



Public Services

Engineering
414 Chestnut St, Suite 200
Wilmington, NC 28401
910 341-7807
910 341-5881 fax
wilmingtonnc.gov
Dial 711 TTY/Voice

June 4, 2014

Mr. Ed Unstead
Payne Umstead Properties, LLC
609 Brae Burn Drive
Martinez, GA 30907

**Subject: Stormwater Management Permit No. 2013027R1
Splash N Dash Car Wash
High Density Filter System - Revision**

Dear Mr. Unstead:

The City of Wilmington Engineering Division has received a request for a revision to the Stormwater Management Permit for The Splash N Dash carwash. Having reviewed the application and all supporting materials, the City of Wilmington has determined that the proposed revision meets the requirements of the City of Wilmington's Comprehensive Stormwater Ordinance.

The revisions include:

- The addition of a small lift station to pump stormwater to the outfall, which had to be raised due to a utility conflict
- A revision of the Operation & Maintenance agreement.
- There is no change to the impervious area with this revision.

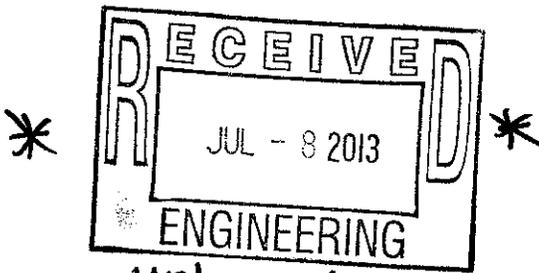
Please be aware all terms and conditions of the permit 8/20/2013 remain in full force and effect. Any additional changes to the approved plans must be approved by this office prior to construction. The issuance of the plan revision does not preclude the permittee from complying with all other applicable statutes, rules, regulations or ordinances which may have jurisdiction over the proposed activity, and obtaining a permit or approval prior to construction.

The revised stamped, approved stormwater management drawings are included with this revision. Please replace any old plan sheets from the approved set with the new, revised sheet. An electronic copy of the approved drawing set, permit, application and supplementary documents will be maintained by the Wilmington Engineering Division. If you have any questions, or need additional information, please contact Robert Gordon at (910) 341-5856 or rob.gordon@wilmingtonnc.gov

Sincerely,

for Sterling Cheatham, City Manager
City of Wilmington

cc: Jarrett Senkbell PE, OnSite Civil Group
Jeff Walton, Wilmington Development Services/Planning



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unless otherwise noted

STORMWATER MANAGEMENT PERMIT APPLICATION FORM
 (Form SWP 2.2)

I. GENERAL INFORMATION

1. Project Name (subdivision, facility, or establishment name - should be consistent with project name on plans, specifications, letters, operation and maintenance agreements, etc.):

SPLASH N DASH CARWASH

2. Location of Project (street address):

5044 MARKET ST

City: Wilmington County: New Hanover Zip: 28405

3. Directions to project (from nearest major intersection):

1 PARCEL WEST OF HOOTERS AT INTERSECTION OF MARKET/NEW CENTRE ON SOUTH SIDE OF MARKET ST.

II. PERMIT INFORMATION

1. Specify the type of project (check one): Low Density High Density
 Drains to an Offsite Stormwater System Drainage Plan Other

If the project drains to an Offsite System, list the Stormwater Permit Number(s):

City of Wilmington: N/A State - NCDENR/DWQ: N/A

2. Is the project currently covered (whole or in part) by an existing City or State (NCDENR/DWQ) Stormwater Permit? Yes No

If yes, list all applicable Stormwater Permit Numbers:

City of Wilmington: N/A State - NCDENR/DWQ: N/A

3. Additional Project Permit Requirements (check all applicable):

CAMA Major Sedimentation/Erosion Control
 NPDES Industrial Stormwater 404/401 Permit: Proposed Impacts: _____

If any of these permits have already been acquired please provide the Project Name, Project/Permit Number, issue date and the type of each permit:

