TOWN OF BLYTHEWOOD
DESIGN GUIDELINES
AND SUSTAINABILITY BEST PRACTICES

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Approved by Blythewood Town Council on April 26, 2010
ACKNOWLEDGEMENTS

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INTRODUCTION

These Design Guidelines were developed during the Town of Blythewood master planning process to ensure that new growth and redevelopment respect the community-based vision of the plan.

In interviews, residents and stakeholders in the Blythewood community repeatedly emphasized the importance of good design—in a wholistic sense that goes beyond cosmetic and landscaping concerns—to the future success of the town. These Design Guidelines are a response to those concerns, as well as an effort to lay out concrete principles that will serve the Board of Architectural Review and the Town as growth occurs.

The Guidelines address the physical design and character of the public and private realms in Blythewood. Their intent is to carefully balance architecture, landscape design, urban stewardship, and sustainability at all levels to promote a high quality environment for residents and visitors.

New Urbanism

Many of the standards provided on the following pages are based on the principles of New Urbanism, a planning approach that emphasizes the benefits of traditional development patterns.

Since World War II, South Carolina has been dominated by conventional development patterns. Often called sprawl, this type of growth is automobile oriented and separates people and uses. It produces vast housing subdivisions, office and industrial parks, strip malls, and public buildings in isolated pockets with no sense of place. The result is the death of local identity and a transportation network that makes driving a necessity rather than a convenience.

In contrast to the conventional model, traditional development patterns respect long-standing principles of town building. Walkable communities on a variety of scales from village to city provide a mix of land uses and housing types, customized in response to context.

Well-connected streets and the proximity of public and private spaces create gathering places
Traditional town patterns place a variety of needs within walking distance and preserve open space (photo courtesy Alex MacLean)

The Charter of the New Urbanism advocates:

- The restoration of existing urban centers and towns within coherent metropolitan regions,
- The reconfiguration of sprawling suburbs into communities of real neighborhoods and diverse districts,
- The conservation of natural environments, and
- The preservation of our built legacy.

and foster local identity. In between communities, open space is preserved in areas of agricultural, ecological, or cultural significance.

Applicability

This document is intended to provide guidance to the Blythewood Board of Architectural Review on general principles of form, including orientation of buildings to the street, relationships between public and private spaces, and quality building materials. The Guidelines strive to balance historic design precedents in the Blythewood area with new building typologies. No stylistic guidelines are given and images are provided for general illustrative purposes only.

These standards address development throughout the Town of Blythewood, even though the current purview of the Board of Architectural Review only includes properties near Blythewood Road and Main Street within the town’s core.

This document contains best practices, but does not mandate or legally codify any design standards. Final approval of any new projects will continue to be at the discretion of the Board of Architectural Review, the Planning Commission, and other applicable parties, in accordance with the Blythewood Code of Ordinances.

Moreover, these Guidelines are not intended to supersede the town’s zoning code with regard to setbacks, parking regulations, building form, or other considerations. Ideally, however, zoning regulations would be brought into conformity with the principles laid out here.

This document comprises five sections. The first pages address larger-scale design concerns under the heading of neighborhood planning. The next section provides site planning standards. More specific guidelines for building types, from houses to shopping centers and civic buildings, and for landscaping concerns, are provided in the following two sections. Each of these four sections contains text and supporting graphics, which are provided for illustrative purposes only. The final section puts forth a variety of sustainability guidelines at each level of design.
NEIGHBORHOOD PLANNING

The neighborhood planning guidelines contained in this section are intended to ensure that streets, lots, open spaces, and buildings are laid out in a manner consistent with the Master Plan and traditional development models. These standards are intended to apply to any development that includes 10 acres or more of land.

Planning Process

Each development larger than 10 acres should be planned according to the following process:

Step 1: Map existing site resources.
- Identify and delineate existing paths, roads, ponds, woods, streams, slopes, wetlands, and other natural features.
- Design parks, squares, and greens around ponds, wooded areas, or legacy trees where practical.
- Define natural boundaries on the site, excluding major roads, utility easements, and any area of land to be preserved for natural or agricultural use.

Step 2: Identify key centers.
Centers are focal points like schools, churches, shops, civic buildings, or places of employment.
- If the site is included in the Master Plan, locate a commercial or neighborhood center in the location shown in the Master Plan.
- If the site is not included, locate the commercial or neighborhood center on the road, street, or intersection with the most traffic.
- Avoid commercial centers in areas with little traffic.

Step 3: Roughly structure the site into pedestrian sheds.
A walking scale should serve as the basis for dividing a development into pedestrian sheds.
- A pedestrian shed represents a five minute walk from edge to center; usually one quarter mile.

Step 4: Precisely adjust pedestrian sheds.
- One pedestrian shed should be centered on a planned or existing commercial center.
- Additional sheds should cover most of the remainder of the site without significant overlap, except for intermediate natural areas.
- Sheds may be irregular in shape to represent actual walk times.

Step 5: Design the street network and connect centers with new streets.
At this step, natural features have been identified and incorporated into the neighborhood design, the main commercial area has been determined, and the pedestrian sheds have been outlined.
- Connect the centers with one another by “main” streets or avenues. They should be direct approaches but not necessarily straight.
The Five Step Planning Process

**Step 1:** Map existing site resources.
- Identify and delineate existing paths, roads, ponds, woods, streams, slopes, wetlands, and other natural features.
- Design parks, squares, and greens around ponds, wooded areas, or legacy trees where practical.

**Step 2:** Identify key centers.
- Centers are focal points like schools, churches, retail, civic buildings, or places of employment.
- Locate commercial or neighborhood centers on the roads, streets, or intersections with most traffic.

**Step 3:** Roughly structure the site into pedestrian sheds.
- A walking scale should serve as the basis for development. It should be divided into different pedestrian sheds.
- A pedestrian shed represents a five minute walk from edge to center; usually one quarter mile.

**Step 4:** Precisely adjust pedestrian sheds.
- Pedestrian shed centers should coincide with natural or man-made features on a site. Landscape features should form the backbone of public spaces.
- Move the boundaries to reflect these factors.

**Step 5:** Design the street network and connect centers with new streets.
- Connect the centers with one another by “main” streets or avenues. Fill in the areas between the main streets with streets and roads to form a network. Adjust the network to create a pattern of blocks.
Use the site terrain to deflect and slow traffic through the neighborhood. Provide the major roads or streets shown in the Master Plan.

- Fill in the areas between the main streets with streets and roads to form a network. Adjust the network to create a pattern of blocks. Blocks should be smaller when in close proximity to the centers, and larger toward the edges.

**Civic Spaces**

Please refer to page 10 for a guide to the types of civic space. Each pedestrian shed should include at least five percent of its area as civic space, according to the following:

- Detention ponds, existing or artificial wetlands, parking lot landscape islands, required stream buffers, and similar spaces should not count as civic space.
- Civic spaces should be designed as one of the general forms described on the following page.
- Each civic space should have at least 50 percent of its perimeter along a street or road. Higher percentages are desirable.
- Civic spaces should be open to the public during regular Town of Blythewood park hours.
- Civic spaces not within a pedestrian shed should be limited to parks.

**Street Network**

Developments should be designed to support and establish an interconnected street system, both within the development and to adjacent developments. For the purposes of neighborhood planning, there are two street types:

**Primary Streets** are intended for a high degree of pedestrian orientation and should:

- Be abutted by buildings or civic spaces for at least 80 percent of their length, with such percentage calculated for each side of each block.
- Provide on-street parking adjacent to commercial functions.

