GREENWORKS®
ENGINEERING AND CONSULTING

600 N Pearl Street
Suite S1900
Dallas, TX 75201
(855) 349-6757
Texas Registered Engineering Firm 20170

Project No. 18451

April 9, 2020

Re: Foundation Evaluation
[redacted]

Dear [redacted]

As requested, personnel of GreenWorks Engineering and Consulting have completed an observation of the foundation at the address referenced above on April 3, 2020. The purpose of the observation was to collect information necessary to assess the performance of the existing foundation. This evaluation was a Level B evaluation as described in the "Guidelines for the Evaluation and Repair of Residential Foundations" by the Texas Section of the American Society of Civil Engineers (ASCE). For the purpose of this report the house faces south.

Introduction:

The house is a two-story wood framed structure built in 2018. The foundation system of the house is a concrete slab on grade. All the information gathered was from the visual evaluation and no destructive or invasive testing was performed.

Observations:

The interior and exterior of the house showed typical signs of distress for a house that has incurred differential foundation movement.

The interior distress included:

- Cracks in the walls
- Crack in the garage ceiling drywall

The exterior distress included:

- Separation of the stone and the mortar
- Cracks in the brick veneer
- Separation of the brick and the mortar
- Cracks in the stucco

- Separation of the brick veneer from the window frame and door frame at the rear patio
- Separation of the frieze board from the brick veneer at the rear patio
- Cracks in the rear patio slab

Note, the exposed areas of the foundation were covered with a parge which limited our ability to visually evaluate the foundation.

Interior Elevation Survey:

An interior floor elevation survey was performed on the living area of the house, with the elevations recorded to the nearest 10th of an inch (0.1"). Adjustments were made to account for the thickness of the floor coverings. A benchmark elevation of 0.0 inches was established near the south wall at the entry as shown in Figure 1 of this report.

Foundation History:

The existing house has no known existing repairs that can be seen, and GreenWorks Engineering and Consulting have not received any existing foundation report. It is our belief that the current foundation evaluation is the only evaluation on record.

Conclusions:

Based on our observations of the interior and exterior cosmetic distress, the floor elevations and calculations, it is our opinion that the house has undergone a permissible amount of movement. The maximum differential deflection is 0.4 inches and occurred over an approximate distance of 11.3 feet. This amount of deflection is within the standard allowable deflection of 0.4 inches for a distance of 11.3 feet. The standard allowable differential deflection is based on 1.0 inch of vertical movement, up or down, over a horizontal distance of 30 feet; expressed as Length (in inches)/ 360.

Furthermore, it is our opinion that the foundation is performing as designed and remedial measures are not required at this time. However, there are a few foundation maintenance recommendations that could be beneficial to the future performance of the foundation.

Recommendations:

1) The interior cracks can be repaired, and the exterior separations can be sealed. Exterior separations around doors and windows should be caulked with an elastic silicone caulk and stone and brick veneer cracks can be filled with mortar.

2) Have the doors that remain poorly functioning adjusted or rehung.

3) It is recommended to review the performance of the foundation every 6 to 12 months. Retain this report as an elevation baseline for the foundation. Compare all future foundation evaluations to this baseline.

Foundation Maintenance Recommendations:

1) To better control the rainwater, add downspout extensions to all the downspouts that do not currently have them. The extensions should discharge the water a minimum of 5 feet from the foundation or into a drainage system.

2) Establish a watering program for the foundation soil to keep the soil moisture content constant during the dry months. The lawn should be kept healthy. This will help by reducing evaporation. Water the lawn and other vegetation consistently and evenly. If the soil is cracking at the surface this is a sign that the soil is drying out.

Limitations:

The opinions and recommendations contained in this report are based on the visual observation of the then current conditions of the house and the knowledge and experience of the engineer. The evaluation was limited to visual observations and areas not visible, accessible or hidden behind furniture and appliances were not included in the evaluation. There has been no structural inspection of the existing framing of the house and no verification of the framing has been done. The evaluation did not include any soil sampling or testing.

The evaluation did not include any assessment of the existing framing, plumbing or soil and no implication is made on the compliance or non-compliance of the house with old or current building codes. The evaluation does not constitute a design of the foundation. No verification was made of the existing concrete strength, thickness, reinforcement nor capacity to support any load.

Foundation movement is a prevalent phenomenon in the Dallas/Fort Worth metroplex area. Future foundation movement is likely to varying degrees due to the shrink/swell characteristics of the soil. The foundation is prone to movement due to the moisture variation in the existing soil and total prevention of future movement is unlikely.

