Form-based codes — new approach to zoning

FORM-BASED CODES
AN EFFECTIVE TOOL FOR SMART GROWTH

As part of Smart Growth strategies, communities are examining development regulations to determine the extent to which the existing regulations may be posing an obstacle to Smart Growth. A great deal of attention is paid towards how development regulations have shaped our communities. An evaluation of development trends and the zoning requirements of many communities identified serious problems associated with uncontrolled urban sprawl and the loss of community character in suburban communities. In many instances, conventional zoning regulations are the major contributors towards creating the sprawling, automobile-oriented environment that dominates many Michigan communities.

Zoning was created in the early 20th century as a response to problems associated with overcrowding in central cities and the intrusion of heavy industry into retail and residential areas. Developed in the later years of the industrial revolution, zoning sought to address these problems through separating incompatible uses and limiting residential density. However, the evolution of zoning in concert with rapid suburbanization has had the effect of dispersing suburban development over large areas of land and creating a host of problems such as loss of farmland, increased environmental impacts, greater auto-dependency, inefficient provision of public services, and loss of community character within the suburbs. While there is a resurgence of interest in older, more traditional urban communities, existing zoning regulations make redevelopment of urban communities more difficult by applying suburban zoning standards.

RELIANCE ON DESIGN CONCEPTS AND PATTERNS TO PRESERVE COMMUNITIES

The Michigan Land Use Leadership Council (MLULC) recognizes the importance of training, education, and knowledge as the means and methods of managing land use change and community development.

The MLULC’s 2003 final report includes recommendations for planning and development regulation and encourages a public education campaign that includes concepts to help citizens better understand the implications of the continuation of land use trends and the benefits of better planned development in general. Additionally, it includes the specific benefits of alternative design schemes that focus on density rather than minimum lot sizes including: density-based zoning, new urbanism, and diverse socio-economic development patterns.

In an effort to continue the momentum and application of the MLULC’s recommendations, this issue of Smart Growth Tactics focuses on form-based codes (an outgrowth of new urbanism). A form-based code is a land development regulatory tool that places primary emphasis on the physical form of the built environment with the end goal of producing a specific type of “place.” The base principle of form-based coding is that design is more important than use. Where conventional zoning controls land use and focuses on separating land uses, form-based coding focuses on form as it relates to streetscape and adjacent uses.

This issue will provide: an overview of the principles associated with form-based codes; a discussion on the differences between conventional zoning and form-based codes; and introduce the structure of form-based codes and the process to developing form-based codes. The article will additionally provide examples of Michigan communities utilizing form-based codes and the potential pitfalls associated with their use.

Communities such as Grand Rapids are using form-based codes to document the urban fabric of their community and develop regulations that ensure that the most valuable qualities of the community are not only retained, but that new development fits into the character of the neighborhood, as well.
Larger setbacks and excessive parking requirements make many cherished urban buildings and spaces nonconforming.

Form-based codes focus land use regulation towards creating more livable communities. The approach uses traditional community character to create and maintain a more human-scale environment. Unlike conventional zoning that focuses on separating land uses, form-based code focuses on building form as it relates to streetscape and adjacent uses. Form-based codes allow for a mixture of land uses based upon the context of building form. As a result, compatibility of uses is achieved through design and orientation, instead of strict land use separation. Where conventional zoning focuses on use and development of an individual lot, form-based codes focus on the role that individual buildings serve in shaping the public streetscape. Form-based codes rely on design concepts and patterns intended to preserve the assets of a community, creating more livable environments and spaces.

PROBLEMS WITH EUCLIDEAN ZONING
The conventional form of zoning currently used throughout Michigan and the United States is what is commonly referred to as Euclidean zoning. This name is derived from the 1926 United States Supreme Court decision in *Euclid v. Ambler Realty Co.* (272 U.S. 365) to uphold the constitutional validity of zoning. Euclidean zoning has been in place in Michigan since 1921 with the City and Village Zoning Act, Public Act 207 of 1921. Enabling legislation for townships and counties soon followed in 1943.

When the city of Detroit adopted its first zoning ordinance in 1920, the city sought to address different problems than those of today. In 1920, overcrowded tenement housing and the intrusion of heavy industrial uses into commercial and light industrial areas created serious public health and welfare problems. These problems are at the root of land use separation and density limits which are the core of virtually all zoning ordinances today.

