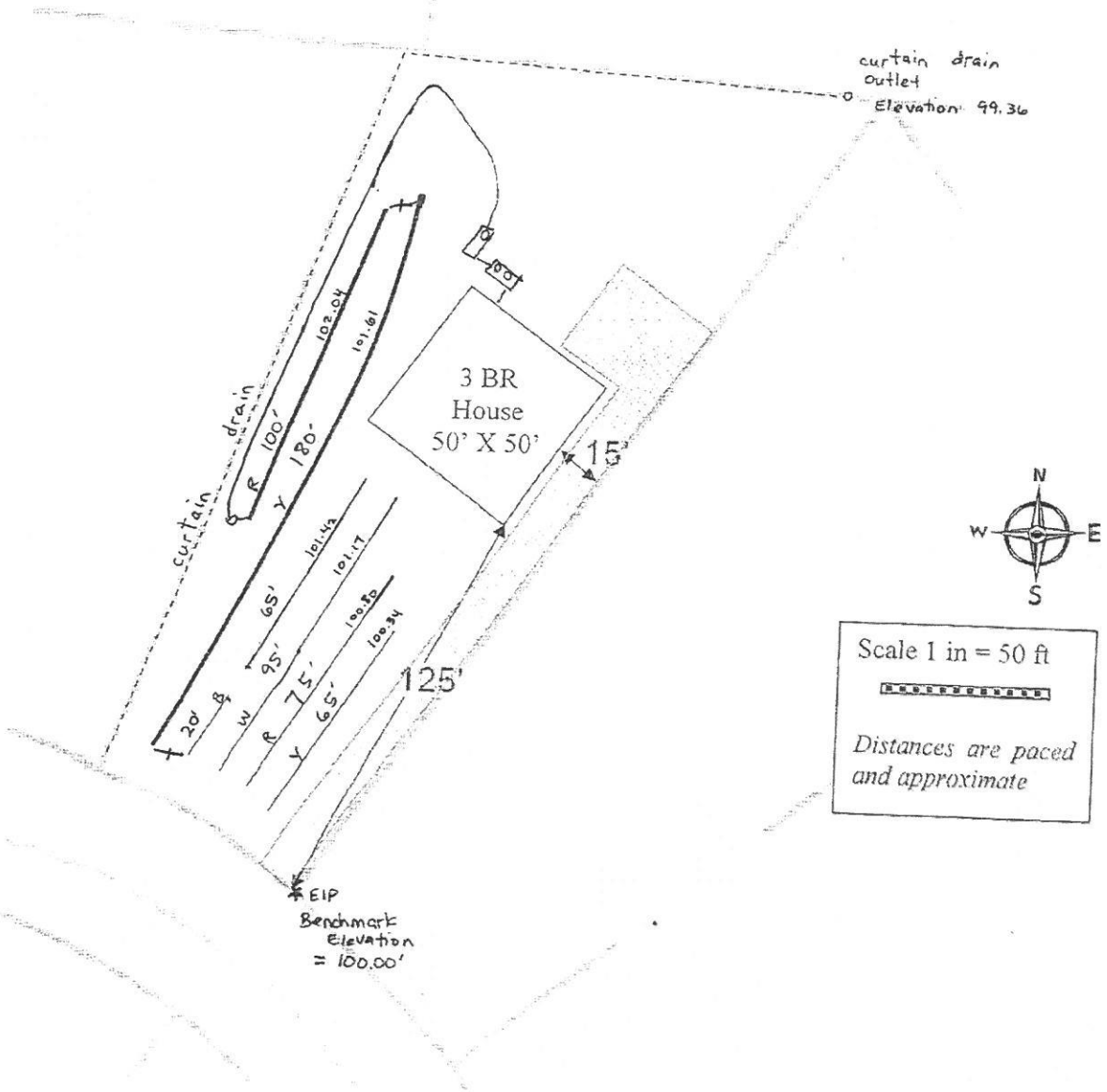
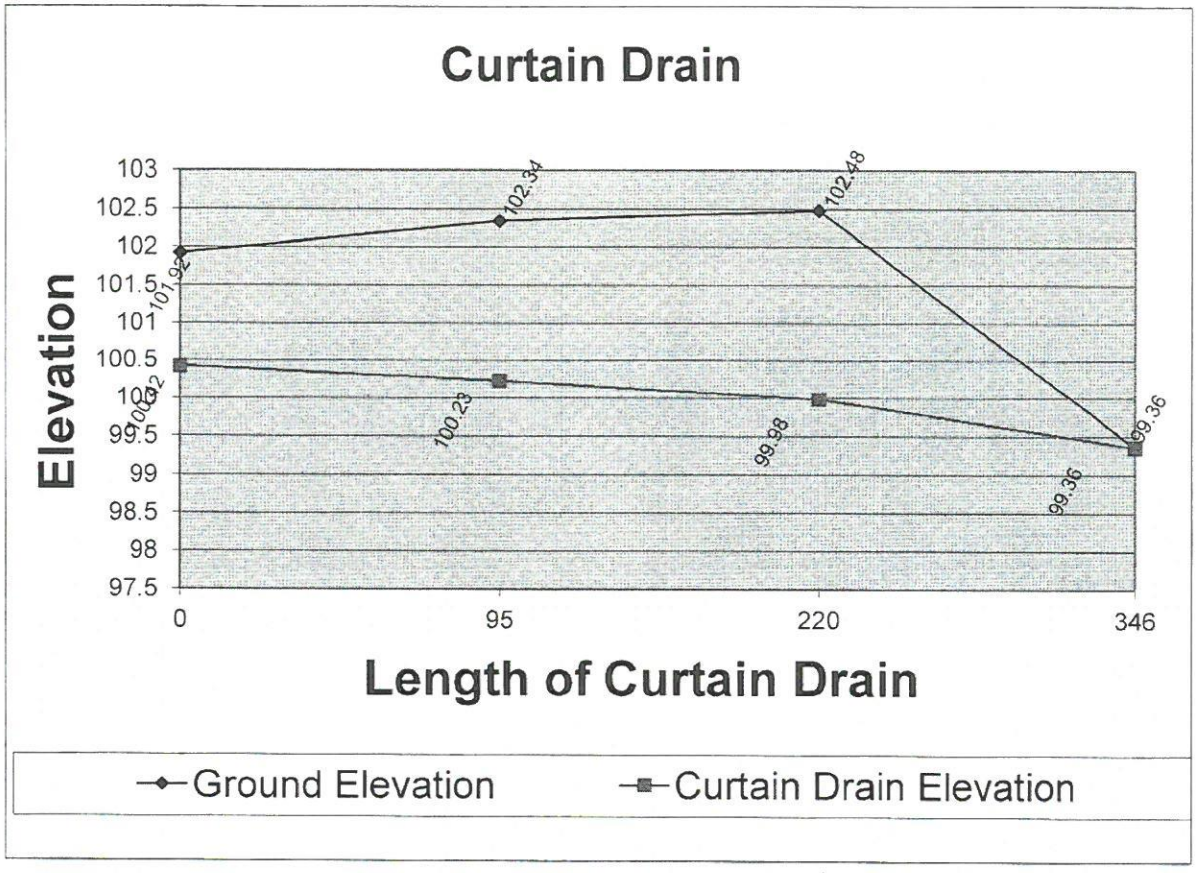
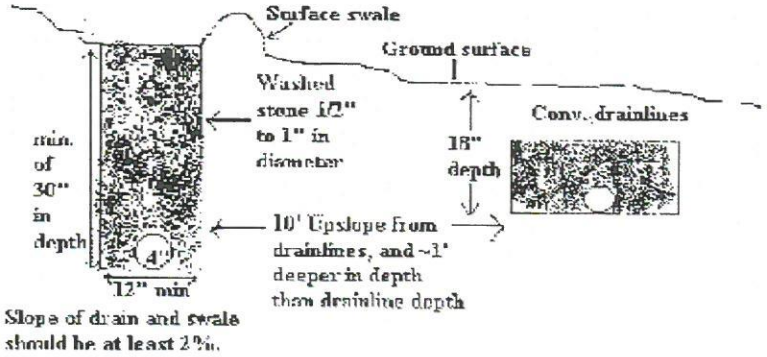
Soil Investigation and Septic System Design
Lot 22 Wexford SD (0.58 Acres) PIN 0665-60-0918; 57 Wexford Drive
22 July 2016

