What is a form-based code?
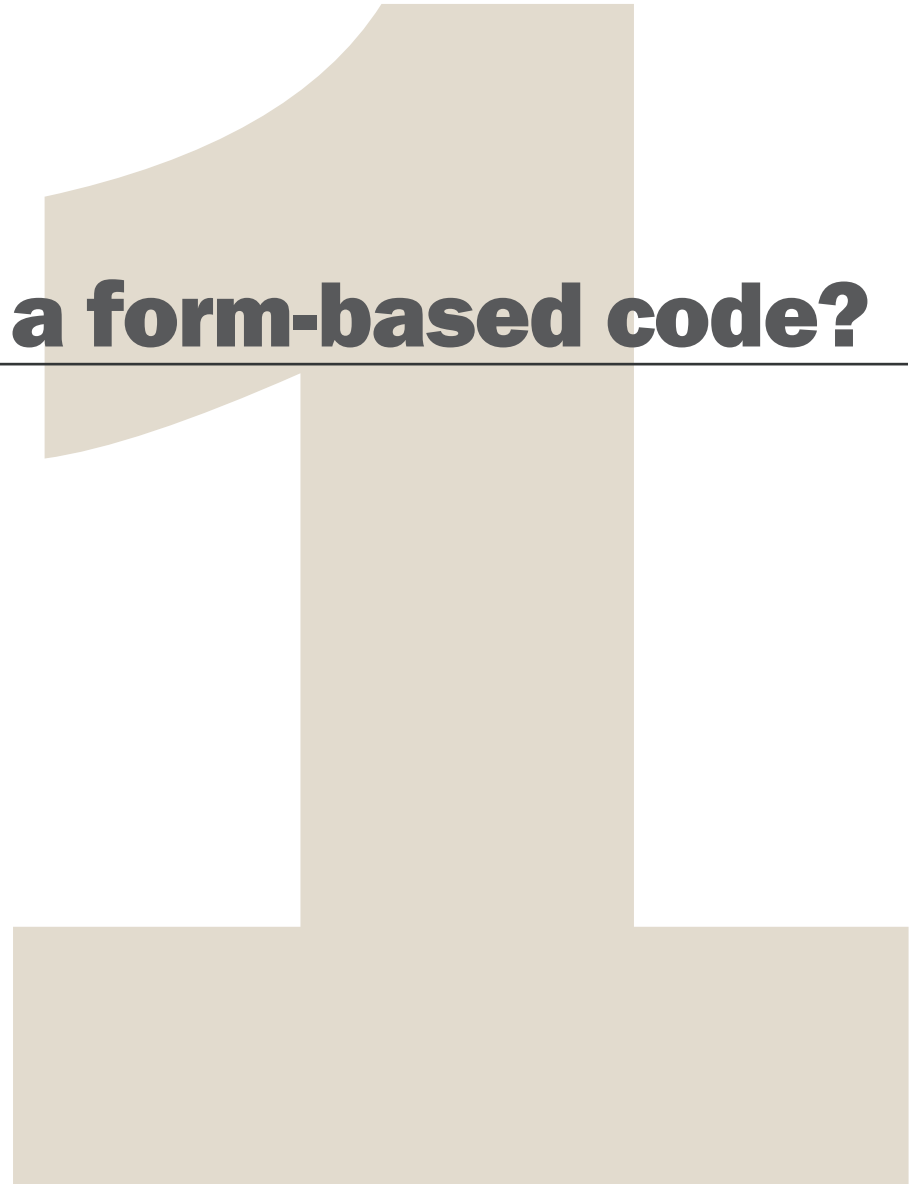
Conventional zoning vs. form-based code

conventional vs. form-based

CONVENTIONAL ZONING VS. FORM BASED CODES

CONVENTIONAL ZONING HAS RESULTED IN THE SEPARATION OF USES AND HAS CREATED AUTOMOBILE-DEPENDANT ENVIRONMENTS.

AN EXAMPLE OF A MIXED-USE NEIGHBORHOOD, WHERE SINGLE-FAMILY, MULTIFAMILY, AND COMMERCIAL USES ARE ALL WITHIN EASY WALKING DISTANCE OF EACH OTHER.

