STORM DRAINAGE COMPUTATIONS
FOR:

ROSWELL MILL WALKING TRAIL

ROSWELL MILL

LAND LOTS 416; 1st DISTRICT
CITY OF ROSWELL
FULTON COUNTY, GEORGIA

PREPARED FOR:

ROSWELL PARKS DEPT

38 HILL STREET
ROSWELL, GA 30075
PHONE: (770) 641-3705
CONTACT: JEFF PRUITT

PREPARED BY:

URBAN ENGINEERS, INC.

1904 MONROE DRIVE,N.E.
SUITE 100
ATLANTA, GEORGIA 30324
(404) 873-5874

MARCH, 2017

Urban Engineers, Inc.

1904 MONROE DRIVE, N.E. SUITE 100 • ATLANTA, GEORGIA 30324

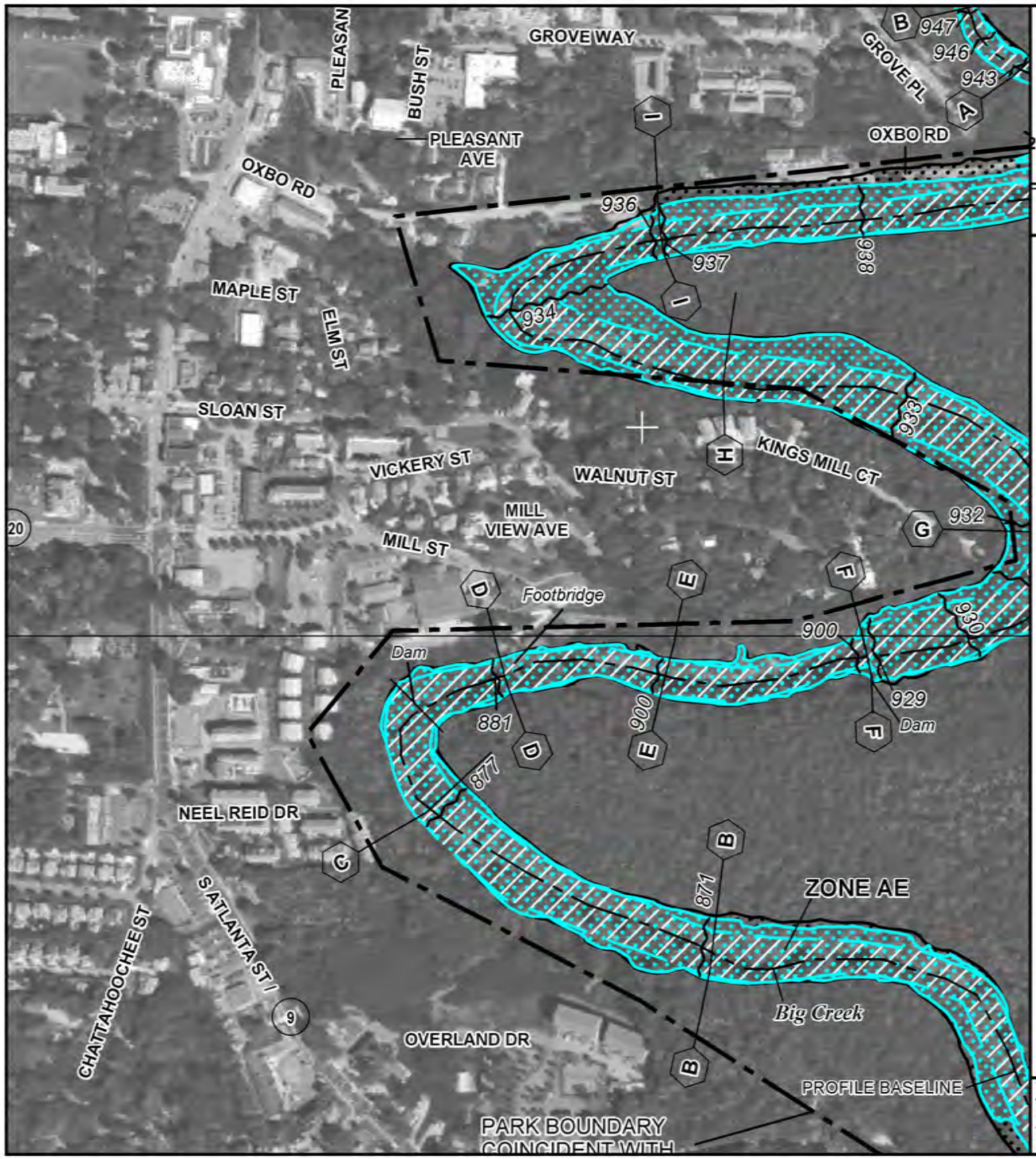
PHONE: (404) 873-5874 / FAX: (404) 873-5877

