

Stonewall Structural Engineering, PLLC
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Adam Dickens
202 Briardale Ave.
Cary, NC 27519

Re: Structural Observation — 202 Briardale Avenue, Cary, NC 27519

Mr. Dickens,

At your request, on June 15, 2026 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 partial walk-out basement and partial 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 crack in the foundation was noted on the right side of the crawlspace as well as at the front-right of the crawlspace (*see pictures 2-4*).
 - Measurement by laser level indicated the foundation wall along the right side of the crawlspace as well as the right portion of the front foundation wall was level within $\frac{1}{2}$ ".
 - The crack on the right foundation wall was reported to have been circled during a past inspection. The crack does not appear to have significantly changed based on the circle drawn on the foundation wall.
- Cracks were noted in the back wall of the retaining wall located at the back of the driveway (*see pictures 5-6*).
 - Measurement by laser plumb indicated the retaining wall was bowing by as much as approximately $\frac{1}{2}$ " over the height of the wall.

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

- The above-noted foundation cracks have been the result of a combination of minor differential settlement of the perimeter foundation and potential consolidation of the soils being retained by the wall at the back of the driveway.
 - Soils in this area tend to expand when wetted and contract when dried. These minor cyclical movements can cause short term cosmetic damage and long term structural damage at areas around the structure with poor exterior drainage which can cause differential settlement to occur as parts of the structure settle at faster rates than at other locations.

- *At this time, due to the limited signs of distress and age of the structure, we do not consider the retaining wall or foundation of the home to be in need of structural repair or reinforcement.*

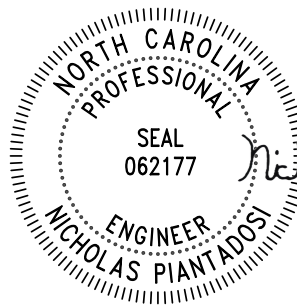
We recommend the following work be performed by a qualified general contractor:

- 1) All cracks in the retaining wall and home foundation walls should be closed with a clear or color-matching flexible sealant and monitored for signs of additional movement. If settlement continues to significantly worsen despite adequate maintenance of site drainage, the affected portions of the structure may require structural reinforcement which may be designed upon request.

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*. Please feel free to contact us should you have any questions or concerns regarding this matter.

Sincerely,

Nicholas Piantadosi, PE
Project Engineer
Stonewall Structural Engineering, PLLC
Firm License No. P-0951



Nicholas Piantadosi 06/23/26

PICTURE ADDENDUM



Picture 1 – 202 Briardale Avenue, Cary, NC 27519



Picture 2 – Foundation crack reported to have previously been circled



Picture 3 – Approximately 1/16" wide (foundation crack same as shown in picture 2)



Picture 4 – Foundation crack



Picture 5 – Retaining wall crack



Picture 6 – Retaining wall crack