GENERAL NOTES

I. 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.

5. THE EXISTING TOPOGRAPHY IS TAKEN FROM F-89-163 AND FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED (MARCH 2000).

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. 4386 AND 4382 WERE USED FOR THIS PROJECT.

8. WATER IS PUBLIC. CONTRACT NO. 14-1946-D

9. SEWER IS PUBLIC. SEWER DRAINAGE AREA: PATAPSCO CONTRACT NO. 705-S

10. THE STORMWATER MANAGEMENT FACILITIES PROPOSED FOR THIS SITE ARE A PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITY.

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. A 100- YEAR FLOODPLAIN STUDY IS NOT REQUIRED FOR THIS PROJECT

13. THERE ARE NO WETLANDS ON THIS PROJECT BASED ON FIELD WALK BY PATTON HARRIS RUST & ASSOCIATES DATED ON OCTOBER 2003.

14. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP DATED NOVEMBER 2003 AND WAS

15. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.

16. THE GEOTECHNICAL STUDY FOR STORMWATER MANAGEMENT FOR THIS PROJECT WAS PREPARED BY HILLIS CARNES DATED NOVEMBER 2003.

17. THE BOUNDARY SURVEY FOR THIS PROJECT IS BASE ON F-89-163 RECORD PLAT BY GREENHORNE AND O'MARA.

18. SUBJECT PROPERTY ZONED M-1 PER 10-18-93 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. F-89-163, P-87-44, S-86-11, S-88-03, S-89-04,

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 PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.

26. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.

27. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.

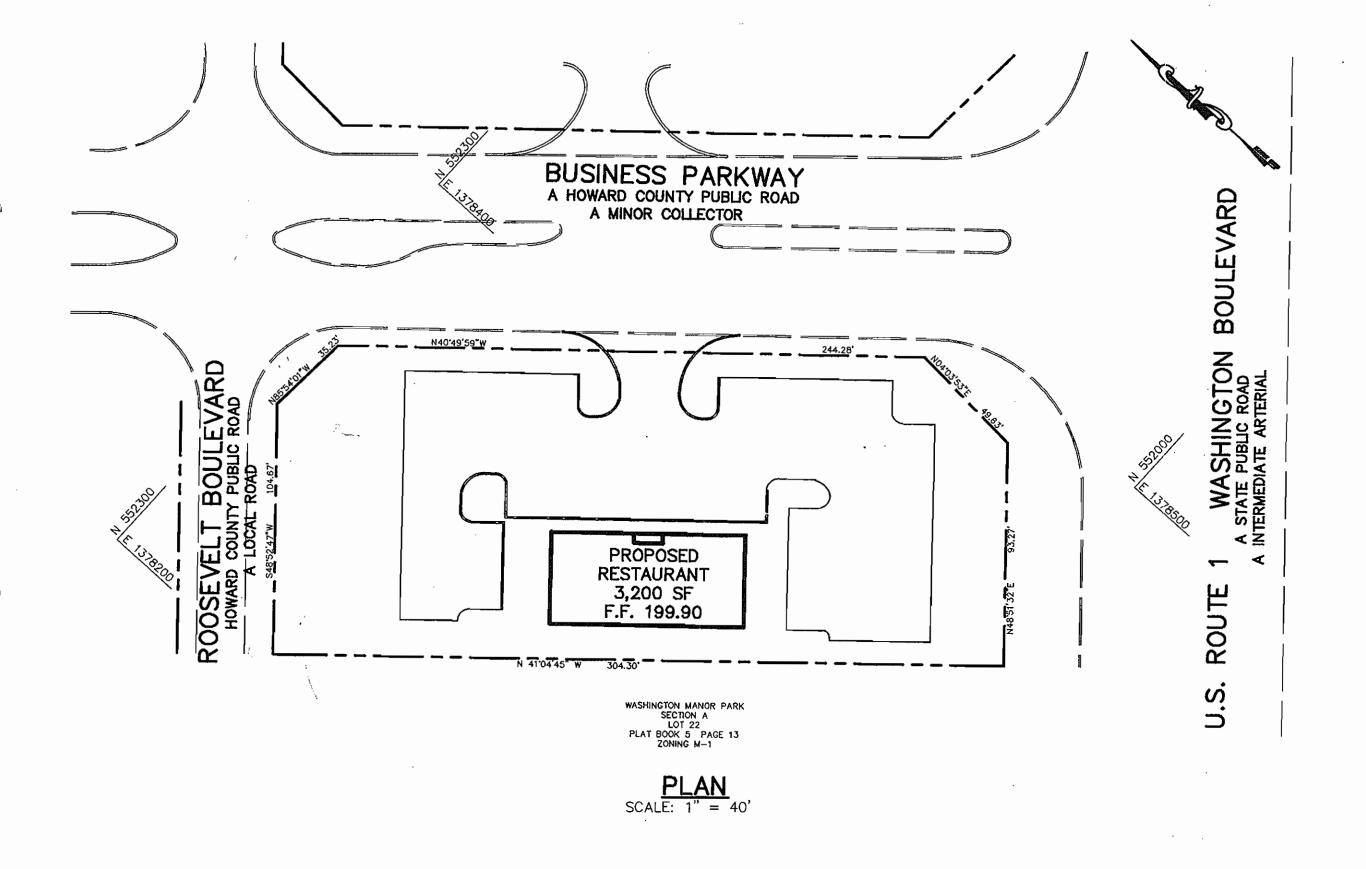
28. THIS PROJECT IS PART OF A PLANNED BUSINESS PARK GREATER THAN 75 ACRES THAT WAS RECORDED PRIOR TO DECEMBER 31, 1992 AND IS THERFORE EXEMPT FROM THE FOREST CONSERVATION ORDINANCE.

29. LANDSCAPE SURETY WILL BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$9060.00

30. ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.

