

# Foundation Wall Pittsburgh Lab Home

Pittsburgh, PA

## About the Mock-up

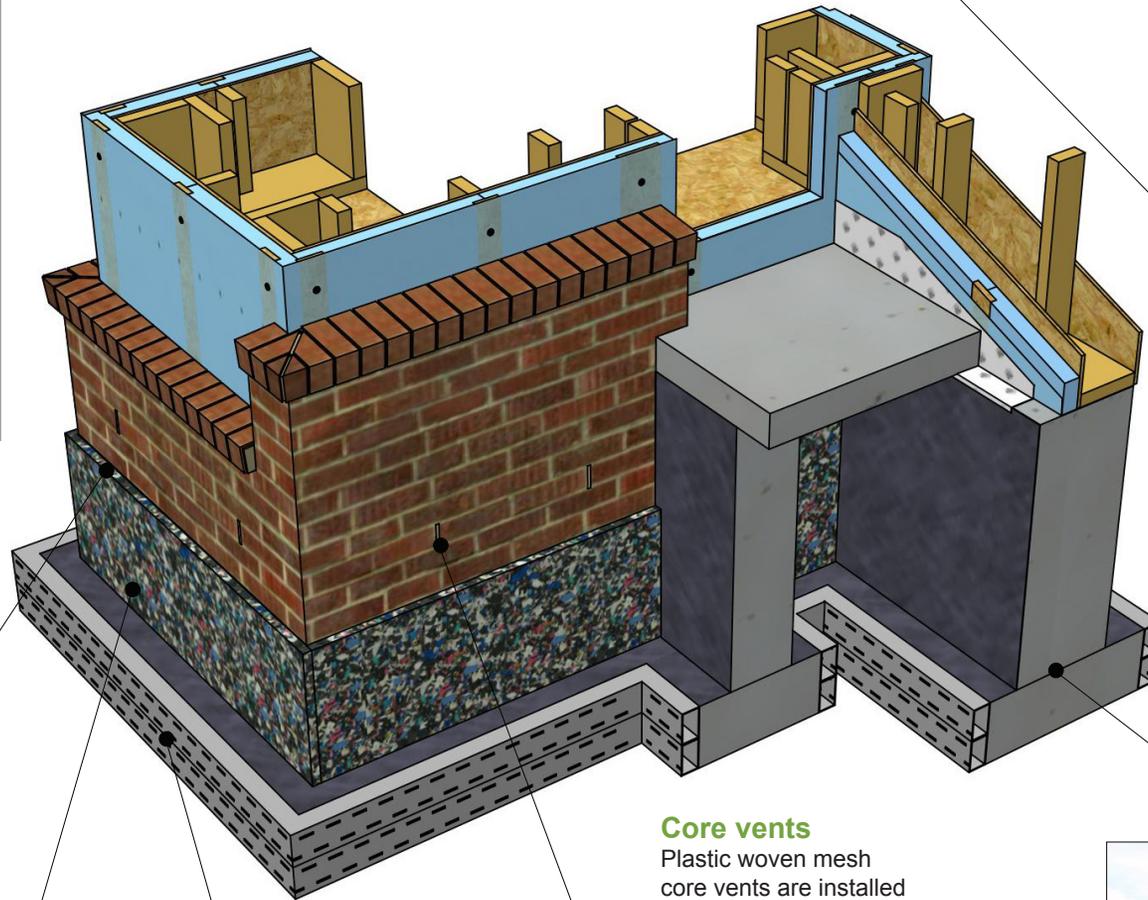
The foundation wall mock-up examines the transition between the poured concrete basement and the high-R, above-grade wall selected for the Pittsburgh Lab Home. By constructing this detail of the home in the IBACOS facility, several constructability issues were revealed and then resolved long before construction on the home ever began. These issues included how to maintain a continuous air barrier, how to properly manage bulk water, and how to correctly install the brick façade.

## Rigid insulation board

Extruded polystyrene (XPS) insulation board is installed against the foundation wall after waterproofing has been applied. The insulation board helps reduce the potential for condensation along the junction of the sill plate to the foundation wall.

## Through-wall flashing

This self-adhesive L-shaped flashing collects water traveling down the wall behind the brick and drains it to the exterior through weep holes.



## Brick ledge

The brick ledge is a consistent 6" width all the way around the foundation, allowing for 4" of bearing for the brick, 1" of insulation board, and a 1" air space behind the brick for drainage.

## Drainage board

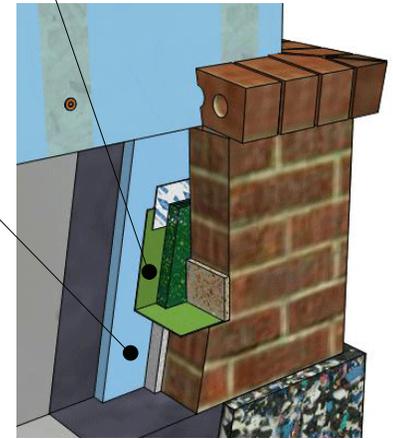
100% post-consumer recycled foam products are molded together to form a 1" thick mat that helps promote the drainage of bulk water along the foundation wall down to the footing drain. The drainage board also protects the waterproofing membrane from damage during backfilling.

## Footing drain

Piping runs parallel to the footing to drain bulk water away from the foundation and reduce hydrostatic pressure against the walls.

## Core vents

Plastic woven mesh core vents are installed instead of standard plastic core vents to prevent insects, debris, and mortar from blocking the weep holes, ensuring that the wall cavity drains properly.



## Capillary break

A waterproof membrane is installed over the top of the footing prior to placing the foundation walls. This membrane prevents moisture from transmitting through the footing and into the foundation wall.

