

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



Jose Garcia
70 E. Governor Brandon St.
Spring Lake, NC 28390

Re: Structural Observation — 511 Stage Road, Spring Lake, NC 28390

Mr. Garcia,

At your request, on July 20, 2023 we performed a visual structural observation of fire damaged roof trusses at the 511 Stage Road residence noted above. The structure is a double wide manufactured home with interior masonry piers (*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.

FIRE DAMAGED ROOF TRUSSES

- In the back truss bay, the leftmost (5) roof trusses were damaged beyond the salvageable limits (*see pictures 2-4 for examples*).

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

- Remove and replaced the (5) rightmost roof trusses with new 2x8 rafters and 2x6 ceiling joists. New rafters and ceiling joists should be #2 Southern Yellow Pine material.
 - The ceiling joist should bear on the outside wall and marriage line of the home.
 - Fasten rafters to the wall top plate using Simpson H2.5A Hurricane Tie installed per manufacturer’s specifications.
 - Securely fasten rafters to ceiling joists at the exterior wall of the home.
 - Install a tight-fit 2x4 stub between the rafter and ceiling joist at the marriage line. Securely fasten the rafter and ceiling joist to the stub.
 - If the stub is installed to the side of the rafter/joist, the stub should be face nailed to the rafter/joist using (4) 10d common nails per connection.

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,
W. Harrison Welch, PE
Stonewall Structural Engineering, PLLC
Lic. #P-0951



07-31-2023

PICTURE ADDENDUM



Picture 1 – 511 Stage Road, Spring Lake, NC 28390



Picture 2 – Example of fire damaged roof truss



Picture 3 – Example of fire damaged roof truss



Picture 4 – Example of fire damaged roof truss