Short Version BMP Computations For Worksheets 2 - 6

Albemarle County Water Protection Ordinance: Modified Simple Method

Plan: **Airport Road Office** Water Resources Area: Powell Creek

Preparer: CK Date: 17-Oct-08

Project Drainage Area Designation: Development Area

L	storm pollutant export in pounds, L = [P(Pj)Rv12] [C(A)2.72]	
Rv	mean runoff coefficient, Rv = 0.05 + 0.009(I)	
Pj	small storm correction factor, 0.9	
I	percent impenvousness	
P	annual precipitation, 43" in Albemarle	
A	project area in acres in subject drainage area, **A =**	5.02
C	pollutant concentration, mg/l or ppm target phosphorus	
f	factor applied to RR	
V	required treatment volume in cy, 0.5" over imperv. area = A(I)43560(0.5/12)/27	
RR	required removal , L(post) - f x L(pre)	
%RR	removal efficiency , RR100/L(post)	

Impervious Cover Computation (values in feet & square feet)

Item	pre-development				Area	post-development				Area
Roads	Length	Width	subtotal			Length	Width	subtotal		
	0	0	0			600	20			
	0	0	0			0	0	0		
						0	0	0		
				0				0		
Driveways and walks	Length	Width	no.	subtotal		Length	Width	no.	subtotal	
	0	0	0	0		0	0	0	0	
	0	0	0	0		0	0	0	0	
				0	0				0	0
Parking Lots	1	2	3	4		1	2	3	4	
	0								0	98339
Gravel areas	Area					Area				
		x 0.70 =			0		x 0.70 =			0
Structures	Area	no.	subtotal			Area	no.	subtotal		
	0	0	0				1			
	0	0	0			0	0	0		
	0	0	0					0		21451
Actively-grazed pasture & yards and cultivated turf	Area					Area				
		x 0.08 =					x 0.08 =			0
Active crop land	Area					Area				
		x 0.25 =			0		x 0.25 =			0
Other Impervious Areas					0					0
Impervious Cover					0%					55%
					I(pre)					I(post)

Rv(post)	V
0.54	184.9

New Development (For Development Areas, existing impervious cover <= 20%)

