

# Cool and Cobb Engineering Company

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Date: 5/23/2023  
Job: Gwen Hawkins  
Location: 6855 Elim Church Rd.  
Ft. White Fl 32038

## PUSH PIER DESIGN ANALYSIS

The load requirements for the piers designed to assist in supporting the identified areas of the subject residence were determined. The selected pier locations and the specific piling are identified on the Pier Identification and Location Plan attached. The calculated total loads on the piers 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 piers, the push pier driver is to be employed. The push pier driver should be employed with a calculated load of 18,000 lbs., which will provide pier capacity, including the 2 to 1 safety factor, of 18,000 lbs. which is greater than the maximum calculated total load of 9,000 lbs. which occurs on the pier identified as no. 1. Based on this analysis, the use of the push pier driver for the push piers with a specific load of 9,000 lbs. and a minimum depth of 15' is approved and certified as meeting all the requirements of the Florida Building Code 2020 7<sup>th</sup> 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 pier installed so they can evaluate the installation and prepare the "As Built" drawings.

### General Notes:

1. All piers to be installed in accordance with ICC ES AC 358
2. A log of each pier to be kept by Contractor noting depth for each pile.
3. Piers installed less than 48" apart are to be battered 10° away from each other.
4. All pile calculations are based on a maximum spacing of 6'-0".
5. This design is based on the loads of the structure placed on the shallow soils under the structure.
6. No deep soils geotechnical testing information was provided for this design.
7. This design does not address any possible sink hole activity as defined in Florida Statute § 627.706.

5/23/2023

Carl E Cool, P.E.  
State of Florida  
Professional Engineer No. 16921



Digitally signed  
by Carl E Cool  
Date: 2023.05.23  
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This Item has been electronically sealed by Carl Cool using a digital signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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

Contractor: Stable Foundation Solutions

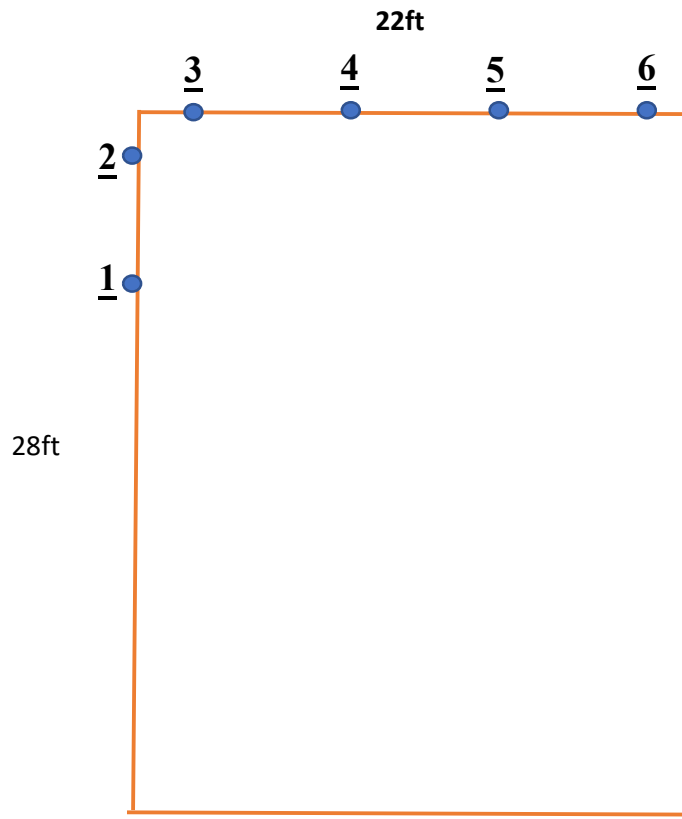
**Gwen Hawkins**

6855 Elim Church Rd Ft.  
White FL 32038

**Legend**

● M 250 Push Piers

**Single story CMU structure**



5/23/2023  
Carl E. Cool, P.E.  
PE# 16921

Cool and Cobb Engineering Co.  
203 W. Main St.  
Avon Park, FL 33825

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(Live Load + Dead Load)

