

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 - MISS UTILITY: 1-800-257-7777
 - VERIZON TELEPHONE COMPANY: 1-410-954-6281
 - HOWARD COUNTY BUREAU OF UTILITIES: 313-2366
 - AT&T CABLE LOCATION DIVISION: 983-3553
 - B.G.M.E. CO. CONTRACTOR SERVICES: 850-4620
 - B.G.M.E. CO. UNDERGROUND DAMAGE CONTROL: 787-4620
 - STATE HIGHWAY ADMINISTRATION: 531-5533
- SITE ANALYSIS:**
 - TOTAL AREA OF PARCEL A-2: 12.881 (PARCEL A-1: 10.381 AC. + P/O PARCEL 50: 2.500 AC.)
 - AREA OF ACCESS EASEMENT OF PROPOSED CONSTRUCTION: 0.46 AC.
 - PRESENT ZONING: NT (EMPLOYMENT CENTER) - INDUSTRIAL, FDP-142-A-II
 - LAND USE: HYBRID LIGHT INDUSTRIAL/OFFICE
 - AREA OF EX. BUILDING 1: 28,000 SF. (0.643 AC)
 - USE: INDUSTRIAL
 - AREA OF EX. BUILDING 2: 53,000 SF. (1.217 AC)
 - USE: INDUSTRIAL
 - AREA OF BUILDING 3: 36,410 SF. (0.836 AC) + (0.13 SF (0.04 AC) MEZZANINE
 - USE: INDUSTRIAL/OFFICE / CHURCH / SUNDAY SCHOOL CLASSES ONLY)
 - AREA OF BUILDING 4: 29,359 SF. (0.674 AC)
 - USE: INDUSTRIAL/OFFICE
 - EX. BUILDING 1 COVERAGE ON SITE: 0.643 AC. OR 4.99% OF GROSS AREA
 - EX. BUILDING 2 COVERAGE ON SITE: 1.217 AC. OR 9.45% OF GROSS AREA
 - BUILDING 3 COVERAGE ON SITE: 0.836 AC. OR 6.49% OF GROSS AREA
 - BUILDING 4 COVERAGE ON SITE: 0.674 AC. OR 5.23% OF GROSS AREA
 - TOTAL BUILDING COVERAGE ON SITE: 3.370 AC. OR 26.16% OF GROSS AREA
 - PAVED PARKING LOT/AREA WITHIN LOD: 2.91 AC. OR 22.71% OF GROSS AREA
 - AREA OF VEGETATION WITHIN LOD: 1.58 AC. OR 12.27% OF GROSS AREA
 - TOTAL IMPERVIOUS AREA: 8.50 AC. OR 65.99% OF GROSS AREA
 - LIMIT OF DISTURBED AREA: 6.00 AC. OR 46.58% OF GROSS AREA
 - CUT: 7,100 CY. FILL: 7,000 CY.
- PROJECT BACKGROUND:**
 - LOCATION: COLUMBIA, MD.; TAX MAP 42, BLOCK 11, PARCEL A-2
 - ZONING: NT
 - SUBDIVISION: E. G. U.
 - SECTION: 2
 - AREA: 6
 - TOTAL SITE AREA OF A-1 AND PARCEL 50: 56.71 AC.
 - FDP-142-A-1, WP-05-120, PLATS 8872-8876, FDP-12-A-II, F-07-007
 - DPZ REFERENCES: BA-743-C, ZB-918M, F-73-85C, SDP-74-21C, SDP-75-110C
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3,500 P.S.I.
- 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.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOIL TEST PRIOR TO CONSTRUCTION.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY FREDERICK WARD AND ASSOCIATES, DATED OCTOBER 2002. SUPPLEMENTAL TOPOGRAPHY BY ROBERT H VOGEL ENGINEERING, INC. DECEMBER 2004. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- ALL PAVING TO BE P-3 UNLESS OTHERWISE NOTED. GEOTECHNICAL ENGINEER TO CONFIRM PAVING SECTION PRIOR TO CONSTRUCTION. (SEE DETAILS, SHEET 4)
- ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD DETAIL 3.01 UNLESS OTHERWISE NOTED. (SEE DETAILS, SHEET 4)
- CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP RAMPS AND HANDICAP ACCESS IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
- WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN.
- ALL ELEVATIONS ARE TO FACE UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- PUBLIC WATER AVAILABLE THROUGH CONTRACT NO. 24-4364-D
- PUBLIC SEWER AVAILABLE THROUGH CONTRACT NO. C-482-D-S.
- STORMWATER MANAGEMENT QUALITY IS PROVIDED BY THE 2-PROPOSED UNDERGROUND SAND FILTER SYSTEMS AND 1-BIORETENTION FACILITY. THE PROPOSED STORMWATER MANAGEMENT FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED BY STONEWOOD BUSINESS CENTER.
- ALL EXTERIOR LIGHTING TO CONFORM TO SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS. (DETAIL ON SHEET 4)
- GEOTECHNICAL REPORT PREPARED BY HILLIS-CARNE ENGINEERING ASSOCIATES, INC., DATED MARCH 30, 2003.
- THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
- ANY EXISTING STREET TREES DAMAGED OR DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.
- THE SUBJECT PROPERTY IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS AS STATED IN THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.202.D(1)(a).
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$19,200.00 FOR THE REQUIRED 42 SHADE TREES AND 44 EVERGREEN TREE.
- TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP DATED AUGUST 11, 2003.
- ALL STORMWATER PIPE BEDDING IS TO BE CLASS "C".
- BUILDINGS TO HAVE INSIDE WATER METER SETTINGS.
- THIS PLAN IS SUBJECT TO MDE APPLICATION TRACKING NO. 03-NT-0309/200364995 DATED AUGUST 14, 2003. THE WETLANDS SHOWN HEREON WERE DELINEATED BY ENVIRONMENTAL SYSTEM ANALYSIS, INC. AUGUST 2, 2002; AND BY ECO-SCIENCE PROFESSIONAL, INC. DATED FEBRUARY 10, 2005.
- MINIMUM COVER OVER WATER LINES TO BE 4".
- CONTRACTOR TO MAINTAIN A MINIMUM 1" CLEARANCE AT ALL UTILITY CROSSINGS.
- THIS PLAN IS SUBJECT TO WAMER PETITION WP-05-120, APPROVED MARCH 7, 2006; TO SECTIONS:
 - a. 16.116(a)(1) TO PERMIT CLEARING, GRADING AND DEVELOPMENT WITHIN 25 FEET OF A WETLAND;
 - b. 16.116(a)(2) TO PERMIT CLEARING, GRADING AND DEVELOPMENT WITHIN 50 FEET OF AN INTERMITTENT STREAM IN A NON-RESIDENTIAL ZONING DISTRICT;
 - c. 16.144(a) and (c) and 16.144 (b) and (3) TO NOT REQUIRE THE SUBMISSION AND APPROVAL OF SKETCH AND PRELIMINARY PLANS FOR THE SUBDIVISION OF NON-RESIDENTIALLY ZONED PART OF TM PARCEL 50; AND
 - d. 16.102(C)(2) TO NOT REQUIRE THE PLATING OF THE RESIDUE OF TM PARCEL 50.
- APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE WOODED 50' STREAM BUFFER AND WOODED 25' WETLAND BUFFERS AT THE REAR OF THE SITE ON WHAT IS CURRENTLY PART OF TM PARCEL 50 SHALL NOT BE DISTURBED BY ANY CLEARING, GRADING OR DEVELOPMENT.
 - ANY REQUIRED 404/401 PERMIT/CERTIFICATE SHALL BE OBTAINED AND ITS/THEIR TRACKING NUMBER(S) SHALL BE NOTED ON SHEET 1 OF SDP-05-105.
 - THE ENCLOSED SDC COMMENT #4 OF 2/6/06 IS REQUIRED TO BE COMPLIED WITH ON SDP-05-105.
- THIS PLAN IS SUBJECT TO MDE TRACKING # 03-NT-0309/200364995

STONEWOOD BUSINESS CENTER

SITE DEVELOPMENT PLAN

PARCEL 'A-2'

E.G.U. SUBDIVISION

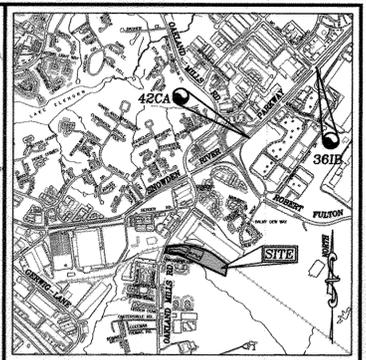
SECTION 2 / AREA 6

LEGEND

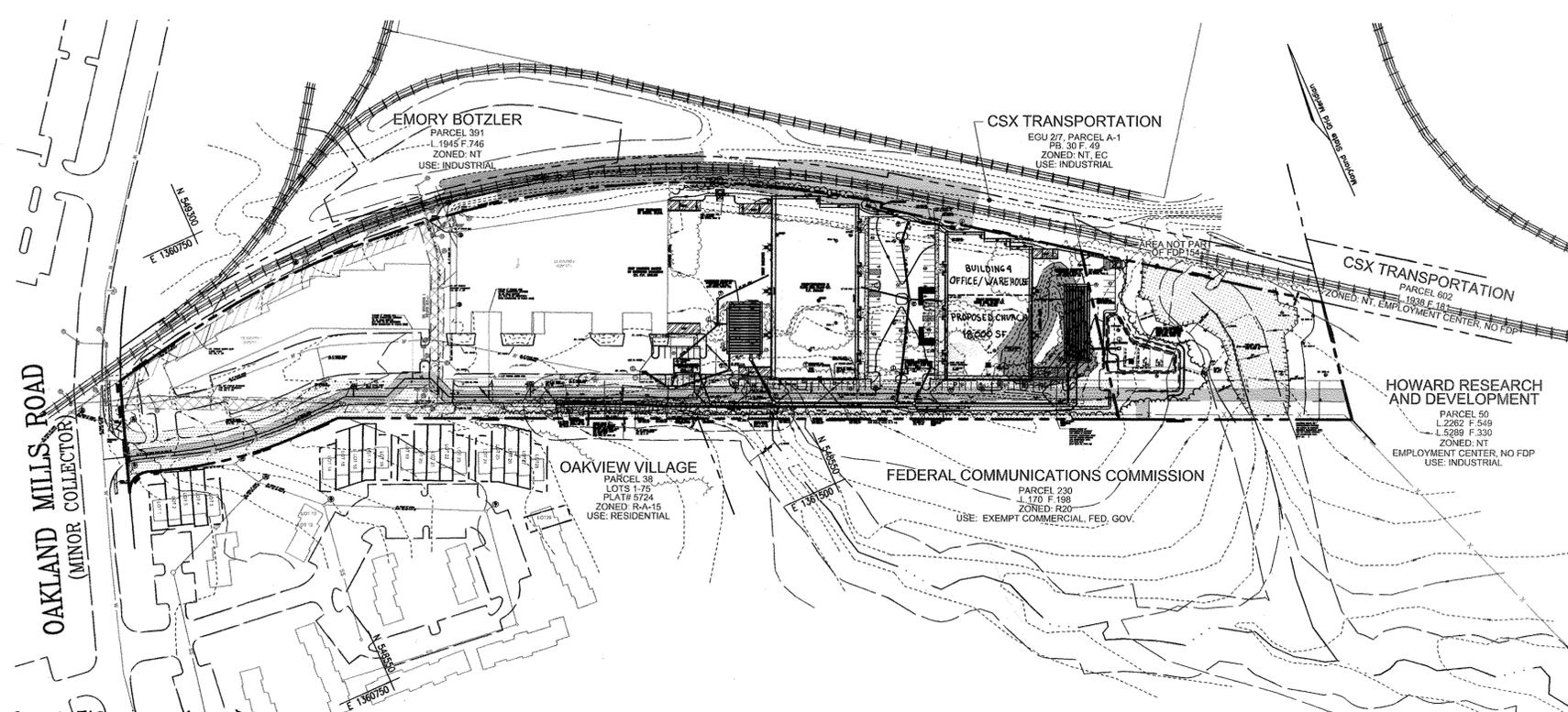
- Existing Contour: --- 82 --- 382
- Proposed Contour: - - - - -
- Existing Spot Elevation: 382.5
- Proposed Spot Elevation: +82.53
- Direction of Flow: →
- Existing Trees to Remain: [Tree Symbol]
- Light Poles: ○ Single Overhead, ○-○ Double Overhead
- Concrete: [Stippled Pattern]

BENCHMARKS

- HOWARD COUNTY BENCHMARK 42CA
N 551695.734 E 1362506.43 ELEV. 376.493
- HOWARD COUNTY BENCHMARK 361B
N 553348.652 E 1364085.211 ELEV. 386.424



VICINITY MAP
SCALE: 1"=2000'



LOCATION MAP
SCALE: 1"=100'

PARKING TABULATION (CONT'D)

EX. BUILDING #1	REQUIRED
DOG DAYCARE (11,041 SF) 4 EMPLOYEES + 4 CUSTOMERS	0 SPACES
DOG BOARDING (7,100 SF) 4 EMPLOYEES + 4 CUSTOMERS	0 SPACES
INDUSTRIAL CONTRACTOR (9,061 SF) 4 EMPLOYEES (OFFICE/WAREHOUSE) 1 SPACE PER 2 EMPLOYEE = 2 SPACES	2 SPACES
EX. BUILDING #2	
INDUSTRIAL CONTRACTOR (8,746 SF) 4 EMPLOYEES (OFFICE/WAREHOUSE) 1 SPACE PER 2 EMPLOYEE = 2 SPACES	2 SPACES
TRAMPOLINE GYM (3,854 SF) 5 SPACES PER 1,000 SF COURT AREA = 20 SPACES	20 SPACES
PLAY GYM (13,716 SF) 5 SPACES PER 1,000 SF PLAY AREA = 40 SPACES	40 SPACES

PARKING TABULATION (COMBINED PARKING TABULATION: SDP-74-21C AND SDP-05-105)

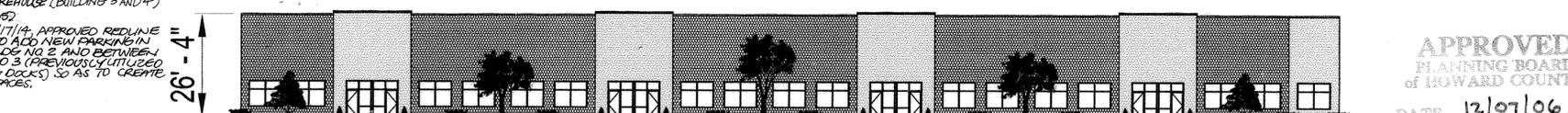
PER FDP-142-A-II, THE PARKING REQUIREMENTS ARE:

- OFFICE: 2 SPACES PER 1000 SF OF NET LEASE AREA
- INDUSTRIAL: 1 SPACE PER 2 EMPLOYEES
- COMMERCIAL/RETAIL SALES: 5 SPACES/1,000 SF OF NET LEASE AREA

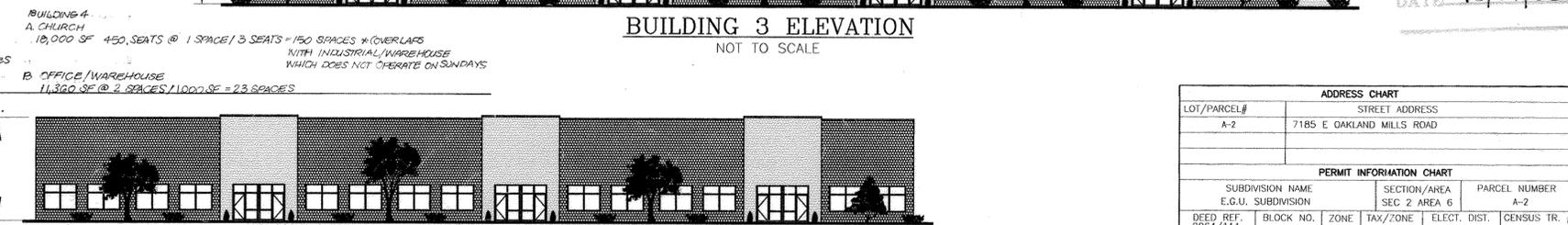
30. THE PERMITS 7/17/14, APPROVED REDLINE REVISIONS TO ADD NEW PARKING FRONT OF BLDG NO 2 AND BETWEEN BLDGS 2 AND 3 (PREVIOUSLY UTILIZED FOR LOADING DOCKS) SO AS TO CREATE 160 NEW SPACES.

31. BUILDING USE LIMITED TO 25% OFFICE AND 75% WAREHOUSE (BUILDING 3 AND 4)

32. THE PERMITS 7/17/14, APPROVED REDLINE REVISIONS TO ADD NEW PARKING FRONT OF BLDG NO 2 AND BETWEEN BLDGS 2 AND 3 (PREVIOUSLY UTILIZED FOR LOADING DOCKS) SO AS TO CREATE 160 NEW SPACES.



