



Downtown & Waterfront

# FORM-BASED CODES: WHAT, WHERE & WHY

LEE D. EINSWEILER • CODE STUDIO • AUSTIN TX

1. **What is a Form-Based Code?**
2. **Where is FBC Used?**
3. **Why a Form-Based Code?**

**Some Notes on Burlington**

# - CODE STUDIO EXPERIENCE

» Founded in 2006 in Austin TX

» Lee D. Einsweiler

- 30 Years Planning Experience
- 50+ Adopted Codes

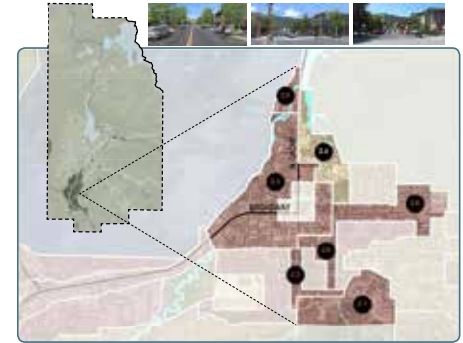
» Recent Citywide Work

- Los Angeles, Raleigh, Denver, Memphis

» Recent Form-Based Codes

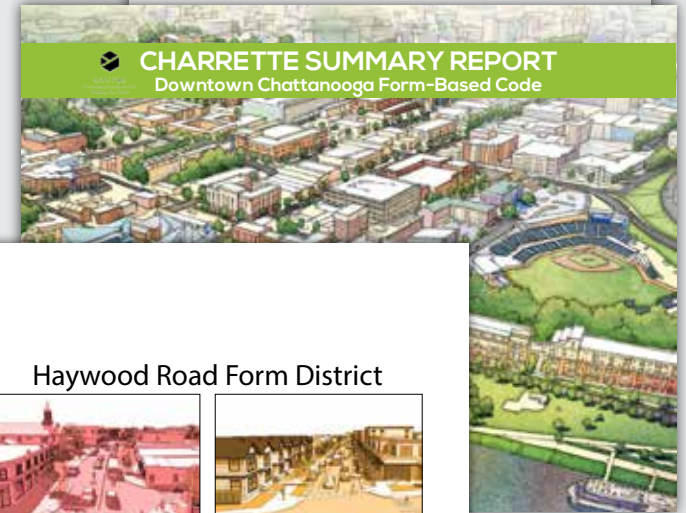
- Asheville NC River Arts District, Chattanooga TN Downtown, Jackson WY Downtown, Malta NY Downtown, Simsbury CT Downtown

## DISTRICT 2: COMMERCIAL CORE ZONING RECOMMENDATIONS



TOWN OF JACKSON  
PUBLIC REVIEW DRAFT

## CHARRETTE SUMMARY REPORT Downtown Chattanooga Form-Based Code



## Haywood Road Form District



City of Asheville, North Carolina

ADOPTED BY ASHEVILLE CITY COUNCIL  
September 9, 2014

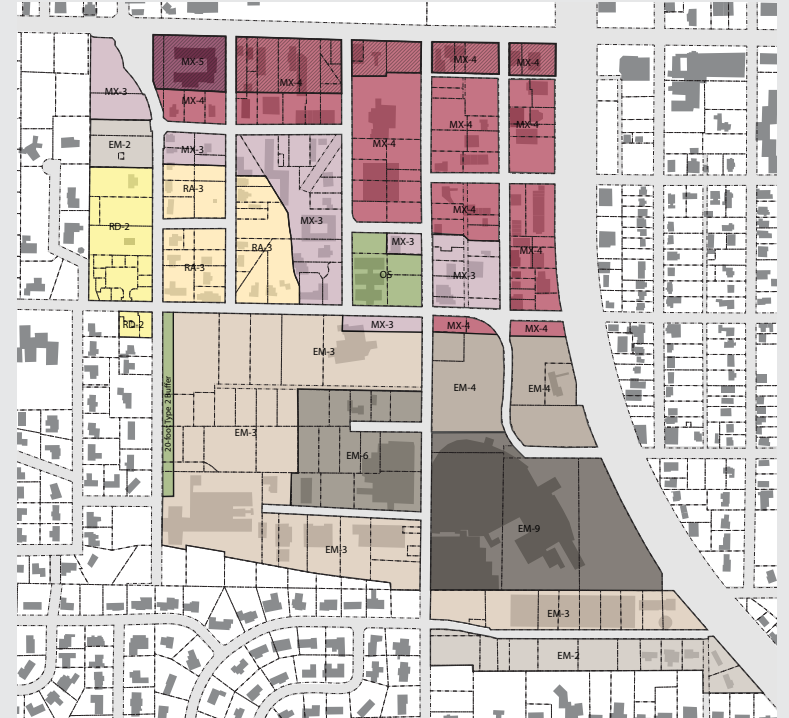
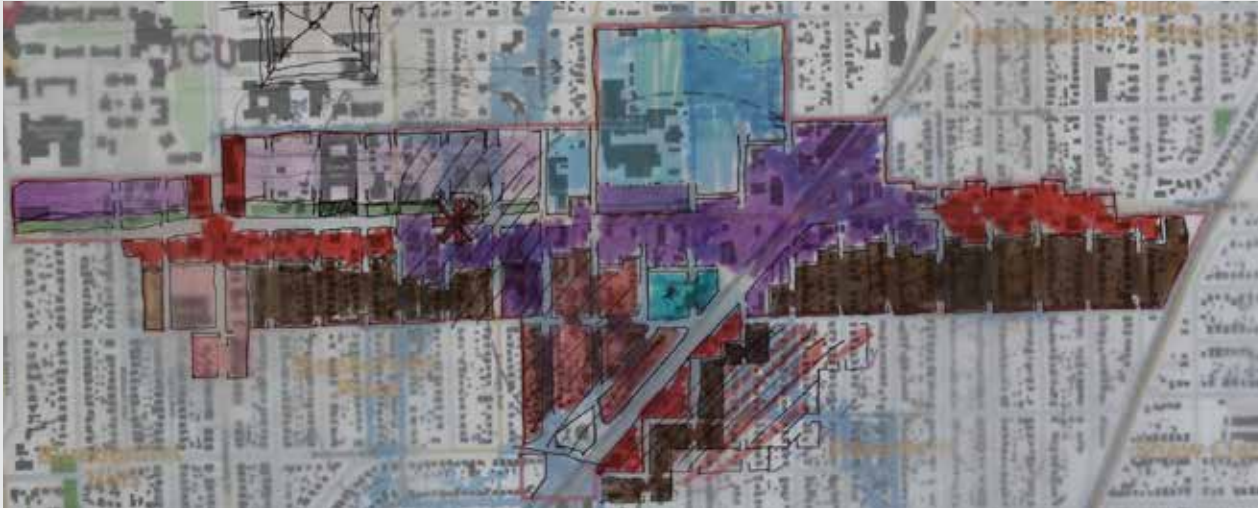


