BLUE HILL DISTRICT DESIGN GUIDELINES

TOWN OF CHAPEL HILL, NORTH CAROLINA

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Blue Hill District Map

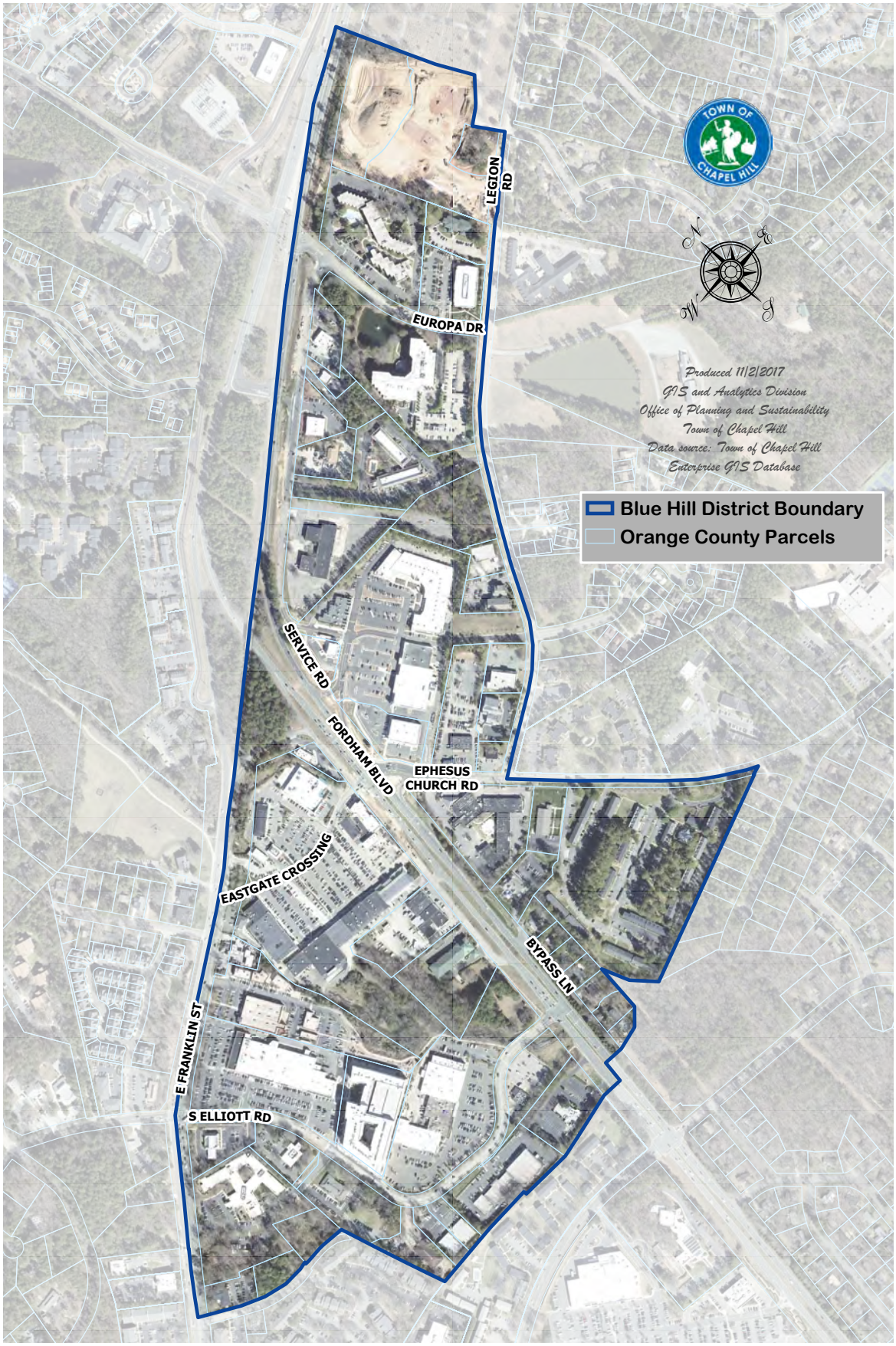


Figure 0-1 *Blue Hill District Map.*

INTRODUCTION

The Blue Hill District (formerly Ephesus/Fordham), is emerging as a vibrant part of Chapel Hill based on a vision for redevelopment that is established in the area's Form-based Code. The code establishes basic requirements for development as a series of prescriptive standards to be administered by Town staff. It also provides for a design review process, using design guidelines, for a specific set of topics, in which the Town's Community Design Commission (CDC) participates. These design guidelines are published, therefore, as provided in the code. The intent is to facilitate interpretation of the code by staff and the review of the specified topics by the CDC.

This draft is published for public review and comment. An overview of the guidelines will be presented in an open house, scheduled for November 13, 2017. Comments will be taken at that time, and they also can be transmitted to Town planning staff during a two-week period after that. Staff then will collect comments and consolidate them for consideration in revising the draft.

IN THE INTRODUCTION

Establishment of the Blue Hill District

The Chapel Hill Town Council established the Blue Hill District in 2014, under its original name, the Ephesus-Fordham District. This District grew out of a small area planning and economic development exercise, with the goal of encouraging reinvestment in a collection of aging commercial properties.

A form-based zoning code was adopted for the District to facilitate redevelopment with a mixture of uses that would support a high-quality public realm in a pedestrian-friendly area. The form-based zoning regulations (found in Section 3.11 of the Land Use Management Ordinance or LUMO) prescribe the physical form of buildings and their relationship to the street. Blue Hill also functions as a Special Appearance District, for which design guidelines may be used to maintain a consistent and cohesive design aesthetic.

UNIQUENESS OF THE AREA

The Booker Creek natural area serves as a central feature of the Blue Hill District running roughly north to south. With the adoption of the Chapel Hill Mobility Plan in 2017, the District also acts as the confluence of many existing and planned multi-use corridors.

This network of trails and enhanced natural areas suggests a re-orientation of buildings and sites within the Blue Hill District, away from the arterial roads that previously characterized the area. This can become a unique aspect of the District as more development is completed. While the construction of new local Complete Streets and the retrofitting of major roads is still an important opportunity, the high-quality public realm envisioned for the District becomes more achievable when considering the potential for interconnected open spaces and non-vehicular thoroughfares.

RECENT AREA HISTORY

As redevelopment of the Blue Hill District began, Chapel Hill residents identified traffic congestion as an issue that needed to be addressed. In 2016, the Town funded $2 million of infrastructure projects in the District to improve access, traffic flow, and bicycle and pedestrian safety.

The zoning regulations have been refined since their initial adoption, including a series of code improvements enacted by Town Council in March 2017 with a focus on achieving greater walkability and public open space through redevelopment within the District. New requirements include design elements like building pass-throughs, block length and block perimeter maximums, as well as greater amounts of publicly accessible outdoor amenity space.

In October of 2017, the Town Council adopted a Mobility Plan that outlines a network of bicycle, pedestrian, and greenway corridors throughout the town. A Sub-Area Plan dedicated to the Blue Hill District identifies a series of current and future connections and also provides a palette of street types that support varying levels of vehicular and non-vehicular connectivity. These street types have been incorporated into the street standards of the Town's Engineering Design Manual.

The rebranding of the Ephesus-Fordham District as the Blue Hill District was announced in August 2017, following the decision of a majority of the property owners and investors. The new brand was seen as a tool to help frame the market and drive the evolution of the District. The name change did not affect the boundaries or regulatory framework of the District.

Vision for the Blue Hill District

The Blue Hill District builds on the active, green and creative traditions found throughout Chapel Hill. The District's design guidelines contribute by promoting the development of a walkable community with opportunities for all to live, shop, work and share community experiences in one place. In the future, there are a variety of characteristics that will define the Blue Hill District, which are described below.

A pedestrian-friendly environment exists throughout the District, with attractive, inviting streetscapes and interconnected multi-use paths. Street edges are defined with buildings that themselves are pedestrian-friendly. A dense canopy of trees and interwoven landscaped areas soften the urban fabric while offering places to rest or play. Natural resources are valued and actively used, and new developments are designed to be compatible with the natural resources. It includes residences, vibrant daytime businesses and enjoyable night-time uses.

The District is a harmonious blend of local tradition, cutting-edge design and sustainability. With a range of living options, shopping, offices spaces, restaurants and outdoor spaces, the Blue Hill District thrives on its mix of uses and a walkable, well-connected urban environment. The District is distinct in the sense that people can walk from place to place, dine at an outdoor café, run or bike along Booker Creek, shop at a local boutique or relax in inviting outdoor spaces.

To maintain its urban vibrancy, the Blue Hill District focuses on people – not cars. Buildings contribute to the urban fabric by stepping down as they meet the sidewalk's edge. Architecture invites the attention of passersby through innovative design, details and variations in massing and materials. Storefronts, architectural screens and landscaping minimize the visual presence of garages and parking lots. Public spaces, streets, greenways and parks, plazas and the creek's edge, all cater to the pedestrian's enjoyment with safe sidewalks, ample landscaping, artwork, resting spots and places for gathering.

Visually, the Blue Hill District conveys a distinct identity that builds on the character of Downtown Chapel Hill while simultaneously offering a local alternative for residents, students and visitors to enjoy. A diverse series of mixed-use developments weave together to create the urban fabric. Its streets and pathways are busy, during the day and into the evening.

About this Document

PURPOSE OF THE DESIGN GUIDELINES

Design Guidelines help establish a common understanding of design principles and standards and provide a basis for making decisions about the appropriateness of new development. They also serve as an educational and planning tool for property owners and design professionals. While the guidelines are written such that they can be used by the layman to plan improvements, property owners are strongly encouraged to enlist the assistance of qualified design and planning professionals, including architects and landscape architects.

PROCESS OF DEVELOPING DESIGN GUIDELINES

The Town of Chapel Hill Planning Department created this document with assistance from the Community Design Commission (CDC), the Planning Commission (PC), town residents, business and property owners.

Outreach and public engagement included a series of on-site meetings and an online survey. Initial meetings with Town staff, the CDC, the PC and local business and property owners provided a preliminary direction for the design guidelines. Two subsequent public workshops and the results from the online survey were then used to steer and refine the overall document.

DO THE DESIGN GUIDELINES DICTATE TASTE?

The guidelines reflect basic approaches to design that will help espouse best practices in urban design. They do not dictate style, but they do require compatibility with the neighborhood context and the surrounding natural environment.

Administering the Design Guidelines

The Design Guidelines are a tool for preparing and evaluating development applications in the Blue Hill District. Applicants should consult the Design Guidelines to understand how a project can best meet the intent of LUMO 3.11, and to understand the opportunity for flexibility with the review of design alternatives. For Town staff and the Community Design Commission, the Design Guidelines inform the following three aspects of design review:

DESIGN ELEMENTS

The Community Design Commission (CDC) will refer to the Design Guidelines to determine whether the following elements of an application meet the intent of the Form District as a base requirement:

- Architectural style
- Building elements listed in LUMO 3.11.2.6
- General design and arrangement of the building exterior
- Type and texture of building materials
- Type and style of windows and doors
- Type and style of light fixtures
- Aesthetic quality of masonry walls, fences, steps and pavement
- Aesthetic quality of above-ground, accessory utility features, including the screening of transformers and cabinet structures
- Appearance of structured parking visible from the public realm, architectural compatibility with the principle building
- Perimeter screening for Type C Frontage along Fordham Boulevard
- Appearance of above-ground stormwater control measures
- Quality of streetscape environment

DESIGN ALTERNATIVES

When an applicant is seeking an alternative to a Form District standard, the Community Design Commission will refer to the Design Guidelines to determine whether the intent of the Form District is still being met and the alternative is warranted. In the case of multiple Design Alternatives, the Commission will look at the interaction of the Alternatives to ensure the proposed design meets the intent of the Form District. The following are considered Design Alternatives:

- Deviation from a standard due to site constraint as indicated in 3.11.1.2.H
- Reduction of the build-to zone requirement for secondary lot frontages as indicated in LUMO 3.11.2.1.D.5.c
- Deviating from the use of streetscape canopy trees and/or exceeding the required average tree spacing as indicated in LUMO 3.11.2.5, based on utility location, fire access, or other conflicts
- The use of other Building Elements at the ground level, as indicated in LUMO 3.11.2.6.H
- Exceeding the maximum block length as indicated in LUMO 3.11.2.7.C.b and/or block perimeter as indicated in LUMO 3.11.2.7.D.b
- Meeting the outdoor amenity space requirement off-site is indicated in LUMO 3.11.2.7.F.4.i
- The use of alternate building materials as indicated in LUMO 3.11.2.7.R.4
- Exceeding the maximum building pass-through spacing as indicated in LUMO 3.11.2.7.S.c
- Exceeding the maximum number of vehicular access points as indicated in LUMO 3.11.4.1.G.1

COMPLIANCE INTERPRETATION

Other guidelines may assist staff in their interpretation of compliance with the Form District standards as base requirements. The images and language of the Design Guidelines aid in interpretation of design standards found in LUMO 3.11.

Application of the Design Guidelines

WHO USES THE DESIGN GUIDELINES?

The guidelines are primarily for use by property owners and applicants considering development projects and by the Town's review authority. Property owners and applicants should review the guidelines to ensure that proposed development projects will contribute positively to the character of the Blue Hill District and to Chapel Hill as a whole.

HOW THE DESIGN GUIDELINES ARE APPLIED

The design guidelines provide the foundation for a design review process that ensures that new construction and redevelopment projects include high-quality design and promote Blue Hill's community objectives.

Projects subject to review using the design guidelines include:

- New commercial, office or public construction, additions and other exterior improvements
- New multi-family residential construction, additions and other exterior improvements
- Phased or incremental projects as defined within these guidelines
- Outdoor amenity spaces, recreation spaces or landscaping projects on commercial, office, multi-family or public properties

All projects subject to review are required to meet the intent of the guidelines. See "Interpreting the Design Guidelines" on page 12 for more information.

Types of projects for which the guidelines do not apply, include:

- Interior improvements and remodeling
- Projects that include only single-family or two-family residential uses
- Signage
- Accessory structures
- Minor modifications to floor area (as defined in the LUMO)
- Demolition

The design review process using these guidelines will be conducted by Chapel Hill Town staff and the Community Design Commission (CDC) as summarized in "Administering the Design Guidelines" on page 6.

INTERACTION WITH OTHER DOCUMENTS

The following resources should be consulted during the design process, to ensure compliance with all applicable rules and regulations. Where conflicts occur with the Design Guidelines, it is typical that other rules and regulations will govern.

- Chapel Hill LUMO Section 3.11
- Chapel Hill Public Works Engineering Design Manual
- Chapel Hill Mobility and Connectivity Plan
- Chapel Hill Town Code of Ordinances
- North Carolina Fire Code
- North Carolina BMP Manual

DESIGN REVIEW PROCESS

1. The review process for applications in the Form District is established in LUMO 3.11.4.6.

2. The pre-application meeting between the applicant and the Town (LUMO 3.11.4.6.C.4.a) should include a discussion of the Design Guidelines and topics herein that are relevant to design of the particular site.

3. Staff will consult the Design Guidelines as necessary to assist in determining whether an application is in compliance with all applicable provisions of LUMO 3.11 (see LUMO 3.11.4.6.C.4.b).

4. The Community Design Commission will consult the Design Guidelines to inform their decision on whether to issue or deny a Certificate of Appropriateness (see LUMO 3.11.4.6t.D.4).

Chapter Overview, Format & Interpretation

The design guidelines are organized and formatted to support consistent design review. See "Chapter Overview" below for more information about the organizational structure of the document and "Standard Design Guidelines Format" on page 11 for more information about the format of the design guidelines within this document. "Interpreting the Design Guidelines" on page 12 provides additional information on using the guidelines.

CHAPTER OVERVIEW

Following the introduction, the design guidelines are organized by design topic into five separate chapters, as summarized below. For some smaller projects, all relevant design guidelines may be in one chapter (i.e., a project to expand and re-landscape a parking area would be subject only to the guidelines in Chapter 3). For larger projects, several chapters may apply (i.e., a new commercial or mixed-use project in the center of the District may be subject to design guidelines in Chapters 1-4).

CHAPTER 1: Guiding Principles

This chapter sets forth "high level" aspirations that inform the guidelines. They are based on intent statements that appear in the Form Based Code and the Comprehensive Plan.

CHAPTER 2: Public Realm

This chapter presents a brief set of "high level" guidelines for the public realm. They describe the general qualities and consistency in design that is expected throughout the public realm of the Blue Hill District.

CHAPTER 3: Site Design Guidelines

This chapter establishes guidelines for streetscape, outdoor amenity spaces and landscape design within a property, as well as for the arrangement of buildings and other features on a site. These include guidelines for parking and the way in which a development should establish a positive relationship to adjacent properties and abutting neighborhoods.

CHAPTER 4: Building Design Guidelines

This chapter provides guidelines for buildings. They address the visual and functional character of new buildings as well as alterations and additions to existing buildings.

Appendix

The appendix includes a glossary that defines any terms not explained in the body of the design guidelines document.

Diagram 0-1 *Chapter Overview*

STANDARD DESIGN GUIDELINES FORMAT

The individual design guidelines in this document use a standard format. The format includes topic headings, intent statements related to the topic, numbered design guidelines, additional information about appropriate strategies and illustrations or diagrams. The diagram below uses a sample design guideline to illustrate each key element.

A→

Building Mass & Scale

The overall size, height and form of a building help determine how large it appears, and whether it is compatible with the surrounding context. Although a new building may be larger than adjacent buildings, it should not be monolithic in scale or jarringly contrast with neighboring development. A new building should use building articulation techniques to provide a sense of scale. These include varied heights, smaller building masses and articulated façades.

D→

Figure 4-3 *Provide variation in building heights.*

B→

BUILDING HEIGHT

New development must meet zoning requirements in Blue Hill while stepping down to create smooth transitions with adjacent lower-scale residential buildings.

C→

4.3 Provide variation in building heights.

a. Incorporate height variations to reduce the scale of a building.
b. Use variation in building and parapet heights to add visual interest and reduce boxy or monolithic building masses.

4.4 Locate the taller portion of a structure away from neighboring residential buildings of lower scale or other sensitive edges.

a. Step down a taller, new building toward existing, lower-scaled neighbors.
b. Where permitted by the base zoning, locate towers and other taller structures to minimize looming effects and shading of lower-scaled neighbors.

E→

ZONING ORDINANCE HEIGHT STANDARDS

Chapel Hill's Land Use Management Ordinance (LUMO) provides height standards that apply to all properties. Maximum permitted height varies by zone subdistrict .

KEY TO SAMPLE DESIGN GUIDELINES FORMAT ABOVE

A **The design topic** is indicated with a heading followed by an intent statement.

B **A subtopic and intent statement** are also provided.

C **The design guidelines** describe an intent or desired outcome. They are numbered by chapter for easy reference.

D **Photographs** are numbered to reference individual guidelines and **Diagrams** are numbered sequentially to illustrate design guidelines principles.

E **Sidebars** are sometimes included to reference external documents (green sidebars) or for internal cross-references (blue sidebars).

Checkmarks and X marks indicate photographs/diagrams that generally illustrate an appropriate or inappropriate approach.

Diagram 0-2 *Standard Design Guidelines Format*

INTERPRETING THE DESIGN GUIDELINES

The design guidelines are intended to shape development that is consistent with community objectives. Although they offer some flexibility in interpretation, compliance with the intent of applicable guidelines is expected, to the greatest extent feasible. However, not all guidelines will apply to every project. Guidelines that refer to features that are not part of a development or redevelopment project are not applicable. Flexibility in the application of some design guidelines may also be available for redevelopment, minor projects or other projects as noted throughout the document. Where a project includes a new or innovative approach that is not addressed by the guidelines, it may be necessary to use the intent statement for the topic/subtopic (see page 11), or the Guiding Principles for the design guidelines (see page 13), to determine whether the approach is appropriate.

In some cases, the design guidelines may also be used to help interpret and illustrate design standards within the Chapel Hill Land Use Management Ordinance (LUMO). As illustrated below, the LUMO and design guidelines work together to ensure that development promotes community objectives.

Topics Addressed by the Zoning Ordinance

The Chapel Hill LUMO provides quantitative standards, such as maximum height and minimum setbacks, that outline the basic shape of development. Zoning standards are generally numerical (such as a specific height limit), making them easy to interpret and providing a high level of predictability.

Topics Addressed by the Design Guidelines

The design guidelines in this document build on the LUMO to address more detailed design considerations such as architectural character and compatibility with a specific context. In some cases, the guidelines require interpretation. Therefore, they do not provide the same predictability as zoning standards, but offer greater flexibility.

A Note About illustrations in the Design Guidelines:

Many photographs, computer models and diagrams appear in the document, to illustrate individual design topics. Many of these show solutions that would be considered appropriate for the specific topic at hand; others show inappropriate designs. These images illustrate the intent of the guideline text. In some cases, while an image shows a specific item that is appropriate, it may also include other features that are not. Captions help clarify those aspects that would be appropriate. The illustrations include a wide range of design styles. The intent is not to demonstrate that specific styles are required, rather that basic principles of best practices in urban design can be achieved through a variety of styles.

Diagram 0-3 *Design Guidelines Interpretation*

GUIDING PRINCIPLES 1

The guidelines and the review process through which they are administered seek to maintain Blue Hill as a cohesive and active place with an attractive and pedestrian-oriented environment. They promote the thoughtful design of new development while respecting the Town's traditional character. The guidelines encourage a contemporary approach to architectural creativity, a pedestrian-friendly experience and designing for Chapel Hill's climate and environment. The following guiding principles provide a foundation for the design guidelines. Each project should be consistent with the Guiding Principles.

IN THIS CHAPTER

GP1: Achieve Excellence in Design

GP2: Promote Creativity

GP3: Design with Authenticity

Guiding Principles

GP1: ACHIEVE EXCELLENCE IN DESIGN

Each improvement in the Blue Hill District should express excellence in design and it should raise the bar for others to follow. This includes using high quality materials and construction methods and paying attention to detail.

GP2: PROMOTE CREATIVITY

Innovation in design is welcomed throughout Chapel Hill, including the Blue Hill District. Exploring new ways of designing buildings and outdoor amenity spaces is appropriate when they contribute to a cohesive urban fabric. This type of creativity should be distinguished from simply being "different."

GP3: DESIGN WITH AUTHENTICITY

The Blue Hill District should be defined by buildings and outdoor places that reflect their own time and materials, including distinct construction techniques as well. Buildings and places should also respond to local climate conditions and the richly vegetated character of Chapel Hill. The result is a sense of authenticity and "timelessness" in buildings, outdoor amenity spaces and materials. All new improvements should convey this sense of authenticity.

GP4: Design with Consistency

GP4: DESIGN WITH CONSISTENCY

Buildings and places in Chapel Hill that are highly valued are those which have a cohesive quality in their use of materials, organization of functions and overall design concept. Each new project in the Blue Hill District should also embody a single, cohesive design concept in terms of its material palette and organization of design elements, while connecting thoughtfully to the larger Town network.

GP5: Design for Durability

GP5: DESIGN FOR DURABILITY

New buildings and public spaces throughout the Blue Hill District should be designed for the long term with high-quality, durable materials.

GP6: Design for Sustainability

GP6: DESIGN FOR SUSTAINABILITY

Aspects of cultural, economic and environmental sustainability that relate to urban design and compatibility should be woven into all new improvements in the Blue Hill District.

GP7: Draw Upon Local Design Traditions

GP7: DRAW UPON LOCAL DESIGN TRADITIONS

The Town of Chapel Hill exemplifies a unique character and authenticity, with lessons for new designs. Many buildings may share similar features, materials and forms that reflect the Town's design traditions and should inspire new work. In Blue Hill this does not mean copying earlier styles, but rather learning from them.

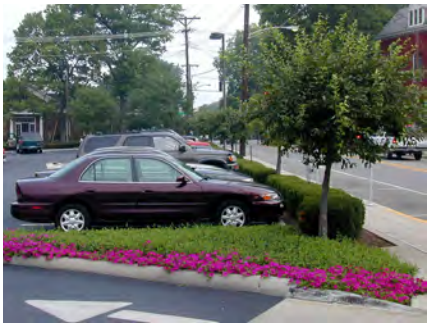
GP8: Enhance the Pedestrian Experience (Walkability)

GP8: ENHANCE THE PEDESTRIAN EXPERIENCE (WALKABILITY)

Each improvement project should contribute to a pedestrian-friendly environment. This includes defining street edges with buildings and spaces that are visually interesting and attract pedestrian activity. Buildings that convey a sense of human scale and landscapes that invite walking are keys to successful design in the Blue Hill District. Designing sidewalks and other walkways to accommodate pedestrian traffic is also important. This includes providing sidewalks of sufficient width for circulation and outdoor activities, and installing appropriate landscape treatments for shade, beautification and a buffered pedestrian experience.

GP9: KEEP THE AUTOMOBILE SUBORDINATE

Parking structures and surface parking lots should support other functions and should be attractive, and visually subordinate in the urban setting. Parking facilities should be well-integrated and visually buffered.



GP9: Keep the Automobile Subordinate

GP10: PROVIDE SIGNATURE OPEN SPACES

Each project should incorporate signature open space elements, or open space amenities, for pedestrians to move through and enjoy. These include public and private yards, promenades, plazas, and courtyards. Linking these elements and spaces while enhancing existing natural resources will provide a valuable green network as an amenity for the public to experience.

GP10: Provide Signature Open Spaces

Design Concepts

The Blue Hill District draws upon basic design concepts that promote urbanism, a sense of scale and placemaking. These are some key terms that appear in the body of the guidelines:

Sense of Place

Sense of place describes our relationship with a site, district or neighborhood. In urban design, distinctive characteristics of the built environment contribute to a sense of place. It results from a unique collection of qualities and characteristics – visual, cultural, social and environmental – that provide meaning to a location. Outdoor spaces that invite human activity, signature design features such as public art and iconic architectural features, as well as an overall sense of visual continuity contribute to a sense of place. This is a fundamental concept that underlies many of the design guidelines in this document.

Sense of Place

Local Context

Local context refers to the combination of buildings, places, social traditions and environmental conditions that compose the Town of Chapel Hill and the Blue Hill District. Together these elements help to define principles for new designs and improvements. Context sensitive design provides a roadmap where new development projects relate to the character of the existing area.

Local Context

Sustainable Development

Sustainable development meets the needs of current generations without compromising the ability to future generations to meet their own needs. Development in the Blue Hill District should incorporate sustainable design features whenever possible to reduce environmental impacts and conserve energy. This will also help the Town's overall sustainability objectives as outlined in its 2020 Comprehensive Plan, which promotes compact, mixed-use development, alternative transportation, greenway development, and environmental protection.

Sustainable Development

Public Realm

Public Realm

The public realm primarily consists of the roadways, sidewalks, parks, plazas, and other open spaces that comprise the arteries and focal points of the urban framework. It is the main space where civic interaction occurs and is often defined in contrast to private property. A well designed public realm balances the mobility and access needs for all users and contributes to the efficient functioning of a town and its sense of place. The quality of the public realm determines how people experience and relate to the surrounding environment. Therefore, it is important to encourage a public realm that is safe, sustainable and enriching.

