

SUSTAINABLE LAND USE CODE PROJECT

Capitol Region Council of Governments



MODEL REGULATIONS: TAILORED STANDARDS FOR INFILL DEVELOPMENT

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In Association with:
Shipman & Goodwin
Seth Harry and Associates

C L A R I O N

101 Market Street
Suite D
Chapel Hill, NC 27516
919.967.9188

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INFILL DEVELOPMENT STANDARDS

Introduction

Successful infill development—new development that is sited on underutilized or undeveloped land within an existing community—can support mass transit, help reduce greenhouse gas emissions, help stabilize and revitalize existing neighborhoods and commercial centers, and utilize existing infrastructure.¹ Many jurisdictions in the region have adopted policies to promote infill development, often as part of an overall comprehensive strategy to spur community revitalization and redevelopment of distressed properties. Prior to World War II, much of town planning and development in this country's communities focused on city and town centers and existing neighborhoods. After World War II, automobile ownership increased dramatically and a major movement to the suburbs and greenfield development sites began. Land use planning and zoning regulations followed suit by requiring greater and greater distances between housing and nonresidential uses, and even between differing types of residential units, thus increasing dependency on the automobile. The new development codes required more parking, landscaping, and open space, further pushing development apart and making communities less walkable. Now local governments and land use planners are recognizing that infill development has some significant attractions.

Infill development can take several forms. In suburban areas, it might take the form of redevelopment of shopping malls or commercial strip centers. In urban areas it might be building single-family homes or apartments on vacant lots or larger scale redevelopment on abandoned commercial or industrial sites.

Although many of the municipalities in the region are small rural or suburban communities, local land use regulations have generally gone farther than those in some jurisdictions in recognizing mixed-use and infill development. A number of the less urban municipalities have town or village center zoning districts that allow or promote mixed-use, infill development (e.g., Avon's Village Center Zone, Bloomfield's Design Development Zone, Enfield's Thompsonville Village Center Zone, Farmington's Unionville Center Zone, Simsbury Center, Tolland's Town Center and Village Area districts, Windsor's Planned Urban Development Zone). In its downtown district, Hartford provides bonus floor area for development that mixes in residential uses and provides pedestrian-oriented retail uses, and encourages structured parking facilities. Windsor allows the transfer of density and increased building height for transit-oriented development near the Amtrak station in Windsor Center.

Overall, however, zoning codes in the CROG region sometimes create roadblocks to infill development. For example, they often require copious landscaping, parking, and open space more appropriate to new greenfield suburban projects, making infill more difficult and sometimes infeasible. Standards offering alternatives that recognize the often differing context for infill can help promote these projects while ensuring they respect the character of surrounding communities. These model regulations are intended to remove some of these unnecessary impediments to infill development.

¹ As used in this document, infill development means new development that is sited on vacant, undeveloped, or underutilized land within an existing community, and that is surrounded by other types of development. Infill development typically utilizes to the maximum extent practicable existing infrastructure such as street, water supply, and sanitary sewers. The term "urban infill" itself implies that existing land is mostly built-out and what is being built is in effect "filling in" the gaps.

Model Code Provisions for Infill Development

1.1. INFILL DEVELOPMENT STANDARDS—GENERAL

1.1.1. PURPOSE STATEMENT

The purposes of these infill development standards are to:

- A. Support and enhance existing residential and commercial areas;
- B. Promote mass transit;
- C. Utilize existing infrastructure; and
- D. Reduce greenhouse gas emissions.

1.1.2. APPLICABILITY

These alternative development standards shall be applied (Option: “may be applied”) in the following zone districts or areas of the community. (Each community should specify particular zone districts, such as a central business or mixed-use zone district, or discrete areas in the locality where the infill standards would be optional or mandatory.)²

1.2. DEFINITIONS

1.2.1. Infill Development: Means new development that is sited on vacant, undeveloped, or underutilized land within an existing community, and that is surrounded by other types of development. Infill development typically utilizes to the maximum extent practicable existing infrastructure such as street, water supply, and sanitary sewers.

