Form-Based Codes: Implementing Smart Growth

I n the two years since the Local Government Commission's ***Smart Growth Zoning Codes: A Resource Guide*** was first published, the movement to reform zoning codes has gained momentum. Today, form-based codes have become an increasingly popular approach to achieve these reforms and create communities where people want to live, work and play.

The old adage "form follows function" describes the common approach behind land use regulation as it has been practiced in the past. Form-based codes turn that relationship on its head. Since the primary basis for regulation is the buildings, not the uses, "function follows form." These codes concentrate first on the visual aspect of development: building height and bulk, façade treatments, the location of parking, and the relationship of the buildings to the street and to one another. Simply put, form-based codes emphasize the appearance and qualities of the public realm, the places created by buildings.

As with other smart growth concepts, form-based codes have been applied in new growth areas, in existing neighborhoods, in limited situations to special districts, and in wholesale code revisions for entire communities.

▲ *Making zoning codes work for the community: Pocket parks and front porches help create livable places.*

What are form-based codes?

F orm-based codes place a primary emphasis on building type, dimensions, parking location and façade features, and less emphasis on uses. They stress the appearance of the streetscape, or public realm, over long lists of different use types. These codes have the following characteristics:

➡ **Zoning Districts** – Form-based codes are defined around districts, neighborhoods and corridors where conventional zoning districts may bear no relationship to the transportation framework or the larger area.

➡ **Regulatory Focus** – Form-based codes de-emphasize density and use regulation in favor of rules for building form. They recognize that uses may change over time, but the building will endure.

➡ **Uses** – Form-based codes emphasize mixed use and a mix of housing types to bring destinations into close proximity to housing and provide housing choices to meet many individuals' needs at different times in their lives.

➡ **Design** – Greater attention is given to streetscape and the design of the public realm, and the role of individual buildings in shaping the public realm. Form-based codes recognize how critical these public spaces are to defining and creating a "place."

➡ **Public Participation** – A design-focused public participation process is essential to assure thorough discussion of land use issues as the code is created. This helps reduce conflict, misunderstanding and the need for hearings as individual projects are reviewed.

Modified from definition by Paul Crawford, AICP

Local Government Commission

Why are form-based codes effective?

The focus on building and street design in form-based codes allows graphics and photos – instead of lengthy, repetitive text – to explain the details of zoning requirements. In turn, these codes are much more democratic instruments, because they are more readily understood by residents who are not otherwise involved in land use or development professions.

■ Pictures tell the story

Form-based codes can greatly reduce discussions about the meaning of zoning terms and arguments over the interpretation of code language, allowing everybody involved in a public participation process to focus their time and energy on the essence of the regulations, rather than on "wordsmithing." Using form-based codes, a picture really can be worth a thousand words.

■ Easy-to-find information

Another improvement offered by form-based codes is that they contain all relevant information in a concise format. By contrast, conventional codes usually include this information in several different sections of the code, sometimes even in side documents that may not be readily apparent or available to the inexperienced user.

By consolidating information and using a simple pictorial style that avoids jargon and complex, repetitive language, form-based codes offer a much more accessible format.

■ Great for mixing uses

Another key characteristic of form-based codes is the way they treat different use types. Since the dawn of zoning, conventional codes were built around the concept of separating uses. They seldom allow uses from a different category (retail, single-family, multi-family, office, etc.) within the same zoning district.

When uses from different categories are proposed by project developers, extra processes and additional hearings are often required. In contrast, form-based codes assume a mix of uses, especially in neighborhood or town centers.

