Form-Based Regulations are Just One Piece of the Puzzle:

DEVELOPING EFFECTIVE HYBRID CODES

Rocky Mountain Land Use Institute

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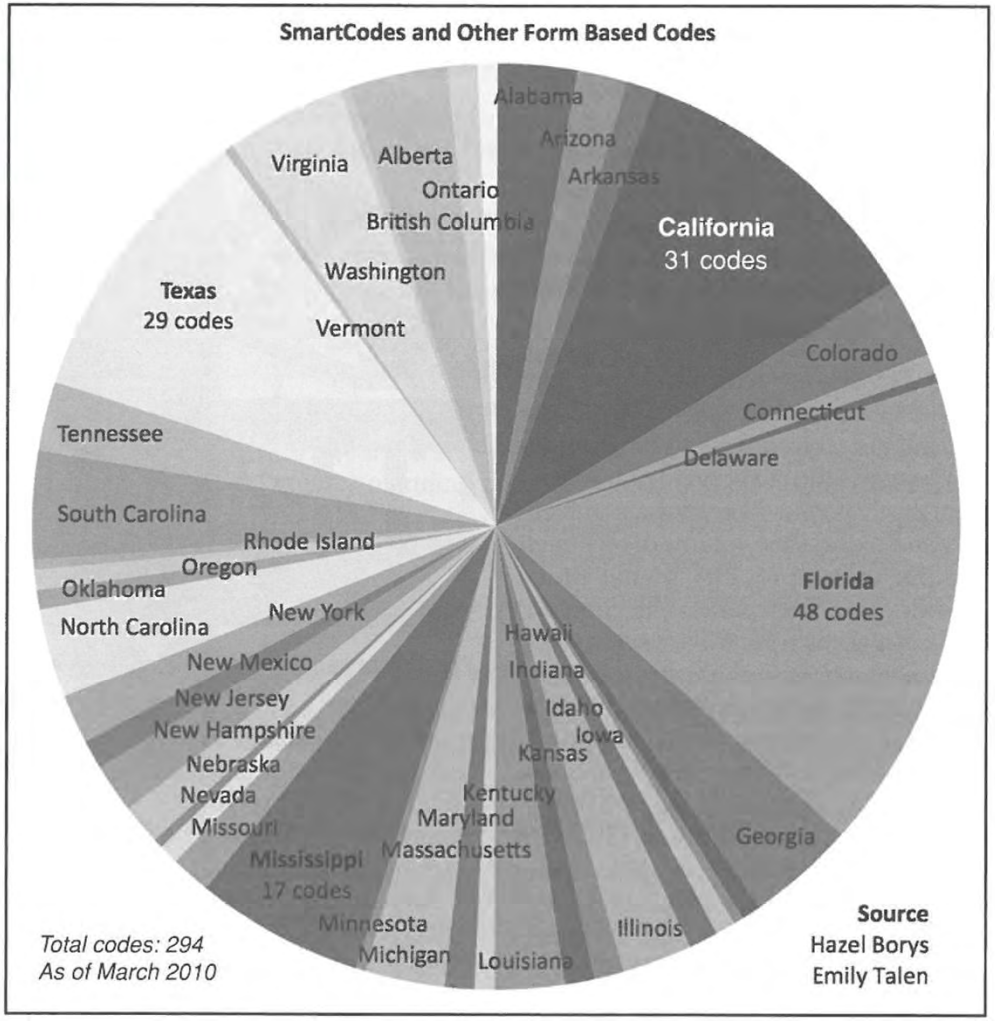
The form-based movement is strong….

NEW URBAN NEWS
COVERING DESIGN & DEVELOPMENT OF HUMAN-SCALE NEIGHBORHOODS

March 2010:

- 294 FBC's adopted or under development in US and Canada
- 40 states and 3 provinces




DOWNTOWN
Traditional Neighborhood
Traditional Workplace
Traditional Marketplace
Corridor
Neighborhood
REGIONAL
MARKETPLACE
CENTER
SUBURBAN
MARKETPLACE
CORRIDOR
CAMPUS
SUBURBAN
WORKPLACE

DENVER
THE MILE HIGH CITY

THE NEW ZONING CODE

PUTTING BLUEPRINT DENVER TO WORK

who has participated

2,329	Site Visitors
1,797	Meeting Participants
4,126	Total Participants

Get to Know the Neighborhood Types

The New Code is about balancing form and function all set within the context of surrounding areas. Learn about the 6 Neighborhood Types in the New Zoning Code.

Why is the code being updated?

Learn about the new code and the development process behind it.

Differing types of land use and transportation

Some factors include pedestrian activity.

Neighborhood contexts are based on block pattern.

Have a voice. Attend a meeting.

It's the best way to weigh in on the New Code. Search by time.

Questions from the Community

Learn about Denver's new approach to Form Based Zoning

Zoning Blogs

Learn about Denver's new approach to Form Based Zoning

Denver Neighborhood Contexts

Suburban Neighborhood			
Urban Edge Neighborhood			
Urban Neighborhood			

		C-MX-3 C-IX-3	C-MX-5 C-RX-5 C-IX-5	C-MX-8 C-RX-8 C-IX-8	C-MX-12 C-RX-12 C-IX-12
	HEIGHT				
Ⓐ	Stories (min/max)	2/3	2/5	2/8	2/8
	Feet, Pitched Roof (max)	40′	65′	100′	100′
Ⓐ	Feet, Flat Roof (max)	35′	60′	94′	94′
Ⓑ	Wall Plate Height (max)	31′	53′	86′	86′
Ⓒ	Finished Ground Floor Height (min/max)	1′/4′	1′/4′	1′/4′	1′/4′
	ZONE LOT AND BLOCK				
	Zone Lot Size (min/max)				
	Zone Lot Width (min)				
	Zone Block Size (max)				
	Primary Structures per Zone Lot (min/max)	1/1	1/1	1/1	1/1
	USE				
	Dwelling Units per Primary Structure (min/max)	3/no max	3/no max	3/no max	3/no max
	STREET SETBACKS				
Ⓓ	Primary Street (min/max)	0′/10′	0′/10′	0′/10′	0′/10′
Ⓔ	Side Street (min/max)	0′/10′	0′/10′	0′/10′	0′/10′
	REQUIRED STREET FRONTAGE				
Ⓕ	Primary Street (min)	50%	50%	50%	50%
Ⓖ	Side Street (min)	30%	30%	30%	30%
	INTERIOR SETBACKS				
Ⓗ	Side, interior (min)	5′	5′	5′	5′
Ⓘ	Rear (min)	0′	0′	0′	0′
	PARKING				
Ⓙ	Primary Street Setback (min)	30′	30′	30′	30′
Ⓚ	Side Street Setback (min)	10′	10′	10′	10′
	Setback Abutting Res. Zone District (min)	5′	5′	5′	5′
	CONFIGURATION				
Ⓛ	Overall Structure Width, Primary Street (max)	150′	150′	150′	150′
Ⓜ	Overall Structure Length, Side Street (max)	150′	150′	150′	150′
	Horizontal Articulation Required (see Sec. 7.3.2)	No	No	No	No
	Vertical Articulation Required (see Sec. 7.3.2)	No	No	No	No
	TRANSPARENCY				
Ⓝ	Ground Story, Primary Street (min)	30%	30%	30%	30%
Ⓞ	Ground Story, Side Street (min)	25%	25%	25%	25%
Ⓟ	Upper Stories (min)	20%	20%	20%	20%
Ⓠ	Length of Blank Wall, Primary/Side Street, All Floors (max)	40′	40′	40′	40′
	COURTYARD CONFIGURATION				
	% of Required Open Space to be Provided in Courtyard min)				
Ⓡ	Ground Floor Courtyard Width, as a % of Overall Structure Width (min)	35%	35%	35%	35%
	Ground Floor Courtyard Depth, as a % of Overall Structure Length (min)	25%	25%	25%	25%
	ENTRY FEATURES				
Ⓢ	Required Entry Features, Primary Street (see Sec. .3.3)	(1) Front Porch; (2) Stoop; or (3) Canopy			

D. Apartment

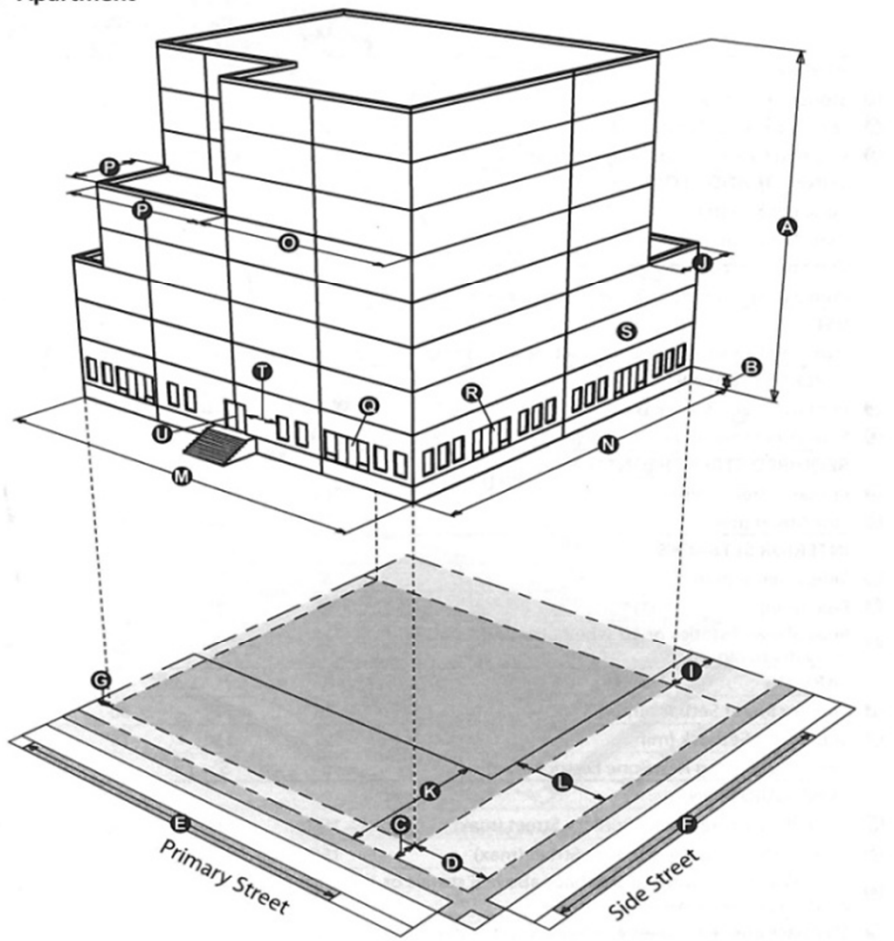


Illustration for measurement purposes.

Range of alternative building forms (not all potential outcomes).

Is it a Form-Based Code?

