A HISTORY, EVOLUTION AND APPLICATION OF FORM-BASED CODES

by

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Abstract

Form-based codes are gaining in popularity and provide a much needed and adequate alternative to more commonly used zoning regulations. Analysis shows the inadequacies and negative consequences that zoning regulations have created over the past 100 years of use within the United States. The focus being that traditional zoning regulations create undesired and unsustainable communities. A progression of form-based codes from their origins to the use of form-based codes today shows how they can be used to influence and shape the built environment. Further examination of the evolution of form-based codes reveals the guiding principles and elements of more modern codes. When compared to traditional zoning regulations, form-based codes can assist in designing a better quality built environment by creating more conscious, significant and sustainable places and spaces within our communities. By looking at current ways in which form-based codes are implemented we can begin to define best management practices and speculate on the future of form-based codes.

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CHAPTER 1 - Introduction

Conventional Development Regulations

The most common form of development regulations used in the United States today are zoning regulations. Traditional zoning methods seek to regulate development by separating residential, commercial and industrial uses, and by implementing density controls and proscriptive standards for development features per each land use classification. Such proscriptive standards define such attributes as density, building heights and setbacks, and generally limit regulations to define what is not wanted for development patterns. Proscriptive standards do little to control or influence the urban form. (Katz)

According to David Rouse's and Nancy Zobl's article on form-based codes, the first forms of zoning regulations were instituted in New York City in 1916, which established building requirements to permit light and air into structures and prevent overcrowding (Rouse & Zobl, 2004). The intent then and what remains to be true now was to develop standards to protect the health, safety and welfare of the public. As Emily Talen describes in her historical examination of form-based codes, "zoning was designed to remedy the negative externalities of the industrial city" (2009, p. 153). They sought to "[stabilize] residential property values while keeping industrial areas efficient and functional" (Talen, 2009, p. 153). The use of zoning regulations continued to progress throughout the 1920s and were fully legitimized for governmental regulatory use in the 1926 Supreme Court case of the *Village of Euclid vs. Ambler Realty Co.*; thus, because of this precedence setting case conventional zoning is also known as Euclidean zoning (Rouse & Zobl, 2004). The case determined, among other findings, that zoning regulations were simply an exercise of the government's police power.

As zoning requirements became part of everyday governmental development regulations and communities continued to grow across the United States, conventional zoning models attempted to adapt to expanding communities and new forms of development. Such adaptations included features like floor-area ratio regulations which are often used to replace height and setback requirements and the use of overlay zoning districts to be used as alternatives to the underlying zoning district. While planners have attempted to adjust zoning standards and

regulations to fit with new development, it seems that there is an underlying defect to zoning regulations that makes them inadaptable to modern needs and new forms of development.

After almost 100 years of the use of zoning regulations in the United States, planners, designers and developers alike are realizing that there are shortfalls to such regulations. Some zoning regulations are too restrictive and others are not comprehensive enough. Generally, designers, developers and planners are noticing that zoning regulations might be adequate for regulating use standards, but they do not do enough to regulate design or assist in creating unique, quality spaces and places through influencing the form of the built environment. Because they are proscriptive regulations and thus define what is not wanted, the form of development is not clearly defined and is therefore left up to each individual implementer. Rouse and Zobul define some of the some of the negative consequences of traditional zoning as the loss of traditional urban form, the proliferation of commercial strip developments, excessive consumption of land and incompatible development types (Rouse & Zobul, 2004). While zoning regulations have somewhat adapted to current development trends through the use of more flexible "zoning" districts like overlay and floating zones, conventional zoning does little to accommodate today's development trends and needs for the future. A more encompassing alternative is needed.

One possible alternative is form-based regulations. Form-based codes can be defined as prescriptive regulations, because they attempt to regulate based upon contextual elements and seek to define what form is wanted for the built environment; something that zoning regulations do not do. Overall code based regulations seek to codify development regulations in a manner in which zoning regulations cannot, and they are more flexible thus they can accommodate more desired forms of development. Unlike similar design guidelines, form-based codes are regulatory and therefore legally enforceable. Implementation methods vary per each community, but should be sought as a better way to regulate.

Report Overview

This report seeks to examine the historical development and use of form-based codes, along with more commonly used zoning regulations, to form quality places in U.S. cities. The intent is to trace the use of form-based codes from their initial inception and use to today, and to speculate on how the use of these codes will improve the built environment. Finally, by looking

at current ways in which form-based codes are being implemented, the purpose is to define best management practices and ways in which to improve the codes.

Additionally, throughout the analysis of form-based codes it is important to discuss other forms of development regulations also being implemented in order to compare and contrast the methods. By defining the differences and similarities between form-based codes and more commonly used zoning regulations, the goal is to present form-based codes as an alternative way to regulate development.

The initial chapter will include the introduction to and statement of the problem at hand, background information regarding general development regulations and a report overview. By providing a general introduction to development regulations, the reader can grasp the general concepts and goals for all development regulations, and thus understand the basis of both zoning regulations and form-based codes.

Following the first chapter will be the discussion of relevant sources related to zoning regulations and form-based codes. The literature review will further identify the problem and thus further the need for possible solutions, offering form-based codes as an acceptable alternative.

The main body of the report will include an analysis of the history of zoning regulations, the history and evolution of form-based codes and a look at today's versions of form-based codes. The breakdown of today's coding regulations includes an analysis of the advantages, typical standards and regulations included in coding regulations, means of implementation and finally a view of the future of form-based codes. Graphics will assist in demonstrating what form-based codes typically look like, how they are used to shape cities and to exemplify the design-oriented standards. Additionally, by presenting examples from cities that have already implemented form-based codes, an adequate implementation strategy can be devised that is relevant to other communities.

Included in the perspective of the future and concluding comments will be reasons for why local governments should continue to implement form-based codes and areas of improvement for code based regulations to be more effective and useful. Improvements are necessary in order to ensure the proliferation and continuation of code-based regulations.

All of the information that is to be presented will be from outside sources including perspectives from planners, designers, developers and government agencies. Most of the data is

qualitative in nature, because the research topic is not based upon a concrete science or specific formula, but is subjective. While a desired urban form varies from designer to planner, citizen to city official, there is general consensus that alternative development regulations are needed.

CHAPTER 2 - Origins of Form-Based Codes

Zoning Regulations

As zoning regulations progressively grew in popularity they became the basic tool for planners to regulate development. Rapid growth of the suburban community ballooned with the urban flight of the 1940s to 1960s and the post World War II housing boom (Parolek, Parolek & Crawford, 2008). Along with the suburban housing boom followed the development of jobs and retail. With new and rapid construction of the modern-day suburban communities, the government sought to regulate development as best as possible as fast as possible with conventional zoning methods; thus, most of today's cities were built upon Euclidean zoning regulations and continue to be regulated by conventional regulations today.

Today zoning regulations today are an intrinsic component used to define a city's character and form. Zoning regulations are recognized by both state and local legislation as a legitimate means to regulate development. They are legally enforceable upon adoption by specific municipalities and often accompany comprehensive plan documents and subdivision regulations. Elements of modern zoning regulation ordinances include the designation of property by land use, development standards, use-specific standards and due process standards.

Recognizing that there are downfalls to conventional zoning became more apparent over time as American cities and suburban flight expanded to present day conditions. Some communities attempted to adopt "fixes" along the way to allow for some flexibility. Parolek, Parolek and Crawford cite that performance zoning was developed to "provide increased flexibility in the number and types of land uses allowed in various zones" (2008, p. 8). Also, incentive based zoning was developed to persuade developers to develop in specific locations and in return the city would allow increased density, building height, lot coverage, or floor-area-ratio. Other "fixes" also included special permitting procedures including conditional use permitting and variances. As Parolek, Parolek and Crawford call these so-called fixes "Band-Aids," they were limited in success because "communities remained dissatisfied with the character and quality of the places that conventional zoning had fostered" (2008, p. 9). The "solutions" were merely seemed to satisfy only temporarily and could not be applied widespread across the community.

Furthermore these "Band-Aids" were not able to adapt to the changing needs to communities. Conventional zoning tools proved to be inadequate to help revitalize downtowns, create economically vital commercial areas, attract pedestrians, facilitate "smart growth" and sustainability principles, accommodate higher densities, increase housing supply when land resources were limited, counteract neighborhood deterioration, or address citizen opposition to multi-family housing (Parolek, Parolek & Crawford, 2008).

As the size, form, wants and needs as communities change through time, so too should the regulations that shape the urban and suburban environment. As previously stated, zoning regulations have somewhat evolved from their beginnings almost 100 years ago in order to mirror the demands of cities in the United States. The basic premise has remained the same though: to divide land uses. In some instances this has shown to be beneficial in separating incompatible land uses, which help to protect the character of development and maintain property values (i.e. separating industrial uses from residential uses.)

Amongst the relevant information regarding form-based codes, there is a clear abundance of noted defects and inadequacies of conventional zoning regulations. The most prominent problem with zoning regulations being that they do not relate to their contextual surroundings, thus they do little to create a more desirable form and unique built environment. Conventional zoning methods merely regulate on the basis of land use. Furthermore, such a traditional method of regulating development by separating land uses is seen as outdated and potentially harmful to communities and the environment.

As described in the book *Form-Based Codes: A Guide for Planners, Urban Designers, Municipalities, and Developers,* "the segregation of uses inevitably required travel between them, and the dominance of single-family housing in expansive, decentralized residential areas inevitably consumed large amounts of land while increasing travel distances" (Parolek, Parolek, & Crawford, 2008, p. 8).

According to the article "Function Follows Form" by Bob Sperber, the senior editor for *Professional Builder*, common criticisms of conventional zoning include that separating land uses creates "pedestrian-unfriendly roadways and poorly designed open spaces,…degrades social interaction, quality of life and the natural environment" (Sperber, 2005, p. 1). As Ed Tombari, AICP, notes in his article, "The Future of Zoning?," that "conventional zoning creates a monotonous, sprawling, auto-dependent landscape that contributes to a perceived growing public

health menace: climate change, greenhouse gas emissions and related environmental degradation" (Tombari, 2009, p. 24).

Whether the problems created by zoning regulations are perceived or real, it is time to find alternative means of regulating development that is better suited to our changing world and societies.

Alternative to Zoning Regulations

Just as zoning regulations have evolved throughout their extensive use, alternatives to conventional zoning have also been developed. One alternative to the use of conventional zoning are form-based codes. Peter Katz, the president of the Form-Based Codes Institute, a nonprofit organization devoted to the advancement of form-based codes, and a key innovator of form-based codes, defines form-based codes as a "method of regulating development to achieve a specific urban form [by creating] a predictable public realm primarily by controlling physical form, with a lesser focus on land use" ("Definition of a form-based code," 2009). Furthermore, the Form-Based Codes Institute describe the codes as focusing on the "dimensions and locations of buildings, streets, frontages, and other elements that constitute the physical design of place" ("Definition of a form-based code," 2009).

The Form-Based Codes Institute explains that form-based codes "address the relationship between building facades and the public realm, and form and mass of building in relation to one another, and the scale and types of streets and blocks" ("Definition of a form-based code," 2009). Additionally, "such codes are drafted to achieve a community vision based on time-tested forms of urbanism" ("Definition of a form-based code," 2009).

In Tombari's article he cites the Form-Based Codes Institute's key advantages of coding as:

- *Achieving a more predictable physical result thus shaping a high-quality built environment;*
- *Encourages public participation;*
- *Reduces the need for large land assemblies;*
- *Easier to implement in established communities versus conventional zoning;*
- *User-friendly because they are concise and rely upon visual aids;*
- *A good replacement for design guidelines.* (Tombari, 2009, p. 24)

The Beginning of Form-Based Codes

Defining and codifying the built environment is by no means a new concept. For many centuries now societies have sought to regulate the form of their cities. Emily Talen's report links the origins of code based regulations as far back as Hammurabi's Code from 2100 BC (2009). Hammurabi's Code "focused on ensuring quality building by exacting penalties if faulty construction [occurred]" (Talen, 2009, p. 147). Talen further traces the regulation of community forms through ancient Greek and Roman societies, and Spanish, Italian and relatively modern British towns. In Greece in the 4th century BC, laws existed that governed streets and public squares (Talen, 2009). "Roman laws included specifications for street layouts in military installments, laws intended to avert harm to neighbors, and laws regulating the use of land in central parts of cities" (Talen, 2009, p. 147). In the 16th century the Spanish monarchy regulated street arrangement and the location of important buildings.

