



# Santa Rosa County Development Services



Beckie Cato, AICP  
Planning and Zoning Director

Rhonda C. Royals, CBO  
Building Official

## **MEMORANDUM**

TO: Board of County Commissioners

THRU: Tony Gomillion, County Administrator

FROM: Rhonda Royals, Building Official

SUBJECT: Flood Variance Request – Barry Cooper

DATE: February 24, 2016

## **DISCUSSION**

Mr. Barry Cooper is seeking a floodplain variance to allow the use of a slab foundation in lieu of a piling foundation as required by Article 10.03.02(A). The proposed project is the construction of a single family home to be located at 1142 Oyster Bay Drive, Milton, Florida, identified by parcel number 25-15-28-4914-00E00-0020. If granted, this variance would only vary our local “freeboard” or higher regulatory requirement for the type of foundation and not the requirements set forth in the National Insurance Flood Program.

## **BACKGROUND**

Mr. Cooper’s property lies in an AE flood zone but is within 200 feet from the mean high tide line in an area where local regulation imposes V-zone construction standards. V-zone construction standards require a structure to be elevated on pilings so the lowest horizontal member is located no lower than the required base flood elevation. The required elevation at this site is 9 feet above mean sea level. However, based on the soil conditions at this site (see attached report) the engineer suggests “the better foundation option for this lot would be shallow in nature with a monolithic-concrete being optimum. The structure will be elevated on blocks to achieve the minimum finished floor elevation of 9 ft. The permit will require the builder to adhere to our current erosion control protective measures which consists of silt screens and hay bales placed between the development site and water body to prevent sediment or debris from leaving the development parcel. The use of red clay or clay-sand mixtures will be limited to foundations and driveways and must be capped within seven (7) days of placement.

Santa Rosa County Public Service Complex  
6051 Old Bagdad Highway, Suite 202 Milton, Florida 32583  
[www.santarosa.fl.gov](http://www.santarosa.fl.gov)  
Office: (850) 981-7000

Cooper Property  
Parcel 25-1S-28-4914-00E-00-0020  
1142 Oyster Bay Dr, Milton, FL





**BAILY**  
**ENGINEERING/  
TESTING, L.L.C.**  
GEOTECHNICAL • MATERIALS

P.O. BOX 427 • PENSACOLA, FLORIDA • 32591-0427 • (850) 434-5500

Project No. 16-109  
January 26, 2016

Mr. Barry Cooper  
4927 Makenna Circle  
Pace, FL 32571

Re: Alternative Foundation Recommendation  
Proposed Cooper Residence – Sea Pines S/D  
Garcon Point, Santa Rosa County, Florida

Mr. Cooper,

This letter report is intended to offer a recommendation for a shallow foundation system on Lot 2E of the Sea Pines S/D in lieu of a piling foundation specified by Santa Rosa County ordinance. This letter is submitted per your email request of November 30, 2015. The recommendation given in this letter is based on two boring logs developed in April of 2007 by this firm. Boring B-2 was completed to the greater depth of the two borings, 50 ft. Both were very similar to 35 ft.

The borings disclosed generally medium-dense sand to 8-ft depth underlain by chiefly very weak and highly compressible clay to 50-ft depth. While loose to medium-dense sand was disclosed between 23 and 32-ft depth that could be utilized as a bearing stratum for piling the presence of the very weak clay between 8 and 23-ft depth would be incapable of supporting other than very light pile loads and not particularly stable following pile installation. Vibrations transmitted to the weak clay from pile driving would lead to consolidation and settlement of the clay, resulting in negative skin friction against the pile wall as the clay settled. The net allowable compressive capacity including negative skin friction would be nil.

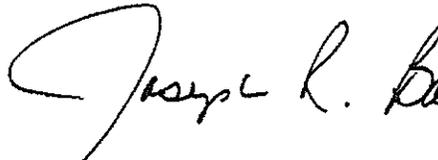
The better foundation choice for this lot would be shallow in nature with a monolithic-concrete foundation being optimum. First, a very competent sand of sufficient thickness is present at the surface. Second, the monolithic foundation would be constructed atop any structural fill placed with a high degree of compaction. Third, the distribution of the structural loads would be more uniform with foundation settlement also being more uniform.

Use of piling at this lot would be very inefficient, resulting to an excessive number of piling installed to 28-ft depth. This would likely lead to between 2 and 3 times the number of piling needed for a conventional pile foundation for the same structure.

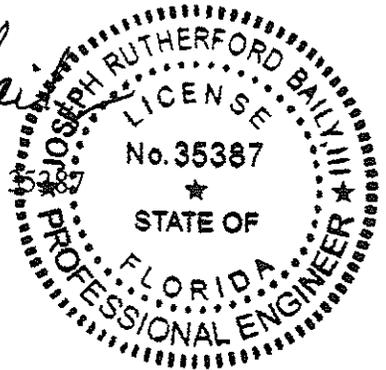
I appreciate the opportunity to have been of assistance in developing geotechnical parameters to guide foundation design and construction for this planned residence. Please contact me with any questions or concerns about this letter or use of a shallow foundation at this location.

Respectfully submitted,

BAILY ENGINEERING/TESTING, L.L.C.



Joseph R. Baily, P.E. Reg. No. 35387  
Principal of Firm



Attachments: Logs of Boring B-1 and B-2