- A **new approach** to zoning with an increased focus on **walkability, predictability** and **desired outcomes**.

plan **BTV**



# 1 FOCUSED ON IMPLEMENTING A PLAN/VISION





# 1 SHAPES THE PUBLIC REALM



# 1 SHAPES THE PUBLIC REALM





# 1 SHAPES THE PUBLIC REALM





# 3 VISUALLY-ORIENTED. GRAPHIC ??

## Article 4: Zoning Maps and Districts

Article Last Updated: July 18, 2014

### Map 4.3.1-1 Base Zoning Districts

#### PART 4: BASE ZONING DISTRICT REGULATIONS

#### Sec. 4.4.1 Downtown Mixed Use Districts

##### (a) Purpose:

The Downtown Mixed Use districts are intended to provide for a diverse and vibrant mixture of commercial and residential development within Burlington's most highly developed and dynamic urban core. A broad range of uses that support a balance between residential and non-residential uses are encouraged reflecting Burlington's role as a regional urban center for commerce, culture, and government. Residential uses are encouraged on upper floors, but are intended to be secondary to non-residential uses and shall not be allowed to define or dominate the overall development objectives and standards for the district. Residential development must be cognizant of nearby non-residential uses in their design and construction, so as to minimize disturbance to residents from non-residential uses. Active uses are to be provided at street-level in order to create an active and interesting streetscape for pedestrians and enhance the vitality of the downtown area.

Development is intended to be intense with high lot coverage and large tall buildings placed close together. Development should complement the historic development pattern, and sensitive transitions should be provided where there is great difference in scale between the old and new. Development should be pedestrian-oriented with buildings oriented to the sidewalk with a strong streetscape. Buildings shall be designed with maintain a sense of scale so that they provide scale spaces. Parking is intended to be hidden and parked vehicles should not be visible from the street.

The 5 Downtown Mixed Use districts are as follows:

1. The **Downtown (D)** is the primary urban district.
2. The **Downtown Transition District (DT)** is intended to provide continuity in the character and scale of the downtown area between the Downtown and the

For the purposes of regulating building of building scale between the Downtown Transition District is further divided into **Map 4.4.1-1** and subject to the height limit

- A. **D-T North:** Properties with frontage on Buell Street to Winooski Avenue from Pearl Street to Winooski Avenue from Pearl

Comprehensive Development Ordinance  
City of Burlington, VT

## Article 4: Zoning Maps and Districts

Article Last Updated: July 18, 2014

setback more than forty (40) feet from the front property line. However, where a principal building with no setback abuts a side lot line, no setback shall be required up to the height of the abutting building.

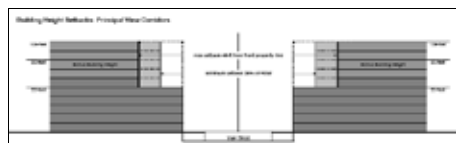


Figure 4.4.1-1 Principal View Corridor Upper Story Setback

#### B. Church Street Buildings:

For the purposes protecting the historic character and scale of buildings along the Church Street Marketplace, the maximum height of any building fronting on Church Street shall be limited to 38-feet. Any portion of a building within 100-feet from the centerline of Church Street shall be set-back a minimum of 16-feet for every 10-feet of additional building height above 38-feet.

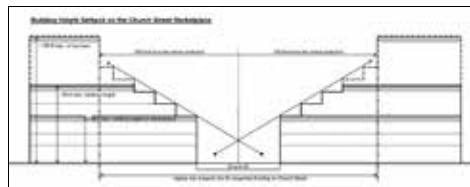


Figure 4.4.1-2 Measuring Height Limits for Church Street Buildings

#### C. Side Street Building Height:

For the purposes of maintaining the residential character and scale of buildings along the north side of King Street, on both sides of South Champlain Street, St. Paul Street, Pine Street and Church Street and the west side of South Winooski Ave. beyond 150 feet south of the center line of Main Street, as illustrated below,

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City of Burlington, VT

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## Article 4: Zoning Maps and Districts

Article Last Updated: July 18, 2014

- A. **D-T Main St. South:** Lots of record as of January 1, 2007 with frontage along the south side of Main St. in that portion of the Downtown Transition District (DT) between Main St. to King St. and from Battery Street to South Winooski Avenue;

- A. **D-T South:** Properties with frontage on the east side of South Winooski Avenue from Buell Street to Main Street, the west side of South Union St from Bradley Street to Main Street, both sides of Main St from South Union St. to South Winooski Avenue, both sides of St. Paul Street between Main and Maple Street, and the south side of Main Street from South Union St. to Battery Street not otherwise included in the D-T Main St. South subdistrict above; and,

- A. **D-T Maple South:** Properties with frontage on both sides of St. Paul Street south of Maple Street to the Enterprise District.

3. The **Downtown Waterfront District (DW)** is intended to enhance and diversify commercial and residential development in the downtown waterfront area.

