

November 18, 2022
Conditional Zoning Permit
Ernest Odie-Larbi
Town of Chapel Hill Public Works
405 Martin Luther King Jr Blvd.
Chapel Hill, NC 27514

RE: UNC Health - Eastowne
River Basin: Cape Fear
NMS Watershed: Jordan Lake

Ernest,

The UNC Health Eastowne Campus lies on the north side of Highway 15-501, to the south and to the east of the Eastowne Drive loop. It is proposed that the campus be redeveloped and that the existing buildings, parking lots, and associated infrastructure except the new MOB1 building be redesigned and replaced. The proposed redevelopment of the campus will result in changes to the site's drainage patterns and to an overall increase in the impervious surface area on site.

The proposed development is located in the Cape Fear River basin and within the Jordan Lake Nutrient Management Strategy Watershed. As a result of the redevelopment, the impervious area on site could increase from approximately 22% of the site's full area in the pre-development condition to a maximum of 70% post-development. All existing impervious will remain on the site until its demolition is required by the proposed phased improvements.

The Town of Chapel Hill Requirements for stormwater management on the campus are as follows:

LUMO Section 5.4 Stormwater Management

Sec. 5.4.6. General Performance Criteria for Stormwater Management

The following are required stormwater management performance criteria:

- > Stormwater treatment shall be designed to achieve average annual eighty-five (85) percent total suspended solids (TSS) removal and must apply to the volume of post-development runoff resulting from the first one-inch of precipitation. Alternative treatment methods to achieve eighty-five (85) percent average annual TSS removal may be acceptable. The eighty-five (85) percent requirement applies to eighty-five (85) percent of the additional suspended solids that are the result of the new development. (Ord. No. 2004-02-23/O-2).
- > The stormwater runoff volume leaving the site post-development shall not exceed the stormwater runoff volume leaving the site pre-development (existing conditions) for the local 2-year frequency, 24-hour duration storm event for all development except single-family and two-family dwellings on lots existing as of January 27, 2003, or on lots pursuant to a preliminary plat that was approved by the town council prior

to January 27, 2003. This may be achieved by hydrologic abstraction, recycling and/or reuse, or any other accepted scientific method.

- > The stormwater runoff rate leaving the site post-development shall not exceed the stormwater runoff rate leaving the site pre-development (existing conditions) for the local 1-year, 2-year, and 25-year 24-hour storm events.
- > Land disturbance within the stream channel of any ephemeral stream shall be minimized, and prohibited unless explicitly authorized by issuance of a zoning compliance permit after demonstration of the necessity for the disturbance.

LUMO Section 5.19 Jordan Watershed Stormwater Protection for New Development

Sec. 5.19.3 Jordan Lake Watershed Management for New Development

- > "Redevelopment" means any development on previously-developed land. Redevelopment of structures or improvements that (i) existed prior to December 2001, (ii) would not result in an increase in built-upon area, and (iii) provides stormwater control at least equal to the previous development is not required to meet the nutrient loading targets of this section.

Sec. 5.19.7 Design and Performance Standards for Stormwater Management.

- > Nitrogen and phosphorus loading.
 - o Stormwater systems shall be designed to control and treat the runoff generated from all surfaces by one (1) inch of rainfall. The treatment volume shall be drawn down pursuant to standards specific to each practice as provided in the state design manual.
 - o The nitrogen load contributed by the proposed development shall not exceed 2.2 pounds per acre per year.
 - o The phosphorus load contributed by the proposed development shall not exceed 0.82 pound per acre per year.
 - o Notwithstanding 15A NCAC 2B. 104(q), redevelopment subject to this section that would replace or expand existing structures or improvements and would result in a net increase in built-upon area shall have the option of either meeting the loading standards identified in subsections 5.19.7(a)(2) and (3) above, or achieve thirty-five (35) percent and five (5) percent reduction for nitrogen and phosphorus, respectively, compared to the existing development.
 - o The applicant shall determine the need for and shall design structural best management practices to meet these loading rate targets by using the approved accounting tool.
- > Nitrogen and phosphorus standards are supplemental. The nitrogen and phosphorus loading standards in this section are supplemental to, not replacements for, stormwater standards otherwise required by section 5.4 of the town's Land Use Management Ordinance.
- > Partial offset of nutrient control requirements. Before using offsite offset options, a development subject to this section shall attain a maximum nitrogen loading rate onsite of six (6) pounds per acre per year for single-family, single-family with accessory apartment, and duplex residential development and ten (10) pounds per acre per year for other development, including multi-family residential, commercial and

industrial and shall meet all requirements for structural best management practices otherwise imposed by this section. A person subject to this section may achieve the additional reductions in nitrogen and phosphorus loadings by making offset payments to the North Carolina Ecosystem Enhancement Program (program) contingent upon acceptance of payments by that program. An applicant may propose other offset measures, including providing his or her own offsite offset or utilizing a private seller. All offset measures permitted by this section shall meet the requirements of 15A NCAC 02B.0273(2) through (4) and 15A NCAC 02B.0240.

- > Structural best management practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the design manuals and the approved accounting tool will be presumed to meet the minimum water quality performance standards of this section

North Carolina State Law

The Jordan Lake Rules were suspended by Session Law 2013-395 (Senate Bill 515), effective August 23, 2013. Municipalities could voluntarily enforce the rules until Session Law 2015-246 (House Bill 44) prohibited municipalities from requiring voluntary regulations and rules. As such, LUMO 5.19.7 is not required for the site. Session Law 2018-145 (Senate Bill 469) states that stormwater runoff rules and programs shall not require private property owners to install increased stormwater controls for pre-existing development.

The State laws referenced resulted in the following stormwater requirements for the site: peak flow rate detention for the 1-, 2-, and 25-year storm events and treatment of runoff resulting from the net increase in impervious area for TSS removal.

Proposed Stormwater Management Performance Standards

Sec. 5.4.6 - General Performance Criteria for Stormwater Management

Detention

In accordance with the requirements of Sec. 5.4.6 (b) and (c), detention will be provided for the 1-, 2-, and 25-year 24-hour storm event. Pre-development peak flow rates have been calculated including all existing impervious onsite.

TSS Removal

Beyond the requirements of Sec. 5.4.6 (a), the Eastowne project will provide TSS removal for the proposed impervious increase above 50% of the existing impervious demolished.

Nutrient Removal

Though nutrient mitigation is not required for the site, the proposed detention and TSS treatment facilities will reduce the total nitrogen and phosphorous loads generated by the development.

Sincerely,

MCADAMS

Josh Shinn, PE

Stormwater Design Support Practice Lead