1.2.2. Maximum extent practicable: Means no feasible or prudent alternative exists, as determined by (Add name of appropriate agency), and all possible efforts to comply with the standards or regulation or minimize potential harmful or adverse impacts have been undertaken by an applicant. Economic considerations may be taken into account, but shall not be the overriding factor determining “maximum extent practicable.”

1.3. DEVELOPMENT STANDARDS

1.3.1. LANDSCAPING AND TREE PROTECTION

These development standards are intended to provide alternative and appropriate standards for parking lot landscaping and tree protection for infill development.

A. Parking Lot Perimeter Landscaping

1. The perimeter of all parking lots that abut a public street or alley or a lot used for detached residential dwellings shall be landscaped or screened according to one of the following options:
 - a. A minimum two-foot-wide planting strip containing an ornamental metal fence or masonry wall with a minimum height of three and one-half feet and a maximum height of four feet, combined with a

² Some communities apply infill development standards in their downtowns or central business districts. Others focus on older residential neighborhoods or obsolete industrial or commercial areas.

- single row of evergreen shrubs planted a minimum of three feet on-center; or
- b. A minimum four-foot-wide planting strip containing a low, continuous hedge a minimum of 30 inches tall at installation and consisting of a double row of evergreen shrubs planted a minimum of three feet on-center in a triangular pattern.
2. Curbs or parking blocks shall be installed as a protective measure adjacent to the landscaped perimeter area to prevent overhang of vehicles into the landscaped area. In cases where two or more off-street surface parking lots are located adjacent to one another, but on different lots, no perimeter landscape materials shall be required between the two parking lots.

Scale-Up Option—Interior Parking Lot Landscaping

In addition to excessive perimeter parking lot landscaping requirements, some zoning codes apply interior landscaping requirements more geared to large greenfield sites. Local governments may want to take the next step beyond tailoring perimeter landscaping regulations and address interior landscaping regulations as well.

A. Interior Parking Lot Landscaping

1. Small lots

Parking lots with fewer than ten spaces are exempt from any interior parking lot landscaping requirements. Pervious pavement shall be allowed in small parking lots.

2. Large lots with 10 or more spaces

Large parking lots shall provide interior landscaping that meets the following standards.

- a. A minimum of one 2.5-inch caliper tree shall be planted in protected islands at the end of each parking row and at intervals not exceeding 100 feet within the parking rows.
- b. Planting islands shall have a minimum width of four feet and minimum area of 160 square feet for double-loaded parking rows and 80 for single-loaded parking rows.
- c. The total area of the interior landscaping shall not exceed ten percent of the lot unless requested by the applicant.
- d. Where practicable, planting islands may incorporate low-impact design approaches to manage stormwater, such as inflow cuts in curbing.

3. General Standards

- a. A minimum of 70 percent of all required islands and other landscaped areas shall be covered with trees or shrubs and continuous groundcover consisting of low-growing evergreen shrubs or evergreen ground cover.

- b. Pervious pavement shall be allowed in all surface parking lots.

B. Tree Protection

1. Preservation of Significant Trees

Significant trees shall be preserved to the maximum extent practicable. For the purposes of this standard, the caliper of a “significant” tree shall be at least 24 inches for deciduous trees and 18 inches for evergreen trees.³

2. Significant Tree Replacement

- a. Where significant trees cannot feasibly be preserved as determined by (Add decision-making agency), the total caliper inches of the tree(s) that are removed shall be replaced on site by the same caliper inches of new trees. The new trees shall either be of the same or similar species, or, if identified by the (Add appropriate city agency) for species diversification, shall be from a list of permissible species provided by the (Add appropriate city agency).
- b. If site limitations affect the ability of the developer to replace the total caliper inches of the removed tree(s), the (Add appropriate city agency) may allow the developer to reduce the replacement measurement in an amount that allows for the maximum replacement of caliper inches feasible on the site. This reduction may not exceed 50 percent of the total caliper inches removed.
- c. Where the (Add appropriate city agency) reduces the number of trees planted in replacement of significant trees, the developer shall make a contribution to the tree fund for the (Add jurisdiction name) for the remaining caliper inches not replaced. The amount of the in-lieu fee shall be calculated as the cost to replace and install the remaining total caliper inches not planted with new trees of the same or similar species purchased wholesale at two-inch caliper.
- d. The tree fund shall be used to replace or provide new trees within the (Add jurisdiction name).