For the purposes of regulating building height in such a way as to provide vistas along Battery Street of harbor activity within the breakwater area, and to preserve panoramic views along public street corridors of the mountains and lake, the Downtown Waterfront District is further divided into the following areas as depicted in **Map 4.4.1-1**, and subject to the height limits as defined in **Table 4.4.1-1** below:

- A. **North of Pearl:** Properties north of the centerline of Pearl Street extended and east of the railroad;
- B. **Pearl-Bank - East:** Properties between the centerline of Pearl Street and

## Article 4: Zoning Maps and Districts

Article Last Updated: July 18, 2014

#### H. Maximum Bonus:

In no case shall any development bonuses and allowances granted, either individually or in combination, enable a building to exceed the maximum FAR and maximum building height permitted in any district as defined below:

Table 4.4.1-2: Maximum FAR and Building Heights with Bonuses	
	Maximum FAR
<b>Downtown</b>	8.5 FAR
<b>Downtown - Transition:</b>	
A. D-T North of Buell	5.0 FAR
B. D-T Main St. South	8.5 FAR
C. D-T South of Buell	5.5 FAR
D. D-T South of Maple	3.0 FAR
<b>Downtown Waterfront:</b>	
A. North of Pearl - East	5.5 FAR
B. Pearl to Bank - East	5.5 FAR
C. Pearl to Bank - West	3.0 FAR
D. Bank to College - East	5.0 FAR
E. Bank to College - West	3.0 FAR
F. South of College	3.0 FAR
<b>Downtown Waterfront - Public Trust:</b>	
A. North of Pearl - West	3.0 FAR
B. Lakeshore	3.0 FAR
<b>Battery Street Transition</b>	4.5 FAR

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## Article 4: Zoning Maps and Districts

