Date: August 12, 2024

Project: Lampkins Residence

Address: 1529 McDougald Rd
Lillington, NC 27546

Wood Framing Floor Support Analysis

This report is prepared for Southeast Foundation Repair (contractor) by FDN Engineering (engineer). Wood framing repairs and/or replacements on the first floor are proposed for installation at the above referenced project. Existing floor framing is damaged or rotten. The improved wood support system is intended to provide a long-term, structurally safe floor structure. Load requirements for the floor components were calculated at areas identified by the contractor. Engineer performed design for this project - see page 2 for engineering notes and results. See page 3 for wood framing details. See page 4 for a layout of the framing repair on a footprint of the structure.

To the best of my professional knowledge and belief, the design of the wood floor framing support system meets the structural requirements of the 2018 North Carolina State Building Code to the extent that it applies to our scope of work.

Upon completion of the floor support system, the contractor shall supply engineer a log of the installed floor framing and pictures. Engineer will evaluate and prepare a completion report.

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(402) 739-9642

NORTH CAROLINA PROFESSIONAL SEAL 044330 ENGINEER CHAD KELLER

Chad Keller 08/12/2024

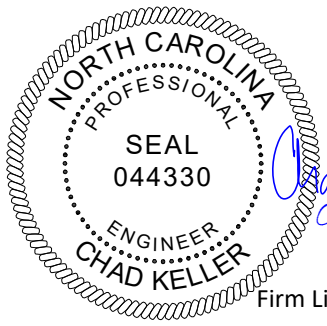
Firm License # P-2438

Wood Framing Project Notes (contractor to inform engineer if assumptions are inaccurate):

1. Structure is one-story, residential with wood-frame floors.
2. All structural lumber & framing to be #2 Spruce-Pine-Fir (SPF) or approved equivalent.
3. Any wood below the required base flood elevation shall be 0.40 CCA treated (flood resistant).
4. New wood-frame girders/joists that replace existing girders/joists to be at least as large as the original member, from like material, and supports placed no further than original distance.
5. Follow all requirements of applicable residential design code for all wood framing, including but not limited to, allowable span lengths, joist spacing, connections, bracing bridging, and nailing.
6. Per R317 of the IRC, contractor to use preservative-treated wood if wood joists are closer than 18 inches to exposed ground.
7. Framing connections noted on the drawings are Simpson Strong-Tie (or equal). Install with the catalog designated connector in each hole.
8. All nails to be common wire (unless noted otherwise). All nailing into pressure treated wood shall be done with hot-dipped galvanized or stainless-steel nails.

Wood Framing Analysis and Results:

9. Interior floor load is designed to not exceed 55 psf nominal load (15 psf DL + 40 psf LL), per Code.
10. Repair/replaced wood girders/joists do NOT support interior load-bearing walls or columns.
11. New framing replacements do not change the load path of the existing structure.
12. Wind loading shall be per Code. Note: wind loads are not applicable to this scope of repair.
13. Where sistering floor joists, sister with a like size/type wood member. Glue sister joist to existing w/ construction adhesive. Fasten sister joist to existing with (2) 10d nails in each row. End rows 6” apart & 16” o.c. in between. Sister joist to bear on support at each end (same support location and type as existing joist).
14. Where the subfloor is replaced, use 3/4" thick plywood sheathing. Nail to supporting joists with 10d common wire nails at 6" o.c. around edges and 12" o.c. throughout.
15. 2" x 8" wood joists to have a maximum span length of 12'-0" when placed at 16" o.c.