Most notably Talen explains that a common element of form-based codes, a regulating plan, was used in 17th century Amsterdam. Daniel Stolpaert, a surveyor and architect, developed the regulating plan at a large scale which "dictated the locations of public buildings, streets, canals and private residences" (Talen, 2009, p. 147). Additionally, an ordinance existed simultaneously that "established rules for building, including where privies could be located, who paid for the streets and rules about drainage" (Talen, 2009, p. 147). The ordinance and plan was used for nearly 400 years.

Talen states that more modern applications include the founding of Mormon towns, American railroad towns and British towns, which each had rules guiding the urban form of development. The plans more specifically sought to shape the "pattern of the urban public realm on a large scale" (Talen, 2009, p. 149).

While each society implemented there regulations in different ways and sought different design forms, Talen points out that the desire to organize and regulate buildings and design form is not a new concept or unique to modern America. Furthermore, while each noted society did not specifically term their regulations as form-based codes, the concept of establishing rules that guided urban form with little attention given to regulating uses is the basis and beginnings of today's modern form-based codes.

CHAPTER 3 - Evolution of Form-Based Codes

New Urbanism

While form-based codes are a reasonably new term and have only been in limited use for the past 10 years, many of the common day concepts of form-based codes have their roots in the "New Urbanism" movement. New Urbanism was developed as an alternative and a possible solution to the negative consequences of zoning regulations with the ultimate goal to create a better urban form. Through the use of alternative application methods, developers and designers created the ability to go beyond typical divisions of uses and craft more meaningful, efficient places; this being the beginning of New Urbanism and the basis for the development of form-based codes. While there have consistently been subsets of alternative methods of growth, the more modern, popular New Urbanism movement first began to gain momentum in the late 1970s as people strongly voiced concerns about the harms of conventional development patterns. The American Planning Association defines New Urbanism as:

> *The process of integrating the components of modern life – housing, workplace, shopping, and recreation – into compact, pedestrian-friendly, mixed-use neighborhoods linked by transit and set in a larger regional open space framework.* (Davidson, M., Dolnick, F., 2004, p. 280)

The New Urbanism movement derived from the need to change the sprawling character of the urban environment, which is harmful to both people and the environment. The American Planning Association's, Planning Advisory Report 526 entitled "Codifying New Urbanism," defines one of the main goals of the New Urbanism movement and form-based codes as combating urban sprawl (Russell & Greenberg, 2004). Sprawl first began in the United States in the late 19th century with the decentralization and industrialization of America's largest cities. As populations continued to grow, incomes increased, the streetcar became more accessible and the manufacturing industry was able to expand beyond the central city, people began to leave the central cities in large amounts. In the 1940s to 1960s most citizens that had the ability to move away from urban cities had done so. Advancements in technology including the mass production of the automobile, advancement of the highway system and electronic communication along with a population boom only aided in the continuation of sprawl and urban exodus. This sprawl

continues on today as the United States population continues to grow and the proliferation of mostly unchanged development patterns continues. New Urbanism focuses on the aspects of smarter, more sustainable growth and development through the application of traditional planning methods, or neo-traditional planning. These neo-traditional methods seek to achieve a more meaningful urban form.

Some of the elements of New Urbanism development include redevelopment, infill development, brownfield and greyfield development, mixed-use development, compact, high-density development, housing for all income levels including affordable housing, connectivity, pedestrian-friendly, transit oriented, and the protection, conservation and incorporation of the natural environment. Many of these concepts are the driving forces for the development of today's communities and are the trends for the future. Each element is designed in such a way to deter the current sprawling trends and possibly reverse the continuation of the degradation of limited natural resources. The goal is to combine as many components as possible into each New Urbanism development in order to achieve the highest quality built environment possible; shaping the form of development in ways that zoning regulations do not allow or even begin to address.

Application of New Urbanism Concepts

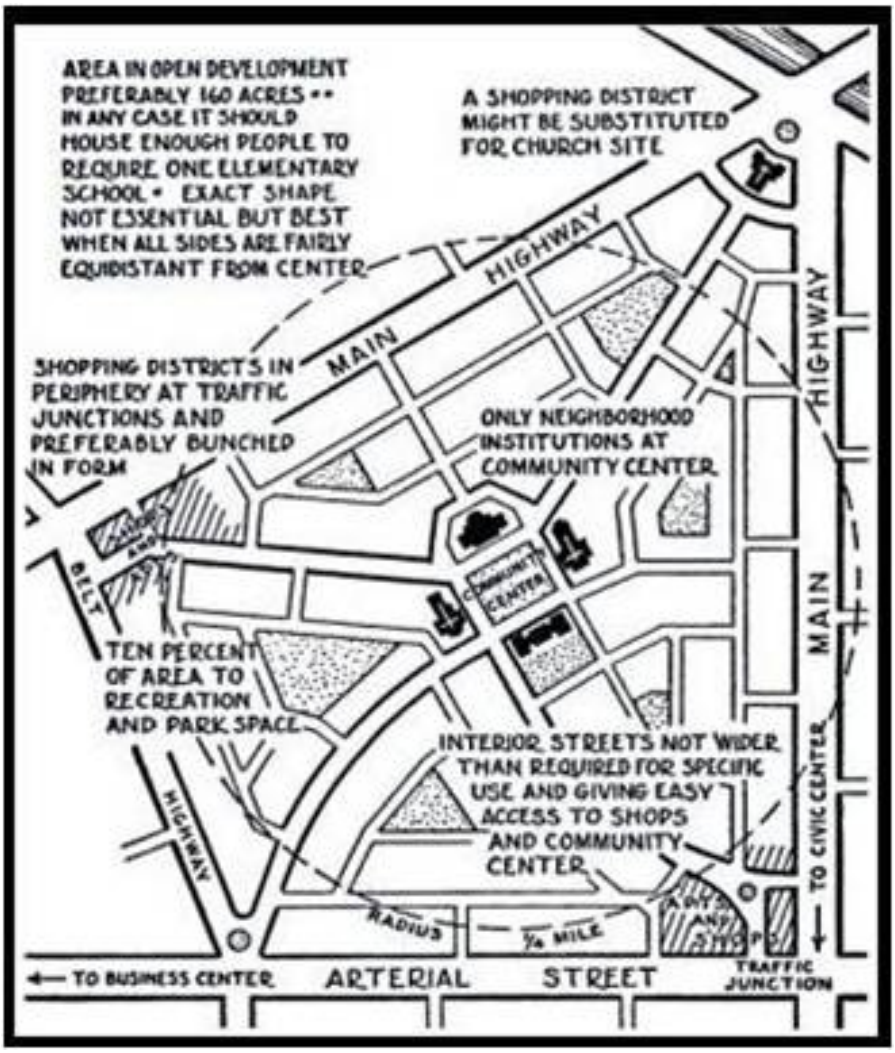
Unfortunately, zoning regulations are often not flexible enough to allow some of the elements of New Urbanism development. Such concepts inherent to New Urbanism like mixed-uses and connectivity between varying land uses and developments are often not options for development in Euclidean based regulations. Developers and architects were forced to step outside of current standards in order to develop "smarter" and create uncommon, yet desired built environments.

While New Urbanism developments are guided by a similar set of principles, application is not limited in form or size. New Urbanism principles can be applied many different scales including site-specific or regionally. They can also be applied in different densities: highly urbanized areas or suburban environments. They can take the form of modern architectural styles or be reminiscent of more classic architectural design. Some of the original methods and regulatory tools used in the New Urbanism movement included traditional neighborhood

developments (TND) and planned unit developments (PUD). Each method is still in use today as a site-specific means to development beyond the allowable underlying zoning regulations.

Traditional neighborhood developments are often used as optional regulatory procedures to promote and revitalize traditional neighborhood forms in new development areas. They can be applied to redevelopment or infill development. TNDs can be used as an alternative to the underlying zoning regulations already established in a designated area. TNDs seek to incorporate the concepts of New Urbanism by creating mixed-use, higher-density, walkable neighborhoods and often include a central anchor space such as civic buildings or public spaces. More specifically, common traditional neighborhood elements often include alleys, grid-like streets, buildings oriented towards the street often through the use of front porches, and common open spaces. The goal is to provide quality development using more modern, sustainable technologies while developing a quality built environment inspired from "colonial times until the 1940s" (Davidson, M., Dolnick, F., 2004, 418). TNDs are frequently site specific, generally around 5-20 acres, instead of community-wide. More traditional models call for neighborhood developments that are as small as a quarter mile from center to edge in order to maintain walkability (Davidson, M., Dolnick, F., 2004). The following figure (Figure 3.1) is a sample diagram of a more traditional compact neighborhood unit.

Figure 3.1 Traditional Neighborhood Unit Concept



Planned unit developments are another New Urbanism alternative to the use of zoning regulations. While, the PUD concept actually predates the more modern New Urbanism movement, it is still used as part of the New Urbanism repertoire. Many of the elements incorporated in PUDs include components of sustainable urban development focusing on quality urban design. Similar to TNDs, planned unit developments are used as optional regulatory procedures that can be used to develop the built environment in ways that zoning regulations do not allow. The American Planning Association defines planned unit developments as:

> *A development guided by a total design plan in which one or more of the zoning or subdivision regulations, other than use regulations, may be waived or varied to allow flexibility and creativity in site and building design and location.*
> (Davidson, M., Dolnick, F., 2004, 309)

PUDs allow for designers to take a more comprehensive approach to design. The specified development area (PUD) is "developed as a single entity containing one or more…residential developments and one or more public, quasi-public, commercial or industrial uses in such ranges of ratios, and non-residential uses to residential uses as specified" (Davidson, M., Dolnick, F., 2004, 309). The intent is not to view the development as a mass of single lots but as an entire system of land, structures and uses. A comprehensive look at development also allows for PUDs to have a more cohesive and compatible physical form. This can mean similar architectural styles, compatibility of uses and connectivity.

PUD plans provide the opportunity to supplement or bypass common regulations and standards and allow design flexibility. For example, by not creating separate lots for each land use PUDs circumvent common site regulations, like building setbacks and height limitations, and may allow for increased density. PUDs can include elements not common in basic Euclidean regulations and thus focus on designing a more adequate built environment. Common planned unit development plans include such elements as mixed-uses, connectivity between buildings and varying uses, accommodations for multi-modal transportation, and the preservation of open spaces.

As the awareness of the negative consequences of zoning regulations becomes more apparent and wide-spread, the use of traditional neighborhood developments and planned unit developments has increased since their inception. While they prove to be more adequate means to craft conscientious developments, they still tend to be confined to traditional regulations and standards and are mostly confined to relatively small scales.

Progression to Form-Based Codes

The first true form-based codes development was applied in Seaside, Florida in 1981 by the firm of Duany Platter-Zyberk and Company. The town of Seaside is a coastal town on Florida's panhandle and has been highly recognized and publicized through the years as a place that exemplifies good, thoughtful design. Seaside is a relatively small community of only 80 acres, but is seen as "a place of great importance in American urbanism" explains Peter Katz (1994, p. 3). Seaside was a clear departure from typical design principles and the process that led to it. Peter Katz's book entitled *The New Urbanism: Toward an Architecture of Community,* describes the development in detail.

The town's designers and architects Andres Duany and Elizabeth Plater-Zyberk overarching goal for Seaside was to incorporate a strong sense of community. This meant "asserting the primacy of public over private" by steering away from typical design patterns that alienated contemporary towns and cities (Katz, 1994, p. 4). In following this approach, Duany and Plater-Zyberk first defined the public spaces. To them, public spaces included not only parks and civic spaces but also streets, walks and natural features of the site. Upon developing a system of public spaces, the designers filled in around the public spaces with private buildings using a newly developed "coding strategy" (Katz, 1994, p. 4). Figure 3.2 is a picture of Tupelo Circle in Seaside, FL demonstrating the emphasis placed upon the architectural standards, public spaces, vistas and the general consciousness of the 3-D environment.

Figure 3.2 Tupelo Circle in Seaside, Florida

Additionally, with public spaces being the defining element of development, Duany and Plater-Zybek sought to incorporate connectivity and pedestrian friendly spaces; thus, Seaside was densely developed that followed the principle of the "five-minute walk" or the traditional neighborhood unit concept (Katz, 1994). This also helped to reduce the dependence on automobiles and promote social interaction within the community (Katz, 1994).

Duany and Plater-Zybek first sought the input of individuals, clients, staff, fellow designers, local officials and consultants as to what the design of the community should be.