Visual Continuity

Visual Continuity

The design guidelines promote a sense of visual continuity among properties, especially along their frontages. Visual continuity results when similar features align, such as awnings, canopies and sets of windows, and when similar materials are used. Buildings of similar scale and those that align at the sidewalk edge also can contribute to visual continuity. In landscape design, the repetition of similar elements, including plants and site furnishings, can also contribute to visual continuity. This does not mean, however, that designs should be copied along a street. Diversity and creativity can occur while also achieving visual continuity. Establishing a balance is a key objective in the Blue Hill District.

Streetscape

Streetscape

The streetscape is the public area between the edge of the street and parking areas or building fronts. Elements include sidewalks, walking trails, bump outs, street trees and lawns, street furniture and lighting.

Pedestrian Orientation

Pedestrian Orientation

Buildings and places that are visually interesting and invite exploration by pedestrians are considered to have a pedestrian orientation. At the street level, this includes building fronts that are visually interesting, inviting and have a sense of scale. Walkways and outdoor spaces that are comfortable, active and safe also contribute to a pedestrian orientation. This concept appears in many of the design guidelines in this document.

Scale

Scale refers to the overall size of building elements and details, including floors, windows, doors and materials as they proportionally relate to each other and to people. When these elements appear similar in size to those with which we are familiar, we can understand the size of a building in the context of our previous experience. Thus, the way in which individual parts of a project relate to each other, how the project relates to the size of the human body and how the project relates to its contextual scale are part of this concept. Conveying a sense of human scale is a key consideration in many of the design guidelines that follow.

Scale

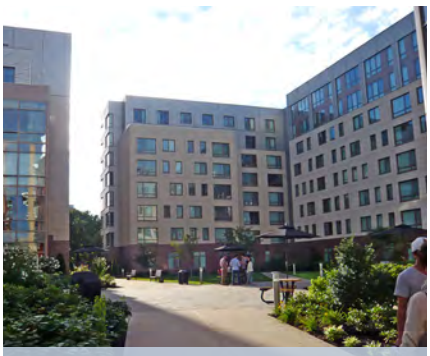
Walkability

Walkability is the extent to which the built environment is friendly to the presence of people living, shopping, visiting and spending time in an area. It is a product of connected streets, sidewalks and paths, which are enhanced with attractive landscape features and outdoor spaces. These are framed with buildings that provide visual interest and access to activities than enliven the public realm. These are important considerations for design in the District, and especially when alternatives for extending block length are discussed.

Walkability

View from the Public Way

The Chapel Hill Land Use Management Ordinance establishes standards for design of buildings and site features that are visible from the public way. In many cases, this focuses on the fronts of buildings and other elements within the Street Frontages as defined in the code, but in some conditions, also relates to some features that are visible from other viewpoints along the public way. The visibility of all sides of a parking structure is an example.



View from the Public Way

Active Use/Frontage

Where buildings line the street, visual connections should be established between the interior spaces on the ground floor of the building and the people on the street and sidewalks outside the building. Orienting storefronts to face the street, designing main entrances to open onto the street and increasing the amount of windows used along the ground floor are a few of the ways to increase activity around a street frontage.

Active Use/Frontage

Massing/Varied Massing

Massing

Massing is a term which refers to the general shape and form as well as size of a building. Building mass is established by the arrangement and proportion of basic building components, including the main building volume, any wall offsets and projections, such as porches and arcades, as well as the roof and the foundation. Building massing that contributes to walkability is a key concept in the design guidelines.

Varied Massing

The design guidelines emphasize using variations in massing to help reduce the overall mass of a building and to establish a sense of human scale. This may be achieved by changing the heights of different parts of a building and by creating offsets in wall planes to express individual building modules. Varying massing to express different building modules also is a key concept in the design guidelines.

Modularity

Modularity

Varying the mass of a building can be expressed as a set of subordinate volumes, which although combined as a complete building, are distinct enough to read as a set of small forms linked together. These are considered building modules. Modularity also can be expressed by changes in wall planes, building materials and architectural details.

Articulation

Articulation

Articulation is the design of a building wall to provide visual interest, reduce mass and establish a sense of human scale. This may include variations in wall surfaces, changes in materials, and differences in fenestration patterns, as well as other design techniques that are described in the design guidelines.

PUBLIC RIGHT-OF-WAY 2

This section provides design guidelines for improvements in the public right-of-way. The "public right-of-way" refers to streets, sidewalks, parks and greenways that are publicly accessible. All improvements to the public right-of-way in Chapel Hill's Blue Hill District should contribute to walkability and enhance multi-modal connections. They also should make public places attractive and useful.

IN THIS CHAPTER

The Public Realm

The public realm of the Blue Hill District should be dynamic, active, inviting and composed of high-quality materials. As defined in the Chapel Hill LUMO, the public realm includes "the streetscape or any other non-vehicular, publicly accessible area located along a designated frontage." Adequate space should be provided for pedestrian traffic, landscape and streetscape elements. An emphasis on walkability is laid out in the District Summary of the Chapel Hill Land Use Management Ordinance (LUMO) in Section 3.11.2.1.

Figure 2-1 *Enhance walkability in the public realm in each project.*

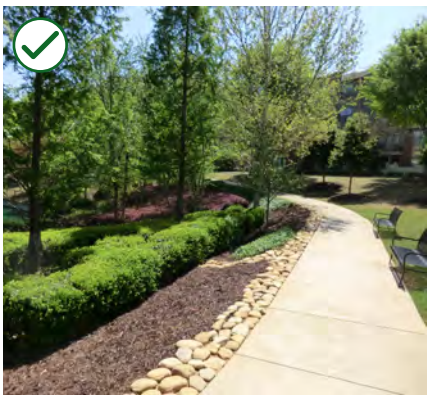


Figure 2-2 *Promote "greenness" throughout the Blue Hill District.*

2.1 Enhance walkability in the public realm in each project.

a. Use these urban design techniques in creating a dynamic public realm:

- Active street frontages
- Pedestrian-oriented entries
- Windows facing the street
- Small public spaces linked to the sidewalk
- Urban streetscape design and landscaping
- Street furniture
- Public art

2.2 Promote "greenness" throughout the Blue Hill District.

a. Include canopy trees, planter beds, green walls and roofs and additional plant materials on public projects whenever possible, to continue the green tradition of Chapel Hill.

b. Seek opportunities to increase the amount of plant material along sidewalks, in pocket parks and other public outdoor amenity spaces.

ADDITIONAL WALKABILITY INFORMATION

More information about walkability can be found in the Design Concepts section of the Chapter 1: Guiding Principles.

THE INTERFACE BETWEEN PUBLIC STREETS & PRIVATE DEVELOPMENT

Although the design guidelines primarily address the character of development on privately-owned property in the Blue Hill District, it is important to understand the typical progression of spaces between buildings and an adjacent public street. In some cases, a new development will not be responsible for improvements within the public area between the property and the street. However, new development should have a strong relationship to public areas, which may include incorporating amenities, paths or other features in a semi-public interface area. New development should also accommodate existing facilities or planned improvements in adjacent public areas.

The diagram below illustrates one type of arrangement of public and private spaces along a street edge.

A. PUBLIC AREA

This area is within the public right-of-way. It most often includes the area between the street edge and the inside edge of the sidewalk.

B. SEMI-PUBLIC AREA

This area includes highly-visible or publicly-accessible outdoor amenity spaces on private property adjacent to the public area. It may include outdoor public space. Compatibility with the public streetscape is preferred, in terms of paving, lighting, furnishings. Guidelines for this area are found in Chapter 3: Site Design Guidelines.

C. PRIVATE OUTDOOR AREA

This area includes private outdoor spaces that are less visible or accessible from the street. More variety in design is appropriate.

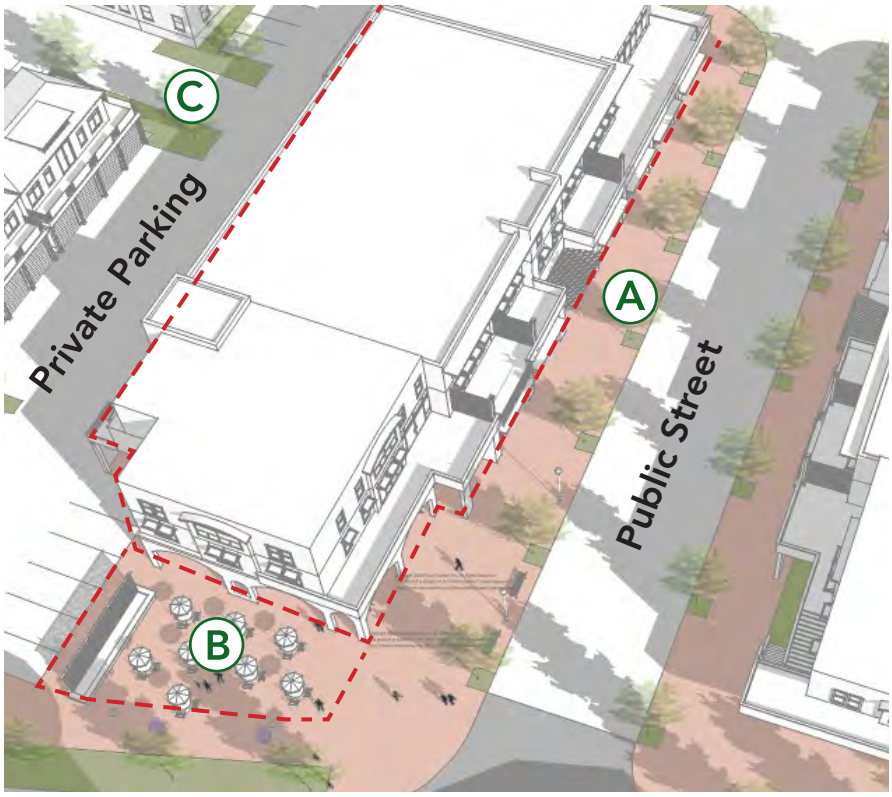


Diagram 2-1 *The Interface Between Public Streets & Private Development*

View from Public Right-of-Way

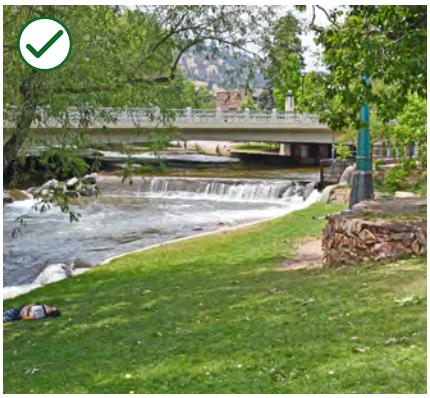


Figure 2-3 *Enhance views from the public way to natural features and landmarks.*

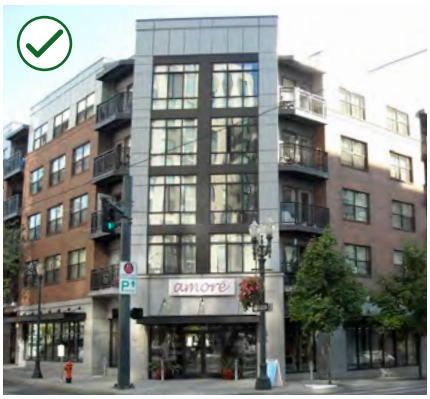


Figure 2-4 *Define the corners of corridor intersections with prominent building and site designs to provide visual interest, an active street edge, and to create gateways throughout the District.*

Views from the public right-of-way should be maintained and taken into account in the design of sites and buildings. The location of a building on a site, in addition to its scale, height and massing, can impact views from the adjacent public right-of-way, including streets, sidewalks, intersections, and public spaces. When designed with views in mind, a project also increases connectivity through a site and to neighboring sites. Each project should preserve noteworthy views, such as those to prominent buildings and to Booker Creek.

2.3 Enhance views from the public right-of-way to natural features and landmarks.

a. Locate a building to maintain or frame a key view, as it is viewed from the public right-of-way.

b. Vary a building's height and massing to provide view access.

2.4 Define the corner of a property at a key intersection with a distinctive design element.

a. Prominent design elements may include (a):

- Iconic design features (Chapter 4, page 94)
- Ground floor design (Chapter 2, page 91)
- Public outdoor amenity space (Chapter 3, page 48)
- Primary building entrance (Chapter 4, page 93)
- Public art feature (Chapter 2, page 31)
- Emphasized signage

Pedestrian and Bicycle Connectivity

Pedestrian and bicycle connections provide access to buildings, courtyards, internal paths and plazas. These systems should interconnect and facilitate pedestrian movement. In most cases, these connections will simply involve extensions to existing sidewalk and greenway networks. However, in some cases they will also include internal circulation within a development. This is especially relevant in large, multifamily residential projects or in clusters of small-scale commercial buildings.

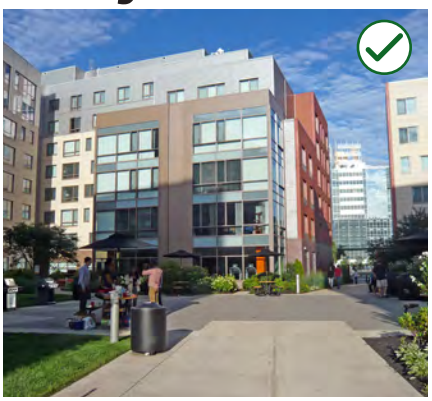


Figure 2-5 *Locate a multi-use path to connect with public outdoor amenity spaces.*

2.5 Locate a multi-use path to connect with public outdoor amenity spaces.

a. Direct a multi-use path through a public plaza, courtyard or other outdoor amenity space to help animate the space.

b. Connect multi-use paths between existing public paths, greenways and outdoor amenity spaces.

Figure 2-5b *Connect multi-use paths between existing public paths, greenways and outdoor amenity spaces.*

STREETSCAPE FRONTAGES

Code requirements for streetscape frontages and the pedestrian way are described in the Chapel Hill LUMO, Section 3.11.2.5.

ADDITIONAL CONNECTIVITY INFORMATION

See "Connectivity" in Chapter 3, page 38, for additional guidelines related to the pedestrian network.

Public Streetscape Character

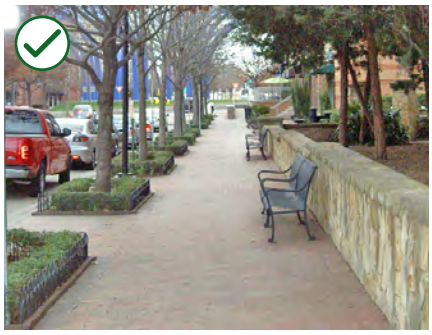


Figure 2-6a *Incorporate plantings that define the edges of sidewalks, pedestrian paths and outdoor amenity spaces.*

This section provides guidelines for site furniture that support a consistent identity, as well as a coordinated landscape along the street edge. Streetscape features should be functional and durable, and should be coordinated with the identity of the Town, neighborhood, or development. The location and design of streetscape features and landscape elements must also accommodate fire access. Many times this can be resolved through the clustering of designs or by modifying plant spacing and alignments.

LANDSCAPING

Landscape design along a streetscape should help to establish a sense of visual continuity. Planting design within the interior of a site should provide a visual focus for pedestrians while accentuating access points, seating areas or interior site pathways. Deciduous plants should be chosen to provide shade during summer months. In general, plant materials that are indigenous or well-acclimated and non-invasive should be used.

2.6 Use landscape materials to enhance the public right-of-way.

a. Incorporate plantings that define the edges of sidewalks, pedestrian paths and public outdoor amenity spaces.

b. Locate landscape materials to highlight building entries.

c. Create a canopy over pedestrian areas, including sidewalks, utilizing canopy trees.

ADDITIONAL STREETSCAPE STANDARDS

- Additional landscape design standards are provided in the Chapel Hill Public Works Engineering Design Manual, page 151-170 and the Chapel Hill LUMO Section 3.11.2.5.
- See the North Carolina Fire Code and Chapter 7 of the Town Code of Ordinances for more information about fire access
- Lighting incorporated in the design of the streetscape should adhere to the lighting standards outlined in the Design Manual
- A, B and C frontages are located, defined and described in more detail in the Chapel Hill LUMO.

2.7 Develop a coordinated "green" experience along all streetscapes to establish a sense of visual continuity.

a. Use a consistent palette of landscape materials including:
   - Plant materials
   - Paving materials
   - Site Furnishings

b. Implement different landscape planting palettes to reinforce streetscape hierarchies.
   - Provide larger scale planting clusters and wider street tree spacing for B frontages to respond to higher vehicular speeds and greater building setbacks.
   - Provide smaller scale planting clusters and narrower street tree spacing with a more diverse palette for A frontages to respond to slower vehicular speeds and increased pedestrian activity.

Figure 2-8 *Integrate an "urban" approach to landscaping.*

2.8 Integrate an "urban" approach to landscaping. Elements include:

- Planters
- Decorative Pavers
- Site & Seat Walls
- A more formal planting style

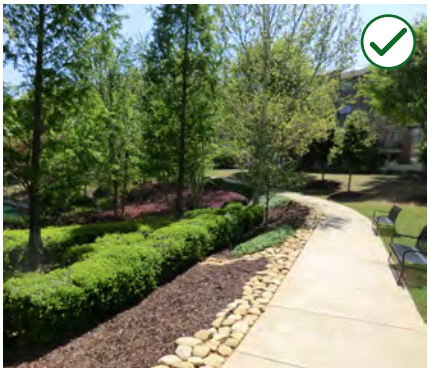


Figure 2-9 *Promote the use of landscape plantings along multi-use pathways, greenways and public connections.*

2.9 Promote the use of landscape plantings along multi-use pathways, greenways and public connections.

a. "Fingers" of green should be developed to connect internal pathways to greenways throughout the Blue Hill District.

b. Use native, low-maintenance plantings, when possible.

DESIGN ALTERNATIVES FOR LANDSCAPE CONFLICTS

The Regulating plan for the Blue Hill district identifies street typologies that have specific landscaping requirements, including street trees. These street sections are to be constructed when properties abutting them are improved. In some cases, however, utility service locations, required sight lines or fire access requirements may conflict with the streetscape standards in the code. When this occurs, these guidelines apply:

2.10 Adjusting the spacing of street trees may be considered.

a. Adjust the spacing of trees or other landscape elements to avoid conflict conflicts with fire access, utility locations or sight lines.

b. However, the net number of trees or amount of planting areas that would have been installed should be maintained. These may be located elsewhere in the street frontage.

2.11 Adjusting the alignment distance of street trees along a curb may be considered

a. Where the code requires a line of street trees that would run parallel to a utility line, the alignment may be adjusted.

b. For example, the line of street trees may be placed farther away from the curb, when sidewalk width is sufficient to do so. Or, they may be located along the inside edge of the sidewalk.

2.12 Adjusting the scale of planting may be considered.

a. When a line of trees would conflict with an overhead utility line, fire access area or sight line, the size of plant material or plant area may be reduced. A lower scale tree species, or shrubbery, may be used.

b. Where a line of trees would conflict with an underground utility line, raised planters that contain trees or shrubs may be used.

SITE FURNISHINGS

Site furnishings may include lighting, benches, chairs, tables, waste receptacles, bike racks, planters and other furnishings designed for outdoor use. Some of these may be located in the public right-of-way, while others will be placed within a property, such as in a plaza or courtyard.

2.13 Incorporate site furnishings into all new streetscape projects.

2.14 Use a coordinated set of site furnishings that accommodates a high level of activity along commercial street frontages.

a. Site furnishings may include:

- lights
- benches
- litter receptacles
- recycling containers
- bike racks
- table sets
- planters
- ash urns
- bollards
- public signage
- pedestrian lighting
- pedestrian signage

2.15 Cluster site furnishings and other streetscape features at mid-block locations to allow for fire access.

SITE FURNISHING SPECIFICATIONS

The Chapel Hill Engineering Design Manual (page 169) provides specifications for many site furnishings when they are to be located in the public right-of-way, and should be used in those cases. A list of approved site furniture is also provided.

Figure 2-12 *Use a coordinated set of site furnishings that accommodates a high level of activity along commercial street frontages.*

STREETSCAPE CLUSTERS

A streetscape "cluster" is an organization of the street furnishings, art and other elements, as listed in 2.14a. Generally, a cluster of benches, bike racks, planters, trash receptacles, etc. should be provided every 100 feet (approx.) in the Blue Hill District. Streetscape clusters should also be provided around each transit stop, or at least two clusters per block face. Mid-block clusters are typically assembled in a linear fashion to maintain a comfortable aisle for pedestrian movement.

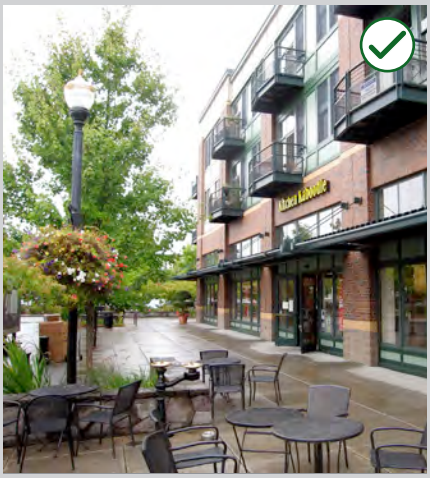


Figure 2-15d *Install decorative streetlights or other coordinated improvements where they are not provided as a public improvement.*

Figure 2-16 *Locate site furnishings to animate the pedestrian network and outdoor amenity spaces.*

Figure 2-17 *Use site furnishings to accommodate passive pedestrian and recreational activity along a residential street frontage.*

2.16 Select furnishing designs that are fitting within the Blue Hill District context.

a. Selected site furnishings may match that identified for the public right-of-way, or they may be distinguishable as separate from that, while remaining compatible in general character, form and materials.

b. Select designs that will be comfortable to use year-round. Selecting a bench design that drains is an example.

c. Consider using custom designs:

- Adaptations of standard furnishings that add a distinctive character to a specific site.
- Well-crafted pieces that reflect skills of local artisans are encouraged.

d. Install decorative streetlights or other coordinated improvements where they are not provided as a public improvement.

- See "Exterior Lighting" in Chapter 4, page 103 for more information.

2.17 Locate site furnishings to animate the pedestrian network and outdoor amenity spaces.

a. Locate furnishings near active pedestrian areas, including major pedestrian routes, building entrances and outdoor gathering places.

b. Locate furnishings so they will not impede a primary pedestrian way.

c. Consider existing site furnishings and the site design when determining locations for new streetscape furnishings.

2.18 Use site furnishings to accommodate both active and passive pedestrian activity along a residential street frontage. These include:

- Landscaped "tree lawn" areas between the sidewalk and the street
- Benches or other furnishings located in landscaped areas

Public Art

Public art is highly encouraged as an amenity in the Blue Hill District as a way of creating visual interest and a special identity to individual development sites. Public art has the potential to enhance the site where it is located and have a positive impact on the broader neighborhood and community.

Public art includes decorative and functional features that are accessible or visible to the public. These may include sculptures, murals, mosaics, street furniture (benches, bike racks or other functional features with an original design), or other features that add interest, communicate a message or generate dialog.

2.19 Incorporating public art in a project is encouraged.

a. Consider public art that:

- Is durable and accessible to the public.
- Provides a focal point in an outdoor amenity space.
- Relates to functional site features such as gates, entries, sitting areas and walkways.
- Reflects the cultural values of the community.

2.20 Locate public art strategically to:

- Frame or enhance a public view or corridor
- Encourage the use of public outdoor amenity space
- Activate recreational space
- Create visual interest on blank walls along a site.

Figure 2-17 *Incorporating public art in a project is encouraged.*

Figure 2-18 *Locate public art to enhance the Blue Hill District.*

SITE DESIGN 3

New construction and redevelopment in the Blue Hill District should incorporate high-quality site design to enhance community image and help create more pedestrian-oriented spaces and connections with a unique sense of place.

Site design refers to the arrangement, placement and orientation of buildings and site features on a parcel. This includes the relationship between components on one site to components of neighboring properties and the public realm. Site design also considers the location and function of vehicular access, lighting, service and utility areas, incorporating storm water management, parking and providing outdoor amenity spaces such as patios and plazas.

FIRE CODE REQUIREMENTS

Refer to the North Carolina Fire Code and Chapter 7 of the Town Code of Ordinances to learn more about the fire code requirements for building stepbacks and setbacks.

FLOOD DAMAGE PREVENTION

Refer to Chapter 5, Article IV of the Town Code - Flood Damage Prevention - to learn more about what is permitted.

IN THIS CHAPTER

Building Placement and Setback Character

BUILDING PLACEMENT REQUIREMENTS

The LUMO uses a Regulating Plan to organize building placement and frontage design. This information can be found in Section 3.11.2.2-3.11.2.5 of the LUMO.

Building placement addresses the distance between a building and the street or the sidewalk edge. Setback character refers to the descriptive quality of the area between a building and the sidewalk edge. Buildings in Blue Hill should be built to the build-to-line to support an active street edge and to create a "street wall," which provides a sense of enclosure and a comfortable scale for pedestrians. While alignment is preferred, the LUMO allows some setback; when this occurs, the setback area should be designed as a public amenity space. Additional context-sensitive guidelines for building frontages are provided in Chapter 4.

3.1 Place a building to promote a safe, interesting and comfortable pedestrian environment along the street.

a. When a building wall is set back from the public streetscape or a natural feature, design the intervening space to be attractive to pedestrians.

Figure 3-1 *Place a building to promote a safe, interesting and comfortable pedestrian environment along the street.*

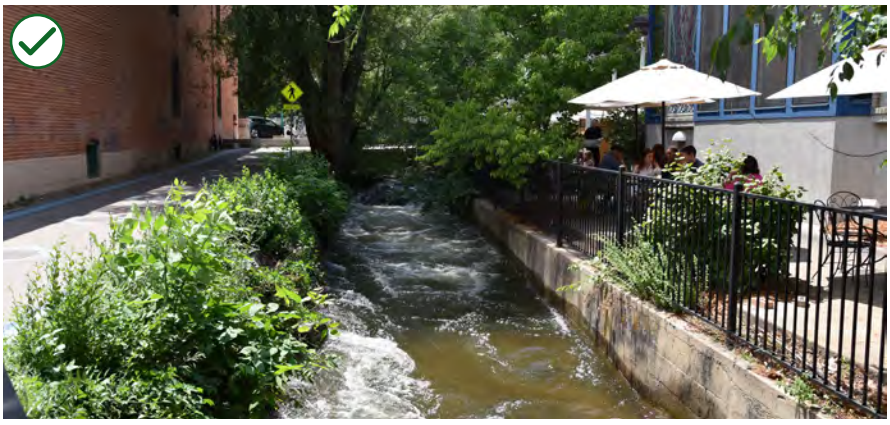


Figure 3-1a *When a building wall is set back from the public streetscape or a natural feature, design the intervening space to be attractive to pedestrians.*

3.2 Design the street frontage to promote pedestrian activity. Appropriate strategies include:

- Active street frontages
- Pedestrian-oriented entries
- Windows facing the street
- Small public spaces linked to the sidewalk
- Urban streetscape design and landscaping

3.3 Develop an active pedestrian-friendly area in front of a building, when it is set back from the build-to line. Areas should be:

- Open to the public
- Landscaped with "green" areas

3.4 Design the street frontage to be compatible with the surrounding context. Provide a landscaped front setback:

- Between buildings or parking areas and the street where development will be oriented primarily towards internal parking areas
- Where residential development with a landscaped setback is located across the street

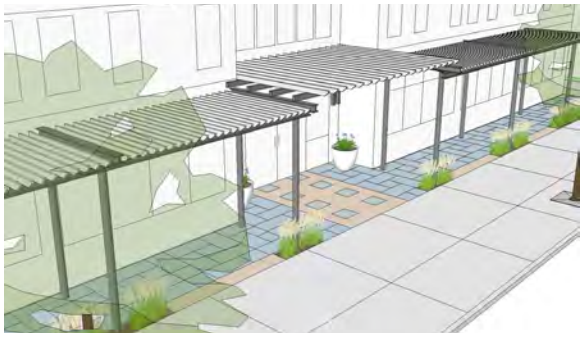
Figure 3-3 *Develop active pedestrian-friendly areas in front of a building, when it is set back from the build-to line.*

STRATEGIES FOR ACTIVATING STREET-FRONTAGES

Where possible, buildings in Blue Hill should be built to the build-to-line to support an activate street edge. When buildings are set back from the build-to-line, the setback area should be designed to encourage active use. Landscape features (including seating, plants, lighting, bicycle racks, etc.), outdoor dining and architectural features are all encouraged. These alternatives should be integrated with the design of the building and may be combined as appropriate.

