See also WC052

CERTIFICATE OF AUTHENTICITY

THIS IS TO CERTIFY THAT THE FOLLOWING ELECTRONIC RECORDS ARE TRUE AND ACCURATE REPRODUCTIONS OF THE ORIGINAL RECORDS OF JAMES CITY COUNTY GENERAL SERVICES DEPARTMENT- STORMWATER DIVISION; WERE SCANNED IN THE REGULAR COURSE OF BUSINESS PURSUANT TO GUIDELINES ESTABLISHED BY THE LIBRARY OF VIRGINIA AND ARCHIVES; AND HAVE BEEN VERIFIED IN THE CUSTODY OF THE INDIVIDUAL LISTED BELOW.

BMP NUMBER: **WC051**

DATE VERIFIED: **January 10, 2013**

QUALITY ASSURANCE TECHNICIAN: **Leah Hardenbergh**

Leah Hardenbergh

LOCATION: WILLIAMSBURG, VIRGINIA

Stormwater Division

MEMORANDUM

DATE: March 13, 2010

TO: Michael J. Gillis, Virginia Correctional Enterprises Document Management Services

FROM: Jo Anna Ripley, Stormwater

PO: 270712

RE: Files Approved for Scanning

General File ID or BMP ID: WC051

PIN: 0510100006

Subdivision, Tract, Business or Owner Name (if known): Stonehouse

Property Description: Golf Course

Site Address:

(For internal use only) **Box** 23 **Drawer:** 9

Agreements: (in file as of scan date) **Y** **Book or Doc#:** 712 **Page:** 663

Comments

This is a combined file with WC051 and WC052; Parcel 12 Legends @ Stonehouse Golf Course

BOOK 0712 PAGE 0663

COPY

DECLARATION OF COVENANTS

017615

INSPECTION/MAINTENANCE OF RUNOFF CONTROL FACILITY

THIS DECLARATION, made this 17th day of October, 19 94, between Legends of Virginia, LC, and all successors in interest, hereinafter referred to as the "COVENANTOR(S)," owner(s) of the following property: Legends at Stonehouse Golf Course 245 Ac FROM 4699.33 Ac STONEHOUSE DEED BOOK NUMBER 420 PAGE 712, and James City County, Virginia, hereinafter referred to as the "COUNTY."

WITNESSETH:

We, the COVENANTOR(S), with full authority to execute deeds, mortgages, other covenants, and all rights, titles and interests in the property described above, do hereby covenant with the COUNTY as follows:

1. The COVENANTOR(S) shall provide maintenance for the runoff control facility, hereinafter referred to as the "FACILITY," located on and serving the above-described property to ensure that the FACILITY is and remains in proper working condition in accordance with approved design standards, and with the law and applicable executive regulations.

2. If necessary, the COVENANTOR(S) shall levy regular or special assessments against all present or subsequent owners of property served by the FACILITY to ensure that the FACILITY is properly maintained.

3. The COVENANTOR(S) shall provide and maintain perpetual access from public right-of-ways to the FACILITY for the COUNTY, its agent and its contractor.

4. The COVENANTOR(S) shall grant the COUNTY, its agent and its contractor a right of entry to the FACILITY for the purpose of inspecting, operating, installing, constructing, reconstructing, maintaining or repairing the FACILITY.

5. If, after reasonable notice by the COUNTY, the COVENANTOR(S) shall fail to maintain the FACILITY in accordance with the approved design standards and with the law and applicable executive regulations, the COUNTY may perform all necessary repair or maintenance work, and the COUNTY may assess the COVENANTOR(S) and/or all property served by the FACILITY for the cost of the work and any applicable penalties.

6. The COVENANTOR(S) shall indemnify and save the COUNTY harmless from any and all claims for damages to persons or property arising from the installation, construction, maintenance, repair, operation or use of the FACILITY.

7. The COVENANTOR(s) shall promptly notify the COUNTY when the COVENANTOR(S) legally transfers any of the COVENANTOR(S)' responsibilities for the FACILITY. The COVENANTOR(S)' shall supply the COUNTY with a copy of any document of transfer, executed by both parties.

8. The covenants contained herein shall run with the land and shall bind the COVENANTOR(S) and the COVENANTOR(S)' heirs, executors, administrators, successors and assignees, and shall bind all present and subsequent owners of property served by the FACILITY.