SITE DEVELOPMENT PLANS MEADOWRIDGE BUSINESS PARK

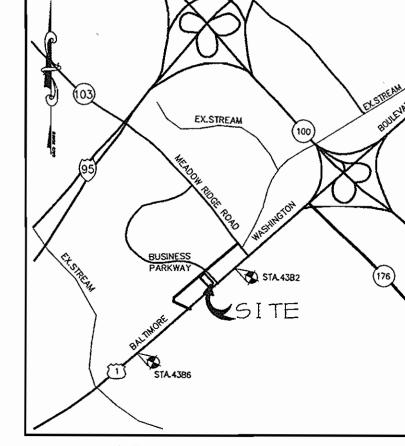
PARCEL Q 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND



BENCHMARKS

HO. CO. SURVEY CONTROL STATION 43B6 N 550,601.59 E 1,376,866.05 ELEV. 210,61

HO. CO. SURVEY CONTROL STATION 43B2 N 551,655.01 E 1,378,176.94 ELEV. 209.67



VICINITY MAP

SITE ANALYSIS

AREA OF PARCEL DISTURBED AREA PRESENT ZONING PROPOSED USE BUILDING COVERAGE

OF PARKING SPACES REQ'D @ 14 SP/1000 SF

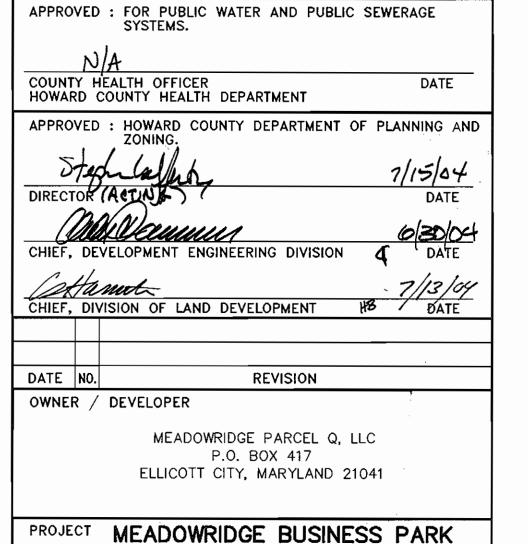
OF PARKING PROVIDED

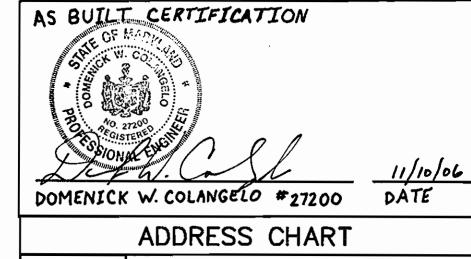
0.88 ACRES 38333 SF 1.01 ACRES (43996) SF

RESTAURANT FACILITY (ONE STORY) 3200 SF (8% COVERAGE)

45 SPACES

45 SPACES (INCLUDING 2 HC)





PARCEL STREET ADDRESS

6790 BUSINESS PARKWAY SUBDIVISION NAME MEADOWRIDGE BUSINESS PARK TAX MAP NO. ELECT. DIST. CENSUS TRAC 9047 4 & 5 M-1 43 1st 6012

SEWER CODE

--2153000

WATER CODE

TITLE SHEET Patton Harris Rust & Associates.pc Engineers. Surveyors. Planners. Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900

PARCEL Q

A RESTAURANT BUILDING

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

PARCEL Q ZONED M-1



AREA TAX MAP 43

DESIGNED BY : C.J.R. DRAWN BY: DAM PROJECT NO :12513/1-0/ENGR C-000COV.DWG

F 410.997.9282

SCALE : AS SHOWN

DATE: JUNE 21, 2004

DRAWING NO. 1 OF 7 CHRISTOPHER J. REID #19949

BUILDING ELEVATION

- 1. PROPOSED 8" SANITARY SEWER, SMH-1 AND SMH-2, CONSTRUCTION IN ROOSEVELT BOULEVARD TO BE CONSTRUCTED BY HOWARD COUNTY UNDER ADVANCED DEPOSIT ORDER AGREEMENT.
- 2. EXISTING FIRE HYDRANT TO BE RETURNED TO HOWARD COUNTY BUREAU OF UTILITIES. PROPOSED FIRE HYDRANT TO BE CONSTRUCTED BY HOWARD COUNTY UNDER ADVANCED DEPOSIT AGREEMENT.

STORMWATER MANAGEMENT FACILITY SUMMARY

DRAINAGE AREA	Rev-REQUIRED	WQV REQUIRED	Cpv REQUIRED	Qp10	& Qp100
0.88 AC.	, 233 CF OR	1560 CF	N/A Q1<2 CFS	٨	/A
	2831 SF				

Rev IS PROVIDED THROUGH THE USE OF GRASS SWALES TO ADDRESS THE PERCENT AREA METHOD. THE WQv IS REDUCED FROM 1663 TO 1793-233=1560 CF DUE TO THE Rev BEING PROVIDED ELSEWHERE. A PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITY IS PROVIDED TO MEET THE WQV VOLUME REQUIREMENT.

NOTE: VOLUME REQUIREMENTS ARE BASED ON ACTUAL IMPERVIOUS AREA PROVIDED, NOT ZONING REQUIREMENTS. ANY INCREASE IN IMPERVIOUS AREA OVER 0.50 ACRE ON-SITE IMPERVIOUS WILL RESULT IN THE NECESSITY OF RE-EVALUATING THE STORMWATER MANAGEMENT PROVISIONS.

AS BUILT CERTIFICATION

DOMENICK W. COLANGELO #27200

DATE

1. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.

2. ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.

3. ALL ON-SITE ROADS ARE PRIVATE.

- 4. ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
- 5. 米 STD/REV STANDARD TO REVERSE CURB TRANSITION.

