

Questions & Answers

About Architectural Standards, Design Guidelines, and Local Policy

About Brick and Brick Construction

Q. What authority do local governments have to guide construction and development?

A. One of the most meaningful legal principles for the authority of local governments is the so-called ‘Police Power.’ The Police Power, derived from the Tenth Amendment of the U.S. Constitution, gives states the ability to create laws to benefit the health, safety, and general welfare of the public. Most states in the Heartland have delegated much of this authority to local governments through various enabling statutes. Importantly, most states have specifically granted local governments the authority to regulate land use and development. It’s important to note that the courts have historically interpreted the police power very broadly, defining zoning and building codes – even those provisions which are mostly based on aesthetics – to be appropriate applications of the police power. Indeed, it is the responsibility of local governments to protect and enhance the health, safety, and welfare of their citizens. Expecting excellent development and using local policy to achieve it is effective, legal, and appropriate for your community.

Q. What do you mean by “local policy?” What are “Architectural Standards” and “Design Guidelines?”

A. Many local governments have acted to guide not just the type, use, and location of structures in their communities, but also the design and construction of those buildings. In doing so, these communities utilize a variety of innovative tools that go by many different names. “Architectural standards” and “design guidelines” are common labels for these official policies of communities. They may be adopted as law, encouraged with incentives, or simply stated as the community’s preference. Regardless of name or legal force, these policies seek to ensure that new development becomes an asset to the community by encouraging thoughtful design and quality construction.

Q. My community already has zoning and subdivision ordinances. Isn’t that enough?

A. Basic zoning, subdivision, and building codes do a good job of preventing land use conflicts, preventing nuisances, and eliminating major hazards. Unfortunately, they often do little to make sure that new development is sensitive to its surroundings, built for the long term, and made to contribute to a community’s overall vitality. To

do this, a community needs to enhance its current land use regulations with policies that address the design and construction details of new development.

Q. But isn't all development good for a community? Every new building or renovation generates more tax revenue, right?

- A. Sure, for the short term. But consider the stability that high-quality brick structures will add to the tax base for the long term. Brick buildings remain attractive and structurally sound – and increasing in value – regardless of the owner's commitment to maintenance. Also, communities filled with brick structures and other thoughtfully designed buildings attract even more investment, creating a “snowball effect” that feeds economic development over decades.

Q. Why does the local government need to get involved? Don't neighborhood associations (through restrictive covenants), and private not-for-profits like Main Street organizations ensure high-quality development?

- A. Organizations like these have done great things for communities around the country. However, not one of them is as well-positioned as the local government to shape development in a consistent, broad, coordinated way. Because the local government administers zoning regulations and plans for new development, it is uniquely equipped to take the lead in ensuring that development fits the community's vision for the future. The local government also has the ability to apply its policies as law. Without the force of law at their disposal, other community groups have to rely on contracts, incentives, and recommendations to accomplish their goals for new construction. Even if they are successful in doing so, there is no guarantee that their goals are shared by the rest of the community.

Q. If local government favors a certain type of construction for the community, isn't it infringing on private property rights?

- A. Private property rights are an important tenet of our democratic society, and the potential for any local government policy to infringe on those rights should be carefully considered. The unique needs and characteristics of each individual community, and the potential good that the policy would do, need to be considered as well. Fortunately, local governments have at their disposal a wide range of policy options to match the general public opinion of virtually any community. For example, much can be achieved with a discretionary, incentive-based policy that rewards adherence to certain design and construction guidelines with tax subsidies or other incentives. There are trade-offs, however. Because this type of policy doesn't mandate that builders build with brick, for example, it is not likely to raise property rights controversies. However, not all builders will take advantage of the incentives and adhere to the guidelines, watering down the effect of the policy. This can be a

tricky balance for communities, but if done effectively, the community-wide benefits can be great.

