SITE DEVELOPMENT PLAN

ENVIRONMENTAL DESIGN RESOURCE CENTER PARCEL 'A'

WATERLOO ROAD, MD.RT.175

1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

⚠5 SEE SHEET 4 FOR PLAN REVISIONS

SHEET INDEX

1	SITE DEVELOPMENT PLAN
2	GRADING, SEDIMENT CONTROL PLAN, DRAINAGE AREA MAP
3	PROFILES AND DETAIL SHEET

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY PHR+A DATED 07/28/06.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 43EA AND 43HB WERE USED FOR THIS PROJECT.
8. WATER IS PUBLIC. CONTRACT NO. 792 W
9. SEWER IS PUBLIC. SEWER DRAINAGE AREA: DORSEY CONTRACT NO. 612 S
10. MICRO-BIORETENTION FACILITY PROVIDED FOR AUTO REPAIR BUILDING.
11. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
12. NO 100- YEAR FLOODPLAIN STUDY WAS REQUIRED FOR THIS PROJECT .
13. NO WETLANDS ARE VISIBLE ON THE SITE.
14. REF TRAFFIC STUDY TRIP GENERATION LETTER, THE TRAFFIC GROUP (06/29/17).
15. NO NOISE STUDY FOR THIS PROJECT IS REQUIRED.
16. REF GEOTECHNICAL STUDY SUBSURFACE EXPLORATION, HILLIS CARNES (07/20/17).
17. THE BOUNDARY FOR THIS PROJECT IS BASED ON PLAT #19641, ENVIRONMENTAL DESIGN AND RESOURCE CENTER, LLC.
18. SUBJECT PROPERTY ZONED M-2 PER 10/16/13 COMPREHENSIVE ZONING PLAN.
19. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
20. SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S: BA-98-28V, ZV-87-54, BA CASE 93-38N, SDP-93-67, F-07-063.
21. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
22. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
23. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
24. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
25. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME I OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
26. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
27. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
28. STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
29. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
30. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.
31. BA-98-28V FOR A VARIANCE FROM REQUIREMENTS OF SECTION 130.B.2 TO REDUCE THE 50 FOOT SETBACK TO 45 FEET FOR A ONE STORY FRAME ADDITION AND TO 18 FEET FOR A SHED. ALSO SOUGHT WAS A REDUCTION FROM 30 FEET TO 5 FEET FOR PARKING AND LOADING. THE DECISION AND ORDER DATED NOVEMBER 10, 1998 GRANTED BOTH VARIANCE REQUESTS.
32. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
33. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE BUILDERS GRADING PERMIT IN THE AMOUNT OF $1,740.00 FOR THE REQUIRED 4 SHADE TREES AND 18 SHRUBS.
34. PER DPZ POLICY DATED DECEMBER 1, 2015, THE NET TRACT AREA FOR THIS PROJECT IS PERMITTED TO BE BASED UPON THE PREVIOUSLY UNDISTURBED AREA OF 0.06 ACRES. THIS RESULTS IN AN OVERALL OBLIGATION OF 0.03 ACRES. SINCE THE AREA OF OBLIGATION IS LESS THAN 0.1 ACRES, NO FEE-IN-LIEU IS REQUIRED.
35. PROPOSED OUTDOOR LIGHTING IS TO BE IN ACCORDANCE WITH ZONING SECTION 134. FULL CUT-OFF FIXTURES WILL BE USED.

GENERAL NOTES CONTINUED

36. ZV-87-54: ZONING VIOLATIONS - MADE IMPROVEMENTS ON PROPERTY WITHOUT A SITE DEVELOPMENT PLAN.
37. BA-93-38N: CONFIRMATION OF A NONCONFORMING USE (SECTION 129) FOR THE PARKING AND THE LOADING, UNLOADING AND STORAGE OF INDUSTRIAL WAREHOUSE BUILDING MATERIALS WITHIN THE REQUIRED 50' SETBACK FROM A PUBLIC STREET RIGHT-OF-WAY [SECTION 123(D)(2)(a)(1)]. CASE WAS DENIED ON NOVEMBER 17, 1995. PETITION WAS WITHDRAWN ON NOVEMBER 27, 1995.
38. SDP-93-67 : FOR AS-BUILT CONDITION NO RECORD OF SDP BEING SIGNED/APPROVED.

DEVELOPER'S/BUILDER'S CERTIFICATE:

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16·124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DEVELOPER 4·5·01

⚠3 NOTE: 8" WATER MAIN, 4" AND 6" TAPS WITHIN PUBLIC WATER AND UTILITY EASEMENT TO BE CONSTRUCTED BY ON-SITE CONTRACTOR UNDER ADO AGREEMENT WITH COUNTY.

⚠2 NOTE: 6" WATER WITHIN MD ROUTE 175 RIGHT-OF-WAY TO BE CONSTRUCTED UNDER ADO AGREEMENT BY HOWARD COUNTY.

NOTE: LIMIT OF DISTURBANCE FOR REVISION #1 IS 4,400 S.F. WHEN THE CUMULATIVE LIMIT OF DISTURBANCE EXCEED 5,000 S.F., STORMWATER MANAGEMENT SHALL BE REQUIRED IN ACCORDANCE WITH THE DESIGN REQUIREMENTS AT THAT TIME. SUBSEQUENT PHASES FOR THIS PROJECT WILL ADDRESS THE CURRENT COUNTY SWM REQUIREMENTS.

WP-03-109 - A REQUEST TO WAIVE SECTION 16.156(m)(2) TO REACTIVATE SDP-01-38 AND SECTION 16.156(m)(1)(i) TO GRANT A ONE YEAR EXTENSION TO APPLY FOR A BUILDING PERMIT TO INITIATE CONSTRUCTION ON SITE IN ACCORDANCE WITH SDP-01-38 WAS APPROVED ON MAY 13, 2003, SUBJECT TO THE FOLLOWING CONDITIONS:

1. THE BUILDING PERMIT APPLICATION SHALL BE SUBMITTED TO DILP WITHIN ONE YEAR OF THE DATE OF APPROVAL OF WAIVER.
2. COMPLIANCE WITH SHA COMMENTS DATED MAY 6, 2003.

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING

PARKING LOT	1
NUMBER OF PARKING SPACES	31
NUMBER OF SHADE TREES REQUIRED (1/20 SPACES)	2
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	 - -
NUMBER OF ISLANDS PROVIDED	2