"This was the firm's first use of the charette methodology for participatory planning" (Katz, 1994, p. 4). After weeks of input the planners decided to leave the design of individual buildings up to others, but guiding them through the use of prescriptive codes. The short, yet thorough standards described what form a building can and should take. The guidelines were mostly comprised of "simple diagrams and captions that physically describe a specific building type" (Katz, 1994, p. 6). Duany and Plater-Zybek also realized that through the use of prescriptive guidelines and clear illustrations, the codes were easier to understand and implement versus traditional zoning regulations.

Some regulating elements that the Seaside's form-based code contains includes build-to lines, thus defining the public space of the street, uniform setbacks on north-south streets designed to preserve views to the sea, sand walkways that cut through blocks to increase walkability, and front porches of a minimum size and proximity to the street. As noted previously, public spaces include more than just parks; pavilions, boardwalks and the beach itself are considered to be public facilities. Also included are architectural and landscape regulations established to maintain aesthetic appeal (Katz, 1994).

To this day, almost 30 years later, Seaside still has a comprehensive, coherent, compatible form that is desirable for the "future of urbanism in America" (Katz, 1994, p. 6). Katz states that:

> *Unlike other recent master-planning efforts, many of which resemble a 'catalogue' of the architectural styles popular during each decade of their build-outs, Seaside's resilient urban structure seems to transcend such issues. Evidence of this is the way it graciously accommodates building of many disparage styles.* (Katz, 1994, p. 6)

Katz explains that Seaside was originally designed to be an inexpensive beachfront vacation community; today it is more like an upscale resort. According to Katz, in 1994 the town had seen a tenfold increase in residential lot prices in the decade since it was founded and the town was 70 percent built-out as planned.

Modern form-based codes have not only been applied in Seaside, Florida but have also seen successes elsewhere and for many years now. Peter Katz's book illustrates the first applications of form-based codes. It exemplifies the overall applicability of form-based codes by

showing that they can be successfully implemented not only in greenfield development, but also in urban infill.

One particular example of one of the earlier urban form-based codes projects in the United States was in Hayward, California in 1992, 11 years after Seaside's Plan was developed. The Hayward project focused on revitalizing downtown Hayward. Along with the input of the public Daniel Solomon, an architect developed a master plan that sought to "restore the economic vitality and pedestrian character of downtown" (Katz, 1994, p. 129). Elements of the plan included a new civic center with public plaza, a transit center for bus and commuter rail riders, housing and a retail corridor. The district was developed at higher densities than conventional development pattern in order to encourage walking and connectivity within the district. Again, the elements of New Urbanism were desired for development and form-based codes became the means for incorporating the concepts into the urban form.

The success of Seaside's community bodes well for the use of form-based codes. While such design aspects as the desire to optimize waterfront access and views are specific to Seaside's geography and the incorporation of access to transit in Hayward are site specific, the underlying regulating principles of connectivity, walkability, social interaction, and public open spaces is a highly desirable form of urban development today. In addition, these are all concepts that define New Urbanism and assist in creating quality places. These are the design elements of the future and can be implemented through the use of modern form-based codes.

CHAPTER 4 - Application of Modern Form-Based Codes

Problems with Traditional New Urbanism Techniques

The initial means of implementation of New Urbanism concepts including TNDs and PUDs can be an effective means to supplement or bypass traditional zoning regulations. Do not do enough to shape form community-wide, because they are often implemented They do not make a big enough change to conventional zoning habits. Particularly with PUDs, much of the conventional zoning, use-based, regulations still exist. Additionally, TNDs and PUDs are often optional regulations within communities that developers can elect to implement, but many do not. Now has come the time to think "bigger."

The present day issues of global warming, sprawl, rising fuel costs and the general awareness that our natural resources are limited demands action from today's societies. Part of the problem is, is that the way in which we develop only assists in increasing the nation's problems. While form-based codes are unfortunately not the solution to the world's problems, they have the ability to adapt to today's changing needs and address some of the possible solutions to the problems inflicted upon the urban, suburban and natural environment. There are multiple means to combat the harmful effects of sprawl and many people argue that code-based regulations will help in those efforts. New Urbanism concepts that are commonly included in code regulations include Today's form-based codes seek to be the new standard for which to implement the New Urbanism concepts creating a more significant and conscious built environment. Table 4.1 is a comparative chart of the previously addressed development methods and the elements included and/or lacking within each regulation type. Traditional zoning regulations are considered to be the very basic, original land use oriented standards. Overlay zones included many different forms of adapted zoning regulations.

Table 4.1 Comparing Implementation Methods

Development Forms					
Elements of Design	**Traditional Zoning**	**Overlay Zoning Districts**	**TND**	**PUD**	**Form-Based Codes**
Mixed-Use		X	X	X	X
High Density	X	X	X	X	X
Mixed Income Housing		X	X	X	X
Pedestrian-Friendly			X	X	X
Transit Oriented			X		X
Multi-Modal Transit			X	X	X
Connectivity			X	X	X
Sustainable			X	X	X
Protects Environment (eg., open space standards or growth limits)			X	X	X
Focus on Form					X
Land-Use Based	X	X	X	X	
Site Specific		X	X	X	X
Community-wide	X				X
Flexible Standards		X	X	X	X
Required Development Pattern, Enforceable	X				X

Elements of Form-Based Codes

As previously stated, form-based codes are prescriptive standards and codes that define the physical form. They are developed as an alternative to conventional zoning and can be adopted into city or county laws as regulations instead of being used as mere guidelines. As the Form-Based Codes Institute explains,

> *Form-based codes are drafted to achieve a community vision based on time-tested forms of urbanism. Ultimately, a Form-based code is a tool; the quality of*

development outcomes is dependent on the quality and objectives of the community plan that a code implements.

("Definition of a Form-Based Code," 2009, para. 3)

Each design and form is unique to each community and each development, but there are consistent components of each code and/or plan. Form-based codes include various elements, but most include such common elements as a regulating plan, public space standards, building form standards, administration and definitions. Codes sometimes include architectural, landscape, signage and environmental resource standards (2009). The codes are expressed using both diagrams and words. The following are definitions of what each element is as the Form-Based Codes Institute defines them, and a sample code of each taken each standard is illustrated. The examples are from the City of Blue Springs, Missouri *Downtown Development Plan* and *SmartCode version 9.2*, which is a sample code document intended for the development and implementation of municipal code regulations. See Appendix A for *SmartCode v. 9.2* reference tables.

A regulating plan is: "A plan or map of the regulated area designating the locations where different building form standards apply, based on clear community intentions regarding the physical character of the area being coded" ("Definition of a Form-Based Code", 2009, para. 4). The regulating plan determines the spatial basis of the ordinance. Whether the codes are intended to be used for neighborhoods, districts, corridors, special purpose zones or community-wide, most regulating plans use "transect zones" to establish the sub-classifications of properties and uses (Duany, Sorlein & Wright, 2008). The *SmartCode v. 9.2* identifies these areas as "Transect Zones" or T-zones (2008). The following diagram (Figure 4.1) describes typical T-zones.

Figure 4.1 *SmartCode v. 9.2* Transect Zone Descriptions

T-1 NATURAL

T-1 Natural Zone consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.

General Character:	Natural landscape with some agricultural use
Building Placement:	Not applicable
Frontage Types:	Not applicable
Typical Building Height:	Not applicable
Type of Civic Space:	Parks, Greenways

T-2 RURAL

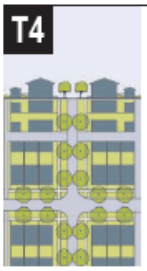
T-2 Rural Zone consists of sparsely settled lands in open or cultivated states. These include woodland, agricultural land, grassland, and irrigable desert. Typical buildings are farmhouses, agricultural buildings, cabins, and villas.

General Character:	Primarily agricultural with woodland & wetland and scattered buildings
Building Placement:	Variable Setbacks
Frontage Types:	Not applicable
Typical Building Height:	1- to 2-Story
Type of Civic Space:	Parks, Greenways

T-3 SUB-URBAN

T-3 Sub-Urban Zone consists of low density residential areas, adjacent to higher zones that some mixed use. Home occupations and outbuildings are allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions.

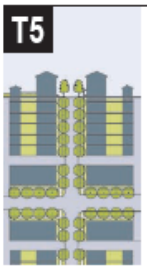
General Character:	Lawns, and landscaped yards surrounding detached single-family houses; pedestrians occasionally
Building Placement:	Large and variable front and side yard Setbacks
Frontage Types:	Porches, fences, naturalistic tree planting
Typical Building Height:	1- to 2-Story with some 3-Story
Type of Civic Space:	Parks, Greenways



T-4 GENERAL URBAN

T-4 General Urban Zone consists of a mixed use but primarily residential urban fabric. It may have a wide range of building types: single, sideyard, and rowhouses. Setbacks and landscaping are variable. Streets with curbs and sidewalks define medium-sized blocks.

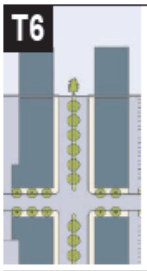
General Character:	Mix of Houses, Townhouses & small Apartment buildings, with scattered Commercial activity; balance between landscape and buildings; presence of pedestrians
Building Placement:	Shallow to medium front and side yard Setbacks
Frontage Types:	Porches, fences, Dooryards
Typical Building Height:	2- to 3-Story with a few taller Mixed Use buildings
Type of Civic Space:	Squares, Greens



T-5 URBAN CENTER

T-5 Urban Center Zone consists of higher density mixed use building that accommodate etail, offices, rowhouses and apartments. It has a tight network of streets, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks.

General Character:	Shops mixed with Townhouses, larger Apartment houses, Offices, workplace, and Civic buildings; predominantly attached buildings; trees within the public right-of-way; substantial pedestrian activit
Building Placement:	Shallow Setbacks or none; buildings oriented to street defining a street wall
Frontage Types:	Stoops, Shopfronts, Galleries
Typical Building Height:	3- to 5-Story with some variation
Type of Civic Space:	Parks, Plazas and Squares, median landscaping



T-6 URBAN CORE

T-6 Urban Core Zone consists of the highest density and height, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; streets have steady street tree planting and buildings are set close to wide sidewalks. Typically only large towns and cities have an Urban Core Zone.

General Character:	Medium to high-Density Mixed Use buildings, entertainment, Civic and cultural uses. Attached buildings forming a continuous street wall; trees within the public right-of-way; highest pedestrian and transit activity
Building Placement:	Shallow Setbacks or none; buildings oriented to street, defining a street wall
Frontage Types:	Stoops, Dooryards, Forecourts, Shopfronts, Galleries, and Arcades
Typical Building Height:	4-plus Story with a few shorter buildings
Type of Civic Space:	Parks, Plazas and Squares; median landscaping

The transects progress from rural to urbanized. They are based upon the "level of intensity of their physical and social character" (Duany, Sorlein & Wright, 2008, p. vi). The urban development zones begin with "T3" and typically are the densest at zone "T6." Some characteristics of lesser urban zones include larger blocks, primarily residential, more landscaping, detached buildings, yards and porches, deep setbacks, generally pitched roofs, roads and lanes, narrow paths, larger curb radii, open swales, mixed tree clusters, local gathering spaces, parks and generally is quieter. Alternatively, more dense urban zones include smaller blocks, primarily mixed-uses, larger buildings, more hardscape, attached buildings, aligned frontages, stoops and shop fronts, shallow setbacks, generally flat roofs, streets and alleys, wide sidewalks, dedicated parking, smaller curb radii, raised curbs, aligned street trees, regional institutions, plazas and squares and more noise is allowed/expected. (Duany, Sorlein & Wright, 2008)

