



Wise Engineering
3915 Old Fairground Rd.
Angier, NC 27501
(919)894-2203

February 24, 2025

Brian Anderson

Subject: 1161 Stewart Rd, Dunn, NC 28334

Mr. Anderson,

A representative from Wise Engineering reviewed the home being renovated at the above address. Specifically, we reviewed the room at the left end of the home to provide a ridge beam design.

Based on my observations and analysis, a cathedral ceiling in this room will require a new ridge beam which can be installed under the existing ridge/rafter connection. The ridge beam spans approximately 23 ft and can be supported on the left wall (at the carport) and on a new beam installed at the wall on the right side of the room, near the center of the home. The beam should be either a (2)1.75"x16" LVL or a (3)1.75"x14" LVL beam. The beam should be supported by 3 studs in the wall on the garage side and 3 studs in the wall on the right side of the room. Since the right side of the ridge is in the center of the hallway, a beam spanning from the back hall wall to the front house wall consisting of a (2)1.75"x9.25" LVL should be added to provide support for the ridge. This 9.25" LVL should be supported on the hall end by a triple stud column and a double stud column over the wall at the front of the house.

In summary, the above ridge beam design and supports are designed in accordance with the 2018 NC Residential Building Code requirements.

If you need additional information or have other questions, please let me know.

Sincerely,

Randy K. Wise, PE