GENERAL INFORMATION

The site is located at the Roswell1Mill Park in the City of Roswell, Fulton County, Georgia. The site is approximately 2.1 acres with 0.25 acres being disturbed. A portion of the property is located inside the 100-year flood plain per FEMA.

The existing project site is a City park with Roswell Mill ruins scattered around. The proposed development is to install a walking trail to allow the public to view the mill machinery while walking the park. The proposed construction will create 8,500 sf of new impervious area. All stormwater for the project will eventually run into Vickery Creek with an existing flood plain. Due to the new impervious area, City code requires we develop a water quality solution for the facility. We have designed remediating two existing slopes in the park to treat the site runoff. Additionally, the parks department is looking into developing a bio-retention cell in the future as well. Due to the proximity of Vickery Creek flood plain and the limited amount of enhanced runoff rates, no stormwater detention is proposed.


SITE
Jones Rd
Houze Way
Putting Green Ln
Mansell Rd
Crabapple Rd
Woodstock Rd
Lake Charles Dr
Wordsworth Dr
92
Houze Rd
Commerce Pkwy
Oakfield Ln
9
Old Roswell Rd
Holcomb Bridge Rd
Knoll Woods Dr
Oakstone Dr
Lake Charles Dr
Charles Pl
Canton St
Pine Grove Rd
Norcross St
Warsaw Rd
Jade Cove Dr
Forrest St
Myrtle St
Zion Cir
Roswell
Hightower Rd
Federal Rd
Wickerberry Ln
Farm Track
Hill St
Atlanta St
Oak St
Oxbo Rd
Grimes Bridge Rd
Sloan St
Longleaf Dr
Spring Dr
Westside Dr
120
Willeo Rd
S Atlanta St
Hillcrest Dr
Riverside Rd
Azalea Dr
Skyland Dr
U.S. Hwy 19
Roberts Dr



MAP SCALE 1" = 500'

250 0 500 1000

FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0063G

FIRM

FLOOD INSURANCE RATE MAP

FULTON COUNTY, GEORGIA AND INCORPORATED AREAS

PANEL 63 OF 490

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ROSWELL, CITY OF	130088	0063	G
SANDY SPRINGS, CITY OF	130689	0063	G

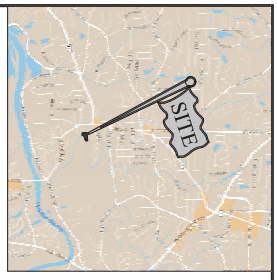
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