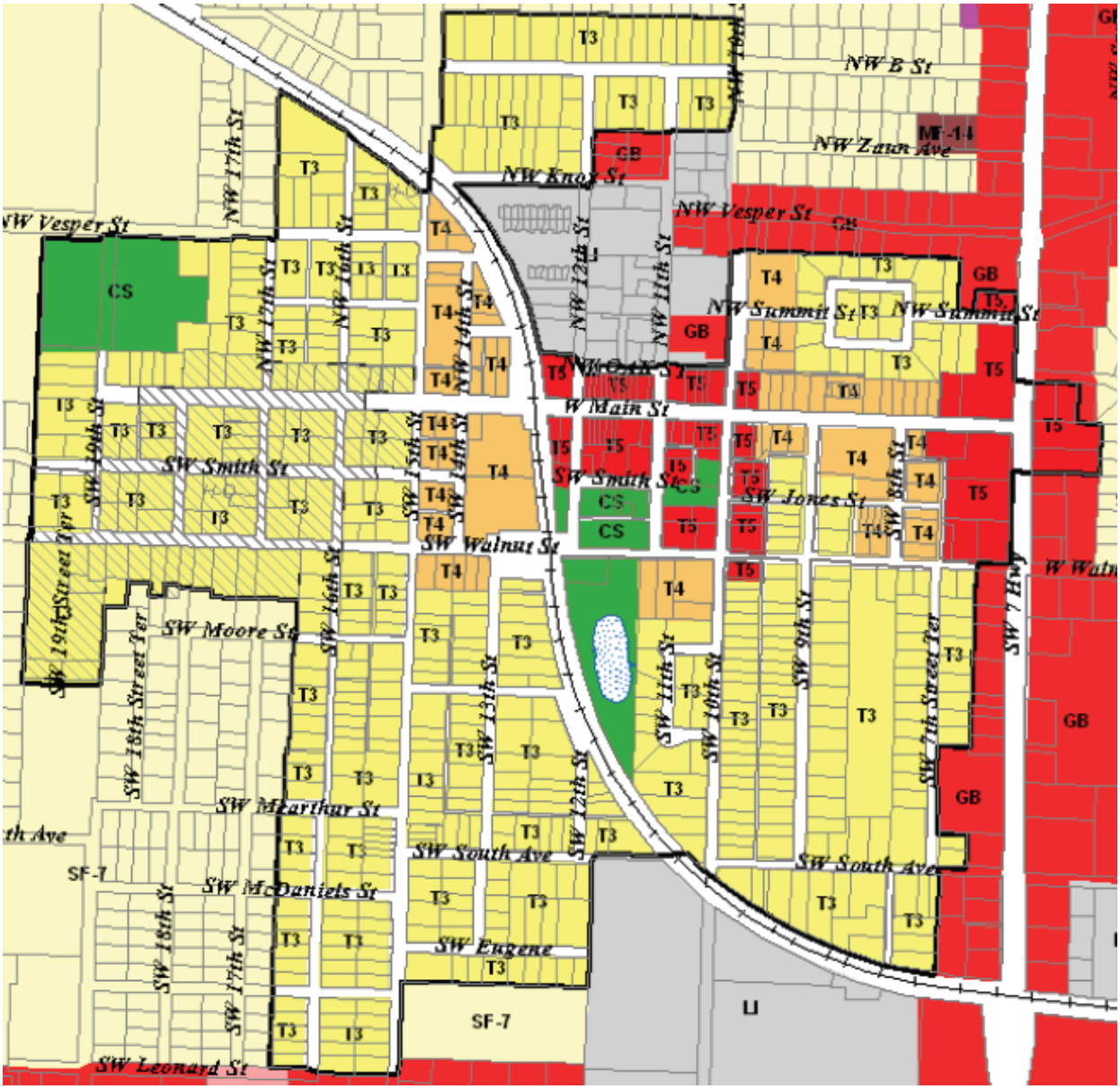
The *SmartCode v. 9.2* specifically calls for the use of transect zone classifications for new communities and specific lot and building standards, but in actuality the concept can be applied at a regional scale or for development and redevelopment of established communities. The "transects" are simply a way for describing a geographic area, and thus can really be called by any name. The classifications help to simplify the code by organizing each area into zones similar to familiar current zoning regulations, but they do not focus on classifications based upon use. The classifications can be tailored to describe the character, density, and expected and desired growth as they relate to each municipality. At a regional scale the authors of the SmartCode suggest establishing the locations where development is allowed. At a community scale FBCs can be used for new development or redevelopment in specified districts such as cluster developments, traditional neighborhood developments, or regional centers. Table 4.2 illustrates the different scales at which form-based codes can be implemented.

Table 4.2 *SmartCode v. 9.2* Applications of Form-Based Codes at Varying Scales

	A. Regional Sector	B. Community Unit	C.Transect Zones
Open Lands	O1 Preserved Open Sector	None	T1 Natural Zone T2 Rural Zone
	O2 Reserved Open Sector	None	
New Development	G1 Restricted Growth Sector	CLD Clustered Land Development	T2 Rural Zone T3 Sub-Urban Zone T4 General Urban Zone
	G2 Controlled Growth Sector	CLD Clustered Land Development	T2 Rural Zone T3 Sub-Urban Zone T4 General Urban Zone
		TND Traditional Neighborhood Development	T3 Sub-Urban Zone T4 General Urban Zone T5 Urban Center Zone
	G3 Intended Growth Sector	TND Traditional Neighborhood Development	T3 Sub-Urban Zone T4 General Urban Zone T5 Urban Center Zone
		RCD Regional Center Development	T4 General Urban Zone T5 Urban Center Zone T6 Urban Core Zone
Existing Development	G4 Infill Growth Sector	INFILL TND Traditional Neighborhood Development	T3 Sub-Urban Zone T4 General Urban Zone T5 Urban Center Zone
		INFILL RCD Regional Center Development	T4 General Urban Zone T5 Urban Center Zone T6 Urban Core Zone
Other			CB Civic Building CS Civic Space
		SD Sprcial Districts	

Once the transect zones are defined within the regulating plan, they are applied to the intended geographical area using a plan map. Figure 4.2 shows the City of Blue Springs *Downtown Master Plan* identifying the applicable zones. The zone names and general character of the transect zones as identified in the Blue Springs zoning map are identical to those of the *SmartCode v. 9.2* transect zones.

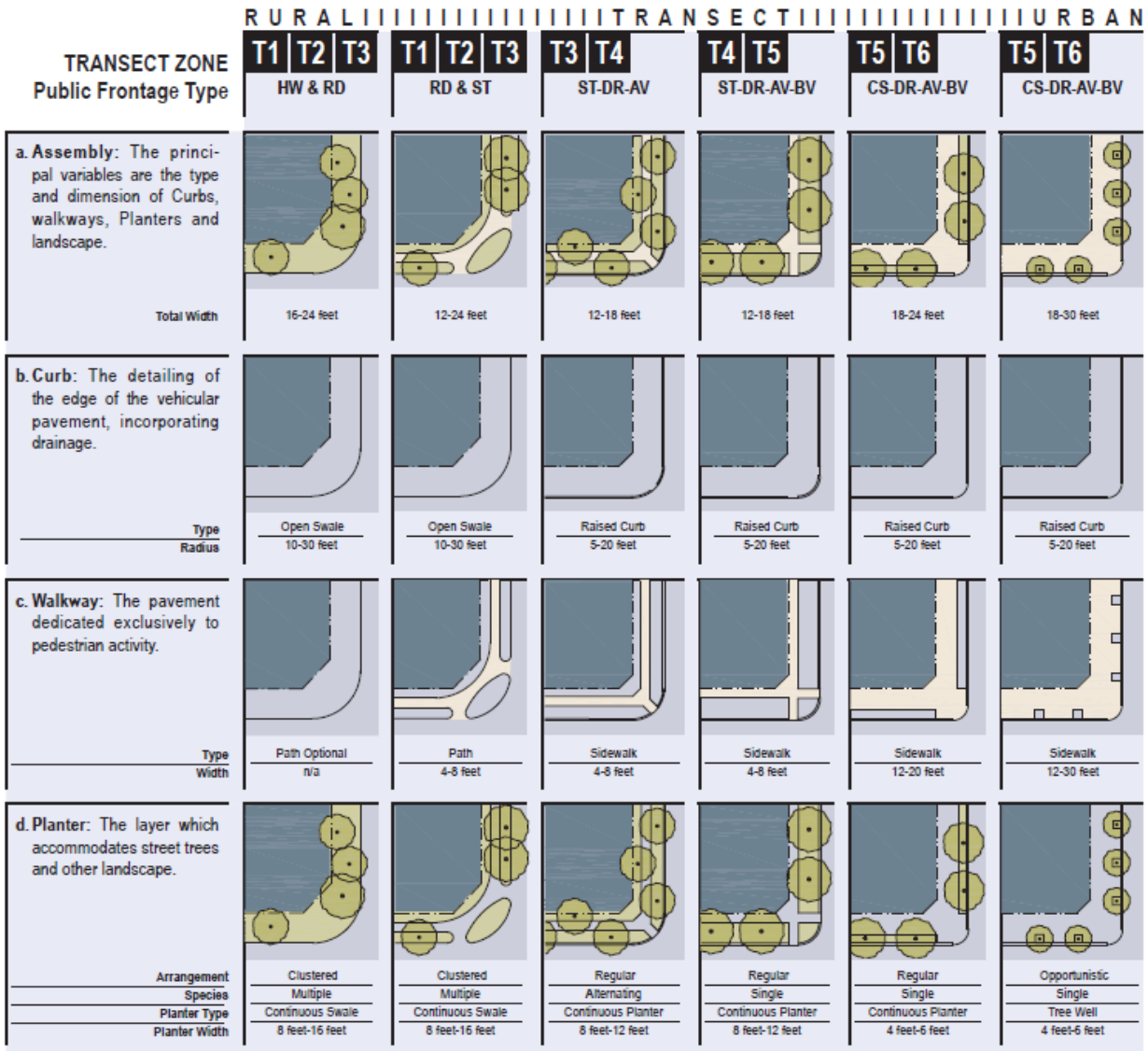
Figure 4.2 City of Blue Springs, Missouri Downtown Zoning Map



Following the delineation of each zone/the regulating plan, each following standard then varies according to the zone category.

Public space standards are: “Specifications for the elements within the public realm (e.g., sidewalks, travel lanes, on-street parking, street trees, street furniture, etc.)” (“Definition of a Form-Based Code,” 2009, para. 4). Public space standards are often also called urban standards. The modified urban standards sometimes combine the public space standards and building form standards because the physical form of the built environment directly affects the public realm. The public space standards focus on providing pedestrian accessibility, connectivity, streetscape elements, and define form as it relates to a pedestrian scale. As with all aspects and standards of FBCs the goal is create unique, relevant spaces and places. The following table (Table 4.3) shows sample public frontage standards.

Table 4.3 *SmartCode v. 9.2* Public Frontage Standards



Also included in proceeding *SmartCode v. 9.2* tables are landscape and street lighting standards. As the zones get closer to the "urban core" designation, greater emphasis is placed upon creating a pedestrian friendly and attractive urban environment. This is achieved by requiring larger sidewalks and pedestrian walkways, smaller-scale lighting elements, public spaces, and streetscaping that does not interfere with pedestrian or vehicular traffic.

Building form standards are: "Regulations controlling the configuration, features, and functions of buildings that define and shape the public realm" ("Definition of a Form-Based Code," 2009, para. 4). Examples of building form standards include building placement, height,

land use and parking placement. Each of these is used to shape the private realm and employ a common pattern of development standards to ensure a desirable urban form and protect the pedestrian environment. Greater densities and larger buildings are permitted closer to the urban core and are highest at the “T6” – urban core zone designation. The table below (Table 4.4) includes typical building form regulations as they are applied to transect zone “T3.”

