



Public Services

Engineering
212 Operations Center Drive
Wilmington, NC 28412
910 341-7807
910 341-5881 fax
wilmingtonnc.gov
Dial 711 TTY/Voice

January 11, 2021

Mr. Thomas Saieed Jr., Manager
Pier 33, LLC
3301 Benson Drive, Suite 103
Raleigh, NC 27609

**Subject: Stormwater Management Permit No. 2015013R2
Pier 33
High Density Development**

Dear Mr. Saieed:

The City of Wilmington Engineering Division has received a request for a revision to the Stormwater Management Permit for Pier 33. 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:

- Addition of Brunswick Street public right-of-way improvements. See approved plans dated January 11, 2021.

Please be aware all terms and conditions of the permit Issued on December 10, 2018 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.

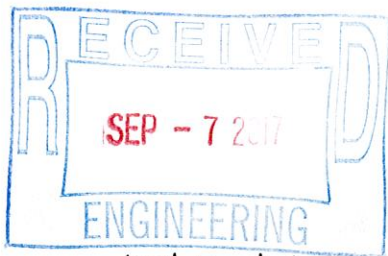
The revised stamped, approved stormwater management drawings will be released for construction by the Wilmington Planning Division under separate cover. Please replace any old plan sheets from the approved set with the new, revised sheet. An electronic copy of the approved drawing set, permit, application and supplementary documents will be maintained by the Wilmington Engineering Division. If you have any questions, or need additional information, please contact Richard Christensen at (910) 341-7813 or richard.christensen@wilmingtonnc.gov

Sincerely,

A handwritten signature in blue ink that reads 'Rich Christensen'.

for Sterling Cheatham, City Manager
City of Wilmington

cc: Howard Resnik, PE, CSD Engineering
Jeff Walton, Associate Planner, City of Wilmington



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 414 Chestnut St, Suite 200
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*unless noted otherwise

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.):

Pier 33

2. Location of Project (street address):

901 Nutt Street

City: Wilmington County: New Hanover Zip: 28401

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

Intersection US 17 and US 74. Travel North on 3rd St to Harnett St. Turn left onto Harnett St. Site is located at end of Harnett 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: 2011036 State - NCDENR/DWQ: _____

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: 2011036 State - NCDENR/DWQ: _____

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:

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: Pier 33 LLC

Signing Official & Title: Thomas Saieed Jr, Manager

- a. Contact information for Applicant / Signing Official:

Street Address: 3301 Benson Drive Suite 103

City: Raleigh State: NC Zip: 27609

Phone: 910-863-1000 Fax: _____ Email: Todd.saieed@dewittcarolinas.com

Mailing Address (if different than physical address): _____

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: _____

Signing Official & Title: _____

- a. Contact information for Property Owner:

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

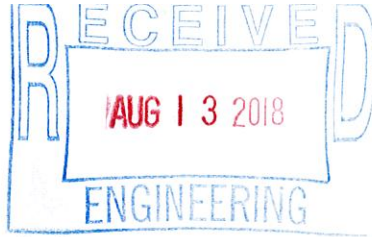
Mailing Address (if different than physical address): _____

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.

All impervious runoff within property boundary will be stored in an underground pipe detention system, then released into a chamber vault with perlite cartridges that will achieve an 85% TSS removal.

2. Total Property Area: 210,069 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: 210,069 square feet.

6. Existing Impervious Surface within Property Area: 6,739 square feet

7. Existing Impervious Surface to be Removed/Demolished: 0 square feet

8. Existing Impervious Surface to Remain: 6,739 square feet

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

Buildings/Lots	99,429
Impervious Pavement	21,797
Pervious Pavement (adj. total, with % credit applied)	
Impervious Sidewalks	57,018
Pervious Sidewalks (adj. total, with % credit applied)	
Other (describe)	
Future Development	2,000
Total Onsite Newly Constructed Impervious Surface	180,244

10. Total Onsite Impervious Surface

(Existing Impervious Surface to remain + Onsite Newly Constructed Impervious Surface) = 186,983 square feet

11. Project percent of impervious area: (Total Onsite Impervious Surface / Total Project Area) x100 = 89 %



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

Impervious Pavement	13,392
Pervious Pavement (adj. total, with % credit applied)	
Impervious Sidewalks	
Pervious Sidewalks (adj. total, with % credit applied)	
Other (describe)	
Total Offsite Newly Constructed Impervious Surface	13,392

