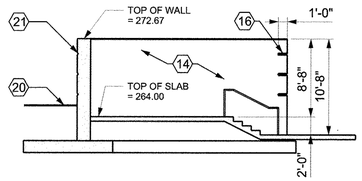
Designed by: M. WEIDER
Dwn by: M. WEIDER
Ckd by: R.CROWLEY
RSFO Project Manager: SANDRA TUCKER
Submitted by: MARCUS WILLIAMS PROJECT MANAGER
Date: MAY 5, 2016
Project No. 31435
File name:
Plot date:
Plot scale: 1:40
Rev. -

EMERSON 6 - TENANT IMPROVEMENT
UTILITY PROFILES
ROOM(S) OR FLOOR
LAUREL, MD

Drawing No.

Sheet Reference No. 26
Sheet 26 of 31

SDP-11-025



10 / 27 27 SECTION - EAST
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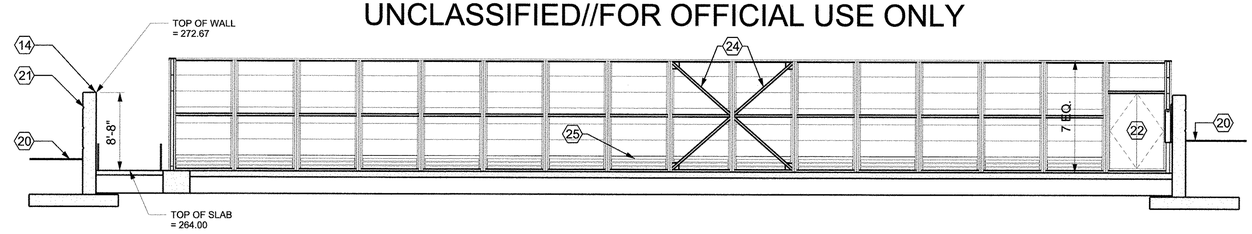
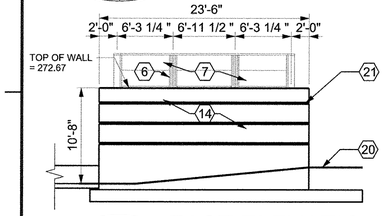
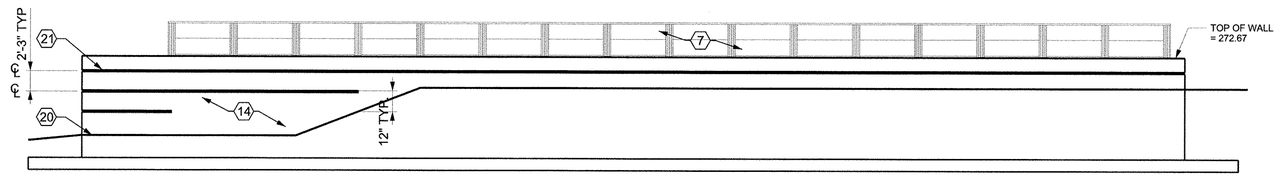


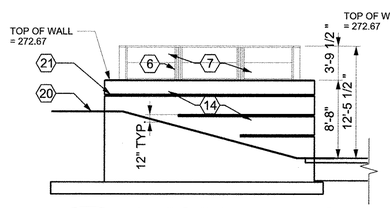
5 / 27 27 MECHANICAL ENCLOSURE - NORTH SECTION
SCALE: 1/8"=1'-0"



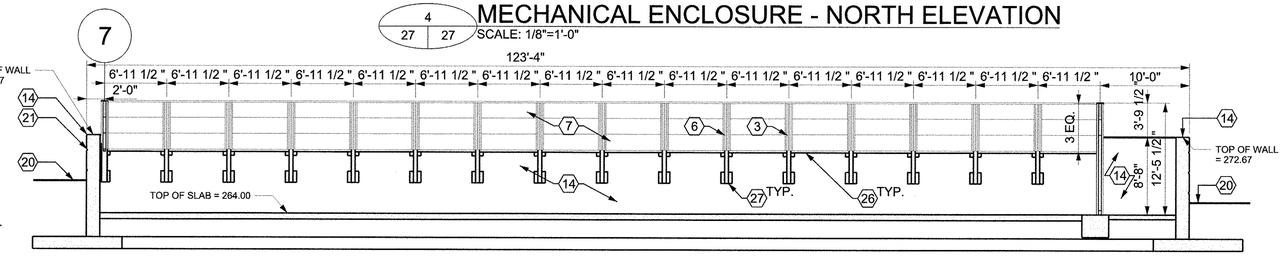
9 / 27 27 EAST ELEVATION
SCALE: 1/8"=1'-0"



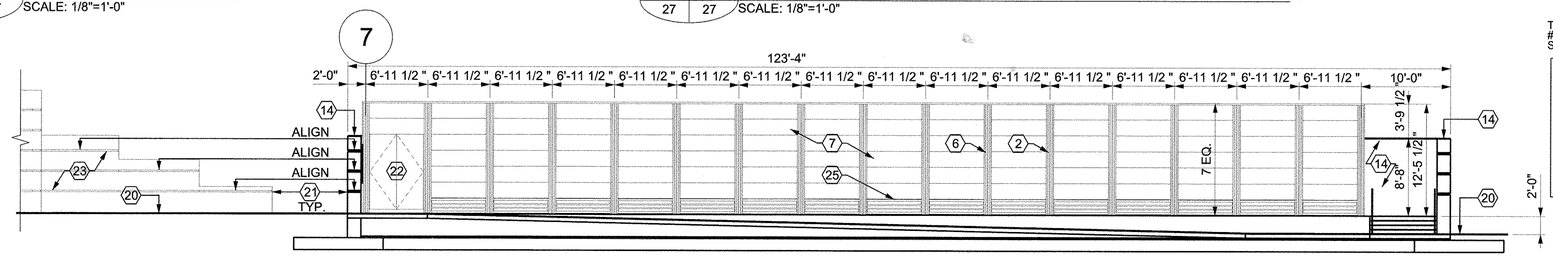
4 / 27 27 MECHANICAL ENCLOSURE - NORTH ELEVATION
SCALE: 1/8"=1'-0"



8 / 27 27 WEST ELEVATION
SCALE: 1/8"=1'-0"



3 / 27 27 MECHANICAL ENCLOSURE - SOUTH SECTION
SCALE: 1/8"=1'-0"



2 / 27 27 MECHANICAL ENCLOSURE - SOUTH ELEVATION
SCALE: 1/8"=1'-0"

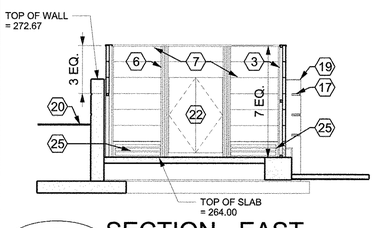
THE PURPOSE OF REDLINE REVISION #3 IS TO ADD NEW PLAN SHEET TO SDP SET.