- Make up at least 50 percent of the total length of streets in a development.
- Be continuous in a development to provide a high-quality pedestrian experience.

**Secondary Streets** are intended for a lower degree of pedestrian orientation and:

- May be abutted by parking lots or parking decks, as long as an 8 foot landscaped buffer is provided adjacent to the sidewalk.
- May be designed to convert to Primary Streets over time.
- Where a Secondary Street borders a parking lot, all utilities except those that serve only the parking lot should be buried under the street to facilitate the long-term redevelopment of the lot into other uses.
- Street type should change at an intersection with another street rather than mid-block.
- Parking drives are not considered streets unless they meet the guidelines for Secondary Streets.

Developments should be divided into blocks defined by Primary and Secondary Streets, subject to the following:

- No block perimeter should exceed 2,400 linear feet (measured at street centerline) except for civic space blocks or where a stub-out to adjacent undeveloped property exists.
- Developments should construct street stub-outs to adjacent undeveloped tracts in a ratio of at least one stub-out for every one half mile of development perimeter.
- All developments abutting existing or approved street stub-outs should connect to such.
- Except where a civic space abuts a side or rear lot line, there is no size limit for blocks containing only a civic space or agricultural areas.

All Primary and Secondary streets, whether public or private, should be publicly accessible and not access controlled.
## Types of Civic Space

**Park:** An open space, available for unstructured recreation. A park’s edges may be defined by landscaping rather than buildings. Its landscape should consist of paths and trails, meadows, woodlands, and trees, naturalistically disposed. The minimum size should be 15 acres.

**Green:** An open space, available for unstructured recreation. A green may be spatially defined by landscaping rather than buildings. Its landscape should consist of lawn and trees, naturalistically disposed. The minimum size should be one acre and the maximum should be 15 acres.

**Square:** An open space available for unstructured recreation and civic purposes. A square is spatially defined by buildings. Its landscape should consist of paths, lawns and trees, formally disposed. Squares should be located at the intersection of important streets. The minimum size should be one half acre and the maximum should be five acres.

**Plaza:** An open space, available for civic purposes and commercial activities. A plaza should be spatially defined by buildings. Its landscape shall consist primarily of pavement. Trees are optional. Plazas should be located at the intersection of important streets. The minimum size should be one half acre and the maximum should be two acres.

**Playground:** An open space designed and equipped for the recreation of children. A playground may include an open shelter. Playgrounds should be interspersed within residential areas and may be placed within a block. Playgrounds may be included in parks and greens. There should be no minimum size and the maximum size should be one acre, unless located within a green of a larger size.

(Courtesy Duany Plater-Zyberk and Co.)

### Table 13 Civic Space

<table>
<thead>
<tr>
<th>Park</th>
<th>Green</th>
<th>Square</th>
<th>Plaza</th>
<th>Playground</th>
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SITE PLANNING

The following section provides general site planning guidelines for new developments within the Town of Blythewood. The guidelines contemplate the range of uses and building types that could occur in a single project, while also addressing the variety of mixed-use projects that could occur in the town, ranging from primarily residential to primarily commercial or office in nature.

Open Spaces

The creation of open space, whether publicly or privately owned, must remain a focus as development occurs in Blythewood. It will enhance the public realm and better the quality of life of residents and visitors, as well as preserve open or natural areas that might otherwise be lost.

Open space does not necessarily constitute undisturbed public land or civic space; it can include any public or privately owned areas that are open to the general public.

Open space may take the form of nature preserves, wetlands, woodlands, athletic fields, multi-use trails, community gardens, orchards, or any civic space. Even small areas such as courtyards and outdoor dining areas can provide public open space.

- New developments larger than 10 acres should provide publicly accessible open space areas equal to at least 10 percent of the site area. Civic spaces should be included in this area.
- Open spaces should be improved before a certificate of occupancy is issued for immediately adjacent buildings. In cases where a development contains multiple open spaces, this provision should apply separately to each space to allow for a phased build-out.
- Maintenance of privately owned open spaces should be the responsibility of the property owner or homeowner’s association.
- If an open space is turned over to the town and landscaping within it dies during the first year, it should be replaced at the developer’s expense within a reasonable period of time.
- Open spaces should be at grade with adjacent streets for at least 15 feet of their depth to ensure maximum visibility into the space.
- Open space provides a great venue for the installation of a variety of art projects to enliven Blythewood and promote tourism, in addition to documenting the history of the town. Developers are encouraged to provide public art in a variety of media within each development.

Streets and Sidewalks

New streets should balance the needs of pedestrians and drivers. They should encourage the continuous and interconnected travel of automobiles, bicycles, pedestrians, and other travel modes.

Public open space should be provided as a part of every new development

Public art should be incorporated into each new development
To achieve a balance between forms of transportation, a variety of pedestrian-oriented street types should be provided as development occurs. Streets should be designed in response to adjacent land uses and desired travel speeds. The following are general guidelines.

- The maximum posted speed for streets in a development should be 35 miles per hour (mph), with most streets between 20 and 25 mph.
- On streets with posted speeds of 35 mph or more, vehicle lanes should be at least 11 feet wide.
- On streets with posted speeds of 25-35 mph, vehicle lanes should be at least 10 feet wide.
- On streets with posted speeds of 20-25 mph, vehicle lanes should be at least 9 feet wide.
- On streets with posted speeds under 20 mph, a 14-foot-wide, two-way “yield” lane may be provided. On such streets, vehicles must stop and pull over so oncoming vehicles can pass.

Complete streets balance the needs of different transportation modes

- On-street parallel parking spaces should generally be 8 feet wide. On-street angled (60-degree) parking spaces should be 18 feet deep.
- Streets passing through different areas may change in width and configuration as land uses change, or they may remain the same.

### Potential New Street Assemblies

<table>
<thead>
<tr>
<th>Vehicle Lanes</th>
<th>Sidewalks</th>
<th>On-Street Parking</th>
<th>Total Right of Way</th>
<th>Primary Adjacent Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Width</td>
<td>Tree Zone Width</td>
<td>Clear Zone Width</td>
<td>Location Width</td>
</tr>
<tr>
<td>AL-24-24</td>
<td>2</td>
<td>12 ft</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>LA-24-12</td>
<td>1</td>
<td>12 ft</td>
<td>4 ft</td>
<td>None</td>
</tr>
<tr>
<td>ST-60-36</td>
<td>2</td>
<td>10 ft</td>
<td>5.5 ft</td>
<td>6 ft</td>
</tr>
<tr>
<td>ST-60-28</td>
<td>2</td>
<td>10 ft</td>
<td>9.5 ft</td>
<td>6 ft</td>
</tr>
<tr>
<td>ST-50-28</td>
<td>2</td>
<td>10 ft</td>
<td>4.5 ft</td>
<td>6 ft</td>
</tr>
<tr>
<td>ST-50-20</td>
<td>2</td>
<td>10 ft</td>
<td>8.5 ft</td>
<td>6 ft</td>
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<tr>
<td>ST-50-14</td>
<td>1 (yield)</td>
<td>14 ft</td>
<td>4.5 ft</td>
<td>6 ft</td>
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<tr>
<td>ST-40-20</td>
<td>1</td>
<td>12 ft</td>
<td>6.5 ft</td>
<td>6 ft</td>
</tr>
<tr>
<td>ST-90-58</td>
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<td>11 ft²</td>
<td>7.5 ft</td>
<td>8 ft</td>
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<td>ST-80-48</td>
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<td>11 ft²</td>
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<td>8 ft</td>
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<td>ST-70-36</td>
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<td>7.5 ft</td>
<td>8 ft</td>
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<tr>
<td>ST-60-28</td>
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<td>11 ft²</td>
<td>6.5 ft</td>
<td>8 ft</td>
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</tbody>
</table>

1: Curb width of approximately 6 inches is not included in measurement, if provided
2: May be reduced to 10 feet on streets with posted speed limits of 25 mph or less
• Street rights-of-way should be in 10-foot increments, with any excess width devoted to the tree planting zone.