Soil Map





FRENCH DRAIN DETAILS



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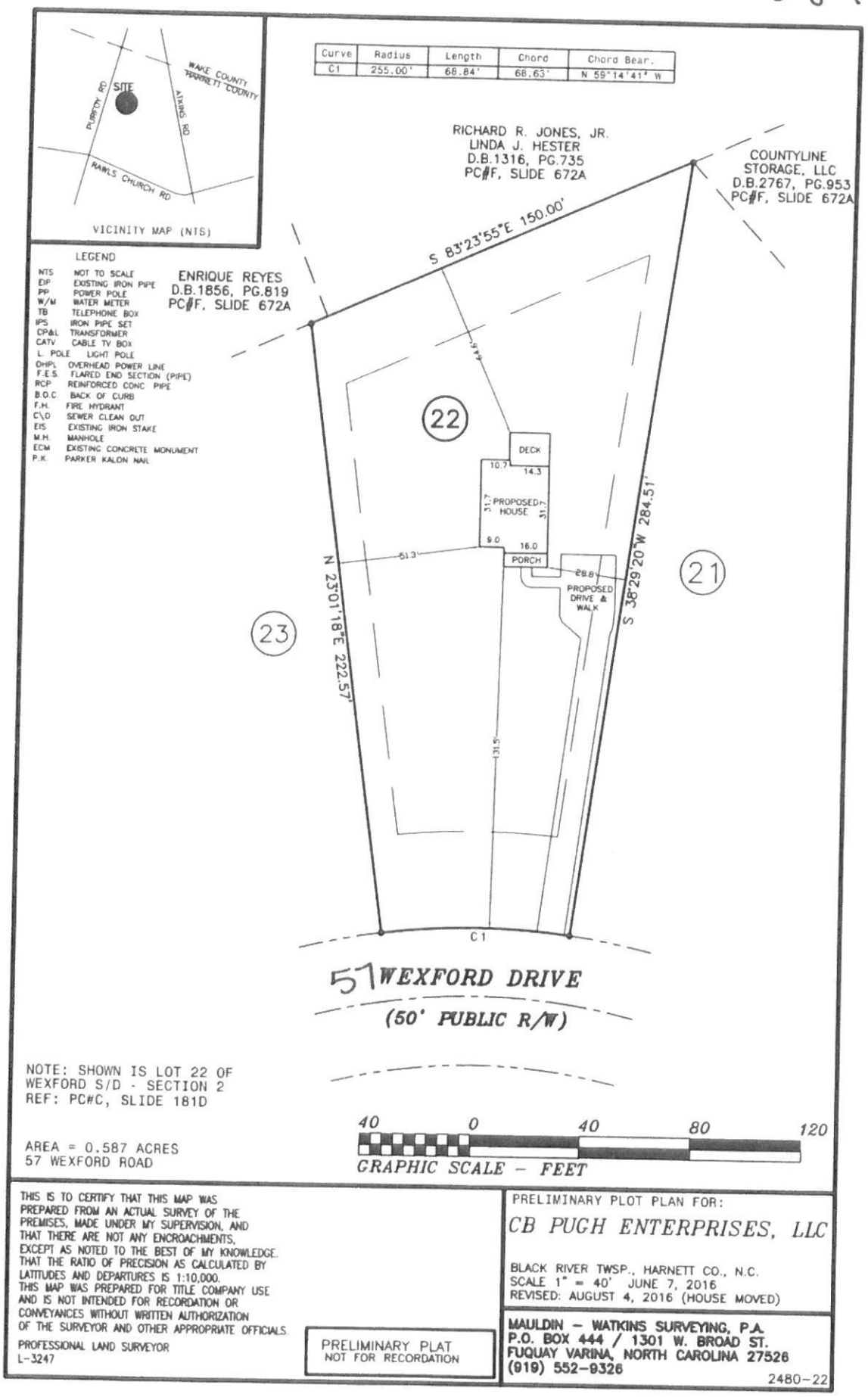

THIS IS TO CERTIFY THAT THIS MAP WAS PREPARED FROM AN ACTUAL SURVEY OF THE PREMISES, MADE UNDER MY SUPERVISION, AND THAT THERE ARE NOT ANY ENCROACHMENTS, EXCEPT AS NOTED TO THE BEST OF MY KNOWLEDGE. THAT THE RATIO OF PRECISION AS CALCULATED BY LATITUDES AND DEPARTURES IS 1:10,000. THIS MAP WAS PREPARED FOR TITLE COMPANY USE AND IS NOT INTENDED FOR RECORDATION OR CONVEYANCES WITHOUT WRITTEN AUTHORIZATION OF THE SURVEYOR AND OTHER APPROPRIATE OFFICIALS.