STATE OF MARYLAND ROBERT A. CROWLEY No. 45292 PROFESSIONAL ENGINEER

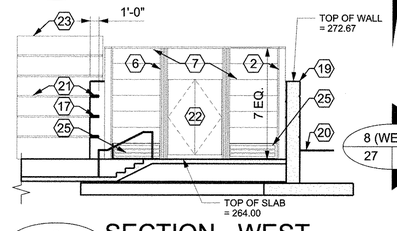
ENGINEER'S SEAL BOX FOR REDLINE REVISION #3 ONLY

JACOBS

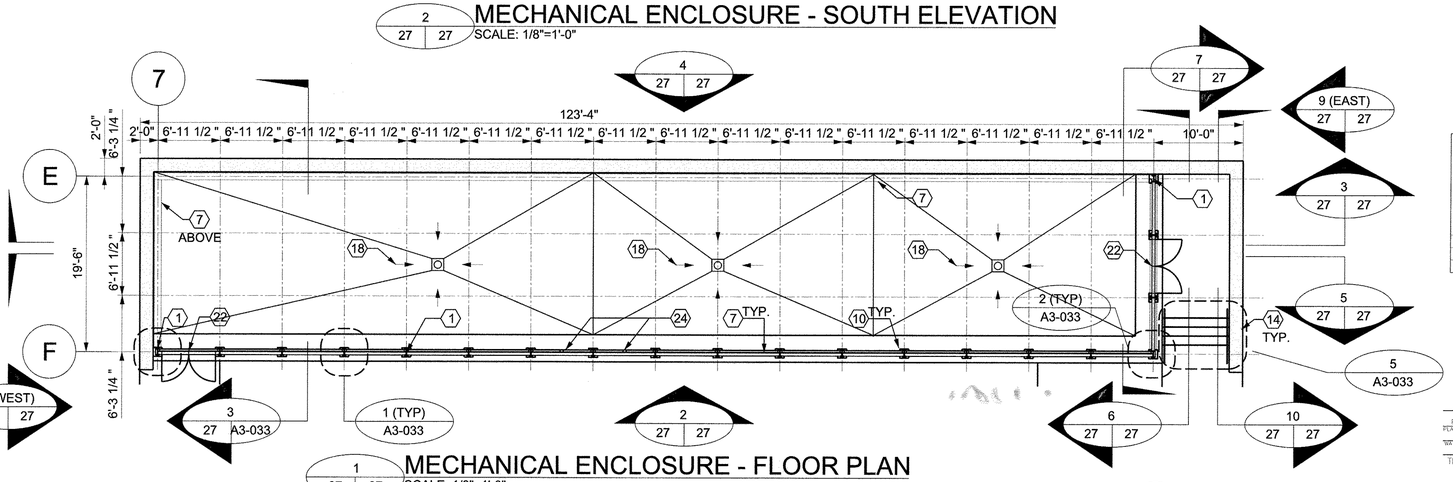
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45292 EXPIRATION DATE: 05/21/2018



7 / 27 27 SECTION - EAST
SCALE: 1/8"=1'-0"



6 / 27 27 SECTION - WEST
SCALE: 1/8"=1'-0"



1 / 27 27 MECHANICAL ENCLOSURE - FLOOR PLAN
SCALE: 1/8"=1'-0"

KEYED NOTES

1. W8 X 18 COLUMN (PT-10), TYP.
2. 16 GA GALV BEAM 'Z' CLIP (PT-10), TYP.
3. 16 GA GALV BEAM BACK 'Z' CLIP (PT-10), TYP.
4. NOT USED.
5. NOT USED.
6. FIELD WELD TYP ALL Z'S TO COLUMNS
7. ACOUSTIC BARRIER/ABSORBTION WALL PANEL (BASIS OF DESIGN - VIBRO-ACOUSTICS, PT-10)
8. NOT USED.
9. NOT USED.
10. EMBEDDED BASE PLATE
11. NOT USED.
12. NOT USED.
13. NOT USED.
14. CONC. WALL SEE STRUCTURAL DRAWINGS (TDPC-1)
15. CONC. WALL BEYOND (TDPC-1)
16. 2 1/2" X 3/4" DEEP REVEAL, TYP.
17. REVEAL BEYOND
18. SLOPE TO DRAIN 1/2" PER FOOT, TYP.
19. CONT. CHAMFER
20. FINISHED GRADE - SEE CIVIL
21. MATCH CONCRETE REVEALS TO ADJACENT EXISTING CONCRETE PARKING GARAGE REVEALS, TYP.
22. (2) 3'-0" X 8'-0" MATCHING DOORS BY WALL PANEL MANUFACTURER. DOOR CLOSERS MOUNTED ON INTERIOR.
23. EXISTING CONCRETE PARKING GARAGE.
24. CROSS BRACING, SEE STRUCTURAL.
25. ACOUSTIC LOUVERS, TYPE L2.
26. HORIZONTAL PANEL SUPPORT, PT-10.
27. W8 X 18 (PARTIAL) COLUMN WELDED TO EMBEDDED STEEL PLATE TYP., PT-10. SEE STRUCTURAL.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7-21-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7-19-16
DIRECTOR — DATE 7-25-16

Date	No.	Revision Description

EMERSON PARCEL G-1 REVITZ PROPERTY

5-STORY COMMERCIAL OFFICE BUILDING
OWNER DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

REVITZ PROPERTY	SECTION AREA	LOT PARCEL #
PLAT NO. / PARCEL NO. 20	TAX ZONE DISTRICT 4	LOT G-1 / PAR 165
PROPOSED USE PEC	ZONING 6	ZONING DISTRICT
WATER CODE	SEWER CODE	606903

TITLE

Des. By AEW	Scale AS SHOWN	Proj. No. 95054.3
Drn. By AEW	Date 07-14-2016	
Chk. By RAC	Approved	

US Army Corps of Engineers
Baltimore District

REAL PROPERTY SERVICES
ANNAPOLIS JUNCTION, MARYLAND

JACOBS
1100 N.GLEBE RD., ARLINGTON, VA. 22201

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Mark	Description	Date	Appr.
	100% BACKCHECK	5/5/2016	

Designed by: | Date: MAY 5, 2016 | Rev: .
Dwn by: | Ckd by: | Project No. 31435
RSFO Project Manager SANDRA TUCKER
Submitted by: NATHAN JAMES PROJECT MANAGER
File name: | Plot date: | Plot scale:

EMERSON 6 - TENANT IMPROVEMENT
ROOM(S) OR FLOOR
LAUREL, MD

Drawing No.