9. This DECLARATION shall be recorded in the County Land Records.

A. STRUCTURAL BMP POINT ALL

BMP	
BMPs 1 & 2	
BMP 3	
BMP4 & 5	

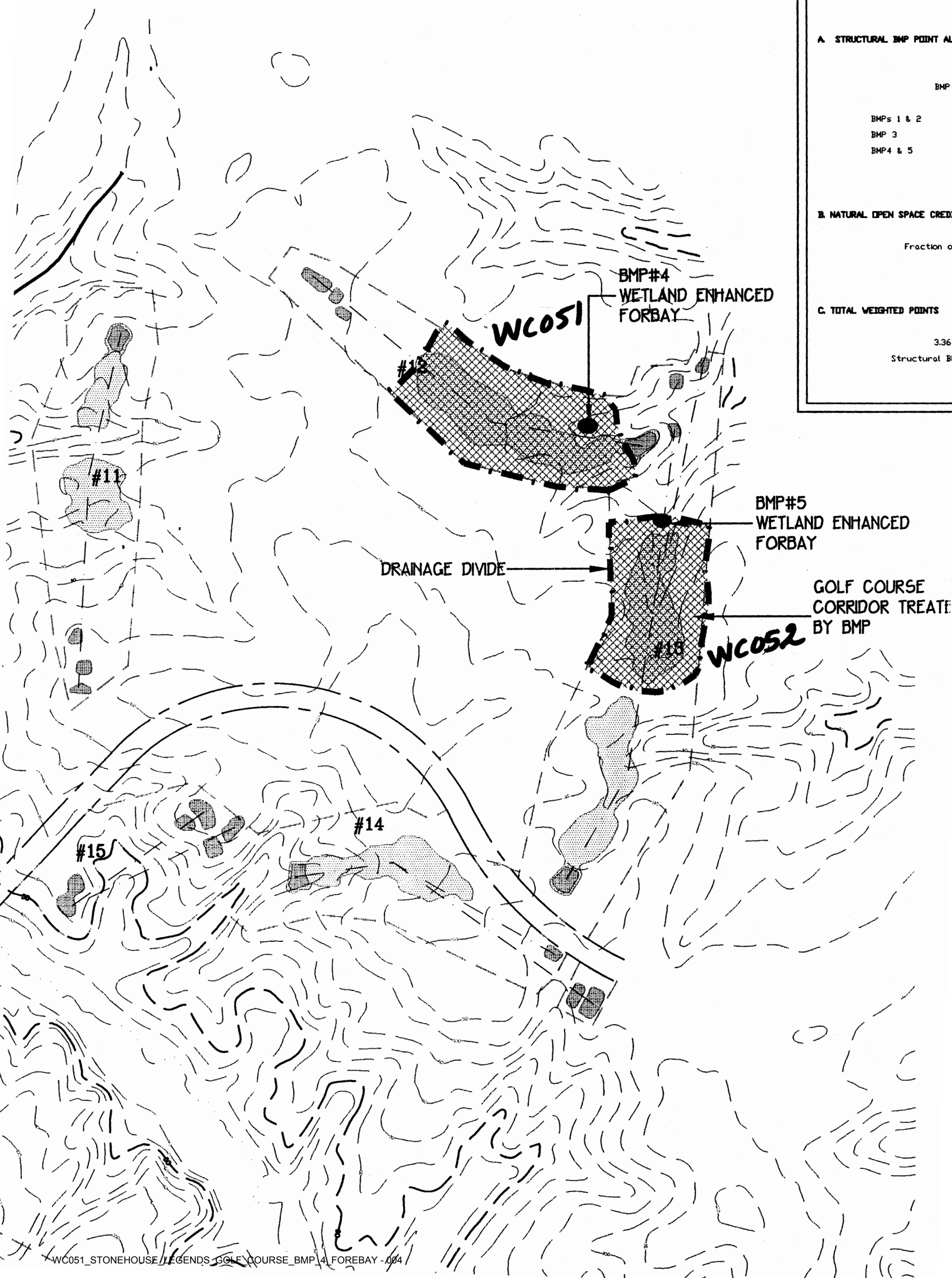
B. NATURAL OPEN SPACE CREDIT

Fraction of

C. TOTAL WEIGHTED POINTS

3.36

Structural BM



Worksheet For BMP Point System

Legends at Stonehouse

A. STRUCTURAL BMP POINT ALLOCATION

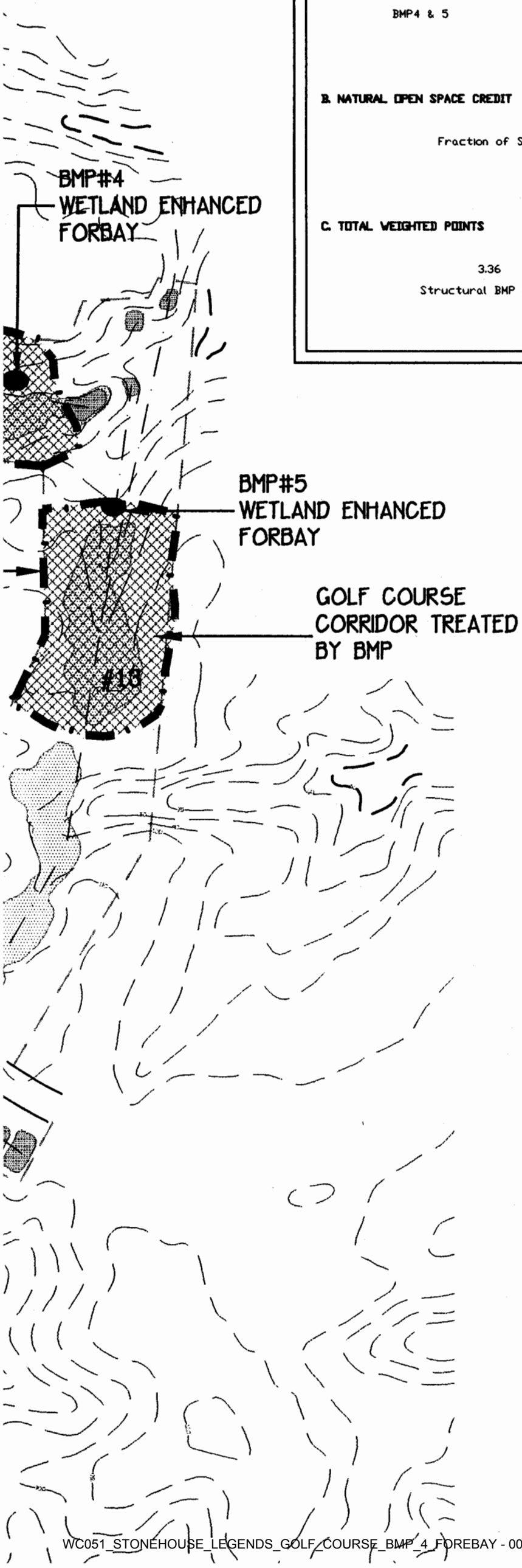
BMP	BMP Points		Fraction of Site Served By BMP		Weighted BMP Points
BMPs 1 & 2	11	×	24%	=	2.64
BMP 3	9	×	1.5%	=	.13
BMP4 & 5	9	×	5%	=	0.42
		TOTAL WEIGHTED BMP POINTS			3.19

B. NATURAL OPEN SPACE CREDIT

Fraction of Site		Natural Open Space Credit		Points for Natural Open Space
63%	×	0.10	=	6.29

C. TOTAL WEIGHTED POINTS

Structural BMP Points	+	Natural Open Space Points	=	Total
3.36		6.29		9.48



PROJECT STATISTICS

TOTAL DISTURBED AREA	109 A.C.
OPTIONAL SELECT CLEARING	48 A.C.
FUTURE CLUBHOUSE + MAINT	16 A.C.
UNDISTURBED AREA	72 A.C.
TOTAL CORRIDOR	245 A.C.