SCHEDULE A - PERIMETER LANDSCAPE EDGE

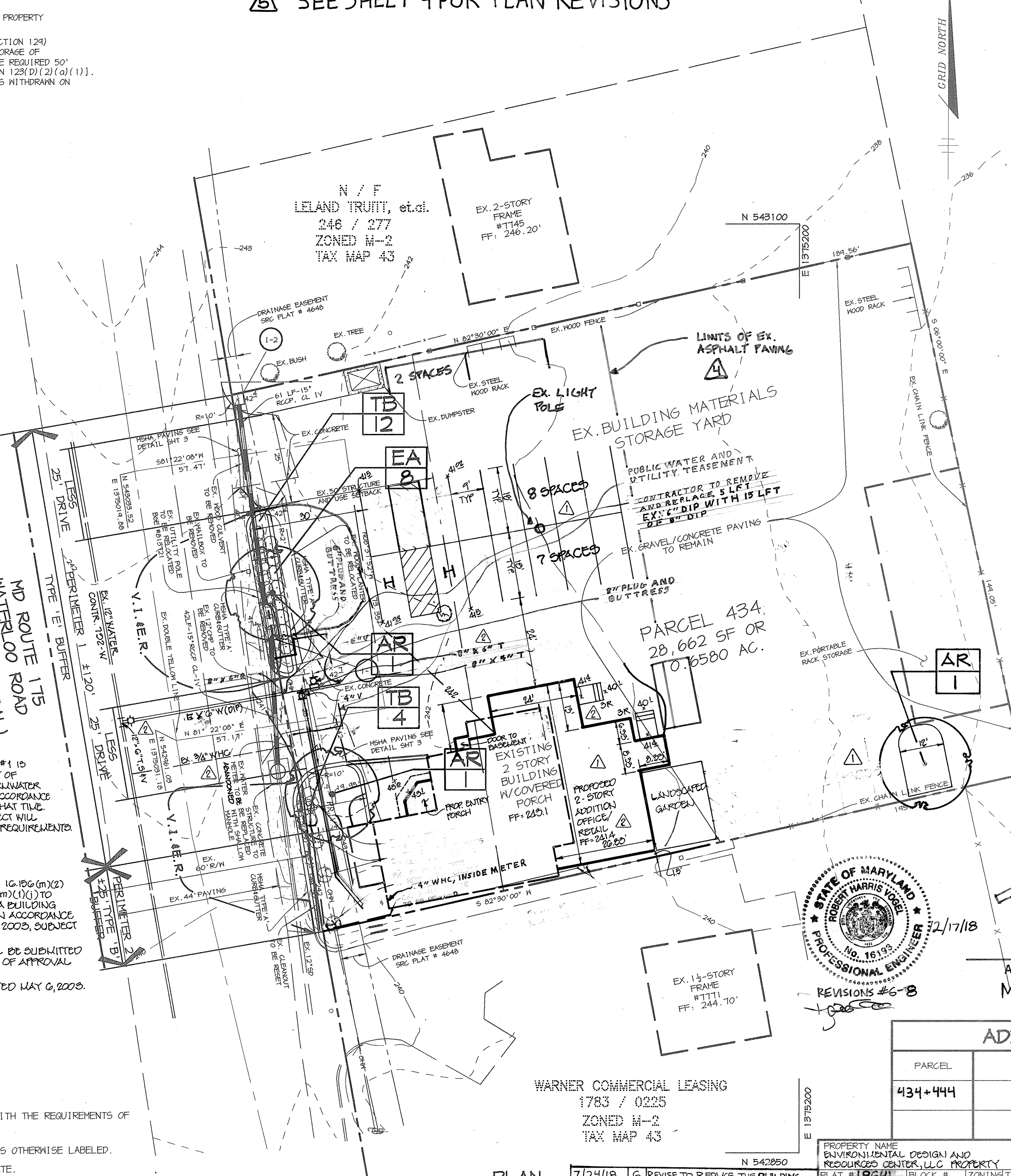
	ADJACENT TO ROADWAYS	
PERIMETER	1	2
LANDSCAPE TYPE	E	B
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	±120'	±25'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES (1) 21" RIVER BIRCH 26 TURF GRASSES + PERENNIALS 8 SHRUBS
CREDIT FOR DRIVE AISLE	YES 50'	NO -
LINEAR FEET REMAINING	±70'	±25'
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	 1:40 2 - 1:4 18	 * * -
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SMALL FLOWERING TREES SHRUBS	 2 - 18	N/A

SCHEDULE 'A' NOTES:

* CREDIT TAKEN FOR EXISTING VEGETATION

NOTES:

1. ALL LIGHTING SHALL COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.
2. ALL CURB RADII ARE 5' UNLESS OTHERWISE LABELED.
3. ALL ON SITE ROADS ARE PRIVATE.
4. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE LABELED.
5. V.I.&E.R.- VEHICULAR INGRESS AND EGRESS RESTRICTED.

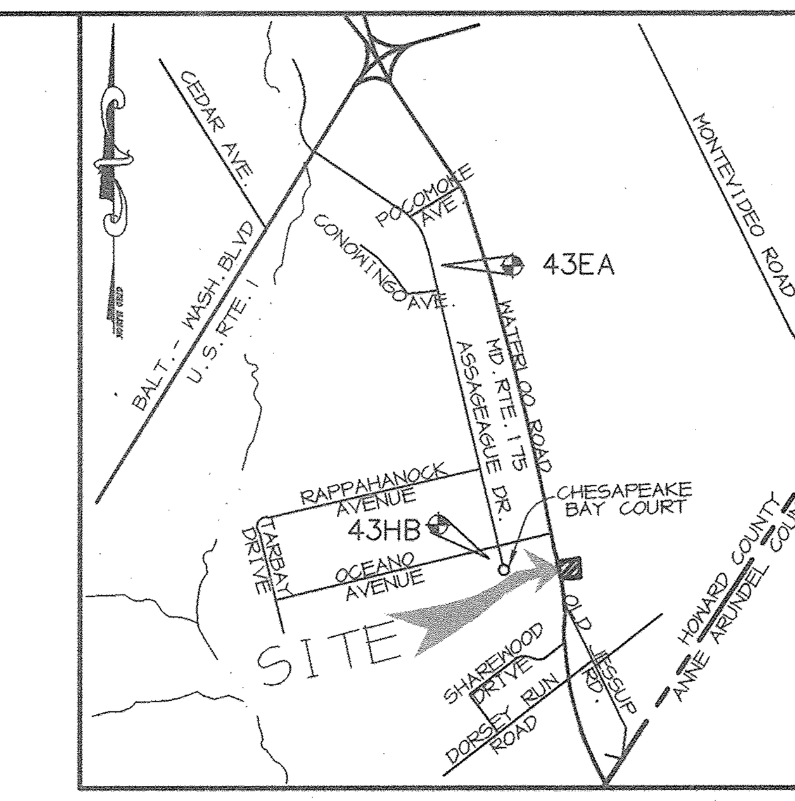


PLAN
SCALE: 1"=20'

BENCH MARKS

HOWARD COUNTY SURVEY CONTROL
STANDARD DISC ON CONCRETE MONUMENT
STATION: 43EA
N 546,593.9961 E 1,373,621.7498
ELEV. 242.94

HOWARD COUNTY SURVEY CONTROL
STANDARD DISC ON CONCRETE MONUMENT
STATION: 43HB
N 543,166.7654 E 1,374,425.0369
ELEV. 252.56



VICINITY MAP

SCALE: 1" = 2000'
ADC MAP 41 GRID E1

PURPOSE STATEMENT:

THE PURPOSE OF THIS PLAN IS TO CHANGE USE TO AUTO SALES + SERVICE.

SITE TABULATION

SITE AREA	1.2135 ACRES (52,860SF)
LIMIT OF DISTURBED AREA	0.17 ACRES
PRESENT ZONING	M-2
PROPOSED USE	AUTO SALES + SERVICE
AREA OF PLAN SUBMISSION (CHANGE IN USE)	0.76 ACRES (33,000SF)
FLOOR SPACE:	
TOTAL SF OF 2 STORY BUILDING (EX. & PROP.)	4814 SF
AUTO SALES AND ANCILLARY USES	4816 SF
AUTO REPAIR	3180 SF
BUILDING COVERAGE 7996 SF	15.1% OF SITE
OUTDOOR SALES DISPLAY 1SP/1,000SF 900SF	1 SPACE
NO. OF PARKING REQUIRED FOR AUTO SALES @ 2.0 SPACES/1000 *	10 SPACES
NO. OF PARKING REQUIRED FOR 6 BAY SERVICE @ 3 SPACES/BAY	18 SPACES
TOTAL OF SPACES REQUIRED	29 SPACES
NO. OF PARKING SPACES PROVIDED	31 INCL. 2 HC

*PER HOWARD COUNTY ZONING REGULATIONS, SECTION 133
PREVIOUS FILE NUMBERS: BA-98-28V, ZV-87-54, BA CASE 93-38N, SDP-93-67, F-07-063

11/29/17	5	ADD NEW BUILDING, EXPAND PARKING LOT, ADD SWM.
11-5-15	4	ADD SHED, RESTRIPE PKNG, UPDATE EX. COND.

PLANT LIST

KEY	QTY	BOTANICAL + COMMON NAME	SIZE	ROOT	SPACING
		MAJOR DECIDUOUS TREES			
*AR	3	Acer rubrum 'Red Sunset' Red Sunset Maple	2½" Cal. (12'-14' Ht.)	B & B	Space as shown
		SHRUBS			
EA	8	Enonymus alatus 'Compactus' Dwarf Burning Bush	(30'-36' Ht.)	B & B or cont.	Plant 4' o.c.
TB	16	Taxus bacata 'repandens' English Weeping Yew	(24"-30" Ht.)	B & B or cont.	Plant 3' o.c.