Michigan communities have experienced many changes over the past 80 years. With this, a new set of challenges in how to regulate development resurrects. Instead of concerns with overcrowding in cities, the focus is now on the negative impacts that uncontrolled sprawl has on the landscape of Michigan. And while the need to separate housing from heavy industry is still a valid concern, planners are now concerned with use-segregated suburbs, where it is not possible to walk to the corner store or for children to walk to school.

The New Urbanism movement (1980 to present) has attracted a great deal of interest in re-creating walkable, mixed-use neighborhoods. As an outgrowth of this movement, form-based codes are the latest technique to re-examine the underlying zoning principle of separating uses and instead provide new means to develop vibrant mix-use communities. This is accomplished by placing a strong focus on the creation of proper urban form, wherein a mixture of uses can flourish.

DESIGN STANDARDS AND OTHER ATTEMPTS TO IMPROVE LAND USE REGULATION
In response to the limitation of Euclidean zoning, a number of zoning techniques have been created with varied levels of success. These include mixed-use planned unit developments, cluster development, performance zoning, and design standards.

Planned unit developments (PUD) have been used for many years as an effective means of developing coordinated larger sites. (The first evidence of a PUD was created in 1949 in Prince Georges County, Maryland.) However, in many instances, what is intended to be a “mixed-use” development actually ends up being “multiple-use,” where there are separate and distinct areas of land uses that are not truly integrated into a mixed-use development. The other limitation of a PUD is that it is designed primarily for the development of larger sites, and with few exceptions, is not well suited for use on individual lots in an urban environment.

Clustered open space developments have had success in preserving open space and natural features. This type of development tends to offer recreational amenities not available in conventional subdivisions. While open space developments are a significant improvement...
Design standards can improve the appearance of the building and site landscaping, but are not effective in changing the underlying form.

from conventional zoning, the developments still tend to be separated, single-use tracts of land.

Many communities have adopted design standards in a variety of forms. Some have adopted separate design guidelines or relied on the guidelines contained within the master plan. However, recent court decisions have held that a community cannot enforce requirements that are not specified in the ordinance.

Instead of guidelines, design standards for architectural and landscaping requirements are now becoming more common place within zoning ordinances. Some communities have adopted architectural regulations that require use of high-quality building materials. Others include discretionary standards whose result can be unpredictable and run the risk of inconsistent application. While these design standards have been effective in improving the appearance of buildings and landscaping, the standards fail to create meaningful change in the urban form – the end result is usually aesthetically-pleasing sprawl.

**PRINCIPLES ASSOCIATED WITH FORM-BASED CODES**

The Form-Based Codes Institute defines form-based codes as “[a] method of regulating development to achieve a specific urban form. Form-based codes create a predictable public realm by controlling physical form primarily, and land uses secondarily.” Form-based codes go beyond conventional zoning by addressing the relationship of the building to the streetscape and the proper relationship between buildings in order to define a desired urban form.

First and foremost, form-based codes are place-based. The codes are adapted to fit the unique characteristics of a community and intended to require that new development fit within the context of the existing community and reinforce a unique sense of place.

Next, form-based codes allow for the unique ecology of a community by permitting a mixture of uses. The codes reflect the importance of the relationship between various uses and building types to one-another, as part of an integral neighborhood and overall community.

Form-based codes are purposeful and not reactive. Conventional zoning tends to be reactive in that it restricts and focuses on preventing development that would be damaging to neighboring properties or the community (i.e. zoning tells you what you cannot do). Form-based codes, on the other hand, document the desired form of development and prescribe building form requirements to achieve the desired community vision.

Form-based codes connect the urban form and land use by providing for specific building types that are suited for the appropriate land use. They also relate the use and building type to the streetscape to comprehensively address the desired urban form for the neighborhood.

Form-based codes provide for development that is compact, mixed-use, and pedestrian friendly to create livable neighborhoods and healthy vibrant communities.

Farmington has adopted a form-based code as part of the central business district that reflects the traditional urban fabric that the community values.
And finally, form-based codes are graphic and designed to be easy to use and understand.

**KEY DIFFERENCES BETWEEN CONVENTIONAL ZONING AND FORM-BASED CODES**

1. Conventional zoning is use-based, with a community divided into zoning districts which segregate land uses. Form-based codes de-emphasize use and divide a community into neighborhoods or specific street corridors, that have a distinct and consistent character, while allowing a mixture of compatible uses.

2. Conventional zoning attempts to create uniformity throughout a district by applying uniform intensity parameters such as setback, height, density, and floor area ratios. Form-based codes embrace diversity in neighborhoods by reflecting different standards for different types of buildings. Because use and building type are tied together, the standards ensure the building form relates properly to the streetscape and adjacent uses.