• Medians, where provided, should be of a minimum width of 10 feet and should be planted with trees no more than 50 feet apart.

The preceding table provides examples of how the street guidelines might be applied. These configurations are by no means exhaustive, but are intended to demonstrate the most likely options for assembling new streets, provided that the minimum standards for lanes and sidewalks are met. Five of the street assemblies are shown in sections above. Final built dimensions will vary according to the design flexibility established by the American Association of State Highway and Transportation Officials (AASHTO).

Sidewalk standards in commercial areas of the town are already found in the Blythewood Code of Ordinances. Sidewalks should be located along all existing and new streets and should meet the following standards:

• On all residential streets, and on commercial or mixed-use streets with posted speeds of 25 mph or less, the minimum sidewalk clear zone width should be 6 feet.

• On commercial or mixed-use streets with posted speeds greater than 25 mph, the minimum sidewalk clear zone width should be 8 feet.

• The minimum tree zone width on all streets should be 5½ feet. A curb, if provided, may be included in this width.

• The tree zone should be adjacent to the curb and includes trees, plantings, street furniture (e.g. benches, waste receptacles, traffic signs, and newspaper boxes), bicycle racks, and similar elements in a manner that does not obstruct pedestrian access or motorist visibility.

• The tree zone may be primarily paved adjacent to on-street parking serving retail businesses, but should be landscaped in all other areas.

• Street trees should follow the landscaping guidelines provided on pages 33-34 of this document in terms of recommended species and spacing.

• Paving materials in the clear zone should continue across any intervening driveways.
Building Siting

The following standards will help ensure that new buildings properly address the street in order to enhance the public realm and provide convenient and pleasant access for pedestrians.

- Buildings should be constructed near the sidewalk, with parking to the side or rear.
- On corner lots, buildings should be located adjacent to the street intersection.
- Large stores, such as supermarkets, should be designed so that small buildings are located close to the street to screen parking and provide a pedestrian-friendly presence and scale.
- Ground floor commercial space adjacent to a street should have a primary pedestrian entrance which faces, is visible from, and is immediately accessible from the adjacent sidewalk. This entrance should be at grade and remain unlocked during business hours.
- Uses not adjacent to a street should be connected to the closest sidewalk with a paved walkway at least 3 feet wide.
- Address numbers at least 6 inches high should be located near the primary building entrance and be clearly visible from the street.
- Drive-through windows and vehicular waiting areas should be placed to the rear or side of the building and should not be located within 25 feet of the back of the sidewalk.
- Gasoline stations should place fuel dispensing, service canopies, and entry doors to the rear of the building and away from the street. These facilities and their queuing should not be visible from any public right-of-way or located within 25 feet of the back of the sidewalk.
- Areas for pedestrian activity should be provided between ground-floor commercial uses and the sidewalk.
- Landscaping should be provided between the sidewalk and ground floor dwellings, except where there are porches, stoops, or walkways.
Parking

Parking areas, with the exception of on-street parking, should never be located between any building and the street.

- New parking lots should follow the landscaping standards laid out in Section 155.394(C) of the Blythewood Code of Ordinances to ensure adequate shade, greenery, and tree canopy.
- Uses with large parking needs, such as large retailers, office buildings, and churches, are encouraged to provide a portion of their parking as grasscrete or grass. These areas can be used for overflow parking, but can serve as open space when not needed.
- Shared parking should be encouraged so that activities with parking needs at different times of the day or week (such as offices, restaurants, and churches) can make use of the same parking spaces and thereby conserve land and promote compact development.
- Interconnected parking lots should be encouraged to facilitate off-street automobile movements and promote shared parking.
- On-street parking along new or existing streets should count toward required parking.

Curb Cuts and Driveways

The number and width of curb cuts should be limited according to the following guidelines.

- There should be no limit to the number of curb cuts for new public or private streets, except where a limit is required by the South Carolina Department of Transportation.
- The use of rear alleys and lanes is encouraged to reduce the need for curb cuts.
- Alleys providing vehicular access to multiple parcels should not count as a curb cut.
- Parcels should have a maximum of one driveway curb cut per street or one per 1,300 feet of frontage, whichever is less. When a property abuts multiple streets, the total number of curb cuts may be located on a single street.

- Two curb cuts serving two one-way driveways may count as one curb cut.
- Circular drives should be prohibited between a building and the street, except for hospitals.
- Driveways for single-family houses:
  - Should not exceed 10 feet in width.
  - Should have a central strip of landscaping when within the front yard.
  - Should not be designed to allow parking in the front yard.
- Driveways for other buildings should not exceed 12 feet in width for one-way or 24 feet for two-way drives.
Utility and Service Areas

Utilities are a necessary part of all modern buildings, but should be constructed and located to minimize their visual impact.

- Where overhead utility lines exist, new development is encouraged to relocate those lines behind buildings, in alleys, or underground.

- Where utilities cannot be buried or relocated, street trees should be limited to those identified on page 4.

- Dumpsters and trash compactors should not be located between a building and an adjacent street. They should be screened by a permanent wall of material compatible with the building exterior and should not be visible from any public right-of-way or other pedestrian area.

- Outdoor storage areas should not be located between a building and an adjacent street.

- At-grade air conditioning units, meters, transformer boxes, and similar equipment should be located to the side or rear of buildings and screened with a wall or evergreen plant material so as to be invisible from a street.

- Roof-mounted mechanical equipment should be located or screened so that it is not visible from any street. Screening, which may include parapet walls, should be compatible with the surrounding building materials.

- Roof mounted antennas and satellite dishes are not discouraged as long as they are not visible from the street.

- Vending machines should not be visible from the street.

Noise and Light Pollution

Compatibility among buildings and between buildings and the public realm must consider not just physical design, but also the effects of light and sound. The following guidelines include several measures that can reduce negative impacts.

- Any outdoor or indoor lighting, whether for illumination or advertising, should be designed to minimize light pollution on adjacent properties, in public rights of way, and for the town as a whole. More detailed standards are provided below on page 35.

- Flashing, rotating, or oscillating lighting should be prohibited where visible from the exterior of buildings.

- All new developments should submit a lighting plan showing illuminance levels for general and security lighting fixtures in order to ensure compliance with these guidelines.

- Noise and vibration from new development should have a minimal effect on adjacent properties. This can be accomplished through building arrangement, design, and time of day restrictions. In general, sounds should not
exceed 60 decibels in residential, office, or shopping areas. Sounds should not exceed 45 decibels in residential areas after 10:00 p.m.

**Signage**

Signs are already regulated by Sections 155.425 to 155.435 of the Blythewood Code of Ordinances. The following guidelines are intended to supplement the sign ordinance:

- Clear directional signage for entrances and parking should be provided for all buildings except single-family dwellings.
- All signage should be consistent with the architectural character of adjacent buildings in terms of size, type, and color.
- Signage should not be located so as to significantly obstruct the view of the building façade or the primary pedestrian entrance.