* EXISTING TREE IS IN POOR CONDITION AND IS TO BE REPLACED BY (1) RED MAPLE.

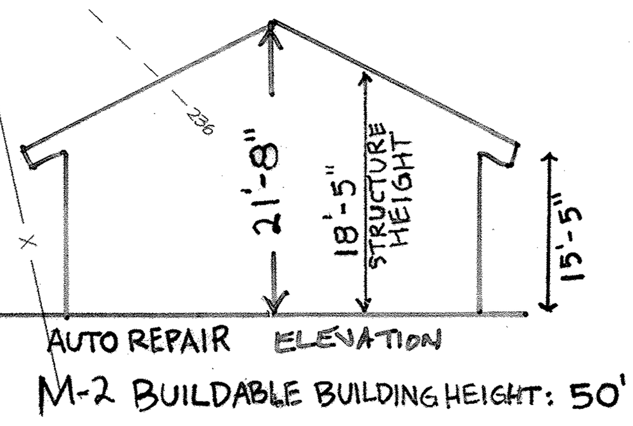
6-10-05	3	MODIFIED PUBLIC AND PRIVATE WATER MAIN

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 4/26/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/18/01
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4/24/01

DATE	NO.	REVISION
3-24-05	2	ADDED 6" WATER SERVICE, MODIFIED F.F. ELEV. FOR ADDITION
7-23-03	1	ADDED BUILDING ADDITION & REV. PARKING & SITE TAB. & TITLE BLOCK

STATE OF MARYLAND — ROBERT HARRIS VOGEL — No. 16193 — PROFESSIONAL ENGINEER 12/17/18
REVISIONS #6-8



AUTO REPAIR ELEVATION
M-2 BUILDABLE BUILDING HEIGHT: 50'

DATE	NO.	REVISION
12-19-18	8	REVISE TO ADJUST THE BUILDING, SWM AND OIL SEPERATOR LOCATIONS

DATE	NO.	REVISION
7/24/18	6	REVISE TO REDUCE THE BUILDING SIZE AND ADJUST THE LOCATION
10-2-18	7	REVISE TO ADJUST THE WHC LOCATION AND TO ADD OIL INTERCEPTOR

ADDRESS CHART

PARCEL	STREET ADDRESS
434+444	7761 WATERLOO ROAD (MD. RTE. 175)

PROPERTY NAME			SECT./AREA		PARCEL
ENVIRONMENTAL DESIGN AND RESOURCES CENTER, LLC PROPERTY			-		PARCEL 'A'
PLAT # 19641	BLOCK #	ZONING	TAX MAP NO.	ELECT. DIST.	CENSUS TRACT
L.1691, F.0484	21	M-2	43	1ST	6012
WATER CODE B-01			SEWER CODE 3020000		

OWNER / DEVELOPER

THOMAS F. GORDON
10743 SYMPHONY PARK DRIVE
ROCKVILLE, M.D. 20852

PROJECT ENVIRONMENTAL DESIGN AND RESOURCES CENTER (FORMERLY AMERICAN BUILDING PRODUCTS) WATERLOO ROAD, MD ROUTE 175 BUILDING AND PARKING ADDITIONS

AREA Tax Map 43 Block 21 Parcel 434+444
L. 17702, F. 0495 ZONED M-2
PLAT #19641, PARCEL 'A'
1st Election District, Howard County, Maryland

TITLE
SITE DEVELOPMENT PLAN

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING ● ENVIRONMENTAL SERVICES ● PLANNING ● SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE
ARTHUR E. MUEGGE #8707

DESIGNED BY :	CJR
DRAWN BY:	K.E.V.
PROJECT NO :	99239/ SDP1.DWG
DATE :	APRIL 5, 2001
SCALE :	AS SHOWN
DRAWING NO.	1 OF 4

SDP-01-38

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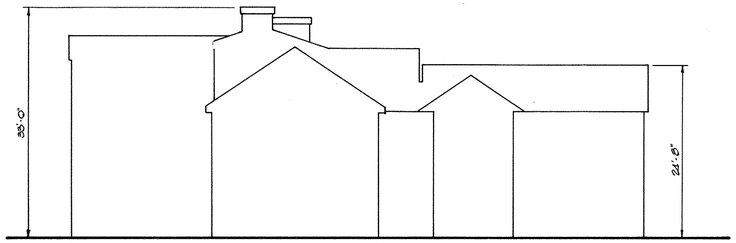
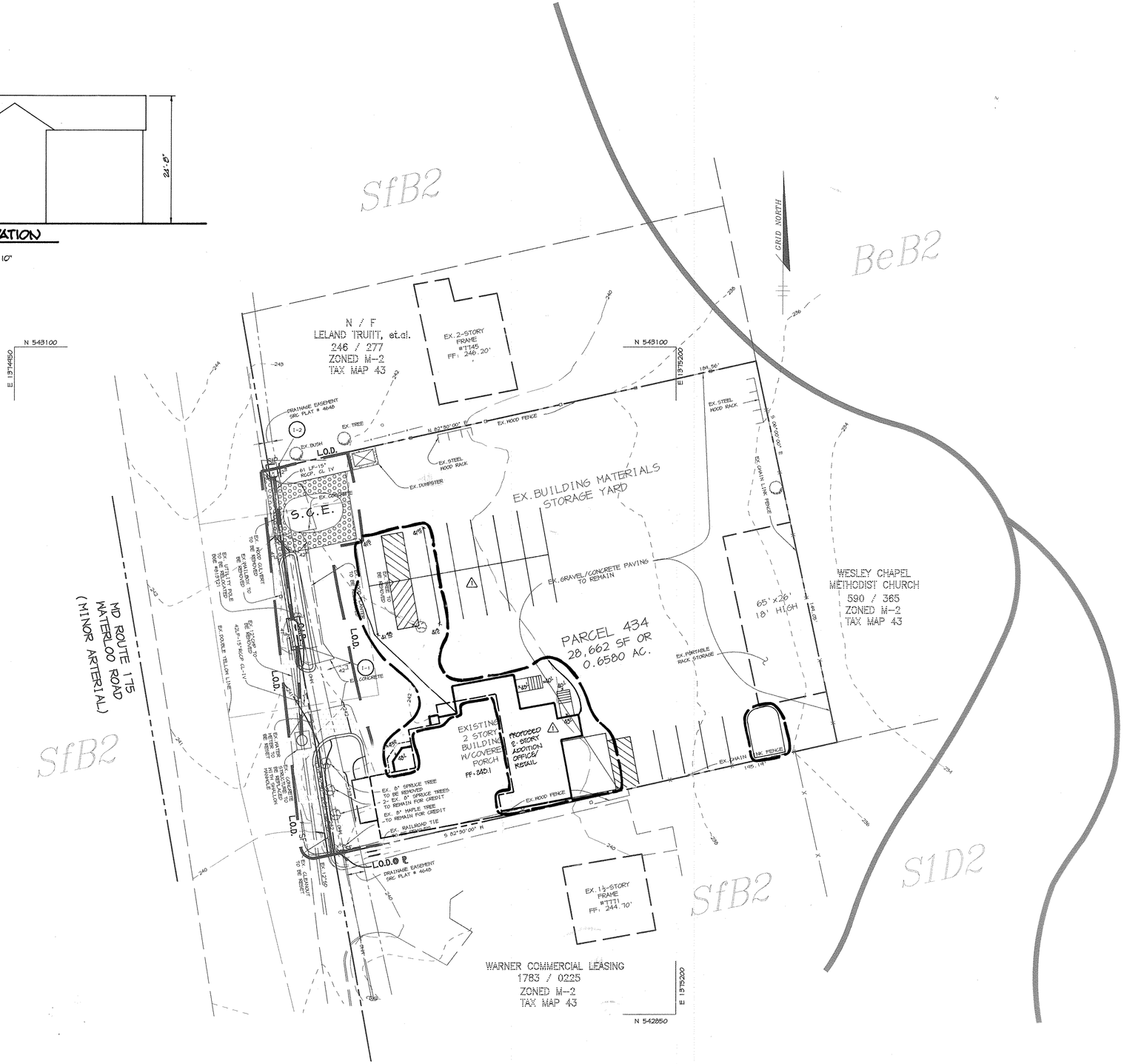


