

SITE DATA

LOCATION: JESSUP, MD; TAX MAP 4.3, GRID 15, PARCEL 2, PARCEL J
 8TH ELECTION DISTRICT
 PRESENT ZONING: M-2
 LOCATION: 7540 ASSATEAGUE DRIVE
 SUBDIVISION: MD WHOLESALE FOOD CENTER
 TOTAL PARCEL AREA: 58.9 AC.
 PARCEL 'J' AREA: 58.89 AC.
 DPZ REFERENCES: L 1603/PL 02246, PLAT 19144, SDP-77-70, SDP-82-45, SDP-80-56, SDP-83-148, SDP-87-50, SDP-90-155, ECP-15-035, SDP-90-214, SDP-91-097, F-16-108, PLAT 23763-23765

SITE DATA FOR THIS PROJECT WITHIN PARCEL 'J'
 AREA OF PLAN SUBMISSION: 10.10 AC.
 USE: STRUCTURE: STORY WAREHOUSE
 BUILDING FLOOR AREA: 180,228 SF
 AREA OF WETLANDS AND BUFFERS: 0.00 AC.
 AREA OF STREAMS AND BUFFERS ON SITE: 0.00 AC.
 AREA OF 100 YEAR FLOODPLAIN ON SITE: 0.00 AC.
 AREA OF FOREST ON SITE: 0.00 AC.
 AREA OF STEEP SLOPES (25% OR GREATER) ON SITE: 0.00 AC.
 AREA OF ERODIBLE SOILS ON SITE: 0.00 AC.
 AREA/LIMIT OF DISTURBED AREA WITHIN THIS SDP: 9.91 AC.
 EX. IMPERVIOUS AREA WITHIN THIS SDP: 8.20 AC.
 EX. GREEN AREA WITHIN THIS SDP: 1.97 AC.
 PROP. IMPERVIOUS AREA WITHIN THIS SDP: 7.63 AC.
 PROP. GREEN AREA WITHIN THIS SDP: 1.27 AC.
 CUT: 30,461 CY FILL: 10,264 CY TO BE UTILIZED FOR EXPANSION OF EXISTING BUILDING LOCATED ON PARCEL 'J' (ASSOCIATED SDP-91-097)

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE. ALL WORK AND MATERIALS SHALL COMPLY WITH O.S.H.A. STANDARDS.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 MISS UTILITY 1-800-257-7777
 VERIZON TELEPHONE COMPANY 1-410-954-6281
 HOWARD COUNTY BUREAU OF UTILITIES 410-311-3366
 AT&T CABLE LOCATION DIVISION 1-800-393-3553
 B.G.&E. CO. CONTRACTOR SERVICES 410-850-4820
 B.G.&E. CO. UNDERGROUND DAMAGE CONTROL 410-787-4820
 STATE HIGHWAY ADMINISTRATION 410-531-5533
- 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 START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED (QUICK PUNCH) SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) 3' LONG. CURB AND SIDEWALKS SHALL NOT EXTEND MORE THAN TWO QUICK PUNCH HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- ALL PLAN DIMENSIONS ARE TO CENTER UNLESS OTHERWISE NOTED.
- THE EXISTING TOPOGRAPHIC INFORMATION SHOWN HEREON IS TAKEN FROM A FIELD-RUN TOPOGRAPHIC SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED OCTOBER 10, 2014.
- THE PROPERTY LINES SHOWN HEREON ARE BASED ON RECORD PLAT 19143-19146, F-07-104, AND F-16-108.
- THE SUBJECT PROPERTY IS ZONED "M-2" IN ACCORDANCE WITH THE 10/06/13 COMPREHENSIVE ZONING PLAN.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS 4389 AND 4390 WERE USED FOR THIS PROJECT.
- PUBLIC WATER AND SEWER AVAILABLE THROUGH CONTRACT NO. BCFM-694-WAS.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- STORMWATER MANAGEMENT FOR THIS REDEVELOPMENT PROJECT IS PROVIDED BY ENVIRONMENTAL SITE DESIGN UTILIZING MICRO-BIORETENTION FACILITIES (M-6), PERMEABLE PAVEMENT (A-2), SAND FILTER (F-5), AND A POND PER SDP-80-056. SWM FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED.
- THERE ARE NO ENVIRONMENTAL FEATURES INCLUDING FLOODPLAIN, WETLANDS, STREAMS, THEIR BUFFER, STEEP SLOPES, SPECIMEN TREES, FOREST OR FOREST CONSERVATION AREAS THAT EXISTS WITHIN THE DEVELOPED AREA.
- SIGNAGE SHALL BE PROVIDED ON THE BUILDING IDENTIFYING THE BUILDING ADDRESS, AND EACH SUITE SEPARATED BY LETTER.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- BUILDINGS TO HAVE INSIDE WATER METER SETTINGS.
- THE PROPOSED BUILDINGS WILL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- LANDSCAPING NOT PERMITTED WITHIN 7'-1/2' OF EACH SIDE OF THE FIRE DEPARTMENT CONNECTION. PROVIDE A CLEAR UNOBSTRUCTED ACCESS PATH TO THE FIRE DEPARTMENT CONNECTION. NEPA-11.13.1.4
- A KNOX BOX IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDING. IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4'-5" IN HEIGHT AND NO MORE THAN 6' LATERALLY FROM THE DOOR. ITS LOCATION IS SHOWN ON THESE PLANS. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSSED (INTEGRATED WITH THE FIRE ALARM SYSTEM).
- FIRE LANES SHOULD BE PROVIDED IN THIS SITE TO ALLOW EMERGENCY VEHICLE ACCESS. EITHER FIRE LANE SIGNAGE SHOULD BE INSTALLED, OR THE CURBS SHOULD BE PAINTED IN RED AND STENCILED TO IDENTIFY THE ROAD AS A FIRE LANE.
- THIS PROJECT IS SUBJECT TO COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE DEVELOPMENT PLAN, WALKER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- THERE ARE NO KNOWN HISTORIC STRUCTURES OR CEMETERIES ON SITE.
- THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.
- NO BARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITATS WERE OBSERVED ON THE PROPERTY.
- THERE ARE NO SPECIMEN OR CHAMPION TREES WITHIN THE LOD.
- SEDIMENT AND EROSION CONTROL IS PROVIDED FOR THIS SITE.
- ROADS ADJACENT TO THE SITE ARE NOT CLASSIFIED AS SCENIC ROADS.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOIL TEST, PRIOR TO CONSTRUCTION.
- THE GEOTECHNICAL ENGINEER TO CONFIRM PAVING SECTION PRIOR TO CONSTRUCTION. SEE SHEET 13 FOR SPECIFICATION.
- ALL PUBLIC CURB AND GUTTER TO BE HOWARD COUNTY STANDARD DETAIL R-3.01 UNLESS OTHERWISE NOTED.
- CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP RAMPS AND HANDICAP ACCESS IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
- WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN.
- ALL ELEVATIONS ARE TO FLOWLINE/BOTTOM OF CURB UNLESS OTHERWISE NOTED.
- ALL EXTERIOR LIGHTING TO COMPLY WITH THE REQUIREMENTS FOUND IN ZONING SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS. (DETAIL ON SHEET 2)
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME II (1993) AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993). A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
- ANY EXISTING STREET TREES DAMAGED OR DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY FOR THE LANDSCAPING IN THE AMOUNT OF \$18,360.00 FOR THE REQUIRED 35 SHADE TREES, 3 EVERGREENS, AND 247 SHRUBS SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS SITE DEVELOPMENT PLAN.
- ALL STORM DRAIN FIRE BEARING IS TO BE CLASS "C".
- TRASH AND RECYCLING COLLECTION TO BE PRIVATE.
- HEALTH DEPARTMENT APPROVAL OF THIS SITE DEVELOPMENT PLAN (SDP) DOES NOT ENSURE APPROVAL OF BUILDING PERMIT APPLICATIONS ASSOCIATED WITH THIS PLAN. PERMIT PLANS FOR CERTAIN FACILITIES TO BE CONSTRUCTED WITHIN THE LIMITS DESCRIBED BY THIS SDP WILL REQUIRE REVIEW AND APPROVAL BY THE HEALTH DEPARTMENT. SUCH FACILITIES MAY INCLUDE, BUT ARE NOT LIMITED TO, THOSE WHICH HAVE SWIMMING POOLS, OR THAT SELL PREPARED OR PACKAGED FOODS, OR THAT MAY HAVE EQUIPMENT THAT EMITS RADIATION.
- REFERENCE WP-16-014; APPROVED AUGUST 20, 2015, TO WAVE SECTION 16.120(1)(a) - NET TRACT AREA AND SECTION 16.120(2)(1)(i) - APPLICABILITY, EXEMPTIONS, DECLARATION OF INTENT, APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 1. A REVISED WALKER EXHIBIT SHALL BE SUBMITTED WITHIN TWO WEEKS OF WALKER APPROVAL (ON OR BEFORE SEPTEMBER 3, 2015) WHICH CLEARLY SHOWS THE NEWLY PROPOSED PARCEL LINES FOR "J-1" AND "J-2" (OR AN EXHIBIT SHOWING ALL LOTS AND CORRESPONDING ACREAGES ON EXISTING PARCEL 'J', IF APPLICABLE).
 2. A FOREST CONSERVATION WORKSHEET SHALL BE SUBMITTED WITHIN TWO WEEKS OF WALKER APPROVAL (ON OR BEFORE SEPTEMBER 3, 2015) FOR EACH PROJECT PROPOSED (BUILDING ADDITIONS AND IMPROVEMENTS ON PARCEL "J-2" AND NEW BUILDING ON PROPOSED PARCEL "J-1" (OR A SINGLE WORKSHEET MAY BE SUBMITTED FOR A SINGLE JOINT PROJECT OCCURRING ON EXISTING PARCEL "J").
 3. THE SUBDIVISION PLAT CREATING PARCELS "J-1" AND "J-2" SHALL BE SUBMITTED ON OR BEFORE OCTOBER 4, 2015 AND MUST BE RECORDED PRIOR TO RECORDATION OF ANY REQUIRED OFF-SITE FC EASEMENT PLATS (OR IF APPLICABLE, A PLAT OF REVISION SHALL BE SUBMITTED).
 4. FOREST CONSERVATION OBLIGATIONS MUST BE MET VIA USE OF AN OFFSITE EASEMENT LOCATION OR THROUGH AN ESTABLISHED FOREST CONSERVATION BANK AND/OR ALONG WITH A PERIA FEE-IN-LIEU PAYMENT, ANY AND ALL EASEMENT PLATS MUST BE RECORDED PRIOR TO FINAL SIGNATURE OF ANY NEW SDP ASSOCIATED WITH PARCEL 'J' OR ANY REDLINE ASSOCIATED WITH EXISTING PARCEL 'J'. LIKEWISE, ANY REQUIRED REDLINE OF AN ESTABLISHED FOREST CONSERVATION BANK MUST BE COMPLETED PRIOR TO FINAL SIGNATURE OF ANY NEW SDP ASSOCIATED WITH PARCEL 'J' OR ANY REDLINE ASSOCIATED WITH PARCEL 'J'.
 5. THE APPLICANT SHALL OBTAIN ALL APPLICABLE PERMITS (GRADING AND BUILDING) THROUGH THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS.
 6. THIS PROJECT IS NOT LOCATED ON A SCENIC ROAD.
- THE FOREST CONSERVATION REQUIREMENT FOR THIS SITE DEVELOPMENT PLAN (SDP-16-012) AND THE ASSOCIATED REDLINE TO SITE DEVELOPMENT PLAN (SDP-91-097) IS 0.83 AC. OF AFForestation. THIS IS ACCOMPLISHED THROUGH THE PURCHASE 0.63 AC. OF FOREST PLANTING IN THE CATTAL CREEK FOREST MITIGATION FOREST BANK (SDP-14-031).
- REFERENCE WP-16-031; APPROVED SEPTEMBER 9, 2015, TO WAVE SECTION 16.155(6)(1)(i) WHICH REQUIRES A SITE DEVELOPMENT PLAN FOR ANY NEW OR EXPANDED INDUSTRIAL DEVELOPMENT, INCLUDING COMMERCIAL, INDUSTRIAL, INSTITUTIONAL AND UTILITY DEVELOPMENT, PLUS PUBLIC BUILDINGS, SCHOOLS AND OTHER PUBLIC FACILITIES, BUT EXCLUDING ROAD, WATER, SEWER OR DRAINAGE IMPROVEMENTS AND DEVELOPMENT ASSOCIATED WITH A USE PERMIT APPROVED BY THE DEPARTMENT IN ACCORDANCE WITH SECTION 128 OF THE ZONING REGULATIONS. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 A. A GRADING AND SEDIMENT CONTROL PLAN SHALL BE REVIEWED AND APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT (HSCD).
 B. THE TEMPORARY STOCKPILE AREA SHALL BE AS SHOWN ON THE SUBMITTED WALKER EXHIBIT (SHEET 13 OF SDP-90-097) AND SHALL ONLY BE PLACED ON EXISTING IMPERVIOUS SURFACES.
 C. THE APPLICANT SHALL OBTAIN ALL APPLICABLE PERMITS (GRADING AND BUILDING) THROUGH THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS.
 D. THE APPLICANT SHALL ADHERE TO ALL 4 DEED CONDITIONS OUTLINED IN THE ATTACHED MEMO.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-13-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

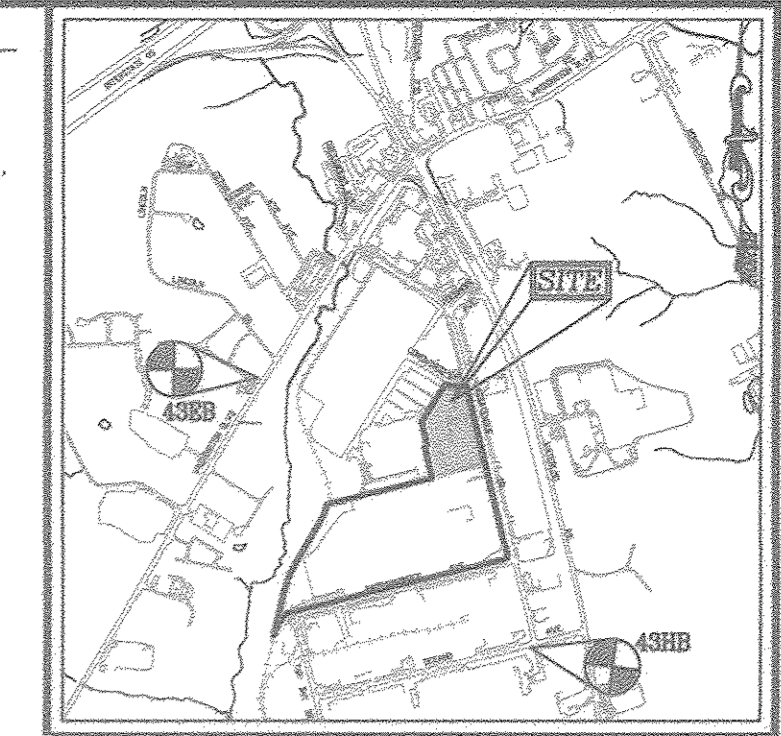
[Signature] 5-3-16
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

[Signature] 5-3-16
 DIRECTOR
 DATE

SITE DEVELOPMENT PLAN
MARYLAND FOOD CENTER AUTHORITY
PROPOSED WAREHOUSE
PARCEL 'J'

BENCHMARKS

HOWARD COUNTY BENCHMARK 43EB
 N 545963.6476 E 1371573.8400 ELEV.: 216.327'
 HOWARD COUNTY BENCHMARK 43HB
 N 453166.729 E 1374425.0243 ELEV.: 251.627'



VICINITY MAP

SCALE: 1"=2000'
 ADC MAP COORDINATES: 41 D-1

LEGEND

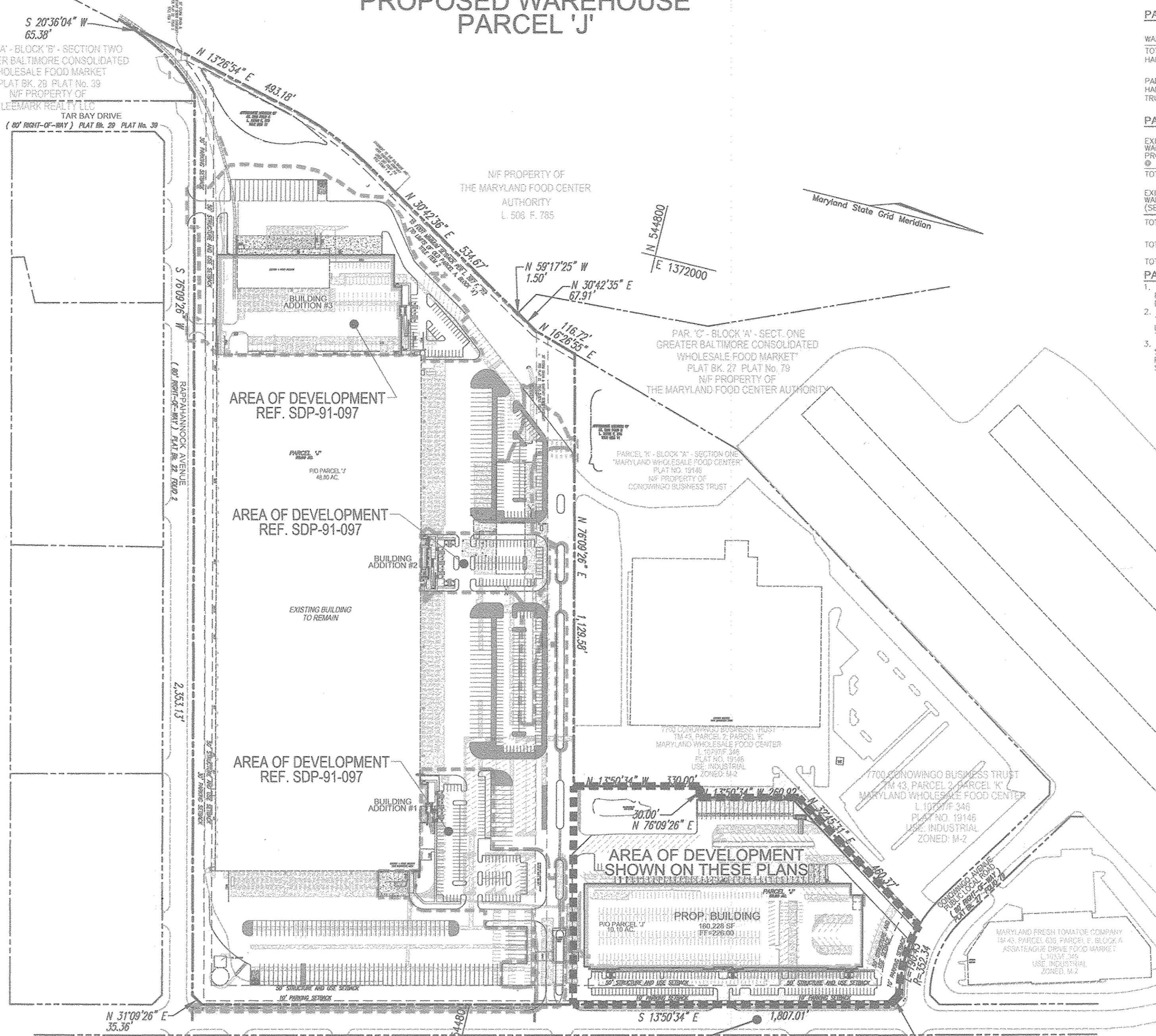
- EXISTING CURB AND GUTTER
- CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SIDEWALK
- BORING
- LIGHT POLE

SHEET INDEX

COVER SHEET	DESCRIPTION	SHEET NO.
1	SITE LAYOUT PLAN	1 OF 15
2	SITE LAYOUT PLAN	2 OF 15
3	SITE LAYOUT PLAN	3 OF 15
4	SITE LAYOUT PLAN	4 OF 15
5	GRADING, SEDIMENT AND EROSION CONTROL PLAN; SOILS MAP	5 OF 15
6	GRADING, SEDIMENT AND EROSION CONTROL PLAN	6 OF 15
7	GRADING, SEDIMENT AND EROSION CONTROL PLAN	7 OF 15
8	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS	8 OF 15
9	STORM DRAIN DRAINAGE AREA MAP	9 OF 15
10	STORM DRAIN PROFILES	10 OF 15
11	STORM DRAIN AND PRIVATE UTILITY PROFILES	11 OF 15
12	STORMWATER MANAGEMENT DRAINAGE AREA MAP	12 OF 15
13	STORMWATER MANAGEMENT NOTES AND DETAILS	13 OF 15
14	LANDSCAPE PLAN, NOTES AND DETAILS	14 OF 15
15	RETAINING WALL PLAN	15 OF 15

ADDRESS CHART	
BUILDING NO.	SECTION ADDRESS
7540	ASSATEAGUE DRIVE

PERMIT INFORMATION CHART			
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL NUMBER	PARCEL 'J'
MD WHOLESALE FOOD CENTER			
PLAT OR L/F	GRID NO.	ZONING	TAX MAP NO.
23763-23765	15	M-2	4.3
		ELECT. DIST.	CENSUS TR.
		6TH	606901



PLAN VIEW

SCALE: 1"=200'

PROPOSED BUILDING ELEVATION (NORTH)

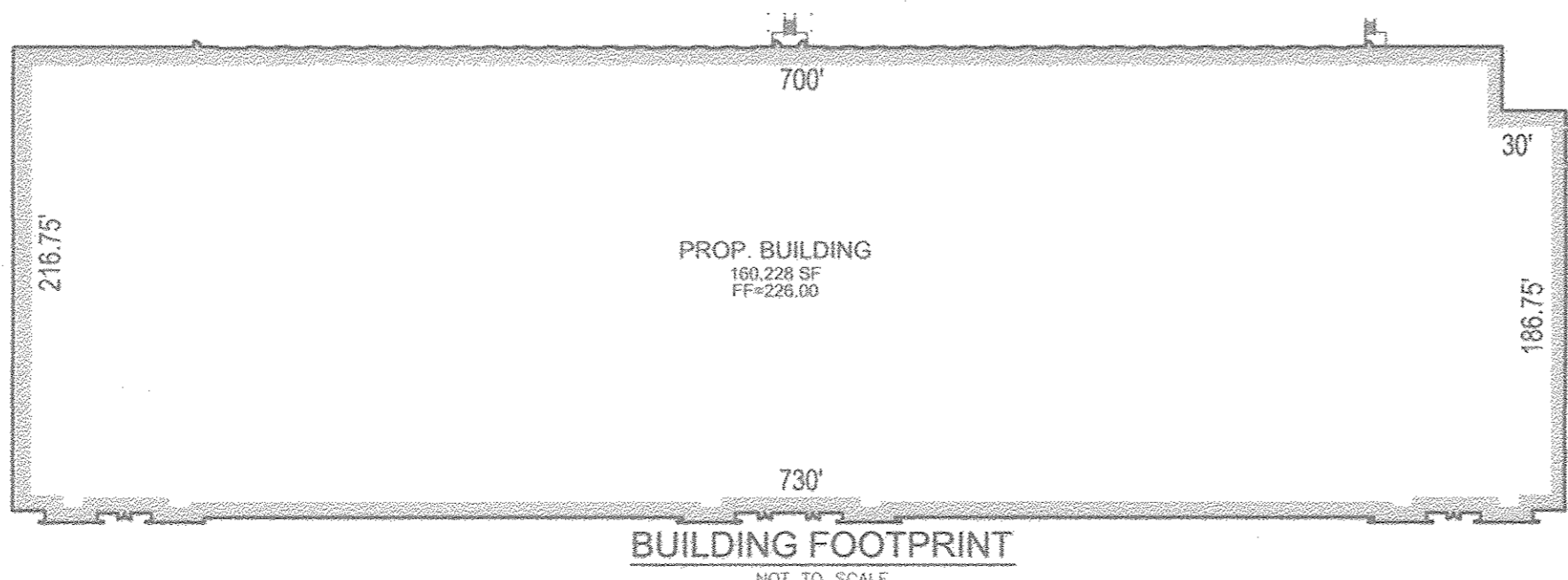
NOT TO SCALE

PROPOSED BUILDING ELEVATION (SOUTH)

NOT TO SCALE

PROPOSED BUILDING ELEVATION (EAST & WEST)

NOT TO SCALE



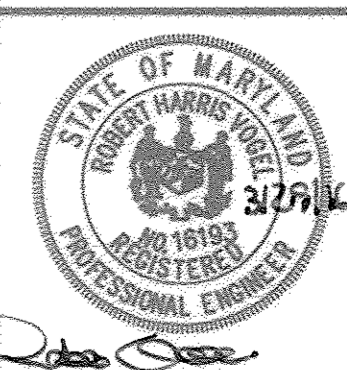
NO.	REVISION	DATE
3	REVISE SHCS, ADD SOLIDS INTERCEPTORS AND DUMPSTER	11-22-16
2	REVISE LANDSCAPE PLANTS SCHEDULE FOR SUBSTITUTIONS	10-11-16
1	REVISE SHCS, ADD TRENCH AND PIPES, UPDATE PUBLIC WATER LOCATION	06-20-16

SITE DEVELOPMENT PLAN

COVER SHEET

MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
 PROPOSED WAREHOUSE
 7540 ASSATEAGUE DRIVE
 ZONED: M-2
 PLAT 19144
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961



DESIGN BY: RHV
 DRAWN BY: DZ
 CHECKED BY: RHV
 DATE: MARCH 2016
 SCALE: AS SHOWN
 W.O. NO.: 13-42

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 EXPIRATION DATE: 09-27-2018

1 SHEET OF 15

N 544800
E 1373750
Maryland State Grid Meridian

PAVING SECTION - ASPHALT:

Light Duty Pavement - Assumed traffic volume of 1 x 10⁶ ESAL's to accommodate cars and limited heavy truck traffic.

Layer	Thickness (in)
Bituminous Surface	1.5
Bituminous Base	2.5
Graded Aggregate Base Course	6.0
Approved Subgrade (Minimum CBR = 5.0)	

Heavy Duty Pavement - Assumed traffic volume of 1.5 x 10⁶ ESAL's to accommodate 200 heavy trucks per day.

Layer	Thickness (in)
Bituminous Surface	2.0
Bituminous Base	4.0
Graded Aggregate Base Course	12.0
Approved Subgrade (Minimum CBR = 5.0)	

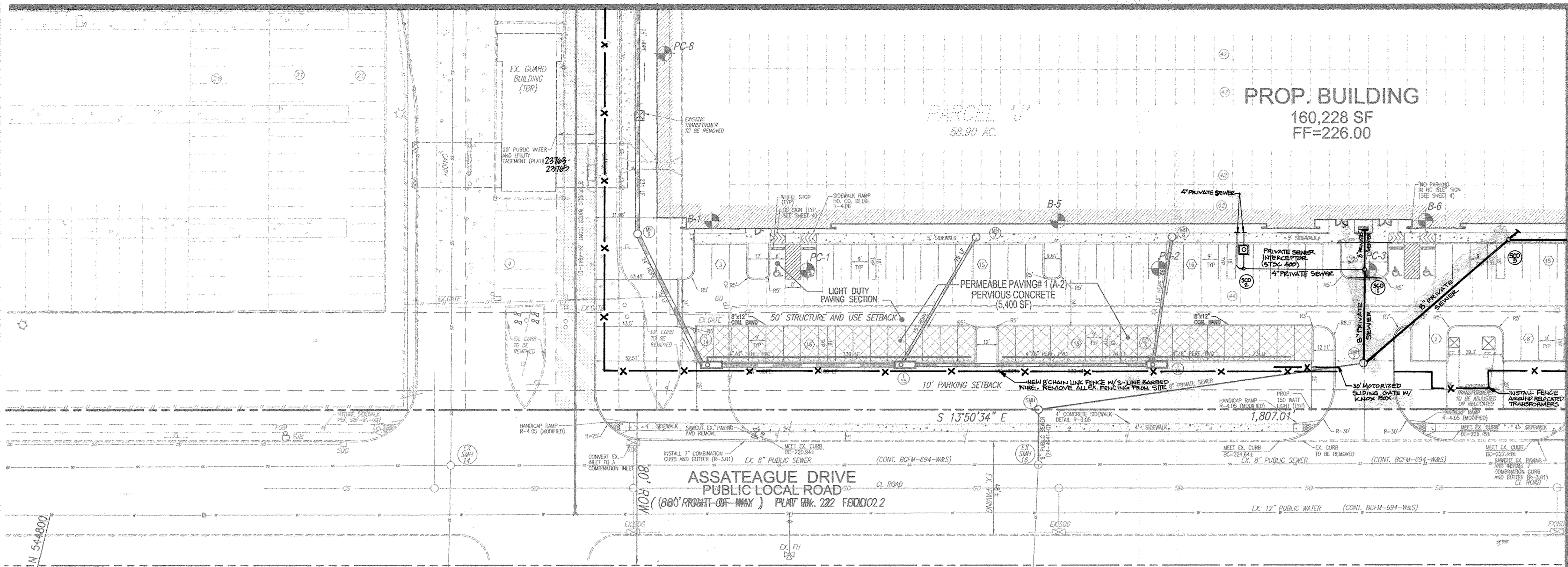
PAVING SECTION - CONCRETE:

Rigid Concrete Pavement - For areas of high traffic or severe turns (such as loading dock areas and dumpster aprons)

Layer	Thickness (in)
Portland Cement Concrete	8.0
Graded Aggregate Base Course	8.0

The recommended pavement sections are not intended to accommodate construction traffic. If the asphalt base course is placed prior to the substantial completion of the project, portions of the asphalt should be expected to be damaged and require replacement prior to the placement of the surface course. Pavement subgrade preparation and paving should be performed during the dryer portions of the year, typically between June and October. Additional CBR testing should be performed at the time of rough grading operations to confirm that the design CBR value will be present at the pavement subgrade. Should CBR values differ from those used in the design, some minor changes to the design pavement sections may be required.

