MASONRY INSIGHTS

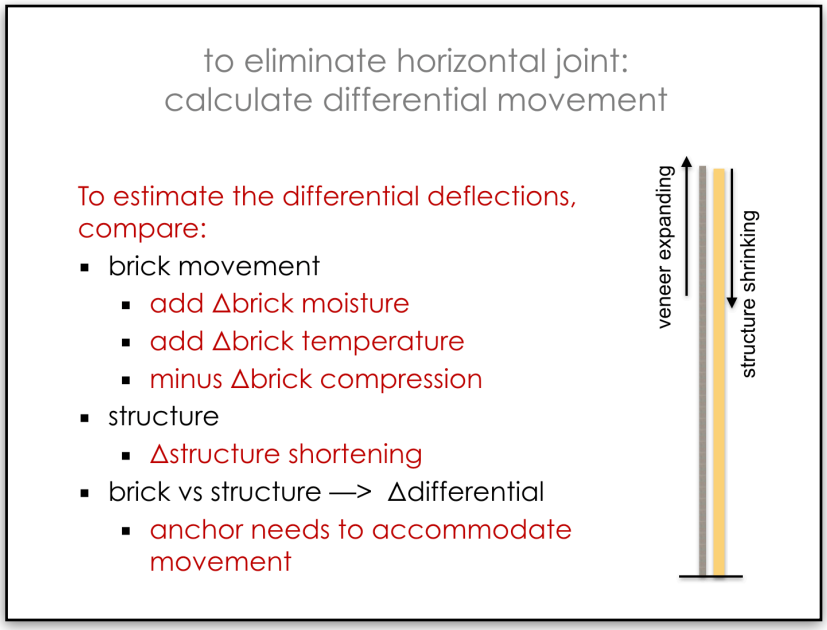
written in conjunction with International Masonry Institute

What are the options for supporting veneers?

Veneer Support

Per Section 12.2 in the TMS code, there are several options to consider for supporting masonry veneers for vertical (for gravity) and for lateral (wind/seismic) loads:

Option 1 - based on TMS 402, Section 12.2.1, alternative analysis can be used, and shelf angles could be eliminated. This requires an analysis of the differential movement between the veneer and the backup, and generally flexible veneer connectors would have to be used for the upper floors.



Option 2 - based on TMS 402, section 12.2.1, alternative analysis can be used, and shelf angles reduced to every other or every third floor. In this case, standard veneer connectors could be used, but a heavier connection for the veneer to the backup system (masonry wall) would be necessary.

Option 3 - a structural brick veneer could be used, and no shelf angles would be needed, and the structural brick veneer would only need a horizontal support at each floor.

Option 4 - based on TMS 402, section 12.2.2, prescriptive requirements can be used. Shelf angles are only necessary with wood or metal stud backup systems after 30 feet and at each floor above 30 feet. Shelf angles are not required with a rigid structural backup, but are often used. This option probably has the most material cost, but is simplest to design.

There are other options as well for brick veneer support/design, but this is a good short list for a building with multiple floors.