

## LIMITED STRUCTURAL INSPECTION

671 Prospect Church Rd  
Dunn, NC

September 8, 2025

Scott Rhodes

### SCOPE AND BACKGROUND

At your request, a limited structural inspection of the above property was performed on September 4, 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. Note that prepared structural plans for renovations to the home dated September 20, 2024.

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 a new LVL beam installed on the left side of the home above the bedrooms. The report is intended to cover only those premises that may be examined visually without excavation, removing surface materials, and disassembling components.

Note that we developed structural plans for renovations to the subject home.

### DESCRIPTION

The one-story, wood-framed home is constructed on a masonry foundation. The home was built in 1980 according to Harnett 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 / RECOMMENDATIONS

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

1. A new 3-1.75" x 9.25" LVL beam had been installed above the bedroom area on the left side of the home, and was supporting the ceiling framing.
2. The beam was supported at the left perimeter wall by 4-2 x 4 jack studs. The beam was supported approximately 17'-8" to the right by 5-2 x 4 jack studs, which were supported on a 2- 2 x 10 steel flitch beam with a half-inch steel plate. The beam extended an additional 5'-6" to the right and was supported by an additional two jack studs. Note that the beam only had bearing on the wall plate over approximately half of its cross-section at this bearing point.
3. The plies on the beam were connected via three rows of nails spaced approximately 12 to 16 inches on center. The ceiling joists were connected to the beam via joist hangers.
4. The steel flitch plate beam installed in the basement had a span of approximately 16 feet and then a span of approximately 11 feet between the supporting 3-inch steel pipe columns.

## DISCUSSION

Per our calculations, the 3-1.75 x 9.25" LVL is sufficiently supported by the steel flitch plate beam below and supporting steel columns. The partial bearing area at the second load point is also sufficient. The following repairs are required for the beam assembly.

- Connect the plies of the beam together with (2) 5-inch Simpson SDWS screws or equivalent, spaced 16 inches on center.
- Install 30-inch-long Simpson CS 16 straps or equivalent spaced 48 inches on center and connect the ceiling joists on either side of the beam.

**With the above repairs completed, the LVL beam and associated low path are structurally adequate to support the imposed structural loads.**

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.



### 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.
- All new LVL members are to be E2.0, Fb=3100 PSI (or equivalent), and plies are to be attached per manufacturer specifications. LVL members exposed to weather should be wrapped per the manufacturer's specifications.
- 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, photo log



### Description

View of the home.

Photo No.  
1



### Description

Typical interior view.

Photo No.  
2



### Description

View of the new LVL beam.

Photo No.  
3



### Description

View of the beam bearing.

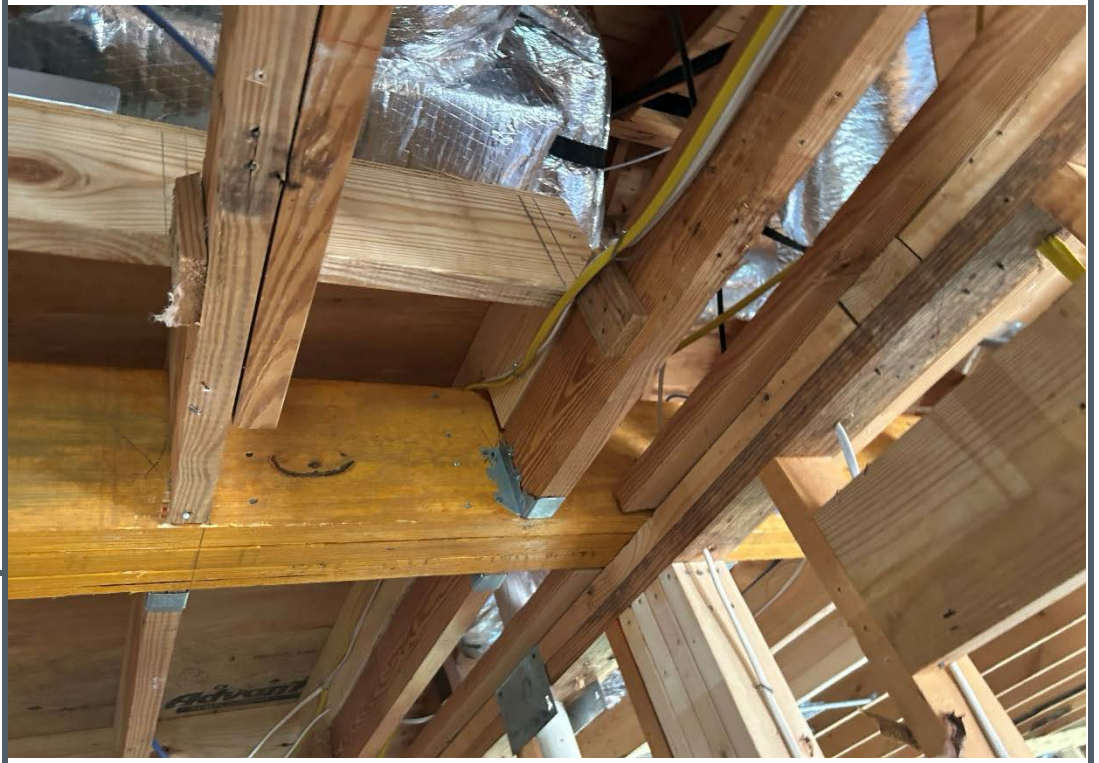
Photo No.  
4



### Description

View of the beam bearing.

Photo No.  
5



### Description

View of the beam and partial bearing at the wall adjacent to the shower.

Photo No.  
6



### Description

Additional views of the beam.

Photo No.  
7



### Description

Additional views of the beam.

Photo No.  
8



### Description

View of partial bearing  
of the beam at the  
wall.

Photo No.  
9

