Residential Pattern Book

for the

City of Roanoke

Planning Building & Development

ROANOKE
VIRGINIA

Endorsed by the Planning Commission
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Winner of the 2009 American Planning Association Virginia Chapter Innovation Award and the Roanoke Valley Preservation Foundation Education Award.
Table of Contents

This document can be read chronologically or by chapter...it all depends on your goals. The following table of contents will help you navigate the document depending on your specific project. Please keep in mind that all sections are designed to work together. For example, if you are constructing a new single-family dwelling, it is not enough to just reference the New Construction section. The neighborhood classification in which the lot is located will have to be determined by using the Neighborhood Patterns section and appropriate architectural patterns for that neighborhood classification will have to be identified using the matrix found on page 17 in the Architectural Patterns section. Each section will provide direction on where additional information can be found within the Pattern Book and in other City documents.

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Introduction

Roanoke Vision, the 1985 Comprehensive Plan, identifies Roanoke as a “City of Neighborhoods” recognizing that the unique character of the City and the quality of life it provides are experienced through its established neighborhoods that have developed over time. These residential neighborhoods encompass a wide range of development patterns, housing types, architectural styles, and materials that reflect the tastes of the times, the resources available as well as the way people lived. These neighborhoods were and still are the basis for a strong sense of community and quality of life. Roanoke Vision advocated for the preservation and enhancement of the City’s existing neighborhoods and recommended that City ordinances and efforts support neighborhood revitalization and preservation. The City’s current comprehensive plan, Vision 2001-2020, continues this advocacy of neighborhood preservation through appropriate and attractive design. Vision 2001-2020 states:

‘The overall goal of Vision 2001-2020 is to make the City of Roanoke an attractive place for people of all ages, backgrounds, and income levels to live, work, shop and play. This vision requires not only sound social and economic policies but also a strong commitment to excellence in community design and appearance. Simply put, the City must be a beautiful city. Good design is not optional. The quality of the physical environment through attractive streets, buildings, parks and open spaces has a direct impact on Roanoke’s economy, the sustainability of its neighborhoods, and the successful stewardship of its unique natural and cultural resources. The community expects the highest level of excellence in building design, streetscapes, pedestrian amenities, preservation of special places, and enhancement of community distinctiveness.’

In developing a Residential Pattern Book, the City of Roanoke strives to preserve and enhance the character and quality of its residential neighborhoods. The Pattern Book is a design aid for new construction and renovation of residential buildings (single-family dwellings, two-family dwellings, townhouses, and multifamily dwellings). By exploring the historic development of the City’s existing neighborhoods and residential forms, the Pattern Book aims to guide homeowners, builders, and design professionals to appropriate maintenance and design decisions. But most importantly it is intended to instill pride in homeowners and encourage them to preserve the unique character of their homes and neighborhoods.

Purpose:

To educate homeowners, builders, and design professionals about Roanoke’s older homes, and how appropriate decisions regarding renovations, additions, and new construction can enhance their value and beauty and create unique and livable urban neighborhoods.
The tradition of pattern books as planning and design tools can be traced to first-century Rome. In his *Ten Books on Architecture*, Roman architect Vitruvius not only standardized the planning and construction of military camps and towns throughout the Roman Empire, but codified the correct use of architectural orders for *columns*, *entablatures* and entranceways. In doing so, Vitruvius provided the first top-to-bottom view of the planning and building process, and created a framework for practical instruction and dialogue that has spanned centuries.

Early American craftsmen had ready access to a variety of pattern books. These early resources ranged from large, expensive, theoretical treatises on classicism, to less expensive, pocket-sized pamphlets with selected designs and specifications for tradesmen. Pattern books provided examples of architectural designs, with how-to illustrations of cottages, villas, and most known architectural styles from Classical to Renaissance. Many of these publications descended from English pattern books, and included carpenter’s manuals, plan books, and catalogs for building products that continued to flood the American colonies and states from the eighteenth century through the end of the nineteenth century.

In addition to available high style reference material, practical publications in the form of builder’s companions or carpenter’s manuals were published in the 1800s by American builders and architects. Examples include Asher Benjamin’s *American Builder’s Companion* (1806); Owen Biddle’s *The Young Carpenter’s Assistant* (1805); and Minard Lafever’s *The Modern Builder’s Guide* (1833).
American architects Alexander Jackson Davis and Andrew Jackson Downing began publishing books that introduced various up-and-coming nineteenth-century Romantic styles and building designs. In 1837, Davis published his only pattern book, *Rural Residences*. For the first time in America, a complete illustration of a house with key details was presented, along with elevations and plans. Downing published many ‘architectural advice’ books including *A Treatise on the Theory and Practice of Landscape Gardening* (1841), which initiated the domestic house pattern book. In 1842, Downing and Davis collaborated on *Victorian Cottage Residences*, which addressed the importance of color, irregularity and variety in residential design. The publications of Downing and Davis also were significant for the fact that they targeted owners and patrons, as well as builders.

By the late nineteenth century, industrialization had created a large, hard-working American middle class that needed affordable housing to raise families. By the early twentieth century, traditional pattern books had been replaced by mail-order catalogs of house plans whose factory-cut components could be purchased and shipped directly to the builder’s site by rail or truck. Companies such as Aladdin Houses, Sears, Roebuck & Co., and Montgomery Ward responded to this market by turning out kit houses by the box car. The City of Roanoke was a beneficiary of this early catalog trend, as evidenced by its stock of American Foursquare and Bungalows that were assembled from kits.
Neighborhood Patterns

This section of the Pattern Book provides a general description of Roanoke’s neighborhoods by discussing the history, development, and dominant architectural styles and house types found within each neighborhood. For the purposes of the Pattern Book, neighborhoods have been classified by period of development:

- Downtown Neighborhoods: 1880s-1920s.
- Traditional Neighborhoods: 1920s-1940s.
- Suburban Neighborhoods: 1940s-present.

The neighborhood classifications will help residents identify which type of neighborhood they live in, or decide where they may want to live. Neighborhood classifications don’t always correspond to a specific architectural pattern. As with most American cities, Roanoke has evolved over time and neighborhoods and their patterns have redeveloped over time. This results in some neighborhoods that are transitional, featuring a combination of architectural elements from Downtown, Traditional, and Suburban neighborhoods. The neighborhood classifications are intended as a convenient starting point for further exploration. On the following page is a map (Figure 1) of Roanoke neighborhoods grouped by classification.

The oldest neighborhoods in Roanoke are classified as Downtown neighborhoods which were constructed between 1880 and 1920. The following neighborhoods, or portion of neighborhoods, are classified as Downtown:

- Belmont
- Downtown
- Fallon
- Gainsboro
- Hurt Park
- Mountain View
- Norwich
- Old Southwest
- South Jefferson
- West End

These neighborhoods developed at a time of heavy industrialization during the late-nineteenth century Roanoke Valley railroad boom. The Atlantic, Mississippi, and Ohio Railroad lines were constructed through the area during the 1870s forming the Norfolk & Western Railway Company (N&W). The population of the area soared from 669 in 1880, to more than 5,000 by 1884 making Roanoke the ‘Magic City’.

To manage growth and plot development, the Roanoke Land and Improvement Company was formed to construct the Hotel Roanoke (which required expansion before its initial construction was even complete), a

Photographs Courtesy of the Virginia Room
Figure 1: Neighborhood Classifications
railroad passenger station (O. Winston Link Museum), and homes for the expanding population. Between February of 1881 and June of 1882, 78 frame and 60 brick houses were built by the company, with an additional 62 brick homes planned for construction as soon as contractors could be found to build them.

These neighborhoods typically featured vernacular (the common building style of a period or place) frame houses with front porches, small narrow lots, fenced yards, and sidewalks. Since they predate the rise of the automobile era, Downtown neighborhoods feature grids of narrow streets with brick or concrete sidewalks and closely spaced buildings for shorter walking distance between destinations. Alleys were located behind houses and served as service corridors. The following development patterns are indicative of a Downtown neighborhood:

**Streetscape Patterns**
- Grid of narrow, yield streets (20-30 feet) with parking on both sides.
- Granite and stone curbs, 3 inches in height, some replaced with concrete, 8 inches in height.
- Deciduous trees located in 6 inch to 3 foot planting strips.
- Concrete sidewalks, with some original brick sidewalks, 5 feet in width.

**Lot Patterns**
- Small, narrow lots that average 5,000 square feet.
- Shallow, consistent front and side yard setbacks.
- Two-story houses with front porches as important living and social space.
- Garages located to the rear of the property, accessed by an alley.
- Driveways from the public street are not common.
- Yards defined by stone/concrete retaining walls, iron fences, or hedge rows.
- Concrete or brick walkways connecting the front entry to the public sidewalk.
Neighborhood Patterns/Downtown Neighborhoods

Typical Lot and Street Patterns in a Downtown Neighborhood

- Public Sidewalk
- Principal Building
- Accessory Structure
- Parcel Line
- Alley
- Public Street

Mature Deciduous Tree

Downtown Streetscape

Iron Fence and Hedge Row

Stone Retaining Wall

Stone Curb and Brick Sidewalk
The next phase of development are classified as Traditional neighborhoods which were constructed between 1920 and 1940. The following neighborhoods, or portions of them, are classified as Traditional:

- Gilmer
- Grandin Court
- Greater Raleigh Court
- Harrison
- Kenwood
- Loudon-Melrose
- Melrose-Rugby
- Morningside
- Riverland
- Walnut Hill
- Roundhill
- South Roanoke
- Villa Heights
- Wasena
- Williamson Road

During this time period, more transportation options such as the street railway system and the automobile were introduced, opening previously inaccessible land to development. The Roanoke Railway & Electric Company (RR&E Co.) reached its peak in 1925, operating approximately 50 electric cars with more than 30 miles of track. The automobile, which revolutionized personal travel and ushered the decline of the streetcar, also became affordable and popular during this time period.

Like Downtown neighborhoods, Traditional neighborhoods still featured a grid street system with alleys, street trees, and sidewalks. However, driveways began to appear and streets became wider to accommodate the automobile. Milled lumber also became available, which promoted easier and faster residential construction. For the most part, Roanoke’s builders produced a wide range of housing types and styles that included American Foursquares, Bungalows, Colonial Revival, and Tudor Revival. The following development patterns are indicative of a Traditional neighborhood:

### Streetscape Patterns
- Interconnected network of narrow, yield streets (28-40 feet) with parking on both sides.
- Concrete curbs, 3 to 8 inches in height.
- Deciduous trees located in 6 inch to 10 foot planting strips.
- Concrete sidewalks, 4 to 5 feet in width.

### Lot Patterns
- Variety of lot sizes that range from 5,000 to 7,000 square feet.
- Shallow, consistent front and side yard setbacks.
- One and a half to two story homes. Porches depend more on style, not lifestyle.
- Garages located to the rear of the property, accessed by an alley or a concrete strip driveway from the public street.
Figure 2: Street Railway System Network
- Yards defined by hedge rows or decorative concrete retaining walls when necessitated by topography.
- Concrete walkways connecting the front entry to the public sidewalk.
Suburban Neighborhoods (1940s to Present)

The newest neighborhoods in Roanoke are classified as Suburban neighborhoods with construction spanning from mid-1940 to present day. The following neighborhoods, or portions of them, are classified as Suburban:

- Airport
- Cherry Hill
- Eastgate
- Edgewood-Summit Hills
- Fairland
- Franklin-Colonial
- Gainsboro
- Garden City
- Grandin Court
- Greater Deyerle
- Greater Raleigh Court
- Hollins
- Kenwood
- Mecca Gardens
- Melrose-Rugby
- Miller Court/Arrowood
- Monterey
- Norwood
- Peachtree
- Preston Park
- Ridgewood Park
- Riverdale
- Roundhill
- Shenandoah West
- South Roanoke
- South Washington Heights
- Southern Hills
- Villa Heights
- Wasena
- Washington Heights
- Washington Park
- Westview Terrace
- Wildwood
- Williamson Road
- Wilmont

Following World War II, American cities adopted new settlement patterns that typify postwar residential growth across the United States: the suburbs. Whereas residences, commerce, and industry stood shoulder to shoulder in older areas, Suburban neighborhoods were built farther from places of employment and entertainment, as the automobile allowed people to travel greater distances in shorter periods of time. Streets tend to be curvilinear with few connections. Cul-de-sacs are nearly synonymous with suburban neighborhoods. They provide access to individual homes through local dead-end streets, while restricting heavy automobile traffic to main arteries on the
periphery of subdivisions. In many car-based suburbs, the ability to walk to and from shops or to neighboring houses diminished as dependence on the automobile increased. Eventually, sidewalks disappeared from most suburban developments.