BUILDING 3 ELEVATION
NOT TO SCALE



BUILDING 4 ELEVATION
NOT TO SCALE

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 12/07/06

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
A-2	7185 E OAKLAND MILLS ROAD

PERMIT INFORMATION CHART					
SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER			
E.G.U. SUBDIVISION	SEC 2 AREA 6	A-2			
DEED REF.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR. #
2064/111	11	NT	42	6th	6067.03
PLAT REF.					
19110					
WATER CODE:	E06		SEWER CODE: 5201800		

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: [Signature] DATE 5/9/07

Chief, Division of Land Development: [Signature] DATE 5/16/07

Director: [Signature] DATE 5/21/07

SHEET INDEX

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RETAINING WALL PLANS	14 OF 14

NO.	REVISION	DATE
6	REVISE TO ADD HANDICAP LIFT SPACE AND AISLE	6/2/10
7	REVISE PLAN TO ADD PARKING IN FRONT OF BLDG 2 AND ASSOCIATED SWM, SHOW AS-BUILT SIDEWALK OF BLDG 2, SHOW AS-BUILT STORM DRAIN OF BLDG 2.	04-30-15

OWNER/DEVELOPER
STONEWOOD BUSINESS CENTER
GUILFORD I LIMITED PARTNERSHIP
11628 LOG JUMP TRAIL
ELLCOTT CITY, MARYLAND 21043
301-596-0222

6	REVISE PARKING TABULATION AND INTERNAL BLDG CONFIG	1/9/12
5	REVISE PLAN TO ADD 9,733 SF OF SUNDAY SCHOOL CLASSROOMS AND TO MEZZANINES TOTALING 1,613 SF	10/5/2011
4	ADD 1,050 SF MEZZANINE TO BUILDING #4	7/19/2010
2	REVISE THE PLAN TO CHANGE THE USE OF BUILDING #4 FROM OFFICE/WAREHOUSE TO OFFICE/WAREHOUSE AND A CHURCH	5-26-09
1	ADD GENERAL NOTE 37-BUILDING USE LIMITS	12-4-07

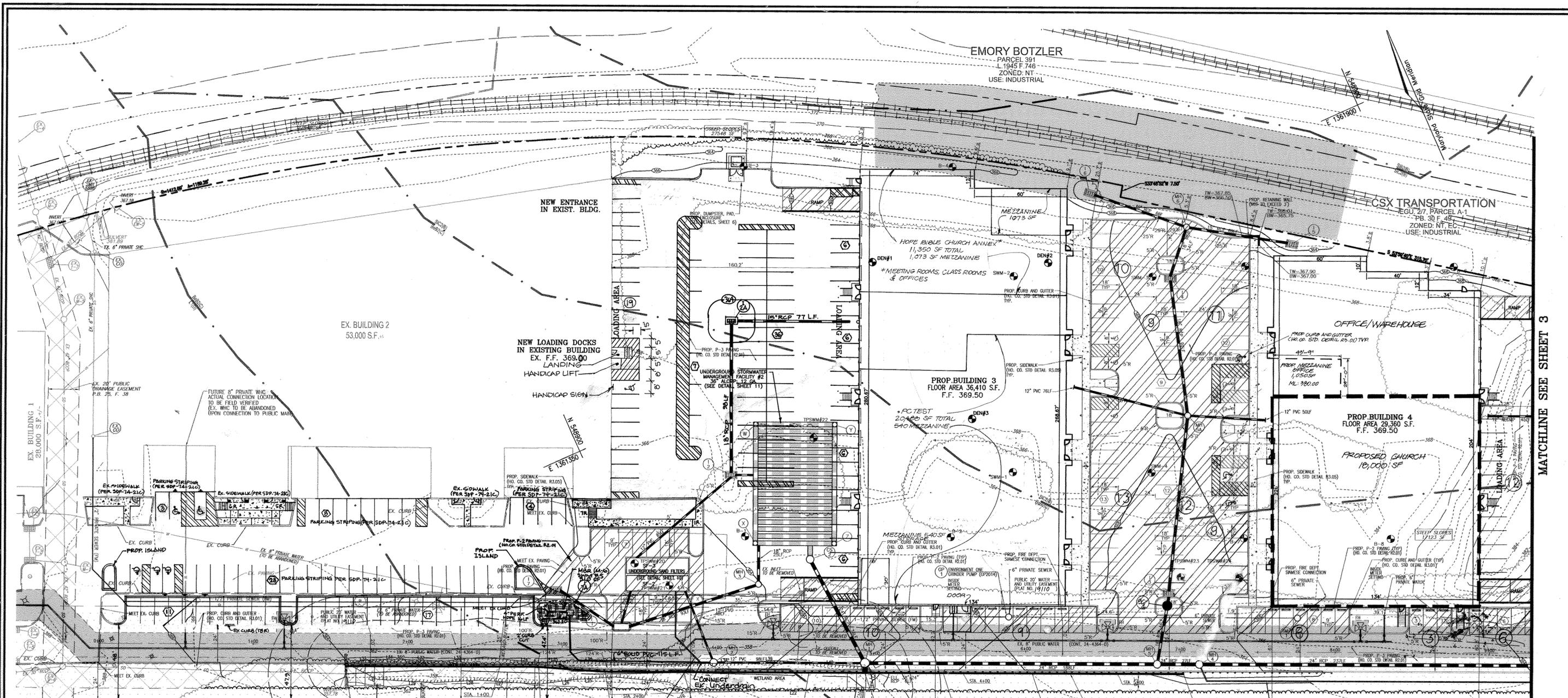
SITE DEVELOPMENT PLAN
COVER SHEET
STONEWOOD BUSINESS CENTER
PARCEL A-2- E.G.U. SUBDIVISION
SECTION 2 / AREA 6
TAX MAP 42 BLOCK 11
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

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

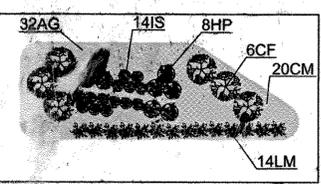


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DRAWN BY: DZ
CHECKED BY: WGZ
DATE: FEB. 2007
SCALE: AS SHOWN
W.O. NO.: 04-90

1 SHEET OF 14



MATCHLINE SEE SHEET 3



KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	NOTES
IS	183	IRIS SIBERICA 'BENNERUP BLUE' BENNERUP BLUE SIBERIAN	1 GALLON	12" O.C.
HP	111	HEMEROCALLIS 'PRAIRIE BLUE EYES' PRAIRIE BLUE EYES DAYLILY	1 GALLON	30" O.C.
LM	112	LIRIOPE MUSCARI 'BIG BLUE' BIG BLUE LILYTURF	4' HT	SPECIMEN QUALITY STRAIGHT LEADER
CF	40	CORNUS SERICEA 'FLAVIRAMEA' YELLOW TWIGGED DOGWOOD	4' HT	SPECIMEN QUALITY STRAIGHT LEADER
CM	494	CONVALLARIA MAJALIS LILY-OF-THE-VALLEY	1 QT.	12" O.C.
AG	656	ACORUS GRAMINEUS 'OGON' GOLDEN VARIATED SWEET FLAG	1 QT.	12" O.C.

NO.	STAKES REQUIRED	STAKES PROVIDED
1	310 SF	8

NO.	REVISION	DATE
8	REVISE TO ADD HANDICAP WET SPACE AND ISLAND	6/27/06
7	REVISE PLAN TO ADD PARKING IN FRONT OF BLDG 2 AND RECONFIGURE SWIMMING POOL	04-30-05
6	RE-BUILT SIDEWALK OF BLDG 2 AND AS-BUILT STORM DRAIN OF BLDG 3	

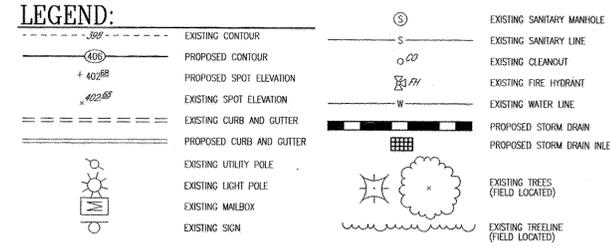
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Michael J. ... 5/9/07
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

David ... 5/16/07
 CHIEF, DIVISION OF LAND DEVELOPMENT

Marc ... 5/21/07
 DIRECTOR

NO.	REVISION	DATE
1	REVISE TO ADD HANDICAP WET SPACE AND ISLAND	6/27/06



STORMWATER MANAGEMENT FACILITY PRIVATELY OWNED AND MAINTAINED

APPROVED PLANNING BOARD OF HOWARD COUNTY
 DATE: 12/07/06

NO.	REVISION	DATE
6	REVISE INTERNAL BUILDING CONFIGURATION	11/9/2004
5	REVISE PLAN TO ADD 9,733 SF OF CHURCH SUNDAY SCHOOL CLASSROOMS AND TWO MEZZANINES TOTALING 11,613 SF	10/15/2004
4	ADD 1,050 SF MEZZANINE TO BUILDING #4	7/19/2005
3	REVISE USE OF BUILDING #4 TO OFFICE/WAREHOUSE AND CHURCH	5/20/07
2	REMOVE SANDFALTER SF-1 REPLACE WITH STORMCEPTOR	5-26-08
1		12/17/06

SITE DEVELOPMENT PLAN
 SITE LAYOUT PLAN

STONEWOOD BUSINESS CENTER
 PARCEL A-2- E.G.U. SUBDIVISION
 SECTION 2 / AREA 6

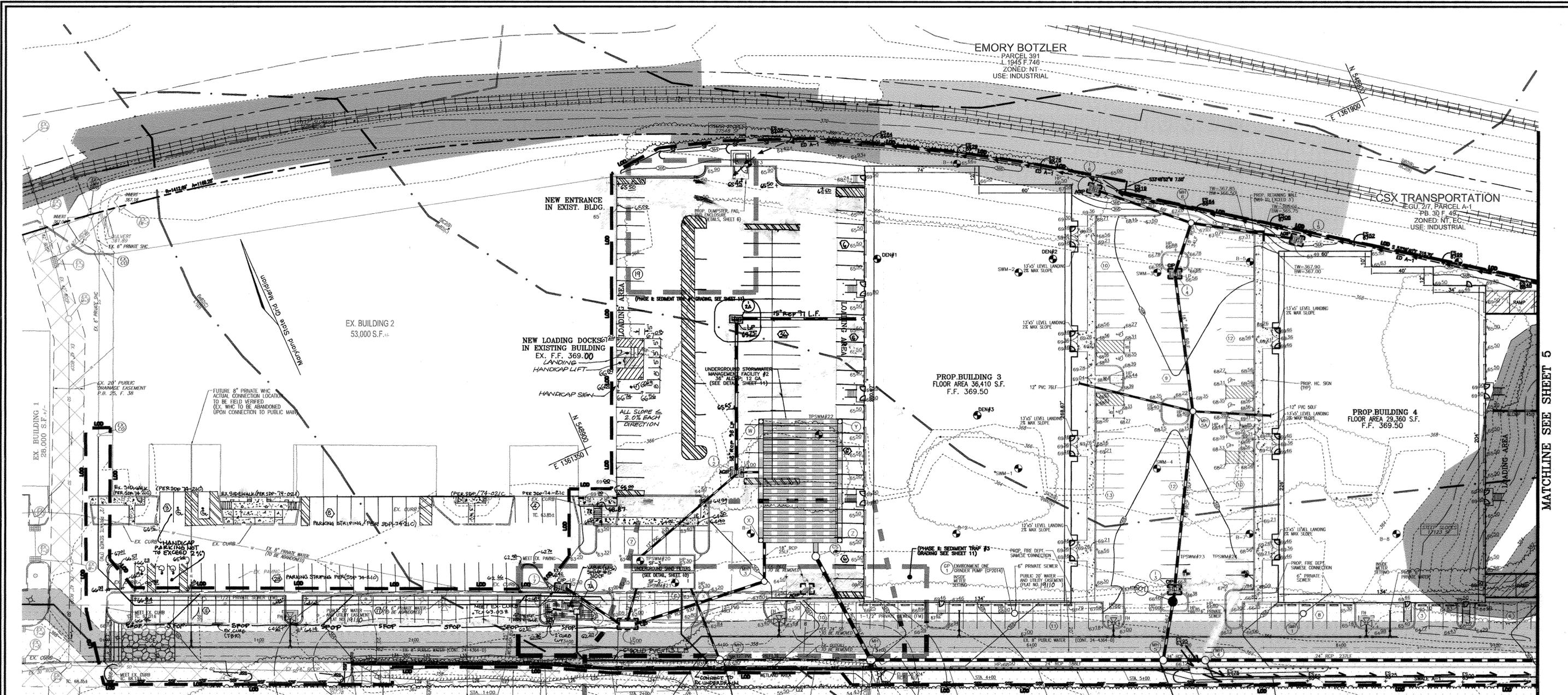
TAX MAP 42 BLOCK 11
 6TH ELECTION DISTRICT

PARCEL 'A-2'
 HOWARD COUNTY, MARYLAND

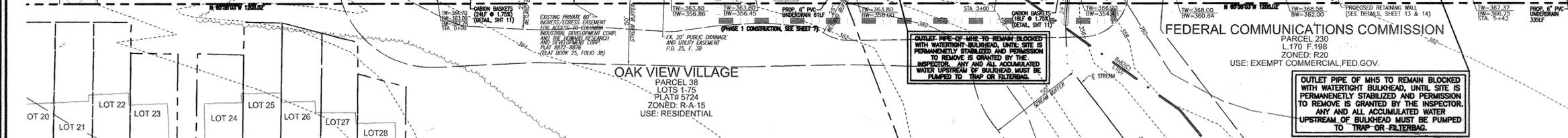
ROBERT H. VOGEL ENGINEERING, INC.
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 8407 MAIN STREET
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 DRAWN BY: DZ
 CHECKED BY: WJZ
 DATE: FEB. 2007
 SCALE: 1"=30'
 W.O. NO.: 04-90

2 SHEET OF 14



MATCHLINE SEE SHEET 5



REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

Jim Messer 5-4-07
DATE

Jeffrey W. Schomay 5-4-07
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chris Hamilton 5/16/07
DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

Mark A. Jaffe 5/16/07
DATE
DIRECTOR

**STORMWATER MANAGEMENT
FACILITY PRIVATELY OWNED
AND MAINTAINED**

BY THE DEVELOPER:

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

S. Bruce Jaffe 4/24/07
SIGNATURE OF 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.

Robert H. Vogel 4/24/07
SIGNATURE OF ENGINEER DATE

LEGEND:

---	EXISTING CONTOUR	---	EXISTING FIRE HYDRANT
- - -	PROPOSED CONTOUR	---	EXISTING WATER LINE
+	PROPOSED SPOT ELEVATION	---	PROPOSED STORM DRAIN
---	EXISTING SPOT ELEVATION	---	PROPOSED STORM DRAIN INLET
---	EXISTING CURB AND GUTTER	---	EXISTING TREES (FIELD LOCATED)
---	PROPOSED CURB AND GUTTER	---	EXISTING TREETRINE (FIELD LOCATED)
---	EXISTING UTILITY POLE	---	EXISTING VEGETATION (APPROXIMATE LOCATION)
---	EXISTING LIGHT POLE	---	EXISTING FENCE
---	EXISTING MAILBOX	---	PROPERTY LINE
---	EXISTING SIGN	---	RIGHT-OF-WAY LINE
---	EXISTING SANITARY MANHOLE	---	
---	EXISTING SANITARY LINE	---	
---	EXISTING CLEANOUT	---	

**APPROVED
PLANNING BOARD
OF HOWARD COUNTY**

DATE: 12/07/06

**SITE DEVELOPMENT PLAN
PHASE 3 GRADING, SEDIMENT
AND EROSION CONTROL PLAN**

STONEWOOD BUSINESS CENTER
PARCEL A-2- E.G.U. SUBDIVISION
SECTION 2 / AREA 6

TAX MAP 42 BLOCK 11 PARCEL 'A-2'
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERING, INC.**

ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET TEL: 410.461.7666
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DRAWN BY: DZ

