

Richter Engineering, Inc.

Foundation Stabilization System Installation Report

Method: Chemical Grouting
Owner: Eliezer and Maria E Rivas
Location: 8913 Rocky Run Ct
Tampa, FL 33634

Contractor:
YD Contractors, Inc.
17750 SR52
Land O Lakes, FL 34638
Attn: Yamil Dominguez
813.704.7941

Prepared by:
Richter Engineering, Inc.
1024 W Hillsborough Ave
Suite 2
Tampa, FL 33603
813-500-0362

Report No.: 2019-YD004

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Richter Engineering, Inc.

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Richter Engineering, Inc.

March 25, 2019

YD Contractors, Inc.
17750 SR 52
Land O Lakes, FL 34638
Attn: Yamil Dominguez

Re: Address: 8913 Rocky Run Ct, Tampa, FL. 33634
 Parcel Id: U-24-28-17-08L-000008-00013.0
 Owner: Eliezer and Maria E Rivas
 Issue: Injection Grout Installation Monitoring

Dear Mr. Dominguez

Richter Engineering, Inc. (REI) is Pleased to provide chemical grout installation monitoring efforts associated with this project.

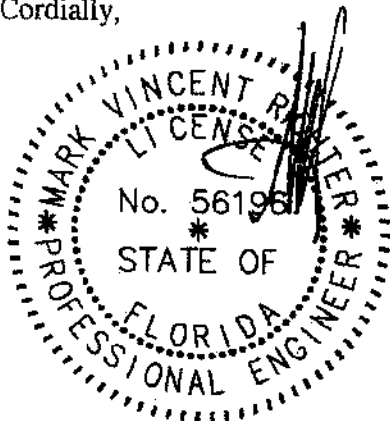
YD Contractors, Inc (YDC) installed the stabilization system as per the provided engineering plan. This report provides the information pertaining to this project.

Eight (8) injection points were installed about the perimeter of the subject structure. The remediation consisted of injecting points P1-P8 at various levels, ranging between 35-45ft in depth. Each one was drilled prior to the injection process.

The material injected is Precision Lift 4.0, Manufactured by Prime Resins. Two - component, high- density polyurethane foam used for void filling, compaction grouting, and stabilization. 3,560 Lbs. of Precision Lift 4.0 was injected in a manner so that the gauge pressure of the lines (Line A and Line B) did not exceed the 500-psig.

Currently REI does not anticipate further subsidence of the subject structure. The structure was stabilized at the time of completion of the project. A table containing the recorded information at each injection location point is part of the report.

Cordially,



Mark Richter, PE
Richter Engineering, Inc.

Richter Engineering, Inc.

1.2 Site Description

The subject structure is a single story frame residence located at:
8913 Rocky Run Ct, Tampa, FL 33634.

County Property Appraiser Information:

Property ID: U-24-28-17-08L-000008-00013.0
S/T/R: 24 / 28 / 17
Date of Construction: 1978

Project Description

2.1 Chemical Grout Injection Program

Between March 22-25, 2019, YD Contractors, Inc.(YDC) performed the repair process.

The grouting process is used to support the structure by displacing materials with low liquid limits that lie beneath the subject structure.

A perimeter plan showing the locations of the injection points has been provided as part of this report.

The injection points, as indicated on the recommended plan, were staked out then reviewed for obstructions. At that time minor adjustments were made prior to inserting the injection points.

EFC utilized 3" OD steel pipe as pinning for the eight (8) locations. The injection tubes were inserted to a depth of 20 ft and retracted as the chemical was injected.

3.0 Monitoring Information

Any cosmetic repairs should be postponed for a period of at least one month to allow the structure to relax any induced stressed due to the chemical grout placement.

Richter Engineering, Inc.

4.0 Limitations

Richter Engineering Inc. (REI) is acting on an observation basis of the project. The purpose is to monitor and document the system installation process. At no time was any destructive testing or subsurface exploration a part of the scope of services. The proposed action plan was prepared based upon the request of the client in an effort to stabilize the subject structure. The design is to support the structure by utilizing competent soils. Due to the nature of the work and the geological make up, there is no guarantee that all deep soil conditions were addressed.