MATCHLINE SHEET 3



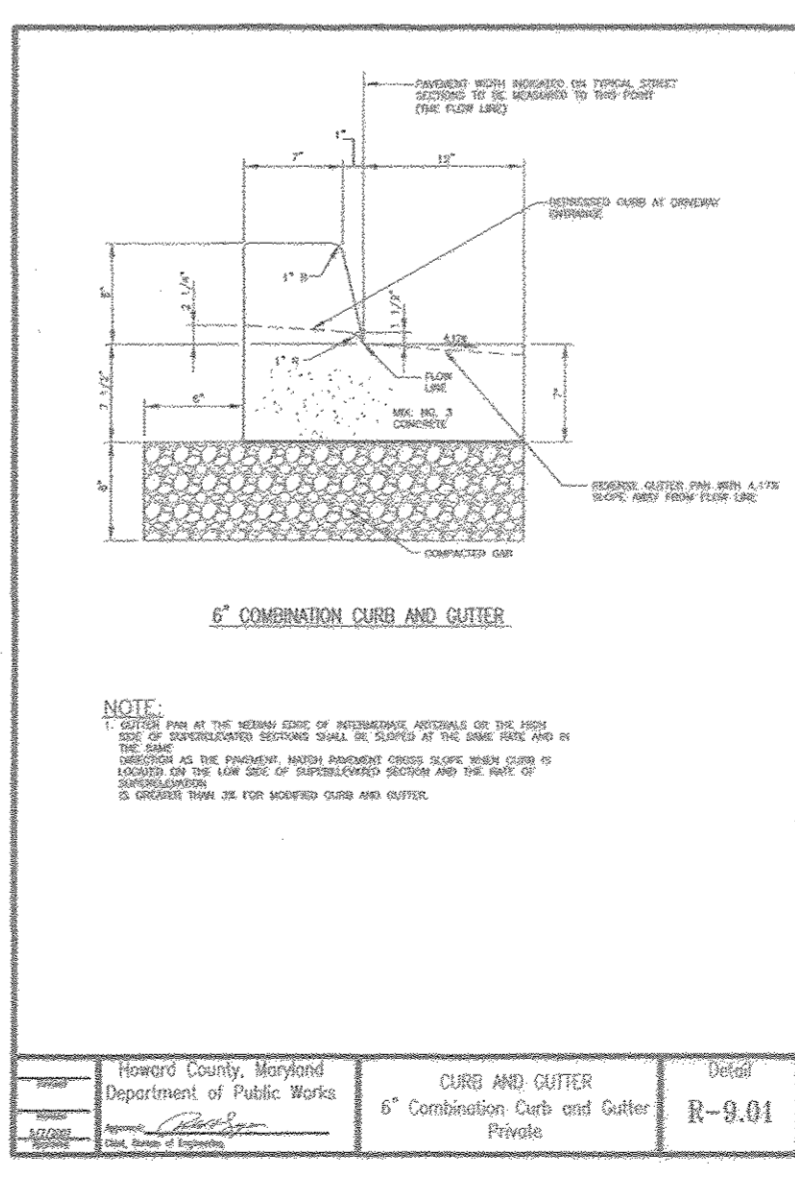
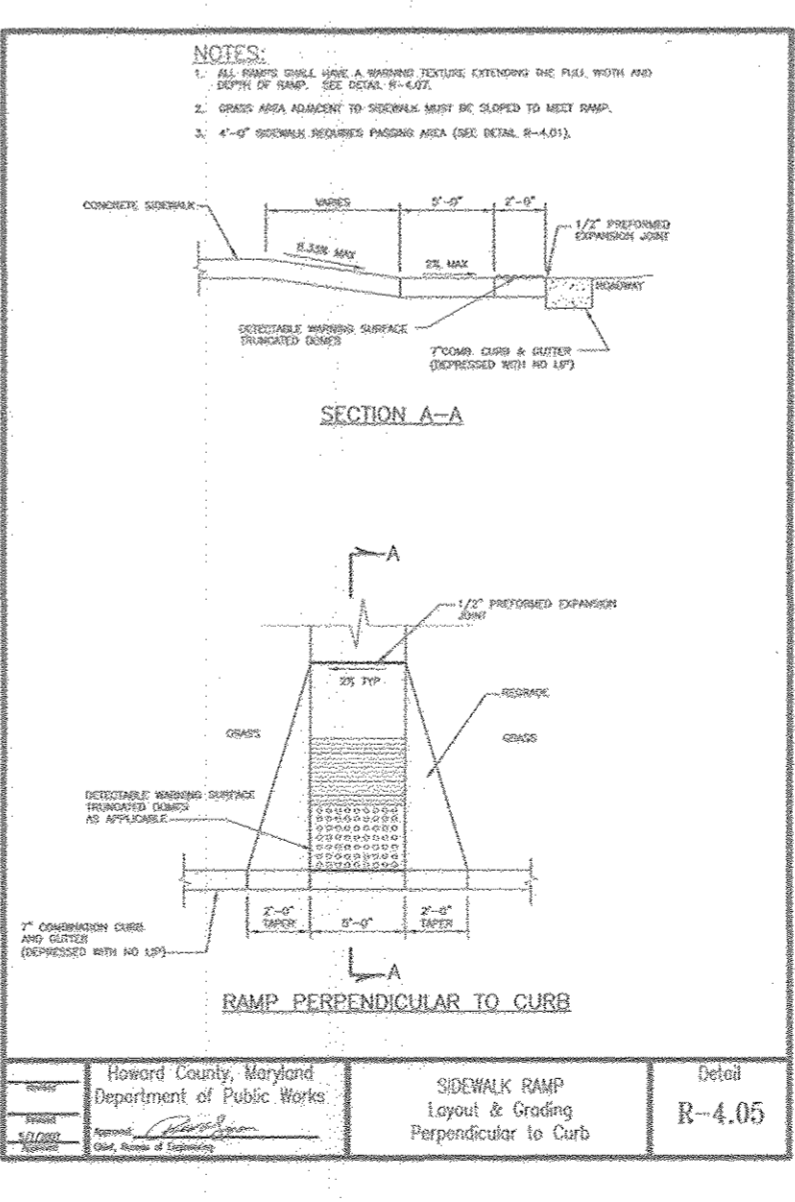
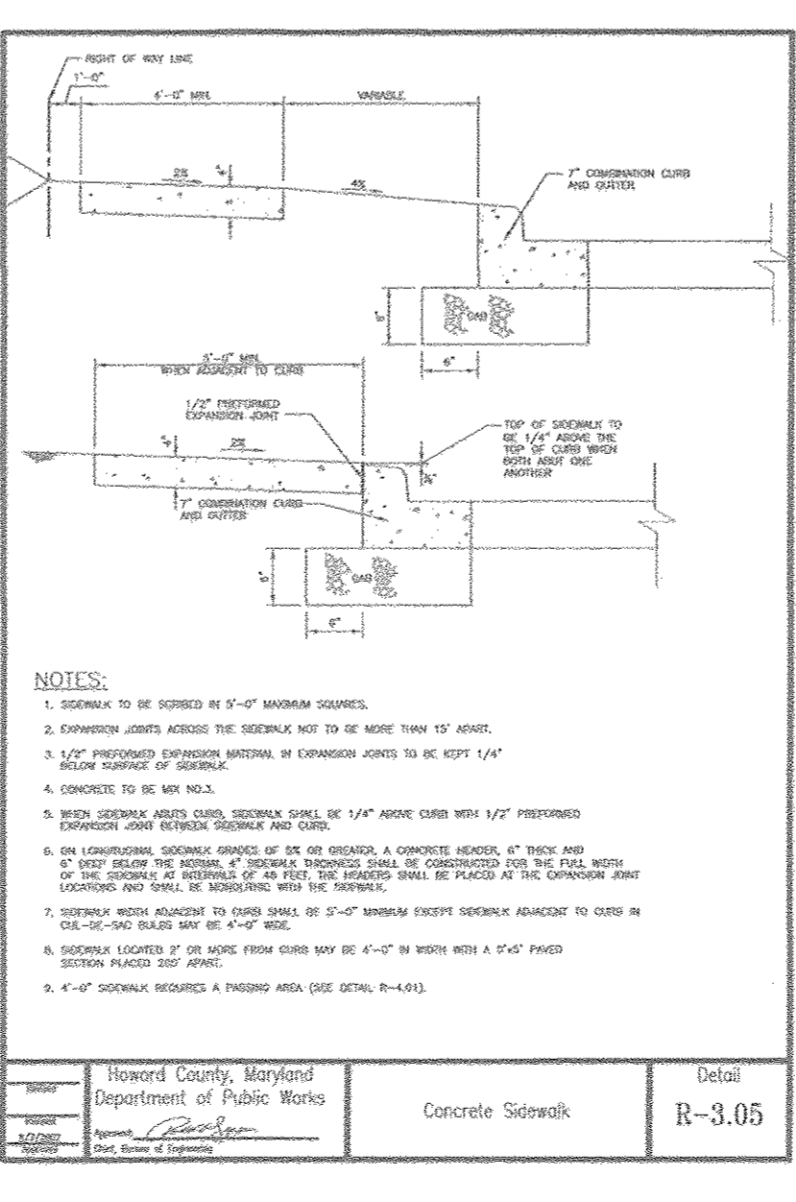
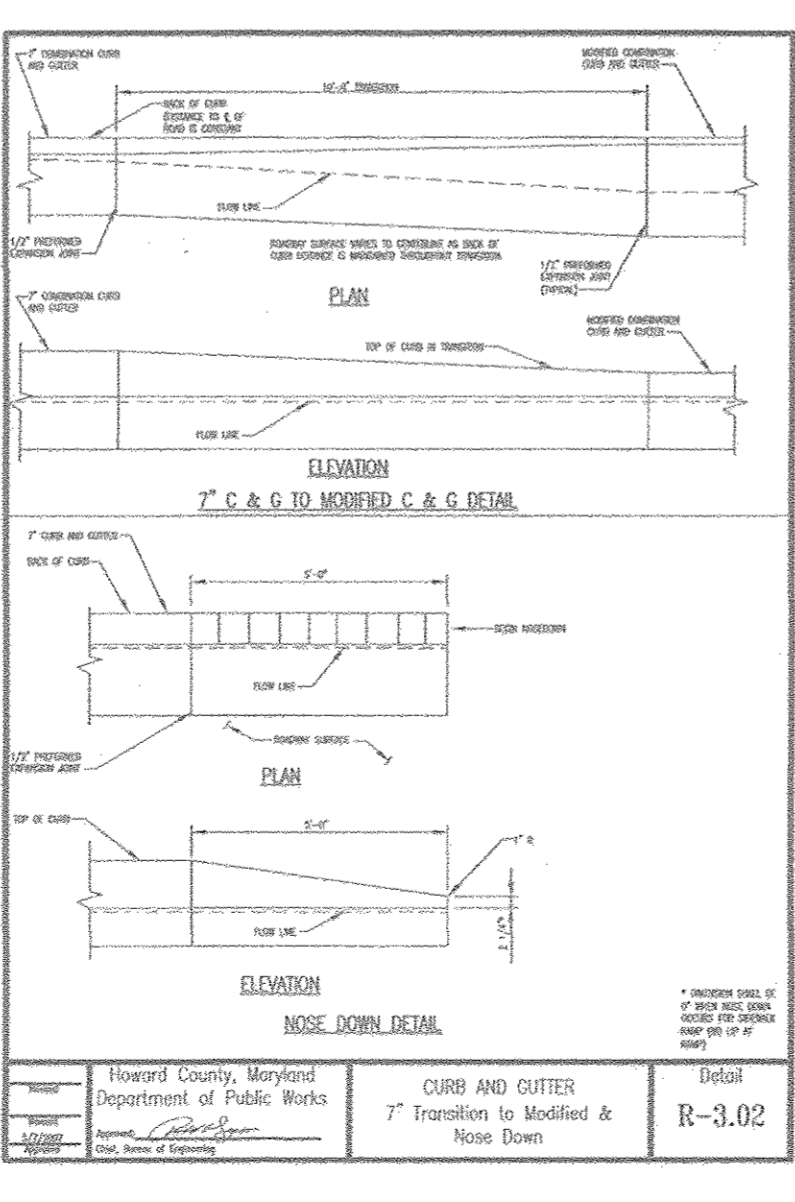
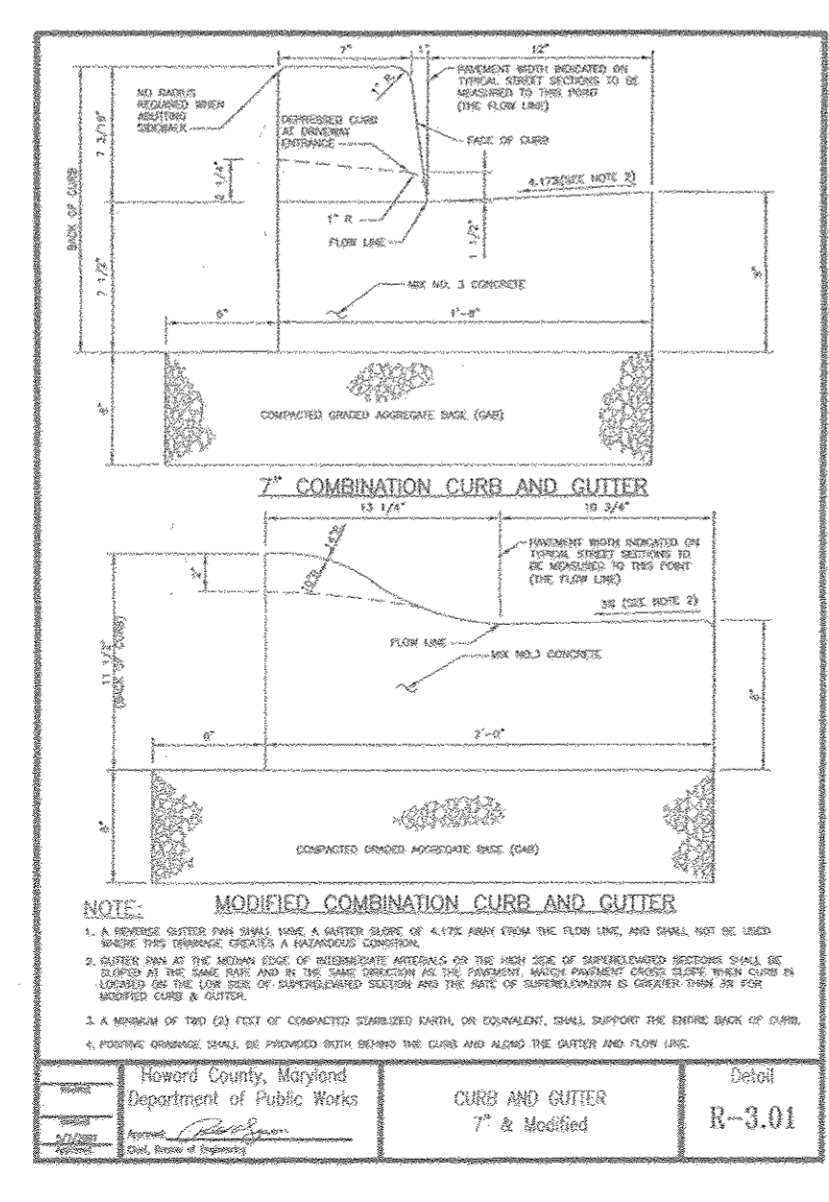
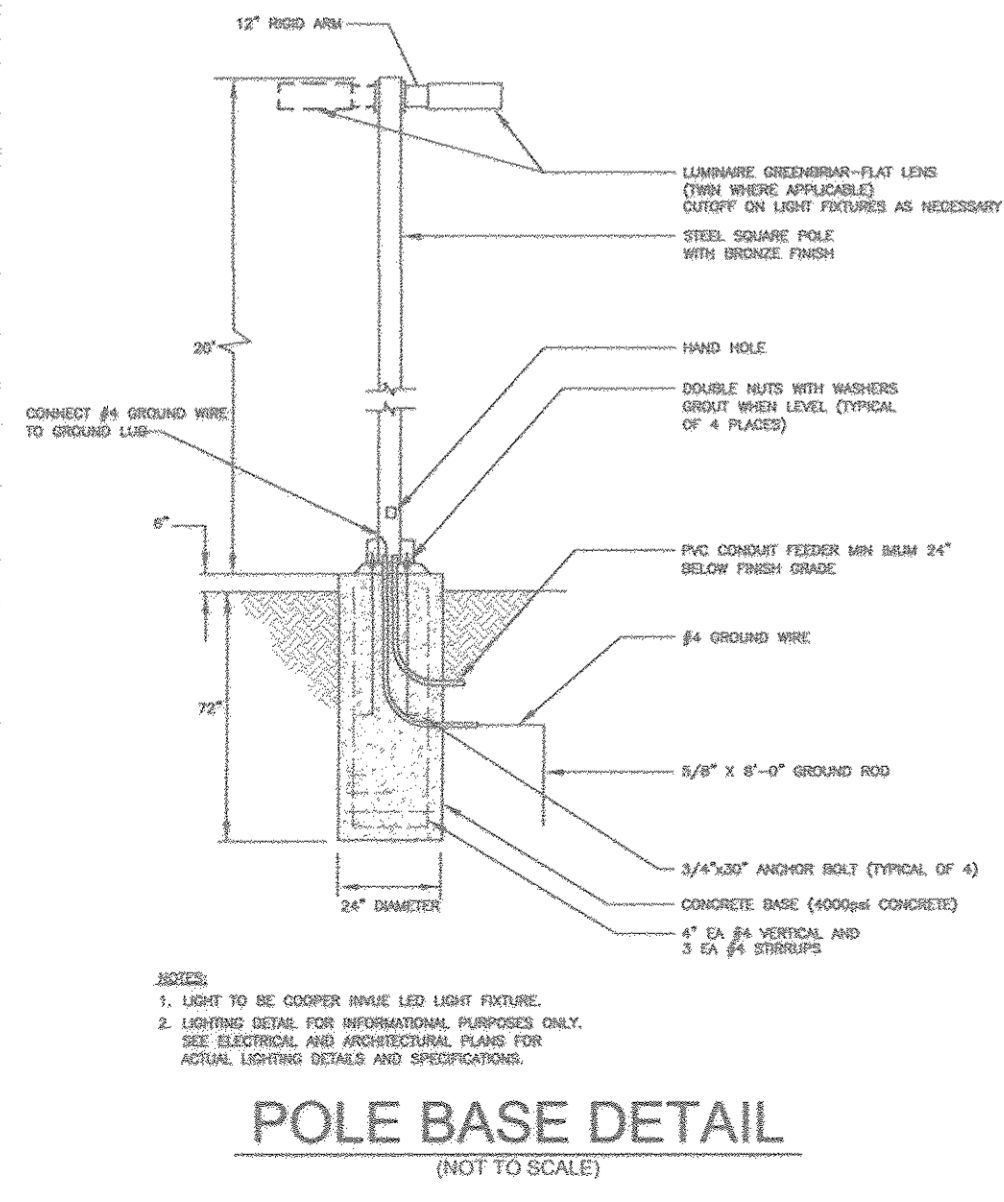
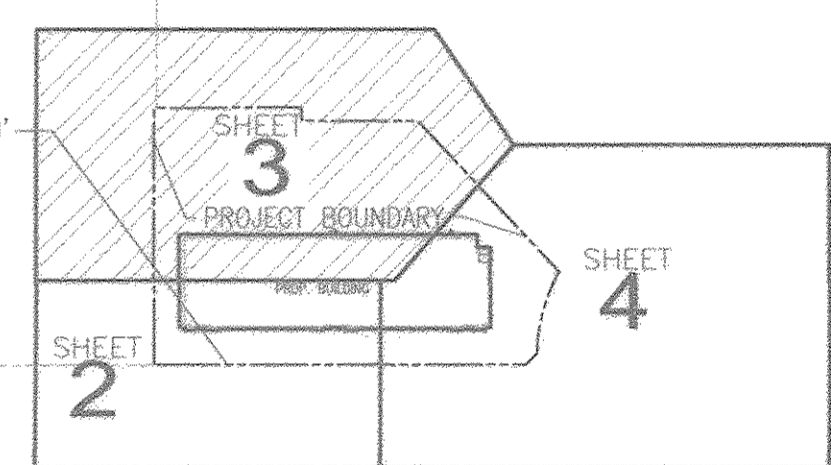
LAYOUT PLAN
SCALE: 1"=30'

LEGEND

[Symbol]	EXISTING CURB AND GUTTER
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING MAILBOX
[Symbol]	EXISTING SIGN
[Symbol]	EXISTING SANITARY MANHOLE
[Symbol]	EXISTING SANITARY LINE
[Symbol]	EXISTING CLEANOUT
[Symbol]	EXISTING STORMDRAIN LINE
[Symbol]	PERVIOUS PAVING
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING FENCE
[Symbol]	PROPERTY LINE
[Symbol]	RIGHT-OF-WAY LINE
[Symbol]	SIDEWALK
[Symbol]	STORM DRAIN
[Symbol]	STORM DRAIN INLET
[Symbol]	BORING
[Symbol]	20' PUBLIC WATER AND UTILITY EASEMENT (PLAT # 23162-23167)
[Symbol]	LIGHT POLE

MATCHLINE SHEET 4

KEYPLAN
N.T.S.



Project	Department	Detail	Scale
7" COMBINATION CURB AND GUTTER	Department of Public Works	7" Modified	R-3.01
7" C.A.G. TO MODIFIED C.A.G. DETAIL	Department of Public Works	7" Transition to Modified & Nose Down	R-3.02
CONCRETE SIDEWALK	Department of Public Works	Concrete Sidewalk	R-3.05
SIDEWALK RAMP	Department of Public Works	Layout & Grading Perpendicular to Curb	R-4.05
6" COMBINATION CURB AND GUTTER	Department of Public Works	6" Combination Curb and Gutter Pivots	R-9.01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4.13.16
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 5-3-16
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 5-3-16
DIRECTOR

NO.	REVISION	DATE
3	REVISE SHCS, ADD SOLIDS INTERCEPTORS AND DUMPSTER	11-22-16
1	REVISE SHCS, ADD FENCE AND GATES, UPDATE PUBLIC WATER LOCATION	06-02-16

SITE DEVELOPMENT PLAN
SITE LAYOUT PLAN

MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
PROPOSED WAREHOUSE
7540 ASSATEAGUE DRIVE
COLUMBIA, MD 21046

TAX MAP 43 BLOCK 15
5TH ELECTION DISTRICT

ZONED: M-2
L.162037.246 - PLAT 19144

PARCEL 2, PARCEL 'J'
HOWARD COUNTY, MARYLAND

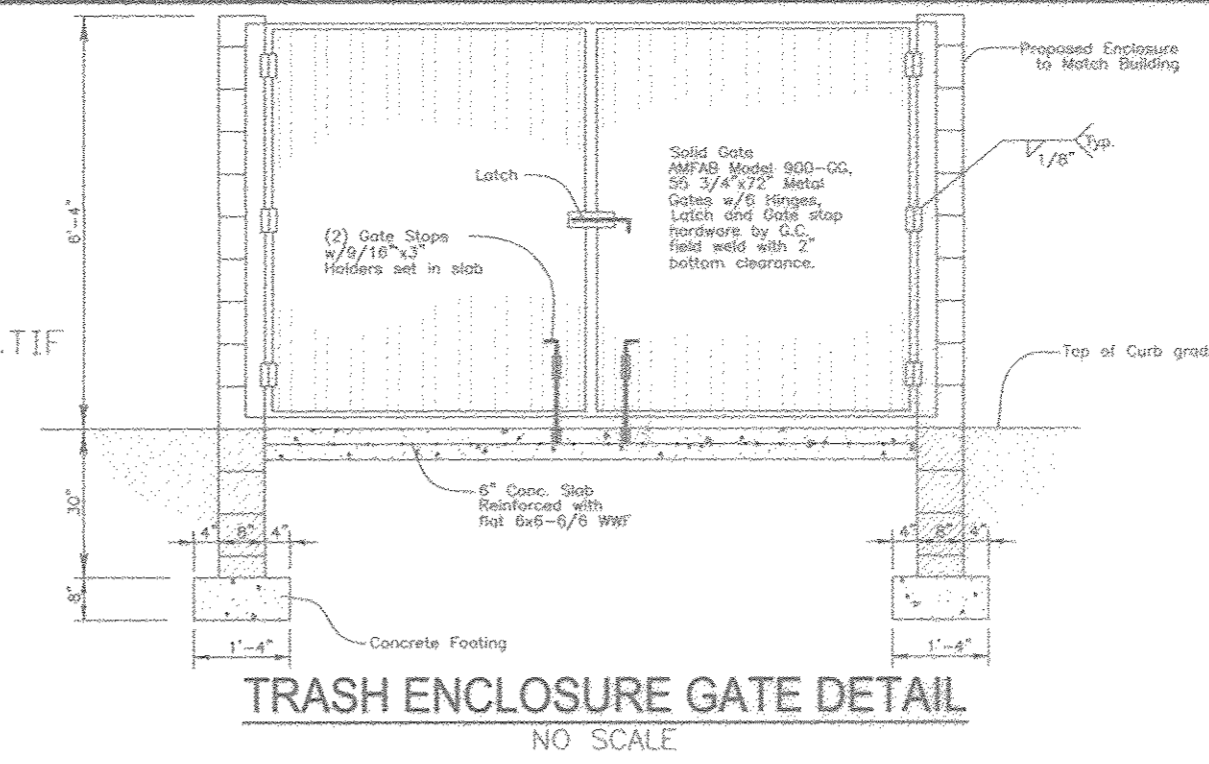
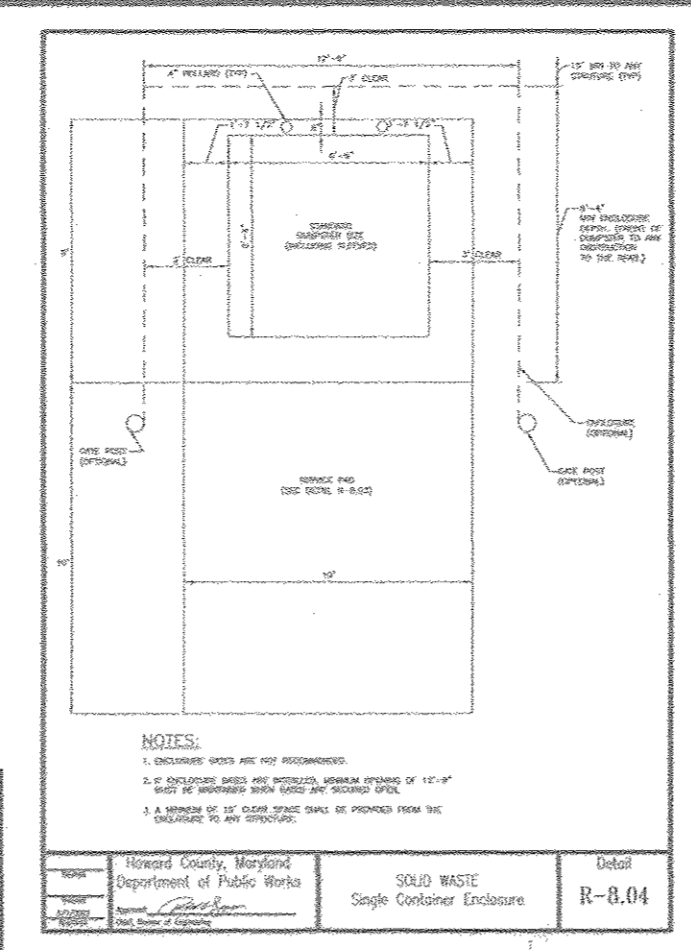
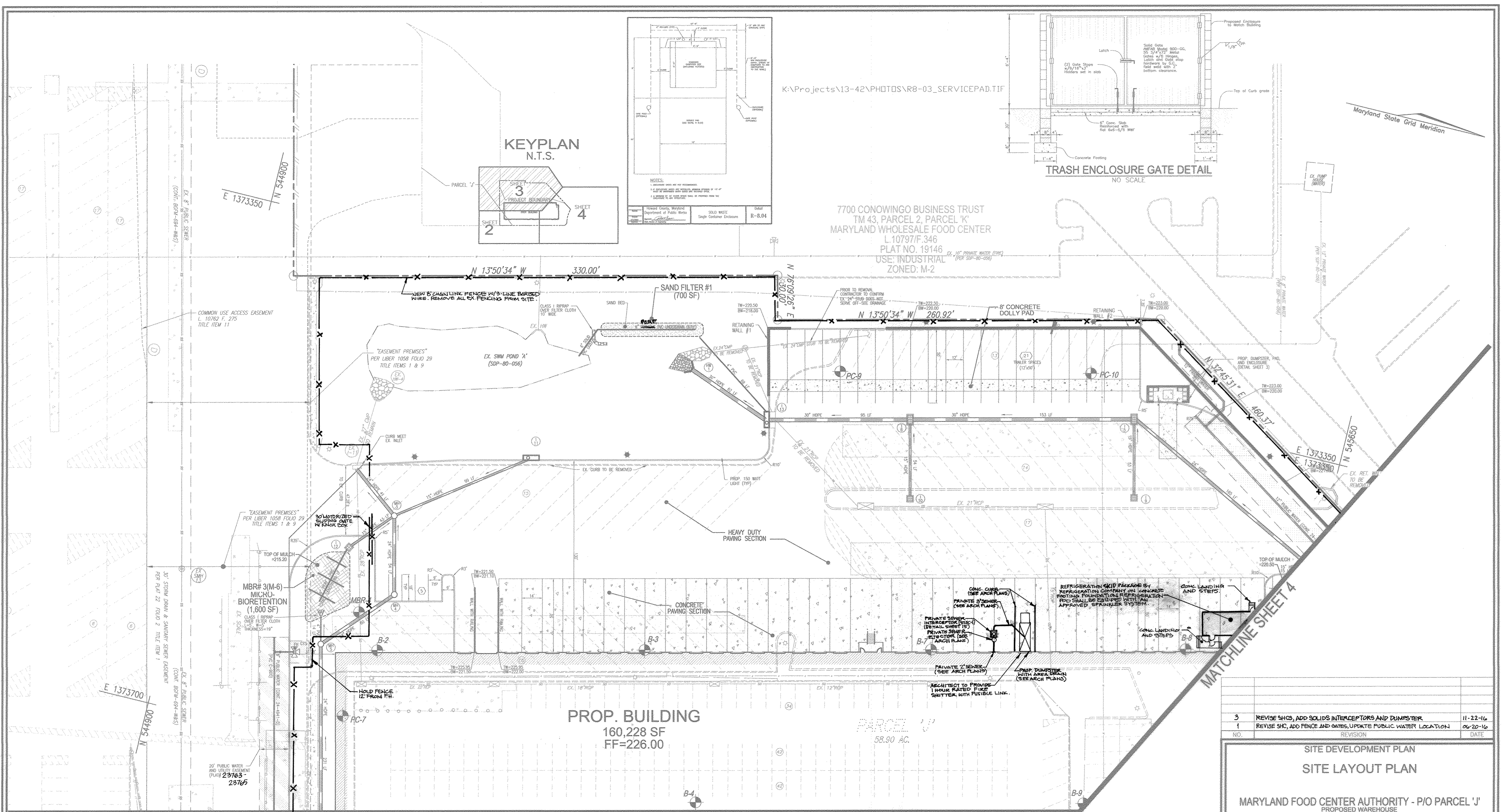
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 1914

DESIGN BY: RHV
DRAWN BY: DZ
CHECKED BY: RHV
DATE: MARCH 2016
SCALE: AS SHOWN
W.O. NO.: 13-42

2 SHEET OF 15



K:\Projects\13-42\PHOTOS\R8-03_SERVICEPAD.TIF

7700 CONOWINGO BUSINESS TRUST
 TM 43, PARCEL 2, PARCEL 'K'
 MARYLAND WHOLESALE FOOD CENTER
 L.10797/F.346
 PLAT NO. 19146
 USE: INDUSTRIAL
 ZONED: M-2



LAYOUT PLAN SCALE: 1"=30'

LEGEND

	EXISTING CURB AND GUTTER		EXISTING WATER LINE
	EXISTING UTILITY POLE		PROPERTY LINE
	EXISTING LIGHT POLE		RIGHT-OF-WAY LINE
	EXISTING MAILBOX		SIDEWALK
	EXISTING SIGN		STORM DRAIN
	EXISTING SANITARY MANHOLE		STORM DRAIN INLET
	EXISTING SANITARY LINE		20' PUBLIC WATER AND UTILITY EASEMENT (PLAT)
	EXISTING CLEANOUT		MICRO-BIORETENTION AREA
	EXISTING STORMDRAIN LINE		LIGHT POLE
	PERVIOUS PAVING		
	EXISTING FIRE HYDRANT		

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edman 4-13-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

Ketel... 5-3-16
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

William Jaffe 5-3-16
 DIRECTOR
 DATE

NO.	REVISION	DATE
3	REVISE SHCS, ADD SOLIDS INTERCEPTORS AND DUMPSTER	11-22-16
1	REVISE SHC, ADD FENCE AND GATES, UPDATE PUBLIC WATER LOCATION	06-20-16

SITE DEVELOPMENT PLAN
SITE LAYOUT PLAN

MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
 PROPOSED WAREHOUSE
 7540 ASSATEAGUE DRIVE
 HOWARD COUNTY, MARYLAND

TAX MAP 43, BLOCK 15, 6TH ELECTION DISTRICT
 ZONED: M-2
 L.16203/F.246 - PLAT 19144
 PARCEL 2, PARCEL 'J'

ROBERT H. VOGEL
ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS

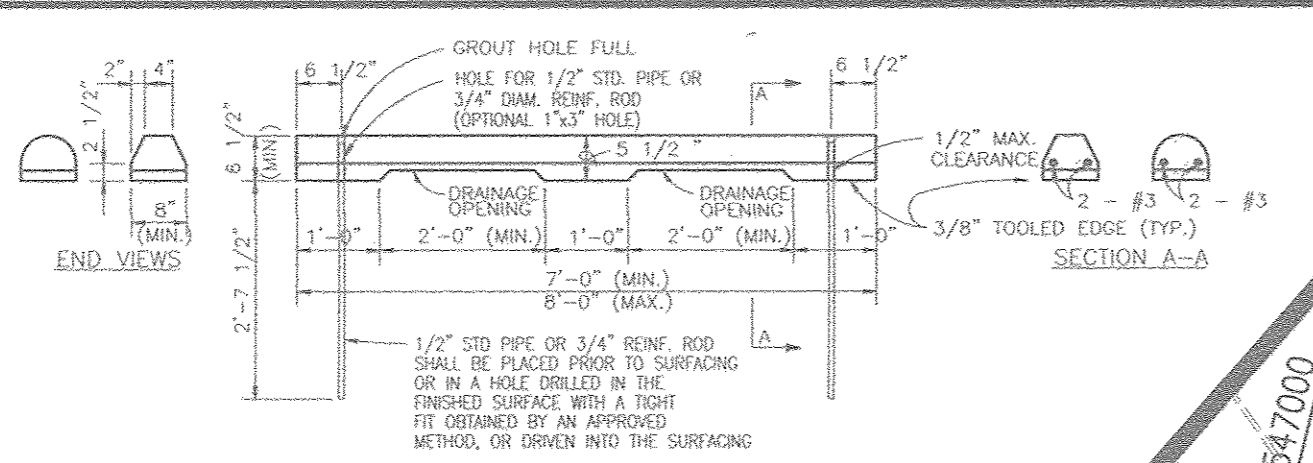
8407 MAIN STREET
 ELICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

DESIGN BY: RHY
 DRAWN BY: DZ
 CHECKED BY: RHY
 DATE: MARCH 2016
 SCALE: AS SHOWN
 W.O. NO.: 13-42

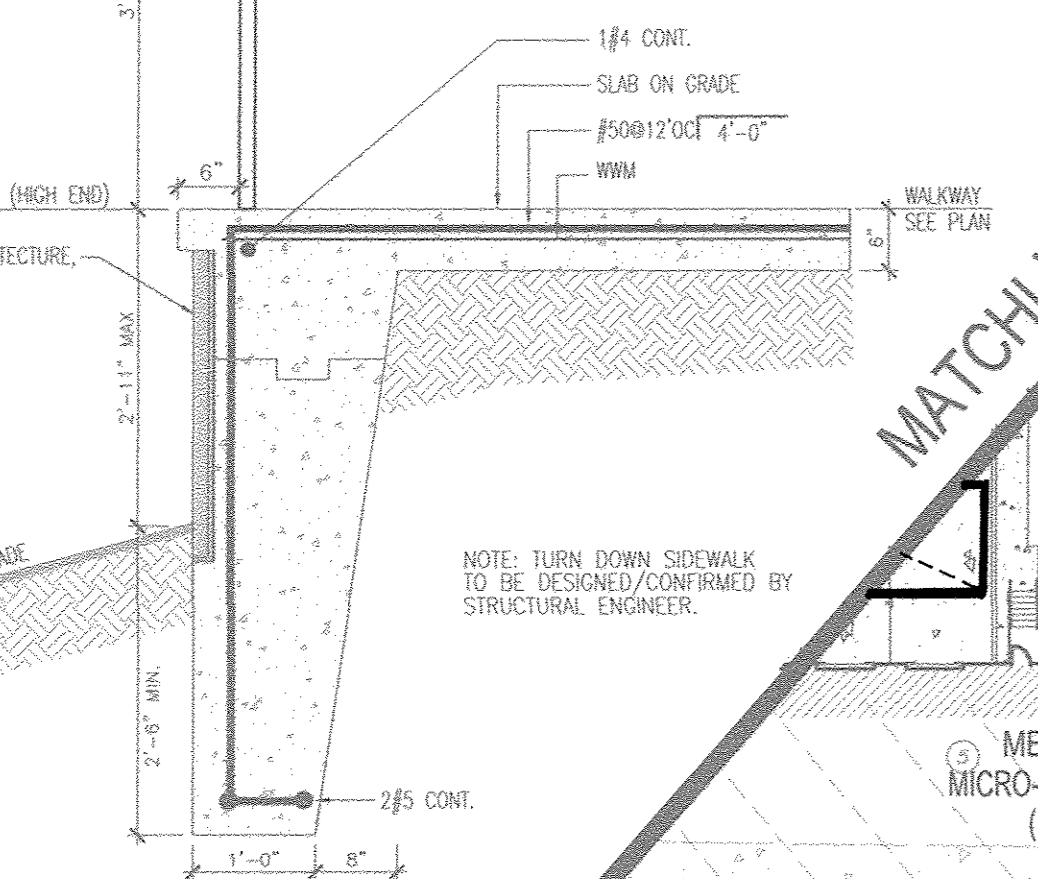
PROFESSIONAL CERTIFICATE
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3 SHEET OF 15

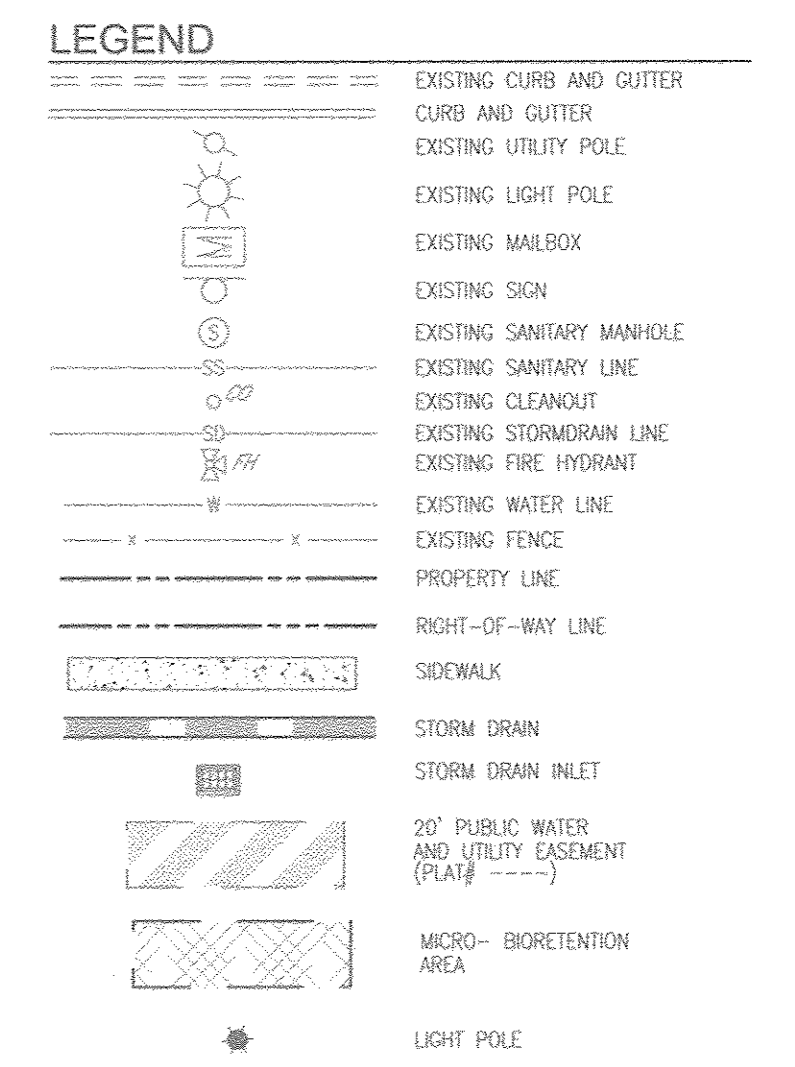
OWNER/DEVELOPER
 MCA ASSATEAGUE HOLDING LLC
 9601 ROBERT FULFON DR
 SUITE 200
 COLUMBIA, MD 21046
 410-290-1400



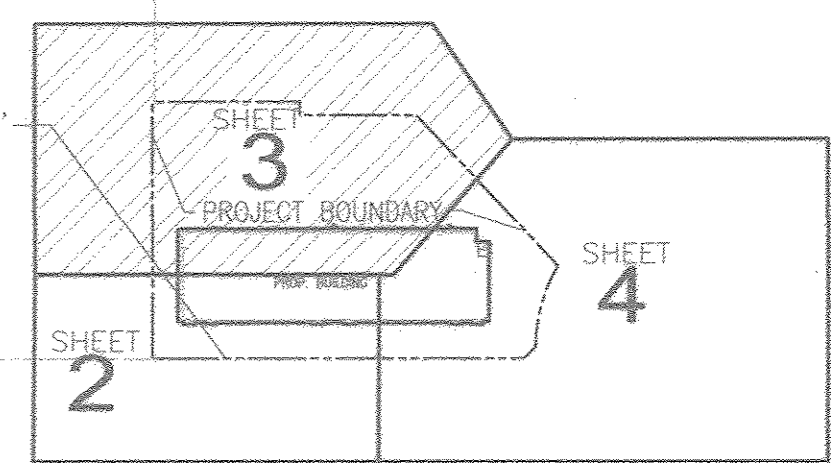
PRECAST CONCRETE WHEEL STOP DETAILS
NOT TO SCALE



TURN DOWN SIDEWALK
TYPICAL DETAIL
NOT TO SCALE



KEYPLAN
N.T.S.