CHECKED BY: WGZ

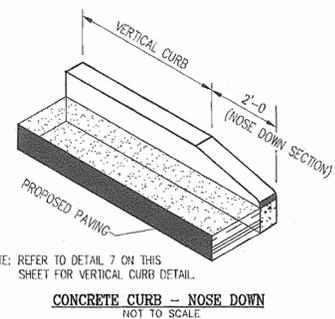
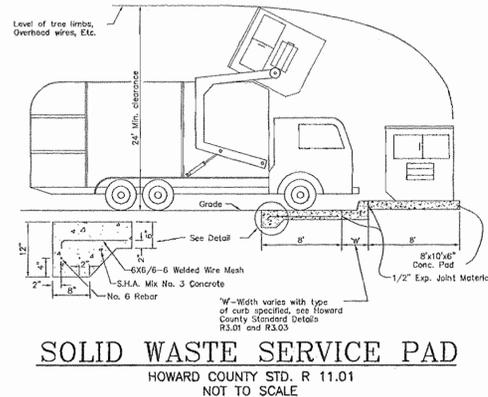
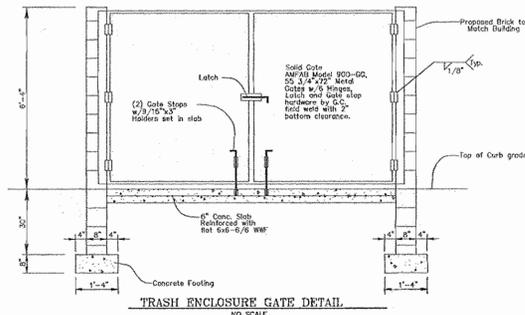
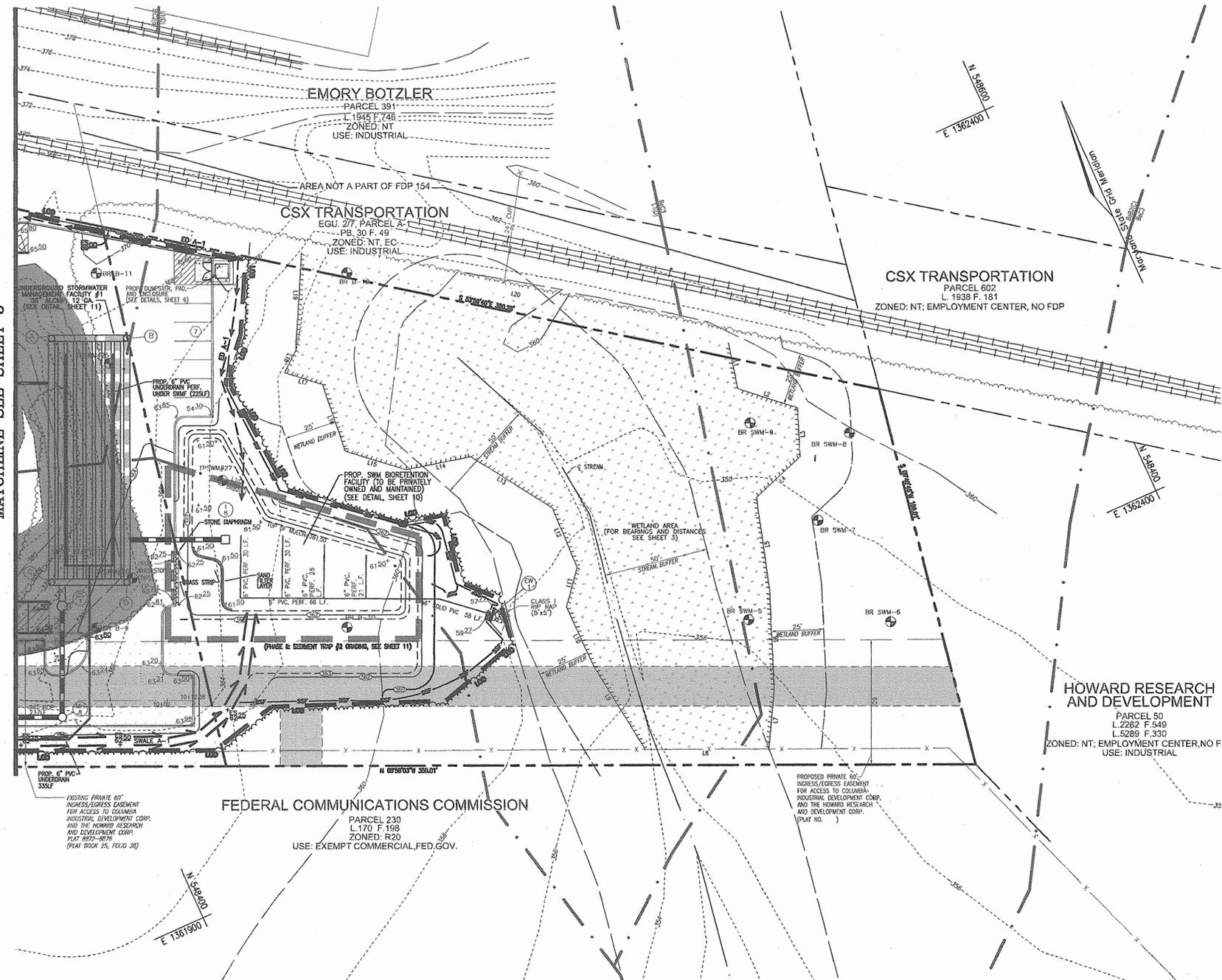
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4 SHEET OF 14

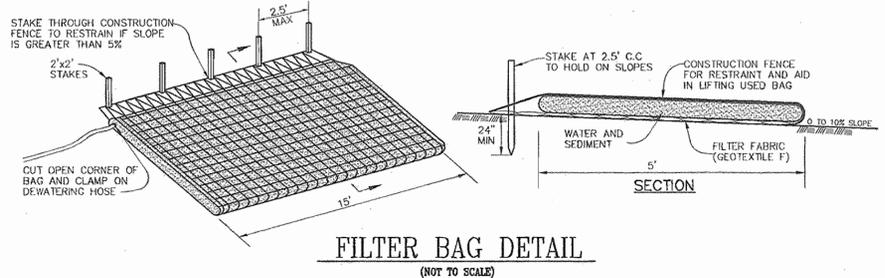
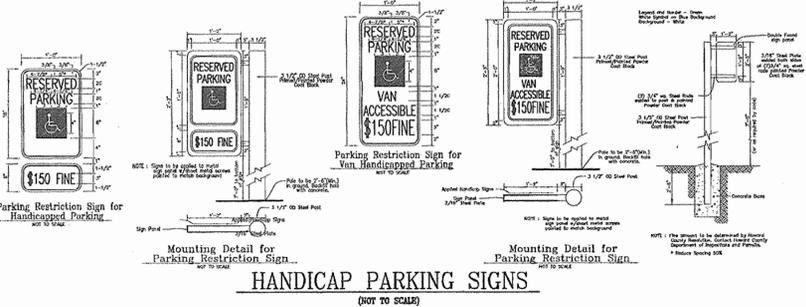
MATCHLINE SEE SHEET 5



- LEGEND:**
- - - - - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - + 40.25 PROPOSED SPOT ELEVATION
 - EXISTING SPOT ELEVATION
 - ==== EXISTING CURB AND GUTTER
 - ==== PROPOSED CURB AND GUTTER
 - ⊙ EXISTING UTILITY POLE
 - ⊙ EXISTING LIGHT POLE
 - ⊙ EXISTING MAILBOX
 - ⊙ EXISTING SIGN
 - ⊙ EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - PROPOSED STORM DRAIN
 - PROPOSED STORM DRAIN INLET
 - ⊙ EXISTING TREES (FIELD LOCATED)
 - ⊙ EXISTING TREELINE (FIELD LOCATED)
 - ⊙ EXISTING VEGETATION (APPROXIMATE LOCATION)
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - MID2 SOILS BOUNDARY
 - MID3 SOILS BOUNDARY
 - SF SILT FENCE
 - SSF SUPER SILT FENCE
 - LOD PHASE 3 LIMIT OF DISTURBANCE
 - PROPOSED SIDEWALK
 - AGIP AT GRADE INLET PROTECTION
 - CIP CURB INLET PROTECTION
 - STABILIZED CONSTRUCTION ENTRANCE

STORMWATER MANAGEMENT FACILITY PRIVATELY OWNED AND MAINTAINED

OWNER/DEVELOPER
STONEWOOD BUSINESS CENTER
GUILFORD I LIMITED PARTNERSHIP
11628 LOG JUMP TRAIL
ELLCOTT CITY, MARYLAND 21043



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division: *[Signature]* 5/19/07
 Chief, Division of Land Development: *[Signature]* 5/16/07
 Director: *[Signature]* 5/12/07

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.
 USA-NATURAL RESOURCES CONSERVATION SERVICE
 Jim Merwin 5-4-07
 DATE

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Geoffrey W. Schomins 5-4-07
 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.
 [Signature] 4/24/07
 DATE

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 12/07/06

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
PHASE 3 GRADING, SEDIMENT AND EROSION CONTROL PLAN
STONEWOOD BUSINESS CENTER
 PARCEL A-2 - E.G.U. SUBDIVISION
 SECTION 2 / AREA 6
 TAX MAP 42 BLOCK 11 PARCEL 'A-2'
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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



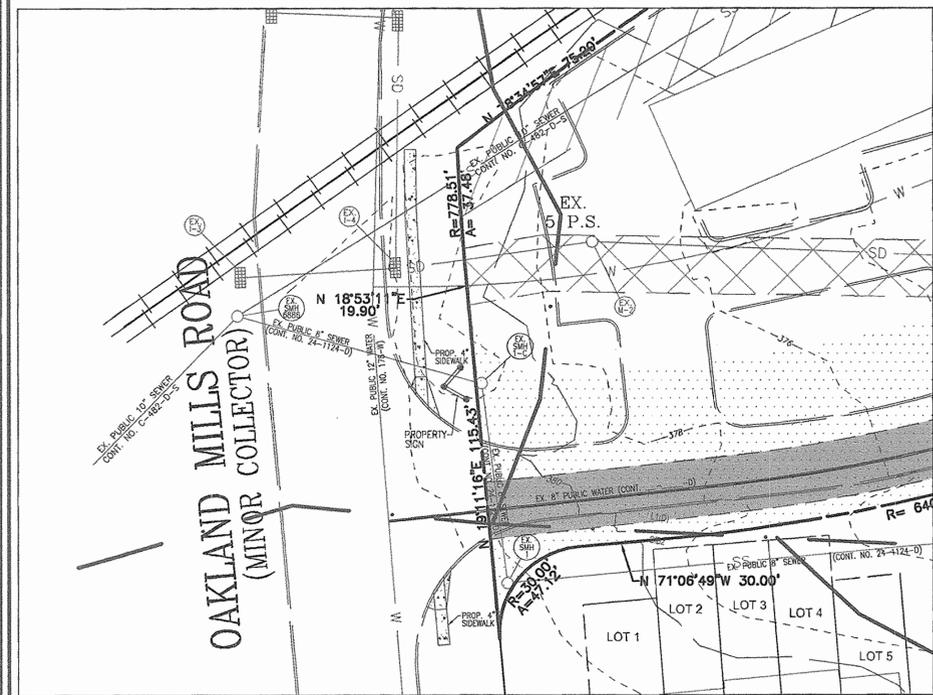
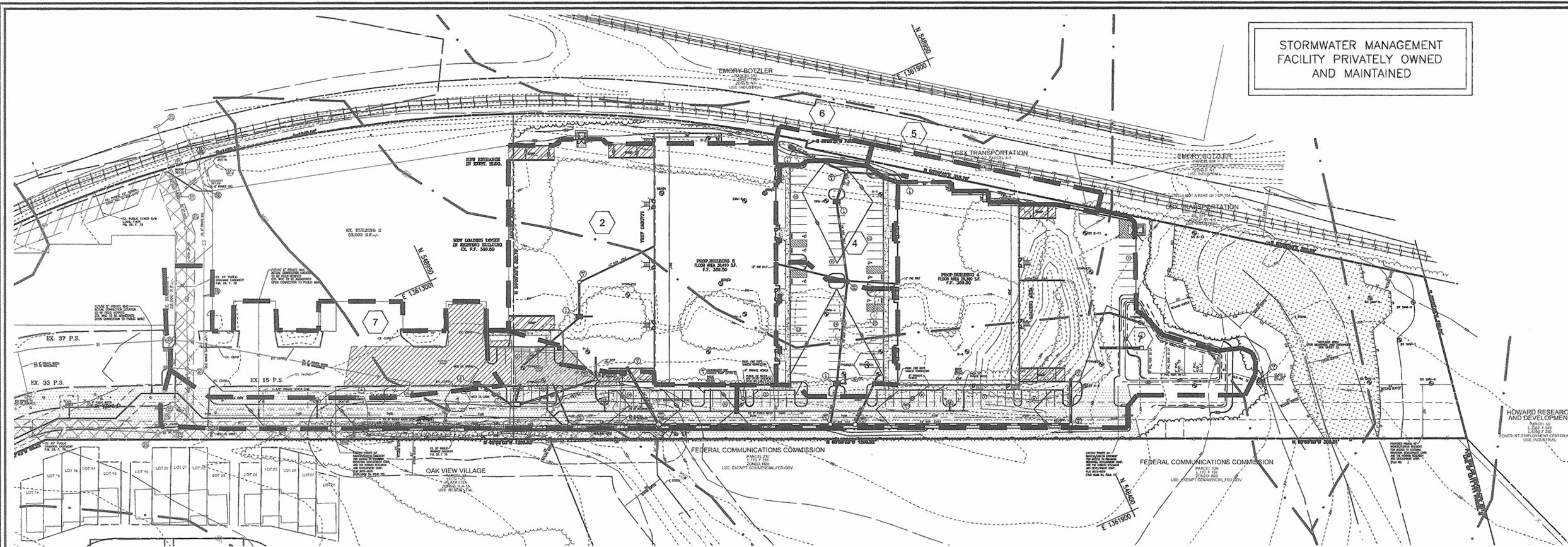
DESIGN BY: W.G.Z.
 DRAWN BY: D.Z.
 CHECKED BY: W.G.Z.
 DATE: FEB. 2007
 SCALE: 1"=30'
 W.O. NO.: 04-90

5 SHEET OF 14

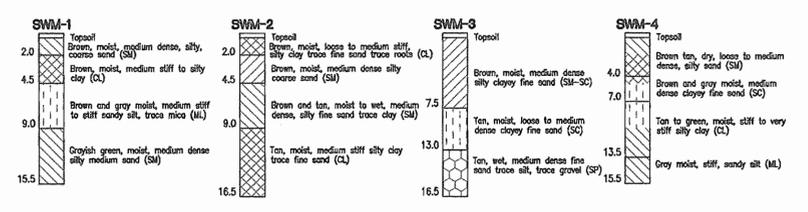
STORMWATER MANAGEMENT FACILITY PRIVATELY OWNED AND MAINTAINED

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
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- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING TREES (FIELD LOCATED)
- EXISTING TREELINE (FIELD LOCATED)
- EXISTING VEGETATION (APPROXIMATE LOCATION)
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED SIDEWALK
- STORM DRAIN AREA



PROPOSED SIDEWALK AT SITE ENTRANCE
SCALE: 1"=30'



TEST PIT DESIGNATION	EXISTING GROUND ELEVATION	DEPTH TO WATER/NO WATER
TPSWM-20	362.55	NO WATER @ 355.05*
TPSWM-21	361.83	WATER @ 356.13
TPSWM-22	366.99	NO WATER @ 354.19*
TPSWM-23	362.62	NO WATER @ 349.12*
TPSWM-24	363.00	NO WATER @ 350.25*
TPSWM-25	367.59	WATER @ 359.09, BOTTOM HOLE @ 358.26
TPSWM-26	368.88	NO WATER @ 353.88*
TPSWM-27	363.60	WATER @ 353.10

* BOTTOM OF TEST PIT

STORM WATER MANAGEMENT BORINGS AND TEST PITS

AREA AND 'C' FACTOR TABULATION

INLET	ZONING	SUBAREA	AREA(ac.)	'C' FACTOR	% IMPERVIOUS
I-1	NT	1	0.75	0.72	79
I-2	NT	2	1.14	0.78	89
I-3	NT	3	0.38	0.77	87
I-4	NT	4	0.49	0.66	72
I-5	NT	5	0.17	0.21	0
I-6	NT	6	0.07	0.21	0
I-7	NT	7	0.80	0.72	72
I-8	NT	8	1.91	0.86	72

SOIL DELINEATION

LABEL DESIGNATION	DESCRIPTION	CLASSIFICATION
BeB2	Beltville Silt Loam, 1 to 5% slopes, moderately eroded	C
LI	Leonardtown Silt Loam	D
SIC2	Sassafras Loam, 5 to 10% slopes, moderately eroded	B

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 12/07/06

OWNER/DEVELOPER
STONEWOOD BUSINESS CENTER
GUILFORD 1 LIMITED PARTNERSHIP
11628 LOG JUMP TRAIL
ELLCOTT CITY, MARYLAND 21043

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
STORMDRAIN DRAINAGE AREA MAP,
AND ENTRANCE SIDEWALK PLAN
STONEWOOD BUSINESS CENTER
PARCEL A-2- E.G.U. SUBDIVISION
SECTION 2 / AREA 6
TAX MAP 42 BLOCK 11 PARCEL 'A-2'
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

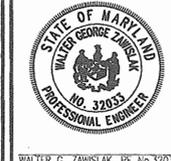
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELLCOTT CITY, MD 21043 FAX: 410.461.8961