⚠ BUILDING ELEVATION

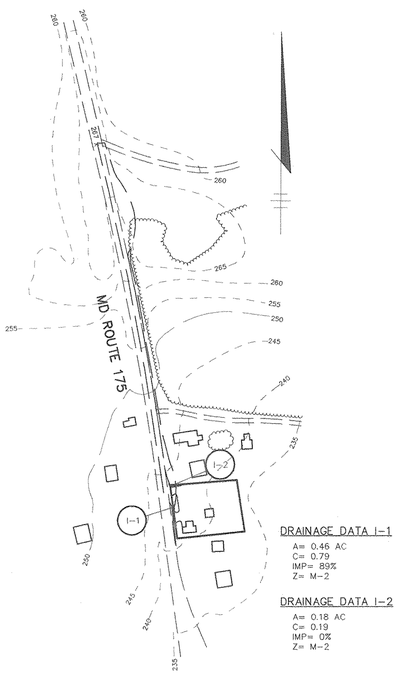
NO SCALE

MEAN ELEVATION - 28'-10"



PLAN

SCALE: 1"=20'



DRAINAGE DATA I-1
A= 0.46 AC
C= 0.79
IMP= 89%
Z= M-2

DRAINAGE DATA I-2
A= 0.18 AC
C= 0.19
IMP= 0%
Z= M-2

DRAINAGE AREA MAP

SCALE: 1"=200'

DRAINAGE AREA DIVIDE ——— ——— ——— ———

LEGEND

LIMIT OF DISTURBANCE ——— L.O.D. ———

STABILIZED CONSTRUCTION ENTRANCE — SCE

CURB INLET PROTECTION — CIP

STANDARD INLET PROTECTION — SIP

SILT FENCE —— SF —— SF ——

SOILS DIVIDE ▬▬▬

BY THE DEVELOPER :

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

DEVELOPER — DATE 4.5.01

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.

ENGINEER — DATE 4-5-01

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 4/16/01

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 4/16/01

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 4/26/01

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/18/01

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4/24/01

DATE	NO.	REVISION
7-28-03	1	ADDED BLDG. ADDITION & BLDG. ELEV., REVISED PARKING & TITLE BLOCK

OWNER / DEVELOPER
ENVIRONMENTAL DESIGN AND RESOURCES CENTER, LLC
192 N. BLADES LANE
GLEN BURNIE, MARYLAND 21060

PROJECT ENVIRONMENTAL DESIGN AND RESOURCES CENTER
(FORMERLY AMERICAN BUILDING PRODUCTS)
WATERLOO ROAD, MD ROUTE 175
BUILDING AND PARKING ADDITIONS

AREA Tax Map 43 Block 21 Parcel 434
L. 1691, F. 0484 Zoned M-2
1st Election District, Howard County, Maryland

TITLE
EROSION & SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING ● ENVIRONMENTAL SERVICES ● PLANNING ● SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE

STATE OF MARYLAND — ARTHUR E. MUEGGE — No. 8707 — PROFESSIONAL ENGINEER

ARTHUR E. MUEGGE #8707

DESIGNED BY :	CJR
DRAWN BY:	K.E.V.
PROJECT NO :	99239/ SDP2.DWG
DATE :	APRIL 5, 2001
SCALE :	AS SHOWN
DRAWING NO.	2 OF 4

SDP-01-38

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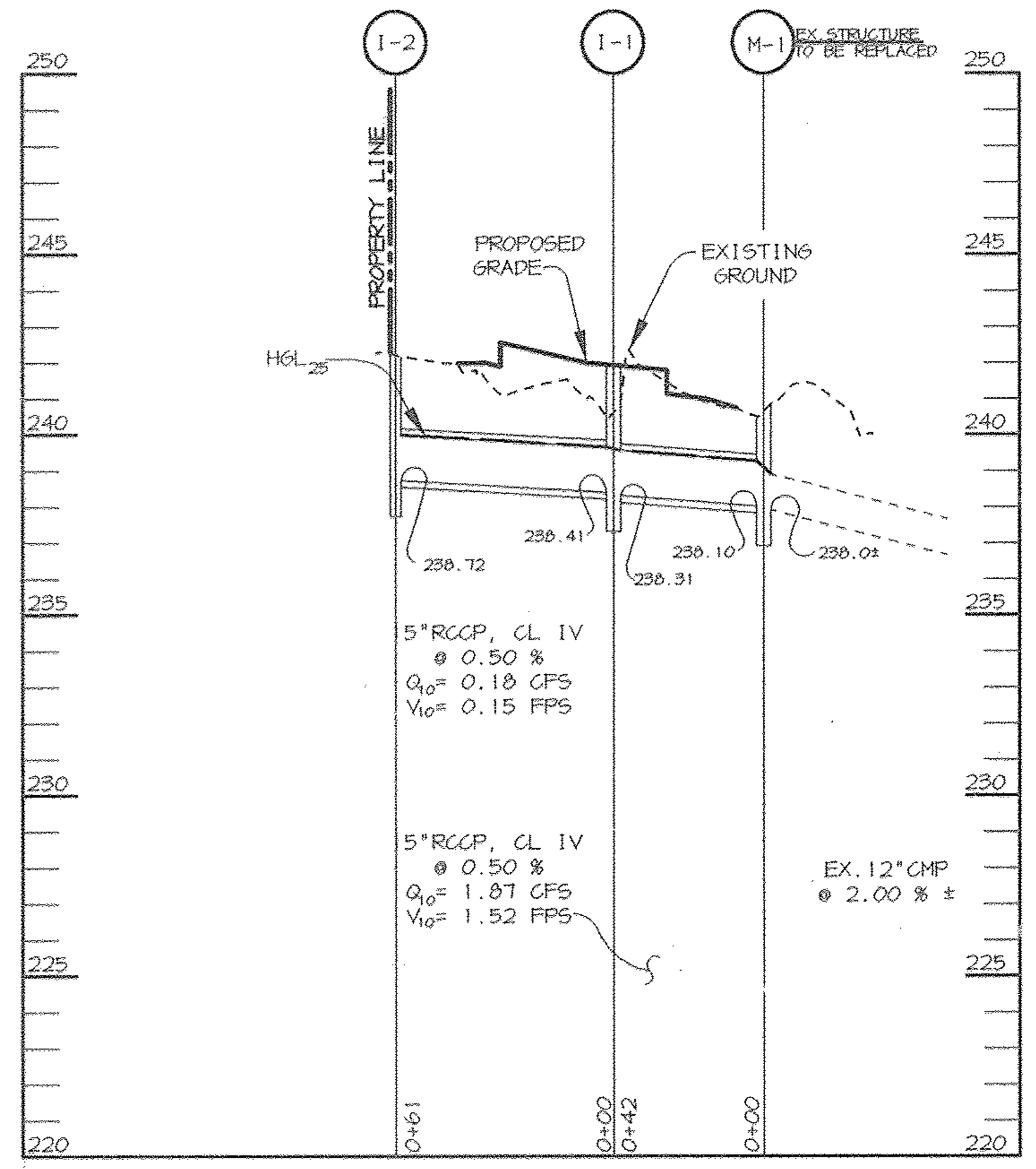
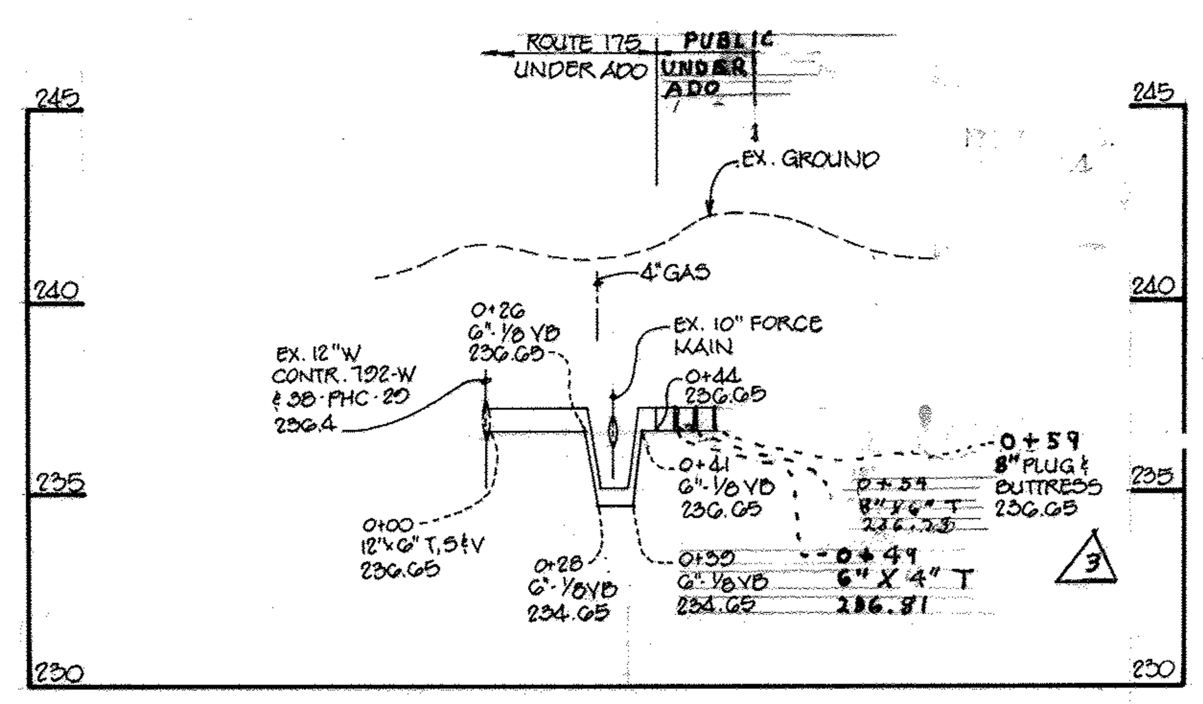