Form-Based Codes Institute

- **Is the code's focus primarily on regulating urban form and less on land use?**
- **Does the code emphasize standards and parameters for form with predictable physical outcomes (build-to lines, frontage type requirements, etc.) rather than relying on numerical parameters (FAR, density, etc.) whose outcomes are impossible to predict?**
- **Does the code require private buildings to shape public space through the use of building form standards with specific requirements for building placement?**

“True” Form-Based Codes

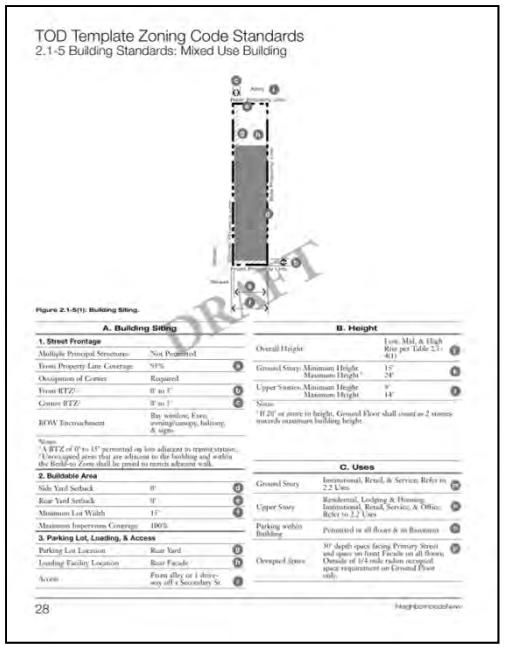

TOD Template Zoning Code Standards
2.1-5 Building Standards: Mixed Use Building

Figure 2.1-5(1): Building Siting.

A. Building Siting	
1. Street Frontage	
Multiple Principal Structures	Not Permitted
Front Property Line Coverage	95%
Occupation of Corner	Required
Front BTZ[1]	0' to 1'
Corner BTZ[1]	0' to 1'
ROW Encroachment	Bay window, Eave, awning/canopy, balcony & sign.
Notes: [1] A BTZ of 0' to 15' permitted on lots adjacent to transit station. Unoccupied areas that are adjacent to the building and within the Build-to Zone shall be paved to match adjacent walk.	
2. Buildable Area	
Side Yard Setback	0'
Rear Yard Setback	0'
Minimum Lot Width	15'
Maximum Impervious Coverage	100%
3. Parking Lot, Loading, & Access	
Parking Lot Location	Rear Yard
Loading Facility Location	Rear Facade
Access	From alley or 1 drive-way off a Secondary St.

B. Height	
Overall Height	1 unit, Mid, & High Rise per Table 2.1-4(1)
Ground Story: Minimum Height / Maximum Height [1]	11' / 24'
Upper Stories: Minimum Height / Maximum Height	9' / 14'
Notes: [1] If 20' or more in height, Ground Floor shall count as 2 stories towards maximum building height.	

C. Uses	
Ground Story	Institutional, Retail, & Services. Refer to 2.2 Uses
Upper Story	Residential, Lodging & Housing, Institutional, Retail, Service, & Office. Refer to 2.2 Uses
Parking within Building	Permitted in all floors & in Basement
Occupied Space	30' depth space facing Primary Street and space on front Facade on all floors. Outside of 1/4 mile radius exempted. space requirement on Ground Floor only.

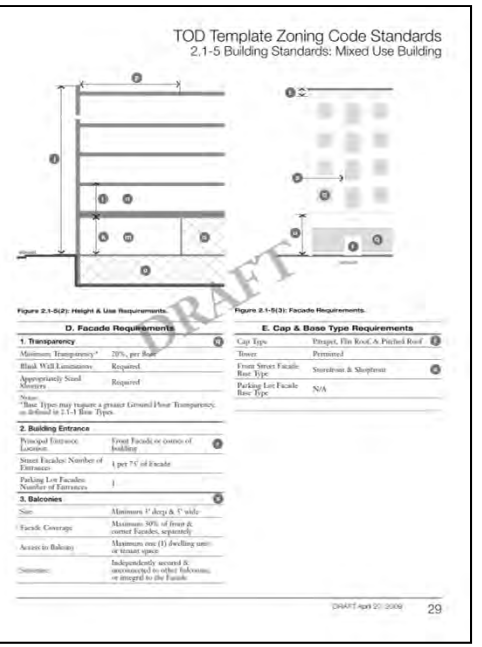

TOD Template Zoning Code Standards
2.1-5 Building Standards: Mixed Use Building

Figure 2.1-5(2): Height & Use Requirements.

Figure 2.1-5(3): Facade Requirements.

D. Facade Requirements	
1. Transparency	
Minimum Transparency *	20%, per floor
Blank Wall Limitations	Required.
Appropriately Sized Openings	Required
Notes: * Base Types may require a greater Ground Floor Transparency, as defined in 2.1-1 Base Types.	
2. Building Entrance	
Principal Entrance Location	Front Facade (or corner) of building
Street Facades: Number of Entrances	1 per 75' of Facade
Parking Lot Facades: Number of Entrances	1
3. Balconies	
Size	Minimum 3' deep & 5' wide
Facade Coverage	Maximum 30% of front & corner Facades, separately
Access to Balcony	Maximum one (1) dwelling unit or tenant space
Notes:	Independently secured & unconnected to other balconies, or integral to the Facade

E. Cap & Base Type Requirements	
Cap Type	Parapet, Flat Roof, & Pitched Roof
Tower	Permitted
Front Street Facade: Base Type	Storefront & Shopfront
Parking Lot Facade Base Type	N/A

Form-Based Building Types

6.2 Live/Work Building (Type II)

Live/Work Building is a dwelling unit that contains to a limited extent, a retail or office component. A live/work building is generally a fee-simple unit on its own lot with the retail or office component limited to the first floor.

Allowed Frontage Types & Building Location

Allowed Frontage Types		Setbacks & Height
Group A	Storefront, Gallery, Arcade, Doorway	Page 43
Group B	Dooryard, Terrace/Light Court	Page 44
Group C	No Group C Frontage Types are Allowed	

Allowed Transect Zones

T6	T5	T4 Corner Lots	T3 by exception

Allowed Uses by Floor

	Allowed Use
First Floor	Retail of Office
Upper Floor(s)	Residential

Intensity of Use

	Allowed Intensity of Use		
Use	T6	T5	T4
Retail	No Applicable Standard		building area available for retail use is limited to the first story of block corner locations
Office	No Applicable Standard		building area available for office use is limited to the first story of block corner locations
Residential	maximum of one accessory unit per main structure		
All uses	use limited by the parking standard		

Landscape Plantings

Frontage Type		Required Number of Landscape Plantings*
Group A	Storefront	0
	Gallery	
	Arcade	
	Doorway	
Group B	Dooryard	6 min.
	Terrace/Light Court	0

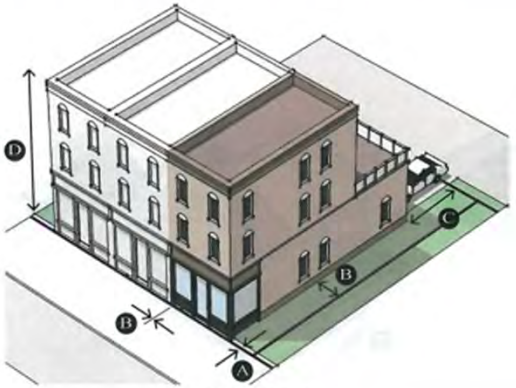
*Landscape Plantings shall be located between the Frontage Line and the Building Facade

Parking

	Required Number of Parking Spaces			Location of the Required Parking Spaces
Use	T6	T5	T4	For All Zones:
Residential	No Minimum	1 space / dwelling unit min.		off-street
Office or Retail	No Minimum	??? 2 spaces / 1000 s.f. min.		on-street, off-street, or a combination of on-street and off-street

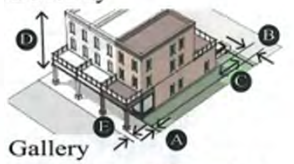
6.2 Live/Work Building: Group A Frontage Types

Allowed Group A Frontage Types

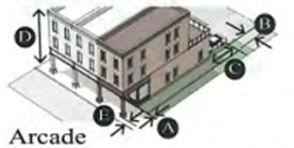


Front Yard

Doorway



Gallery



Arcade

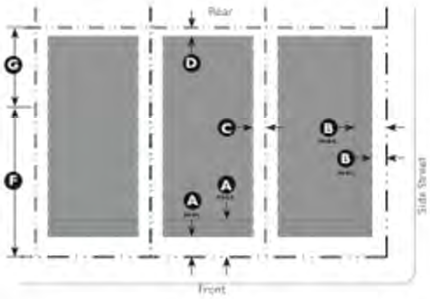
Building Setbacks

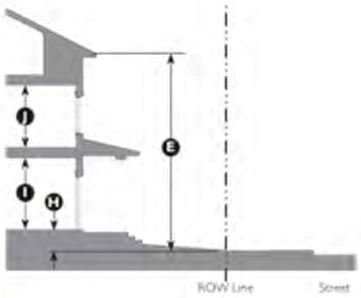
Dimension	Setback			T6	T5	T4	T3	CS
A	Front Setback			0' max.		0' max.		N/A
B	Side Setback		Street-Facing	0' max.		10' max.	5' min.	
			Non Street-Facing	0' max.	10' max.		5' min.	
C	Rear Setback	Corner Lots	with Rear Alley	5' max.		5' max. or 16' min.		
			without Rear Alley	10' max.		5' min.		
		Interior Lots	with Rear Alley	5' max. or 16' min.				
			without Rear Alley	5' min.				
E	Gallery or Arcade Setback			3' max. from curb to column/cover				

Applicable Notes:
1: At least 80% of the building facade shall be located at the front setback line.
2: For buildings located on corner lots, at least the first 30' of the building facade, as measured from the front building corner, shall be located at the setback line.

Building Height

Dimension		T6	T5	T4	T3	CS
D	Minimum Building Height *(stories)*	2	2	1	1	N/A
	Maximum Building Height *(stories)*	10	4	3	2 1/2	





Key

---- ROW / Property Line
---- Setback Line
Building Area
Facade Zone

C. Building Placement		
Setback (Distance from ROW / Property Line)		
Front		A
Minimum [1,2]	Match adjacent property	
Maximum [3]	25'	
Front facade within facade zone	50% min.	
Side Street	10' min.; 15' max.	B
Side [4]		C
1 Story	5' min.	
2+ Stories	7.5' min.	
Rear	5' min.	D

[1] In developments on lots over 20,000 sf, the first building defines setback for block in new construction.

[2] 5' min.

[3] No maximum front setback for Carriage houses.

[4] No side setback required between Townhouse and/or Live/Work building types.

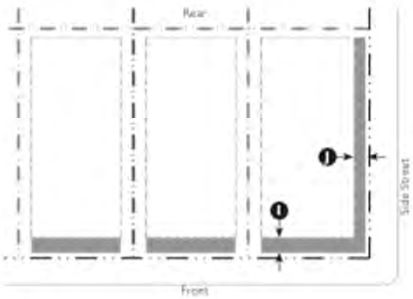
Miscellaneous	
Distance between Main Buildings on Same Lot	
1 Story	8' min.
2+ Stories	15' min.

D. Building Form		
Lot Size		
See Part 5 (Building Types).		
Building Height [5,6]		
Lot depth ≤ 100': Within 75' of street property line or		F
Lot depth > 100': Within 90' of street property line		
Stories	2-½ stories max	E
To Eave or Parapet	24' max.	
Overall	35' max.	
Other lot area		G
Stories	1-½ stories max	E
To Eave or Parapet	15' max.	
Overall	24' max.	
Ground Floor Finish Level	18" min. above sidewalk	H
Ground Floor Ceiling	9' min. clear	I
Upper Floor(s) Ceiling	8' min. clear	J

[5] Does not apply to accessory structures. See 4.02.030 (Accessory Structures)

[6] See Part 5 (Building Types) for additional height regulations.