MASTER STORMWATER MANAGEMENT
THE LEGENDS AT STONE
JAMES CITY COUNTY, VIRGINIA

PROJECT STATISTICS

TOTAL DISTURBED AREA	109 A.C.
OPTIONAL SELECT CLEARING	48 A.C.
FUTURE CLUBHOUSE + MAINT	16 A.C.
UNDISTURBED AREA	72 A.C.
TOTAL CORRIDOR	245 A.C.

OPEN SPACE CREDIT

	Area (ac)	Area (%)
Wooded Area	84	34%
Planted Buffer	22	9%
Select Clearing	48	20%
Total	154	63%

APPROXIMATE BMP SIZE
SIZED FOR GOLF ONLY

	Type of BMP	Corridor Drainage Area (ac)	Rv Rv	Required Volume (cf)	BMP Points
BMP #1	Existing Wet Pond	35.5	0.06	12780	11
BMP #2	Existing Wet Pond	22.7	0.2	27380	11
BMP #3	Marsh Enhanced Dry Pond	4.5	0.25	4090	9
BMP #4	Wetland Enhanced Forbay	5.7	0.06	1250	9
BMP #5	Wetland Enhanced Forbay	4.5	0.06	990	9

APPROXIMATE BMP SIZE
SIZED FOR FUTURE DEVELOPMENT

	Type of BMP	Corridor Drainage Area (ac)	Rv Rv	Required Volume (cf)	BMP Points
BMP #1	Existing Wet Pond	144	0.18	161600	11
BMP #2	Existing Wet Pond	41	0.28	69640	11

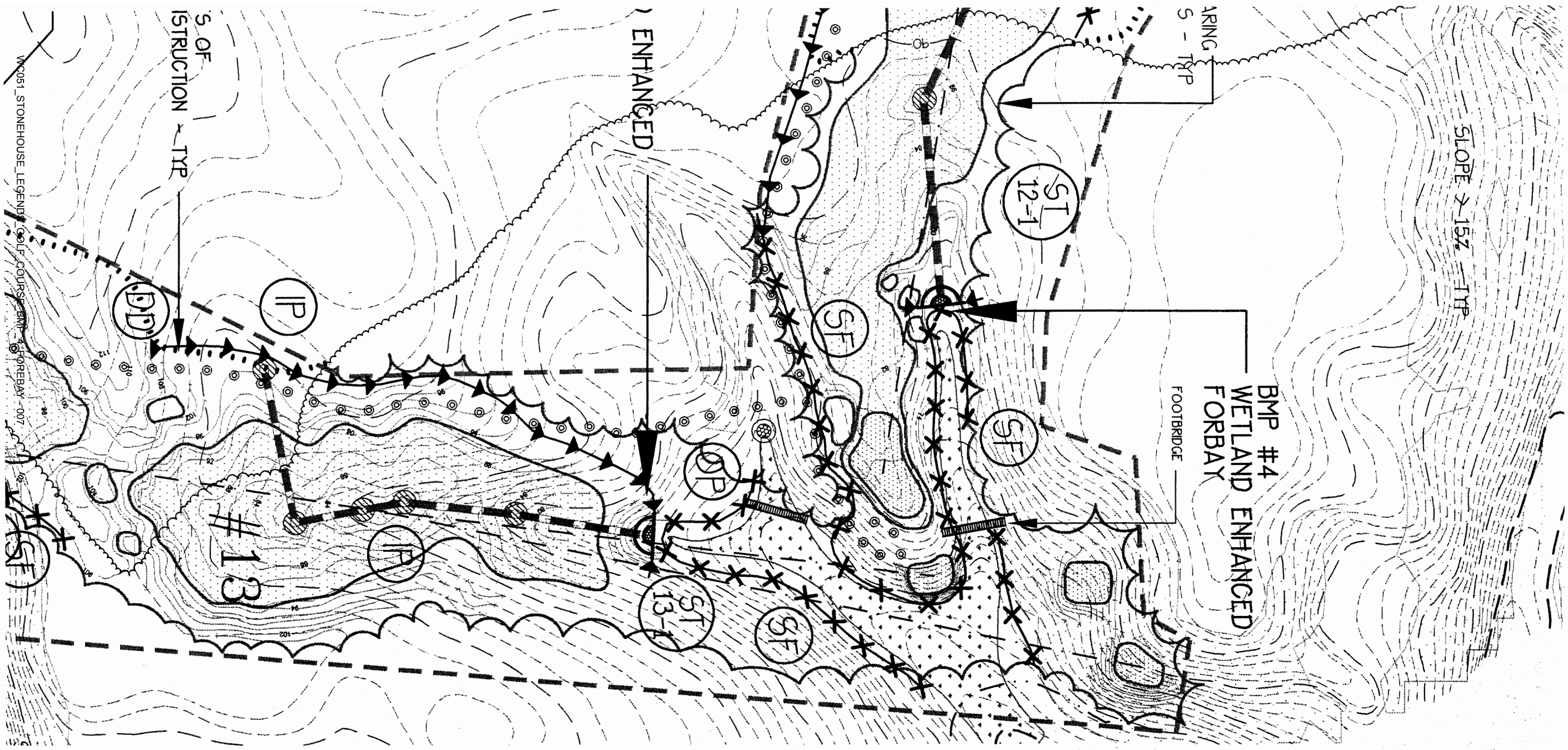
0 150' 300' 600' 900'