STORM DRAIN PROFILE

SCALE :
HOR. -1"=50'
VERT. -1"=5'

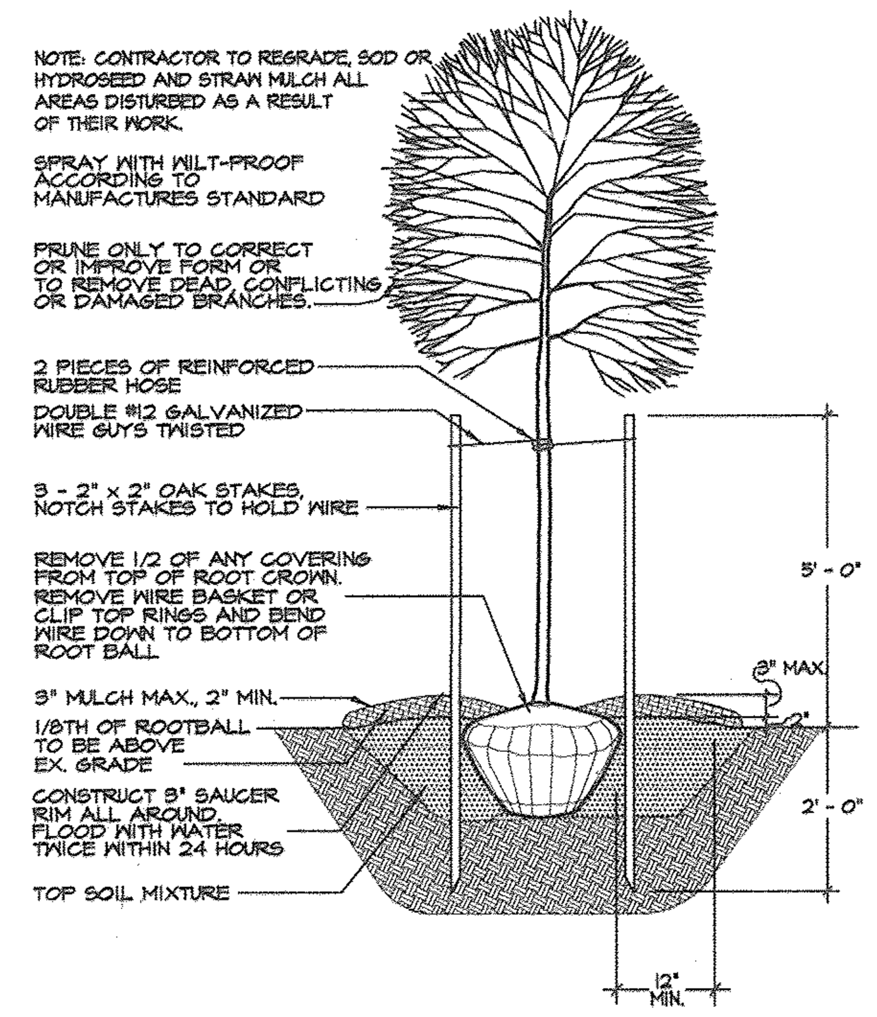


2 WATER PROFILE

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

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE (2 DAYS).
3. UPON PERMISSION OF HO.CO.DILP.SEDIMENT CONTROL INSPECTOR, BEGIN ROUGH GRADING AND BUILDING CONSTRUCTION. INSTALL STORM DRAINS AS SOON AS SUBGRADE ELEVATIONS ARE ESTABLISHED.
4. COMPLETE STORM DRAIN INSTALLATION (1 WEEK).
5. INSTALL CURB AND GUTTER THEN PAVE (1 WEEK).
6. INSTALL LANDSCAPING. (1 DAY)
7. COMPLETE ALL REMAINING CONSTRUCTION AND UPON APPROVAL OF THE HO.CO. DILP SEDIMENT CONTROL INSPECTOR, REMOVE RMAINING SEDIMENT CONTROLS AND STABILIZE IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES. (2 WEEKS)



TREE PLANTING DETAIL

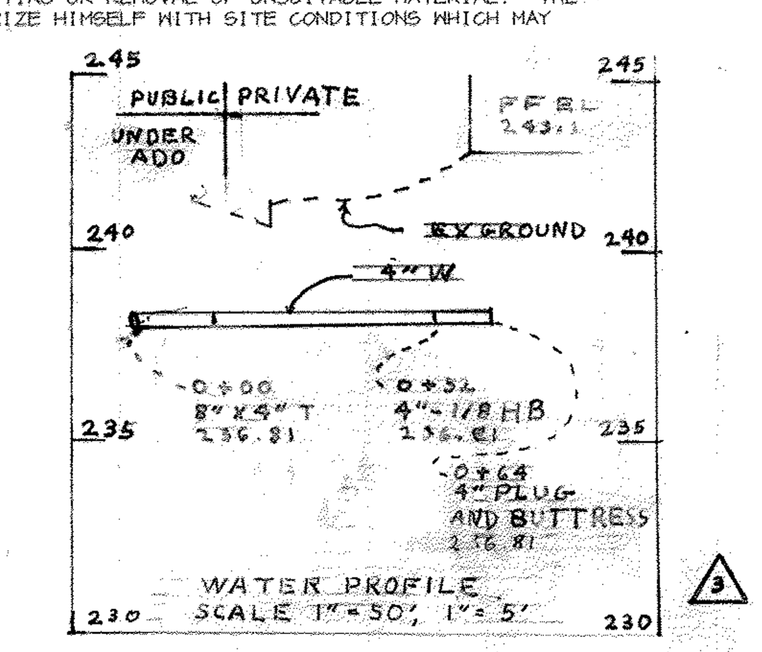
NOT TO SCALE

STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHED OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	0.6580 ACRES
AREA DISTURBED	0.0919 ACRES
AREA TO BE ROOFED OR PAVED	0.0623 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.0296 ACRES
TOTAL CUT	300 CU. YARDS
TOTAL FILL	300 CU. YARDS
OFFSITE WASTE/BORROW AREA LOCATION	

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
12. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
13. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
14. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.