Conventional zoning regulations

Conventional zoning was developed to protect property values by separating incompatible uses in a particular area or district. This separation was typically accomplished by creating single or limited use zones, which segregated different land uses, such as residential and commercial. Development with spatially separate land uses became the norm. This separation of uses, along with the automobile becoming the preeminent transportation mode, created the character of suburban communities we have today. Many zoning ordinances originated during the '50s and '60s, and although virtually all have been amended since then, most retain the principles of segregating land uses and neglecting all transportation modes except the automobile. Examples include commercial zones, which prohibit residential uses, or development regulations that have detailed automobile parking standards but no on-site circulation requirements for pedestrians.

Because the original purpose of zoning was to prevent incompatible uses moving into the neighborhood, zoning regulations are often reactive, focusing on what is not allowed. These standards and design requirements are usually applied generically throughout the entire community. This preoccupation with separating incompatible uses often bears no relationship to the real transportation or land use issues in the community.

A second important characteristic of conventional zoning is the use of numerical parameters to regulate development form. These include floor area ratios (FARs), dwelling units per acre, building heights and setbacks, and parking ratios. These indirectly affect development form, but not in a manner that is easily visualized or predictable. Zoning regulations are often applied in a one-size-fits-all manner, without any specific planning or thought about what the community wants development character to be. Although the resulting development may be "compatible" in terms of density, for example, it can often be incompatible with the context of the surrounding neighborhood.

a conventional zoning table

(a)

District	Minimum Required #Open Space Ratio#	Maximum #Floor Area Ratio#
R1 R2*	150.0	0.50

_____

*   R2A and R2X are subject to the provisions of paragraph (b).

(b)

District	Maximum #Lot Coverage# (in percent)	Minimum Required #Open Space# (in percent)	Maximum #Floor Area Ratio#
R2A	30	70	.50
R2X	governed by #yard# requirements		.85
R3-1 R3-2	35	65	.50
R3A R3X	governed by #yard# requirements		.50
R4	45	55	.75
R4A R4-1	governed by #yard# requirements		.75
R4B	55	45	.90
R5	55	45	1.25
R5A	governed by #yard# requirements		1.10
R5B	55	45	1.35
R5D	60*	40*	2.00

*   For #corner lots#, the maximum #lot coverage# shall be 80 percent and the minimum required #open space# shall be 20 percent.

A CONVENTIONAL ZONING TABLE

IN MANY CONVENTIONAL ZONING CODES, TABLES EXPLAINING DEVELOPMENT STANDARDS, USE REGULATIONS, FAR LIMITATIONS, DENSITY REQUIREMENTS, AND PARKING REQUIREMENTS CAN BE CUMBERSOME AND DIFFICULT TO UNDERSTAND.

Third, conventional zoning ordinances deal with private development, but typically do not include standards for the design or character of the streets that serve it. These standards are usually left to the city engineer or public works department. Street standards are normally created with a distinct deference to accommodating automobile traffic. They are based on general street classification (arterial, collector, and local) with no special consideration of how these standards relate to the different areas the streets serve. For example, it is common for an arterial street to have the same design as it travels through employment, commercial, and residential districts in a city.

This general application of development and street standards does not allow zoning ordinances to promote development envisioned by community plans. In fact, zoning regulations often undermine the very plans they are supposed to support. Conventional zoning has often has led to dysfunctional communities, which exhibit many of the traits the Blueprint Plan hopes to avoid in the future, including:

► Separation of uses related to daily activity (e.g., home, school, and work);

► Limited transportation choices;

► Few distinct centers or downtown districts;

► Low density development and relatively limited housing choices; and

► Excessive land consumption.

using form-based codes to transform the public realm

USING FORM-BASED CODES TO TRANSFORM THE PUBLIC REALM

FORM-BASED CODES TYPICALLY INCLUDE STANDARDS FOR THE DESIGN AND CHARACTER OF PUBLIC STREETS, THEREBY TAKING A STRONGER ROLE IN SHAPING THE PHYSICAL ENVIRONMENT THAN A CONVENTIONAL ZONING CODE. THIS PHOTO SIMULATION OF THE 65TH STREET AREA ILLUSTRATES HOW BUILDING DESIGN AND STREETSCAPE STANDARDS CAN TRANSFORM THE PUBLIC REALM.