TOTAL CALCULATE LOAD

9,000 lbs

7,500 lbs

6,000 lbs

7,200 lbs

7,200 lbs

6,000 lbs

PE# 16921

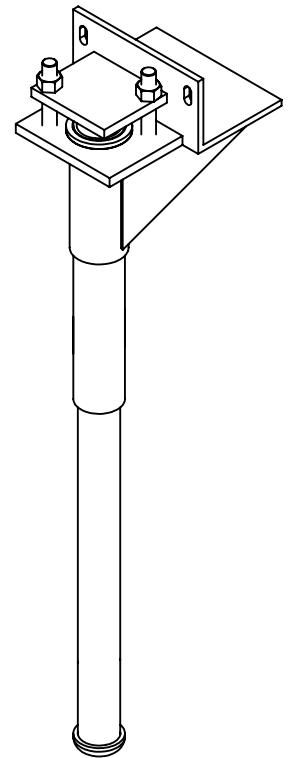
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203 W. Main St.

## Lift Brackets

TMG Manufacturing offers 4 different foundation brackets designed to meet the needs of any foundation support application. Choose between our heavy duty lift bracket or our medium duty lift bracket. Both brackets are also available for grout injection. All of our brackets are made from high-tensile strength steel and comprised of CNC machined parts, ensuring precision and accuracy. In addition, all brackets are robotically welded guaranteeing a quality product every time. All brackets have been field and lab tested and can be powder-coated or galvanized.

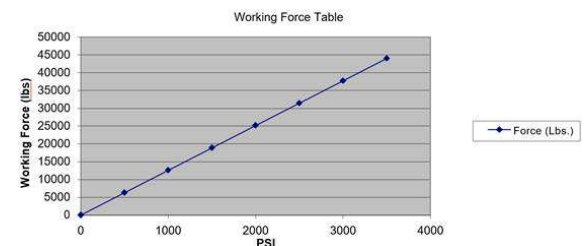
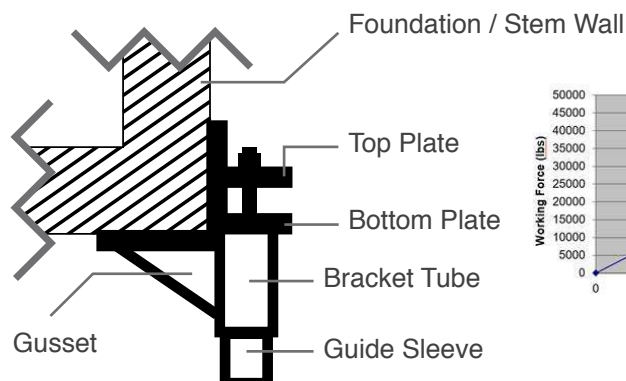
| Product                         | Capacity |
|---------------------------------|----------|
| Standard Duty Lift Bracket      | 45 kips  |
| Heavy Duty Lift Bracket         | 70 kips  |
| Standard Duty Injection Bracket | 45 kips  |
| Heavy Duty Injection Bracket    | 70 kips  |



## Push Pipe

TMG Manufacturing offers several types of foundation support piers, designed to be installed directly to load bearing strata. All piers are used in conjunction with our lift brackets to stabilize and strengthen existing foundations. All piers are engineer certified and field and lab-tested. Can be galvanized or powder-coated.

| Product                        | Wall Thickness | Outside Diameter | Tensile Strength (lbs) | Yield Strength (lbs) |
|--------------------------------|----------------|------------------|------------------------|----------------------|
| Standard Push Pipe             | .217"          | 2.875"           | 14,500                 | 262,000              |
| Heavy Duty Push Pipe           | .308"          | 2.875"           | 16,900                 | 276,400              |
| Standard Injection Push Pipe   | .217"          | 2.875"           | 14,500                 | 262,000              |
| Heavy Duty Injection Push Pipe | .308"          | 2.875"           | 16,900                 | 276,400              |



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