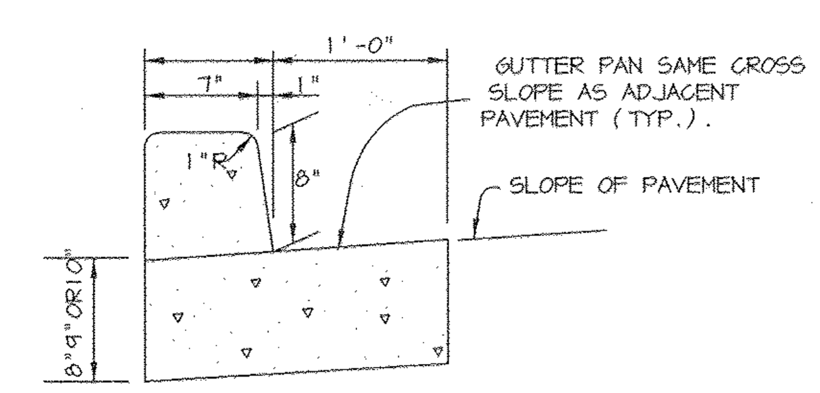
WATER PROFILE
SCALE 1"=50', 1"=5'

3

STRUCTURE SCHEDULE

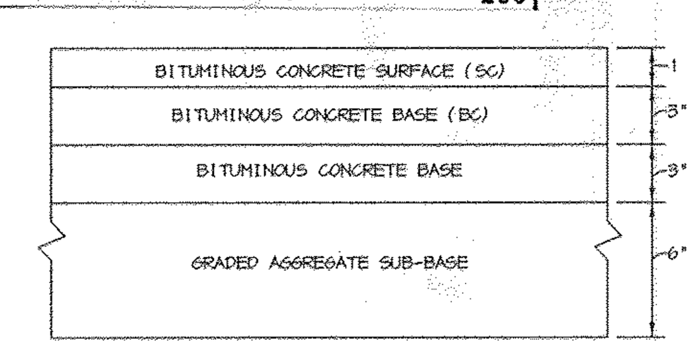
STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-1	COG-10	* N 542992.58 E 1375054.46	238.41 (15")	238.31 (15")	242.0	MSHA STD. DETAIL MD-374.51
I-2	K INLET	* N 543052.87 E 1375047.91	-	238.72 (15")	242.4	MSHA STD. DETAIL MD-378.03
M-1	4'DIA.	* N 542952.65 E 1375058.74	238.10 (15")	238.00 (12")	240.5	MSHA STD. DETAIL MD-384.01

NOTES: * FOR "COG" INLETS LOCATION IS GIVEN FOR CENTER OF THROAT OPENING AT FACE OF CURB. FOR GRATE INLETS AND MANHOLES LOCATION IS AT CENTER OF TOP COVER. TOP ELEVATION IS TOP OF CURB/GRATE/RIM.



M.S.H.A. TYPE 'A' CURB AND GUTTER

NO SCALE



M.S.H.A. PAVING SECTION

NO SCALE

PERMANENT SEEDING NOTES

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

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

Soil Amendments : In lieu of soil test recommendations, use one of the following schedules :

1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).

2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding : For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options :

1) 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.

2) Use sod.

3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

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

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition

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

Purpose

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

Conditions Where Practice Applies

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

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

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimentation Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½" in diameter.

ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

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

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

III. For sites having disturbed areas over 5 acres:

i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
b. Organic content of topsoil shall be not less than 1.5 percent by weight.
c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes to amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for Permanent Seeding - instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for site having disturbed areas under 5 acres shall conform to the following requirements:
a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
d. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

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

TEMPORARY SEEDING NOTES

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

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

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

Seeding : For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching : Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

6.10.05	3	MODIFIED WATER PROFILE, ADDED WATER PROFILE

BY THE DEVELOPER :

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

[illegible] 4.5.01
DEVELOPER 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.

[illegible] 4.5.01
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Myers 4/16/01
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

[illegible] 4/16/01
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[illegible] 4/26/01
DIRECTOR DATE

[illegible] 4/18/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[illegible] 4/24/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION
3.24.05	2	ADDED WATER PROFILE
7.23.03	1	REVISED TITLE BLOCK

OWNER / DEVELOPER

ENVIRONMENTAL DESIGN AND RESOURCES CENTER, LLC
152 N. BLADES LANE
GLEN BURNIE, MARYLAN 21060

PROJECT ENVIRONMENTAL DESIGN AND RESOURCES CENTER (FORMERLY AMERICAN BUILDING PRODUCTS) WATERLOO ROAD, ROUTE 175 BUILDING AND PARKING ADDITIONS

AREA Tax Map 43 Block 21 Parcel 434
L. 1691, F. 0484 Zoned M-2
1st Election District, Howard County, Maryland

TITLE

PROFILES, DETAILS & NOTES

RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282

DATE

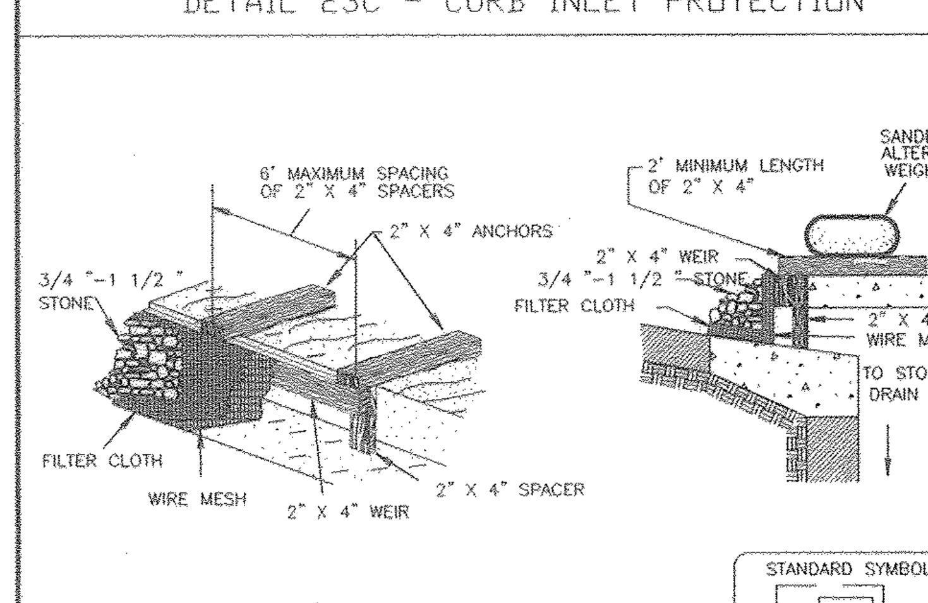
STATE OF MARYLAND ARTHUR E. MUEGGE PROFESSIONAL ENGINEER

[illegible]
ARTHUR E. MUEGGE #8707

DESIGNED BY :	CJR
DRAWN BY:	K.E.V.
PROJECT NO :	99239/ SDP3.DWG
DATE : APRIL 5, 2001	
SCALE : AS SHOWN	
DRAWING NO. 3 OF 4	