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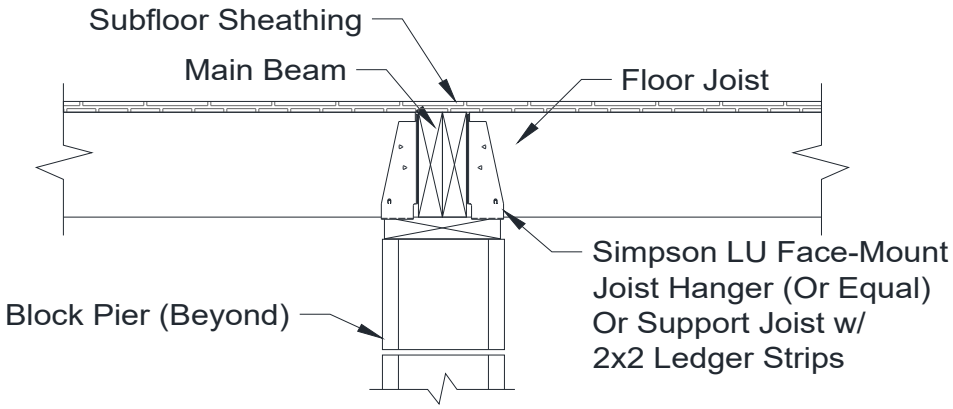
Follow the current building Code and/or manufacturer's catalog for fastening and nailing requirements.



JOIST ON BEAM HANGER FRAMING SECTION

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LEGEND:

— – — - Sister Joist

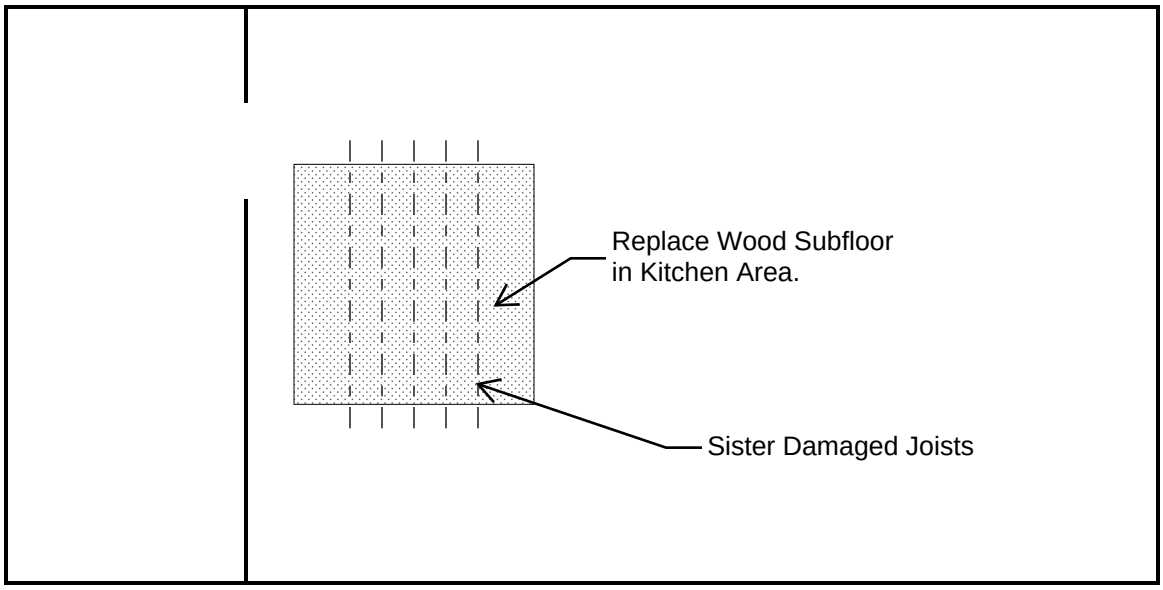
Replace Subfloor

Existing Pier

--------- Existing Main Beam

Wood Framing Notes:

1. Residential construction, one-story.
2. Layout of wood framing repairs and/or replacements on first floor.
3. Install per local Building Code.
4. See page 2 for notes, sizes, and specs.
5. Notify engineer if design assumptions are discovered inaccurate.



FRONT HOUSE

FOOTPRINT OF
RESIDENCE

DRAWING NOT TO SCALE

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