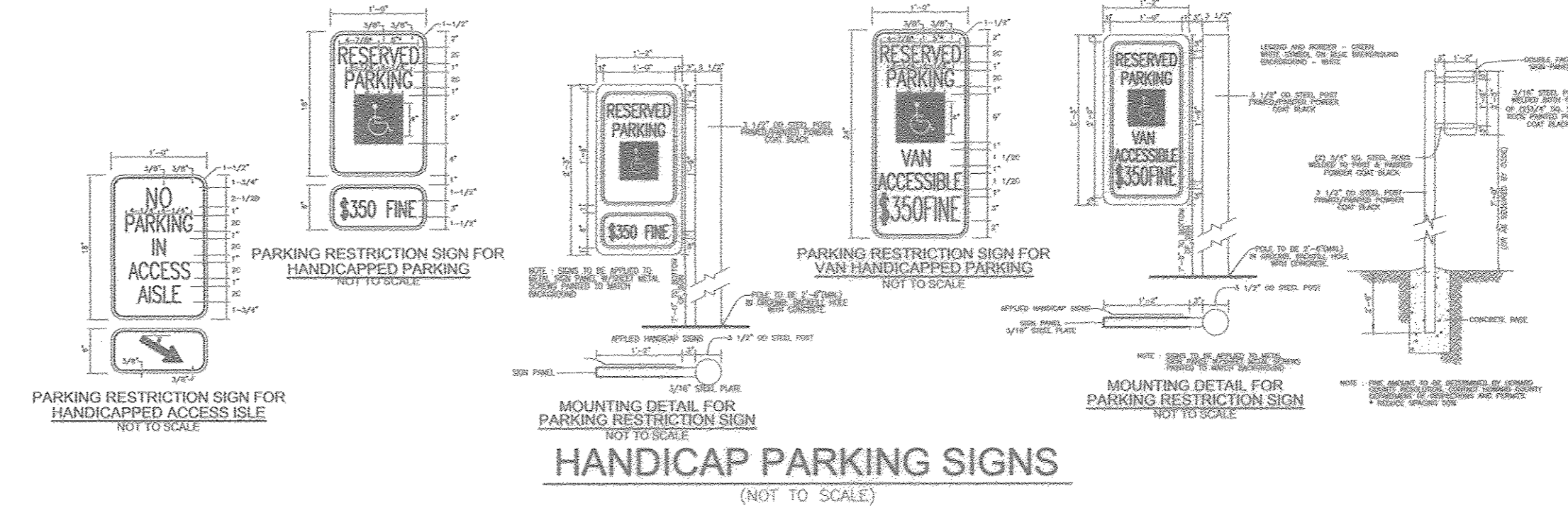
7700 CONOWINGO BUSINESS TRUST
TM 43, PARCEL 2, PARCEL 'K'
MARYLAND WHOLESALE FOOD CENTER
L.10797/F.346
PLAT NO. 19146
USE: INDUSTRIAL
ZONED: M-2

PROP. BUILDING
160,228 SF
FF=226.00

CONOWINGO AVENUE
PUBLIC LOCAL ROAD
(80' RIGHT-OF-WAY)
PLAT Bk. 27 FOLIO 79

MARYLAND FRESH TOMATO COMPANY
TM 43, PARCEL 636, PARCEL E, BLOCK A
ASSATEAGUE DRIVE FOOD MARKET
L.1033/F.349
USE: INDUSTRIAL
ZONED: M-2

ASSATEAGUE DRIVE
PUBLIC LOCAL ROAD
(80' RIGHT-OF-WAY) PLAT Bk. 222 FOLIO 02.2



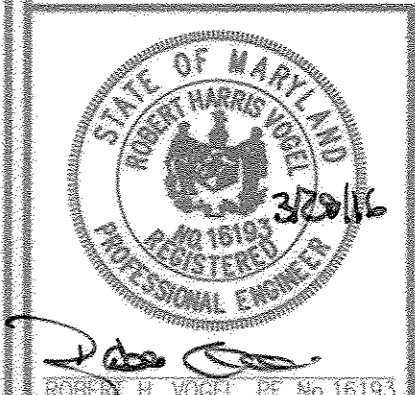
HANDICAP PARKING SIGNS
(NOT TO SCALE)

NO.	REVISION	DATE
1	REVISE SHC, ADD FENCE AND GATE, UPDATE PUBLIC WATER LOCATION	06-20-16
3	REVISE SHC, ADD SOLIDS INTERCEPTORS AND DUMPSTER	11-22-16

SITE DEVELOPMENT PLAN
SITE LAYOUT PLAN

MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
PROPOSED WAREHOUSE
7540 ASSATEAGUE DRIVE
ZONED: M-2
L.16203/F.240 - PLAT 19144 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLIOTT CITY, MD 21043
TEL: 410.461.7666
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DESIGN BY: RHV
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DATE: MARCH 2016
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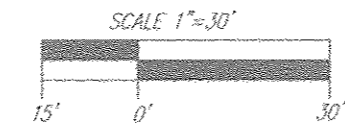
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/13/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 5-3-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 5-3-16
DIRECTOR DATE

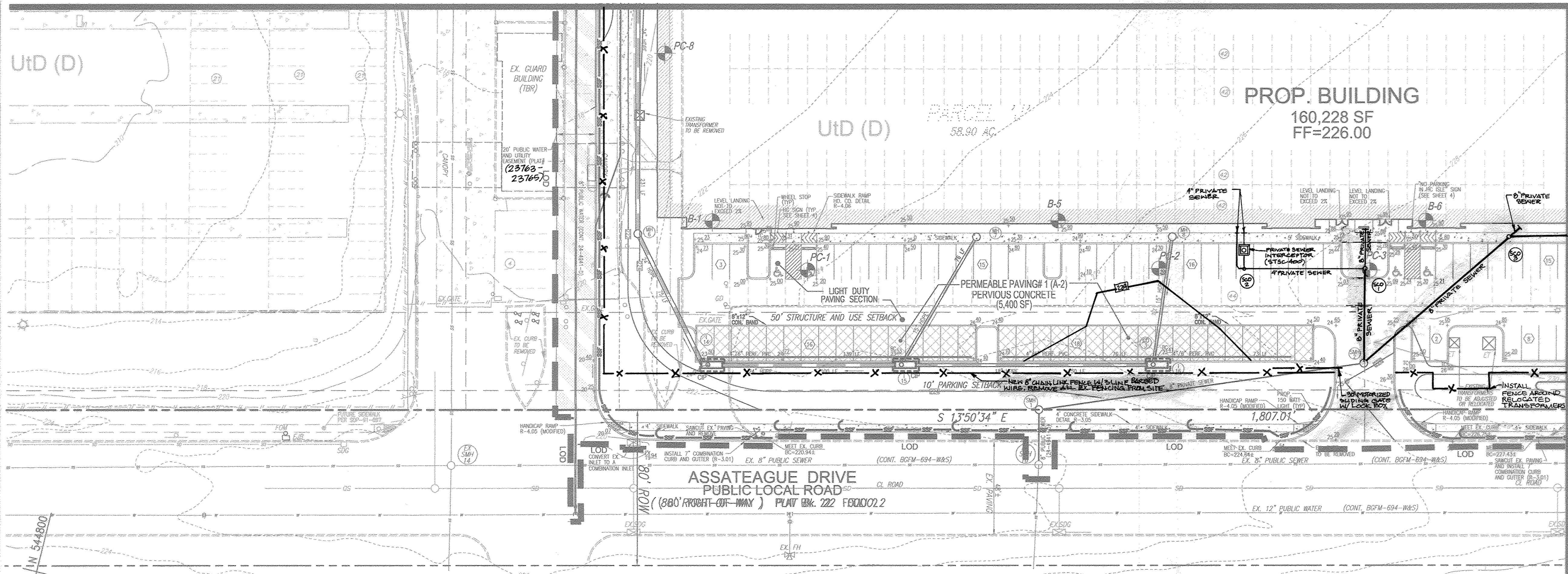


LAYOUT PLAN
SCALE: 1"=30'

OWNER/DEVELOPER
MCA ASSATEAGUE HOLDING LLC
9601 ROBERT FULTON DR
SUITE 200
COLUMBIA, MD 21046
410-290-1400

N 544800
E 1373750
Maryland State Grid Meridian

MATCHLINE SHEET 6



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- EXISTING SPOT ELEVATION
- ==== EXISTING CURB AND GUTTER
- ==== PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- STORM DRAIN
- STORM DRAIN INLET
- PERVIOUS PAVING
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- SIDEWALK
- SILT FENCE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- CURB INLET PROTECTION
- AT GRADE INLET PROTECTION
- 20' PUBLIC WATER AND UTILITY EASEMENT (PLAT # ---)
- LIGHT POLE

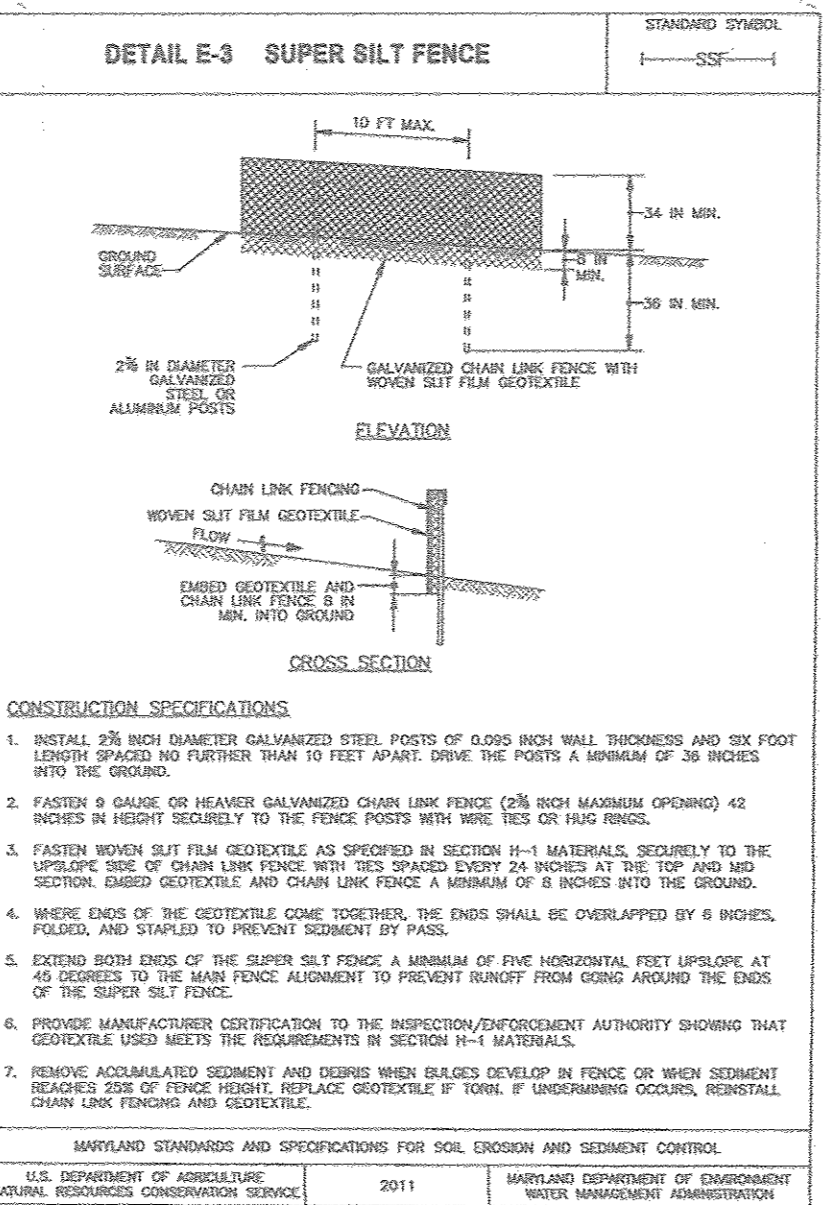
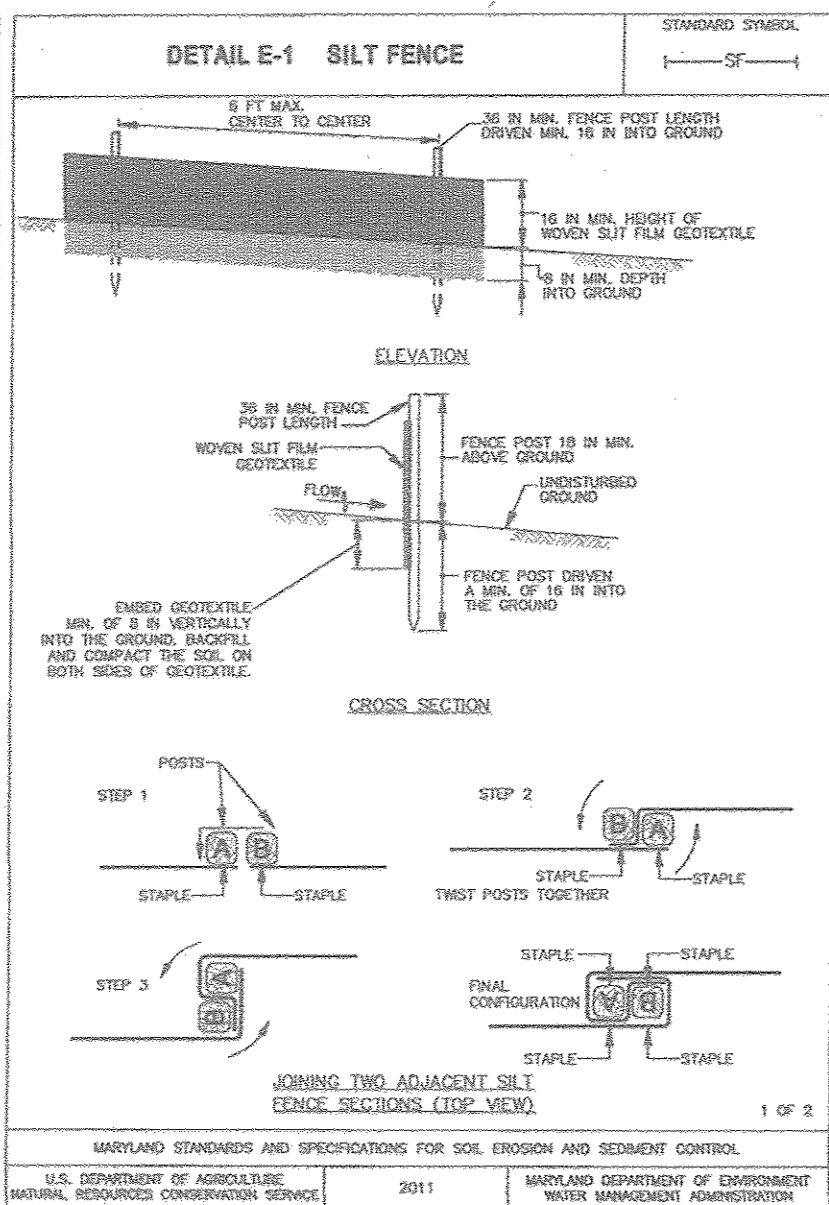
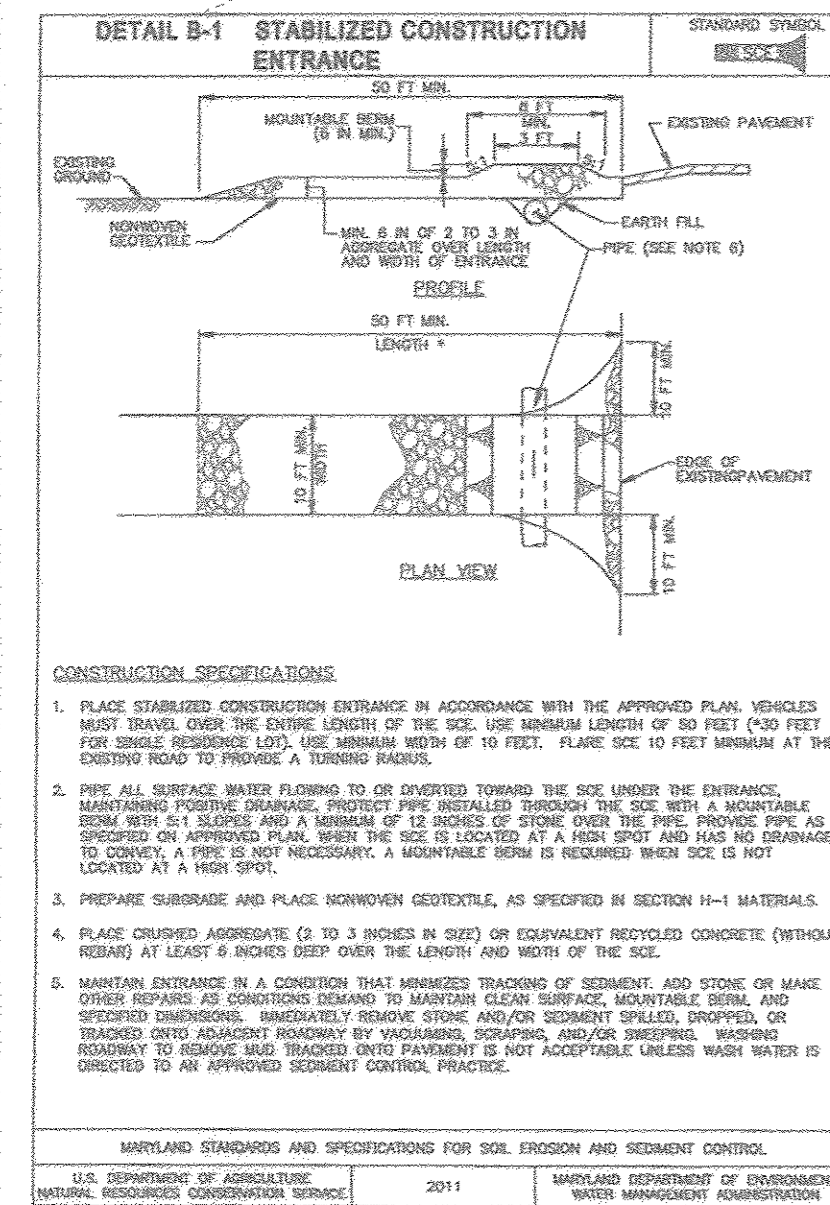
MATCHLINE SHEET 7

NOTE:
1. ON-SITE CONC. CURB AND GUTTER TO BE 6" HO. CO. STANDARD DETAIL R-9.01
CONC. CURB AND GUTTER WITHIN PUBLIC ROW TO BE 7" HO. CO. STANDARD DETAIL R-3.01
2. PROVIDE LEVEL LANDING AT TENANT ENTRANCE DOORS AND AT RAMP LANDINGS.



SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
Utd	URBAN LAND-UDORMENTS COMPLEX, 0 TO 15 PERCENT SLOPES	D

NOTE: BASED ON HOWARD SOIL SURVEY



U.S. STANDARDS AND SPECIFICATIONS

EROSION CONTROL

Definition

Controlling the suspension of dust particles from construction activities.

Purpose

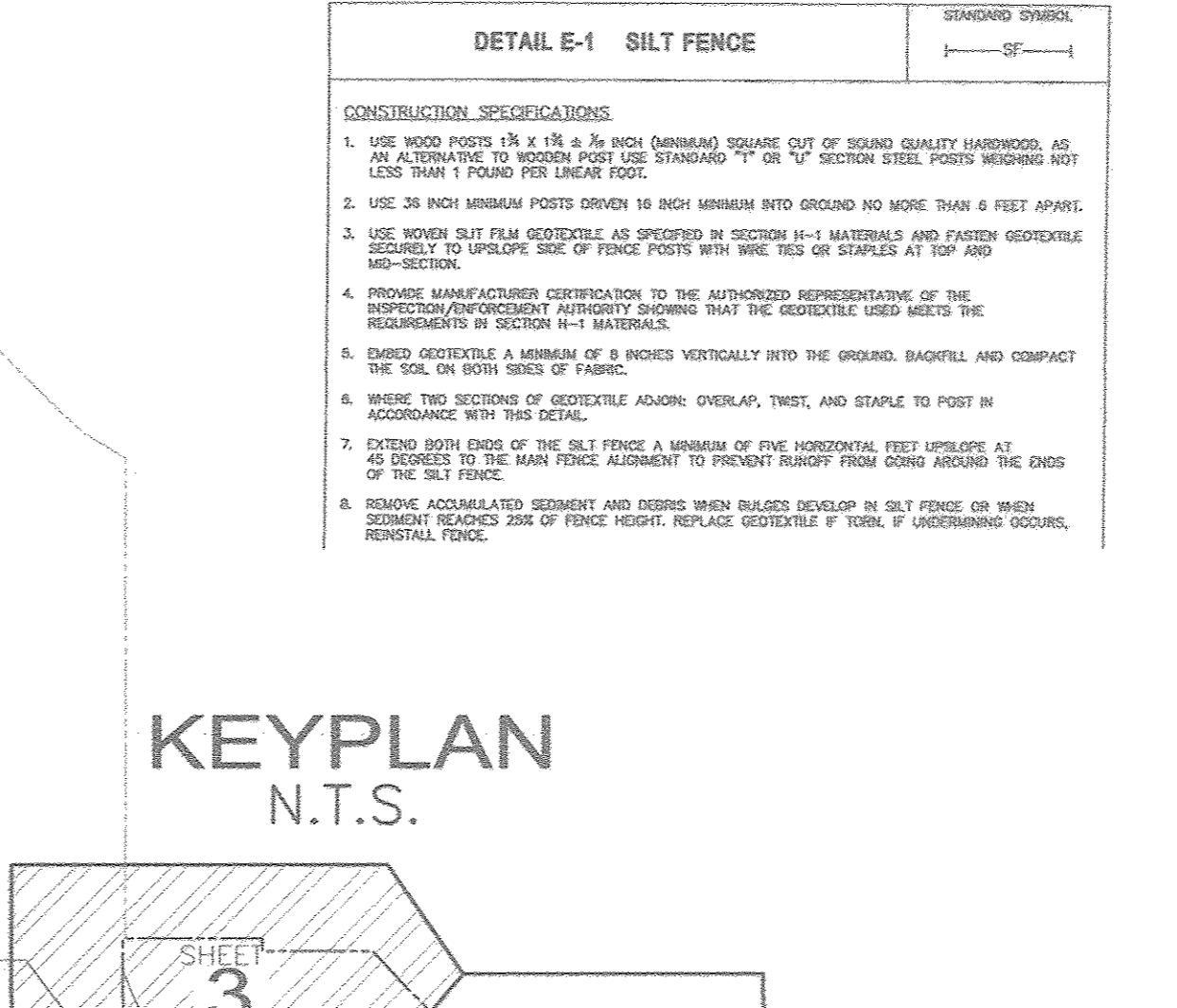
To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Conditions Where Practice Applies

Areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

- Materials: See Section B-4.2 Soil Preparation, Tilling, and Soil Amendment, Section B-4.3 Seeding and Mulching, and Section B-4.4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
- Vegetative Cover: See Section B-4.4 Temporary Stabilization.
- Tillage: Tillage to roughen surface and bring silt to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows an example of equipment that may produce the desired effect.
- Interrillage: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
- Barriers: Solid board fences, silt fences, snow fences, hayrack fences, straw bales, and similar material can be used to control soil movement and silt blowing.
- Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

4/13/16
DATE

4/13/16
DATE

5-3-16
DATE

5-3-16
DATE

BY THE DEVELOPER:

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

4/11/2016
DATE

BY THE ENGINEER:

"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 IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

4/7/16
DATE

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

4/7/16
DATE

NO.		REVISION	DATE
2		REVISE SHCS, ADD SOLIDS INTERCEPTORS AND DUMPSITE	11-22-16
1		REVISE SHCS, ADD FENCE AND GATES, UPDATE PUBLIC WATER LOCATION	06-20-16

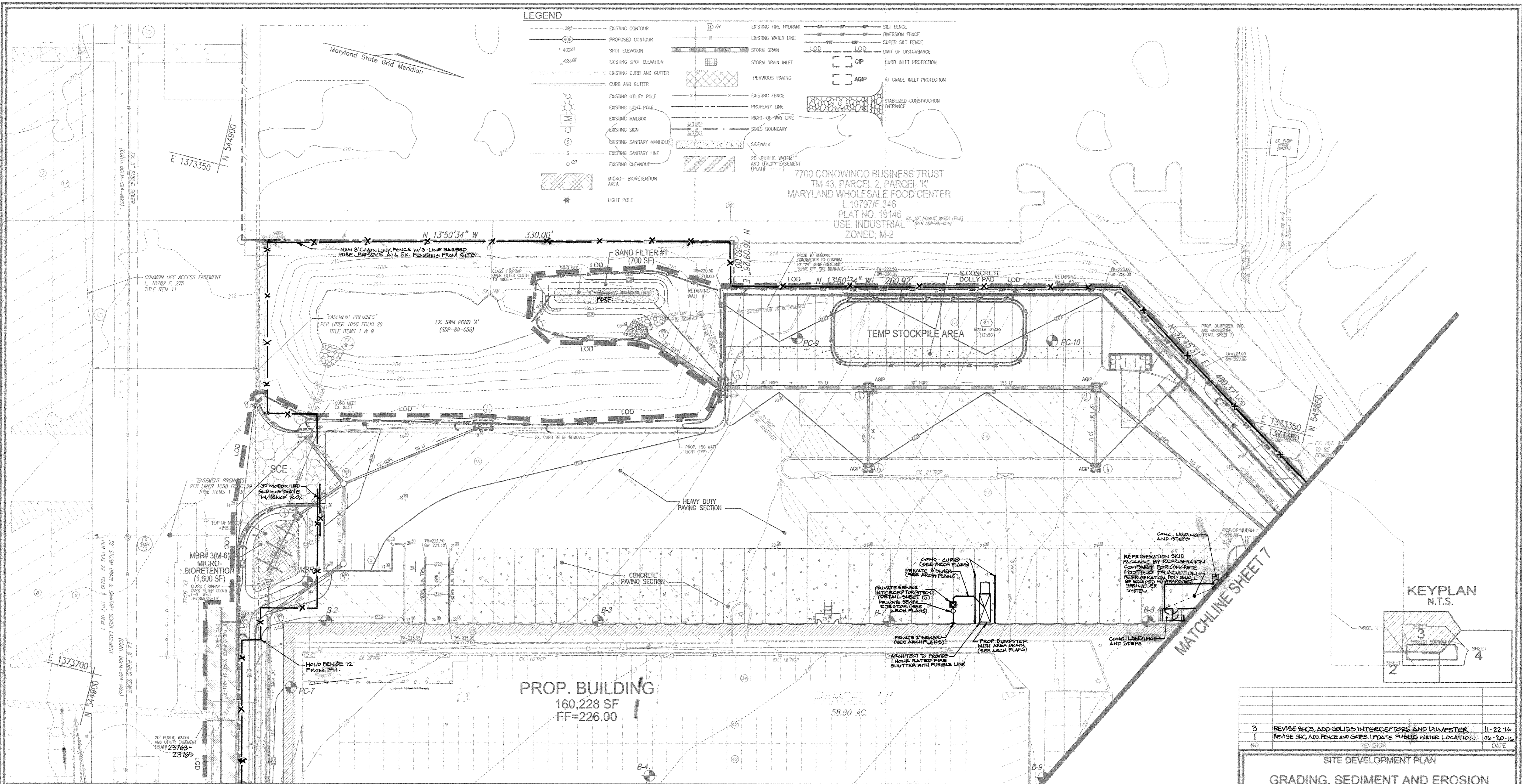
SITE DEVELOPMENT PLAN
GRADING, SEDIMENT AND EROSION CONTROL PLAN; SOILS MAP
MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
PROPOSED WAREHOUSE
7540 ASSATEAGUE DRIVE
TAX MAP 43 BLOCK 15 ZONED M-2 PARCEL 2, PARCEL 'J'
16TH ELECTION DISTRICT L16203/F.246 - PLAT 19144 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHV
DRAWN BY: DJZ
CHECKED BY: RHV
DATE: MARCH 2016
SCALE: AS SHOWN
W.O. NO.: 13-42

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A SOILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 1816 EXPIRATION DATE 09-27-2018

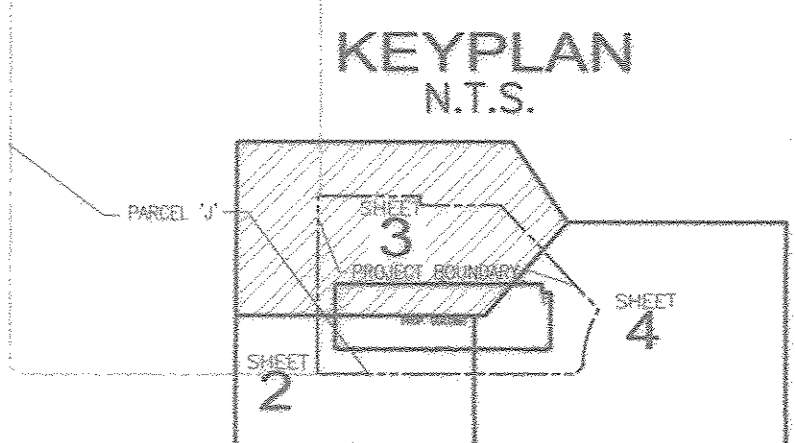
5 SHEET OF 15



LEGEND

---	EXISTING CONTOUR	---	EXISTING FIRE HYDRANT	---	SILT FENCE
---	PROPOSED CONTOUR	---	EXISTING WATER LINE	---	DIVERSION FENCE
---	SPOT ELEVATION	---	STORM DRAIN	---	SUPER SILT FENCE
---	EXISTING SPOT ELEVATION	---	STORM DRAIN INLET	---	LIMIT OF DISTURBANCE
---	EXISTING CURB AND GUTTER	---	PERVIOUS PAVING	---	CURB INLET PROTECTION
---	EXISTING CURB AND GUTTER	---	EXISTING FENCE	---	AT GRADE INLET PROTECTION
---	EXISTING UTILITY POLE	---	PROPERTY LINE	---	STABILIZED CONSTRUCTION ENTRANCE
---	EXISTING LIGHT POLE	---	RIGHT-OF-WAY LINE	---	
---	EXISTING MAILBOX	---	SOILS BOUNDARY	---	
---	EXISTING SIGN	---	SEWALK	---	
---	EXISTING SANITARY MANHOLE	---	20" PUBLIC WATER AND UTILITY EASEMENT (PLAT)	---	
---	EXISTING SANITARY LINE	---		---	
---	EXISTING CLEANOUT	---		---	
---	MICRO-BIORETENTION AREA	---		---	
---	LIGHT POLE	---		---	

7700 CONOWING BUSINESS TRUST
 TM 43, PARCEL 2, PARCEL 'K'
 MARYLAND WHOLESALE FOOD CENTER
 L.10797/F.346
 PLAT NO. 19146
 USE: INDUSTRIAL
 ZONED: M-2



PROP. BUILDING
 160,228 SF
 FF=226.00

PLAN VIEW
 SCALE: 1"=30'
 SCALE 1"=30'

- NOTE:**
1. ON-SITE CONC. CURB AND GUTTER TO BE 6" HO, CO, STANDARD DETAIL R-9.01
 CONC. CURB AND GUTTER WITHIN PUBLIC ROW TO BE 7" HO, CO, STANDARD DETAIL R-3.01
 2. PROVIDE LEVEL LANDING AT TENANT ENTRANCE DOORS AND AT RAMP LANDINGS.

