GREENWORKS
ENGINEERING AND CONSULTING

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

Project No. 18774

April 28, 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 17, 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 2013. The foundation system of the house is a pier and beam with a concrete perimeter wall. 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 minor signs of distress. The house appeared to be in relatively good condition.

The interior distress included:

- Cracks in the walls and ceiling drywall
- Slight separation of the crown molding from the drywall
- Slight separation of the crown molding in the corners
- Separation of the wood molding around the family room windows
- Separation of the wood trim at the end of the fireplace
- Slight separation of the door trim at the upper corners
- Slight separation of the grout and tile in the bathroom

The exterior distress included:

- Separation of the brick and the mortar above garage door
- Small areas void of mortar
- Slight separation of the lap siding joints
- Slight separation of the lap siding from trim boards
- Cracks in the concrete garage apron
- Cracks in the concrete driveway at the garage apron

The areas of concern as viewed from the crawlspace included:

- Plywood shims
- Horizontal cracks in the LVL floor beam

Interior Elevation Survey:

An interior floor elevation survey was performed on the living area of the house, with the elevations recorded to the nearest 10^{th} 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 northeast corner of the kitchen 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 appears to be in relatively good condition. The maximum differential deflection is 0.5 inches and occurred over an adjusted distance of 25.3 feet. This amount of deflection exceeds the standard allowable deflection of 0.8 inches for a distance of 25.3 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 foundation is within the standard allowable deflection and remedial measures are not required. Note, the floor beam, in the crawlspace, with the horizontal cracks appears to be structurally capable of supporting the anticipated loads and a repair is not required.

Recommendations:

1) It is recommended that all wood shims replaced with metal shims due to the wood shims being susceptible to expansion from humidity and can be damaged over the years.

2) Interior cracks and separations can be repaired, and exterior separations can be sealed with an elastic silicone caulk. The areas that were void of mortar do not require a repair due to the small size of the voided areas.

3) It is recommended, as a proactive maintenance program, 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) Establish a watering program for the foundation soil to keep the soil moisture content constant during the dry months and throughout the year. The lawn should be kept healthy, but not lush. 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.

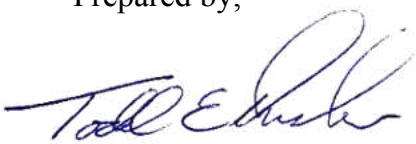
The evaluation did not include any assessment of the existing framing, plumbing or soil and no implication is made on the compliance or non-compliance of the house with old or current building codes. The evaluation does not constitute a design of the foundation. No verification was made of the existing 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

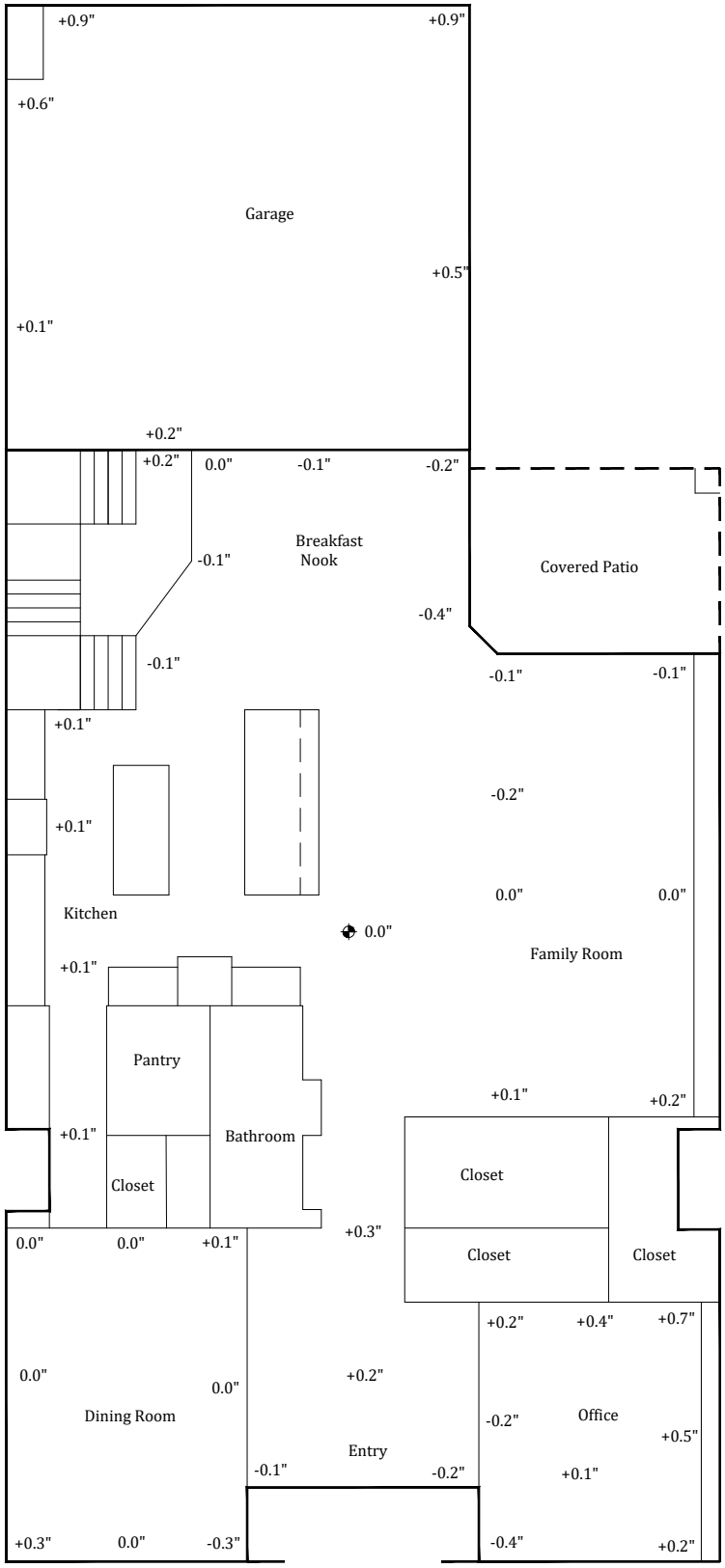
the fees paid for services and anyone relying on the content of this report agrees to indemnify GreenWorks Service Company for all costs exceeding this fee.