■ Better, faster, cheaper process

This clarity of format and intent can lead to a shift in approval processing from a hearing-heavy process to one that is largely administrative. Simply put, if all the details are discussed and clarified when the code is developed, and if they are accurately represented in a format that leaves no doubt as to the requirements, then a "build-by-right" approach is possible.
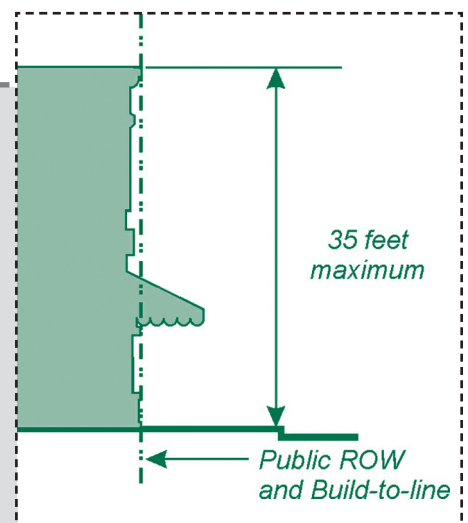
This means the review of a project application follows procedures similar to those for obtaining building permits. If the proposed project meets all of the code's requirements, the application can be approved administratively.
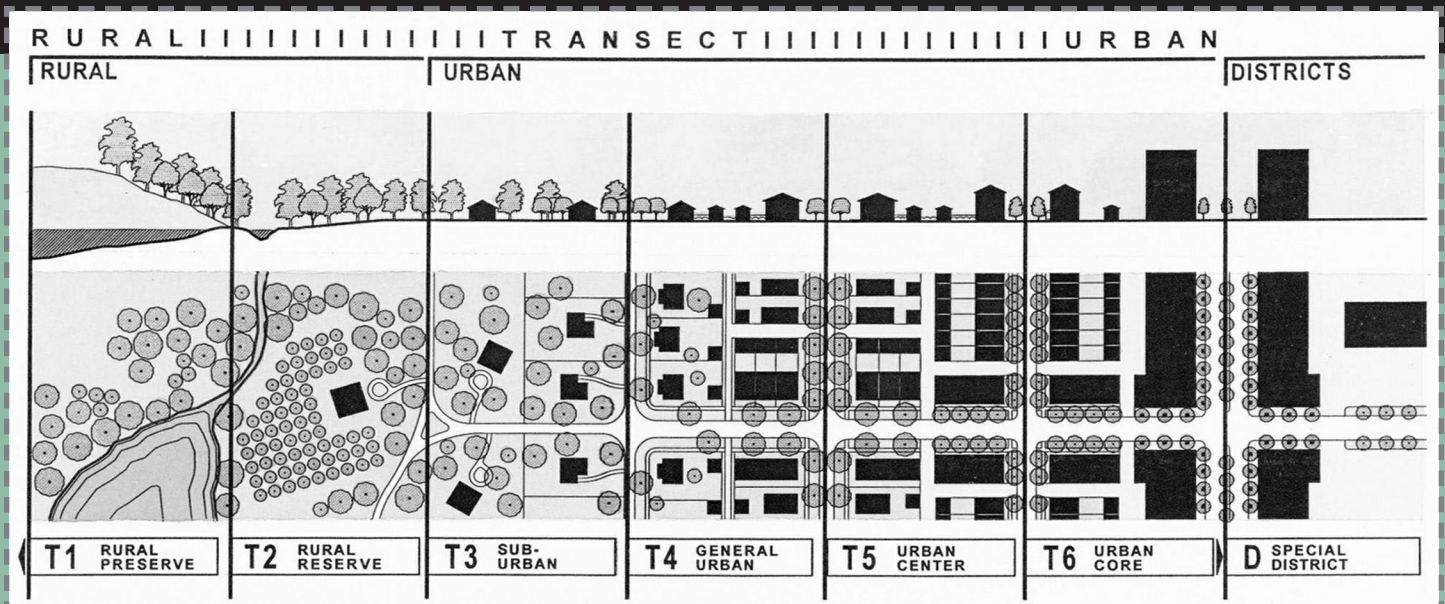
Obviously, this reduces time, expense and uncertainty for the developer, but it also reduces processing and hearing costs for the jurisdiction involved. This can free up staff time for more proactive planning.

▼ *Form-based codes use pictures to tell the story.*

35 feet maximum

Public ROW and Build-to-line

New state law authorizes use of form-based codes

Like many unconventional ideas, form-based codes were met with considerable skepticism in many communities, and at times it was argued that they were not even a legal means of regulating land use. To clarify that issue, the California legislature weighed in by adopting legislation specifically authorizing form-based codes. Assembly Bill 1268 was signed into law in July 2004, resulting in very clear language in the state's General Plan Guidelines and the statutes governing zoning that allow form-based codes.