NO.	REVISION	DATE
3	REVISE SHCS, ADD SOLIDS INTERCEPTORS AND DUMPS	11-22-16
1	REVISE SHC, ADD FENCE AND GATES, UPDATE PUBLIC WATER LOCATION	06-20-16

SITE DEVELOPMENT PLAN
GRADING, SEDIMENT AND EROSION CONTROL PLAN
 MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
 PROPOSED WAREHOUSE
 7540 ASSATEAGUE DRIVE
 ZONED: M-2
 L.16203/F.246 - PLAT 19144
 PARCEL 2, PARCEL 'J'
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
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 ELLICOTT CITY, MD 21043
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DESIGN BY: RHV
 DRAWN BY: DZ
 CHECKED BY: RHV
 DATE: MARCH 2016
 SCALE: AS SHOWN
 W.O. NO.: 13-42

6 SHEET OF 15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad P. ... 4/13/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Kurt ... 5-3-16
 CHIEF, DIVISION OF LAND DEVELOPMENT

Val ... 5-3-16
 DIRECTOR

BY THE DEVELOPER:

R ... 4/11/2016
 SIGNATURE OF DEVELOPER

BY THE ENGINEER:

John ... 4/7/16
 SIGNATURE OF ENGINEER

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

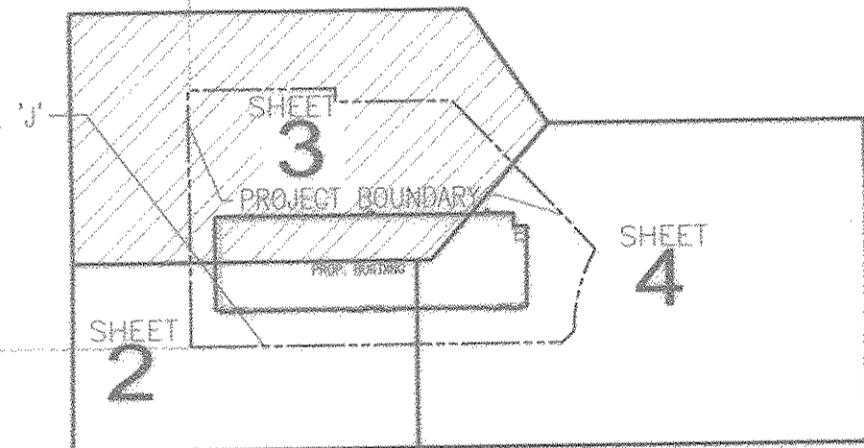
OWNER/DEVELOPER
 MCA ASSATEAGUE HOLDING LLC
 9801 ROBERT FULTON DR
 SUITE 220
 COLUMBIA, MD 21046
 410-290-1400

NOTE:
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 2. PROVIDE LEVEL LANDING AT TENANT ENTRANCE DOORS AND AT RAMP LANDINGS.

LEGEND

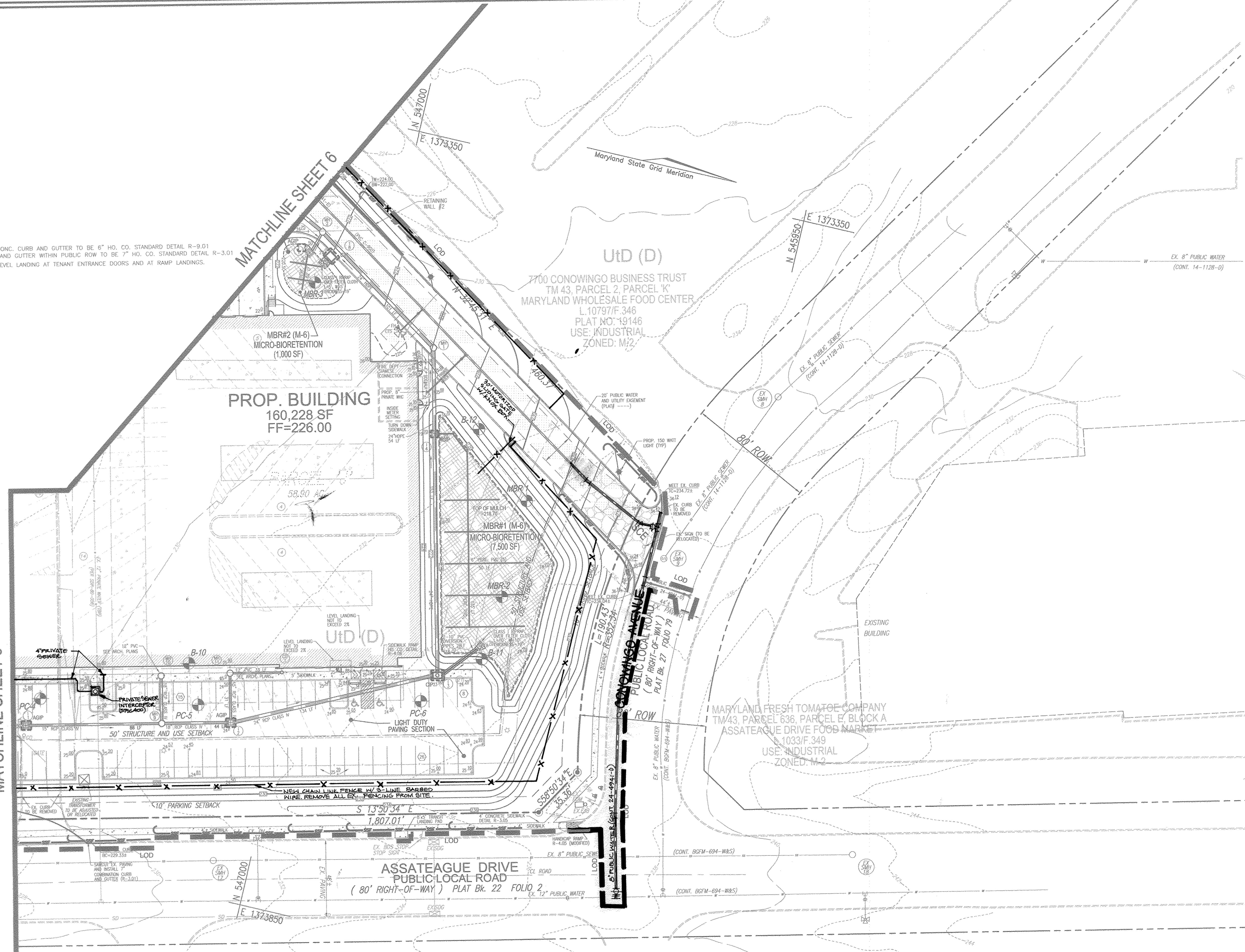
- EXISTING CONTOUR
- PROPOSED CONTOUR
- + 40.25 SPOT ELEVATION
- + 42.25 EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- STORM DRAIN
- STORM DRAIN INLET
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- SIDEWALK
- SILT FENCE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- CIP CURB INLET PROTECTION
- AGIP AT GRADE INLET PROTECTION
- 20' PUBLIC WATER AND UTILITY EASEMENT (PLAT# ---)
- MICRO-BIORETENTION AREA
- LIGHT POLE

KEYPLAN
N.T.S.



MATCHLINE SHEET 5

MATCHLINE SHEET 6



NO.	REVISION	DATE
3	REVISE SHADY SOLIDS INTERCEPTOR AND DUMPSITE	11-22-16
1	REVISE SHC, SPD PERMITS AND GATES, UPDATE PUBLIC WATER LOCATION	06-22-16

SITE DEVELOPMENT PLAN
GRADING, SEDIMENT AND EROSION CONTROL PLAN
 MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
 PROPOSED WAREHOUSE
 7540 ASSATEAGUE DRIVE
 ZONED: M-2
 L.16203/F.246 - PLAT 19144
 PARCEL 2, PARCEL 'J'
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
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 DATE: MARCH 2016
 SCALE: AS SHOWN
 W.O. NO.: 13-42

7 SHEET OF 15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad E. ... 4/7/16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Kate ... 5-3-16
 CHIEF, DIVISION OF LAND DEVELOPMENT

Walter ... 5-3-16
 DIRECTOR

BY THE DEVELOPER:

R. ... 4/11/2016
 SIGNATURE OF DEVELOPER

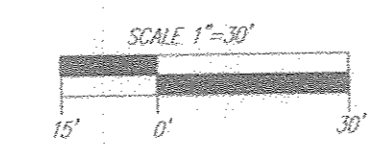
BY THE ENGINEER:

John R. ... 4/7/16
 SIGNATURE OF ENGINEER

PLAN VIEW
 SCALE: 1"=30'

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

John R. ... 4/7/16
 HOWARD S.C.D.



OWNER/DEVELOPER
 MCA ASSATEAGUE HOLDING LLC
 9601 ROBERT FULTON DR
 SUITE 200
 COLUMBIA, MD 21046
 410-290-1400

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

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

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

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

CRITERIA: WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

A. SOIL PREPARATION

- TEMPORARY STABILIZATION
 - SOIL PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISKDRAGS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT, AFTER THE SOIL IS LOOSENED, IT MUST BE BROKEN UP OR BRANDED SMOOTH BUT LEFT IN THE RECOMMENDED CONDITION. SLOPES 2:1 OR FLATTER ARE TO BE BROKEN UP TO THE CONTOUR OF THE SLOPE.
 - APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLAN.
 - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
- PERMANENT STABILIZATION
 - A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE TO 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE STABILIZATION ARE:
 - SOIL BETWEEN 0.5 AND 1.0% ORGANIC MATTER.
 - SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - SOIL CONTAINS LESS THAN 40% PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 20 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IS LOVEGRASS WHICH WILL BE PLANTED IN A SANDY SOIL LESS THAN 30 PERCENT SILT PLUS CLAY WHICH WOULD BE ACCEPTABLE.
 - SOIL CONTAINS 15 PERCENT PROTEIN ORGANIC MATTER BY WEIGHT.
 - SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 - APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
 - APPLY SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. DISKING SHOULD BE DONE IN A SINGLE PASS. DISKING SHOULD BE DONE IN A SINGLE PASS. DISKING SHOULD BE DONE IN A SINGLE PASS. DISKING SHOULD BE DONE IN A SINGLE PASS.

B. TOPSOILING

- TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATIVE STABILIZATION TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF COARSE SAND OR LOW MOISTURE CONTENT, LOW pH MATERIALS, LOW PH MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
- TOPSOIL SHOWN FINISH TO BE PLACED IN THE MANNER SPECIFIED IN THE STANDARD AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE STABILIZED FOR A GIVEN SOIL FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PROVIDE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OF FURNISH CONTINUAL SUPPLIES OF NUTRIENT NUTRIENTS.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIME/DOE IS NOT FEASIBLE.
 - AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
- TOPSOILING METHODS TO BE USED MUST MEET THE FOLLOWING CRITERIA:
 - TOPSOIL MUST BE A LIGHT, SANDY, LOAM, CLAY LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST AND HOLD SOILS IN CONTACT WITH THE SOIL, WITHOUT RESTRICTING THE GROWTH OF THE GRASS SEEDLINGS.
 - SOIL MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATIONS LEVELS THAT WILL BE PHYTO-TOXIC.
 - SOIL MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 1 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ACID CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MAXIMUM.
- APPLICATION
 - APPLY MULCH TO ALL SEVERED AREAS IMMEDIATELY AFTER SEEDING.
 - WHEN STRAW OR OTHER APPROVED MATERIAL IS USED AS MULCH, IT SHOULD BE APPLIED TO A UNIFORM LAYER DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
 - WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 100 POUNDS PER ACRE TO ACHIEVE A UNIFORM DISTRIBUTION OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALONS OF WATER.
- ANCHORING
 - PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND PROSSION HAZARD:
 - A MULCH ANCHORING TOOL IS A TRACTOR DRIVEN IMPLEMENT DESIGNED TO PUNCTURE AND ANCHOR MULCH INTO THE SOIL SURFACE. A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
 - WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. USE THE WOOD CELLULOSE FIBER WITH WATER AT A RATIO OF 1:10 (WOOD CELLULOSE FIBER PER 100 GALONS OF WATER).
 - SYNTHETIC BINDERS SUCH AS ACRYLIC OR ACRYLONITRILE (ACR)-70, FERROX, ETC., MAY BE USED IN CONJUNCTION WITH THE WOOD CELLULOSE FIBER. APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE REHEARD AT THE EDGES WHERE WIND OR WATER CAN REMOVE THE BINDERS.
 - ANCHORING BINDERS IS STRICTLY PROHIBITED.
 - LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ANCHORING TO MANUFACTURER RECOMMENDATIONS. NETTING IS SPECIFIED AS 1/8" MESH WITH 18" X 18" CELLS AND 300 TO 3,000 FT. LONG.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

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

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

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

CRITERIA: WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

A. SEEDING

- SPECIFICATIONS
 - ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A QUALIFIED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SEEDING SUCH MATERIAL, ON ANY PROJECT. REFER TO TABLE B.4 REQUIRING THE RECOVERY OF SEED. SEED MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY THE TYPE OF SEED AND SEEDING DEPTH.
 - MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWES. INCOCULANTS, THE INCOCULANT FOR TREATING LEASE SEED IN THE SEED MIXTURE MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INCOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER AND FRESH INCOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INCOCULANTS AT COOL TO ROOM TEMPERATURES (46-60°F) AT 3-1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
 - TURFGRASS MIXTURES
 - AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL REQUIRE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
- APPROVAL
 - APPROVED SEEDING MIXTURES FOR USE IN AREAS THAT RECEIVE INTERMEDIATE OR HIGH INTENSITY REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CENTURY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE CENTURY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 50 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - KENTUCKY BLUEGRASS/PRENSALE RYE FULL SUN MIXTURE FOR USE IN FULL SUN AREAS WHERE WEARD ESTABLISHMENT IS REQUIRED. SEEDING RATE: 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE CENTURY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - FULL SUN TURFGRASS MIXTURES FOR USE IN BROADBENT PASTURE AREAS AND/OR FOR AREAS WHERE WEARD ESTABLISHMENT IS REQUIRED. SEEDING RATE: 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE CENTURY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - FULL SUN TURFGRASS MIXTURES FOR USE IN BROADBENT PASTURE AREAS AND/OR FOR AREAS WHERE WEARD ESTABLISHMENT IS REQUIRED. SEEDING RATE: 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE CENTURY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

B-4-4 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATIVE COVER.

PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

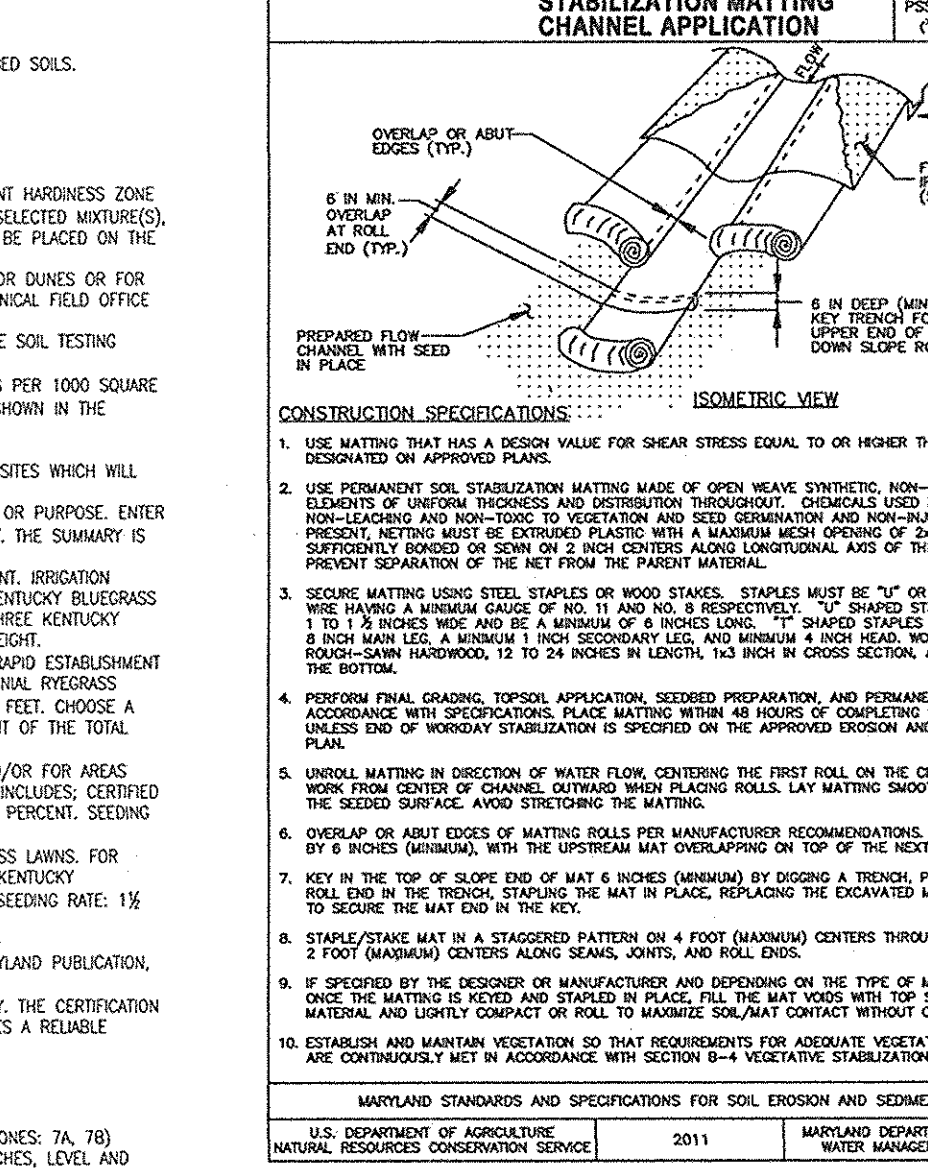
CONDITIONS WHERE PRACTICE APPLIES: TO THE SURFACE OF ALL PERMETER CONTROL SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

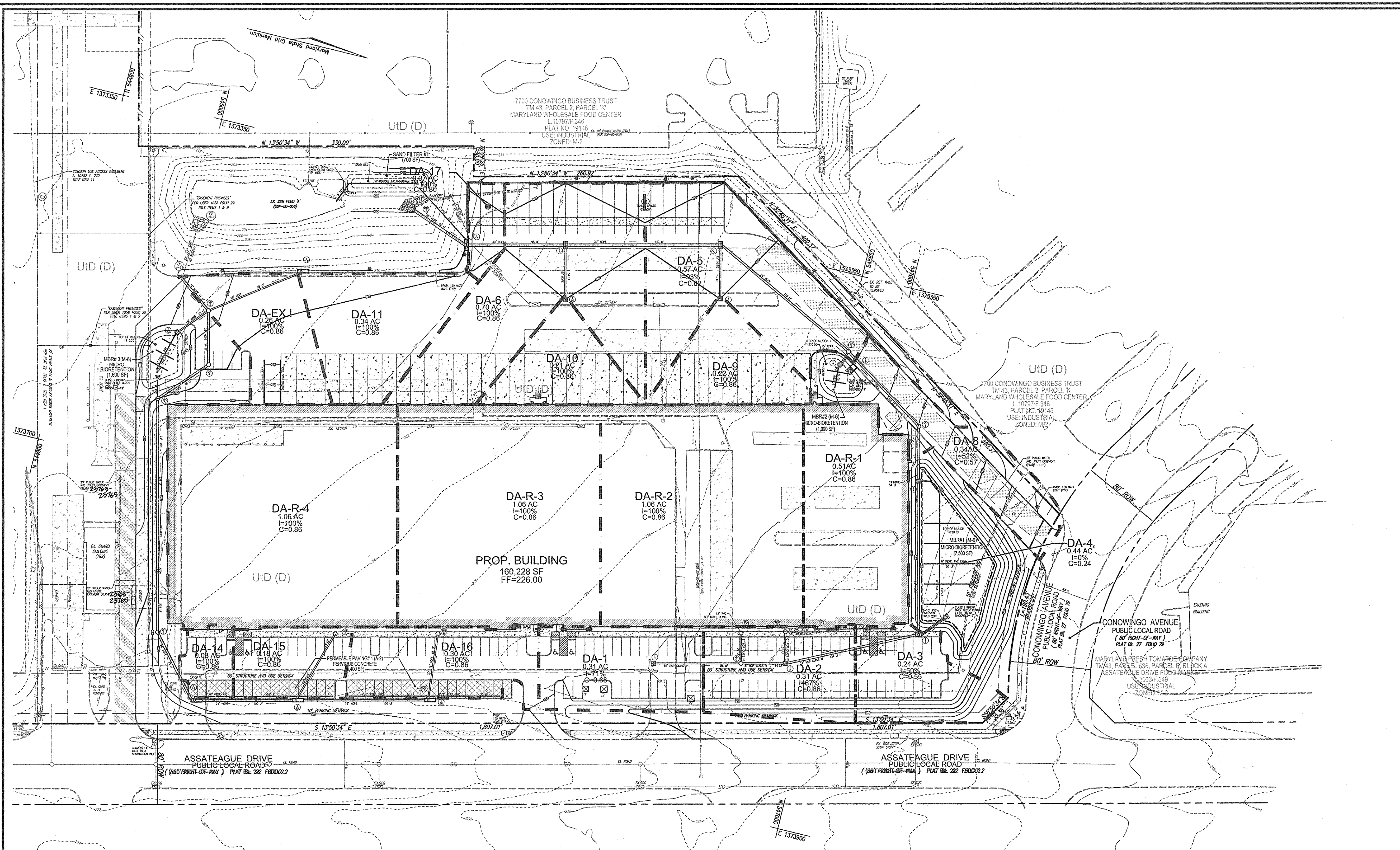
CRITERIA: WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

A. SEED MIXTURES

- GENERAL
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.4 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND ENTER THEM IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD TESTING GUIDE (MATERIALS) FOR PERMANENT VEGETATIVE STABILIZATION. REFER TO THE APPROPRIATE TECHNICAL FIELD TESTING GUIDE FOR SPECIAL PURPOSES.
 - FOR AREAS HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
 - FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3-1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
 - TURFGRASS MIXTURES
 - AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL REQUIRE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
- APPROVAL
 - APPROVED SEEDING MIXTURES FOR USE IN AREAS THAT RECEIVE INTERMEDIATE OR HIGH INTENSITY REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CENTURY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE CENTURY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 50 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - KENTUCKY BLUEGRASS/PRENSALE RYE FULL SUN MIXTURE FOR USE IN FULL SUN AREAS WHERE WEARD ESTABLISHMENT IS REQUIRED. SEEDING RATE: 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE CENTURY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - FULL SUN TURFGRASS MIXTURES FOR USE IN BROADBENT PASTURE AREAS AND/OR FOR AREAS WHERE WEARD ESTABLISHMENT IS REQUIRED. SEEDING RATE: 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE CENTURY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - FULL SUN TURFGRASS MIXTURES FOR USE IN BROADBENT PASTURE AREAS AND/OR FOR AREAS WHERE WEARD ESTABLISHMENT IS REQUIRED. SEEDING RATE: 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE CENTURY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

DETAIL B-4-6-C PERMANENT STABILIZATION MATING CHANNEL APPLICATION





LEGEND

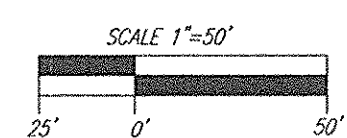
	EXISTING CONTOUR
	PROPOSED CONTOUR
	SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	STORM DRAIN
	STORM DRAIN INLET
	PERVIOUS PAVING
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	SIDEWALK
	DRAINAGE DIVIDE
	LIGHT POLE

SOILS LEGEND
MAP NUMBER 25

SYMBOL	NAME / DESCRIPTION	GROUP
URD	URBAN LAND-UDORTHERTS COMPLEX, 0 TO 15 PERCENT SLOPES	D

NOTE: BASED ON HOWARD SOIL SURVEY

STORMDRAIN DRAINAGE AREA MAP
SCALE: 1"=50'



NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
STORM DRAIN DRAINAGE AREA MAP
MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
PROPOSED WAREHOUSE
7540 ASSATEAGUE DRIVE
ZONED: M-2
TAX MAP 43, BLOCK 15, 6TH ELECTION DISTRICT
L.16203/F.246 - PLAT 19144
PARCEL 2, PARCEL 'J'
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: DZ
CHECKED BY: RHV
DATE: MARCH 2016
SCALE: AS SHOWN
W.O. NO.: 13-42

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. 16193, EXPIRATION DATE: 09-27-2018

9 SHEET OF 15

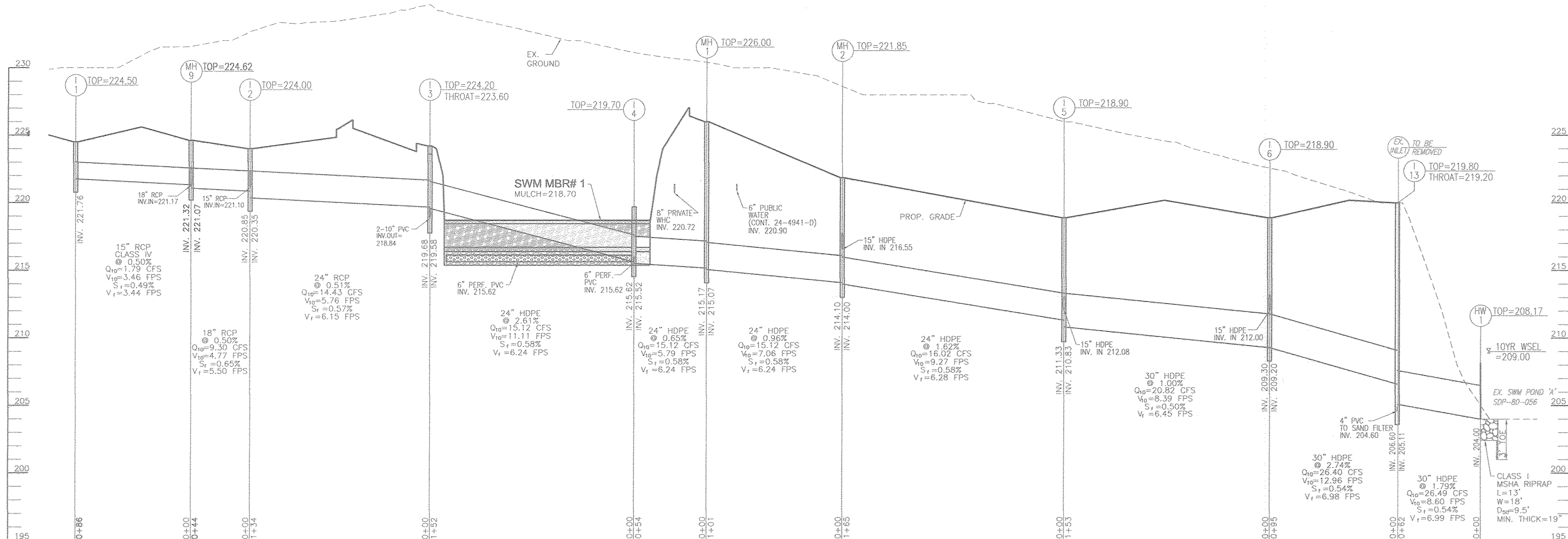
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Clark 4/13/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

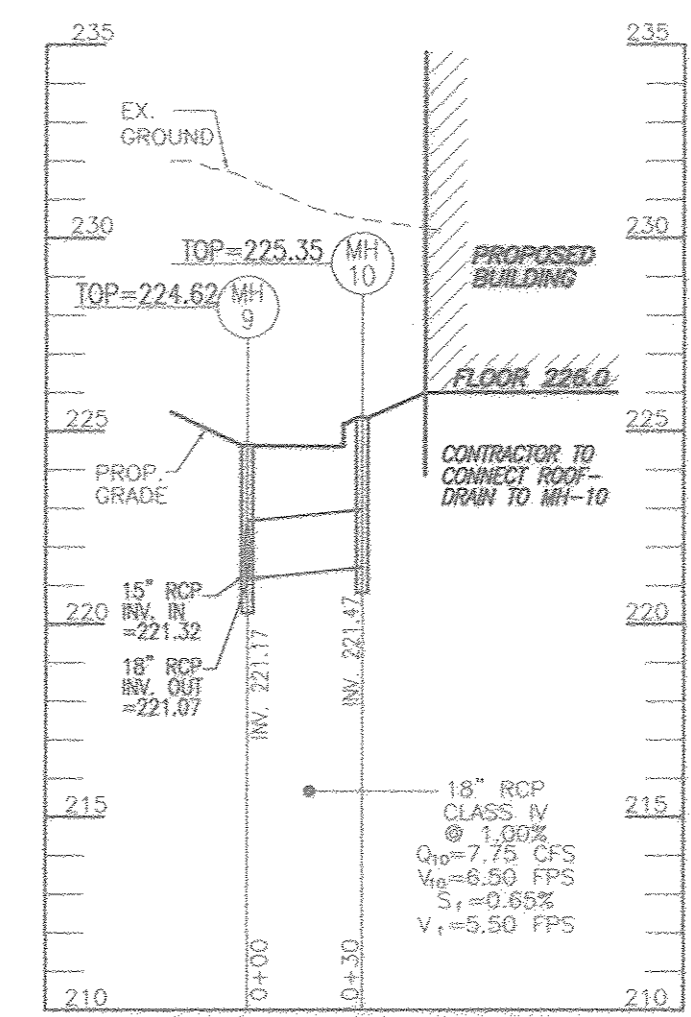
Kristen Dunlop 5-3-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Natalie J. Davis 5-3-16
DIRECTOR DATE

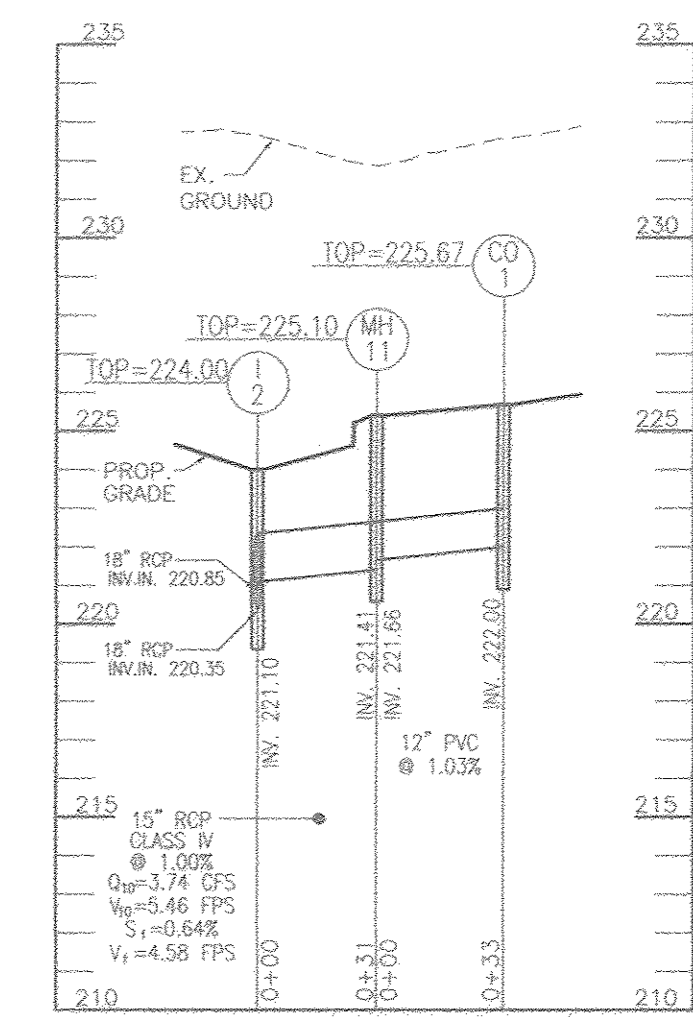
OWNER/DEVELOPER
MCA ASSATEAGUE HOLDING LLC
9601 ROBERT FULTON DR
SUITE 200
COLUMBIA, MD 21046
410-290-1400



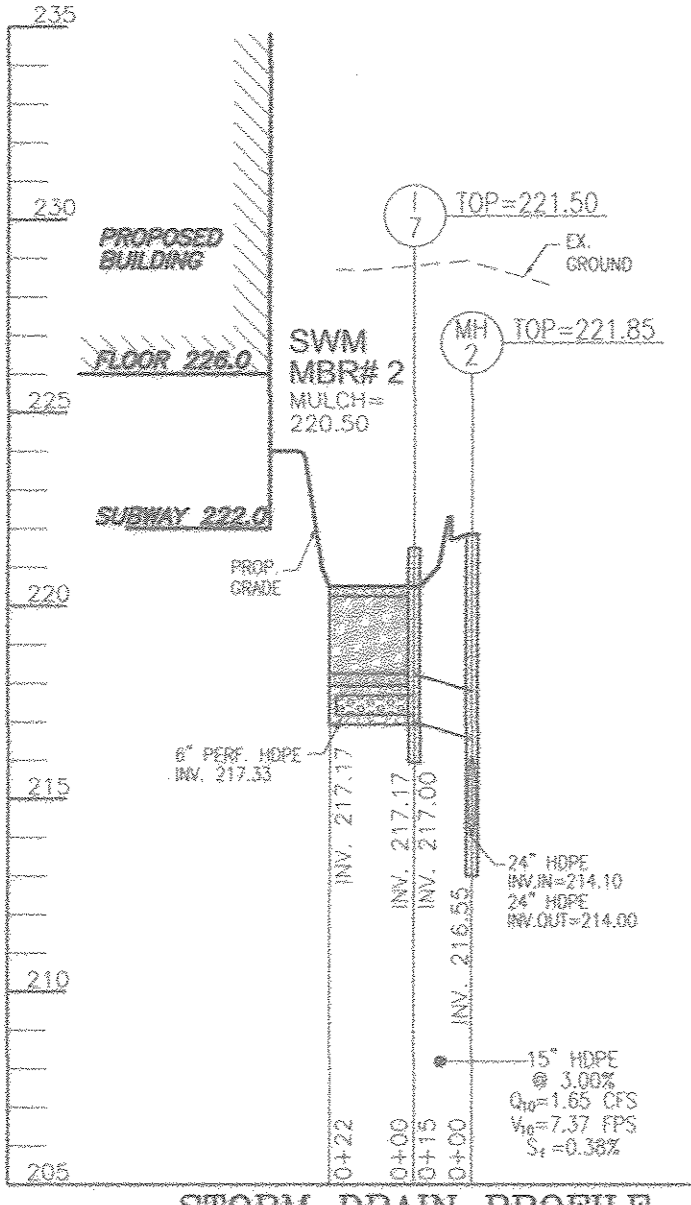
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