N/A

III. CONTACT INFORMATION

1. Print Applicant / Signing Official's name and title (specifically the developer, property owner, lessee, designated government official, individual, etc. who owns the project):

Applicant / Organization: PAYNE UMSTEAD PROPERTIES LLC

Signing Official & Title: ED UMSTEAD

- a. Contact information for Applicant / Signing Official:

Street Address: 609 BRAE BURN DR

City: MARTINEZ State: GA Zip: 30907

Phone: 706-840-4988 Fax: 706-863-7935 Email: EDUMSTEAD@COMCAST.NET

Mailing Address (if different than physical address): SAME

City: _____ State: _____ Zip: _____

- b. Please check the appropriate box. The applicant listed above is:

- The property owner (Skip to item 3)
 Lessee* (Attach a copy of the lease agreement and complete items 2 and 2a below)
 Purchaser* (Attach a copy of the pending sales agreement and complete items 2 and 2a below)
 Developer* (Complete items 2 and 2a below.)

2. Print Property Owner's name and title below, if you are the lessee, purchaser, or developer. (This is the person who owns the property that the project is on.)

Property Owner / Organization: STICKY WILMINGTON LLC

Signing Official & Title: Chad Walldorf, managing partner

- a. Contact information for Property Owner:

Street Address: 710 Johnnie Dodds Blvd Suite 110

City: Mt Pleasant State: SC Zip: 29464

Phone: (843) 375-1384 Fax: (843) 375-1393 Email: chad@eightysixllc.com

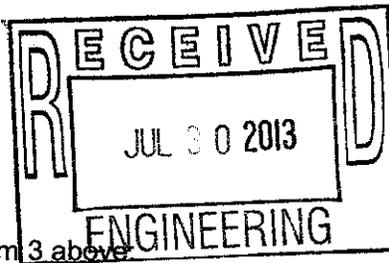
Mailing Address (if different than physical address): _____

City: _____ State: _____ Zip: _____

3. (Optional) Print the name and title of another contact such as the project's construction supervisor or another person who can answer questions about the project:

Other Contact Person / Organization: _____

Signing Official & Title: _____



a. Contact information for person listed in item 3 above:

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Mailing Address (if different than physical address): _____

City: _____ State: _____ Zip: _____

IV. PROJECT INFORMATION

1. In the space provided below, briefly summarize how the stormwater runoff will be treated.

A CONTECH STORMFILTER BMP WILL BE INSTALLED TO TREAT AN AREA EQUIVALENT TO THE AREA OF NEWLY FORMED IMPERVIOUS. THE BMP WILL DRAIN TO MARKET ST AND WILL BE LOCATED AS SHOWN ON THE PLANS

2. Total Property Area: 61,940 square feet

3. Total Coastal Wetlands Area: 0 square feet

4. Total Surface Water Area: 0 square feet

5. Total Property Area (2) – Total Coastal Wetlands Area (3) – Total Surface Water Area (4) = Total Project Area: 61,940 square feet.

6. Existing Impervious Surface within Property Area: 53,753 square feet

7. Existing Impervious Surface to be Removed/Demolished: 34,848 square feet

8. Existing Impervious Surface to Remain: 18,905 square feet

9. Total Onsite (within property boundary) Newly Constructed Impervious Surface (*in square feet*):

Buildings/Lots	7,838
Impervious Pavement	15,312
Pervious Pavement (adj. total, with % credit applied)	0
Impervious Sidewalks	2,088
Pervious Sidewalks (adj. total, with % credit applied)	0
Other (describe) N/A	0
Future Development	0
Total Onsite Newly Constructed Impervious Surface	25,238

10. Total Onsite Impervious Surface

(Existing Impervious Surface to remain + Onsite Newly Constructed Impervious Surface) = 44,143 square feet

11. Project percent of impervious area: (Total Onsite Impervious Surface / Total Project Area) x100 = 71 %

12. Total Offsite Newly Constructed Impervious Area (improvements made outside of property boundary, in square feet):

Impervious Pavement	0
Pervious Pavement (adj. total, with % credit applied)	0
Impervious Sidewalks	0
Pervious Sidewalks (adj. total, with % credit applied)	0
Other (describe)	0
Total Offsite Newly Constructed Impervious Surface	0

13. Total Newly Constructed Impervious Surface

(Total Onsite + Offsite Newly Constructed Impervious Surface) = 25238 square feet

14. Complete the following information for each Stormwater BMP drainage area. If there are more than three drainage areas in the project, attach an additional sheet with the information for each area provided in the same format as below. Low Density projects may omit this section and skip to Section V.

