



Keeping TABS on the Thin Veneer Industry

TABS WALL SYSTEMS, LLC

CONTROL JOINTS IN ADHERED VENEER INSTALLATIONS

TABS 2nd Quarter Newsletter



Three years ago, **TABS Wall Systems** received a call from a frantic hotel owner in Richmond, VA. The hotel had thin brick installed with a lath system. As visible in the photos, the walls were literally buckling.

The owner had been advised to contact **TABS** for assistance. The city had told the owner that corrective action was required immediately to first eliminate the hazards of falling brick. The owner wanted to know how soon **TABS** could come to the site to help determine the cause of the problem. We had him forward photographs.

The cause was apparent immediately. No site visit was necessary. There was not a single control joint anywhere on the building. The only “soft joints” were at the windows.

Projected (non-union) costs for labor to remove, dispose of and replace the thin brick installation were \$35 per square foot. Replacement materials were estimated at \$7 per square foot. Thus the 10,000 square foot façade costs were approaching \$500,000!

CONTROL JOINTS

TABS Wall Systems emphasizes the need for proper placement of control joints to accommodate:

- expansion & contraction thermal dynamic movement
- differential movement at building corners
- load deflections at floor lines
- isolation and separation of dissimilar materials
- veneer moisture expansion
- transitions in planes (e.g. a flat surface to a curvature)



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TABS recommends control joints in facades as follows:

- vertical control joints every 20-25'
- horizontal control joints at every floor line on wood stud framing and every other floor line (assuming maximum 10' heights) on steel stud framing
- all inside corners
- all transitions to dissimilar materials
- all transitions in façade planes
- within 2-4 feet of outside corners on steel stud framing; with 2' out both sides of outside corners on wood stud framing

(Local codes supersede all TABS recommendations for control joints)

Outside corners on wood framing are particularly problematic. In addition to differential movement, wood framing experiences shrinkage, swelling, bending, cupping and twisting (See [TABS 2017 3rd/4th Quarter Newsletter](#)). The result of inadequate accommodation of conditions in wood stud framing can be random cracking of the corner brick units.



THE FAÇADE CONTROL JOINT PATTERN

By having control joints at 20-25' vertically and 10' or 20' horizontally, the façade is essentially separated into sections that move and drain independently. Maximum areas of 500 square feet on steel framing or 250 square feet on wood framing contribute to a more manageable façade to accommodate the elements. The control joints are through the veneer and panel while the insulation, sheathing and moisture/moisture barriers are continuous. Thus the panel/veneer act as a monolith.

FINAL NOTE

Last we heard, the hotel owner had hired some labor to take down, clean up and salvage the thin brick. Seems the installer was not bonded, the value engineering to the lath installation (aka de-value engineering) of the general contractor was approved by the owner and there was no warranty.