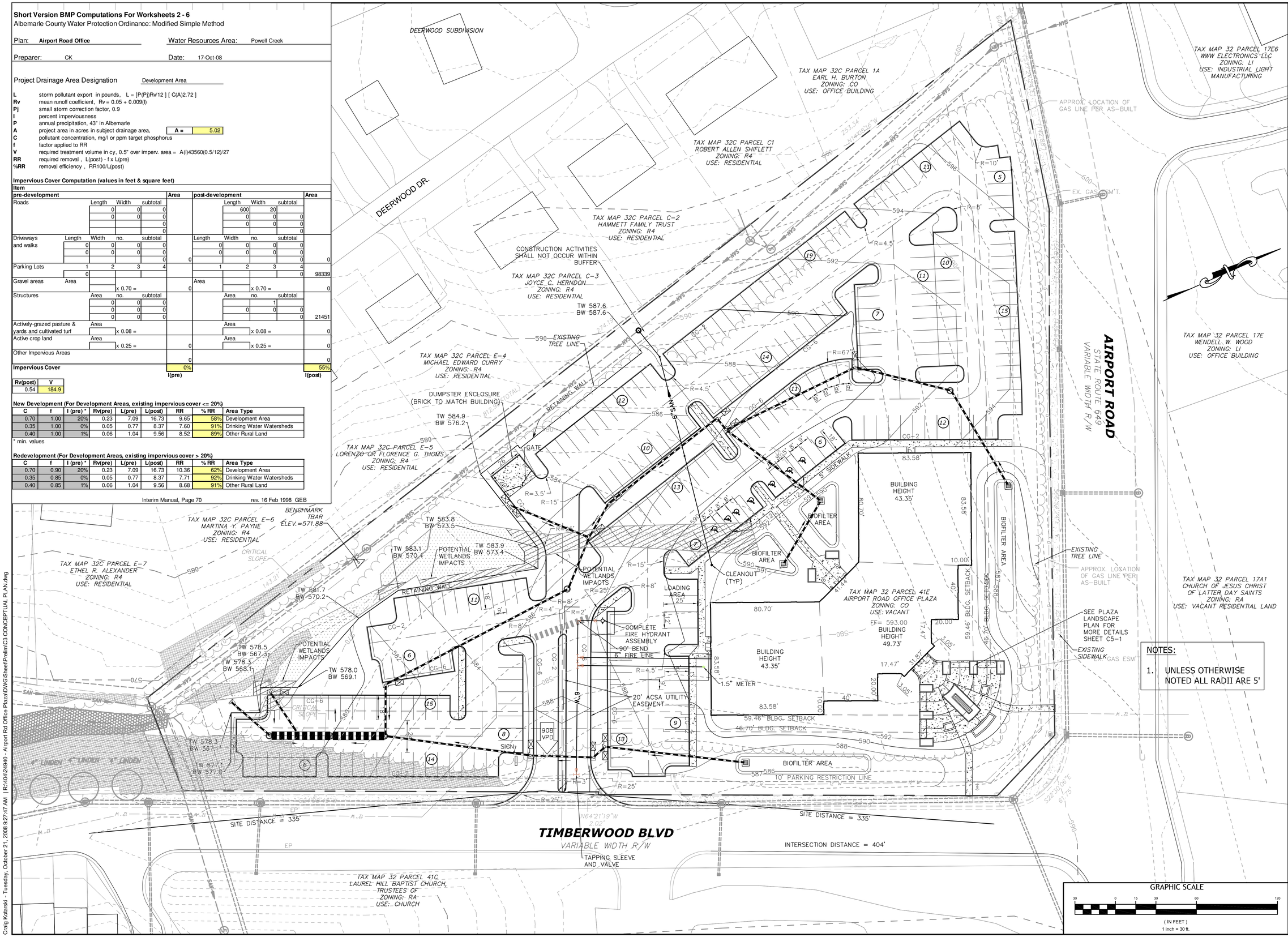
C	f	I (pre) *	Rv(pre)	L(pre)	L(post)	RR	% RR	Area Type
0.70	1.00	20%	0.23	7.09	16.73	9.65	58%	Development Area
0.35	1.00	0%	0.05	0.77	8.37	7.60	91%	Drinking Water Watersheds
0.40	1.00	1%	0.06	1.04	9.56	8.52	89%	Other Rural Land

* min. values

Redevelopment (For Development Areas, existing impervious cover > 20%)

C	f	I (pre) *	Rv(pre)	L(pre)	L(post)	RR	% RR	Area Type
0.70	0.90	20%	0.23	7.09	16.73	10.36	62%	Development Area
0.35	0.85	0%	0.05	0.77	8.37	7.71	92%	Drinking Water Watersheds
0.40	0.85	1%	0.06	1.04	9.56	8.68	91%	Other Rural Land

Interim Manual, Page 70 rev. 16 Feb 1998 GEB



NOTES:

1. UNLESS OTHERWISE NOTED ALL RADII ARE 5'

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

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DATE	REVISION DESCRIPTION
4-15-08	REVISED PER ARB COMMENTS
6-30-08	REVISED PER ARB COMMENTS
9-15-08	SUBMITTED TO COUNTY FOR REVIEW
10-20-08	REVISED PER ARB AND COUNTY COMMENTS

DATE 12/3/2007

DRAWN BY C. KOTARSKI

DESIGNED BY A. GEORGE

CHECKED BY S. SAUNDERS

SCALE 1" = 30'

TIMMONS GROUP

AIRPORT ROAD OFFICE PLAZA

RIO DISTRICT - ALBEMARLE - VIRGINIA

SITE PLAN

JOB NO. 24940

SHEET NO. C3

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Craig Kotarski - Tuesday, October 21, 2008 9:27:47 AM [R:\40\24940 - Airport Rd Office Plaza\DWG\SheetPrelim\C3 CONCEPTUAL PLAN.dwg