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**Date:** October 30, 2025

**To:** Tyler Appel  
Drees Homes  
8521 Six Forks Road, Suite 500  
Raleigh, NC 27615

**Re:** 25-FRM-237  
Roof Truss Repairs  
Lot 140 Tobacco Road  
256 Crop Rd.  
Angier, NC 27501  
Permit No.: SFD2509-0054

Mr. Appel:

At your request, a site visit was made to the above referenced single family residence to inspect the repairs of several damaged roof trusses above the primary bathroom.

**Observations:**

1. Prior to our inspection, the 1st "C02" roof truss from the right had a +/-2'-0" section of the "6-9" web member cut out and replaced with a new 2x4. Full-length 2x4 scabs were installed on both sides of the web member. The scab on the left side of the web was fastened with (2) rows of nails spaced +/-8" o.c. It appears the scab on the right side of the web was improperly nailed due to a lack of working space.
2. Prior to our inspection, the "6-9" web member of the 2nd "C02" roof truss from the right was replaced with a new 2x4. A full-length 2x4 scab was installed on the left side of the new web member and fastened with (2) rows of nails spaced +/-8" o.c.. A +/-24" wide by 16" tall by 3/4" thick OSB gusset was installed on the right side of joint "6", centered on the joint, and was fastened to the truss with minimal nailing. Additionally, the gusset plates on both sides of joint "9" were delaminated.
3. Prior to our inspection, the 3rd "C02" roof truss from the right had a +/-3'-0" section of the "6-9" web member cut out and replaced with a new 2x4. Full-length 2x4 scabs were installed on both sides of the web member and fastened with (2) rows of nails spaced +/-8" o.c.
4. Prior to our inspection, the 4th "C02" roof truss from the right had a +/-1'-0" section of the "6-9" web member cut out and replaced with a new 2x4. Full-length 2x4 scabs were installed on both sides of the web member and fastened with (2) rows of nails spaced +/-8" o.c. However, minimal nailing was observed on both scabs above the replaced section of the web member.
5. The 5th "C02" roof truss from the right was observed to have a 2'-0" long split in the "6-9" web member, +/-4'-0" from the top of the truss. Prior to our inspection, 2x4 scabs were installed on both sides of the damaged web member, extending from the top of the truss down +/-9'-0". The scabs were fastened with (2) rows of nails spaced +/-8" o.c.

**Analysis and Recommendations:**

1. Analysis revealed the 2x4 scab installed on the left side of the damaged web member is to be nailed above the replaced section of the web with (2) rows of 10d nails spaced 4" o.c. The scab on the right side of the damaged web member does not require additional fasteners.

2. Analysis revealed the OSB gusset installed on the right side of joint "6" is not suitable to support the imposed loads. Remove the existing OSB gusset and install a 23/32" OSB gusset on both sides of joint "6". The OSB gussets are to extend from the center of the joint onto the top chords a minimum 16" each direction and onto each web member a minimum 16". Pack out the truss members on the left side of the truss with 2x4 blocking to allow for flush installation of the OSB gusset. Fasten the OSB gussets to all truss members with (2) rows of 10d nails spaced 4" o.c. Stagger nails from each side to avoid interference. Analysis revealed a 16" wide by 24" tall by 7/16" thick OSB gusset is to be installed on both sides of joint "9". Pack out the truss members on the left side of the truss with 2x4 blocking to allow for flush installation of the OSB gusset. Fasten the OSB gussets to the bottom chord with (3) rows of 10d nails spaced 4" o.c. and to all other truss members with (2) rows of 10d nails spaced 4" o.c. Stagger nails from each side to avoid interference.
3. Analysis revealed the "as-built" reinforcement of the "6-9" web member is adequate and requires no modifications.
4. Analysis revealed the 2x4 scabs are to be nailed above the replaced section of the web with (2) rows of 10d nails spaced 4" o.c. Stagger nails from each side to avoid interference.
5. Analysis revealed the "as-built" reinforcement of the "6-9" web member is adequate and requires no modifications.

The damaged roof trusses reinforced in the above noted manners will provide the required support for all imposed loads.

Please contact us if you have any questions.

Respectfully submitted,  
Hayes Structural Consulting & Design, PLLC



Digitally signed by

Zachary H. Hayes,  
PE

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