



# Takla Engineering, PLLC

NC Firm License # P-1952

Consulting | Design | Efficiency

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**Project:** Prince Place Lot 21  
**Location:** Fuquay Varina, NC  
**Company:** David Homes  
**Care Of:** Lee Aversano  
**Subject:** Roof Truss Repairs  
**Job Number:** 2-2670-22



As requested, Andy Takla, PE visited the above referenced site on June 6th, 2022 to review the damage and provide repair / modification recommendations to the following roof trusses:

1) One (1) B3 roof truss which aligns directly over the 2nd story chase which will house the fireplace duct will need to be cut (to accommodate the duct). Moving forward we recommend installing 6' long 2x4 scabs to both sides of the bottom chord both forward and rear of where the duct will run (+ minimum 2" gap). Continue to pack out these 6' long 2x4s, attaching with (2) 10d nails at 3" on center until duct is cleared. Then, install a ~13' long 2x4 scab to both sides of the truss and packing, centered on the duct and attach similarly.

2) The three (3) left most roof trusses near the left wall features damaged vertical webs serving as the forward wall of the 2nd story. See picture below for reference. Moving forward we recommend the following:

- A) cut damaged portions of broken webs away as to provide a clean, flush end.
- B) Fill in the missing portions of the web with field framed 2x4 material.
- c) Install a 4'x4'x1/2" OSB gusset plate to both sides of the top and bottom chord joints, notching away only the material required to not intrude into finished areas. Attach with (2) 10 x 1.5" nails spaced at 3" on center to all adjoining truss and field framed members.
- D) Install a full length 2x4 scab extending from top of top chord to bottom of bottom chord to both faces of the truss (+ gusset plates). Attach with (2) 10d nails at 3" on center.



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