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| RURAL | URBAN | | DISTRICTS |

| T1 RURAL PRESERVE | T2 RURAL RESERVE | T3 SUB-URBAN | T4 GENERAL URBAN | T5 URBAN CENTER | T6 URBAN CORE | D SPECIAL DISTRICT |

▲ *Seeing development and zoning codes as part of a land use continuum – an urban/rural "transect" or cross-section – helps us better understand where different uses and building types belong, and where they might be inappropriate.*

The Transect: Seeing land uses in context

Communities differ greatly in size, topography, density and growth rates. In some areas, the primary concerns are about new development taking place on previously undeveloped land or "greenfields." Other communities are mostly built out, and focus more on codes that guide infill or reshape and revitalize neglected neighborhoods. Still others need new codes to address development opportunities around new transit systems.

One of the beauties of form-based codes is that they can be applied in so many different communities and situations.

Andres Duany, one of the Ahwahnee Principles' authors and a founder of the Congress for New Urbanism, has taken the idea of the "transect" from natural science and applied it to land use planning. The transect, as used in ecological studies, draws a cross-section through different habitats to better understand their inter-relationships along a continuum.

Applied to an urban/rural continuum, the transect helps us better understand where different uses and building types fit well or where they are inappropriate. Seen from this perspective, we learn that a controversial use or development project is not inherently bad, but may simply have been proposed for the wrong location.

Duany codes all the features and concepts that guide communities, neighborhoods and development into six different districts along the transect (T1 to T6), from rural preserve districts to those in the urban core. He also includes a special district for uses such as a university campus, airport or stadium.

Setbacks, for instance, shrink as development progresses from the rural to the more highly urban. Likewise, there is less area devoted to greenery in the urban core than in the rural districts. Building heights, however, increase.

This unified development ordinance, or "SmartCode," links all

commonly regulated dimensions and features, building bulk, street lighting, sidewalks, parking and landscaping to the different districts.

This framework allows for a common understanding that relates development characteristics to places within the urban fabric. This common language allows developers, planners and residents – even in different cities – to readily comprehend the context for different uses and building types.

In Petaluma, California (see next page), this shared comprehension overcame the confusion and conflicts that stood in the way of good intentions, and all too often, good projects. The graphical nature of the transect fits very well with form-based codes.

Duany Plater-Zyberk & Company has been instrumental in bringing this classification methodology into real-world application in form-based code projects across the country.

Steps for preparing a form-based code

How does a community go about preparing a form-based code? What are the steps that need to be taken to prepare a form-based code?

According to planner Paul Crawford, one of the nation's experts on form-based codes, the typical steps are required to prepare this type of code include:
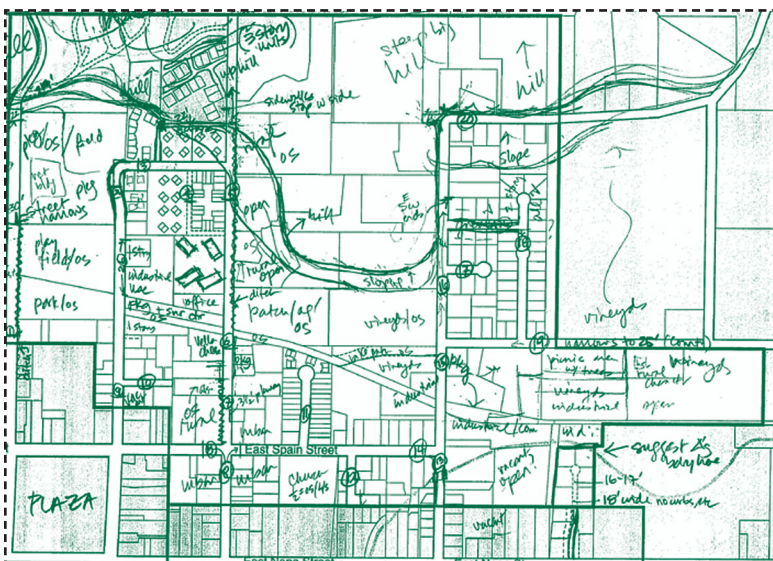
1 Existing conditions analysis and inventory

Before embarking on development of the code it is critical to understand clearly what the existing patterns of development are in a community. This record of existing conditions – especially of areas that the community identifies as special, or significant – can help develop a code that fits local characteristics.