Q. My community has never ventured past the most basic of zoning regulations. Where do we start?

A. Any community planning activity should start with an assessment of current conditions. Accurately assessing existing problems, citizens' attitudes, and developing a vision for the future of the community that most citizens share is critical to the rest of the process. Much of this may have already been done in your community when the zoning regulations were considered. If the assessment of current conditions suggests that the community would benefit from a policy that more stringently guides the design and construction of new development, consider the following steps:

1. **Choose a policy type.** Consider whether a mandatory or discretionary policy (or some hybrid of the two) would be most appropriate for your community. Mandatory policies that require builders to meet certain standards, such as facing new buildings with a certain percentage of brick, are most effective but can also be the most controversial. Discretionary policies, which simply outline the community's preferences for certain design features and construction types, leave all the final decisions up to the builder. These are not likely to be controversial, but also have little effect. Many communities that have chosen the discretionary route also provide incentives to builders for adhering to their policies. Incentives often include subsidies or tax abatement.
2. **Define the applicability of the policy.** Consider the areas in the community to which the policy will apply. Will the policy apply to the design and construction of single-family, detached homes? Or, will the policy only be applicable to commercial and multi-family construction? Will the renovation of old structures be subject to the policy? Your community may also have areas that are critical to its image and "sense of place." Community gateways, historic areas, and heavily traveled corridors are examples of these special places that can benefit from architectural standards, design guidelines, or other similar policies.
3. **Define the scope of the policy.** Consider how much the community should tackle with its policy. Guiding the architectural detail, landscaping, lighting, signage, and parking design of each building can greatly improve the character and appeal of a community, but a broad policy scope like this can also be burdensome to administer – especially for a community that is new to such policies. At the very least, though, the policy should address the exterior materials used on new buildings. A simple, easy to administer policy guiding the choice of exterior materials provides the most benefit to communities with the least hassle and expense.

Q. My community doesn't have many resources to commit to the administration of new, complex policies, but we need to take some action about the type of development we're starting to see. What are our options?

A. If you currently require that builders obtain a zoning or building permit for each new structure or renovation, you already have the resources necessary to "raise the bar" for the design and construction of buildings. As mentioned above, just stick to the basics when forming your community's policy – exterior materials. Create a list of required or preferred "primary materials" which most often include brick, stone, and other masonry products, and a list of allowable "secondary materials" to be used as building trim and accent. Establish a threshold for the use of primary versus secondary materials as a percentage of each building façade (90%/10% for example). Simply require builders to include the proposed exterior materials in this format (perhaps with a sketch) on their permit applications. It is then easy for the person reviewing the applications to quickly determine whether the local government policy will be satisfied by the proposed structure. This approach works equally well for mandatory and discretionary, incentive-based policies. In the latter case, a form for applying for the incentives may need to be created that asks for the exterior materials information.

Q. You mentioned incentives, such as tax breaks, for adhering to the policy, but I'm not sure my community wants to give up that revenue. Are there any other options for adding some "teeth" to an otherwise discretionary policy?

A. Yes. Some communities have successfully implemented so-called "alternative compliance" or "incentive zoning" programs to achieve their goals for the design and construction of development. These programs reward builders for adhering to the communities' design policies by allowing some variance from other regulations in return. For example, a community may be able to convince a builder to voluntarily face a commercial building with 100% brick if the community's minimum parking standards are eased. The builder commits less space and money to the parking lot and so is happy to alter the design of the building to meet the local design policy. This can be an effective approach for communities, so long as the trade-offs and conditions under which they may occur are clearly outlined in the communities' policies.

Q. I'm not sure my community should be regulating aesthetics. Is that what you're advocating?

A. There is definitely an aesthetic component to guiding the design of development with local government policy. Your community should seek legal advice as to whether your state specifically prohibits policies based solely on aesthetics. That said, reasons for guiding the design of development go beyond the superficial. Well designed and constructed buildings promote economic development and grow the local tax base.