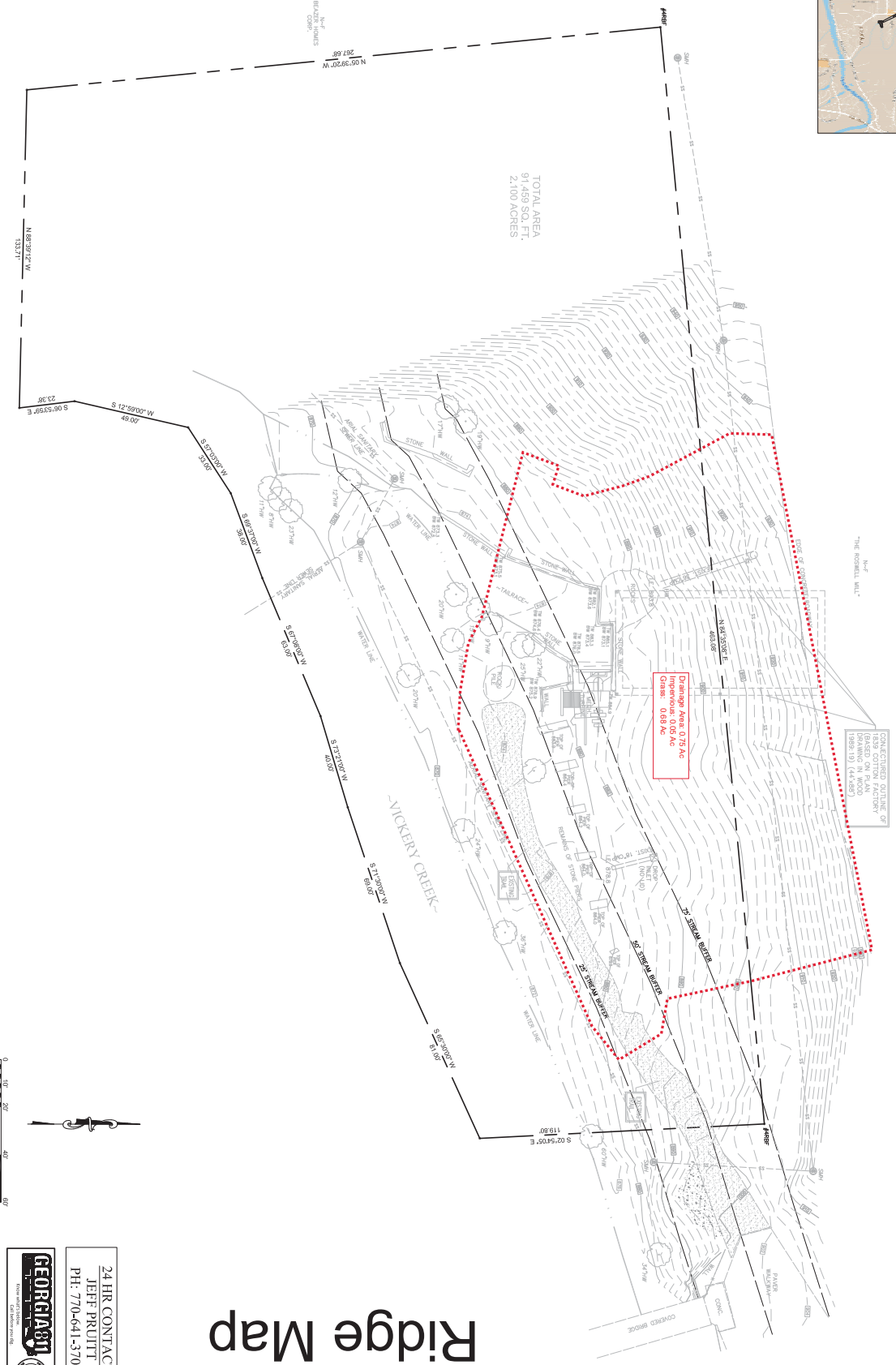
MAP NUMBER
13121C0063G

MAP REVISED
SEPTEMBER 18, 2013

Federal Emergency Management Agency

U:\AdamsTodd\u21002j4 - Roswell Mill\2016\u21002j4.dwg
3/10/2017 10:20 AM





Pre Developed Ridge Map

24 HR CONTACT
JEFF PRUITT
PH: 770-641-3705

DRAWING NO.: C-2.0	PROJECT No. 21002–4 LAND LOT(S): 156, 179 DISTRICT: 9th COUNTY: FULTON SCALE: 1"=20' DATE: 3–10–2017	EXISTING CONDITIONS ROSWELL MILL PARK WALKWAY	REVISIONS △ DESCRIPTION