Using diagrams and notes, a typical analysis will look at:

➢ Street types (by setback, walkway, roadway, and landscape)

➢ Block types (shape, size, alleys, parcelization)

➢ Building types (footprint, profile, streetfront, access by car or pedestrian, service areas)

➢ Open space types (front, back and side yards, squares and parks, undeveloped parcels with urban zoning)

➢ Parking types and location (parallel, diagonal, lots)

➢ Natural features (creeks, significant trees, views, hills, etc.)

2 Public visioning and charrette

Input from the community is gathered early in the process through a public visioning and charrette process.

The charrette is a collaborative planning process that brings together residents and design professionals in an intensive multi-day process that typically includes focus group meetings, workshops, presentations, and public engagement exercises to develop a feasible plan for future revitalization and development.
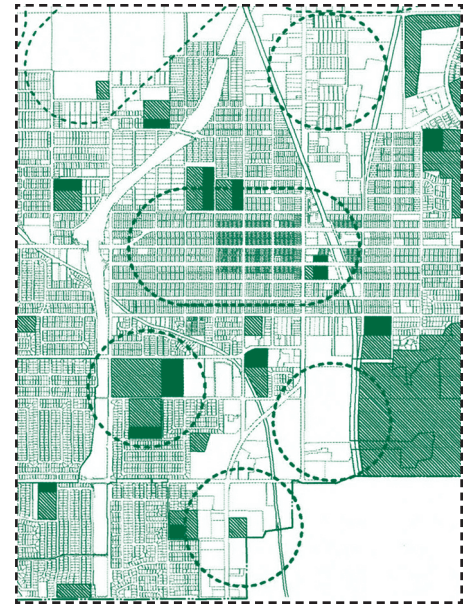
▲ *Step 3: Azusa's code divides the city into open space, residential areas, commercial corridors and commercial districts.*

3 Determine appropriate spatial basis for regulation (districts, transect, streets or special zones)

There are a number of different approaches that can be taken in determining how the form-based code will be defined and regulated. Although there is some overlap between these approaches, Crawford describes four basic alternatives that are typically used by different practitioners:

➢ Neighborhoods, districts, corridors

➢ Transect

➢ Street-based regulating plan

➢ Special purpose zones

This process entails identifying which parts of the community are appropriate for different types of development. For example, if the transect-based approach is used the plan would identify those areas that are suburban (T3), general

▼ *Step 1: Existing conditions' inventory from the City of Sonoma's development code update*

Form-based codes: Good vintage for wine country

■ Sonoma, California

One of California's oldest cities and located in the scenic wine country, the city of Sonoma had seen post-war suburbia grow into older neighborhoods built around its old pueblo that dates back to Spanish colonial times. This jumble of neighborhoods and building types represented a significant challenge to those developing a new code.

Adopted in 2001, the new form-based code covers the entire city. To break the daunting task of a wholesale code revision into more readily understood pieces, the city was divided into 13 planning areas in four categories – residential, commercial district, commercial corridor and open space. Within each area, the existing situation was inventoried and compared to the desired future state. This allows the code to recognize existing development while imposing a new regulatory framework on future development. Areas of special concern such as rural roads, the urban edge and creeks are highlighted, and subject to specified guidelines.

Code prepared by Crawford, Multari and Clark Associates

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urban (T4), urban center (T5), urban core (T6) and special districts such as schools, civic centers or industry.

4 Develop urban standards (streets, blocks, building placement, height, land uses, etc.)

The next step is to define and code the urban standards for the different parts of the community mapped in Step 3. The results will be a set of diagrams for each zone that clearly establish standards for some of the following key ingredi-