1.3.2. OPEN SPACE

A. In-Lieu Payment

Development in the (Insert appropriate reference to infill districts or areas) shall be exempt from all private open space set-aside and public land dedication requirements contained elsewhere in the zoning and subdivision regulations. In place of such requirements, the (Add appropriate decision-making body) may require the applicant to make a payment as determined by the (Add appropriate city agency) that shall not exceed 50 percent of the value of the private open space set-aside or open space land dedication requirements normally required in (Add reference to

³ Each jurisdiction should define “significant tree” as appropriate for its existing tree cover. Some jurisdictions create lists defining “significant” for each desirable individual species so that a “significant” dogwood tree would be much smaller in caliper size than a “significant” oak.

open space set-aside or dedication requirements elsewhere in land development codes) applied to the property.⁴ The in-lieu fee shall be calculated so that it does not exceed the open space impacts or demands of the proposed development. The (Insert name of local jurisdiction) shall expend such funds for the provision of trees or the purchase and maintenance of street furniture or plazas or other community amenities in the general vicinity of the development.

B. Community Amenities

1. In addition to any in-lieu payment, the applicant shall provide community amenities as set forth below in Table 1.

TABLE 1: COMMUNITY AMENITIES	
Size of Development or Redevelopment (Building Square Footage)	Number of Amenities
Less than 5,000 sq. ft.	1
5,000 – 10,000 sq. ft.	2
10,000 – 50,000 sq. ft.	3
Greater than 50,000 sq. ft.	4

2. Acceptable community amenities include:
 - a. A public outdoor seating plaza adjacent to, or visible and accessible from, the street, with a minimum usable area of 300 square feet.
 - b. Sidewalk planters between sidewalk and building.
 - c. Public art, including, but not limited to, sculptures, fountains, clocks, or murals with a value equal to or greater than one percent of construction value of the structure.
 - d. Other (to be added by local government as appropriate).

Scale-Up Option—Open Space

Some communities elect to provide more detailed standards to guide the provision of open space in infill areas. The standards in this section are intended to ensure that all developments in designated infill areas provide for on-site open space, and that the shape, size, and design of that open space provides spaces usable by the occupants, residents, or visitors to the property.

A. Usable Open Space Required

Usable open space required for infill varies based on gross site acreage and

⁴ The state’s zoning enabling legislation does not prohibit open space dedication or in-lieu fees. However, to comply with federal and state court decisions, zoning-based fees would be limited by the demonstrable open space demands or impacts of the proposed development. The Connecticut subdivision enabling legislation (which likely would not apply to infill development in most cases) provides that an in-lieu fee cannot exceed 10 percent of the value of the total land subdivided. Thus if the subdivision rules applied, as this model ordinance section is written, the in-lieu fee would not exceed five percent of the total value of the land (50% of 10%).

development type as specified in Table 1 below.

1. Developments with a gross site acreage of more than four acres may aggregate usable open space requirements into one or more designated usable open space sites, common areas, or pocket parks.
2. A minimum of 50 percent of required usable open space in the following locations shall have public access: (Add appropriate locations such as commercial areas)
3. In infill areas, where outdoor seating for eating and drinking establishments is a permitted or conditional use, up to 65 percent of the area designated for seating may be credited towards the usable open space requirements.
4. Usable open space areas may be either publicly or privately owned, as determined during the review and approval process.

TABLE 2: MINIMUM USABLE OPEN SPACE REQUIREMENTS		
Gross Project Acreage	Type of Development	
	Minimum Open Space Residential or Mixed Use with Residential Component	Minimum Open Space Nonresidential
<.25	100 sq. ft./du	None
.25 to 1.0	100 sq. ft./du	5% of gross lot area
1.01 to 99	100 sq. ft./du or 5% of gross lot area, whichever is greater	5% of gross lot area
100 –149		
150 or more		
Required usable open space may be either common/shared or private		

B. Usable Open Space in Phased Developments

1. At the developer’s discretion, developments constructed in multiple phases may aggregate the usable open space requirements into one or more usable open space areas, provided the following criteria are met:
 - a. The location and required acreage of usable open space for the entire development is shown in the preliminary development application; and
 - b. The percentage of total usable open space developed prior to, or concurrent with, occupancy in the first phase is at least proportional to the percentage of total acreage in the first phase.
2. If an approved phasing plan allocates the majority of usable open space to a particular lot, a prorated share of the usable open space may be used to calculate FAR and/or residential density on other lots in the development.

