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August 26, 2021

Project No.:21.201.TBS

Tonya Gunn  
Tarheel Basement Systems  
2910 Griffith Road  
Winston-Salem, North Carolina 27103

RE: Special Inspection - 7905 Overhills Road, Spring Lake, North Carolina  
Permit No.: BRES2106-0066

Dear Tonya :

I have performed the special inspection of the installation of the push piers per IBC Chapter 17 for the above-referenced project.

Push Pier Installation:

The push pier used for installation was a 2 7/8 inch diameter pipe, using a FS35DC Drive Cylinder with a working area of 9.62 square inches. The installation was performed by Tarheel Basement Systems, certified installers for Groundworks products.

The maximum axial load requirement for this project is 11000 lbs working load, 22000 lbs ultimate load. The piers were driven to depths of 9 to 10 feet, with a minimum installation pressure of 2800 psi. This results in an ultimate axial capacity of 26936 lbs, exceeding the required ultimate load per the design documents.

The following part numbers were installed:

- Lead P/N: PP21617-36PTA w/ Friction Reduction Collar
- Extension(s) P/N: PP21617-48ESA
- Bracket P/N: PP21617-34B w/ PP21617-48ES Guide Sleeve

Summary:

Based on my special inspection and structural observation, the push piers were installed according to the engineering design load requirements and according to IBC Chapter 17.

Please give our office a call if you have any questions or need further assistance.

Regards,

A handwritten signature in blue ink, appearing to read "D. Stark".

Daniel Stark, P.E.  
Stark Foundations



# TARHEEL

## BASEMENT SYSTEMS

### PUSH PIER LOG

FSI Drive Cylinder #FS35DC  
 IMG pier model FP21617-34 (48" sleeve)

Customer number: \_\_\_\_\_  
 Customer name: Carolyn Hair  
 Date: \_\_\_\_\_  
 Weather conditions: \_\_\_\_\_

Starter	Depth	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	Pier 8	Pier 9	Pier 10
1	4'2"	1700	1900	1700							
2	7'2"	2000	1900	2100							
3	10'2"	2800	2800	2800							
4	13'2"										
5	16'2"										
6	19'2"										
7	22'2"										
8	25'2"										
9	28'2"										
10	31'2"										
11	34'2"										
12	37'2"										
13	40'2"										
14	43'2"										
15	46'2"										
16	49'2"										
17	52'2"										
18	55'2"										
19	58'2"										
20	61'2"										
	64'2"										

Job Foreman Name: Zack Mitchell  
 Job Foreman Signature: [Signature]  
 INSTALL NOTES: Install pressure met? or house began to move? Yes  
angle from used? (provide measurements)



FSI Drive Cylinder #FS35DC    Factor of Safety = 2.0

## Tar Heel Push Pier Conversion Chart

<b>Drive Pressure</b>	<b>Ultimate Capacity</b>	<b>Allowable Load</b>
1000 PSI	9,620 Pounds	4,810 Pounds
1100 PSI	10,582 Pounds	5,291 Pounds
1200 PSI	11,544 Pounds	5,772 Pounds
1300 PSI	12,506 Pounds	6,252 Pounds
1400 PSI	13,468 Pounds	6,734 Pounds
1500 PSI	14,430 Pounds	7,215 Pounds
1600 PSI	15,392 Pounds	7,696 Pounds
1700 PSI	16,354 Pounds	8,177 Pounds
1800 PSI	17,316 Pounds	8,658 Pounds
1900 PSI	18,278 Pounds	9,139 Pounds
2000 PSI	19,240 Pounds	9,620 Pounds
2100 PSI	20,202 Pounds	10,101 Pounds
2200 PSI	21,164 Pounds	10,582 Pounds
2300 PSI	22,126 Pounds	11,063 Pounds
2400 PSI	23,088 Pounds	11,544 Pounds
2500 PSI	24,050 Pounds	12,025 Pounds

# **TARHEEL<sup>®</sup>**

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## **BASEMENT SYSTEMS**

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<b>Drive Pressure</b>	<b>Ultimate Capacity</b>	<b>Allowable Load</b>
2600 PSI	25,012 Pounds	12,506 Pounds
2700 PSI	25,974 Pounds	12,987 Pounds
2800 PSI	26,936 Pounds	13,468 Pounds
2900 PSI	27,898 Pounds	13,949 Pounds
3000 PSI	28,860 Pounds	14,430 Pounds
3100 PSI	29,822 Pounds	14,911 Pounds
3200 PSI	30,784 Pounds	15,392 Pounds
3300 PSI	31,746 Pounds	15,873 Pounds
3400 PSI	32,708 Pounds	16,354 Pounds
3500 PSI	33,670 Pounds	16,835 Pounds
3600 PSI	34,632 Pounds	17,316 Pounds
3700 PSI	35,594 Pounds	17,797 Pounds
3800 PSI	36,556 Pounds	18,278 Pounds
3900 PSI	37,518 Pounds	18,759 Pounds
4000 PSI	38,480 Pounds	19,240 Pounds
4100 PSI	39,442 Pounds	19,721 Pounds
4200 PSI	40,404 Pounds	20,202 Pounds
4300 PSI	41,366 Pounds	20,683 Pounds