The design of homes also changed with advances in technology. Front loaded garages and driveways became prevalent, while alleys disappeared. The prime social space moved from the front porch to the family room with the advent of television and air conditioning. Outdoor living area moved to the back yard and patios, decks, and privacy fences began to appear. The following development patterns are indicative of a Suburban neighborhood:

**Streetscape Patterns**
- Curved streets with limited connections and cul-de-sacs.
- Rolled or block edged concrete curbs, 7 inches in height, where present.
- Tree canopy provided in private yards, rarely in the public right-of-way.
- Sidewalks typically absent.

*Typical Lot and Street Pattern in a Suburban Neighborhood*
Lot Patterns
- Large lots, 7,000 square feet or greater.
- Deep front and side yard setbacks.
- Sprawling homes often one-story or split level with small or non-existent front porches.
- Front-loaded, attached garages accessed by a large, concrete or asphalt driveway.
- Wood privacy or chain link fence enclosing the rear yard.
- Concrete walkway connecting the front entry to the public street and the driveway.

Transitional Neighborhoods

Many neighborhoods transition from one classification to another for a variety of reasons. In some cases, these neighborhoods began as Downtown or Traditional neighborhoods, then experienced redevelopment or other disruptive changes. In other instances, lots were created during one era and then built on during another. This could result in a suburban style house on a narrow, tree lined street with sidewalks and an alley.
Identify Your Neighborhood

The neighborhood map shown at the beginning of the Neighborhoods section is the first step to identifying your neighborhood type. This map is a general guide as development changes over time and there are no truly defined boundaries. The grid on the next page will help guide you in determining your neighborhood type. Follow the steps below to complete the grid and gain an understanding of your neighborhood.

Walk around and observe your immediate neighborhood - about two blocks in each direction. Take this book with you and complete the grid by filling in the check boxes that correspond to what you see.

Step 1: Locate your home on the Neighborhood Map.
Step 2: Get out and walk around your neighborhood.
Step 3: Identify street patterns.
Step 4: Determine street width.
Step 5: Identify sidewalks.
Step 6: Identify driveways.
Step 7: Identify garages.
Step 8: Identify lot sizes.

As you go through each of these steps, fill in the blank check box appropriately. For example, if you live in a neighborhood that has a grid or connected street pattern with alleys, then check the boxes next to these items. Checking these two boxes will indicate that these are typically found in either Downtown or Traditional neighborhoods. If your neighborhood has curvilinear streets or cul-de-sacs, this indicates that you most likely live in a Suburban neighborhood.

Fill in the check boxes to the best of your ability and review your results. Once you have completed this process you should be able to tell if the features that are present in your immediate neighborhood are typical of Downtown, Traditional or Suburban neighborhoods. Although there might be elements of all three neighborhoods in your neighborhood, by completing the entire grid you should be able to determine which characteristics are prevalent in your immediate area.
**Neighborhood Patterns/Identify Your Neighborhood**

**Hint:**
As you walk around your neighborhood, one important piece of information that will help you complete this matrix is to know the length of your pace or stride. Knowing this will help you to judge distances such as street width and lot width conveniently without having to use a measuring tape. Typically, your full stride is equal to half your height. So a 6 foot tall person typically has a 3 foot stride. Measure the length of your standard pace prior to your neighborhood tour and this will assist you tremendously with this exercise.

<table>
<thead>
<tr>
<th>Neighborhood Characteristics</th>
<th>Check Box</th>
<th>Downtown</th>
<th>Traditional</th>
<th>Suburban</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Street Patterns</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grid/ Connected Streets</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Alleys Present</td>
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<td></td>
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<tr>
<td>Curvilinear Streets</td>
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<tr>
<td>Cul de Sac</td>
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<tr>
<td><strong>Street Pavement Width (Curb to Curb)</strong></td>
<td>Check Box</td>
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<td></td>
</tr>
<tr>
<td>Narrow 20' to 30'</td>
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</tr>
<tr>
<td>Medium 28' to 40'</td>
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<td></td>
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<tr>
<td>Wide 26' to 50'</td>
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<tr>
<td><strong>Sidewalks</strong></td>
<td>Check Box</td>
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<td></td>
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</tr>
<tr>
<td>Brick Sidewalks</td>
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<tr>
<td>Concrete Sidewalks</td>
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<td></td>
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<tr>
<td>No Sidewalk</td>
<td></td>
<td></td>
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<tr>
<td><strong>Driveways</strong></td>
<td>Check Box</td>
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<td></td>
</tr>
<tr>
<td>No Driveway Present</td>
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</tr>
<tr>
<td>Un-Paved Driveway</td>
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<tr>
<td>Concrete Strip Driveway</td>
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<tr>
<td>Paved Driveway</td>
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<tr>
<td><strong>Garages</strong></td>
<td>Check Box</td>
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<td></td>
</tr>
<tr>
<td>No Garage Present</td>
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<td></td>
<td></td>
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<tr>
<td>Detached</td>
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<tr>
<td>Attached</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Lot Sizes</strong></td>
<td>Check Box</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5,000 Square Feet (s.f.)</td>
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<td></td>
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<tr>
<td>5,000 - 7,000 s.f.</td>
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<td></td>
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<tr>
<td>Greater than 7,000 s.f.</td>
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</tbody>
</table>
Roanoke’s houses and their respective patterns reflect the periods of development and the changing tastes and livelihoods of the residents who built them. The following section helps homeowners and builders recognize Roanoke’s residential architecture patterns by identifying the key components of each form. Character-defining features of each pattern are examined with attention to massing, roof forms, wall cladding, porches, doors, and windows. Architectural details are illustrated with graphics and photographs of Roanoke houses. With a little practice, anyone can recognize these elements that typify the houses and neighborhoods of Roanoke.

The architectural patterns discussed in the Pattern Book are not exclusive to Roanoke. They are found in cities across the United States. An ability to recognize the repeating architectural patterns that link a house to its neighborhood, and its place in the city’s development, enables people to appreciate a house’s history and architectural character, and make informed decisions regarding renovation, additions and new construction in a specific neighborhood. For example, the Downtown urban core is rich in Queen Anne and Colonial Revival, while the later Traditional neighborhoods feature Tudor Revival, Bungalow, and Foursquare houses. The Ranch houses and continuing styles of Colonial Revival reflect the Post-World II Suburban neighborhoods. The matrix on the following page will help you identify which architectural patterns are typically found in each neighborhood classification. (To determine your neighborhood’s classification, please refer to Neighborhood Patterns.)

Stylistic Mixtures

In a region like the Roanoke Valley, stylistic categories can become blurred. While many houses in Roanoke have been built in distinct, recognizable architectural styles, other houses have multiple characteristics, and do not fit neatly into one category. Houses were sometimes built with elements of a variety of architectural styles, while in some cases houses were remodeled later in a style that was more fashionable. For example, a Colonial Revival house may feature a gambrel roof or a Palladian-style dormer, but have the battered porch supports commonly found on Craftsman style houses. Likewise, a house with the horizontal massing of the Prairie style may exhibit stickwork between porch supports, or the open eaves with exposed rafter tails characteristic of the Craftsman style. From about 1890 to 1915, various styles such as Queen Anne, Prairie, Tudor, and Craftsman were being built simultaneously. During the 1930s, architects and builders experimented with mixtures of Tudor, Colonial Revival, and Mediterranean influences that are reflected in many of the eclectic houses found in Roanoke.
<table>
<thead>
<tr>
<th>Architectural Pattern</th>
<th>Downtown Neighborhood</th>
<th>Traditional Neighborhood</th>
<th>Suburban Neighborhood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queen Anne</td>
<td><img src="Queen_Anne.jpg" alt="Image" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Foursquare</td>
<td><img src="American_Foursquare.jpg" alt="Image" /></td>
<td><img src="American_Foursquare_Traditional.jpg" alt="Image" /></td>
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<td>Bungalow</td>
<td><img src="Bungalow.jpg" alt="Image" /></td>
<td><img src="Bungalow_Traditional.jpg" alt="Image" /></td>
<td><img src="Bungalow_Suburban.jpg" alt="Image" /></td>
</tr>
<tr>
<td>Tudor Revival</td>
<td><img src="Tudor_Revival.jpg" alt="Image" /></td>
<td><img src="Tudor_Revival_Traditional.jpg" alt="Image" /></td>
<td><img src="Tudor_Revival_Suburban.jpg" alt="Image" /></td>
</tr>
<tr>
<td>Colonial Revival</td>
<td><img src="Colonial_Revival.jpg" alt="Image" /></td>
<td><img src="Colonial_Revival_Traditional.jpg" alt="Image" /></td>
<td><img src="Colonial_Revival_Suburban.jpg" alt="Image" /></td>
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<tr>
<td>Ranch</td>
<td><img src="Ranch.jpg" alt="Image" /></td>
<td><img src="Ranch_Traditional.jpg" alt="Image" /></td>
<td><img src="Ranch_Suburban.jpg" alt="Image" /></td>
</tr>
</tbody>
</table>
The following provides a basic vocabulary for residential architectural terms. A full list of architectural terms can be found in the *Illustrated Glossary* on page 148. Defined terms are delineated by italic, bold print throughout the document.

**Main Roof Types**

- **Roof**
- **Fascia**
- **Cornice Mold**
- **Frieze Board**
- **Corner Board**
- **Siding**

**Window**

- **Head**
- **Muntin**
- **Glazing**
- **Upper Sash**
- **Meeting Rail**
- **Casing**
- **Lower Sash**

**Door**

- **Crown**
- **Head**
- **Glazing**
- **Stile**
- **Panels**
- **Rail**
- **Threshold**

**Porch**

- **Capitol**
- **Column**
- **Baluster**
- **Top Rail**
- **Balustrade**
- **Bottom Rail**
- **Skirt Board**
- **Framed Lattice**

**Wall Cladding**

- **Roof**
- **Frieze Board**
- **Entablature**

**Basic Components of a Roanoke House**

Intersecting Gable  Side Gable  Front Gable  Pyramidal Hipped  Hipped
Vernacular Architecture

A number of vernacular house types are found in Roanoke. In contrast to fully-designed houses in a specific or even mixed architectural style, a vernacular house typically lacks architectural detailing to associate it with a particular style. Generally speaking, vernacular buildings derive their appearance and names from their plans and internal arrangements. Often, the vernacular house follows a typical form of a certain period or style, such as the I-House, often with an intersecting-ell roof plan, but does not embellish it with any stylistic detailing.

For example, the I-house, with its two-story, three-bay, central-passage plan, might be embellished in the Queen-Anne style with decorative brackets and shingles in the gable end and a spindlework porch, or feature a simple squared column porch with no other detailing.

Often, the vernacular style house is associated with mass-produced worker housing, which was built with an eye toward quantity and speed of construction-versus style or personal taste. This was the case in many Roanoke neighborhoods, where a building boom occurred in response to the rapid development of Roanoke at the turn of the twentieth century. Vernacular architecture reflects the overall development and building trends of Roanoke and contributes to the overall fabric of our historic neighborhoods.
Often misidentified as “Victorian,” the Queen Anne was popular during the reign of Victoria, the Queen of England, from when she turned 18 in 1837 until her death in 1901. Like other Victorian era styles, the Queen Anne design thrived on decorative excess, which matched the Victorian sensibilities of the decorative arts and interior design seen inside these homes. When constructing a Queen Anne building, variety was to be encouraged, as was freedom of expression, which is why it is difficult to find two Queen Anne homes that are exact replicas. The use of detailing was not necessarily thought out beforehand. The effect was one of overall busyness and sense of chaos with wall surfaces clad in masonry, wood shingles of all designs, and clapboard; porches intermixed with turrets and gables; and windows designed in varied patterns, sizes and styles, often with leaded or colored glass.

