

FORM-BASED CODE

General Descriptions and Applications

What is Form-Based Code?

Form-based codes address the relationship between **buildings and the “public realm”** (which is to say streets, open spaces and civic buildings and places), the form and mass of buildings in relationship to one another, and the scale and type of streets and blocks. The regulations in form-based codes are presented in both written and diagrammatical formats, and keyed to a regulating plan (zoning district map) that designates the appropriate form, scale and placement of development, streets, and civic spaces

In contrast, conventional zoning regulations focus on the segregation of land use types, permissible property uses, and the control of development intensity by different zoning districts through simple numerical parameters such as floor area ratios (FAR), density, height limits, lot coverage, and minimum setbacks and frontages.

Street design standards are often absent in zoning regulations (in MA they are typically found in the Subdivision Regulations), and where they are defined they are typically simple r-o-w standards intended strictly for construction purposes with few of any requirements regarding streetscape treatments and intermodal accommodations (i.e. pedestrians, bicyclists, and transit). Often there are few options to choose from and right-of-ways tend to be wide and out of context in certain areas of the community targeted as mixed use walkable environments. FBCs are often accompanied by a hierarchy of street and streetscape design that achieves these criteria.

Conventional zoning regulations also tend not to have **civic or open space standards** that define a variety of spaces intended for different forms and public gatherings and active/passive recreational uses. Conventional zoning regulations may have percent lot coverage requirements or open space requirements in PUDs but often do not address how these spaces should take shape and thus enhance vitality in the district.

Not to be confused with design guidelines or general statement of policy, form-based codes are regulatory, not advisory. The potential benefits of adopting form-based code include the following:

- Ease of use with effective diagramming of development standards
- Predictability in the physical outcome of development
- Higher quality development as a result of well defined development standards
- Stronger connections between development plans and regulations
- More efficient approval process.

In summary, form-based codes are drafted to achieve a community vision based on time-tested forms and patterns of urban planning and design. Ultimately, a form-based code is a tool; the quality of development outcomes is dependent on the quality of goals, objectives, and strategies defined in the community plan and implemented through land use regulations.

The Origins of New Urbanism and Form-Based Code¹

Form-Based Code (FBC) is a relatively new and innovative method of **managing growth and shaping development to achieve a specific urban form, pattern and mix of uses** as preferred by the community.

The **Congress for the New Urbanism (CNU)** was officially founded in 1993 by a group of town planners and architects dedicated to revitalizing and promoting walkable, mixed use, sustainable communities. The founders described the principles of Smart Growth in the **Charter of the New Urbanism** which promotes the hallmarks of New Urbanism, including:

- Livable streets arranged in compact, walkable blocks.
- A range of housing choices to serve people of diverse ages and income levels.
- Schools, stores and other nearby destinations reachable by walking, bicycling or transit service.
- An affirming, human-scaled public realm where appropriately designed buildings define and enliven streets and other public spaces.

Today, CNU is a leading organization in promoting mixed-use neighborhood development and healthier living conditions.

CNU members began working individually and collectively in the late 1980s and early 1990s to formulate, test and refine alternatives to conventional zoning. They began to focus on community development patterns and their variations in scale and intensity rather than in the differences between land uses. The results of the New Urbanist research of zoning alternatives first appeared in the Southeast United States followed shortly thereafter in the West on large mixed use development projects.

The Development Code for **Seaside**, Florida prepared by Duany Plater-Zyberk (DPZ) in 1981 was the first modern day application of form-based coding. It regulated development in this new planned development by specific building and lot types. The entire code was presented graphically on one poster.

During the late 1980s and early 1990s, several cities and counties in the southeast adopted form-based code in the form of **Traditional Neighborhood Development (TND)** ordinances. Over the past 10 years, form-based code has evolved from applying almost exclusively to “greenfields” to existing developed areas such as downtowns, village centers and highway corridors. Today there are many examples for form-based codes applied city-wide as well as districts targeted for revitalization and redevelopment.

¹ From ***Form-Based Codes: A Guide to Planners, Urban Designers, Municipalities, and Developers***, John Wiley & Sons, 2008, by Daniel G. Parolek, AIA, Karen Parolek, and Paul C. Crawford, FAICP

Common Goals and Principles of Form-Based Code

Most form-based codes are designed to achieve the following community goals and Smart Growth Principles:

- **Based on a Community Vision** - Form-Based Code is often used as a specific method of regulating development to achieve a community vision and urban form. FBCs typically follow the preparation of a master plan or strategic plan that provides for future land use and development objectives in a given neighborhood, corridor, or district.
- **An Implementation Tool** – FBCs are designed to achieve a community vision based on local preferences for forms of development. The quality of future development and redevelopment is dependent on the quality and objectives of the community's plan. The FBC translates this plan and is calibrated to fit the local context and vision for the future.
- **Compact Development** – FBCs typically focus on creating a walkable urban environment and conserving land and energy through reduced automobile usage and advanced techniques such as stormwater infiltration.
- **Focus on Physical Form vs. Land Use** - Form-based codes create a predictable public realm by controlling physical form primarily, with a lesser focus on land and building use. The regulations and standards in FBCs are presented in both diagrams and words.
- **Diversity and Mixed Uses** – FBCs are geared to prevent homogeneity through a variety of building types, street types, open spaces, and land uses providing for people of all ages and every form of mobility. FBC typically define the horizontal and vertical mix of uses rather than separating them like many conventional regulations. Potential conflicts between uses are typically addressed through frontage zones and performance standards rather than separation.
- **Public-Private Relationship** - FBCs address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets, blocks, and civic spaces.
- **Complete Streets** – FBCs are typically geared to creating densely interconnect street network, dispersing traffic and providing convenient routes for pedestrian and bicyclists.
- **Creating an Outdoor Room** – FBCs standards for frontages, building setbacks and heights are typically geared to create a combination of development and streetscape design that shapes the public realm and provides street enclosure as desired by the community.
- **Vibrant Civic Spaces** – FBCs include standards to create high quality public and civic spaces with relationships to buildings and streets such as plazas, squares, and neighborhood parks.
- **Transect Based Zoning** – FBC is based on Transect Districts which are similar to the zoning districts in conventional regulations except that in addition to the typical building use, density, height, and

setback requirements, other elements of the existing or intended habitat are integrated, including those of the private lot and building and the fronting public streetscape.

Typical Components of a Form-Based Code

Common components of a Form-Based Code include the following:

- **Regulating Plan** – A master plan or zoning map that designates the appropriate form, scale and placement of development, streets, blocks, and civic spaces. FBCs are keyed to a regulating plan which addresses the character of the public realm as well as private development rather than only distinctions in land-use types which is typical in conventional zoning district maps.
- **Building and Lot Types** – The FBC defines the configuration, design features, and functions of building types that frame the public realm. Buildings are typically placed close to the sidewalk with frontage variations based on types of use (civic, residential, mixed use).
- **Frontage Types** – These standards define how different types of buildings (i.e. civic, residential, commercial, or mixed use) address the public realm along their frontages. Some examples may include storefronts, arcades, galleries, stoops, and forecourts.
- **Allowable Uses and Functional Standards** – The FBC defines the horizontal and vertical mix of uses rather than separating them like many conventional regulations. Potential conflicts between uses are typically addressed by performance standards and **frontage zones** which will define the types of uses permitted at ground level to accomplish certain planning objectives such as creating a cluster of retail or restaurant uses.
- **Dimensional and Placement Standards for Lots and Buildings** - The Regulating Plan (or zoning map) will indicate a “build-to-line” or minimum/maximum building setbacks. Buildings are typically required to be placed close to the sidewalk to improve vitality and walkability with variations based on types of use (civic, residential, commercial, or mixed use).
- **Development and Design Standards** – Design standards in FBCs will usually address how building facades present themselves to the street and other public spaces including the front entrance. Front façades, fenestrations, entrances, articulation, material courses, height stepbacks, outdoor activities, and lighting are typical design elements that are addressed to create an attractive street wall and an interesting pedestrian environment.
- **Thoroughfares Design Hierarchy** – FBCs provide functional specifications for thoroughfares which are often arraigned in a design hierarchy and can range from large boulevards to alleys to pathways. Design standards are usually geared to creating pedestrian friendly “complete streets” through the assemblage of key functional characteristics (e.g., sidewalks, travel lanes, street trees, street furniture, transit facilities, bike facilities, lightings, etc.). Thoroughfares are designed to interact with surrounding buildings and create an attractive framework for private investment.

- **Public and Private Open Space Types** – The integration of vibrant civic and public spaces into neighborhoods and town centers is an essential component of the urban landscape. FBCs provide a palette of possible civic spaces such as neighborhood parks, plazas, squares, playgrounds, and community gardens.
- **Flexible Parking Standards** – FBC prescribes the location and design of parking areas and allow (or require) shared parking and utilization of public parking when determining the number of spaces needed.
- **Administrative and Review Process** - FBCs prescribes clear application and development review process. A common advantage of FBCs is that more review processes can be conducted administratively or through a simple site plan review because development outcomes are more predictable.
- **Definitions** - A glossary to ensure the precise use of technical terms.

Optional components of form-based codes include the following:

- **Architectural Standards** - Regulations controlling external architectural materials and quality.
- **Landscaping Standards** - Regulations controlling landscape design and plant materials on private property as they impact public spaces (e.g. regulations about parking lot screening and shading, maintaining sight lines, ensuring unobstructed pedestrian movement, etc.).
- **Signage Standards** - Regulations controlling allowable signage sizes, materials, illumination, and placement.
- **Environmental Resource Standards** – Sustainable development and low impact design (LID) regulations controlling issues such as storm water drainage and infiltration, development on slopes, tree protection, solar access, etc.
- **Annotation** - Text and illustrations explaining the intentions of specific code provisions.

What is the Key Difference between FBC and Conventional Zoning Regulations?

The key difference between Conventional Zoning Regulations and Form-Based Code is that development is regulated by type of use rather than building location and relationship to public space, streets and surrounding buildings. For example, conventional zoning regulations typically **segregate land use types** and permissible property uses by zoning districts where form-based codes would provide for a broader mix of uses while focusing on the placement of buildings where certain types of uses would typically accumulate.