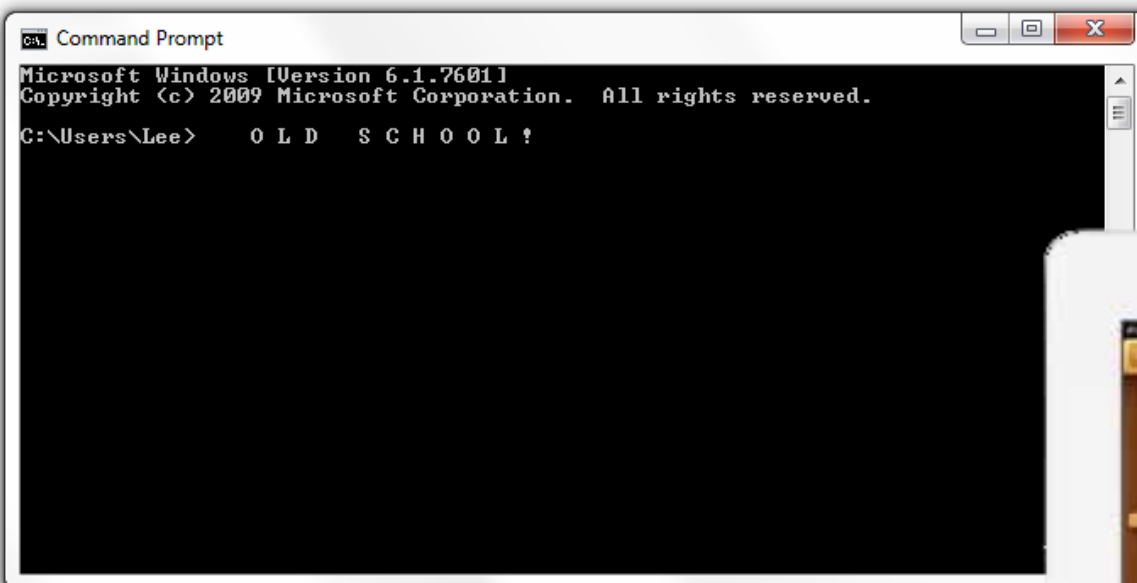
Article Last Updated: July 18, 2014

### Table 4.4.1-1 Dimensional Standards and Intensity

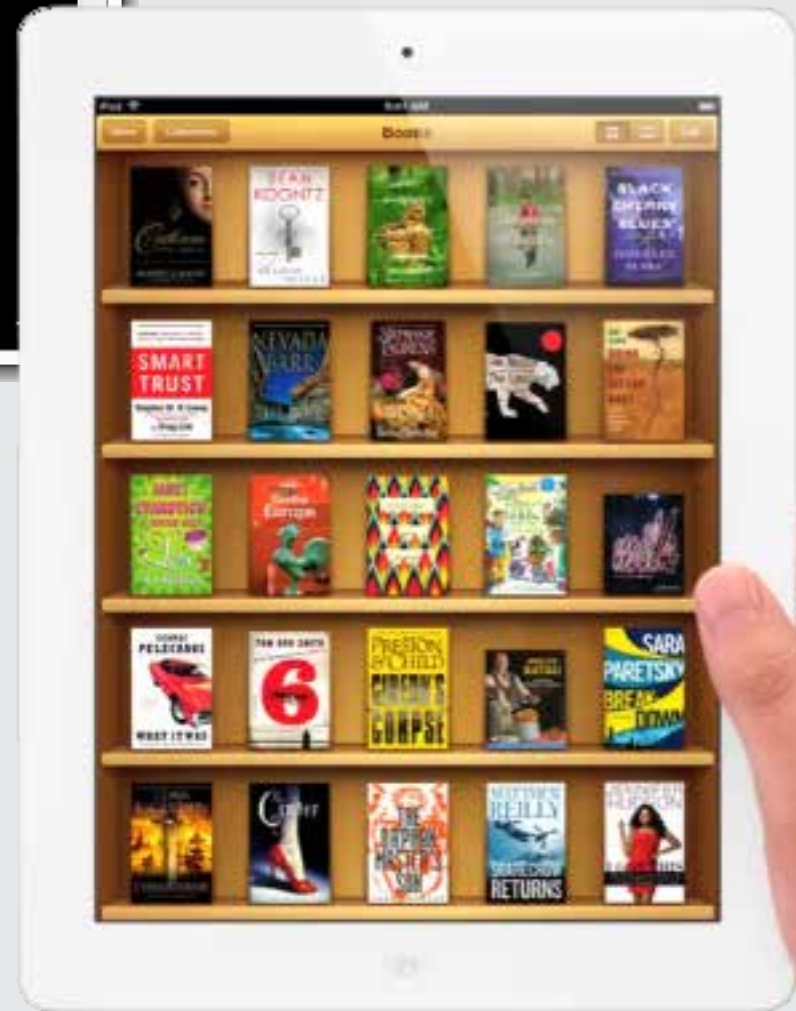
Districts	Max. Intensity (floor area ratio)	Max. Lot Coverage	Min. Building Setbacks (feet)			Height (feet)
			Front	Side	Rear	
<b>Downtown</b>						
D	5.5 FAR	100%	Greater of 0' or 12' from curb	0	0	Min: 30 Max: 65
Church St. Marketplace			Same as Downtown			Min: 30 Max: 38 (see Sec. 4.4.1(c)(4)(B))
<b>Downtown Transition District</b>						
DT		100%	Greater of 0' or 12' from curb	0	0	
A. North of Buell St.	4 FAR		Same as Downtown Transition			Min: 30 Max: 45
B. South side of Main St.	5.5 FAR		Same as Downtown Transition			Min: 30 Max: 65
C. South of Buell St.	4 FAR		Same as Downtown Transition			Min: 30 Max: 45
D. South of Maple St.	2 FAR		Same as Downtown Transition			Min: 30 Max: 35
<b>Downtown Waterfront</b>						
DW		100%	Greater of 0' or 12' from curb	0	0	
North of Pearl - East			Same as Downtown Waterfront			Min: 30 Max: 45
Pearl to Bank - East			Same as Downtown Waterfront			Min: 30 Max: 45
Pearl to Bank - West			Same as Downtown Waterfront			Min: 30 Max: 35
Bank to College - East			Same as Downtown Waterfront			Min: 30 Max: 35
Bank to College - West			Same as Downtown Waterfront			Min: 30 Max: 35
South of College			Same as Downtown Waterfront			Min: 30 Max: 35
Public Trust			Same as Downtown Waterfront			Max: 35
North of Pearl - West			Same as Downtown Waterfront			Max: 35
Lakeshore			Same as Downtown Waterfront			Max: 35
Battery Street Transition			Greater of 0' or 12' from curb	0	0	Min: 30 Max: 35

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# 3 AN EVOLUTION: WYSIWYG



“What You See is What You Get !”



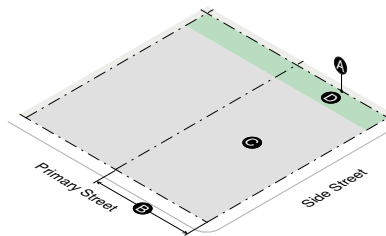


# 3 VISUALLY-ORIENTED, GRAPHIC !

## 2.0. DISTRICTS

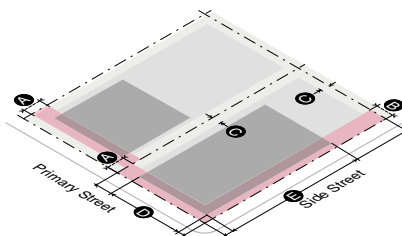
### 2.8. HR-6: Town

#### 1. LOT CRITERIA



Lot Dimensions	
A Lot area (min)	0'
B Lot width (min)	0'
Lot Parameters	
C Building coverage (max)	80%
D Outdoor amenity space (min)	20%

#### 2. SITING

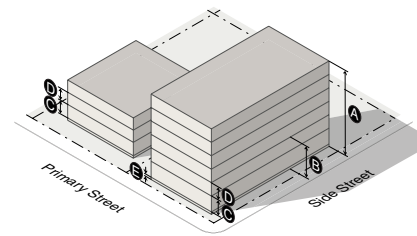


Building Setbacks	
A Primary street (min/max)	
Residential	5'/15'
Nonresidential	0'/10'
Patton Avenue exemption	0'/85'
B Side street (min/max)	
Residential	5'/15'
Nonresidential	0'/10'
C Rear or side interior (min)	0'
Rear or side interior abutting RS, RM (min)	15'
Rear or side abutting alley (min)	5'
Build-to Zone (BTZ)	
D Building facade in primary street BTZ (min % of lot width)	80%
E Building facade in side street BTZ (min % of lot width)	40%
Parking Location	
No on-site parking between building and street, except on Patton Avenue, where max. 2 bays of on-site parking with single drive aisle is allowed	
Garage doors cannot face Haywood Road	

## 2.0. DISTRICTS

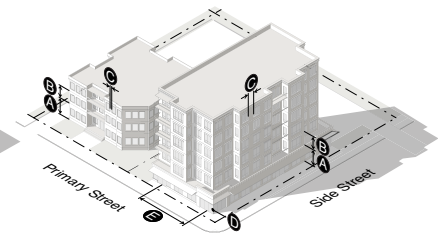
### 2.8. HR-6: Town

#### 3. HEIGHT



Building Height	
A Building height, stories max./feet max.	6/80'
B Building height, stories min./feet max.	2/30'
Reduced height may be required when abutting a RS or RM district (see Sec. 2.2.O)	
Story Height	
C Ground story height (min)	
Residential	10'
Nonresidential	12'
D Upper story height (min)	9'
Ground Floor Elevation	
E Ground floor elevation (min/max)	
Residential	2'/4'
Nonresidential	0'/2'

#### 4. ACTIVATION



Transparency	
A Ground story, primary/side (min)	
Residential	20%/20%
Nonresidential	60%/30%
B Upper story (min)	20%
C Blank wall area, primary/side (max)	
Residential	30'/30'
Nonresidential	15'/30'
Pedestrian Access	
D Entrance facing primary street	Required
E Entrance spacing along primary street (max)	50'
Building Elements Allowed	
Residential: awning/canopy, balcony, front porch, stoop	
Nonresidential: awning/canopy, balcony, gallery, forecourt, courtyard	

# 1 FORM-BASED CODE COMPONENTS

## PREAMBLE

A PLACE-BASED APPROACH TO ZONING



An overview of Burlington's form and character. This text is not regulatory and is intended to provide an introduction and overview of the Burlington Form-Based Code.