Form-based code: implementing a vision

Form-based codes differ from conventional zoning because they:

1. Are the result of a *public design process*, which creates a clear and articulate vision for a defined district or neighborhood. A form-based code is developed as an outcome of this process to help implement the vision.

2. Pay greater attention to the design of *the public realm* and the importance that streetscape design and individual building character have in defining public spaces and a special sense of place. Of special significance is the integration of street standards with the desired physical character of the abutting development.
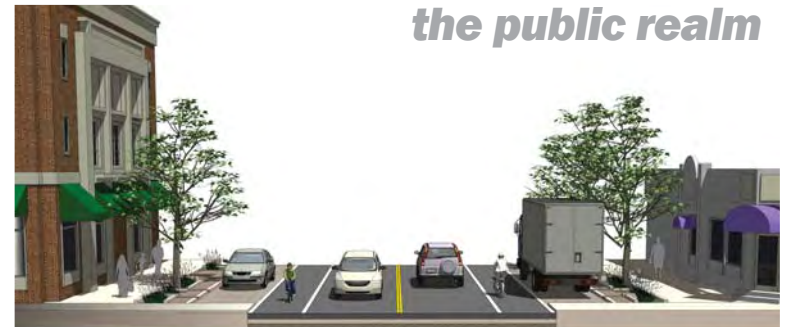
public design process

PUBLIC DESIGN PROCESS

IN ORDER TO ENSURE THAT A CLEAR AND ARTICULATE VISION IS FORMED FOR THE PLANNING AREA, FORM-BASED CODES ARE THE RESULT OF A THOROUGH PUBLIC DESIGN PROCESS.

the public realm

sidewalk	furnishing zone	parking and loading	bike lane	travel lane	travel lane	bike lane	parking and loading	furnishing zone	sidewalk
8'	7'	8'	6'	11'	11'	6'	8'	7'	8'
15'				34'				15'	
pedestrian zone	parking		travel zone				parking	pedestrian zone	

PORTLAND DEVELOPMENT COMMISSION/SERA ARCHITECTS

THE PUBLIC REALM

FORM-BASED CODES FOCUS ON THE DESIGN OF THE PUBLIC REALM AS WELL AS INDIVIDUAL BUILDING DESIGN, RESULTING IN MORE UNIFIED AND COHERENT PUBLIC SPACES.

site design and building form

SERA ARCHITECTS

Windows along min. 50% of length of ground floor area
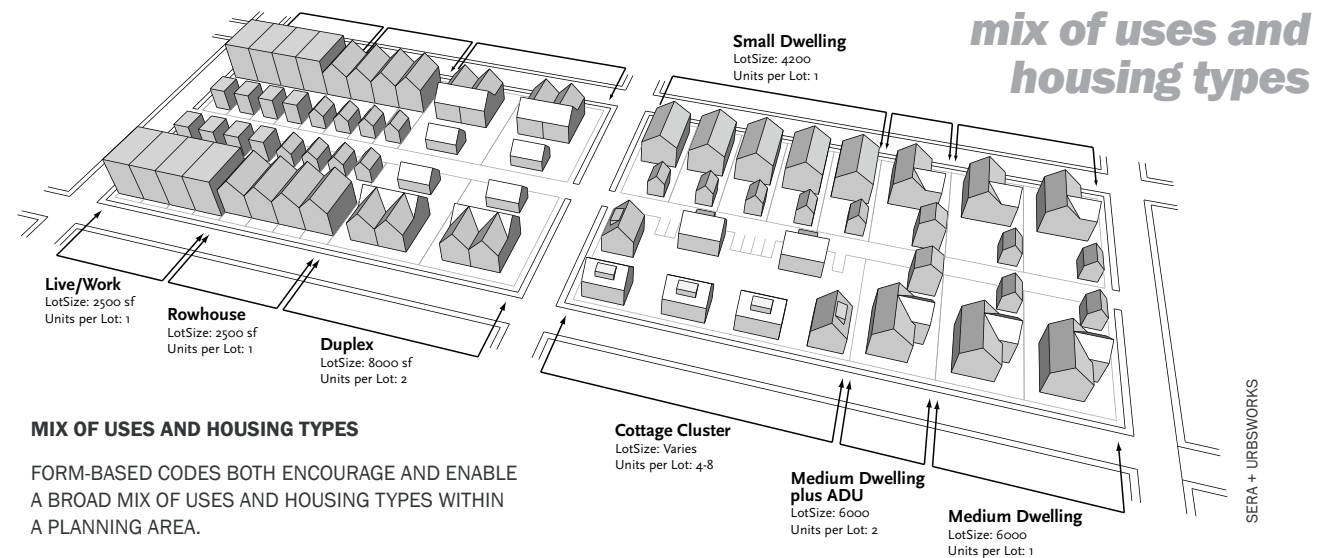and 25% of overall courtyard-facing ground floor wall area