This provision shall apply whether the usable open space is retained in private ownership or dedicated to the (Insert jurisdiction name) for park or open space purposes.

C. Types of Spaces

The following types of public and private outdoor spaces may be counted towards minimum open space requirements:

1. Plazas, patios, pocket parks, and other community gathering spaces that provide opportunities for outdoor seating, dining, and social interaction;
2. Courtyards, balconies, and yards intended for individual units;
3. Community gardens or similar spaces designated for urban agricultural uses;
4. Playgrounds;
5. Indoor or outdoor exercise or recreational facilities;
6. Habitable, landscaped roofs (may include “green roof” treatments);
7. Extra sidewalk width (beyond the through pedestrian passage widths required by (Add appropriate code section)) created between the building façade and the required through pedestrian passage area and furnished for outdoor dining or seating; or
8. Interior, multi-purpose community space provided for private or public use.

D. Exclusions and Exceptions

To qualify as usable open space, an area must be planned for that purpose and of a sufficient size to provide a legitimate active or passive recreational opportunity. The following features shall not be counted towards minimum usable open space requirements:

1. Parking strips;
2. Foundation landscaping around buildings;
3. Required sidewalk and streetscape elements;
4. Parking areas;
5. Small, oddly-shaped, and/or otherwise unusable remnant parcels;
6. Areas along the property boundaries with a minimum width of less than six feet; and
7. Land area without structures, site improvements, or landscaping, unless it is located within a publicly accessible natural or wildlife viewing area.

E. Pedestrian-Oriented Features

In order to create places attractive to and usable by the public, usable open space areas shall incorporate a minimum of three pedestrian-oriented features, such as, but not limited to:

1. Benches or low walls with seating areas;
2. Trees identified in the street tree list maintained by (Add appropriate agency);
3. Free standing planters and/or raised planting beds designed to treat stormwater and allow infiltration into the underlying soil;
4. Public art or sculpture;
5. Water features and/or drinking fountains;
6. Outdoor dining areas;
7. Play structures;
8. Weather canopies or sunshades; or
9. Other pedestrian-oriented features as approved by the Review Authority.

F. Dimensions

Where provided, usable open space shall meet the following standards:

TABLE 2: MINIMUM USABLE OPEN SPACE DIMENSIONS	
Type of Usable Open Space	Minimum Size
Balconies or porches	Minimum average depth and width of 6 feet
At grade patios	Minimum depth of 6 feet and width of 10 feet
Private Yards	Minimum depth and width of 10 feet
Courtyards/plazas or other spaces that provide opportunities for outdoor seating, dining, and social interaction	Minimum depth of 10 feet and width of 20 feet and a minimum total area of 1,000 square feet

G. Location

1. Usable open space shall be sited and improved to provide opportunities for physical activity and social interaction. The entirety of the required usable open space shall be improved for such purposes except where significant natural resources such as wetlands are present.
2. Preference in the placement of usable open space shall be given to sites that:
 - a. Enhance opportunities for recreation (active or passive) and access to nature;
 - b. Enhance opportunities for interaction between residents, tenants, and/or the public;
 - c. Enhance park sites adjacent to converging pedestrian routes;
 - d. Preserve otherwise unprotected natural resources and wildlife

- habitat on the site;
- e. Can be combined with adjacent sites to create opportunities for larger contiguous tracts of usable open space; or
- f. Protect lands where more intense development than open space may otherwise have an adverse impact on significant natural resources, wetlands, or floodplains on adjacent properties.

1.3.3. PARKING

The minimum parking requirements of the zoning code shall be adjusted as follows for infill development. The aggregate parking reduction for any project shall not exceed 30 percent.