COMMONWEALTH OF VIRGINIA
RONALD J. BOYD
No. 020970
PROFESSIONAL ENGINEER

DESIGN BY: ELA
DRAWN BY: BLF\ACAD MSP\ACAD
DATE: 10\11\94
CHECKED BY: RB

SHEET: 4

JOB NUMBER:



IENT CONTROL PLAN:

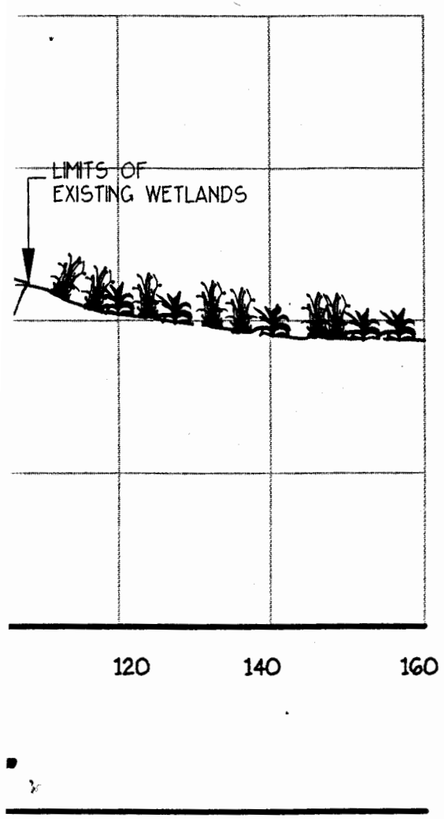
S AT STONEHOUSE

Y, VIRGINIA

THE

© '94

STREET
WILLIAMSBURG, VIRGINIA, 23185
(804) 220 - 6869, FAX (804) 229 - 4507



BMP #4 SIZING

WC 051

I COMPUTE Rv

DRAINAGE AREA=	5.7	ACRE
IMPERVIOUS AREA=	0	ACRE
IMPERVIOUS %=	0.00	%
OPEN SPACE IMPERVIOUS=	1	%
TOTAL IMPERVIOUS=	1.00	%

Rv= (.05 + .009(IMPERVIOUS %))
Rv= 0.06

II COMPUTE STORAGE VOLUME

PROVIDE A WETLANDS ENHANCED EXTENDED DETENTION BASIN TO FUNCTION AS A 50% EFFICIENT BMP.
REMOVAL EFFICIENCIES ARE TAKEN FROM LOCAL ASSISTANCE MANUAL. (CBLAD.1989)
DESIGN BASED ON A FRAMEWORK FOR EVALUATING COMPLIANCE WITH THE 10% RULE
IN THE CHESAPEAKE BAY CRITICAL AREA.(MWCOG.1987)

VOL=(RUNOFF FROM A 1" STORM)
VOL=(Rv)(1")(DRAINAGE AREA)

VOL=	1250.0	CU-FT
VOL PROVIDED=	1250.0	CU-FT

WETLAND ENHANCED FORBAY
BMP VOLUME = 1250.0 CUFT
NP ELEV = 75' MSL
BOTTOM ELEV = 74.5' MSL

PROVIDE 9 SY EC-1
TYPE A EROSION CONTROL
STONE (RIVERSTONE)

EXISTING WETLANDS

"A1"

"A2"