In addition, wayfinding signs could be installed to guide visitors and residents to shopping, civic, and cultural attractions. They could also serve to help brand Blythewood as a distinct destination. The design of public signage should be coordinated with the town’s Chamber of Commerce.

**Walls, Fences, and Gates**

The design and placement of walls and fences should be guided by the following standards:

- Wall materials should be limited to natural stone, cast stone, brick, or smooth stucco.
- Fence and gate materials should consist of painted wood, composite materials, natural or synthetic stone, or black wrought iron with the finished side facing the street.
- Chain link and wire fencing should be prohibited where visible from a street.
- Brick or stone columns should be spaced no further than 40 feet apart.
- Walls surrounding outdoor dining or displays in the sidewalk or front yard should have a maximum height of 32 inches unless a higher wall is required by building code. All other walls in the front yard, except retaining walls, are discouraged.
BUILDING DESIGN

The design of future developments in Blythewood must succeed not only at the level of the neighborhood or site, but also at the more detailed level of the building. The following sections are organized by building type and provide guidelines for the relationship of buildings to the street, their general form, the materials from which they are made, and other important considerations.

Commercial and Mixed-Use Buildings

Commercial and mixed-use buildings will define the core of Blythewood and future neighborhood centers. They not only establish the character of the public realm, but form the places in which those who live, work, and shop in Blythewood will gather and interact.

The following guidelines apply to buildings that house a combination of retail, office, residential, or other uses, often with first-floor shops. Live-work buildings may follow these guidelines or those for single-family houses and townhouses.

- Proper transitions are necessary where a commercial or mixed-use building abuts an area of lesser development intensity, such as open space or single-family houses. The commercial or mixed-use building should step down from its full height to avoid dwarfing adjacent buildings.

- The ground level of all commercial and mixed-use buildings should be no more than 18 inches above the adjacent sidewalk.

- The main entrance to a building should face, be visible from, and be immediately accessible from the adjacent sidewalk. For buildings with more than one use, a main entry door or lobby for each use should be linked to the sidewalk via a walkway.

- The ground floor of all buildings, including parking decks, should contain habitable space for at least the first 20 feet of depth. This space should not be used for parking, mechanical equipment, or storage. Finished floor-to-ceiling-slab height in this area should be at least 16 feet.
**Visual divisions** between the first and second floors, where applicable, should be provided on all street-facing façades. This can be accomplished through architectural means such as courses, awnings, or a change in materials.

Buildings taller than two stories should have two- or three-part façades. Horizontal zones in the façade may be differentiated by a change in materials, window pattern, or window material, or by a cornice or course.

- A two-part façade consists of:
  - Base zone (first story)
  - Shaft zone (all other stories)

- A three-part façade consists of:
  - Base zone (first story)
  - Shaft zone (middle stories)
  - Cap zone (upper stories or cornice)

**Façade articulation** should be provided for buildings with street-facing façades longer than 200 feet.

- A major articulation at least every 200 feet of horizontal façade length. This should be accomplished through a change of material extending from grade through the cornice, and could also include changes in storefront systems, varying setbacks, or similar means intended to convey the impression of separate buildings.

This mixed-use building occupies a 300-foot block without a major façade articulation

This mixed-use building achieves the appearance of several smaller buildings through a variety of techniques, including: change in façade materials and color, change in windows, change in roof form, change in façade style, and change in finished floor elevation
Roofs should be designed according to the following standards.

- Principal sloped roofs should have a pitch of between 5:12 and 12:12. This does not apply to dormers, porches, and roofs not visible from a street.
- Flat roofs are allowed, provided that they are vertically screened with a parapet wall along the street-facing façade.

Fenestration means all windows, openings, or other transparent glass areas including, but not limited to, storefront windows, display windows, and doors containing glass panels.

- Painted glass, reflective glass, or other opaque or treated windows should be prohibited.
- Exterior security bars, steel gates, and steel roll down curtains are prohibited.
- The length of the first floor street-facing façade without any intervening fenestration or entry ways should not exceed 20 feet.
- Additionally, first floor retail uses:
  - Should provide fenestration for at least 75 percent of the width of the street-facing façade. For stores abutting two or more streets, this is only necessary on one street.

  - Should provide storefronts beginning at least 1 foot, but no more than 3 feet above grade and extending to at least 10 feet above it.
- Street-facing façades on all other floors:
  - Should have windows or balcony doors that equal between 20 and 60 percent of the total façade area, with each story being calculated independently.
  - Should provide windows equally sized, taller than they are wide, equally spaced, and arranged in a grid pattern.
  - Grids between glass are prohibited.

Please see the Glossary for a definition.
Awnings that project over the sidewalk, serve as entry canopies to protect from the elements, and provide business signs in conformity with the sign ordinance are encouraged, but should:

- Be made of canvas, fixed metal, or other similar materials.
- Have a depth of at least 5 feet.
- Match adjacent business awnings in depth and height.
- Be mounted at a consistent height for each building, but at least 8 feet above the sidewalk.

Awnings should be made of appropriate materials and not detract from the sidewalk.

Awning light fixtures may light the ground or storefront below, but fixtures should not be visible from the street. Internally backlit awnings should be prohibited. Awning colors, lettering, and graphics should be approved by the Board of Architectural Review.

Facade materials should be limited to full-depth brick, natural stone, cast stone, terra cotta, pre-cast concrete resembling brick or stone, or hard coat stucco. Accent materials may include ceramic tile, galvanized steel, glass block, wood, stone or stucco.

Roofing materials should consist of asphalt, fiberglass, or cedar shingles, concrete or clay tile, slate or simulated slate, or standing seam metal. Flat roofs that are not visible from the street may be covered with other materials. Roofing materials should have a minimum usable life of 30 years according to the manufacturer’s warranty.

Parking spaces should be located behind or to the side of buildings. Shared parking is encouraged between mixed-use buildings that house activities with parking needs at different times of the day or week.
**Multifamily Buildings**

Multifamily buildings may elect to follow the guidelines provided above for commercial and mixed-use buildings or those provided below for single-family houses, but should also address the following considerations.

Due to the lack of significant precedents for multifamily buildings in Blythewood, buildings with four or fewer units should be designed to resemble single-family detached houses, as shown on the following page.

**Setbacks** should be minimized in order to ensure a proper relationship between the building, its neighbors, and the street, but buildings should be set back and step down in height where they adjoin single-family houses.

The **main entrance** to each building should face, be visible from, and be immediately accessible from the adjacent sidewalk. Buildings with more than four street-facing ground-floor units should provide individual unit entrances.

**Utility equipment** such as electric meters, air conditioning units, plumbing vents, and so on should be screened from view from the sidewalk. Preferably, such equipment should be located behind buildings.

**Parking** should be behind or underneath buildings to avoid interrupting sidewalk continuity.

**Open space** areas should be provided for common use by residents or for public use. These areas may be small and may provide places for active recreation such as playgrounds or places for more passive recreation areas.

**Façade materials** should be limited to full-depth brick, natural stone, cast stone, terra cotta, pre-cast concrete resembling brick or stone, hard coat stucco, or wood or fiber cement siding. Accent materials may include ceramic tile, galvanized steel, and glass block.

**Roofing materials** should consist of asphalt, fiberglass, or cedar shingles, concrete or clay tile, slate or simulated slate, or standing seam metal.

