

17-5-4112

HAL OWEN & ASSOCIATES, INC.

SOIL & ENVIRONMENTAL SCIENTISTS

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09-9575-0185-09

31 March 2017

Mr. Thomas Simpson
Solid Foundations Inc.
PO Box 100
Olivia, NC 28368

Reference: Septic System Investigation
For Solid Rock Church; NC PIN 9575-83-9195

Dear Mr. Simpson,

It was a pleasure to meet with you on 22 March 2017 to discuss the proposed kitchen renovation at the existing church and removal of the modular classrooms. The site is located at 2297 NC 24 in Harnett County, North Carolina. The purpose of the investigation was to determine the ability of this lot to support the septic needs of both the church and the kitchen. All soil ratings and determinations were made in accordance with "Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A .1900". It is our understanding that individual septic systems and public water supplies will be utilized at this site.

You stated that once the adjacent daycare building is approved for operation, the kids will be moved to the new building and the old modular classrooms will be removed. An existing septic system serves the three modular classrooms which appeared to be functioning properly on the day of the investigation. It is our understanding that effluent from the three buildings is collected in one septic tank, and then gravity flows to five 130-ft long conventional drainlines. A soil investigation was conducted and it appears that an adequate amount of provisionally suitable soil exists on this lot to 100 % repair the system if it should fail. Given a long-term application rate of 0.5 gal/day/sqft, it appears the system was designed to handle a design daily sewage flow of 975 gallons.

The church building also has an existing septic system that appeared to be functioning properly on the day of the investigation. It is our understanding that the design daily sewage flow of this system was 750 gallons. Effluent from the church is collected in a septic tank located at the northeast corner of the building, and then gravity flows to three 170-ft long conventional drainlines. A soil investigation was conducted and it appears that an adequate amount of provisionally suitable soil exists in front of the church building to 100 % repair the system if it should fail.

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It is our recommendation that the renovated kitchen be plumbed separate from the church. The church would continue to utilize its existing septic system, which without a kitchen or daycare would allow up to 250 seats in the church (750 gallons / 3 gallons per seat). The existing septic system that currently serves the modular classrooms could be used for the kitchen after the modular classrooms are disconnected. Given a design flow of 5 gallons per meal and a septic system capacity of 975 gallons for the existing system, it appears the kitchen could prepare up to 195 meals per day. This would more than meet the anticipated number of meals needed for the adjacent daycare.

To use the existing system for the kitchen, some modifications will need to be made to the system. A grease trap, septic tank, and pump tank will need to be added at the kitchen, in addition to any other modifications required by the Health Department. Effluent will be pumped to the existing septic tank. You may be able to tie in to the existing conveyance pipes associated with the modular classrooms.

This report and the attached septic system design information has been submitted to the Harnett County Health Department for review and the permitting process. I appreciate the opportunity to provide this service and hope to be allowed to assist you again in the future. If you have any questions or need additional information, please contact me at your convenience.

