



Energy, Mineral
and Land Resources
ENVIRONMENTAL QUALITY

PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

TRACY DAVIS

Director

May 12, 2016

Mr. Thomas Walsh, VP Facilities & Support Services
New Hanover Regional Medical Center
PO Box 9000
Wilmington, NC 28402

15120

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N & T

**Subject: Approved Plan Revision & Correction
New Hanover Regional Medical Center
Stormwater Permit No. SW8 960123
New Hanover County**

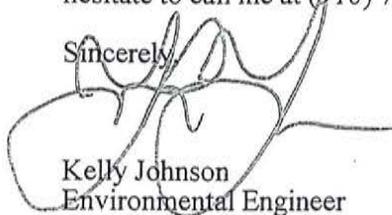
Dear Mr. Walsh:

On April 18, 2016, the Wilmington Regional Office received a request to revise the approved plans for Stormwater Management Permit Number SW8 960123. The revisions include:

1. Plan Revision: Impervious area has been reallocated as documented in Attachment A. This plan revision results in a 2,106sf increase in impervious area to Drainage Area 5A. This permit (SW8 960123) drains offsite to the Silverstream Pond (SW8 921002), which is permitted to the City of Wilmington. The City of Wilmington is currently working to determine overall compliance with SW8 921002, and to identify opportunities for additional treatment.
2. Correction: The December 3, 2015 Plan Revision did not fully document the reason for approving 1,608sf of impervious area which raised the total impervious in Drainage Area 5A above the value it had been previously permitted for. Attachment A has been updated to summarize an arrangement to increase impervious in SW8 960123 but to also decrease impervious area in an area that, like SW8 960123, drains to SW8 921002. The area that decreased was permitted on January 6, 2016 under SW8 151006, the Glen Meade Parking Lot. Additionally, 290sf of future impervious area was erroneously left in drainage area 5A of the December 3, 2015 Plan Revision. It has been removed.

It has been determined that a formal permit modification is not required for the proposed changes. We are forwarding you an approved copy of the revised plans for your files. Please add these sheets to the previously approved set. Please understand that the approval of this Plan Revision for the subject State Stormwater project is done on a case-by-case basis. Any other changes to this project must be approved through this Office prior to construction. The issuance of this 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. If you have any questions concerning this matter, please do not hesitate to call me at (910) 796-7215.

Sincerely,



Kelly Johnson
Environmental Engineer

GDS\kpj: \\Stormwater\Permits & Projects\1996\960123 HD\2016 05 permit_pr 960123

cc: John Tunstall, PE, Norris & Tunstall Consulting Engineers, PC
Inspector, New Hanover County Building Inspections
Wilmington Regional Office file, SW8 960123
Wilmington Regional Office file, SW8 151006
Wilmington Regional Office file, SW8 921002

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENERGY, MINERAL AND LAND RESOURCES

STATE STORMWATER MANAGEMENT PERMIT

HIGH DENSITY DEVELOPMENT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations

PERMISSION IS HEREBY GRANTED TO

New Hanover Regional Medical Center

New Hanover Regional Medical Center Master Facilities Plan

New Hanover County

FOR THE

construction, operation and maintenance of 7 underground infiltration trenches in compliance with the provisions of 15A NCAC 2H .1000, effective September 1, 1995 (hereafter referred to as the "stormwater rules") and the approved stormwater management plans and specifications and other supporting data as attached and on file with and approved by the Division of Energy, Mineral and Land Resources and considered a part of this permit.

This permit shall be effective from the date of issuance until February 6, 2020, and shall be subject to the following specified conditions and limitations:

I. DESIGN STANDARDS

1. This permit is effective only with respect to the nature and volume of stormwater described in the application and other supporting data.
2. This stormwater system has been approved for the management of stormwater runoff as described in Section I.7 of this permit. The seven stormwater control systems listed in section I.7 have been designed to handle the runoff from a total of 1,097,604 square feet of impervious area. Approximately 8.28 acres of existing impervious surface will remain untreated that drains to the Silverstream Regional Water Quality Facility (permit # SW8921002). Approximately 8.64 acres of existing impervious surface will remain untreated that drains to Greenfield Lake. Impervious area for this project is shown in Attachment A.
3. Trenches A and Ex 1 (previously known as the Jumpin' Run System) must be operated with a 30' vegetated filter.
4. The tract will be limited to the amount of built-upon area indicated in this permit, and per approved plans. There is no built-upon area available for future development under this permit.