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 3/2/07

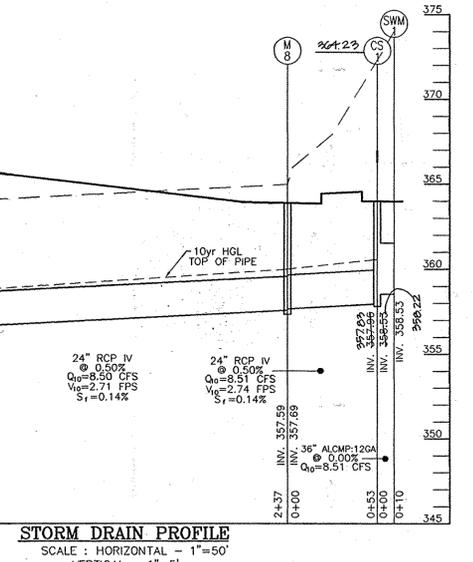
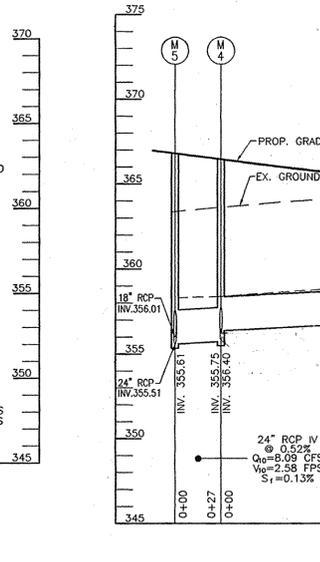
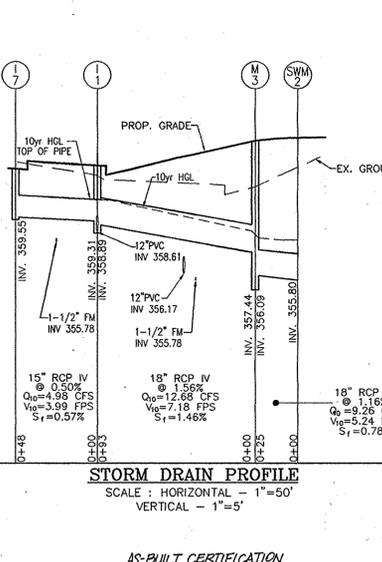
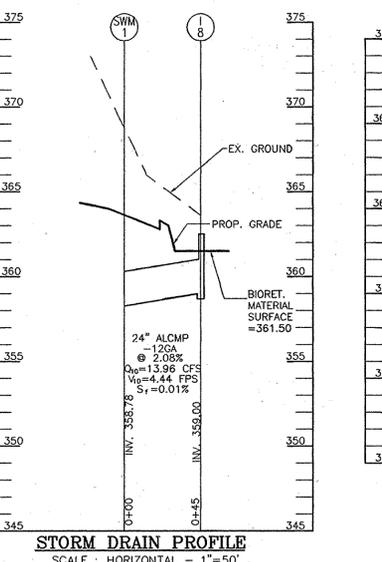
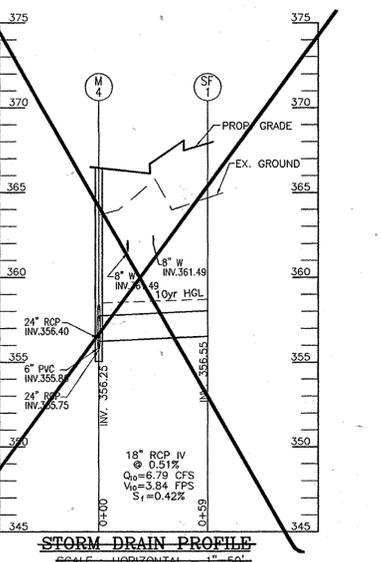
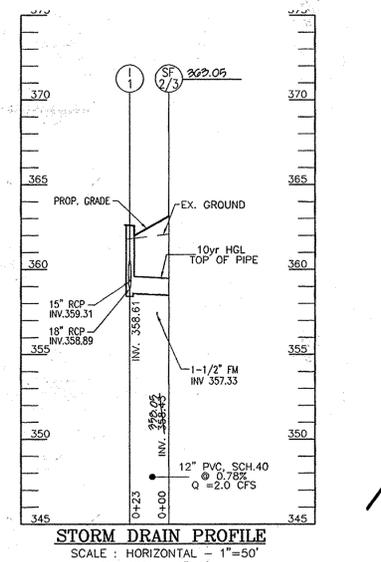
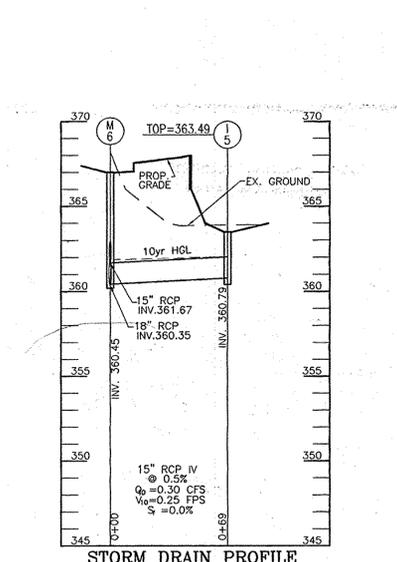
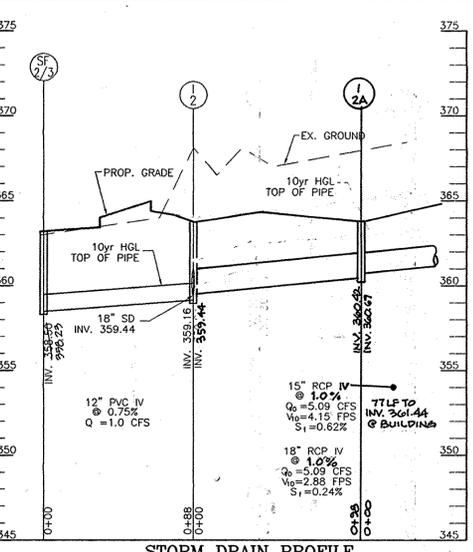
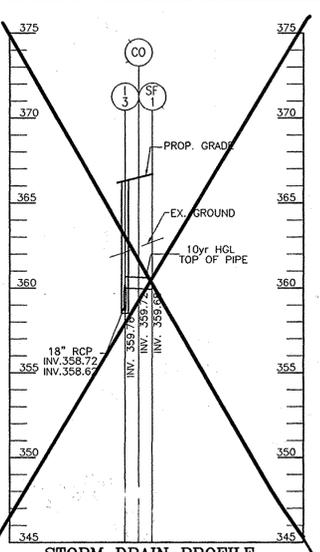
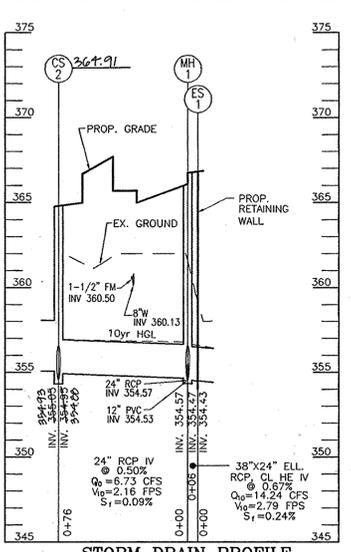
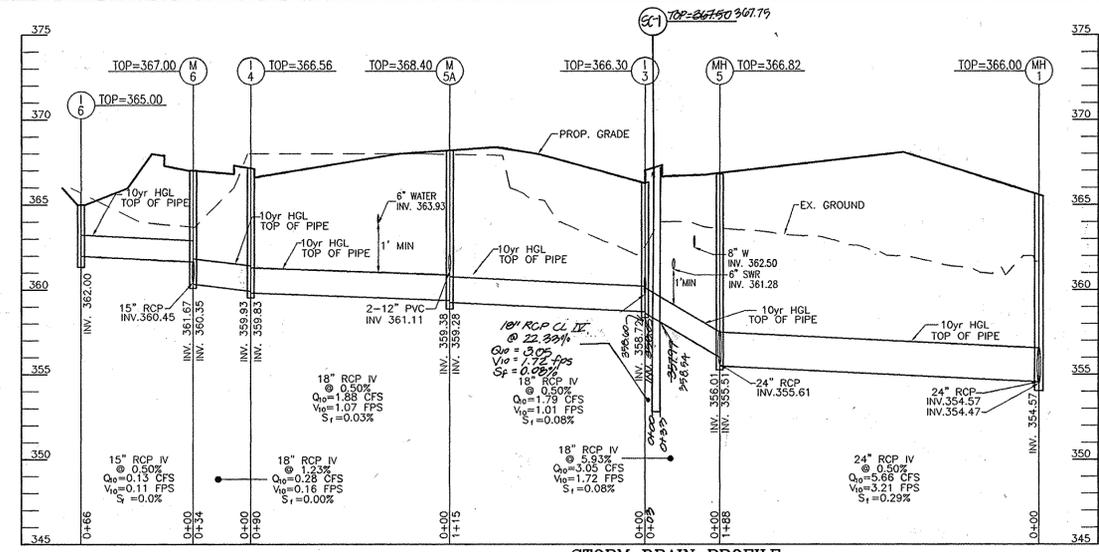
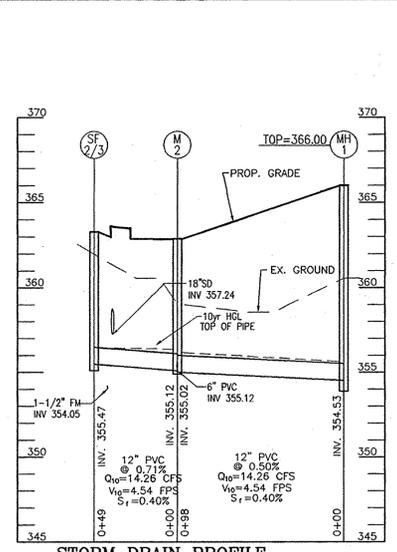
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 5/16/07

 DIRECTOR DATE 5/17/07



DESIGN BY: WGZ
 DRAWN BY: DZ
 CHECKED BY: WGZ
 DATE: FEB. 2007
 SCALE: 1"=50'
 W.O. NO.: 04-90

7 SHEET OF 14



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

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

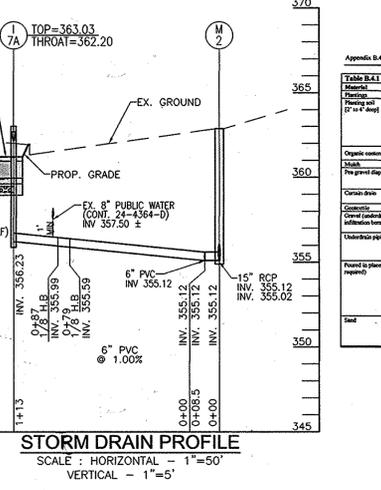
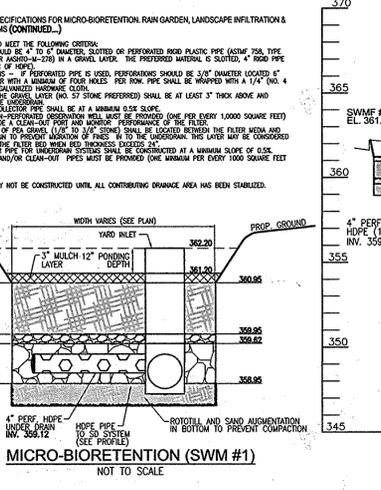
2. FILTERING MEDIA OR PLANTING SOIL
THE SOIL SHALL BE A MINIMUM 18" DEPTH OF STONES, GRAVEL, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 1/2" INCHES TO OTHER MATERIALS. SUBSTITUTES SHALL BE APPROVED BY THE OWNER. THE MICRO-BIORETENTION PRACTICES SHALL NOT BE CONSIDERED AS A SUBSTITUTE FOR THE MICRO-BIORETENTION PRACTICES. THE PLANTING SOIL SHALL BE FREE OF FERTILIZERS, CHEMICALS, PESTICIDES, OR OTHER TOXIC MATERIALS. THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING REQUIREMENTS:

- SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (SAND SOIL, TEXTURAL CLASSIFICATION)
- ORGANIC MATTER - MINIMUM 10% (AS MEASURED BY WEIGHT) IN ORIGINAL STATE. IT CAN BE MET WITH A MIXTURE OF LOAMY SAND (80%-85%) AND COMPOST (10% TO 15%) OR SANDY LOAM (LOAM, COARSE SAND) (LOAM AND COMPOST).
- CLAY CONTENT - MINIMUM SHALL BE A CLAY CONTENT OF LESS THAN 10%.
- PH VALUE - SHALL BE BETWEEN 5.5 - 7.0 (AS MEASURED BY pH). LIME, LIMONITE OR OTHER SOIL AMENDERS SHALL BE USED TO ADJUST THE PH VALUE TO THE RANGE OF 5.5 - 7.0.
- THESE SHALL BE AT LEAST ONE SOIL TEST PER PRACTICE. EACH TEST SHALL CONSIDER BOTH THE STANDARD SOIL TEST FOR PH AND ORGANIC MATTER. THE TEST SHALL BE CONDUCTED AT A MINIMUM DEPTH OF 18" (OR DEPTH OF SURFACE AREA).

3. CONSTRUCTION
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE DEPTH OF MICRO-BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXISTING BACKFILL TO RECONSTRUCT ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING EXISTING BACKFILL, THE CONTRACTOR SHALL USE THE BEST OF AVAILABLE EQUIPMENT OR EQUIPMENT WITH THE BEST USE OF EQUIPMENT WITH MINOR TRENCHING OR MINOR TRENCHING. THESE PRACTICES SHALL BE CONSIDERED AS A CONSTRUCTION PRACTICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES AND STRUCTURES.

4. PLANT MATERIAL
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A SECTION A.2.3.

5. PLANT INSTALLATION
RECOMMENDED PLANT MATERIAL SHOULD BE LESS THAN 18" IN HEIGHT AND SHOULD BE PLACED IN THE BARREL AND OTHER LOW AREAS WHICH SHOULD BE PLACED IN SUBSEQUENCE TO A UNIFORM THICKNESS OF 3" TO 4" OF SAND OR OTHER MATERIAL. THE PLANT MATERIAL SHOULD BE PLACED IN SUBSEQUENCE TO A UNIFORM THICKNESS OF 3" TO 4" OF SAND OR OTHER MATERIAL. THE PLANT MATERIAL SHOULD BE PLACED IN SUBSEQUENCE TO A UNIFORM THICKNESS OF 3" TO 4" OF SAND OR OTHER MATERIAL.



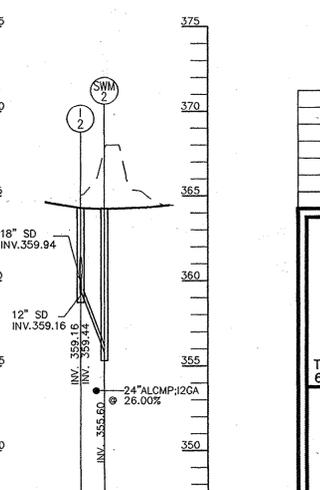
Appendix B.4.1 Material Specifications for Micro-BioRetention, Rain Gardens & Landscape Infiltration

Material	Specification	Notes
Gravel	ASTM D-4481	Washed, angular, 1/2" to 3/4" size
Filter fabric	ASTM D-4753	Non-woven, geotextile
Plant material	See Appendix A.2.3	Native, hardy, drought-tolerant
Soil	See Appendix B.4.C	Loamy sand or sandy loam

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THESE AS-BUILT PLANS WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT APPROVED PLANS AND SPECIFICATIONS.

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: 12/07/06



OWNER/DEVELOPER
STONWOOD BUSINESS CENTER
GUILFORD I LIMITED PARTNERSHIP
11628 LOG JUMP TRAIL
ELLCOTT CITY, MARYLAND 21043

REVISIONS

NO.	REVISION	DATE
7	REVISE PLAN TO ADD PARKING IN FRONT OF BLDG2 AND ASSOCIATED SWM; SWM	04-20-15
2	AS-BUILT SIDEWALK OF BLDG 2, SHOW AS-BUILT STORM DRAIN OF BLDG #2.	
2	REMOVE SAND FILTER (SF-1) REPLACE WITH STRONGFLO	12/17/06

SITE DEVELOPMENT PLAN
UTILITY PROFILES
STONWOOD BUSINESS CENTER
PARCEL A-2 - E.G.U. SUBDIVISION
SECTION 2 / AREA 6

TAX MAP 42 BLOCK 11
6TH ELECTION DISTRICT

PARCEL 'A-2'
HOWARD COUNTY, MARYLAND

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

DESIGN BY: W.G.Z.
DRAWN BY: D.Z.
CHECKED BY: R.H.V.
DATE: FEB. 2007
SCALE: 1"=30'
W.O. NO.: 04-90

8 SHEET OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5/16/07
DATE

5/16/07
DATE

5/16/07
DATE

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

5-4-07
DATE

5-4-07
DATE

BY THE DEVELOPER:

