

## MEMORANDUM

Date: November 4, 2013  
To: Virginia Fox  
From: Matthew J. Miller, P.E.  
Re: Porch Rafter Review

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We understand that the roof over the addition to your house was constructed with 2x8 rafters spaced at 16" on center with a clear span of 13'-6", which exceeds the allowable span of 12'-4" for Spruce-Pine-Fir No. 2 rafters in accordance with the International Residential Code.

In order to support the code required snow loads based on a ground snow load, Pg, of 50 pounds per square foot and the potential drifting snow from the adjacent roof we recommend sistering an additional full length 2x8 to the existing rafters. The new rafters shall be fastened to the existing rafter with (2) rows of 10d nails at 16" oc.

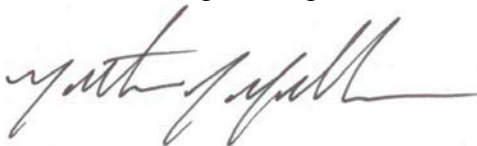
In addition to the addition of new roof rafters, we recommend that the connection of the ledger board to the wall studs be reviewed to ensure that it is adequate. At a minimum, three (3) 3-5/8" long Fastenmaster LedgerLok or Timberlok Screws should be installed at ea. stud location.

With the additional 2x8 installed the allowable load capacity of the rafters will exceed the required design loads.

If you have any questions regarding this memo, please do not hesitate to contact me.

Regards,

M<sup>2</sup> Structural Engineering, P.C.



Matthew J. Miller, P.E.  
President.