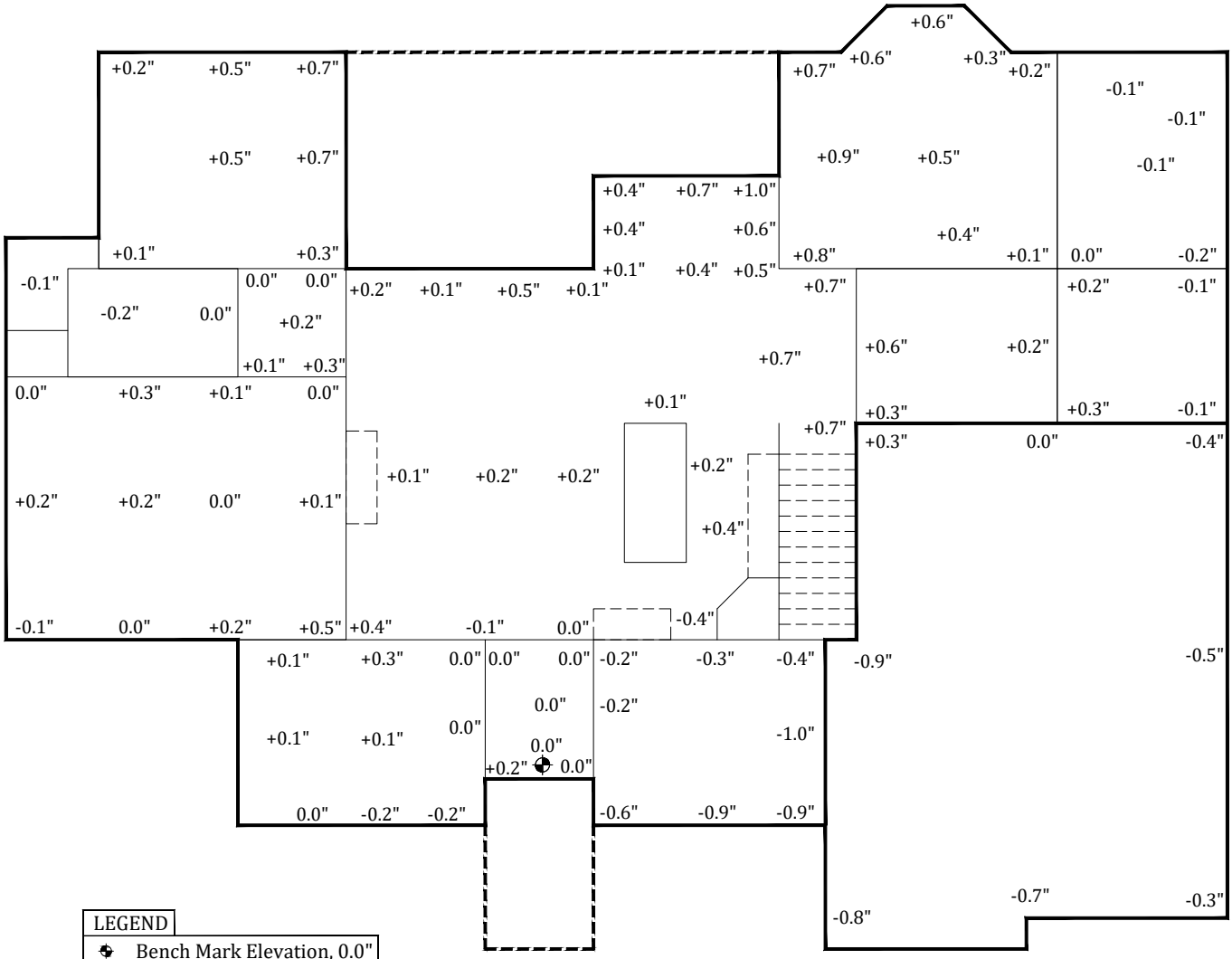
No guarantee or warranty as to the future performance or need for repair of the foundation is intended or implied. Limits of liability for any claims with respect to this report is limited to the fees paid for services and anyone relying on the content of this report agrees to indemnify GreenWorks Service Company for all costs exceeding this fee.

Prepared by,

Wayne Leake III

H. Wayne Leake III, P.E.
Professional Engineer

GREENWORKS
ENGINEERING AND CONSULTING
GreenWorks Service Company
Texas Registered Engineering Firm 20170



LEGEND

⊕	Bench Mark Elevation, 0.0"
0.0"	Top of Floor Elevation

FIGURE 1

NOT TO SCALE

GREENWORKS® ENGINEERING & CONSULTING
Texas Eng. Firm : 20170
600 N. Pearl Street
Suite S1900
Dallas, Texas 75201
(855) 349-6757

ELEVATION SURVEY

[redacted]

Project No:	18451
Figure No:	1 of 1
Date:	04/09/2020
Revision Date:	---