



Gary Porter, Engineering & Technical Services for the Masonry Advisory Council is called upon with questions about construction concerns and for masonry advice from a variety of Architects, Engineers, Contractors, Developers and Distributor sources. He is dedicated to ongoing education of masonry and shares helpful tips from his professional experience that may be beneficial to you.

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Movement Joints in Masonry

There once were three little pigs. The first pig built his house out of straw, the second pig built his house out of wood and the third built his house out of bricks! When the big bad wolf came by, he huffed and puffed and blew the straw and wood homes away but the pig who built his home from bricks survived the pounding wind of the big bad wolf. We have also found out recently, that the third pig who built his house with bricks also installed movement joints!



Well we don't know this fact for sure, but there is good chance the third pig did install expansion joints in his brick home. When we build with brick, concrete block, stone and the many other materials that we use in masonry, we need movement joints. Materials built with cement in their composition, such as concrete block or cast stone have the property of shrinking over time, so we call these control joints as they control the shrinkage. Brick and other clay products expand over time, so we install a joint to let them grow called expansion joints.

The Masonry Society, TMS, (officials who develop and maintain the "Building Code Requirements and Specification for Masonry Structures" the building code for masonry TMS 402/602, have developed a checklist for architects and structural engineers to "Indicate type and location of movement joints on the project drawings". It is not the job of the mason contractor, general contractor or owner to be indicating these joint locations.

Movement Joints in Masonry

There are guidelines for the architect and structural engineer to follow in locating movement joints.

The Brick Industry Association, BIA, provides technical notes at www.gobrick.com, with two technical notes:

Tech Note 18 - Volume Changes - Analysis and Effects

Tech Note 18A - Accommodating Expansion of Brickwork

These two technical notes outline the most favorable locations for expansion joints.

The National Concrete Masonry Association, NCMA, www.ncma.org also provides technical notes designating locations for control joints with four technical notes at:

TEK 10-1A - CRACK CONTROL IN CONCRETE MASONRY WALLS

TEK 10-2C - CONTROL JOINTS FOR CONCRETE MASONRY WALLS—EMPIRICAL METHOD

TEK 10-3 - CONTROL JOINTS FOR CONCRETE MASONRY WALLS - ALTERNATIVE ENGINEERED METHOD

TEK 10-4 - CRACK CONTROL FOR CONCRETE BRICK AND OTHER CONCRETE MASONRY VENEERS

If this seems too confusing and you have been charged with the task of locating the control or expansion joints on a project. Please call or e-mail me at The Masonry Advisory Council and we will help you to locate the best locations for movement joints on your project so it is a success!



Masonryadvisorycouncil.org/askmac



The Masonry Advisory Council is a non-profit organization that markets and promotes the benefits of building with masonry. Our vast network of industry professionals are available through MAC as a source of education, technical support, promotion, and marketing outreach.

Visit our website masonryadvisorycouncil.org

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