PROFESSIONAL LAND SURVEYOR
L-3247

PRELIMINARY PLAT
NOT FOR RECORDATION

PRELIMINARY PLOT PLAN FOR:

CB PUGH ENTERPRISES, LLC

BLACK RIVER TWSP., HARNETT CO., N.C.
SCALE 1" = 40' JUNE 7, 2016
REVISED: AUGUST 4, 2016 (HOUSE MOVED)

MAULDIN – WATKINS SURVEYING, P.A.
P.O. BOX 444 / 1301 W. BROAD ST.
FUQUAY VARINA, NORTH CAROLINA 27526
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2480-22

HAL OWEN & ASSOCIATES, INC.

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22 July 2016

Mr. Chris Pugh
Pughbuilders21@gmail.com

Reference: Soil Investigation and Septic System Design
Lot 22 Wexford SD (0.58 Acres) PIN 0665-60-0918; 57 Wexford Drive
Lot 23 Wexford SD (0.5 Acres) PIN 0665-51-9010; 47 Wexford Drive

Dear Mr. Pugh,

A site investigation has been conducted for the above referenced lots, located on the northern side of Wexford Drive in Harnett County, North Carolina. The purpose of the investigation was to determine the ability of this lot to support a subsurface sewage waste disposal system and 100 % repair area for a typical three-bedroom home. Public water will be utilized for both lots. A foundation drain will not be possible for either lot. 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.

SOIL INVESTIGATION

A portion of each lot was observed to be underlain by soils rated as provisionally suitable soils for subsurface sewage waste disposal (see attached map). These provisionally suitable soils were observed to be firm clays to greater than 26 inches and will support long term acceptance rates of 0.3 gal/day/sqft. Except at the rear of Lot 23, the provisionally suitable soils are limited in usable depth to the extent that ultra shallow drainlines will likely be required. This requirement will necessitate the addition of approximately six inches of topsoil to cover the system.

LOT 22 (57 WEXFORD DRIVE) SEPTIC DESIGN

The initial septic system is proposed as 300-feet of 25% reduction status (EZ Flow or chamber) drainlines utilizing a long term application rate of 0.3 gal/day/ft^2. A pump will be needed to lift effluent to the drainfield where it will be distributed to two unequal length drainlines using a pressure manifold. The drainlines should be installed on contour with trench depths at 16 inches below surface.

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,

Hal Owen
Licensed Soil Scientist

Lot 22 Wexford Subdivision

Pressure Manifold Design Criteria

Initial System

Line Number	Line Color	Elevation	Drainline Length(ft)	Tap Size/ Schedule	Flow/tap (gpm)	gpd/ft	LTAR (gpd/sqft)
1	R	102.04	100	3/4"sch 80	10.10	1.200	0.400
2	Y	101.61	200	1"sch 40	20.20	1.200	0.400

Total Drainline= 300 Total Flow= 30.30

Pressure Head (ft)= 2.0 Target LTAR* (gpd/sf)= 0.4 LTAR + 5% 0.42

Daily Flow= 360 Total Flow (gpm)= 30.30 Daily PRT(min)= 11.88

Dose Vol= 146.93 gallons w/ Pipe Vol @% 75 Dose PRT (min)= 4.85

Repair System

Line Number	Line Color	Elevation	Drainline Length(ft)	Tap Size/ Schedule	Flow/tap (gpm)	gpd/ft	LTAR (gpd/sqft)
3	B	101.42	85	1/2"sch 40	7.11	1.196	0.399
4	W	101.17	85	1/2"sch 40	7.11	1.196	0.399
5	R	100.8	65	1/2"sch 80	5.48	1.205	0.402
6	Y	100.34	65	1/2"sch 80	5.48	1.205	0.402

Total Drainline= 300 Total Flow= 25.18

Pressure Head (ft)= 2.0 Target LTAR* (gpd/sf)= 0.4 LTAR + 5% 0.42

Daily Flow= 360 Total Flow (gpm)= 25.18 Daily PRT(min)= 14.30

Dose Vol= 146.93 gallons w/ Pipe Vol @% 75 Dose PRT (min)= 5.83

ared By: Hal Owen and Associates, Inc.
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