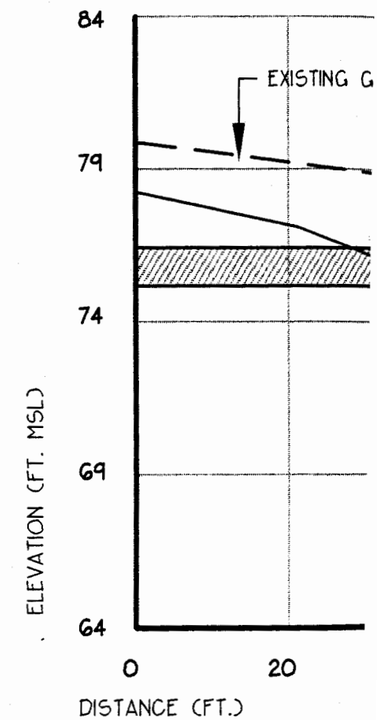
80

74

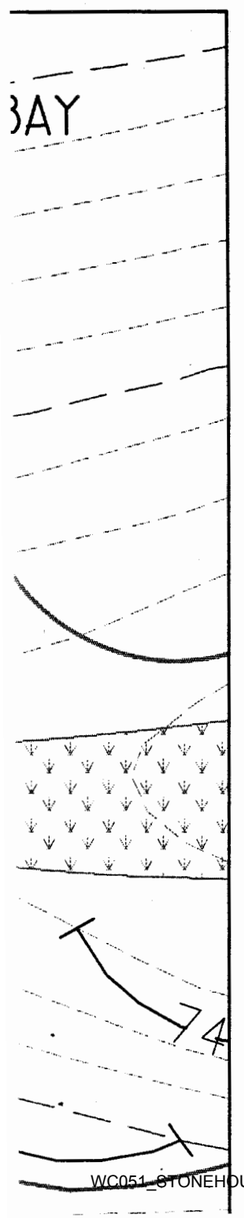
82

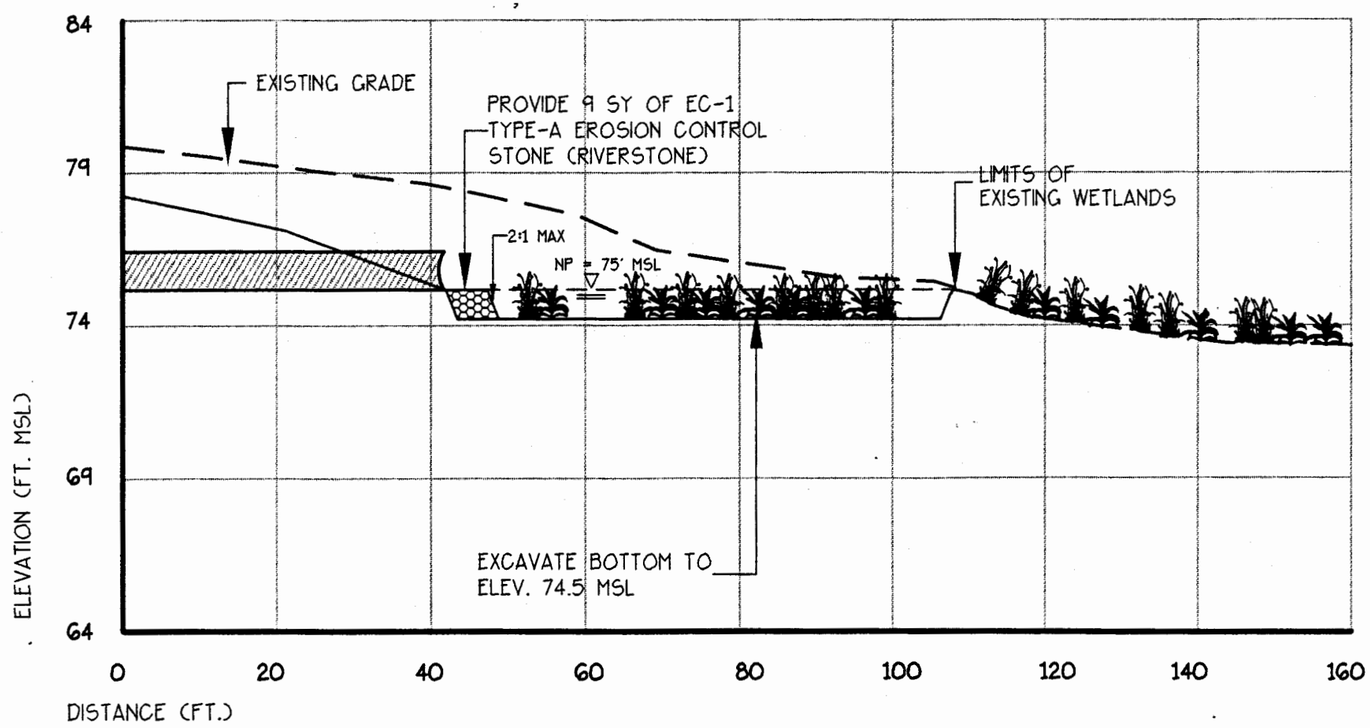
WC051

HOLE #12 FAIRWAY



BMP #4
VERTICAL SCALE: 1"





BMP #4 PROFILE: "A1-A2"

BMP #4 SIZING

I COMPUTE Rv

DRAINAGE AREA=
IMPERVIOUS AREA=
IMPERVIOUS %=
OPEN SPACE IMPERVIOUS=
TOTAL IMPERVIOUS=

Rv= C.05 + .009(IMPERVIOU
Rv= 0.0

II COMPUTE STORAGE VOLUME

PROVIDE A WETLANDS ENHAI
REMOVAL EFFICIENCIES ARE
DESIGN BASED ON A FRAME
IN THE CHESAPEAKE BAY CR

VOL=(RUNOFF FROM A 1" S
VOL=(Rv)(1")(DRAINAGE ARE
VOL= 1250.0

BMP #5 SIZING

WC 052

I COMPUTE Rv

DRAINAGE AREA=	4.5	ACRE
IMPERVIOUS AREA=	0	ACRE
IMPERVIOUS %=	0.00	%
OPEN SPACE IMPERVIOUS=	1	%
TOTAL IMPERVIOUS=	1.00	%

Rv= (.05 + .009(IMPERVIOUS %)
Rv= 0.06

II COMPUTE STORAGE VOLUME

PROVIDE A WETLANDS ENHANCED EXTENDED DETENTION BASIN TO FUNCTION AS A 50% EFFICIENT BMP.
REMOVAL EFFICIENCIES ARE TAKEN FROM LOCAL ASSISTANCE MANUAL. (CBLAD.1989)
DESIGN BASED ON A FRAMEWORK FOR EVALUATING COMPLIANCE WITH THE 10% RULE
IN THE CHESAPEAKE BAY CRITICAL AREA.(MWCOG.1987)

VOL=(RUNOFF FROM A 1" STORM)
VOL=(Rv)(1")(DRAINAGE AREA)