5. All stormwater collection and treatment systems must be located in either dedicated common areas or recorded easements. The final plats for the project will be recorded showing all such required easements, in accordance with the approved plans.
6. The runoff from all built-upon area within the permitted drainage area of this project must be directed into the permitted stormwater control system.
7. The following design criteria have been provided in the infiltration trenches and must be maintained at design condition:

	Units	Trench A	Trench B	Trench C
Drainage Area		9.49	8.38	6.02
Onsite	Acres	9.49	8.38	6.02
Offsite		0	0	0
Total Impervious Surfaces	ft ²	293,594	301,588	201,999
Design Storm	inches	1	1*	1*
Trench Dimensions (LxWxH)	ft	140x100x4.5	120x120x5.5	175x45x5.5
Perforated Pipe Diam./Length	ft	2/892	3/876	3/568
Bottom Elevation	FMSL	41.0	45.7	36.75
Bypass Weir Elevation	FMSL	45.5	51.2	42.25
Permitted Storage Volume	ft ³	23,871	31,745	17,769
Expected Infiltration Rate	in/hr	100.1	15.3	26.5
Seasonal High Water Table	FMSL	39.0	40.17	34.75
Time to Draw Down	hours	0.49	4.31	2.49
Type of Soil		Sandy/Urban		
Receiving Stream		Greenfield Lake	Silverstream RWQ Facility	Greenfield Lake
River Basin		Cape Fear		
Stream Index Number		18-76-1	18-76-1-1	18-76-1
Classification of Water Body		C;Sw		

* 1" design storm + 1 additional inch for the new portion of the DA (no vegetated filter)

	Units	Trench D	Trench E
Drainage Area		1.36	1.22
Onsite	Acres	1.36	1.22
Offsite		0	0
Total Impervious Surfaces	ft ²	53,579	48,876
Design Storm	inches	1**	1**
Trench Dimensions (LxWxH)	ft	115x65x35	60x40x4
Perforated Pipe Diam./Length	ft	2/540	2/184
Bottom Elevation	FMSL	42.0	50.33
Storage Elevation	FMSL	45.5	54.33
Permitted Storage Volume	ft ³	10,260	4,156
Expected Infiltration Rate	in/hr	6.5	37.6
Seasonal High Water Table	FMSL	40.0	48.33
Time to Draw Down	hours	6.46	1.28
Type of Soil		Sandy/Urban	
Receiving Stream		Silverstream RWQ Facility	
River Basin		Cape Fear	
Stream Index Number		18-76-1-1	
Classification of Water Body		C;Sw	

* 1" design storm + 2 additional inches for the new portion of the DA (no vegetated filter or bypass)

	Units	Trench Ex1 (aka Jumpin Run)	Trench Ex2 (aka Silverstream)
Drainage Area		3.71	2.38
Onsite	Acres	3.71	2.38
Offsite		0	0
Total Impervious Surfaces	ft ²	112,820	85,148
Design Storm	inches	1	1
Trench Dimensions (LxWxH)	ft	185 x 12 x 6	108 x 18 x 6
Perforated Pipe Dia./Length	ft	4/370	4/324
Bottom Elevation	FMSL	40.55	38.5
Bypass Weir Elevation	FMSL	47.5	44.75
Permitted Storage Volume	ft ³	8,118	7,109
Expected Infiltration Rate	in/hr	7	7
Seasonal High Water Table	FMSL	36.0	36.0
Time to Draw Down	hours	7.5	6.2
Type of Soil		Sandy/Urban	
Receiving Stream		Jumpin Run/ Greenfield Lake	Silverstream RWQ Facility
River Basin		Cape Fear	
Stream Index Number		18-76-1-3	18-76-1-1
Classification of Water Body		C;Sw	