Table 4.4 *SmartCode v. 9.2* Building Form Standards for Transect Zone 3

(see Table 1)

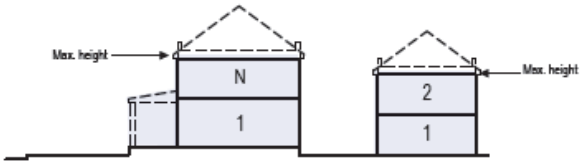
l. BUILDING FUNCTION (see Table 10 & Table 12)	
Residential	restricted use
Lodging	restricted use
Office	restricted use
Retail	restricted use
k. BUILDING CONFIGURATION (see Table 8)	
Principal Building	2 stories max.
Outbuilding	2 stories max.
f. LOT OCCUPATION (see Table 14f)	
Lot Width	72 ft. min 120 ft. max
Lot Coverage	60% max
i. BUILDING DISPOSITION (see Table 9)	
Edgeyard	permitted
Sideyard	not permitted
Rearyard	not permitted
Courtyard	not permitted
g. SETBACKS - PRINCIPAL BUILDING (see Table 14g)	
(g.1) Front Setback Principal	24 ft. min
(g.2) Front Setback Secondary	12 ft min.
(g.3) Side Setback	12 ft min.
(g.4) Rear Setback	12 ft min.
Frontage Buildout	40% min at setback
h. SETBACKS - OUTBUILDING (see Table 14h)	
(h.1) Front Setback	20 ft. min. + bldg setback
(h.2) Side Setback	3 ft. or 6 ft at corner
(h.3) Rear Setback	3 ft. min
j. PRIVATE FRONTAGES (see Table 7)	
Common Lawn	permitted
Porch & Fence	permitted
Terrace or L.C.	not permitted
Forecourt	not permitted
Stoop	not permitted
Shopfront & Awning	not permitted
Gallery	not permitted
Arcade	not permitted
Refer to Summary Table 14	
PARKING PROVISIONS	
See Table 10 & Table 11	

*or 15 ft. from center line of alley

"N" stands for any Stories above those shown, up to the maximum. Refer to metrics for exact minimums and maximums

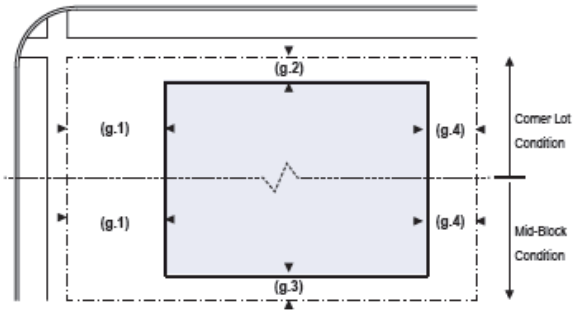
BUILDING CONFIGURATION

1. Building height shall be measured in number of Stories, excluding Attics and raised basements.
2. Stories may not exceed 14 feet in height from finished floor to finished ceiling, except for a first floor Commercial function which must be a minumum of 11 ft with a maximum of 25 feet.
3. Height shall be measured to the eave or roof deck as specified on Table 8.



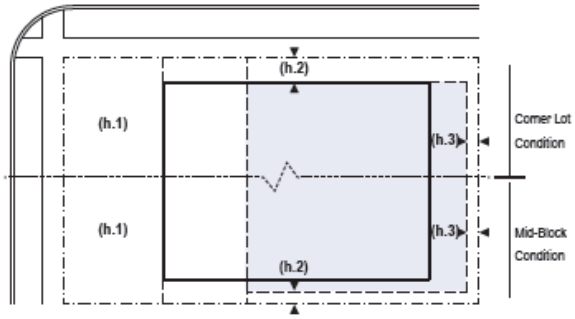
SETBACKS - PRINCIPAL BLDG

1. The Facades and Elevations of Principal Buildings shall be distanced from the Lot lines as shown.
2. Facades shall be built along the Principal Frontage to the minimum specified width in the table.



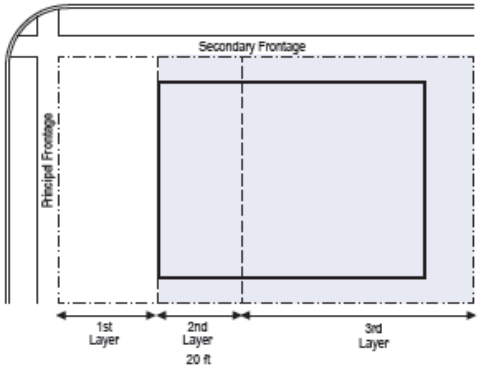
SETBACKS - OUTBUILDING

1. The Elevation of the Outbuilding shall be distanced from the Lot lines as shown.



PARKING PLACEMENT

1. Uncovered parking spaces may be provided within the second and third Layer as shown in the diagram (see Table 17d).
2. Covered parking shall be provided within the third Layer as shown in the diagram (see Table 17d). Side- or rear-entry garages may be allowed in the first or second Layer by Warrant.
3. Trash containers shall be stored within the third Layer.



As displayed in Table 4.4 building function describes the allowable land uses for the T3 zone. Parking requirements are further identified according to the allowable density for each

permitted use. Building configuration limits the maximum number of stories and height configurations with some flexibility depending on the use. The lot occupation defines the minimum and maximum lot size within T3 zones and allows for 60% maximum building coverage. Building disposition refers to the placement of structures on each individual lot and establishes basic building types for each transect zone. Building setbacks are defined as they relate to the principal structure on the lot and as they relate to the accessory structure, or "outbuilding." Private frontages refer to the area between the building façade and lot lines. These also include private frontage, public frontage and right-of-way regulations for each type of propped private frontage. Larger frontages are permitted in less dense zones in order to provide a buffer from higher speed thoroughfares. Smaller frontages in more dense urbanized zones allow for greater building coverage per lot and encourage pedestrian activity and interaction.

Administration contains: "A clearly defined application and project review process" ("Definition of a Form-Based Code," 2009, para. 4). The administrative section often defines the legal background or authority for adoption, applicability, code intent, application and review process including the process for deviations, and succession. The content is regulated by state and local procedural laws. In most cases FBC ordinances are enforceable development regulations when adopted in accord with the Comprehensive Plan (The legal basis for FBCs will be addressed later).

The development review process within FBC regulations is often expedited. With the emphasis of FBC being placed upon design versus land use there are generally not as many variances and additional review processes required for development review. Overall form-based codes allow for greater flexibility of land use and development forms. The City of Blue Springs has a stand-alone process for proposals within the downtown form-based codes district in order to expedite the applications that conform to the *Downtown Master Plan*. The processes are illustrated below in Figure 4.3 and 4.4 are adapted from the Blue Springs *Downtown Development Code*. The first figure illustrates the process taken for permitted uses and the second illustrates the process for uses permitted through the Conditional Use permitting process. The permitted path is shortened because it does not require a public hearing. Both paths are shortened because they do not require pre-application meetings or development reviews that are required for traditional zoning applications, i.e. platting, conditional use permits, rezoning, etc.

Figure 4.3 City of Blue Springs, Missouri Review Process for Permitted Uses

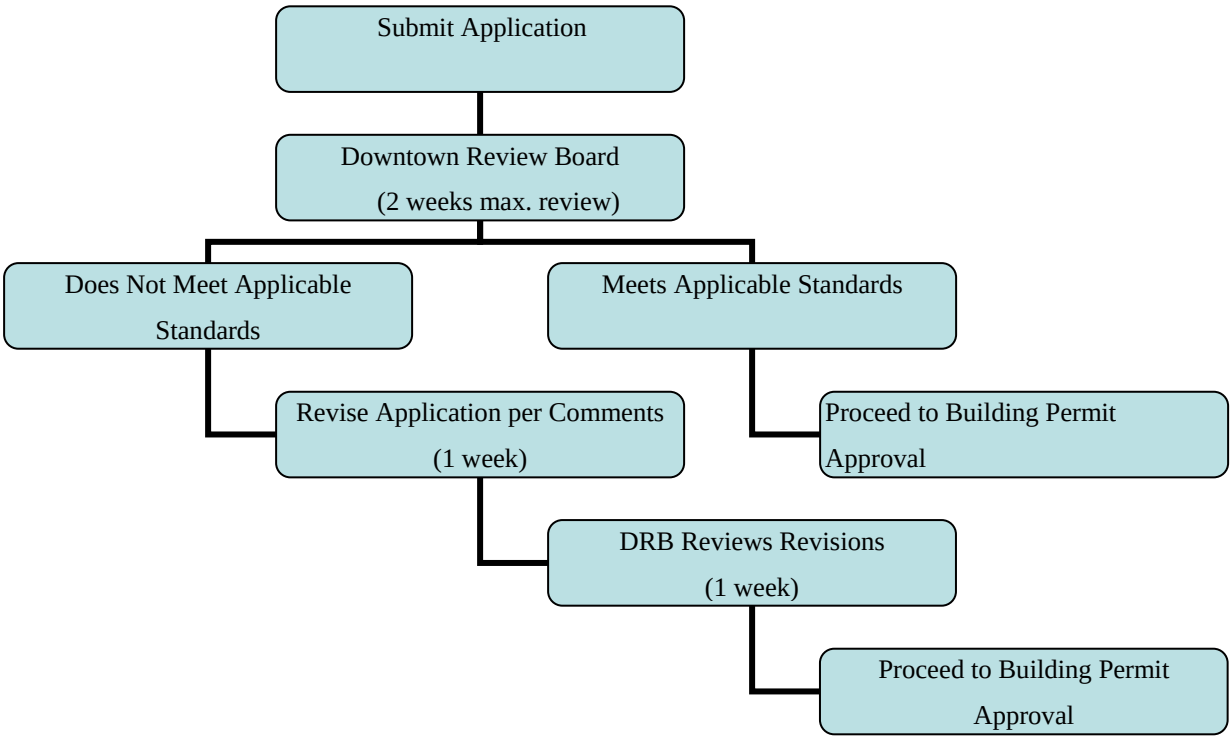
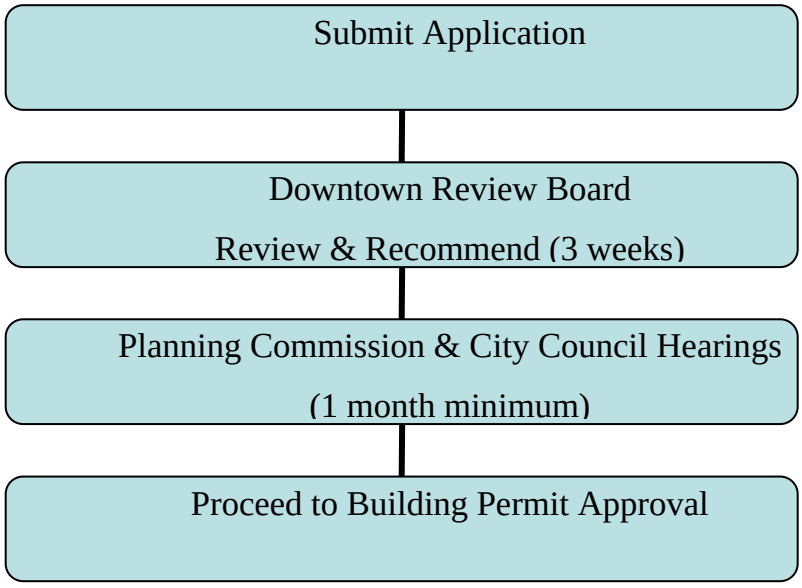


Figure 4.4 City of Blue Springs, Missouri Review Process for Conditional Uses



Unique to Form-Based Codes regulations is the element of succession within the administrative standards. Succession defines the amount of time past the adoption of the regulations that that each Transect Zone be rezoned to next higher Transect Zone. Zones T1 and

T2 are exempt from rezoning in order to prevent unnecessary sprawl and protect the naturalized environment. The succession can be denied through the public hearing process by the Legislative Body. (Duany, Sorlein & Wright, 2008) The need for a succession clause varies per each community depending on rate of growth, scale and intent.

Additional articles included in the SmartCode v. 9.2 are use incentives, affordable housing incentives and hazard mitigation standards. These standards are usually not unique to FBC regulations, but help to encourage the use of form-based codes when they are included within the development standards.

Architectural standards are: "Regulations controlling external architectural materials and quality" ("Definition of a Form-Based Code," 2009, para. 5). The architectural standards should derive from community input and mirror a desired architectural style. The Blue Springs Downtown Development Code stresses that "the standards relate to the vernacular building traditions of the region…[and] produce visual compatibility among disparate building types" (2007, p. 6). Permitted materials and configurations for walls, roofs, openings and facades are defined within the architectural standards. The building materials listed in the Blue Springs code is rather flexible, but calls for the use of high quality masonry building materials like stone, brick, cast stone and Stucco. The provisions generally seek to "ensure a longer-lasting, sustainable appeal of the downtown" (Downtown Development Code, 2007, p. 36). As municipalities seek to have more control to ensure compatibility and application of a very specific architectural form the regulations can be more definitive and limited.