Basin Information	(Type of BMP) BMP #	(Type of BMP) BMP #	(Type of BMP) BMP #
Receiving Stream Name	SMITH	N/A	N/A
Receiving Stream Index Number			
Stream Classification	C-SW		
Total Drainage Area (sf)	27395	0	0
On-Site Drainage Area (sf)	24033		
Off-Site Drainage Area (sf)	3362		
Total Impervious Area (sf)	25238	0	0
Buildings/Lots (sf)	5295		
Impervious Pavement (sf)	11781		
Pervious Pavement, % credit (sf)	0		
Impervious Sidewalks (sf)	2088		
Pervious Sidewalks, % credit (sf)	0		
Other (sf)	0		
Future Development (sf)	0		
Existing Impervious to remain (sf)	2712		
Offsite (sf)	3362		
Percent Impervious Area (%)	92.1		

15. How was the off-site impervious area listed above determined? Provide documentation:

WITH SURVEY DATE, SEE EXHIBIT B IN STORMWATER CALCULATIONS. THE MAJORITY OF THE OFFSITE AREA IS A SHARED ACCESS EASEMENT WITH THE ADJACENT COMMERCIAL SITE. ONLY 1,780 SF (OF 3362) OF THE OFFSITE IS NOT WITH THE ACCESS EASEMENT.

V. SUBMITTAL REQUIREMENTS

1. Supplemental and Operation & Maintenance Forms - One applicable City of Wilmington Stormwater BMP supplement form and checklist must be submitted for **each** BMP specified for this project. One applicable proposed operation and maintenance (O&M) form must be submitted for **each type** of stormwater BMP. Once approved, the operation and maintenance forms must be referenced on the final plat and recorded with the register of deeds office.
2. Deed Restrictions and Restrictive Covenants - For all subdivisions, outparcels, and future development, the appropriate property restrictions and protective covenants are required to be recorded prior to the sale of any lot. Due to variability in lot sizes or the proposed BUA allocations, a table listing each lot number, lot size, and the allowable built-upon area must be provided as an attachment to the completed and notarized deed restriction form. The appropriate deed restrictions and protective covenants forms can be downloaded at the link listed in section V (3). Download the latest versions for each submittal.

In instances where the applicant is different than the property owner, it is the responsibility of the property owner to sign the deed restrictions and protective covenants form while the applicant is responsible for ensuring that the deed restrictions are recorded.

By the notarized signature(s) below, the permit holder(s) certify that the recorded property restrictions and protective covenants for this project, if required, shall include all the items required in the permit and listed on the forms available on the website, that the covenants will be binding on all parties and persons claiming under them, that they will run with the land, that the required covenants cannot be changed or deleted without concurrence from the City of Wilmington, and that they will be recorded prior to the sale of any lot.

3. Only complete application packages will be accepted and reviewed by the City. A complete package includes all of the items listed on the City Engineering Plan Review Checklist, including the fee. Copies of the Engineering Plan Review Checklist, all Forms, Deed Restrictions as well as detailed instructions on how to complete this application form may be downloaded from:

<http://www.wilmingtonnc.gov/PublicServices/Engineering/PlanReview/StormwaterPermits.aspx>

The complete application package should be submitted to the following address:

City of Wilmington – Engineering
Plan Review Section
414 Chestnut Street, Suite 200
Wilmington, NC 28402

VI. CONSULTANT INFORMATION AND AUTHORIZATION

1. Applicant: Complete this section if you wish to designate authority to another individual and/or firm (such as a consulting engineer and /or firm) so that they may provide information on your behalf for this project (such as addressing requests for additional information).