LANDSCAPE FEATURES

ARCADE



OUTDOOR DINING

Diagram 3-1 *Strategies for Activating Street-frontages*

FORM BASED CODE BUILDING SETBACK REQUIREMENTS

The Chapel Hill LUMO provides building setback requirements that address the placement of a building in relation to the edges of a property. Side and rear setbacks ensure that a building's location is compatible with surrounding properties, while the front setback addresses the relationship of a building to the street and sidewalk.

TYPE A1

Front building setback is limited to 0-10'. On-street parking is allowed.

TYPE A2

Front building setback is limited to 0-20'. On-street parking is not allowed.

TYPE B1

Front building setback with parking is limited to 0-85'.

Front building setback without parking is limited to 0-20'.

Diagram 3-2 *Form-Based Code Setback Requirements*

Building Orientation

Building orientation refers to how a building entry relates to its surroundings. A building's primary entrance and façade should face the street in order to create an engaging and pedestrian-friendly streetscape.

3.5 Orient a building to the public streetscape.

a. Place a primary entry to face a street.

b. Orient a primary entry to a public plaza or other prominent outdoor amenity space where appropriate.

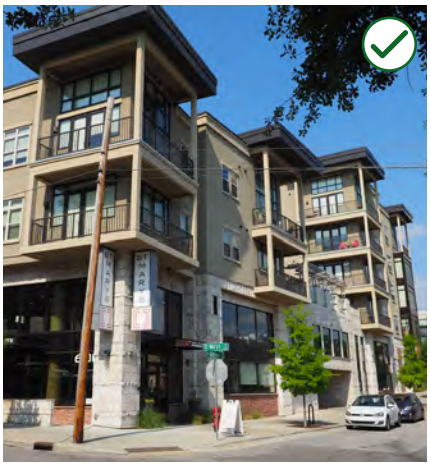


Figure 3-5 *Orient a building to the public streetscape.*

3.6 Where a building has multiple frontages such as streets, plazas and/or amenity spaces, provide a secondary entry along each frontage.

3.7 If a property is located along Booker Creek, orient an entry toward this natural feature.

a. Provide entries to face Booker Creek and an adjacent street, when feasible.

b. Orient a building toward Booker Creek in a way that activates existing or new community spaces.

Figure 3-7 *If a property is located along Booker Creek, orient a building toward this natural feature.*

BUILDING ORIENTATION

Orient a building's primary functional entry to face a street. Orienting an additional entry to a public plaza or other prominent public space is also suggested.

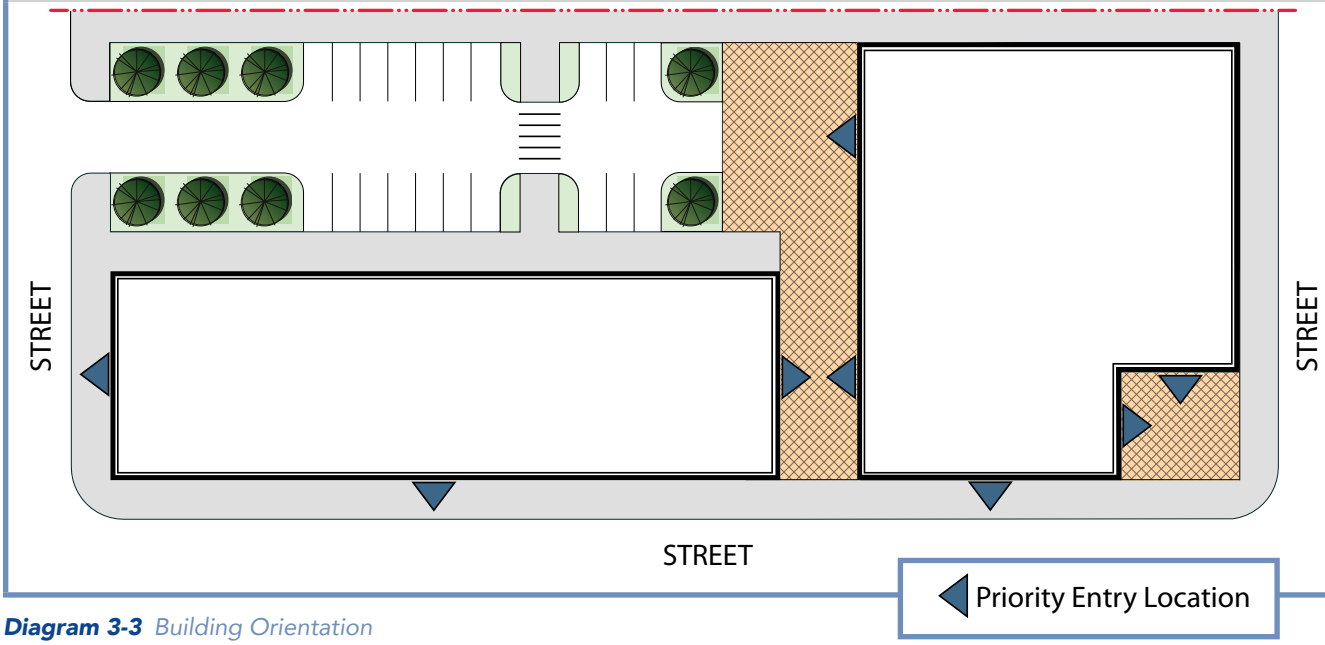


Diagram 3-3 *Building Orientation*

DESIGNING PEDESTRIAN, CYCLING AND VEHICULAR FACILITIES

- Refer to the Chapel Hill Engineering Design Manual to learn more about the design of pedestrian and bicycle facilities
- Refer to the North Carolina Fire Code and Chapter 7 of the Town Code of Ordinances for information about street and fire lane requirements.
- Refer to the Chapel Hill Mobility and Connectivity Plan for additional connectivity information.

Figure 3-3 *Connect a development to established pedestrian and bikeways.*

Connectivity

Connectivity refers to the network of sidewalks, paths, lanes and streets that provide pedestrian and vehicle routes within and between properties or neighborhoods. Future development should help create a more active, and inter-connected environment throughout Blue Hill. Future development should also utilize sidewalks, building pass-throughs and multi-use alleys to create connections throughout a site. Initially, individual sites will be more walkable, with better connections between buildings, sidewalks, parking areas and buildings. As additional sites redevelop, a network of connections between sites, and to adjacent neighborhoods, should emerge. This network of connections will also be strengthened by maintaining important views and creating new views through the design and placement of new connections on a site.

PEDESTRIAN & BICYCLE CONNECTIONS

A site should establish an internal pedestrian and bicycle circulation system that connects site components and is integrated with the public realm.

3.8 Connect a development to established pedestrian pathways and bikeways.

a. Provide a clearly defined, direct connection to adjoining public sidewalks, paths and greenways. Appropriate connections include:
   - Sidewalks
   - Internal walkways and mid-block passages
   - Multi-use alleys
   - Building pass-throughs

b. Appropriate features to connect include:
   - Outdoor amenity spaces
   - Building entrances
   - Recreation spaces
   - Plazas and courtyards
   - Outdoor dining areas

3.9 Provide pedestrian and bicycle connections into and between properties.

a. Connect an internal circulation system to those of adjacent properties, when possible.

b. Provide a mid-block connection for pedestrians and bicyclists, when possible.

c. Use building pass-throughs to provide public connections between blocks.

d. Route pedestrian connections through outdoor open spaces, when possible.

e. Locate sidewalks and pedestrian paths to link with potential future development phases.

f. Align sidewalks and pedestrian paths to potential future connections on adjoining properties.

3.10 Incorporate bicycle parking into the design of a new building and in connection with existing bikeways.

a. Locate bicycle parking facilities in highly visible and accessible locations.

b. Design bicycle parking facilities to be covered.

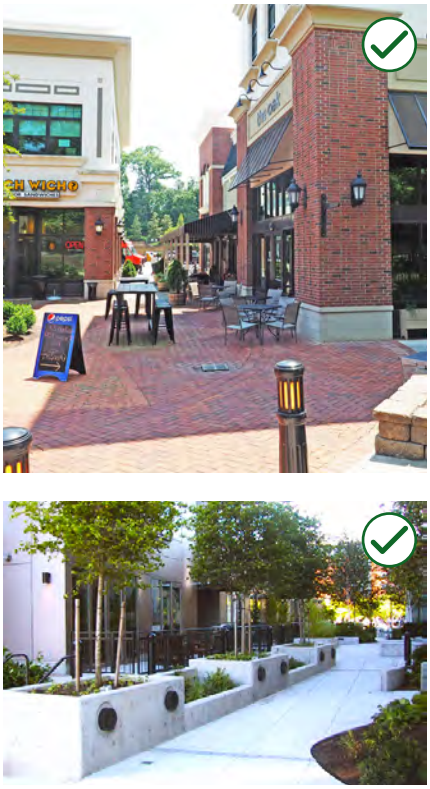
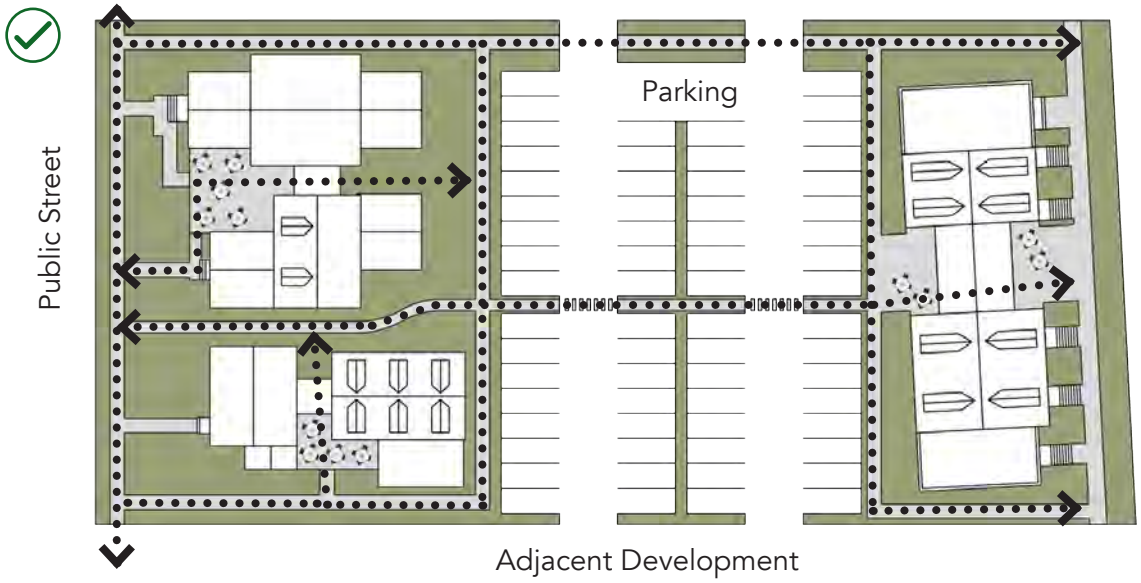


Figure 3-9 *Provide pedestrian and bicycle connections into and between properties.*

Figure 3-10 *Incorporate bicycle parking into the design of a new building and in connection with existing bikeways.*

STRATEGIES FOR PEDESTRIAN CONNECTIONS

Future development should help create a more active, and inter-connected environment throughout the Blue Hill District. This may include mid-block pedestrian connections, and pedestrian connections that are routed to and through building pass-throughs or outdoor amenity spaces such as courtyards, patios and plazas.



SIDEWALK CONNECTION OPTIONS

New development and redevelopment should provide pedestrian connections from walking trails and sidewalks on surrounding streets to building entries. As illustrated below, such connections may be direct, or may be routed through outdoor open space or across a landscaped parking island where a building is located at the rear of a site.

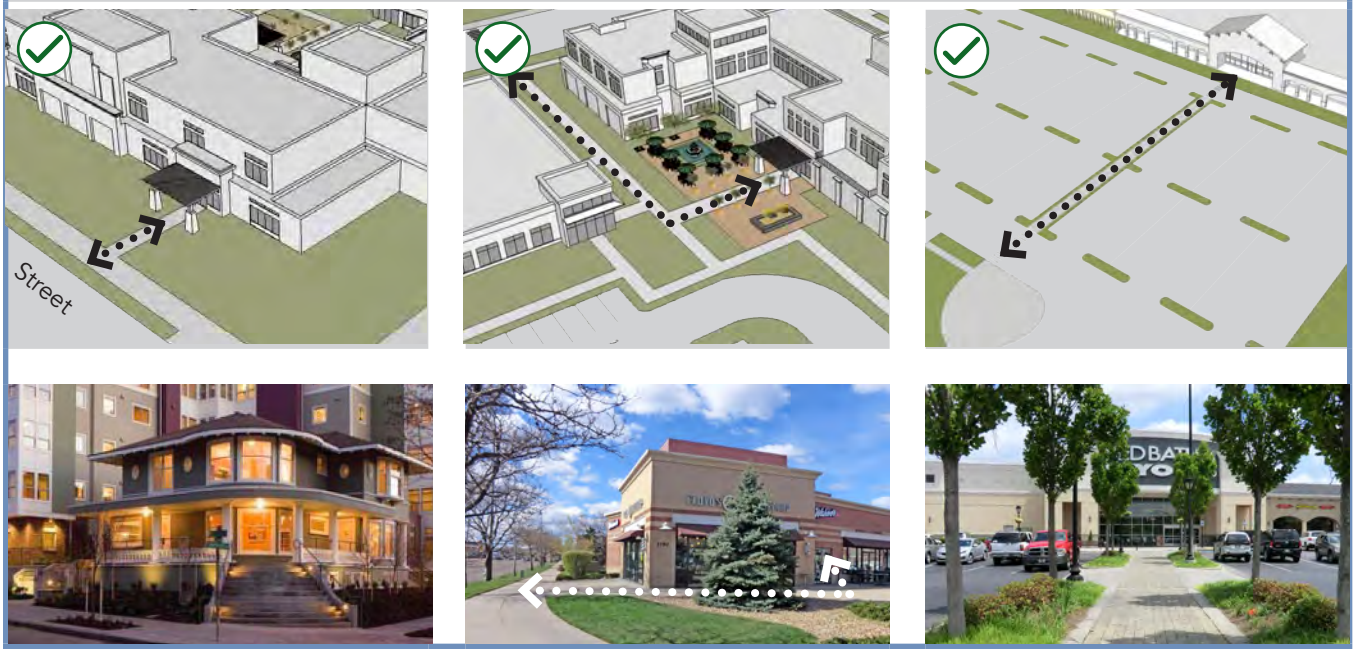


Diagram 3-4 *Strategies for Pedestrian Connections*

BUILDING PASS-THROUGHS

A building pass-through allows access from one side of a building to another in a large development. A pass-through should be designed to provide safe and enjoyable public passage.

3.11 Design a building pass-through to be inviting and in proportion to its associated building.

a. Locate a building pass-through centrally within a building to provide a balanced form and easily-accessible location.

b. Increase the height and width of a building pass-through when greater pass-through lengths are necessary.

c. Increase the height and width of a building pass-through when a building's height increases.

d. Provide variation in massing to create visual interest. Possible tools include:

- Height variation
- Wall offset
- Wall setback
- Material change

3.12 Activate a building pass-through to a create safe, enjoyable public space.

a. Promote designs that keep "eyes on the street." Possible design elements include:

- Windows
- Doors
- Courtyards
- Bridges

b. Align a building pass-through to frame a clear view of an outdoor amenity space and buildings beyond.

c. Activate a pass-through wall to provide a pedestrian-friendly experience. See Design Options for Windowless Façade Areas, Diagram 4-6 on page 90.

d. Incorporate lighting in the design of a pass-through that is visually interesting and creative. For instance, consider using festoon lights in a pass-through.

Figure 3-12 *Activate a building pass-through to a create safe, enjoyable public space.*

BUILDING PASS-THROUGH DESIGN STANDARDS

Design standards for building pass-throughs and opportunities for design alternatives to be approved by the CDC can be found in Sec. 3.11.2.7.S of the LUMO.

Figure 3-11 *Design a building pass-through to be inviting and in proportion to its associated building.*

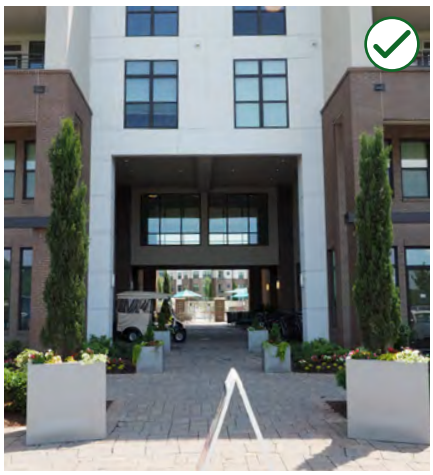
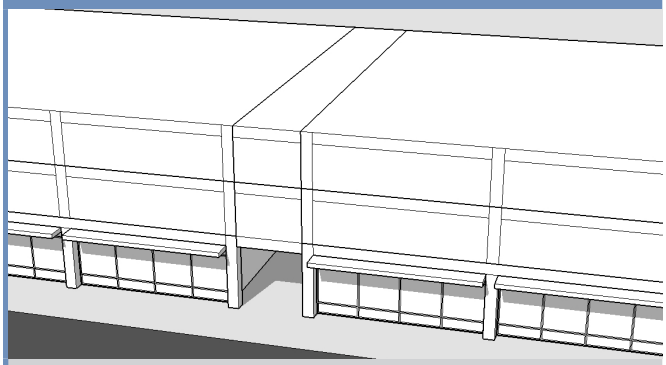


Figure 3-11c *Provide variation in massing to create visual interest.*

BUILDING PASS-THROUGH PROPORTIONS

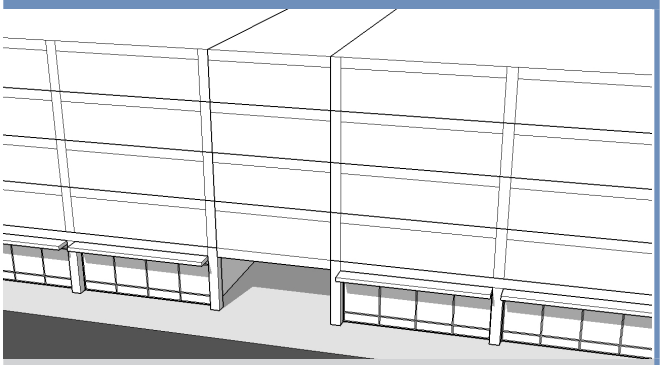
The proportion of the width, length and height of an enclosed pass-through should be scaled to invite its use by pedestrians.

< 4-STORY PROPORTION



A pass-through with the minimum required dimensions is more appropriate for shorter distances and lower scaled buildings.

> 3-STORY PROPORTION



As the size of a buildings increases or the length of the walkway increases, larger dimensions are needed to be in proportion.

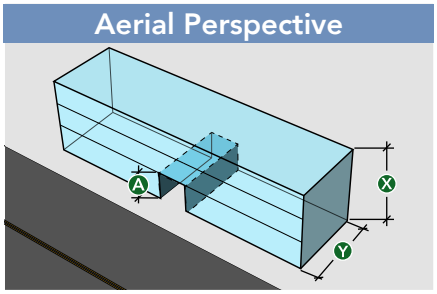
Diagram 3-5 *Building Pass-through Proportions*

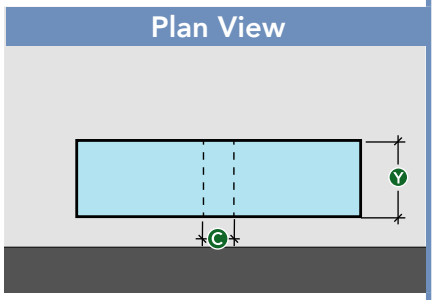
BUILDING PASS-THROUGH WIDTH DIMENSIONS

The width and height of a pass-through should increase as walk distance increases.

1. SHORT/SHALLOW

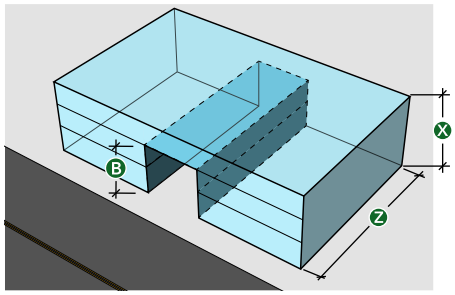
A relatively small opening (A x C) is in proportion to a relatively short walk distance (Y) and building height (X).

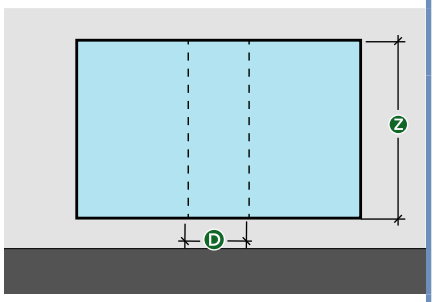




2. TALL/LONG

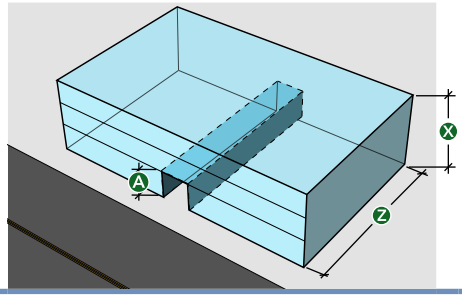
A relatively large opening (B x D) is in proportion to a relatively long walk distance (Z) and building height (X).





3. SHORT/LONG

A relatively small opening (A x C) is out of proportion to a relatively long walk distance (Z).



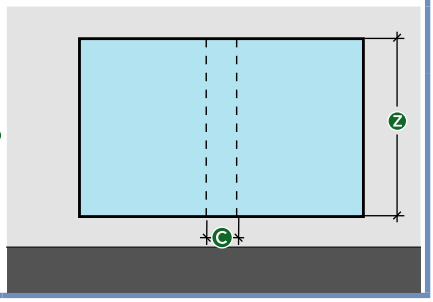


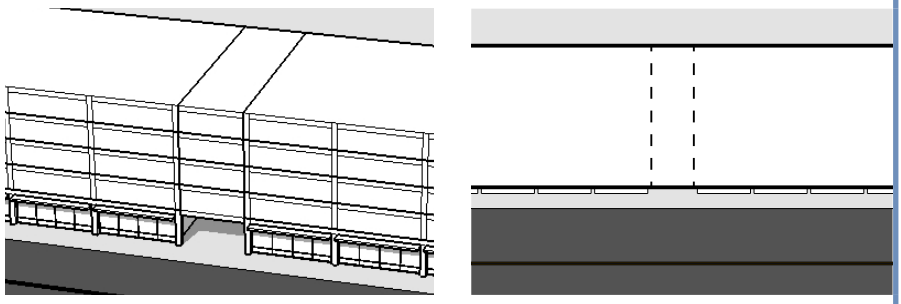
Diagram 3-6 *Building Pass-through Width Dimensions*

BUILDING PASS-THROUGH FORMS

These alternative forms may be considered for building pass-through designs. Some designs may also include a combination of these forms.

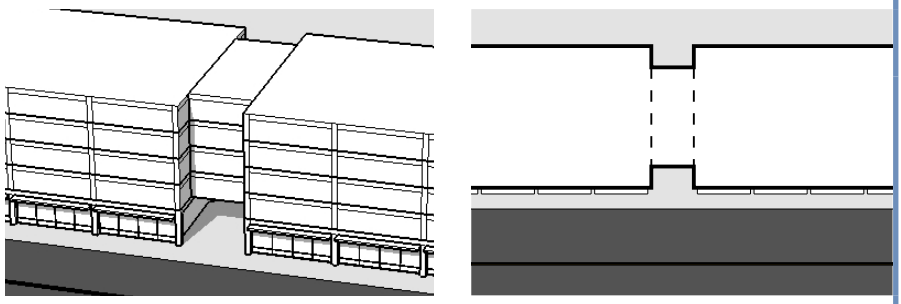
1. TUNNEL

A covered, continuous walkway through a building



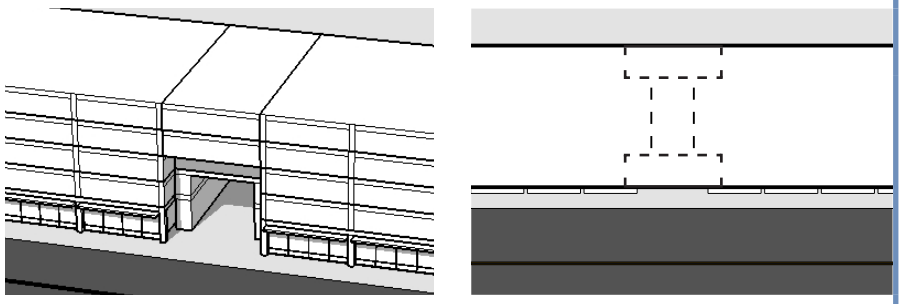
2. STEPBACK

- Only a portion of the pass-through is covered
- Enclosed or open walkways may be used



3. HYBRID

The width and height of the pass-through vary



4. OPEN AIR

- The entire pass-through is open to the sky
- It may, however, include pergolas or other shelters

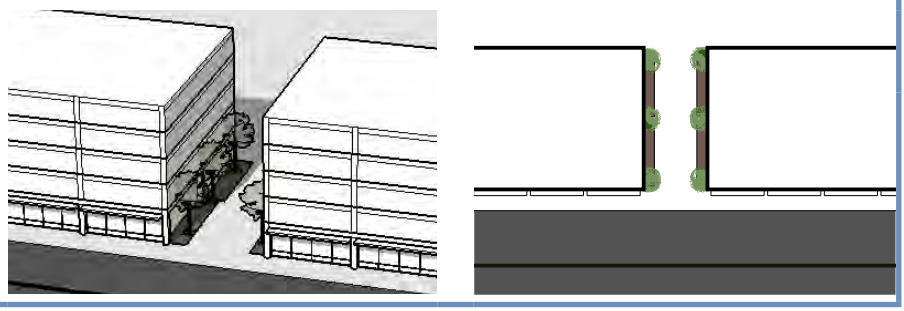
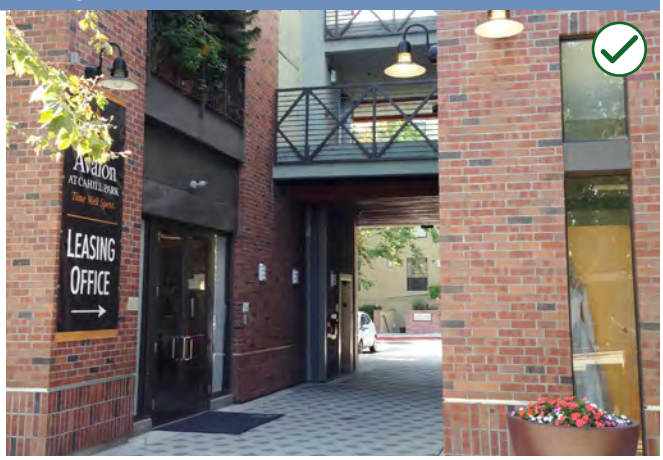


Diagram 3-7 *Building Pass-through Forms*

BUILDING PASS-THROUGH OPTIONS

A building pass-through allows access from one side of a building to another in a large development. The images below illustrate examples of appropriate building pass-through options.