Sheet Reference No. 27
Sheet 27 of 31

1/8"=1'-0" 0 2' 4' 8' 16' 24'

SDP-11-025

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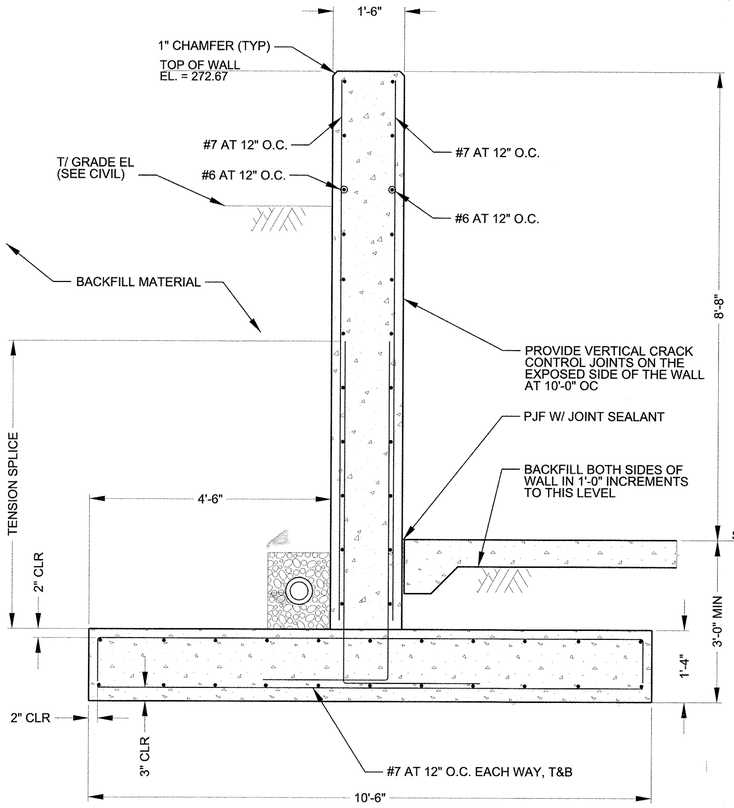
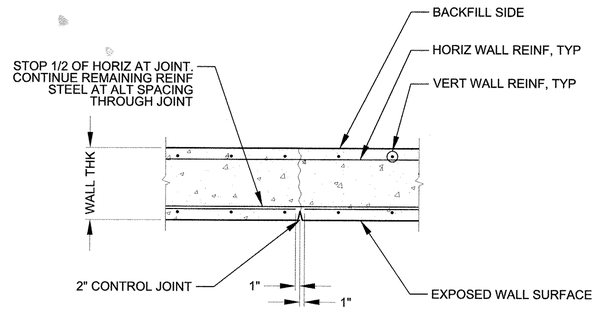
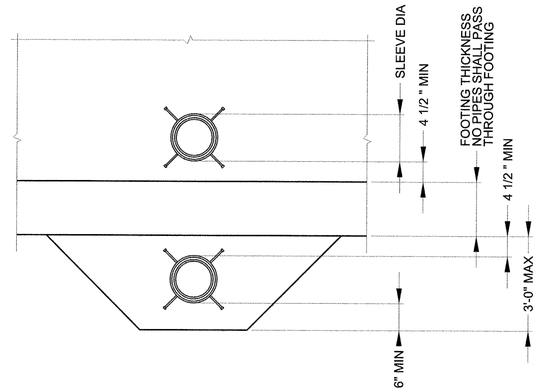


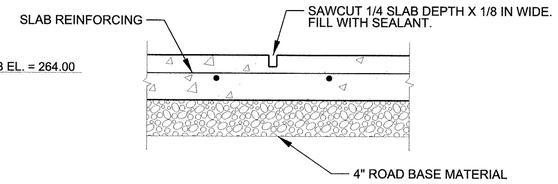
4 / 30 28 RETAINING WALL SECTION
SCALE: 3/4"=1'-0"



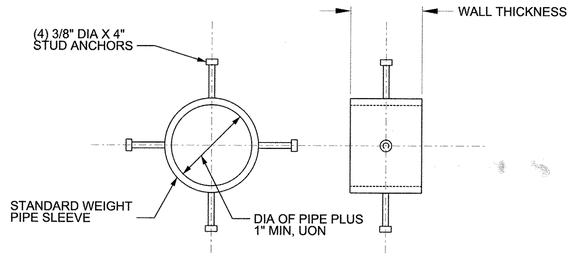
5 / 30 28 WALL CONTROL JOINT DETAIL
SCALE: 3/4"=1'-0"



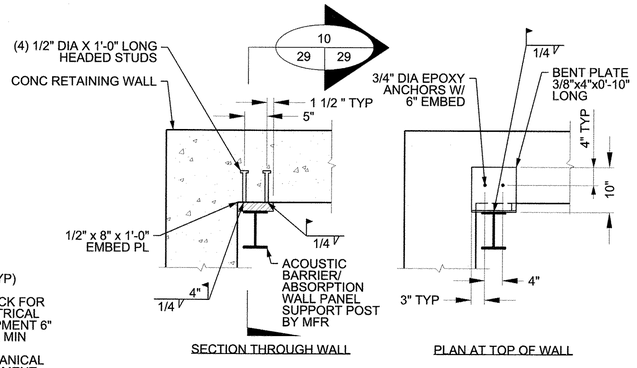
7 / 28 28 PIPE THROUGH FOUNDATION
SCALE: 3/4"=1'-0"



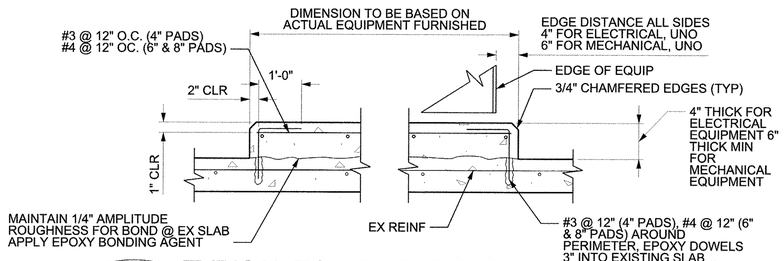
6 / 28 28 SLAB-ON-GROUND CONTRACTION JOINT
SCALE: NTS



8 / 28 28 PIPE SLEEVE
SCALE: 1 1/2"=1'-0"

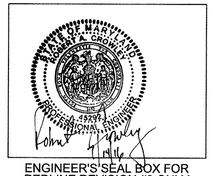


10 / 30 28 EMBED PLATE AT CORNER COL
SCALE: 3/4"=1'-0"



9 / 28 28 TYPICAL EQUIPMENT PAD
SCALE: 1 1/2"=1'-0"

THE PURPOSE OF REDLINE REVISION #3 IS TO ADD NEW PLAN SHEET TO SDP-11-025.



