HAL WEN & ASSOCIATES NC.

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20 December, 2007

Mr. Bryan McSwain
Harnett County Environmental Health Division
307 Cornelius Harnett Blvd.
Lillington, NC 27546

Reference: Septic layout of repair area for Mark Crane
PIN: 0624-88-6995.000

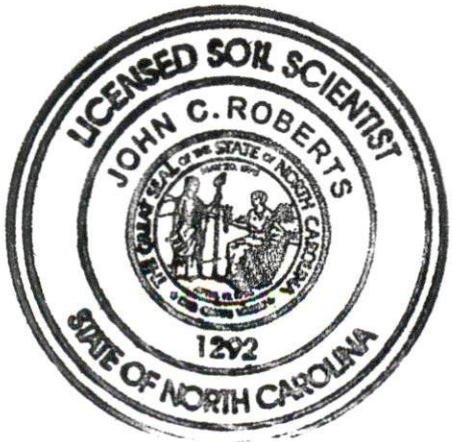
Dear Mr. McSwain,

A site investigation was conducted for the above referenced property on the northern side of Dewar Street, Hectors Creek Township, Harnett County, North Carolina. The purpose of the investigation was to determine if an alternative repair area exists in addition to the original area allocated for the repair system for the existing three-bedroom home. Public water is utilized for this lot. A pressure manifold to 260-ft of accepted systems drainline is the proposed design for the alternative repair septic system. A pump tank will need to be installed if the above mentioned repair system is needed.

Attached is a septic system layout and supporting information for the repair system for this lot. I trust that this report provides all the information that you require at this time. If you have any questions or need additional information, please contact me at your convenience.

Sincerely,

John C. Roberts
Licensed Soil Scientist



Preliminary Repair System for Mark Crane

On-Site Wastewater I ign Specifications

House Footprint: Existing Home

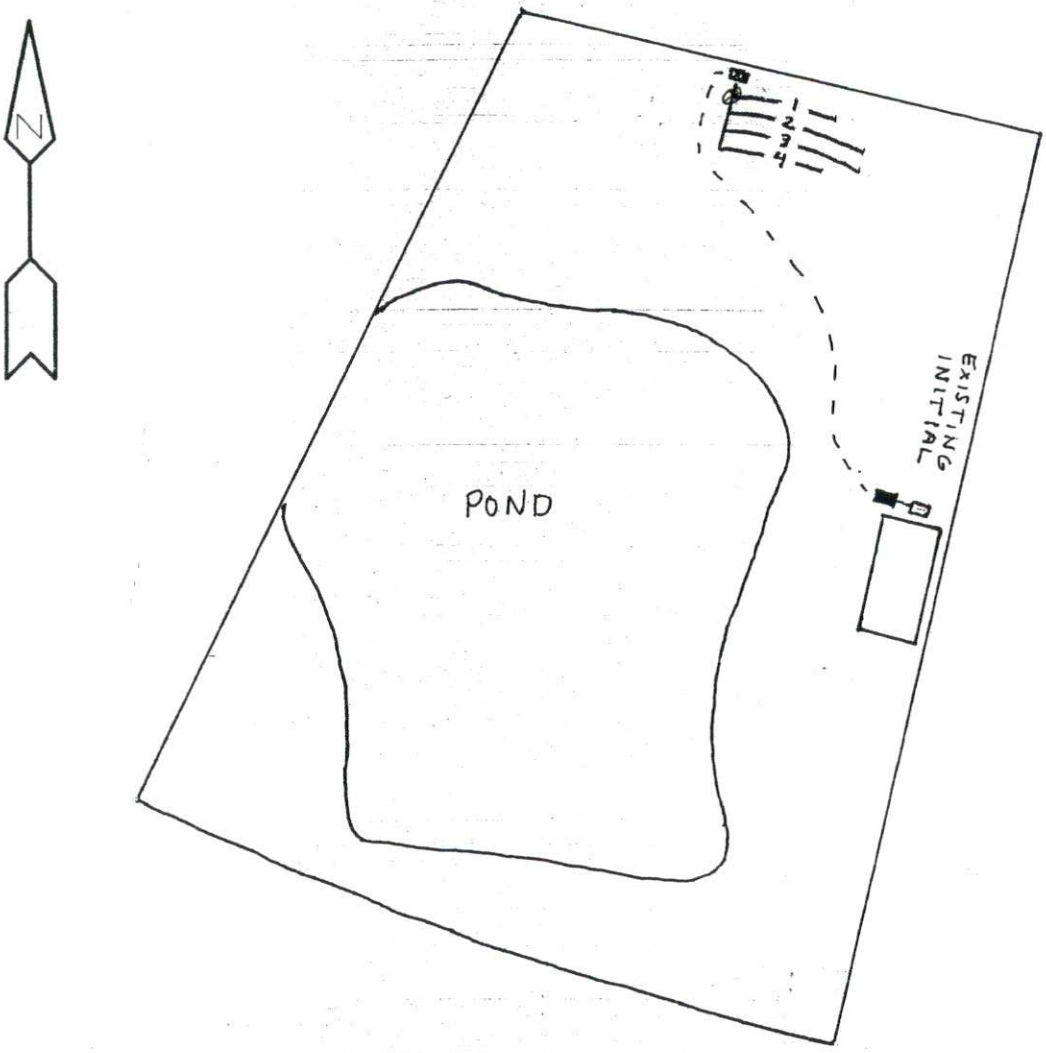
3 Bedrooms: (Daily Flow 360 gallons)