It is the opinion of REI that the contractor has completed this installation in accordance with generally accepted industry standards and practices to the best of our belief or knowledge. However, REI does not imply any warranty to the effectiveness of the work performed, but only to the accuracy of the information reported herein. The scope of this report does not cover problems that may occur in areas beyond the limits of this repair work. This report is the final inspection report for the Foundation Stabilization program as monitored by REI, and in our opinion, the foundation had been stabilized at this time.

REI authorizes the structure owner and YDC the use of this report, any other parties or users shall request permission in writing prior to making any copies or use of this information.

Richter Engineering, Inc.

5.0 Certification

March 25, 2019

To Whom It May Concern:

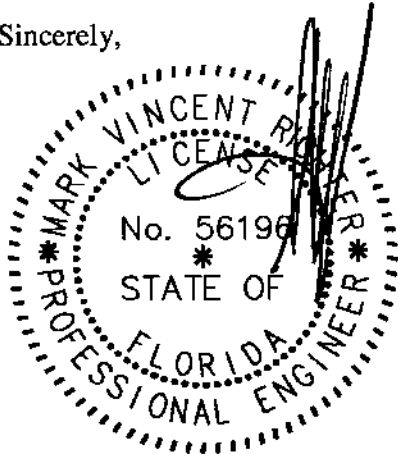
This report is provided as a record of the efforts made to stabilize the structure located at 8913 Rocky Run Ct, Tampa, FL 33634.

It is the opinion of REI that the contractor has completed this installation in accordance with generally accepted industry standards and practices to the best of our belief or knowledge.

Based upon this information we believe that the structure is stabilized and therefore certify the structure as safe for habitation.

Should you have any questions or concerns please feel free to contact me with the information provided below.

Sincerely,



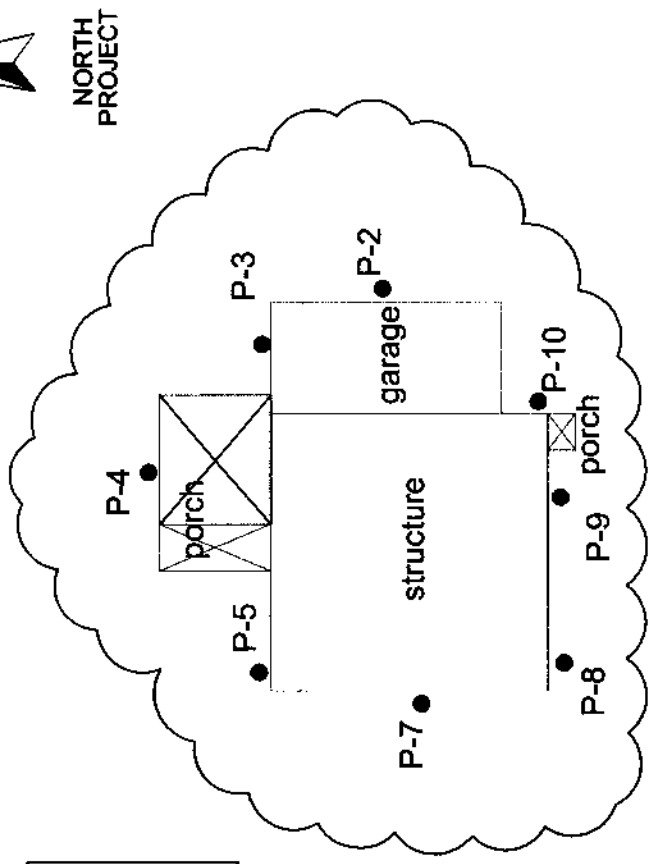
Mark Richter, PE
Richter Engineering, Inc.
PE 56196
CA09356

Richter Engineering, Inc.

6.0 Supporting Documentation

OWNER INFORMATION:
 RECORDED OWNERS: Eliezer and Maria E Rivas
 PIN: UJ-25-28-17-000008-00013.0
 STR: 25 / 28 / 17
 ADDRESS: 8913 Rocky Run Ct
 Apopka, FL 33634
 LEGAL DESCRIPTION: Carmeo Villas Unit No. 5
 Lot 13, Block 8
 PROPERTY USE: Residential
 YEAR BUILT: 1978