These multifamily buildings include adequate windows for light and visual interest, as well as on-street parking to reduce the size of parking lots.

The main entrance to each multifamily building should face and be accessible from the adjacent public sidewalk.

This multifamily building is set close to street, with stoops to help identify entrances, parking and utilities hidden from view, and quality façade materials.
Flat roofs that are not visible from the street may be covered with other materials. All roofing materials should have a minimum usable life of 30 years according to the manufacturer’s warranty.

**Balconies, bay windows, or stoops** are encouraged to provide interest on the façade and promote an effective building-street relationship.

**Gates, walls, and fences** higher than 32 inches are discouraged between buildings and the sidewalk. Chain link and any type of wire fencing should not be permitted in areas visible from a public right-of-way. Where provided, materials should consist of picket wood, stone, composite materials, or ornamental metal, with the finished side facing the street.

Retaining walls adjacent to the sidewalk should not exceed 32 inches in height unless required by topography. All street-facing walls should be faced with stone, brick, or smooth stucco.

**Primary roof forms** should be flat, pyramidal, side gabled or sloped in one direction (shed). Shed roofs should be concealed with parapets along the street frontage. The slope for gabled or hipped roof forms should be at least 5:12. Secondary roofs, such as those over porches or dormers, may have lesser slopes.

*Please see the Glossary for a definition of these forms.*

**Accessory buildings** such as clubhouses, pool houses, and mailbox structures should be built of compatible materials and in a compatible architectural style to the main buildings. They may be connected to the principal building with a covered walk, trellis, or enclosed breezeway. The height of accessory buildings should be at least 10 feet, but should not exceed 25 feet, measured to the top of the tallest element.
**Single-Family Houses and Townhouses**

**Setbacks** should be minimized. Shallow setbacks facilitate a proper relationship between the house and the street, encourage social interactions, and spatially define the street.

**Building massing** should consist of simple volumes and roof forms when homes are within 50 feet of the lot line. Houses that are further back may be more complex in form.

**Porches or stoops** should be provided, should face and connect to the sidewalk, and should not be enclosed by glass. Porches should be at least 8 feet deep, and should extend across at least 80 percent of the front of façade. Stoops should provide a landing at least 4 feet by 4 feet.

**Driveways** should not exceed 10 feet in width. Paving areas should not encroach in front of the house, but should be placed to the side.

**Garages** should ideally be separate buildings in the back yard, accessed from alleys. Otherwise, they should be set back at least 15 feet from the front façade. Material, color, and design compatibility with the house is encouraged.

**Carports** should be permitted only in rear or side yards and should be set at least 15 feet behind the front façade. Carport roofs should be supported by columns with a minimum width and depth of 8 inches. Columns should be faced in brick or stone to a minimum height of 3 feet.
Buildings close to the street should be composed of simple forms, such as this rectangular house.

**First floor elevation**, including porches or stoops, should be between 2 and 6 feet above grade, unless existing topography prevents or wheelchair access is desired.

**Windows** should be provided on all sides of each detached house for cross ventilation, light, and aesthetic reasons. Windows should constitute between 20 and 60 percent of the area of each floor of the street-facing façade.

- First-story front window sills should begin not more than 3½ feet above finished floor elevation.
- Front windows should be rectangular and taller than they are wide.
- Glass may be transparent or stained, but not painted.
- Where used, shutters should measure half the width of the window opening.
- Grids-between-glass are discouraged.

*Please see the Glossary for a definition.*

This home fronts the street with a complex building shape and roof form.

Front windows should not be wider than they are tall.

Front windows should be taller than they are wide.

Front windows should be taller than they are wide.
Façade materials

- Should be limited to full-depth brick, natural stone, cast stone, true hard coat stucco, and wood or fiber cement siding/shingles. While a mixture of façade materials can be appropriate, consistency between the street facing façade(s) and other sides of the house should be ensured.

- Should be combined vertically, with the heavier material below the lighter.

- Should change vertically, not horizontally.

Roofing materials should consist of asphalt, fiberglass, or cedar shingles, concrete or clay tile, slate or simulated slate, or standing seam metal. Roofing materials should have a minimum usable life of 30 years according to the manufacturer’s warranty.

Roof overhangs should be at least 12 inches to provide shadow and depth.

Foundations exposed more than two feet above grade should be coated or faced in cement, stucco, brick, manufactured stone, latticework, or natural stone to contrast with façade materials.

A fence, wall, curb, or hedge between 6 and 32 inches in height is encouraged at the back of the sidewalk when homes are within 50 feet of the lot line.

Retaining walls adjacent to the sidewalk should not exceed 32 inches in height unless required by topography. Small plantings between retaining walls and the required sidewalk are encouraged and should have a minimum width of 6 inches.

Accessory units, such as granny flats over detached garages or basement apartments, are encouraged as allowed by zoning. They can provide affordable living space, particularly for students and the elderly.

No more than three adjacent townhouse units should have the same façade design. Differentiation between adjacent façades may be accomplished by a change in materials, building height, color, roof form or setbacks, provided that the appearance of a separate building is achieved.
Civic Buildings

Civic buildings include government buildings, churches, libraries, schools, post offices, and other public facilities. They may be located in civic spaces, but do not count toward open space. Civic buildings should be subject to the same general design standards as other buildings, but also occupy a unique place in the fabric of the Town of Blythewood and should therefore comply with the following guidelines.

Setbacks are a simple way to set apart a civic building from its surroundings, but should not isolate a building from the sidewalk. Civic building entrances may front immediately on the sidewalk with no setback where appropriate.

The main entrance to each building should face, be visible from, and be immediately accessible from the adjacent public sidewalk. Such entrances should be clearly defined through façade articulation and signage.

Parking demands for civic buildings may be higher than for some other buildings due to public meetings and other gatherings. Every effort should be made to share parking with adjacent buildings, or to surface a portion of the parking spaces with gravel, grasscrete, or landscaping.

Height limits should remain consistent with underlying zoning regulations and with the height of neighboring buildings, but exceptions can be made where appropriate for towers, belfries, steeples, spires, monuments, cupolas, domes, flagpoles, and other distinguishing architectural elements.

Façade materials should be limited to full-depth brick, natural stone, cast stone, terra cotta, precast concrete resembling brick or stone, or hard coat stucco.

Roofing materials should consist of asphalt, fiberglass, or cedar shingles, concrete or clay tile, slate, or standing seam metal. Flat roofs that are not visible from the street may be covered with other materials. All roofing materials should have a minimum usable life of 30 years according to the manufacturer’s warranty.

Windows on civic buildings may be exempt from transparency requirements where appropriate, as with stained glass on churches or translucent glass on fire station doors.

Gates, walls, and fences higher than 32 inches are discouraged between buildings and the sidewalk. Chain link and any type of wire fencing should not be permitted in areas visible from a public right-of-way.
Office/Technology Buildings

While the core of Blythewood and its future development nodes should be mixed-use in nature, the character of some specific areas, particularly in the southwestern portion of the town where a knowledge village is envisioned, may be primarily single-use.

Development in such areas should remain street-oriented to the maximum extent possible. Mixed-use, commercial, or residential buildings located within office or technology districts should still be subject to the guidelines provided above for those building types.

The main entrance to each building should face, be visible from, and be immediately accessible from the adjacent public sidewalk. Such entrances should be clearly defined through façade articulation and signage.