LEGEND

☆ EIP	Septic Tank
Supply Line	Pump Tank
Proposed Well	D-Box
Existing Well	Pressure Manifold

SCALE: 1" = 100'

Repair System: Pressure Manifold to 260-ft. of accepted systems drainline installed on contour at 12 to 15 inches
Soil LTAR 0.35 gpd/sf



Lines flagged at site on 9-ft centers.

Initial/ Repair	Line #	Color	Drainline Length(ft)	Measured Field Line Length (ft)
Repair	1	W	55	74
Repair	2	B	75	83
Repair	3	R	75	75
Repair	4	Y	55	55
		Total:	**260**	**287**

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Mark Crane

Pressure Manifold Design Criteria

Repair System

Line Number	Line Color	Elevation	Drainline Length(ft)	Tap Size/ Schedule	Flow/tap (gpm)	gpd/ft	LTAR (gpd/sqft)
1	W	0	55	FD 1/2"sch 40	3.56	1.289	0.430
2	B	0	75	1/2"sch 80	5.48	1.455	0.485
3	R	0	75	1/2"sch 80	5.48	1.455	0.485
4	Y	0	55	FD 1/2"sch 40	3.56	1.289	0.430

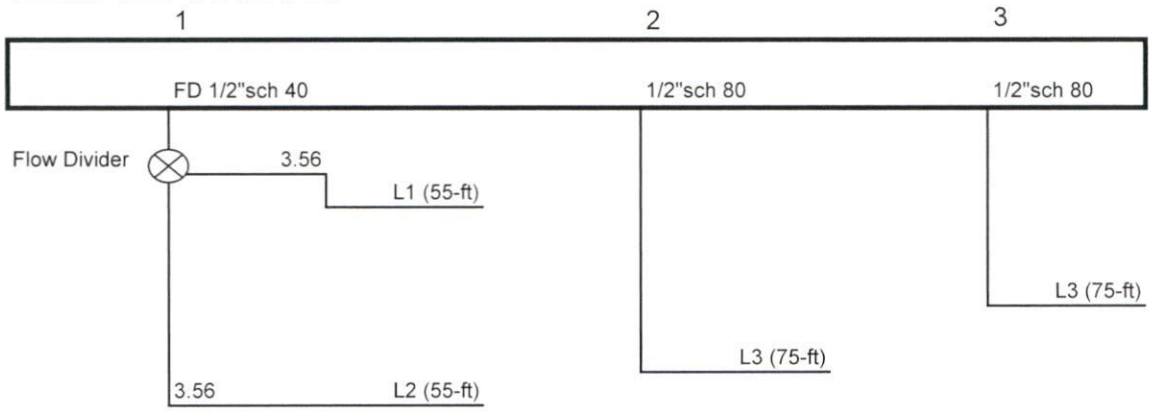
Total Drainline= 260 Total Flow= 18.08

Pressure Head (ft)= 2 Target LTAR= 0.46667 gpd/sqft LTAR + 5% 0.49

Daily Flow= 360 Total Flow (gpm)= 18.08 Daily PRT(min)= 19.91

Dose Vol= 127.34 gallons w/ Pipe Vol @% 75 Dose PRT (min)= 7.04

MANIFOLD DIAGRAM:



* Soil LTAR 0.35 gpd/sf; convert for accepted system drainlines 0.35 /.75=0.467 gpd/sf

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12/20/2007