

## LIMITED STRUCTURAL INSPECTION

49 James Allen Lane  
Dunn, NC

August 22, 2025

OWNER

Garrett Lamontagne

### SCOPE AND BACKGROUND

At your request, a limited structural inspection of the above property was performed on August 20, 2025. The report that follows has been prepared based on that inspection. The inspection was performed by Sean Casady, PE of Built Up Engineers, PLLC.

No tests, measurements, or calculations have been made except as described in this report. We have not investigated for toxic materials or wastes, or examined public records regarding this property. The scope of the inspection does not assure that the property conforms to any regulations, restrictions, or building codes that may be in effect at its location.

The scope of this project was limited to the inspection and evaluation of the covered porch on the rear of the home, which had recently been constructed without a building permit, per our understanding. The report is intended to cover only those premises that may be examined visually without excavation, removing surface materials, and disassembling components.

### DESCRIPTION

The two-story, wood-framed home is constructed on a masonry foundation. The home was built in 2023 according to Durham County Real Estate Tax Records. For purposes of this report, all directions (left, right, rear, etc.) are taken from the viewpoint of an observer standing in front of the home and facing it.

Upon our arrival, access to the interior was provided. The items pertaining to the above-mentioned scope were subsequently inspected.

Note that the original builder was not interviewed, and no plans for the construction of this home were provided. The information presented in this report is gathered from the conditions visible at the site as they existed at the time of the inspection. A photo log is enclosed with this report.

Should there be any questions or concerns regarding this report, contact us at [sean@builtupengineers.com](mailto:sean@builtupengineers.com) or 919-817-9915. Our mailing address is 7283 Veterans Parkway STE 102-148, Raleigh, NC, 27603. Our website is [Builtupengineers.com](http://Builtupengineers.com)

## **OBSERVATIONS**

1. The subject covered porch is approximately 12 feet deep by 22 feet wide. The porch includes a shed roof, which is constructed off the rear of the home.
2. The roof framing is comprised of 2 x 8 rafters, spanning approximately 12 feet and supported by a 2x ledger board, which is screwed to the rear wall of the home. The screw spacing appeared to be somewhat inconsistent. But generally appeared to be targeted at 24 inches on center staggered.
3. The covered porch was supported by four 6 x 6 posts on the rear supporting a 2- 2 x 10 band. The posts were shoulder cut around the band and connected with two structural screws. The posts were connected to the concrete slab at the base with post bases.
4. A 2-2 x 10 band was supported on the sides by 6 x 6 posts installed against the house.
5. A thickened concrete footing appeared to be present below the right rear corner post via probing. Per probing, the footing appeared to be approximately 12 inches deep and approximately 16 inches wide in each direction.
6. A footing did not appear to be present below the remaining posts on the rear of the porch.

## **DISCUSSION**

Overall, it appears that the framing structure of the new cupboard porch is generally adequate with a few exceptions, which are noted below.

With the below repairs completed, the subject porch would be considered structurally adequate to support the loads prescribed by the 2018 NC Building Code, residential code.

No areas of the structure were reviewed other than those explicitly described in this report. The review used a standard of care consistent with other local design professionals limited by the scope and budget. This report was at a flat rate and has a liability limitation of 10 times the fees collected. It represents the best judgment of the staff of Built Up Engineers, PLLC given the information available at the time of writing. No review of organic growth, mildew, or any other building science issue was performed except as noted. All opinions are subject to revision based on new or additional information. No responsibility will be taken for conditions that could not be easily seen or are outside the scope of this review. Any use that a third party makes of this report, or any reliance upon, decisions made in response to, or in any way influenced by this report are the responsibility of such third party. Recommendations are provided to address structural-related issues, and may not rectify cosmetic issues.

## **RECOMMENDATIONS**

*If there are any questions or concerns about the specified recommendations, contact the engineer prior to construction.*

1. We recommend undermining the slab below the three posts without footings and installing 16 x 16 x 8" thick concrete footings. The new concrete shall be packed and tied to the underside of the slab.
2. We recommend installing additional structural screws (Simpson SDWS 4" or similar) to connect the ledger board supporting the roof against the wall of the house. Additional screws shall be installed to achieve a minimum of two screws at 24 inches on center.
3. We recommend installing Simpson L 50 clip angles to connect the rafters to the ledger board at the rear wall.