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

4/24/07
DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

4/24/07
DATE

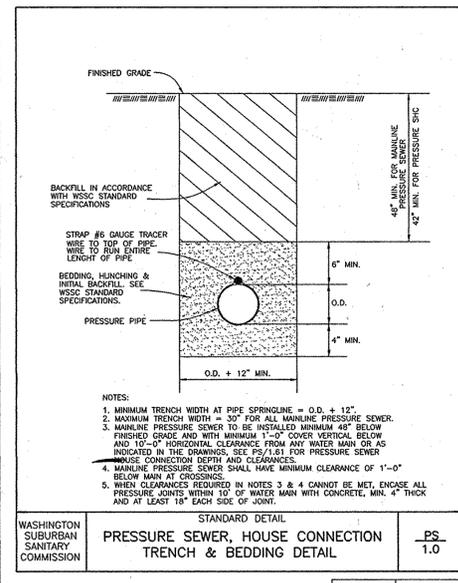
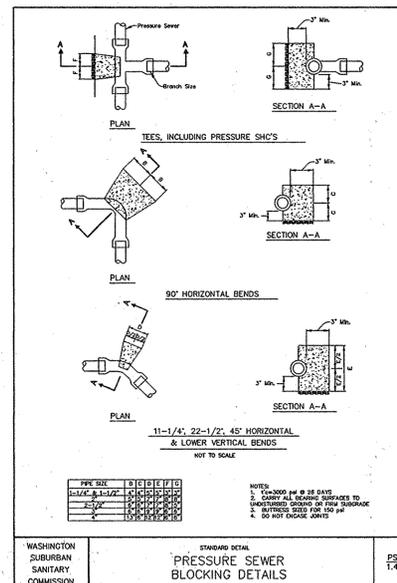
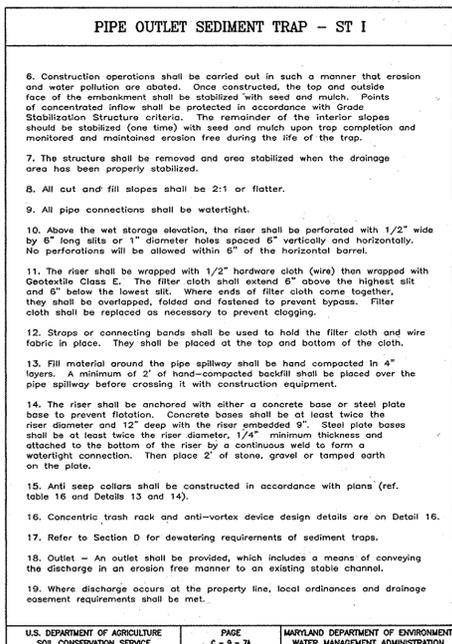
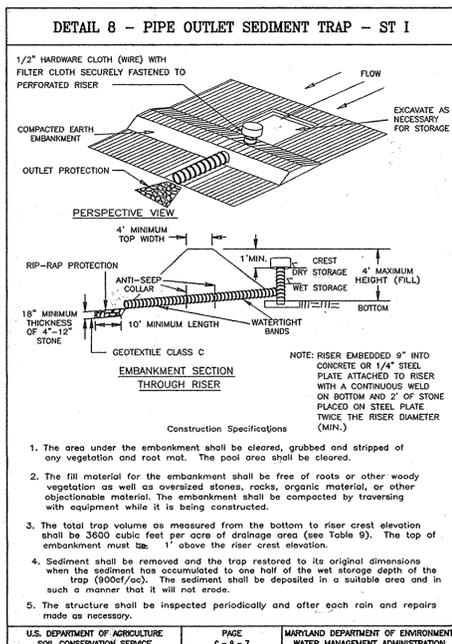
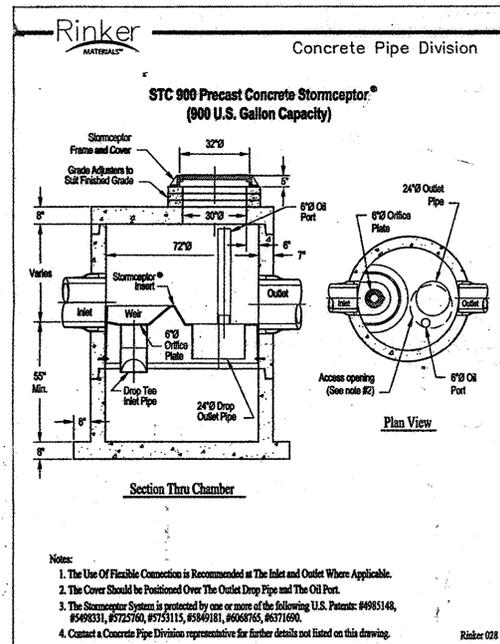
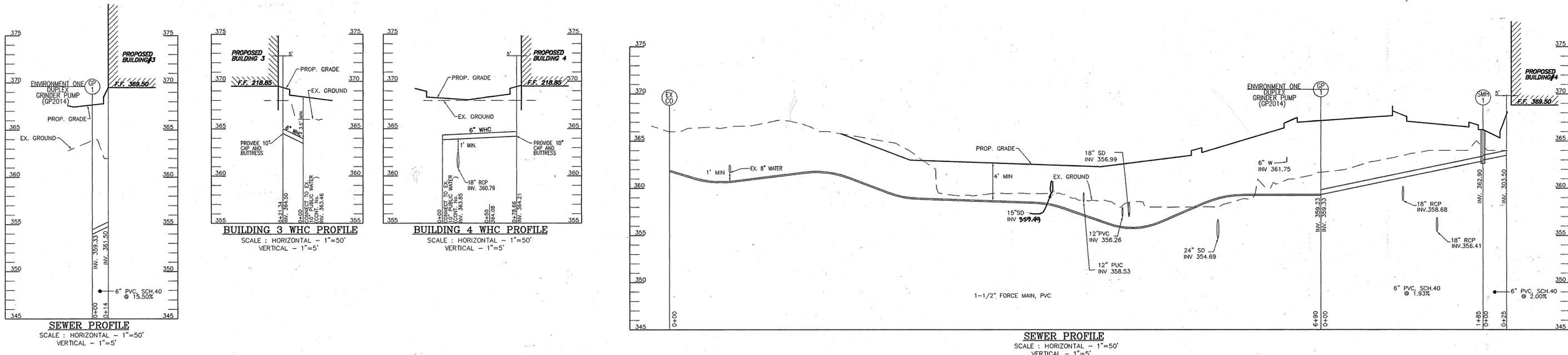
OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-8), RAIN GARDENS (M-7), BIORETENTION SWALES (M-5), AND ENHANCED FILTERS (M-9)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION ON WHICH ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND PESTS AND MAINTENANCE WILL ADDRESS SOIL MAINTENANCE. ACCESSIBLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 HANDBOOK FOR STORMWATER DESIGN MANUAL, VOLUME 8, TABLE A.1 AND 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 REPAIR. THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND REPAIR. THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND REPAIR.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PROPOSED MULCH LAYER SHALL REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONE (1) INCH OF MULCH AND AFTER EACH HEAVY STORM.
- SHOULD SYSTEM FAIL AND UPON DETERMINING FAILURE OF SYSTEM IS DUE TO PLANTING MEDIA, ALL PLANT MATERIAL WITHIN THE UNIT, INCLUDING TREES, SHALL BE REMOVED AND REPLACED.

STORM DRAIN PROFILE (12-SWM2)
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

AS-BUILT 4-7-2010

SDP-05-105



STATE OF MARYLAND
PROFESSIONAL BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: 12/07/06
OWNER/DEVELOPER
STONEWOOD BUSINESS CENTER
GUILFORD I LIMITED PARTNERSHIP
11628 LOG JUMP TRAIL
ELLCOTT CITY, MARYLAND 21043

NO.	REVISION	DATE
7	REVISE PLAN TO ADD PARKING IN FRONT OF BLDG. 2 AND ASSOCIATED SIGN; SHOW AS-BUILT SIDEWALK OF BLDG. 2; SHOW AS-BUILT STORM DRAIN OF BLDG. 3.	04/30/15
2	REMOVE SAND FILTER SF-1 REPLACE WITH STORMCEPTOR	11/17/06

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMCEPTOR WATER QUALITY DEVICE

- The Stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Stormceptor Inspection/Monitoring Form. Inspections shall be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When the sediment depths exceed the level specified in Table 6 of the Stormceptor Technical Manual, the unit must be cleaned.
- The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies.
- The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- The inlet and outlet pipes shall be checked for any obstructions at least once every six months. If obstructions are found the owner shall have them removed. Structural parts of the Stormceptor unit shall be repaired as needed.
- The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available to the Howard County officials upon their request.

*SEE SHEET 7 FOR COMPLETED STORMCEPTOR ORDER FORM.

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	COMMENTS
I-2A	DOUBLE 'S' INLET	N 548937 E 1361474	363.75	360.67	360.67	HO. CO. STD SD-4.23
I-7A	YARD INLET	N 548807 E 1361302	362.20	359.11	256.23	HO. CO. STD SD-4.14

SIZE	TYPE	LENGTH
1-1/2"	PVC, FORCE MAIN	690 LF
6"	PVC (SEWER)	224 LF
15"	RCP, CL IV	265 LF
18"	RCP, CL IV	499 LF
24"	RCP, CL IV	581 LF
38"x24"	HORZ. ELLIPT. RCP, CL. HE IV	6 LF
6"	PVC (SOLID)	165 LF
6"	PVC (PERFORATED)	264 LF
12"	PVC	264 LF
8"	PVC	35 LF

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	COMMENTS
I-1	TYPE 'A'-10" INLET (TWO-SIDED OPENINGS)	N 548785 E 1361329	362.00	359.31	359.31	HO. CO. STD SD-4.02
I-2	DOUBLE TYPE 'S' INLET	N 548846 E 1361433	364.00	359.94	359.94	HO. CO. STD SD-4.23
I-3	TYPE 'S' DBL. COMB. INLET (PARALLEL)	N 548662 E 1361661	366.30	358.72	358.72	HO. CO. STD SD-4.34
I-4	TYPE 'S' DBL. COMB. INLET (PARALLEL)	N 548847 E 1361744	366.56	359.93	359.93	HO. CO. STD SD-4.34
I-5	TYPE 'S' INLET	N 548835 E 1361838	363.49	360.79	360.79	HO. CO. STD SD-4.22
I-6	TYPE 'S' INLET	N 548918 E 1361718	365.00	362.00	362.00	HO. CO. STD SD-4.22
I-7	TYPE 'S' INLET	N 548824 E 1361300	362.30	359.55	359.55	HO. CO. STD SD-4.22
I-8	TYPE 'D' INLET	N 548561 E 1361984	363.33	359.00	359.00	HO. CO. STD SD-4.11
MH-1	72" DIAM. PRECAST MANHOLE	N 548701 E 1361464	366.00	354.47	354.47	MD 384.05
MH-2	4'-0" STANDARD PRECAST MANHOLE	N 548744 E 1361374	363.35	355.02	355.02	HO. CO. STD. G-5.12
MH-3	4'-0" STANDARD PRECAST MANHOLE	N 548775 E 1361421	363.80	357.44	357.44	HO. CO. STD. G-5.12
MH-4	60" DIAM. PRECAST MANHOLE	N 548612 E 1361661	366.47	355.75	355.75	MD 384.03
MH-5	4'-0" STANDARD PRECAST MANHOLE	N 548623 E 1361636	366.82	355.51	355.51	MD 384.03
MH-5A	4'-0" STANDARD PRECAST MANHOLE	N 548762 E 1361719	368.40	359.28	359.28	HO. CO. STD. G-5.12
MH-6	4'-0" STANDARD PRECAST MANHOLE	N 548873 E 1361767	367.00	360.35	360.35	HO. CO. STD. G-5.12
MH-7	4'-0" STANDARD PRECAST MANHOLE	N 548601 E 1361449	364.32	361.49	361.49	HO. CO. STD. G-5.12
MH-8	4'-0" STANDARD PRECAST MANHOLE	N 548515 E 1361878	363.65	357.69	357.69	HO. CO. STD. G-5.12
EW-1	TYPE 'C' ENDWALL (USE 12" SPECS)	N 548476 E 1362086	359.52	357.77	357.77	HO. CO. STD SD-5.21
GP-1	GP 2014 ENVIRONMENT ONE, DUPLEX GRINDER PUMP	N 548690 E 1361561	368.10	359.33	359.23	MD 384.03 (SEE SHT 11)
CS-1	CAST-IN-PLACE CONTROL STRUCTURE (SEE SHEET 11)	N 548564 E 1361900	364.31	358.39	357.38	MD 384.03 (SEE SHT 11)
CS-2	CAST-IN-PLACE CONTROL STRUCTURE (SEE SHEET 11)	N 548776 E 1361458	364.31	358.05	354.95	MD 384.03 (SEE SHT 11)
SMH-1	4'-0" STD PRECAST MANHOLE	N 548614 E 1361731	365.73	362.90	362.90	HO. CO. STD. G. S. 12.

NOTE:
1. Top elevations are of flowline for Type 'A'-10" and Double Type 'S' Comb. Inlets at center top of grate for Double Type 'S' Inlets and top of Manhole cover for Precast Manholes.
2. For top slab slopes see grading plan.
3. See Architectural plans for roof drain details.
4. All custom structures, including sand filters, to be designed by a structural engineer.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Michael Cunningham 5/19/07
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Cindy Hunt 5/16/07
 CHIEF, DIVISION OF LAND DEVELOPMENT
Parish K. Taylor 5/16/07
 DIRECTOR

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.
Jim Murray 5-4-07
 USA-NATURAL RESOURCES CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

BY THE DEVELOPER:
Andrew W. Schomay 5-4-07
 HOWARD S.C.D.

BY THE ENGINEER:
Robert H. Vogel, P.E.
 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.

SITE DEVELOPMENT PLAN
UTILITY PROFILES

STONEWOOD BUSINESS CENTER
PARCEL A-2 - E.G.U. SUBDIVISION
SECTION 2 / AREA 6

TAX MAP 42 BLOCK 11
6TH ELECTION DISTRICT

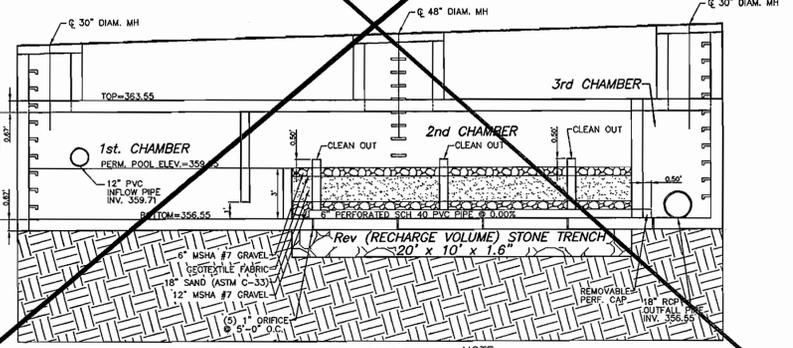
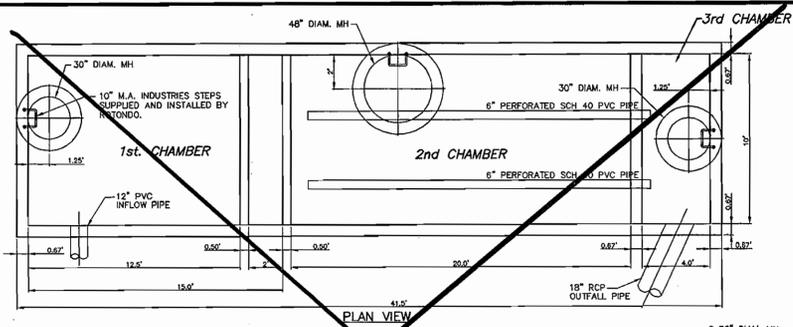
PARCEL 'A-2'
HOWARD COUNTY, MARYLAND

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

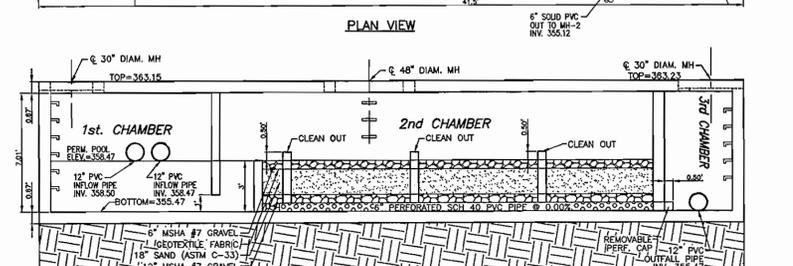
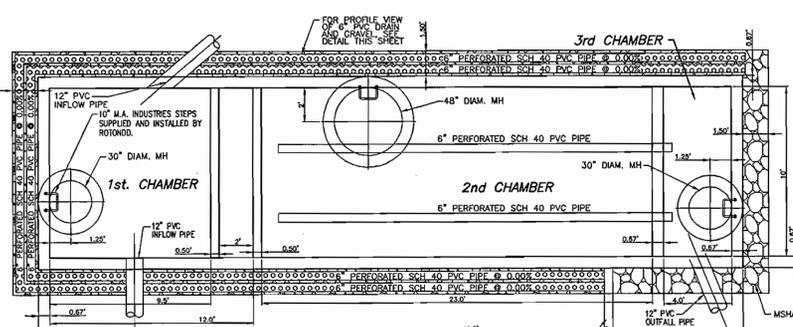
DESIGN BY: WJZ
DRAWN BY: DZ
CHECKED BY: RHV
DATE: FEB. 2007
SCALE: 1"=30'
W.O. NO.: 04-90

9 SHEET OF 14

AS-BUILT 4-7-2010



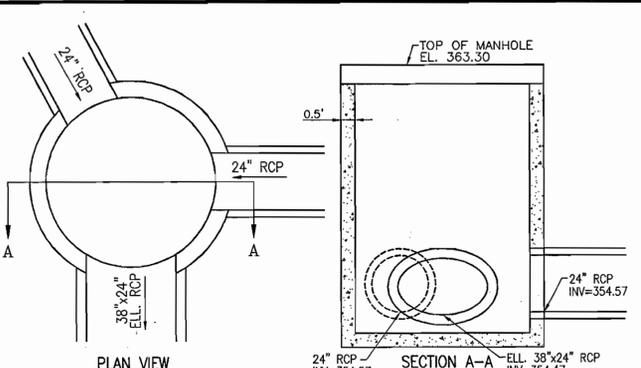
NOTE: SAND FILTER STRUCTURE MUST BE DESIGNED BY A STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.



