



July 14, 2022

New Mark Homes

Re: 1620 SW 27th St
Lot 44, Whispering Woods
Lee's Summit, MO 64082
Permit: PRRES20215563

Apex Engineers Inc. observed the house under construction at the above-referenced address. Our firm has been retained to address comments from the city rough-in inspection. For the purposes of this report, the house will be referred to as facing south.

1. *Address ceiling joists to rafter connection throughout*

- Rafters shall be connected to ceiling joists with #2-2x6 kickers at 36" on center, installed at minimum 45-degree angle from horizontal and fastened per Figure 1.0.

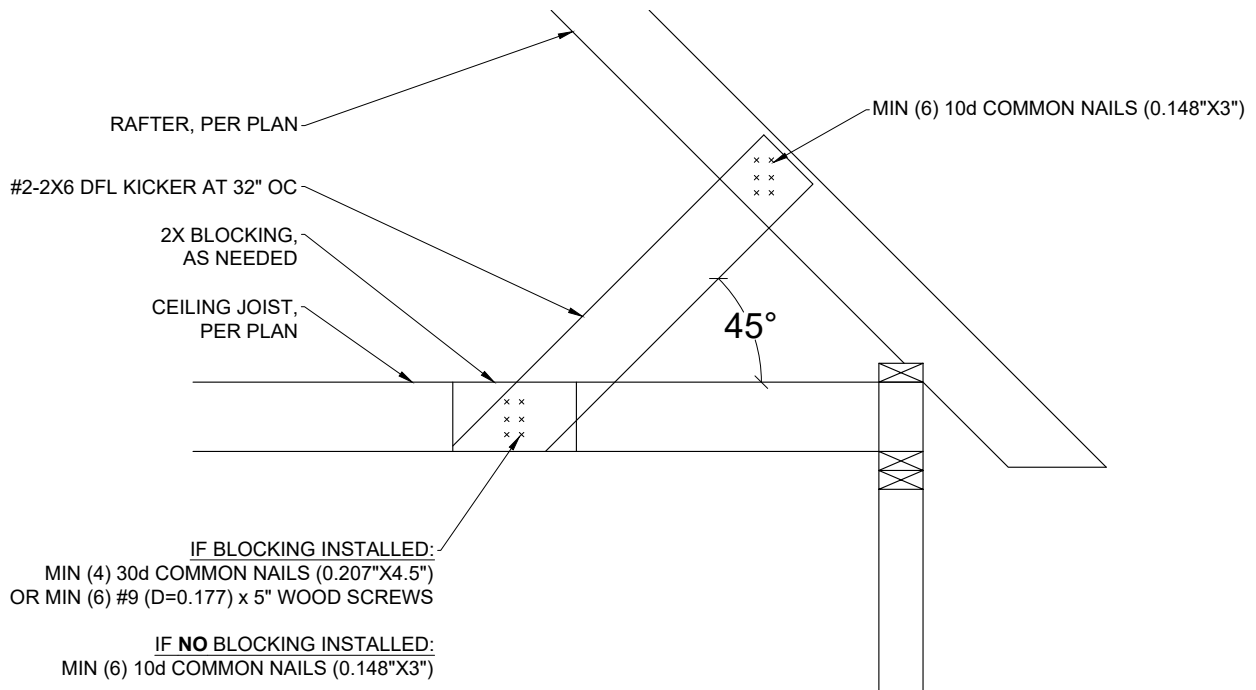


Figure 1.0 – Kicker Detail

2. *Address over notched joist above single car garage for DVV*

- A 4" diameter bore hole was observed in the center depth of a #2-2x10 floor joist and located approximately 16" away from support.
 - After computations, our firm has determined that the beam is adequate to support the service loads of the structure.

3. *CSPF in breakfast room per plans*

- Min 7/16" thick sheathing and tension strap shall be installed on the interior side of the portal frame. Construction of the portal frame shall comply with 1/S4.1 everywhere else.

4. *Over-notched ceiling joists above master bath entry*
 - Two 3" diameter bore holes were observed in floor joists at the master bath entry and were determined to be within allowable IRC limitations.
 - Two large square notches were observed in ceiling joists at the master bath entry. Our firm recommends replacing the ceiling joists with DFL #2-2x6 at 16" on center and rotate the joist direction 90 degrees. Reference Figure 2.0.

