



February 2, 2021

## STORMWATER MANAGEMENT NARRATIVE

Harris Teeter #223 – Chapel Hill  
1800 Martin Luther King Jr. Blvd  
Chapel Hill, NC 27514

To whom it may concern,

We are proposing the expansion of an existing Harris Teeter grocery store and the addition of a fuel center at 1800 Martin Luther King Jr. Blvd in the Town of Chapel Hill. The grocery store expansion will include the addition of approximately 11,800 square feet of building area as well as a pharmacy drive thru to the endcap of the building. The proposed fuel center will include 7 fuel pumps (14 fueling positions), a 240 SF kiosk, limited outdoor sales and associated parking and drive aisles. The proposed site is not located in a special flood hazard area according to the current Flood Insurance Rate Map, panel 3710988000J, dated February 2, 2007.

The existing site is an operating shopping center with a 51,212 SF Harris Teeter grocery store and additional small shops. The total impervious area of the existing shopping center is approximately 9.3 acres. Once the fuel center and additional building square footage, parking, and drive aisles are added, an additional 1.7 acres of impervious area will be added to the shopping center. This additional impervious area will be treated through an underground sand filter and detention system that will be installed in the parking lot of the grocery store.

The underground detention system will be designed for peak attenuation of the 1, 2, and 25-year storm. It will also be designed to retain the 2-year storm, and provide 85% TSS removal for post-development stormwater runoff.

The onsite stormwater drainage system will be analyzed using Bentley StormCAD V8i (SELECTseries 2) by Bentley Solutions Inc. in conjunction with Bentley Flowmaster V8i (SELECTseries 1) by Bentley Systems, Inc. for channel, pipe and culvert analysis. These programs utilize the Rational Method and Mannings Equations for predicting discharge and flow, respectively. The proposed stormwater conveyance network will be designed to convey the 25-yr storm event using the rational method. The rainfall intensities will be obtained from NOAA's National Weather Service for the 25-year storm event.

If you have any questions, please feel free to contact me at the office at 704-409-1812, or via email at [maggie.houston@kimley-horn.com](mailto:maggie.houston@kimley-horn.com)

Sincerely,

**KIMLEY-HORN AND ASSOCIATES, INC.**

Maggie Houston, P.E.  
Project Manager