BUILDING PASS-THOUGHS WITH ELEVATED WALKWAYS



BUILDING PASS-THROUGHS WITH INTERIOR PEDESTRIAN ACTIVATION AND AREAS THAT ARE OPEN TO THE SKY

BUILDING PASS-THROUGHS THAT INCLUDE A BUILDING ENTRY

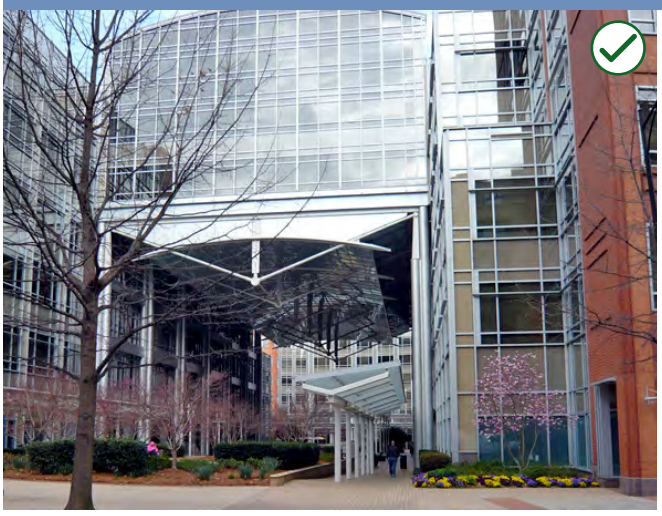
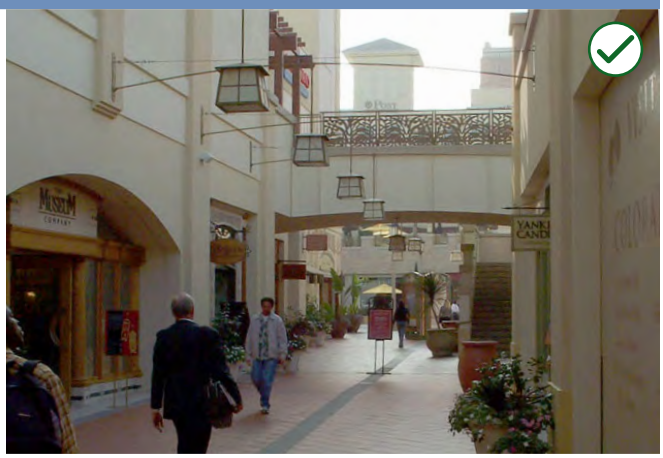
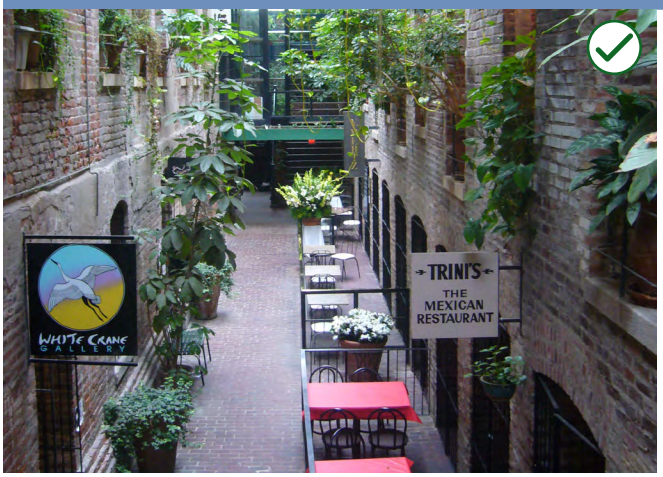


Diagram 3-8 *Building Pass-through Options*

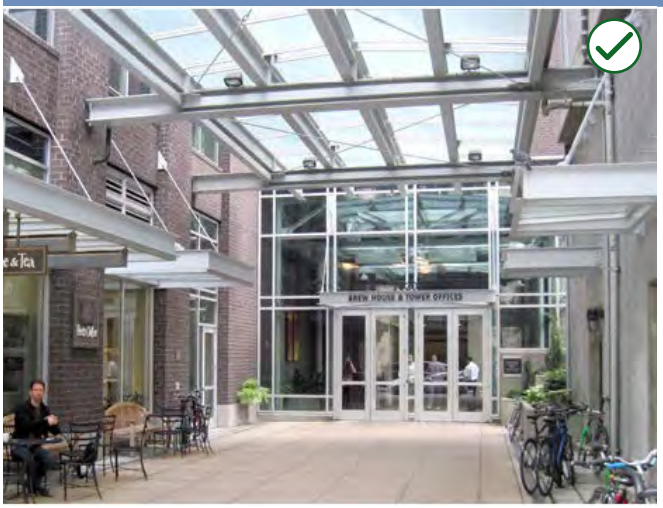
BUILDING PASS-THOUGHS WITH ELEVATED WALKWAYS



BUILDING PASS-THROUGHS WITH INTERIOR PEDESTRIAN ACTIVATION AND AREAS THAT ARE OPEN TO THE SKY



BUILDING PASS-THROUGHS THAT INCLUDE A BUILDING ENTRY



VEHICULAR ACCESS DESIGN STANDARDS

Additional information and vehicular access design standards are provided in the Chapel Hill Public Works Engineering Design Manual.

VEHICULAR ACCESS & CONNECTIVITY

Automobile access should be unobtrusive. Driveways should be designed to promote safety and minimize pedestrian-vehicle conflicts.

3.13 Provide vehicular connections into and between adjoining properties.

a. Ensure that a development has more than one vehicular entrance/exit.

b. Provide a direct vehicular connection to streets and lanes on adjoining properties to reduce traffic and pedestrian impacts on surrounding streets.

c. Align internal drive aisles to allow for future connections to adjoining properties.

d. Where possible, design fire lanes and emergency access points to be visually appealing. For instance, consider a short grass-pave drive or other paving alternatives to concrete.

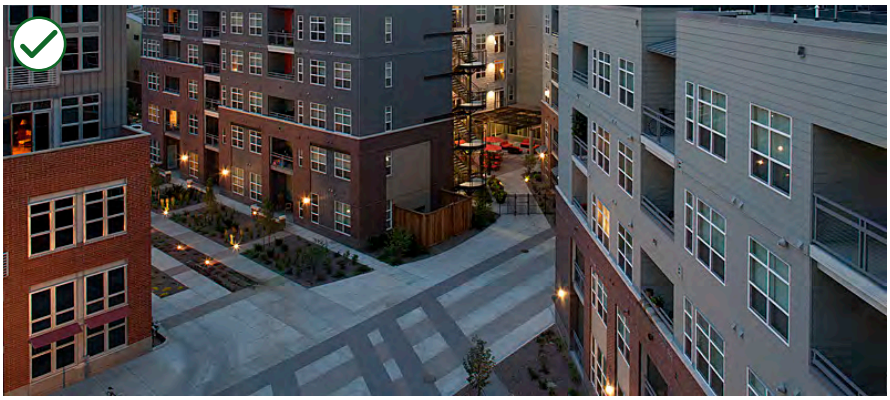


Figure 3-13 *Provide vehicular connections into and between properties.*

STRATEGIES FOR VEHICULAR CONNECTIONS

Provide vehicular connections into and between adjoining properties.

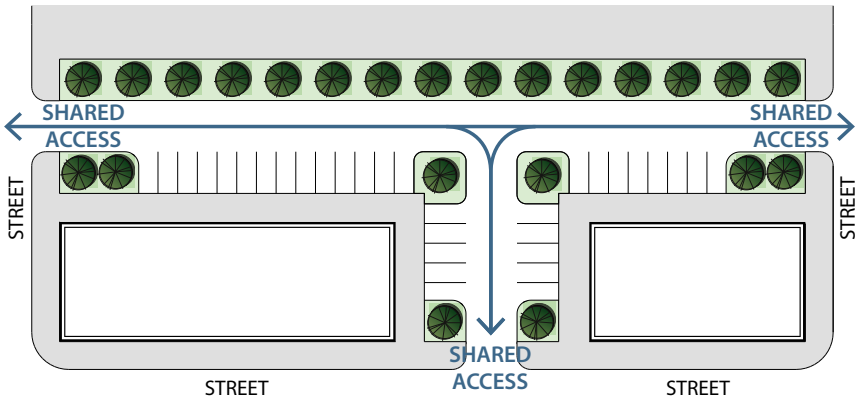


Diagram 3-9 *Strategies for Vehicular Connections*

3.14 Create a consistent streetscape experience within a development.

a. Coordinate streetscape improvements within a development with streetscape improvements on surrounding streets, whenever possible.

3.15 Where a curb cut is to be installed, minimize its width.

a. Consider using shared driveways between properties to reduce the number of curb cuts.

3.16 Design a service drive to be a visual asset.

a. Use decorative and porous paving materials where feasible based on vehicle load requirements.

b. Include landscape materials to buffer views and soften appearance.

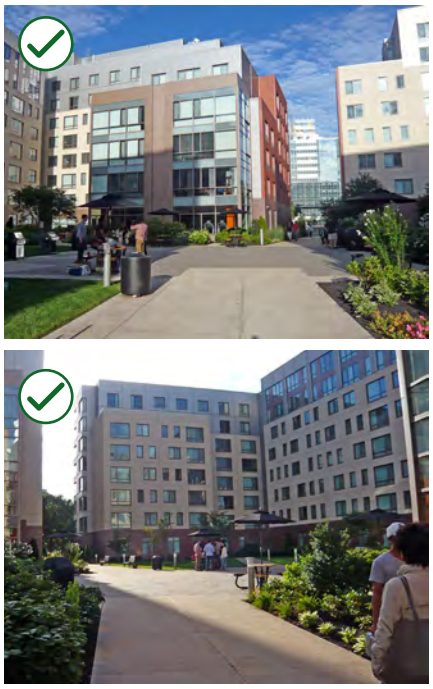


Figure 3-14 *Create a consistent streetscape experience within a development.*

Figure 3-16 *Design a service drive to be a visual asset.*

Outdoor Amenity Space

Outdoor amenity space includes public and semi-public areas such as plazas, courtyards, patios, small park spaces, rooftops or landscaped features that are visible from surrounding streets. These provide places for people to gather, engage in activities and enjoy a sense of community, and they are encouraged throughout the Blue Hill District.

A new development should incorporate outdoor amenity space that projects a vibrant image and invites pedestrian activity. These places should be planned to activate streets and buildings while enhancing the pedestrian experience within the interior of a site. The size and location of outdoor amenity spaces should be sufficient to accommodate the intended social uses. It should not be over-sized, such that the space will appear to be under-utilized. The location should also consider the surrounding vehicular traffic to determine if buffers are needed to create a usable space or if the space can be left open for passing pedestrians, cyclists and drivers as an invitation. An outdoor amenity space should also utilize landscaping and lighting that creates inviting spaces, while adhering to the standards outlined in the Chapel Hill Engineering Design Manual.

STANDARDS FOR OUTDOOR AMENITY SPACES

The LUMO (Sec. 3.11.2.7.F) provides design provisions, alternatives and standards for outdoor amenity spaces. These guidelines address qualitative aspects that support a pedestrian-friendly experience and the relationship of an amenity space to buildings and other site features.

Figure 3-17 *Locate an outdoor amenity space to provide a focal point on a site.*

DESIGN OPTIONS FOR OUTDOOR AMENITY SPACE

Outdoor amenity space can include active and passive designs, as illustrated below.

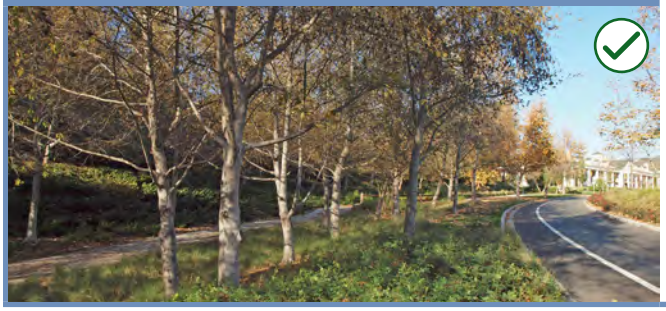
COURTYARDS

PLAZAS

RIVER WALKS

STREETSCAPE

STORMWATER RETENTION AREAS



AMPHITHEATER

Diagram 3-10 *Design Options for Outdoor Amenity Space*

Figure 3-18 *Locate and orient outdoor amenity space to be actively used.*

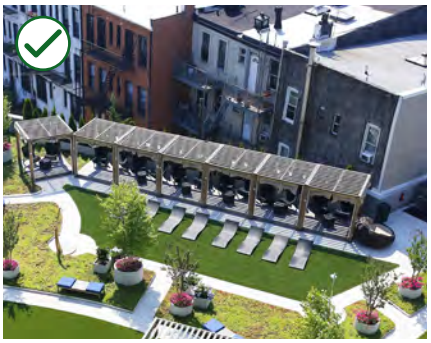
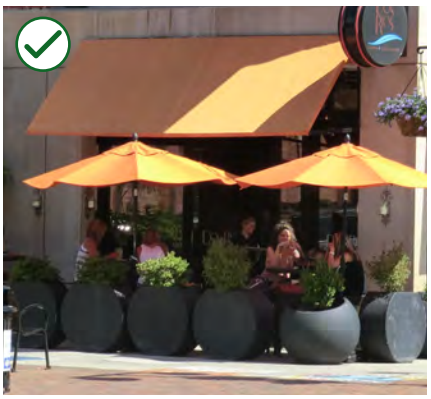


Figure 3-18d *Consider locating an outdoor amenity space on a rooftop.*



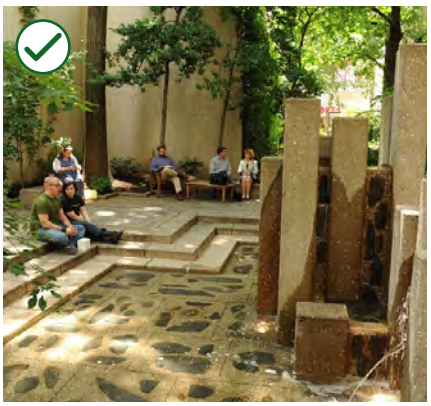


Figure 3-19 *Locate outdoor amenity space where it will be shaded in summer months.*

OUTDOOR AMENITY SPACE LOCATION

In a large development, an outdoor space can be a focal point. An outdoor amenity space may also be an accent within a small project. An outdoor amenity space can also provide relief from long building facades. An outdoor amenity space should be located to encourage active use and consider connecting to existing or proposed greenways. Paths of vehicular travel, such as large driveways or delivery areas, cannot be counted as amenity space, as they do not meet the intent of the guidelines presented in this section.

3.17 Locate an outdoor amenity space to provide a focal point on a site.

a. Locate outdoor amenity space to highlight key building features.

b. Position outdoor amenity space to link adjoining buildings, when possible.

3.18 Locate and orient outdoor amenity space to be actively used.

a. Provide clear connections from an outdoor amenity space to pedestrian circulation routes and building entrances.

b. Orient an outdoor amenity space to link with other cultural resources, natural features or greenways and to extend existing view corridors.

c. Orient an outdoor amenity space to views of active spaces or architectural landmarks to provide visual interest.

d. Consider locating outdoor amenity spaces along active pedestrian circulation paths such as a greenway, as opposed to the interior of a property.

e. Consider locating an outdoor amenity space on a rooftop.

3.19 Locate outdoor amenity space where it will be shaded in summer months.

a. Design an outdoor amenity space to be cool in the summer months and warm in the winter months.

b. The opportunity to include shade trees should be a determining factor when locating an outdoor amenity space.

3.20 Create outdoor amenity space in the remaining area when a building is set back from the build-to line.

a. Design the space to be publicly accessible.

b. Integrate the space with the design of the building.

c. Refer to Diagram 3-3 for design options.

OUTDOOR AMENITY SPACE DESIGN ELEMENTS

An outdoor amenity space should be designed and furnished to encourage activity and create a comfortable space for all to enjoy. Creative and inviting elements should be incorporated into outdoor amenity spaces, such as water features or public art. Where possible, the outdoor amenity space may also be integrated into the on-site stormwater management system.

3.21 Design an outdoor amenity space to be inviting.

a. Size the space to provide a comfortable scale for pedestrians.

b. Design the space to invite public use.

c. Create a sense of enclosure for an outdoor amenity space area by positioning buildings to frame the space.

d. Use landscaping to create an inviting and comfortable experience.

e. Using public art to add interest to an outdoor amenity space may be considered. See "Public Art" (Chapter 2) for more information.

Figure 3-21 *Design an outdoor amenity space to be inviting.*

3.22 Furnish outdoor amenity spaces to encourage passive use and public enjoyment.

a. Provide benches, tables, shelters and landscape features.

3.23 Create a coordinated design palette for an outdoor open space.

a. Coordinate landscape and site design elements within a development, to create a consistent visual design.

b. Use site furniture, public art and streetscape elements to help establish a sense of identity within the development.

Figure 3-22 *Furnish outdoor amenity spaces to encourage active use and public enjoyment.*

Figure 3-24 *Promote a "green" experience in all outdoor amenity spaces.*

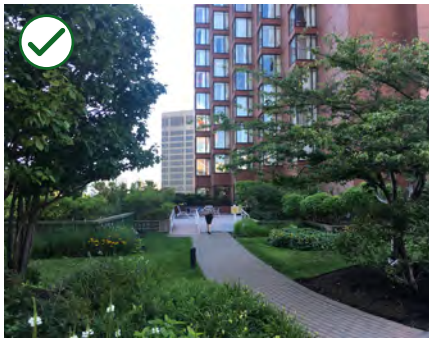


Figure 3-25 *Design a rooftop outdoor amenity space to capitalize on views of natural features and active social spaces.*

Figure 3-27 *Design outdoor amenity space to incorporate Low Impact Development (LID) principles for stormwater management.*

STORMWATER MANAGEMENT

See "Stormwater Management" (Chapter 3, page 66) for more information.

3.24 Promote a "green" experience in all outdoor amenity spaces.

a. Increase the amount of plant material used in outdoor amenity spaces, whenever possible.

b. Use trees to provide shade in outdoor amenity space.

c. Use plants to create an improved experience in outdoor amenity spaces.

d. Balance hardscape areas with planter beds.

3.25 Design a rooftop outdoor amenity space to be visible and accessible.

3.26 Design a rooftop outdoor amenity space to capitalize on views of natural features and active social spaces.

a. Orient a rooftop space to take advantage of nearby natural features such as Booker Creek.

b. Orient a rooftop space toward pedestrian activity, such as a plaza, courtyard or other outdoor amenity space on the ground level.

c. Avoid orienting a rooftop space toward a parking lot or highway.

3.27 Design outdoor amenity space to incorporate Low Impact Development (LID) principles for stormwater management.

a. Design and locate larger stormwater management systems such as bioretention areas to serve as usable open space or as a site amenity.

b. Use permeable surfaces and paving systems to assist with stormwater drainage.

c. Where appropriate, incorporate rain-water capture systems and storage cisterns.

Recreation Space

Recreation spaces will be developed in conjunction with new residential and mixed-use housing. These indoor or outdoor areas will provide common, semi-private, active spaces to be enjoyed by residents.

3.28 Design recreation areas to provide options for a variety of users.

a. Provide active recreation for a variety of ages and fitness levels. Options include a combination of:

- Basketball courts
- Tennis courts
- Fitness courses
- Playgrounds
- Shuffleboards
- Horseshoe pits
- Disc golf baskets
- Pickleball courts

b. Recreation activity areas may share space with outdoor amenity spaces, provided that the areas are safety delineated.

3.29 Design and furnish a recreation area to fit with the context of its development.

a. Materials and colors should match those found on the site and buildings within the development, when possible.

b. Landscape materials and site furnishings should match those found throughout the site.

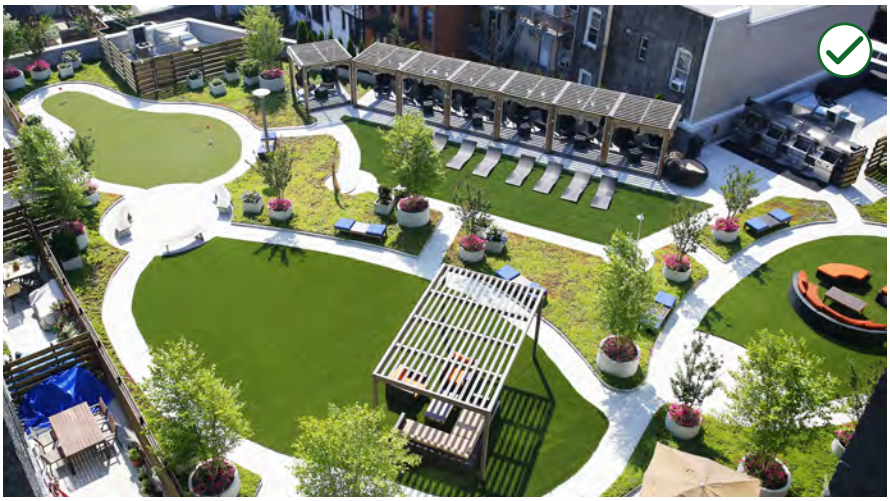


Figure 3-29 *Design and furnish a recreation area to fit with the context of its development.*

STANDARDS FOR RECREATION SPACES

The LUMO provides general standards and alternatives for a recreation space in Sec. 3.11.2.7.G. These guidelines address quality and features for a recreation amenity.

Figure 3-28 *Design recreation areas to provide options for a variety of users.*

Outdoor Dining Areas

Outdoor dining areas and sidewalk cafes located within a private property can help animate the public realm and are welcomed throughout the Blue Hill District. An outdoor dining area or sidewalk café typically involves a grouping of tables and/or seating for the purpose of eating, drinking or social gathering.

OUTDOOR DINING SPACE STANDARDS

Coordinate with Chapter 17, Article VI of the Chapel Hill LUMO. Also consult the North Carolina Building Code for outdoor dining standards and safety requirements.

3.30 Locate an outdoor dining area to accommodate pedestrian traffic along the sidewalk.

a. Locate a dining area immediately adjacent to a building front to maintain a public walkway along the curb side.

b. Maintain a clear path along the sidewalk for pedestrians.

c. Use a railing, detectable barrier, or similar edge treatment to define the perimeter of a permanent outdoor dining area.

d. Design a railing or detectable barrier to be sturdy and of durable materials.

Figure 3-30 *Locate an outdoor dining area to accommodate pedestrian traffic along the sidewalk.*

Figure 3-30b *Maintain a clear path along the sidewalk for pedestrians.*

Surface Parking

Site design considerations for parking include the location of surface lots, their design and their relationship to pedestrian and vehicular circulation systems. Surface parking lots should not be a visually prominent feature of sites in the District, especially those along high-traffic corridors, such as Fordham Boulevard, or in locations intended for strong pedestrian orientation.

3.31 Minimize the visual impact of surface parking.

a. Buffer or screen the view of parked cars from a public sidewalk or street using one or more of the following methods:

- Landscaping
- Site walls
- Decorative fencing
- Public art
- Other methods that meet the intent of this guideline

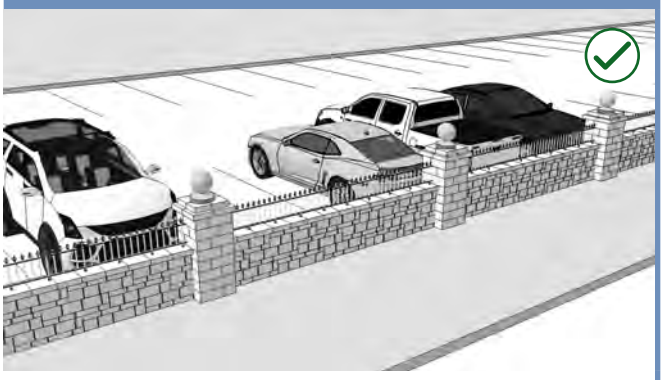
Figure 3-31 *Minimize the visual impact of surface parking.*

SURFACE PARKING SCREENING OPTIONS

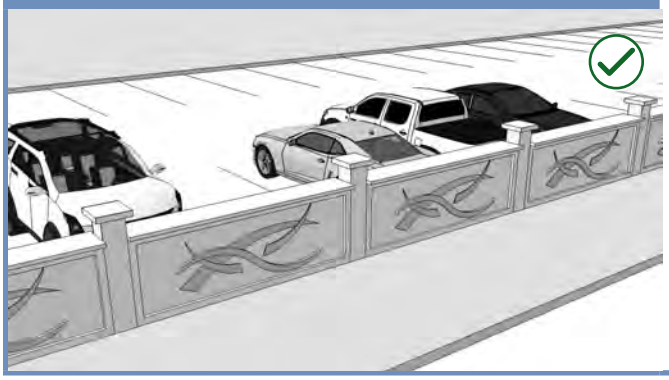
Options include:

LANDSCAPING

SITE WALL



PUBLIC ART



DECORATIVE FENCING

Diagram 3-11 *Surface Parking Screening Options*

Figure 3-33 *Divide a large parking area into interconnected, small modules with landscape buffers.*

3.32 Locate a surface parking lot so it will minimize gaps in the continuous building wall.

a. Place the parking at the rear of the site. If this is not feasible, locate it beside the building.

b. Minimize the number of vehicular access points to a site from a public street.

c. Encourage shared, consolidated access between adjacent properties.

d. Discourage driveway access from a public street, where other options are available.

3.33 Divide a large parking area into interconnected, smaller modules with landscape buffers.

a. A vegetated buffer that separates two parking modules should be used.

3.34 Design a surface parking lot for sustainability by incorporating one or more of the following features, or other features that create a more sustainable site:

- Installation of EV chargers or conduit laid for future installation
- Carpool spaces
- Park and ride spaces

Figure 3-32 *Locate a surface parking lot so it will minimize gaps in the continuous building wall of a commercial block.*

Structured Parking

Structured parking should be compatible with nearby buildings in terms of building scale, consistency between window patterns, materials and screening elements. At the street level, structured parking should support a pedestrian-friendly experience with an active use at the sidewalk edge, especially at corner locations. On upper floors that can viewed from the public way, structures should be designed to include attractive elements such as building articulation, architectural screens and detailing.