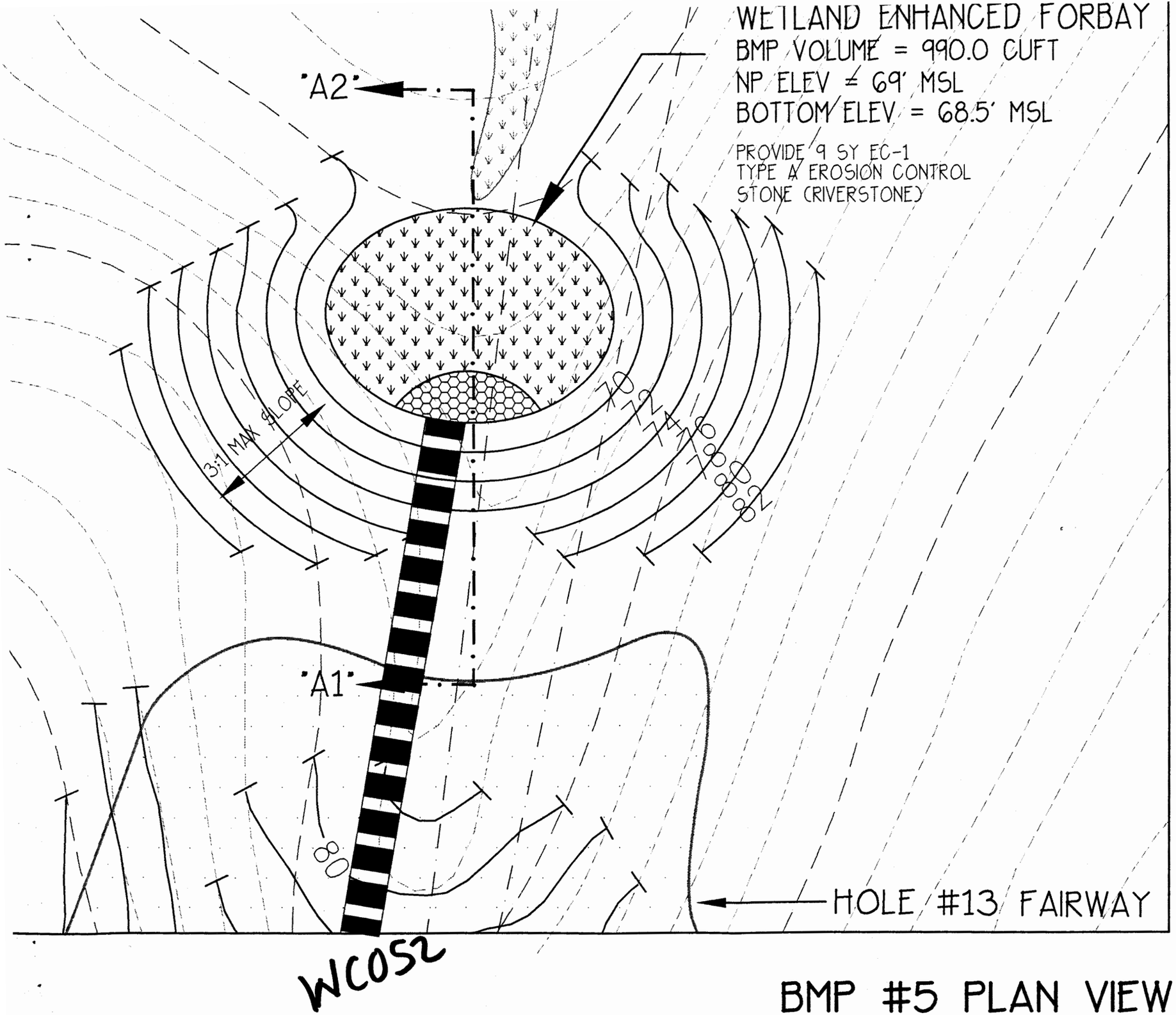
VOL=	990.0	CU-FT
VOL PROVIDED=	990.0	CU-FT