Landscaping standards are: "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 movements, etc.) ("Definition of a Form-Based Code," 2009, para. 5). Most landscape standards include location and planting patterns for both public and private uses. Landscaping standards are described as general to all zones and specific to each zone. More landscaping is required further away from the urban core including lawns requirements and trees. The plantings are coordinated in order to achieve a coherent linkage from the urban to rural transects. Within the urban transects landscaping is encouraged "[achieve] a forestation of the urban fabric" ("Downtown Development Code," 2007,). Landscape elements assist in creating a visually appealing urban environment and

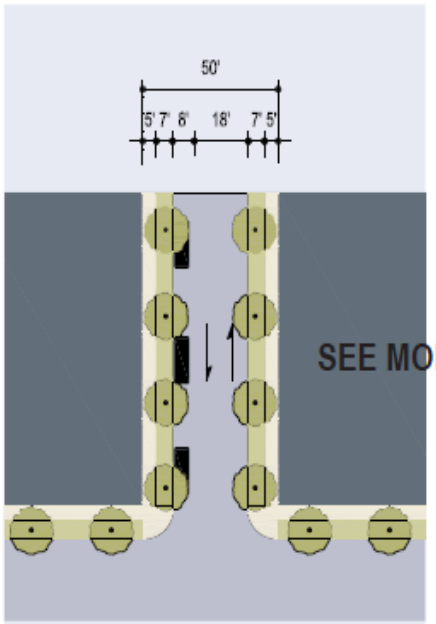
encourage pedestrian access. Landscaping standards also help to preserve natural elements and assists in creating the highly desirable “green” development.

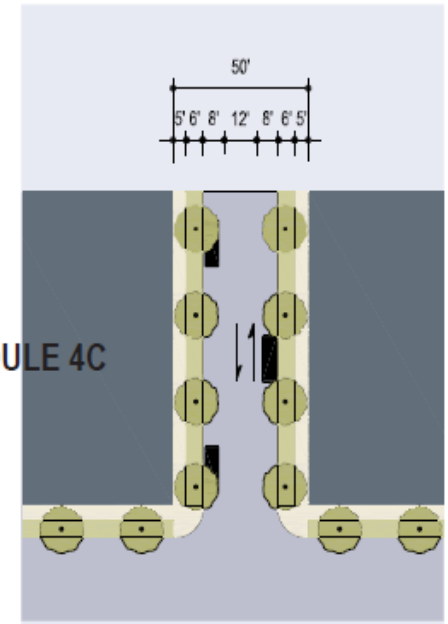
Thoroughfare standards are: “specifications and dimensions that assembles vehicular and pedestrian ways…specialized in both capacity and character” (Downtown Development Code, 2007, p. 6). Vehicular lane dimensions are assigned per zone and specify the design standards including speed, lane width and turning radius. Where on-street parking is allowed, additional vehicular lanes and parking requirements are established. On-street parking is traditionally not allowed in the rural zone, T1 and T2. Allotments for street parking increase the more dense the transect zone. Also, each thoroughfare type is assigned to transect zones and defined within the “thoroughfare assemblies” standards. Table 4.5 illustrates the *SmartCode v. 9.2* sample thoroughfare assembly standards.

Table 4.5 *SmartCode v. 9.2* Thoroughfare Assembly for a Street in Transect Zones 4, 5 & 6

KEY	ST-57-20-BL
Thoroughfare Type	
Right of Way Width	
Pavement Width	
Transportation	

THOROUGHFARE TYPES	
Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR



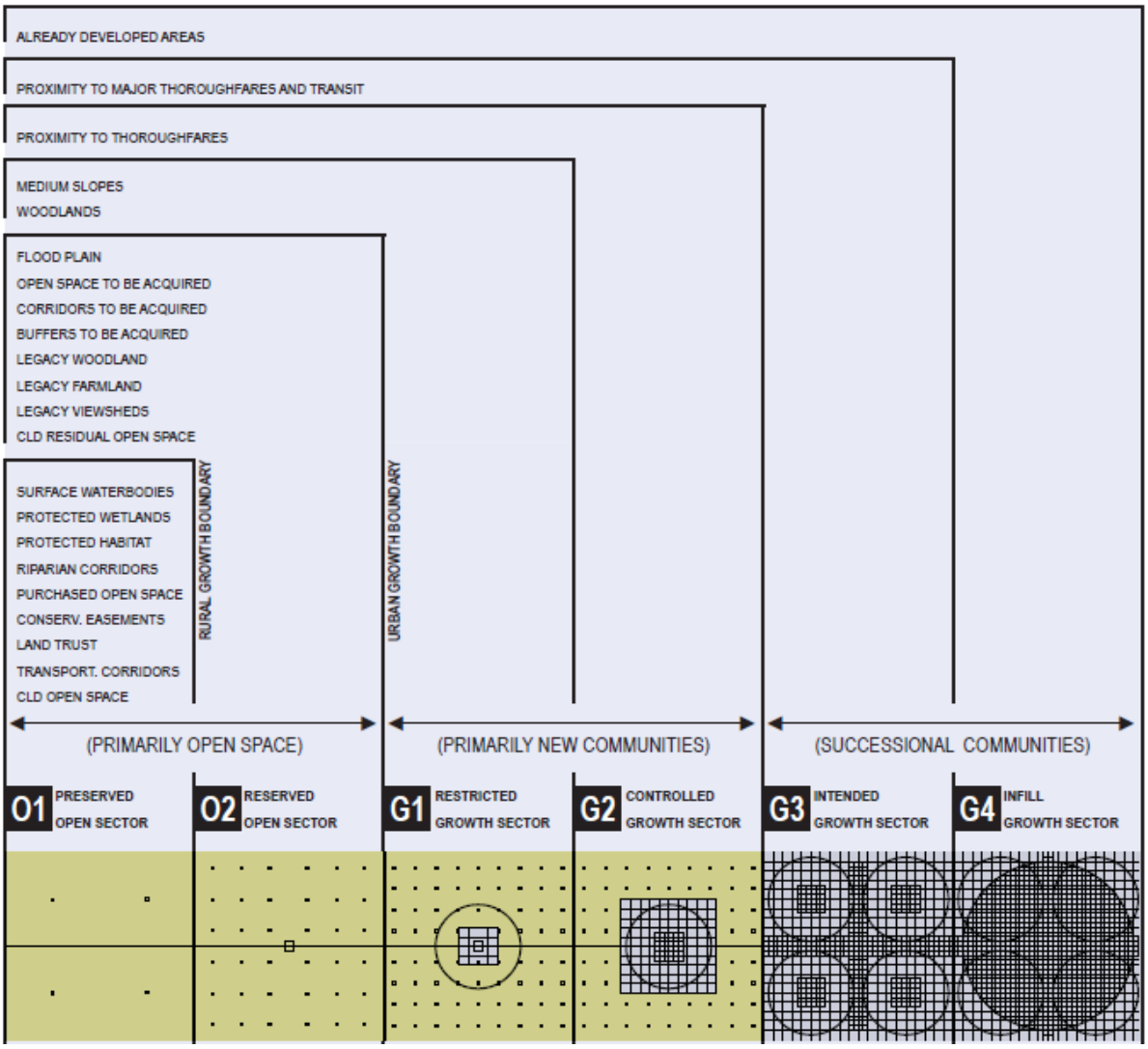


	ST-50-26	ST-50-28
Thoroughfare Type	Street	Street
Transect Zone Assignment	T4, T5, T6	T4, T5, T6
Right-of-Way Width	50 feet	50 feet
Pavement Width	26 feet	28 feet
Movement	Slow Movement	Yield Movement
Design Speed	20 MPH	20 MPH
Pedestrian Crossing Time	7.4 seconds	7.6 seconds
Traffic Lanes	2 lanes	2 lanes
Parking Lanes	One side @ 8 feet marked	Both sides @ 8 feet unmarked
Curb Radius	10 feet	10 feet
Walkway Type	5 foot Sidewalk	5 foot Sidewalk
Planter Type	7 foot continuous Planter	6 foot continuous Planter
Curb Type	Curb	Curb
Landscape Type	Trees at 30' o.c. Avg.	Trees at 30' o.c. Avg.
Transportation Provision	BR	BR

Signage standards are: “Regulations controlling allowable signage sizes, materials, illumination, and placement” (“Definition of a Form-Based Code,” 2009, para. 5). There are general regulations for all zones and specific regulations per each zone. Most communities already have signage regulations in place, but more specific regulations can be established in order to maintain aesthetic appeal and ensure compatibility with the designated architectural styles. Within the sub-urban transects little signage is allowed, because of the typically residential nature of development. More signage and larger signage is typically permitted for commercial, urban sectors.

Environmental Resource standards are: “Regulations controlling issues such as storm water drainage and infiltration, development on slopes, tree protection, solar access, etc.” (“Definition of a Form-Based Code, 2009, para. 5). Many of the environmental resource standards are progressive “green” standards that aim to protect the environment and ensure quality development. Additionally, such standards can also include growth standards, infill regulations, or preservation of open space. These regulations are often supplemental to growth boundaries, flood plain regulations and already protected lands, eg., state parklands. The following figure (Figure 4.5) shows a sample environmental resource standard that focuses on defining where growth is most appropriate and what natural elements should be protected.

Figure 4.5 *SmartCode v. 9.2* Environmental Resource Standards



Also included within form-based code regulations are definitions, which "ensure the precise use of technical terms" ("Definition of a Form-Based Code," 2009, para. 4). These terms are clarifications to technical language within the code, and are an important element when adopting form-based code regulations. Their intent is to increase understanding of the codes making them easier to use and enforce.

The elements listed previously are both common elements within form-based codes and others are more tailored and used discretionally. Each element should be analyzed for applicability as they relate to the needs of each individual community and the goals of the FBC regulations. They can be used as a basic template, but should more clearly defined by the entity that develops the codes. Additional elements might be required for special districts or extenuating circumstances. Overall FBC regulations will vary per community based on necessity and the scale at which the codes are applied.

Legality

The legal basis for implementation and enforceability of form-based code ordinances lies within state and local governments' ability to exercise police power, which protects and promotes the health, safety and general welfare of its citizens. Comprehensive plans, zoning regulations, subdivision standards, and other development ordinances including form-based codes are adopted to promote and protect those things, and thus are a legitimate exercise of police power when applied reasonably and without bias. In some states it is required that a city adopt a comprehensive plan before they can adopt form-based coding, and the codes must then follow the general plan guidelines. In 2004, California adopted legislation that specifically enabled the practice of form-based development regulations (Katz, 2004). The bill reads:

> *The text and diagrams in the land use element [general plan]…may also express community intentions regarding urban form and design. These expressions may differentiate neighborhoods, districts, and corridors, provide for a mixture of land uses and housing types within each, and provide specific measures for regulating relationships between buildings and outdoor public areas, including streets.*
> (Katz, 2004)

Other states just require that a plan be prepared, while others enable, but do not require that plans be prepared or that zoning regulations be used at all. (Katz, 2004) It is important to be aware of the enabling legislation requirements when developing form-based codes.

Additionally, it is important that the codes are not overly prescriptive so as not to encroach into private property rights. They should be more similar to typical unified development ordinances than optional design guidelines, but again will vary depending upon scale and intent.

Adopting Form-Based Codes

The process towards adoption of form-based code ordinances can be quite lengthy and is very detailed. The form-based codes book developed by Parolek, Parolek, and Crawford breaks to process into a "pre-phase" and then three supplemental phases. The pre-phase is entitled "scoping." Phase one includes "documenting" or evaluation of existing inventory, phase two involves "visioning," and the final phase calls for "assembly" (Parolek, Parolek & Crawford, 2008, p. 96).

Step One

The "pre-phase" or first step is making the initial decision about the size and extent of the code regulations. This includes deciding who will be involved, what areas of the municipality will be included, which elements of the code might be necessary and how the code might fit in with the existing regulatory framework (Parolek, Parolek & Crawford, 2008).

Most municipalities choose to involve their planning department, departmental directors and hire a consulting firm. These selected members should be involved throughout the entire process. Consultants are often hired for their additional knowledge and skills. Developing form-based codes involves a great deal of design work, which some planners are not accustomed to, so assistance from consultants is necessary. When choosing a consulting firm it is important to match the community's needs with a consulting team that has the right qualifications and prior experience. Appendix A is a sample Request for Qualifications (RFQ) put together by the Form-Based Codes Institute.

The next step in the pre-phase process is to determine the application area and the degree of change that is desired. The degree of change relates to the extent of physical change that is expected and desired for the designated areas. The different degrees can aim to simply to

preserve, to preserve and enhance, encourage physical change over time, or to transform the physical environment within the shortest amount of time possible (Parolek, Parolek & Crawford, 2008).

