

GILL ENGINEERING, INC

P.O. BOX 1420, LIVE OAK, FL 32064 (386-590-1242)

Project Owner: Vladimir Bessonoff
Project Address: 225 NW Scenic Lake Drive, Lake City, FL 32055
Contractor: Trademark Construction Group, Inc CGC1514780



Re: Structural Engineering Letter – Wall Opening and Header Modification

Project: Existing two-story residential structure with 2x4 framed exterior walls and full-height brick veneer.

Location: East-facing wall, bottom story, section between bay window and rear wall.

Scope: Remove a portion of the existing load-bearing 2x4 exterior wall to accommodate installation of a new sliding glass door. Modify the wall framing in the opening area to support the new header and maintain load path continuity from the second floor and roof.

Structural Requirements:

- Wall Framing Modification** Build out the existing 2x4 wall framing to 2x6 depth in the area of the new opening to accommodate the deeper header.
- Header** Provide and install a triple 1.75" x 11.875" 2.0E 3100Fb LVL header (or approved equivalent).
 - This document is valid for spans not exceeding 12'-0".
 - The new header shall be installed tight to the existing top plate.
 - Fully laminate the beam per manufacturer recommendations.
 - Minimum bearing length at each end is provided by the three jack studs.
 - Do not remove the existing strapping/hold-downs for the upper floor. Unfasten only the nails attaching the strapping to the wall segment being removed, then reinstall the same strapping directly to the new LVL beam using appropriate fasteners.
- Studs at Opening** Install three (3) king studs and three (3) jack (trimmer) studs at each side of the opening.
 - King studs shall run full height from bottom plate to top plate.
 - Jack studs shall provide full support under the header ends.
- Lateral Connections** Install a minimum of two (2) Simpson LSTA18 flat straps (or approved equivalent) on each side of the opening. Secure per Simpson Strong-Tie published installation instructions and load tables. Install a minimum of four (4) Simpson SP6 stud-to-plate ties on each side of the opening, connecting to two king studs and two jack studs. Secure per manufacturer instructions.
- Anchorage to Foundation** Provide one (1) ½" x 8" Simpson Strong-Tie Titen HD Screw Anchor (Zinc) with washer at each side of the opening. Locate each anchor within 6" of the outside king stud. Install into the existing concrete foundation/slab per manufacturer instructions, including proper hole diameter, embedment depth, and torque.

General Notes:

- All work shall comply with the Florida Building Code 8th Edition (2023) - Residential.

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- The existing wall is assumed to be load-bearing. The new header and associated framing shall maintain a continuous load path.
- Rough opening dimensions shall match the sliding door manufacturer's requirements plus recommended shim tolerances.
- All lumber and connectors shall be appropriate for exterior/wet conditions (treated where required).
- The builder/contractor is responsible for obtaining all permits, performing field verification of existing conditions, providing temporary support as needed during demolition and installation, coordinating with the door supplier/installer, and ensuring proper integration with the brick veneer, flashing, and weatherproofing.
- Any deviations from these requirements must be submitted to the engineer for review and approval prior to construction.

This letter provides the necessary structural parameters for the described opening. The contractor shall engage qualified trades for all work and shall schedule all required inspections.

Thank you,



Gary Gill, PE 51942

The logo for Gill Engineering, Inc, featuring the word "Gill" in a red, cursive font.