By the 1880s, pattern books were popularizing the style, while railroads made available a host of mass-produced architectural details, such as doors,
Architectural Patterns/Queen Anne

windows, and siding, which were applied directly in various combinations to an asymmetrical *facade*. Additionally, light wood frame construction (such as *balloon framing*) was replacing heavy timber construction as a standard building practice, which allowed irregular-shaped, asymmetrical floor plans for the first time. The prevalence of the Queen Anne in Roanoke, mostly in the older Downtown neighborhoods, is directly related to the building boom Roanoke experienced in the late nineteenth to early twentieth century. Given the nationwide popularity of the style during this period, coupled with the availability of building components by rail, and the shift in building techniques toward the balloon frame, the Queen Anne has a strong presence in Roanoke’s older neighborhoods.

The Queen Anne will generally fall under one of two subtypes, the Spindlework or the Free Classic. The Spindlework subtype is easily recognizable with its delicate turned porch supports, turned or flat sawn *balusters* and ‘lacy’ woodwork, commonly referred to as ‘*gingerbread*’. This woodwork is commonly seen as ornamentation on porches, *gable ends*, and beneath *bay* window overhangs. The Free Classic subtype is recognizable by the use of classical *columns* often grouped in pairs of two or three. The columns may either be full porch height or raised on stone or brick piers. Other classical details, such as *Palladian* windows or *dentil* moldings are also common.

**Essential Elements**

- Steeply *pitched* irregular roof; often includes dominant front-facing *gable*, and complex shape.
- Asymmetrical façade with partial, full-length, or wrap around porch, which is usually one-story high and extended along one or both side walls.
- Picturesque *massing* with *bays*, towers, overhangs, and wall-projections.
- *Beveled, etched* or stained glass in doors and *feature* windows.
- Decorative detailing such as *spindlework*, *half-timbering*, classical *columns*, patterned shingles, *finials*, spandrels, and *brackets*.

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*Spindlework Subtype*

*Free Classic Subtype*
The Queen Anne style is well-known for its complex massing featuring a variety of hipped, gabled, and intersecting-gabled roofs. Three main types of massing forms can be found in Roanoke; rectangular, L-shape, and square. Each form of massing can be found in both one-story and two-story variations.

**Rectangular Massing:**

Houses with rectangular massing feature steeply pitched gable-front roofs ranging from 8:12 to 12:12. Full-width hipped porches are added on the front.

**L-Shaped Massing:**

An L-shaped massing form features a narrow, front-gabled wing facing the street, which is typically two-fifths that of the main body. The main body is a side-gabled wing, which consists of the remaining three-fifths of the dwelling. A porch will usually extend across the main body, and sometimes wrap around the front-gabled wing as well. The front and side-gabled wings will typically have a 9:12 pitch.
Square Massing:

Houses with square massing feature a centered hipped roof with a front-gabled wing and a lower side cross gable. Roof pitches range from 8:12 to 12:12. Full-width porches extend across the façade.

Note: Roofs are often punctuated with dormers in a variety of shapes and sizes. Dormers were important sources of light in attics of upper-income Queen Anne houses as this was often the living space for servants. Large attic spaces are more often found on the larger hipped roofed Queen Anne as opposed to the intersecting gable.

Eaves

The eave is often boxed with a 12 to 16 inch frieze board. The Spindlework subtype will often include spandrels and brackets while the Free Classic subtype often features modillions, arches and/or dentils.
Wall Cladding

Texture is a major decorative element of the Queen Anne homes, which displays an assortment of wall surfaces. A frame house might incorporate several different types of wood or masonry siding with *gable ends* featuring patterned shingles (fishscale, diamond, sawtooth, coursed, and staggered), *half-timbering* and other elaborate motifs. The Queen Anne has three distinct siding patterns: *German*, *Novelty*, and *Clapboard* siding. German siding has a 6 inches exposed face; Novelty siding has an 8 inches exposed face with the “apparent exposure” of 4 inches, and Clapboard siding has a 6 inches exposed face with a straight angular configuration. The most common combination of siding is Clapboard on the first level and Novelty on the second level. The Free Classic subtype often features various garlands, *swags*, and other decorative motifs that are derived from Greek and Roman traditions.

Porches

During the Victorian era, the front porch was an important design feature and was treated as an outdoor room, often with houseplants, wicker furniture, and rockers; even parlor furniture and rugs were added when a party was planned. While many a summer afternoon and evening were spent in this outdoor living area, front porches were also built to be admired and punctuate an already asymmetrical façade. Expansive one-story, partial, or full-width porches that extend along one or both side walls with a minimum depth of 8 feet are common. Where a turret is present, the porch curves to follow its shape. Second-story porches may be present, while recessed porches are sometimes found in *gables*, second stories, or towers.
### Spindlework Porch

The Spindlework subtype features decorative turned-wood *columns* (minimum 6 inch wide and 9 to 10 feet tall), *turned wood*, and flat sawn *balusters*, *gingerbread* in between the columns that feature side and projecting *brackets*.

![Spindlework Porch Diagram](image)

### Free Classic Porch

The Free Classic subtype focuses on classically-inspired *columns*, such as Tuscan, Ionic, or Corinthian columns which are often paired and mounted on pedestals. Full length columns are typically 8 to 10 inches in diameter and 9 to 10 feet tall while columns mounted on a pedestal are typically 8 inches in diameter. Porch roofs often feature a *pediment gable* over the entrance. *Balusters* are usually turned or square (2 inches in diameter) and spaced no more than 4 inches apart on center.

![Free Classic Porch](image)
Doors

Glass is an elaborate feature on the Queen Anne with beveled, etched, and stained glass appearing in doors, sidelights, and transoms. A single large pane of glass is usually set into the upper portion of a door, which often features other incised decorative detailing. Half-light and multiple light doors are also common. Trim is typically 6 to 8 inches with a decorative cap.

Windows

Vertical window sashes are typically one-over-one or two-over-two and are sometimes bound by smaller rectangular panes. Large, full-length façade windows often occur in groups. Many times stained glass multi-light “feature” windows are located at the stair landings. Shutters were rarely used on the Queen Anne. Trim is typically 6 inches in width with a decorative cap.
Turrets

Round, octagonal or square towers and turrets are staples of the Queen Anne, especially in the Free Classic subtype. These features are located at a front façade outside or inside corner.

Additions

Most Queen Anne homes have large footprints that do not require an addition. Reallocating existing square footage and finishing attic space as shown below is often all that is needed to update a Queen Anne to modern expectations. However, if an addition is needed, it should be designed as a secondary element or wing that respects the overall massing and scale of the original house. Additions should never be larger or wider than the main residence; they should be located to the rear of the property to minimize visibility from the street. Roofing forms and materials on additions should match the roof of the main house, with steeply-pitched gables that maintain the characteristic asymmetry of a Queen Anne house. Fenestration patterns, as well as window and door types, on an addition should mimic what is found on the main house.
An addition should respect the “gingerbread” or classical stylistic influences that may be found on a Queen Anne. Similar exterior finish materials should be used wherever possible, and decorative millwork complement the original. A list of appropriate materials specific to the Queen Anne is provided at the end of this section. Additions should be designed and built so that the form and character of the primary residence will remain intact if the addition is ever removed. More information on additions can be found within the New Construction section of this document.
Second Floor Existing

Second Floor Modified

*Finish Attic Space into Additional Bedrooms, Media Room, or Recreation Room

Full Bath and Laundry
9'6" x 10'6"

Reallocation of Existing Square Footage on a Square Queen Anne
Carriage House

The carriage house served an important function during the Victorian era. The carriage house typically served the middle-to upper-income families and was built to house the horse and buggy (carriage) and often featured a second floor where a servant would live. The carriage house was often a large structure that mimicked the main house architecturally. The carriage house would have been built out of the same material as the main house with corresponding window types and roof pitches; if the main house had six-over-six sash windows then the carriage house did too. The doors were double-leaf pull out or sliding doors, often made of solid wood.

Painting a Queen Anne

Queen Anne houses were meant to be colorful. Architectural details are highlighted with dark vivid colors with contrasting hues: Greens, oranges, reds, maroons, grays, browns, as well as tans and olives are dominant colors. The walls of a Queen Anne house may be painted one color, while doors, window sashes, trim, and decorative shingles are painted other colors; five separate colors can be painted on a single house. If a Queen Anne displays both wood shingles and wood siding, than the shingles should be painted or stained a different color than the siding. It is important to emphasize the many textures of these highly ornate houses and the more ornate a house, the more paint colors can be chosen. Unpainted brick should never be painted as it could drastically alter the home’s original character and traps moisture inside walls.

Maintaining Character

Defining Features

Queen Anne houses remain an enduring architectural feature of Roanoke’s older neighborhoods not only because they are stylish, but because they are well-built in terms of materials and construction. However, the same character-defining elements that make Queen Anne houses such a colorful addition to the landscape also make for a high-maintenance residence. Their complex roof designs, multiple chimneys, and windows demand ongoing attention.

Predominantly constructed of wood, Queen Anne houses and their machine-made architectural details - scrollwork, brackets, spindles - must be
Residential Pattern Book

Architectural Patterns/Queen Anne

Painted to ward off exposure damage. Because the decorative elements of a Queen Anne are comprised of many individual pieces of wood, only damaged pieces should be repaired or replaced—preferably with wood. Wholesale replacement of architectural elements is not recommended. All windows should be maintained and repaired annually.

Porches are fundamental character-defining aspects of a Queen Anne house; they should be examined for signs of foundation damage that may be evidenced by sagging, cracking, or buckling, as well as rotting scrollwork and brackets. Wood porch columns and hand rails should be painted. Queen Anne porches should never be enclosed with siding, nor should they be removed or altered. Keeping gutters clean and functional will minimize the risk of water damage to porches.

**Appropriate Materials**

- **Roofs:** Fiberglass shingles (architectural grade), cementitious shingles, slate and faux slate materials, standing-seam metal, and pressed metal shingles.

- **Wall Cladding:** Smooth finish brick. Wood or smooth finished fiber cement boards in *novelty* siding and lap siding with a 4 to 6 inch lap exposure. Decorative cut wood or fiber-cement shingles in fishscale, diamond, sawtooth, *coursed*, and staggered patterns.

- **Porch Ceilings:** Tongue-and-groove wood or composite boards, or beaded-profile plywood.

- **Columns:** Architecturally correct Classical proportions for the Free Classic subtype and details in wood, fiberglass, or composite material. Turned posts for the Spindlework subtype (minimum 6 inch stock) in wood, fiberglass or composite material.

- **Railings:** Milled wood top and bottom rails with square, turned, or flat-sawn *balusters* (Spindlework subtype only).

- **Doors:** Wood, fiberglass or steel with traditional stile-and-rail proportions, raised panel profiles, and *glazing* proportions, painted or stained.

- **Windows:** Wood, or aluminum-clad wood. Vinyl should only be used in conjunction with brick veneer (not in the H-1 or H-2 Historic Districts). True divided light or *simulated divided light* (SDL) *sash* with traditional exterior *muntin* profile (7/8 inch wide).

- **Shutters:** Shutters were not typically used on the Queen Anne style.

- **Trim:** Wood, composite, or polyurethane millwork.
Gallery of Examples
Spindlework Subtype
Gallery of Examples
Free Classic Subtype
The American Foursquare began appearing on American streets—from Seattle to San Diego, Miami to New York, and here in Roanoke—around the turn of the twentieth century. This new style promised affordable, utilitarian housing for middle-class families trying to gain the most from a modest lot. Simplistic and practical, American Foursquares are one of the most common housing types found in Roanoke’s diverse neighborhoods.

The American Foursquare’s origins are rooted in the work of Frank Lloyd Wright, the American architect who shunned asymmetrical late-Victorian era pretension and pioneered a humbler, boxier, more down-to-earth alternative for domestic architecture.