Miscellaneous
Mansard roof forms are not allowed.
Upper-floor units must have a primary entrance along a street facade or to a courtyard.
Ground-floor residential units facing a street shall have individual entries.



Key

---- ROW / Property Line
---- Setback Line
Encroachment Area

E. Allowed Use Types	
Ground Floor [1]	Residential
Upper Floor [1]	Residential

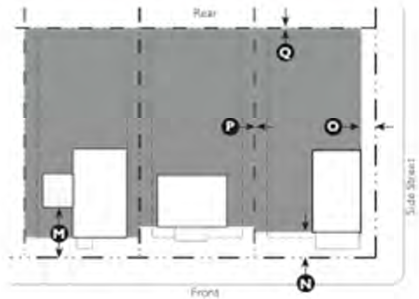
[1] See 3.02.080.H (T4N Use Table) for specific use

F. Frontage Types and Encroachments		
Encroachments into Setback [2]		
Front	5' max.	I
Side Street or Civic Space	3' max.	J
Side	0' max.	
Rear		
Property Line	0' max.	
Rear Lane	3' max.	

[2] Encroachments are not allowed within a Street ROW. See 4.02.020.B (Encroachments) for complete list of allowed encroachments.

Required Frontage Types [3]	
Porch	Forecourt
Stoop	

[3] See 4.03 (Frontage Standards) for descriptions and regulations.



Key

---- ROW / Property Line
---- Setback Line
Allowed Parking Area

G. Required Parking		
Spaces		
Residential Uses		
Studio or 1 Bedroom	1 space/unit min.	
2+ Bedrooms	2 spaces/unit min.	
Location (Setback from Property Line)		
Front		
Covered or Attached	Match front facade + width of garage min.	M
Uncovered	Match front facade min.	N
Side Street	5' min.	O
Side	0' min.	P
Rear	0' min.	Q

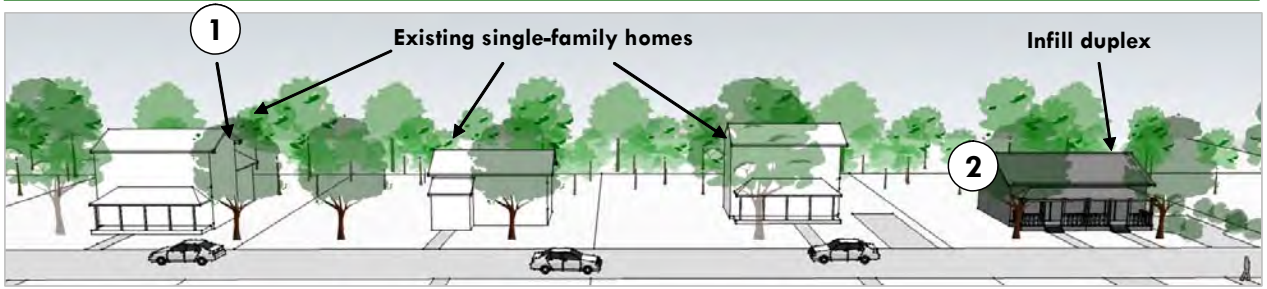
Miscellaneous	
Linear feet of front or side facade that may be garage	35% max.

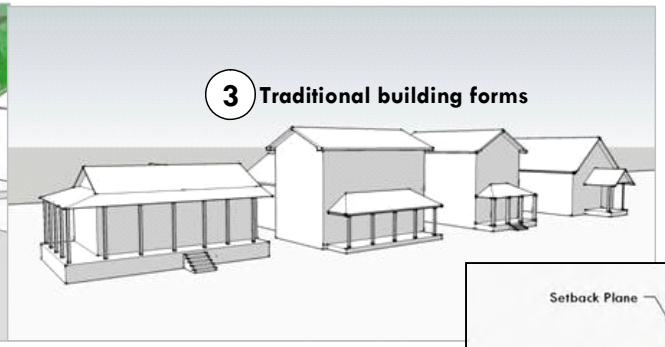
Tandem parking is allowed for off-street parking only if both spaces are behind the required setback and are for the same residential unit.

See Chapter 4.04 (Parking Standards) for additional general parking requirements.

Hybrid Code Approaches

MASSING AND FORM: HISTORIC CROSSROADS VILLAGE

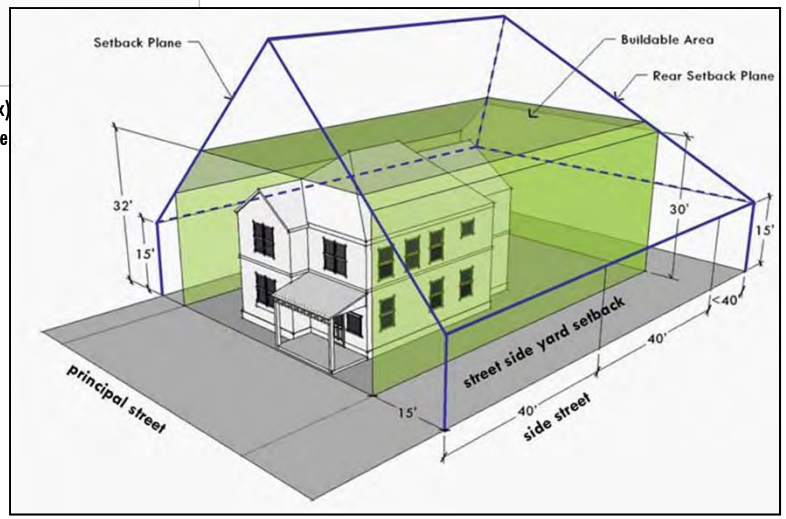




1 Major addition is incorporated at the rear of and perpendicular to primary building module and appears subordinate in terms of its height and mass.

2 Massing and form of attached single-family (duplex) the appearance of being a large single-family home

3 Traditional building forms in the Historic Crossroads Village District include simple, rectangular massing; sloped roof forms; and covered front porches and stoops.



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- Does the code emphasize standards and parameters for form with predictable physical outcomes (build-to lines, frontage type requirements, etc.) rather than relying on numerical parameters (FAR, density, etc.) whose outcomes are impossible to predict?
- Does the code require private buildings to shape public space through the use of building form standards with specific requirements for building placement?
- **Does the code promote and/or conserve an interconnected street network and pedestrian-scaled blocks?**

“True” Form-Based Codes

SMARTCODE MODULE — **TABLE 4C THOROUGHFARE ASSEMBLIES**

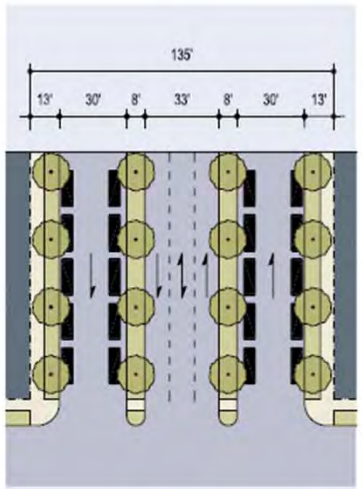
Municipality

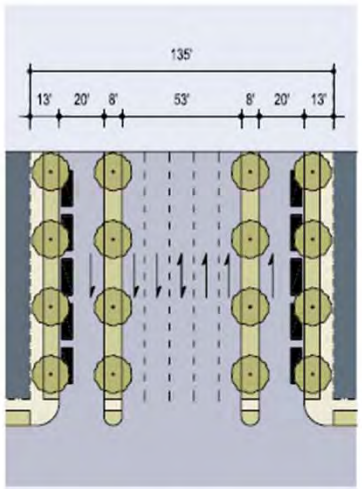
KEY ST-57-20-BL

- Thoroughfare Type
- Right of Way Width
- Pavement Width
- Transportation

THOROUGHFARE TYPES

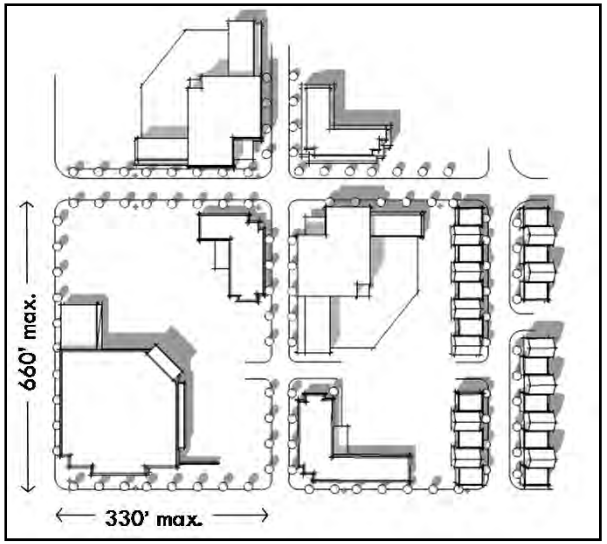
Highway:	HW
Boulevard:	BV
Avenue:	AV
Commercial Street:	CS
Drive:	DR
Street:	ST
Road:	RD
Rear Alley:	RA
Rear Lane:	RL
Bicycle Trail:	BT
Bicycle Lane:	BL
Bicycle Route:	BR
Path:	PT
Passage:	PS
Transit Route:	TR