Consulting Engineer: JARRETT M. SENKBEIL

Consulting Firm: ONSITE CIVIL GROUP

a. Contact information for consultant listed above:

Mailing Address: 3506 BILLINGSLEY DRIVE

City: MARIETTA

State: GA

Zip: 30062

Phone: 404-822-9147

Fax: 770-627-5214

Email: JARRETT@ONSITECIVIL.COM

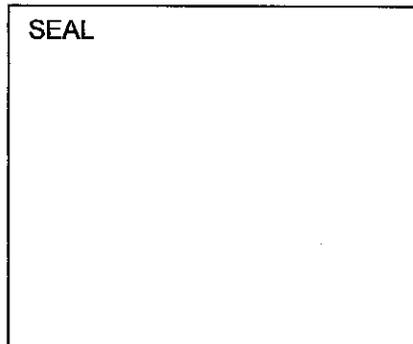
VII. PROPERTY OWNER AUTHORIZATION (If Section III(2) has been filled out, complete this section)

I, (print or type name of person listed in Contact Information, item 2) Chad Walldorf, certify that I own the property identified in this permit application, and thus give permission to (print or type name of person listed in Contact Information, item 1) Ed Umstead with (print or type name of organization listed in Contact Information, item 1) Payne Umstead Properties, LLC to develop the project as currently proposed. A copy of the lease agreement or pending property sales contract has been provided with the submittal, which indicates the party responsible for the operation and maintenance of the stormwater system.

As the legal property owner I acknowledge, understand, and agree by my signature below, that if my designated agent (entity listed in Contact Information, item 1) dissolves their company and/or cancels or defaults on their lease agreement, or pending sale, responsibility for compliance with the City of Wilmington Stormwater Permit reverts back to me, the property owner. As the property owner, it is my responsibility to notify the City of Wilmington immediately and submit a completed Name/Ownership Change Form within 30 days; otherwise I will be operating a stormwater treatment facility without a valid permit. I understand that the operation of a stormwater treatment facility without a valid permit is a violation of the City of Wilmington Municipal Code of Ordinances and may result in appropriate enforcement including the assessment of civil penalties.

Signature: *Chad Walldorf*

Date: 6/10/13

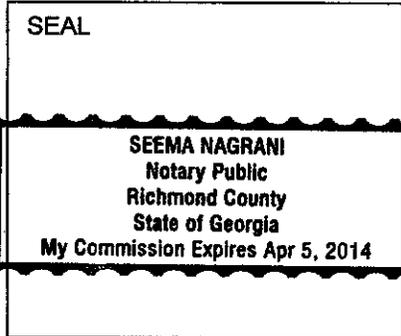


I, Sarah Stewart, a Notary Public for the State of South Carolina County of Dorchester, do hereby certify that Chad Walldorf personally appeared before me this day of June 10th, 2013, and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal,
Sarah Stewart
My commission expires: July 19, 2016

VIII. APPLICANT'S CERTIFICATION

I, (print or type name of person listed in Contact Information, item 1), E.D. Umstead certify that the information included on this permit application form is, to the best of my knowledge, correct and that the project will be constructed in conformance with the approved plans, that the required deed restrictions and protective covenants will be recorded, and that the proposed project complies with the requirements of the applicable stormwater rules under.

Signature: *E D Umstead* Date: 6/10/2013



I, Seema Nagrani, a Notary Public for the State of GEORGIA, County of RICHMOND, do hereby certify that Edward D Umstead personally appeared before me this day of 10th June 2013 and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal,
Nagrani
My commission expires: 04/05/2014.

Underground Water Quality Storage and Storm Filter Operation and Maintenance Agreement

I will keep a maintenance record on this system. This maintenance record will be kept in a log in a known set location. Any deficient system elements noted in the inspection will be corrected, repaired or replaced immediately. These deficiencies can affect the integrity of structures, safety of the public, and efficiency of the collection system.