Pattern books and mail-order catalog companies such as Sears, Roebuck & Co., and Aladdin Houses helped promote Wright’s new “Prairie” vision by offering kit homes that included American Foursquare house plans. The pieces were trucked or shipped by boxcar to cities across the country, which helps explain why American Foursquares were built in neighborhoods near rail lines.
Essential Elements

- Cubical-shaped, two-story house, square in plan and elevation.
- **Hipped** or pyramidal hipped roof with hipped, **gabled** or **pedimented** dormers on one or more sides of main roof.
- Deep, full-width or wrap around porch, one story in height, with significant structural components.
- Centered front entrance with equal groupings of windows on either side of both stories; or off-centered entrance with symmetrical upper story window arrangement.
- Craftsman or Colonial Revival influence present on doors, windows, porches, and *eaves*.

Massing & Roof Forms

The American Foursquare is characterized more by its simple box-like form and low-*hipped* roof, than its style, thus gaining its name from a straightforward floor plan of four rooms on each level. The standard American Foursquare truly is square in form often measuring 28’ x 28’, 29’ x 29’, or 30’ x 30’. The roof is either hipped or pyramidal hipped with a hipped, **gabled** or **pedimented** dormer on one or more sides with a *pitch* ranging from 6:12 to 8:12. The roof is typically accented with a wide *eave*.

The American Foursquare is always two stories tall. Window and door composition on the front façade typically consists of two windows (sometimes paired) and a centered or off-centered door on the first floor, two windows (sometimes paired) on the second floor and a centered dormer in the roof. The American Foursquare typically has an exterior end chimney projecting through the eaves.
Walls were almost always laid in brick. Occasionally, decorative geometric patterns called \textit{diapering} were used with darker brick highlighting the pattern. Many American Foursquares feature a horizontal band of vertical bricks (a \textit{soldier course}) at the roof wall junction. Wood siding (4 to 6 inch exposure), wood shingles and stucco were often used to accent the second story and dormer windows.

A full-length, one-story front porch is a widespread element of the American Foursquare. The porch often extends to one side as either a wrap around porch or as a \textit{porte-cochere} for parking vehicles. American Foursquare porches are typically accessed by concrete steps that match the foundation with flanking square brick posts.

Because most American Foursquares are brick, most porch supports are 12 inch square brick posts of full height. Brick knee-walls capped with concrete \textit{coping} usually span between the brick posts. Other variations will feature a brick pier with tapered wood posts (10 to 12 inches wide) and wood railings with 2 inch square \textit{balusters}. 

\begin{itemize}
  \item \textit{Wall Cladding} \\
  \textit{Diapering with Soldier Course Above} \\
  \textit{Combination of Brick and Shingle Siding} \\
  \item \textit{Porches} \\
  \textit{Brick Piers with Knee-Wall Capped with Concrete Coping} \\
  \textit{Tapered Post on Brick Pedestal with Wood Railings} \\
  \textit{Brick Piers with Wood Railings}
\end{itemize}
Doors

The American Foursquare door is similar to other front doors of the 1920s with rectangular-shaped glass and raised wood panels. Sidelights and a transom often accent the front door while allowing more light into the living area. The design of the sidelights and transom will often match that of the door. Brick dwellings typically have a 2 inch brickmold and a soldier course at the head of the door while dwellings with siding have 6 inch straight trim.

Windows

Paired, double-hung wood windows with four-over-one sashes typify the American Foursquare. Other common window sash types include a one-over-one or a six-over-one double-hung window. Sometimes decorative six or eight-over-one windows were used. Brick dwellings typically have a 2 inch brickmold and a soldier course at the head of the window while dwellings with siding have 6 inch straight trim. Shutters were rarely used on the American Foursquare.

Window placement reflects the American Foursquare floor plan. For example, sets of double or triple windows, and in some instances a bay window, on a side elevation will denote the first floor living room/dining room or a second floor master bedroom. A small window between floors will light the staircase, while a small second floor window located between larger windows indicates a bathroom or closet.
Stylistic Influences

The modest American Foursquare design lent itself to changing architectural tastes effortlessly and inexpensively. Thus an American Foursquare in Roanoke is often decorated with stylistic features from either the Colonial Revival or the Craftsman styles:

Colonial Revival Influence
- Pedimented gable over a porch entry.
- Classical columns
- Cornice with dentils or modillions.
- Dormer with a Palladian-style window.

Craftsman Influence
- Low-pitched roof
- Tapered posts
- Wide eaves with exposed rafter tails or knee braces.
- Large gabled or shed dormers with exposed rafter tails and braces.

Additions

New additions to American Foursquares should be designed as secondary elements or wings that are compatible with the overall massing and scale of the original house. An addition should never be larger or wider than the main residence. The most appropriate location for an addition is to the rear of the property to minimize visibility from the street. Additions should be designed and built so that the form and character of the primary residence will remain intact if the addition is ever removed.

An addition should respect the stylistic influences that may be found on an American Foursquare. Similar exterior finish materials should be used whenever possible. A list of appropriate materials specific to the American Foursquare is provided at the end of this section. Roofing forms and materials should match those of the original structure if possible, with low-pitch roofs that are subordinate to the primary roof line. Windows should be similar to the original in type and style, employing wooden double-hung sash or casement windows as necessary. More information on additions can be found within the New Construction section of this document.
Reallocation of Existing Square Footage and Addition to an American Foursquare
Reallocation of Existing Square Footage and Addition to an American Foursquare

Second Floor Existing

Porch Roof

Bedroom 10’6” x 11’6”

Bedroom 10’5” x 13’0”

Bedroom 9’0” x 12’0”

Bedroom 11’6” x 7’6”

Full Bath 5’6” x 9’3”

Second Floor Modified

Porch Roof

Bedroom 10’6” x 11’6”

Bedroom 10’5” x 13’0”

Bedroom 11’6” x 7’6”

Bedroom 11’6” x 7’6”

Full Bath 5’6” x 9’3”

Addition 27’0” x 14’0”

*Finish Attic Space into Additional Bedrooms, Media Room, or Recreation Room

Residential Pattern Book

Page 40
Garages and Porte-Cocheres

Like other early 20th-Century residences, American Foursquare houses had matching garages; most garages were one bay wide, while some featured two bays divided by a centered brick post (as opposed to one wide door that is common today). The garages were often brick that matched the house with double-leaf doors or sliding doors. The roof pitch is usually lower than the main house. The garages were located off the rear corner of the house at the end of double strips of concrete. Vehicles were also parked under a porte-cochere.

Painting an American Foursquare

Soft colors such as white or ivory should be used on the American Foursquare’s wood sashes, eaves, and trim. Soft earth tones such as brown, yellow, and green should be used on siding and shingles. Unpainted brick should never be painted as it could drastically alter the home’s original character and trap moisture inside walls.

Roanoke’s stock of American Foursquares is nearly one hundred years old. This longevity attests to the sturdiness of construction and craftsmanship that made these houses an American tradition. Despite their durability, homeowners should take a few simple maintenance steps to preserve the character-defining elements that add richness to local American Foursquares.

The symmetrical massing for which the American Foursquare is named is one of the most important architectural features to maintain. A simple insensitive window replacement can impact the house by skewing its façade proportions. Because exterior architectural elements are character-defining features of an American Foursquare, their ongoing maintenance is essential to preserving the historic significance of a building.

Doors and windows are among the most highly visible features of any residence. All windows should be maintained and repaired annually. Windows located beneath the full-width porches are always protected from the sun and...
rain and rarely require replacement. Porches and *porte-cocherses* are fundamental aspects of an American Foursquare and should be maintained and repaired annually. Front porches should never be enclosed with siding, nor should they be removed or altered. Unpainted brick should never be painted.

### Appropriate Materials

- **Roofs**: Fiberglass shingles (architectural grade), cementitious shingles, slate and faux slate materials, and pressed metal shingles.

- **Wall Cladding**: Smooth finish brick. Wood or smooth finished fiber-cement boards in **novelty** siding and lap siding with a 4 inch to 6 inch lap exposure where appropriate on wood clad houses.

- **Porch Ceilings**: Tongue-and-groove wood or composite boards, or beaded-profile plywood.

- **Columns and Posts**: Solid brick posts or brick piers with tapered square posts. Architecturally correct proportions and details in wood, fiberglass, or composite material; as appropriate to the porch type.

- **Railings**: Milled wood top and bottom rails with thick square **balusters** (2” x 2” nominal dimension).

- **Doors**: Wood, fiberglass or steel with traditional stile-and-rail proportions, raised panel profiles, and **glazing** proportions.

- **Windows**: Wood, or aluminum-clad wood. Vinyl clad windows (generally not allowed in the H-1 or H-2 Historic Districts) should only be used in conjunction with brick veneer. True divided light or **simulated divided light** (SDL) **sash** with traditional exterior **muntin** profile (7/8 inch wide).

- **Shutters**: Shutters were not typically used on the American Foursquare and should not be added embellish the exterior.

- **Trim**: Wood, composite, or polyurethane millwork.
Gallery of Examples
The word Bungalow comes from the Bengali word bangla, which is a small cottage with a veranda that was used in tropical areas where they had to cope with hot climates. The Bungalow has nineteenth century British and Dutch influences from Asian countries where shallow-pitched roofs with wide overhangs and porches shielded the walls from the sun. This popular form was used in America before air conditioning became commonplace in the late 1940s and early 1950s.

A Bungalow called the Idaho Building premiered at the Columbian Exhibition at the Chicago World’s Fair in 1893. Early developments began in California during the early 1900s by Charles Sumner Greene and Henry Mather Greene. They incorporated the influences of the British Arts and Crafts movement, which favored the use of natural materials, along with the avoidance of unnecessary, mass-produced ornamentation in architecture, furniture, and the decorative arts.

Magazines such as The Architect, Ladies’ Home Journal, and Gustav Stickley’s 1901-1916 The Craftsman promoted the bungalow as a modern house that embodied an honest, simpler lifestyle. Gustav Stickley, a furniture maker and architect who heralded the Arts and Crafts movement believed that
a house should be built in harmony with nature, have an open floor plan, built in bookcases and benches, and abundant natural light – all common features of the Bungalow. The house to the left is the only known example of a Stickley house in Roanoke.

Sears, Roebuck & Co., along with numerous other pattern book companies, published plans for the Craftsman Bungalow which spurred nationwide popularity of the design due in large part to its low cost and easy maintenance. The Wasena and Melrose-Rugby neighborhoods in southwest and northwest Roanoke contain a number of these homes. However, by the early 1930s, the Bungalow began to lose its appeal when the Colonial Revival movement gained momentum.

Essential Elements

- One-and-a-half story; simple horizontal lines.
- Low-*pitched* projecting roof with exposed roof *rafters* and triangular *knee braces* and a *gabled* or shed dormer.
- Prominent low, broad front porch supported by square masonry pedestals with straight or tapered wood posts; occasionally solid brick or stucco supports are found.
- Multi-paned windows and door *glazing* in a variety of geometric shapes.

Massing & Roof Forms

Though variations exist, the Bungalow is basically a *gable-roofed* cottage with a prominent front porch. Square or rectangular in plan, Bungalows are compact with either a side-gabled or front-gabled roof with wide *eaves*. The *pitch* of the main roof typically ranges from 6:12 to 8:12 and dominates the Bungalow’s horizontal silhouette. A large single dormer with a gabled or shed roof typically is located on the main roof. An exterior end chimney usually projects through the eaves. The porch roof is slightly shallower with a 3:12 to 5:12 pitch. This shape sometimes varies with two intersecting low-pitched front-gables or a *hipped* or pyramidal roof.
Architectural Patterns/Bungalow

Eaves

Triangular knee braces and deep overhanging eaves with exposed beam and rafter tails are Bungalow hallmarks. Although the predominate type of eave in the Bungalow style is the open eave with exposed rafters tails, eaves can also be boxed.

Wall Cladding

Masonry (stone, brick and cobblestone) and wood siding (with 4 to 8 inch exposure) are the major construction material used. Dormers and gable ends often feature wood shingles or stucco.