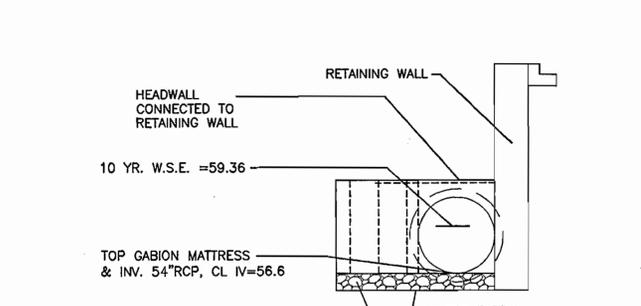
NOTE: SAND FILTER STRUCTURE MUST BE DESIGNED BY A STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND STORMWATER FILTRATION SYSTEM (F-2)

1. THE SEDIMENT CHAMBER OUTLET DEVICES SHALL BE CLEANED AND/OR REPAIRED WHEN DRAW-DOWN TIMES WITHIN THE CHAMBER EXCEED 36 HOURS.
2. DEBRIS AND LITTER SHALL BE REMOVED AS NECESSARY TO ENSURE PROPER OPERATION OF THE SYSTEM.
3. SEDIMENT SHALL BE CLEANED OUT OF THE SEDIMENTATION CHAMBER WHEN IT ACCUMULATES TO A DEPTH OF 6 INCHES. VEGETATION WITHIN THE SEDIMENT CHAMBER SHALL BE LIMITED TO A HEIGHT OF 18 INCHES.
4. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.
5. A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
6. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO ENSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
7. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

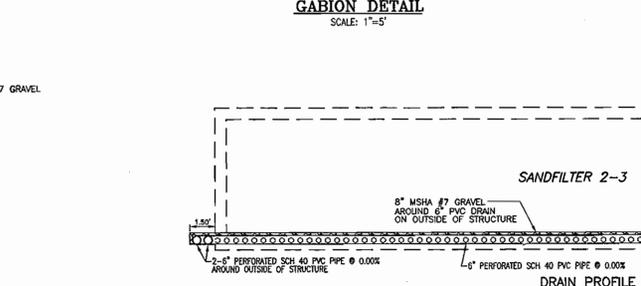


MH-1 (5'-0\"/>



GABION DETAIL
SCALE: 1\"/>

1. 3-GABION MATTRESSES TO BE CONSTRUCTED SIDE BY SIDE, @ 1.75% SLOPE, CONNECTED PER MANUFACTURER'S SPECIFICATIONS, AT 36\"/>
2. 4-GABION MATTRESSES TO BE CONSTRUCTED SIDE BY SIDE, @ 1.75% SLOPE, CONNECTED PER MANUFACTURER'S SPECIFICATIONS, BEGINNING AT EX. 54\"/>
3. CHAMFER ALL EXPOSED EDGES 1\"/>
4. FOR CONNECTION AND RETAINING WALL DESIGN, SEE RETAINING WALL SPECIFICATIONS.

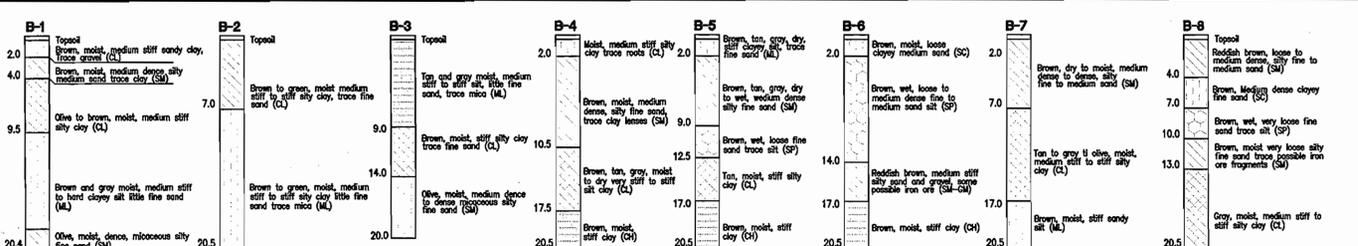


SECTION THROUGH SAND FILTER
SCALE: 1/2\"/>

OWNER/DEVELOPER
STONEWOOD BUSINESS CENTER
GUILFORD I LIMITED PARTNERSHIP
8600 SNOVICEN RIVER PARKWAY, #207
COLUMBIA, MARYLAND 21045
301-576-0222

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

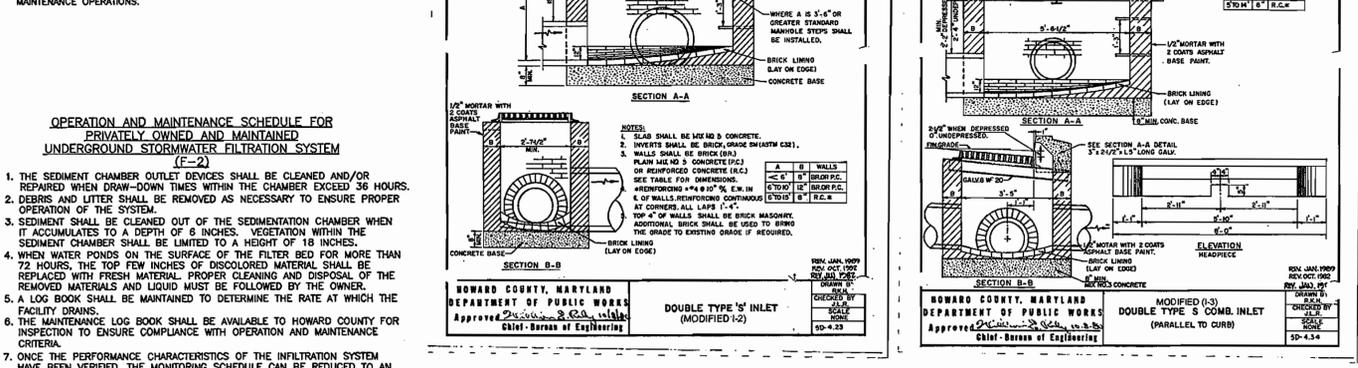
BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.



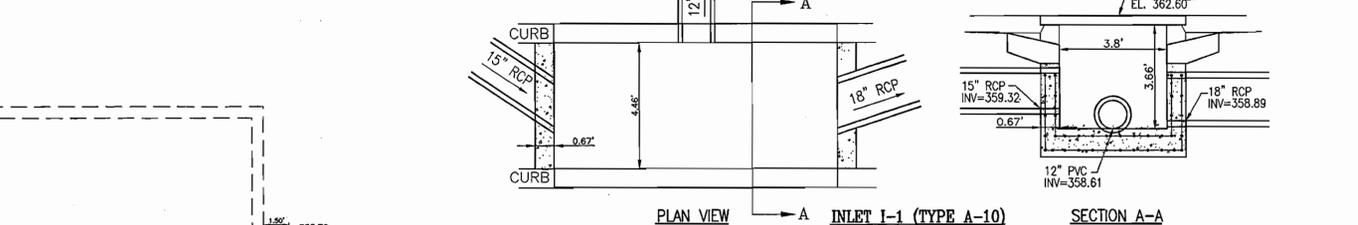
BUILDING BORINGS

UNDERGROUND SAND FILTER CONSTRUCTION SPECIFICATIONS

1. PROVIDE MANHOLE AND/OR GRATES TO ALL UNDERGROUND AND BELOW GRADE STRUCTURES. MANHOLES SHALL BE IN COMPLIANCE WITH STANDARD SPECIFICATIONS FOR EACH COUNTY, BUT DIAMETERS SHOULD BE 30\"/>
2. UNDERGROUND SAND FILTERS SHOULD BE CONSTRUCTED WITH A GATE VALVE LOCATED JUST ABOVE THE TOP OF THE FILTER BED FOR DEWATERING IN THE EVENT THAT CLOGGING OCCURS.
3. UNDERGROUND SAND BEDS SHALL BE PROTECTED FROM TRASH ACCUMULATION BY A WIDE MESH GEOTEXTILE SCREEN TO BE PLACED ON THE SURFACE OF THE SAND BED. SCREEN IS TO BE ROLLED UP, REMOVED, CLEANED AND RE-INSTALLED DURING MAINTENANCE OPERATIONS.

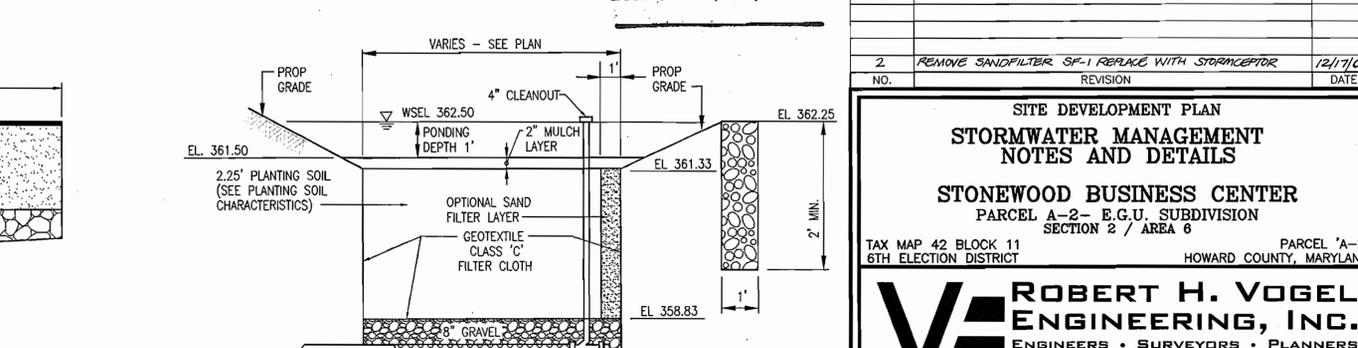


SECTION A-A
SECTION B-B



INLET I-1 (TYPE A-10)
SCALE: 1\"/>

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE 12/07/06



DETAIL - BIORETENTION AREA
NOT TO SCALE

NOTE: DEBRIS IS TO BE KEPT OUT OF STORMWATER MANAGEMENT FACILITIES DURING AND AFTER CONSTRUCTION.

NO.	REVISION	DATE
2	REMOVE SANDFILTER SP-1 REPLACE WITH STORMCEPTOR	12/17/06

SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT NOTES AND DETAILS
STONEWOOD BUSINESS CENTER
PARCEL A-2- E.G.U. SUBDIVISION
SECTION 2 / AREA 6

TAX MAP 42 BLOCK 11
6TH ELECTION DISTRICT

PARCEL 'A-2'
HOWARD COUNTY, MARYLAND

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

DESIGN BY: WGW
DRAWN BY: DZ
CHECKED BY: WGW
DATE: FEB. 2007
SCALE: AS SHOWN
W.D. NO.: 04-90

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

3/2/07
5/16/07
5/17/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION
CHIEF, DIVISION OF LAND DEVELOPMENT
DIRECTOR

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

USDA-NATURAL RESOURCES CONSERVATION SERVICE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

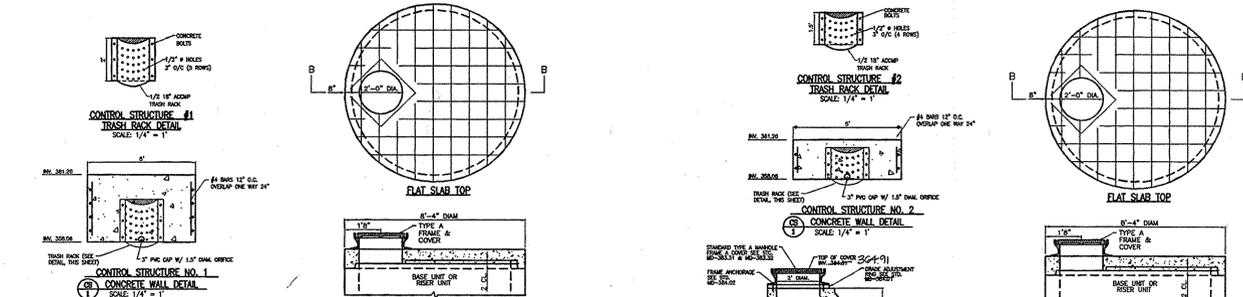
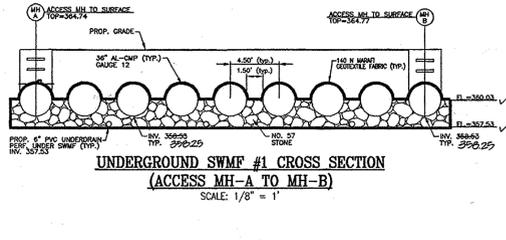
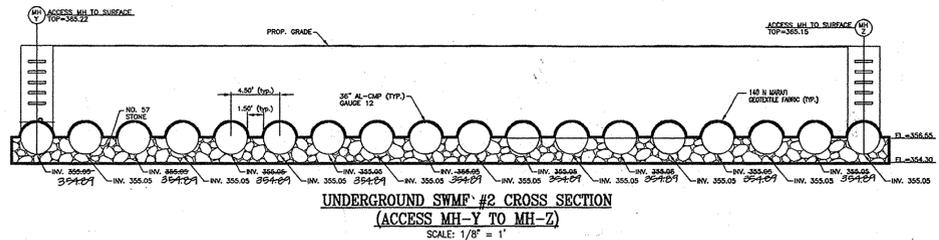
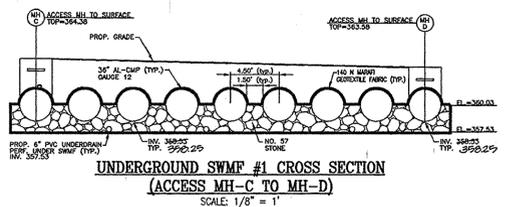
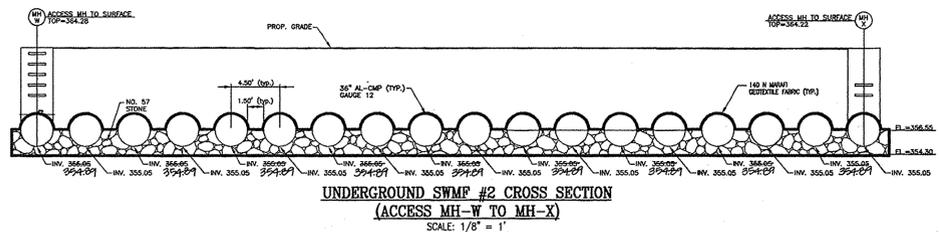
HOWARD S.C.D.

DATE 3/2/07

SIGNATURE OF DEVELOPER

DATE 3/2/07

SIGNATURE OF ENGINEER
WALTER G. ZAWISLAK, P.E.

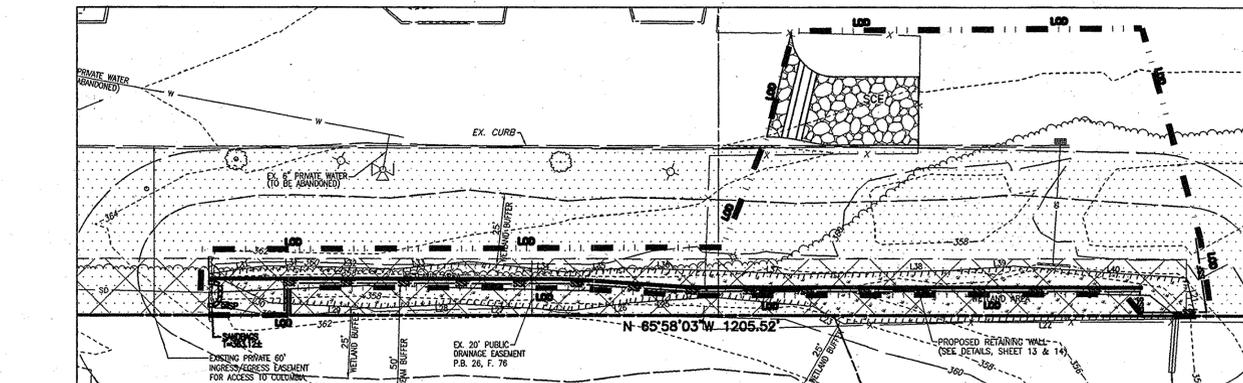


CONTROL STRUCTURE NOTES:

- MANHOLE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASHRAE 109.
- CONCRETE SHALL BE 4000 P.S.I.
- REINFORCEMENT FOR BASE UNITS AND RISER UNITS SHALL BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.2 IN²/IN FOR THE 4" DIAMETER MANHOLES. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 95.
- BASE REINFORCEMENT TO BE REINFORCEMENT BARS OR WELDED WIRE FABRIC WITH A MINIMUM AREA OF 0.2 IN²/IN. THE BASE SHALL BE CAST MONOLITHIC WITH THE BASE UNIT ON JOINTS FOR MANUFACTURERS DESIGN.
- THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEaled BY THE CONTRACTOR AND MADE WATER-TIGHT USING AN APPROVED RUBBER GASKET OR OTHER APPROVED METHOD.
- LADDER RINGS SHALL BE INSTALLED IN VERTICAL ALIGNMENT AT 1'-0" MAXIMUM C/C. RINGS SHALL BE WELDED TO THE COST OF THE MANHOLE.
- WELDED STEEL RINGS SHALL BE USED IN THE BASE UNIT OR ANY RISER UNIT.
- IF THE USE OF AN ALUMINUM LADDER IS REQUIRED IN THE FIELD AND SHALL SLOPE 1" PER FOOT TOWARD OUTLET OR AS DIRECTED BY THE ENGINEER.
- THE TOP OF THE LADDER SHALL BE 10'-0" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER. VERTICAL DEPTH FROM THE TOP OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER, VERTICAL DEPTH FROM THE TOP OF THE MANHOLE COVER TO THE TOP OF THE MANHOLE COVER SHALL INCLUDE ALL RISERS IN EXCESS OF 10'-0" TO THE COST OF THE OWNER. STONE LANDING, NO. 57 AGGREGATE GRAVEL, SOLE, AND ALL NECESSARY APPURTENANCES SHALL BE INCORPORATED TO THE PRICE BID.
- MINIMUM DEPTH FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER SHALL BE 10'-0" MEASURED FROM THE BOTTOM OF THE BASE UNIT TO THE TOP OF THE MANHOLE COVER. VERTICAL DEPTH FROM THE TOP OF THE MANHOLE COVER TO THE TOP OF THE MANHOLE COVER SHALL INCLUDE ALL RISERS IN EXCESS OF 10'-0" TO THE COST OF THE OWNER. STONE LANDING, NO. 57 AGGREGATE GRAVEL, SOLE, AND ALL NECESSARY APPURTENANCES SHALL BE INCORPORATED TO THE PRICE BID.