Following the determination of the application area it is time to determine the implementation method. This includes analysis of state laws to determine the public process and extent to which form-based codes can be adopted by the local legislative body. Within that framework communities can choose to entirely replace conventional zoning regulations with FBC regulations, as optional and freestanding regulations, as an "embedded form-based zone," or as a floating zone. A comprehensive replacement approach allows for consistency throughout the community, but can be a challenging undertaking. Optional, freestanding codes are stand alone codes that do not replace traditional zoning regulations. Developers are given the choice to use the codes is specified areas or for project sites that meet certain minimum requirements. Embedded form-based zones are mandatory and integrated into existing zoning regulations. This allows for gradual change with certain areas being "rezoned" to form-based zones. Finally, floating zones are similar to traditional New Urbanism implementation methods of Traditional Neighborhood Developments and Planned Unit Developments. These zones are applied only when a developer wishes to use the FBC. (Parolek, Parolek & Crawford, 2008)

The final step within the pre-phase process is to select an approach to coding. This means defining an organizing principle which is used as the basis for the regulating plan. There are various templates being used, but the most common is the transect method. If choosing to select a template, e.g. *SmartCode v. 9.2*, it is important to customize it to define the community needs.

Step Two

Step two, or "phase one," is the documenting phase. This phase involves an analysis of the existing conditions and inventory. The evaluation will help the code developers understand the existing character and patterns of development within the municipality. In the article "Form-Based Codes: Implementing Smart Growth," Dave Davis notes that inventory typically includes an analysis of street types, walkways, landscape, block shape and size, alleys, parcels, building footprints, streetfronts, pedestrian and vehicular access, front and side yards, squares and parks, undeveloped parcels, parking types and location and natural features like, creeks, wooded areas, vistas and significant topography. Through this evaluation planners and other design

professionals involved in the development process can diagnose problems and begin to identify possible solutions. (Davis, 2008)

Step Three

Step three, or "phase two," is the "visioning phase" (Parolek, Parolek & Crawford, 2008, p. 96). This step entails developing the desired form for the built environment that is defined by the community. Public participation is at the heart of the visioning process because, after all, the intent of the codes is to create a more desired urban form. Also, because FBCs are public documents that directly affect the community, public input is critical and required. While public engagement is imperative in this phase, it is important to remember that the designers, staff and other municipal officials should help guide the public through this process. This means that the citizens should have clearly defined alternatives, examples and a sense of direction that was previously established in steps one and two.

The public input process can occur in many forms. One more common method is a design charette. The charette allows for residents, property owners, city officials and others to give their input on design, policy and management issues. A well-run charette often includes visual representations of various alternatives to explore, and allows the public to discuss and even alter the possible design scenarios. Charettes are often held on multiple days and incorporate focus group meetings, workshops, presentations and public engagement (Davis, 2008). Through the use of charettes involved parties can analyze different scenarios and hopefully come up with a feasible and meaningful plan for future development. The number of public input sessions will vary per community based upon how volatile the changes are and how many people choose to participate. No matter how many public input sessions are held it is important to remember that public input is the key to successful, significant codes. Public participation creates excitement and momentum for change and can help make the adoption process much easier.

Step Four

Step four is the final phase in developing form-based code regulations. This step calls for the assembly of the code content and includes finalizing all illustrations, tables, diagrams and the standards that match the decided form. This includes the combination of scale, identifying organization (i.e. transects), and all additional standards that shape the urban form including, but

not limited to, the urban, architectural, landscape, and public space standards. The format of the codes should be well thought out in order to make them easy to understand and should only include relevant, concise information. All relevant information for implementing the FBC should be contained in one document to discourage cross-referencing and obscure terms. Illustrations should be clear and exemplify the desired development patterns. The final document itself is usually completed by a consulting firm, but is not required.

Advantages

There are many noted advantages to form-based codes and the larger principles of New Urbanism. Some are mutual; while others are exclusive to FBCs. Shared benefits include limiting unnecessary expansion/sprawl by allowing for redevelopment and infill development, creating walkable, inter-connected communities, encouraging environmental protection, and overall creating more sustainable communities.

The Form-Based Codes Institute cites eight major advantages of form-based codes over conventional zoning regulations. These include:

1. "Because they are prescriptive (they state what you want), rather than proscriptive (what you do not want), form-based codes can achieve a more predictable physical result" (Katz, para. 1). They better control the elements that shape the form of the built environment.

2. "FBCs encourage public participation because they allow citizens to see what will happen" (Katz, para. 2). Katz notes that by allowing citizens to see what will happen, they are often more open to new development because they understand the regulations.

3. "Because they can regulate development at the scale of an individual building or lot, FBCs encourage independent development by multiple property owners. This obviates the need for large land assemblies and the megaprojects that are frequently proposed for such parcels" (Katz, para. 3). This allows for greater flexibility for mixed-uses at the parcel level, and encourages compatibility with surrounding developments.

4. "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" (Katz, para. 4). Again, this results from the discretion given to developers to develop individual buildings and lots within a clearly defined, yet flexible framework.

5. *"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"* (Katz, para. 5). FBCs are applicable at varying levels and can be molded to best fit each communities needs.

6. "Non-professionals find FBCs easier to use than conventional zoning documents because they are much shorter, more concise, and organized for visual access and readability" (Katz, para. 6). FBCs are developed with the average citizen in mind, thus they are often easier to understand. Ease increases efficiency for citizens, developers, public officials, designers and planners alike.

7. "They require less oversight by discretionary review bodies, fostering a less politicized planning process that could deliver huge savings in time and money and reduce the risk of takings challenges" (Katz, para. 7).

8. *FBCs [prevent] the need for design guidelines, which are difficult to apply consistently, offer too much room for subjective interpretation, and can be difficult to enforce…The stated purpose of FBCs is the shaping of a high quality public realm, a presumed public good that promotes healthy civic interaction. For that reason compliance with the codes can be enforced, not on the basis of aesthetics but because a failure to comply would diminish the good that is sought.* (Katz, para. 8)

Additional advantages as noted in the *SmartCode v. 9.2* include:

1. "Enables smart growth community patterns that include Cluster Land Development, Traditional Neighborhood Development, Regional Center Development, and Transit-Oriented Development" (Duany, Sorlein, & Wright, 2008, p. viii).
2. FBCs "integrate the scale of planning…from regional through…architectural elements" (Duany, Sorlein, & Wright, 2008, p. viii). The codes are highly adaptable ensuring sustainability through longevity.
3. "Integrates the design process across professional discipline" (Duany, Sorlein, & Wright, 2008, p. viii). Input from multiple disciplines helps create a more significant regulation document.
4. "Integrates the methods of environmental protection, open space conservation and water quality control" (Duany, Sorlein, & Wright, 2008, p. viii). FBCs encourage and allow for sustainable development concepts.

5. “Encourages the efficiency of administrative approvals when appropriate, rather than decision by public hearings” (Duany, Sorlein, & Wright, 2008, p. viii). This saves time and thus can save developers money creating an incentive for their use.
6. “Encourages specific outcomes through incentives, rather than through prohibition” (Duany, Sorlein, & Wright, 2008, p. viii). For example, some FBC regulations allow for increased density or flexibility on other layout requirements when additional elements are included that are not required like more open space or affordable housing units.
7. Form-based codes "generally increase the range of options over those allowed by conventional zoning codes” (Duany, Sorlein, & Wright, 2008, p. viii). The range of options minimizes the need for variances, because there is a flexible set of standards. Again, this makes the FBCs more user-friendly, saving time and money.

Evaluating Form-Based Codes

When developing form-based code ordinances it is important that municipalities evaluate their codes to determine their effectiveness. The Form-Based Codes Institute has organized a set of general questions that reflect “best practices” of form-based coding. There are three main questions that can be used when evaluating coding regulations:

1. “Is the code enforceable?”
2. “Is the code easy to use?”
3. “Will the code produce functional and vital urbanism?”
   (“Checklist for Identifying,” 2008)

The answer to each question should be affirmative. Municipalities should also evaluate if their code addresses the specified intentions, if the procedures for code administration are clearly defined, are the codes coordinated with other applicable policies and regulations that control development on the same property, and they should make sure that the code is designed, intended and programmed to be regularly updated.

When evaluating how easy the code is to use municipalities should confirm that the overall format and structure is clear so that users can easily find what is pertinent to their request, the desired physical form is executable, the intentions are clearly describe and reasonable, the technical terms are clearly defined and understandable for non-professionals, if the code is

formatted in such a way to "lend itself to convenient public distribution and use" ("Checklist for Identifying," 2008, para. 3).

To determine if the code will produce functional and vital urbanism, municipalities should evaluate if the code will produce a pedestrian-friendly public realm and neighborhoods that encourage social interaction, if it produces identifiable neighborhoods that provide for daily needs, if the code is based upon a detailed regulating plan and other clear communities visions that "directs development and aids implementation," and finally if the "parking requirements are compatible with pedestrian-scaled urbanism" ("Checklist for Identifying," 2008, para. 4).

Overall it is important to make sure that the codes that have been devised actually assist in creating the desired physical form and assists in achieving the goals that were defined at the outset of development. The intentions should be clearly defined and recognizable throughout the regulations. Finally, as planners and designers it is easy to understand technical terms and envision grandiose schemes, but not even speaks the same language. The codes should be developed with the non-professional in mind to ensure that the vision can be implemented.

Barriers and Drawbacks

Like most development regulations there are barriers to overcome and some disadvantages. Generally, the greater the change is, the greater the opposition is. Good strategic planning and active public participation can help to overcome implementation barriers.

Common barriers to changes of development regulations include citizen and developer opposition. Mostly people want to make sure that their property values will not be harmed by any changes to the codes, and rightfully so. This is why public engagement is important to the development of form-based codes. Involving the public and other investors within the community will help to build momentum for FBCs, build the community's trust in the code developers, create a shared vision and increase understanding, which will hopefully muffle credible opposition. People should be familiarized with the intentions, future goals, what the changes will be and most importantly how the codes will affect them. This can be a long process that will take patience, time and resources, but it will be worth it when the regulations are adopted.

In the case of Miami, Florida's "Miami 21" code developed by form-based code founders Duany Plater-Zyberk & Company finalized in 2009, opposition almost proved to be too much to

overcome. The code was developed to replace the highly criticized existing zoning regulations that was said to be outdated (Raterman, 2007). The intent was to overhaul the current zoning code, but they realized that the city was too large to do make the change all at once, so they sought to make the changes progressively by dividing the city into quadrants. Even through what Charles Rabin writes in the *Miami Herald* that there were "literally hundreds of public meetings," the plans still saw adamant opposition (Rabin, October 2009, para. 2). There were many concerning points brought up against the code, the most notable was that people were concerned about the loss of property rights via development limitations and prescriptions placed upon private property by the Miami 21 code (Rabin, August 2009). On August 6, 2009 the code ordinance was denied for approval by the City Commission, more than four years after the first phases of the code development began (Rabin, August 2009). Finally, after the second public hearing held before the City Commission the document was adopted on October 12, 2009 (Rabin, October 2009).

Another hurdle to overcome when implementing form-based codes is the lack knowledge. While FBCs have formally been used for almost 30 years now, they are still somewhat uncommon. Zoning regulations have been the norm for development patterns for the past 80 years. Many developers, designers and planners realize that alternative forms of development are necessary, but simply do not know enough about form-based codes to use.

Aside from a possible lack of knowledge about form-based codes, Kaizer Rangwala most notably argues that many planners just do not have the skills needed to develop form-based design standards (p. 84). While form-based codes are aimed at making them easier to understand than zoning regulations, especially for non-professionals, their development involves a significant amount of technical design knowledge. In Rangwala's article, "Retooling Planners," he states that for many planners, form-based codes enlist an entirely different skill set oriented towards design, which is often not common practice for many planners (Rangwala, p. 84). Implementing form-based codes requires a different set of 'tools;'

> *The planning profession has its roots in physical planning, with an emphasis on designing desirable and livable places. However, over the last century planners have neglected the physical aspects of their profession… it exposes how little skill and knowledge planners today have with crucial tools of graphic representation.* (Rangwala, p. 84-85)

Rangwala suggests placing more of an emphasis on urban design skills in architecture and planning higher education institutions, which sounds to be a capable first step to increase the popularity of form-based codes.

After possibly overcoming impediments to implementation, planners and designers must also know that some drawbacks to form-based codes do exist. Knowledge of FBC can help designers to foresee issues and work towards finding solutions.

As exemplified above, there is no guarantee of approval. The more opposition, whether justified or unwarranted, can result in a denial of the codes. Also, as with any ordinance that goes through the public hearing process and approval by municipality commissions, politics often play a part. Volatile political environments can result in denial of adequately efficient, sustainable and visionary codes. Be aware of the social environment in which you plan.