Side Gabled Roof with Gabled Dormer

Exposed Rafter Tail

Triangular Knee Brace

Exposed Rafter Tails and Triangular Knee Braces

Wire Cut Brick

Wood Siding Paired with Shingled Dormer and Gable Ends

Brick Paired with Shingled Dormer and Gable Ends
Bungalows typically have full-width front porches supported by a variety of porch supports that are unique to the Craftsman tradition. It is common to find massive brick pedestals with thick tapered wood columns; occasionally the columns will be paired on top of the pier. These piers and columns can also be constructed of brick, stone, concrete or a combination of materials, including stucco. Brick knee-walls capped with concrete coping usually span between the piers. Other variations will feature wood railings with 2 inch square balusters closely spaced together or a panel of shingles. Bungalow porches are typically accessed by concrete steps that match the foundation that sometimes feature flanking brick and concrete sidewalls.
Bungalows feature a variety of doors that reflect both the Craftsman and Prairie styles. In most cases, wood panel doors with upper glazing are flanked by sidelights and a transom. Glazing is always divided by thick wood muntins into geometric motifs. Brick dwellings typically have a 2 inch brickmold and a soldier course at the head of the door while dwellings with siding have 6 inch straight trim.

Bungalows were designed to take full advantage of natural lighting, thus reducing the need for artificial light. Groupings of windows allow for ample interior lighting, as well as exterior views, which accounts for the array of paired or triple windows and feature windows that light Bungalows.

A variety of multi-light double-hung and casement windows occur on Bungalows. Three-over-one, four-over-one, and five-over-one double-hung windows are the most common window configurations. Sometimes casement windows that feature small panes divided into various patterns are used. Brick dwellings typically have a 2 inch brickmold and a soldier course at the head of the window while dwellings with siding have 6 inch straight trim. Shutters were not used on the Bungalow.
Additions

Additions can be sensitively located to the rear of the building or with smaller side wings. New additions should be designed as secondary elements that respect the overall massing and scale of the original house. An addition should never be larger or wider than the main residence. Additions should be designed and built so that the form and character of the primary residence will remain intact if the addition is ever removed.

An addition should respect the stylistic influences that are found on the Bungalow. Roofing forms and materials should match those of the original structure if possible, with low-pitched roofs that are subordinate to the primary roof line. Windows should be similar to original in type and style, employing wooden double-hung sashes. Similar exterior finish materials should be used when possible. A list of appropriate materials specific to the Bungalow is provided at the end of this section. More information on additions can be found within the New Construction section of this document.
Bungalow additions are most appropriate on the first floor as it is difficult to tie two-story additions into their unique roof forms. The unique roof forms of the Bungalow often allow for spacious rooms and closets that typically do not require expansion like many of the other architectural forms constructed during the same time period. The illustration to the left is an example of an unmodified second floor plan.
Garages

Like many other early twentieth century residences, Bungalow houses also had matching garages; most garages were one bay wide, just wide enough for one vehicle. The garages were often brick that matched the house with double-leaf wood doors that pulled open. The roof pitch is usually lower than the main house. The garages were located right off the rear corner of the house at the end of double strips of concrete.

Painting a Bungalow

Wood trim and features on the Bungalow were painted or stained colors that harmonized with nature. Bungalows used contrasting colors to accent their architectural features. For example, if the wood window sashes were painted white, contrasting colors such as deep browns or oranges were used on the window trim. Greens are also good colors for wood trim. Favorite colors for lap siding or stucco were pale yellows and ochres. Unpainted brick should never be painted as it could drastically alter the home’s original character and trap moisture inside walls.

Maintaining Character Defining Features

One of the chief principles of Bungalow design was the importance of light and openness. This harmony between dwelling and nature takes the form of wide open porches, wood structural members and generous windows. The Bungalow’s roots in the Arts & Crafts movement accounts for the prevalence of windows as character-defining features. As a result, Bungalows may feature an assortment of art glass and casement windows, as well as double-hung windows with distinctive muntin patterns.

Exposed rafter tails are signature details that embellish the eaves and dormers of every Bungalow, providing a rustic Arts & Crafts touch, and eliminating the soffits and fascia boards common on other house types. All too often the eaves of many Bungalows have been covered with vinyl or aluminum wrapping, obscuring an essential design feature. Since exposed rafter tails - which are made of wood - remain unprotected from the elements, they are vulnerable to the deterioration and accelerated aging common to exposed wood surfaces. Keep rafter tails painted and gutters unlogged to ensure the longevity of eaves and rafter tails. Finally, the front porch should never be enclosed with siding, nor should it be removed or altered.
### Appropriate Materials

- **Roofs**: Fiberglass shingles (architectural grade), cementious shingles, slate and faux slate materials, or clay tile with flat or barrel profile as appropriate.

- **Wall Cladding**: Smooth finish wood or fiber-cement boards, 4 to 8 inch lap exposure. Smooth finish or wire-cut brick in common bond. Light sand-finish stucco.

- **Porch Ceilings**: Tongue-and-groove wood or composite boards, or beaded-profile plywood.

- **Columns**: Solid brick posts or brick piers with tapered square posts. Architecturally correct proportions and details in wood, fiberglass, or composite material, as appropriate to the porch type.

- **Railings**: Milled wood top and bottom rails with thick square balusters (2” x 2” nominal dimension). Other variations are common.

- **Doors**: Wood, fiberglass or steel with traditional stile-and-rail proportions, raised panel profiles, and glazing.

- **Windows**: Wood, aluminum-clad wood, or vinyl (vinyl is not allowed in the H-1 or H-2 Historic Districts). True divided light or simulated divided light (SDL) sash with traditional muntin profile.

- **Trim**: Wood, composite, or polyurethane millwork.

- **Shutters**: Shutters were not used on the Bungalow.
Gallery of Examples
Arriving at the end of the Gothic movement, the original Tudor style thrived during the reign of the Tudor monarchs: from Henry VII in 1485 until the death of Elizabeth I in 1603. As English carpentry matured, prominent landowners shunned stone Gothic castles for more domesticated homes with brick, timber and stucco facades, and elegant oak-paneled rooms. The revival of the Tudor style was ignited by William Morris, a promoter of the British Arts and Crafts movement, in the late nineteenth century. The Tudor was based on broad reinterpretations of manor houses and folk cottages that dotted the English countryside. After World War I, the Tudor swept across American neighborhoods and was rivaled in popularity by the Colonial Revival.

The Tudor Revival stayed fashionable in Roanoke long after its appeal had been lost in other cities, a fact attributable to the prominence of Hotel Roanoke, whose Tudor Revival roof line and *half-timbering* remains a focal point of the City’s skyline. However, following World War II, modernism and the American ranch house came into vogue and supplanted lively eclectic revival styles—such as Tudor—in Roanoke and around the United States.
A Tudor Revival house is one of the more recognizable styles in Roanoke, notable for its asymmetrical layout and high-pitched roof, which is often side-gabled and complex. Steeply-pitched, front-facing gables dominate an irregular façade.

Two main types of massing exist on the Tudor Revival; the basic L-shaped house and the broad front house. The roof of both types is always steep and will vary from 12:12 to 20:12. Eaves tend to be shallow with boxed eaves ranging from 4 to 10 inches and exposed rafter tails being 10 inches. Dormers are often present on these steeply pitched roofs to allow light into upper stories. Chimneys are usually placed prominently on the front or side of a house, sometimes in clusters.
Note: The presence of an upper-story room that extends out above the lower level or entry is a defining feature of some Tudor Revival houses. When used, this technique shields the lower floor from the elements, and allows construction of larger houses on small lots in dense urban neighborhoods.
Wall Cladding

Tudor Revival façades primarily consist of patterned stonework and/or brick work. Most Tudor Revival houses in Roanoke are wood framed covered with stucco, stone and/or brick veneers. Brick is often used on a first story, while stone, stucco or wood cladding is featured on principal gables or upper stories. The use of light stucco is often offset by dark exposed timbers (half-timbering and/or a vergeboard) in a variety of patterns that appear in gables or elsewhere on the façade. These timbers are rarely used as a structural device on Tudor Revival houses. Its use is nearly always decorative created by a veneer of thin boards and stucco applied to wire

Porches

Most Tudor Revivals omit the front porch, while some will feature a projecting gable that encompasses a round arched doorway with brick trim and stone ‘tabs.’ A small portico may also be used on more complex designs. A square or round brick stoop with brick steps with a wrought iron railing is common. Tudor Revivals will often feature a side or off-set porch, 8 to 12 feet in depth with a wide elliptical arched opening set under the main roof.
Architectural Patterns/Tudor Revival

Doors

A heavy board and batten door set in a half-round bricked arch is a common feature in the Tudor Revival. Doorways are often ‘tabbed’ with brick or stone for emphasis and recessed to give the appearance of thick walls. Tall narrow windows will often flank the door opening.

Windows

The most common window form is the standard six-over-six *double-hung* window which is often grouped in pairs or triples with brick sills. Double-hung windows with small diamond-shaped panes in the upper *sash* and a single pane in the lower sash are also used. Metal *casement* windows with diamond-paned or square-paned glass are also prevalent. Windows are often recessed to give the appearance of thick walls and are accented by a brick *soldier course* at the head or stone ‘tabs’. Shutters were sometimes used on Tudor Revival houses and feature plank/board or panel-style construction. Shutters are never used where *half-timbering* is present.
Additions to Tudor Revival houses should be designed as secondary elements that respect the overall massing and scale of the original house. An addition should never be larger or wider than the main residence and should be located to the rear or side. An addition should respect the asymmetry and steeply pitched roof lines that are characteristic of Tudor Revival houses. Adding on to a gable end or creating a cross gable are appropriate ways to provide more space while respecting the original form of the building. Window and door patterns and types on an addition should mimic what is found on the main house.

Similar exterior finish materials should be used wherever possible. A list of appropriate materials specific to the Tudor Revival is provided at the end of this section. Additions should be designed and built so that the form and character of the primary residence will remain intact if the addition is ever removed. More information on additions can be found within the New Construction section of this document.
Modified First Floor Plan of a Broad Front Tudor Revival

*Finish Basement Space into a Media Room, or a Recreation Room

*No Modification of Second Floor
The Tudor Revival garages were built off the rear corner of the house, often reached by a driveway consisting of two concrete strips. Garages were often brick to match the house and were either one or two bays wide with double-leaf or sliding wood doors. Doors are either solid or have a row of windows to illuminate the interior. The roof pitch was usually 7:12 to 12:12. Some Tudor Revival garages, especially with multifamily buildings, featured flat roofs over wide garages with two or more door openings.
Painting a Tudor Revival

Painting a Tudor Revival’s accents is very important to get the detail correct. Doors, trim, and half-timbering members are accented through the use of a dark brown paint color. Greens are also favorite trim colors, and certain deep reds can accent the doors and trim as well. Stucco walls use lighter earth tones. Unpainted brick should never be painted as it could drastically alter the home’s original character and trap moisture inside walls.

Maintenance

Routine cleaning of a house’s exterior is a convenient way to conduct regular inspections that also address curb appeal. Maintaining exterior wall finishes is a critical first line of defense against moisture and other environmental hazards. A good cleaning regimen should include simple gutter cleaning and repair as well as seasonal snow removal. Massive chimneys crowned with chimney pots are one of the hallmarks of the Tudor Revival style. It is important to routinely inspect and clean a working masonry chimney. A solid-fuel burning chimney should be inspected annually and cleaned often.

