

Cody Johnston, PE
Stonewall Structural Engineering, PLLC
4800 Falls of Neuse Rd. #120
Raleigh, NC 27609
(919)407-8663



Jeff Trost
7967 Danish Ridge Way
Salt Lake City, Utah 84121

Re: Structural Observation — 306 Burgwin Wright Way, Cary, NC 27519

Mr. Trost,

At your request, on July 15, 2022 we performed a visual structural observation of foundation cracks at the Cary residence noted above. The structure is a conventionally framed, detached, single family residence with raised first floor framing over a pier/girder foundation system with perimeter masonry foundation walls (*see picture 1*).

Our observations are listed below. Indicators such as "left," "right," "front," and "back" are referenced as viewing the front of the home.

FOUNDATION CRACKS

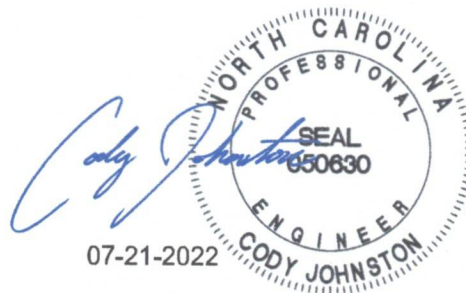
- A foundation crack was noted at the front-right of the garage (*see picture 2*).
 - Measurement by laser level indicated back right of the garage was down by as much as approximately $\frac{5}{8}$ " relative to the front right.
 - No significant signs of significant distress were noted in the garage.
- A foundation crack was noted at the back-right of the garage (*see picture 3*).
 - The crack measured approximately $\frac{1}{8}$ " wide. Additionally, measurement by laser plumb indicated the foundation wall was not leaning outward.
 - The garage slab was noted to have settled into the supporting fill material (*see picture 4 for example*).
 - The crack in the wall was reported to have been as wide as approximately $\frac{1}{8}$ " in a report written by Woodard Sease & Associates, P.C. dated 4/24/2022.
- A foundation crack was noted at the back right of the home where the garage foundation wall intersects the home (*see picture 5*).
 - Measurement by laser level indicated the foundation wall level within $\frac{1}{8}$ " in this area.
 - No signs of structural distress were noted in the home above this area.
- A foundation crack was noted behind the back leftmost pier (*see picture 6*).
 - No signs of significant structural distress were noted in the finishes of the home above this area.

Upon completion of our analysis, we have concluded the following:

- Upon completion of our analysis, we believe the crack on the back garage foundation wall was caused by minor movement of the back wall and back-right corner toward the back of the property most likely due to a combination of inadequate management of rainwater runoff around the perimeter of the structure, and cyclical loading by vehicle loads in the garage area.
 - Due to the minor evidence of distress within the finishes of the home and due to the lack of continued structural movement since the time of the previous engineer's report, we do not believe these cracks represent a matter of significant structural concern at this time.
 - Any cracks in exterior masonry should be closed with a clear or color-matching flexible sealant and should be monitored for signs of further movement.

The above-listed determinations were made in accordance with common engineering principles and the intent of the 2018 edition of the *North Carolina Residential Building Code*. Sequencing, and means and methods of construction are considered to be beyond the scope of this report. Contractor is to provide adequate temporary shoring prior to cutting or removing any structural load-bearing elements. All work is to conform to applicable provisions of current building standards. Please feel free to contact us, should you have any questions or concerns regarding this matter.

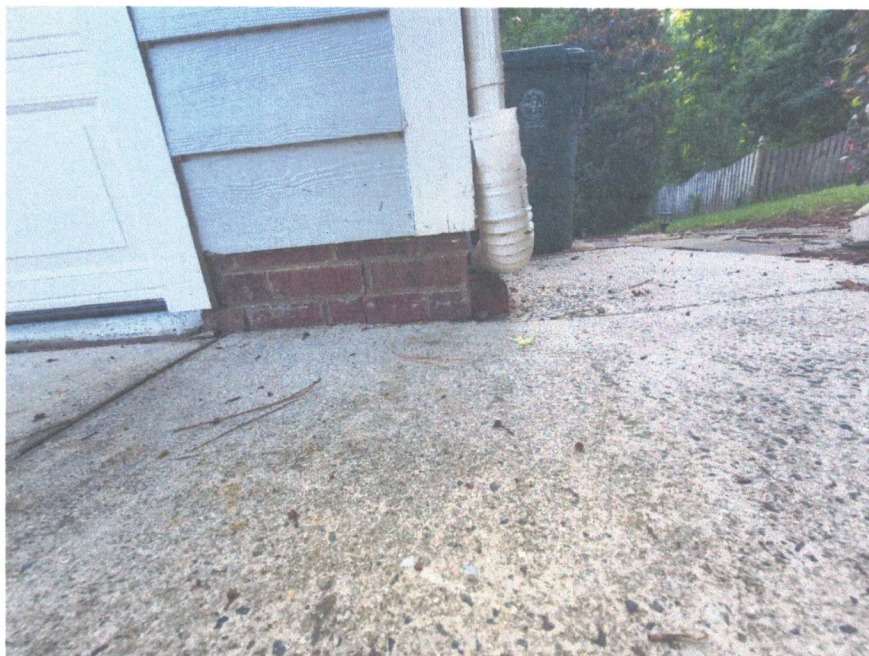
Sincerely,
Cody Johnston, PE
Stonewall Structural Engineering, PLLC
Lic. #P-0951



PICTURE ADDENDUM



Picture 1 – 306 Burgwin Wright Way, Cary, NC



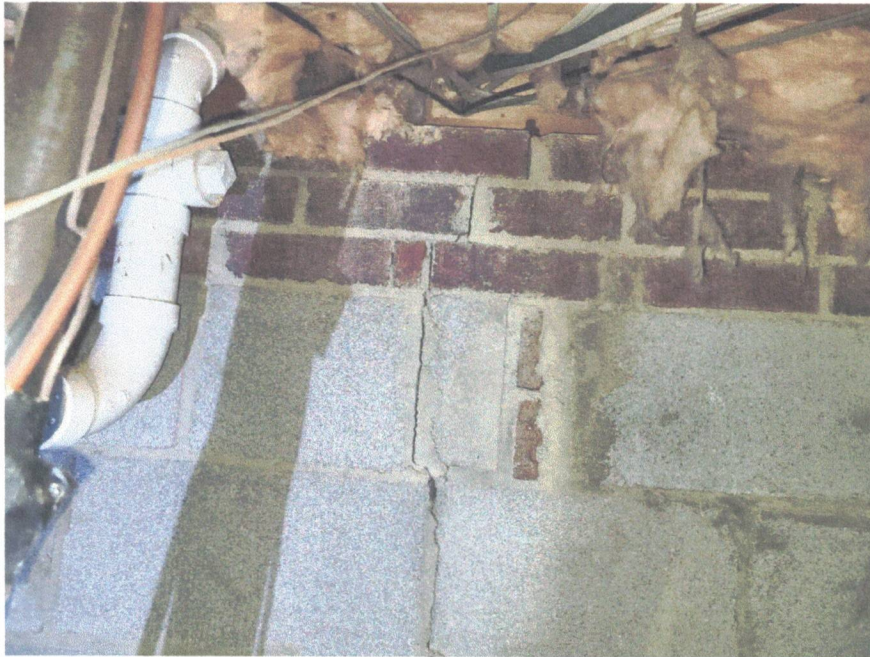
Picture 2 – Foundation crack



Picture 3 – Foundation crack



Picture 4 – Slab settled into fill material



Picture 5 – Foundation crack



Picture 6 – Foundation crack