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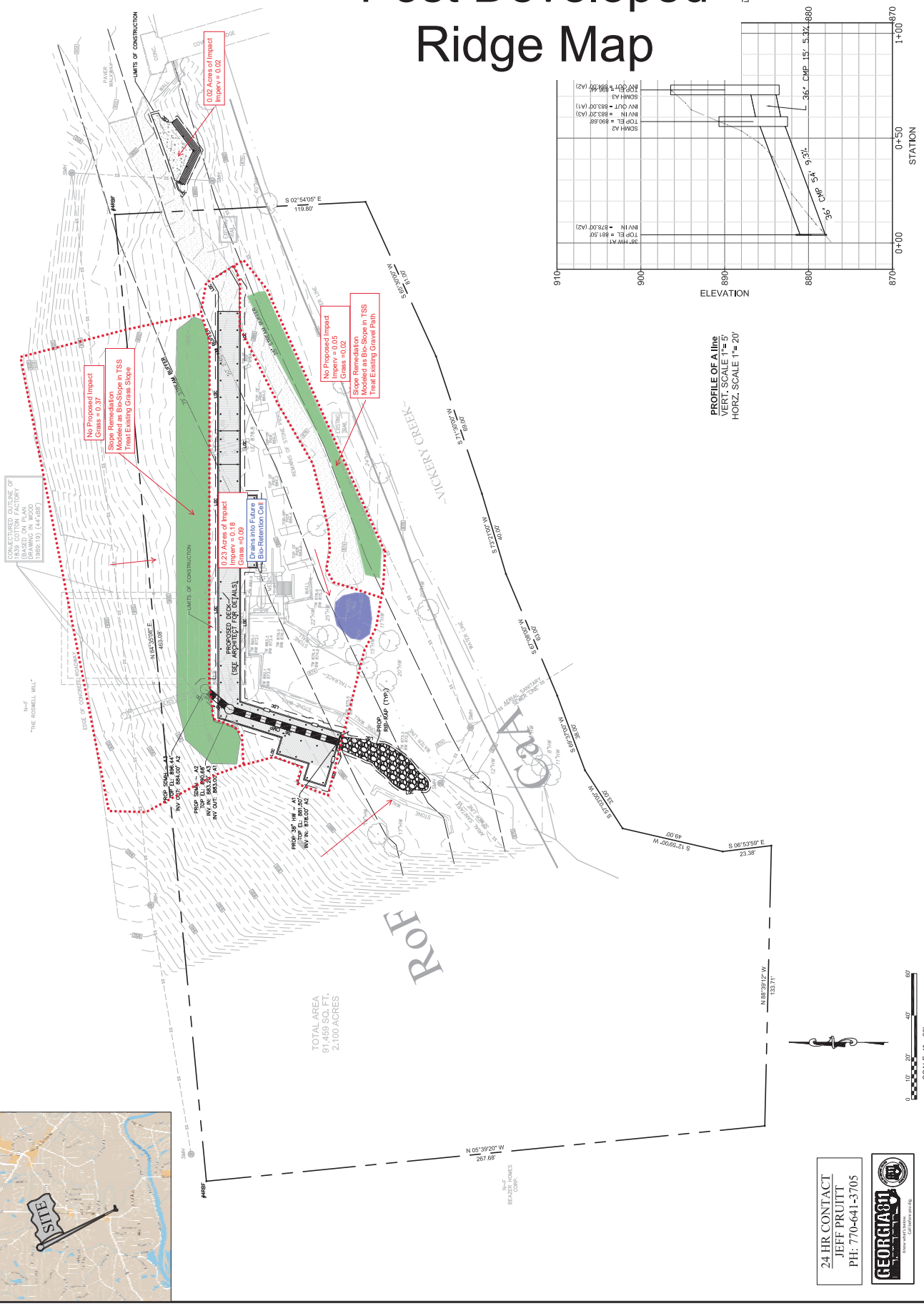
CERTIFICATE LEVEL II
CERT # 6968
EXPIRES 3/17/18