- A. All projects shall be eligible for a ten percent reduction in off-street parking spaces to reflect the reduced use of the automobile associated with infill development.
- B. All infill projects that incorporate two or more primary use classifications (e.g., residential, commercial, office, institutional) shall be eligible for a 15 percent reduction in off-street parking spaces to reflect the reduced use of the automobile associated with mixed-use infill development.
- C. All infill projects located within ¼ mile of an established bus rapid transit or mass transit line or center shall be eligible for a 30 percent reduction in off-street parking spaces. If they are located with ½ mile, a 20 percent reduction shall be granted. If an existing transit route or center is eliminated or moved, any development approved in conformance with this section shall not be deemed nonconforming in terms of required parking
- D. The total number of required off-street parking spaces may be further reduced by the (Insert name of appropriate agency) if the applicant submits a parking evaluation by a qualified traffic engineer or planner or other qualified professional that demonstrates a reduction is appropriate based on the expected parking needs of the development and existence of other factors.

Scale-Up Option—Off-Street Parking Location and Structured Parking Design

In addition to parking space quantity requirements, local governments may want to consider the location of parking in infill areas as well as the design of structured parking.

A. Off-Street Parking Location

- 1. No off-street surface parking shall be located between a building wall and the primary street the building fronts; however, parking may be permitted between a street and a secondary entrance.
- 2. Off-street surface parking lots shall not abut street intersections.
- 3. Parking structures shall not abut street intersections unless the facades are designed to resemble building walls and include nonresidential uses on the

first floor.

4. In no instance shall off-street parking areas occupy more than 30 percent of the lot frontage adjacent to the primary street serving the lot.

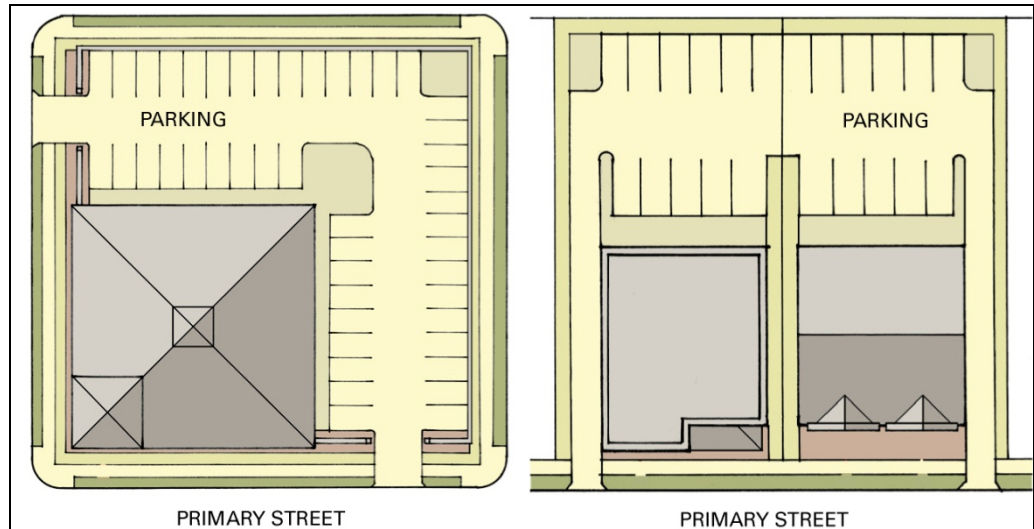


Figure 1: Buildings in infill areas should not have frontages that are dominated by off-street parking areas. These images demonstrate two acceptable options.

B. Parking Structures

1. Parking structures shall be wrapped with retail, commercial, institutional, or residential uses along a minimum of 50 percent of their street frontage to provide visual interest and to promote pedestrian activity at the street level.
2. Facades of parking decks not occupied by retail, commercial, institutional, or residential uses shall use three or more of the following architectural features:
 - a. Windows or window-shaped openings.
 - b. Decorative wall insets or projections;
 - c. Awnings;
 - d. Changes in color or texture of materials;
 - e. Approved public art;
 - f. Integrated landscape planters; or
 - g. Other similar features approved by (insert appropriate decision-making agency).