

# HAL OWEN & ASSOCIATES, INC.

SOIL & ENVIRONMENTAL SCIENTISTS

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3 May 2017

Mr. Ronnie Currin  
James Bobby Currin & Sons Inc.  
PO Box 1166  
Fuquay-Varina, NC 27526

Reference: Soil Investigation and Septic System Design  
Duncan Industrial Park Lots 13-15

Dear Mr. Currin,

A site investigation was conducted on 6 April 2017 for the above referenced property, which is located on the eastern side of Progress Drive in Harnett County, North Carolina. The purpose of the investigation was to determine the ability of Lot 13 and Lot 14/15 (combined) to each support a subsurface sewage waste disposal system and 100% repair area for a business with a design flow of up to 200 gallons per day or eight employees if no other water uses are involved. 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. Public water supplies will be utilized at this site.

## LOT 13

The soils were evaluated under moist soil conditions through the advancing of auger borings. A portion of Lot 13 was observed to be underlain by soils rated as suitable for subsurface sewage waste disposal (Figure 1). These suitable soils were observed to be friable loamy sands and sandy loams to greater than 36 inches and will support long term acceptance rates of 0.6 to 0.8 gal/day/sqft.

An initial septic system and repair area have been designed for a design flow of 200 gallons per day utilizing a long term application rate of 0.6 gal/day/sqft. The initial septic system is proposed a pump to one 112 ft conventional drainline. The repair system is designed as a pump to two 56 ft conventional drainlines. The drainlines should be installed on contour with trench bottom depths at 18 to 24 inches below surface.

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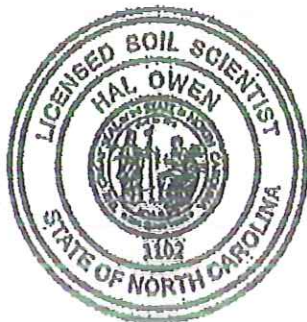
~~LOT 14/15~~

~~The soils were evaluated under moist soil conditions through the advancing of auger borings. A portion of Lot 14/15 (combined) was observed to be underlain by soils rated as provisionally suitable for subsurface sewage waste disposal (Figure 2). These provisionally suitable soils were observed to be friable sandy clay loams to greater than 34 inches and will support long term acceptance rates of 0.5 gal/day/sqft.~~

~~An initial septic system and repair area have been designed for a design flow of 200 gallons per day utilizing a long term application rate of 0.5 gal/day/sqft. The initial septic system is proposed as a pump to three 50 ft long conventional drainlines (LTAR of 0.44 gal/day/sqft used for design purposes). The repair system is proposed as a pump to three 45 ft long conventional drainlines. The drainlines should be installed on contour with trench bottom depths at 18-24 inches below surface.~~

~~Potential septic system drainlines have been demonstrated with various colored pin flags that are located on the lots. It is important that you do not disturb the septic system area. 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 layout of the system.~~

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

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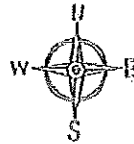
Soil Investigation and Septic System Design  
 Duncan Industrial Park Lots 13  
 2 May 2017



Figure 1. Lot 13 Soil Map and Septic System Layout

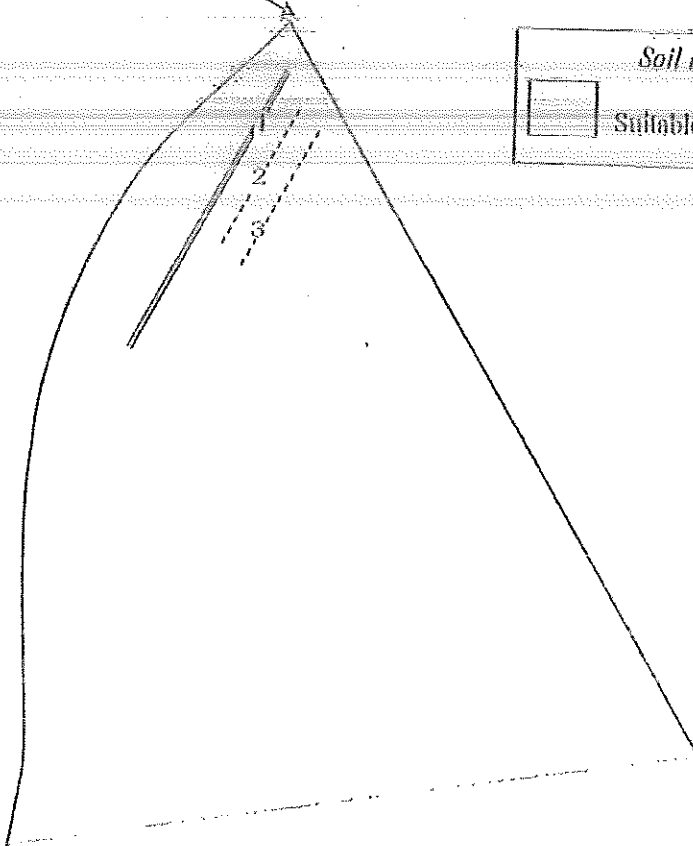
Line #	Color	Drainline Length(ft)	Measured Field Line Length (ft)	Relative Elevation (ft)
1	B	112	140	99.52
2	R	56	100	98.59
3	W	56	100	97.61
Total:		224	340	B.M.E.=100

Scale 1 in = 60 ft  
 Distances are paced  
 and approximate



B.M.E. @ EIP

Soil Map Legend  
 Suitable Soils



S 32°23'36"

87.39'

S 10°12'

98.3'

8

10 acres

S 18°07'54" E

120.15'

S 00°03'52" W

97.39'

S 05°40'57" E

110.13'

N 32°20'41" E

163'

7

1.43 acres

CURVE  
L=48'

15

12 acres

16

170' ON-OFF

LIMIT OF AREA  
OF SUITABLE SOILS FOR  
ON SITE SEPTIC DISPOSAL

10e

5.69 acres

11

2.23 acres

12

1.65 acres

13

1.01 acres

14

1.04 acres

N 66°15'04" E

483.67'

90'

252'

118'

59'

162'

430