3.35 Provide an active use at the sidewalk edge when parking in a structure occurs at the street level on a primary street.

a. Other methods of providing visual interest may also be employed. Options include:

- Architectural details
- Public art
- Wall sculpture
- Display cases

3.36 Wrapping the parking with an active use is preferred.

a. When an active use in not feasible, provide an architectural screen.

b. Screening that reflects window patterns along the street is encouraged.

Figure 3-36 *Wrapping the parking with another use is preferred.*

DESIGN OF STRUCTURED PARKING

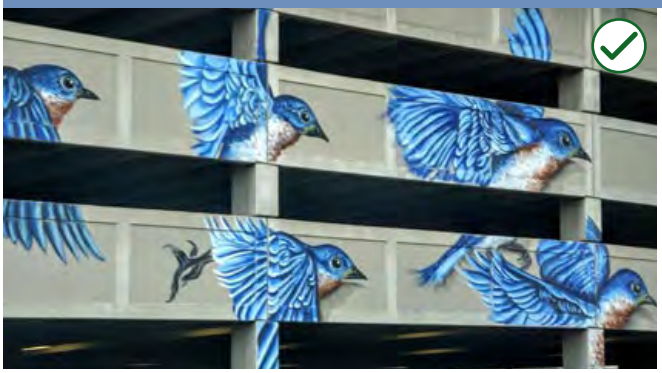
The appearance of structured parking is defined in Section 3.11.4.B.4 of the LUMO.

Figure 3-35 *Provide an active use at the sidewalk edge when parking in a structure occurs at the street level on a primary street.*

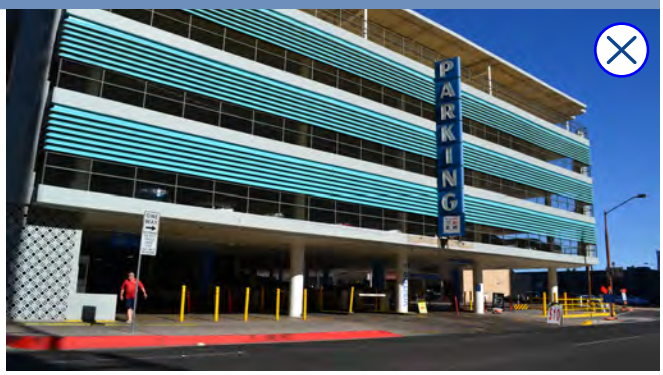
PARKING STRUCTURE FACADE TREATMENT OPTIONS

Options include:

PUBLIC ART



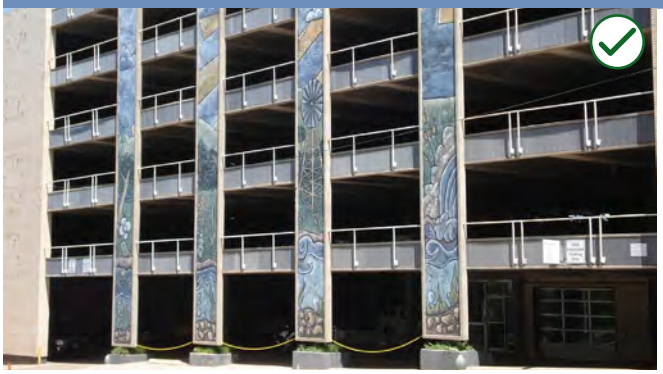
ARCHITECTURAL DETAILS



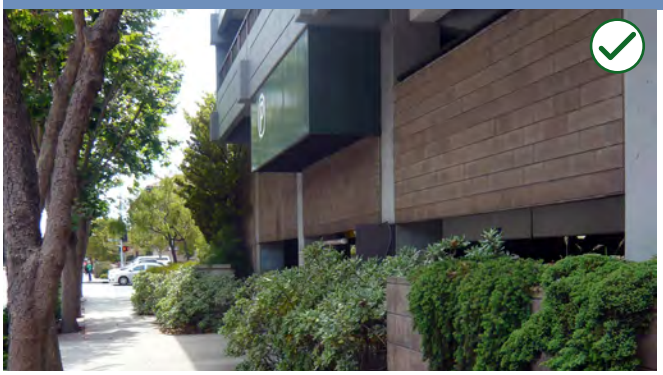
RETAIL WRAP

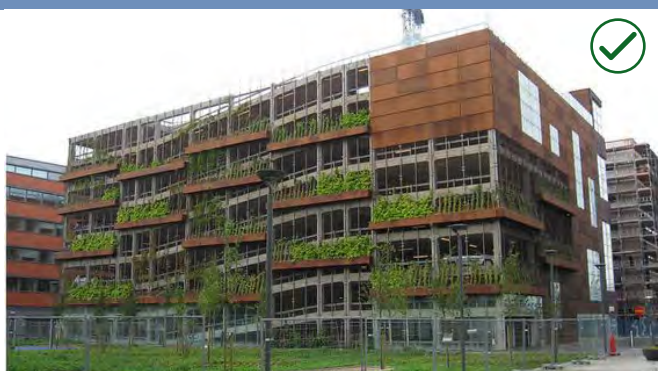
Diagram 3-12 *Parking Structure Facade Treatment Options*

PUBLIC ART



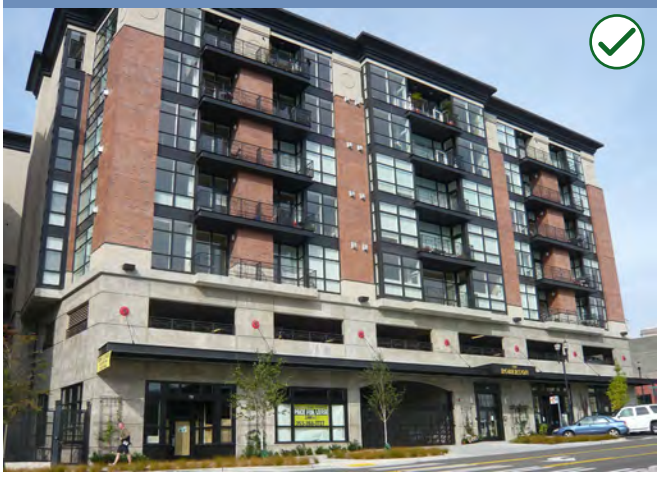
GREEN WALLS





MIXED-USE WRAP

RESIDENTIAL WRAP



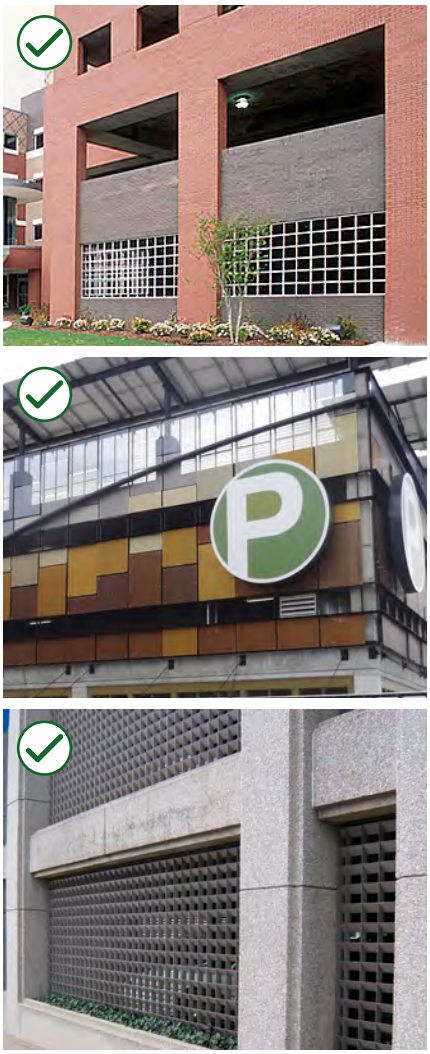


Figure 3-37 *Design architectural screens to be an integral part of the building design.*

3.37 Design architectural screens to be an integral part of the building design.

a. Design an architectural screen to create visual interest by including decorative patterns, railings and details.

b. Construct architectural screens of durable materials and finishes, to be consistent with the primary building materials.

c. While an architectural screen is not required to completely screen cars, design it to minimize their visual impact.

3.38 Design a parking structure to minimize light spill into adjacent sites.

a. Locate internal lighting to minimize light spill outside of the parking structure.

b. Incorporate design elements such as screening to minimize light spill.

3.39 Design a parking structure to promote sustainability by incorporating one or more of the following features, or other features that create a more sustainable site:

- Installation of EV chargers or conduit laid for future installation
- Carpool spaces
- Park and ride spaces
- Solar panels
- Green roof

Landscape Design

Landscaping addresses the basic aesthetics of a site, including trees, shrubs and other plantings, as well as ornamental features and site contours. Landscapes should be designed to enhance community image, invite pedestrian activity, preserve mature trees and highlight distinctive topographic or other site features. In general, indigenous or well-acclimated and noninvasive species should be used. Landscape design should also help to establish a sense of visual continuity within a site.

3.40 Preserve and maintain mature trees and other significant vegetation.

a. Include existing vegetation as part of a landscape design scheme when feasible.

b. Identify healthy trees and vegetation clusters for preservation. Give special consideration to mature trees.

3.41 Use a coordinated landscape palette to establish a sense of visual continuity within a site.

a. Incorporate live plant materials that are native to the area.

b. Use patterns of similar tree and shrub species to establish visual consistency across a large development.

c. Use subtle variations in the landscape palette to highlight different uses or areas within a development.

d. Minimize the use of high-maintenance plants. If necessary, use these species for small accent areas.

e. Incorporate drought-tolerant plants into the design of a site.

3.42 Integrate landscaping and stormwater management systems.

a. Use stormwater management facilities, such as ponds, swales and bioretention areas, as landscape amenities.

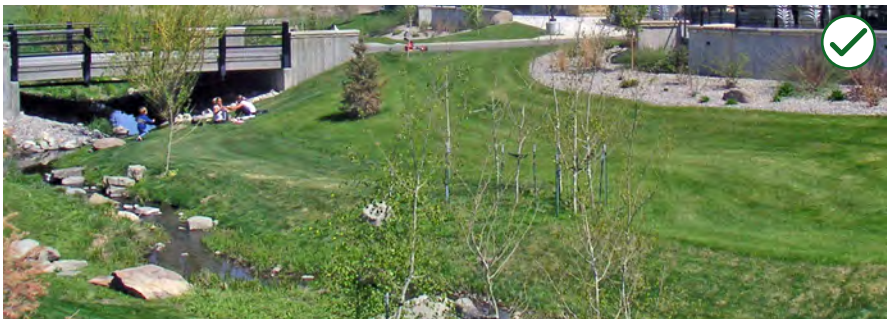


Figure 3-42 *Integrate landscaping and stormwater management systems into the design of a site.*

LANDSCAPE STANDARDS

The landscape design guidelines are intended to complement landscape design standards in the LUMO Section 3.11.2.5, and in Chapter 6.4 of the Chapel Hill Engineering Manual. Additional landscape guidelines can also be found in Chapter 2.

STORMWATER MANAGEMENT

See the guidelines for Stormwater Management (Chapter 3, pg. 68) for more information.

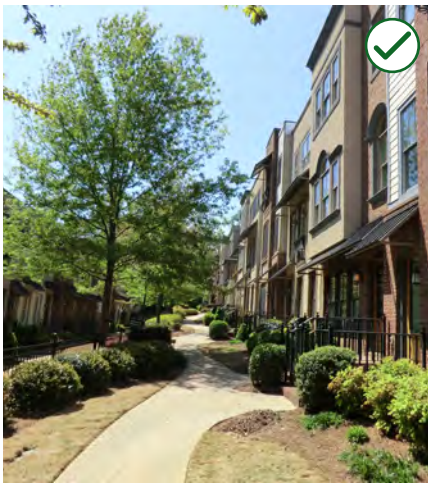


Figure 3-41 *Use a coordinated landscape palette to establish a sense of visual continuity within a site.*

Fences and Site Walls

Fencing and walls can be helpful to property owners seeking greater security and privacy, and may be appropriate along rear and side lots in some contexts. While fences and walls often serve utilitarian functions, they should also enhance the character of the street and appear to be integral components of site design. Aside from those that may be used to screen trash storage, fences and walls should typically be pedestrian-scaled and permit partial views into the property.

STANDARDS FOR FENCES AND WALLS

The LUMO establishes standards for the location, materials and quality of fences and walls in Section 3.11.2.5.G. These guidelines assist by providing additional guidance.

Figure 3-43 *Coordinate a fence or wall with the overall site design.*

Figure 3-45 *Design a retaining wall to minimize impacts on the natural character of the site.*

3.43 Coordinate a fence or wall with the overall site design.

a. Design a fence or wall to be an integral part of the site and serve as an amenity that adds visual interest to the property.

b. Create fence or wall openings to lead to an internal circulation system.

c. Incorporate landscape plants along walls that face residential areas.

3.44 Use a material that is durable and compatible with that of adjacent buildings and other site features.

a. For a fence, use finished metal, natural wood or a durable substitute that appears similar in scale and character.

b. Concrete and stone are appropriate for walls.

c. Vinyl, chain link, or any fence with razor wire is inappropriate.

d. Opaque privacy fences or solid walls are inappropriate along street frontages.

3.45 Design a retaining wall to minimize impacts on the natural character of the site.

a. Design a retaining wall to step with the topography of the site.

b. Design a retaining wall to be in scale with a development.

c. Terrace retaining walls on steeper slopes to minimize height of individual walls.

d. Use high quality materials such as brick and stone.

e. Integrate landscaping into the design.

3.46 Incorporate design variations in a site wall to create interest.

a. Articulate the surface and height of the wall.

b. Include simple changes in material.

c. Incorporate planting material.

Working with Topography

Many sites in Chapel Hill include topographical features that influence development opportunities. Where possible, site design should preserve and work within existing topography. Any re-grading should maintain pedestrian and vehicular connectivity while minimizing potential negative visual impacts of large retaining walls.

3.47 Design a site to integrate with existing topography.

a. Where regrading a site is necessary, design it to minimize impacts to landform stability and built environment.

b. Use a series of landscaped terraces or stepped walls where a taller cut or change in grade is necessary.

c. Incorporate an existing topographic landform as a natural or open space amenity.

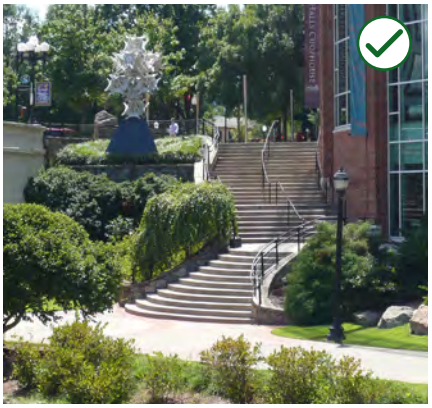


Figure 3-47b *Use a series of landscaped terraces or stepped walls where a taller cut or change in grade is necessary.*

3.48 Design parking lots to take advantage of changes in topography.

a. Terrace parking lots on steep slopes, following site contours.

b. Where on-site parking is provided, consider taking advantage of site topography to provide subterranean or partially subterranean parking.

c. Place parking deck entrances at a lower/higher grade to allow access to a separate level from the ground floor.

Figure 3-47c *Incorporate an existing topographic landform as a natural or open space amenity.*

3.49 Orient a building's primary facade along a level grade, where possible.

3.50 Design a building to step with the existing topography of a site.

a. Step building foundations to follow site contours, when feasible.

b. "Terrace" a building into a hillside to minimize site disturbance and create private outdoor spaces and site features.

c. Step the first floor of a building along a sloped street to maintain a close connection to the sidewalk level.

d. Maintain continuous upper floor plates by varying first floor heights according to changes in grade.

Figure 3-50 *Design a building to step with the existing topography of a site.*

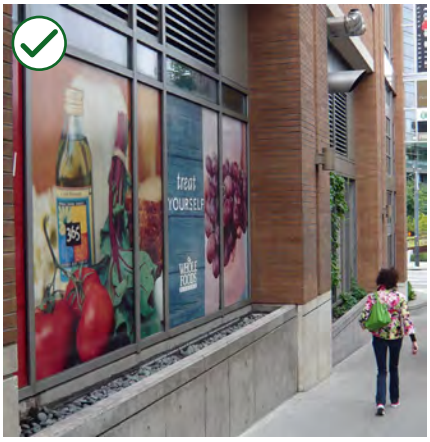


Figure 3-51 *Integrate the elements of a building facade to respond to changes in topography.*

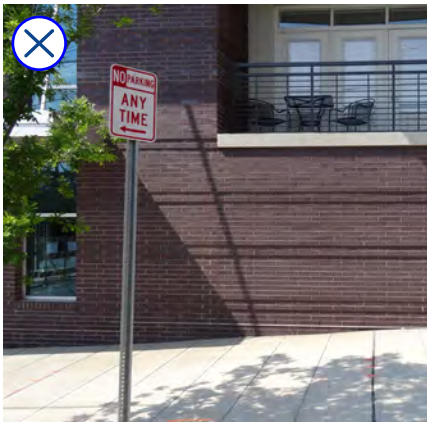


Figure 3-51d *Limit the maximum height of an exposed foundation wall*

Figure 3-52c *Consider locating a sloped sidewalk adjacent to stepped hardscape areas in order to maintain ADA access.*

3.51 Define facade elements to respond to changes in topography.

a. Step building entrances to follow changes in building foundations.

b. Step windows with topography to ensure a continued visual connection and an active edge for pedestrians.

c. Limit the maximum length of an exposed foundation wall to maintain an active building edge.

d. Limit the maximum height of an exposed foundation wall to maintain a pedestrian scale.

3.52 Step outdoor amenity spaces to follow changes in topography.

a. Use site elements such as seat walls and berms to transition between changes in grade.

b. Integrate landscape elements such as seating, lighting and others with changes in grade

c. Consider locating a sloped sidewalk adjacent to stepped hardscape areas in order to maintain ADA access.

3.53 Provide frequent connections between the public walk to the site and its building(s).

a. Include regularly spaced connections between pedestrian circulation systems and the finished grade of a project site.

b. Avoid using sheer sitewalls that limit pedestrian access into a site from the public way.

3.54 Retaining walls are subject to the same guidance as blank walls. Use one or more of the following methods:

- Vertical landscaping
- Public art
- Change in materials and color
- Integrate seating into wall

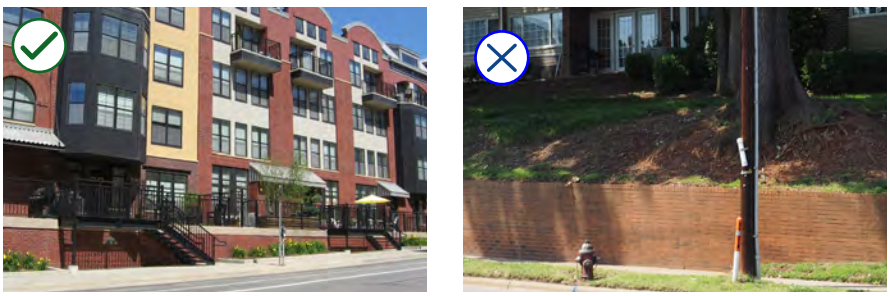


Figure 3-53 *Provide frequent connections between the public walk and to the site and its building(s).*

Service Areas & Utilities

Service areas and utilities include loading docks, trash areas, electrical stations, cabinet structures and other necessary functions. They should be located and designed to be visually unobtrusive and integrated with the design of the site and the building. Service areas are typically most appropriate when located to the rear of a building and not visible from the public right-of-way or abutting properties.

3.55 Locate a service area or utility to minimize visual impacts from the street and sidewalk.

a. Locate a service area out of public view, when feasible.

b. Locate a service area away from streets, residential areas or outdoor amenity space.

c. Locate a service area or utility to the side or rear of a primary structure.

d. Orient a service area toward a service lane or alley.

e. Locate a service area to minimize conflicts with other abutting uses.

3.56 Enclose a free-standing utility or service area.

a. Design a service area or utility to be visually subordinate.

b. Use a similar material and color palette for service areas and utilities, when separate from a primary building.

c. Screen the entrance to a service area or utility with a solid gate made from painted metal, wood or other high-quality, non-reflective material that is detailed for visual interest.

d. Do not use chain link fencing.

ACCESS TO SERVICE AREAS

The LUMO provides additional information on Service Area access (Sec. 3.11.4.1.G) and screening (Sec. 3.11.4.2.E).

Figure 3-55 *Locate a service area or utility to minimize visual impacts from the street and sidewalk.*

Figure 3-56 *Enclose a free-standing utility or service area.*

SERVICE AREA LIGHTING

Additional lighting information can be found in these design guidelines (Chapter 4, pg. 101) or in the LUMO (Sec. 3.11.4.4).

3.57 Provide lighting for service areas and utilities.

a. Use a lighting fixture(s) that supports safe navigation of the area.

b. Choose a lighting fixture that is compatible with a building and site design in its size, design and material.

c. Shield site lighting to minimize off-site glare.

3.58 Integrate mechanical equipment into the design of a building.

a. Integrate service areas and utilities into a building wall, when feasible.

b. Consider integrating a service or utility area into a gap in a side or rear building wall.

Figure 3-56b *Use a similar material and color palette for service areas and utilities, when separate from a primary building.*

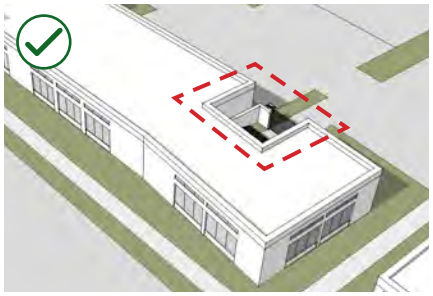


Figure 3-58 *Integrate mechanical equipment into the design of a building.*

Drive-Thru Areas

Drive-thru facilities should provide convenient access and safe circulation. Individual corporate identity can be accommodated while also keeping the facility subordinate to the street scene and the center within which the use is located. In Chapel Hill a drive-thru area includes, but is not limited to menu boards, stacking lanes, trash receptacles, ordering box, drive up windows.

A key concern is the location of queuing lanes and their interaction with the street edge, internal drive aisles and views from the right-of-way. Traffic impacts of queuing lanes on internal circulation to a development should be minimized to reduce impacts to internal congestion. To minimize the visual impacts of cars queuing at a drive-thru, these facilities should be placed away from a street frontage.

DRIVE-THRU FACILITIES

Refer to the LUMO for additional information on Drive-Through Facilities (Sec. 3.11.4.1.F).

3.59 Design a drive-thru area to be subordinate to the principal structure on a site.

a. Locate a drive-thru area behind the principal structure on a site.

b. Locate a queuing lane to minimize visual impacts on a public street.

c. Screen drive-thru aisles from the view of street frontages and adjacent parking areas. Use one or more of the following:

- Landscaping
- Site wall
- Site fence

Figure 3-59 *Design a drive-thru to be subordinate to the principle structure on a site.*

3.60 Locate a drive-thru area to avoid conflicts with internal circulation.

a. Locate a drive-thru area to avoid intersecting exiting pedestrian walkways.

b. Locate a drive-thru entrance to avoid conflicts with internal drive aisles.

Figure 3-60 *Locate a drive-thru area to avoid conflicts with internal circulation.*

3.61 Coordinate the design elements of a drive-thru area with the primary structure.

a. Use a similar material and color palette for the elements within a drive-thru area.

Figure 3-61 *Coordinate the design elements of a drive-thru area with the primary structure.*

3.62 Locate menu board speakers to protect adjoining residential areas from excessive noise.

Stormwater Management

Stormwater management addresses the conveyance and treatment of rainfall and other surface water entering a site. Low Impact Development (LID) is a specific development strategy to address stormwater in a way that closely mimics the natural, pre-development, hydrologic system. Integrating stormwater management and LID principles into the design of a site not only helps address stormwater effectively, but also can be used to create additional green spaces and amenity spaces to activate an area. For this reason, properly integrated LID and stormwater management practices help achieve the goals of these design guidelines overall. The guidelines that follow complement landscape requirements in the LUMO.

ADDITIONAL STORMWATER MANAGEMENT INFORMATION

For additional information on Stormwater Management, see the LUMO (Sec. 3.11.4.3), the North Carolina Stormwater Design Manual and other North Carolina Department of Environmental Quality resources.

Figure 3-63 *Incorporate Low Impact Development (LID) principles, such as stormwater planters and permeable pavement, to mitigate stormwater impacts.*

3.63 Incorporate Low Impact Development (LID) principles to mitigate stormwater impacts.

a. Incorporate a natural drainage way as an amenity into the site plan.

b. Avoid altering or obscuring natural drainage ways.

c. Additional LID management systems include:

- Permeable surfaces and paving systems
- Bioretention and other planted drainage areas
- Green roofs, rain barrels/cisterns and other building systems

3.64 Incorporate and design stormwater management systems as site amenities.

a. Possible stormwater management systems include:

- On-site rainwater collection and filtration
- Outdoor amenity space to also serve as rainwater detention/retention area
- Outdoor amenity space, such as a plaza, courtyard or patio, into and around stormwater management areas
- Green roofs to help address stormwater impacts

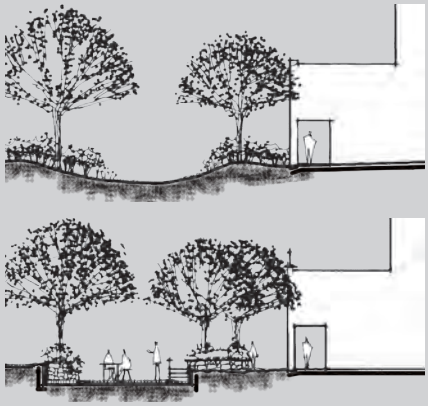
b. Minimize the use of rip rap and other devices that do not appear natural in character.

Figure 3-64 *Incorporate and design stormwater management systems as site amenities.*

LOW IMPACT DEVELOPMENT SYSTEMS AS SITE AMENITIES

Low Impact Development (LID) is stormwater management approach to address rainfall in a way which more closely mimics the natural hydrologic system at the site prior to any development. Techniques include those which infiltrate, store, filter, evaporate and detain stormwater close to the location where the rain fell. LID principles encourage integrating stormwater management systems into landscapes and open space throughout a site. Illustrations, resources and other information regarding LID principles and stormwater management systems are provided below.

STORMWATER RETENTION AREAS AS AMENITIES



The design guidelines promote using LID principles to integrate stormwater management systems with public open space areas. The stormwater treatment areas illustrated above serve as a passive landscape amenity (top) and an outdoor seating area with a permeable surface (bottom).