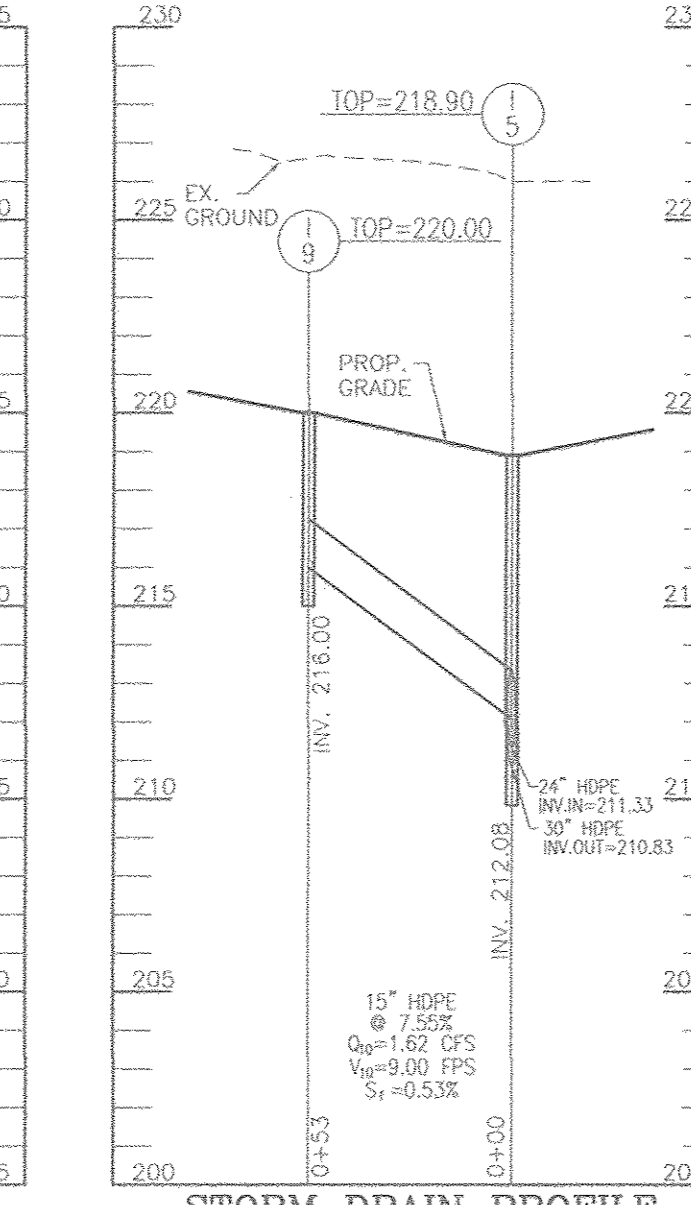
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



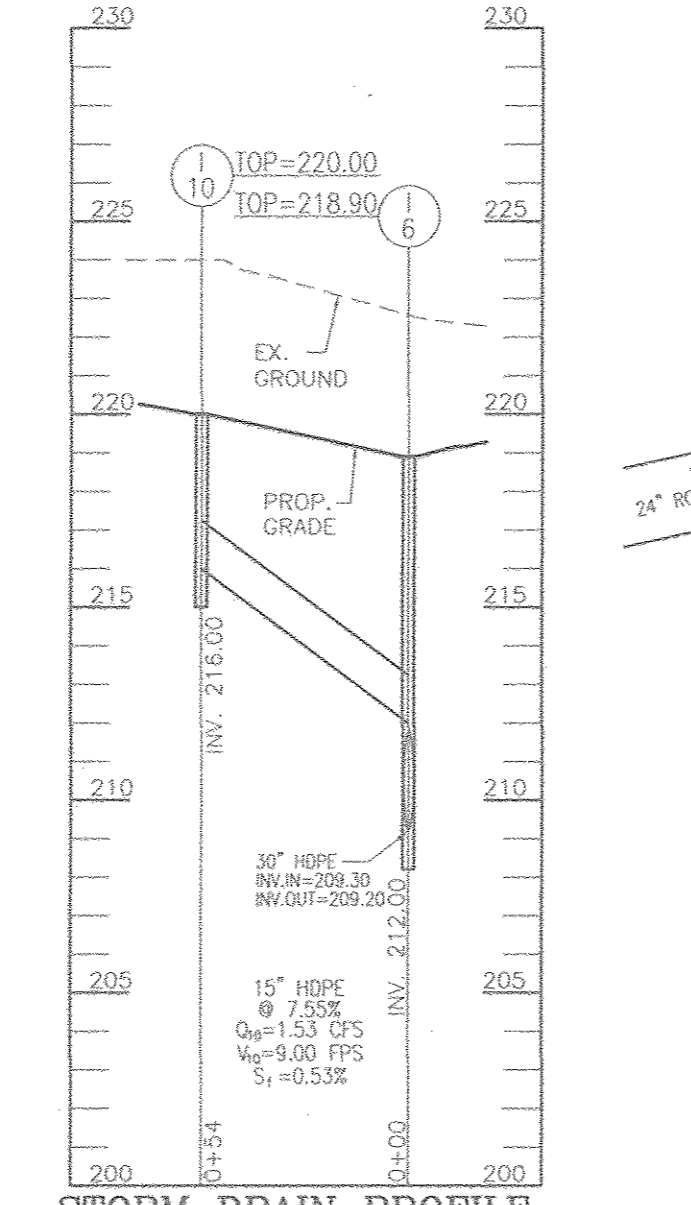
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



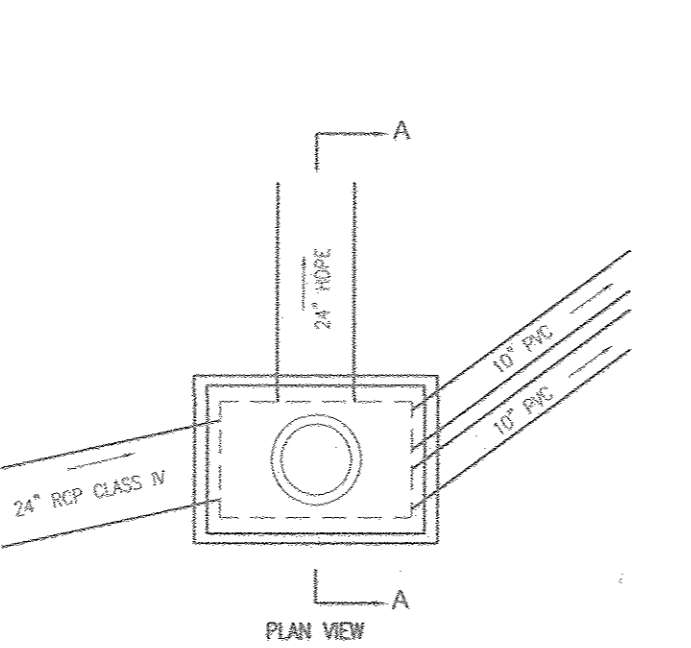
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



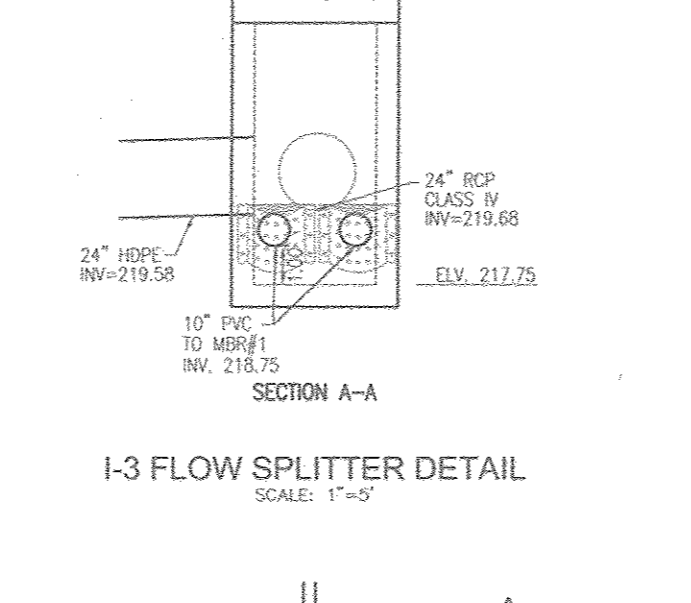
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



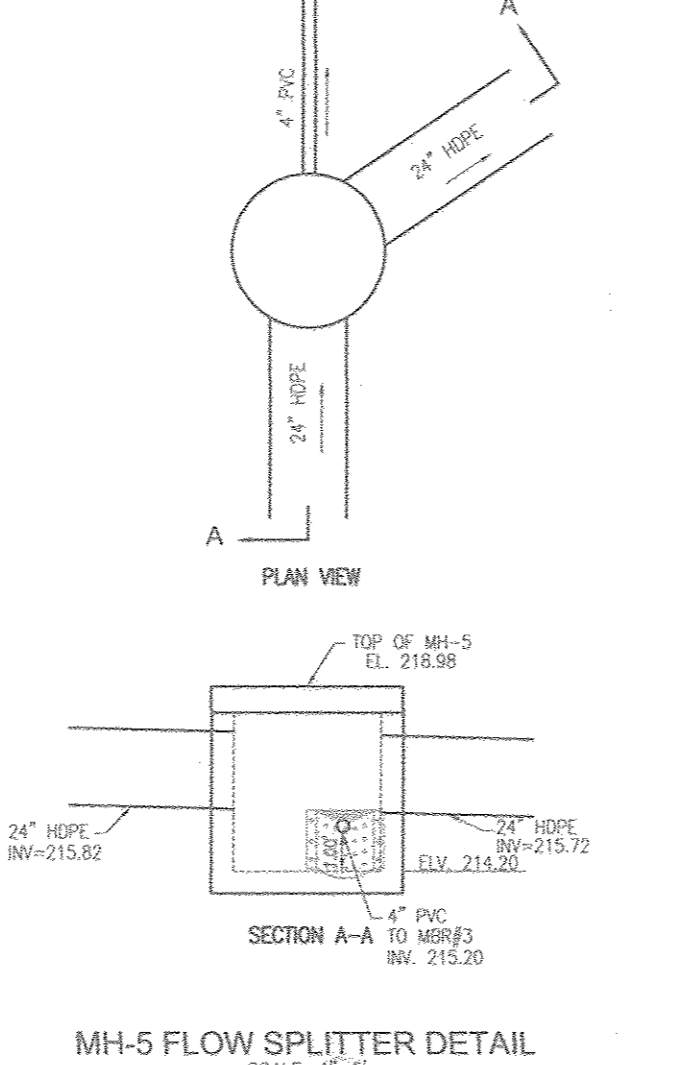
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



I-3 FLOW SPLITTER DETAIL
SCALE: 1"=5'



I-13 FLOW SPLITTER DETAIL
SCALE: 1"=5'

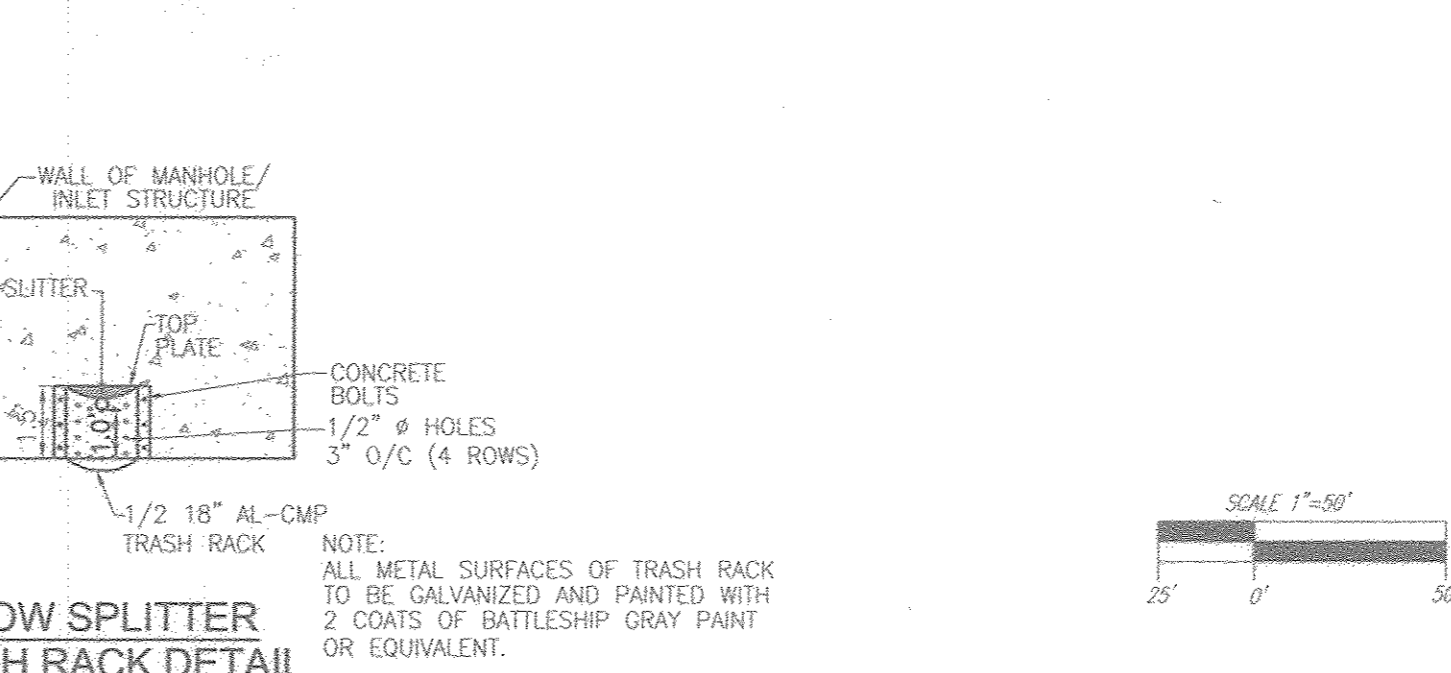


MH-5 FLOW SPLITTER DETAIL
SCALE: 1"=5'

NO.	TYPE	LOCATION	THROAT	TOP EL.	INV. IN	INV. OUT	COMMENTS
EX. I-11		N 544999.6 E 1373510.9	215.52	216.12	206.85	204.80	
I-1	TYPE "S" INLET	N 545541.8 E 1373770.6	224.50	221.76	HO. CO. STD	D-4.22	
I-2	TYPE "S" INLET	N 545668.1 E 1373739.5	224.00	220.35	HO. CO. STD	D-4.22	
I-3	TYPE "A-5" INLET	N 545789.1 E 1373981.0	223.60	219.68	HO. CO. STD	D-4.01	
I-4	TYPE "S" INLET	N 545792.7 E 1373533.3	219.70	215.52	HO. CO. STD	D-4.22	
I-5	TYPE "DOUBLE S" INLET	N 545506.7 E 1373353.4	218.90	210.83	HO. CO. STD	D-4.23	
I-6	TYPE "DOUBLE S" INLET	N 545358.5 E 1373389.9	218.90	209.20	HO. CO. STD	D-4.23	
I-7	TYPE "S" INLET	N 545643.9 E 1373438.1	221.50	217.17	HO. CO. STD	D-4.22	
I-8	SHA. PASS THROUGH COG	N 545663.3 E 1373430.1	220.60		SHA MD	374.68	
I-9	TYPE "S" INLET	N 545519.4 E 1373405.0	220.00	216.00	HO. CO. STD	D-4.22	
I-10	TYPE "S" INLET	N 545371.9 E 1373441.9	220.00	216.00	HO. CO. STD	D-4.22	
I-11	TYPE "A-10" INLET	N 545111.7 E 1373476.7	218.61	219.21	HO. CO. STD	D-4.03	
I-12	TYPE "S" INLET	N 545006.5 E 1373570.5	216.20	211.87	HO. CO. STD	D-4.22	
I-13	TYPE "A-10" INLET	N 545264.1 E 1373415.1	219.20	219.80	HO. CO. STD	D-4.03	
I-14	TYPE "A-10" INLET	N 545111.5 E 1373914.3	223.50	217.76	HO. CO. STD	D-4.03	
I-15	TYPE "A-10" INLET	N 545208.6 E 1373890.4	223.52	218.46	HO. CO. STD	D-4.03	
I-16	TYPE "A-10" INLET	N 545354.8 E 1373859.2	223.31	220.07	HO. CO. STD	D-4.03	
CO-1	CLEAN OUT	N 545692.6 E 1373701.5	225.67	222.00	HO. CO. STD	S-2.22	
CO-3	CLEAN OUT	N 545332.2 E 1373855.6	223.42	220.32	HO. CO. STD	S-2.22	
MH-1	4'-0" STANDARD PRECAST MANHOLE	N 545735.9 E 1373465.4	226.00	215.17	HO. CO. STD	G-5.12	
MH-2	4'-0" STANDARD PRECAST MANHOLE	N 545054.6 E 1373425.5	221.85	214.00	HO. CO. STD	G-5.12	
MH-3	5'-0" STANDARD PRECAST MANHOLE	N 545032.5 E 1373536.8	217.80	209.25	HO. CO. STD	G-5.13	
MH-4	4'-0" STANDARD PRECAST MANHOLE	N 545045.4 E 1373588.7	219.65	214.42	HO. CO. STD	G-5.12	
MH-5	4'-0" STANDARD PRECAST MANHOLE	N 545004.8 E 1373633.2	220.00	215.82	HO. CO. STD	G-5.12	
MH-6	4'-0" STANDARD PRECAST MANHOLE	N 545060.1 E 1373857.3	224.00	217.31	HO. CO. STD	G-5.12	
MH-7	4'-0" STANDARD PRECAST MANHOLE	N 545230.4 E 1373817.2	225.20	220.35	HO. CO. STD	G-5.12	
MH-8	4'-0" STANDARD PRECAST MANHOLE	N 545326.6 E 1373792.9	225.05	221.18	HO. CO. STD	G-5.12	
MH-9	SHALLOW STANDARD PRECAST MANHOLE	N 545625.7 E 1373750.0	224.62	221.07	HO. CO. STD	G-9.05	
MH-10	SHALLOW STANDARD PRECAST MANHOLE	N 545616.5 E 1373720.9	225.35	221.47	HO. CO. STD	G-9.05	
MH-11	SHALLOW STANDARD PRECAST MANHOLE	N 545660.7 E 1373708.9	225.10	221.66	HO. CO. STD	G-9.05	
HW-1	TYPE "A" HEADWALL (30")	N 545206.2 E 1373392.3	208.00	204.60	HO. CO. STD	D-5.11	
SMH-1	4'-0" STANDARD PRECAST MANHOLE	N 545262.9 E 1373895.5	223.45	214.48	HO. CO. STD	G-5-12	
SMH-2	4'-0" STANDARD PRECAST MANHOLE	N 545440.3 E 1373832.3	225.81	215.39	HO. CO. STD	G-5-12	

NOTE: 1. TOP ELEVATIONS ARE AT TOP OF CURB FOR ALL TYPE "A" INLETS.
2. FOR TOP SLAB SLOPES SEE GRADING PLAN.
3. DOUBLE TYPE "S" INLETS TO HAVE CURVED VANE GRATES W/ FRAME (MD-379.05-01)

NO.	TYPE	LOCATION	THROAT	TOP EL.	INV. IN	INV. OUT	COMMENTS
SCD-1	SEWER CLEANOUT	N 545428.7 E 1373785.4	225.10	218.98	210.44	HO. CO. STD	S-2.22
SCD-2	SEWER CLEANOUT	N 545347.9 E 1373805.4	224.54	218.14	HO. CO. STD	S-2.22	
SCD-3	SEWER CLEANOUT	N 545427.1 E 1373752.2	225.70	218.38	HO. CO. STD	S-2.22	



FLOW SPLITTER TRASH RACK DETAIL
SCALE: 1/4" = 1"

SIZE	TYPE	LENGTH
4"	PERF. PVC	286 LF
4"	SOLID PVC	68 LF
6"	PERF. PVC	906 LF
10"	PVC	89 LF
12"	PVC	33 LF
15"	HDPE	428 LF
18"	HDPE	109 LF
24"	HDPE	1033 LF
30"	HDPE	310 LF
15"	RCP CLASS IV	96 LF
18"	RCP CLASS IV	95 LF
24"	RCP CLASS IV	134 LF
6"	PVC SEWER	3435 LF
8"	PRIVATE WATER	24.94 LF
12"	PRIVATE WATER	63.56 LF
4"	PVC SEWER	201 LF

- OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED FLOW SPLITTER STRUCTURE**
1. THE FLOW SPLITTER STRUCTURE IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN TO MAINTAIN ITS OPERATION AND FUNCTION.
 2. THE FLOW SPLITTER STRUCTURE INSPECTED YEARLY AT A MINIMUM AND ESPECIALLY AFTER SEVERE STORM EVENTS.
 3. WHEN SEDIMENT ACCUMULATION OF MORE THAN 2" IS OBSERVED OR ANY DEBRIS THAT MIGHT OBSTRUCT THE FLOW SPLITTER OUTFALL IS OBSERVED, THE FACILITY SHALL BE CLEANED.
 4. THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE FLOW SPLITTER STRUCTURE BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID.
 5. THE INLET AND OUTFALL PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX (6) MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John Chubb 4/13/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

Kat Sanderson 5-3-16
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

Valerie J. Mc... 5-3-16
DIRECTOR
DATE

3 REVISION SHCS, ADD SOLIDS INTERCEPTORS AND DUMPSTER 11-22-17

NO. REVISION DATE

SITE DEVELOPMENT PLAN

STORM DRAIN PROFILES

MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
PROPOSED WAREHOUSE
7540 ASSATEAGUE DRIVE
ZONED M-2
L18203F-246 - PLAT 19144
PARCEL 2, PARCEL J
HOWARD COUNTY, MARYLAND

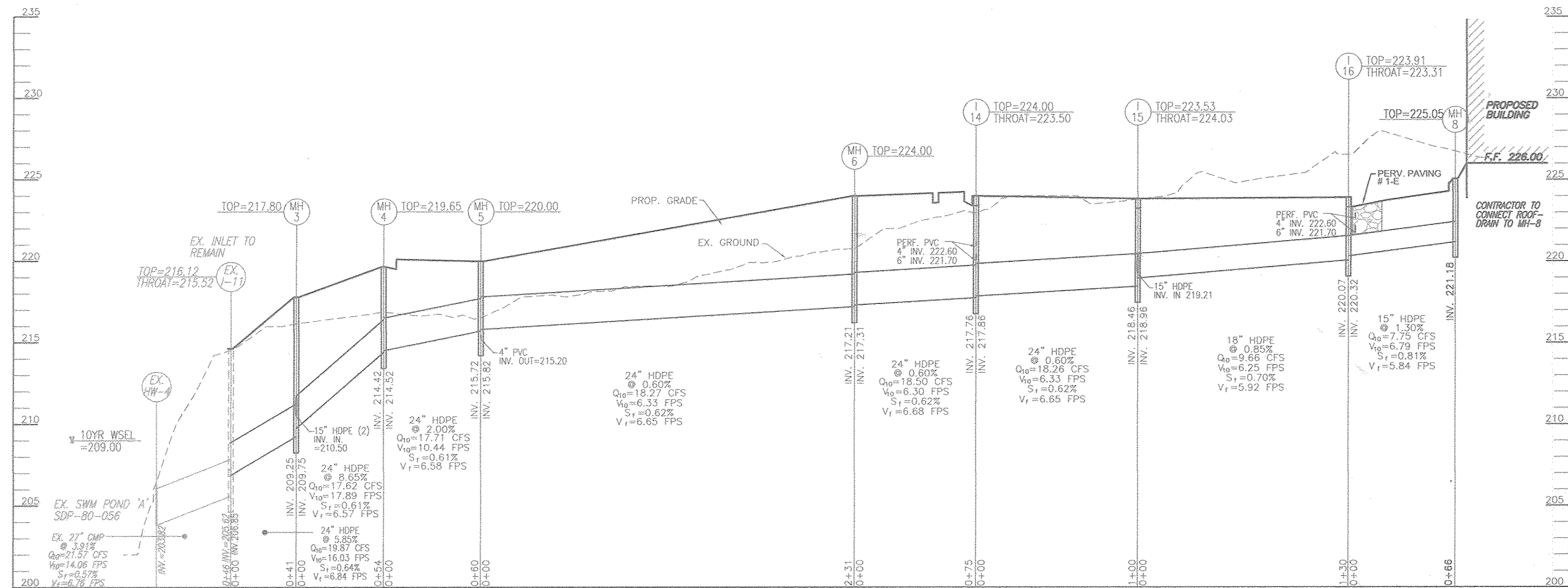
TAX MAP 43 BLOCK 15
8TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

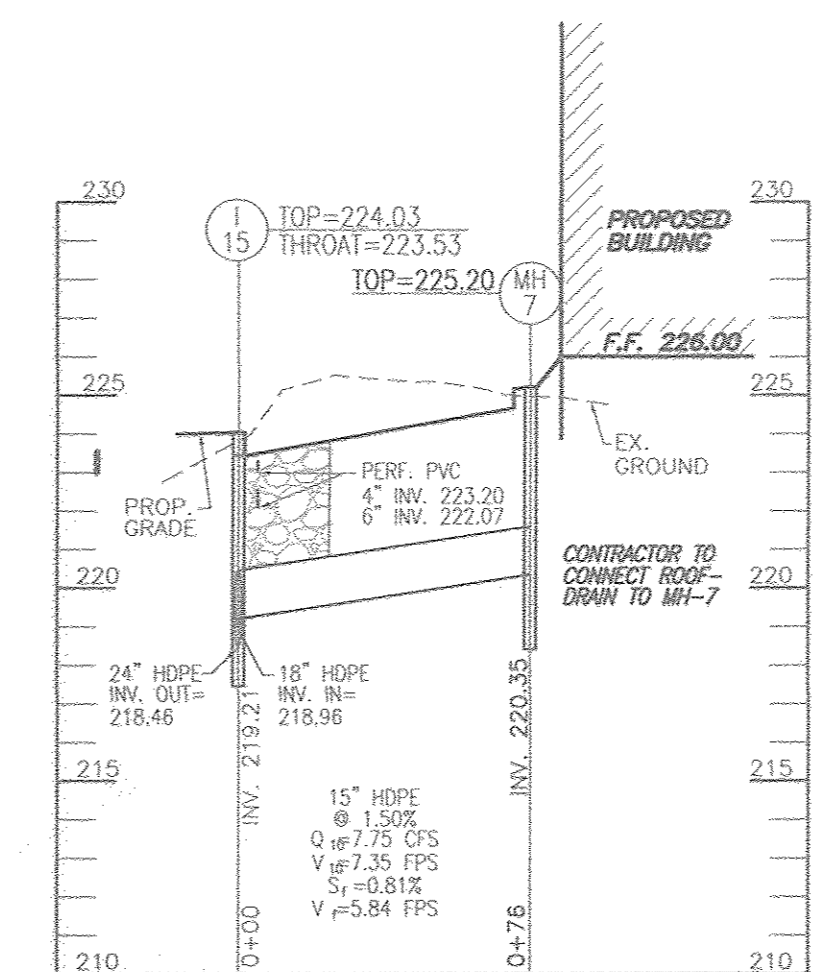
DESIGN BY: RHV
DRAWN BY: DZ
CHECKED BY: RHV
DATE: MARCH 2016
SCALE: AS SHOWN
W.O. NO.: 13-42

PROFESSIONAL CERTIFICATE
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. 19163
EXPIRATION DATE: 09-27-2016

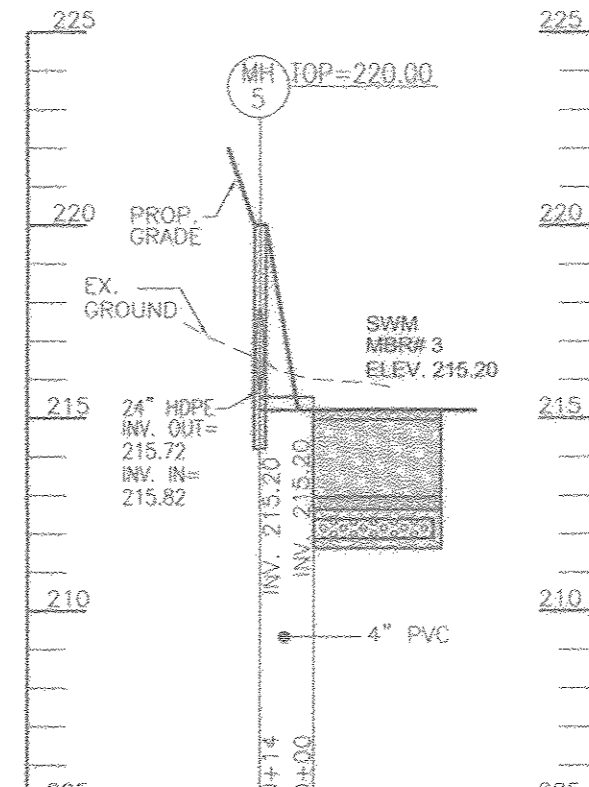
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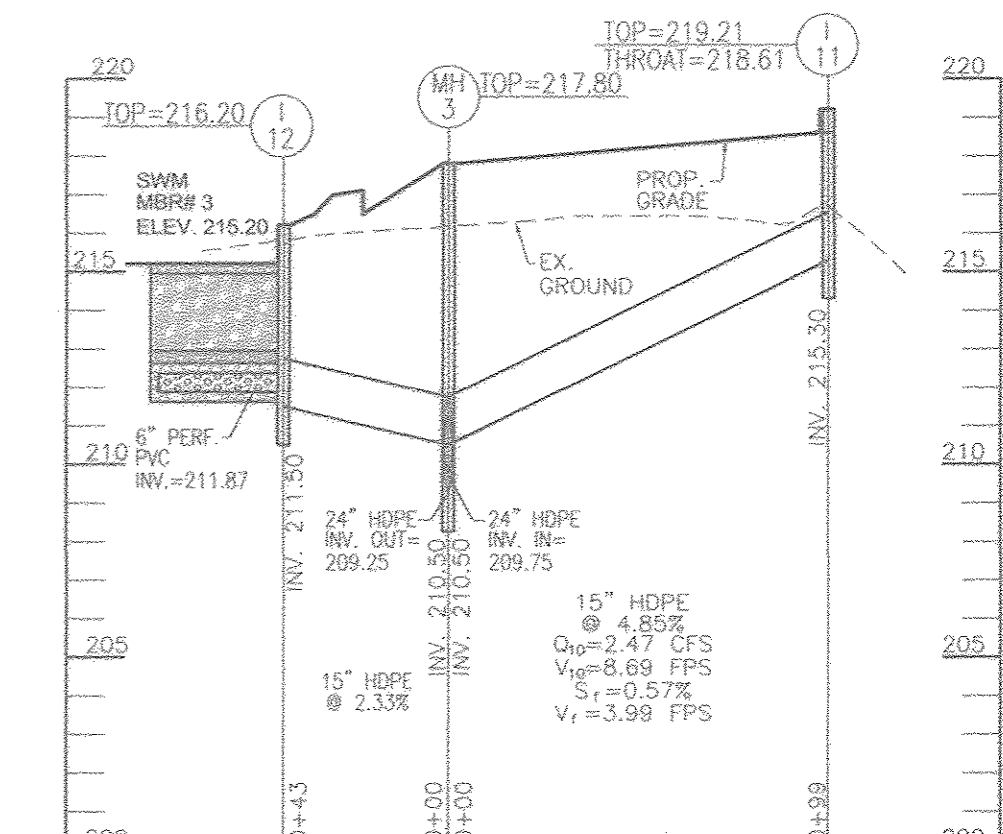
STORM DRAIN PROFILE
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