SDP-01-38

DETAIL 23C - CURB INLET PROTECTION

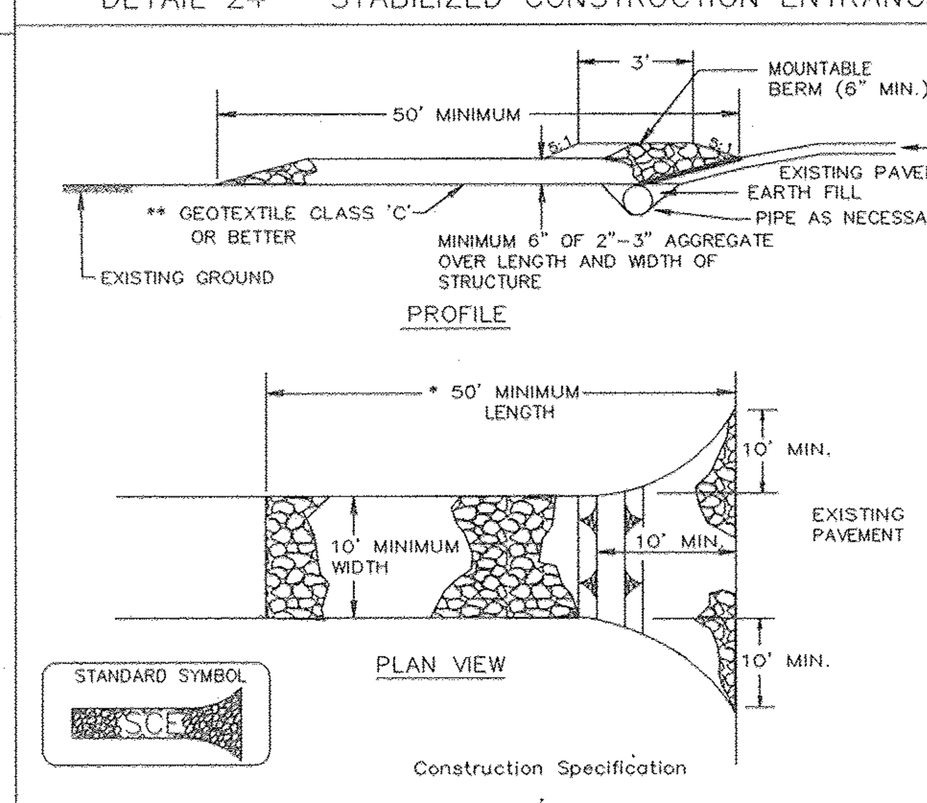


Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.
2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).
4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
6. Form the 1/2" x 1/2" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4" x 1 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

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

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

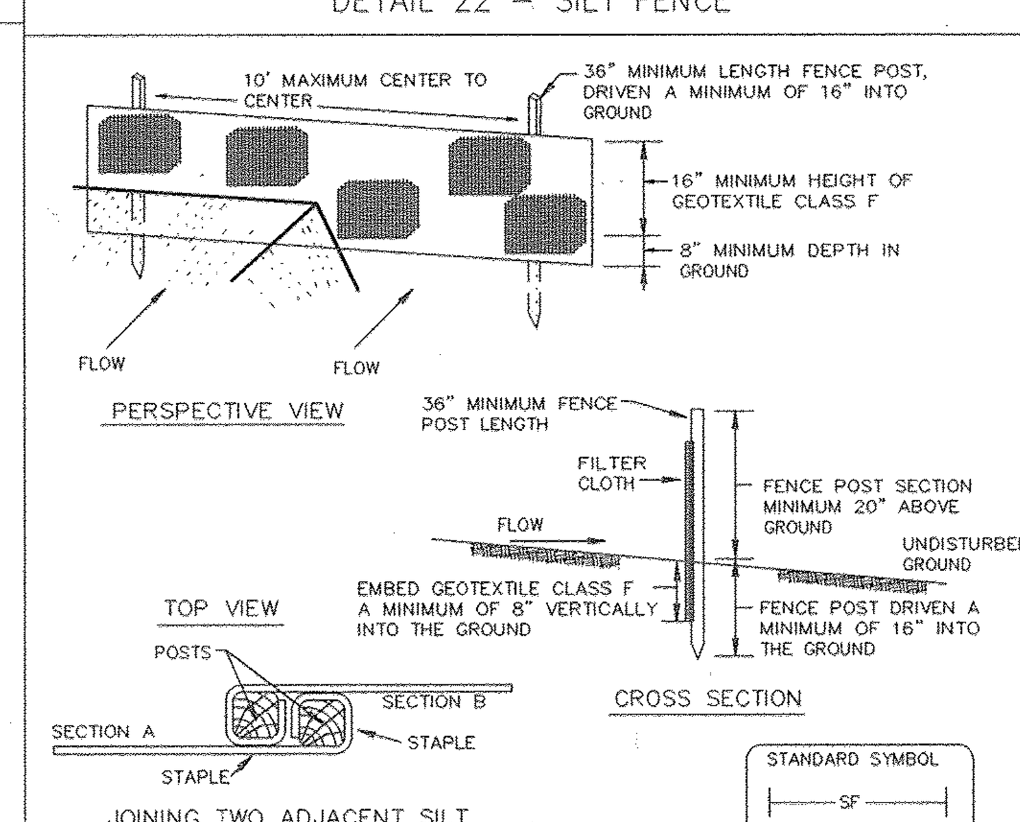


Construction Specification

1. Length — minimum of 50' (*30' for single residence lot).
2. Width — 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
4. Stone — crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water — all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location — A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

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

DETAIL 22 - SILT FENCE



Construction Specifications

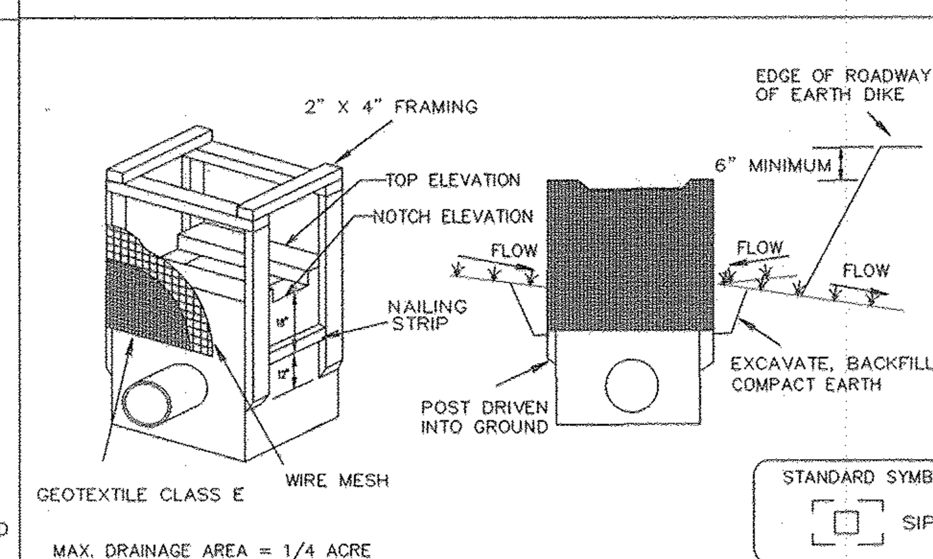
1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ^{2}/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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

DETAIL 23A - STANDARD INLET PROTECTION



Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.
2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

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

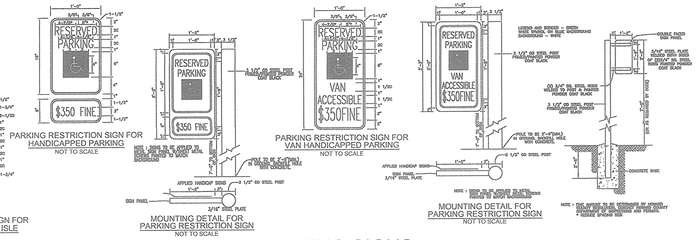
SCALE 1"=30'

LAYOUT PLAN
SCALE: 1"=30'