Transitions to adjacent properties should be carefully executed to ensure compatibility. Where an office/technology building abuts an area of lesser development intensity, such as open space, single-family houses, or low-density commercial or mixed-use buildings, a proper transition is necessary. See Blythewood Code of Ordinances Chapter 155.

The office or technology building should step down from its full height on the edge of the property abutting the lower density to avoid dwarfing adjacent buildings. In addition, a landscaped buffer area should be provided of a width to be determined by context, but in no case less than 25 feet, as shown on page 20.

Semi-public or common areas such as office lobbies and cafeterias should be located at street level and be immediately accessible from the sidewalk. While continuous street-level retail is not always feasible in office/technology districts, this can be one way to achieve a lively sidewalk environment. All buildings should provide first-floor occupiable space for at least the first 20 feet of depth along the front of the building.

Loading docks and loading areas should be located behind buildings and completely hidden from view.

Mid-block buildings should be subject to more lenient standards regarding façade materials, relationship to sidewalk, and other guidelines presented here. Mid-block buildings include structures that do not immediately front a public street or those that are hidden from view by other buildings.

Façade materials

- Should be limited to full-depth brick, natural stone, cast stone, terra cotta, pre-cast concrete resembling brick or stone, hard coat stucco, split-face block, metal, and pre-cast concrete.
panels. This list includes some materials not recommended elsewhere in the town in order to help establish a unique district.

• Façade accent materials may include ceramic tile, galvanized steel, glass block, and wood or fiber cement siding.

• Should be combined vertically, with the heavier material below the lighter.

• Should change vertically, not horizontally.

Roofing materials should consist of asphalt, fiberglass, or cedar shingles, concrete or clay tile, slate, or standing seam metal. Flat roofs that are not visible from the street may be covered with other materials. All roofing materials should have a minimum usable life of 30 years according to the manufacturer’s warranty.

Windows should be taller than they are wide, and may use clear or tinted glass with any transmittance or light reflectance factor. A minimum of 40 percent of each façade should be glass. Glass should allow visibility into the building for a minimum depth of 5 feet.

Building floors should have the appearance of distinct horizontal floors rather than employing horizontal window bands separated by non-glass or opaque bands between floors.
LANDSCAPE DESIGN

The following standards are intended to guide the design and placement of landscaping and hardscaping in the Town of Blythewood. Existing natural vegetation should remain undisturbed until a building permit is issued.

Types of Open Space

A major park includes at least ten acres of land and a combination of structured and unstructured recreational opportunities that attract visitors from within the town and beyond. The proposed park north of the current Blythewood Town Hall is such a park, because it provides athletic fields, an amphitheater, a skate park, and other amenities that are expected to draw visitors from elsewhere in the Midlands region.

Major parks represent the highest development intensity for park land and the highest cost. They are distinguished by a diversity of plant species, high visibility, the prominence of paved plazas, premium-quality materials, active uses, and lighting to allow for daytime and evening use.

Community parks are generally between half an acre and ten acres; they provide space for less structured recreation in combination with playgrounds and other amenities to serve the immediate neighborhood.

Community parks provide some planting variety, significant tree canopy, open space, a single garden structure or focal point, lawns, a dog area, a fire pit, and paved paths for circulation.

Community gardens will be an important component of the Blythewood landscape in the future. They can range in size from a few hundred square feet within a larger open space to thousands of square feet. In addition to providing locally grown vegetables, herbs, and flowers, they provide opportunities for residents to work together to help beautify the town.

Smaller open spaces, such as greens or squares, generally contain between half an acre and eight acres and are closely fronted by buildings that help define the space.

Plazas or other partially paved areas of one half to two acres may be included in larger parks or adjacent to groupings of mixed-use, office, or multifamily buildings.

Playgrounds of any size are appropriate in residential or mixed-use areas of the town. They provide places for exercise, meeting neighbors, and can be critical in making mid-rise living attractive for families.
Recommended Street Trees

The trees shown on this page are acceptable for planting throughout the town of Blythewood along public or private streets. Other species not shown here but suggested by the state Forestry Commission may be appropriate for yards, parks, and other locations.

Within the sidewalk tree zone, trees should be planted no more than 50 feet apart. The species shown here are encouraged where adequate...
root space and the absence of overhead utility lines permits their full maturity. Each has a minimum mature height of 40 feet.

Street trees should be spaced equally between street lights, should not be planted on top of storm drain inlets, and should have a minimum planting area of 40 square feet planted with evergreen ground cover or covered with hardwood mulch or loose stone.

Flowers and other seasonal plantings within the sidewalk tree zone should be replaced with hardwood mulch out of season. Street tree grates should be avoided.

Newly planted street trees should have a minimum diameter of 3.5 inches when measured 4.5 feet above grade. They should also be limbed up to a height of 7 feet to avoid obstructing the passage of pedestrians and vehicles on the street and sidewalk.

The tree species shown on this page are intended for use as street trees under utility lines or in other locations where a larger mature height would prove problematic. These trees should be spaced no more than 25 feet apart.

The following species (not pictured) should be prohibited along all public and private rights-of-way within the Town of Blythewood:

• Bradford Pear (Pyrus calleryana) is not native to the United States and is susceptible to ice and breaking.

• Fruit trees are often structurally unstable and litter the street with fruit.
Light Pollution

Light pollution was identified as a significant concern during interviews with Blythewood residents and stakeholders. The following guidelines are intended to minimize night sky pollution, negative effects on nocturnal ecosystems, and the amount of electricity consumed. The guidelines also strive to maintain nighttime security, safety, and productivity.

• Minimize the use of lighting in parking lots.
• Do not use mercury vapor lamps or bottom mounted outdoor sign illumination.
• Provide full cutoff, semi cutoff, or cutoff lighting in all exterior lights to reduce light pollution.
• All interior and exterior lighting fixtures should be automatically set to turn off after 10:00 p.m. in areas where they are not absolutely necessary. Manual override switches should be provided for after-hours users.
• Outdoor floodlights that project above a horizontal plane, such as the one shown at right, should be prohibited on new construction.
• Light output from all exterior light fixtures should meet the following standards.
  ○ Rural/park areas: Light spillage at the property line should not exceed 0.01 footcandles. Of the total lumens, 0% should be emitted above a horizontal plane.
  ○ Residential areas: Light spillage at the property line should not exceed 0.10 footcandles. Of the total lumens, 2% should be emitted above a horizontal plane.
  ○ Mixed-use areas: Light spillage at the property line should not exceed 0.20 footcandles. Of the total lumens, 5% should be emitted above a horizontal plane.

Light pollution will become a significant threat to Blythewood’s small town feel as growth occurs.

All light fixtures should be designed to minimize light emitted above a horizontal plane.
SUSTAINABILITY BEST PRACTICES

The World Commission on Environment and Development defines sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”1 This document addresses sustainability in Blythewood in the areas of buildings, landscaping, and planning. It includes a series of sustainable practices intended to serve as a guide for sustainable development.

Relationship to LEED Standards

Many of the principles contained in this document are based on LEED (Leadership in Energy and Environmental Design) standards. The United States Green Building Council created the standards as a rating system for green building.

Green building refers to the design, construction, and operation of buildings in an environmentally friendly way. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

The rating system is specific to the type of project. Specific LEED standards are provided for new construction, existing buildings, commercial interiors, core and shell, homes, neighborhood development, and schools. Each project receives points for each sustainable measure and reaches one of the following levels:

- Minimum points: Certified
- Second highest points: Silver
- Third highest points: Gold
- Fourth highest points: Platinum

LEED certification is the ideal goal for new development in Blythewood, but it may not always be feasible. The certification process can be cost prohibitive, particularly for smaller projects. The standards in this document, therefore, are intended to provide a broad range of guidance for all projects, whether LEED certified or not.