▼ *Step 4: Form-based codes show where parking must be located.*

Parking only allowed on rear half of lot
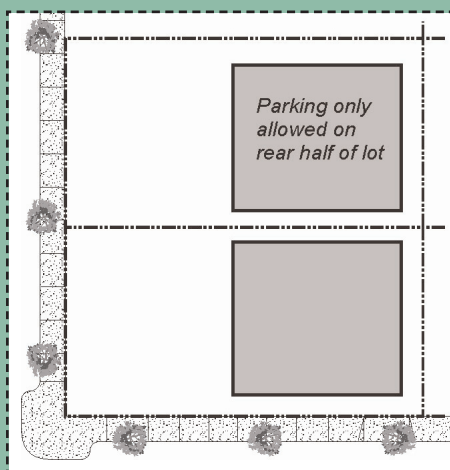
Building Type	Lot Width at Street Frontage					
	50 ft	75 ft	100 ft	125 ft	150 ft	200+
Single-Family	■	■				
Duplex	■	■				
Quadruplex	■	■	■			
Eightplex/Mansion						
Lane Housing						
Bungalow Court			■	■	■	
Townhouse						
Sideyard Housing						

▲ *Step 5: A simple lot-width table shows how Ventura's code regulates building profiles.*

ents of an urban place: street and sidewalk widths, building placement, building height and profile, and, if relevant, location of on-site parking.

5 Develop architectural standards (building or frontage typologies, etc.)

The inventory conducted in Step 1 and the public visioning and charrette process in Step 2, help to identify the different types of buildings and how they front the street to define the public realm.

The form-based code builds on this information to define what types of buildings fit into different parts of the community. The

form-based code for the City of Ventura, California, for example, identifies the following types of buildings as appropriate for different parts of the community: single family, carriage house, duplex, triplex, quadplex, mansion apartment, bungalow court, townhouse, sideyard housing, live/work, courtyard, stacked flats, commercial block, and blended development.

The code then lays out very clearly which types of buildings are appropriate in the different districts for different lot widths through a table on the left.

6 Allocate and illustrate standards

The final step in the process is to prepare the standards in a format that is graphic, well-illustrated, jargon-free, and easy to understand.

This format should include all information and regulation relevant to a particular district (street type, neighborhood, etc.) in one concise piece. This avoids the confusion that cross-referencing, scattered requirements, and obscure terms can introduce.

Zoning for consensus and revitalization

■ Petaluma, California

I can't tell if the SmartCode is a radical, green, left-wing document or a developer-friendly, market based right-wing one," a *Santa Rosa Press-Democrat* reporter wrote in April 2003. The view underscores the broad appeal of form-based codes.

The City of Petaluma struggled for seven years to achieve consensus on a specific plan for a 400-acre redevelopment site adjacent to its downtown. Despite extensive public outreach, political battles continued between residents, developers and environmentalists.

The proposed zoning code was full of legalese and numbers and did not assure the stakeholders that new development would mimic the existing historic downtown.

To move forward, the city hired a consultant who introduced the transect SmartCode. This code focused less on separating uses and more on describing the building forms that would realize the community's vision of a pedestrian-oriented, mixed-use district. Residents have been reassured by the clarity and relative simplicity of the new code, and developers appreciate its clear rules and expedited permitting process.

After only nine months of community visioning and consensus-building, former adversaries agreed on the new form-based code, breaking a long-time logjam.

The Central Petaluma Specific Plan, adopted in June 2003, has jump-started the construction of a new, mixed-use theater district.

Code for a new town center

■ Hercules, California

The "Regulating Code," adopted for the small city of Hercules across the bay from San Francisco in the summer of 2001, is similar to another prepared by the same firm for the City of Winter Springs, in Florida.

Intended to foster smart growth development in newly created town centers, both codes have been extremely successful, immediately triggering development projects conforming to the principles and details embodied in the code.

The Hercules code covers four districts in the central part of town. It includes eight street types, though not all will appear in each zone. The use table is a mercifully short three pages, with a half-page of footnotes. Four times that number of pages are devoted to façade details and architectural standards.

▲ *Attractive new homes in Hercules look out onto the San Francisco Bay.*

This architectural material features photographs and drawings of desired and unwelcome features, signs, porches, trim and so on. These details precede the use tables in the code, consistent with form-based codes' emphasis on building form and the public realm.

One page is devoted to each street type, detailing streetscape features such as pavement width, curbs, on-street parking, landscaping, corner radii, sidewalks, building setbacks, eaves, awnings and balconies.

This format allows the user to quickly access all the most relevant requirements and standards for a piece of property, just by referencing the street type that fronts the property.

