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can pull away from a foundation as much as two inches to a depth of three feet or more. Either the wind or the homeowner is likely to fill this crack with loose soil. When the clay soil gets wet again and expands, crack goes the wall—if it is weak.

Recommendations

Very rarely do walls cave in from insulation except, possibly, in Duluth, Minnesota, where all the conditions are ripe for foundation failure. But you can prevent all frost-related foundation problems by following standard good practices: positive site drainage and granular backfill. Also, build foundation walls strong enough to resist intermittent loads exerted by water or ice. Given basically sound foundation and site-work, I'd say it's OK to insulate a foundation inside or outside, half-way, full-height, or flared out—anywhere in the continental United States.

In retrofits in very cold climates life is not so simple. What if you have an unreinforced block foundation, a frost-susceptible soil (clay or silt), and poor drainage? Then I would be reluctant to install any foundation insulation without first improving the site—at the very least by conducting surface water away from the foundation.

Where the integrity of the foundation is in doubt, there are compromise solutions. I might install half-height insulation on the inside, or half-height on the outside with a 2- to 4-foot horizontal flare. But don't expect good thermal performance with half-height interior insulation on an open-core block wall. Convection in the block cores will carry heat right past the insulation.

Also consider the wintertime temperature in the basement. If the owners have insulated the basement ceiling, and are heating with a woodstove upstairs rather than a furnace in the basement, the basement walls (not to mention water pipes) could get pretty chilly.