Appropriate Materials

- **Roofs**: Fiberglass shingles (architectural grade), cementious shingles, slate and faux slate materials, or clay tile with flat or barrel profile as appropriate.
- **Wall Cladding**: Smooth finish wood or fiber-cement boards with a 6 to 8 inch lap exposure, with mitered corners. Smooth finish brick in common bond. Stucco with handmade appearance. Half-timbering on second floor.
- **Railings**: Wrought or cast iron.
- **Doors**: Wood, fiberglass or steel with traditional stile-and-rail proportions, plank/board and panel profiles, painted or stained; and appropriate metal hardware
- **Windows**: Wood, aluminum-clad wood, or vinyl (vinyl is not allowed in the H-1 or H-2 Historic Districts) with true divided light or **simulated divided light** (SDL) sash with traditional exterior muntin profile (7/8 inch wide). Metal casement windows.
- **Shutters**: Wood or composite, sized to match height of window sash and half the window width, mounted to appear operable.
- **Trim**: Wood, composite, or polyurethane millwork, stone, brick or cast-stone.
Gallery of Examples
Historical Origins

The Colonial Revival style encompasses a number of architectural traditions, such as English, Dutch, and Spanish colonial influences that were combined during the late-nineteenth and early-twentieth-centuries to create buildings that celebrated Colonial America. Thus Cape Cod cottages, gambrel-roofed houses, large formal Georgians, Federal townhouses, columned southern mansions, in a wide variety of one, two and three-story houses can fall under the Colonial Revival heading, so long as entrances, cornices and windows are outfitted with classical details.

The Philadelphia Centennial celebrations of 1876 inspired patriotism that helped spark a revival of interest in Colonial American architecture that would continue into the mid-twentieth century; basically Americans began reviving their own past. Other events such as the 1893 Columbian Exposition which featured a number of buildings in the Colonial Revival style and the re-creation of Colonial Williamsburg in the early 1930s further popularized the style.

Floor plans and building materials were also easy to come by. In 1915, the lumber industry produced *The White Pine Series of Architectural*
Monographs, a monthly magazine published by the White Pines Institute. The magazine featured scholarly photos and articles on Colonial American architecture, as well as plans and measured drawings of Colonial buildings that were intended to help architects design houses with historically accurate Colonial details, with white pine products. Combined with the enormous press in the 1930s from magazines such as Ladies Home Journal, House and Garden, Better Homes and Gardens, and House Beautiful, the Colonial Revival style was in high demand.

Essential Elements

- Small to large-scaled, simple massing.
- Symmetrical façade with orderly relationship between windows, doors and building mass.
- Classical details on doors, windows, roofline and corners.
- Prominent front entry; door with decorative pediment supported by pilasters or portico supported by classical columns.
- Multi-pane windows.

Massing & Roof Form

The Colonial Revival house is rectangular in form and one to three stories in height with a side-gabled roof ranging in pitch from 7:12 to 12:12. Sometimes a hipped roof is used with the same range of pitches. The facade will feature either three or five-bays with a centered door and symmetrically balanced windows. If dormers are incorporated into the roof, they are always gabled and aligned vertically with the windows and central door. Chimneys are often located at the gable ends of the houses.
The Colonial Revival typically has an 18 inch boxed eave. Dentilled, modillioned, or bracketed cornices and other classical details are commonly found on roof eaves and gable end.

Colonial Revival houses were typically constructed of brick, although stucco and wood siding (6 to 8 inch exposure) or combinations of these materials are also found in Roanoke. Pilasters or quoins in the classical tradition sometimes highlight the corners. Vertical brick banding (soldier course) at the roof wall junction of the eave and a belt course between the first and second floor are common decorative elements on the facade.

The Colonial Revival style omits the traditional full-width front porch and replaces it with smaller, centered porticos. The outdoor living space created by the front porch was moved to a side porch or sunroom. The portico consisted of classical columns (10 to 12 inches wide and 9 to 10 feet tall), either smooth or fluted that support an arch or an entablature over the front entry. Porticos can also be flattened against the house with a broken, segmental or triangular pediment or entablature supported by pilasters (flattened columns). If a railing is included, it is typically wrought iron or wooden square baluster spaced no more than 4 inches on center.
Doors

Triangular, segmental and broken pediments over pilasters as well as fanlight and sidelights often flank a six-panel door, which is centered on the façade. When a pediment and pilasters are not used, brick dwellings have a 2 inch brickmold and a soldier course at the head of the door while dwellings with siding have 6 inch straight trim.
Colonial Revival windows are symmetrically placed, and frequently occur in pairs. **Double-hung** windows feature six-over-six, eight-over-eight, nine-over-nine, or twelve-over-twelve window **sashes**. Multi-pane upper sashes may also occur over a single-light lower sash. The **muntins** on Colonial Revival windows are usually thicker than other window styles. Brick dwellings typically have a 2 inch **brickmold** and a **soldier course** at the head of the window while dwellings with siding have 6 inch flat trim. Some brick homes will feature a **jack arch** over windows instead of a soldier course. Louvered wood shutters are a common feature of the Colonial Revival. Shutters should be sized and mounted to appear functional.

The **Colonial Revival style movement** embraced a number of stylistic influences. The most common influence found in Roanoke is the Dutch Colonial. These homes were predominately constructed in the 1920s and 30s and bear little resemblance to the seventeenth century Dutch farmhouses that inspired the name. Most elements of the Dutch Colonial are identical to other Colonial Revivals with the exception of their steeply **pitched gambrel** roof, shed dormer and curved **eaves**. They can also feature a full width front porch.
Additions

It is easy to add onto the basic rectangular Colonial Revival form with side wings, rear wings, and dormers that bring in light to upper stories and attics. Additions to Colonial Revival houses should be designed as secondary elements that respect the overall *massing* and scale of the original house. An addition should never be larger or wider than the main residence. Additions should be designed and built so that the form and character of the primary residence will remain intact if the addition is ever removed.

Roofing forms and materials should match those of the original structure if possible, with low- *pitched* roofs that are subordinate to the primary roof line. Windows should be similar to the original in type and style, employing wood or clad *double-hung sash* windows. A list of appropriate materials specific to the Colonial Revival is provided at the end of this section. More information on additions can be found within the New Construction section of this document.

*Reallocation of Existing Square Footage and Addition to a Colonial Revival*
Reallocation of Existing Square Footage and Addition to a Colonial Revival

Existing Second Floor Plan

- Bedroom 13'3" x 11'0"
- Bedroom 13'3" x 10'0"
- Bedroom 13'3" x 12'0"
- Full Bath

Addition

- Master Suite 17'0" x 16'0"
- Bedroom 13'3" x 11'0"
- Porch Roof

*Finish Attic Space into Additional Bedrooms, Media Room, or Recreation Room

Modified Second Floor Plan

- Bedroom 13'3" x 11'0"
- Bedroom 13'3" x 12'0"
- Full Bath

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Residential Pattern Book
Like many other twentieth century residences, Colonial Revival houses had garages, either one-bay or two-bays wide. The garages were often brick to match the house with double-leaf wood doors that pulled open. The roof pitch is usually lower than the main house. These garages were usually located off the rear corner of the house at the end of double strips of concrete. Depending on the topography, some Colonial Revival garages were attached to the side of the building (many with an upper story room) or built into a hillside.
When painting any Colonial Revival house, softer colors should be used. Trim is typically painted white or ivory since this style reflects the return to classical motifs, and yellowish whites simulate ancient marble. Golds, greens, and grays are also used. Shutters are often painted green because it resembles the bronze shutters of Renaissance buildings. Doors are often painted the same color as the shutters or other trim. Unpainted brick should never be painted as it could drastically alter the home’s original character and trap moisture inside walls.

Windows and doors are among the most important character-defining features of a Colonial Revival house to maintain. They provide scale and symmetry which is so important to the Colonial Revival. The treatment of original windows and doors, their unique arrangement, and the design of replacements are critical considerations. Side porches or sunrooms are also character defining features of the Colonial Revival and should never be removed or enclosed.

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Gallery of Examples
Following World War II, America’s middle class took up residence in the suburbs. Postwar architects and builders generally ignored the historical influences that had inspired the globe-spanning revival styles of the late nineteenth and early twentieth century. Construction costs were an issue for people, so steeply-\textit{pitched} Tudor and Cape Cod \textit{gables} were lowered, exterior ornament was minimized, and \textit{massing} became boxier, with perhaps a protruding \textit{bay} window or gable end to break monotony. Thus a modern architectural look was achieved in America’s newly developed suburban neighborhoods through simple cost-cutting, a horizontal emphasis, and an absence of detail.

Several architectural forms emerged during the 1940s that solidified the country’s rejection of previously-held classical and colonial traditions: Minimal Traditional, Ranch, Split-Level, Split-Foyer, Art Moderne, International, and Shed. Of these five styles, the Ranch clearly had the greatest impact on Roanoke’s suburban neighborhoods. The American Ranch house, which originated in California during the 1930s, dominated new construction throughout the 1950s and 1960s in Roanoke; the majority of them were built speculatively by developers.
Essential Elements

- Asymmetrical *massing*.
- One-story rectangular or L-shaped plan, often with an attached garage or *carport*.
- Low-*pitched hipped* or *gabled* roof with a pronounced chimney.
- Variety of window types including *double-hung, picture*, sliding and *jalousie*.
- Shallow porch or recessed entrance.

Massing & Roof Forms

Based on the earlier Bungalow and Prairie style houses and Frank Lloyd Wright’s Usonian houses, a Ranch house is basically a rectangular-shaped, one-story house with a long, low overhanging roof. The roof is typically side-*gabled*, but also features cross-gables, and can be *hipped*. Ranch houses are rectangular, L-shaped, or U-shaped. Ranch houses were typically built over a basement or on a concrete slab. However, the first floor was always built at grade to help eliminate the separation between indoor and outdoor living. Windows and doors were placed without regard to symmetry. The roof was always low-*pitched* (4:12 to 5:12, the lowest pitch for an asphalt shingle guarantee), which reinforced its...
The roof eaves can be flush, shallow, or wide, with enclosed soffits. In rare instances, eaves are open with exposed rafters. A wide, low chimney was also an important feature.

Ranch houses feature a mix of exterior materials. Walls may be clad with wood (vertical paneling or horizontal siding) or brick or a combination of both. Brick veneer over wood-frame construction was an inexpensive and low-maintenance alternative. Brick was often used on the lower section of the exterior wall with wood siding on the upper section. Stone veneer and stucco were also used for cladding.

The rambling suburban Ranch house typically has a shallow porch or recessed entry used to receive guests. It is not intended as an outdoor sitting area as were nineteenth and early twentieth-century front porches. Instead, rear outdoor patios and courtyards replaced front porches as family gathering areas. Decorative features of the porch include braces, decorative iron or wooden support posts.
Doors were typically solid wood with decorative geometric patterns of lights or raised panels in an elongated, square, or diamond pattern. Double-leaf, solid wood entrance doors with large round door knobs were character defining features of some Ranch houses. Full-length, fixed-glass, rectangular sidelights may flank a flush entrance door within a recessed entrance, although this is uncommon. At the rear of the house, sliding glass doors often opened out onto a patio that served as another living area.

As in the Bungalow before it, light was an important feature and the Ranch incorporated a variety of windows, including double-hung (paired and tripled), picture, ribbon, jalousie, casement, sliding, corner, and clerestory windows. Double-hung windows were used in a variety of muntin patterns such as one-over-one, two-over-two, six-over-six, or eight-over-eight sashes. Clerestory windows located high on exterior walls were often used for bedrooms to allow light into the room while maximizing privacy. A large fixed-glass picture window in the façade became popular in the 1950s and 1960s. This period saw the rise of non-functioning shutters that were used for decoration only, as most of them would not fit the windows they border even if they were hinged and could be closed. Nonetheless, they offered a hint of the traditional building flavor they replaced.
Reallocating existing square footage or the construction of a cross-gabled addition to the rear of the house are appropriate ways to provide more space in a Ranch. Unfinished basements are a great place to incorporate an office, a media room, a recreation room, and/or additional bedrooms/bathrooms. An addition should be designed and built so that the form and character of the primary residence is maintained. It should never be located over the rear patio area and must be one-story tall with a low-sloped roof. Materials should match the original building which were typically organic such as brick, wood, or stucco. A list of appropriate materials specific to the Ranch is provided at the end of this section. More information on additions can be found in the New Construction section of this document.
The importance of the automobile in American life is reflected in the design and placement of Ranch houses. Ranch houses usually are set back from the street and situated lengthwise on a big lot. Where earlier garages once stood detached to the rear of the lot, Ranch house garages now were prominently attached. Attached garages with multi-paneled doors, carports and concrete driveways are standard.