For more information on LEED certification, visit the U.S. Green Building Council website at: www.usgbc.org/leed
SUSTAINABLE BUILDINGS

Architectural sustainability can be achieved in a variety of ways. The following focuses on materials, energy, water usage, and indoor pollution.

Materials

New construction generates a demand for materials that can have a major environmental impact. These guidelines can reduce that impact.

- Maintain and reuse existing buildings where feasible, rather than building new ones.
- Require durable façade materials such as full-depth brick, stone, true stucco, cementitious siding, or wood clapboard. Vinyl siding and EIFS should be avoided.
- Construct buildings to last at least 100 years.
- Recycle waste generated during construction, where possible by reusing it on site.
- Purchase local materials that are harvested or manufactured within 500 miles to reduce transportation energy needs.
- Use reclaimed materials or those with recycled content to reduce the demand for virgin materials.
- Use rapidly renewable building materials (those with a life cycle under 10 years) to decrease the demand for non-renewable materials.

Energy

Approximately 68 percent of the electricity used in the United States is consumed in buildings, whether residential, commercial, or industrial. This makes energy-saving buildings crucial for curbing electrical consumption. The following elements and technologies should be utilized to help bring about energy savings.

- Low-tech, passive solar architectural features, such as eaves, porches, awnings, light-colored siding and roofing, and windows or doors with low-emittance glazing.

Materials can be reused from older structures to reduce waste and energy associated with construction

Recycled materials, such as this insulation made from blue jeans, can reduce a building’s impact

Simple design features can take advantage of natural light and air to reduce the need for air conditioning
• Buildings oriented to take advantage of natural light, shade, seasonal sunlight, and air circulation.
• Skylights or other technologies to bring sunlight into interior rooms.
• Natural ventilation and operable windows to reduce the need for mechanical cooling.
• High-efficiency ventilation systems with a seasonal energy efficiency ratio of at least 14.
• Renewable power technologies, such as solar panels, geothermal systems, or small wind turbines integrated into buildings.
• Controls that automatically shut off lighting during non-business hours, except for emergency lighting.
• High-efficiency light fixtures.
• Energy Star rated appliances.
• Hardscape and roof materials with a maximum solar reflective index of 29 to reduce the heat island effect.
• Insulation with high R-values to increase the efficiency of mechanical heating and cooling.
• Solar thermal water heating systems to reduce the load on electric or gas water heaters.
• Awnings over commercial storefronts to reduce solar heat capture in summer.

Water

Water usage can be significantly reduced by a number of methods. Indoor strategies are provided here, while those for outdoors are outlined in the Sustainable Landscape section below. Blythewood should encourage new developments to use both types of conservation strategies.

• Efficient plumbing fixtures that meet or exceed the 1992 Energy Policy Act standards for flow rate can reduce the demand for municipal water and sewage treatment.
• Gray water systems capture from bathroom sinks, showers, washing machines, and air conditioning condensate for reuse where potable water is not necessary.
• Capture of rainwater and HVAC condensation can reduce peak runoff volume and provide water for irrigation or for use in toilets.

**Indoor Pollutant Control**

Indoor air quality is often ignored in discussions of sustainability, yet in many areas the air in homes and businesses is more contaminated than the air outdoors. These guidelines reflect practices that improve indoor air quality, or prevent it from becoming a problem.

• Use adhesives, sealants, carpeting, paint, coatings, and composite wood products with a low amount of volatile organic compounds.

• Provide floor mats or rugs at busy doors to reduce the amount of pollutants tracked in.

• Limit indoor smoking to designated areas, or prohibit indoor smoking and provide a designated outdoor smoking area at least 25 feet from building entrances and windows.

• Utilize indoor plants to clean the air and beautify interior space.

• Design bathroom and kitchen fans to exhaust to the outdoors in order to remove contaminants and increase ventilation.

• Provide operable windows in residential units per the South Carolina Fire/Life Safety Code.

• Provide operable windows in other buildings as follows:
  • A minimum exterior opening of 6 square feet per window.
  • At least one such window in all rooms abutting an exterior wall (except where an abutting building exists), except for of kitchens, bathrooms, storage, stairs, hallways, garages, or rooms for retail sales, manufacturing, warehousing, or laboratories.

• Integrate operable windows with HVAC systems to reduce energy consumption.
SUSTAINABLE LANDSCAPE

Landscape design has a significant impact on sustainability. If implemented responsibly, the result can be healthy and enjoyable spaces that require a minimal use of natural resources.

Greenspace

The right combination of plant species, design, and maintenance should be encouraged to help ensure sustainable greenspace. The following focus points should serve as guidelines in the consideration of new landscape design.

- Provide a variety of greenspace ranging from window boxes, gardens, and pocket parks to greenways, athletic fields, and regional parks.
- Use local plant species to minimize maintenance, reduce water use, and prevent the introduction of invasive species.
- Mix plant species for year-round beauty and lower susceptibility to drought or pests.
- Minimize lawn areas to reduce the need for watering and reduce pesticide use. Native grasses or groundcover are one alternative.
- Provide community vegetable gardens and orchards that allow some food to be grown locally. Smaller gardens can be integrated into backyards within new developments.
- Plant street trees with a minimum mature height of 40 feet (except under utilities) and spaced no further than 50 feet apart. Planting areas should be at least 40 square feet.
- Plant trees in parking lots per the requirements of §155.394(C) of the Blythewood Code.
- Encourage deciduous tree species that allow sunlight to reach buildings in winter but provide shade to lower cooling costs in summer.
- Restore forests and streams to control erosion, improve water quality, and provide habitat. This may include trash and invasive species removal, bank stabilization, and grading.
- Irrigate during mornings and evenings only to limit evaporation. Drip irrigation is preferred.
Sustainability Best Practices

Stormwater

Water quality in Blythewood is relatively healthy compared to some neighboring communities that have experienced more suburban development. The future of water quality is largely dependent on the stormwater that drains off of parking lots, roofs, roads, and streets.

The following stormwater management best practices should be implemented to protect water quality:

- Provide a tree canopy, whether preserved during construction or planted afterward, which can slow raindrops, reduce erosion, and retain water in the soil.
- Provide bioswales along streets to remove silt and pollution from runoff before releasing it into the watershed or storm sewer. Bioswales also beautify neighborhoods with vegetation.
- Encourage rooftop gardens or green roofs to retain stormwater, reduce the heat island effect associated with development, increase usable outdoor space, decrease heating and cooling costs, beautify the built environment, and even provide food.
- Use rain gardens or other infiltration areas to provide small-scale detention and opportunities for plantings.
- Utilize cisterns to capture rain water and release it later for irrigation.
- Provide drainage pathways lined with rock between the gutter and the stormwater inlet. These pathways aerate, disperse, and slow the flow of water, while allowing sediments and some pollutants to drop out of the water. Lightweight materials that might shift during flooding are discouraged.
- Encourage erosion control and sedimentary plans with new development.
- Label storm drains to prevent any materials that could diminish water quality from being poured into them.
- Protect storm drains during construction by a curb and gutter inlet filter.

