

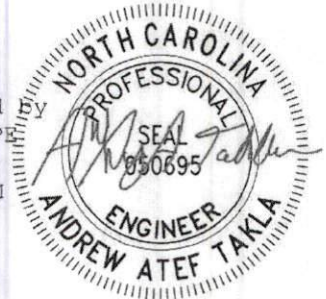
# A. A. Takla Engineering, PLLC

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Consulting | Design | Efficiency  
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**Project:** 57 Inlet View  
**Location:** Sanford, NC  
**Company:** Freys Building and Remodeling  
**Care Of:** Jeff Greer  
**Subject:** Renovation - Structural Modifications  
**Job Number:** 0290-23

Digitally signed by  
Andy A. Takla, PE  
Date: 2023.02.21  
Time: 12:43:02 PM



As requested, Andy Takla, PE visited the above referenced site on February 21st, 2023 to review the several aspects of the 2nd story renovations in order to provide contractor with guidance from a structural standpoint. It should be noted that the vast majority of work is considered non-structural and will require no reinforcements to accommodate. However, we have provided the following which encompasses the structural scope of work:

1) Several windows, interior doors and the master bathroom shower niches will be installed and/or relocated. Based on review, put simply, a (2)2x10 header supported by (2)2x4 jack studs at each will be adequate to accommodate all openings (non of which are over 6' wide). Note, the master bathroom niches should end no closer than 12" from the rear-left corner of the 2nd story in neither the left exterior wall or the rear exterior wall. Ensure exterior openings feature king studs per code (at least 2 at each end for openings of 6' wide). Lastly, no reinforcements within the 1st story will be required to accommodate the change in loading configuration given their generally light loading.

2) While several sections of walls will be relocated (including several diagonal walls which will be squared off), the only ones which should be discussed in this report are at the following areas:

A) To move the right master bathroom wall ~ 3' to the right, we recommend installing either a (2)14" LVL or (3) 11 7/8" LVL at the location of the existing wall. The header may be flushed or dropped as desired and will span ~ 14.5'; Header shall be supported by (3)2x4 jack studs at each end. If 3 ply option is selected and flushed, secure with (5) 10d nails spaced at 12" on center driven from both faces. In the first story hallway, below the forward stud column, install at least (5) 2x4 studs within the hallway wall; providing solid blocking to the first story wall wall. No first story reinforcements are required to accommodate the rear end point load.

B) At the room above the garage, the existing 8' tall left/right side walls will be shifted outward, turning into a 5' knee wall. To accommodate this, we recommend scabbing each rafter from the new location of the 5' knee wall to the ridge. Attach with (3) 10d nails at 12" on center.

Limitations of Inspection: Services provided are in accordance with the standard of practice for structural engineering, the North Carolina Residential Code (2018 edition) and within the limits imposed by scope, schedule and budget. The determinations contained in this report are based on conditions observed at the time of the evaluation. No guarantees or warranties, expressed or implied, under this agreement or otherwise, shall be construed in connection with services provided. Sequencing, shoring, means and methods of construction are considered beyond the scope of this report. All information used to form decisions and recommendations provided to engineer are taken as truthful. A.A. Takla Engineering assumes no responsibility for untruthful statements provided by any party. Lastly, while every effort has been made to ensure accuracy in the preparation of this document, the maker cannot guarantee against human error nor evaluations of structural elements which are concealed from visual inspection.