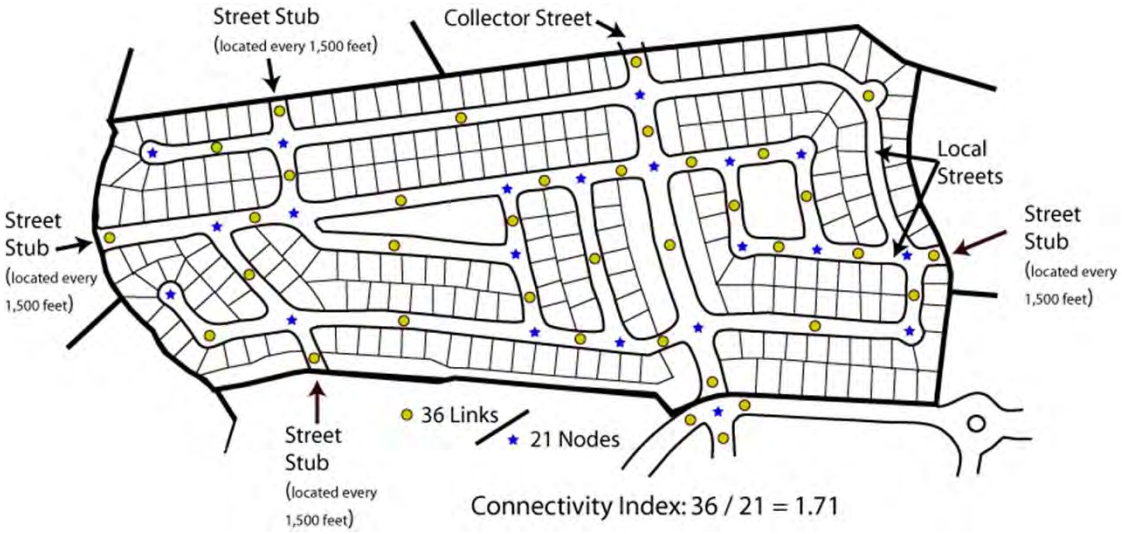


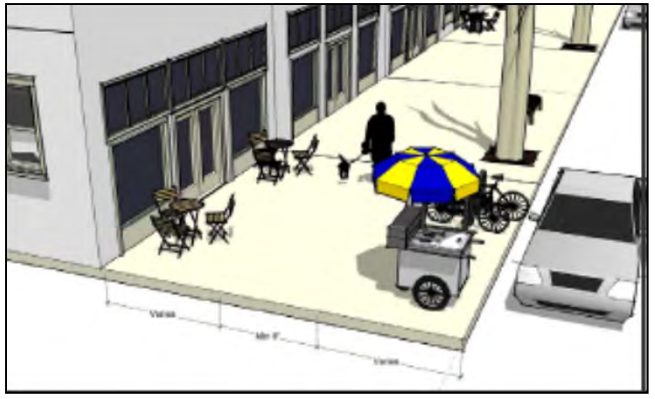


	BV-135-33	BV-135-53
Thoroughfare Type	Boulevard	Boulevard
Transect Zone Assignment	T5, T6	T5, T6
Right-of-Way Width	135 feet	135 feet
Pavement Width	30 feet - 33 feet - 30 feet	20 feet - 53 feet - 20 feet
Movement	Free Movement	Free Movement
Design Speed	35 MPH	35 MPH
Pedestrian Crossing Time	8.5 seconds - 9.4 seconds - 8.5 seconds	5.7 seconds - 15.1 seconds - 5.7 seconds
Traffic Lanes	3 lanes, one turning lane & two one-way slip roads	5 Lanes, one turning lane & two one-way slip roads
Parking Lanes	8 feet	8 feet
Curb Radius	10 feet	10 feet
Walkway Type	6 foot Sidewalk	6 foot Sidewalk
Planter Type	7 foot continuous Planter	7 foot continuous Planter
Curb Type	Curb	Curb
Landscape Type	Trees at 30' o.c. Avg.	Trees at 30' o.c. Avg.
Transportation Provision	see Bicycling Module	see Bicycling Module

Hybrid Code Approaches







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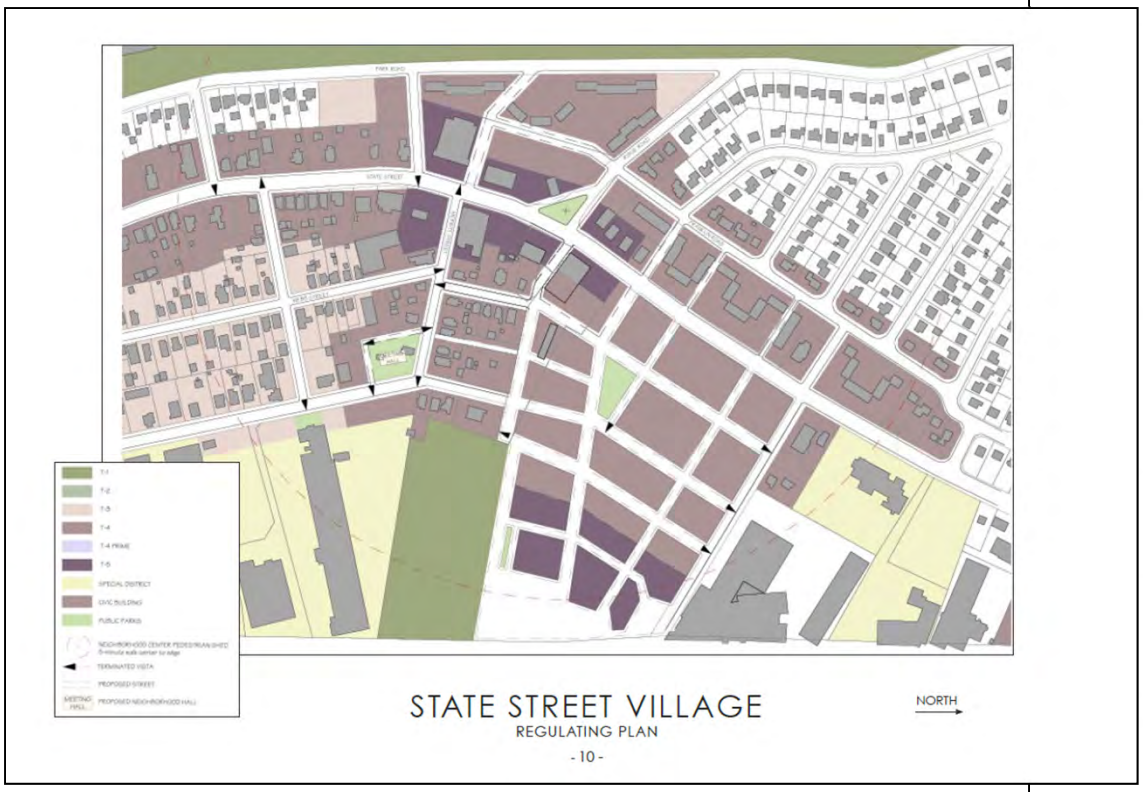
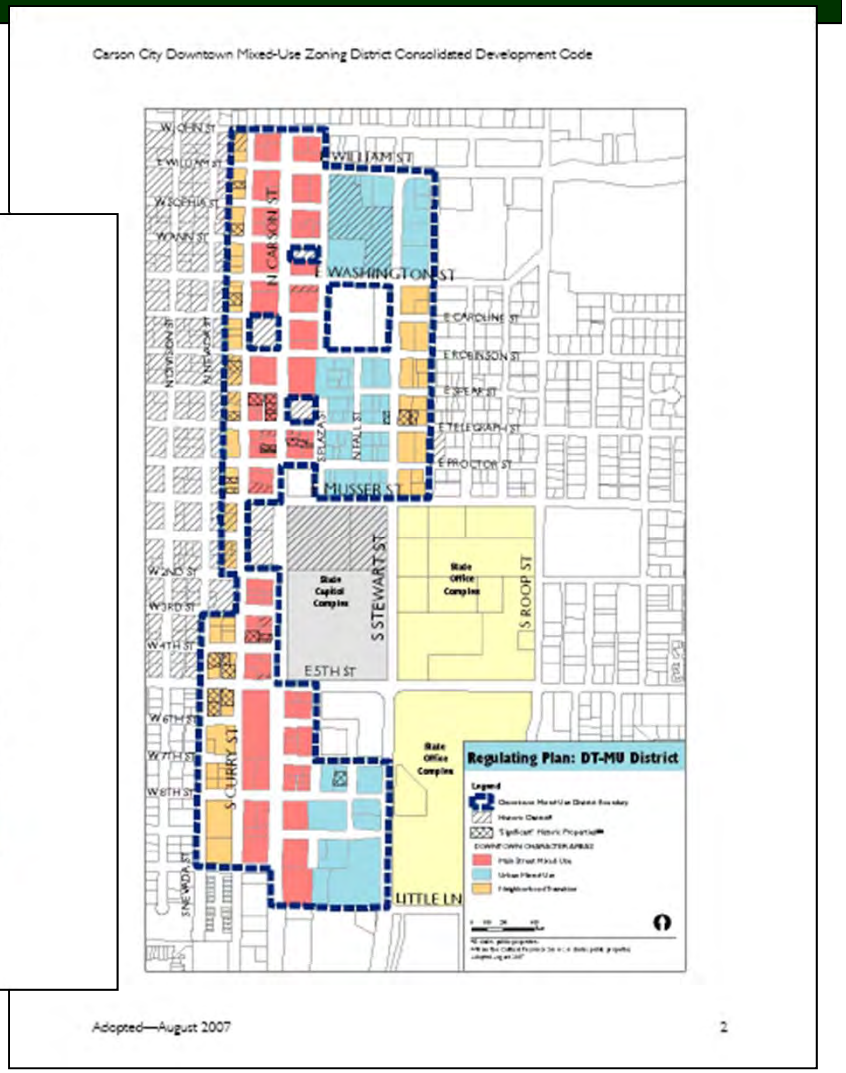
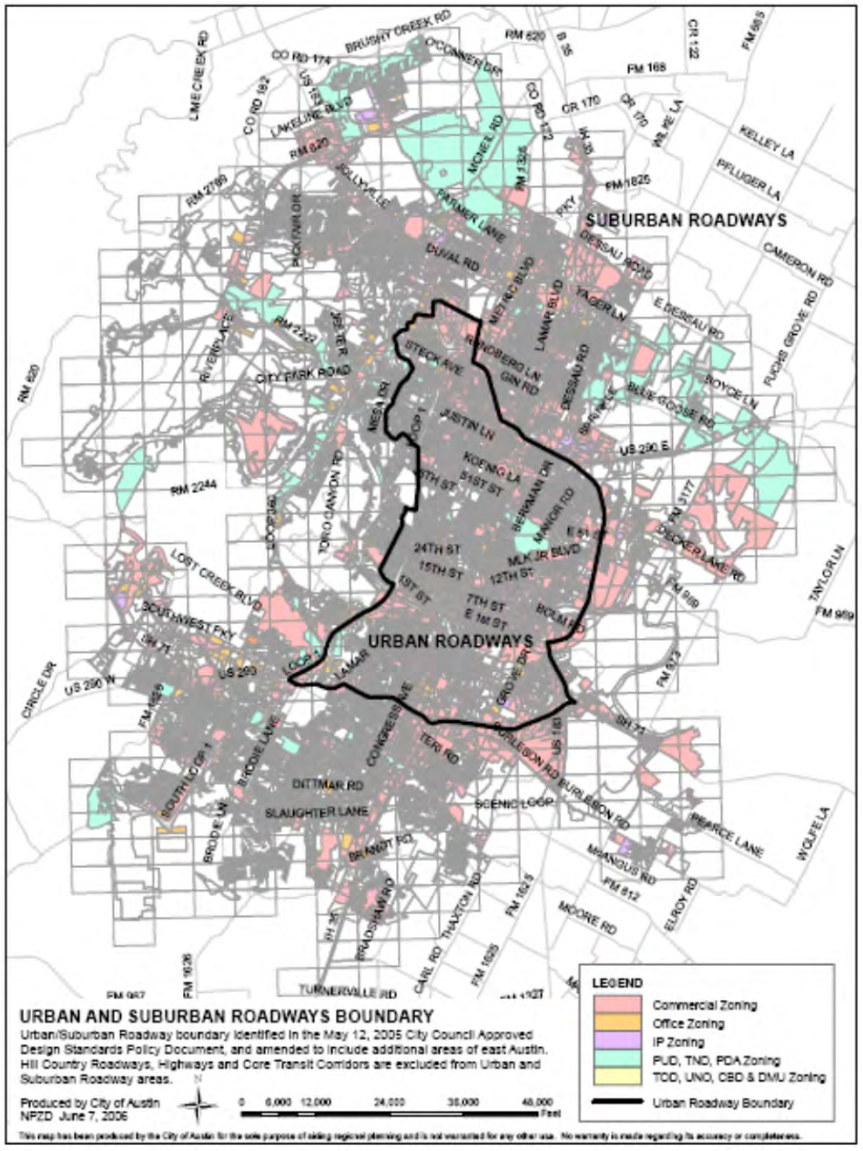
- Does the code require private buildings to shape public space through the use of building form standards with specific requirements for building placement?
- Does the code promote and/or conserve an interconnected street network and pedestrian-scaled blocks?
- **Are regulations and standards keyed to specific locations on a regulating plan?**

