

Double-Wythe Cavity Wall

MASONRY



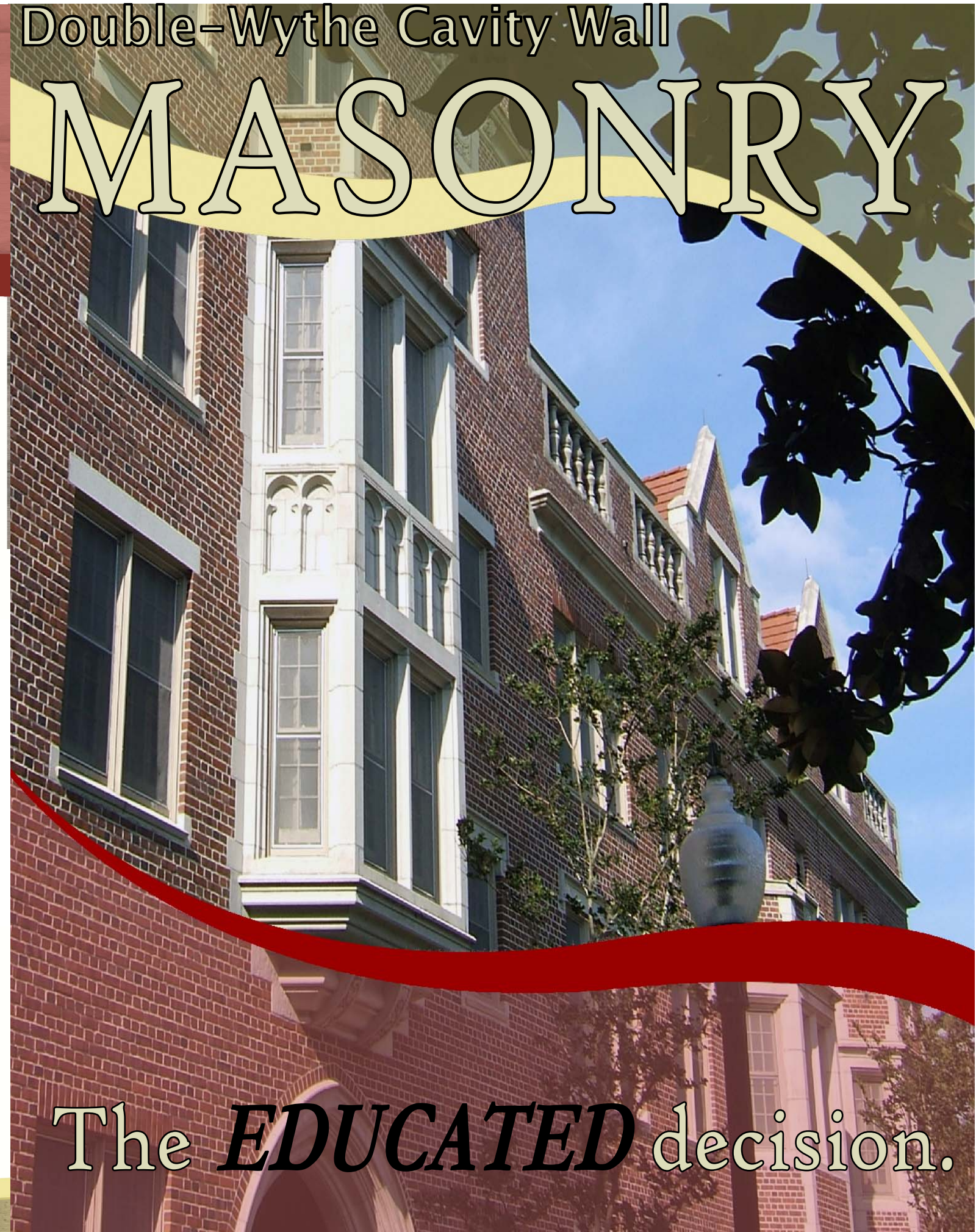
**Contact the Masonry Association
of Florida for a quote on
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The **EDUCATED** decision.