II. SCHEDULE OF COMPLIANCE

1. The stormwater management system shall be constructed in its entirety, vegetated (if applicable) and operational for its intended use prior to the construction of any built-upon surface.
2. During construction, erosion shall be kept to a minimum and any eroded areas of the system will be repaired immediately.
3. The permittee shall at all times provide the operation and maintenance necessary to assure the permitted stormwater system functions at optimum efficiency. The approved Operation and Maintenance Plan must be followed in its entirety and maintenance must occur at the scheduled intervals including, but not limited to:
 - a. Semiannual scheduled inspections (every 6 months).
 - b. Sediment removal.
 - c. Mowing and revegetation of slopes and the vegetated filter.
 - d. Immediate repair of eroded areas.
 - e. Maintenance of all slopes in accordance with approved plans and specifications.
 - f. Debris removal and unclogging of bypass structure, filter media, flow spreader, catch basins, piping and vegetated filter.
 - g. A clear access path to the bypass structure must be available at all times.
4. Records of maintenance activities must be kept and made available upon request to authorized personnel of DEMLR. The records will indicate the date, activity, name of person performing the work and what actions were taken.
5. The facilities shall be constructed as shown on the approved plans. This permit shall become voidable unless the facilities are constructed in accordance with the conditions of this permit, the approved plans and specifications, and other supporting data.

6. Upon completion of construction, prior to issuance of a Certificate of Occupancy, and prior to operation of this permitted facility, a certification must be received from an appropriate designer for the system installed certifying that the permitted facility has been installed in accordance with this permit, the approved plans and specifications, and other supporting documentation. Any deviations from the approved plans and specifications must be noted on the Certification. A modification may be required for those deviations.
7. If the stormwater system was used as an Erosion Control device, it must be restored to design condition prior to operation as a stormwater treatment device, and prior to occupancy of the facility.
8. Access to the stormwater facilities shall be maintained via appropriate easements at all times.
9. The permittee shall submit to the Director and shall have received approval for revised plans, specifications, and calculations prior to construction, for any modification to the approved plans, including, but not limited to, those listed below:
 - a. Any revision to any item shown on the approved plans, including the stormwater management measures, built-upon area, details, etc.
 - b. Project name change.
 - c. Transfer of ownership.
 - d. Redesign or addition to the approved amount of built-upon area or to the drainage area.
 - e. Further subdivision, acquisition, lease or sale of all or part of the project area. The project area is defined as all property owned by the permittee, for which Sedimentation and Erosion Control Plan approval or a CAMA Major permit was sought.
 - f. Filling in, altering, or piping of any vegetative conveyance shown on the approved plan.
10. The permittee shall submit final site layout and grading plans for any permitted future areas shown on the approved plans, prior to construction.
11. A copy of the approved plans and specifications shall be maintained on file by the Permittee for a minimum of ten years from the date of the completion of construction.
12. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of revised plans and certification in writing to the Director that the changes have been made.

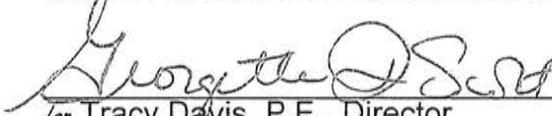
III. GENERAL CONDITIONS

1. This permit is not transferable except after notice to and approval by the Director. In the event of a change of ownership, or a name change, the permittee must submit a formal permit transfer request to the Division of Energy, Mineral and Land Resources, accompanied by a completed name/ownership change form, documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits and may or may not be approved. The permittee is responsible for compliance with all permit conditions until such time as the Division approves the transfer request.

2. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to enforcement action by the Division of Energy, Mineral and Land Resources, in accordance with North Carolina General Statute 143-215.6A to 143-215.6C.
3. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances, which may be imposed by other government agencies (local, state, and federal) having jurisdiction.
4. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those as may be required by this Division, such as the construction of additional or replacement stormwater management systems.
5. The permittee grants DEQ Staff permission to enter the property during normal business hours for the purpose of inspecting all components of the permitted stormwater management facility.
6. The permit may be modified, revoked and reissued or terminated for cause. The filing of a request for a permit modification, revocation and reissuance or termination does not stay any permit condition.
7. Unless specified elsewhere, permanent seeding requirements for the stormwater control must follow the guidelines established in the North Carolina Erosion and Sediment Control Planning and Design Manual.
8. Approved plans and specifications for this project are incorporated by reference and are enforceable parts of the permit.
8. The permittee shall notify the Division any name, ownership or mailing address changes within 30 days.
9. If the use of permeable pavement is desired, this permit must be modified to add the permeable pavement conditions.
10. The permittee shall submit a permit renewal application request at least 180 days prior to the expiration date of this permit. The renewal request must include the applicable documentation and the processing fee.

Permit corrected, revised and re-issued this the 12th day of May 2016

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



for Tracy Davis, P.E., Director
Division of Energy, Mineral and Land Resources
By Authority of the Environmental Management Commission

New Hanover Regional Medical Center Master Facilities Plan
Stormwater Permit No. SW8 960123
New Hanover County

Designer's Certification

I, _____, as a duly registered _____
in the State of North Carolina, having been authorized to observe (periodically/ weekly/
full time) the construction of the project,

(Project)

for _____ (Project Owner) hereby state that, to the
best of my abilities, due care and diligence was used in the observation of the project
construction such that the construction was observed to be built within substantial
compliance and intent of the approved plans and specifications.

The checklist of items on page 2 of this form is included in the Certification.

Noted deviations from approved plans and specification:

SEAL

Signature _____

Registration Number _____

Date _____

Certification Requirements:

- ____ 1. The drainage area to the system contains approximately the permitted acreage.
- ____ 2. The drainage area to the system contains no more than the permitted amount of built-upon area.
- ____ 3. All the built-upon area associated with the project is graded such that the runoff drains to the system.
- ____ 4. All roof drains are located such that the runoff is directed into the system.
- ____ 5. The bypass structure elevations are per the approved plan.
- ____ 6. The bypass structure is located per the approved plans.
- ____ 7. A Trash Rack is provided on the outlet/bypass structure.
- ____ 8. All slopes are grassed with permanent vegetation.
- ____ 9. Vegetated slopes are no steeper than 3:1.
- ____ 10. The inlets are located per the approved plans and do not cause short-circuiting of the system.
- ____ 11. The permitted amounts of surface area and/or volume have been provided.
- ____ 12. All required design depths are provided.
- ____ 13. All required parts of the system are provided.
- ____ 14. The required system dimensions are provided per the approved plans.

cc: NCDEQ-DEMLR Regional Office
Inspector, New Hanover County Building Inspections