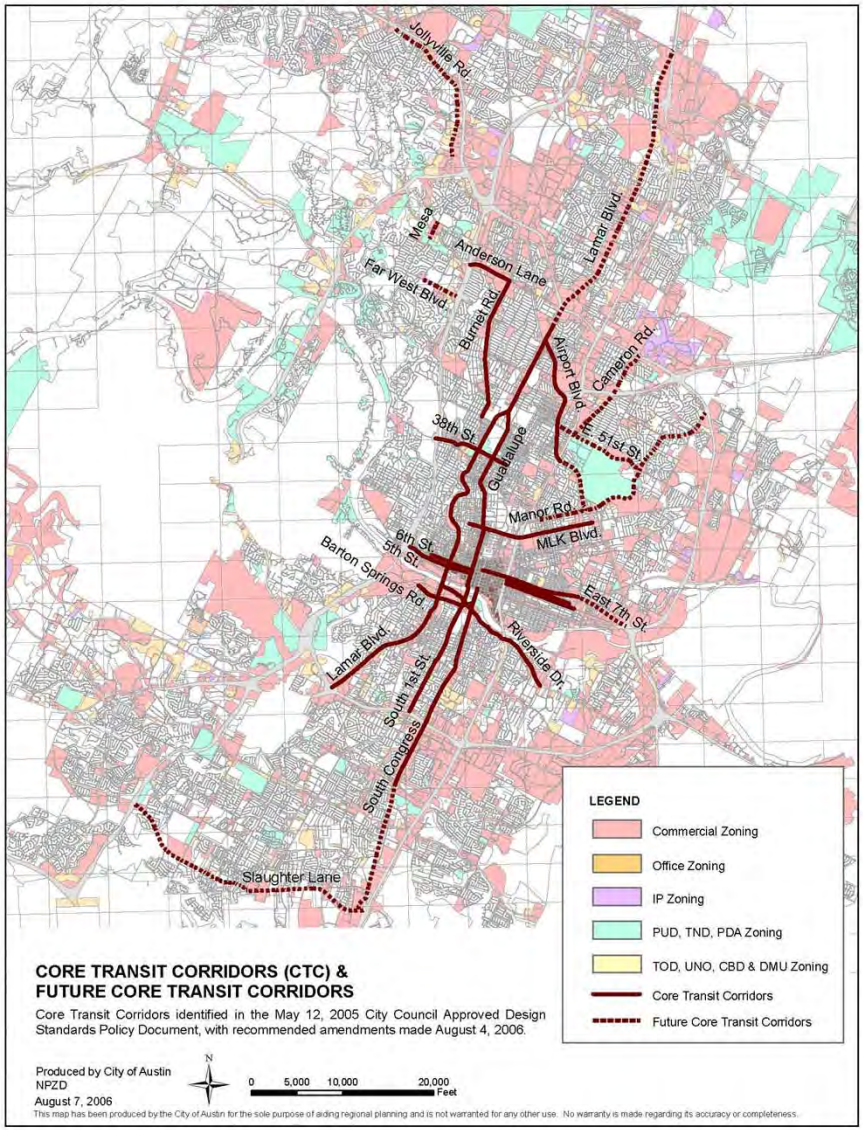
“True” Form-Based Codes





Hybrid Code Approaches





Is it a Form-Based Code?

Form-Based Codes Institute

- Is the code's focus primarily on regulating urban form and less on land use?
- Does the code emphasize standards and parameters for form with predictable physical outcomes (build-to lines, frontage type requirements, etc.) rather than relying on numerical parameters (FAR, density, etc.) whose outcomes are impossible to predict?
- Does the code require private buildings to shape public space through the use of building form standards with specific requirements for building placement?
- Does the code promote and/or conserve an interconnected street network and pedestrian-scaled blocks?
- Are regulations and standards keyed to specific locations on a regulating plan?
- **Is the code regulatory rather than advisory?**
- **Are the diagrams in the code unambiguous, clearly labeled, and accurate in their presentation of spatial configurations?**

Hybrid Code Approaches

CHAPTER 19.2: RESIDENTIAL ZONING DISTRICTS
Section 19.2.14 DRL Downtown Low-Density Residential

19.2.14. DRL: DOWNTOWN LOW-DENSITY RESIDENTIAL

The DRL district is established to improve the quality and visual appearance of downtown's residential neighborhoods while providing opportunities for low-density residential development on smaller lots. The district is intended to preserve the general character of existing residential development in downtown neighborhoods, while encouraging compatible infill development and redevelopment.

Figure 19.2.14-A: DRL Example Building Form

TABLE 19.2.14-1 DIMENSIONAL STANDARDS DRL DISTRICT

DISTRICT STANDARDS	
Site area, min.	N/A
Density, max (units/gross acre)	N/A
Common open space, min (sq ft)	240 per unit
LOT STANDARDS	
Lot area, min (sq ft)	5,000
Lot width, min (ft)	50
Lot coverage, max (%)	N/A
SETBACKS	
Front (Garage), min (ft)	20
Front, min (ft)	14
Side-loaded garage, min (ft)	10
Side, interior, min (ft)	5
Side, corner, min (ft)	10
Rear, min (ft)	15
BUILDING STANDARD	
Height, min/max (stories)	1 / 2
Dwelling unit size, min (sq ft)	N/A
Garage door width, max (ft)	45% facade width; 40% on lots <80' wide
Floor area ratio (FAR)	N/A

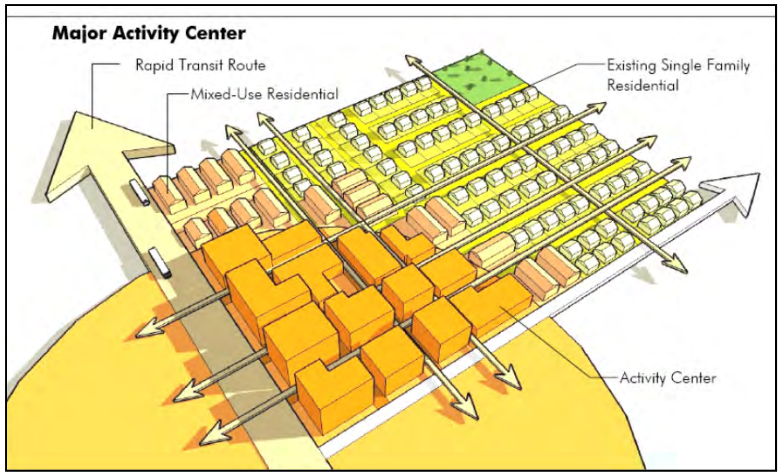
Figure 19.2.14-B: DRL Example Lot Configuration

DRL Example Lot Configuration

See Chapter 19.7 for design and development standards.

1. Infill and redevelopment shall be consistent with existing roof pitches, garage placement, orientation, and building materials.
2. Front porches and pedestrian-oriented building features are strongly encouraged.
3. Driveways leading to a single garage door shall not exceed 12' in width; 20' when serving multiple garage doors.

City of Henderson | Development Code
Adoption Draft - October 2009 | Page 2-14



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Hybrid codes versus form-based codes

KAIZER RANGWALA

As form-based coding continues to increase in popularity, the term "hybrid code" is being used more often. Hybrid codes involve the meshing of conventional zoning codes with graphic urban design standards that typically address setbacks, parking placement, building bulk, materials, and architectural features. Such a hybrid is not a form-based code (FBC) and likely will not produce the physical outcome desired. While urban design standards within a conventional coding framework are beneficial, they are not enough, and are not a viable alternative to FBCs.

"The conception of public realm in this form of hybrid codes is missing," say Geoffrey Ferrell, chairman of the Form-Based Code Institute. FBCs carefully pull together the individual elements of the public realm — the buildings, streets, and open space — into a cohesive and memorable place. FBCs also integrate the full spectrum of land-use regulations such as planning, zoning, subdivision, public works, and safety standards to produce benefits in unison, rather than allowing these systems to clash with one another.

Because the form standards are not fully developed in such hybrid codes, hyper-control of uses continues. Changes in market cycle require constant legislative changes to the zoning regulations. The lack of precise standards diminishes the predictability of the outcome. Discretionary review continues. The uncertainty is played out at individual project levels in contentious and protracted public hearings.

Communities often drift toward a hybrid code either because the sheer scale of replacing the conventional zoning seems daunting — or because a hybrid code is proposed by a consultant who does not fully understand how to integrate a FBC into the existing system, especially when it applies citywide.

A better way to deal with this problem is to adopt a complete and comprehensive FBC for a specific planning area such as a neighborhood or district. The FBC would reside within the structural and legal framework of a conventional code.

Plenty of FBCs have been adopted. Their built results provide numerous examples of how FBCs have been implemented, without the need to "hybridize." Recently completed codes and code updates that are in progress in Miami, Denver, Livermore, California, and Flagstaff, Arizona, show the right way to approach form-based codes citywide.

In a citywide code there are auto-dependent or conventional zones resting next to complete FBC regulations. The SmartCode, for example, allows the establishment of special districts and Transect zones in which a degree of automobile-oriented and/or lower-density development is permitted. A pure FBC, therefore, legitimately includes a degree of "hybridization" — or conventional components — at the citywide scale.

Integrating form-based coding into a citywide code is no more work and no more complex than a conventional code update. In addition, communities often are excited about getting a much-needed fix for their "broken" zoning codes, which have promoted development that is completely auto-dependent.

Infill and greenfield areas susceptible to change are typically coded first. Their FBCs include: a regulating plan that defines the placement of buildings, streets, and open spaces; building form standards that define height (or stories), bulk, and function of the building; standards for different types of streets and open spaces; and a streamlined development review process. Any code that lacks these basic components will compromise the consistency of the place and the streamlined review process — by shifting the protracted discretionary review from the larger plan and code level to the individual project level.

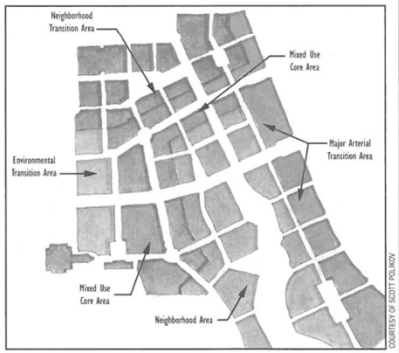
FBCs can be adopted for specific areas — as freestanding unified development codes that contain all the standards and procedures, with little or no reference to the conventional zoning ordinance. For example, "Specific Plans" in California combine policies, codes, and implementation strategies into one freestanding document. Alternatively, these FBCs can be housed in the existing conventional zoning ordinance with necessary adjustments to the conventional subdivision and site planning processes. This kind of code delivers all the benefits of a FBC — on a familiar conventional zoning platform. It combines zoning, urban design, public works, and safety standards with subdivision and streamlined review processes.

Lessons Learned

How does one determine if a code is form-based — and well-crafted? The Form-Based Codes Institute (FCBI) has developed a checklist for identifying and evaluating FBCs based on their ability to shape pedestrian scale, mixed-use, fine-grained urbanism, enforceability, and ease of use. The checklist is available at www.formbasedcodes.org.