3. Emphasize *site design and building form* over density and use regulations. Form-based codes pay more attention to the buildings, which will last many years, instead of the uses, which change over time.

4. Encourage a *mix of uses and housing types* to reduce the need to travel as part of one's daily routine.

SITE DESIGN AND BUILDING FORM

FORM-BASED CODES EMPHASIZE BUILDING DESIGN RATHER THAN USE.

mix of uses and housing types

Small Dwelling
LotSize: 4200
Units per Lot: 1

Live/Work
LotSize: 2500 sf
Units per Lot: 1

Rowhouse
LotSize: 2500 sf
Units per Lot: 1

Duplex
LotSize: 8000 sf
Units per Lot: 2

Cottage Cluster
LotSize: Varies
Units per Lot: 4-8

Medium Dwelling plus ADU
LotSize: 6000
Units per Lot: 2

Medium Dwelling
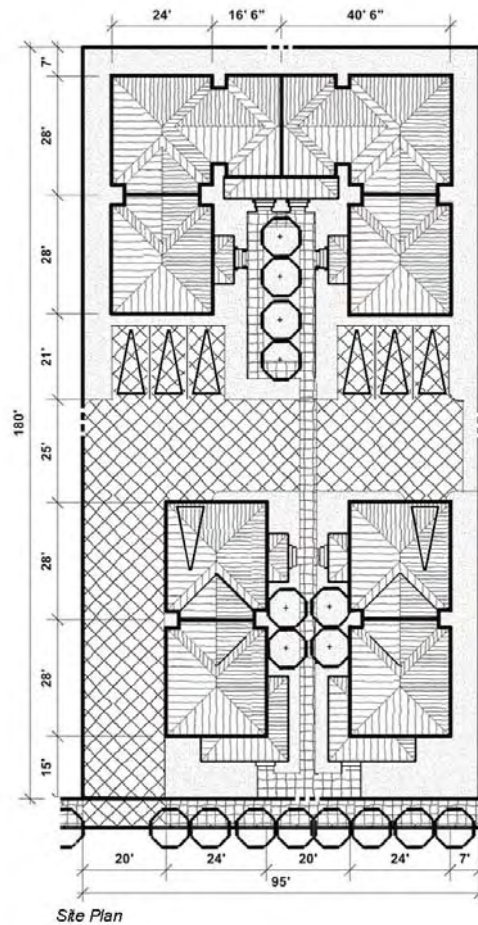LotSize: 6000
Units per Lot: 1

SERA + URBSWORKS

MIX OF USES AND HOUSING TYPES

FORM-BASED CODES BOTH ENCOURAGE AND ENABLE A BROAD MIX OF USES AND HOUSING TYPES WITHIN A PLANNING AREA.
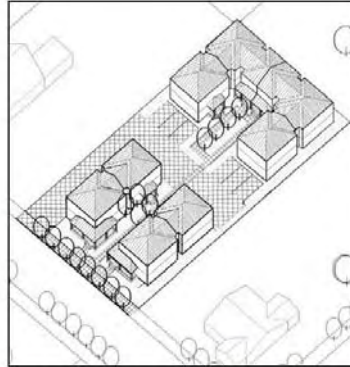
illustrating the standards