ENGINEER'S SEAL BOX FOR REDLINE REVISION #3 ONLY

JACOBS

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. 45292 EXPIRATION DATE: 05/21/2018

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT 7-21-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION 7-19-16
DIRECTOR 7-25-16

Date	No.	Revision Description

EMERSON PARCEL G-1 REVITZ PROPERTY

5-STORY COMMERCIAL OFFICE BUILDING
OWNER DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

REVITZ PROPERTY		SECTION AREA	LOT PARCEL # LOT G-1 / PAR. 165
PLAT# OR/ L F	BLOCK# / ZONE	TAX ZONE MAP / ELECT. DISTRICT	CENSUS TRACT
	20 / PEC	47 / 6	
WATER CODE		SEWER CODE	

TITLE
STRUCTURAL SECTIONS AND DETAILS

Des. By AEW	Scale AS SHOWN	Proj. No.
Drn. By AEW	Date 06-16-2016	
Chk. By RAC	Approved	

US Army Corps of Engineers
Baltimore District

REAL PROPERTY SERVICES FIELD OFFICE
ANNAPOLIS JUNCTION, MARYLAND

JACOBS
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Mark	Description	Date	Appr.
	100% BACKCHECK	5/25/2016	

Designed by: D. RAU
Dwn by: D. RAU
Ckd by: K. LECHNER
RSFO Project Manager: SANDRA TUCKER
Submitted by: MARCUS JAMES PROJECT MANAGER
Date: MAY 5, 2016
Project No. 31435
File name:
Plot date:
Plot scale: VARIES
Rev. -

EMERSON 6 - TENANT IMPROVEMENT
STRUCTURAL SECTIONS AND DETAILS
ROOM(S) OR FLOOR
LAUREL, MD

Drawing No.
Sheet Reference No. 28
Sheet 28 of 31

SDP-11-025

1 1/2"=1'-0" 0 3" 6" 1' 2'
3/4"=1'-0" 0 6" 1' 2' 4'

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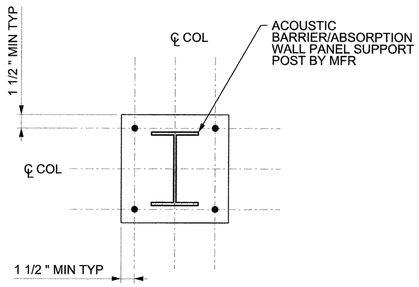
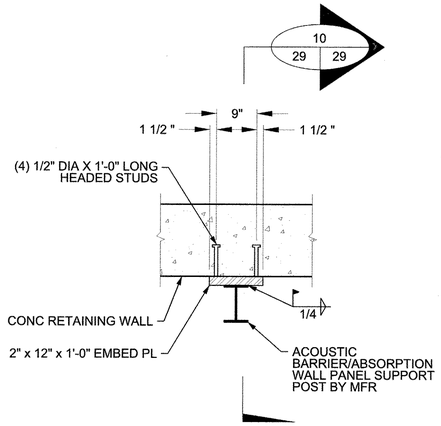


1 / 30 29 BASE PLATE DETAIL
SCALE: 1 1/2"=1'-0"



2 / 30 29 EMBEDMENT PLATE
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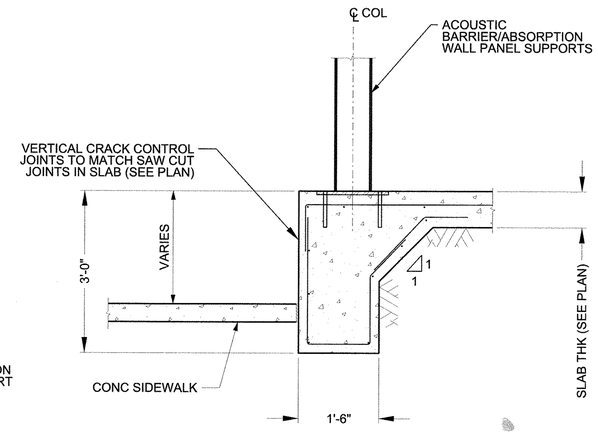
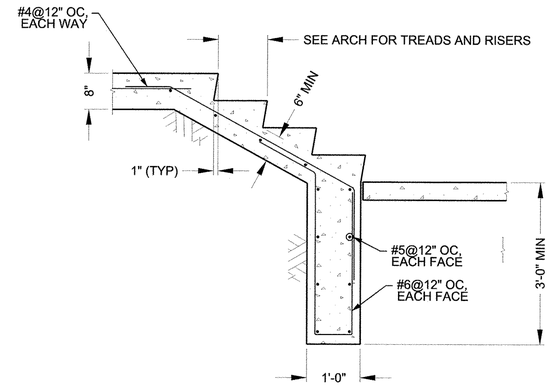
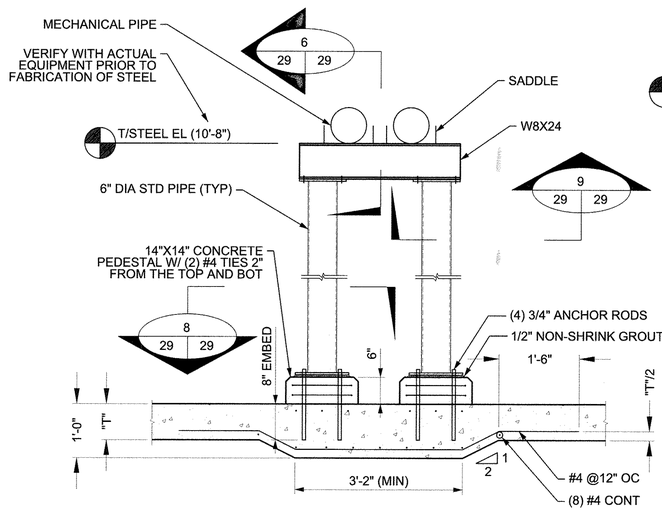


3 / 30 29 THICKENED SLAB
SCALE: 3/4"=1'-0"

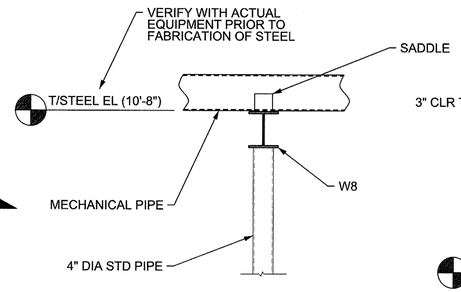


4 / 30 29 STAIRS AT CHILLER ENCLOSURE
SCALE: 3/4"=1'-0"

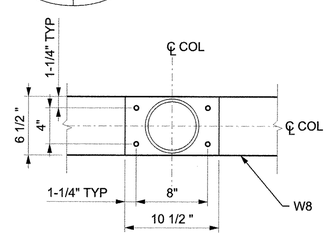


NOTE: SLAB REINF NOT SHOWN FOR CLARITY.