LID & STORMWATER RESOURCES

Resources to assist with stormwater management strategies and LID principles include:

- Chapel Hill LUMO Section 5.4
- Chapel Hill Public Works Engineering Design Manual, Chapter 4
- North Carolina Division of Water Resources (NCDWR) Stormwater Design Manual
- North Carolina Department of Environmental Quality (NCDEQ) - Best Management Practices Manual
- North Carolina Erosion Control and Sediment Control Planning and Design Manual
- Construction Industry Compliance Assistance (www.cicacenter.org)
- International Stormwater Best Management Practices (BMP) Database (www.bmpdatabase.org)
- EPA Stormwater Discharges from Construction Activities

COORDINATING MANAGEMENT SYSTEMS TO PROMOTE LOW IMPACT DEVELOPMENT

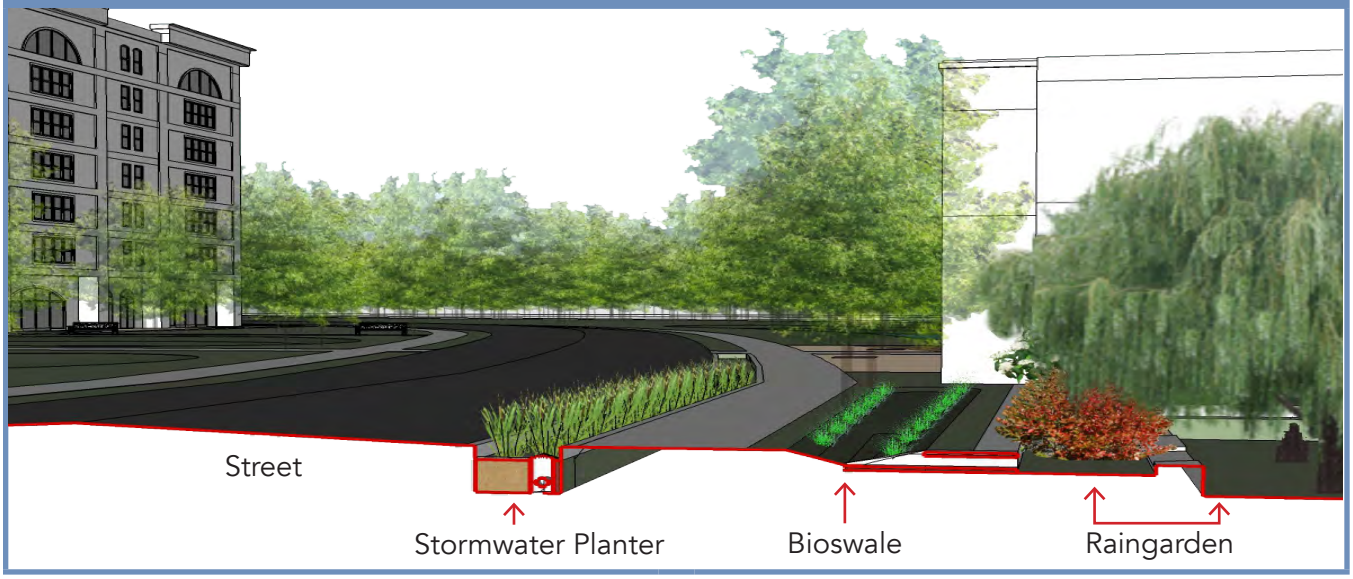


Diagram 3-13 *Low Impact Development Systems as Site Amenities*

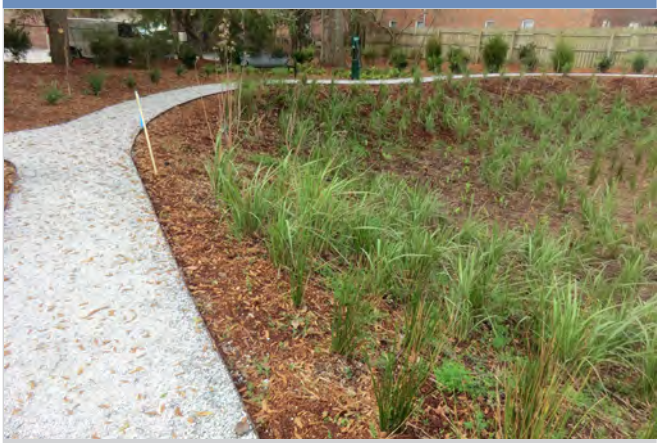
MANAGEMENT SYSTEMS TO PROMOTE LOW IMPACT DEVELOPMENT (LID)

A range of stormwater management systems may be used to implement LID principles for site design. The most commonly-used systems are summarized below and on the next page.

PERMEABLE SURFACES

Permeable surfaces include paving systems that allow rainwater to percolate into the ground underneath. Such systems can significantly reduce runoff generated by parking areas, drive aisles, pedestrian paths and plazas.

BIORETENTION



Bioretention systems manage and treat stormwater runoff in a shallow depression filled with a soil bed and planting materials to filter runoff. They help provide greater site utilization and attractive landscape areas while protecting water quality.

BIOSWALES & VEGETATED SWALES

Bioswales and vegetated swales are linear bioretention systems used to partially treat water while also conveying flows to larger bioretention or other stormwater management systems.

STORMWATER PLANTERS

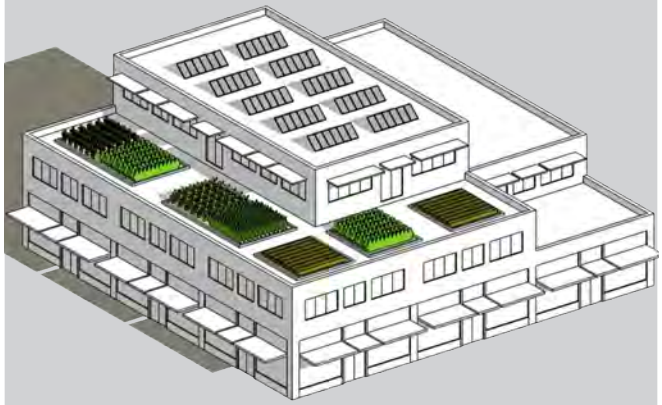
Stormwater planters are specialized planter systems installed adjacent to a sidewalk to manage street and sidewalk runoff. The planter is lined with a permeable fabric, filled with gravel or stone, and topped off with soil, plants, and sometimes trees.

Diagram 3-14 *Management Systems to Promote Low Impact Development (LID)*

RAIN BARRELS

Rain barrels are storage devices that collect rain water for reuse in lawn and garden watering or other uses. They are generally connected to roof gutter systems.

GREEN ROOFS



Green roofs and roof gardens are vegetated roof systems that help detain, filter and absorb rainfall. They may also provide heating and cooling benefits for the building.

TREE PRESERVATION

Preserving mature trees helps manage the rate at which rainfall reaches the ground to provide benefits for stormwater management.

CLUSTERING/OPEN SPACE DEVELOPMENT

Clustering is an overall site design strategy that concentrates development and impervious surfaces on a portion of the site to allow other areas to remain natural. This strategy can reduce stormwater pollution, construction costs and the need for regrading.

Phased Improvements

Some projects may involve incremental improvements to an existing development on a site. While phased improvements will include long term objectives for the area and site, some flexibility in the application of the design guidelines is appropriate for such projects to ensure that development is able to respond to current market conditions.

3.65 When locating a new building on a site with existing ones, consider improving the urban fabric in the following ways:

- Expand an existing building by extending it closer to the street.
- Locate a new building between the street and a parking area when existing buildings are located to the rear of a lot, behind a surface parking lot.
- Improve pedestrian and vehicular circulation to include connections between new additions or developments.

3.66 Plan incremental improvements to accommodate future development.

a. Locate small-scale improvements to accommodate future vehicular and pedestrian connections. For example, walkways, parking areas and drive aisles may be set up to accommodate future redevelopment.

3.67 Design phased improvements to enhance the pedestrian environment of an existing development.

a. Site new buildings to maximize street frontage and minimize the visual impact of parking areas.

b. Place improvements to enhance the pedestrian environment. For example, new buildings and public open space areas may be located to create a pedestrian gateway into the site.

c. Plan for later pedestrian improvements, such as connections between the street and interior buildings, or to an adjacent neighborhood, when locating a new building or addition.

PHASED REDEVELOPMENT OF AN EXISTING SITE

In some cases, redevelopment of a site may be phased so that incremental improvements build towards long term objectives for the area and site. In the example illustrated below, an auto-oriented shopping center site is redeveloped in a series of phases. Each phase builds on previous phases, ultimately producing a long-term redevelopment scenario that promotes the vision for the Blue Hill District with a variety of shops, restaurants, businesses and residences in a pedestrian-oriented setting.

EXISTING CONDITION

Commercial development is located to the rear of the site, separated from the street edge by surface parking.

INTERMEDIATE PHASE OF REDEVELOPMENT

The site is sub-divided for the development of smaller projects. These new projects activate the public street edge and improve the walkability of the site interior with sidewalks and outdoor amenity spaces.

FINAL PHASE OF REDEVELOPMENT

Surface parking is consolidated into an on-site structure providing space in the site interior for new higher-density, mixed-use development projects.

Diagram 3-15 *Phased Redevelopment of an Existing Site*

Sensitive Site Design Transitions

Figure 3-68 *Design a site with a new land use to be compatible with adjacent neighborhoods.*

Sensitive site design transitions should be developed to reduce conflicts between adjacent sites with different uses. The most typical transition in the Blue Hill District is a commercial property adjacent to a residential property. Where a potential conflict occurs, a sensitive transition that limits the potential negative effects from the commercial activity on the residential property should be incorporated into the design of the development. Site design adjacent to an existing or future residential neighborhood should provide a compatible transition that minimizes potential negative impacts while promoting positive connections. Designs that incorporate compatible uses and designs, and which link commercial and mixed-use areas with the adjacent residential neighborhoods are generally preferred as illustrated in "Strategies to Promote a Compatible Transition to an Adjacent Low-scale Development or Neighborhood" (Diagram 3-18).

Sensitive transitions are also important for a project's interface with Booker Creek. A building should be placed to sensitively transition to this natural feature.

Figure 3-68a *Place and orient buildings to minimize potential negative impacts on an adjacent residential neighborhood.*

3.68 Design a site with a new land use to be compatible with adjacent neighborhoods.

a. Place and orient a building to minimize potential negative impacts on an adjacent residential neighborhood.

b. Avoid orienting the rear of a building toward an adjacent residential neighborhood.

c. Avoid creating an impassible barrier between a newly developed site and an adjacent neighborhood.

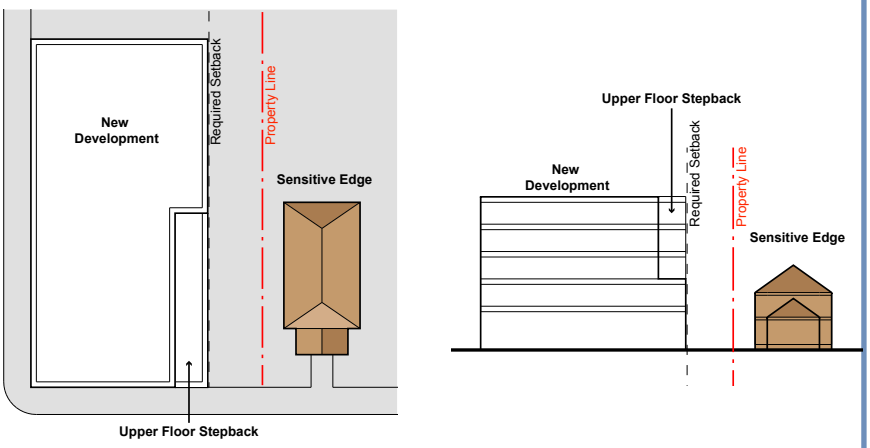
d. Do not locate a mechanical or service area directly adjacent to a residential neighborhood.

STRATEGIES TO PROMOTE A COMPATIBLE TRANSITION TO AN ADJACENT LOW-SCALE DEVELOPMENT OR NEIGHBORHOOD

Provide a transition in scale to prevent a looming wall and minimize the negative visual effects of a larger building on an adjacent low-scale property. The intent is also to respond to the building placement patterns of the District. Sensitive edge conditions involve low-scale development and residentially zoned properties. Use one or more of the following options to address a sensitive edge condition.

UPPER FLOOR STEPBACK

Provide an upper floor stepback along a side lot line that is a sensitive edge. This option is particularly effective when the sensitive edge is a low-scale residentially-zoned property.



INCREASED SIDE SETBACK

Provide an increased side setback along a side lot line that is a sensitive edge. This option is effective when the sensitive edge is a low-scale residentially-zoned property.

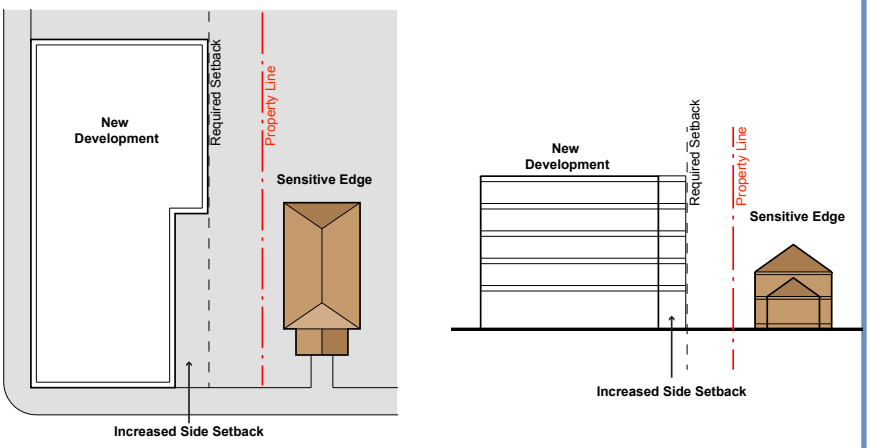


Diagram 3-16 *Strategies to Promote a Compatible Transition to Adjacent Neighborhood Developments*

Figure 3-69 *Minimize negative impacts of a commercial operation on an adjacent residential property.*

3.69 Minimize negative impacts of a commercial operation on an adjacent residential property.

a. Locate a commercial activity that generates noise, odor or other similar impacts away from the shared lot line with a residential property.

b. Where a commercial use is adjacent to a residential use, buffer or screen the commercial activities. This could include a buffer area with landscaping and outdoor amenities such as an exercise area, picnic area or pedestrian walkway.

c. Where a fence or physical barrier is needed to minimize negative impacts from the commercial operation, utilize a barrier that retains some transparency.

3.70 Provide pedestrian, bike and vehicular connections to adjacent neighborhoods.

a. Where possible, extend paths or small vehicular lanes to connect with streets and paths in an adjacent neighborhood.

b. Design pedestrian and vehicular circulation systems to consider potential future connections to adjacent neighborhoods.

c. Incorporate breaks in a landscape buffer to allow for pedestrian and bicycle connections.

d. Do not incorporate continuous walls, fences or landscaping that prevents pedestrian or bicycle connections across a landscaped buffer area.

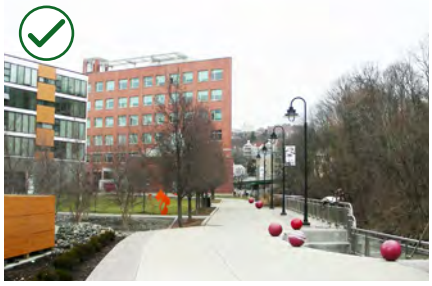


Figure 3-70 *Provide pedestrian, bike and vehicular connections to adjacent neighborhoods.*

3.71 Design site transitions to connect to future/ proposed developments.

a. Transition areas should be pedestrian-friendly and allow access between properties.

b. Site transitions should be designed to be compatible with adjacent public and private landscape areas.

Figure 3-71 *Design site transitions to connect to future/proposed developments.*

3.72 Design a landscape buffer area to include shared amenities. This may include:

- Multi-use paths
- Picnic areas
- Exercise areas
- Playgrounds
- Water features, including landscaped stormwater management facilities
- Other landscape features

Figure 3-72 *Design landscape buffer areas to provide shared amenities.*

3.73 If a property is located along a curved portion of Booker Creek, place a building edge(s) to respond to the Creek's curvilinear shape and to activate a community amenity. Appropriate placements include:

- Curved
- Angled
- Rectilinear
- Stepped

LANDSCAPE BUFFER AND BUILDING SETBACK ALONG BOOKER CREEK

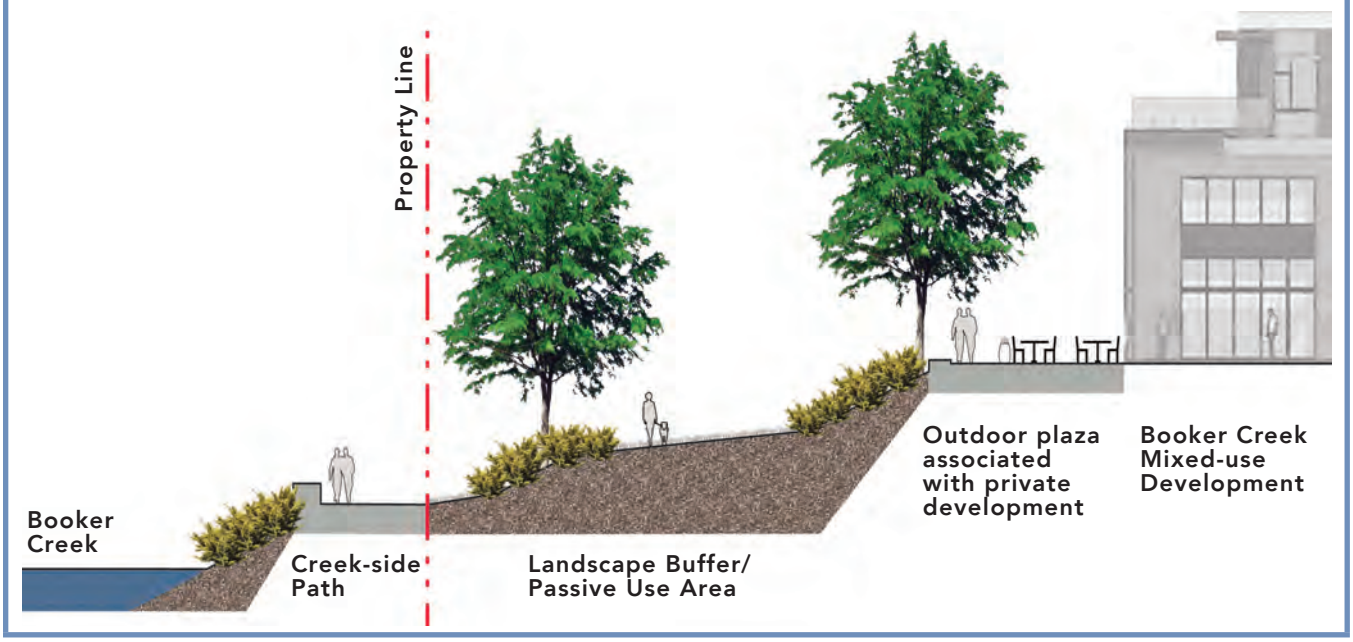
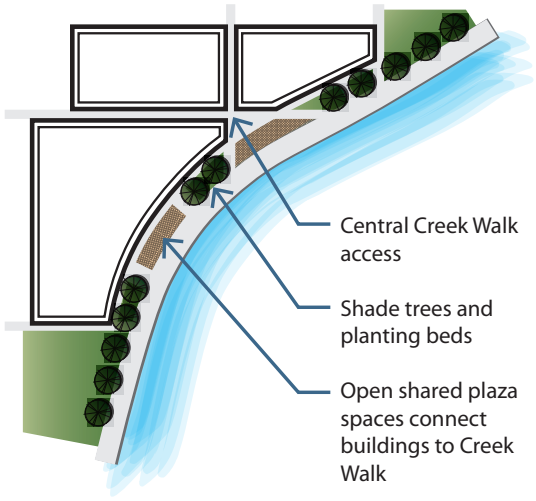


Diagram 3-17 *Landscape Buffer and Building Setback Along Booker Creek*

BUILDING PLACEMENT ADJACENT TO BOOKER CREEK

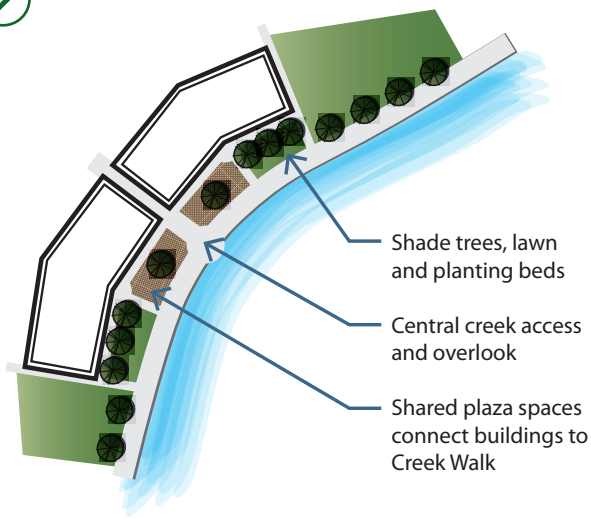
Buildings adjacent to Booker Creek should be designed to respond to the Creek's natural alignment, while also framing pedestrian access and outdoor amenity space.

CURVED



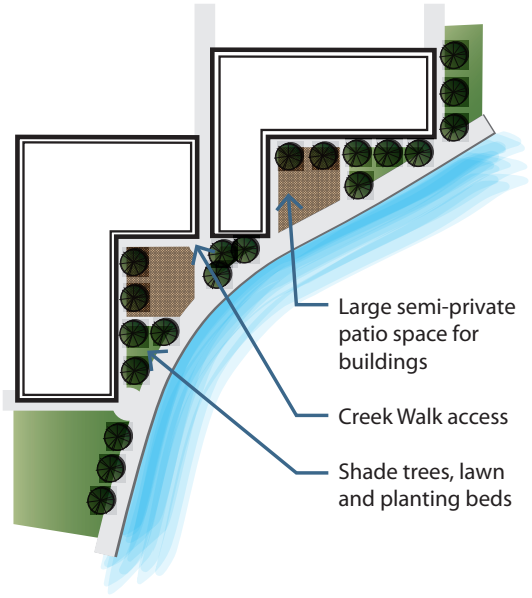
These buildings match the curvature of the creek and activate the Creek Walk with plaza spaces and pedestrian access.

ANGLED



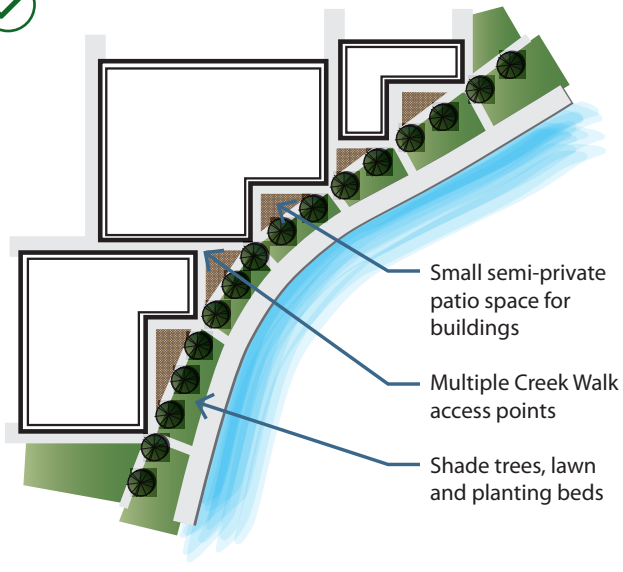
Angled buildings frame the Creek and provide plaza space and a centralized creek access.

RECTILINEAR



Rectilinear buildings are placed along the Creek so that they provide triangular plazas and open space along the Creek Walk.

STEPPED



A series of buildings provides a "stepped" edge to the Creek. Open space along the Creek Walk is broken up and distributed more evenly along the edge of the site.

Diagram 3-18 *Building Placement Adjacent to Booker Creek*

BUILDING DESIGN 4

This section addresses the design of new buildings in the Blue Hill District. Building design addresses the visual and functional character of a building, including its relationship to surrounding development. Key design topics include: character, height, scale and materials. The objective is to promote designs that enhance the pedestrian experience and create a sense of place throughout the District. High quality, innovative designs are preferred and they should appear in scale with eachother. Active ground floor uses that enhance the pedestrian experience are especially welcomed.

ADDITIONAL INFORMATION

In addition to the building design guidelines that follow, review the North Carolina Fire Code and Chapter 7 of the Town Code of Ordinances to learn more about the fire code requirements for building stepbacks, setbacks and forecourts.

IN THIS CHAPTER

Architectural Character

Consistency in architectural character and high-quality design of its own time is crucial for new development in the Blue Hill District. A building should reflect the traditions of Chapel Hill while developing an updated aesthetic within the District. Architecture should provide a pedestrian-friendly ground floor and active street edge.

Figure 4-1 *Innovative new design that draws upon regional design tradition is preferred.*

Figure 4-1b *Standardized "corporate" style architecture is discouraged.*

Figure 4-2 *Create a pedestrian-friendly atmosphere with all new projects.*

4.1 Innovative new design that draws upon regional design traditions is preferred.

a. Design a building to provide a sense of authenticity in its form and materials.
b. Standardized corporate architecture is discouraged.

4.2 Create a pedestrian-friendly environment with all new projects.

a. Use architectural devices that promote shading and cooling. These include:
   - Awnings
   - Canopies
   - Arcades
   - Matte finish materials

b. Use building elements to create a street edge that invites pedestrian activity. These include:
   - First floor canopies that complement the character of the building and its street front
   - Architectural details that provide a sense of scale
   - Wall surfaces with visually interesting detailing, textures and colors
   - Art including sculptures, friezes and murals

c. Develop an active building edge to enhance pedestrian interest. This may include:
   - Building Articulation (Chapter 4, page 83)
   - Architectural Features (Chapter 4, page 89)
   - Building Elements (Chapter 4, page 98)
   - Building Materials (Chapter 4, page 100)
   - Windowless Facade Alternatives (Diagram 4-6)
   - Pedestrian-Friendly Commercial Ground Floor (Diagram 4-7)

Building Mass & Scale

The overall size, height and form of a building help determine how large it appears, and whether it is compatible with the surrounding context. Although a new building may be larger than adjacent buildings, it should not be monolithic in scale or jarringly contrast with neighboring development. A new building should use articulation techniques to provide a sense of scale. These include varied heights, smaller building masses and articulated façades.

BUILDING AND STORY HEIGHT

Measuring building and story height is addressed by the LUMO (Sec. 3.11.2.7.K).

Appropriate building height and placement limits for each of the zone subdistricts are identified in the LUMO (Sec.3.11.2.3-3.11.2.4.) The following guidelines provide further clarification on how the design of a building can enhance the pedestrian environment through varied massing, height and a combination of building articulation methods.

BUILDING HEIGHT

New development must meet zoning requirements in Blue Hill while stepping down to create smooth transitions with adjacent lower-scale residential buildings.

4.3 Provide variation in building heights.

a. Incorporate height variations to reduce the scale of a building.
b. Use variation in building and parapet heights to add visual interest and reduce boxy or monolithic building masses.