BMP #4 & #5 DETAIL

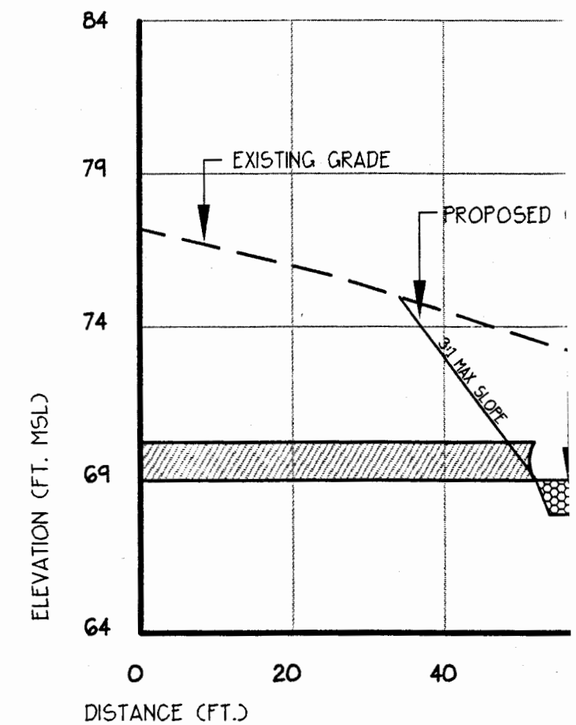
COMMONWEA
RO
PROFESS

DESIGN
TCM\EL
DATE
10/09/

160



BMP #5 PLAN VIEW

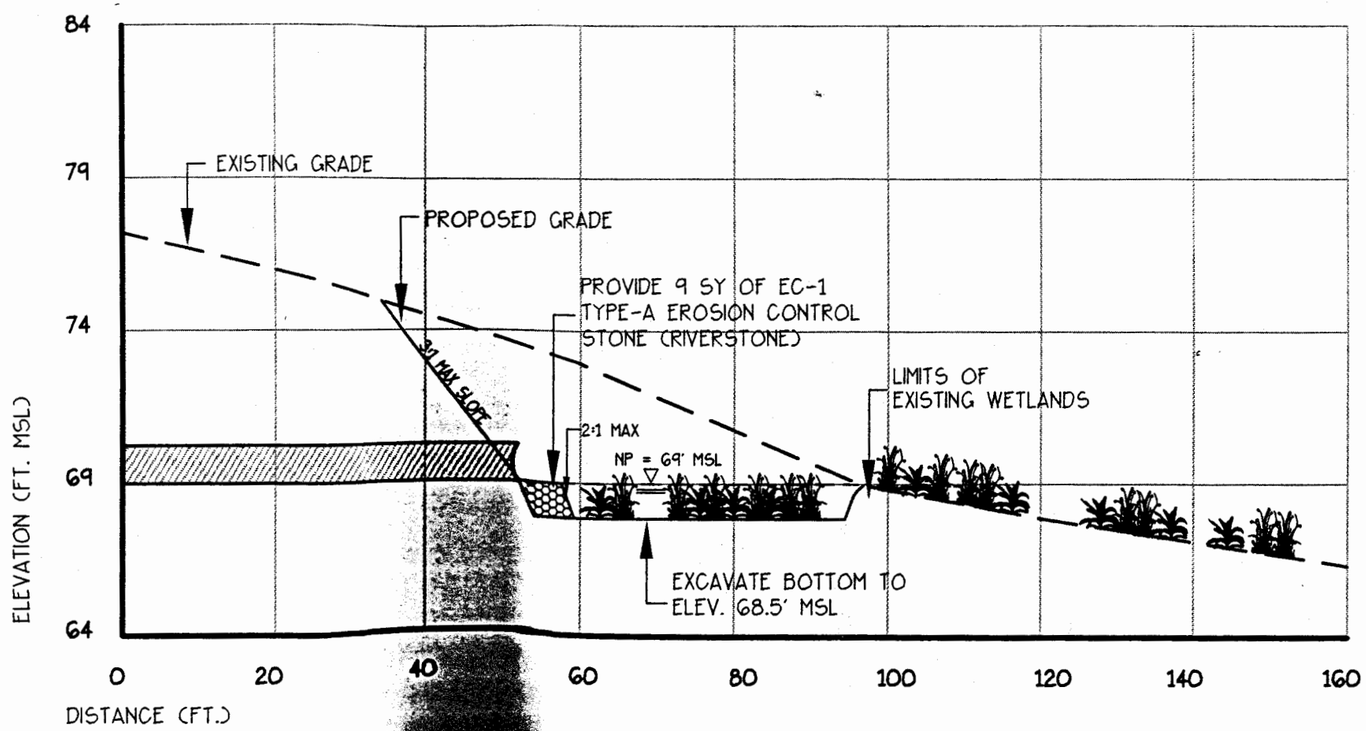


BMP #5 PROF

VERTICAL SCALE: 1" = 5'. HORIZONTAL

.D FORBAY
CUFT

MSL



BMP #5 PROFILE: "A1-A2"

VERTICAL SCALE: 1" = 5' HORIZONTAL SCALE 1" = 20'

BMP #5 SIZING

I COMPUTE Rv

DRAINAGE AREA=
IMPERVIOUS AREA=
IMPERVIOUS %=
OPEN SPACE IMPERVIOUS
TOTAL IMPERVIOUS=

Rv= (.05 + .009(IMPERV
Rv= (

II COMPUTE STORAGE VOL

PROVIDE A WETLANDS EN
REMOVAL EFFICIENCIES A
DESIGN BASED ON A FR
IN THE CHESAPEAKE BAY

VOL=(RUNOFF FROM A 1
VOL=(Rv)(1")(DRAINAGE
VOL= qc
VOL PROVIDED= qc

FAIRWAY

OPEN SPACE CREDIT

	Area (ac)	Area (%)
Wooded Area	84	34%
Planted Buffer	22	9%
Select Clearing	48	20%
Total	154	63%

APPROXIMATE BMP SIZE
SIZED FOR GOLF ONLY

	Type of BMP	Corridor Drainage Area (ac)	Rv Rv	Required Volume (cf)	BMP Points	
BMP #1	Existing Wet Pond	35.5	0.06	12780	11	@ HOLE #1
BMP #2	Existing Wet Pond	22.7	0.2	27380	11	@ PUTTING RANGE
BMP #3	Wetlands Enhanced Dry Pond	4.5	0.25	4090	9	@ MAINTENANCE FACIL
BMP #4	Wet Pond	3.7	0.06	1330	9	@ HOLE #10 GREEN
BMP #5	Wet Pond	11.5	0.06	4140	9	@ HOLE #12 GREE

APPROXIMATE BMP SIZE
SIZED FOR FUTURE DEVELOPMENT

		Type of BMP	Corridor Drainage Area (ac)	Rv Rv	Required Volume (cf)	BMP Points
WC033	BMP #1	Existing Wet Pond	144	0.18	161600	11
WC049	BMP #2	Existing Wet Pond	41	0.28	69640	11
WC050	BMP #3	Wetlands Enhanced Dry Pond	4.5	0.25	4090	9
WC051	BMP #4	Wet Pond	3.7	0.06	1330	9
WC054	BMP #5	Wet Pond	35	0.19	40040	9

HOLES 12 + 13

33 ac wshed

Pre devel to Post Devel Change

HOLE 12 -

2.75 ac - crop → fairway

4 ac - trees → fairway

HOLE 13

3.4 ac - woods → fairway

use C soils

Pre -

Woods	-	7.4 ac @	70	518
Crop	-	2.75 @	82	225.5
		10.15		743.5 ⇒ 73.3

Post

Fairway - 74

Worksheet For BMP Point System

Legends at Stonehouse

A. STRUCTURAL BMP POINT ALLOCATION

BMP	BMP Points		Fraction of Site Served By BMP		Weighted BMP Points
Existing Lake	11	x	24%	=	2.64
Maintenance BMP& Hole 10 BMP	9	x	3%	=	0.30
Hole 12 and 13 BMP's	9	x	5%	=	0.42
		x		=	
	TOTAL WEIGHTED BMP POINTS:				**3.36**

B. NATURAL OPEN SPACE CREDIT

Fraction of Site		Natural Open Space Credit		Points for Natural Open Space
63%	x	0.10	=	**6.29**