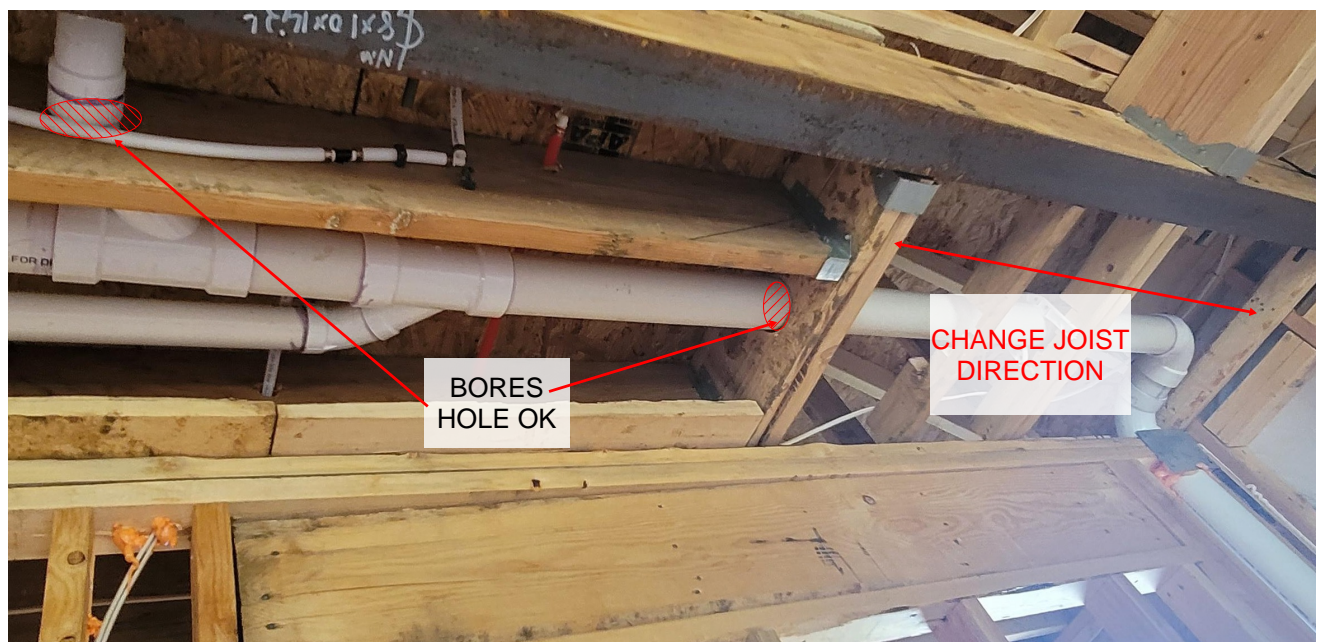


Figure 2.0 – Master Bathroom Entry Notches

5. *Address holes drilled closer than 2" to the bottom of joists above the master bath*
 - 24" long Simpson CS16 straps shall be installed centered under the notch along the bottom face or bottom edge of the joist
6. *Address over notched and not permitted in middle 1/3 joist at W basement wall for DWV.*
 - The notched joist shall be doubled with a full-length ply of DFL #2-2x10 and fastened together per detail 10/S3.1 of the city approved plans. Minimum one ply shall remain un-notched.
7. *Address joist cut for DWV W wall basement*
 - The cut joist shall be hangered into a single ply DFL #2-2x10 header beam with Simpson LUS210-2 face mount hanger. An additional 2x10 joist shall be installed on the backside of header beam and fastened with Simpson LUS210 face mount hanger at one end and bear on steel beam at the other end. The header beam shall be fastened to adjacent joist bays with Simpson LUS24 hangers each side. Reference Figure 3.0.

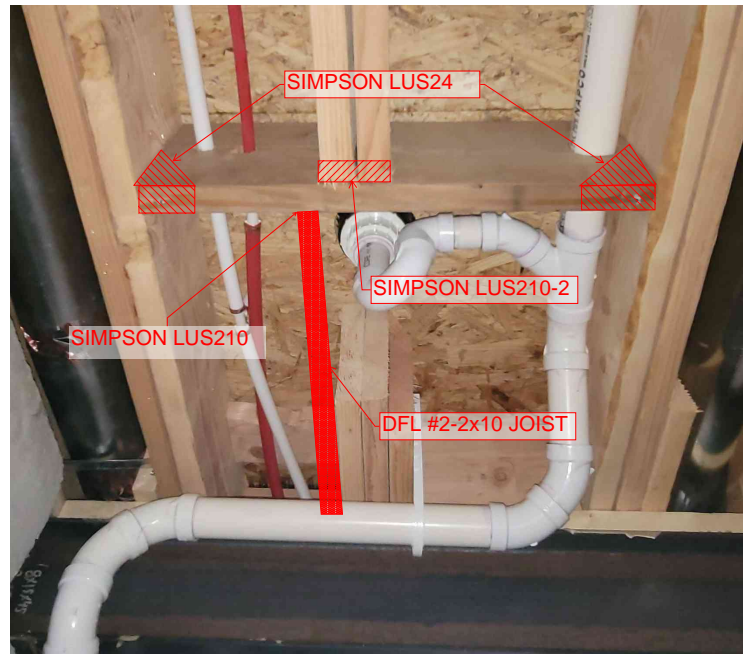


Figure 3.0 – Cut Joist Repair

8. *Over-cut hole in joist left of the service panel*

- The notched joist shall be headered off at the notch with a single DFL #2-2x10 joist. The new header shall be supported by adjacent floor joist to the west and foundation wall to the east.

Contingent upon the repairs outline above, our firm recommends approval of these items.

Please call if our firm can of further assistance.

LIMITATIONS

The scope of our services includes only those items specifically addressed herein. All other items are outside the scope of this inspection; including any environmental assessment (such as but not limited to mold, mildew, or presence of any other toxic substance or environmental risks).

In addition, the scope of our services does not include any evaluation of the building or site for job-site safety and/or hazardous conditions. All construction shall be performed in compliance with IRC and OSHA standards at all times. Our firm has not been retained to examine the site or building for any of these conditions. In addition, the contractor shall retain sole responsibility for the quality of work, for adhering to plans, specifications, and appropriate codes, and, for repairing defects, deficiencies or omissions, regardless of when they are found. By the use of this report, it is understood the above conditions are agreed to.

Best Regards,
Apex Engineers, Inc.



Nick A. Shifflett
Project Engineer

Clayton J. Hess, PE
Principal