Prepared by,



Todd E. Alexander, P.E.
Vice President of Engineering

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

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ELEVATION SURVEY

[redacted]

Project No:	18774
Figure No:	1 of 2
Date:	04/28/2020
Revision Date:	---

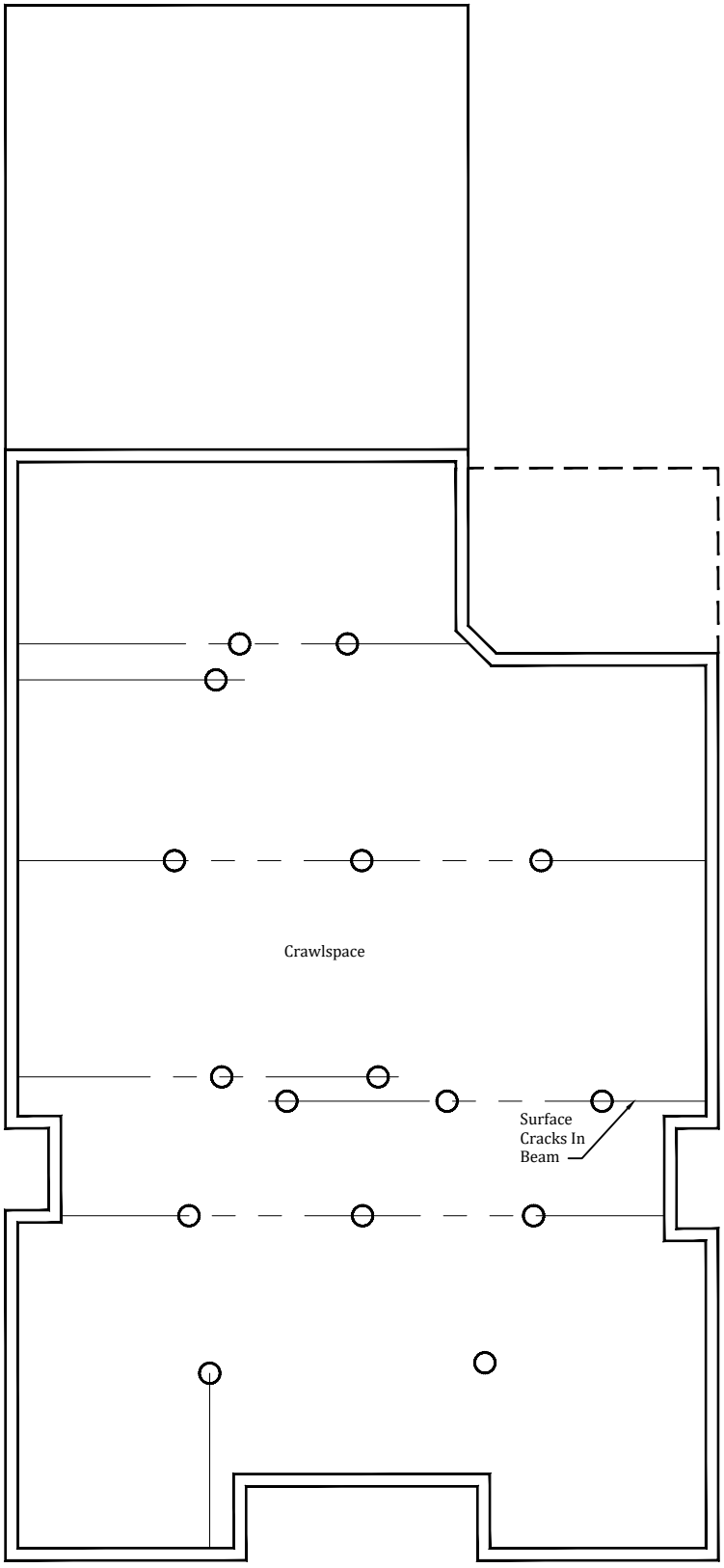

FIGURE 2

NOT TO SCALE

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CRAWLSPACE LAYOUT

[redacted]

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Figure No:	2 of 2
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