Production and administration of FBCs require an interdisciplinary sensitivity to planning, urban design, architecture, landscape design, transportation and civil engineering, legal issues, environmental science, and market demand. Generally, planners do not have all of these skill sets – no one person does. Therefore, hiring consultants, while expensive, is necessary. Cash-strapped communities should explore creative

Flower Mound, Texas, form-based zones



NEW URBAN NEWS
COVERING DESIGN & DEVELOPMENT OF HUMAN-SCALE NEIGHBORHOODS

- Kaizer Rangwala
- April/May 2009

NEW URBAN NEWS

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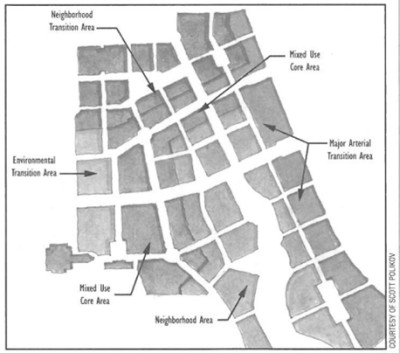

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NEW URBAN NEWS

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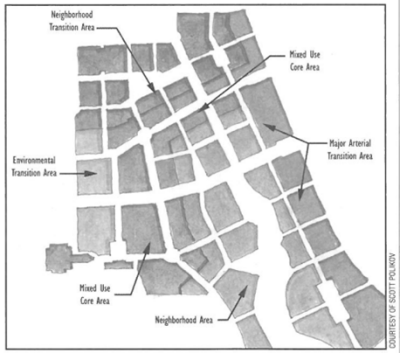

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- **“Anything less than a FBC will produce inferior outcomes and may further disillusion the public.”**

- **“A hybrid code in any format is not a long-term solution.”**

In Defense of Hybrid Codes….

In reality, a spectrum….

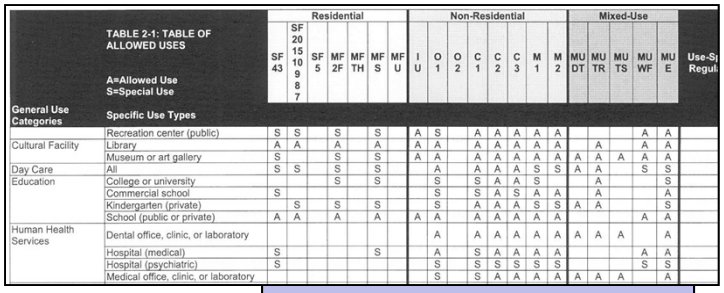


TABLE 2-1: TABLE OF ALLOWED USES A=Allowed Use S=Special Use		Residential						Non-Residential							Mixed-Use					
General Use Categories	Specific Use Types	SF 43	SF 20 15 10 9 8 7	SF 5	MF 2F	MF TH	MF S	MF U	I U	O 1	O 2	C 1	C 2	C 3	M 1	M 2	MU DT	MU TR	MU TS	MU WF	MU E	Use-Specific Regulations
	Recreation center (public)	S	S		S		S		A	S		A	A	A	A	A				A	A	
Cultural Facility	Library	A	A		A		A		A	A		A	A	A	A	A		A		A	A	
	Museum or art gallery	S			S		S		A	A		A	A	A	A	A	A	A	A	A	A	
Day Care	All	S	S		S		S			A		A	A	A	S	S	A	A		S	S	
Education	College or university				S		S			S		S	A	A	S			A			S	
	Commercial school	S								S		S	A	S	A	A		A			A	
	Kindergarten (private)		S		S		S			S		A	A	A	S	S	A	A			S	
	School (public or private)	A	A		A		A		A	A		A	A	A	A	A				A	A	
Human Health Services	Dental office, clinic, or laboratory									A		A	A	A	A	A	A	A	A		A	
	Hospital (medical)	S					S			A		S	A	A	A	A				A	A	
	Hospital (psychiatric)	S								S		S	S	S	S	S				S	S	
	Medical office, clinic, or laboratory									S		S	A	A	A	A	A	A	A		A	

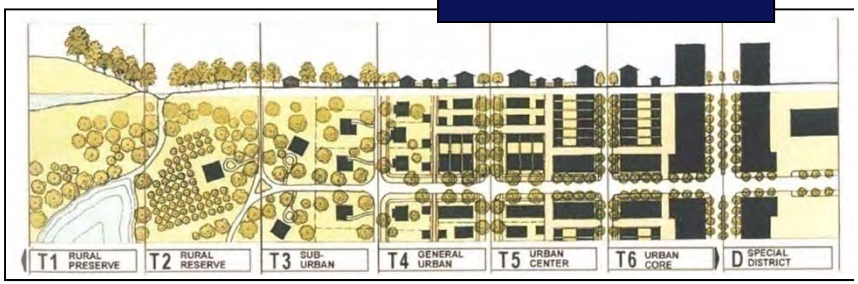
Euclidean Zoning with Design Standards

Form-based Codes

Use-Based — Form-Based

Performance Standards

Smart Codes

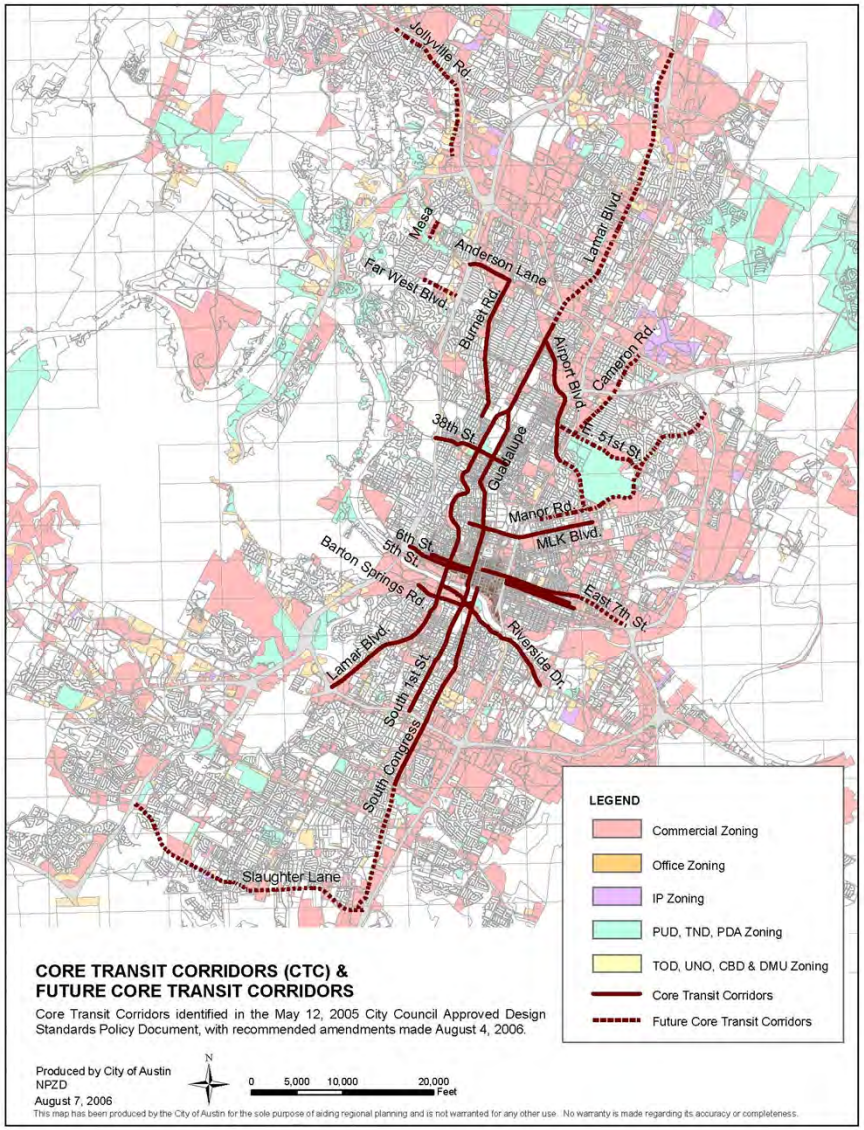


The Range of Form Controls

- **Euclidean Districts with Form Standards**
- **Linking Building Types and Permitted Uses**
- **Optional Form-Based Districts**
- **Mandatory Form-Based Districts for Specific Areas**
- **Mandatory Citywide Form-Based Code**

With or without Regulating Plan

Austin, Texas
Euclidean Districts with Form-Based Standards



Austin, Texas

Euclidean Districts with Form-Based Standards

1-POINT OPTIONS
Achieve City of Austin Green Building Program 1-star rating.
Provide for liner stores in building façade.
Provide façade articulation meeting specified standards.
Provide primary entrance design meeting specified standards.
Provide roof design meeting specified standards.
Provide building materials meeting specified standards.
Improve existing storefronts to meet new glazing requirements.
100% of glazing on ground-floor facades facing street or parking lot with visual transmittance (VT) of 0.6 or higher.
Comply with neighborhood design guidelines (if applicable).

2-POINT OPTIONS
Achieve City of Austin Green Building Program 2-star rating.
75% of façade facing principal street consists of storefronts with at least 2 separate entrances facing principal street.
Provide sustainable roof meeting specified standards.
Integrate solar power generation into building design.
3-POINT OPTIONS
Achieve City of Austin Green Building Program 3-star rating.
Develop VMU building.

Mooresville, North Carolina
Linking Building Types and Permitted Uses

– A blended form/use table

TABLE 5.1.4: TABLE OF ALLOWED USES

P = PERMITTED BY RIGHT
C = CONDITIONAL USE PERMIT
CU = CONDITIONAL ZONING

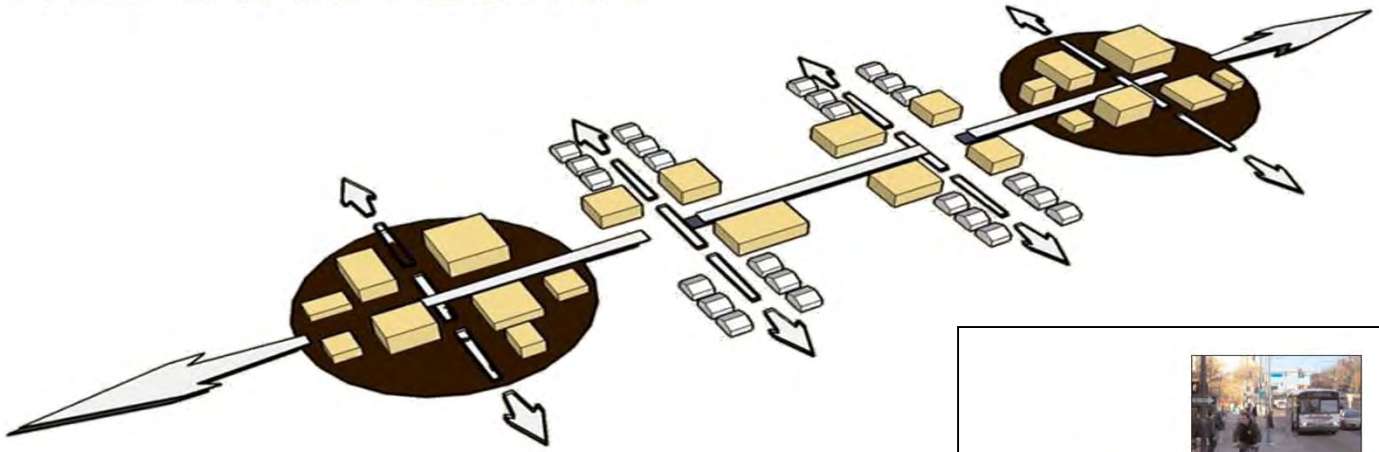
ALLOWABLE BUILDING FORMS
DH = DETACHED HOUSE
MA = MANSION APARTMENT
AR = ATTACHED RESIDENTIAL
NA = NOT APPLICABLE
CV = CIVIC
SF = SHOPFRONT
WP = WORKPLACE
CR = COMMERCIAL/RETAIL
FX = FLEX/INDUSTRIAL
LR = LARGE RETAIL