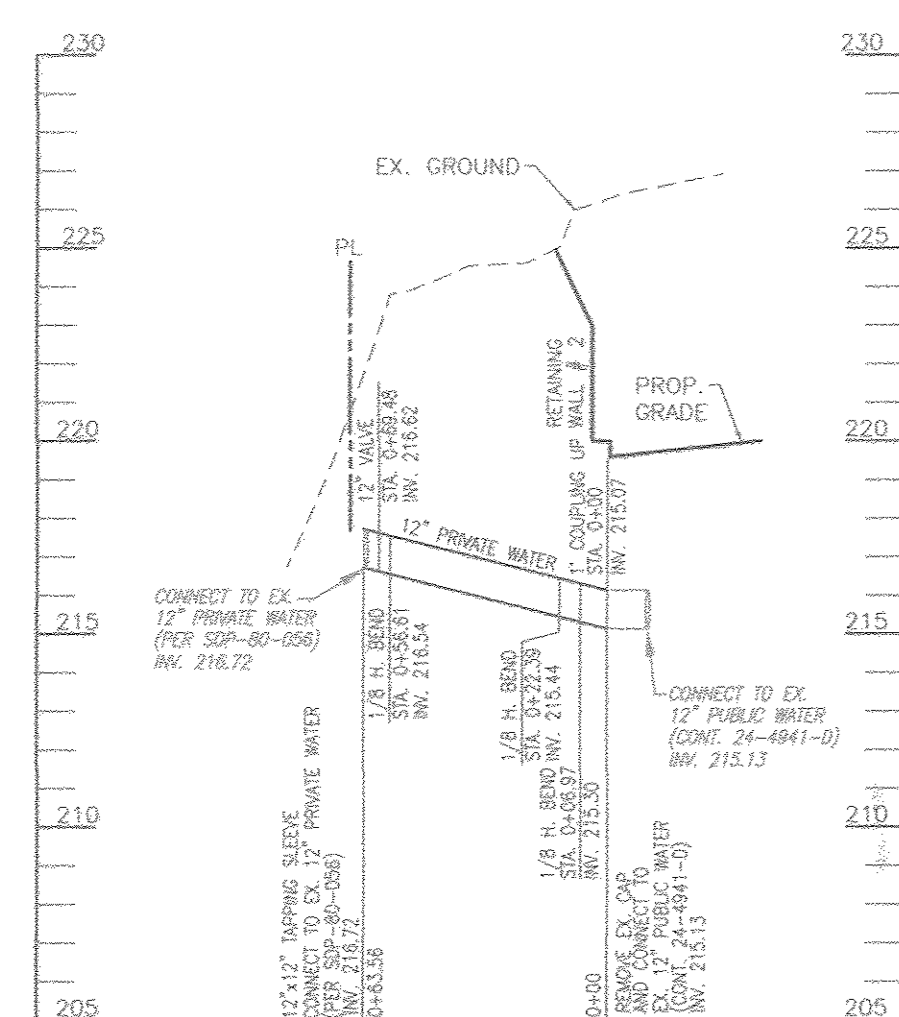
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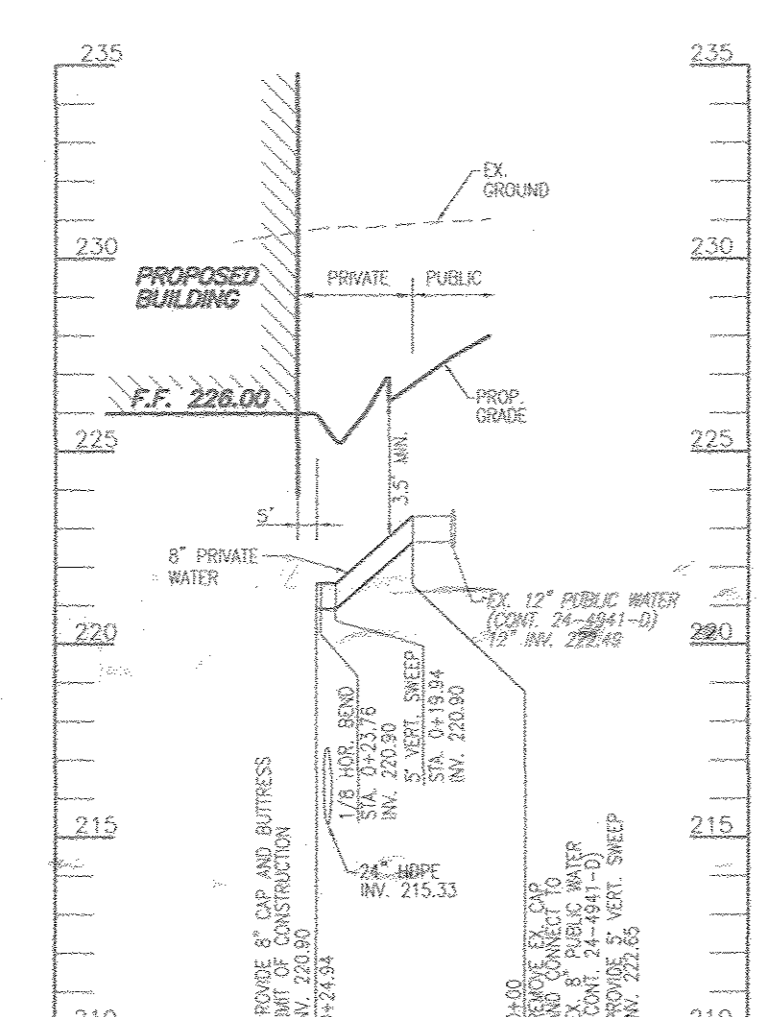
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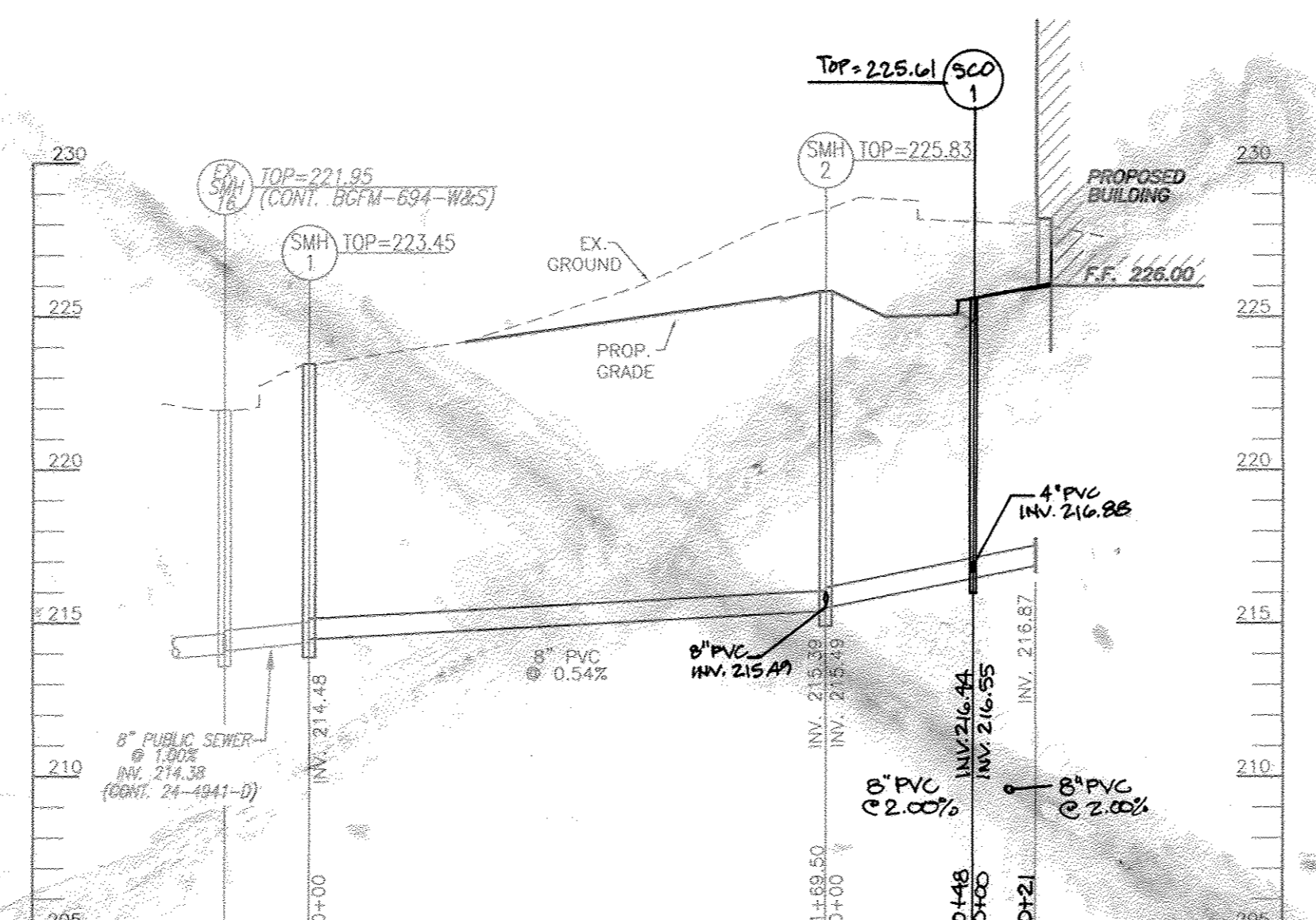
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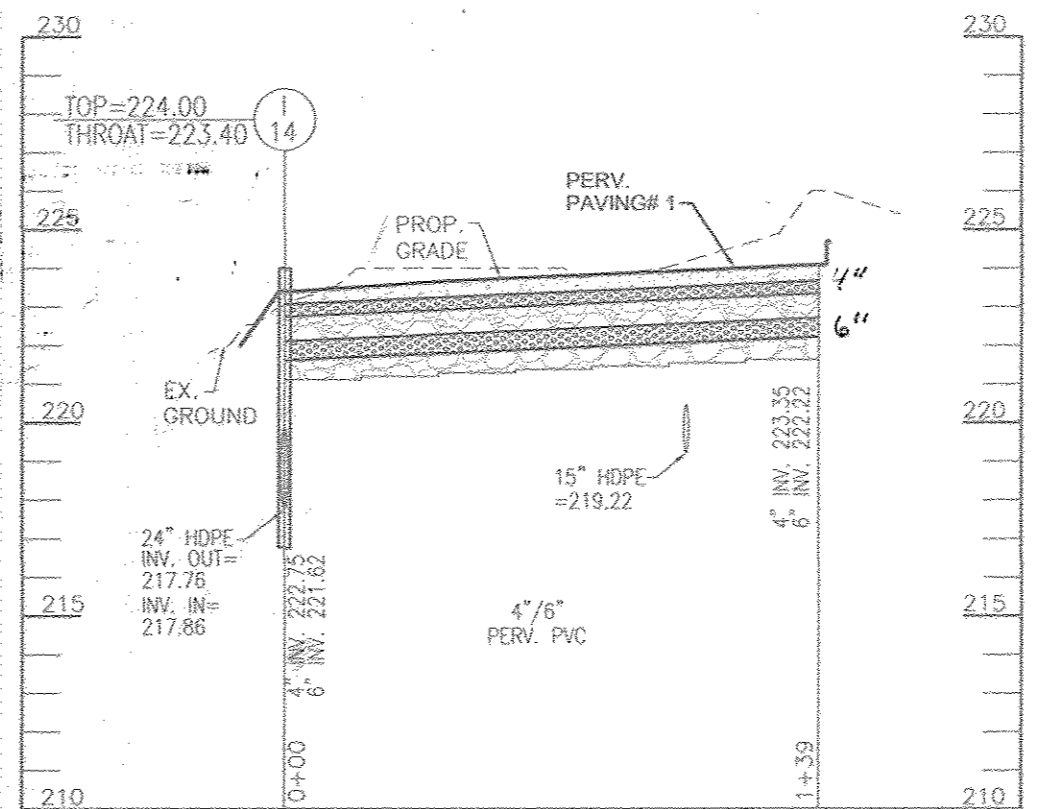
PRIVATE 12" WATER PROFILE
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



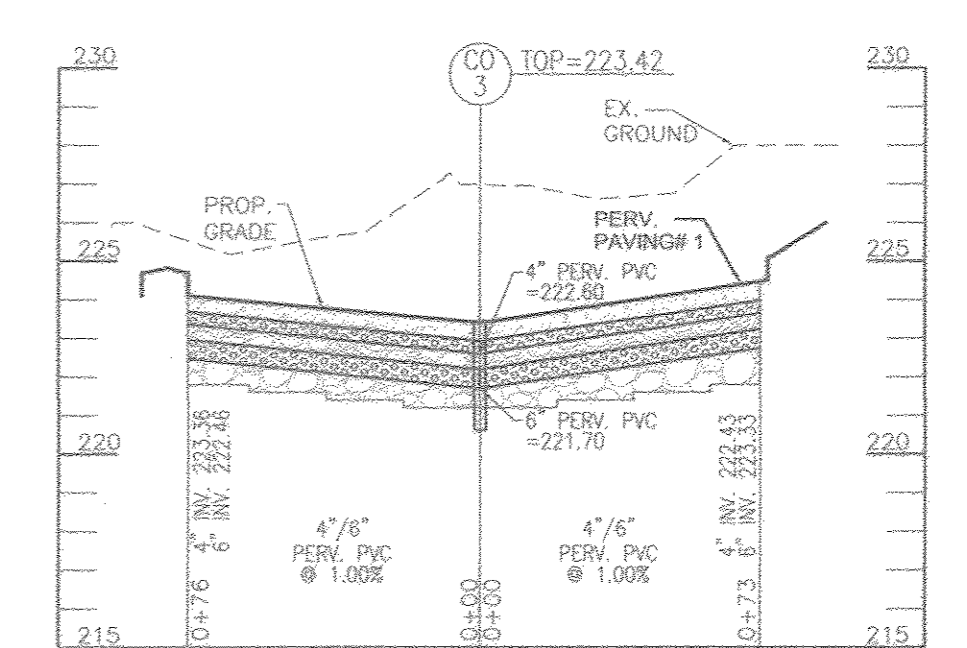
PRIVATE 8" WATER PROFILE
SCALE: HORIZONTAL = 1"=50'
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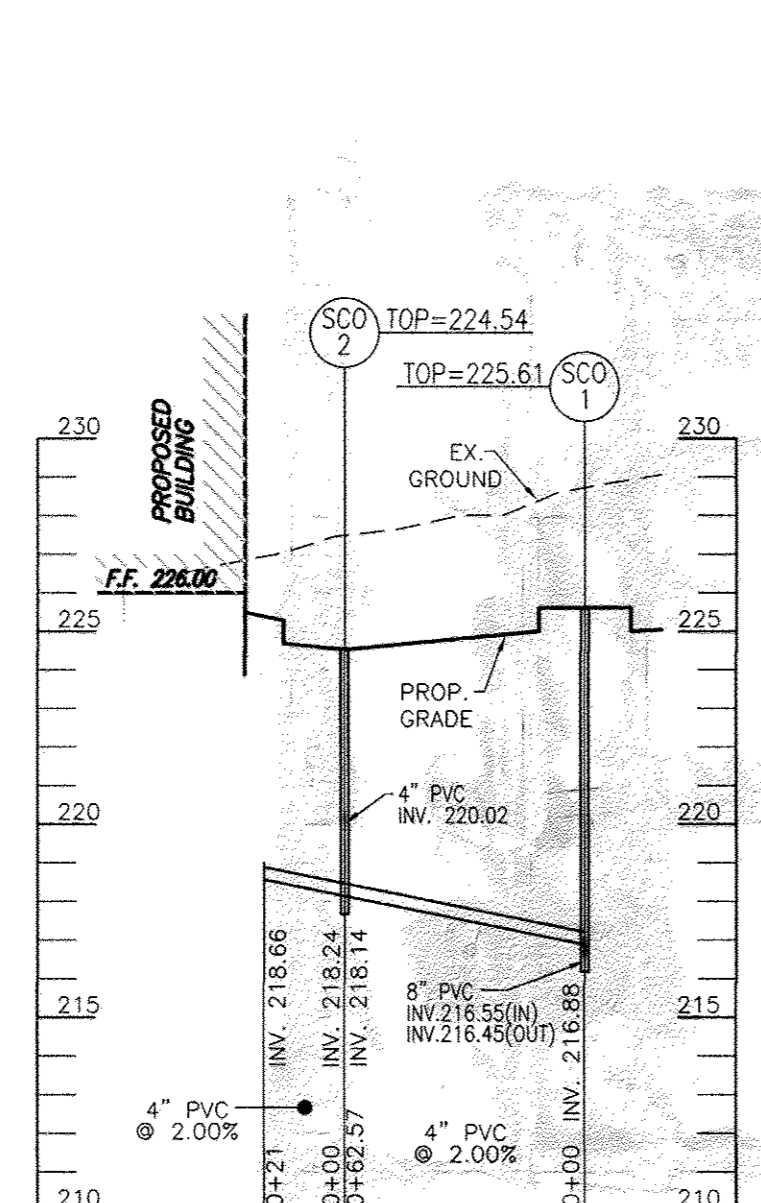
PRIVATE 8" SEWER PROFILE
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



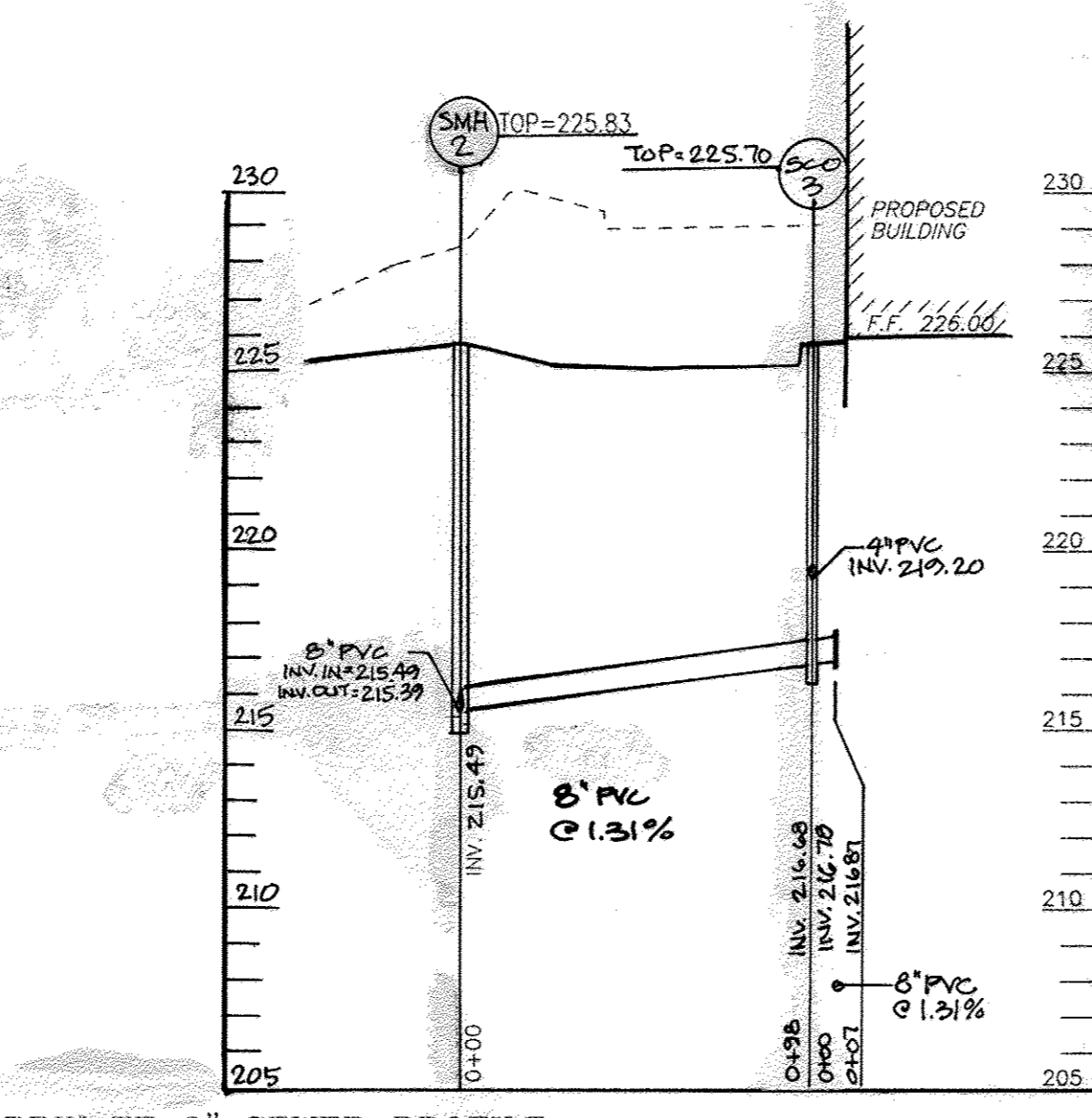
UNDERDRAIN PROFILE
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



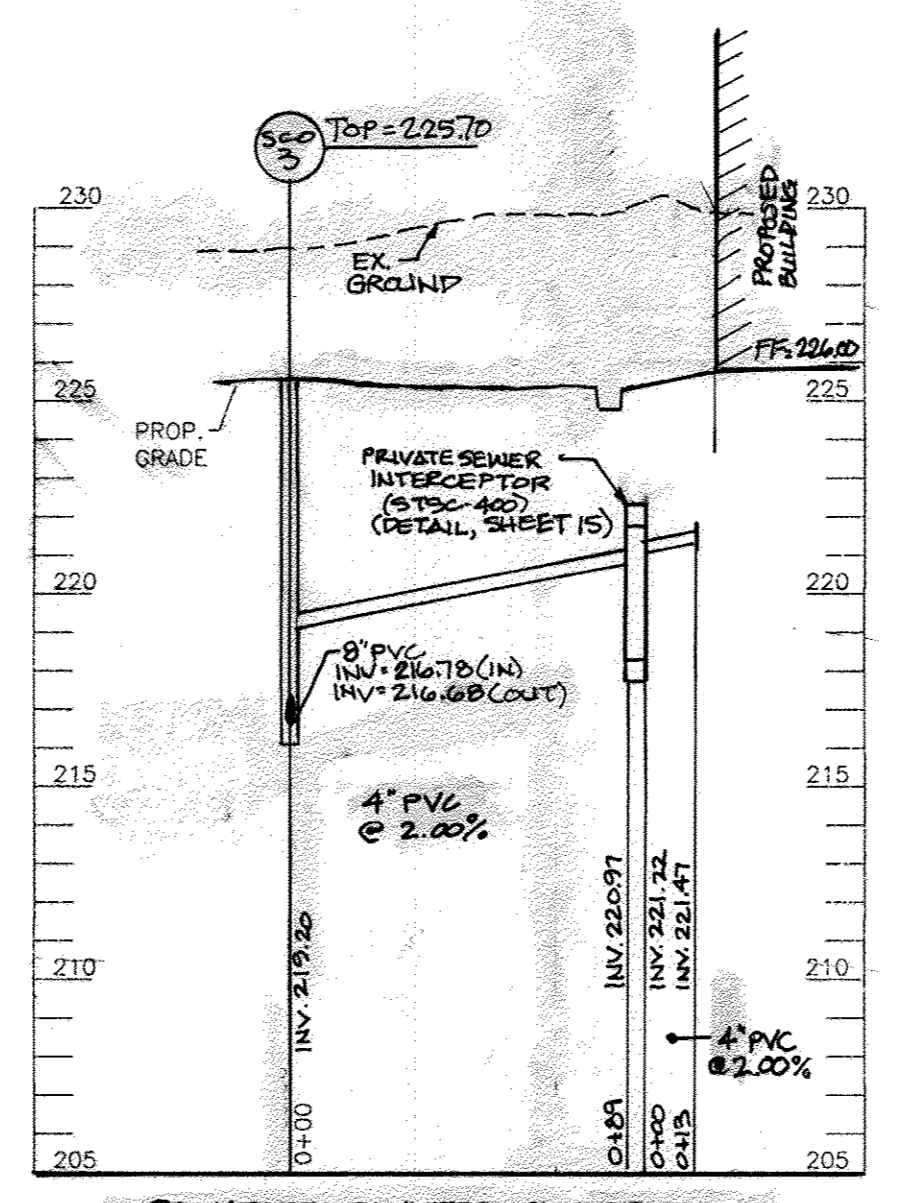
UNDERDRAIN PROFILE
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



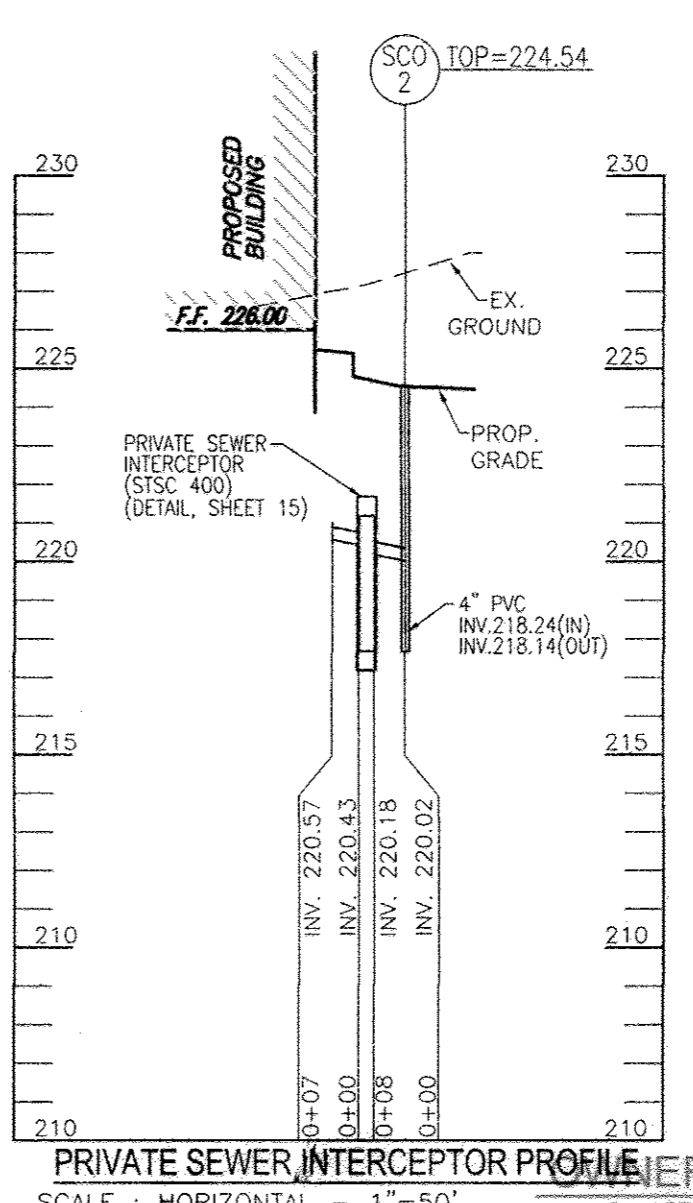
PRIVATE 4" SEWER PROFILE
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



PRIVATE 8" SEWER PROFILE
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



PRIVATE SEWER INTERCEPTOR PROFILE
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



PRIVATE SEWER INTERCEPTOR PROFILE
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'

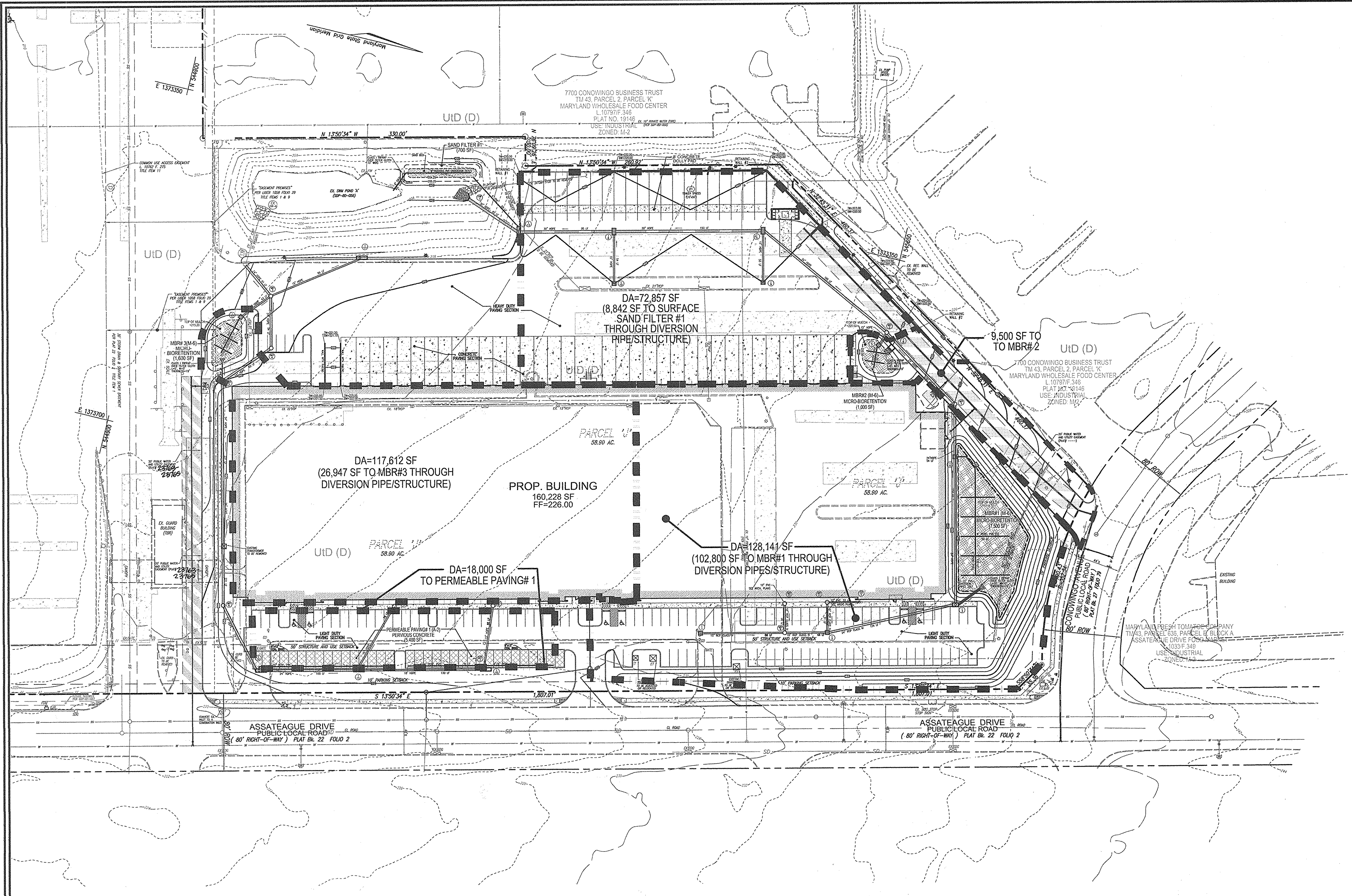
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 4.13.16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 5-3-16
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 5-3-16
 DIRECTOR

NO.	REVISION	DATE
3	REVISE SHCS, ADD SOLIDS INTERCEPTORS AND DUMPSTER	11-22-17
1	REVISE SHC, ADD FENCE AND GATES, UPDATE PUBLIC WATER LOCATION	06-20-16

SITE DEVELOPMENT PLAN
STORM DRAIN AND PRIVATE UTILITY PROFILES
 MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
 PROPOSED WAREHOUSE
 7540 ASSATEAGUE DRIVE
 ZONED: M-2
 TAX MAP 43 BLOCK 15 L16203P.246 - PLAT 19144 PARCEL 2, PARCEL J
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 02-27-2016
 DESIGN BY: RHV
 DRAWN BY: OZ
 CHECKED BY: RHV
 DATE: MARCH 2016
 SCALE: AS SHOWN
 W.O. NO.: 13-42
 11 SHEET OF 15



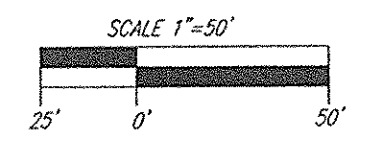
LEGEND

	EXISTING CONTOUR
	PROPOSED CONTOUR
	SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	STORM DRAIN
	STORM DRAIN INLET
	PERVIOUS PAVING
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	SIDEWALK
	SWM DRAINAGE DIVIDE
	LIGHT POLE

SOILS LEGEND
MAP NUMBER 25

SYMBOL	NAME / DESCRIPTION	GROUP
UtD	URBAN LAND-UDORMENTS COMPLEX, 0 TO 15 PERCENT SLOPES	D

NOTE: BASED ON HOWARD SOIL SURVEY



SWM DRAINAGE AREA MAP - IHOP (DEVELOPMENT AREA #1)
SCALE: 1"=50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4-13-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 5-3-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 5-3-16
DIRECTOR DATE

OWNER/DEVELOPER
MCA ASSATEAGUE HOLDING LLC
9601 ROBERT FULTON DR
SUITE 200
COLUMBIA, MD 21046
410-290-1400

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
SWM DRAINAGE AREA MAP

MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
PROPOSED WAREHOUSE
7540 ASSATEAGUE DRIVE
L16203/F 246 - PLAT 19144 HOWARD COUNTY, MARYLAND