LEGEND

EXISTING 2'CONTOUR EXISTING 10'CONTOUR PROPOSED 2'CONTOUR PROPOSED 10'CONTOUR PROPERTY LINE AND RIGHT OF WAY STORM DRAIN PROP.SPOT ELEVATION SETBACK LINES P-2 PAVING CONCRETE SIDEWALK PROPOSED LIGHTS

	EXTENSIONERS OF THE PROPERTY AND THE PROPERTY OF THE PROPERTY
APPROVED : FOR PUBLIC WATER AND PUBLIC SI SYSTEMS.	EWERAGE
NIA	ngia-randysychomo (wysyscau bydystynodoga parynimydyn namicylab o ni bailidy, a mae gyryn
COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF ZONING.	PLANNING AN
Dean Callud	7/15/04
DIRECTOR LACTING	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE DATE
Cothanh	7/13/04
CHIEF, DIVISION OF LAND DEVELOPMENT	MATE BATE
3-17-05 A MODIFIED ENTRY POINTS, SHIFTED HANDICA	naingta as great i galait ann aireann an ag gnàid i àgail ann ann ann ann an ag airean aireann. UP SPACES aireann ag aireann ag agus aireann aire

DATE NO. REVISION

OWNER / DEVELOPER

MEADOWRIDGE PARCEL Q, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041

PROJECT MEADOWRIDGE BUSINESS PARK PARCEL Q

A RESTAURANT BUILDING AREA TAX MAP 43 PARCEL Q ZONED M-1

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates, pc Engineers. Surveyors. Planners. Landscape Architects.

8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282

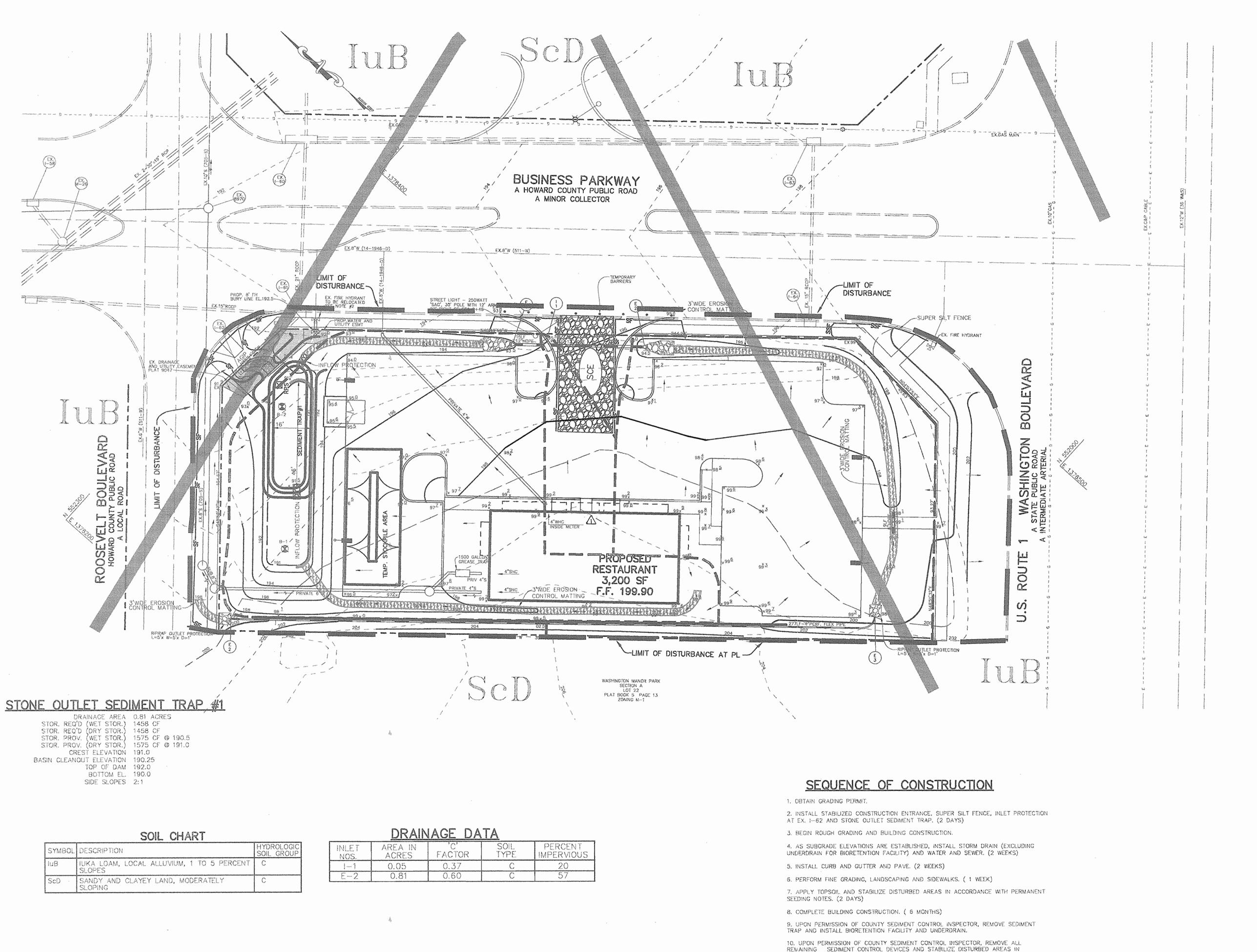
DESIGNED BY : C.J.R.

DRAWN BY: DAM PROJECT NO :12513/1-0/ENGR C400SIT.DWG DATE : JUNE 21, 2004

SCALE : 1" = 20'

SDP-04-73

CHRISTOPHER J. REID #19949 DRAWING NO. 2 OF 7



ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)

LEGEND

TEMPORARY BARRIERS SOIL LINES BORING LOCATION DRAINAGE AREA LINES LIMIT OF DISTURBANCE SUPER SILT FENCE EROSION CONTROL MATTING STABILIZED CONSTRUCTION ENTRANCE

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		V No do		O.D				
*commission				SSF	***************************************			
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No.	10		30	XG	CE	K	345	5
Avanable.	and the same of the same of	professional Lagran	an in many designation that the	e eight agreement ann ann ann ann ann ann ann ann ann a	Downston Market Market	734	dan	Mushows

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.

6-21-04

6.21.04

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.

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

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION

AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND

CHIEF, DEVELOPMENT ENGINEERING DIVISION CHIEF, DIVISION OF LAND DEVELOPMENT

3.17.05 \ LODIFIED ENTRY POINTS DATE NO.