3. Where conventional zoning focuses on use and dimensional requirements, form-based codes focus more on the building form and how it relates to the public streetscape. In order to define the streetscape, form-based codes often prescribe build-to-lines where buildings are required to be set a specific distance from the front lot line. Conventional zoning uses minimum setbacks to create building envelopes; however, the ultimate location and form of the building within the envelope is unpredictable. As a result, conventional zoning has a primary focus on the lot and pays little to no attention to the streetscape. Form-based codes take a more holistic approach by considering the building form as it relates to the streetscape.

4. Conventional zoning has limited ability to effect change, as it tends to prohibit development that is determined to be inappropriate. Form-based codes are more prescriptive and do a better job of describing the desired urban form. The result is the development of a neighborhood that encourages pedestrian activity, social interaction, and local investment.

**WHAT IS REGULATED**

An underlying premise of form-based codes is that the public realm (i.e. the streetscape) is defined by the buildings that line it. Because of this, building placement and site orientation are paramount in the form-based code. The front building line location is based upon the type of street frontage. In a traditional downtown setting, there would be a “zero front lot line” or “build-to” requirement with all parking required to be at the rear of the building. In a residential neighborhood, there would be a requirement that the front of a residence be placed at a specific setback from the front lot line.

Once the streetscape has been defined by the building placement, the building elements can be considered to ensure that the building relates properly to the streetscape and adjacent buildings. In a business district, this would include requirements for doors and windows...
along the sidewalk, window articulation on upper floors, building expression lines, and other details such as cornices. In residential areas these may be requirements for front porches or a limitation on front-loaded garages.

While uses are secondary to building form, they are nonetheless still important. Similar to a conventional zoning ordinance, different uses are allowed in each zone or district. Form-based codes allow a greater mixture of uses, but tie the use to the required building form. Unlike most conventional zoning ordinances, form-based codes also regulate use on the vertical plane. In a downtown setting, there may be a requirement for retail uses on the first floor and an allowance for residential or office on upper floors. There may also be a requirement along a downtown “Main Street” for mandatory retail frontages on the first floor to create a strong synergy between retail uses and an interesting environment for shoppers.

Form-based codes also contain regulations for accessory structures and uses. This includes specific requirements for the placement and design of parking lots. Other elements such as accessory buildings, loading areas, waste receptacles, screening walls, landscaping, and lighting are also addressed.

Another major improvement in the form-based code approach is that it goes beyond just regulating the site, by tying together the site and the public realm (i.e. the streetscape). Building regulations relate to design requirements for streets, sidewalks, on-street parking, street trees, and public spaces such as plazas.

An important aspect of a form-based code is that all of the regulations be tied together. The use is tied directly to the building type. The building type in-turn dictates form and building elements. The building form also relates to the street frontage, tying all of the elements together.

HOW FORM-BASED CODES ARE STRUCTURED

The form-based code is based upon a regulating plan. A regulating plan is analogous with and functions similarly to a zoning map, except that it provides a greater amount of specificity to the street types, block dimensions, and building lines. Regulating plans may also indicate the locations for parks, squares, and plazas. For downtown shopping districts, the regulatory plan may indicate a mandatory retail frontage.

The zone on the regulating plan permits specific uses and corresponding building types. Building types may include single family dwellings, townhouses, live-work units, retail buildings, and others. The underlying principle is that the use, building, and street are interrelated.

Based upon the zone and the building type proposed, there are specific placement and building envelope requirements. These graphically depict building lines, setbacks, building height, and parking lot location. These requirements can be compared to the schedule of area and bulk requirements in a conventional zoning ordinance, except that they rely more on graphics to depict requirements and tend to be more prescriptive (e.g., building lines state exactly where the front of the building is required to be placed, instead of stating minimum setbacks). Building height is often defined in both minimum and maximum measurements to ensure that the building is tall enough to define the streetscape, but not so tall that they overwhelm other buildings.

Building elements are required relative to the type of building proposed. These include standards for building materials, doors and windows, building expression lines, front porches, etc. Note that most form-based codes do not regulate architecture – if the building has the proper form, then the architectural style of the building is less important. However, it may be appropriate to include architectural regulations in a

POTENTIAL PITFALLS WITH FORM-BASED CODES

While form-based codes are effective tools that can help realize a community’s vision, they are not a panacea that will cure all problems. There are some limitations of form-based codes and some problems that the codes may present to local communities:

Form-based codes tend to cost two to four times that of a conventional zoning ordinance. This is because of the upfront effort required to complete a detailed inventory of the community’s existing urban form, the additional public involvement, and design work that goes into creating the regulating plan and the code.