Bioswales or planting areas in parking lots and along streets integrate greenery into the town landscape

Stormwater management can be an opportunity to enhance existing stream beds and improve aesthetics

Rooftop gardens help reduce stormwater runoff, decrease electricity use, & provide usable greenspace
Pavement

Pavement includes roads, parking lots, sidewalks, paths, and other hardscaped areas that will represent an ever-greater amount of land as development occurs in Blythewood. Fortunately, pavement’s environmental impact can be reduced.

Permeable (also called porous) surfaces are one way to do this. They provide the function and durability of pavement with the filtration benefits of soil. Oils, dirt, and other pollutants from streets and sidewalks that are washed away by rain can be allowed to filter into the ground instead of simply being channelled back into rivers and streams. This reduces flooding, infrastructure costs, and the amount of pollutants typically found in stormwater. This pavement also allows surface water to infiltrate into the groundwater. With less water on the street, the occurrence of hydroplaning and similar rain-related traffic accidents are also reduced.

Blythewood’s sandy soils are ideal for a variety of porous paving materials. Recommendations are as follows:

- Encourage porous pavement or open grid pavers in parking lots, driveways, and alleys to decrease stormwater runoff. Maintenance is relatively minimal.
- Use crushed stone in plazas or parks to provide a hard surface for pedestrians but allow rain water to filter through.
- Use colored pavers to distinguish crosswalks on otherwise stone or gravel surfaces.
- Consider retaining dirt roads where population densities remain low. They are a low-cost alternative to paving.
- Encourage use of the following pervious materials
  - Open grid pavers
  - Grass pavers, especially in overflow parking areas or fire access lanes
  - Interlocking concrete paving blocks with a sand base, especially for sidewalks, public squares, and patios

Porous concrete, ideal for Blythewood’s sandy soil, allows water to filter into the ground

Open grid pavers can decrease stormwater runoff in parking lots, driveways, and alleys

Open spaces can make use of porous surfaces, such as this crushed stone court, for recreational areas
SUSTAINABLE PLANNING

Elements of sustainable architecture and landscape design are important at the level of the building and block, but other sustainable practices can only be incorporated at the level of town planning. The following guidelines will help ensure that Blythewood develops with environmentally responsible settlement patterns through the next generation.

Land Conservation

Traditional, sprawl-style development consumes land and divides it into single-use areas that leave only the leftover land for public spaces or “conservation” areas. In order to avoid this fate, Blythewood should encourage developers to:

• Provide a mix of retail, office, and residential uses to allow needs to be met within the town, per the Town Center Master Plan.
• Cluster development in areas where open space preservation is desired. Density may seem contrary to conservation, but allows growth to occur in cells that preserve surrounding land.
• Build compact and well-connected neighborhoods that favor walking over driving.
• Conserve sensitive land in new developments to provide open space and reduce the impacts of growth.
• Connect open spaces to create a continuous network of greenspace for recreation, alternative commutes, and wildlife corridors.
• Respect natural elements on a site, such as mature trees, wetlands, creeks, and steep slopes.
• Promote growth within areas that are already served by infrastructure to reduce sprawl and the cost of providing services.
• Plant trees in parks, along streets, in new developments, in parking lots, on private land, and wherever feasible. Trees help clean the air, capture carbon from the atmosphere, reduce the heat island effect, and enhance space for people and wildlife to enjoy.

Open space preservation can be incorporated into new developments to preserve Blythewood’s rural feel

Existing natural features such as trees and streams should be respected rather than destroyed when land redevelops

Concentrating development in areas already served by infrastructure can conserve land and preserve open space

SUSTAINABILITY BEST PRACTICES
Transportation

Modes of transportation have a significant impact on community sustainability because they affect health and social interactions as well as ambient air quality and the amount of natural resources consumed.

• Concentrate development in appropriate locations to reduce the need for driving by putting daily needs within walking distance.
• Provide multiuse trails to increase the health of residents and provide for alternative modes of transportation like biking and golf carts.
• Support commuter buses and other public transit in the Town Center to meet some transportation needs, reduce congestion, and foster a more walkable town.
• Require pedestrian-oriented buildings along well-designed sidewalks to promote walking.

Infrastructure

A town’s infrastructure must be considered if the community as a whole is to develop in a more sustainable manner. The following recommendations will allow Blythewood to progress toward a more sustainable infrastructure:

• Expand the community recycling program to accept materials not already collected, such as glass and cardboard.
• Begin education programs to inform residents of ways they can participate in sustainable living.
• Encourage homes and businesses to generate some electricity on-site with solar cells, small wind turbines, or other means, to reduce the demand on the utility grid.
• Promote home compost bins to reduce the amount of material sent to the landfill and provide fertilizer for gardening.
• Integrate food systems into the town to reduce the need for transporting goods. Gardens, orchards, small farms, and farmers markets all encourage local food consumption.
Exterior Lighting

Light pollution is a growing problem nationwide, particularly in fast growing areas such as the Midlands. Light pollution not only wastes energy, but also negatively impacts wildlife and people.

- Minimize the use of lighting in parking lots.
- Do not use mercury vapor lamps or bottom mounted outdoor sign illumination.
- Provide full cutoff, semi cutoff, or cutoff lighting in all exterior lights to reduce light pollution.
- All interior and exterior lighting fixtures should be automatically set to turn off after 10:00 p.m. in areas where they are not absolutely necessary. Manual override switches should be provided for after-hours users.
- Outdoor floodlights that project above a horizontal plane should be prohibited.
- Light output from all exterior light fixtures should meet the following standards.
  - Rural/park areas: Light spillage at the property line should not exceed 0.01 footcandles. Of the total lumens, 0% should be emitted above a horizontal plane.
  - Residential areas: Light spillage at the property line should not exceed 0.10 footcandles. Of the total lumens, 2% should be emitted above a horizontal plane.
  - Mixed-use areas: Light spillage at the property line should not exceed 0.20 footcandles. Of the total lumens, 5% should be emitted above a horizontal plane.
GLOSSARY OF ARCHITECTURAL TERMS

Cornice - decorative horizontal molding that crowns a building.

Course - a narrow band of brick, stone, etc. that runs horizontally around a building to visually delineate floors.

Fenestration - all windows, openings, or other transparent glass areas including in a building façade.

Grids between glass - dual paned windows having a grid (muntins) between the two panes of glass. The muntins are a series of thin bars that simulate the look of window made up of several panes of glass. The muntins serve no functional purpose and are simply cosmetic.

Offset - horizontal sections of a building façade that are set back or protrude in front of neighboring façade sections at least three feet, to break up the appearance of large buildings.

Parapet - a low wall or railing along the edge of a roof, which is usually also designed as a cornice.

Pilaster - an ornamental flattened column set on the front façade of a building.

The band of group bricks shown here is the building’s cornice.

The green band (between the first and second floor) and the red band (between the second and third floor) are simple course of painted brick.

The 18 inch high brick wall at the top of this building is both a parapet and a cornice.

The white structure shown above is a pilaster located on the corner of a historic home.
Roof form - a reference to the overall massing of a building’s primary roof structure, excluding dormers, towers, or other embellishments. Some common roof forms can be found above.

Simulated divided lite - one piece of window glass with grilles adhered to the interior and exterior of the window to give the window an overall look of a true divided lite.

True divided lite - individual panes of window glass held together by muntin bars.

Grids between glass cause window panes to appear flat because they provide less shadow contrast than true or simulated divided lites.

True or simulated divided lites provide more window texture and enrich the building façade.
 SOURCES CITED