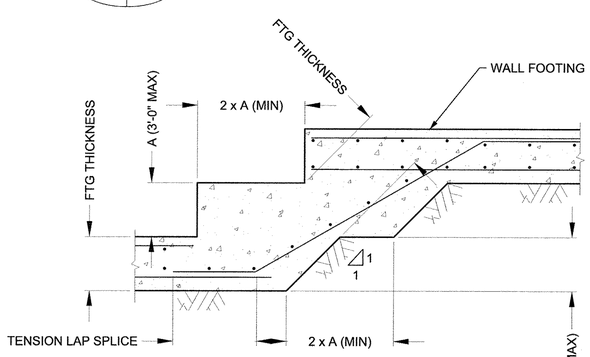
5 / 30 29 PIPE SUPPORT
SCALE: 3/4"=1'-0"



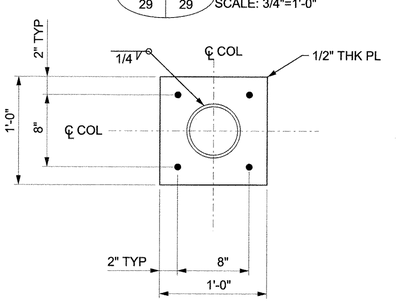
6 / 30 29 PIPE SUPPORT
SCALE: 3/4"=1'-0"



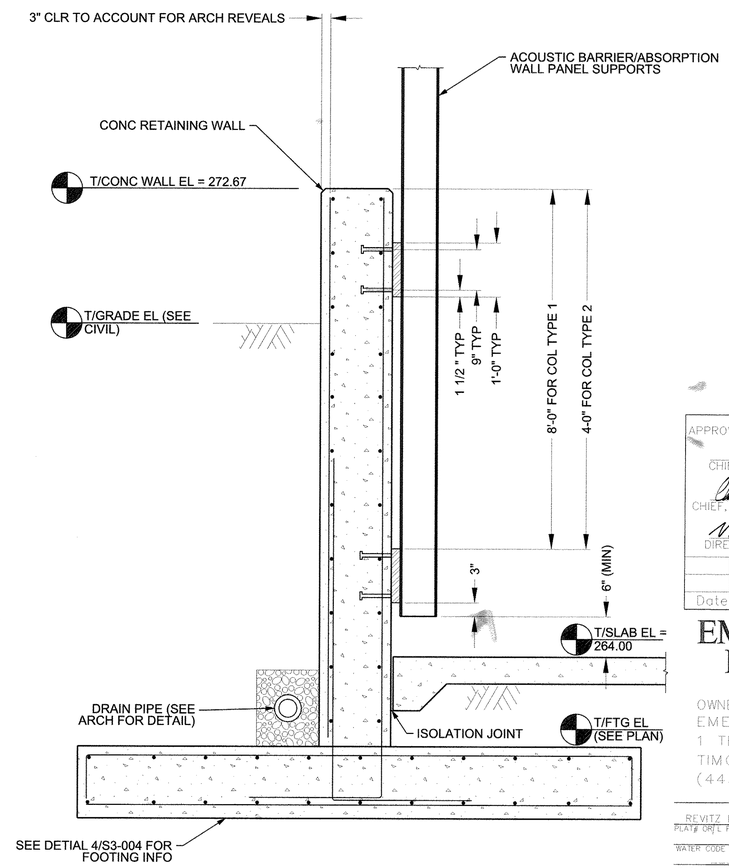
9 / 29 29 PIPE SUPPORT
SCALE: 3/4"=1'-0"



7 / 30 29 STEPPED FOOTING
SCALE: 3/4"=1'-0"



8 / 30 29 PIPE SUPPORT BASE PLATE
SCALE: 3/4"=1'-0"



10 / 28 29 / 29 / 30 STEEL COL CONN TO RETAINING WALL
SCALE: 3/4"=1'-0"

1 1/2"=1'-0" 0 3" 6" 1' 2'

3/4"=1'-0" 0 6" 1' 2' 4'

US Army Corps of Engineers
Baltimore District

REAL PROPERTY SERVICES
ANNAPOLIS JUNCTION, MARYLAND

JACOBS
1100 N GLEBE RD., ARLINGTON, VA. 22201

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THE PURPOSE OF REDLINE REVISION #3 IS TO ADD A NEW PLAN SHEET TO SDP-11-025.

STATE OF MARYLAND ROBERT A. CROWL No. 45292 PROFESSIONAL ENGINEER
7/14/16

ENGINEER'S SEAL BOX FOR REDLINE REVISION #3 ONLY

Mark	Description	Date	App
	100% BACKCHECK	5/17/2016	

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT 7-21-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION 7-19-16
DIRECTOR 7-25-16

Date	No.	Revision Description

EMERSON PARCEL G-1
REVITZ PROPERTY

5-STORY COMMERCIAL OFFICE BUILDING
OWNER DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

REVITZ PROPERTY:	SECTION AREA	LOT/ PARCEL # LOT G-1 / PAR. 165
PLAT# OR L F / BLOCK # / ZONE / PEC 20	TAX ZONE MAP / ELECT. DISTRICT 47 / 6	CENSUS TRACT
WATER CODE	SEWER CODE	

TITLE
STRUCTURAL SECTIONS AND DETAILS

Des. By AEW	Scale AS SHOWN	Proj. No.
Drn. By AEW	Date 06-16-2016	
Chk. By RAC	Approved	

Designed by: D. RAU
Dwn by: D. RAU
Ckd by: K. LECHNER
RSFO Project Manager SANDRA TUCKER
Submitted by: SUSAN MAYER PROJECT MANAGER
Date: MAY 17, 2016
Project No. 31435
Rev. .
File name:
Plot date:
Plot scale: VARIES