Form-based codes require an illustrative regulating plan that is often based upon some form of urban design plan. This type of plan tends to be more involved than a zoning map.

Since Michigan streets are often regulated by separate authorities, there may be limited ability for a form-based code to regulate existing public streets. This may be more of a problem in townships, where all of the roads fall under the jurisdiction of the road commission, and less of a problem in cities that control their own city streets.

Form-based codes are prescriptive and very rigid, which may be viewed by developers as a limitation on what they can do with their property and a limitation on an architect’s creativity.

There is a lack of specific enabling legislation as the Michigan Zoning Enabling Act (Public Act 110 of 2006) does not specifically provide for form-based codes. However, these types of codes are being developed throughout the United States and in other states, without specific enabling legislation.

A criticism of new-urbanism (which form-based codes are closely tied to) is that it is not environmentally sensitive; however, by developing more compact communities, the amount of land consumed by urban sprawl and dependence on the automobile is reduced. And unlike much of the new-urbanist developments that are “new towns,” advocates of form-based codes have used form-based codes more as a tool to facilitate infill and redevelopment within existing urban communities.
How do form-based codes work in the real world?

Form-based codes have been adopted by communities throughout the country. Some applications in Michigan are as follows:

**Downtown Farmington:** As part of the City of Farmington’s Downtown Development Plan, there is a detailed urban design plan that includes specific downtown design standards. The city wanted to promote redevelopment within the existing downtown while ensuring that the zoning regulations would be reflective of the existing community character and the recommendations of the plan.

A form-based code was prepared for the Downtown Zoning District to encourage redevelopment that embraces the historic character of Farmington, including traditional storefronts and a pedestrian scale environment. The form-based code requires buildings be built to the front lot line and parking lots be located in the rear. In order to maintain a well-defined streetscape, maximum and minimum building heights are included. Detailed building design standards to ensure that buildings relate properly to the streetscape at a pedestrian scale are included. Not only does the ordinance permit a vertical mixture of uses, but it builds in incentives to encourage mixed-use developments.

**Genoa Town Center.** As part of its master plan, Genoa Township identified a location for a new Genoa Town Center. The new town center location was centered on one of the few remaining large vacant areas along the Grand River Avenue corridor between Brighton and Howell. The township wanted to see a high quality, mixed-use development for this site that would create a new town center and also serve as a catalyst for redevelopment of the older commercial properties in the immediate area. As part of the master plan process, the township developed a detailed urban design plan for the new town center area.

The Genoa Town Center is planned to become a mixed-use town center with local businesses, neighborhood service establishments, and traditional residential neighborhoods. Residential uses will provide a variety of housing types including apartments on upper floors above commercial uses, traditional townhouses, and single family homes on smaller lots. This area will be integrated into a pedestrian-friendly, walkable area with sidewalks connecting all uses and community parks and plazas.

To implement the Genoa Town Center, a form-based code overlay zoning district was adopted that requires all new development to follow strict requirements for a more traditional form of development that is more characteristic of a small town. The overlay zone not only allows for a mixture of uses, but has incentives to encourage truly integrated mixed-use development. The overlay zone includes building placement requirements that create traditional, pedestrian-friendly streetscapes and reduce the dominance of the automobile. It also includes detailed design standards for buildings, streetscapes, and public open spaces.

**Grand Rapids:** The City of Grand Rapids is nearing completion of an ambitious project to convert its 1967 zoning ordinance to a modern form-based code. It was clear that simply updating the original ordinance would not further the goals of the city’s new Master Plan: a Plan that emphasizes neighborhood preservation while transforming the landscape and incentives for quality design and development.

An extensive public outreach effort revealed the desire of neighborhood groups, business associations, and others, to develop flexible, user-friendly land use regulations. Accordingly, the code includes a number of unique elements: increased use of administrative approvals, flexible nonconforming use and building regulations, and incentives for quality design and development.

The language of form-based codes is developed with an eye toward the specific physical plan. This includes a broad range of regulations that encompass building alignment toward the street (setbacks, building orientation), spaces between buildings (side setbacks, separation between disparate uses), and heights, each of which can be described in ranges of acceptable values.

