

Georgia Civil, Inc.  
P.O. Box 896 (mailing)  
311 N. Main Street  
Unit C - Suite 100  
Madison, GA 30650

May 23, 2019

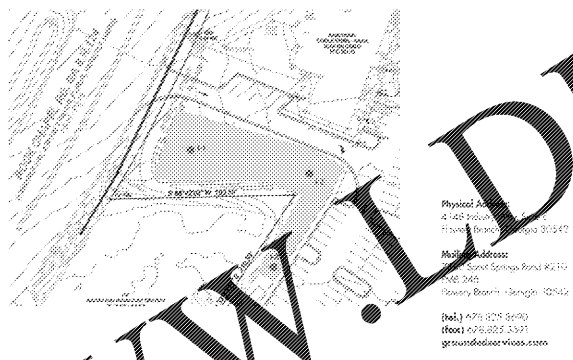
VIA EMAIL to [jason@georgiacivil.com](mailto:jason@georgiacivil.com)

**RE: Results of Infiltration Testing**  
Planned Emanuel Seventh Day Adventist Church Facility  
Rock Chapel Road  
Lithonia, DeKalb County, Georgia  
GROUND Project 19GCE005

Dear Mr. Brown:

GROUND Engineering Services, LLC (GROUND), in accordance with your request, has completed the infiltration testing for the storm drain management system for the planned Emanuel Seventh Day Adventist Church off Rock Chapel Road in Lithonia, Georgia.

Three (3) infiltration tests were performed at the requested depth of six (6) feet below existing grades in the swale area and pond area as detailed in the figure below:



Each boring was extended to the depths requested in the general areas as detailed in the client designated infiltration area. The borings were advanced utilizing hand augers with a four (4) inch diameter bucket and further "hollowed out" with "post-hole" diggers to allow for the advancement of the four (4) inch diameter PVC single ring to be installed.

The ring was then "secured" in the hole using a sledge hammer to ensure contact with the sides and the bottom bedded with gravel. The hole was filled with water and allowed to initially soak for several hours.

Upon return, the water level was filled to the top of the ring and measurements were begun and continued until a relatively constant rate of infiltration was achieved.

**Based on the results of our testing, GROUND recommends allowing a rate of 1.2 inches per hour for design to allow for the single ring infiltrometer testing to be performed.**

As always, GROUND is pleased to have provided service to your project. Should any question arise regarding the results of our testing, or the nature of service in any manner, please contact our office at your convenience.

Respectfully submitted,  
GROUND Engineering Services, LLC

Christopher J. Settles, PE  
Principal

WATER QUALITY WITH INFILTRATION TRENCH	
TOTAL DEVELOPED AREA (ACRE)	1.03
TOTAL IMPERVIOUS AREA (ACRE)	0.63
PERCENT IMPERVIOUS (%)	61.17
WATER QUALITY VOLUME (FT <sup>3</sup> )	2694
WQr = 1.2 * (RV)	0.720583
RV = 0.05 + I * 0.009	0.000485
WQv = (WQr/12) * A	2694
REQUIRED WATER QUALITY VOLUME	

WATER QUALITY VOLUME TREATED BY INFILTRATION TRENCH.  
INFILTRATION TRENCH CALCULATIONS:

A = WQv / (nd + (KT/12))  
 A = SURFACE AREA (SQ. FT.)  
 n = POROSITY (% VOID)  
 d = TRENCH DEPTH (FT)  
 k = PERCOLATION RATE (INCHES/HOUR)  
 T = FILL TIME (HOURS)

INPUT DATA:	
n =	0.32 0.32 (32% VOID MAX.)
d =	8 8 FT. DEPTH MAX.
k =	1.22 0.5 IN/HR (MIN. RATE)
T =	2 FILL TIME (ASSUME 2 HRS.)

SURFACE AREA (FT <sup>2</sup> ) =	1490
TRENCH 1 (APP. 12' X 98') =	1,176 SQ FT
TRENCH 2 (APP. 14' X 30') =	420 SQ FT
TOTAL TRENCH AREA =	1,596 SQ FT

**24-HOUR CONTACT**  
JASON BROWN  
770-713-9972

JASON P. BROWN  
LEVEL II CERTIFIED  
DESIGN PROFESSIONAL  
#52374 - EXP. 5-1-2020



Utilities shown are for Contractor's convenience. Items are shown schematically and neither the design professional nor the owner assumes any responsibility for services in their actual location. This plan may not show and/or may incorrectly show utilities located on site. Contractor shall be responsible to locate and use the services of a private utility locator firm during the entire course of work and shall pay for such services. Contractor shall locate utilities prior to any excavation (including fire-wiring location and depth of utilities that are to be avoided and protected). Contractor shall verify the site design professional of any utility conflicts prior to installation of new utilities, grading, etc. The Contractor, at their expense, shall be responsible to repair, replace and/or relocate, as necessary, any utilities damaged, whether shown or not. Abandonment, relocation, etc. of utilities shall be coordinated with the respective utility company.

**OWNER**  
COMPANY: SOUTH ATLANTIC CONFERENCE ASSOCIATION  
ADDRESS: 294 HAMILTON E HOLMES DR NW ATLANTA, GA 30318  
CONTACT: ANDREA JARRETT  
PHONE: -  
EMAIL: [ajarrett@projectplusolutions.com](mailto:ajarrett@projectplusolutions.com)

**CONTRACTOR**  
COMPANY: TBD  
ADDRESS: -  
CONTACT: -  
PHONE: -  
EMAIL: -

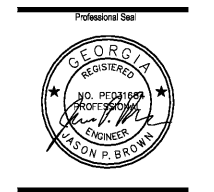
**SURVEYOR**  
COMPANY: GEORGIA CIVIL, INC.  
ADDRESS: P.O. BOX 896 MADISON, GA 30650  
CONTACT: BRIAN SLATE  
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EMAIL: [BSLATE@GEORGIA-CIVIL.COM](mailto:BSLATE@GEORGIA-CIVIL.COM)

**SITE DESIGNER**  
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PHONE: 706-342-1104



**georgia civil**  
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LAND SURVEYING

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Project Information

**EMMANUEL SEVENTH DAY ADVENTIST CHURCH**  
16 188 02 001  
1780 ROCK CHAPEL ROAD, LITHONIA, GA 30058  
DEKALB, COUNTY  
ZONING (COUNTY) - R-85 (RESIDENTIAL MEDIUM LOT)

DRAWING DATE:	8.22.19
DRAWN BY:	MKS
CHECKED BY:	JPB
REVISIONS	
DATE:	DESCRIPTION:
01.31.20	ADDRESS COMMENTS

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Sheet Title  
**STORMWATER MANAGEMENT PLAN**

Sheet Number  
**C-4.0**