## SECTION 14.1

PURPOSE & APPLICABILITY OF THE BURLINGTON FORM-BASED



Provides an outline for the Structure of the Form-Based Code and establishes the overall intent and applicability of the Code within the Burlington Comprehensive Development Ordinance (CDO)

## SECTION 14.2

REGULATING PLAN



Establishes the Downtown and Waterfront District Regulating Plan and the Form Districts and where they apply within the City.

MAP

## SECTION 14.3

SPECIFIC TO FORM DISTRICTS



Establishes regulatory standards governing building form and other related matters, such as land use and Signs, within the districts.

## SECTION 14.4

SPECIFIC TO BUILDING TYPES



Establishes standards for a wide range of building types found within Burlington's downtown that are appropriate for walkable, transit-supportive urban environments.

## SECTION 14.5

SPECIFIC TO FRONTAGE TYPES

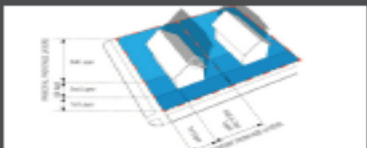


Establishes standards for a wide range of building frontages that provide the transition between the public street and the private realm within buildings.

STANDARDS

## SECTION 14.6

SUPPLEMENTAL TO FORM DISTRICTS



Establishes general development standards that apply across multiple Form Districts for topics such as parking, Signs and standards for specific uses.

## SECTION 14.7

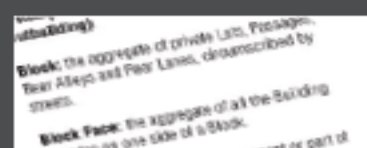
ADMINISTRATION & PROCEDURES



Establishes procedures for processing and reviewing developments under the Form-Based Code.

## SECTION 14.8

FORM-BASED CODE GLOSSARY



Provides definitions for certain terms used throughout the Form-Based Code.

ADMIN

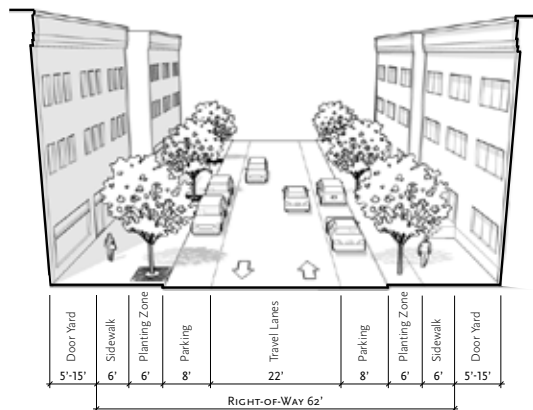


# 1 = CLEAR, PREDICTABLE RESULTS

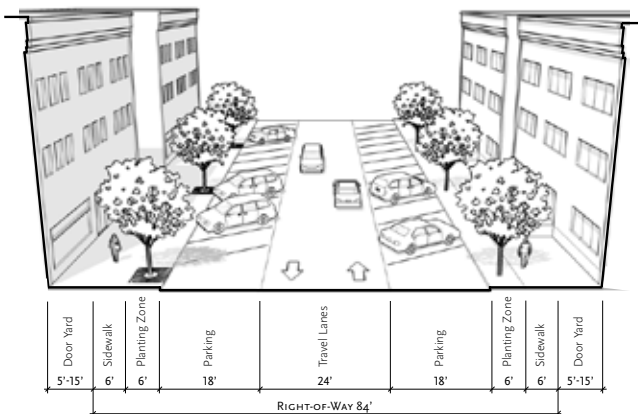
Division 51A-13.500 Minor Streets and Streetscapes.

Sec. 51A-13.502 New Minor Streets.

(A) Parallel Parking (MS-1A).



(B) Angle (60°) Parking (MS-1B).

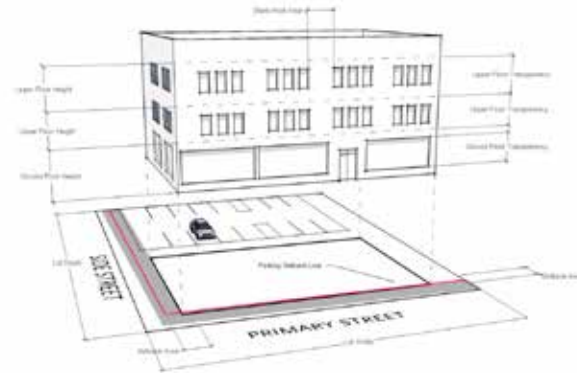


DRAFT

Article XIII. Form Districts | 5-5



Article 3 Building Envelope Standards

3.10 Mixed Use and Industrial Districts  
3.10.3 Frontage Standards**SHOPFRONT****PLACEMENT****SETBACK AREA**

2ft min. (7 ft. if ground floor use is a restaurant with outdoor seating) to 15 ft. behind ROW line.

**CONTEXTUAL INFILL**

For any infill project along a designated Shopfront Frontage with less than 75 feet of frontage, and upon approval of the Planning Director, structures may be located closer to the ROW line than the minimum setback provided that the structure is located within the range of front setbacks on the street. This range of setbacks is measured on the basis of the four structures surrounding the project site (the two closest lots in either direction along the street). The new structure shall be located within the range of established setbacks (no closer than the narrowest setback, no further than the deepest setback). Where a setback in these four lots is significantly out of the range of setbacks along the street, it may be eliminated from the range.