EMERSON 6 - TENANT IMPROVEMENT
STRUCTURAL SECTIONS AND DETAILS
ROOM(S) OR FLOOR
LAUREL, MD

Drawing No.
Sheet Reference No. 29
Sheet 29 of 31

SDP-11-025

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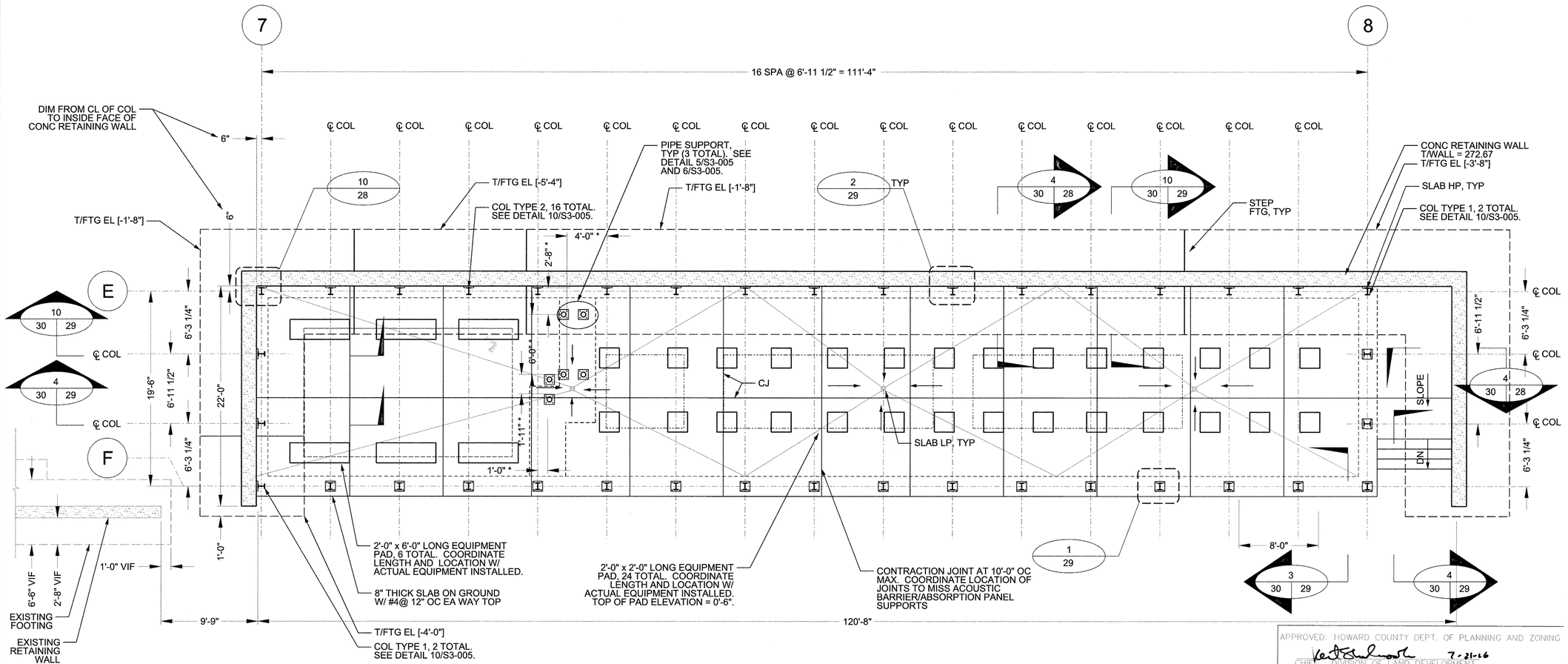
GENERAL NOTES

1. THE HIGH POINT OF THE CONCRETE SLAB ON GROUND IS DESIGNATED AS ELEVATION [0'-0"]. ACTUAL HIGH POINT TOP OF SLAB ELEVATION RELATIVE TO MEAN SEA LEVEL [264'-0"].
2. SLOPE OF SLAB ON GROUND IS 1/2" PER FOOT.
3. * COORDINATE LOCATION OF PIPE SUPPORTS WITH MECHANICAL EQUIPMENT PRIOR TO SLAB INSTALLATION.



1 MECHANICAL EQUIPMENT ENCLOSURE - SLAB AND FOUNDATION PLAN

SCALE: 3/16"=1'-0"

3/16"=1'-0" 0 1' 2' 4' 8' 12' 16'

THE PURPOSE OF REDLINE REVISION #3 IS TO ADD NEW DETAIL SHEET TO SDP-11-025.

ENGINEER'S SEAL BOX FOR REDLINE REVISION #3 ONLY

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APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT 7-21-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION 7-19-16
DIRECTOR 7-25-16

Date	No.	Revision Description

5-STORY COMMERCIAL OFFICE BUILDING
OWNER DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

REVITZ PROPERTY		SECTION AREA	LOT PARCEL # LOT G-1 / PAR. 165
PLAT# OR L. F.	BLOCK# / ZONE 20 / PEC	47	6
WATER CODE		SEWER CODE	CENSUS TRACT

TITLE
MECHANICAL EQUIPMENT ENCLOSURE - SLAB AND FOUNDATION PLAN

Des. By AEW	Scale AS SHOWN	Proj. No.
Drn. By AEW	Date 6-16-2016	
Chk. By RAC	Approved	

US Army Corps of Engineers
Baltimore District

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FORT DETRICK
ANNAPOLIS JUNCTION, MARYLAND

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Mark	Description	Date	Appr.
	100% BACKCHECK	5/17/2016	

Designed by: | Date: MAY 17, 2016 | Rev. -
Dwn by: | Ckd by: | Project No. 31435
RSFO Project Manager: SANDRA TUCKER
Submitted by: NATHAN JAMES PROJECT MANAGER
File name: Plot scale: Plot date:

EMERSON 6 - TENANT IMPROVEMENT
MECHANICAL EQUIPMENT ENCLOSURE - SLAB AND FOUNDATION PLAN
LAUREL, MD
ROOM(S) OR FLOOR

Drawing No.
Sheet Reference No. 30
Sheet 30 of 31

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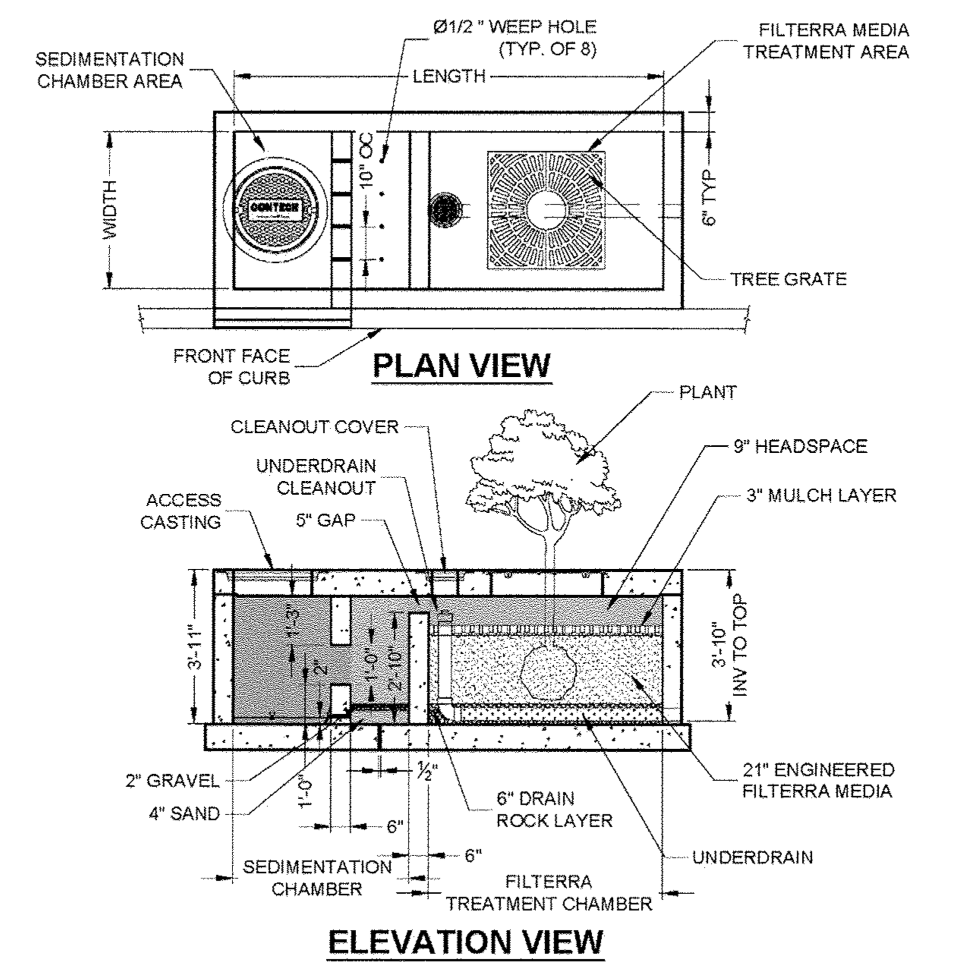
SDP-11-025