eliminated:
 P-1
 P-6

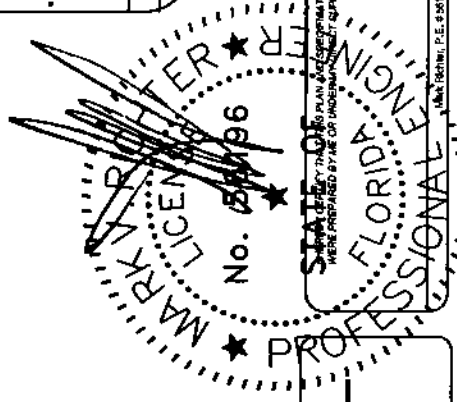


INJECTION POINT LAYOUT

LEGEND
 ● P-X CHEMICAL INJECTION LOCATION AND NUMBER

PRESSURE PIER MATERIAL SPECIFICATIONS:
 PRESSURE PIER FOUNDATION BRACKET:
 1/2" THICK ASTM A36 HOT ROLLED STEEL
 MINIMUM YIELD STRESS = 36 KSI
 MINIMUM TENSILE STRENGTH = 58 KSI
 WELDS: E70XX
 MINIMUM YIELD STRESS = 67 KSI
 MINIMUM TENSILE STRENGTH = 70 KSI
 BRACKET TUBE:
 3.25" OD, 3.725" ID, ASTM A513 DOM GRADE
 1020 COLD DRAWN STEEL 11" LENGTH
 MINIMUM YIELD STRESS = 85 KSI
 MINIMUM TENSILE STRENGTH = 95 KSI
 PRESSURE PIER TUBE PILE:
 PIER TUBE: 2.00" OD, ASTM A513 DOM GRADE
 1020 COLD DRAWN STEEL = 36" LENGTHS
 MINIMUM YIELD STRESS = 55 KSI
 MINIMUM TENSILE STRENGTH = 65 KSI
 PIER TUBE COUPLER:
 ASTM A513 DOM GRADE
 MINIMUM YIELD STRESS = 65 KSI
 MINIMUM TENSILE STRENGTH = 65 KSI
 PRESSURE PIER INSTALLATION SYSTEM:
 JACK, SHEFFER, 3-1/4 BORE, RATED 3,000 PSI
 (NOMINAL 24,000 LBS)
 PUMPS:
 SPX-POMER TEAM ELECTRIC PUMP, RATED
 10,000 PSI, 4" PRESSURE GAUGE

Richter Engineering, Inc.
 C.A.#09356
 1024 W Hillsborough Ave
 Tampa, FL 33603
 Richter@engineer.com
 Phone: 813-500-0362