**REQUIRED BUILDING FRONTAGE**

1. Primary street (sides 100 ft. or more in width). The building facade must be located within the setback area for a minimum of 80% of the site width.
2. Primary street (sides less than 100 ft. in width). The building facade must be located within the setback area for a minimum of 70% of the site width. For sites under 100 ft. in width, the required building frontage may be reduced to accommodate no more than a single 20-ft. access drive for a rear parking area.
3. Side street. The building facade must be located within the setback area for a minimum of 40% of the site depth.

**SIDE/REAR SETBACKS**

Abutting single-family: 10 ft min. Abutting multifamily, nonresidential: 0 or 10 ft min. Abutting alley: 5 ft. min. Building separation: 10 ft min.

**PARKING SETBACK**

1. Primary street setback: Min 30 ft. behind ROW line.
2. Side street setback: Min 8 ft. behind ROW line.
3. Abutting single-family Min 10 ft.
4. Parking shall be located behind the parking setback line. No parking is permitted between the street and the building. This requirement shall not restrict on-street parking.
5. On street parking is required.

**ELEMENTS****TRANSPARENCY (WINDOWS & DOORS)**

1. Ground floor. Primary Street 50% min, Side Street 30% min. Ground floor transparency is measured between 2 and 12 ft. above the adjacent sidewalk.
2. Upper floor. Min 20% ( floor to floor).
3. A minimum of 60% of the window pane surface area shall allow views into the ground floor for a depth of at least 8 ft. Windows shall not be made opaque by window treatments (excepting operable sunscreen devices within the conditioned space).

**BUILDING ENTRANCE**

1. A functioning entrance, operable during normal business hours, is required facing the primary street. An angled entrance may be provided at either corner of the building along the primary street to meet this requirement.
2. A building located on two primary streets shall have either one entrance per frontage or provide one angled entrance at the corner of the building at the intersection. Buildings located on corner lots shall meet all applicable intersection sight distance requirements. Additional entrances off another street, pedestrian area or internal parking area are permitted.
3. A minimum of 50% of the required entrance shall be transparent.
4. Recessed entrances shall not exceed 3 ft. in depth and one floor in height.

**BLANK WALL AREA**

Blank lengths of wall exceeding 25 linear ft. are prohibited on all primary and side street building facades.

**HEIGHT****GROUND FLOOR ELEVATION**

For ground floor residential uses, the ground floor finished elevation shall be a minimum of 18 inches above the adjacent sidewalk. There is no minimum for ground floor nonresidential uses.

**FLOOR HEIGHT**

1. Ground floors shall have a floor to floor height of at least 14 ft.
2. Each upper floor shall have a floor to floor height of at least 9 ft.

Memphis/Shelby County

3-35 (2-11-10)

PUBLIC REVIEW DRAFT Unified Development Code





## 2 WHERE IS FBC USED?

### » Nationwide Tool

- Non-SmartCode Form-Based Codes



## 2 WE HAVE A PREFERENCE - DOES OUR CODE?



RED on Zoning Map



Also RED on Zoning Map



## 2 FBC: A MULTI-PURPOSE TOOL

PRESERVE/ENHANCE



INCREMENTAL CHANGE



TRANSFORM



# 3 WHY USE A FORM-BASED CODE?

## » Preserve/Enhance

- Protect Character by Matching Intensity Allowed to Existing Form

## » Incremental Change

- Increase Intensity in a Modest Way, Consistent with Existing Patterns

## » Transformational Change

- Modify Auto-Dominated Places to be More Pedestrian-Friendly





### 3 WHY PREPARE A NEW CODE?

#### » Implement a New/Revised Plan

- Plan BTV - Downtown and Waterfront

#### » Proactively Update the Zoning Map

- Reconsider Intensity of Development or Allowed Uses

#### » Improve the Development Standards

- Embed the Knowledge, Interpretations from Prior Approvals
- Regulate Additional Important Design Elements

#### » Enhance the Development Review Process

- Improve the Predictability of the Process For All Parties  
(Neighbors, Planners, Decision-Makers, Applicants)

# 3 THE ORIGINS OF ZONING

## » Separation of Uses

- Eliminate the tannery next door (or the possibility of it!)
- Impose use standards and zones/districts where they applied

## » Light and Air

- Make tenement houses healthier places to live
- Impose bulk standards (allow "light and air")

## » Market Failure

- Protect shared interests, the "common good"
- Harness market forces to implement our plans



# 3 IDEAL PLAN IMPLEMENTATION

## » Comprehensive Plan

- Overall comprehensive or functional plans
- Detailed plans for sector, neighborhood, area