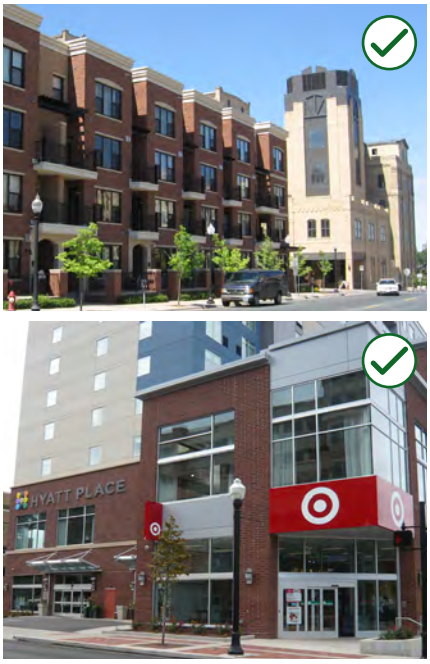
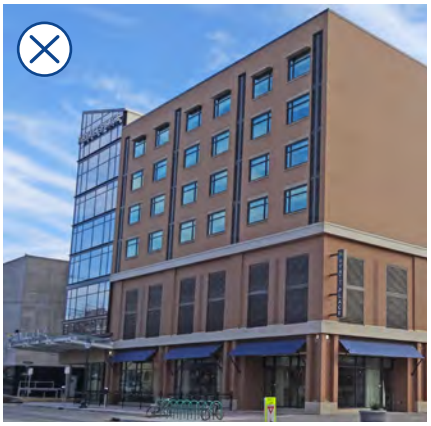


Figure 4-3 *Provide variation in building heights.*

4.4 Locate the taller portion of a structure away from neighboring residential buildings of lower scale or other sensitive edges.

a. Step down a taller, new building toward existing, lower-scaled neighbors.
b. Where permitted by the base zoning, locate towers and other taller structures to minimize looming effects and shading of lower-scaled neighbors.

Figure 4-4 *Locate the taller portion of a structure away from neighboring residential buildings of lower scale or other sensitive edges.*



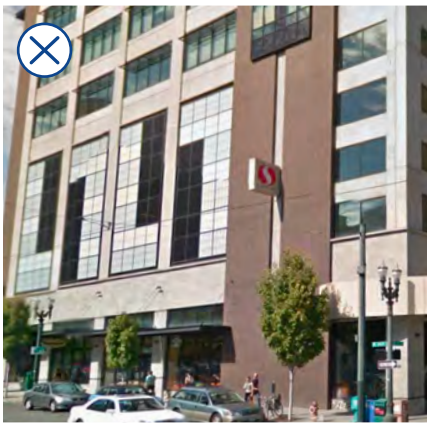


Figure 4-5 *Establish a sense of human scale in the design of a new building.*

BUILDING ARTICULATION

Building articulation includes vertical or horizontal changes in materials, texture or wall plane that influence the scale of a building. New development in the Blue Hill District should incorporate articulation techniques that promote a sense of human scale and divide the mass and scale of a larger building into smaller parts.

4.5 Establish a sense of human scale in the design of a new building.

a. Use vertical and horizontal articulation techniques to reduce the apparent scale of a larger building mass.
b. Use articulation techniques in proportion to a building's overall mass. For example, deeper insets are needed as a building's length increases.
c. Apply materials in units, panels or modules that help to convey a sense of scale.
d. Create a sense of texture through shadow lines which also provide a sense of depth and visual interest.

HUMAN SCALE BUILDING DESIGN

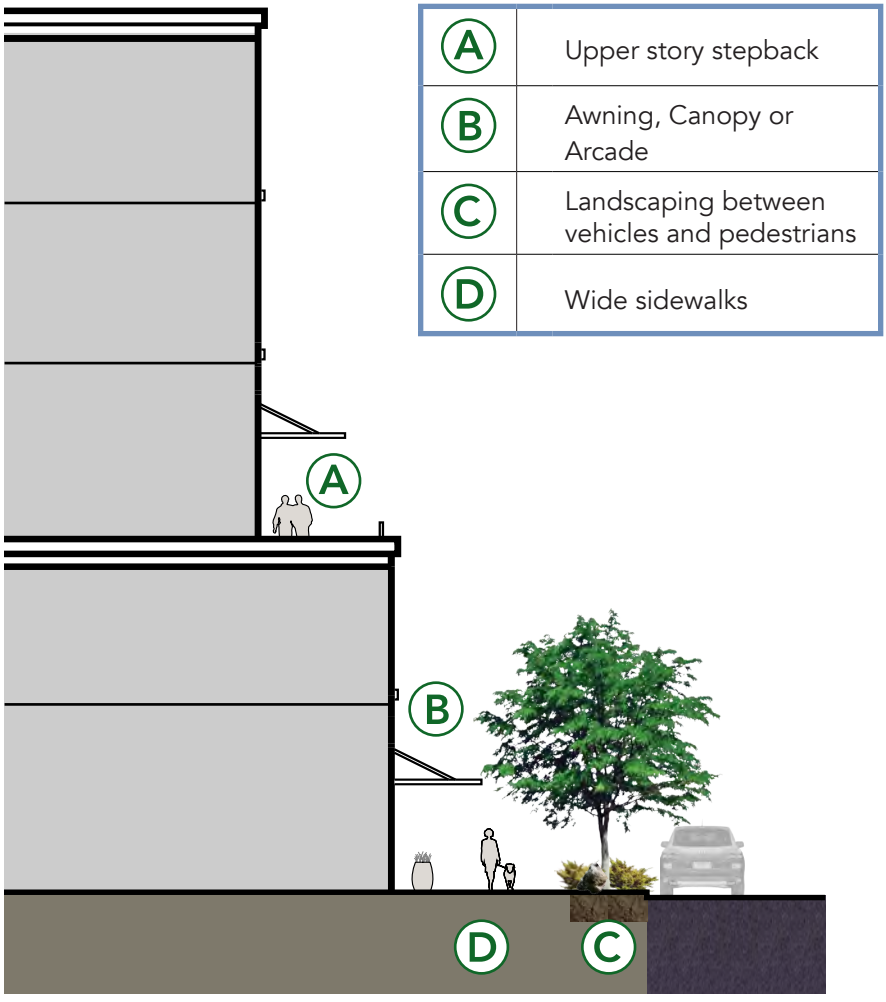


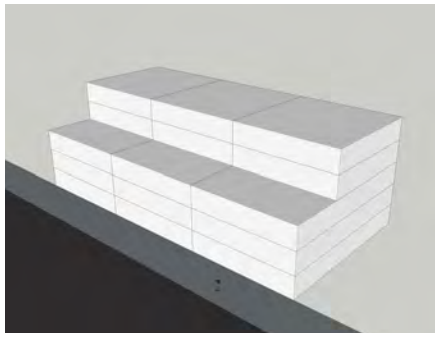
Diagram 4-1 *Human Scale Building Design*

OPTIONS FOR VARIED BUILDING MASSING

Building massing techniques can be used to reduce the overall appearance of a building while also helping to create a more interesting building form. Stepping down the mass of a building adjacent to a pedestrian way or sensitive area will provide a smooth transition to a lower scale.

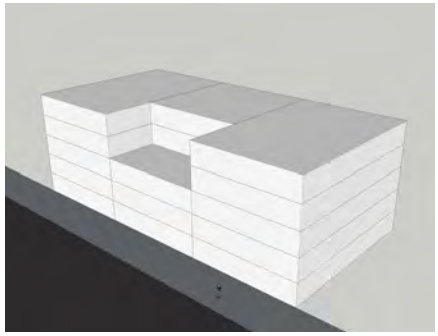
1. FRONT STEPBACK

A front stepback reduces the mass of a building along the street frontage.



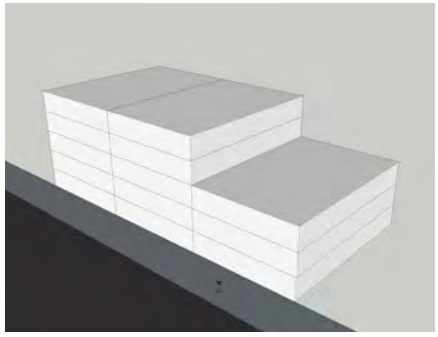
2. MIDDLE STEPBACK

A middle stepback reduces the central mass of a building by expressing different modules.



3. SIDE STEPDOWN

A side stepdown reduces the mass of a building to provide a transition to a neighboring building of smaller scale or a pedestrian connection.



4. REAR STEPDOWN

A rear stepdown provides a transition between the rear of a building and a sensitive area such as an adjacent residential area or outdoor amenity space.

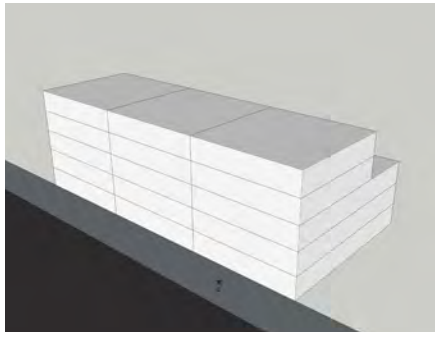


Diagram 4-2 *Options for Varied Building Massing*

Figure 4-6 *Incorporate horizontal expression lines to establish a sense of scale.*

Figure 4-7 *Provide vertical articulation in a larger building mass to establish a sense of scale.*

Figure 4-8 *Use materials to convey a sense of human scale and visual interest to pedestrians.*

Figure 4-9 *Incorporate balconies to create depth and interest on a building façade.*

4.6 Incorporate horizontal expression lines to establish a sense of scale.

a. Use moldings, a change in material, or an offset in the wall plane to define the scale of lower floors in relation to the street.
b. Align architectural features with similar features along the street, where a distinct alignment pattern already exists.

4.7 Provide vertical articulation in a larger building mass to establish a sense of scale.

a. Use moldings, columns, a change in material or an offset in the wall plane to define different building modules.
b. Organize modules to reflect traditional lots widths or façade dimensions.

4.8 Use materials to convey a sense of human scale and visual interest to pedestrians.

4.9 Incorporate balconies to create depth and interest on a building façade.

a. Integrate balconies into the design of a building façade to express different modules.
b. Use a balcony to provide shade for the sidewalk or lower balcony areas.

4.10 Vary cornice lines to create visual interest.

a. Create a sense of visual interest by using a variety of cornice heights for individual modules.

Figure 4-10 *Vary cornice lines to create visual interest.*

4.11 Create a sense of visual interest by using a variety of roof heights along the street.

a. Vary roof heights through differences in roof form and parapet height.
b. Vary the roof profile by stepping down some parts of the façade.

Figure 4-11 *Create a sense of visual interest by using a variety of roof heights along the street.*

4.12 Incorporate a roof form that provides a "cap."

a. Define a flat roof form with a distinct parapet or cornice line. This can help reinforce a vertical base, middle and cap building articulation, and contribute to a sense of iconic design.
b. Use an overhang on sloped roof forms on multi-family buildings. This helps to define the roof as a building cap.

Figure 4-12 *Incorporate a roof form that provides a "cap."*

4.13 Utilize one of the following methods to design a building that is located on the corner:

a. Chamfer the corner and provide a visual connection between the street and the interior at the ground level.
b. Curve the corner of the building.
c. Increase the setback from one or both of the street frontages with a corner plaza.
d. Create an enhanced linear outdoor space along one or both of the street frontages.

BASE, MIDDLE, CAP DESIGN

On a taller (over two stories) commercial or mixed use building, horizontal articulation techniques may be used in combination to express a traditional base, middle and cap façade composition. This design creates well-defined ground or lower floors and a distinctive "cap" element that frame middle building floors.

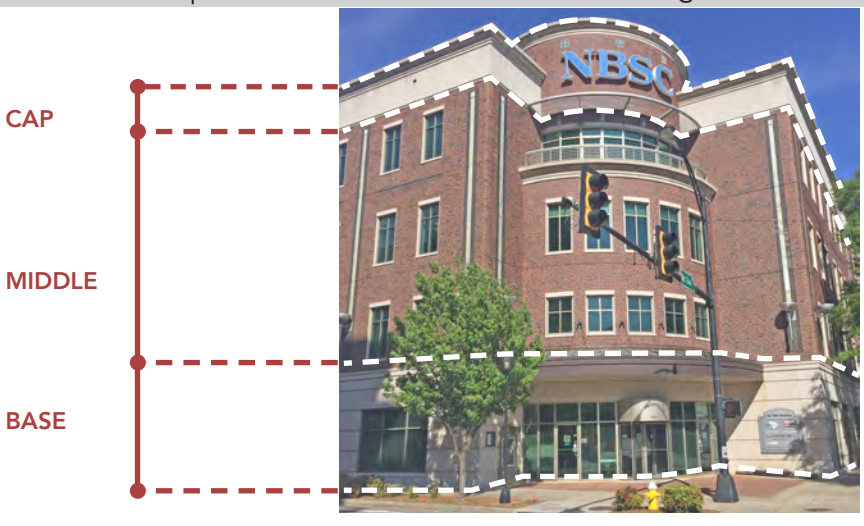


Diagram 4-3 *Base, Middle, Cap Design*

OPTIONS FOR BUILDING ARTICULATION

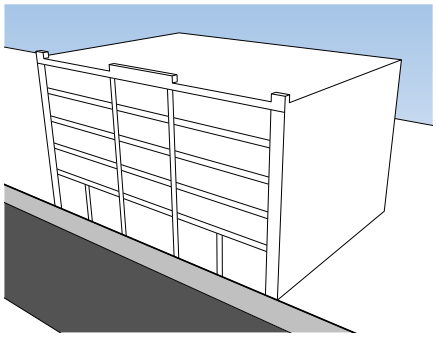
The design options described and illustrated below and on the next page may be used individually, or in combination, to meet the intent of the design guidelines for building articulation. Note that other creative building articulation strategies may also be appropriate.

1. ACCENT LINE

Accent lines include vertical and horizontal moldings and attached columns, as in this example. An accent line often projects sufficiently from the face of a building wall to cast a distinct shadow.

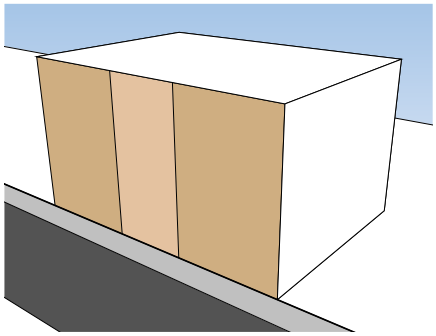
Examples include:

a. Moldings
b. Sills
c. Cornices
d. Canopies



2. COLOR CHANGE

Color changes may occur as significant vertical or horizontal design on a building wall. In this example different façade modules vary in color.



3. MATERIAL CHANGE

Material change may appear as a significant vertical or horizontal surface. In this example of townhomes, a change in material expresses each unit.

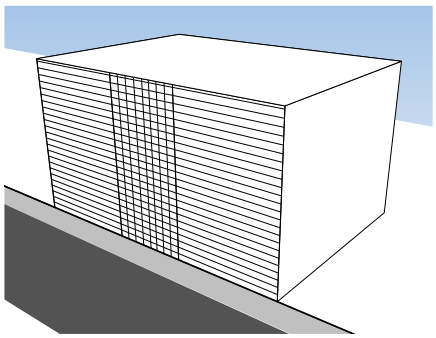
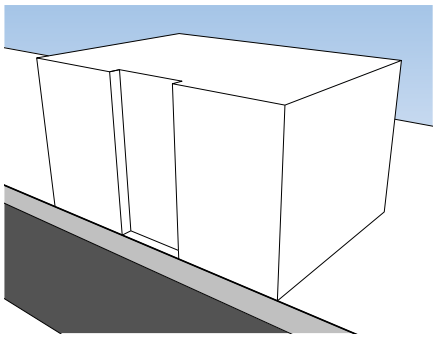


Diagram 4-4 *Options for Building Articulation*

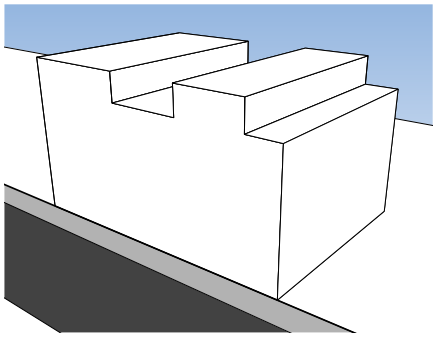
4. MINOR WALL OFFSET

A minor wall offset is a vertical expression line created by notching a building wall for its full height. Minor wall offsets are typically 5 feet or less. In this example the central bay is inset from the flanking walls.



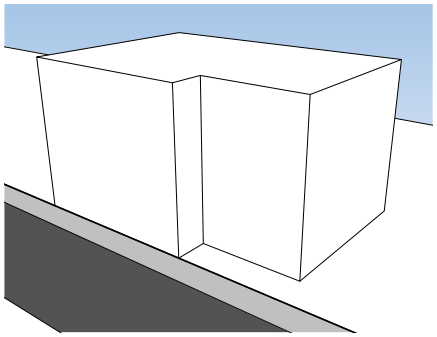
5. HEIGHT VARIATION

A variation in height may occur as a setback of part of a floor or a change in roof line. In this example of a single building, a portion on the right is one story less than that on the left.



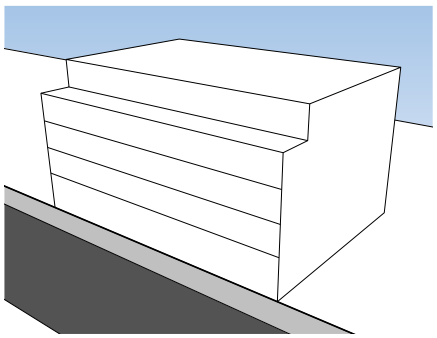
6. INCREASED WALL SETBACK

An increased setback is similar to a minor wall offset, but with a larger dimension. It often provides an outdoor amenity space along part of the front of a building.



7. UPPER FLOOR STEPBACK

An upper floor stepback is similar to an increased setback, but it only occurs on an upper floor(s). In this example, a portion of the fourth floor is set back from the front wall plane.



COMBINING BUILDING ARTICULATION METHODS

A single building articulation method is typically insufficient to achieve a desired design outcome or promote architectural creativity. Combining multiple methods into a single building is highly encouraged. As shown in Diagram 4-5, a building often includes some or all of the building articulation methods identified previously in Diagram 4-4..

Diagram 4-5 *Combining Building Articulation Methods*

- **A1** Accent Lines
- **A2** Color Changes
- **A3** Material Changes
- **A4** Minor Wall Offsets
- **A5** Height Variation
- **A6** Increased Setbacks
- **A7** Upper Floor Stepbacks

Architectural Features (Design Elements)

Architectural features such as windows, doors and materials help establish a building's character and help convey a distinct community image for the Blue Hill District. Such features are those that add visual interest and create a unique sense of place, while encouraging pedestrian activity. When a new building is located such that it becomes a view terminus, it should be designed to be visually interesting.

OVERALL FAÇADE CHARACTER

A building façade should incorporate high-quality design features that enhance Chapel Hill's community image and convey an active and vibrant appearance. The design guidelines below apply to façade areas that face public streets, the pedestrian way or parking lots. They are especially important for visible façades along a major commercial corridor such as Fordham Boulevard and major interior cross-streets such as South Elliott Road.

4.14 Design a building façade to enhance community image.

a. Incorporate design features that add depth and detail, such as deep roof eaves and changes in the façade plane that create patterns of light and shadow.
b. Use high-quality building materials on visible façades.

4.15 Design a building façade to be compatible with its context.

a. When possible, align canopies, windows and roof cornices on adjacent buildings.
b. Use materials or other façade features that are compatible with adjacent buildings.

4.16 Design a building façade to convey visual interest.

a. Incorporate façade features such as pergolas, arcades or awnings to add visual interest.

ARCHITECTURAL DESIGN ELEMENTS

Additional Town code information on building entrances can be found in the LUMO (Sec. 3.11.2.3 - Sec. 3.11.2.7).

ADDING VISUAL INTEREST TO A BUILDING

Refer to "Design Options for Addressing Windowless Facade Areas" (Diagram 4-6) for more information.

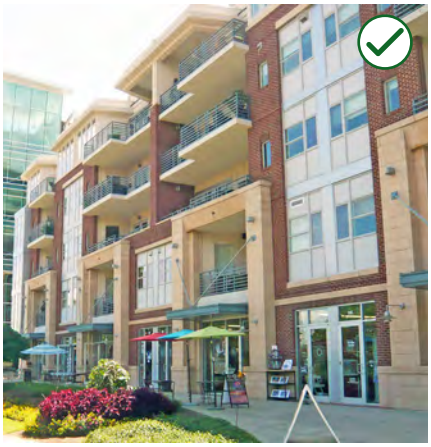


Figure 4-16 *Design a building façade to convey visual interest.*

Figure 4-14a *Incorporate design features that add depth and detail.*

Figure 4-15b *Use materials or other façade features that are compatible with adjacent buildings.*

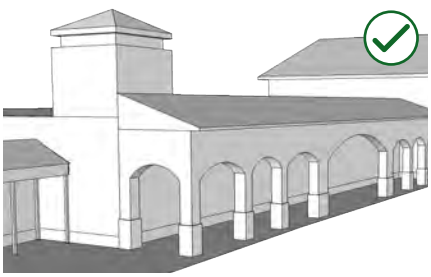
DESIGN OPTIONS FOR ADDRESSING WINDOWLESS FAÇADE AREAS

In some cases, a building may have windowless façade areas where the interior contains parking, retail shelving, storage or other inactive uses. The design options illustrated below are appropriate methods of meeting the intent of Guideline 4.17 on page 91 by promoting an active appearance on a windowless façade area facing a sidewalk, parking area or other public frontage.

Note that other creative strategies are also appropriate to address windowless façade areas, including the "Design Options for a Pedestrian-Friendly Ground Floor" on page 92.

1. ARCADES

An arcade or loggia can help create a more transparent appearance on an otherwise windowless façade while also adding visual interest.

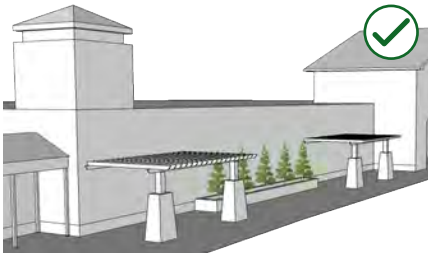


2. ARCHITECTURAL DETAILS/SCREENS

Details such as architectural screens or patterned materials can help create a more active appearance and add visual interest on a windowless façade.

3. PERGOLAS/ STRUCTURES

Pergolas or other landscape structures can help soften the view of a windowless façade and help create a more active appearance.



4. VERTICAL TRELLIS/ LANDSCAPING

A vertical trellis allows vines and plants to cover blank wall areas and provide visual interest. A vertical trellis may work in combination with a raised planting bed.

Diagram 4-6 *Design Options for Addressing Windowless Facade Areas*

GROUND FLOOR DESIGN

Building design should incorporate features that help create a pedestrian-friendly street level. High-quality ground floor design considers elements such as height, transparency, entrance location, canopies and awnings. In mixed-use areas, it is especially important to incorporate active features into the ground floor such as plazas and storefront windows. In residential areas, the ground floor may incorporate other design features, such as porches and stoops, to engage the sidewalk and street.

The LUMO establishes ground floor standards for transparency percentages, story height limits, elevation requirements, limits on blank walls and others. The following guidelines expand on those standards to provide additional pedestrian-oriented strategies that help activate the street edge.

4.17 Design the ground floor to engage the public realm and promote pedestrian activity.

a. Incorporate recessed entries, courtyards or other setbacks in the ground floor façade.
b. Use design features such as windows, display areas and awnings to engage the street and add pedestrian interest.
c. Avoid long blank wall areas that will diminish pedestrian interest. Instead, add visual interest to blank walls through at least one of the techniques shown in Diagram 4-7.

4.18 Incorporate a high level of ground floor transparency when designing a new commercial or mixed-use building.

4.19 Use building materials to define the ground floor and add visual interest.

a. Use changes in material to add ground-floor interest.
b. Define the ground floor of a building by incorporating a different material, color or texture.

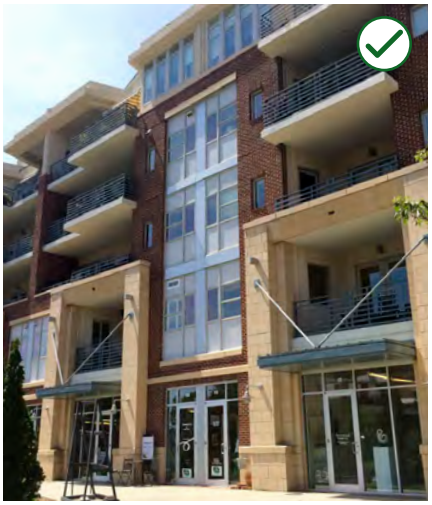


Figure 4-18 *Incorporate a high level of ground floor transparency when designing a new commercial or mixed-use building.*

Figure 4-19 *Use building materials to define the ground floor and add visual interest.*

APPLICATION OF MATERIALS

See "Building Materials" on pg. 100 for additional guidance on the application of materials.

DESIGN OPTIONS FOR A PEDESTRIAN-FRIENDLY GROUND FLOOR

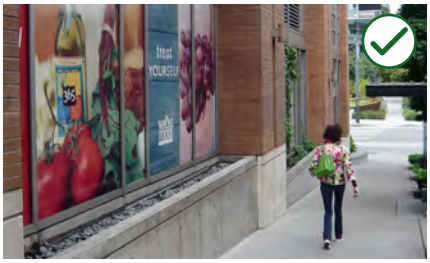
The design options described and illustrated below may be used individually, or in combination, to meet the intent of the design guidelines for ground floor design on page 91. In most cases, the street level of a building should incorporate windows and other pedestrian-friendly features.

1. WINDOWS

Commercial buildings should incorporate a high percentage of transparent glass to actively engage the street and sidewalk. Windows may be combined with canopies, awnings, planters and other features to enhance the street level.

2. DISPLAY AREAS

Display cases or other product displays can create pedestrian interest and engage the street and sidewalk. Such treatments are especially appropriate along an otherwise windowless façade.



3. CANOPIES AND AWNINGS

Canopies and awnings help define the street-level pedestrian area and may provide shade or highlight entries and storefront windows.

4. WALL ART

Wall art, mosaics and murals add interest, especially along an otherwise windowless façade.

5. PLANTERS/ LANDSCAPING

Integrated planters, large pots or other areas for landscaping add interest along the building façade and help engage the street and sidewalk.

Diagram 4-7 *Design Options for a Pedestrian-Friendly Ground Floor*

PRIMARY BUILDING ENTRANCE

The primary entrance of a structure should be oriented to a street, major sidewalk, pedestrian way, plaza, courtyard or other outdoor public space. The objective is to provide a sense of connection with the neighborhood and add "eyes on the street." In most cases, orienting the entrance toward the street is preferred, but in some designs, orienting an entrance to an active courtyard that is visible from the street will accomplish the same objective.

4.20 Design the main entrance to be clearly identifiable.

a. Use an architectural element(s) to highlight an entrance, and to provide weather protection, where feasible. Potential treatments include:
   - Canopy
   - Awning
   - Arcade Portico
   - Building recess
   - Moldings
   - Change in material
   - Change in color

b. Use variation in building mass and height to highlight a main entrance.

4.21 Orient the primary entrance of a building to face a street, plaza or pedestrian way.

a. Orient the primary entrance towards the street.
b. Use a "double-fronted" design that provides an entry to the street and another to an outdoor amenity space, plaza or a parking lot, when present.
c. In some cases, the front door may be positioned perpendicular to the street. Where this is the case, clearly define the entry. This may be achieved by:
   - Incorporating a recessed entry, canopy or awning for commercial/mixed-use building types, or
   - Incorporating a porch, stoop or canopy for residential building types.

4.22 If a property is located along Booker Creek, orient an entry toward this natural feature.

BUILDING ENTRANCES

Additional Town code information on building entrances can be found in the LUMO (Sec. 3.11.2.7.O).