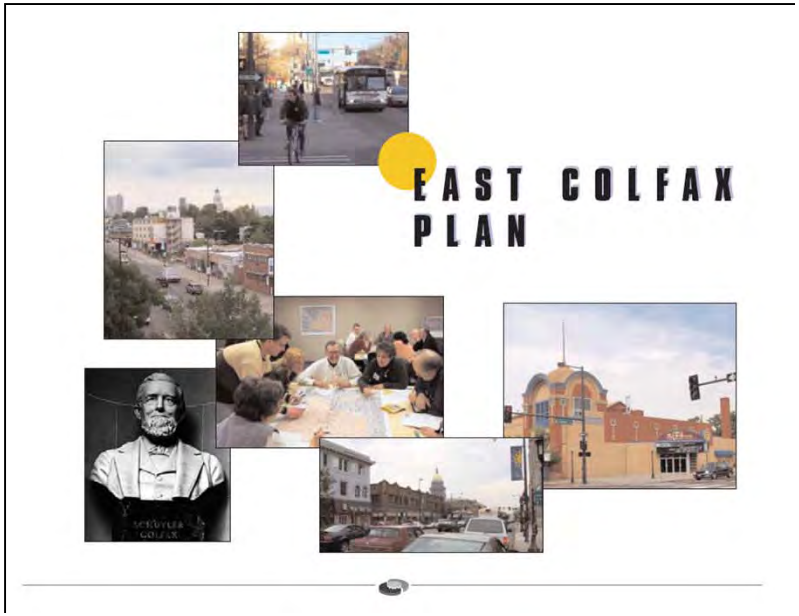
USE CATEGORY	USE TYPE [2]	R-2		R-3		R-5		RMX		RMX-MH		TND-C		NMX		CMX		HB		VC		TC		GI		EI		PC-C		ADDITIONAL REQUIREMENTS
		USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	USE	BLDG. FORM	
Restaurant	Restaurant with Drive-Through Service													C	SF WP	P	SF WP CR		SF WP CR					C	WP CR			P	CV SF WP	5.3.3 (7)
Retail Sales and Services	Bar, Nightclub, or Similar Establish-ment											P	SF			C	CV SF		SF WP CR	C	SF WP	C	SF WP	C	WP CR					5.3.3 (8) (A)
	Crematory																		CV WP					C	WP	C	CR WP			
	Retail/ Service Use with Gasoline Sales											P	SF WP	C	SF CR	P	SF CR		SF CR	C	CV SF WP	C	CV SF WP	C	WP CR			P	WP CR	5.3.3 (8) (B)
	Type I Retail Use							C	DH AR SF	C	DH AR SF	P	DH AR SF WP	P	DH AR CV SF	P	DH AR CV SF WP	P	DH AR CV SF WP CR	P	DH AR CV SF	P	DH AR CV SF	C	SF WP			P	SF WP	5.3.3 (8) (D)
	Type II Retail Use (up to 15,000 sf GFA)											P	SF WP	C	SF WP	P	SF WP CR	P	SF WP CR	P	CV SF WP	P	CV SF WP	P	WP CR			P	SF WP CR	
	Type II Retail Use (15,001 to 30,000 sf GFA)											C	SF, WP			P	SF WP CR	P	SF WP CR	P	CV SF WP	P	CV SF WP	P	WP CR			P	SF WP CR	

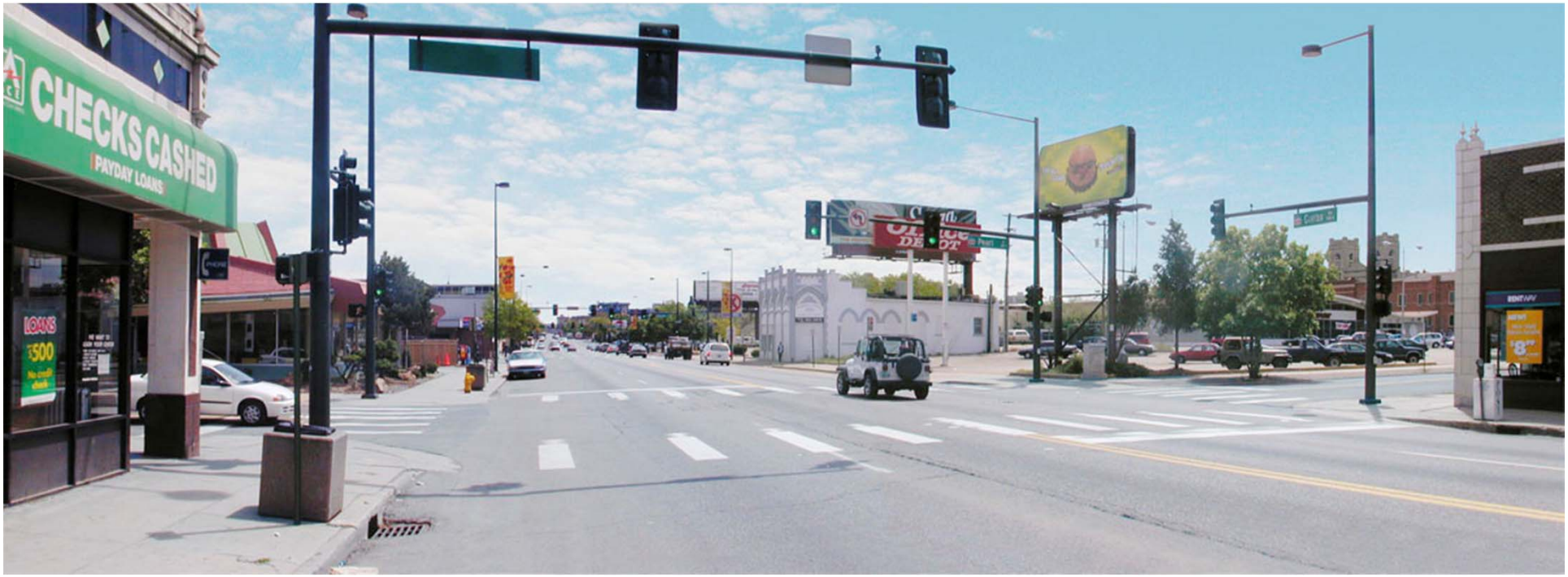
CMX	
USE	BLDG. FORM
P	SF WP CR
C	CV SF
P	SF CR
P	DH AR CV SF WP
P	SF WP CR
P	SF WP CR

Denver, Colorado
Mandatory Form-Based Districts in Specific Areas

– **Denver's Main Street Zones**



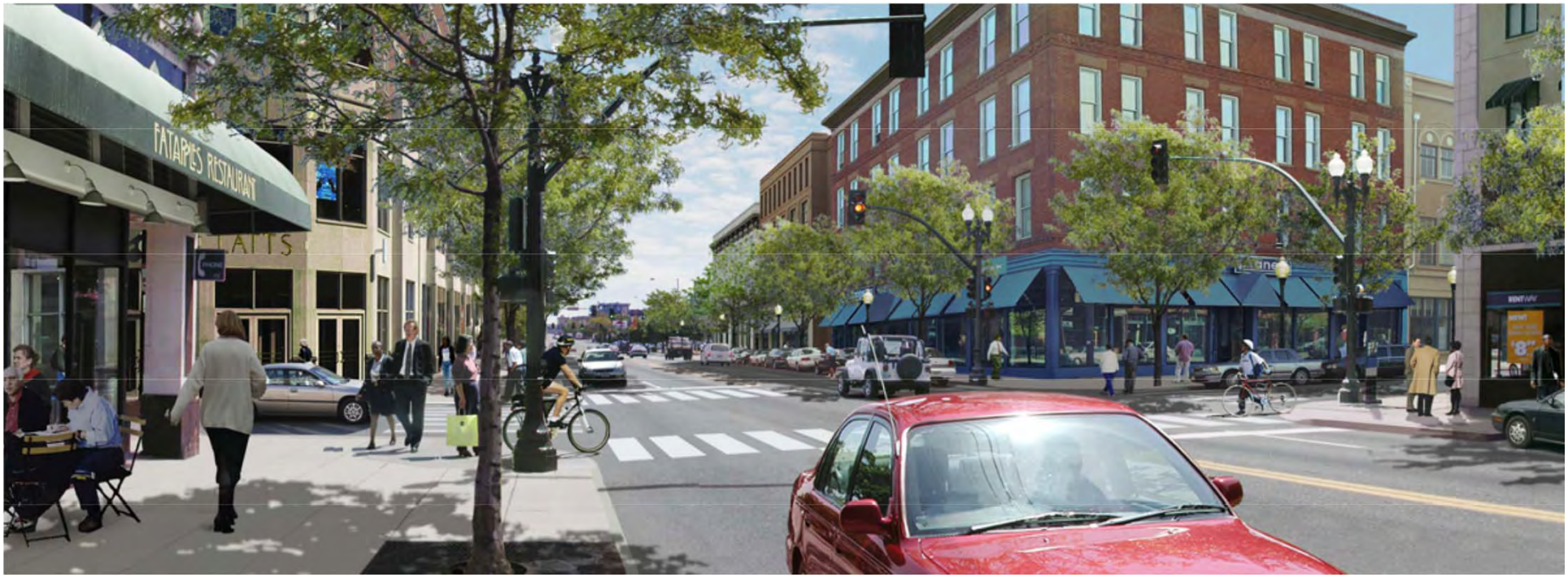




Existing conditions

Mixed-use buildings on one block

Public street improvements: street trees, street lamps, decorative traffic signals, bulbouts