Attachment A

SW8 960123 - NHRMC Master Plan²
Impervious Area Summary - May 12, 2016

DA #	1B	5B	3B	5C	5D	5E	5F	1A	2	3A	4	5A
	GF Lake	SS Pond	GF Lake	SS Pond	SS Pond	Jumpin' Run	SS Pond	TBD	TBD	TBD	TBD	TBD
Trench	A	B	C	D	E	Ex1 aka "Jumpin Run"	Ex2 aka, "Silverstream"	-	-	-	-	-
Drains to ¹	9.49	8.38	6.02	1.36	1.22	3.71	2.38	3.63	2.55	3.99	2.96	9.04
Drainage Area	413,384	365,033	262,231	59,242	53,143	161,608	103,673	158,123	111,078	173,804	128,938	393,782
	6.74	6.92	4.64	1.23	1.12	2.59	1.95	1.61	2.09	3.66	1.28	8.83
2/7/06	Impervious Area											
Permit	25.19											
	1,097,604											
Buildings	293,594	301,588	201,999	53,579	48,876	112,820	85,148	70,132	91,040	159,430	55,757	384,635
Parking	82,317	87,645	61,624	0	0	33,344	4,750	0	0	0	0	0
Sidewalk	210,749	207,377	133,498	53,579	48,876	79,476	80,398	0	0	0	0	0
"Existing"	528	6,566	6,877	0	0	0	0	0	0	0	0	0
Future	0	0	0	0	0	0	0	70,132	91,040	159,430	55,757	384,635
	0	0	0	0	0	0	0	0	0	0	0	0
	6.74	6.92	4.64	1.23	1.12	2.59	1.95	1.61	2.09	3.66	1.28	8.83
3/15/11	25.19											
Plan Revision	1,097,604											
Buildings	293,594	301,588	201,999	53,579	48,876	112,820	85,148	70,132	91,040	159,430	55,757	384,635
Parking	82,317	87,645	61,624	0	0	33,344	4,750	0	0	0	0	0
Sidewalk	210,749	207,377	133,498	53,579	48,876	79,476	80,398	0	0	0	0	0
"Existing"	528	6,566	6,877	0	0	0	0	0	0	0	0	0
Future	0	0	0	0	0	0	0	70,132	91,040	159,430	55,757	384,624
	0	0	0	0	0	0	0	0	0	0	0	11
	6.74	6.92	4.64	1.23	1.12	2.59	1.95	1.61	2.09	3.66	1.28	8.83
3/24/15	25.19											
Plan Revision	1,097,604											
Buildings	293,594	301,588	201,999	53,579	48,876	112,820	85,148	70,132	91,040	159,430	55,757	384,635
Parking	82,317	87,645	61,624	0	0	33,344	4,750	0	0	0	0	0
Sidewalk	210,749	207,377	133,498	53,579	48,876	79,476	80,398	0	0	0	0	0
"Existing"	528	6,566	6,877	0	0	0	0	0	0	0	0	0
Future	0	0	0	0	0	0	0	70,132	91,040	159,430	55,757	384,345
	0	0	0	0	0	0	0	0	0	0	0	290
	6.74	6.92	4.64	1.23	1.12	2.59	1.95	1.61	2.09	3.66	1.28	8.86
5/12/16	25.19											
Correction³	1,097,604											
Buildings	293,594	301,588	201,999	53,579	48,876	112,820	85,148	70,132	91,040	159,430	55,757	386,243
Parking	82,317	87,645	61,624	0	0	33,344	4,750	0	0	0	0	0
Sidewalk	210,749	207,377	133,498	53,579	48,876	79,476	80,398	0	0	0	0	0
"Existing"	528	6,566	6,877	0	0	0	0	0	0	0	0	1,608
Future	0	0	0	0	0	0	0	70,132	91,040	159,430	55,757	384,345
	0	0	0	0	0	0	0	0	0	0	0	290
	6.74	6.92	4.64	1.23	1.12	2.59	1.95	1.61	2.09	3.66	1.28	8.86
5/12/16	25.19											
Plan Revision	1,097,604											
Buildings	293,594	301,588	201,999	53,579	48,876	112,820	85,148	70,132	91,040	159,430	55,757	385,953
Parking	82,317	87,645	61,624	0	0	33,344	4,750	0	0	0	0	0
Sidewalk	210,749	207,377	133,498	53,579	48,876	79,476	80,398	0	0	0	0	0
"Existing"	528	6,566	6,877	0	0	0	0	0	0	0	0	1,608
Future	0	0	0	0	0	0	0	70,132	91,040	159,430	55,757	384,345
	0	0	0	0	0	0	0	0	0	0	0	290
	6.74	6.92	4.64	1.23	1.12	2.59	1.95	1.61	2.09	3.66	1.28	8.91
5/12/16	25.19											
Plan Revision	1,097,604											
Buildings	293,594	301,588	201,999	53,579	48,876	112,820	85,148	70,132	91,040	159,430	55,757	388,059
Parking	82,317	87,645	61,624	0	0	33,344	4,750	0	0	0	0	0
Sidewalk	210,749	207,377	133,498	53,579	48,876	79,476	80,398	0	0	0	0	2,106
"Existing"	528	6,566	6,877	0	0	0	0	0	0	0	0	1,608
Future	0	0	0	0	0	0	0	70,132	91,040	159,430	55,757	384,345
	0	0	0	0	0	0	0	0	0	0	0	384,345
	6.74	6.92	4.64	1.23	1.12	2.59	1.95	1.61	2.09	3.66	1.28	8.91