UNIT DESIGNATION	INSIDE VAULT DIMENSIONS	FILTERRA TREATMENT AREA	MAXIMUM DRAINAGE AREA TREATED (SF)	STORAGE CAPACITY OF UNIT PRIOR TO FILTRATION (CF)	WQv TREATMENT EQUIVALENT (CF)
FTSC 6' x 4'	12' x 4'	6' x 4'	4,356	85	339
FTSC 8' x 4'	16' x 4'	8' x 4'	5,990	117	467
FTSC 6' x 6'	12' x 6'	6' x 6'	6,534	128	511
FTSC 8' x 6'	16' x 6'	8' x 6'	9,039	176	702
FTSC 10' x 6'	19' x 6'	10' x 6'	10,454	204	816
FTSC 10' x 8'	20' x 8'	10' x 8'	15,246	298	1,194
FTSC 11' x 8'	22' x 8'	11' x 8'	16,990	330	1,322

NOTE:
1. FILTERRA TREATMENT AREA BASED UPON MINIMUM OF 0.44% OF THE TOTAL DRAINAGE AREA.
2. MAXIMUM DRAINAGE AREA TREATED ASSUMES 25% WQv AND FILTER SURFACE AREA REQUIREMENTS ARE BOTH MET.
3. STORAGE CAPACITY ASSUMES 30% VOIDS IN MULCH WITH NO STORAGE IN MEDIA AND STONE.
4. ALL INFORMATION IS BASED ON STANDARD 3.83' RIM TO OUTLET DEPTH. CONTACT CONTECH FOR CUSTOM SIZING IF DEPTH IS NOT 3.83'. ACCEPTABLE DEPTH IS 3.33' MIN. TO 5.00' MAX. RIM TO INVERT OUT.
5. PLEASE CONTACT YOUR CONTECH REPRESENTATIVE FOR CUSTOM SIZES IF THE STANDARD UNITS DO NOT MEET SITE CONSTRAINTS.

filterra®

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
605 Global Way, Suite 113, Linthicum, MD 21090
866-740-3318 OFFICE 866-376-8511 FAX

FILTERRA® WITH SEDIMENTATION CHAMBER

DATE: 10-28-15 | SCALE: NONE | PRODUCT No.: FTSC | DRAWN BY: BAS

No Mulch, Media, and Stone Storage															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Unit Designation	Inside Vault Dimensions	Inside Vault Width (ft)	Inside Vault Length (ft)	Rim to Inv. Out (ft)	Filter Media Surface Area Length (ft)	Sedimentation Chamber Length (ft)	Filter Media Surface Area (sf)	Headspace Depth (ft)	Headspace Volume (cf)	Chamber Volume 1 (cf)	Chamber Volume 2 (cf)	Chamber Volume 3 (cf)	Storage Capacity of Unit Prior to Filtration (cf)	WQv Treatment Equivalent (cf)	Underdrain Pipe Diameter (in)
FTSC 6' x 4'	12x4	4	12	3.83	6	5.5	24	0.75	18.83	45.45	1.00	19.48	85	339	4
FTSC 8' x 4'	16x4	4	16	3.83	8	7.5	32	0.75	24.83	71.43	1.00	19.48	117	467	4
FTSC 6' x 6'	12x6	6	12	3.83	6	5.5	36	0.75	28.25	68.18	2.00	29.22	128	511	4
FTSC 8' x 6'	16x6	6	16	3.83	8	7.5	48	0.75	37.25	107.14	2.00	29.22	176	702	4
FTSC 10' x 6'	19x6	6	19	3.83	10	8.5	60	0.75	46.25	126.62	2.00	29.22	204	816	6
FTSC 10' x 8'	20x8	8	20	3.83	10	9.5	80	0.75	61.67	194.80	3.00	38.96	298	1194	6
FTSC 11' x 8'	22x8	8	22	3.83	11	10.5	88	0.75	67.67	220.77	3.00	38.96	330	1322	6

1. Contech Filterra Sedimentation Chamber model designation, which is based on the filter media length and width.
2. Overall internal vault dimensions.
3. Internal vault width.
4. Internal vault length.
5. Rim to invert out depth.
6. Length of chamber with filter media (see detail).
7. Length of sedimentation chamber (see detail).
8. Filter media surface area = inside vault width (3) x filter media surface area length (6).
9. Headspace depth = Rim to inv. out (5) - 8" top slab - 21" media - 3" mulch - 5" underdrain stone to pipe invert.*
10. Headspace volume = headspace depth (9) x filter media surface area (8) + (6" x 5" x inside vault width (3)) to account for volume in gap above weir wall.
11. Chamber volume 1 = (sedimentation chamber length (7) - 1.5' for chamber 2 - 6" for weir wall) x inside vault width (3) x (rim to invert out (5) + 1" to get to vault invert - 8" top slab).
12. Chamber volume 2 = 6" wall width x 1' opening in wall x (inside vault width (3) - 2').
13. Chamber volume 3 = 1.5' x (rim to invert out (5) + 1" to get to vault invert - 8" top slab) x inside vault width (3).
14. Storage Capacity of Unit Prior to Filtration = headspace volume (10) + chamber volume 1 (12) + chamber volume 2 (13) + chamber volume 3 (14).
15. = WQv Treatment Equivalent = Storage Capacity of Unit Prior to Filtration x 4. **
16. Diameter of Underdrain pipe

Notes:
*Calculations shown are for standard depth of 3.83' rim to invert out. For shallow units (3.33' - 3.83') the decrease in depth will be removed from the filter media and the headspace will remain 9". For deep units (3.83' - 5.00') the depth will be added to the headspace and the media depth will remain 21".
** The Treatment Volume for which the Storage Capacity of the Filterra Unit (14) is 25%.

SWM/DA ID	ESD TYPE	UNIT TYPE	OVERALL DIMENSION (FT X FT)	STRUCTURE TOP ELEV (FT)	STRUCTURE DEPTH (FT)	INVERT OUT ELEV (FT)	CHAMBER HEIGHT (FT)	TOP CHAMBER WEIR ELEV (FT)	SEDIMENT OPENING (FT)	OPENING BOTTOM ELEV (FT)	OPENING TOP ELEV (FT)	PLANTING
ESD-1	FTSC	8' X 6'	17' X 7'	262.33	3.83	258.50	3.25	261.33	1.00	259.50	260.50	HERITAGE RIVER BIRCH (BETULA NIGRA 'HERITAGE')
ESD-2	FTSC	8' X 6'	17' X 7'	262.03	3.83	258.20	3.25	261.03	1.00	259.20	260.20	HERITAGE RIVER BIRCH (BETULA NIGRA 'HERITAGE')

NOTE: TREES SHALL BE SINGLE STEM SPECIMEN, MINIMUM CALIPER OF 3 INCHES.