Double Wythe Cavity Wall System

World's Best Wall System!

Say what you will, *there is a King of Wall Systems*, and it is pretty much undisputed. The Double Wythe Drainage Cavity Wall is and remains the proven best at everything we want an exterior wall to do.

Insulation

Rigid insulation board completely wraps the building virtually eliminating thermal bridging which severely degrades stud walls with bat insulation. The insulation is protected by the exterior wythe of masonry. An insulation envelope between the wythes allows you to keep the interior masonry exposed for beauty and serviceability.

Thermal Mass

Thermal Mass mitigates the passage of heat or cold through a wall system and is recognized by ASHRAE as enhancing performance beyond their "R" value. You normally have to choose to have your mass on the outside or inside of your insulation. Here you get the best of both worlds with high mass wall on both sides.

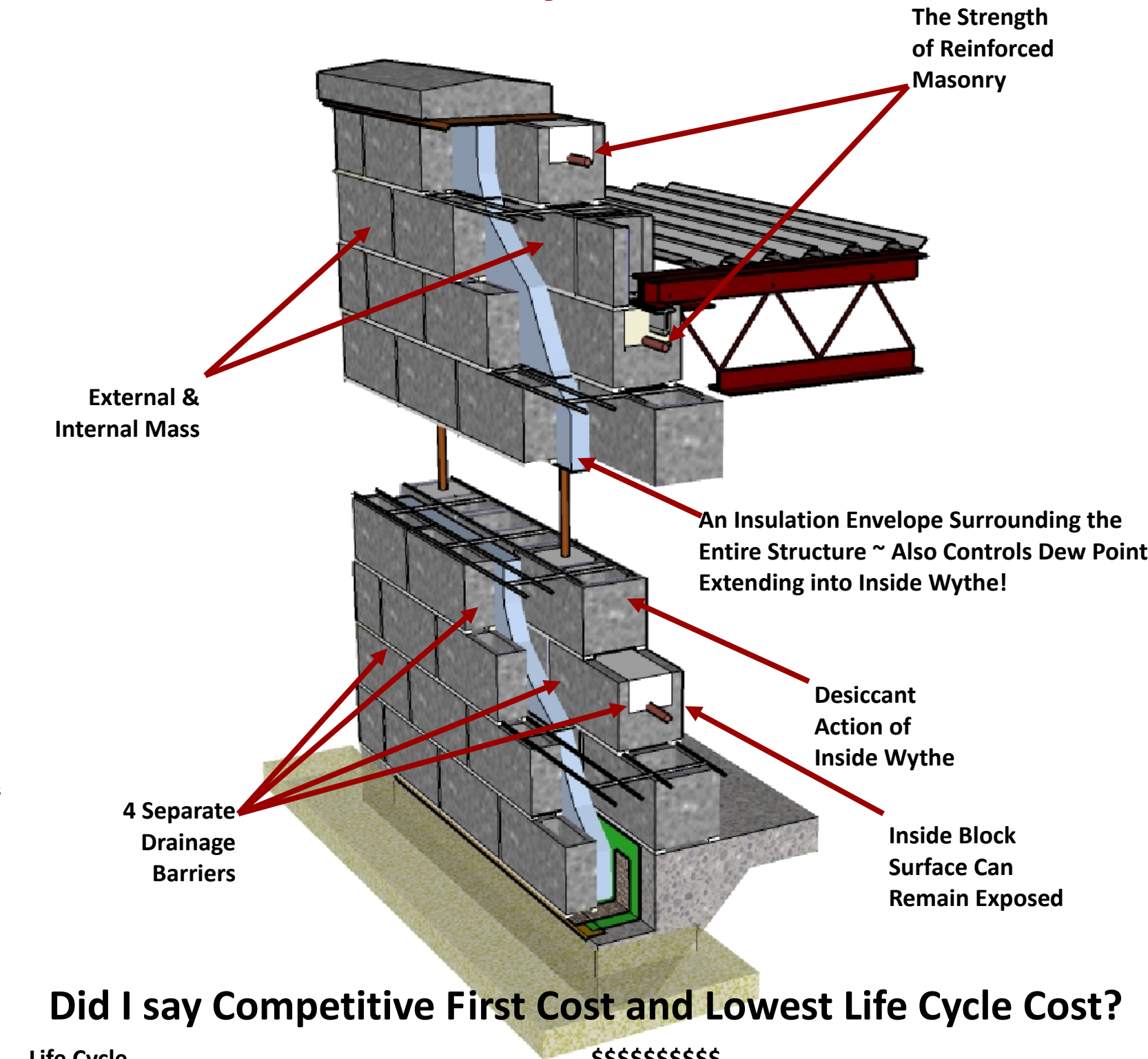
Dew Point Control

Light frame wall systems invariably have the insulation inside of the studs which forces the dew point to fall inside the wall at various times throughout the year. Not so with rigid insulation in the cavity. Dew points stay outside where they belong. Additionally, masonry acts as a desiccant with the ability to absorb moisture from the building interior.

Moisture Barriers

The double wythe system incorporates 4 separate barriers to moisture entering the building: 1) The exterior wythe sheds wind driven rain; 2) Water making it past the outside wythe is intercepted by the drainage cavity and discharged to the outside face by flashing and weeps at the bottom of the cavity; 3) A water barrier is created on either the face of the insulation or the face of the block backup wythe which intercepts any moisture crossing the drainage divide on ties or mortar; 4) The block back up wythe acts as one last additional barrier and/or desiccant for any small amount of water bypassing the first 3 barriers. Results of these four layers of defense: A lifetime of trouble free moisture protection.

Additionally, because of this multi-barrier approach to keeping out water, cracks in either or both the exterior and interior wythe does not lead to wall leakage. This is a truly unique and valuable feature provided only by double-wythe cavity walls.



Did I say Competitive First Cost and Lowest Life Cycle Cost?

Life Cycle

