

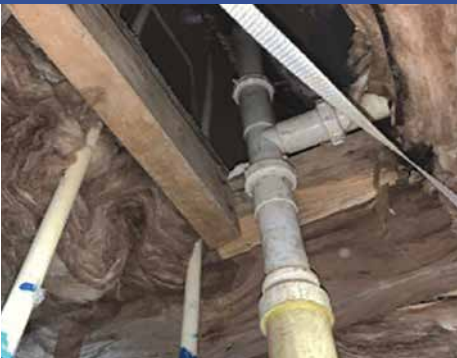


# Air Seal Large Penetrations in a Subfloor

Job Aid for Air Seal Floor Above Unconditioned Subspace (Basement or Crawl Space) Badge

Aligns With Standard Work Specifications 3.0101.1, 3.0104.1

## BEFORE



Larger penetrations in the subfloor, especially plumbing chases, need to be air sealed when they define the pressure boundary.

1



Spray foam expands to fill large holes, but may need fire protection (e.g., thermal/ignition barrier).

2



For larger holes, rigid infill material is needed.

3



Cut rigid infill with attention to locations of pipes and electrical.

4



Secure rigid infill in place and seal smaller gaps around infill with appropriate materials.



Use appropriate materials for high-temperature locations, such as around flues and chimneys.



Depending on the size of the gap, one-part spray foam or a combination of infill material and foam or caulk can be used.



## Checklist

# Air seal floor above an unconditioned subspace (basement or crawl space)

## DESIRED OUTCOME

Consistent pressure boundary between conditioned and unconditioned space.<sup>1</sup>

- ☐ Remove existing insulation as needed to access air sealing locations.
- ☐ Ensure all wall cavities are enclosed on all six sides (e.g., have top and bottom plates).  
Install additional blocking where necessary.
- ☐ Seal the following cracks, penetrations, and chases to prevent air movement with the appropriate materials based on hole sizes according to the AIR SEALING MATERIALS GUIDELINES table below:
  - ☐ Chases
  - ☐ Plumbing penetrations
  - ☐ Electrical penetrations
  - ☐ Chimney/flue<sup>2</sup>
  - ☐ Ductwork penetrations into subspace
  - ☐ Any other holes/penetrations in the floor plane/boundary.
- ☐ Clean work area.

AIR SEALING MATERIALS GUIDELINES	
HOLE/GAP SIZE	MATERIALS/NOTES
1/4" or less (small)	Caulk
1/4"–2" (medium)	One-component foam or mastic
2"–3" (large)	Two-component foam
3" or larger (extra-large)	Infill material installed that will not bend, sag, or move Support material (e.g., 2X4) installed for spans wider than 24"

1. Relevant Standards: 3.0101.1, 3.0104.1

2. Materials must be appropriate for high-temp situations.

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