Hercules' new Regulating Code has clearly been a success. Since its adoption, development has flourished in the area it covers. Several traditional-appearing residential projects have been built, with a total of 300 units, and construction is under way on the first phase of the main street area of the Waterfront District.

That main street building includes fifteen 2,700-square-foot ownership units with commercial space on the ground floor and two-story townhouse units above. The single-family projects include a number of creatively designed duplex, triplex, and fourplex units that blend in very well with the surrounding housing. Building styles are varied.

The structures, landscaping, street design, and even the street lamps have design details specified in the code. This thorough approach to the details can make all the difference in the finished appearance and appeal of a project.

Code prepared by
Dover, Kohl & Partners

wide median and plentiful street trees make the Two Lane Avenue a quiet address especially well suited to residential and office uses.

A. Building Placement:

Build-to-line location: (Typical) — 0 to 10ft. from Property line

Space Between Buildings: — 0 ft. if attached / 6-10 ft. if detached

B. Building Volume:

Bldg. Width: — 16 ft. minimum / 160 ft. maximum

Bldg. Depth: — 125 ft. maximum

Bldg. Height: — 2 stories minimum / 4 stories maximum / 55 ft. Maximum / The first floor shall be a minimum of twelve (12) feet in height

C. Notes:
1. Appurtenances may extend beyond the height limit.
2. Building fronts are required to provide shelter to the sidewalk by means of at least one of the following: arcade, colonnade, marquee, awning, or second floor balcony.
3. The alignment of floor-to-floor heights of abutting buildings is Encouraged to allow for shared use of elevators.
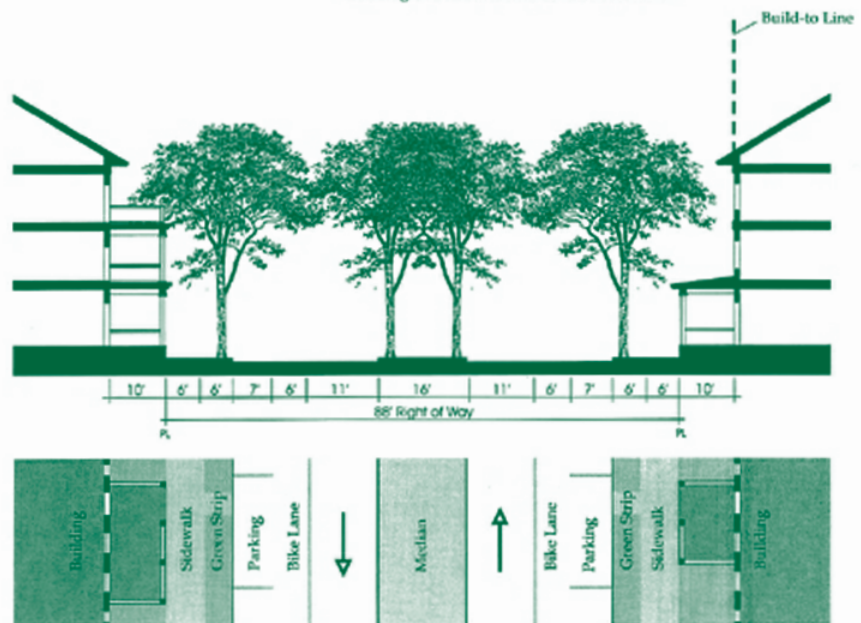
Other Points to Consider

Large-scale revisions of zoning codes always have the potential for unanticipated problems, whether a form-based approach, or a more conventionally structured code built around smart growth principles, is used. The need to monitor and revise these new codes after they are adopted must not be overlooked with any format. With form-based codes, these problems will likely surface when the underlying basis for regulation is changed from a focus on uses within and around buildings to a focus on the structures first.

Form-based codes require re-educating everyone in the community – elected and appointed officials, planners, engineers, developers and residents. This begins with a broad public participation effort as the code is developed, of course, but it must also continue after the code is adopted. Code modifications should be expected over time, and must be explained to everyone involved. Some cities have hired an architect or urban designer to work with builders and developers to help implement the code's objectives.

This education – particularly of staff – will help reassure developers and the public that application approvals will meet the code's intent. If code reform streamlines the process in a way that eliminates hearing checkpoints, people must be confident that staff are trained to properly assess whether proposed projects comply with detail requirements in the code.