13. Total Newly Constructed Impervious Surface

(Total Onsite + Offsite Newly Constructed Impervious Surface) = 193636 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	Cartridge BMP # 1	BMP #	(Type of BMP) BMP #
Receiving Stream Name	Cape Fear River		
Receiving Stream Index Number	18-(71)		
Stream Classification	SC		
Total Drainage Area (sf)	194609	0	0
On-Site Drainage Area (sf)	192355		
Off-Site Drainage Area (sf)	2254		
Total Impervious Area (sf)	179376	0	0
Buildings/Lots (sf)	99429		
Impervious Pavement (sf)	20783		
Pervious Pavement, % credit (sf)			
Impervious Sidewalks (sf)	54910		
Pervious Sidewalks, % credit (sf)			
Other (sf)			
Future Development (sf)	2000		
Existing Impervious to remain (sf)			
Offsite (sf)	2254		
Percent Impervious Area (%)	92		

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

Delineated from as-built drawings of Harnett St.

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: Howard Resnik, PE

Consulting Firm: CSD Engineering

a. Contact information for consultant listed above:

Mailing Address: PO BOX 4041

City: Wilmington State: NC Zip: 28406

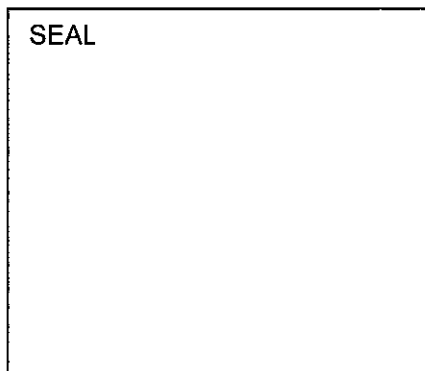
Phone: 910-791-4441 Fax: 910-791-1501 Email: howard@csd-engineering.com

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)* _____, 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)* _____ with *(print or type name of organization listed in Contact Information, item 1)* _____ 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: _____ Date: _____

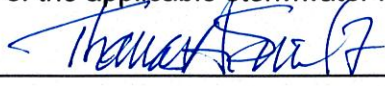


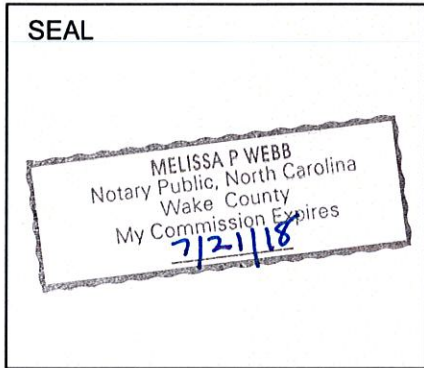
I, _____, a Notary Public for the State of _____, County of _____, do hereby certify that _____ personally appeared before me this day of _____, _____, and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal,

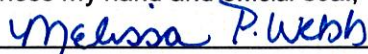
My commission expires: _____

VIII. APPLICANT'S CERTIFICATION

I, (print or type name of person listed in Contact Information, item 1) Thomas Saieed Jr; President 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:  Date: 7/27/17



I, melissa P. webb, a Notary Public for the State of NC, County of Wake, do hereby certify that Thomas A. Saieed Jr. personally appeared before me this day of July 27, 2017, and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal,

My commission expires: 7/21/18



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	Pier 33
Contact name	Howard Resnik, PE
Phone number	910-791-4441
Date	November 20-17
Drainage area number	1

II. DESIGN INFORMATION

Site Characteristics

Drainage area (A _D)	194,609.00 ft ²	OK
Impervious area	179,376.00 ft ²	
% Impervious (I _A)	92.2% %	
Design rainfall depth (R _D)	3.83 in	

Peak Flow Calculations

1-yr, 24-hr runoff depth	3.83 in
1-yr, 24-hr intensity	0.16 in/hr
Pre-development 1-yr, 24-hr runoff	8.45 ft ³ /sec
Post-development 1-yr, 24-hr runoff	15.91 ft ³ /sec
Pre/Post 1-yr, 24-hr peak control	7.46 ft ³ /sec