Conventional zoning regulations also control development intensity by different zoning districts. The intensity of development is usually controlled by **simple (and often arbitrary) dimensional parameters**

such as floor area ratios (FAR), units per acre, height limits, maximum lot and building coverage, and minimum setbacks and frontages.

Common Characteristics of Conventional Zoning Regulations

- Focus on the separation of uses from one another.
- Regulate building placement in an abstract manner, often without consideration or relationship to adjacent properties.
- Setback requirements are typically not site specific resulting in limited control over how the public space of the street is developed.
- Housing types typically differ by zoning district resulting in the separating people by income or stage of life. This often results in people having to move if their family grows or shrinks.
- Typically do not address the relationship between the building frontage (façade and space) and adjacent street.
- The number of parking spaces is based on building square footage and use often without consideration for available transit, public parking (on and off-street), and shared parking opportunities.
- Street design is typically not included in zoning regulations resulting in unfriendly walking environments and poor connections from one place to another.
- Civic and open spaces are typically not defined or provided for except in a general manner such as through lot and building coverage.

What is the Difference between a Regulating Plan and Zoning District Map?

Conventional zoning districts are typically defined by a simple peripheral boundary which encompasses the permissible uses and applicable dimensional requirements and functional standards in a given geographical area. Zoning districts typically address only private development and their potential impacts and access to public infrastructure.

Form-based codes are keyed to a **regulating plan** that designates the appropriate form, scale and placement of development, streets, and civic spaces. The regulating plan is usually a detailed master plan or zoning map of the district (or transect) designating the locations where different building form standards apply, based on clear community intentions regarding the physical character of the area being coded. The Regulating Plan also provides the structure for the public realm including the size and location of blocks, appropriate locations and types of thoroughfares, and location and forms of public and civic spaces. The regulating plan may also include **frontage zones** which prescribed the horizontal and vertical mix of uses in key areas.

What is a Hybrid Form-Based Code?²

“Hybrid codes” integrate conventional zoning regulations with graphic urban design standards that typically address setbacks, parking placement, building bulk, materials, and architectural features. The

² From the article “*Hybrid Codes Versus Form-Based Codes*” by Kaizer Rangwala in *New Urban News*, April-May, 2009

use of graphical design standards does not make this hybrid a form-based code (FBC) and may not produce the desired physical outcome for a given district. While urban design standards within a conventional zoning framework are beneficial, they may not be enough, and are not a viable alternative to FBCs.

Creating a hybrid zoning bylaw/form-based code that has form-based and use-based standards side by side without compromising the principles of form-based code can be a challenge. However, most form-based codes being created today are hybrid codes, as few cities and towns are prepared to fully replace conventional zoning regulations.

Some of the key topics in preparing a hybrid form-based/conventional zoning code include the following:

- The process for deciding where FBCs should apply and where to leave the use-based zoning;
- How to structure the table of contents to ensure that walkable urban development (as regulated by the Form-Based Code) is the default or is as much of a default as drivable suburban development;
- Assessing existing regulations and effectively calibrating the FBC elements;
- Integrating the visioning public process (i.e. Visual Preference Survey, design charrette, etc.) into the code update;
- Different ways to apply the land use transect without compromising it;
- How use tables within transect/form-based zones need to be different than use-based zones; and
- The role of subdivision standards and ways to address variances/special permits.

What are the Potential Benefits of FBCs?

The potential benefits of adopting form-based code include the following:

- **Stronger Connections Between Development Plans, The Community's Vision and Land Use Regulations** - FBCs can provide broader public support because are typically based on a community vision and plan, and allow citizens to see what will happen and where leading to a higher comfort level about greater density, for instance.
- **Can be Calibrated to Existing Desirable Conditions** - FBCs work well in established communities because they effectively define and codify a neighborhood's existing "DNA." Vernacular building types can be easily replicated, promoting infill that is compatible with surrounding structures.
- **Predictable Physical Outcomes of Development** - Because they are prescriptive (they state what you want), rather than proscriptive (what you don't want), form-based codes (FBCs) can achieve a more predictable physical result. The elements controlled by FBCs are those that are most important to the shaping of a high quality built environment.

- **Encourages Diversity** - Because they can regulate development at the scale of an individual building or lot, FBCs encourage independent development by multiple property owners. This eliminates the need for large land assemblies and the megaprojects that are frequently proposed for such parcels.
- **Higher Quality Development** - The built results of FBCs often reflect a diversity of architecture, materials, uses, and ownership that can only come from the actions of many independent players operating within a communally agreed-upon vision and legal framework.
- **Effectively Replaces Design Guidelines** - FBC eliminates the need for design guidelines, which are difficult to apply consistently, offer too much room for subjective interpretation, and can be difficult to enforce. They also require less oversight by discretionary review bodies, fostering a less politicized planning process that could save time and reduce the risk of legal challenges.
- **Creates a Supportive Relationship between Private Development and The Public Realm** – Because specific standards are established for street design and civic/open spaces a more attractive, safer, and walkable environment is often created.