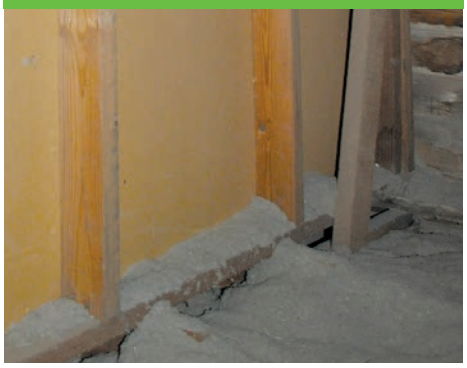
Air Seal Beneath the Knee Wall

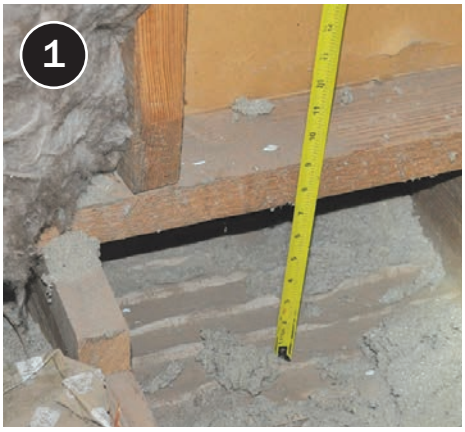
Job Aid for Seal and Insulate Knee Walls Badge

Aligns With Standard Work Specifications 3.0101.1

BEFORE

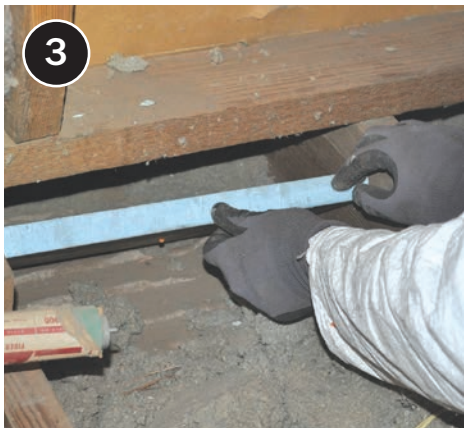


Knee walls often define the thermal and pressure boundary and the open joist cavity below requires careful air sealing.

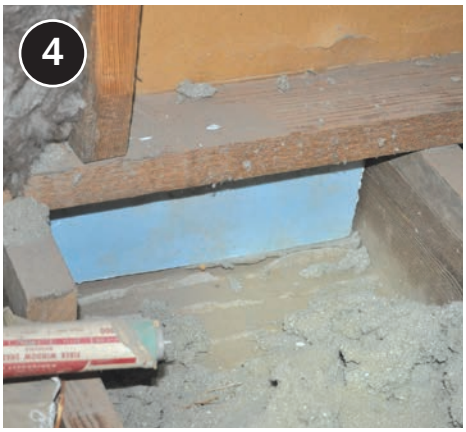


After clearing away debris, measure gap below knee wall in line with pressure boundary.

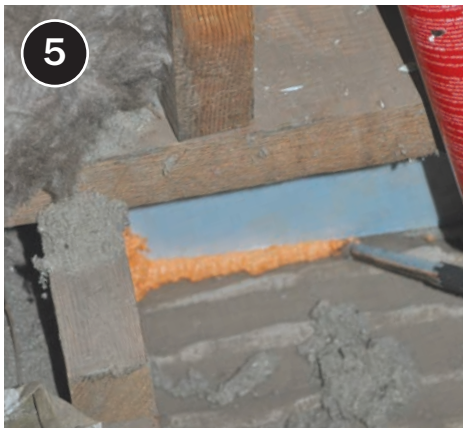
Cut blocking material (extruded polystyrene, wood, gypsum board) to fit gap.



Securely fit infill or blocking material in place.



Ensure blocking material is located in line with preferred pressure boundary.



Seal around the edges of the blocking material to align the pressure boundary.

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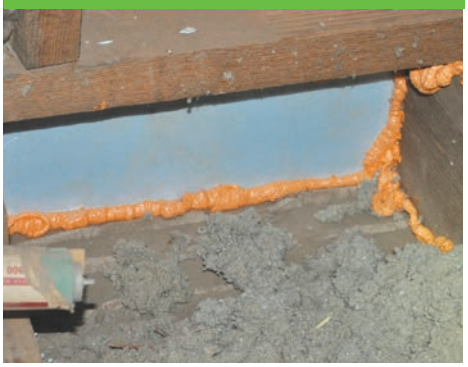
AFTER



Air sealing each and every open joist cavity below the knee wall prevents air movement between the unconditioned attic and the conditioned floor.

CHECKLIST

Seal and insulate knee walls

DESIRED OUTCOME

Knee walls framed to prevent thermal bypass and sealed to prevent air leakage between conditioned and unconditioned space.[1]

Air Sealing (check prior to insulation):

- ☐ Existing insulation was removed or adjusted to allow access to top and/or bottom of knee wall.
- ☐ Rigid blocking or other durable material installed:
  - ☐ Beneath the knee wall (floor running under knee wall) and
  - ☐ Above the knee wall (ceiling cavity/ ventilation chute/top plate).
- ☐ Installed blocking will stop air flow and support insulation.
- ☐ All joints, cracks, and penetrations including connection between interior surface and framing are air sealed.

Insulation:

- ☐ Install fabric or rigid backing material to enclose knee wall cavity in a durable, permanent way.
- ☐ Install insulation to manufacturer's specifications/proper density.
- ☐ Insulation has no gaps, voids, compression, or misalignment.
- ☐ Seal holes in backing material as needed.
- ☐ Applicable sections of house-wide insulation certificate are filled out with coverage area, thickness, and R-value.
- ☐ Clean work area.

1. Relevant Standards: 3.0101.1

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DOE/EE-2591 • May 2022