

# HAL OWEN & ASSOCIATES, INC.

SOIL & ENVIRONMENTAL SCIENTISTS

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14 November 2016

Mr. Joseph Fredley  
80 Woodstone Place  
Angier, NC 27501

Reference: Soil Investigation and Septic System Design  
Lot 18 Barclays Subdivision

Dear Mr. Fredley,

A site investigation was conducted on 3 November 2016 for the above referenced property, which is located on the northern side of Woodstone Place in Harnett County, North Carolina. It is our understanding that you wish to add a detached garage to your property. The purpose of the investigation was to determine the ability of this lot to continue to support a subsurface sewage waste disposal system and 100% repair area for the existing three-bedroom home. Public water supplies are in use at this lot.

All ratings and determinations were made in accordance with "Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A .1900". This report represents my professional opinion but does not guarantee or represent permit approval for any lot by the local Health Department. The permit you receive from the Health Department may contain some modifications or amendments to our submitted design. Please carefully review your permit and adhere to all prescribed requirements.

The existing three-bedroom home has an existing septic system that appeared to be functioning on the day of the investigation. The tank and distribution box had been uncovered which aided in location. The drainfield was identified using a tile probe and appears to consist of three equal length 80-foot long gravel drainlines, which correlates to a long-term application rate of 0.5 gal/day/sqft. It was confirmed that all parts of the existing system are more than five feet from the proposed garage as it was staked at the site on the day of the investigation.

A repair septic system is proposed as a gravity driven system to two 75-foot long, 25% reduction status drainlines (EZ Flow or chamber) below the existing drainfield. The soils in this area were observed to be friable loamy sands to greater than 42 inches and appear adequate to support a long term acceptance rate of 0.8 gal/day/sqft. The drainlines should be installed on contour with trench bottom depths at 18 to 24 inches below surface.

Additional repair area is available above the existing drainfield but would require the use of a pump. These soils were observed to be friable sandy clay loams to greater than 36 inches and appear adequate to support a long term acceptance rate of 0.6 gal/day/sqft. The drainlines should be installed on contour with trench bottom depths at 18 to 24 inches below surface.

It is important that you do not disturb the septic system areas during construction. It is recommended that a staked line or protective fence be placed around the system prior to construction to eliminate any potential damage to the soil or the system components.

It is recommended that care be taken to preserve the life of your existing septic system. The septic tank, pump tank, and distribution boxes should be kept accessible for pumping and adjustment. Your septic system should be inspected periodically and the septic tank pumped out every 2 to 5 years by a professional contractor. It is recommended that a sanitary tee and effluent filter be placed in the outlet end of the tank to prevent solids from entering the drainfield. Practicing water conservation in the home, such as promptly repairing leaky fixtures and running washing machines and dishwashers only when full, will help to avoid overloading the septic system. Also, disposal of oils, fats, and grease into the septic system should be avoided because they could clog drainlines and conveyance pipes. A list of other useful suggestions is attached for your use.

This report and the attached septic system design information will need to be submitted to the 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,

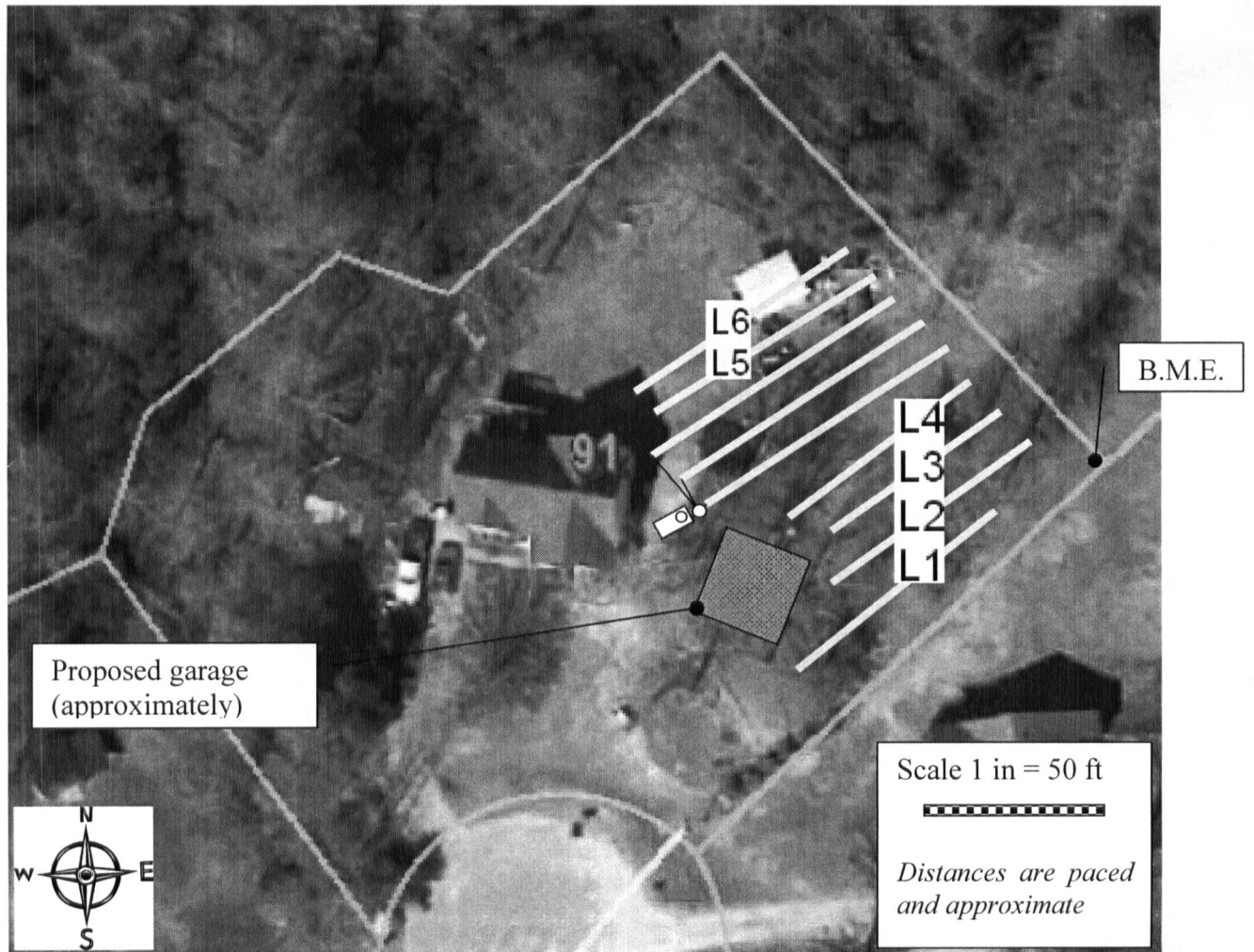
*Krissina B. Newcomb*

Krissina B. Newcomb

*Hal Owen*

Hal Owen  
Licensed Soil Scientist

Soil Investigation and Septic System Design  
 Lot 18 Barclays Subdivision  
 9 November 2016



possible drainlines	Rod Elevation (ft)	Line Length (ft)
L1 -red	5.38	58
L2 -blue	6.95	57
L3 -yellow	8.4	45
L4 -white	10.12	50
L5 -white	14.18	75
L6 -red	15.52	75
Benchmark (BME)	5.99	