OWNER / DEVELOPER

MEADOWRIDGE PARCEL Q, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041

REVISION

PROJECT MEADOWRIDGE BUSINESS PARK PARCEL Q A RESTAURANT BUILDING

AREA TAX MAP 43 PARCEL Q ZONED M-1

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GRADING, SEDIMENT CONTROL PLAN AND DRAINAGE AREA MAP

Patton Harris Rust & Associates, pc Engineers. Surveyors. Planners. Landscape Architects.

8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282

6.88.08

DESIGNED BY : C.J.R. DRAWN BY: DAM

PROJECT NO :12513/1-0/ENGR C600GRA.DWG DATE: JUNE 21, 2004

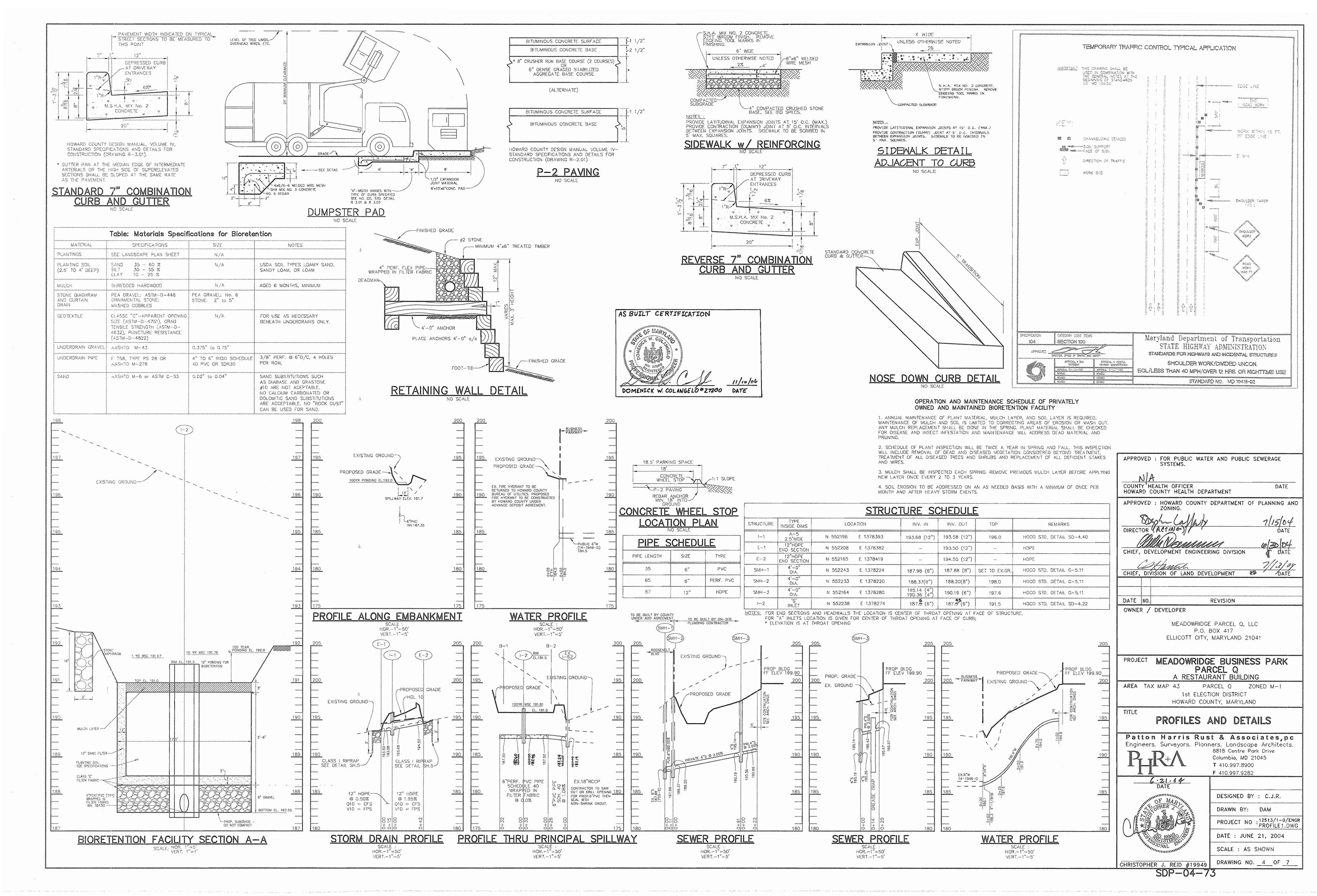
SDP-04-73

AS BUILT CERTIFICATION DOMENICK W. COLANGELO #27200

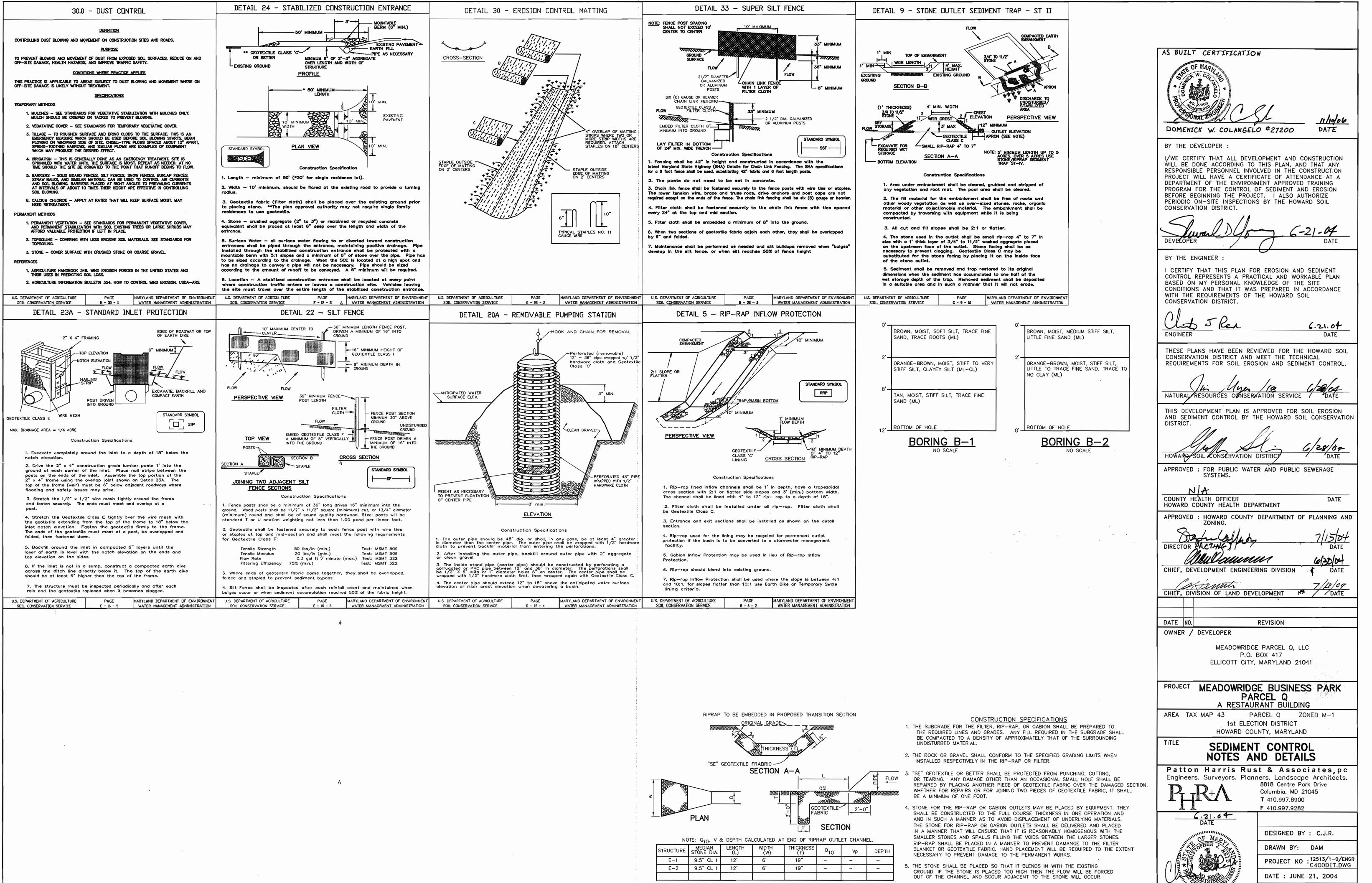
DATE

CHRISTOPHER J. REID #19949

SCALE : 1" = 20'DRAWING NO. 3 OF 7



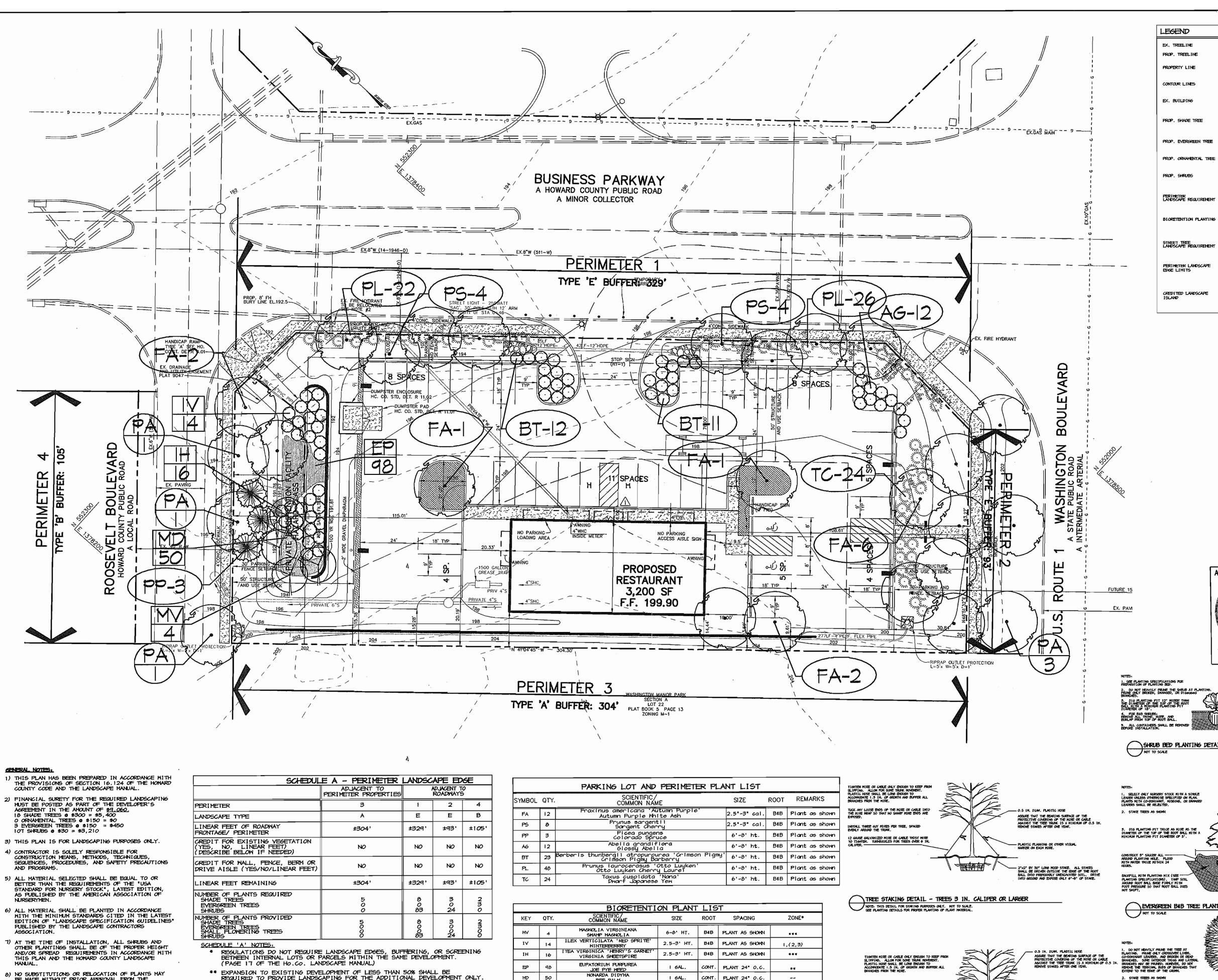
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RIPRAP OUTLET PROTECTION DETAIL

SCALE : AS SHOWN DRAWING NO. 5 OF 7

CHRISTOPHER J. REID #19949



PLANTING SPECIFICATIONS

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Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Howard County Landscape Manual, the latter takes precedence.