Storage Volume

Design volume (WQV)	27,415.00 ft ³	
Adjusted water quality volume (WQV _{Adj})	20,561.25 ft ³	OK
Volume contained before filter	20,618.00 ft ³	
Runoff Coefficient (R _v)	0.88 (unitless)	

Mass loading calculations

Mean Annual Rainfall, P	57.00 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	27.00 in	
Specific Flow Rate, q	1.00 gpm/ft ²	
SHWT elevation	3.00 ft amsl	
Bottom of the StormFilter vault elevation	2.50 ft amsl	
Clearance (d _{SHWT})	-0.50	
Time to drain the StormFilter (t)	14.00 hours	Insufficient drainage time or the discharge rate from the system must be controlled so that the post-development rate is no greater than the pre-development rate for the 1-year, 24-hour rain event.
Time to drain the StormFilter (t)	0.58 days	

SUMMARY

Maximum Treatment Flow Rate, cfs	0.55
Number of Cartridges	33.00

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	Y or N	Show how flow is evenly distributed.
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	y	Y or N	OK
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



Operation & Maintenance Agreement

Project Name: Pier 33

Project Location: 901 Nutt Street

Cover Page

Maintenance records shall be kept on the following BMP(s). This maintenance record shall be kept in a log in a known set location. Any deficient BMP 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 the pollutant removal efficiency of the BMP(s).

The BMP(s) on this project include (check all that apply & corresponding O&M tables will be added automatically):

Bioretention Cell	Quantity:		Location(s):	
Dry Detention Basin	Quantity:		Location(s):	
Grassed Swale	Quantity:		Location(s):	
Green Roof	Quantity:		Location(s):	
Infiltration Basin	Quantity:		Location(s):	
Infiltration Trench	Quantity:		Location(s):	
Level Spreader/VFS	Quantity:		Location(s):	
Permeable Pavement	Quantity:		Location(s):	
Proprietary System	Quantity:	1	Location(s):	NE corner of site
Rainwater Harvesting	Quantity:		Location(s):	
Sand Filter	Quantity:		Location(s):	
Stormwater Wetland	Quantity:		Location(s):	
Wet Detention Basin	Quantity:	0	Location(s):	
Disconnected Impervious Area	Present:	No	Location(s):	
User Defined BMP	Present:	No	Location(s):	

I acknowledge and agree by my signature below that I am responsible for the performance of the maintenance procedures listed for each BMP above, and attached O&M tables. I agree to notify NCDENR of any problems with the system or prior to any changes to the system or responsible party.

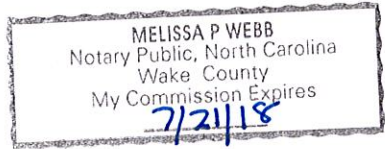
* Responsible Party:	Pier 33 LLC
Title & Organization:	Thomas Saieed Jr
Street address:	3301 Benson Drive Suite 103
City, state, zip:	Raleigh NC 27609
Phone number(s):	919-863-1000
Email:	todd.saieed@dewittcarolinas.com

Signature: Thomas A Saieed Jr Date: 7/27/17

I, Melissa P. Webb, a Notary Public for the State of NC
 County of Wake, do hereby certify that Thomas A. Saieed Jr.

personally appeared before me this 27 day of July and
 acknowledge the due execution of the Operations and Maintenance Agreement.

Witness my hand and official seal, Melissa P. Webb.



How many devices are
Contech StormFilters?

1

Important operation and maintenance procedures:

- The drainage area will be carefully managed to reduce the sediment load to the StormFilter.
- The sedimentation chamber or forebay will be cleaned out whenever sediment depth exceeds six inches.

The StormFilter system 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.

BMP element:	Potential problem:	How to remediate the problem:
Adjacent pavement (if applicable)	Trash/debris is present.	Remove the trash/debris.
Flow diversion structure	Sediment is present on the pavement surface.	Sweep or vacuum the sediment as soon as possible.
StormFilter Cartridges	The structure is clogged.	Unclog the conveyance and dispose of any sediment offsite.
	The structure is damaged.	Make any necessary repairs or replace if damage is too large for
Outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment offsite.
	The outlet device is damaged	Repair or replace the outlet device.
Receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the 401 Oversight Unit at 919-733-1786.

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. The responsible party shall have received and understand Contech's **StormFilter Inspection and Maintenance Procedures** document.