CONTECH® ENGINEERED SOLUTIONS

Filterra® Standard Plan Notes

filterra® Bioretention Systems

Construction & Installation

A. Each unit shall be constructed at the locations and elevations according to the sizes shown on the approved drawings. Any modifications to the elevation or location shall be at the direction of and approved by the Engineer.

B. If the Filterra® is stored before installation, the top slab must be placed on the box using the 2x4 wood provided, to prevent any contamination from the site. All internal fittings supplied (if any), must be left in place as per the delivery.

C. The unit shall be placed on a compacted sub-grade with a minimum 6-inch gravel base matching the final grade of the curb line in the area of the unit. The unit is to be placed such that the unit and top slab match the grade of the curb in the area of the unit. Compact undisturbed sub-grade materials to 95% of maximum density at +1- 2% of optimum moisture. Unsuitable material below sub-grade shall be replaced to the site engineer's approval.

D. Outlet connections shall be aligned and sealed to meet the approved drawings with modifications necessary to meet site conditions and local regulations.

E. Once the unit is set, the internal wooden forms and protective mesh cover must be left intact. Remove only the temporary wooden shipping blocks between the box and top slab. The top lid should be sealed onto the box section before backfilling, using a nonshrink grout, butyl rubber or similar waterproof seal. The boards on top of the lid and boards sealed in the unit's throat must NOT be removed. The Supplier will remove these sections at the time of activation. Backfilling should be performed in a careful manner, bringing the appropriate fill material up in 6" lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of Filterra® unit shall conform to ASTM specification C891 "Standard Practice for Installation of Underground Precast Utility Structures", unless directed otherwise in contract documents.

F. Curb and gutter construction (where present) shall ensure that the flow-line of the Filterra® units is at a greater elevation than the flow-line of the bypass structure or relief (drop inlet, curb cut or similar). Failure to comply with this guideline may cause failure and/or damage to the Filterra® environmental device.

G. Each Filterra® unit must receive adequate irrigation to ensure survival of the living system during periods of drier weather. This may be achieved through a piped system, gutter flow or through the tree grate.

1. FILTERRA INLET STRUCTURE INSPECTION SCHEDULE:

   MINIMUM 2 TIMES PER YEAR
   WITHIN EVERY 6 MONTHS

2. PERFORM INSPECTION/MAINTENANCE OF THE FILTERRA SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS. THE GENERAL INSPECTION PROCEDURE SHALL BE AS FOLLOWS:

   A. INSPECT THE FILTERRA STRUCTURE & SURROUNDING AREA.
   B. INSPECT FOR STANDING WATER, DAMAGE TO BOX STRUCTURE, DAMAGE TO GRATE, AND ENSURE THE BYPASS IS CLEAR. RECORD INSPECTION FINDINGS AND MAKE REPAIRS AS REQUIRED.
   C. REMOVE THE TREE GRATE AND EROSION CONTROL STONES. DIG OUT SILT (IF ANY), MULCH, AND ANY TRASH/FOREIGN ITEMS.
   D. AFTER REMOVAL OF ALL FOREIGN DEBRIS, MEASURE THE DISTANCE FROM TOP OF FILTER MEDIA SOIL TO THE TOP OF SLAB. IF THE DISTANCE EXCEEDS 12-INCHES, ADD ADDITIONAL FILTER MEDIA TO RECHARGE TO A DEPTH OF 9-INCHES.
   E. ADD DOUBLE SHREDDED MULCH EVENLY ACROSS THE ENTIRE UNTI TO A DEPTH OF 3-INCHES (SEE FILTERRA MULCH SPECIFICAITONS). CORRECTLY REPOSITION EROSION CONTROL STONES IN ORIGINAL LOCATION AND SET FILTERRA GRATES IN PLACE.
   F. EXAMINE THE PLANTS HEALTH. PRUNE OR REPLACE AS NECESSARY BASED ON MANUFACTURER'S RECOMMENDATIONS.
   G. CLEAN AREA AROUND FILTERRA INLET.
   H. RECORD INSPECTION/MAINTENANCE DATA. KEEP RECORDS ON SITE AND READILY ACCESSIBLE.

1 FILTERRA STORMWATER MANAGEMENT STRUCTURE
SCALE: NTS

JACOBS

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. 45292 EXPIRATION DATE: 05/21/2018

THE PURPOSE OF REDLINE REVISION #3 IS TO ADD NEW DETAIL SHEET TO SDP-11-025.

STATE OF MARYLAND ROBERT A. CROWLEY 45292 PROFESSIONAL ENGINEER 7/14/16

ENGINEER'S SEAL BOX FOR REDLINE REVISION #3 ONLY

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT 7-21-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION 7-19-16
DIRECTOR 7-25-16

Date	No.	Revision Description

5-STORY COMMERCIAL OFFICE BUILDING
OWNER DEVELOPER:
EMERSON DEVELOPMENT VI LLC
1 TEXAS STATION COURT, SUITE 200
TIMONIUM, MARYLAND 21093-8288
(443) 689-8000

REVITZ PROPERTY	SECTION AREA		LOT PARCEL # LOT G-1 / PAR. 165
PLAT# OR L F / BLOCK# 20 / ZONE PEC	TAX ZONE MAP 47	ELECT. DISTRICT 6	CENSUS TRACT
WATER CODE	SEWER CODE		

TITLE

Des. By AEW	Scale AS SHOWN	Proj. No.
Drn. By AEW	Date 06-16-2016	
Chk. By RAC	Approved	

US Army Corps of Engineers
Baltimore District

REAL PROPERTY SERVICES FIELD OFFICE ANNAPOLIS JUNCTION, MARYLAND

JACOBS™ 1100 N.GLEBE RD., ARLINGTON, VA, 22201

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Mark	Description	Date	Appr.
	100% BACKCHECK	5/17/2016	

Designed by: R. CROWLEY
Dwn by: R. CROWLEY
Ckd by: A. WILLIAMSON
RSFO Project Manager SANDRA TUCKER
Submitted by: NATHAN JAMES PROJECT MANAGER
Date: MAY 17, 2016
Rev. -
Project No. 31435
File name:
Plot date:
Plot scale:

EMERSON 6 - TENANT IMPROVEMENT
STORMWATER MANAGEMENT DETAILS
ROOM(S) OR FLOOR
LAUREL, MD

Drawing No.
Sheet Reference No. 31
Sheet 31 of 31

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SDP-11-025