## » Zoning, Subdivision, Other Codes

- Apply “tools” from the “toolkit” to implement the plan; OR
- Develop new tools

## » Permit Approval Process

- Ensure the development community builds the City's vision

### 3 IDEAL PLAN IMPLEMENTATION

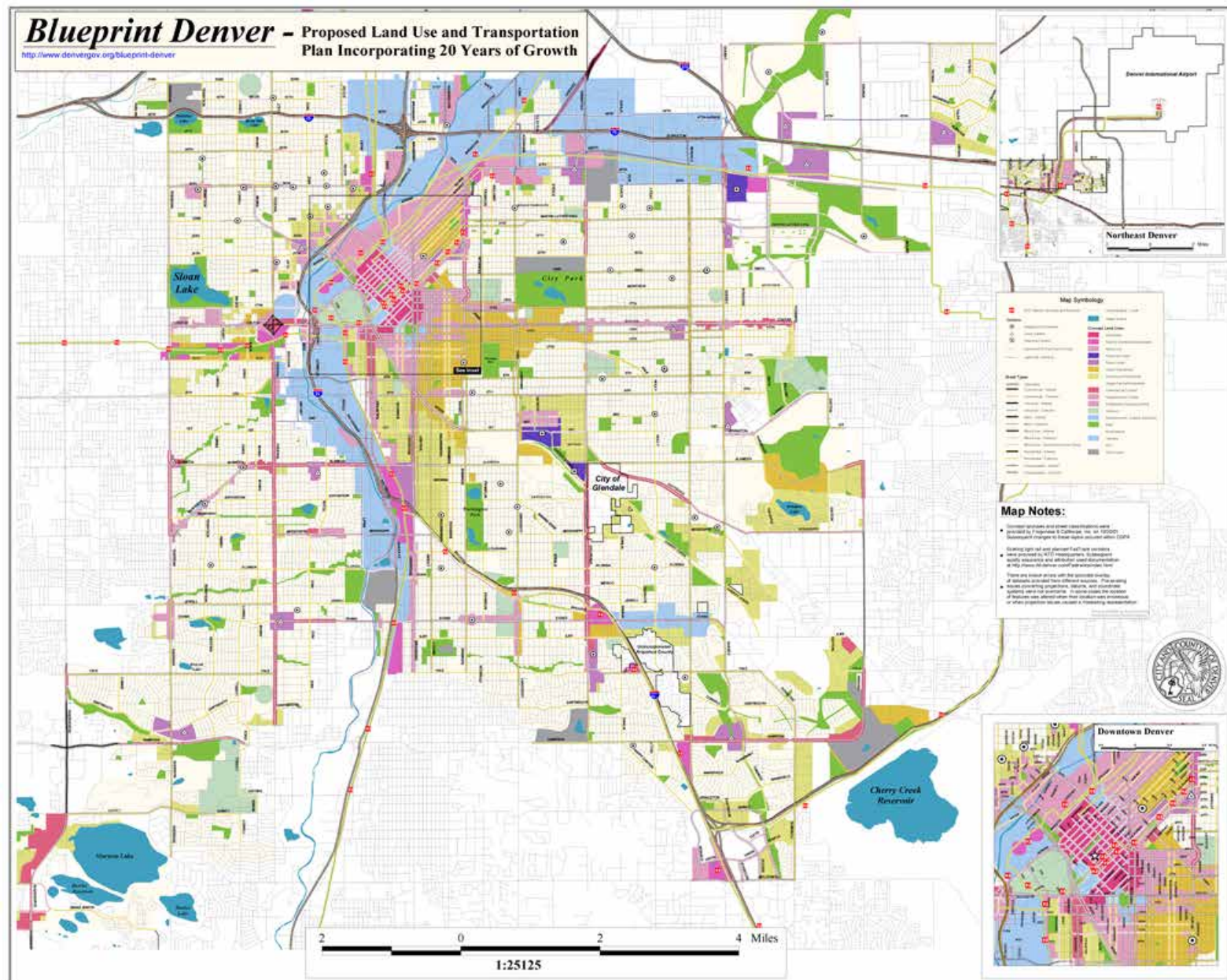
## » Planning at 30,000 Feet





# 3 IDEAL PLAN IMPLEMENTATION

## » Planning at 20,000 Feet: Parcel Level





# 3 IDEAL PLAN IMPLEMENTATION

## » Planning at 10,000 Feet: Site Level



### 3 | WHY DO WE REGULATE?

- » Harness Market Forces to Shared Vision
- » Protect Public Interest
- » Protect Property Owners
- » How Much Regulation is Needed?
  - Just enough to get the Plan's intended results!



## 3 A COMMON PROBLEM

### » Case-By Case Negotiation

- Reliance on one-time, negotiated solutions (ad hoc)

### » How Could This Possibly be Bad?

- Fairness/equity questions, consistent treatment of applicants, situations
- Difficulty in enforcement, tracking
- Hard-won compromises not available for all
  - Street cross-sections
  - Parking reductions
  - Materials

## 3 A BETTER IDEA !

» If you're not happy with the results of your Code . . .

**REVISE THE CODE !**



### 3 THE TYPICAL PLANNING PROBLEM

- » Balancing neighborhood interest in protection of perceived character with the desire for reinvestment, intensification
- » Requires PLANNING including PUBLIC INVOLVEMENT to reach shared solutions



# 3 IDEAL ROLES IN PLANNING AND IMPLEMENTATION

## » Neighbors ?

- Up front during planning process
- Code/Plan adoption or amendment
- NOT individual site plan decisions

## » Policy Makers ?

- Confirmation of planning vision/results
- Adoption and amendment of plan/code

## » Technical Staff ?

- Support for planning, decision-making process
- Permit (site plan) review, approval

*Some communities include discretionary design review in the process*



### 3 COMMON MISTAKES

#### » Expecting a Miracle . . .

- Mixed use zones and intensities (heights) established years ago
- Limited market response to date

#### » Planning Through Zoning

- Codes should IMPLEMENT plans, not make them

#### » Borrowing Your Code Language From Others

- A good code is PLACE-SPECIFIC
- Code metrics must be locally calibrated

# 1 CODE REFORM IS SIMPLE



Old Standards:  
Hard to  
Understand



New Standards:  
Must Be Clear  
and Predictable

*With thanks to Peter Park*

# 3 PLACEMAKING BARRIERS

## » Planning versus Public Works, Utilities, DOT

- The “silo” effect

## » Short-Term versus Long-Term

- Phasing of development, changing uses over time, intensification

## » Zoning versus Subdivision

- Public realm improvements



# 3 ZONING VERSUS SUBDIVISION



UrbanAdvantage

# 3 ZONING VERSUS SUBDIVISION



UrbanAdvantage



# 3 ZONING VERSUS SUBDIVISION



UrbanAdvantage



# 3 ZONING VERSUS SUBDIVISION





# 3 ZONING VERSUS SUBDIVISION



UrbanAdvantage



# 3 ZONING VERSUS SUBDIVISION



UrbanAdvantage



# - SOME NOTES ON BURLINGTON

## » A Great Downtown/Waterfront Plan

- The People's Plan
- Created Through a Public Process with Many Voices
- Represents the Community We Desire in the Future