When constructed primarily of brick, buildings are not susceptible to lapses in maintenance that may occur as the property changes hands. That means local governments spend less time and money dealing with blighted neighborhoods and properties. Brick buildings also repel wind-blown debris and suffer less damage in storms, a comforting fact for citizens as they live, shop, and dine in the Heartland's communities. Finally, strong policies guiding the design and construction of development can help communities grow in a smart, planned manner. Because of its fire resistance, structures built with brick can be closer together making smaller lots and increased density a real possibility. Citizens may even find the concept of higher densities more appealing when they know that neighboring buildings, whether commercial, single-family, or multi-family residential, will be held to a high standard of quality.

Q. How can my community get help with crafting and implementing design guidelines, architectural standards, or similar policies?

- A. Contact Heartland Brick Council. Our qualified and experienced community planning staff will provide free assistance with these and other related community issues. You can reach Heartland Brick Council at (877) 202-5554, or on-line at www.heartlandbrick.org.

Q. What is considered a “masonry” material?

- A. Conventional masonry materials include clay brick, concrete masonry units, natural and cut stone, manufactured stone, and traditional cementitious stucco applied over a masonry base.

Q. What about the stucco systems that are applied over rigid insulation? Aren't these also considered masonry?

- A. Absolutely not. These systems are generically referred to as External Insulation and Finish Systems or EIFS. These types of synthetic stucco have none of the advantages of true masonry, such as near zero maintenance, high durability and impact resistance, noise reduction for the interior, lower insurance costs, and low environmental impact.

Q. Doesn't brick construction greatly increase the cost of business?

- A. No. The cost increase, which may range from 5-15% more, depending on many variables, isn't a significant issue to most businesses with plans to build. The term “Brick and Mortar” is part of our vocabulary for a reason. That reason is that bricks and mortar are synonymous with quality, performance, attractiveness, and permanence. Businesses strive to communicate these qualities to their customers. New buildings by national firms such as McDonalds, Burger King, and Wendy's are building brick stores, as are regional convenience stores like Quik Trip, Kum 'N Go, and Casey's. Commercial construction demands quality; brick performs.

Q. Is brick really worth the cost increase?

- A. Definitely! Businesses open and businesses close every day. While no one wants to think of the consequences of a business ceasing its operations, the truth is, most storefronts outlive the original business occupying the commercial space. Eventually, that structure will be adapted to another tenant. The community that recognizes this fact and plans for the inevitable will be the community with attractive, high-quality storefronts and vibrant businesses. Customers frequent a business because it serves their needs. So too, brick or another masonry product is the choice for most businesses, because it serves their needs.

Q. Doesn't brick greatly increase the cost of a home?

- A. No. An all-brick home costs only 7% more than the same home clad in vinyl. [1] However, these initial costs are more than offset by homeowner savings in

maintenance costs, lower insurance rates, and an average 6% premium on resale [2] for a brick home over a comparable non-brick home.

Q. But even a small percentage increase in the cost of a new home could make that home unaffordable for some buyers. Is brick really worth it?

A. Yes, brick is really worth it. Buyers who have to stretch to purchase a home are usually the folks least able to spend money maintaining it. Therefore, lower cost housing should be built to withstand little or no upkeep. Brick never needs repainting and it won't crack, rust, peel, corrode, melt, buckle, warp, bend or dent like other siding materials. The most affordable house in the long run is a solid, brick structure. The homebuyer can amortize the additional cost of brick over the life of the mortgage, and will probably earn back the extra cost of brick in the first five to seven years due to lower home maintenance and insurance costs.

Q. Time is money in construction. Won't the addition of masons on the job site slow down construction and increase costs?

A. With the proper project management and scheduling, NO. Masons can begin their work as soon as the framing and sheathing are up. Other interior work such as plumbing, electrical, and interior finish can be taking place at the same time. Also, if a builder constructs several masonry structures concurrently, the masons' mobilization costs are greatly reduced. Example: If a builder puts just 500 brick on a home or business as an accent, that job should take a mason a half-day to complete. But it takes the mason another half day to mobilize and de-mobilize for the job. That means that 50% of the cost of a small masonry job is mobilization cost. If a builder puts 5,000 brick on a home or business, the mason will complete the job in approximately four days. Mobilization and de-mobilization of his crew and equipment will take another half-day. For the larger job, mobilization costs total just 15% of the total job cost. Brick for brick, the large job is much less expensive to complete than the small job.

