

Monday, April 25, 2022

Mrs. Jennifer Kralovich  
106 Cokesbury Park Lane  
Fuquay Varina, NC

Professional Engineer Inspection and Recommendations  
22.039 – 106 Cokesbury Park Lane Fuquay Varina NC


To Whom It May Concern:

Mark G. Johnson, PE with JSM Engineering PLLC performed a third-party engineering inspection of the following and to provide engineering guidance in compliance with the 2018 NC Residential Building Code:

1. The owner has requested to remove the wall between the kitchen and the dining room and wants to know the load bearing status. The wall itself is a non-load bearing wall, as it is not carrying any floor or roof load from above but it is carrying the load of the wood 2 x 4 wall framing and gypsum board since the kitchen area has a flat ceiling and the living room area has a sloped ceiling. To remove the lower section of the wall to open up the space between the kitchen and living area a (2) 1 3/4" x 9 1/4" 2.0E LVL header shall be installed to support the upper attic wall section from the stair wall to the right-side house exterior wall. A (3) 2 x 4 stud column shall be installed under both beam ends.
2. The unfinished attic space was reviewed to determine if the area can be finished as inhabitable space. Based on the inspection, the majority of the floor joists in this area are 2 x 10's at 16" O.C. spanning in multiple sections. The one area in the right-rear of the house behind the framed 2 x 4 wall contains 2 x 8 floor joists at 16" O.C. with two separate spans under 12'-0". In accordance with the 2018 NCRCBC, 2x8's can span 13'-6" under a 30 PSF live load and 10 PSF dead load and 12'-3" under a 40 PSF live load and 10 PSF dead load; and 2x10's can span 17'-2" under 30 PSF live load and 10 PSF dead load and 15'-5" under 40 PSF live load and 10 PSF dead load. The minimum floor sheathing thickness over the joist is 5/8", so the existing floor sheathing in place will need to be removed before finishing the space. The minimum wall height for sloped ceilings is 5'-0", so in all areas of sloped rafters, a 5'-0" knee wall must be constructed.

*The scope of work for the preparation of this professional engineering report was limited to a non-destructive and visual inspection of the locations accessible foundation support and framing systems. JSM Engineering PLLC did not perform any destructive or below grade / subsurface explorations for purposes of exposing concealed or hidden structural conditions. This professional engineering report does not warrant any future performance of the subject residential structure.*

Sincerely,

  
Mark G. Johnson, PE  
JSM Engineering PLLC  
NC PLLC License - P-1567  
NC PE License - 033168



Digitally signed by  
Mark G. Johnson PE  
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