Post Developed Ridge Map



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REVISIONS		
△	DESCRIPTION	

GRADING & DRAINAGE PLAN
ROSWELL MILL PARK
WALKWAY

PROJECT No.	21002-4
LAND LOT(S):	156, 179
DISTRICT:	9th
COUNTY:	FULTON
SCALE:	1"=20'
DATE:	3-10-2017

DRAWING NO.: C-3.0

CERTIFIED LEVEL II
STORMWATER FEE
EXPIRES 03/17/18
No. 2424
CERTIFIED LANDSCAPE ARCHITECT
EXPIRES 12/31/2017

24 HR CONTACT
JEFF PRUITT
PH: 770-641-3705

GEORGIA811
Know what's below.
Call before you dig.

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool
Version 2.2

General Information

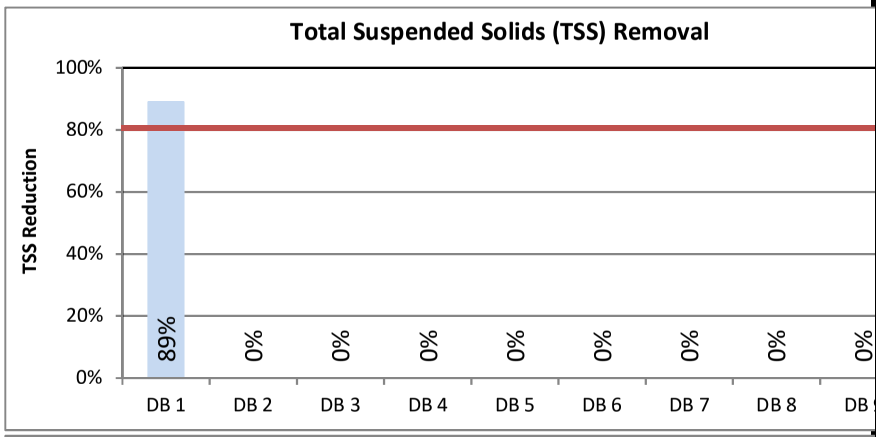
Name of Developer:	Todd Architect	**Date Submitted:**	3/10/2017
Development Name:	Roswell Mill	**Permit Number:**	
Site Location / Address:		**Developer Contact:**	Jeff Pruitt
		Phone Number:	770 641-3705
		Name of Engineer(s):	Urban Engineers
Development Type:	Parks, Recreation & Conservation Areas	**Maintenance Responsibility:**	Roswell Parks Dept

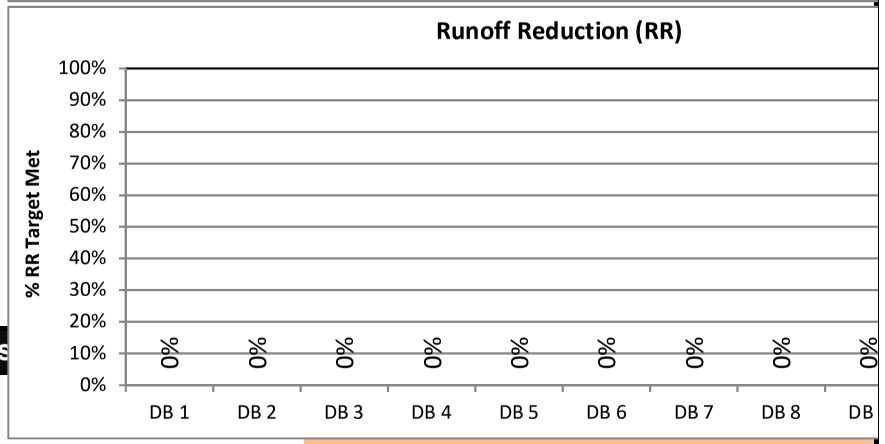
Site Summary

Total Pre-Development Area (ac):	**0.73**
Total Post-Development Area (ac):	**0.73**
Total Treated Area (ac):	**1.38**
Total Untreated Area (ac):	**-0.65**