The StormFilter system is defined as the proposed underground filter designed by Contech. The Water Quality Storage is defined as the underground system of pipes which stores the 1 inch rainfall event.

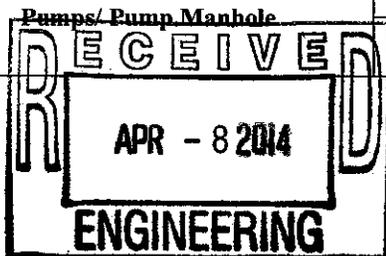
Important inspection and maintenance procedures:

- Remove and properly dispose of sediment and floating debris accumulated in drain inlet, outlet pipes and detention chambers. Sediment should be removed from detention chambers when it exceeds 6" deep. Use catch basin cleaning equipment including vacuum pumps.
- Proper disposal of sediment is required. It is least expensive if a nearby site has been set aside for sediment. This area must be located outside of floodplain. Persons responsible for disposing of sediment shall determine if disposal site accepts wet sediment. The material may need to be dewatered before disposal.

The StormFilter and underground water quality storage pipes will be inspected quarterly. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

The entire BMP system	Trash/debris is present	Remove the trash/debris
Adjacent pavement (if applicable)	Sediment is present on the paving surface	Sweep or vacuum the sediment as soon as possible
Flow diversion structure (between underground storage and Storm Filter)	The pipes entering and leaving the splitter box are clogged	Unclog the pipe. Dispose of the sediment off-site
	The pipe is cracked or otherwise damaged	Replace the pipe
	Sediment has accumulated to a depth greater than 6"	Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP
The underground storage pipes	Sediment has accumulated to a depth greater than 6"	Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP
	Structural damage has occurred to the vault, access hatch, access ladders, and/or weirs	Repair or replace the vault and/or mechanical components as necessary
	Blocked, damaged, or plugged air vents	Clear vents from all blockages and make structural repairs/replacements as necessary
Storm Filter Cartridges	Cartridges not performing as designed – see Contech I&M documents to determine if cartridge maintenance is required	Replace cartridges per manufacturer's recommendations
The outlet device	Clogging has occurred	Clean out the outlet device. Dispose of the sediment off-site
	The outlet device is damaged	Repair or replace the outlet device
Pumps/ Pump Manhole	Pump alarm is sounding	Contact pump service technician to check pumps
	Water not being pumped out of the system	Check pump alarms to ensure floats are working properly



Permit Number: _____
(to be provided by DWQ)

All other operation and maintenance activities should be in accordance with Contech's StormFilter Inspection and Maintenance Procedures document. Any problems that are found shall be repaired immediately. I acknowledge and agree by my signature below that I am responsible for the performance of the maintenance procedures listed above and have received and understand Contech's StormFilter Inspection and Maintenance Procedures document. I agree to notify DWQ of any problems with the system or prior to any changes to the system or responsible party.

Project name: SPLASH N DASH CARWASH

BMP drainage area number: 1

Print name: ED UMSTEAD

Title: OWNER

Address: 609 BRAE BURN RD, MARTINEZ, GA 30907

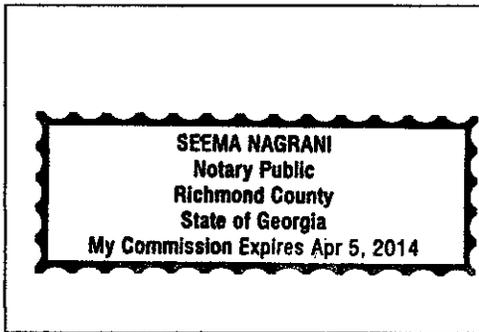
Phone: 706-840-4988

Signature: ED Umstead

Date: 6/10/2013

Note: The legally responsible party should not be a homeowners association unless more than 50% of the lots have been sold and a resident of the subdivision has been named the president.