## » How Do We Implement the Plan?

- Public Investment
- Private Investment
- Shared Investment

## » How Do We Manage Private Investment to Ensure Results?

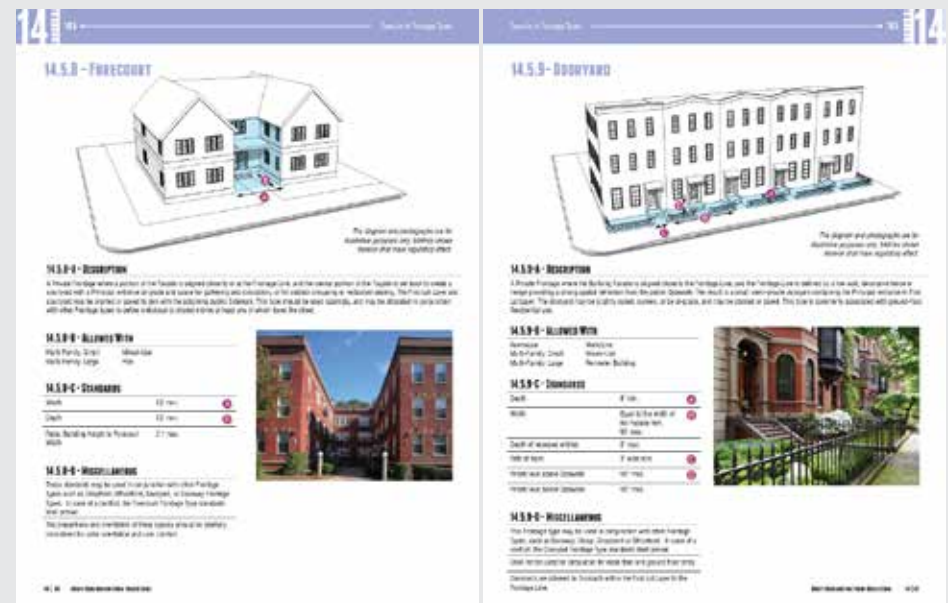
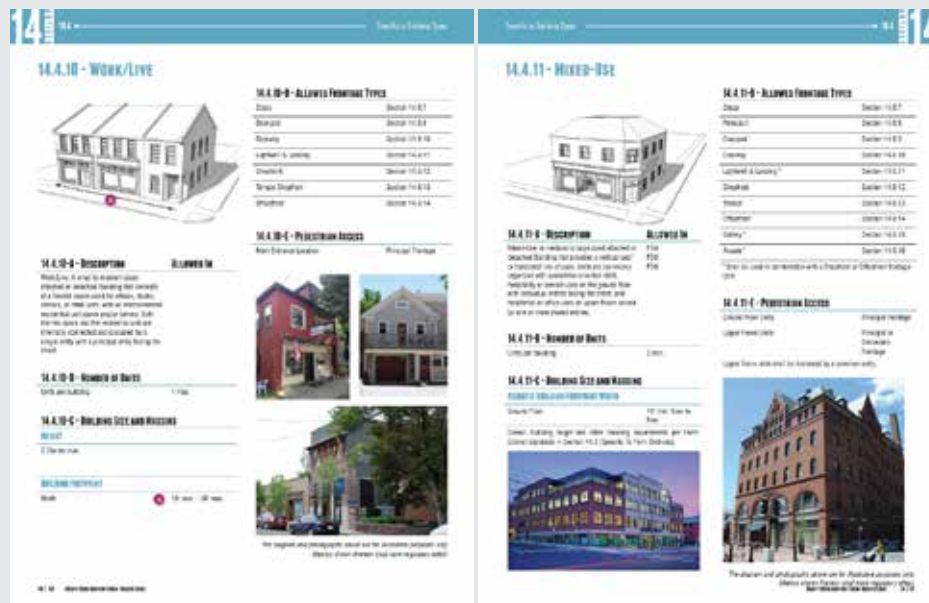
- Zoning !



# - SOME NOTES ON BURLINGTON

## » Burlington's New Zoning

- More Visual, Graphic, Easier to Understand
- Illustrates the Plan's Vision
- Targeted at Architects and Designers, Not Lawyers
- Includes the Best Practices from Burlington's Zoning Today
- Raises the Bar for Development to Match the Plan



# - SOME NOTES ON BURLINGTON

## » How Can I Be Sure This is Better?

- Talk with Planners, Developers, Architects you Trust
- Test Some Key Sites to Check the Guaranteed Outcome
- Consider What the Worst Case *Might* Be Today Versus Under the New Code (remember - zoning is a minimum standard)

## » What if I Have Concerns About the New Code?

- Identify **Clearly** Which Part You're Concerned About
- Standards? Propose a change based on real buildings you know people like - how would the rules have to change to build them?
- Development Review Process? Consider how today's process works first, then gauge whether the new one is improved, or needs to add elements from today's process.
- Is it Something Zoning Can Legally Regulate?



## - SOME NOTES ON BURLINGTON

### » What if Zoning Authority is Not Enough?

- Be clear about what you object to - is it something that zoning can fix? (Not the proposed tenant, not the proposed color, not the developer)
- Involve the community in a public discussion of the project - good ideas often "go viral"
- If there is any public money involved, tie development modifications to those funds!
- If any discretionary approvals are required, tie development modifications to the discretionary action

# - A CLOSING NOTE ABOUT "FUNKY"

## » You Cannot Zone to Mandate Funky

- And You Wouldn't Want to!
- New buildings are not typically viewed as funky - that's for rehabilitation of old buildings, and often re-use
- Doesn't mean we cannot include:
  - Intriguing architecture
  - Desirable public spaces
  - Fabulous signs
  - Creative tenants

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