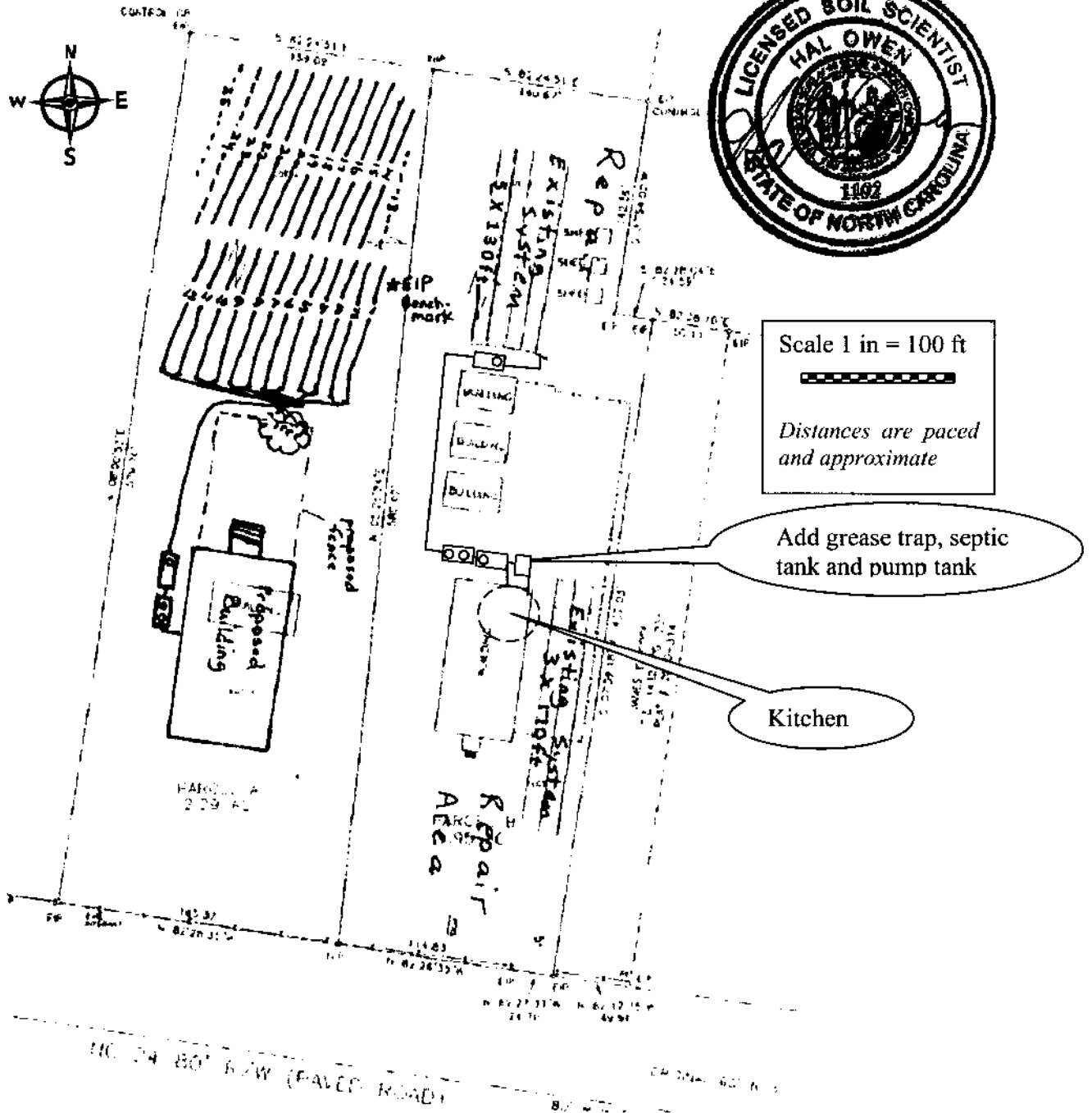


Sincerely,

A handwritten signature in cursive script that reads "Hal Owen".

Hal Owen
Licensed Soil Scientist

Septic System Investigation
For Solid Rock Church; NC PIN 9575-83-9195
31 March 2017



HARNETT COUNTY CASH RECEIPTS

*** CUSTOMER RECEIPT ***

Oper: DJOHNSON Type: CP Drawer: 1
Date: 4/06/17 54 Receipt no: 305484

Year	Number	Amount
2017	50041112	
2295 NC 24		
CAMERON, NC 28326		
B4	BP - ENV HEALTH FEES	\$100.00

EXISTING

SOLID FOUNDATIONS INC

Tender detail	
CP CREDIT CARD	\$100.00
Total tendered	\$100.00
Total payment	\$100.00

Trans date: 4/06/17 Time: 12:38:00

** THANK YOU FOR YOUR PAYMENT **