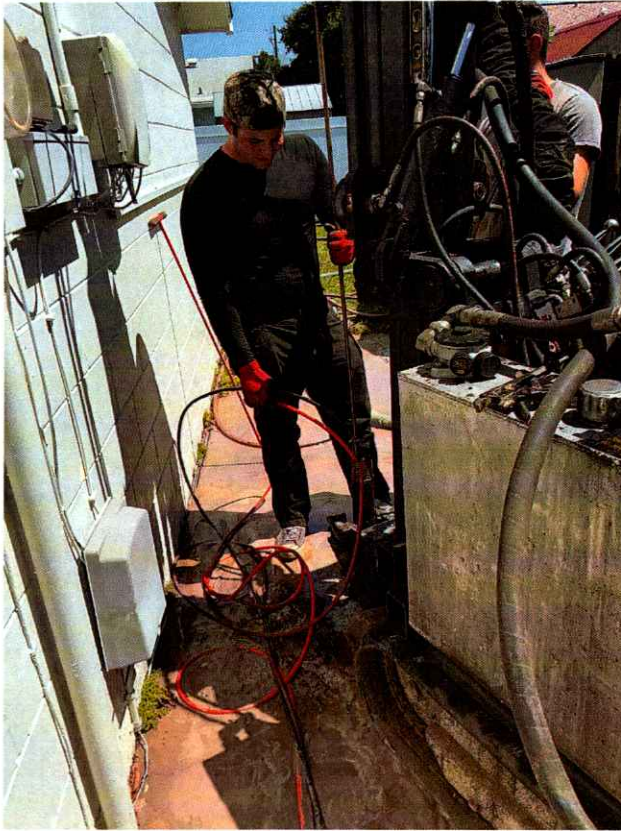


GENERAL NOTES

- ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE CODES AND STANDARDS, INCLUDING BUT NOT LIMITED TO ALL STATE LAWS, LOCAL ORDINANCES, FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, THE STANDARD MECHANICAL CODE, THE STANDARD PLUMBING CODE, THE OCCUPATIONAL SAFETY AND HEALTH (SEE REPORT FOR CURRENT VERSION/EDITION)
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO AND DURING CONSTRUCTION.
- THE CONTRACTOR SHALL SECURE ALL OPENINGS UNDER CONSTRUCTION AT THE END OF EACH WORKING DAY, REMOVE ALL DEBRIS FROM THE PROJECT SITE AS REQUIRED TO MAINTAIN A SAFE AND ORDERLY WORK ENVIRONMENT, REPLACE AREAS DAMAGED AS A RESULT OF PERFORMANCE OF THE WORK (IF APPLICABLE) AND CLEAN AFTER CONSTRUCTION.
- CONTRACTOR WILL PUMP SOLIDIFICATION WATER MIXTURE INTO VOID UNDER SLAB ON GRADE IF AND AS REQUIRED IN CONTRACTOR'S JUDGEMENT.
- CONTRACTOR SHOULD HAVE GENERAL LIABILITY INSURANCE.
- ANY CRACKS SUCH AS INSUFFICIENT STEEL IN THE SLAB AND/OR OTHER STRUCTURAL CONDITIONS MAY BE DISCOVERED AFTER WORK COMMENCES THAT MAY NOT BE VISIBLE PRIOR TO COMMENCEMENT OF WORK OR DURING THE WORK, THESE CONDITIONS MAY HAVE LEVELING THE STRUCTURE IMPOSSIBLE. IF SUCH CONDITIONS ARE FOUND, CONTRACTOR WILL IMMEDIATELY HALT WORK AND INFORM THE OWNER AND/OR THE SITE ENGINEER.
- THE CONTRACTOR WILL NOTIFY THE OWNER AND/OR THE SITE ENGINEER OF SUCH CONDITIONS IF DURING THE COURSE OF FOUNDATION REPAIR UNFORESEEN CONDITIONS ARE ENCOUNTERED THAT CREATE AN OBSTRUCTION FOR THE CONTRACTOR.
- CONTRACTOR WILL CHECK FOR DOMESTIC WATER LEAKS BEFORE AND AFTER THE FOUNDATION REPAIR PROGRAM. ANY PLUMBING LEAKS FOUND WILL BE IMMEDIATELY REPORTED TO THE OWNER AND/OR THE SITE ENGINEER. CONTRACTOR WARRANTS THAT THE WORK AND MATERIALS WILL BE FREE FROM DEFECTS NOT INHERENT IN THE NATURE OF SUCH WORK AND MATERIALS. ALL WORK WILL BE PERFORMED AS STATED HEREIN.
- CONTRACTOR NEEDS TO LOCATE ALL UTILITIES INCLUDING WATER, SEWER, ELECTRICAL, TELEPHONE AND IRRIGATION LINES AROUND THE PERIMETER OF THE BUILDING.
- THIS STRUCTURAL STABILIZATION PROPOSAL IS BASED ON OUR CLIENT REQUEST. RICHTER ENGINEERING WILL ACT AS A THIRD PARTY MONITOR ON BEHALF OF THE CLIENT TO DOCUMENT, CONFIRM AND RECORD ALL DEPTHS & PRESSURES. WE CANNOT BE RESPONSIBLE FOR UNPRESSED SOIL, SHIFTS, MOVEMENTS, OR BUILDING CRACKING THAT MAY RESULT AS PART OF IMPLEMENTING THIS STABILIZATION PROCESS. RICHTER ENGINEERING SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES WHICH OCCUR DURING THE REPAIR/CONSTRUCTION WORK.
- THIS PROPOSED PLAN IS NOT INTENDED TO DEAL WITH UNDEEP SOIL OR UNDESIRABLE CONDITIONS THAT MIGHT EXIST AT THE SITE UNLESS THEY REQUIRE A REPLACEMENT FOR A COMPACTION GROUTING PROGRAM.

NO.	REV.	DATE
1	ISSUE	03/25/19

CONTRACT NO: Y10 Construction, Inc.
 17750 SR 22
 Lake Noyah, FL 34088
 03/25/2019
 SHEET NO. 1
 AS SHOWN



Picture 1
Right Side of Residence
Injection Point 2



Picture 2
Rear of Residence
Injection Point 4



Picture 3
Rear of Residence
Injection Point 5



Picture 4
Front of Residence
Injection Point 8



Picture 5
Front of Residence
Injection Point 8