Q. Doesn't the use of brick as a veneer reduce the net square footage of a home or business?

A. Slightly, but not as much as you would think. Consider a 2,000 square foot ranch home with outside dimensions of 40' by 50'. A wood-framed home with brick veneer (8" walls) would enclose 1,880 square feet, or 3% less area. To balance this, the brick home has improved sound insulation, lower upkeep and lower energy costs for heating and cooling.

Q. Doesn't the additional weight of the brick veneer result in higher foundation costs for a home?

- A. For a single or two-level residence, the weight of brick veneer results in an increase of 15-20% of typical vertical loads supported by the foundation. In most cases, the additional load is easily accommodated by widening the footing by the same proportion (approximately 2"). Brick can also be supported on a continuous steel angle through-bolted to the existing foundation. In those communities that have swelling soils, the additional weight of a masonry veneer will actually reduce the required length of drilled piers and reduce foundation costs.

Q. Won't mandating the use of brick tie the designer's hands? Won't all neighborhoods and businesses begin to look the same?

- A. Brick is one of the most versatile building materials available. Over 70% of the buildings in the world are built of masonry [3]. In the Heartland you'll find well-established, architecturally diverse all-masonry neighborhoods including Clayton, Missouri; Mission Hill, Kansas; and the Beavertdale neighborhood in Des Moines, Iowa. With its 10,000 shapes and colors, clay brick can achieve any architectural effect imaginable and combines beautifully with every other exterior material.

Q. Will architects and homebuilders have to scrap their existing models and redesign their plans for homes and businesses to include brick?

- A. No. In order to make brick cost-effective, the openings and wall dimensions should be some multiple of the brick's dimensions. For standard brick, this means that openings and wall dimensions should fall on a superimposed grid that is 8" in height and 4" in width. Minor adjustments to elevations to line up with the grid will ensure minimal cuts and improve the mason's productivity.

Q. Is brick good for the environment?

- A. Brick is hands-down the most environmentally-friendly building material available. Brick is simply fired clay, a material which is readily available, inexpensive and can be reused or recycled in making new bricks. The energy required to manufacture brick is from 300 to 1750 BTU per pound as compared to 19,200 BTU/lb for steel or 2,625 BTU/lb for wood [4]. Quality clay deposits are abundant in the Heartland and are for all practical purposes inexhaustible. Brick during a fire emits no toxins, nor does brick require periodic painting with toxic paints.

The greatest gift to the environment is brick's exceptional durability. Properly constructed, masonry buildings have been known to last for hundreds – even

thousands – of years. While other houses are being “scraped off” for new construction, a brick home can itself be recycled!

Q. Brick is usually a poor insulator. Won't adding a brick veneer actually increase the energy used to heat or cool a home or business?

- A. No. In fact, according to the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) [5], brick construction requires less insulation than other building systems because of its thermal mass. Because of its heavy weight, brick is slow to absorb or lose heat, reducing peak loads on heating and cooling systems. Low-mass walls, such as those with wood framing and wood siding, are unable to store energy in the wall. That leads to rapid temperature changes inside the home, and the need for additional heat or air conditioning. Simply put, brick homes keep you cooler in the summer and warmer in winter. Simple passive solar concepts can be used with brick to greatly reduce energy requirements in residential construction.

References

- 1 Masonry Advisory Council, Brick Value Builder Program. Note: An all-brick home is defined as one constructed with modular brick veneer, 8' high, four sides.
- 2 Marshall & Swift's Residential Cost Handbook, Marshall & Swift Inc. 1998.
- 3 Beall, C., “Why Build in Masonry?” Masonry Construction, Concrete Construction Publications, Inc., Addison, Illinois, Vol. 1, No 1, April 1998.
- 4 Environmental Resource Guide, American Institute of Architects, Washington D.C., 1994.
- 5 ASHRAE 90.2, Energy Efficient Design of New Low-Rise Residential Building, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Atlanta, Georgia.