C. TOTAL WEIGHTED POINTS

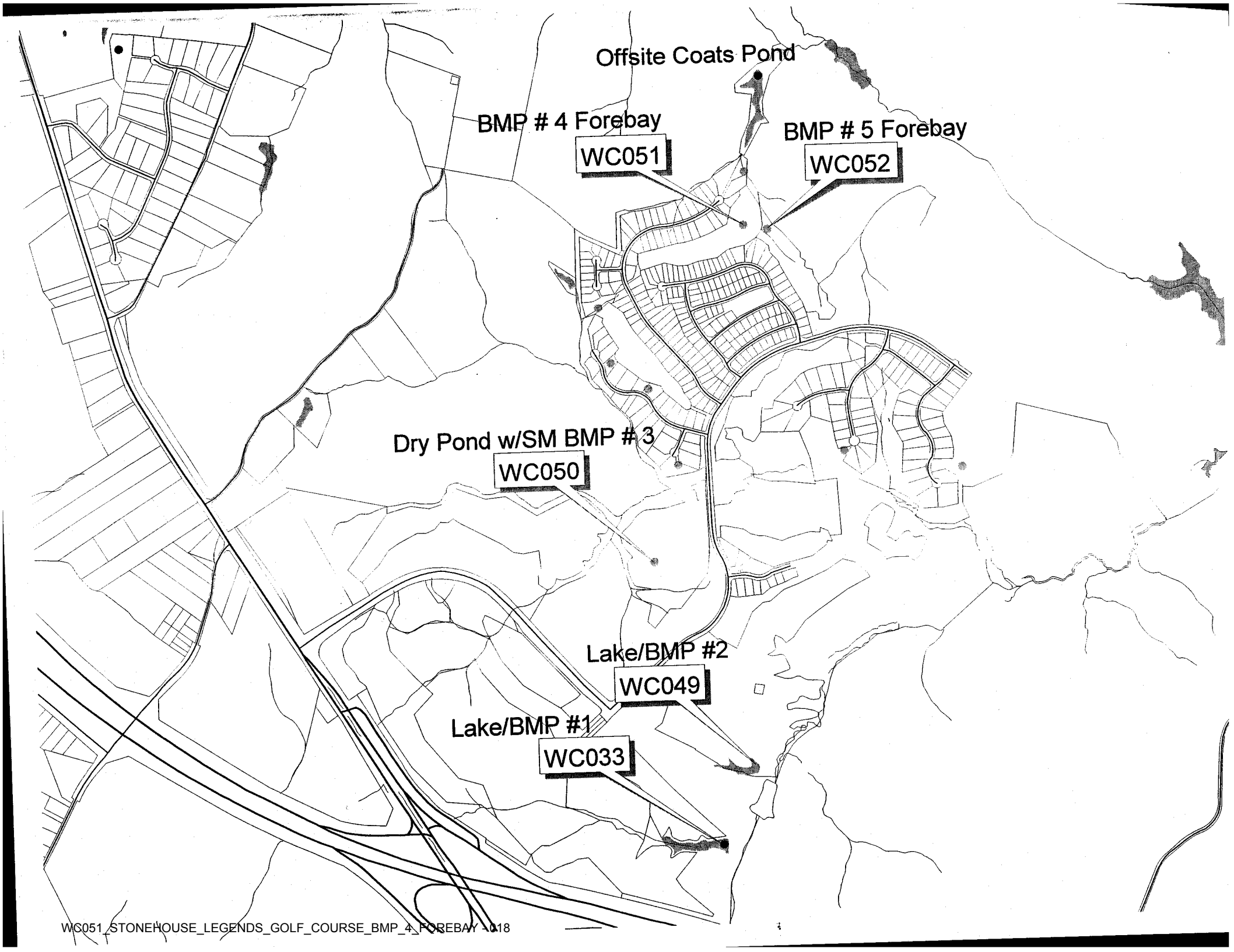
3.36		6.29	=	**9.66**
Structural BMP Points		Natural Open Space Points		**Total**

otal Site = 245 acres

WATERSHED	WC	MAINTENANCE PLAN	No	CTRL STRUC DESC	None
BMP ID NO	051	SITE AREA acre		CTRL STRUC SIZE inches	
PLAN NO	SP-92-94	LAND USE	Res Planned Unit D	OTLT BARRL DESC	None
TAX PARCEL	(05-01)(01-06)	old BMP TYP	Wet Forebay	OTLT BARRL SIZE inch	
PIN NO	0510100006	JCC BMP CODE			
CONSTRUCTION DATE	1/1/1996	POINT VALUE	9	EMERG SPILLWAY	No
PROJECT NAME	Legends at Stonehouse Golf Course			DESIGN HW ELEV	75.0
FACILITY LOCATION	BMP #4 Golf Course Hole 12			PERM POOL ELE	75.0
CITY-STATE	Williamsburg, Va. 23188	SVC DRAIN AREA acres	5.7	2-YR OUTFLOW cfs	0.00
CURRENT OWNER	The Tradition Golf Club at Stonehouse LLC			10-YR OUTFLOW cfs	0.00
OWNER ADDRESS	745 Atlantic Avenue			REC DRAWING	No
OWNER ADDRESS 2		SERVICE AREA DESCRI	Golf Course area		
CITY-STATE-ZIP CODE	Boston, MA 02111-2735	IMPERV AREA acres	0.06	CONSTR CERTI	No
OWNER PHONE		RECV STREAM	UT of Bird Swamp		
MAINT AGREEMENT	Yes	EXT DET-WQ-CTRL	Yes	LAST INSP DATE	
EMERG ACTION PLAN	No	WTR QUAL VOL acre-ft	0.029	INTERNAL RATING	
		CHAN PROT CTRL	No	MISC/COMMENTS	
		CHAN PROT VOL acre-ft	0	Treats 1" rainfall. EC-1 type A lining.	
		SW/FLOOD CONTROL	No		
		GEOTECH REPORT	No		

Get Last BMP No

Return to Menu



WC051_STONEHOUSE_LEGENDS_GOLF_COURSE_BMP_4_FOREBAY - 018