TAX MAP 43 BLOCK 15 ZONED: M-2 PARCEL 2, PARCEL J
6TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
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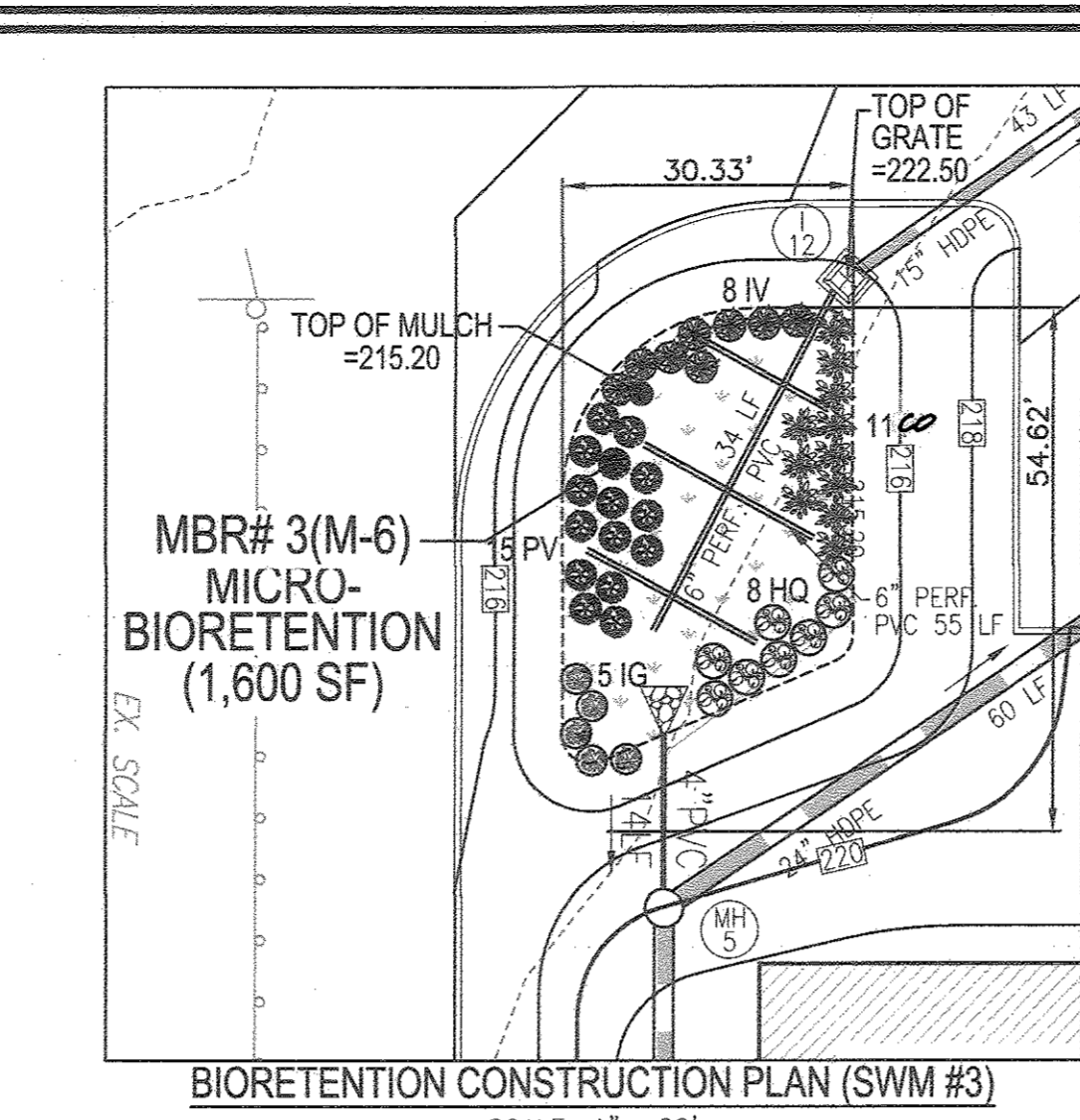
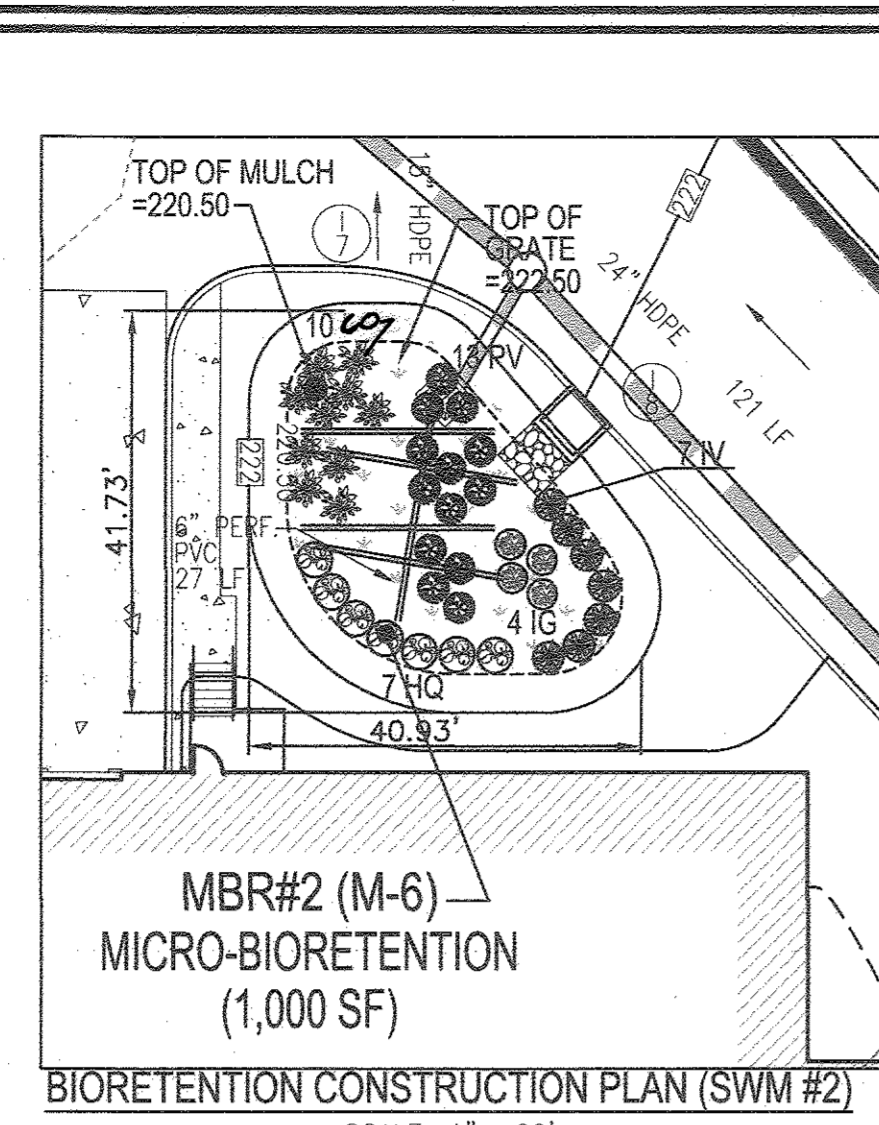
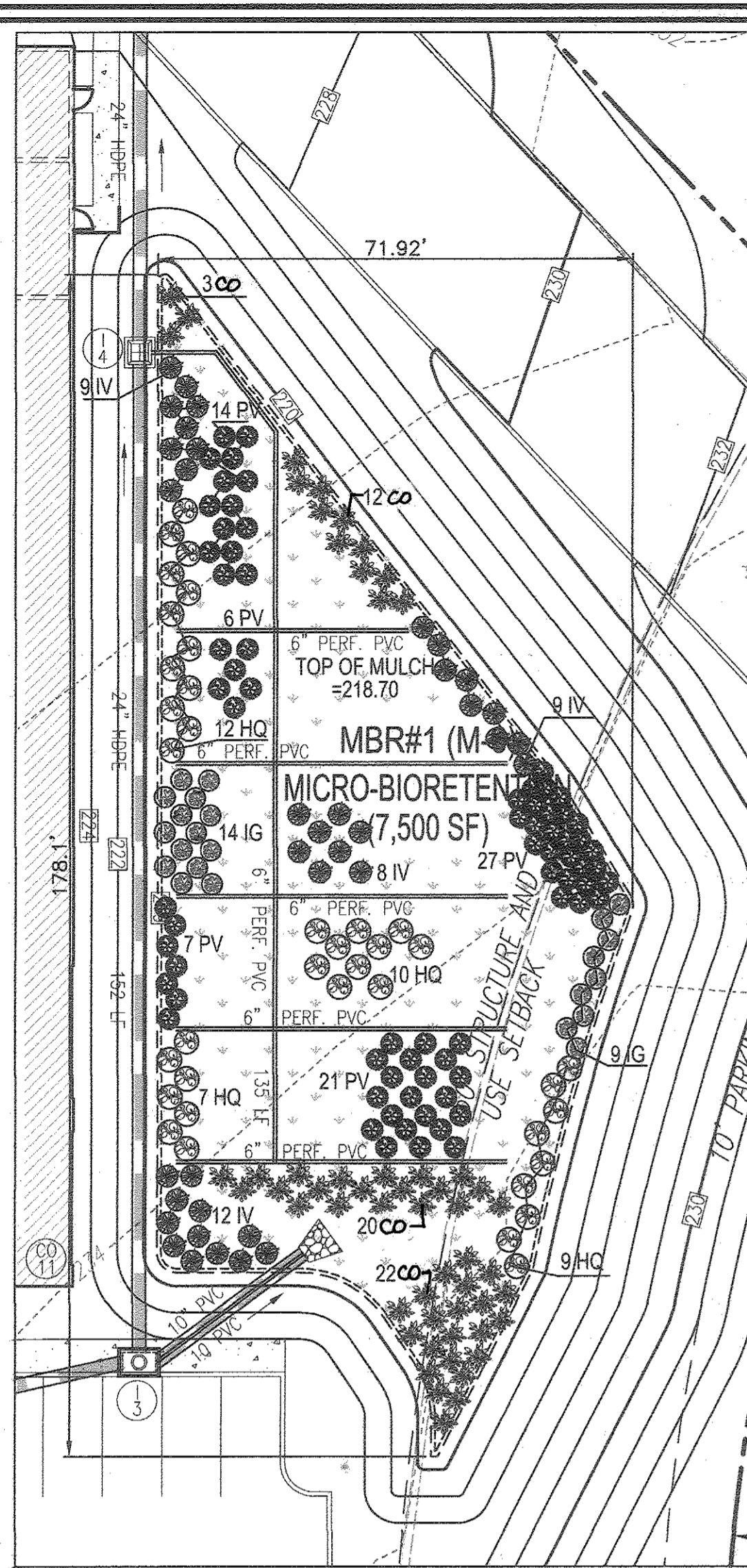
PROFESSIONAL CERTIFICATE

DESIGN BY: RHY
DRAWN BY: DZ
CHECKED BY: RHY
DATE: MARCH 2016
SCALE: AS SHOWN
W.O. NO.: 13-42

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. 16193 EXPIRATION DATE: 08-27-2016

[Signature]
ROBERT H. VOGEL, PE No. 16193

12 SHEET OF 15



Forest Conservation Worksheet 2.2

PROJECT: MARYLAND WHOLESALE FOOD CENTER - PARCEL J (SDP-16-012 & SDP-91-097)

Net Tract Area	Total Tract Area (Combined LOD for both SDPs)	A = 22.43
B. Deductions (Existing Imperious Area)		B = 18.22
C. Net Tract Area (Existing Grass Area)		C = 4.21

Land Use Category	Input the number "1" under the appropriate land use zoning, and limit to only one entry	A = 0.63
D. Afforestation Threshold (Net Tract Area x 15%)		E = 0.63
E. Conservation Threshold (Net Tract Area x 15%)		F = 0.00
F. Existing Forest Cover		G = 0.00
G. Area of Forest Above Conservation Threshold		H = 0.00
H. Break Even Point		I = 0.00
I. Forest Clearing Permitted Without Mitigation		J = 0.00
J. Proposed Forest Clearing		K = 0.00
K. Total Area of Forest to be Retained		L = 0.00
L. Reforestation for Clearing Above the Conservation Threshold		M = 0.00
M. Reforestation for Clearing Below the Conservation Threshold		N = 0.00
N. Credit for Retention above the Conservation Threshold		O = 0.00
O. Total Reforestation Required		P = 0.00
P. Total Afforestation Required		Q = 0.63
Q. Total Planting Requirement		R = 0.63

THE FOREST CONSERVATION REQUIREMENT FOR THIS SITE DEVELOPMENT PLAN (SDP-16-012) AND THE ASSOCIATED REDLINE TO SITE DEVELOPMENT PLAN (SDP-91-097) IS 0.63 AC. OF AFFORESTATION. THIS IS ACCOMPLISHED THROUGH THE PURCHASE 0.63 AC. OF FOREST PLANTING IN THE CATAL CREEK FOREST MITIGATION FOREST BANK (SDP-14-031).

Appendix B.3. Construction Specifications for Sand Filters, Bioretention and Open Channels

B.3.A. Sand Filter Specifications

- Material Specifications for Sand Filters**
The allowable materials for sand filter construction are detailed in Table B.3.1.
- Sand Filter Testing Specifications**
Underground sand filters, facilities within sensitive groundwater aquifers, and filters designed to serve within hot spots are to be tested for water tightness prior to placement of filter media. Entrances and exits should be plugged and the system completely filled with water to demonstrate water tightness. Water tightness means no leakage for a period of 8 hours.
- Sand Filter Construction Specifications**
Provide sufficient maintenance access (i.e., 12-foot-wide road with legally recorded easement). Vegetated access slopes are to be a maximum of 10%; gravel slopes to 15%; paved slopes to 25%. Absolutely no runoff is to enter the filter until all contributing drainage areas have been stabilized. Surface of filter bed is to be level.
All underground sand filters should be clearly delineated with signs so that they may be located when maintenance is due.
Surface sand filters may be planted with appropriate grasses; see Appendix A.
"Pocket" sand filters (and residential bioretention facilities creating areas larger than an acre) shall be sized with a stone "windows" that covers approximately 10% of the filter area. This "windows" shall be filled per gravel (3/4 inch stone).

BIORETENTION CONSTRUCTION PLAN (SWM #1)
SCALE: 1" = 20"

MBR #	LF	AREA	STEMS REQUIRED (0.0229)	STEMS PROVIDED	IG	IV	HQ	CO	PV	BA	AG	TOTAL
1	418	7491	172	172	23	38	38	57	75	262	262	524
2	137	3252	29	47	4	7	7	10	13	43	43	86
3	148	3404	33	47	5	8	8	11	15	49	49	98
TOTALS	0	7491	234	0	32	53	53	78	103	354	354	708

BIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.0229 STEMS PER SQUARE FOOT).

BIORETENTION PLANTING SCHEDULE (SHRUB/ORNAMENTAL GRASSES)

LEGEND/KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
IG	32	ILEX GLABRA "SHAMROCK" INKBERRY HOLLY	1 GALLON	18" O.C.
IV	53	ITEA VIRGINICA "HENRY'S GARNETT" VIRGINIA SWEETSPICE	1 GALLON	18" O.C.
HQ	53	HYDRANGEA QUERCIFOLIA OAKLEAF HYDRANGEA	1 GALLON	30" O.C.
CO	78	CERIALANTHUS OCCIDENTALIS BUTTON BUSH	1 GAL.	30" O.C.
PV	103	PANICUM VIRGATUM SWITCHGRASS	1 GAL.	36" O.C.

PERENNIALS/GROUNDCOVER PLANTING SCHEDULE

LEGEND	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
	354	BAPTISIA AUSTRALIS FALSE INDIGO	4" POT	12"-15" O.C. FOR SIDES AND BOTTOM OF MBR. MIX ALL VARIETIES IN A NATURALIZED RANDOM PATTERN THROUGHOUT. PLANT IN GROUPS OF NO LESS THAN 9 PLANTS PER CLUMP.
	354	AGORUS OZON GOLDEN VARIEGATED SWEET FLAG TO PLUGS	1 QT.	

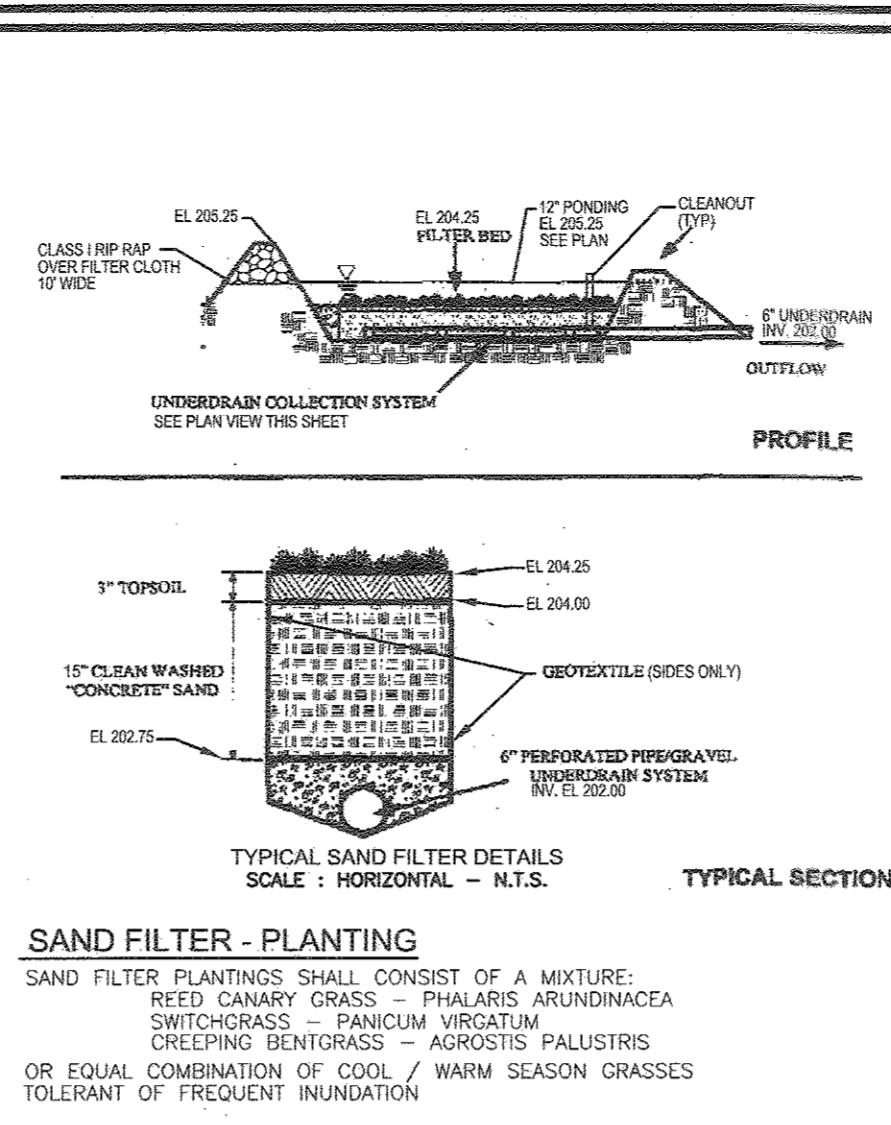
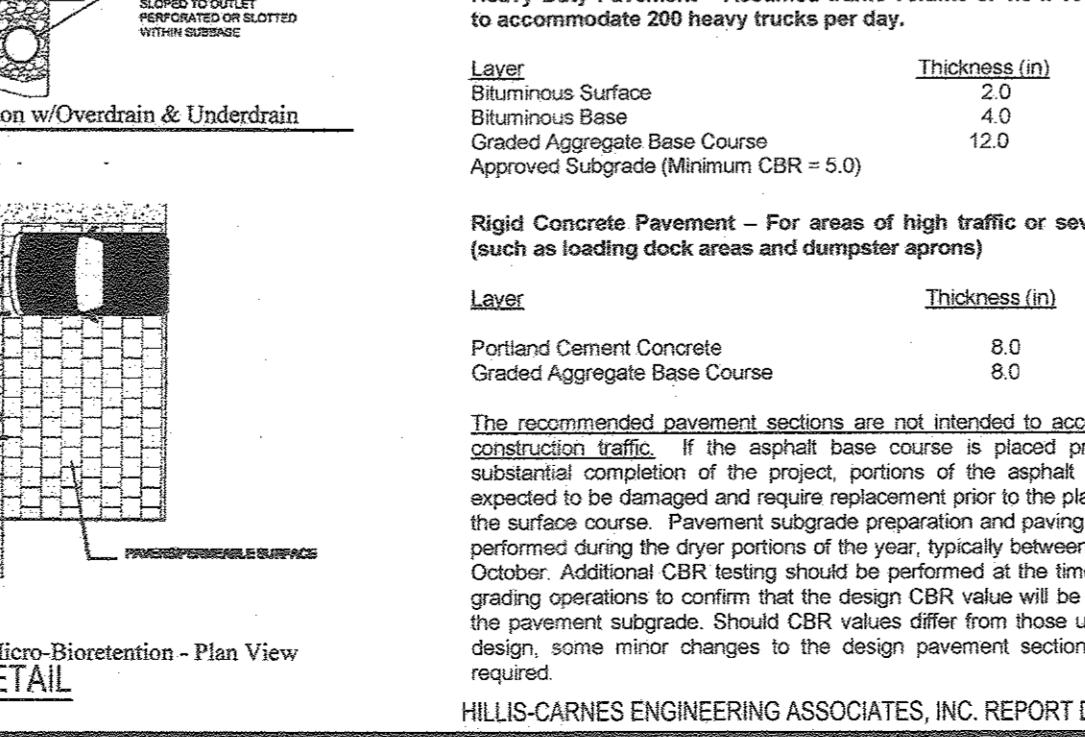
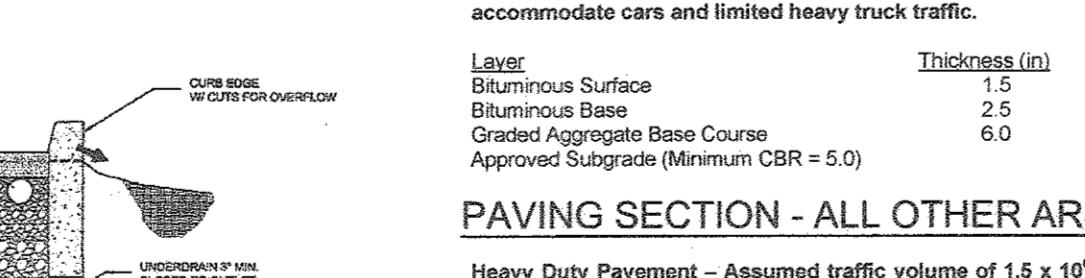
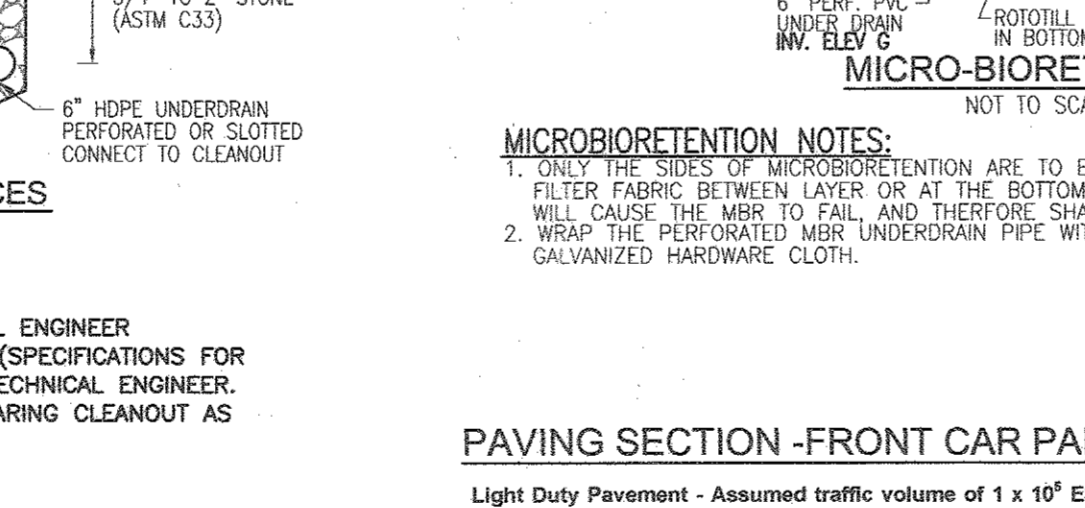
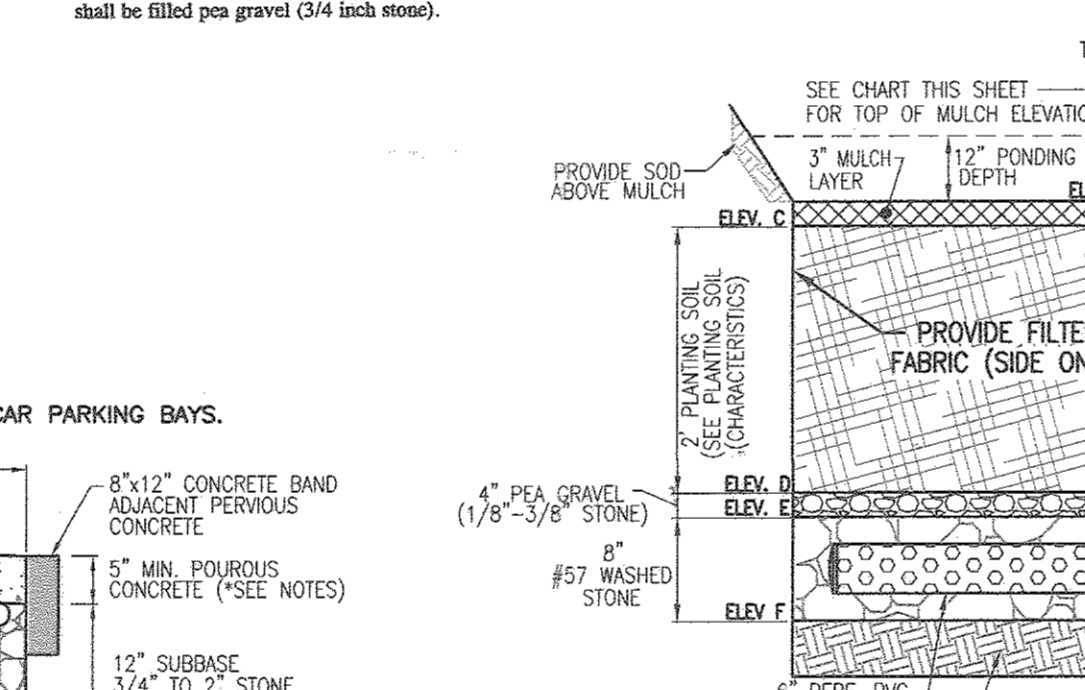
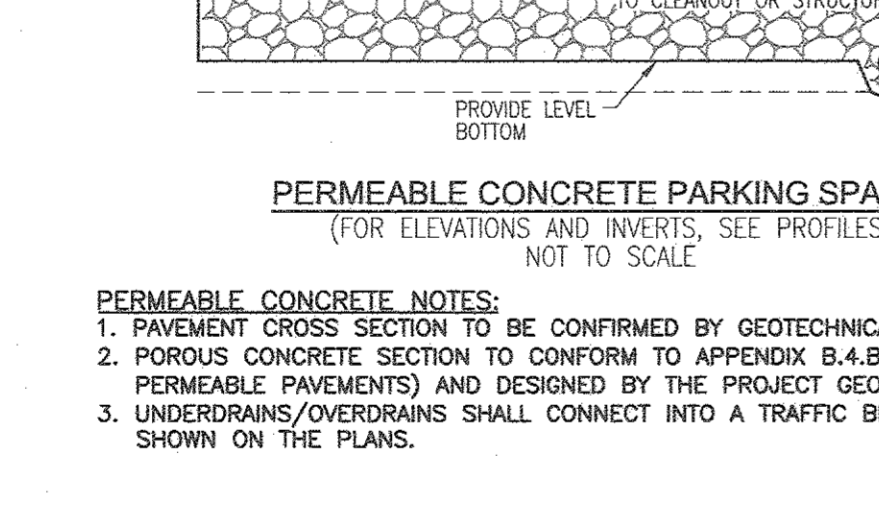
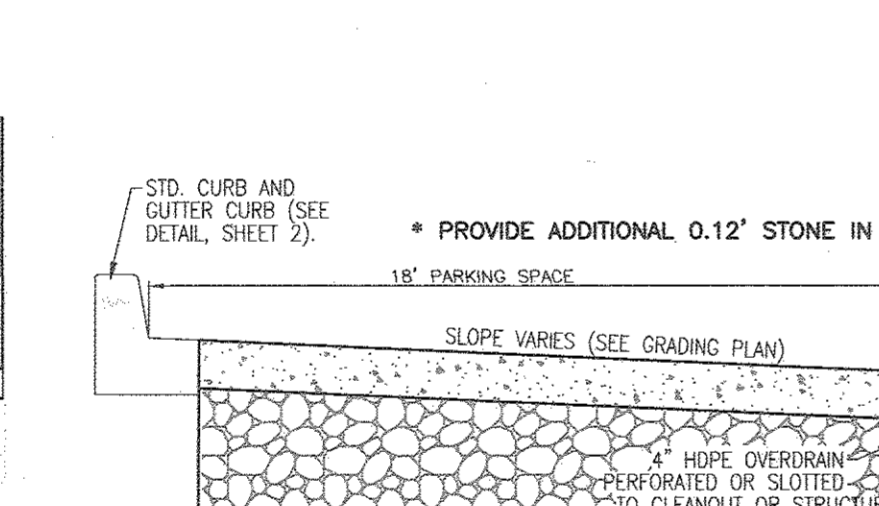
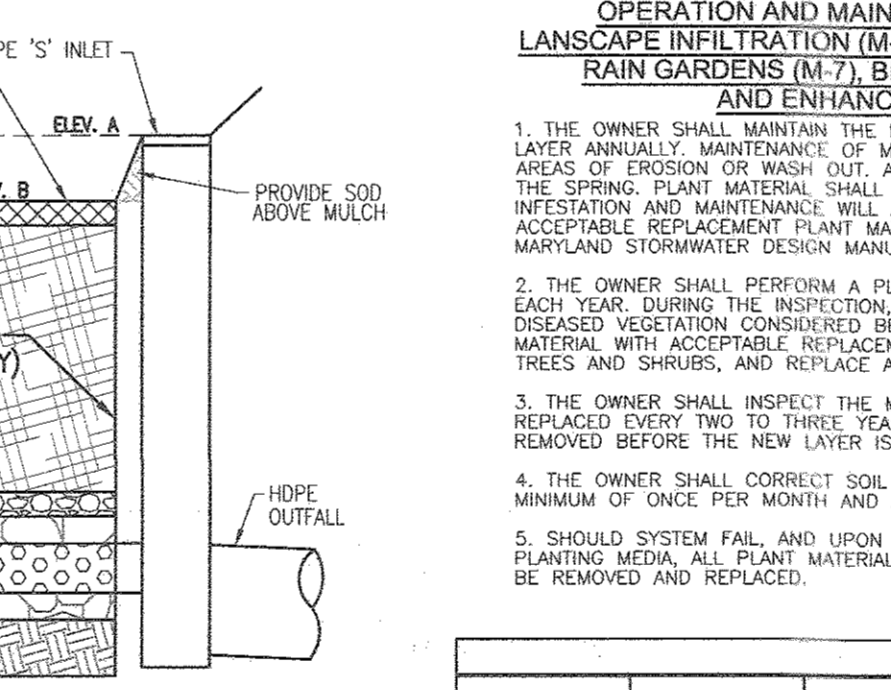


Table B.3.1 Material Specifications for Sand Filters

Material	Specifications/Test Method	Size	Notes
used	class AASHTO M-6 or ASTM C-33 concrete sand	0.075" to 0.04"	Sand substitutions such as Diabase and Gneiss #10 are not acceptable. No calcium sulfonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.
post	ash content < 1.5% pH range 5.5 to 4.9 bulk density 0.15 to 0.15 g/cc	n/a	The material must be non-soluble, non-toxic, uncompactable, uniform, and clean.
leaf compost	AASHTO M-41	0.125" to 0.75"	
underdrain grate	ASTM D-4833 (quarter strength - 125 lb.) ASTM D-4832 (Tensile strength - 300 lb.)	0.60" thick equivalent opening size of 48 mesh	Must maintain 125 gpm per sq. ft. flow rate. Note: a 4" post per layer may be substituted for geotextiles meant to "separate" filter layers.
impermeable liner (if required)	ASTM D-4833 (thickness) ASTM D-412 tensile strength (1,100 lb., elongation 200%) ASTM D-424 (Tear resistance - 150 lb./in.) ASTM D-471 (water absorption: < 1% to 2% max)	30 mil thickness	Liner to be ultraviolet resistant. A geotextile fabric should be used to protect the liner from puncture.
underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel cover pipes; not necessary underdrain pipes
concrete (cast-in-place)	MSHA Standards and Specs. Section 902, Min. No. 3, F _c = 3500 psi, normal weight, air-entrained, reinforcing to meet ASTM A-615-60	n/a	in-situ testing of poured in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved Slab or local standard requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland.
concrete (pre-cast)	per pre-cast manufacturer	n/a	SEE ABOVE NOTE
non-erlar steel	ASTM A-36	n/a	structural steel to be hot dipped galvanized ASTM A-123



MICRO-BIORETENTION DATA CHART

MBR Facility	Ponding Depth (ft)	Ponding Elevation (ELEV. A)	Top of Mulch (ELEV. B)	Bottom of Mulch (ELEV. C)	Depth of Plant Media (ft)	Bottom of Plant Mix (ELEV. D)	Bottom of Pea Gravel (ELEV. E)	Depth of Stone (ft)	Invert of Underdrain (INV. ELEV. G)	Bottom of ELEV. F
#1	1.00	219.70	218.70	218.45	1.75	216.70	216.37	1.00	215.62	215.37
#2	1.00	221.50	220.50	220.25	2.00	218.25	217.92	1.00	217.17	216.92
#3	1.00	216.20	215.20	214.95	2.00	212.95	212.62	1.00	211.87	211.62

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Table B.4.1 Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

Material	Specifications	Notes
Plantings	see Appendix A, Table A.4	plantings are site-specific
Planting soil (2" to 4" deep)	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (50%) & compost (40%)	USDA soil types loamy sand or sandy loam, clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)	
Mulch	shredded hardwood	aged 6 months, minimum; no pine or wood chips
Pea gravel/diaphragm	pea gravel: ASTM D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"
Geotextile	n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration basins)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35
Poured in place concrete (if required)	MSHA Min. No. 3, F _c = 3500 psi @ 28 days, normal weight, air-entrained, reinforcing to meet ASTM A-615-60	in-situ testing of poured in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved Slab or local standard requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 190.3(R)-vertical loading (H: 10 or H:20); allowable horizontal loading (based on soil pressure); and analysis of potential carbonation. Sand substitutions such as Diabase and Gneiss (AASHTO #10) are not acceptable. No calcium sulfonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.
Sand	AASHTO M-6 or ASTM C-33	0.075" to 0.04"

B.4.B SPECIFICATIONS FOR PERMEABLE PAVEMENTS & REINFORCED TURF
THESE SPECIFICATIONS INCLUDE INFORMATION ON ACCEPTABLE MATERIALS FOR TYPICAL APPLICATIONS AND ARE NOT EXCLUSIVE OR LIMITING. THE DESIGNER IS RESPONSIBLE FOR DEVELOPING SPECIFICATIONS FOR INDIVIDUAL PROJECTS AND SPECIFIC CONDITIONS.

1. PERVIOUS CONCRETE SPECIFICATIONS
DESIGN THICKNESS - PERVIOUS CONCRETE APPLICATIONS SHALL BE DESIGNED SO THAT THE THICKNESS OF THE CONCRETE SLAB SHALL SUPPORT THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED. APPLICATIONS MAY BE DESIGNED USING EITHER STANDARD PAVEMENT PROCEDURES (E.G. AASHTO, ACI 305.3R, ACI 330R) OR USING STRUCTURAL VALUES DERIVED FROM FLEXIBLE PAVEMENT DESIGN PROCEDURES.
MIX & INSTALLATION - TRADITIONAL PORTLAND CEMENTS (ASTM C 150, C 1187) MAY BE USED IN PERVIOUS CONCRETE APPLICATIONS. PHOSPHORUS ADMIXTURES MAY ALSO BE USED. MATERIALS SHOULD BE TESTED (E.G., TRIAL BATCH) PRIOR TO CONSTRUCTION SO THAT CRITICAL PROPERTIES (E.G., SETTLING TIME, RATE OF STRENGTH DEVELOPMENT, POROSITY, PERMEABILITY) CAN BE DETERMINED.
AGGREGATE - PERVIOUS CONCRETE CONTAINS A LIMITED FINE AGGREGATE CONTENT. COMMONLY USED GRADATIONS INCLUDE ASTM C 33 NO. 67 (3/4 IN. TO NO. 4), NO. 8 (3/8 IN. TO NO. 16) AND NO. 19 (1/4 IN. TO NO.50) SIZES. SINGLE-SIZE AGGREGATE (UP TO 1 INCH) MAY ALSO BE USED.
WATER CONTENT - WATER-TO-CEMENT RATIOS BETWEEN 0.27 AND 0.30 ARE USED ROUTINELY WITH PROPER INCLUSION OF CHEMICAL ADMIXTURES. WATER QUALITY SHOULD MEET AQA. AS A GENERAL RULE, POTABLE WATER SHOULD BE USED ALTHOUGH RECYCLED CONCRETE PRODUCTION WATER MEETING ASTM C 94 OR AASHTO M 157 MAY ALSO BE USED.
ADMIXTURES - CHEMICAL ADMIXTURES (E.G., RETARDERS OR HYDRATION-STABILIZERS) ARE USED TO OBTAIN SPECIAL PROPERTIES IN PERVIOUS CONCRETE. USE OF ADMIXTURES SHOULD MEET ASTM C 494 (CHEMICAL ADMIXTURES) AND ASTM C 260 (AIR ENTRAINING ADMIXTURES) AND CLOSELY FOLLOW MANUFACTURER'S RECOMMENDATIONS. BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).
2. PERMEABLE INTERLOCKING CONCRETE PAVEMENTS (PICP)
PAVER BLOCKS - BLOCKS SHOULD BE EITHER 3/4 IN. OR 4 IN. THICK, AND MEET ASTM C 936 OR CSA A231.2 REQUIREMENTS. APPLICATIONS SHOULD HAVE 20% OR MORE (40% PREFERRED) OF THE SURFACE AREA OPEN. INSTALLATION SHOULD FOLLOW MANUFACTURER'S INSTRUCTIONS, EXCEPT THAT INFILL AND BASE COURSE MATERIALS AND DIMENSIONS SPECIFIED IN THIS APPENDIX SHALL BE FOLLOWED.
INFILL MATERIALS AND LEVELING COURSE - OPENINGS SHALL BE FILLED WITH ASTM C-33 GRADED SAND OR SANDY LOAM. PICP BLOCKS SHALL BE PLACED ON A ONE-INCH THICK LEVELING COURSE OF ASTM C-33 SAND.
BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).
3. REINFORCED TURF
REINFORCED GRASS PAVEMENT (RGP) - WHETHER USED WITH GRASS OR GRVEL, THE RGP THICKNESS SHALL BE AT LEAST 1-3/4" THICK WITH A LOAD CAPACITY CAPABLE OF SUPPORTING THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (E-1, E-4, AND E-5)

- THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
- THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
- PLANTS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- REMOVING SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
- WHEN WATER POUNDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.
- A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

1. MATERIAL SPECIFICATIONS
IT IS VERY IMPORTANT TO MANAGE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. PRACTICES ARE LOCATED USING NARROW TRACKS OR NARROW TIRES. RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.
COMPACTION CAN BE AVOIDED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO RESTRUCTURE THE SOIL PROFILE THROUGHOUT THE 12 INCH COMPACT ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REMOVE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
ROTILLER 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY POUNDED WATER BEFORE ROTILLING BASE.
WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 1 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTILLER THE SAND/TOPSOIL TO GREAT A CRIBBLE NUMBER OF THE TOPSOIL TO FINE GRADE.
COMPACTION CAN BE AVOIDED AT THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.
ROOTSOFF OF THE PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIPE SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRANDED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALIZED SPACED ON THE OUTSIDE OF THE TREE BARK.
GRASSES AND LEGUME SEED SHOULD BE DOLDED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLANTS SHALL BE PLANTED FOLLOWING THE HIGH-GRASS GROUND COVER PLANTING SPECIFICATIONS.