This effort represents the most significant attempt to introduce form-based codes for a city the size of Grand Rapids in the state of Michigan, and in much of the country as well.

**Is a Form-Based Code Right for Your Community?**

Form-based codes can be an effective tool that can be used in most communities. Some communities are appropriate for a community-wide form-based code, while others should utilize this new technique for certain subareas. Most importantly, the community must have a commitment to create a better place and undergo the process of gaining consensus on the desired urban form of the community. Form-based codes can be an effective tool in...
Form-based codes also include many of the other regulations of conventional zoning ordinances such as definitions, administrative procedures, zoning board of appeals, nonconforming, etc.

HOW APPROVALS ARE PROCESSED

Because the regulating plan sets forth detailed and predictable building form requirements, approvals that are in accordance with the regulating plan can be approved administratively. This is possible because the unpredictability and greater discretion typically involved with conventional zoning does not exist with form-based codes. The idea is that if a developer is willing to follow all of the detailed requirements of the regulating plan and the form-based code, there should be little, if any, room for discretion, and the approval should be handled administratively. However, if the developer wants to deviate, then approval is required before the planning commission. Essentially, form-based codes make it easy to do the right thing, and harder to deviate from the code and regulating plan.

Because the regulating plan and form-based code are so detailed, the code must also anticipate situations that don’t fit requirements or where unique development forms are proposed. Typically, a form-based code can allow for three levels of departure. Administrative departures would be minor in nature and can be approved as part of the administrative approval process. The authority for administrative departures needs to be specifically spelled out in the code, such as allowing the planning director to substitute landscaping in place of a screening wall. Major departures that deviate from the regulating plan would require approval by the planning commission, such as allowing a front façade that does not meet the building design requirements. This could be evaluated by the planning commission based upon a set of standards that relate to the regulatory intent. A third level of deviation should also be built into the code that requires a variance from the zoning board of appeals, such as departures from the build-to line or exceeding height limits. The variances would have to be reviewed based upon the standard tests of practical difficulty.

PROCESS IN DEVELOPING A FORM-BASED CODE

When embarking on a significant change in how a community regulates development, the first step is to have a commitment to creating better places. This should go beyond just a desire for change - the desires of the community should be articulated through the master plan or other document, such as a downtown plan, so that there is an underlying basis to move forward.

A determination needs to be made on the type of code desired and the geographic area to be covered. The form-based code could be integrated into a community-wide ordinance, or perhaps applied to a specific corridor, neighborhood, or business district.

Next, there needs to be an inventory and analysis of existing conditions to document the existing “forms” of
the community. This inventory can be fairly labor intensive and involves detailed analysis of lot widths, setbacks, building heights, etc. With a good understanding of the existing “forms” of the community, a public process should then be conducted to gain a consensus on the existing community quality that should be maintained or new ones to be achieved. This is often done through a design charrette or workshop.

From the inventory, analysis, and public process, detailed urban standards are developed for features such as streets, blocks, building placement, and land use. Building form standards will also be developed for the various building types within the community. These standards are then developed into an ordinance and applied to a regulating plan.

APPLICATIONS OF FORM-BASED CODE
Form-based codes can be applied to a variety of geographic areas, from a specific subarea, such as a downtown, to the entire community. Form-based codes can also be used as tools to preserve the character of an area or as mechanisms of change to transform an area.

The most common application of form-based codes has been to subareas. The codes are used in existing downtowns and historic districts in order to preserve and enhance the traditional character. They are also used to preserve the character of specific neighborhoods and insure that new infill development is compatible with existing homes. Additionally, they are being used as effective tools to transform out dated strip commercial corridors into new town centers.

While form-based codes have been applied most often to specific subareas, more communities are looking to adopt form-based codes on a community-wide basis. National experts in form-based code have recognized that a pure form-based approach is not going to be the best application in all areas of a community - there will still need to be zoning districts for industrial uses such as truck terminals, foundries, and hazardous uses. There may also be areas within the community that are more appropriate for automobile-oriented uses such as dealerships and fast-food restaurants. For this reason, community-wide form-based codes are going to be a hybrid, with some areas regulated by form-based zoning districts and other areas by more conventional zoning districts.

Conclusion
Form-based codes are land development regulatory tools that places primary emphasis on the physical form of the built environment with the end goal of producing a specific type of ‘place.’ The codes assert more control over a community’s form and lead to improvements in the way the community functions. For more information on form-based codes visit www.formbasedcodes.org.

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