The attached garage and carport are important symbols to the Ranch style house and should be retained. Sometimes they are enclosed or modified to create additional living space, often in a manner that is not sensitive to the house. When considering such modifications, the owner should consult an architect/designer to determine the best design. New additions can also be added to the rear of the house for added space.
Painting a Ranch

The trim on Ranch style houses should be painted softer colors such as ivory which will contrast with the darker colors of the brick or the wood siding material which can be stained darker colors. Earth tone colors on the Ranch are a good choice because the house has a low profile close to the ground. Unpainted brick should never be painted as it could drastically alter the home’s original character and trap moisture inside walls.

Maintaining Character Defining Features

Roofs and windows are character-defining features of a Ranch house. The low roof profile must be maintained; a second story addition is never recommended. Windows provide scale to residences and maintain the façade composition that is unique to each house. The treatment of original windows, their unique arrangement, and the design of replacements are critical considerations. The attached garage or carport are also character-defining features of the Ranch style and should be maintained as such; their enclosure is not recommended.

Appropriate Materials

- **Roofs**: Fiberglass shingles (architectural grade), composition shingles, or wood shakes.
- **Wall Cladding**: Wood paneling and/or brick in common bond. Wood cladding, cement board, vinyl siding (4” to 8” lap exposure), and shingle siding.
- **Doors**: Wood, fiberglass or steel, paneled or flush with lights appropriate to the style.
- **Windows**: Painted wood, or aluminum double-hung, picture, jalousie, sliding, or clerestory.
- ** Shutters**: Wood, vinyl, or composite, sized to match height of window sash.
- **Trim**: Wood, composite, or polyurethane millwork.
- **Garage Doors**: Wood or fiberglass appropriate to the style.
Gallery of Examples
Why should I keep or buy an old house?

Whether or not you already own and live in an older home or are considering buying one, you have no doubt heard both cautions and accolades associated with older structures. “They sure don’t build them like they used to?.” This is usually meant as a compliment, but if you have ever worked on old buildings there were probably times when your first reply would surely have been, “no…they don’t, thank goodness”. Well-meaning friends and relatives undoubtedly warned you about the “money pit” aspects of the project on which you are about to embark and how you will never get back what you put into the place. How about when friends first walked into that cavernous front foyer and gasped, “Gosh, I wouldn’t want to pay the heating bill in this house!” We could go on, but we don’t want to create too much fear or regret at this point.

Now you may be left with all sorts of the questions: Are older homes really built better than new ones? Does it really cost more to maintain an older home? Who do I call when the roof leaks? How will we ever afford to heat this place? If you have lived in an older home for a period of time, you may already know the answers to some of these questions. If you are planning on purchasing an older home, these might be the sorts of questions that are beginning to make that brand new house on the edge of town look mighty attractive. In the next couple of pages, the hope is to address some of the concerns associated with owning and maintaining an older home, dispel misinformation about older homes, and provide guidance to help make your experience positive and perhaps even fun.

Any house will usually keep you warm and dry and provide a place for you to eat and sleep. If these needs were your only concern, however, you wouldn’t be reading this. Owning and maintaining an older house provides you with an opportunity to gain an understanding of past times. How many people had to walk across your front door threshold over the years to create that dip in the wood? Could you ever find enough sandpaper and steel wool to replicate the smoothness of your stair railing that thousands of handholds created? Could their kids really have slid down without hitting that newel post? The people that lived there before left traces that help to create the character of your home. These are the kinds of things that help make your house historic and indeed elevate it to the status of an artifact of sorts.

Buying and owning an older house can actually make financial sense. In most communities, your money goes farther when buying an older house. The rooms are typically bigger, the ceilings higher, and the materials are usually better and more beautiful. In most new home construction, hardwood floors are a premium option, the walls are of gypsum board (sheet rock or drywall),
the windows and siding are vinyl, the fireplace is surrounded with faux brick or stone, and even the most expensive cabinets usually contain particle board and plastic. They are usually marketed as low maintenance but, until a hundred years or so have passed, no one really knows for sure how well vinyl siding and composite floor trusses will hold up.

Another advantage of an old house is that whatever can go wrong has probably already gone wrong. As timbers age, they harden. Old wood, therefore, is typically very stable. Since most old houses were built with first or second growth lumber, the grain is usually straighter and tighter than modern lumber. The sags in the floors and cracks in the plaster probably happened decades ago and the original cause has likely been addressed.

Living in an old house usually means living in a neighborhood filled with similar old houses. As a resident you become part of a living organism, a group of stewards who, by residing in these houses, preserve and maintain a part of mankind's past. Your house may not be Mount Vernon but in the larger sense it is just as important to the story of your neighborhood, the City of Roanoke, and ultimately the Commonwealth of Virginia.

Most people who live in older houses develop a respect for them that drives their level of effort. You buy light fixtures that are in keeping with the character of the house. You search for period wallpaper and you use the best paint. When there are repairs or maintenance issues, (high-pitched roofs, plaster walls, hardwood floors, wood siding and windows, brick walls and stone foundations) you hire qualified craftspeople to do those things you can’t do yourself.

The exterior of your house has been exposed to weather and its ravages for perhaps 100 years or more, rather than several decades. The complexity of architectural elements, the challenges of gaining access to a chimney top, and the scarcity of contractors who know what they are doing can all impact maintenance. Old houses are bigger, draftier and usually don’t have as much insulation, so you don’t expect the heating and cooling efficiency of a new house.

The very things that attract people to older, historic homes can make them more expensive to maintain. But with a little bit of knowledge and planning, there are things that you can do to help keep maintenance within a realistic effort.

If you are a building contractor or are skilled in the building trades, chances are you can do most things yourself. However, the truth is that most people are not. Homeowners must depend on the knowledge and skill of others they hire to do the work and do it properly. By observing specific conditions and knowing a little bit about the cause and effect relationship of damage, you can help ensure the work suggested by a contractor is
appropriate to your situation.

While there are hundreds of separate elements that go into the actual construction of a house, this outline will address the primary parts and pieces of the exterior and how to go about trouble-shooting and fixing the problems.

Any building’s first defense against the elements is the roof and drainage system. A leaky roof can damage interior framing, plaster and paint, and can, in extreme cases, lead to structural failures. Poor drainage (gutters and downspouts) can contribute to damaged siding and windows, and can increase moisture levels in the soil surrounding the foundation. Evidence of this is usually seen as loose mortar, water on the basement floor or mold and mildew stains. In order to ensure the continued good health of your roof and gutters, here are some things to do or watch for every six months:

- Look for loose, missing or misaligned shingles (wood, fiberglass or slate). Have them repaired or replaced as needed.
- On metal roofs, look for rust, open seams, failing paint or loose edges. Metal roofs can last for many decades but they need regular cleaning, spot repairs, and painting.
- On all roofs, inspect the valleys (where roof sections intersect) and flashings (usually found at the base of chimney or other roof penetrations) for signs of rust, loose or open seams, holes, missing caulk or areas where debris has gathered. Most roof leaks occur in valleys or at areas that are flashed.
- Have your gutters cleaned in the spring and again in the fall. Make sure hangers are secure and that the gutters are pitched so that they carry water toward the downspouts. Check the downspouts and fittings to make sure they are tight. Flush the downspouts with a garden hose to ensure that they are clear. Missing mortar or peeling paint behind the downspout is a sign that the backside of the downspout is split or damaged and needs replacing. Finally, make sure that splash blocks are placed properly and that the downspouts extend at least five feet away from the foundation. It may be necessary to add sections to the bottoms of downspouts.

Whether the exterior walls are brick, stone, wood shakes, or wood siding, none are impervious to time and weather. Most of the damage that is visible on the exterior surfaces of a house is usually an indicator of another problem. For example: Paint does not fail just because it gets old. If it did the interior paintings in the Pyramids would have vanished centuries ago. Paint typically fails when water gets behind it and lifts it from the surface on which it was
originally placed. Peeling paint is usually an indication of water infiltration. (See the previous section on gutters.)

Here are a few things you can do to help you keep ahead on exterior maintenance. A visual inspection of the exterior should be done at least once a year.

- **On masonry walls** (brick or stone) check for loose or missing mortar, broken bricks or stones and efflorescence. Efflorescence is a white, chalky substance that appears when the naturally occurring soluble salts in brick, stone, block, and mortar react to increased levels of moisture inside the wall. First find and address the source(s) of the damage, then make the repairs with a mortar that matches in color, texture, and relative “hardness”. Tool it so it mimics the original mortar joints. Use brick or stone of a similar size and color.

- **On walls with wood siding or shakes** (shingles) check for peeling paint, rusted nail heads, loose or broken areas and mildew. Again, these can all be signs of moisture infiltration. Once the cause or source of the damage has been identified and addressed, repairs and/or repainting can be undertaken. Make sure that wood is replaced in-kind with materials that are similar in profile and species (use pine to repair pine, etc.). Remove loose paint and clean areas that are to be painted. Caulk or use putty to fill holes and open joints as needed. Use an appropriate primer and the best exterior paint you can afford. Don’t wait until the whole house needs painting. Deferred maintenance is one of your home’s biggest enemies.

- **Stucco** walls are usually a combination of wood framing and masonry. Stucco can be applied directly onto masonry or is applied to wood or wire lathe over a wood framework. However it was applied, several things should be looked for. Check for cracks, missing material or areas that appear loose or detached. Per the previous sections, these are many times indications of water infiltration. Cracks can be filled with good-quality acrylic caulk. The caulk provides a flexible patching material that should last for many years. Larger areas should be repaired using stucco of a similar type. Most masonry contractors can determine whether stucco is Portland cement-based or lime based. Never install repair material that is “harder” than the original material. Make sure the substrate (surface that the stucco is installed onto) is in good and stable condition.

Porches and steps are typically subject to more damage from weather than other areas of your house. This is especially true of open porches with wood flooring and steps. Many of the things previously discussed apply to porches: roof repairs and maintenance, proper function of gutters and downspouts, etc. However, here are some things to be aware of that are specific to porches,
steps, and walkways.

- NEVER use salt or products containing chloride or sodium to melt ice on concrete, stone or brick walkways or steps. Salts are corrosive and contribute to the accelerated deterioration of masonry by helping to create conditions where it is easier for water to enter. Salts also get tracked onto wood porches and interior floors where they speed the deterioration of painted or varnished surfaces. Gutters and downspouts that are in good repair can help reduce dripping and the resultant ice. Sometimes just by using another door for a day or two makes it possible for the sun to do its work. Other alternatives include spreading sand or kitty litter (non-clay based). Neither help to melt ice, but they provide good traction. A good doormat helps to ensure that the sand or litter stays outside.

- Make sure that balustrades are tight and in good repair. Many companies reproduce the elements for repairing historic railings.

- Inspect wood porch flooring for signs of deterioration, especially around the perimeter of the porch where water sets after rain or snow. Damaged areas should be replaced with lumber of the same size and species. Make sure that all sides of new lumber are primed prior to installation. Remove loose and peeling paint, prime bare wood areas and apply a good-quality porch and floor paint. Yearly touch-ups can extend the life of wood porch flooring almost indefinitely.

- Once your wooden porch floor is repaired and painted, and has had a chance to cure for several weeks, apply a coat of paste wax or a liquid acrylic wax. While not made specifically for exterior applications, it can help preserve the paint finish. The “slippery” surface of the wax will last only a couple of weeks, so care is needed until it wears a little.

- Inspect brick or stone piers or foundation walls for damage and repair them when needed. Visible sagging of floors is often a result of failures in piers and foundations.

- Repair and replace wood lattice as needed. The primary benefit of keeping lattice in good repair is that it makes the area under your porch less accessible to cats, dogs, groundhogs, and the like. Historic wood lattice that consists of vertical and horizontal strips, as opposed to contemporary diamond-shaped lattice, is hard to find at most lumberyards. However, all of the elements to recreate it are usually available. Panels can be constructed by using 2 inch x 4 inch lumber for a frame, then placing shoe-molding around the interior perimeter as a stop. The lattice strips are laid in place and tacked together with brads (small nails). All that is left to do is install a second layer of shoe-mold to hold it in place, paint, and install. You can pre-paint all of the elements prior to construction to make things a little easier. Please refer to Porch
Construction in the Appendix for more information about assembling lattice.