¹Drainage Areas are "GF Lake", Greenfield Lake; "SS Pond", Silverstream Pond SW8 921002; Jumpin' Run Creek; and "TBD", to be determined by ongoing discussions with the City of Wilmington regarding SW8 921002 impervious area tracking. Note that the 2006 permit Section I(2) shows that 8.28ac of existing impervious drains untreated to SS Pond and 8.64ac drains untreated to Greenfield Lake. This total, 16.92ac, is less than the 17.47ac shown above. This discrepancy will be addressed in the discussions regarding SW8 921002 as well.

²See permit Section I.2. There is additional impervious area that drains offsite untreated.

³The December 3, 2015 Plan Revision did not fully document the reason for approving 1,608sf of impervious area which raised the total impervious in Drainage Area 5A above the value it had been previously permitted for. Attachment A has been updated to summarize an arrangement to increase impervious in SW8 960123 but to also decrease impervious area in an area that, like SW8 960123, drains to SW8 921002. The area that decreased was permitted on January 6, 2016 under SW8 151006, the Glen Meade Parking Lot. Additionally, 290sf of future impervious area was erroneously left in drainage area 5A of the December 3, 2015 Plan Revision. It has been removed.

Date Received	Fee Paid (express only)	Permit Number
2/11/16		SW8 960123

**State of North Carolina
Department of Environment and Natural Resources
Division of Energy, Mineral and Land Resources**

STORMWATER MANAGEMENT PERMIT PLAN REVISION APPLICATION FORM

This form may be photocopied for use as an original

I. GENERAL INFORMATION

- Stormwater Management Permit Number: SW8 960123
- Project Name: New Hanover Regional Medical Center Master Facilities Plan
- Permit Holder's name (specify the name of the corporation, individual, etc.):
New Hanover Regional Medical Center
- Print Owner/Signing Official's name and title (person legally responsible for permit):
Thomas Walsh, Vice President Facilities & Support Services
- Mailing Address for person listed in item 2 above:
P.O. Box 9000
City: Wilmington State: NC Zip: 28402
Phone: (910) 343-2788 Fax: (910) 343-2413
Email: thomas.walsh@nhrmc.org cc: allen.harris@nhrmc.org & ivan.batts@nhrmc.org

II. PLAN REVISION INFORMATION

- Summarize the plan revision proposed (attach additional pages if needed):
Revision request is for the Zimmer Cancer Center Renovation project. The most recent revision to SW8 960123 was issued on December 3, 2015. This project adds 2,106 SF of additional impervious area to the NHRMC Campus that flows to Silver Stream Lake.

III. SUBMITTAL REQUIREMENTS

Only complete application packages will be accepted and reviewed by the Division of Energy, Mineral and Land Resources (DEMLR). A complete package includes all of the items listed below. The complete application package should be submitted to the DEMLR Office that issued the permit.

- Please indicate that you have provided the following required information by initialing in the space provided next to each item.
 - Original & 1 copy of the Plan Revision Application Form
 - Two (2) copies of revised plans (*must be revisions of original approved plan sheet(s)*)

Initials

N/A

If applying for Express review (only available in 20 coastal counties):

- Application fee of \$500.00 (*made payable to NCDENR*)

VI. APPLICANT'S CERTIFICATION

RECEIVED
 FEB 11 2016
 BY: _____

I, (print or type name of person listed in General Information, item 3) Thomas Walsh, Vice President Facilities & Support Services

certify that I have authorized these plan revisions and that the information included on this plan revision application is, to the best of my knowledge, correct and complete.

Signature:  Date: 2-5-16

RECEIVED
FEB 11 2016
BY: _____