		I (ac)	P (ac)	CA (ac)
DB1	**DB 1**	0.25	0.48	0.00
DB2	**DB 2**	0.00	0.00	0.00
DB3	**DB 3**	0.00	0.00	0.00
Drainage Basin 4	**DB 4**	0.00	0.00	0.00
Drainage Basin 5	**DB 5**	0.00	0.00	0.00
Drainage Basin 6	**DB 6**	0.00	0.00	0.00
Drainage Basin 7	**DB 7**	0.00	0.00	0.00
Drainage Basin 8	**DB 8**	0.00	0.00	0.00
Drainage Basin 9	**DB 9**	0.00	0.00	0.00
Drainage Basin 10	**DB 10**	0.00	0.00	0.00
	TOTAL	**0.25**	**0.48**	**0.00**

I = Impervious Area, P = Pervious Area, CA = Conservation Area





Target Runoff Reduction Volume Achieved?	**No**
Target TSS Removal Achieved?	**Yes**
Total Target Runoff Reduction Volume (cf)	949
Runoff Reduction Volume Achieved (cf)	452
Total Target Water Quality Volume (cf)	1,139
% TSS Removal Achieved	100%

Official Us

Tracking #:	
Reviewed By:	
Date Approved:	

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Roswell Mill
Drainage Basin Name: DB1

data input cells
calculation cells
constant values

Site Data

Indicate Pre-Development Land Cover and Runoff Curve Numbers in the Site's Disturbed Area

Cover Type	HSG* A (acres)	CN	HSG B (acres)	CN	HSG C (acres)	CN	HSG D (acres)	CN	Total	% Cover
Woods - Good Condition		30	0.68	55		70		77	0.68	93%
Impervious		98	0.05	98		98		98	0.05	7%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Local Jurisdiction Input									0.00	0%
Other									0.00	0%
Total	0.00		0.73		0.00		0.00		0.73	100%

*HSG = hydrologic soil group

Impervious (ac)	0.05
Weighted CN	58
Potential Max Soil Retention, S_{pre} (in)	7.26

Indicate Post-Development Land Cover and Runoff Curve Numbers in the Site's Disturbed Area

Cover Type	HSG A (acres)	CN	HSG B (acres)	CN	HSG C (acres)	CN	HSG D (acres)	CN	Total	% Cover
Impervious		98	0.25	98		98		98	0.25	34%
Woods - Good Condition		30	0.48	55		70		77	0.48	66%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Select a land cover type…		0		0		0		0	0.00	0%
Local Jurisdiction Input									0.00	0%
Other									0.00	0%
Total	0.00		0.73		0.00		0.00		0.73	100%

Impervious (ac)	0.25
Rv	0.36
Weighted CN	70
Potential Max Soil Retention, S_{post} (in)	4.34

Conservation Area Credits

Scenario 1: Natural Conservation Area **See the GSMM Volume 2, Section 2.3.3.3 for more information.*

Check the box if a portion of the post-developed area is protected by a conservation easement or equivalent form of protection.

Area (ac) of development protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 1 box above is checked

Scenario 2: Site Reforestation/Revegetation **See the GSMM Volume 2, Section 4.22 for more information.*

Check the box if a portion of the post-developed area employs site reforestation/revegetation and is protected by a conservation easement or equivalent form of protection.