2. All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Association of Nurserymen (AAN) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bank, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no healed-in plants or plants from cold storage

3. Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape specification suidelines by the Landscape Contractors Association of HD, DC, 4 VA^* , (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape

4. Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

5. Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Mies Utility" a minimum of 40 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

6. Protection of existing vegetation to remain shall be accomplished via the temporary installation of 4 foot high show fence at the drip line, see detail.

7. Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant Pinus strobus or Xcupressacyparis legiand!! between November 15 and March 15. Landscape plants are not to be installed before site is graded to final grade.

8. Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work.

9. Bid shall be based on actual site conditions. No extra payment shall be made for mork arising from actual site conditions differing from those indicated on drawings and

10. Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. Where discrepancies on the plan exist between the symbols and the callout leader, the number of symbols take precedence.

11. All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double-shredded hardwood

12. Positive drainage shall be maintained on planting beds (minimum 2 percent slope). 13. Bed preparation shall be as follows: Till into a minimum depth of 6° 1 yard of Compro or Leafgro per 200 SF of planting bed, and I yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5-10-5 fertilizer per cubic yard of planting mix and till. Enloaceous plants (Azaleas, Rhododendrons, etc.): top dress after planting with Iron sulfate or comparable product according to package directions. Taxus baccata 'Repandens'

14. Planting mix: For trees not in a prepared bed, mix 50% compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail.

(English meeping years): Top dress after planting with 1/4 to 1/2 cup lime each.

15. Weed & insect control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre-emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the mulch need-free for the extent of the warranty period. Under no circumstances is a pesticide containing chlorpyrifes to

16. Nater: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and as necessary to avoid

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND

REVISION

MEADOWRIDGE BUSINESS PARK

PARCEL Q ZONED M-1

8818 Centre Park Drive

Columbia, MD 21045

T 410.997.8900

F 410.997.9282

PARCEL Q

A RESTAURANT BUILDING

1st ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

LANDSCAPE PLAN

Patton Harris Rust & Associates,pc

Engineers. Surveyors. Planners. Landscape Architects.

MEADOWRIDGE PARCEL Q, LLC

P.O. BOX 417

ELLICOTT CITY, MARYLAND 21041

DATE

DATE

63004

17. Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches.

SYSTEMS.

HOWARD COUNTY HEALTH DEPARTMENT

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

5.17.05 /N REVISED HANDICAP PARKING

ZONING.

Stanul

DATE NO.

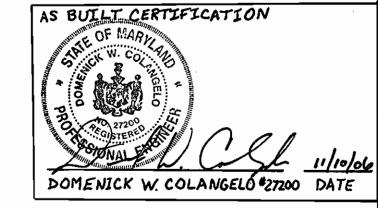
OWNER / DEVELOPER

AREA TAX MAP 43

TITLE

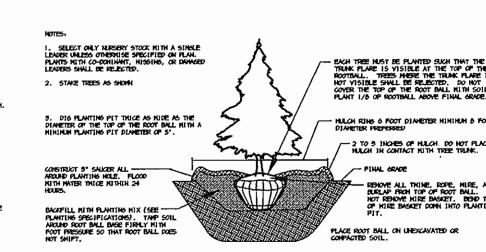
18. All areas mithin contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded, grass seed planted, and

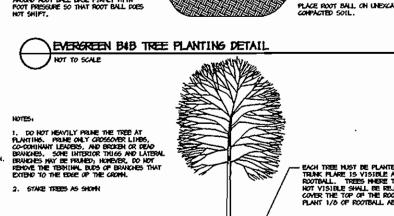
COUNTY HEALTH OFFICER



 DO NOT COMER THE TOP OF THE ROOT BALL
 ALIGHT 1/6 OF ROOTBALL ABOVE
 FINAL GRADE. 2 TO 3 INCHES OF HULCH, DO NOT PLACE
HULCH IN CONTACT HITH SHRUB TRUNK OR BRANCHE TAMP SOIL AROUND BALL BASE FIRMLY HITH FOOT PRESSURE SO THE ROOT BALL DOES NOT SHIPT.

- PLACE ROOT BALL ON UNEXCAVATED OR COMPACTED SOIL. SHRUB BED PLANTING DETAIL - BAB AND CONTAINER SHRUBS





BACKFILL HITH PLANTING MIX (SI PLANTING SPECIFICATIONS). TW ARRUND ROOT BALL BASE FIRSTLY I FROM PRESSURE SO THAT ROOT BA

EACH TREE HUST BE PLANTED SUCH THAT THE TRANK FLANE IS VISIBLE AT THE TOP OF THE ROOTBALL. TREES HHERE THE TRANK FLANE IS NOT VISIBLE SHALL BE RELECTED. SO NOT COVER THE TOP OF THE ROOT BALL NITH SOIL. PLANT 1/6 OF ROOTBALL ABOVE PINAL GRADE.

PLACE ROOT BALL ON UNEXCAYATED OR COMPACTED SOIL.

