



February 27, 2023

KC Custom Homes

Re: 2059 NW O'Brien Rd
Lot 182, The Estates of Woodridge
Lee's Summit, MO
Permit # PRRES20222990

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 north.

1. *Address/clarify missing HSS column at the garage.*
 - After computations, our firm determined the HSS steel column in garage can be substituted for (8) 2x4s built-up wood columns** at each end.
2. *Overnotched joist near beam for master bath dwv.*
 - Rim joist was observed notched for dwv. The joist is continuously bearing on the sill plate, therefore joist is adequate as installed.
3. *Address holes bored over 40% at load-bearing wall in the laundry.*
 - The double top wall plate was observed notched for plumbing. The top plates shall be repaired with a min (1) 16-gauge strap across the opening and fastened with min (8) 10d common nails at each end, extending the strap 6" past the opening. Reference IRC Figure R602.6.1.
4. *Address/clarify (3) 2x4s used instead of column shown on plans resting directly on the beam below by stairs.*
 - Min (7) 2x4 built-up wood studs** or 3" (3.5' O.D) shall be installed to support the steel beam at the main floor stairs, above and below the flush beam in the floor. The column in the basement shall bear on a minimum of 30"x30"x12" concrete pad with #4 bars each way (contractor to verify condition).

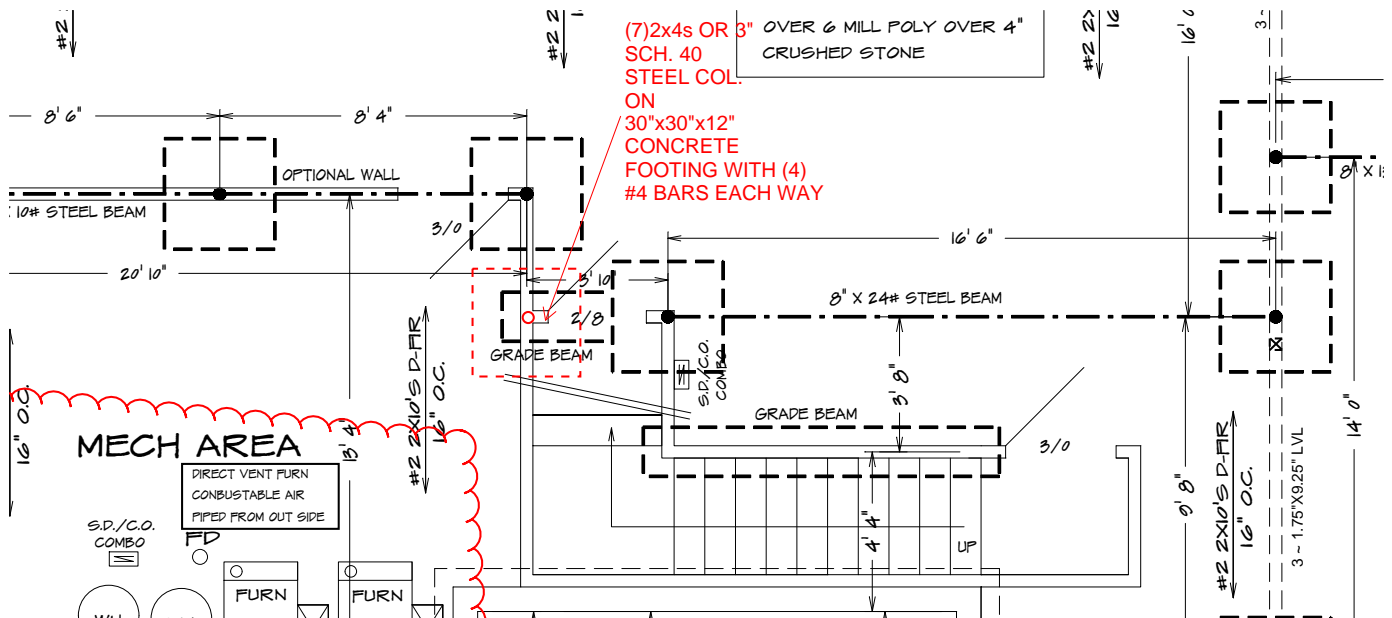


Figure 1.0 – Basement Plan

5. *Correct over-bored stud at load-bearing wall in master bath/hallway.*
 - Overboard studs shall be repaired with Simpson Stud Shoe (SS). Install per manufacturer's specification.
6. *Have engineer address broken hip joist in master bath near the exterior corner.*
 - (2) 15/32" OSB plies shall be fastened to the outside faces of the hip rafter [(1 each side of the face)] with (3) 10d common nail rows at 4" on center. The OSB shall be extended 6" past where the wood is split.

***Built-up wood column - Each 2x4 or 2x6 ply shall be fastened with 1 row of 10d nails at 9" on center alternating side to side, 1.4" min edge distance, and starting 2.5" from each end.*

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 the 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, 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, E.I.T.
Field Engineer

Clayton J. Hess
Principal