(ac) of development reforested/revegetated and protected by a rvation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 2 box above is checked

Scenario 3: Soil Restoration **See the GSMM Volume 2, Section 4.23 for more information.*

Check the box if a portion of the post-developed area employs soil restoration and is protected by a conservation easement or equivalent form of protection.

Area (ac) of development with restored soils and protected by a conservation easement or equivalent form of protection.

Note: The green cell will unlock if the Scenario 3 box above is checked

Scenario 4: Site Reforestation/Revegetation & Soil Restoration **See the GSMM Volume 2, Section 4.22 and 4.23 for more information.*

Check the box if the same portion of the post-developed area employs site reforestation/revegetation and soil restoration, and is protected by a conservation easement or equivalent form of protection.

Area (ac) with restored soils by a conservation easemen d & revegetated area and protected form of protection.

Note: The green cell will unlock if the Scenario 4 box above is checked

Total Conservation Area Credit (acres) 0.00

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Roswell Mill
Drainage Basin Name: DB1

data input cells
calculation cells
constant values

Water Quality Goals

Target Runoff Reduction Storm (in)	1.00

Total Site Area for Water Quality Volume (acres)	0.73
Target Runoff Reduction Volume (cf)	949
Target Water Quality Volume (cf)	1,139

Select BMPs for Runoff Reduction and Water Quality

		Area Draining to Each BMP			Storage Volume Provided by BMP (cf)	RR Conveyance Volume Provided by BMP (cf)	Down-stream BMP	Runoff Reduction Calculations						WQ Calculations	
		On-site Pervious Area (acres)	On-site Impervious Area (acres)	Offsite Area (acres)				RR Volume from Direct Drainage (cf)	RR Volume from Upstream Practices (cf)	Total RR Volume Received by BMP (cf)	Runoff Reduction %	RR Achieved (cf)	Remaining RR Volume (cf)	WQ_v from Direct Drainage (cf)	Effective TSS Removal %
BMP 1	Bioslope (A & B hydrologic soils)	0.37	0.00					67	0	67	50%	0	67	81	85%
BMP 2	Bioslope (A & B hydrologic soils)	0.02	0.05					176	0	176	50%	0	176	211	85%
BMP 3	Bioretention Basin (w/o underdrain)	0.09	0.18					637	0	637	100%	0	637	764	100%
BMP 4	Select a BMP…		0.02					69	0	69	N/A	0	69	83	N/A
BMP 5	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 6	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 7	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 8	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 9	Select a BMP…							0	0	0	N/A	0	0	0	N/A
BMP 10	Select a BMP…							0	0	0	N/A	0	0	0	N/A
	TOTAL	0.48	0.25	0.00				949				0		1,139	
	UNTREATED AREA (acres)	0.00	0.00												

Target Runoff Reduction Volume (cf)	949
Target Achieved?	No
Remaining Runoff Reduction Volume (cf)	949

Target Water Quality Volume (cf)	1,139
% TSS Removal Achieved	89%
Target Achieved?	Yes!
Remaining TSS Removal %	0%

Georgia Stormwater Management Manual
Stormwater Quality Site Development Review Tool, v2.2

Development Name: Roswell Mill
Drainage Basin Name: DB1

data input cells
calculation cells
constant values

Channel and Flood Protection Calculations

	1-yr, 24-hr storm	2-yr, 24-hr storm	25-yr, 24-hr storm	100-yr, 24-hr storm
Target Rainfall Event (in)				

	1-yr, 24-hr storm	2-yr, 24-hr storm	25-yr, 24-hr storm	100-yr, 24-hr storm
Pre-Development Runoff Volume (in)	0.00	0.00	0.00	0.00
Post Development Runoff Volume (in) with no BMPs	0.00	0.00	0.00	0.00
Post-Development Runoff Volume (in) with BMPs	0.00	0.00	0.00	0.00
Adjusted CN	0	0	0	0

*See Stormwater Management Standards to Determine Detention Requirements.

Comments