NOTES:		
 SELECT CALLY AURSERY STOCK HITH A SING LEADER UALES OTHERWISE SPECIFIED ON PLAN PLANTS MITH CO-DOMINATE, INSGING, OR DAM LEADERS SHALL BY RELECTED. 	<u>.</u>	BACH TREE HUST BE PLANTED SUCH THAT THE TRIAK PLARE IS YISIBLE AT THE TOP OF TH ROOTBALL. TREES HESSE THE TRIAK PLARE
2. STAKE TREES AS SHOWN	\$ \{	NOT VISIBLE SHALL BE RELECTED. DO NOT COVER THE TOP OF THE ROOT BALL HITH SO! PLANT 1/6 OP ROOTBALL ABOVE FINAL GRADE
 DIG PLANTING PIT THICE AS HIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL HITH HINIMAN PLANTING PIT DIAMETER OF 5°. 		 HULCH RING 6 FOOT DIAMETER HIHIHUM 6 FO DIAMETER PROFESSED
CONSTRUCT 5° SALCER ALL	January /	2 TO 5 INCHES OF HULCH. DO NOT PLA HULCH IN CONTACT HITH TREE TRUNK.
ABOUND PLANTING HOLE, FLOOD NITH MATER THICE KITHIN 24 HOURS.		REMOVE ALL THINE, POPE, HIRE, BURLAP FROM TOP OF ROOT BALL NOT REMOVE HIRE BASGET. BEND
BACKFILL HITH PLANTING HIX (SEE ——————————————————————————————————	\	OF HIRE BASKET DOWN INTO PLANT PIT.
FOOT PRESSURE SO THAT ROOT BALL POES NOT SHIFT.		PLACE ROOT BALL ON UNEXCAVATED OR COMPACTED SOIL.
EVERGREEN BAB TRE	E PLANTING DETAIL	

5. DIG PLANTING PIT THICE AS HIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL HITH A HINIHUM PLANTING PIT DIAMETER OF 5'. ...

HULCH RING 6 FOOT DIAMETER HIHLHUM 6 FOOT -2 TO 9 INCHES OF HULCH, DO NOT PLACE HULCH IN CONTACT HITH TREE TRUNK,

6.21.04

DESIGNED BY : K.L.M. DRAWN BY: K.L.M. PROJECT NO : 12513/1-0/ENG DATE: JUNE 21. 2004 SCALE : 1" = 20'DRAWING NO. 6 OF 7

AS PUBLISHED BY THE AMERICAN ASSOCIATION OF

EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS

B) NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY
BE MADE WITHOUT PRIOR APPROVAL FROM THE
DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.

DEVELOPER'S /BUILDER'S CERTIFICATE. I/ME 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/HE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, HILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

/ DATE

** EXPANSION TO EXISTING DEVELOPMENT OF LESS THAN 50% SHALL BE REQUIRED TO PROVIDE LANDSCAPING FOR THE ADDITIONAL DEVELOPMENT ONLY. (PAGE 3 OF THE HO.CO. LANDSCAPE MANUAL)

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING				
PARKING LOT	1			
NUMBER OF PARKING SPACES	45			
NUMBER OF SHADE TREES REQUIRED (1/20 SPACES)				
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	2 -			
NUMBER OF ISLANDS PROVIDED	3			

	BIORETENTION PLANT LIST							
KEY	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	SPACING	ZONE*		
MV.	4	MAGNOLIA VIRGINIANA SMAMP MAGNOLIA	6-8' HŢ.	B4B	PLANT AS SHOWN			
I٧	14	ILEX VERTICILATA 'RED SPRITE' WINTERSERRRY	2.5-3' HT.	B4B	PLANT AS SHOWN	1,(2,3)		
IH	16	ITEA VIRGINICA 'HENRY'S GARNET' VIRGINIA SMEETSPIRE	2.5-3' HT.	B4B	PLANT AS SHOWN	•••		
Ħ	98	EUPATORIUM PURPUREA JOE PYE WEED	1 6AL.	сонт.	PLANT 24" 0.C.	**		
MD	5⊘	HONARDA DIDYHA BEE BALH	I GAL.	CONT.	PLANT 24" O.C.			

* HYDROLOGIC ZONES ACCORDING TO APPENDIX A OF THE MARYLAND MODEL STORMWATER MANAGEMENT ORDINANCE JULY 2000. ** COMMONLY USED BIORETENTION SPECIES ACCORDING TO TABLE A.4 IN APPENDIX A OF THE MARYLAND MODEL STORMWATER MANAGEMENT ORDINANCE JULY 2000.

*** KNOWN TO TOLERATE INNUNDATION AS WELL AS DRY AREAS ACCORDING TO DIRR, MICHAEL A., MANUAL OF MOODY LANDSCAPE PLANTS

BIORETENTION PLANT LIST NOTES:

		STREET TREE PL	ANT LIST		
KEY	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
PA	6	PLATANUS XACERFOLIA LONDON PLANE TREE	2.5"-3" CAL.	B4B	PLANT AS SHOWN

TREE STAKING DETAIL - TREES 3 IN. CALIPER OR SHALLER HOTE, THIS DETAIL FOR STAKING PURPOSES ONLY. NOT TO SCALE
SEE PLANTING DETAILS FOR PROPER PLANTING OF PLANT NATERIAL

TUCK ANY LOOSE BHOS OF THE HIRE OR CABLE INTO THE HIRE HAMP SO THAT HO SHARP HIRE BHOS ARE

SCOTT R. WOLFORD #797 SDP-04-73

within 15 feet of the toe of the embankment.

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed

Areas to be covered by the reservoir will be cleared of all trees, brush, loas, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas. EARTH FILL

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6". frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soll Classification 6C. C, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other moterials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by aeotechnical énaineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-inch thick before compaction) lauers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spilling must be installed concurrently with fill placement and not excavated into the embankment

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of faur complete passes of a sheepsfoot, rubber tire or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be abtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

When required by the reviewing agency the mimimum required density shall not be ess than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Methad T-99 (Standard Proctor).