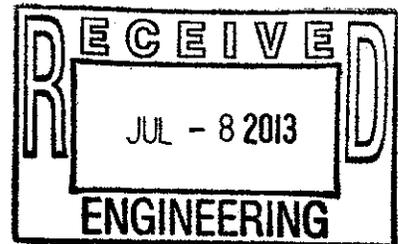
I, Seema Nagrani, a Notary Public for the State of GEORGIA, County of RICHMOND, do hereby certify that Edward D Umstead personally appeared before me this 10th day of June, 2013, and acknowledge the due execution of the forgoing sand filter maintenance requirements. Witness my hand and official seal,



Nagrani

SEAL

My commission expires 04/05/2014





STORMWATER MANAGEMENT PERMIT APPLICATION FORM
401 CERTIFICATION APPLICATION FORM

CONTECH STORMFILTER SUPPLEMENT
ENGINEERED SOLUTIONS



This form must be filled out on line, printed and submitted with all of the required information.

Make sure to also fill out and submit the Required Items Checklist (Section III) and the O&M Agreement

I. PROJECT INFORMATION

Project name	SPLASH N DASH CARWASH
Contact name	JARRETT M. SENKBEIL
Phone number	404-822-9147
Date	June 9, 2013
Drainage area number	1

II. DESIGN INFORMATION

Site Characteristics

Drainage area (A _D)	27,395.00 ft ²	OK
Impervious area	25,238.00 ft ²	
% Impervious (I _A)	92.1% %	
Design rainfall depth (R _D)	1.50 in	

Peak Flow Calculations

1-yr, 24-hr runoff depth	_____ in
1-yr, 24-hr intensity	_____ in/hr
Pre-development 1-yr, 24-hr runoff	_____ ft ³ /sec
Post-development 1-yr, 24-hr runoff	_____ ft ³ /sec
Pre/Post 1-yr, 24-hr peak control	_____ ft ³ /sec

Storage Volume

Design volume (WQV)	3,010.49 ft ³	
Adjusted water quality volume (WQV _{Adj})	2,257.87 ft ³	OK
Volume contained before filter	2,281.00 ft ³	
Runoff Coefficient (R _v)	0.88 (unitless)	

Mass loading calculations

Mean Annual Rainfall, P	54.00 in
Agency required TSS% removal	85.00%
Percent Runoff Capture (% capture)	90.00%
Event Mean Concentration of Pollutant, EMC	70.00 mg/l

(Suggestion: Use 60 for residential, 70 for Commercial, 100 for Industrial)

Filter System

Cartridge height	18.00 in
Specific Flow Rate, q	_____ gpm/ft ²
SHWT elevation	39.16 ft amsl
Bottom of the StormFilter vault elevation	38.50 ft amsl
Clearance (d _{SHWT})	-0.66

Time to drain the StormFilter (t)	48.00 hours
Time to drain the StormFilter (t)	2.00 days

OK. Submit drainage calculations.

SUMMARY

Maximum Treatment Flow Rate, cfs	0.00
Number of Cartridges	11.00

Note: Orifice plate required on discharge pipe of BMP manhole, see calculations on Page C5.3 of plans and pg 15 of this report

Additional Information

Does volume in excess of the design volume bypass the filter?	Y	Y or N	OK
Is an off-line flow-splitting device used?	Y	Y or N	OK
If draining to SA waters: Does volume in excess of the design volume flow evenly distributed through a vegetated filter?	N/A	Y or N	Enter Data
What is the length of the vegetated filter?	N/A ft		
Does the design use a level spreader to evenly distribute flow?	N/A	Y or N	Enter Data
Is the BMP located at least 30ft from surface waters (50ft if SA waters)?	Y	Y or N	OK
Are the vegetated side slopes equal to or less than 3:1	N/A	Y or N	Insufficient vegetated side slopes.
Is the BMP located in a recorded drainage easement with a recorded access easement to a public Right of Way (ROW)?	Y	Y or N	OK