Cool and Cobb Engineering Company

Date: 4/22/2022
Job: Peggy Kendrick
Location: 453 Northwest Emerald Lake Drive
Lake City, FL 32055

PUSH PIER DESIGN ANALYSIS

The load requirements for the pilings designed to assist in supporting the identified areas of the subject residence were determined. The selected piling locations and the specific piling are identified on the Pier Identification and Location Plan attached. The calculated total loads on the piles in the specific location, including both dead and live loads are documented in the attached table which is designated as Attachment "A". Based on the total load requirements for each of these piles, the push pier driver is to be employed. The push pier driver should be employed with a calculated load of 4,125 lbs., which will provide pile capacity, including the 2 to 1 safety factor of 8,250 lbs. which is greater than the maximum calculated total load of 4,125 lbs. which occurs on the pile identified as no. 1. Based on this analysis, the use of the push pier driver for the ECP piles with a specific load of 8,250 lbs. and a minimum depth of 15' is approved and certified as meeting all the requirements of the Florida Building Code 2020 7th Edition, and good engineering practice. This is not to be the primary support structure, but a supplement support to assist in support of the weight of the structure, which will reduce the total pressure on the existing soils. After completion of installation, Cool and Cobb Engineering Company shall be supplied with a drilling log of the location and depths of each pile installed so they can evaluate the installation and prepare the "As Built" drawings.

General Notes:

1. A log of each pile to be kept by Contractor noting depth for each pile.
2. Piles installed less than 48" apart are to be battered 10° away from each other.
3. This design is based on the loads of the structure placed on the shallow soils under the structure.
4. No deep soils geotechnical testing information was provided for this design.
5. This design does not address any possible sink hole activity as defined in Florida Statute § 627.706.

4/22/2022
Carl Cool, P.E.
State of Florida
Professional Engineer No. 16921

Digitally signed by Carl E Cool
Date: 2022.04.22 16:29:10 -04'00'

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203 W. Main St.
Avon Park, FL 33825
Office: (863) 657-2323
Fax: (863) 657-2324

Cool and Cobb Engineering Company

Date: 4/22/2022

Job: Peggy Kendrick

Location: 453 Northwest Emerald Lake Drive
Lake City, FL 32055

POLY INJECTION DESIGN ANALYSIS

The load requirements for the structural polyurethane injections designed to level the identified areas of the subject residence were determined. The selected injection locations and the specific injection are identified on the Injection Identification and Location Plan attached. The design of the injected Polyurethane is certified as meeting all of the requirements of the Florida Building Code 2020 7th Edition, and good engineering practice. This will be the primary support of the structure, which will not change the pressure on the existing soils. After completion of installation, Cool and Cobb Engineering Company shall be supplied with a log of the location and depths of each injection installed along with post injection floor level readings for evaluating the installation and prepare the "As Built" drawings.

General Notes:

1. Assume load of 1500 lbs/ ft^2
2. All injections to be installed in accordance with ICC ES AC 358
3. A log of each injection to be kept by Contractor noting depth installed for each injection and the corrected level readings.
4. This design is based on the loads of the structure placed on the shallow soils under the structure.
5. No deep soils geotechnical testing information was provided for this design.
6. This design does not address any possible sink hole activity as defined in Florida Statute § 627.706.

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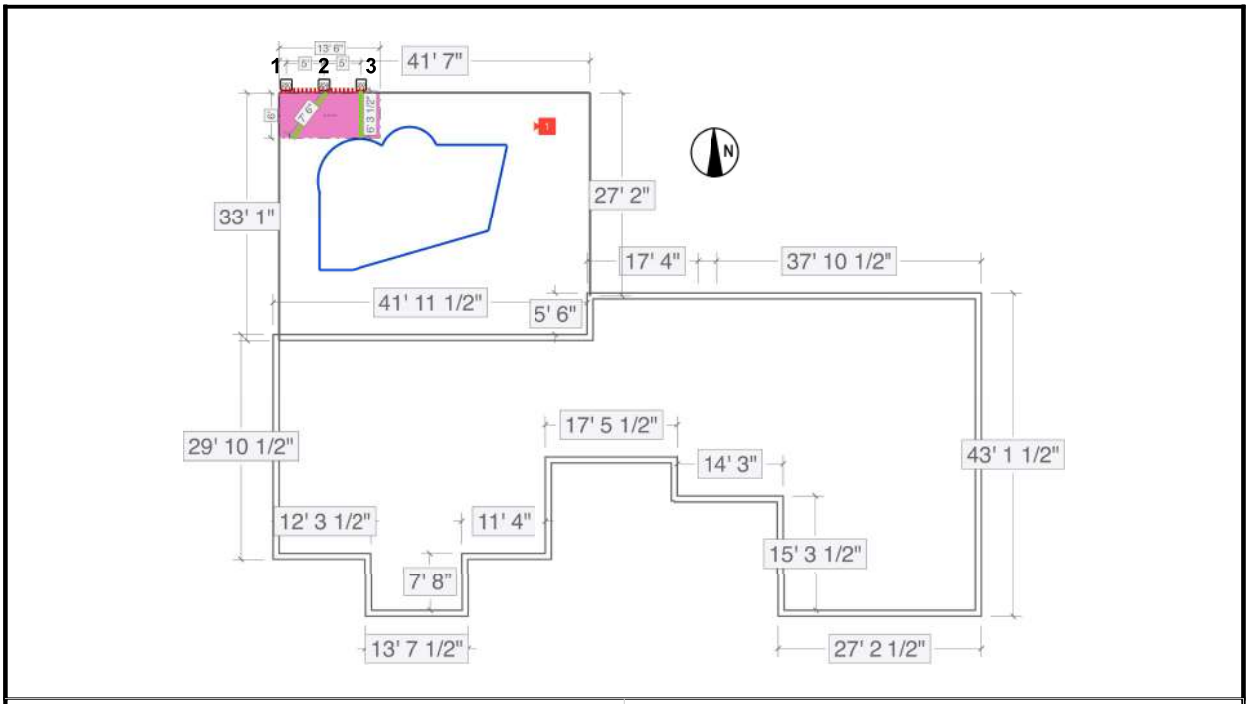
Contractor: Foundation Professionals

Foundation Professionals of Florida
P.O. Box 1625
Lake City, Florida 32056
www.foundationprosfl.com

Project Address
Peggy Kendrick
453 Northwest Emerald Lakes Drive
Lake City ,FL 32055

Created By
Conner Rawlins
(386) 406-2191
04/19/2022

Repair Plan



250	250 - Concentric Bracket	3		Spreader Beam (Linear Foot)	11.50 ft
	ECP/NCFI P2-011 - 4.8LB/FT3	63.89 LB		Prime Resins Precision Seal	13.82 ft

Year structure was built:
N/A

Construction:
Service Not Engineered - N/A

Foundation Type:
Concrete - Shallow Spread Footing

Veneer:
Open

Single Story, Block

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Attachment "A"

Total Load on Pile (Live Load + Dead Load)

PILE NO.	TOTAL CALCULATE LOAD
1	4,125 lbs
2	3,750 lbs
3	3,750 lbs

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Maximum Total Load on Pile: 4,125 lbs

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