CS-1 CAST-IN-PLACE SWM CONTROL STRUCTURE MD SHA STD. 384.03 SCALE: 1/4" = 1'

CS-2 CAST-IN-PLACE SWM CONTROL STRUCTURE MD SHA STD. 384.03 SCALE: 1/4" = 1'

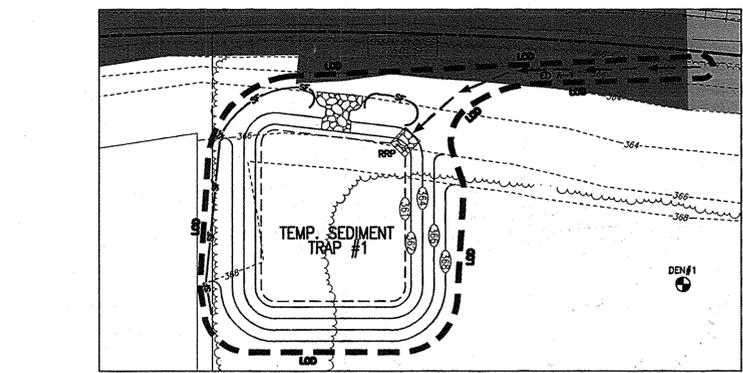
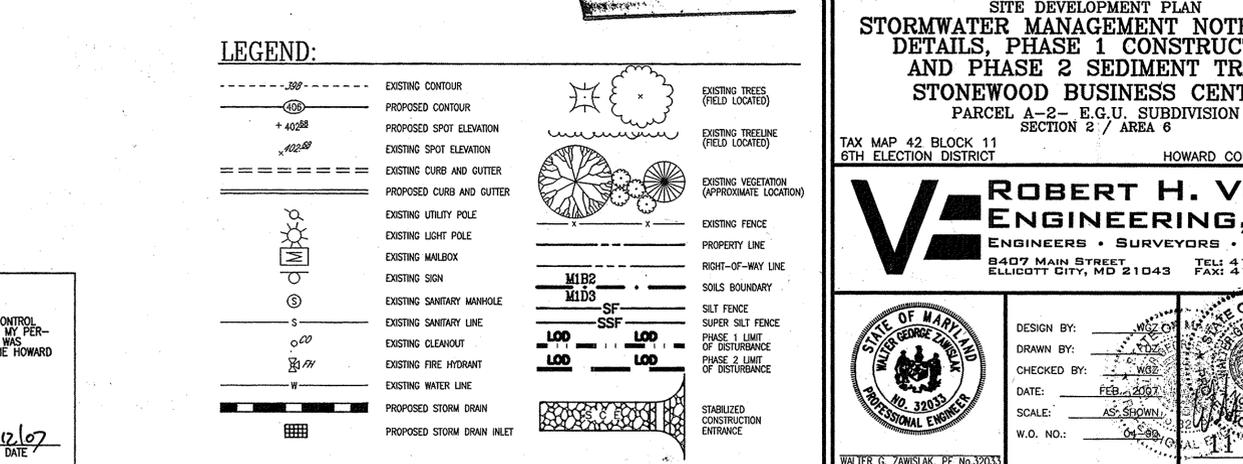


IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES:

WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 6b, 6c)
CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 6b)
SOUTHERN MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7a, 7b)

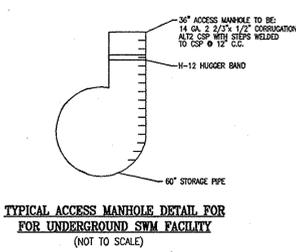
OWNER/DEVELOPER:
STONEWOOD BUSINESS CENTER
GUILDFORD LIMITED PARTNERSHIP
8000 SHANNON RIVER PARKWAY, 207
COLUMBIA, MARYLAND 21045
301-596-0222

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: 12/07/06

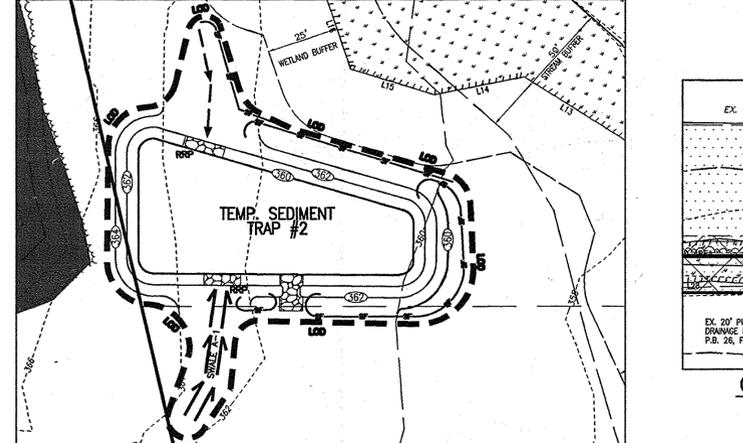


TEMP. SEDIMENT TRAP #1

D.A. = 1.76 AC.
WET STORAGE REQUIRED = 3168 CF.
WET STORAGE PROVIDED = 3168 CF.
WET STORAGE EL. = 362.03
DRY STORAGE REQUIRED = 3168 CF.
DRY STORAGE PROVIDED = 7458 CF.
WEIR WIDTH = 6'
TOP OF DAM = 365.00
BOTTOM TRAP DIM. = 50'x60'
BOTTOM OF TRAP EL. = 361.00
WEIR CREST EL. = 364.00
TOTAL STORAGE DEPTH = 3'
SIDE SLOPES = 2:1
C/O EL. = 361.51



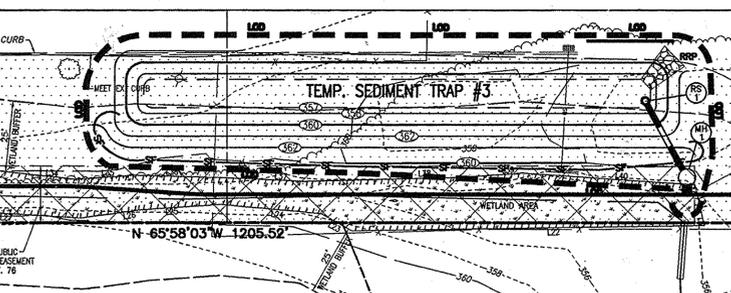
GRADING FOR TEMP. SEDIMENT TRAP #1 (PHASE 2)
SCALE: 1" = 30'



GRADING FOR TEMP. SEDIMENT TRAP #2 (PHASE 2)
SCALE: 1" = 30'

TEMP. SEDIMENT TRAP #2

D.A. = 1.28 AC.
WET STORAGE REQUIRED = 2304 CF.
WET STORAGE PROVIDED = 2304 CF.
WET STORAGE EL. = 360.59
DRY STORAGE REQUIRED = 2304 CF.
DRY STORAGE PROVIDED = 5491 CF.
WEIR WIDTH = 8'
TOP OF DAM = 362.50
BOTTOM TRAP DIM. = 95'x35'
BOTTOM OF TRAP EL. = 360.00
WEIR CREST EL. = 361.50
TOTAL STORAGE DEPTH = 2'
SIDE SLOPES = 2:1
C/O EL. = 360.30



GRADING FOR TEMP. SEDIMENT TRAP #3 (PHASE 2)
SCALE: 1" = 30'

Table B.1: Temporary Seeding for Site Stabilization

Plant Species	Seeding Rate ^{1/2}		Seeding Depth (inches)	Recommended Seeding Dates by Plant Hardiness Zone ^{2/3}			
	lb/ac	lb/1000 ft ²		5b and 6a	6b	7a and 7b	
Annual Ryegrass (<i>Lolium perenne</i> spp. multivarium)	40	1.0	0.5	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Burley (<i>Hordeum vulgare</i>)	96	2.2	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Oats (<i>Avena sativa</i>)	72	1.7	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Wheat (<i>Triticum aestivum</i>)	120	2.8	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Central Rye (<i>Secale cereale</i>)	112	2.8	1.0	Mar 15 to May 31; Aug 1 to Oct 31	Mar 1 to May 15; Aug 1 to Oct 31	Feb 15 to Apr 30; Aug 15 to Oct 15	
Forstia Millet (<i>Setaria italica</i>)	30	0.7	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14	
Pearl Millet (<i>Pennisetum glaucum</i>)	20	0.5	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14	

TEMP. PIPE OUTLET SEDIMENT TRAP #3

D.A. = 3.25 AC.
WET STORAGE REQUIRED = 5850 CF.
WET STORAGE PROVIDED = 5850 CF.
WET STORAGE EL. = 359.12
DRY STORAGE REQUIRED = 5850 CF.
DRY STORAGE PROVIDED = 7940 CF.
TOP OF DAM = 362.00
BOTTOM TRAP DIM. = 10'x17.5'
BOTTOM OF TRAP EL. = 357.00
TOTAL STORAGE DEPTH = 5'
SIDE SLOPES = 2:1
RISER DIAM. (RS-1) = 24"
TRASH RACK DIAM. = 36"
BARREL DIAM. = 21"
INV. OF BARREL @ RS-1 = 357.37
INV. @ MH-1 = 354.57

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 3/26/07

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 5/12/07

DIRECTOR
DATE: 5/12/07

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

BY THE DEVELOPER:
DATE: 3/26/07

BY THE ENGINEER:
DATE: 3/26/07

DATE: 3/26/07

NOTE: DEBRIS IS TO BE KEPT OUT OF STORMWATER MANAGEMENT FACILITIES DURING AND AFTER CONSTRUCTION.

NO.	REVISION	DATE
1	REVISE PLAN TO ADD PARKING IN FRONT OF BLDG 2 AND ASSOCIATED SWM; SHOW AS-BUILT SIDEWALK OF BLDG 2, SHOW AS-BUILT STORM DRAIN OF BLDG 3.	04-30-15

SITE DEVELOPMENT PLAN STORMWATER MANAGEMENT NOTES AND DETAILS, PHASE 1 CONSTRUCTION, AND PHASE 2 SEDIMENT TRAPS - STONEWOOD BUSINESS CENTER

PARCEL A-2 - E.G.U. SUBDIVISION
SECTION 2 / AREA 6

TAX MAP 42 BLOCK 11
6TH ELECTION DISTRICT

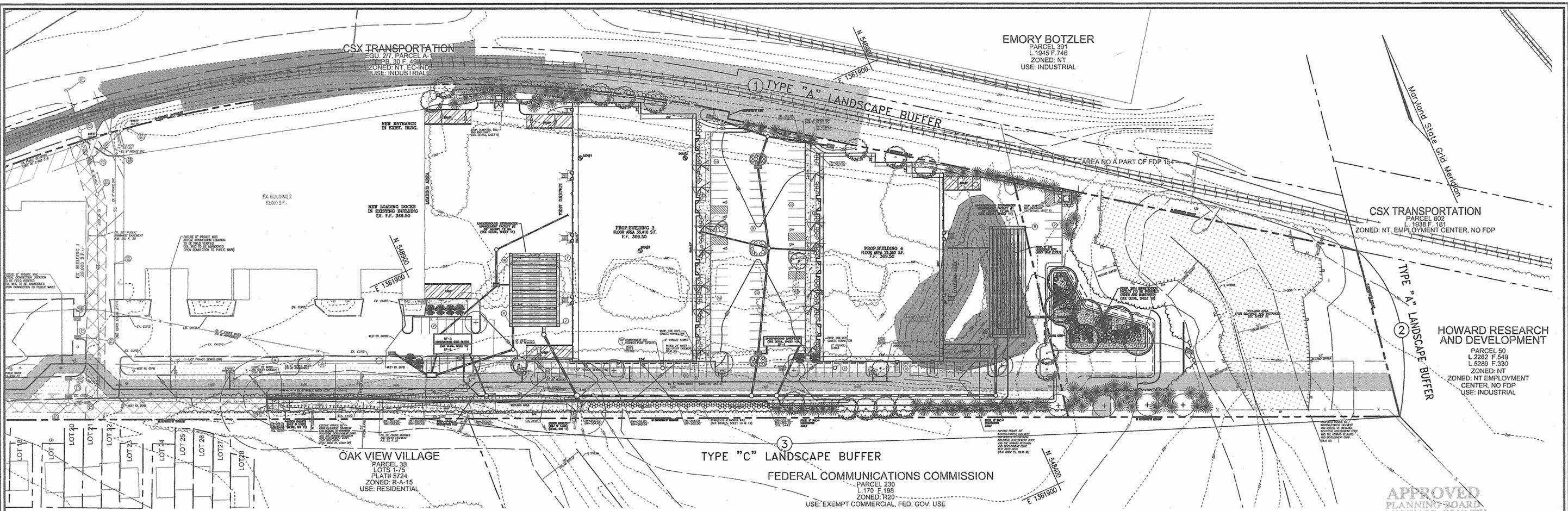
PARCEL 'A-2'
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.

ENGINEERS • SURVEYORS • PLANNERS

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

DESIGN BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: FEB 2007
SCALE: AS SHOWN
W.O. NO.: 04-89-0011 SHEET 14



LANDSCAPE SCHEDULE NOTE:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
AR	15	Acer rubrum 'October Glory' October Glory Red Maple	2 1/2" - 3" Cal.	B & B
PS	84	Pinus strobus Eastern White Pine	6' - 8' Ht.	B & B
OP	9	Quercus phellos Willow Oak	2 1/2" - 3" Cal.	B & B
TD	219	Taxus media 'densiformis' Densiformis Yew	2 1/2" - 3" Ht.	B & B
PA	8	Picea abies Norway Spruce	6' - 8' Ht.	B & B
CH	14	Prunus Sargentii Sargent Cherry (Flowering Tree)	2 1/2" - 3" Ht.	B & B
PC	2	Prunus Cerasifera Atropurpurea Thundercloud Purpleleaf Plum (Flowering Tree)	1 1/2" - 2" Cal.	B & B

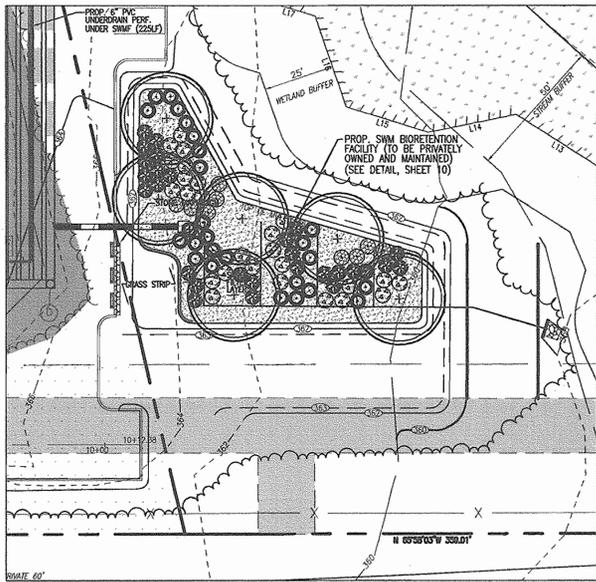
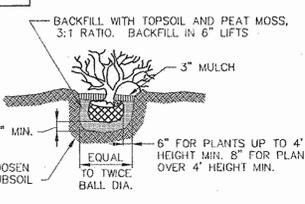
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NR	AREA	STEMS REQUIRED	STEMS PROVIDED
1	4292 SF	98	98

CATEGORY	1	2	3	DUMPSTER	DUMPSTER
PERIMETER LANDSCAPE EDGE	A	A	C	C	G
Linear Feet of Roadway	1029'	186'	1049'	34'	34'
Credit for Existing Vegetation (Yes, No, Linear Feet)	302'	Yes	206'	No	No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet)	No	No	No	No	No
Number of Plants Required	1:60 12*	1:60 0	1:40 21**	1:40 1***	1:40 1***
Number of Plants Provided	30*	0	48**	0***	0***
Shade Trees (2:1 Substitution)	-	-	100**	10**	10**

GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$19,200.00 FOR THE REQUIRED 42 SHADE TREES AND 44 EVERGREEN TREES.



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.