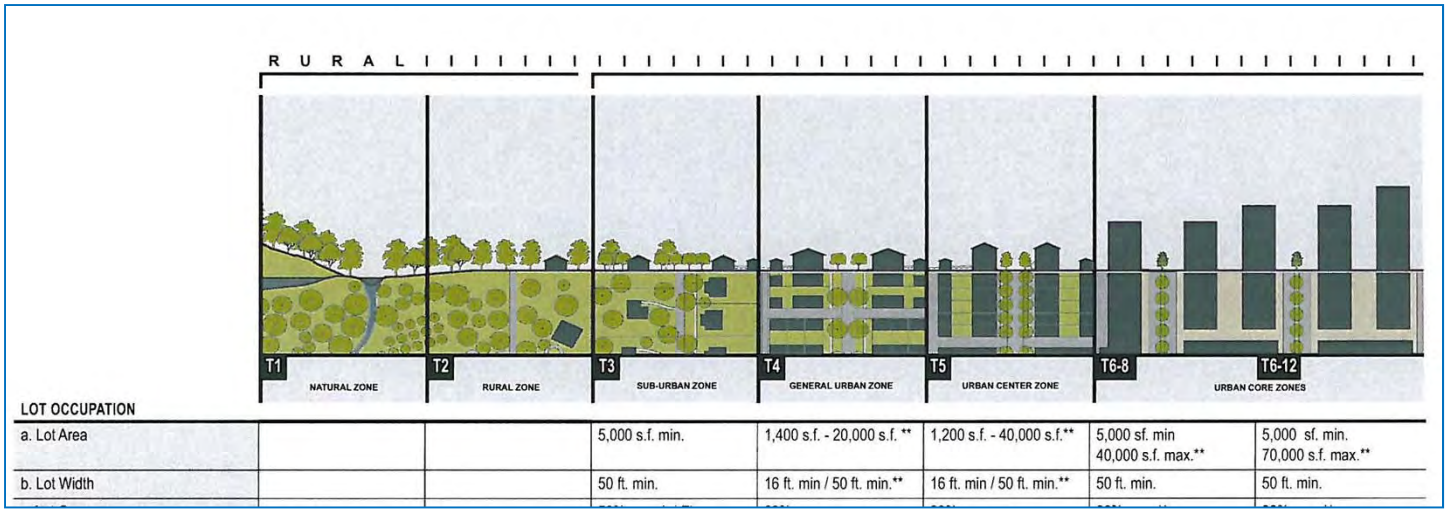


Additional mixed-use development, remodeling of existing buildings

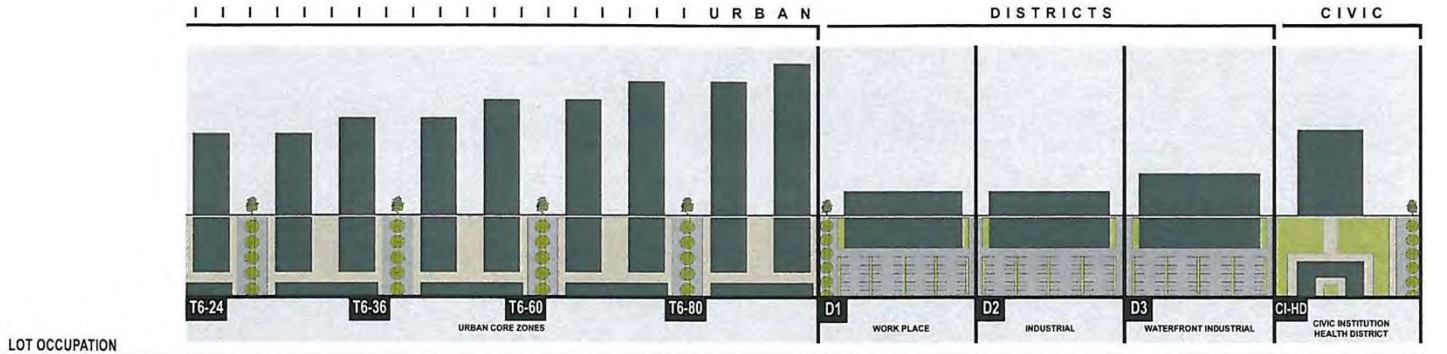

Washington
& LIQUOR
ONE WAY
FOR LEASE
(303)292-3700
LIQUORS
ARGONAUT
WINE & LIQUOR
VISIT OUR
90'S WINE CLUB!

Miami, Florida
Mandatory Citywide Form-Based Code

(with regulating plan)



LOT OCCUPATION							
a. Lot Area			5,000 s.f. min.	1,400 s.f. - 20,000 s.f. **	1,200 s.f. - 40,000 s.f.**	5,000 sf. min 40,000 s.f. max.**	5,000 sf. min. 70,000 s.f. max.**
b. Lot Width			50 ft. min.	16 ft. min / 50 ft. min.**	16 ft. min / 50 ft. min.**	50 ft. min.	50 ft. min.



LOT OCCUPATION								
a. Lot Area	5,000 sf. min. 100,000 s.f.max. **	5,000 sf. min.	5,000 sf. min.	5,000 sf. min.	5,000 s.f. min.	5,000 s.f. min.	10,000 s.f. min.	10,000 s.f. min.
b. Lot Width	50 ft. min.	100 ft. min.	100 ft. min.	100 ft. min.	50 ft. min.	50 ft. min.	100 ft. min.	50 ft. min.
c. Lot Coverage	80% max.**	80% max.**	80% max.**	80% max.**	80% max	90% max	90% max	80% max

Miami, Florida
Mandatory Citywide Form-Based Code

BUILDING DISPOSITION

LOT OCCUPATION

a. Lot Area - With rear vehicular access	5,000 s.f. min.; 20,000 s.f. max. 1,400 s.f. min.; 20,000 s.f. max.
b. Lot Width - With rear vehicular access	50 ft. min. 16 ft. min.
c. Lot Coverage	60% max.
d. Floor Lot Ratio (FLR)	N/A
e. Frontage at front Setback	50% min.
f. Open Space Requirements	15% Lot Area min.
g. Density	36 du/acre max.

BUILDING SETBACK

a. Principal Front	10 ft. min.
b. Secondary Front	10 ft. min.
c. Side	0 ft. or 5 ft. min. Abutting a Setback
d. Rear	20 ft. min.

OUTBUILDING SETBACK

a. Principal Front	30 ft. min.
b. Secondary Front	10 ft. min.
c. Side	0 ft. or 5 ft. min. Abutting a Setback
d. Rear	5 ft. min.

BUILDING CONFIGURATION

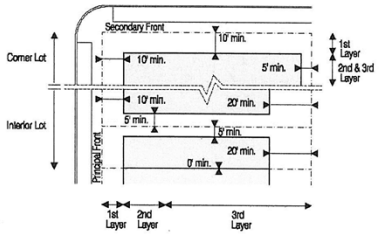
FRONTAGE

a. Common Lawn	permitted
b. Porch & Fence	permitted
c. Terrace or L.C.	permitted
d. Forecourt	permitted
e. Stoop	permitted
f. Shopfront	permitted (T4 L & T4 O only)
g. Gallery	prohibited
h. Arcade	prohibited

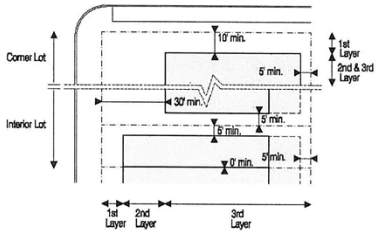
BUILDING HEIGHT

a. Principal Building	3 Stories max.
b. Outbuilding	2 Stories max.

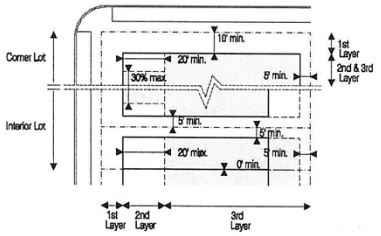
BUILDING PLACEMENT



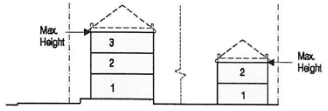
OUTBUILDING PLACEMENT



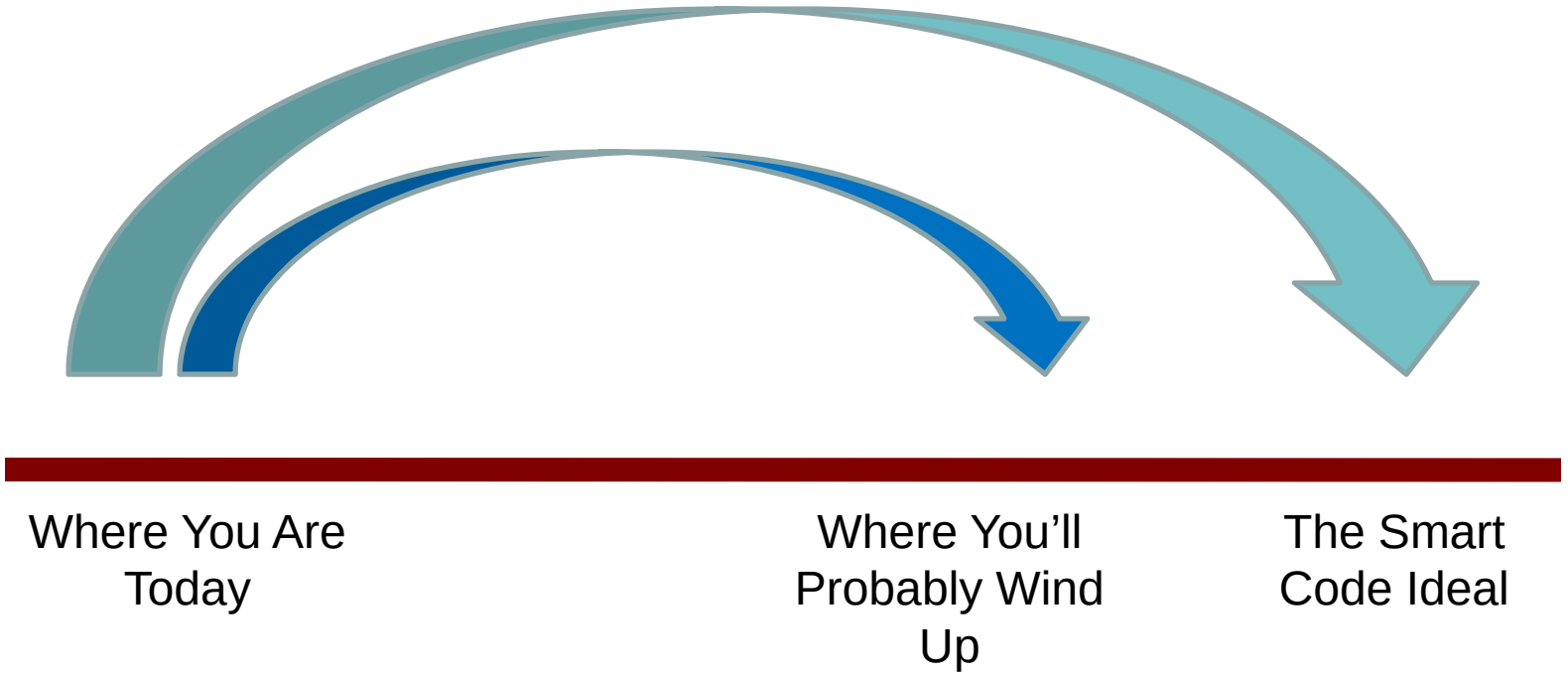
PARKING PLACEMENT



BUILDING HEIGHT



Integrating Form Controls



Evaluating a Code's Effectiveness
Form-Based Codes Institute

- ***Is the code enforceable?***
- ***Is the code easy to use?***
- ***Will the code produce functional and vital urbanism?***

Case Studies

- Why was a hybrid approach necessary?
- How was the form-based piece balanced with other code elements?
- What's unique about the code and/or code development process?
- Politics of the hybrid code adoption
- What would you do differently?

Case Studies

- John Miki, Opticos Design
  - Flagstaff, Arizona
  - Livermore, California
- Craig Richardson, Clarion Associates
  - Beaufort County, South Carolina