Overall form-based codes have to walk a fine line between what the designers want and what the community will accept. Incremental changes can be implemented in order to “test” the political and social environment. Codes ahead of their time that often include sweeping changes and entirely new design elements might be what is needed, but not what is wanted. Many people are also weary of change even if it is good. The community is the voice behind form-based codes, not the designers and planners. Be aware of your community’s desires. There is a fine line between prescriptive regulations and the violation of private property rights. FBCs should allow for freedom of development within a defined code that truly seeks to protect the public.

CHAPTER 5 - Conclusions

The future of form-based codes looks promising. Zoning regulations are progressively being realized as outdated, inflexible and inadaptable to societies needs for the physical environment. With the "green" movement and New Urbanism becoming more and more popular, the demand for new "smarter" development patterns will also continue to increase. Form-based codes can be the regulations used to implement the new desired forms. The new, New Urbanism tool. FBCs are being used more widespread now, so professionals and non-professionals can become accustomed to what they do and how they achieve a defined goal. As they are adopted in more communities there will hopefully be less resistance to them.

While there are several barriers and impediments to overcome, there are ways around them. First, remember that public participation is key. With the support of the public and the politicians adopting FBCs should be relatively smooth. Build trust with the community by letting them know that their vision is important too. If designers of the code see that comprise and consensus is needed, then they should seek to achieve them. Incremental changes might be necessary. Part of this incremental change might also include labeling or codifying new form-based codes similar to traditional zones. Many people have grown accustomed to zoning regulations and they understand them, so why not format codes in a similar manner to make the changes not seem so dissimilar.

For codes that have been adopted as "floating zones" or optional regulations, incentives should be offered to developers to encourage their use; economic incentives greatly influence development. There is also an overall benefit to the community when the codes are implemented successfully, so the developer should also reap some of the benefits.

Another incentive or advantage of FBCs is that often the review process is simplified. This means that time is saved, which most of the time means money is saved. After all, as the saying goes, "time is money." This component of the codes should also be stressed as an incentive for using them. Some may contest though that while the administrative review process might be shortened the initial design process is not. While it is probably true that there is intended to be more consideration for design in the beginning of development, it is important to

note that with clearer more definitive codes, make the process is less ambiguous creating less confusion allowing for fewer reviews or denials. This again assists in saving time and money.

As planners, particularly planners that work in the public realm, we often worry about having the power to make changes within our communities. Education and flexibility will allow for planners to keep their power within the world of design. As Kaizer Rangwala suggests in "Retooling Planners," much of the form-based codes are design based and are thus oriented away from traditional planning practices giving the power to architects and other design professionals.

Rangwala suggests implementing more design-oriented courses into higher education planning institutions. While this is definitely a way for planners to better understand a designer's language, it does not assist those who are already out of the traditional education realm. Access to knowledge is important to professional planners in order to be cognizant of new development trends, foresee community harms and plan alternatives. As the use of form-based codes persists, it is important for planners to seek additional training and become educated about technical design elements in order to remain relevant.

In the case where design knowledge is limited, planners should at least find ways to make their codes more flexible. With new forms of development rapidly gaining popularity, it is important for planners to be able to incorporate these forms within their communities. If a municipality has not already done so, they should consider implementing some of the elements of New Urbanism and form-based codes into their existing regulations. This means allowing "floating" zones, overlay districts, mixed-use districts, TNDs and PUDs. This also includes incorporating more open spaces into new developments, allowing for pedestrian-friendly sidewalks and paths, or allowing compact development. Each of these elements can be incorporated into use-based ordinances. Additionally, this allows for slower change that might not be as vehemently opposed as sweeping changes.

Finally, once a vision has been defined and outlined it is important to make sure that the codes can actually be used and implement the intended changes. An important step to developing form-based codes should be a "test" phase. Non-professionals or inexperienced designers should review the documents to ensure that the codes can be understood and implemented properly. Also, a part of this "test" phase could be using the codes for a particular new growth development area or special district. This way there are no large-scale changes. If changes occur

incrementally, planners can make amendments as necessary in order to ensure the use of the codes and the proper application of the codes.

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Appendix A - Sample Request for Qualifications (RFQ)

SUGGESTED SCOPE OF SERVICES:

PRIMARY WORK PRODUCT: This contract will result in a proposed form-based code, meant to supersede (either entirely or in part) the present zoning ordinance and other local land development regulations that apply to [*insert name of area*]. This code is to be consistent with the definitions and evaluation criteria established by the Form-Based Codes Institute (FBCI); see *www.formbasedcodes.org* for more details.

1. **INITIAL REVIEW AND ANALYSIS**

    a. ***Interviews.*** The Consultant will interview appropriate stakeholders involved with the project. These interviews will include groups and individuals including elected officials, nonprofit organization leaders, property owners, neighborhood representatives, local design professionals, developers, business organizations, and municipal staff.

    b. ***Site Analysis.*** The Consultant will become familiar with the physical details of [*area to be coded*] and the historic patterns of urbanism and architecture in the surrounding region.

    c. ***Media coverage.*** The Consultant will participate in a press conference with local officials and draft a press release to inform the local citizenry about the planning efforts to be undertaken.

    d. ***Website.*** The Consultant will provide information for [*the municipality's*] website. As officials deem appropriate, the Consultant will provide materials including text, photographs, maps, renderings, and other images for the web site. This material will describe the Consultant's credentials and help explain the project's process.

2. **PUBLIC DESIGN PROCESS**

    a. ***Generate necessary background maps.*** [*Municipality*] will provide all necessary base map information as needed by the Consultant. These documents will be used

to produce the maps that will be used during the preparation of the form-based code.

COMMENTARY: The next sections describe a public process for generating the detailed physical plan that underlies a form-based code. In some circumstances this step will already have been completed and the code work can begin without the full step of a new planning charrette; but in most cases, this critical planning step must be undertaken first.

b. ***Public Workshop and/or Design Charrette.*** The Consultant will organize and lead design workshops or a full planning charrette to engage the community, gather ideas and goals, and formulate implementation strategies. The Consultant will tailor the workshop or charrette to obtain maximum community input so as to produce the best possible master plan on which to base the new code. The charrette format will also take into consideration the findings of the initial site analysis, input from staff, and information obtained at previous meetings, workshops, and interviews. While the end result will be new land development regulations, the public process will include discussions of alternatives for street design, street connectivity, and town planning strategies that create vital town centers, corridors, and livable neighborhoods. At the conclusion of the workshop(s), the Consultant will present the work generated to-date. Plans, renderings, and initial coding ideas that reflect ideas articulated in the workshops will be publicly presented and further feedback solicited from the community. It is essential that local government officials attend this presentation along with citizens, stakeholders and technicians.

3. **DRAFTING THE FORM-BASED CODE**

a. ***Design Parameters for the Form-Based Code.*** The new code will regulate development to ensure high-quality public spaces defined by a variety of building types and uses including housing, retail, and office space. The new code will incorporate a regulating plan, building form standards, street standards (plan and section), use regulations as needed, descriptive building or lot types (optional), and other elements needed to implement the principles of functional and vital urbanism and practical management of growth. Sections of this document would typically include the following:

- Overview, including definitions, principles, and intent; and explanation of the regulations and process in clear user-friendly language.

- Regulating Plan (a schematic representation of the master plan) illustrating the location of streets, blocks, public spaces (such as greens, squares, and parks), and other special features. Regulating plans may also include aspects of Building Form Standards such as "build-to-lines" or "required building lines" and building type or form designations.
- Building Form Standards governing basic building form, placement, and fundamental urban elements to ensure that all buildings complement neighboring structures and the street. These standards should be based upon study of building types appropriate for the region, climate, and neighborhood vitality.
- Public Space/Street Standards defining design attributes and geometries that balance the needs of motorists, pedestrians, bicyclists, and transit riders while promoting a vital public realm. These standards should include design specifications for sidewalks, travel lane widths, parking, curb geometry, trees, and lighting.

COMMENTARY: Optional sections here may include building or lot types, architectural standards (exterior materials and quality), landscape standards, parking location and parking management standards, etc.

b. ***Integration of the Form-Based Code***. The form-based code must be integrated into [*municipality's*] existing regulatory framework (zoning and land development regulations) in a manner that insures procedural consistency, meshes with state and local legal requirements, provides clarity as to applicability of existing regulations, and maximizes the effectiveness of the code.

COMMENTARY: Integration of the form-based code may be undertaken by the Consultant, by municipal staff, or some combination thereof.

4. **REFINING THE FORM-BASED CODE.**

a. ***Presentation of First Draft.*** The Consultant will present the first draft of the form-based code for the purpose of gathering comments. Copies of the first draft will need to be in hardcopy and digital form and posted on the website. The presentation may be made to a special audience of neighborhood residents or stakeholders, or may be presented before a joint gathering of municipal boards and committees, as determined by [*municipality*].

b. ***Presentation of the Second Draft.*** After making revisions in response to comments on the first draft, the Consultant will present the second draft of the form based code at a another meeting convened by [*municipality*].

c. ***Meetings with Stakeholders*.** The Consultant will attend and participate in up to [*insert number*] additional meetings with key stakeholders to explain the details of the new code and obtain further input and comments.

5. **APPROVAL PROCESS**

a. ***Public Hearing Presentations.*** The consultant will make formal presentations to the [*planning commission*] and the [*city council*].

b. ***Additional Revisions.*** The Consultant will be responsible for two rounds of revisions that may become necessary between presentations. [*Municipality*] staff will be responsible for collecting comments, questions, and suggestions for these refinements from various sources and consolidating them into a series of action items for revision or responses.

SUBMITTAL SUMMARY:

Submittals should be provided in [#] identical copies and include the following items, along with other material to demonstrate Consultant's expertise and capability:

1. A brief written description of the Consultant's approach to the project.
2. The expertise of the team assembled by Consultant to carry out the work.
3. A list of comparable projects undertaken by Consultant and/or team members.
4. A copy of at least one municipal form-based code previously created by the Consultant and adopted into law.

RECOMMENDED FORMAT FOR SUBMITTALS:

1. **DESCRIPTION OF APPROACH:** Up to two pages describing the Consultant's typical approach to projects similar to this one, including the nature of the public process and intended extent of public involvement.

2. **TEAM EXPERTISE:** Brief description of general qualifications, the multi-disciplinary nature of the team assembled for this project, specific evidence of relevant experience creating form-based codes, and a listing of key personnel that would be available to work on this project.

3. **COMPARABLE PROJECTS:** Summary of form-based code projects in progress or completed, with the following information for each code:
    a. Reference name, with current contact information
    b. Current status of code (drafting in progress; drafting completed; adopted?)
    c. Nature of public involvement in formulation of code
    d. Client type (clarifying role of private sector client, if any)
    e. Was the vision plan created as part of this process, or done separately?
    f. Size and scale of geographic area
    g. Type of development (greenfield? infill/redevelopment? city-wide code?)
    h. Type of code
        i. Mandatory (integrated into existing code, or freestanding?)
        ii. Optional "parallel" code?
        iii. Floating-zone code?

4. **SAMPLE CODE DOCUMENT:** Please include one or more sample code documents selected from the list of comparable projects. If this document is the code as originally proposed by Consultant, please also include the code as formally adopted by the municipality and a brief explanation of differences between the two. Photos of designed or built results of the code are encouraged but must be accompanied by a description of their specific relationship to the form-based coding process.

EVALUATION OF SUBMITTALS:

Consultants responding to this RFQ must demonstrate the following:

- Experience in preparing municipal form-based codes that regulate development and redevelopment in other communities.
- Experience in building community consensus to support innovative regulatory structures.
- Strong graphic skills.
- Strong skills in written and oral communication.
- Experience in identifying, evaluating, codifying, and explaining the essential qualities of community design and character.
- Experience in writing or implementing municipal land development regulations.

[*Municipality*] will evaluate all submittals to determine which Consultants have the experience and qualifications that are most suited for this project. [*Municipality*] may

request personal interviews with the highest-ranked Consultants or may request one or more prospective Consultants to submit detailed proposals, which may include the following:

1. Detailed description of the methodology being proposed.

2. Work program detailing:
   - Tasks to be performed.
   - When each will be completed (timeline).
   - Tentative allocation of person days by task.
   - Schedule of work products.

3. Methods the Consultant proposes to use to manage the project and communicate with [*municipality*] and the public as to project progress, reviews, and conduct of public meetings.

4. Identification of key personnel to be assigned to the project and their roles, with resumes of all key personnel.

5. Hourly rates (inclusive of overhead and profit) for personnel or personnel categories.

6. Data expected to be provided by [*municipality*].