



## Soil & Environmental Consultants, PA

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sandec.com

Meridian Properties Group, LLC  
Attn: Sherry Case  
4030 Wake Forest Rd  
Suite 100  
Raleigh, NC 27609

September 13, 2023  
S&EC Job #15816.S1

Re: Detailed storm water soils evaluation for 401 W Gannon Ave, Zebulon, NC

Dear Ms. Case:

Soil & Environmental Consultants, PA (S&EC) performed a detailed soil evaluation within the targeted area of the potential storm water control measure (SCM) on the site mentioned above. The purpose of this evaluation was to provide additional information for the proper design of the proposed SCM to treat the on-site storm water per 15A NCAC 02H storm water rules. A soil morphological profile description was performed at the specified location to determine depth to seasonal high water table (SHWT). The following is a brief report of the methods utilized in this evaluation and the results obtained.

### **Soil/Site Evaluation Methodology**

The site evaluation was performed by advancing hand auger borings to sufficient depth to estimate SHWT. S&EC navigated to the pre-determined SCM location to describe soil morphological conditions using standard techniques outlined in the “Field Book for Describing and Sampling Soils, Version 3” published by the Natural Resources Conservation Service (NRCS, 2012).

### **Soil/Site Conditions**

This site is located in the Piedmont geological area of Wake County. The soil boring was in one proposed SCM location.

The soil observed at SB-1 is similar to a Hard Labor soil series. These soils are moderately well drained and slowly permeable. Field investigation revealed SHWT indicators within 37 inches from the top of the ground and there was no observed, apparent water table within 72 inches from the top of the ground. A soil profile for SB-1 is shown below.

SB-1

Horizon	Depth (inches)	Matrix Color	Texture	Redoximorphic Features	Other notes
A	0 – 8	10YR 6/3	Sandy Loam		
Bt	8 – 22	10YR 6/8	Sandy Clay Loam		
BC	22 – 37	10YR 6/8	Sandy Clay Loam		
C	37 – 72	7.5YR 5/8	Sandy Loam	10YR 6/1 5YR 5/8	Common, medium depletions; SHWT at 37"; Clay lenses, Fe concretions

At the time of the soils evaluation, the type of storm water device was yet to be determined. Each storm water device has different requirements with regard to in-situ soils. S&EC made no attempt to measure soil saturated hydraulic conductivity ( $K_{sat}$ ) in the underlying soil at this time.

Soil & Environmental Consultants, PA is pleased to be of service in this matter and we look forward to assisting in the successful completion of the project. If requested, S&EC can meet on-site with state or local regulatory agencies to discuss our findings and recommendations. Please feel free to call with any questions or comments.  
Sincerely,

Soil & Environmental Consultants, PA

John Lewis  
NC Licensed Soil Scientist #1345

Encl: Boring Location Map





NCCGIA, NC 911 Board

Project Number:  
15816.51

Project Manager:  
JL

Scale:  
1" = 40'

Date:  
9/12/23

Map Title:  
**Boring Location Map**  
401 W Gannon St  
Zebulon, NC

Source: NC OneMap  
Wake Co. GIS



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