5. Make much greater use of *illustrations* to explain important design elements rather than relying on numeric standards and text.
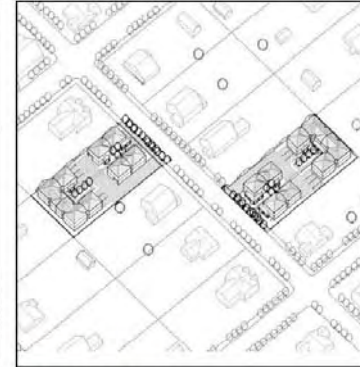

Site Plan

Site Axonometric View

Neighborhood Context

Precedents

Site 4 - v.a
95' x 180' (17,500 SF) site in the R2 zone - Outer SE neighborhood
Prototype 4a - "Interrupted Green"

- 8 units in 3 buildings (1,200 - 2,150 sq ft each, not including garages) arranged around a pedestrian walkway and a common green.
- Shared surface parking area at middle of site.
- Specially paved walk crosses driveway to link pedestrian walkway to common green.
- This configuration would need to be apartments or condominiums.

Prototype Plans for Multidwelling Development
PORTLAND BUREAU OF PLANNING/SERA + URBSWORKS

ILLUSTRATING THE STANDARDS

DETAILED ILLUSTRATIONS HELP TO CLEARLY COMMUNICATE A COMMUNITY'S DESIRED VISION FOR THE DEVELOPMENT AND DESIGN OF ITS VARIOUS NEIGHBORHOODS AND CENTERS.

Advantages of the form-based code approach

To some extent, all of the seven Blueprint Growth Principles must rely upon thoughtful design solutions to be successful. For example, providing transportation choices involves more than just furnishing sidewalks and bike lanes. It requires locating different uses and destinations closer together, carefully designing streetscapes, and integrating private and public development to create a safe and inviting public realm. This careful attention to detail represents the overall strength of a well-executed form-based code. Additionally, some other notable advantages of the form-based code approach include:

1. Encouraging **active public participation** in creating the regulating plan and related design elements. This public participation and consensus building at the beginning increases public understanding of the plan and its desired results, thereby reducing misunderstanding and conflict during implementation.

2. **Focusing on what the community wants** and not what it dislikes. A form-based code offers an alternative regulatory approach for successfully reaching planning objectives embodied in the Blueprint Growth Principles and local general plans by shifting the focus to the desired physical character of development. For example, the public's desire for pedestrian-friendly environments is often related to the design and physical relationships of buildings and public spaces. An FBC provides a means to get to the heart of these types of community concerns and plan for them. This attention to what is desired makes it much easier for developers, citizens, and decision-makers to be "on the same page" when individual development projects are proposed. With form-based codes, the community can offer its preferences on a variety of issues that relate to the community's physical appearance: architectural design, street design, building orientation, how to address different housing needs, and how to manage growth in general.

3. Providing information that is **easier to use** than conventional zoning codes because it is shorter, is more concise, and emphasizes illustrations over text. Therefore, form-based codes are more engaging and comprehensible to non-professionals.

4. **Tailoring the requirements** to fit a specific place or neighborhood by reflecting its vernacular architecture and overall character.

When to apply a form-based code

A form-based code may be applied in a wide variety of circumstances ranging from specific development sites to an entire city. Examples include downtown master plans, neighborhood revitalization plans, specific plan development standards, and transit-oriented developments. It is particularly useful in planning areas where the physical character of public spaces and buildings is critical to achieving community planning goals.

a quick comparison...

Conventional Zoning	Form-Based Code
Often applied universally throughout a jurisdiction	Created for a specific planning area
Reactive, focusing on preventing bad things from happening	Purposeful, "pro-active," and focused on implementation of community planning goals and objectives
Focus on land use	Connects urban form and land use
Development standards inadvertently or intentionally discourage compact, mixed-use, and pedestrian-friendly development	Primary focus is on achieving compact, mixed-use, and pedestrian-friendly development
Text-based presentation	Liberal use of graphics to define key concepts and requirements