Figure 4-20 *Design the main entrance to be clearly identifiable.*

Figure 4-21 *Orient the primary entrance of a building to face a street, plaza or pedestrian way.*

Figure 4-22 *If a property is located along Booker Creek, orient an entry toward this natural feature.*

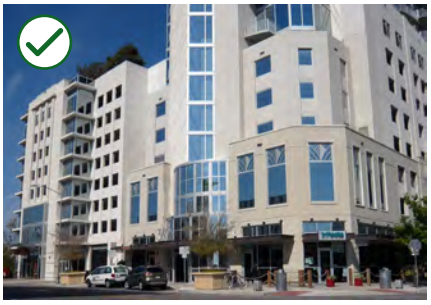


Figure 4-23 *Use an iconic design feature to foster a unique sense of place.*

Figure 4-23a *Incorporate iconic design features such as well-defined entries or tower elements.*

ICONIC DESIGN FEATURES

Iconic design features include those that help define a building, convey a unique appearance, or make an area more memorable. New development in a highly-visible location, such as at the intersection of arterial roads, should incorporate iconic design features. In most cases, large-scale new development projects in any location should incorporate iconic design features for entries, view corridors, building form or roofs.

4.23 Use an iconic design feature to foster a unique sense of place.

a. Incorporate iconic design features such as well-defined entries or tower elements into the design of a new development that is large-scale or located in a highly-visible location. Design an iconic design feature to be in proportion with a building and its features as well as nearby buildings.

4.24 Locate an iconic design feature to maximize its visibility and impact. Appropriate locations include:

- At a primary building entry
- Adjacent to, or at the entrance to an outdoor public space
- At the corner of a building (especially when the building itself is at the intersection of two streets or lanes)
- At the termination of a view or vista (i.e., located to be highly visible when looking down a street or path)

Figure 4-24 *Locate an iconic design feature to maximize its visibility and impact. For instance, locate the feature at the primary building entry,*

Four-sided Building Design

A building's façade strongly impacts the pedestrian experience on an adjacent public space, such as a sidewalk or public open amenity space. All building sides should be designed for public view, using building form and architectural details to create visual interest. The degree of detail may vary depending on the location of the of the wall, but some architectural detail is needed because a blank or featureless building façade can diminish interest. Thus, building design should be considered "in the round." This applies to buildings and parking structures in the Blue Hill District.

FOUR-SIDED DESIGN

See "Understanding Four-sided Design for Buildings" and "Facade Treatments for Four-sided Building Design" (pages 96-97) for additional information on four-sided building design.

4.25 Design a building to provide interest on all sides that will be viewed from the public realm.

a. All faces of a building should include architectural details to avoid presenting a "back side." Visual interest can be provided through a variety of methods, including:
   - Windows and doors
   - Building articulation techniques such as:
     - » Accent lines
     - » Color changes
     - » Height variation
     - » Minor wall offsets
     - » Upper floor stepback
     - » Material changes
     - » Increased wall setbacks
     - » (See Diagram 4-4 for additional information on the list of articulation options)
   - Site walls and raised planters
   - Decorative wall treatments, including:
     - » Wall art
     - » A display window or display cases
     - » Green walls

b. Incorporate active uses on the ground floor to encourage an enjoyable pedestrian experience.

Figure 4-25 *Design a building to provide interest on all sides that will be viewed from the public realm.*

UNDERSTANDING FOUR-SIDED DESIGN FOR BUILDINGS

A key goal in the Blue Hill District Design Guidelines is that buildings be designed to be "four-sided." This means that all walls are to be designed to create visual interest, convey a sense of scale and in some cases to help activate streets, outdoor amenity spaces and large developments. The degree to which an individual wall must have these qualities varies, depending upon the location of the wall. Where walls are highly visible by the public and/or are located near high amounts of pedestrian activity, a high degree of "pedestrian-friendly" features must be provided. In other locations, where walls are less visible, fewer pedestrian-friendly features are required.

Many design guidelines in this chapter provide guidance on how to apply those variables. The degree to which design variables are combined can vary, depending upon the context.

The Intent of Four-sided Design

There are several important objectives associated with the requirement for designing four-sided buildings. These are:

1. To create walls that area visually interesting, as viewed from close up and far away (both from the public way and from within a project)
2. To provide visual interest and a sense of scale for a wall that is viewed close up (usually for pedestrians)
3. To provide views of active uses inside a building (to help animate the adjacent streets or outdoor public amenity spaces)

Different Priorities for Four-sided Design

Even though the overall objective is to design all four sides of a building as attractive elevations, there are some differences in the degree to which this level of design is needed, or merited. Some walls will be seen by observers (pedestrians and motorists) up close and frequently; whereas other walls will be seen less frequently or perhaps at a distance. The degree of design detail that is applied to each wall should reflect these contextual factors:

Determining a Wall Type Classification

Early in the design process, the type of wall categories should be determined.

Key factors in determining priorities for wall treatment are:

- Proximity to a public way (a street or a walkway internal to a project)
- Proximity to a sensitive edge (such as an adjacent residential area or an outdoor amenity space)
- Servicing requirements (an area where utilities or trash storage are to be located, for example)

WALL TREATMENTS FOR FOUR-SIDED BUILDING DESIGN

Wall Type A: High Priority (Primary Wall)

This wall type is highly visible to the public and is important in conveying a sense of scale, visual interest and a pedestrian-oriented activity for the building and its site. This is the "front" of a building, either facing a street, into a development or onto an outdoor public amenity space. It should include a high percentage of glass to display goods and activities inside. (Note that a building may have more than one "Type A" wall, especially in "double-fronted" building scenarios, and when the building is at a highly visible location.)

A High Priority wall:

- Faces a public right-of-way and is in relatively close proximity to it
- Will be seen by users on a regular basis
- Contributes to a clustering of buildings that defines a place

Objectives for High Priority walls:

- Convey a sense of human scale in massing and detailing
- Have a high level of visual interest
- Invite pedestrian activity
- Provide views into interior functions

Wall Type B: Pedestrian-Friendly (Secondary Wall)

These are also in high-traffic areas, but are walls (or portions thereof) where internal functions do not lend themselves to designs with extensive amounts of transparency. On a freestanding pad site in a commercial center, for example, there is likely to be one wall where service doors are located, and public access is not appropriate. Because these are in high-traffic areas, a high degree of wall surface treatment is needed. This may include a broader range of options to achieve visual interest, including wall art or other architectural detailing. (See "Options for Windowless Facades," Figure 4-6)

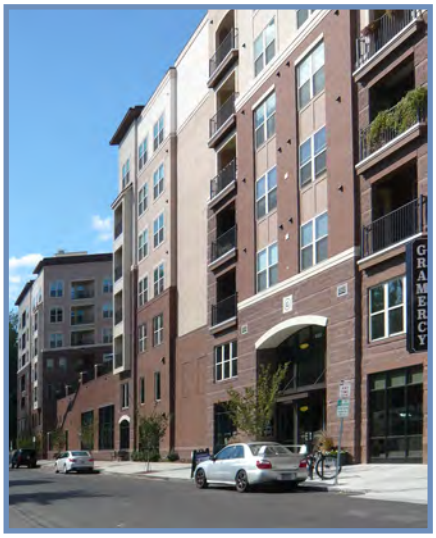
A Pedestrian-friendly wall:

- Faces a pedestrian area
- Will be seen a regular basis
- Includes some "back of house" or service functions

Objectives for Pedestrian-friendly walls:

- Convey a sense of human scale in massing and detailing
- Have a high level of visual interest
- Be compatible with pedestrian activity in the area

Wall Type C: Service-Oriented (Tertiary Wall)



Finally, there are walls that are more remote in terms of public exposure. Even so, the objective is still to assure that these walls are seen as part of coherent design composition a lesser level of detail may be appropriate.

A Service-Oriented wall:

- Is seen by the general public at a distance
- Is less frequently experienced by the general public
- Has service functions as a primary requirement

Objectives for Service Oriented walls:

- Convey a sense of scale in general massing
- Have a moderate level of visual interest
- Convey a sense of relatedness to the overall building design

Building Elements

Building elements - such as balconies, stoops, entries and windows - in the Blue Hill District should be human scaled to increase pedestrian activity. Elements such as forecourts, building arcades and front porches connect buildings to the public realm. Building elements will create visual continuity along the street and a cohesive transition from building to building.

BUILDING ELEMENTS

Additional information on Building Elements design can be found in the LUMO (Sec. 3.11.2.6).

ACTIVE FRONTAGES

See pages 90 and 92 for strategies to promote an active frontage.

4.26 Include building elements to create a street edge that invites pedestrian activity. Potential building elements to incorporate include:

- Building forecourts
- Plazas
- Arcades
- Porches

4.27 Design a forecourt to enhance the pedestrian experience.

- Maintain the street edge
- Engage the street
- Providing interest and activity
- Be accessible

STRATEGIES TO ACTIVATE A FORECOURT

Three strategies that promote an active street frontage for forecourts are illustrated below.

COLONNADE/ARCADE

Extending a colonnade or arcade wall across a forecourt can help maintain an active, pedestrian-oriented street frontage.

SITE WALL

A low wall with plantings to the front or rear can help bridge a forecourt to maintain an active, pedestrian-oriented street frontage.

PLANTERS

A low planter or series of planters can help bridge a forecourt to maintain an active, pedestrian-oriented street frontage.

Diagram 4-8 *Strategies to Activate a Forecourt*

4.28 Expanding the size of a forecourt may be considered as a design alternative when the edge is clearly defined.

a. Expand the design of a forecourt to increase pedestrian interest.
b. Design a forecourt to provide architectural interest and variation in the design of a building.
c. Use strategies as shown in Diagram 4-8 to define the public edge of a forecourt.

Figure 4-28 *Expanding the size of a forecourt may be considered as a design alternative when the edge is clearly defined.*

4.29 Encourage consistency in arcade design.

a. Integrate a building arcade into the design of a building.
b. Use materials for an arcade that are compatible with the primary building.

Figure 4-30a *Include an arcade to provide architectural interest and variation.*

4.30 Design an arcade to improve the pedestrian experience by including elements to:

- Protect pedestrians from the weather
- Create a human-scaled building element
- Create interest by increasing building articulation

a. Include an arcade to provide architectural interest and variation.
b. Use an arcade to create a more transparent appearance.

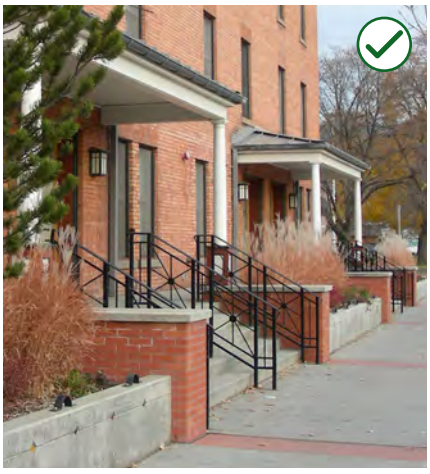


Figure 4-31 *Incorporate a front porch to create a visual and functional connection between a residential building and the street.*

4.31 Incorporate a front porch to create a visual and functional connection between a residential building and the street.

a. Locate a front porch to define a residential entry.
b. Orient a front porch towards the street and sidewalk.

4.32 Incorporate building elements that are visually consistent with elements on adjacent, new buildings.

a. Include building elements that are of a scale and form similar to those on adjacent buildings.
b. Do not copy building elements on adjacent redeveloped sites. Instead, incorporate building elements that are unique to the development but compliment those on neighboring structures.

PERMITTED BUILDING MATERIALS

The LUMO establishes a base list of permitted materials that can be found in Sec. 3.11.2.7.R. These guidelines address the quality and application of building materials.

Figure 4-33 *Incorporate building materials that contribute to the visual continuity of the District.*

Figure 4-34a *Avoid mixing several materials in a way that would result in an overly busy design.*

Building Materials

Exterior building materials and colors should provide a sense of scale and texture and convey design quality and visual interest. Building façades should use high-quality, durable materials that contribute to the visual continuity of the context and convey high quality in design and detail.

4.33 Incorporate building materials that contribute to the visual continuity of the District.

a. Utilize genuine masonry, metal, concrete and glass, where possible.
b. Avoid using imitation or highly reflective materials.

4.34 Develop simple combinations to retain the overall composition of the building.

a. Avoid mixing several materials in a way that would result in an overly busy design.

4.35 Use high quality, durable building materials.

a. Choose materials that are proven to be durable in the Chapel Hill climate.
b. Choose materials that are likely to maintain an intended finish over time or acquire a patina, when it is understood to be a desired outcome.
c. Incorporate building materials at the ground level that will withstand on-going contact with the public, sustaining impacts without compromising the appearance.

4.36 Alternative primary materials may be considered when they are designed to express modules and a sense of scale. These may include:

- Architectural metals
- Glass curtain walls

4.37 Utilize traditional masonry materials such as stone, concrete and brick, where feasible.

a. Use genuine masonry units, which appear authentic in their depth and dimension.
b. Wrap masonry units around corners of wall to ensure that it does not appear to be an applied veneer.

4.38 Architectural metals may be considered as a primary building material for design alternatives on building walls.

a. Incorporate architectural metals that convey a sense of human scale. For example, use smaller-scaled panels, varying forms and designs to create patterns to provide visual interest and eliminate expanses of unarticulated wall space.
b. Choose a metal that has a proven durability in the Chapel Hill climate.
c. Detailing of architectural metals should be done in a manner that is consistent with the durability and longevity of the material.

4.39 Architectural concrete may be considered as a primary building material for design alternatives on building walls.

a. Detail architectural concrete to provide visual interest and convey a sense of scale.
b. Detail architectural concrete in a manner that is consistent with the durability and longevity of the material.

4.40 Architectural glass may be considered as a primary material.

a. Detail glass to provide a sense of scale.
b. On the ground floor, use glass that permits views into the building to activate the street.
c. Avoid the use of tinted windows on the ground.
d. Avoid the design of a glass box.

Figure 4-40 *Architectural glass may be considered as a primary material.*

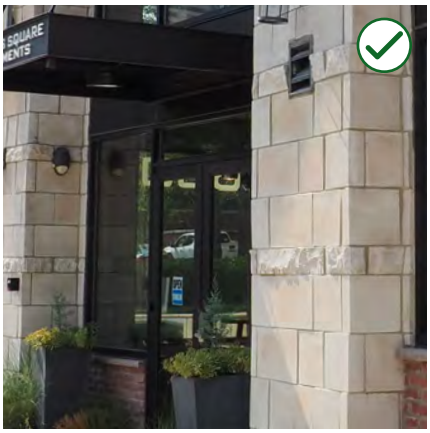


Figure 4-37b *Wrap masonry units around corners of wall to ensure the material does not appear to be an applied veneer.*

Figure 4-38 *Architectural metal may be considered as a primary building material for design alternatives on building walls.*

Windows

Windows are a key design element for commercial, mixed-use and residential buildings. Their design and arrangement should express a human scale and building modularity, while creating visual continuity with context and providing visual interest to the public streetscape. High-quality windows should be used on all new projects in the Blue Hill District.

WINDOW TRANSPARENCY

The LUMO establishes a minimum percentage of transparency in Sec. 3.11.2.7.O. These guidelines address quality and arrangement of windows on a building facade.

Figure 4-41 *Design a window to create depth and shadow on a facade.*

4.41 Design a window to create depth and shadow on a façade.

a. Design a window on an upper floor to appear to be inset into the wall.
b. Avoid using a window that lacks depth.

4.42 Locate and space windows to express individual modules of a large façade, to express scale and to create rhythm along the block.

a. Provide consistent horizontal spacing between windows on a floor.
b. Vertically align windows on upper and lower floors.
c. Provide a common head height for windows on a single floor. Minor deviations may be appropriate for an accent, but vertical alignment and horizontal spacing should remain consistent.
d. If a glazed wall is utilized, use spandrels, moldings, awnings or sills to provide vertical and horizontal expression.

4.43 Use durable window materials.

a. Incorporate windows with metal or wood frames, where possible.
b. Avoid using inappropriate window materials that do not have a proven durability, such as vinyl and plastic snap-in muntins.
c. Avoid using thin aluminum frames.

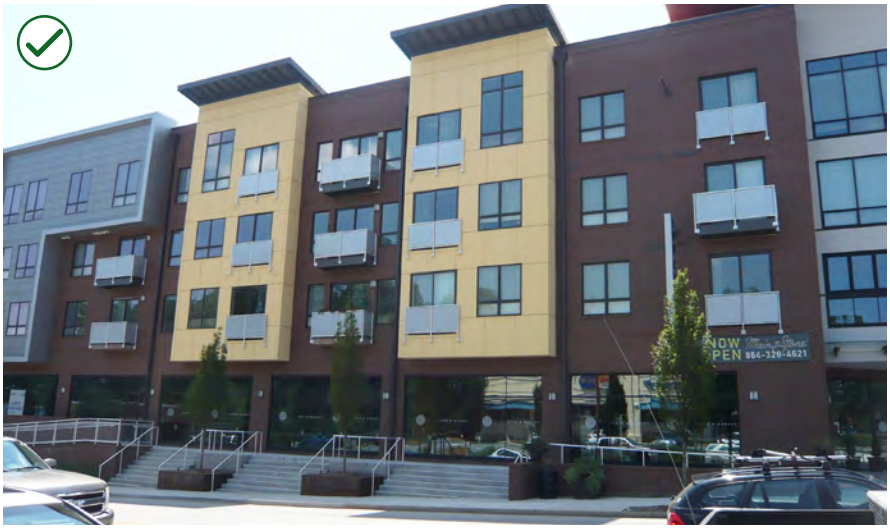


Figure 4-42 *Locate and space windows to express individual modules of a large façade, to express scale and to create rhythm along the block.*

Exterior Lighting

The character and level of exterior building lighting helps establish a sense of identity and cohesion in the Blue Hill District. It can help create a sense of place, highlight distinctive architectural details and reinforce the overall form, massing and spatial characteristics of the building or site. Exterior lighting is also important to provide safety for pedestrians along the street.

4.44 Install exterior lighting that will enhance the public realm and improve the pedestrian experience.

a. Design a lighting plan to enrich the appearance and function of the building and site.
b. Locate light fixtures to be visually subordinate to other building and site features during the day.
c. Exterior lighting may be used to enhance the nighttime appearance of trees, shrubs and other landscape features.
d. Design lighting so that it does not endanger the safety of pedestrian or automobile traffic.

4.45 Use exterior lighting to highlight the distinctive features of a site, such as:

- Building entrance
- Architectural details
- Signs
- Outdoor use areas
- Public art

4.46 Minimize the visual impacts of architectural lighting on neighboring properties.

a. Use exterior light sources with a low level of luminescence.
b. In most cases, use white lights that cast a color similar to daylight.
c. Reserve washing an entire building elevation for civic buildings and landmark structures.

4.47 Use shielded and focused light sources to prevent glare and light pollution.

a. Provide shielded and focused light sources that direct light downward.
b. Do not use high intensity light sources or cast light directly upward.
c. Shield lighting associated with service areas, parking lots and parking structures.
d. Light sources should be designed, installed and maintained to prevent light trespass onto a neighboring property or the public right-of-way.

4.48 Coordinate fixture designs with abutting properties to establish a sense of continuity.

a. This is especially important for walkways and lanes that interconnect within a development.

ADDITIONAL INFORMATION

The LUMO establishes minimum standards for installation, location and measurement of exterior lighting in Sec. 3.11.4.4.H. These guidelines address quality and consistency for a building and site.

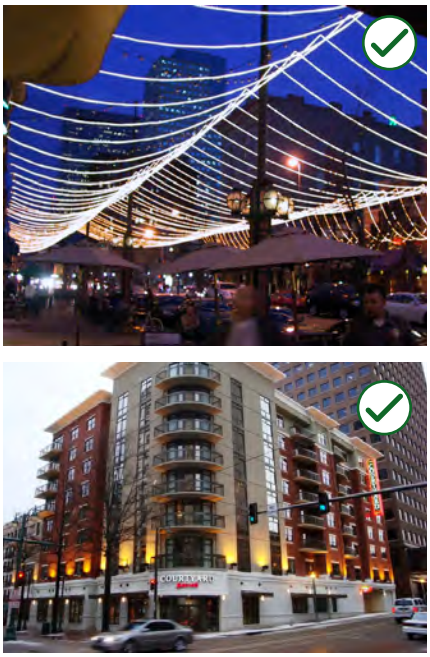


Figure 4-44 *Install exterior lighting that will enhance the public realm and improve the pedestrian experience.*

Figure 4-47 *Use shielded and focused light sources to prevent glare and light pollution.*

Energy Efficiency and Building Performance

The conservation of energy is a key objective in community planning and a guiding principle for the Blue Hill District. The design process should include an evaluation of the physical assets of the site to maximize energy efficiency and conservation in the placement and design of a building. Landscapes play a large part in planning for energy efficiency and building performance on a site.

Figure 4-49b *Design projects to reduce stormwater runoff by including a greenroof.*

Building designs should address seasonal changes and design with the climate of Chapel Hill in mind. Designs should implement passive strategies that save energy (and money) whenever feasible. Natural lighting and ventilation, shading, thermal mass and many other options are available. Using sustainable building materials that are durable, long-lasting, locally-made and recycled/recyclable are encouraged. Careful consideration should also be given to balancing sustainable design principles with those related to maintaining the traditional character of the area.

Figure 4-50 *Design with energy efficiency as a top priority.*

4.49 Utilize sustainable building design solutions throughout the Blue Hill District.

a. New building designs that promote energy conservation while adding visual interest should be supported.
b. Design building projects to reduce environmental impacts, like stormwater runoff, on the public streetscape.

4.50 Design with energy efficiency as a top priority.

a. Examine energy efficiency opportunities when developing a site design for a new project.
b. Examine building performance and system efficiency for all new projects.
c. Utilize external shading (integrated into the building and/or with landscape) to keep out summer sun and let in winter sun.
d. Design windows to maximize light into interior spaces.
e. Use exterior shading devices, such as overhangs, to manage solar gain in the summer months and welcome solar access in winter months.
f. Incorporate a renewable energy device, including a solar collector or wind turbine.

4.51 Locate a new building, or an addition, to take advantage of micro-climatic opportunities for energy conservation.

a. Orient a building to be consistent with established development patterns, when they are a part of the desired features for the context.
b. Consider seasonal solar and wind exposure patterns when positioning a new building on its site.

4.52 Design an addition to take advantage of energy-saving and energy-generating opportunities.

a. Design and locate windows to maximize daylighting into interior spaces.
b. Use exterior shading devices, such as overhangs, architectural screens or shade trees, to manage solar gain in summer months and minimize solar loss in winter months.
c. Incorporate energy-producing devices, including solar collectors and wind turbines, into the design of the site and building, while respecting the context.

4.53 Maximize solar access for all properties.

a. New development should incorporate heights and setbacks to minimize impacts to solar access on adjoining properties. This is especially important for residential sites and sites that adjoin or are adjacent to residential properties.

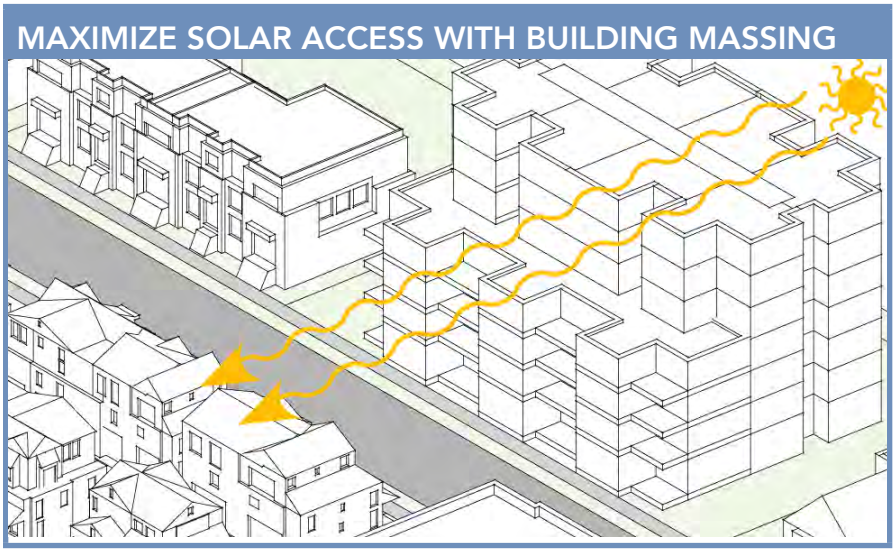


Diagram 4-10 *Maximize Solar Access with Building Massing: New development should incorporate heights and setbacks to minimize impacts to solar access on adjoining properties. This is especially important for residential sites and sites that adjoin or are adjacent to residential properties.*

Environmental Performance in Building Elements

The elements that make up a building, including windows, mechanical systems and materials, influence environmental performance. New building elements that improve environmental performance should be employed if they have been proven effective in Chapel Hill's climate.

4.54 Use sustainable building materials whenever possible. These materials may be:

- Locally manufactured
- Low maintenance
- Materials with long life spans
- Recycled materials

4.55 Incorporate building elements that allow for natural environmental control, such as the following:

- Operable windows for natural ventilation to reduce air conditioning needs.
- Locating vertical or horizontal shading devices to reduce solar heat gain.
- Daylighting strategies to reduce electrical lighting demand.
- Thermal mass or building materials that are capable of storing heat, which will reduce heat transferred through a building envelope.
- "Green roof" to provide insulation, absorb water, and reduce heat island effect.

a. Incorporate energy efficient mechanical systems.

4.56 Minimize the visual impacts of energy devices on the character of the district.

a. Mount equipment where it has the least visual impact on buildings and important view corridors.

b. Where exposed hardware frames and piping are visible, use a matte finish and color that is consistent with the color scheme of the primary structure.

SUSTAINABLE BUILDING MATERIALS & ELEMENTS

Incorporate building elements that allow for natural environmental control and reduce energy consumption. Exterior shading devices, photovoltaics and green roofs are just a few examples.

Use sustainable building materials whenever possible, such as ones that are locally manufactured, low maintenance with long life spans and recycled.

Diagram 4-11 *Sustainable Building Materials & Elements*

Incremental Building Improvements

While many properties in the Blue Hill district will redevelop entirely, with new buildings that comply with the standards and guidelines, there may be a situation in which redevelopment of a property is to be phased. This may involve interim improvements that cannot fully comply with the Code. Some flexibility in applying the standards in these cases may be considered, when the intent of the standards and guidelines is met and when the potential to fully comply with the standards remains as final phases are completed. A master plan or similar documentation may be required to indicate how future phases will comply with the standards. Some flexibility in complying with these standards may be considered as Design Alternatives for interim improvements.

4.57 Alternatives to the design of an addition to an existing building may be considered.

a. It may be located where it will support functions in the existing building.
b. It may not be required to meet build-to requirements.
c. It may not be required to meet minimum building height standards.
d. Requirements for primary materials for the addition may also be adjusted.

4.58 Alternatives in the design of improvements to an existing parking lot may be considered.

a. Buffering or screening requirements may be adjusted where existing dimensions limit compliance.
b. Adjustments to the required amount of landscaping in the interior of the lot also may be considered.

4.59 Alternatives in the design of a buffer or landscape transition may be considered.

a. Where a buffer is required between two phases of the same property, adjustments in design standards may be considered.
b. This may be especially appropriate where connectivity between the two phases is to be maintained.

APPENDIX

A Glossary of Terms will be included as part of the final design guidelines document.

IN THE APPENDIX