2. PLANTING MEDIA OR PLANTING SOIL
THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OF OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTITUTES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE. THE PLANTING MEDIA SHALL BE FREE OF BENTHAZONE, GLYPHOSATE, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.
THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
SOIL COMPOSITION - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COARSE SAND (30% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COARSE (40%).
CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. ADMIXTURES (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE ADDED TO THE SOIL TO INCREASE OR DECREASE PH.
THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH AND AN ADDED TEST OF ORGANIC MATTER AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF PH IS REPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION
IT IS VERY IMPORTANT TO MANAGE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. PRACTICES ARE LOCATED USING NARROW TRACKS OR NARROW TIRES. RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.
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4. PLANT MATERIAL
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH TO GREAT A CRIBBLE NUMBER OF THE MULCH TO FINE GRADE. MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.
ROOTSOFF OF THE PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIPE SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRANDED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALIZED SPACED ON THE OUTSIDE OF THE TREE BARK.
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OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

- THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM) POROUS CONCRETE PAVEMENT SURFACES TO REMOVE DEBRIS AND LITTER. SWEEPING SHALL BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING OR COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
- THE OWNER SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGE DRAINS AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE.
- THE OWNER SHALL USE DEICERS IN MODERATION. DEICERS SHOULD BE NON-TOXIC AND BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT.
- THE OWNER SHALL ENSURE SNOW PLOWING IS PERFORMED CAREFULLY WITH BLADES SET ONE INCH ABOVE THE SURFACE. FLOWED SNOW PILES AND SNOWMELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP
U1D	URBAN LAND-UD(ORTHOENTS) COMPLEX, 0 TO 15 PERCENT SLOPES	D

NOTE: BASED ON HOWARD SOIL SURVEY

SITE DEVELOPMENT PLAN

STORMWATER MANAGEMENT NOTES AND DETAILS

MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
PROPOSED WAREHOUSE
7540 ASSATEQUE DRIVE
ZONED M-2
L 16203/F 246 - PLAT 19144

TAX MAP 43 BLOCK 15
611 ELECTION DISTRICT

PARCEL 2, PARCEL 'J'
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET, MD 21043 TEL: 410-461-7666
ELLIOTT CITY, MD FAX: 410-461-8181

DESIGN BY: RHV
DRAWN BY: DZ
CHECKED BY: RHV
DATE: MARCH 2016
SCALE: AS SHOWN
W.O. NO.: 13-42

PROFESSIONAL CERTIFICATE
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. 16163 EXPIRES 06-27-2019

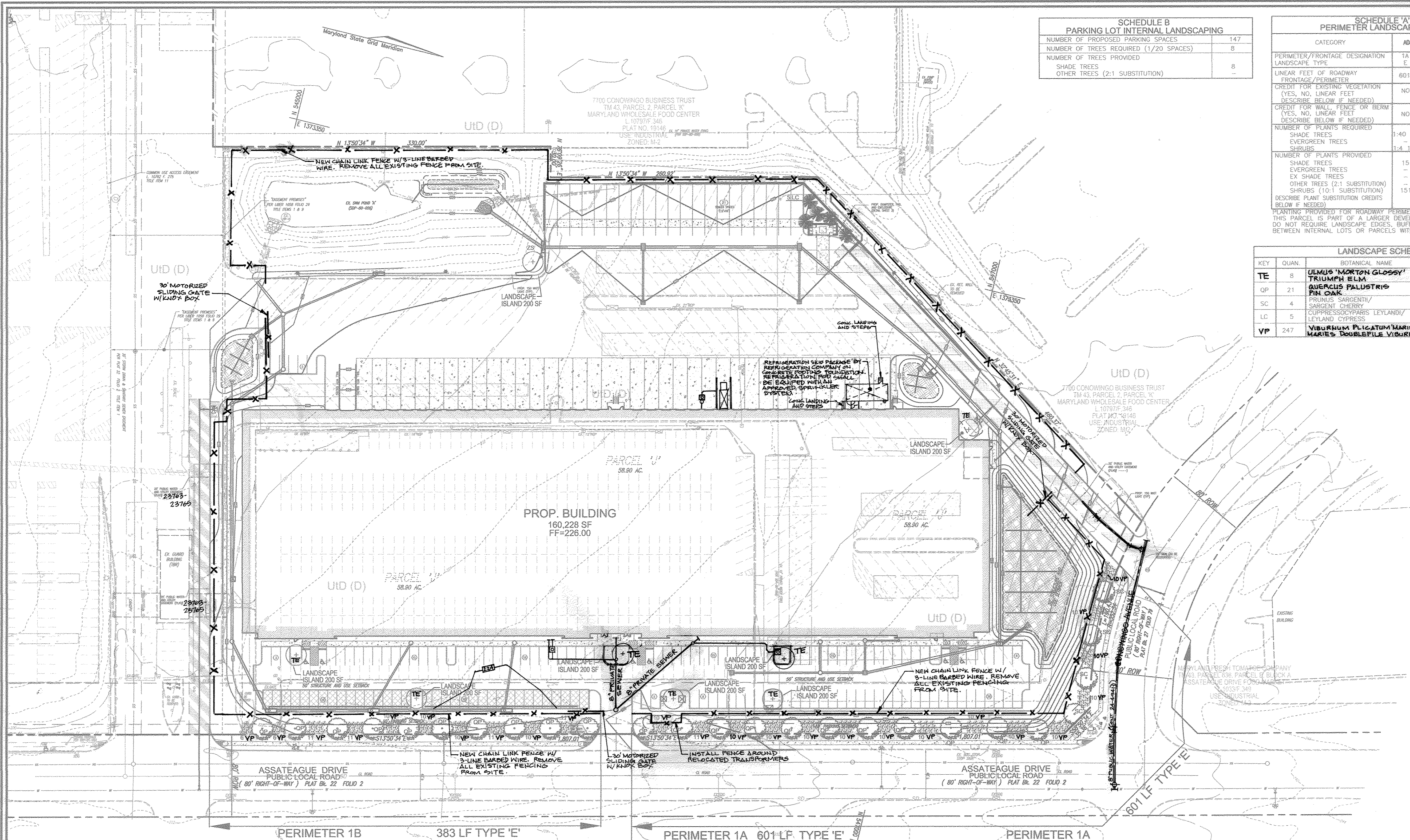
13 SHEET OF 15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

4-13-16
DATE

5-3-16
DATE

5-3-16
DATE



**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING**

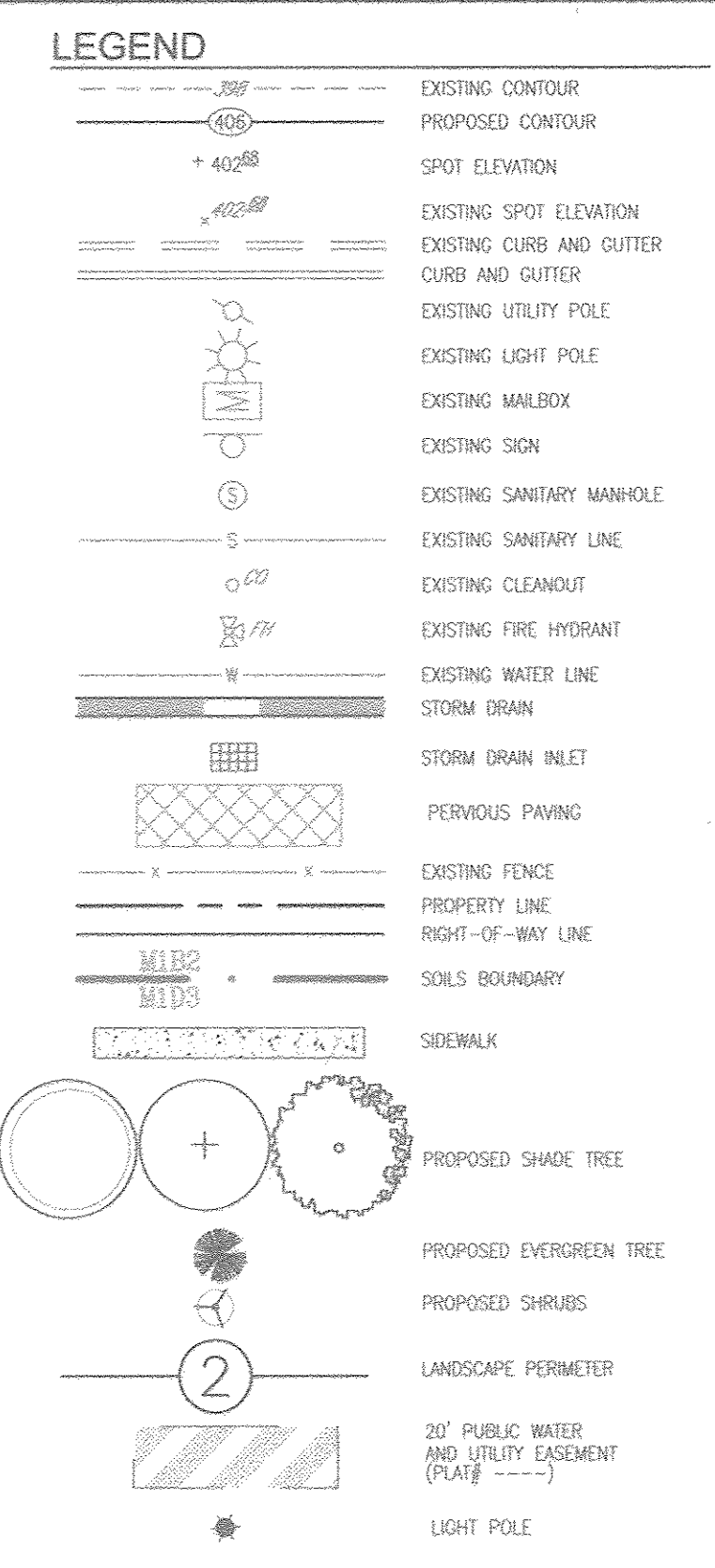
NUMBER OF PROPOSED PARKING SPACES	147
NUMBER OF TREES REQUIRED (1/20 SPACES)	8
NUMBER OF TREES PROVIDED	8
SHADE TREES	8
OTHER TREES (2:1 SUBSTITUTION)	—

**SCHEDULE 'A'
PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS			TOTALS
	1A	1B	DUMPSTER	
PERIMETER/FRONTAGE DESIGNATION	601'	383'	60'	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	601'	383'	60'	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	
NUMBER OF PLANTS REQUIRED	1:40	1:40	1:40	27
SHADE TREES	1:4	1:4	1:2	3
EVERGREEN TREES	1:4	1:4	1:2	3
NUMBER OF PLANTS PROVIDED	15	10	0	25
SHADE TREES	—	—	—	5
EVERGREEN TREES	—	—	—	—
EX SHADE TREES	—	—	—	—
OTHER TREES (2:1 SUBSTITUTION)	151	96	—	247
SHRUBS (10:1 SUBSTITUTION)	—	—	—	—
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED				

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
TE	8	ULMUS 'MORTON GLOSSY' TRIUMPH ELM	2 1/2"-3" CAL.	B & B
OP	21	QUERCUS PALUSTRIS PIN OAK	2 1/2"-3" CAL.	B & B
SC	4	PRUNUS SARCENTI/ SARGENT CHERRY	2 1/2"-3" CAL.	B & B
LC	5	CUPRESSUS COPRINIS LEYLANDI CYPRESS	5'-6" HT.	B & B
VP	247	VIBURNUM PLICATUM 'MARIESSI' MARISS DOUBLEFILE VIBURNUM	2 1/2"-3" HT.	B & B



GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$18,360.00 FOR THE REQUIRED 35 SHADE TREES, 3 EVERGREEN TREES, AND 247 SHRUBS.

LANDSCAPE SCHEDULE NOTE:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HCD PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLANT DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
- 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.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS 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 APPLICABLE PLANS AND CERTIFICATES.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
DATE: 4-13-16

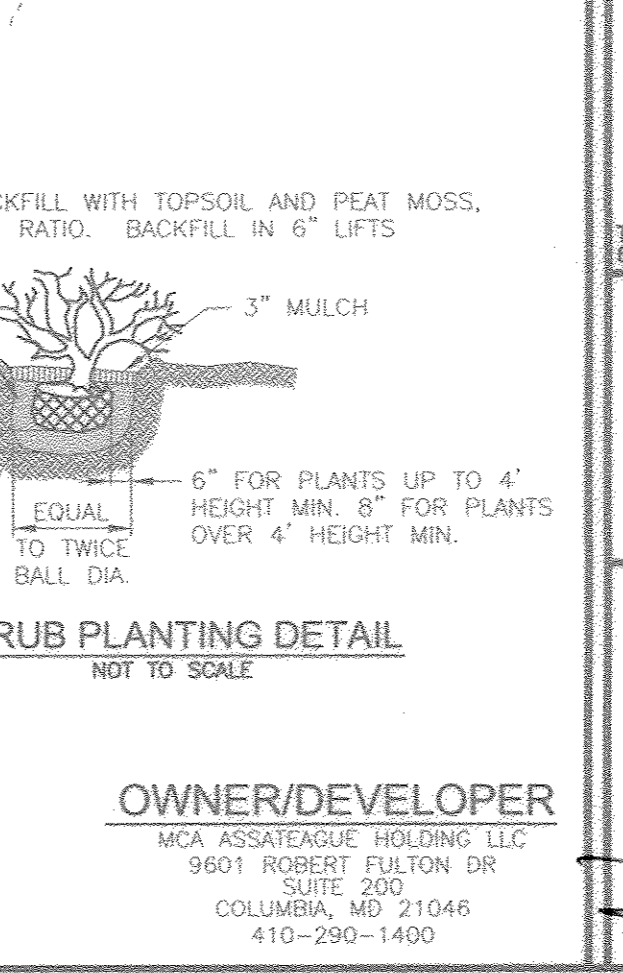
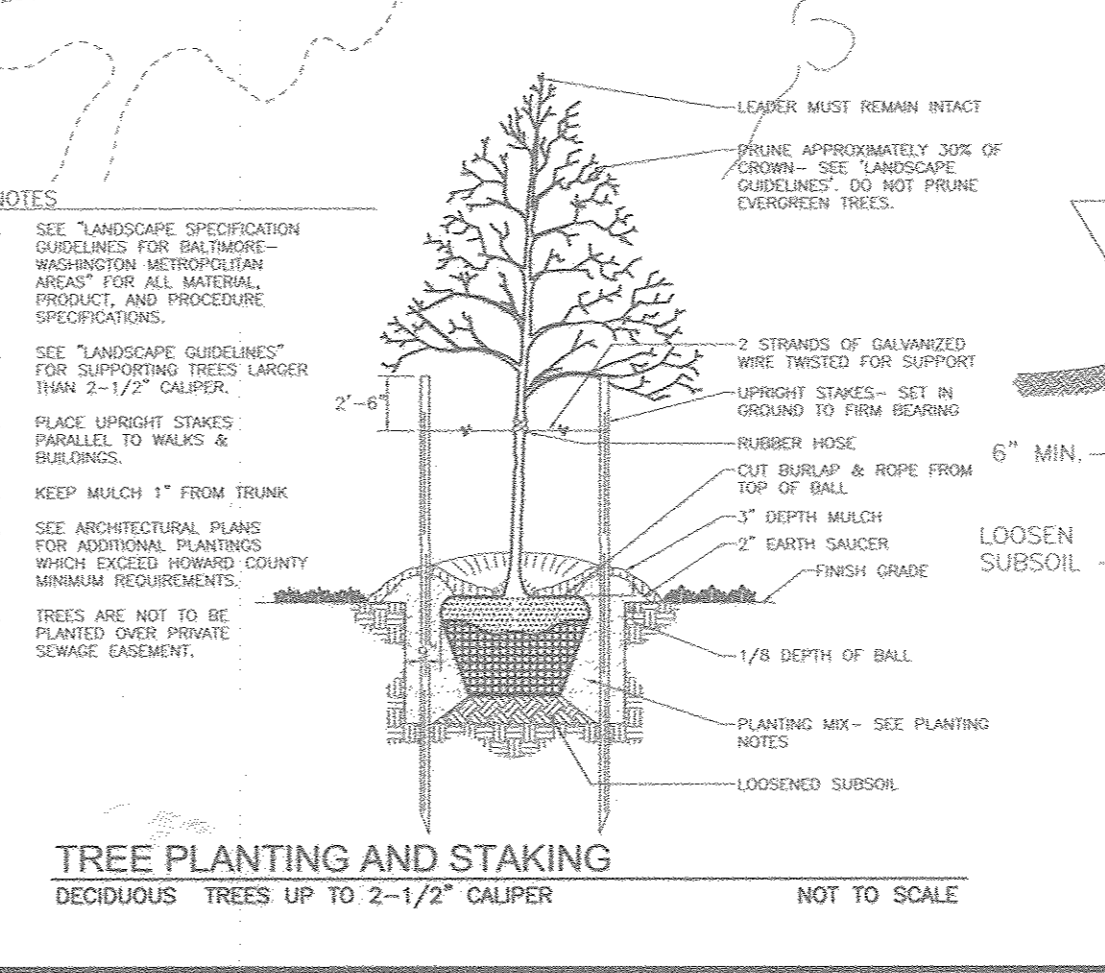
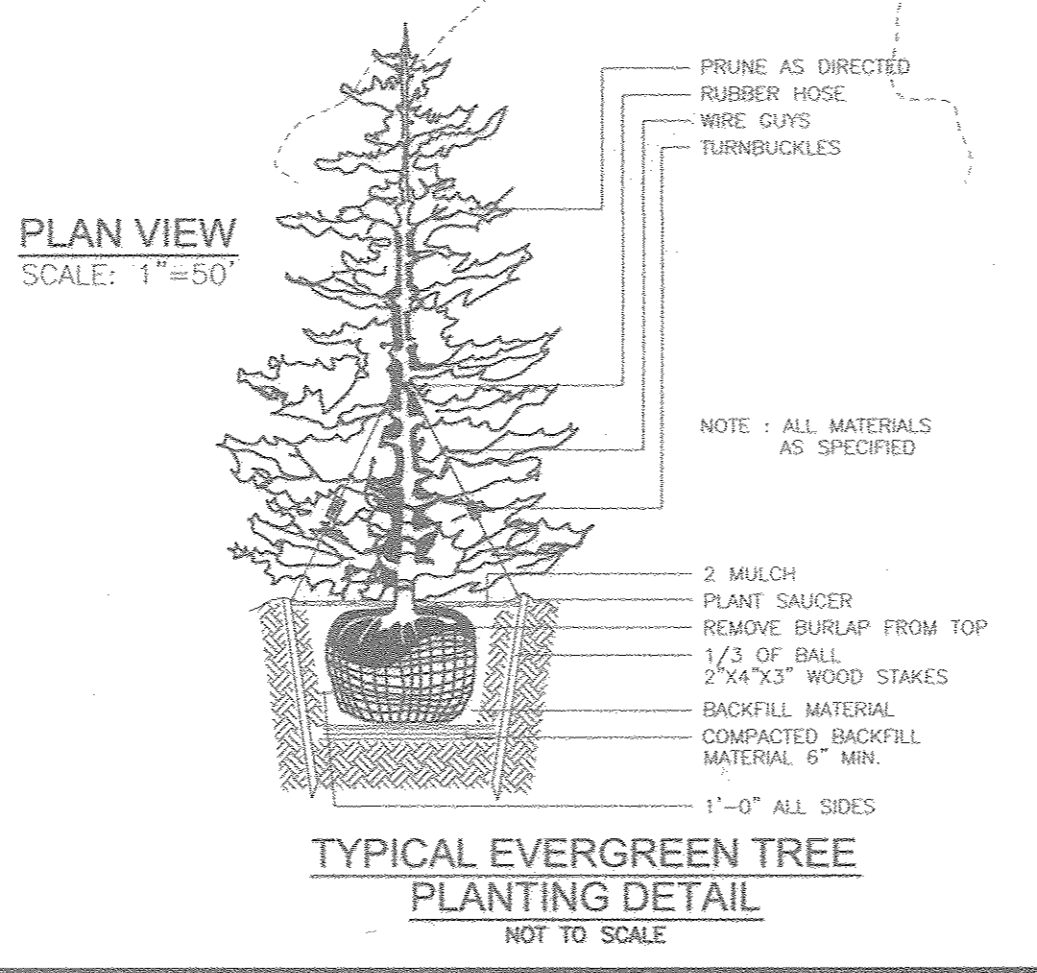
Chief, Division of Land Development
DATE: 5-3-16

Director
DATE: 5-3-16

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 (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Signature of Developer
DATE: 4/11/2016



3	REVISE SHED, ADD SOLIDS INTERCEPTORS AND DUMPSTER	11-22-16
2	REVISE LANDSCAPE PLANTS SCHEDULE FOR SUBSTITUTIONS	10-11-16
1	REVISE SHC, ADD FENCE AND GATES, UPDATE PUBLIC WATER LOCATION	06-20-16

**SITE DEVELOPMENT PLAN
LANDSCAPE PLAN**

MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
PROPOSED WAREHOUSE
7540 ASSATEAGUE DRIVE
ZONED: M-2
L 16200FF 246 - PLAT 19144

TAX MAP 43 BLOCK 15
5TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

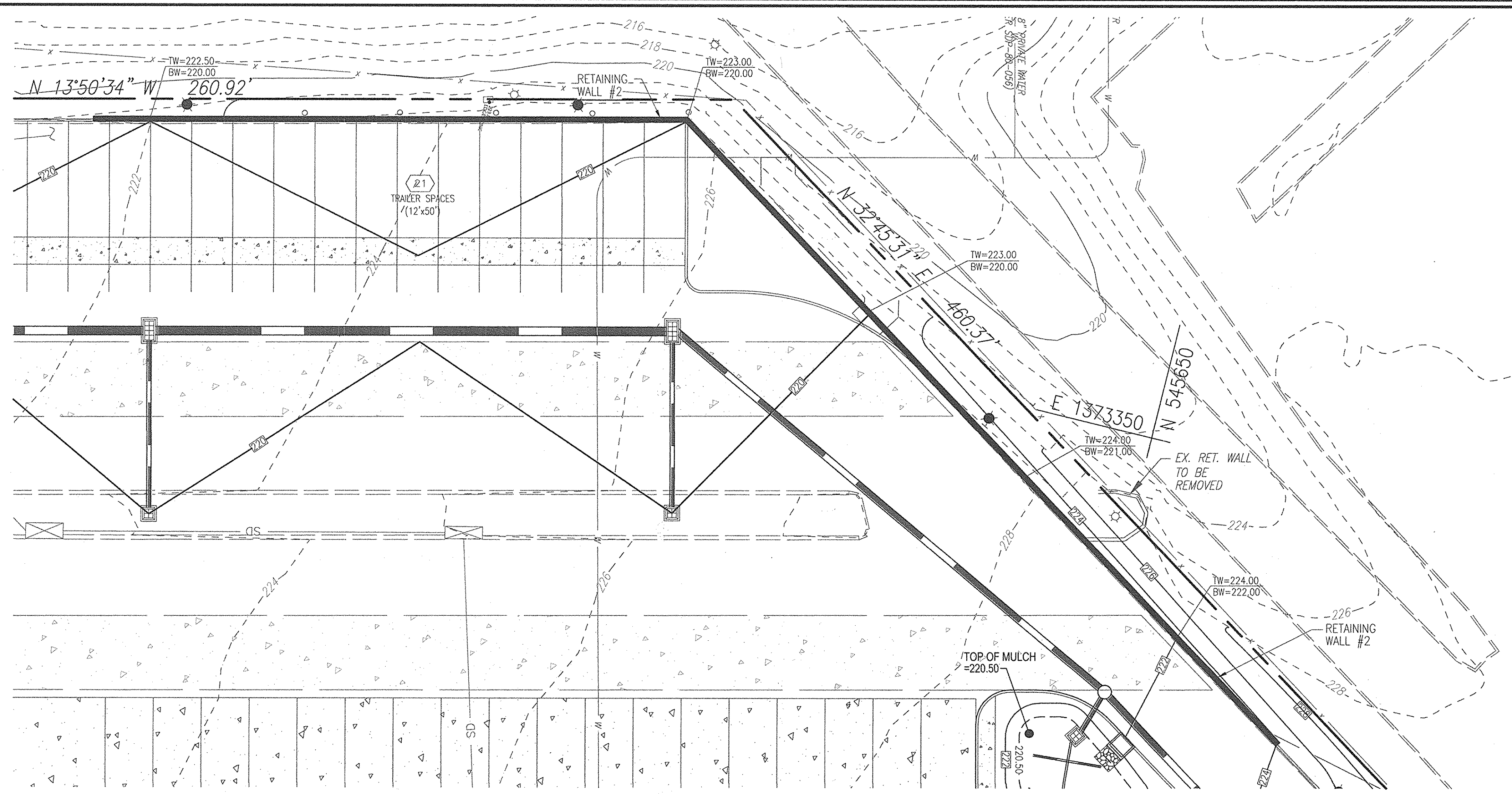
DESIGN BY: RHV
DRAWN BY: DZ
CHECKED BY: RHV
DATE: MARCH 2016
SCALE: AS SHOWN
W.O. NO.: 13-42

PROFESSIONAL CERTIFICATE
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. 16193, EXPIRATION DATE 09-27-2016.

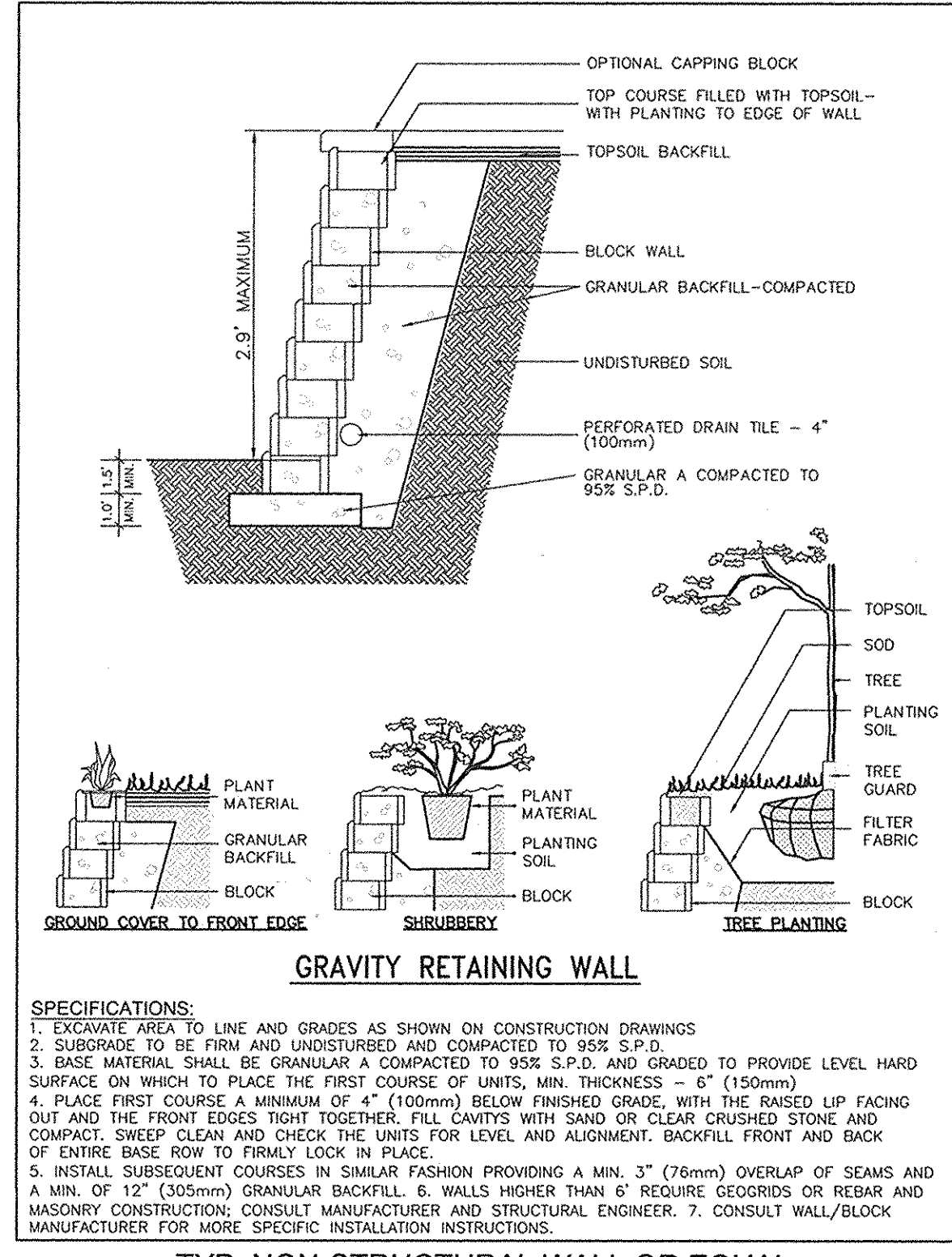
3/29/16

14 SHEET OF 15

SDP-16-012

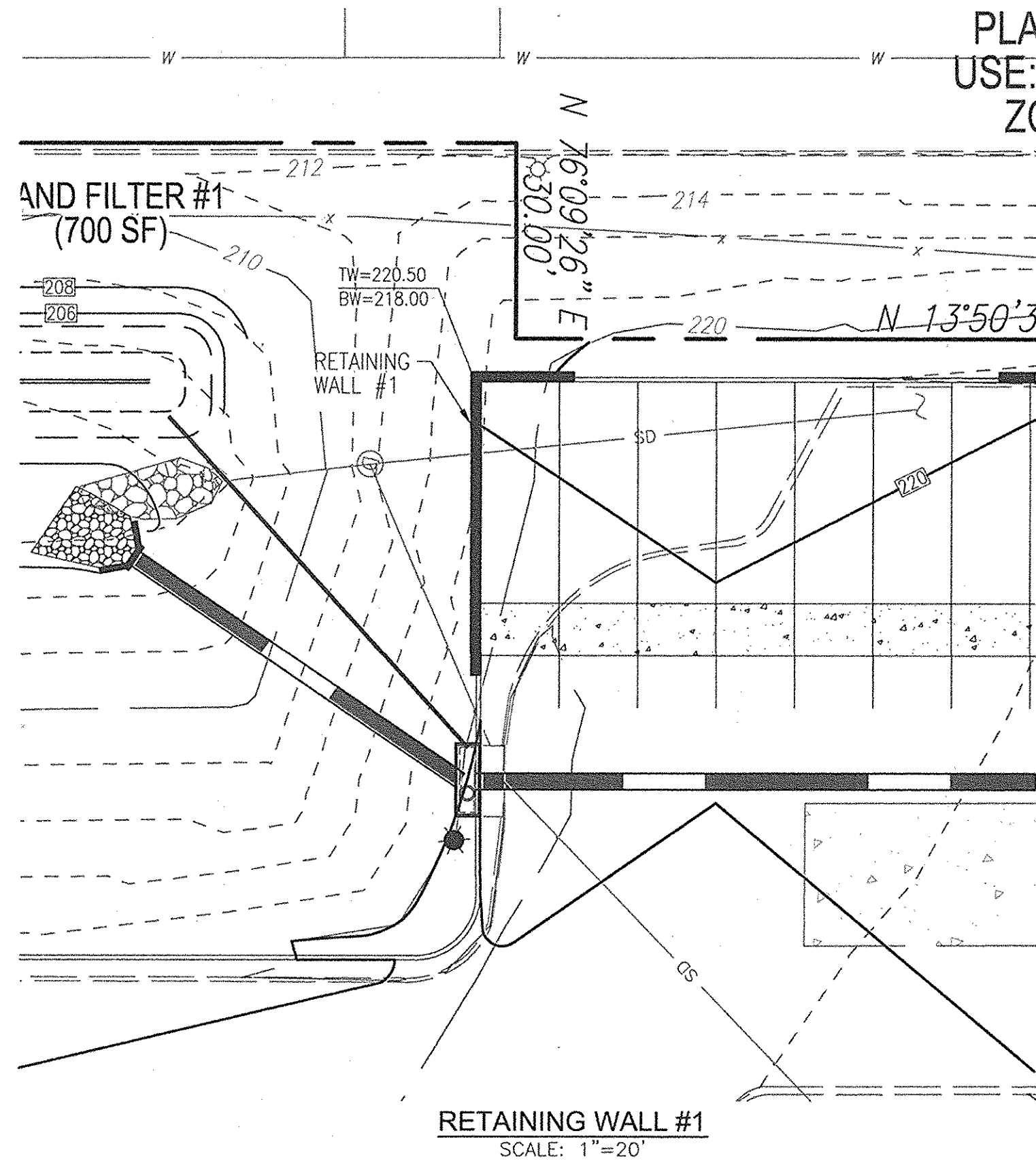


RETAINING WALL #2
SCALE: 1"=20'



TYP. NON-STRUCTURAL WALL OR EQUAL

LEGEND	
	EXISTING CONTOUR
	PROPOSED CONTOUR
	SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EXISTING CURB AND GUTTER
	CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	STORM DRAIN
	STORM DRAIN INLET
	PERVIOUS PAVING
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	SIDEWALK



RETAINING WALL #1
SCALE: 1"=20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Clark 4.13.16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Walter Decker 5.3.16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Walter Decker 5.3.16
DIRECTOR DATE

OWNER/DEVELOPER
MCA ASSATEAGUE HOLDING LLC
9601 ROBERT FULTON DR
SUITE 200
COLUMBIA, MD 21046
410-290-1400

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
RETAINING WALL PLAN

MARYLAND FOOD CENTER AUTHORITY - P/O PARCEL 'J'
PROPOSED WAREHOUSE
7540 ASSATEAGUE DRIVE
ZONED: M-2
L.16203/F.248 - PLAT 19144 PARCEL 2, PARCEL J
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7656
ELlicott CITY, MD 21043 FAX: 410.461.8961

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SCALE: AS SHOWN
W.O. NO.: 13-42

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 16193 EXPIRATION DATE 09-27-2018

15 SHEET OF 15