4. We recommend installing a new 2 x 6 ledger strip below the over-notched rafters. The new ledger strip shall be bevel cut to provide continuous bearing to the underside of the rafters and be connected to the existing 2 x 10 band with two rows of #8 screws at 16 inches on center.

**General Notes:**

- The contractor should verify all dimensions prior to ordering materials.
- If the contractor has any questions or concerns regarding the method of construction or if conditions vary from what is described below, the engineer should be consulted.
- Likewise, if any changes to sizes or modifications to the structure are desired other than what is explicitly described below, the engineer should be consulted.
- All construction and workmanship shall adhere to the 2018 NC Building Code, Residential Code.
- All new lumber should be SPF or SYP No.2 or equivalent. All lumber exposed to concrete/masonry or weather must be pressure-treated.
- Contractor to confirm minimum soil-bearing capacity of 2000 psf. All footings shall be installed a minimum of 12" below grade and in no case less than the frost depth.
- All new concrete is to have a minimum 28-day strength of 3000 psi.
- All new metal hangers/ties/clips are to be installed per manufacturer specifications.
- All fasteners/connections are to be installed per table R602.3 of the 2018 NC Building Code, Residential Code.
- With any structural changes, finish material cracks and minor movements are typical and expected. These are associated with settlement generally observed after the construction of an addition or significant remodel.

**CONCLUSION**

We trust that this report provides the information you require. Please contact us at 919-817-9915 if you have any questions. Thank you for the opportunity to be of assistance to you.

Sincerely,



Sean Casady, PE  
Project Engineer  
Built Up Engineers PLLC  
NC Lic. No. P-2664

Enclosed: sketch, photo log



ADDRESS

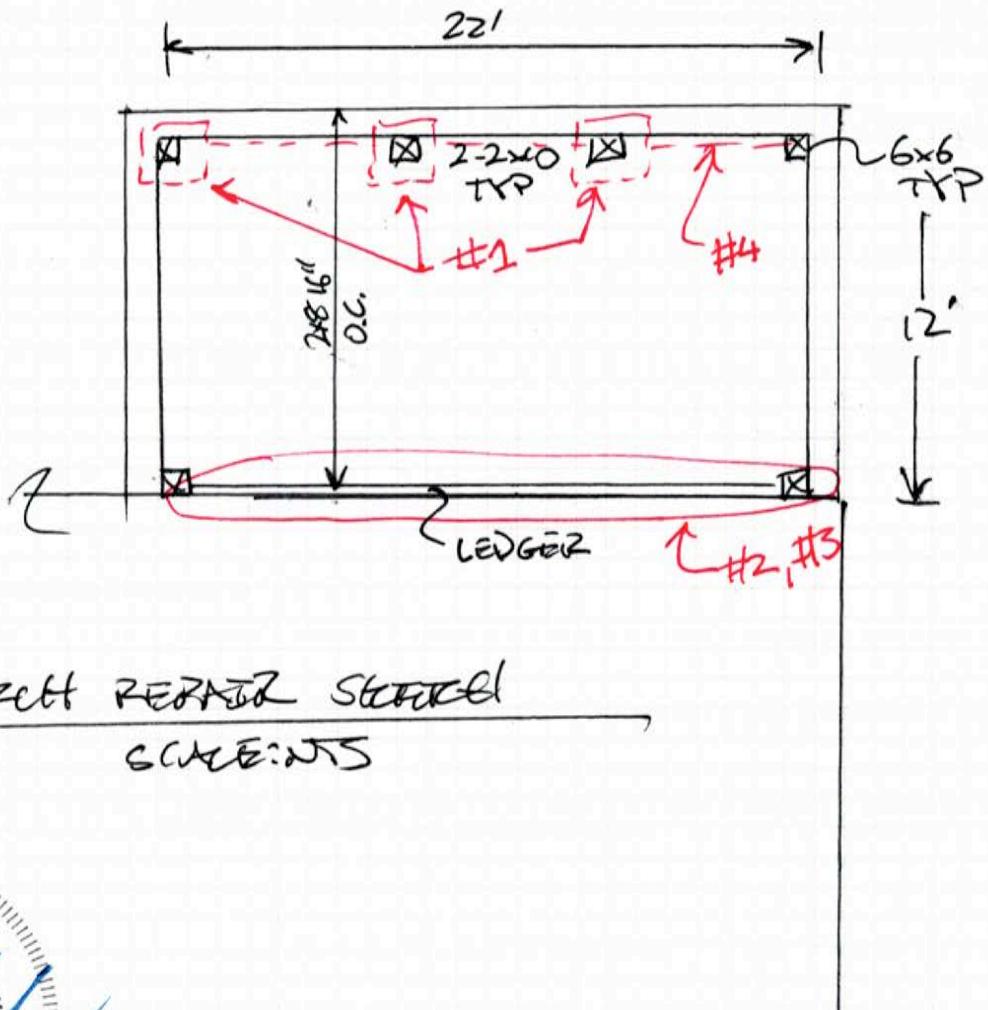
7283 NC Hwy 42,  
Ste 102-148  
Raleigh, NC 27603