SCHEDULE A
PERIMETER LANDSCAPE EDGE

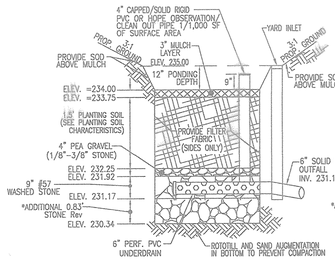
CATEGORY	ADJACENT TO PERIMETER AND ROADWAYS						TOTAL
PERIMETER/FRONTAGE DESIGNATION	1 E	2 B	3 A	4 A	5 A	6 A	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	±120	±25*	287'	253'	92'	325'	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	No	Yes (120± RIVER BIRCH & SHRUBS	Yes 55 LF	Yes* FULL CREDIT	Yes* FULL CREDIT	Yes 132 LF	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	Yes 50'	No	Yes** ±232'	No	No	Yes** ±193'	
NUMBER OF PLANTS REQUIRED	±70'	±25*					
SHADE TREES	1:40 2	1:50 0	1:60 0	1:60 0	1:60 0	1:60 0	2
EVERGREEN TREES	–	1:40 0	–	–	–	–	–
SHRUBS	1:4 18	–	–	–	–	–	18
NUMBER OF PLANTS PROVIDED							
SHADE TREES	2	*	**	*	*	**	2
EVERGREEN TREES	–	*	–	–	–	–	–
EX SHADE TREES	–	–	–	–	–	–	–
OTHER TREES (2:1 SUBSTITUTION)	–	–	–	–	–	–	–
SHRUBS (10:1 SUBSTITUTION) DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	18	–	–	–	–	–	18

* CREDIT TAKEN FOR EXISTING VEGETATION.
** NO PERIMETER LANDSCAPING PROVIDED DUE TO IMPERVIOUS SURFACES UP TO THE PROPERTY LINE (AS PERMITTED BY ZONING).

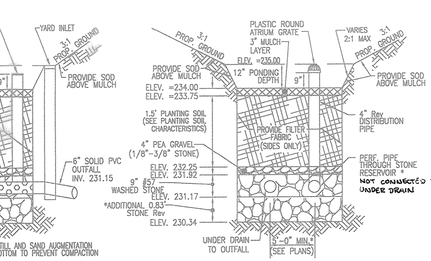


HANDICAP PARKING SIGNS
(NOT TO SCALE)

PROVIDE ESDV FOR AUTO REPAIR BUILDING
BLDG AREA = 3,330 SF I=100% Rv=0.95
ESDv=(3,330)(0.95)(2.6)/12=685 CF ; RPOVIDE Rev 171.3 CF INSTONE BELOW (0.83')
PROVIDE 514 SF (75%) ABOVE MULCH

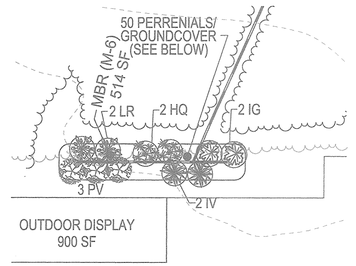


MICRO BIORETENTION (UNDERDRAIN) (M-6)
NOT TO SCALE



MICRO BIORETENTION (OVERFLOW) (M-6)
NOT TO SCALE

MICRO BIORETENTION NOTES:
1. ONLY THE SIDES OF MICRO BIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICRO BIORETENTION WILL CAUSE THE MBR TO FAIL, AND THEREFORE SHALL NOT BE INSTALLED.
2. WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH. SEE APPENDIX B.4.C.6.
3. PROVIDE 5' MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS)



MICRO BIORETENTION DETAIL
1"=20'

BIORETENTION PLANTING SCHEDULE (SHRUB/ORNIMENTAL GRASSES)

LEGEND/KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
IG	2	ILEX GLABRA "SHAMROCK" INKBERRY HOLLEY	1 GALLON	18" O.C.
IV	2	ITEA VIRGINICA "HENRY'S GARNETT" VIRGINIA SWEETSPIRE	1 GALLON	18" O.C.
HQ	2	HYDRANGEA QUERCIFOLIA OAKLEAF HYDRANGEA	1 GALLON	30" O.C.
LR	2	LEUCOTHEO RACEMOSA FETTERBUSH	1 GAL.	30" O.C.
PV	3	PANICUM VIRGATUM SWITCHGRASS	1 GAL.	36" O.C.

PERENNIALS/GROUNDCOVER PLANTING SCHEDULE

LEGEND	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
	25	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
	25	ACORUS GRAMINEUS 'OGON' GOLDEN VARIEGATED SWEET FLAG	1 QT.	

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED PAVING
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING STORM DRAIN LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- EXISTING TREELINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- EX. WATER AND UTILITY EASEMENT PLAT#19641
- EX. PERPETUAL EASEMENT FOR DRAINAGE FACILITY S.H.A PLAT # 47814

OPERATION AND MAINTENANCE SCHEDULE FOR LANSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULTCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT, ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.
2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR, DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

STATE OF MARYLAND · ROBERT HARRIS VOGEL · No. 16193 · PROFESSIONAL ENGINEER · 12/17/18

REVISIONS 5-8

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	ROOT
AG	4	ACER GINNALA AMUR MAPLE	2.5" CAL	B & B
EA	8	EMONYMUS ALABUS 'COMPACTUS' DWARF BURNING BUSH	30" – 36" HT.	B & B
TB	10	TAXUS BACATA 'REPANDENS' ENGLISH WEEPING YEW	24" – 30" HT.	B & B

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 1-7-18
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 1-17-18
DIRECTOR	DATE 1-18-18

OWNER/DEVELOPER
THOMAS F. GORDON
10743 SYMPHONY PARK DR.
ROCKVILLE, MD 20852
410-465-2020

Forest Conservation Worksheet 2.2

Net Tract Area

A.	Total Tract Area (2500 SF)	A =	0.06
B.	Deductions	B =	0.00
C.	Net Tract Area	C =	0.06

Land Use Category
Input the number "1" under the appropriate land use zoning, and limit to only one entry

ARA	MDR	IDA	HDR	MPD	CIA
0	0	0	0	0	1

D.	Afforestation Threshold (Net Tract Area x 15%)	D =	0.01
E.	Conservation Threshold (Net Tract Area x 15%)	E =	0.01

Existing Forest Cover

F.	Existing Forest Cover within the Net Tract Area	F =	0.06
G.	Area of Forest Above Conservation Threshold	G =	0.05

Break Even Point

H.	Break Even Point	H =	0.02
I.	Forest Clearing Permitted Without Mitigation	I =	0.04

Proposed Forest Clearing

J.	Total Area of Forest to be Cleared	J =	0.06
K.	Total Area of Forest to be Retained	K =	0.00

Planting Requirements

L.	Reforestation for Clearing Above the Conservation Threshold	L =	0.01
M.	Reforestation for Clearing Below the Conservation Threshold	M =	0.02
N.	Credit for Retention above the Conservation Threshold	N =	0.00
P.	Total Reforestation Required	P =	0.03
Q.	Total Afforestation Required	Q =	0.00
R.	Total Planting Requirement	R =	0.03

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 — Thomas Gordon — 1/9/2018 DATE

NO.	REVISION	DATE
8	REVISE TO ADJUST THE BUILDING, SWM AND OIL SEPERATOR LOCATIONS	12-17-18
7	REVISE TO ADJUST THE WHC LOCATION AND TO ADD OIL INTERCEPTOR.	10-2-18
6	REVISE TO REDUCE THE BUILDING SIZE AND ADJUST THE LOCATION	7-24-18
5	CHANGE USE TO AUTO SERVICE + SALES ADD ESDV.	11-02-2017

SITE DEVELOPMENT PLAN
ENVIRONMENTAL DESIGN AND RESOURCES CENTER (FORMERLY AMERICAN BUILDING PRODICTS)
WATERLOO ROAD, MD ROUTE 175
BUILDING AND PARKING ADDITIONS

L. 6242 F. 645
ZONE: M-2

TAX MAP 43 GRID 21 — PARCELS 444, 434
1ST ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
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FAX: 410.461.8961

STATE OF MARYLAND · ROBERT HARRIS VOGEL · No. 16193 · REGISTERED PROFESSIONAL ENGINEER · 12/17/18

ROBERT H. VOGEL, PE No.16193

DESIGN BY:	RHV
DRAWN BY:	KG
CHECKED BY:	RHV
DATE:	NOVEMBER 2017
SCALE:	AS SHOWN
W.O. NO.:	17-27

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: 09-27-2018

SHEET 4 OF 4

SDP-01-038