If life cycle is an indicator of sustainable construction then the double wythe cavity wall is about as sustainable as it gets, proven by millions of structures over thousands of years of construction history.

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Most of the time double wythe walls are competitive first cost. When a life cycle cost analysis is performed there is simply no equal.

Structural Strength

The reinforced masonry back-up wythe provides proven strength to resist both hurricanes and earthquakes. Often, reinforced masonry is mistakenly relegated to an infill in structural steel or concrete. This is simply a waste of money. Utilizing the full structural capacity of reinforced masonry drastically reduces your wall cost with no downside. World class 3-D masonry design programs such as RAM Elements allows you to generate complete designs and take-offs quickly and easily.

Fire Rating

Created from all non-combustible materials with a 2 hour + rating ensures lower premiums on your fire-insurance.

Sound Attenuation

Sound attenuation is truly unmatched with this wall system. Tested STC values up to 79 are simply not available with other wall systems. The high mass dissimilar wythes combined with the airspace are the secret to sound deadening.

Durability

The usual combo of positive masonry attributes are fully present in the double wythe wall. Rot proof, termite proof, corrosion proof are all standard fare for solid concrete masonry construction.

Mold Control

Masonry is not a food source for mold and it is not damaged by water. Important attributes in a construction world full of leaky windows and roofs.

Beauty

An unlimited palate of colors and textures combined with easy to achieve and distinctive architectural features provides an opportunity to create a building of lasting beauty.

Flexibility

Hand assembled by combining many small pieces, masonry is a product that provides flexibility in both design and construction.

Environmental Superiority

The concept of "green" has taken over the construction industry. Every material claims to be greener than the next. Though stunned, common sense is not completely dead. The attributes reviewed in this article, combined with a material that is locally produced and a construction process that has proven to be the right choice for tight sites and tight budgets scores high on LEED and any other environmental score sheet.