49 JAMES ALEX  
DUNN, JC

PROJECT

08/21/25

DATE



**Description**

View of the home.



**Photo No.**

1

**Description**

View of the porch.

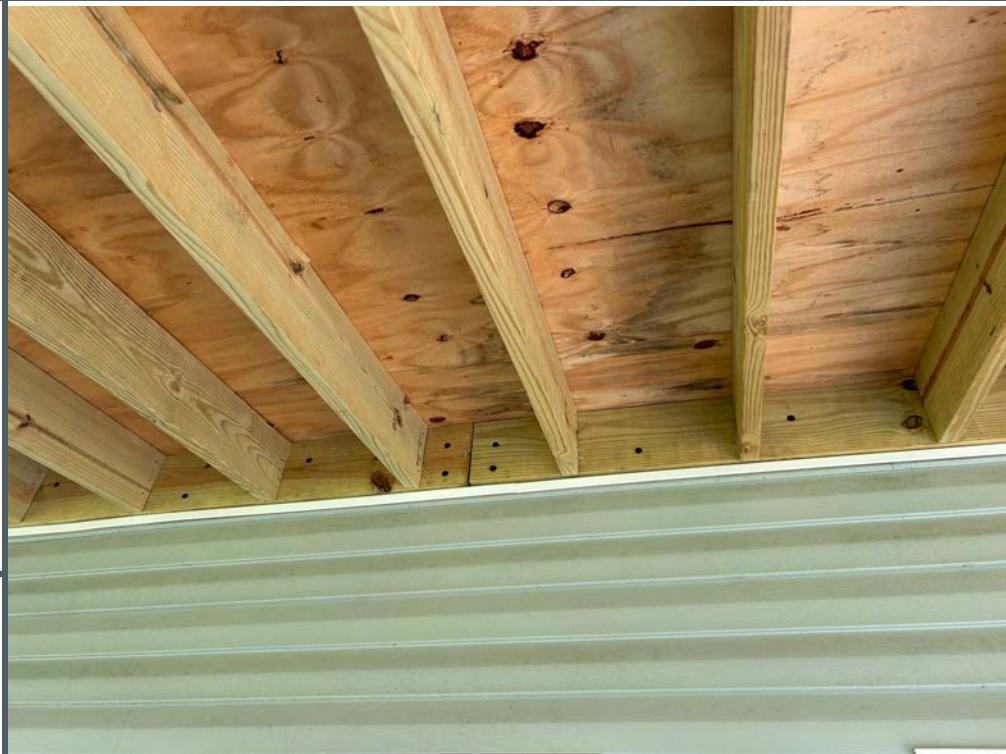


**Photo No.**

2

### Description

View of the rafters and roof sheathing.



**Photo No.**  
**3**

### Description

View of the rafters and roof sheathing.



**Photo No.**  
**4**

### Description

View of the ledger connection at the house.



**Photo No.**  
**5**

### Description

View of the ledger connection at the house.



**Photo No.**  
**6**

## Description

View of the rafter framing.



**Photo No.**

**7**