Cutoff Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slapes of the trench shall be 1 to 1 ar flatter. The backfill shall compacted with construction equipment, rollers, or hand tampers to assure maximum density and maximum

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top midth of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be I to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

STRUCTURE BACKFILL

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24° or greater over the structure

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 ps; 20 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the pipe) of flowable Il shall be under (bedding), over and, on the sides of the pipe. It any needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7° to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe sháll be bituminous coated. Aný adjoinig soil fill shall be placed in horizontal layers not to exceed four inchéd in thickness and compacted by hand tampers or other directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured norizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24° or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

PIPE CONDUITS Il pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

Materials - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & H-246 with watertight coupling bands or flanges.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or mater conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to to the requirements of AASHTO Specifications N-196 or M-211 with matertight caupling bands or flanges. Aluminum Pipe, when used-with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminaus coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphait. Hot dip gaivanized balts mat be used for connections, the pH of the surrounding sails shall be between 4

- Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and cated as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at at least 24 mils in thickness.
- Connections All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be melded all oround when the pipe and riser are metal. Anti-seep callars shall be connected to the pipe in such a manner as to be completely matertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The fallowing type connection are acceptable for pipes less than 24° in diameter; flanges on both ends of the pipe with a circular 3/8 inch closed cell neaprene gasket, prepunched to the flange balt circle, sandwiched between adjacent flanges; a 12 inch wide standard lap type band with 12 inch wide by 3/8 inch thick closed cell circular neoprene gasket; and a 12 inch mide hugger type band with o-ring gaskets having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long annular corrugated band using a minimum of 4 (four) rods and lugs 2 on each connecting pipe ends. A 24 inch wide by 3/8 inch thick closed cell circular neaprene gasket will be installed with 12 Inch on the end of each pipe. Flanged joints with 3/8 Inch closed cell gaskets the full width of the flange is also acceptable.

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

- Bedding The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to pravide adequate support.
- Backfilling shall conform to "Structure Backfill."
- Other details (anti-seep callars, valves, etc.) shall be as shown an the

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

- Materials Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation 6-361.
- Bedding All reinforced concrete pipe conduits shall be laid in a concrete bedding/cradie for their entire length. This bedding/cradie shall consist of high slump concrete placed under the pipe and up the side of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this stanard, Gravel bedding is not permitted.

- 3. Laying pipe Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Core shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet
- 4. Backfilling shall conform to "Structure Backfill."
- 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the
- Plastic Pipe The following criteria shall apply for pipe:
- 1. Materials PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4 - 10 inch pipe shall meet the requirements of AASHTO M252 Type 5, and 12" through 24" shall meet the requirements of AASHTO M294 Type 5.
- 2. Joints and connections to anti-seep collors shall be completely watertight.
- 3. Bedding The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with sultable earth compacted to provide adequate support.
- 4. Backfilling shall conform to Structure "Backfill".
- 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drakings.

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction

Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

CARE OF WATER DURING CONSTRUCTION

All wark on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, Install, aperate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the nork free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective morks shall be removed or leveled and graded to the extent required to prevent obstruction In any degree whatsoever of the flow of water to the spilling or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and campacting of material in required excavations, the mater level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillmay, spoil and borram areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the

accompanying drawings. EROSION AND SEDIMENT CONTROL

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be fallowed. Construction plans shall detail erosion and sediment control measures.

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

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.

dments , Apply 600 lbs. per acre 10-10-10 fertilizer (14

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 20, protect site by applying 2 tons per ocre of well anchored straw mulch and seed as soon a

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 210 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

PERMANENT SEEDING NOTES

Apply to graded or cleared oreas 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

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

Seeding : For the period March | thru April 30 and from August | 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 levegrass. During the period October 16 thru February 20, protect site by one of the following

- 1) 2 tons per acre of well-anchored mulch strow and seed as soon as possible in the spring.
- 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.) af Unrotted small grain strow immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 210 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. ar higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for accepting

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

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITY

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER, AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.

2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND

3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.

4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

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
- 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.

0.88 ACRES

1.01 ACRES

0.46 ACRES

7. SITE ANALYSIS:

TOTAL AREA OF SITE AREA DISTURBED AREA TO BE ROOFED OR PAVED AREA TO BE VEGETATIVELY STABILIZED TOTAL CUT

0.64 ACRES 3140 CF TOTAL FILL 246 CF OFFSITE WASTE AREA LOCATION TO HAVE ACTIVE GRADING PERMIT

- 8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF
- 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

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

<u> Pefinition</u> Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture cantent, low nutrient levels, low pH, materials tóxic 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.
- []. 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 sond. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardiess, 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 13" in diameter.
- Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistie, 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 soll amendments as specified in <u>20.0 Vegetative</u> Stabilization - Section I - Vegetative Stabilization Methods and Materials.
- III. For sites having disturbed areas over 5 acres:

dissipation of phyto-toxic materials.

formation of depressions or water pockets.

- 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 topsoll 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 neight. . Topsoil having soluble salt content greater than 500 parts per millión shall not be used. d. No sod or seed shall be placed on soll which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit
- 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.
- i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilizátion Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- ii. Grades on the areas to be topsolled, 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 irrequiarities in the surface resulting from topsolling or other operations shall be corrected in order to prevent the
- iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively met 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-YA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

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.

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.

6.21.04

DATE .

DATE

7/13/64

#B / DATE

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

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

DISTRICT.

APPROVED : FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND

DEVELOPMENT ENGINEERING DIVISION Defanett. CHIEF, DIVISION OF LAND DEVELOPMENT

DATE NO.

OWNER / DEVELOPER

MEADOWRIDGE PARCEL Q, LLC P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041

REVISION

MEADOWRIDGE BUSINESS PARK PARCEL Q

A RESTAURANT BUILDING AREA TAX MAP 43 PARCEL Q ZONED M-1 1st ELECTION DISTRICT

AS BUILT CERTIFICATION

DOMENICK W. COLANGELO #27200

SEDIMENT CONTROL NOTES

HOWARD COUNTY, MARYLAND

Patton Harris Rust & Associates, pc

Engineers. Surveyors. Planners. Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 **F** 410.997.9282

DESIGNED BY : C.J.R. DRAWN BY: DAM

PROJECT NO :12513/1-0/ENGR C400DET1.DWG DATE : JUNE 21, 2004

SCALE : AS SHOWN

CHRISTOPHER J. REID #19949

DATE

DRAWING NO. 7 OF 7