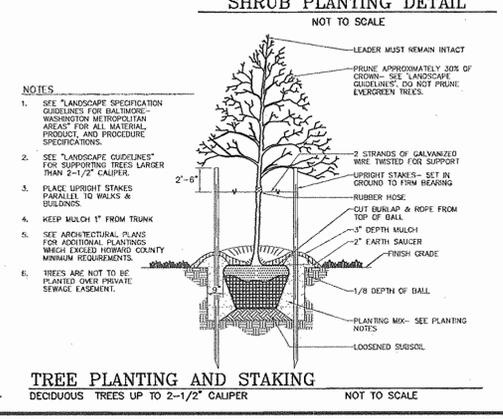
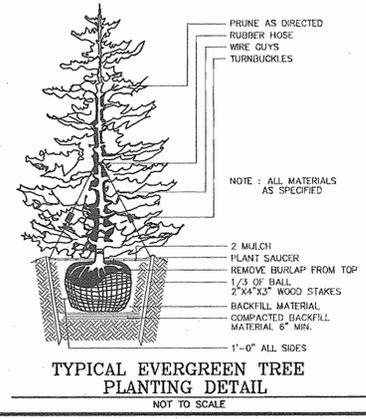
Signature: *S. Ben...* DATE: _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: *[Signature]* DATE: 5/16/07

Signature: *[Signature]* DATE: 5/16/07

Signature: *[Signature]* DATE: 5/13/07



LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANDOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- EXISTING TREES (FIELD LOCATED)
- EXISTING TREELINE (FIELD LOCATED)
- EXISTING VEGETATION (APPROXIMATE LOCATION)
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED SIDEWALK
- STEEP SLOPES
- MODERATE SLOPES
- PROPOSED SHADE TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUB
- LANDSCAPE PERIMETER
- PROPOSED TREELINE

STORMWATER MANAGEMENT FACILITY PRIVATELY OWNED AND MAINTAINED

OWNER/DEVELOPER
 STONEWOOD BUSINESS CENTER
 GUILFORD 1 LIMITED PARTNERSHIP
 11628 LOG JUMP TRAIL
 ELLICOTT CITY, MARYLAND 21043

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN

LANDSCAPE PLAN

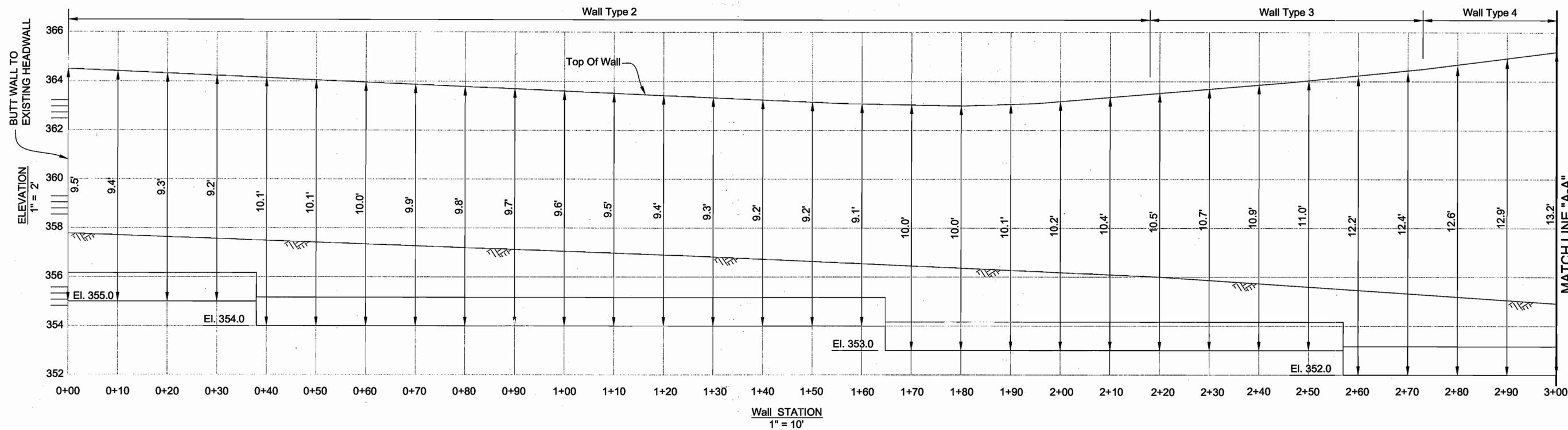
STONEWOOD BUSINESS CENTER
 PARCEL A-2 - E.G.U. SUBDIVISION
 SECTION 2 / AREA 6

TAX MAP 42 BLOCK 11 PARCEL 'A-2'
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

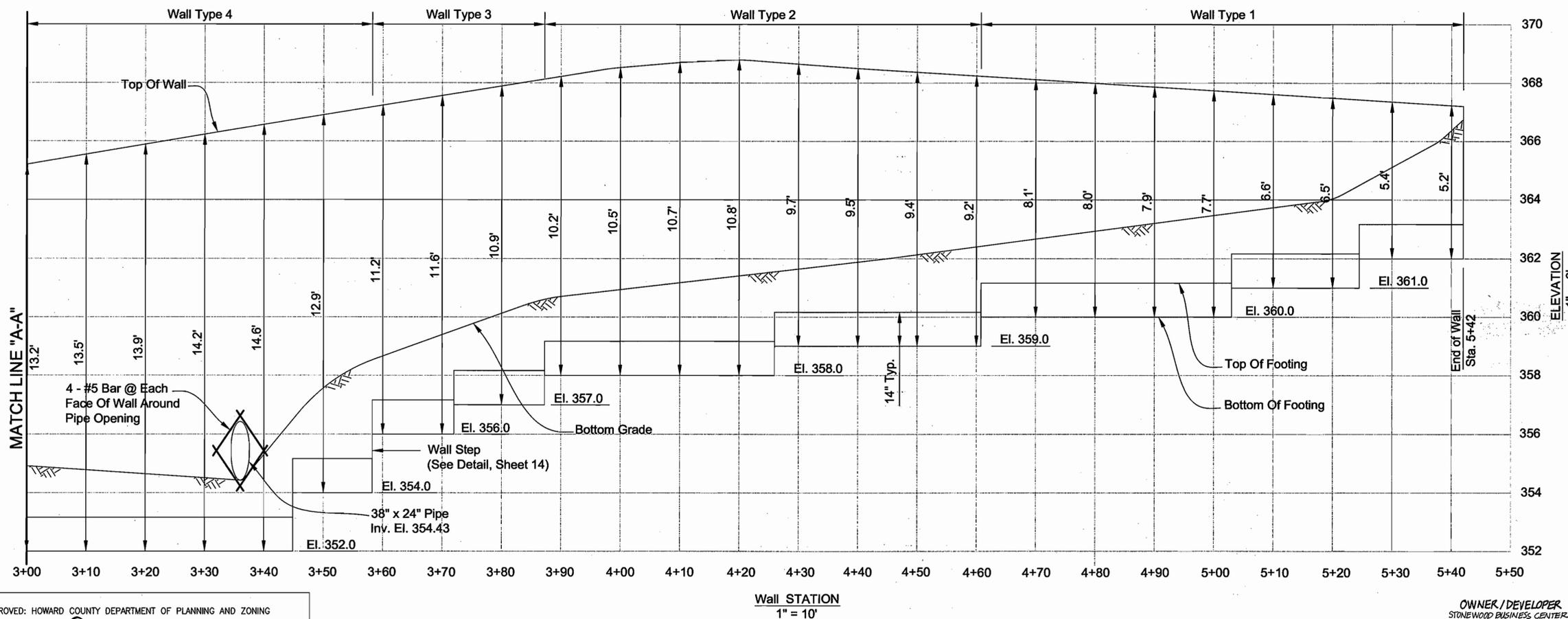
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: _____ WGZ
 DRAWN BY: _____ OZ
 CHECKED BY: _____ WGZ
 DATE: FEB. 2007
 SCALE: 1"=50'
 W.O. NO.: 04-90

12 SHEET OF 14



Note: Verify Top Of Retaining Wall Elevation Prior To Construction



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 12/07/06

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
RETAINING WALL PLAN AND ELEVATION
STONEWOOD BUSINESS CENTER
PARCEL 'A-2' - E.G.U. SUBDIVISION
SECTION 2 / AREA 6
TAX MAP 42 BLOCK 11 PARCEL 'A-2'
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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HILLIS-CARNES
ENGINEERING ASSOCIATES, INC.
12011 Guilford Road Suite 106 Annapolis Junction, Maryland 20701
Baltimore, (410) 880-4788 D.C. (301) 470-4239 Fax (410) 880-4098



DESIGN BY: HM
DRAWN BY: HM
CHECKED BY: RWS
DATE: SEPTEMBER 2006
SCALE: AS SHOWN
HCEA NO.: 03127-C

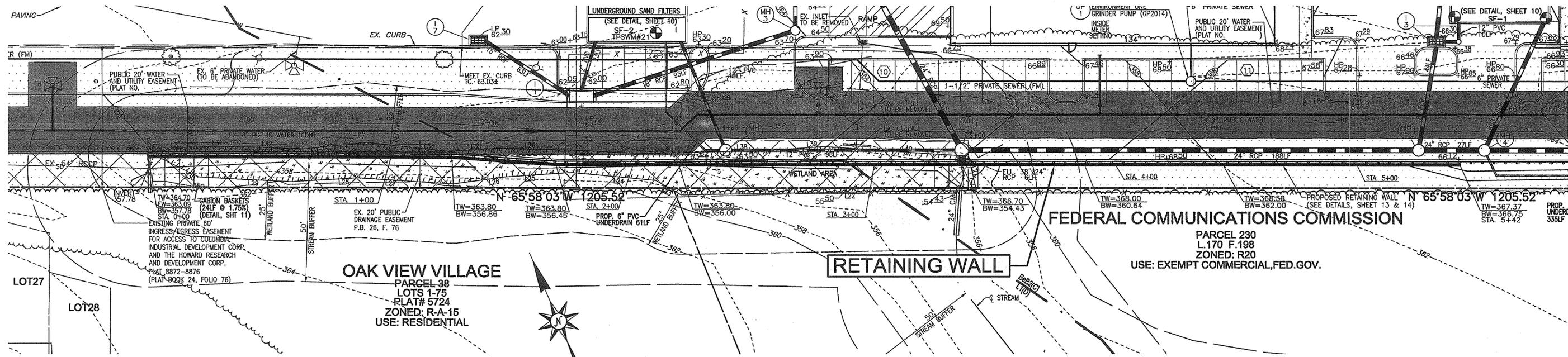
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 3/22/07

 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 5/16/06

 DIRECTOR DATE 5/11/07

OWNER / DEVELOPER
STONEWOOD BUSINESS CENTER
GUILFORD I LIMITED PARTNERSHIP
8600 SNOWDEN RIVER PARKWAY, #201
COLUMBIA, MARYLAND 21045
301-596-0222



RETAINING WALL LOCATION PLAN

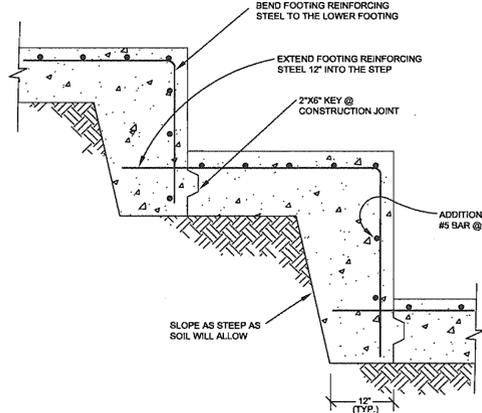
1" = 20'

NOTES:

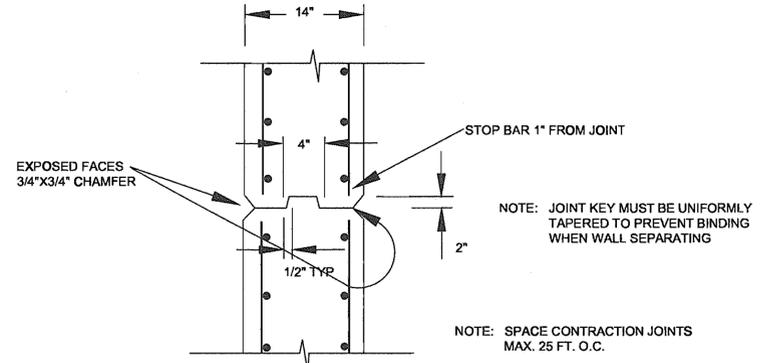
- 1.) Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.
- 2.) The required bearing pressure and suitable bearing soils beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
- 3.) The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% standard proctor density unless otherwise directed by site engineer and the testing report shall be made available to the Howard County Inspector upon completion of construction.

Notes:

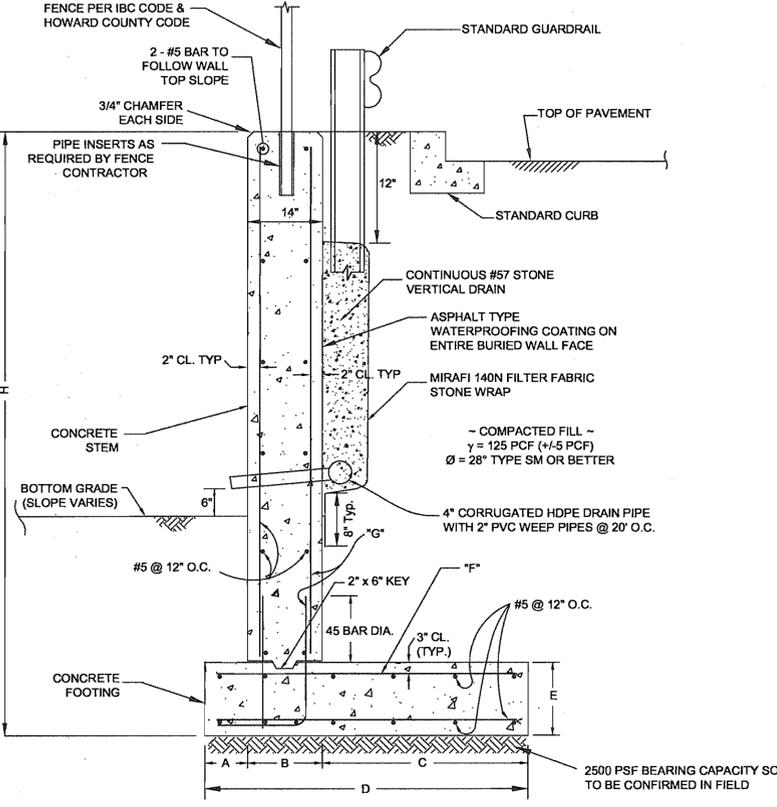
1. All Retaining Wall Concrete Shall Be 4000 PSI With Air Entrainment.
2. Reinforcing Steel Shall Conform To ASTM Grade 60
3. Wall Backfill Shall Be Compacted In Accordance With Howard Co. Specifications
4. Concrete Work Shall Comply With The Latest ACI 318 Building Code For Concrete Structures
5. All Rebar Splices Not Shown Shall Be A Minimum 40 Bar Diam.
6. All Wall Exposed Surfaces Shall Be Mortar Patched And Sack-Rubbed Finished With Grout And Burlap. Any Flashings Shall Be Ground Flush.



WALL STEP DETAIL
NOT TO SCALE



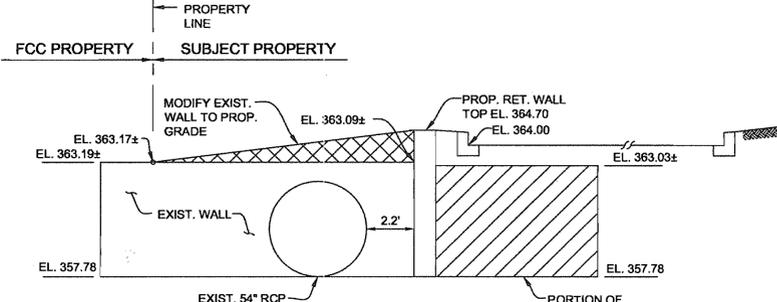
WALL STEM VERTICAL
CONTRACTION JOINT C.J. DETAIL
NOT TO SCALE



WALL SECTION
NOT TO SCALE

Wall Type	A	B	C	D	E	Max. H	Footing Reinf	Stem Reinf
1	1'-10"	14"	2'-0"	5'-0"	14"	8'-6"	#5 @ 12"	#5 @ 12"
2	1'-10"	14"	3'-0"	6'-0"	14"	10'-6"	#5 @ 12"	#5 @ 12"
3	2'-4"	14"	3'-10"	7'-4"	14"	12'-6"	#6 @ 12"	#6 @ 12"
4	2'-8"	14"	4'-8"	8'-6"	14"	14'-6"	#7 @ 10"	#7 @ 10"

WALL DIMENSION CHART



SCHEMATIC HEADWALL DETAIL
N.T.S.

(FOR REFERENCE ONLY, NOT TO BE USED FOR CONSTRUCTION)

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 12/07/06

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
RETAINING WALL DETAILS AND NOTES
STONEWOOD BUSINESS CENTER
PARCEL 'A-2' - E.G.U. SUBDIVISION
SECTION 2 / AREA 6
TAX MAP 42 BLOCK 11 PARCEL 'A-2'
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 3/22/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 5/16/06
CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 1-12/06
DIRECTOR