Windows and doors on historic homes are usually considered some of the most important “character defining” features. They are also one of the elements of an old house that owners struggle with the most. Over the years many have been painted shut, caulked shut, nailed shut or just plain don’t work very well. The ads on TV show how those new vinyl-clad units just tip in so nicely for easy cleaning, and their spokesman urges you to replace your old, drafty wooden windows. First let’s dispel some myths about replacement windows and then examine things you can do to make historic windows work more efficiently.

Myth: Old windows let in lots of cold air.
Fact: Old windows that are not properly maintained let in cold air. Old windows that function as they were designed do a pretty good job of protection against the elements.

Myth: Old windows let out all of the warm air in the winter.
Fact: It is an indisputable fact that hot air rises. Most of the thermal loss in any building is through the roof, not the windows or walls. This can be easily verified by checking your local building codes. On new construction, building codes require an insulation with an “R” factor that is approximately 50% higher in overhead (horizontal) areas than is required in walls (vertical) areas. While not specific to this section, one of the best things you can do to increase your homes heating efficiency is to properly insulate the attic.

Myth: You will save a ton of money on heating bills by installing new “energy efficient” windows. It is cheaper to replace old windows than to repair them.
Fact: According to information provided by various government and private agencies, the average American family spent almost $1,000.00 to heat their home in 2006. The average cost for complete window replacement in a moderate home in America is about $8,500.00. Most replacement window manufacturers claim a 20% savings in heating costs. If you allow for a 5% yearly increase in heating costs, it will take nearly 30 years to recoup the costs of the replacement windows. The same justification is often used to market replacement doors. Furthermore, if replacement doors and windows are not maintained, they too will wear out.
Here are a few things you can inspect for or repair to help your old windows and doors work better:

- Make sure that the upper sash and lower sash close tightly, and that the meeting rail (the area where the window lock is installed) pulls together snugly when the window is locked. This may require removal of old layers of paint and caulk along with some repairs to the sash.

- Repair broken or missing sash cords so that the window weights function. Depending on the design of the window, this process may take minutes or hours. Many times there is a small access panel on the sides of the jamb. Once removed the weight can be cleaned and restrung. Sometimes it is also necessary to remove and clean the pulley located at the top of the jamb. In rare instances, the casing (the trim boards on either side of the interior) must be removed to access the weights. It can appear to be a daunting task, but if you can use a utility knife, a screwdriver, and a hammer it can be accomplished. People are usually surprised how well old windows work when they are cleaned and the sash weights are restored.

- Check the exterior sills, sash, and casings for peeling paint. Make the necessary repairs and keep them painted. Also check for loose and missing window putty. Tight window glazing reduces the instances of broken panes and helps reduce drafts.

- Check doors to see that locks and strike plates align properly. Look at them from the inside to see if there are areas where daylight is visible. Over the years the constant pounding that a door is exposed to takes a toll on hinges. Screws can loosen and the pins in the hinges can wear out, ultimately changing the original placement of the door within the doorjamb. This is usually why old doors are so hard to close sometimes. Slamming them or lifting them so that the locks align only increases the damage. It is possible that previous owners have tried to remedy gaps by installing various types of insulation, foam strips or other materials. These are usually less-than-successful. Clean the edges of the door and doorjamb of all old repair materials. Adjust and repair hinges so that the door swings and closes easily. The best remedy to seal gaps is to install traditional spring-metal weather strips made of brass or copper along the sides and top of the doorjamb. This type of weather stripping is available at most any hardware store; it is inexpensive, easy to install and it works.
Foundations of historic houses are usually constructed of brick or stone. They can also be of poured concrete or cinderblock. Whatever their construction, foundations need to be inspected yearly and repaired as needed to ensure the continued good-health of your house. Damage manifests itself in many forms: loose or missing mortar, efflorescence, cracks, missing material, staining or wet basements. Underground water is seldom the cause of water infiltration. Most water infiltration and the resultant damage are due to poor drainage of surface water. The materials and techniques for repairs will vary with the type of foundation and sometimes there may be structural repairs that require a professional. However, there are several things to look for around foundations that are universal.

- Make sure that gutters and downspouts are in good condition. Overflowing gutters and downspouts that dump water too close to a house help to increase moisture levels in the soil around foundations. Almost all masonry materials “wick” moisture in and upwards due to capillary action (masonry acts like a sponge). Water is any building’s biggest enemy.

- Re-grade the yard around the house so that it slopes away (positive drainage) and does not direct surface water toward the foundation. For further guidance please see ‘Residential Lot Drainage’ in the City’s Stormwater Management Design Manual. This document can be found at www.roanokeva.gov/planning.

- Most people like to place flowers, shrubs or other plants around their house to increase its appeal. However mulch, loose and disturbed soil, plant or tree roots and overhanging trees all help to increase levels of moisture near and around foundations. Cut trees and shrubs back to a distance of at least five (5) feet from the house. Use this same distance for plants and flowerbeds. Consider using potted plants next to the house. Reducing the amount of water that enters the soil adjacent to your house will significantly reduce the possibility of damage to its foundation. For more information on drainage and landscaping, please see the Single-Family Construction and Landscaping sections.

- Another benefit to reducing moisture levels in soils is that drier soils, and the subsequently drier foundation and framing elements, are less attractive to wood-boring insects. Termites, powder-post beetles, and other insects require water to live. Dry, stable foundations usually mean dry, stable wood framing above. Dry, stable wood means there is no fungal growth. If there is no fungal growth to soften the wood, insects seldom attack it. Of course this does not apply to carpenter bees, which seem to be able to eat through anything.
Homeowners themselves can undertake many home repairs, even complex ones, if they have the proper tools and knowledge. However, if you “think” you might need help, you probably do. Jobs that require extensive knowledge of plumbing or electrical systems or those that could be dangerous (roofing or chimney repairs) are probably best left to specialists. Here are several things to look for when choosing someone to make repairs or modifications to your house:

- First and foremost are they properly licensed to do your work? The State of Virginia places restrictions on the three primary classifications for contractors. Class A contractors can undertake most any type of work no matter the scope or cost. However, a Class B or C contractor has a dollar limit on the amount of work that is undertaken. While they may be skilled enough to do the work, if the cost of the contract exceeds their classification, they cannot lawfully undertake your contract. Also, there are “specialty” classifications within Virginia’s system. For instance, just because a firm holds a Class A license does not immediately mean they are licensed to do electrical work. Make sure your contractor is licensed in the trade they are hired to undertake, or that they hire sub-contractors that are.

- Is the contractor insured through an insurance company licensed to do business in Virginia? If not, then you have little recourse if your home is damaged or if someone is injured during the performance of work. In the worst case, if damage or injury occurs, you the homeowner will bear the liability. If in doubt, ask your contractor for a Certificate of Insurance. All liability insurance companies will furnish these upon request as proof of insurance.

- What is their level of experience? Unless this is your contractor’s very first job, they should be able to furnish you with a list of prior clients. If you have an opportunity, go look at some of their previous work.

- What is a fair price for the work? This is perhaps the most subjective question there is in identifying a contractor. Price will depend on materials, level of effort, and can many times be impacted by what a contractor thinks you want. If you meet with three contractors and they all have a different concept of what the work is, you will receive three very different prices; none of which may be reflective of what you actually expect. The best way to ensure accurate pricing is to be certain of your expectations before you pick up the phone. Make a list of the work items and the level to which you want them finished and provide a copy to each firm that interviews. Ask them to include a comprehensive listing of the work in their proposal. This way you can compare apples-to-apples. Once you have a relationship with a contractor, keep using them.
When you are viewed as a regular client, their level of effort and prices are consistently better.

### Maintenance Checklist

#### Porches and Steps Maintenance Checklist

<table>
<thead>
<tr>
<th></th>
<th>Inspect in Spring</th>
<th>Inspect in Fall</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Inspect balustrades to ensure they are tight and in good repair.</td>
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<tr>
<td>Inspect wood porch flooring for signs of deterioration, especially around the perimeter of the porch.</td>
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<tr>
<td>Inspect brick or stone piers or foundation walls for damage.</td>
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<tr>
<td>Inspect wood lattice for damage or holes that may allow rodents under the porch.</td>
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<tr>
<td>Inspect for signs of leaks where decks attach to the house</td>
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#### Yard and Landscaping Maintenance Checklist

<table>
<thead>
<tr>
<th></th>
<th>Inspect in Spring</th>
<th>Inspect in Fall</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Inspect downspouts and yard to ensure that water drains away from house (Positive Drainage)</td>
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<tr>
<td>Inspect sidewalks and walkways to ensure there are no tripping hazards</td>
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<tr>
<td>Inspect for signs of rodents, bats, roaches, termites, around house or in landscaping, etc.</td>
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<tr>
<td>Inspect outdoor faucets and hoses and drain if needed</td>
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<tr>
<td>Inspect window wells and check for appropriate drainage</td>
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<tr>
<td>Inspect gutters and downspouts and clean as needed</td>
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<tr>
<td>Inspect landscaping (trees and shrubs) to ensure appropriate distances away from house for roots and branches</td>
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### Roof and Gutter Maintenance Checklist

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<th>Inspect in Spring</th>
<th>Inspect in Fall</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Inspect roof for loose, missing or misaligned shingles, slate tiles.*</td>
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<tr>
<td>For metal roofs, inspect for rust, open seams, failing paint, or loose edges.*</td>
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<tr>
<td>For all roofs, inspect valleys and flashing for rust, loose or open seams, holes, missing caulk or gathered debris.*</td>
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<tr>
<td>Inspect chimney for deteriorating bricks or mortar, bird nests, squirrels, etc.*</td>
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<tr>
<td>Inspect and clean gutters each spring and fall.*</td>
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<tr>
<td>Inspect gutters and downspouts for leaks, misalignments, or damage.*</td>
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<tr>
<td>Inspect bath and kitchen roof vents for signs of bird nests, squirrels, insects, etc.</td>
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<tr>
<td>Inspect interior of attic for signs of leaks, rodent infestations, etc.</td>
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<tr>
<td>Inspect foundation for cracks or signs of damage or settling</td>
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<tr>
<td>Inspect exterior walls for peeling or flaking paint, deteriorating bricks or mortar</td>
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<tr>
<td>Inspect for signs of leaks where decks attach to the house</td>
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<tr>
<td>Inspect flashing at windows and doors</td>
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<tr>
<td>Inspect windows and doors for cracked or broken glass</td>
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<tr>
<td>Inspect for signs of leaks at window and door sills</td>
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<tr>
<td>Inspect dryer vent to ensure it is clean and clear of debris or rodents</td>
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<tr>
<td>Inspect bath and kitchen exhaust ducts to ensure they are clean and clear of debris or rodents</td>
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* Inspect only if you are comfortable working with ladders, etc.
### Windows and Doors Maintenance Checklist

<table>
<thead>
<tr>
<th>Task</th>
<th>Inspect in Spring</th>
<th>Inspect in Fall</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Ensure upper and lower sash close tightly and that the meeting rail pulls together snugly when the window is locked.</td>
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<tr>
<td>Inspect for broken or missing sash cords and repair as needed.</td>
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<tr>
<td>Inspect exterior sills, sash and casings for peeling paint.</td>
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<tr>
<td>Inspect flashing at windows and doors</td>
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<td></td>
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<tr>
<td>Inspect windows and doors for cracked or broken glass</td>
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<tr>
<td>Inspect for signs of leaks at window and door sills</td>
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<tr>
<td>Inspect doors to see that locks and strike plates align properly.</td>
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### Exterior Walls Maintenance Checklist

<table>
<thead>
<tr>
<th>Task</th>
<th>Inspect in Spring</th>
<th>Inspect in Fall</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Inspect masonry walls for loose or missing mortar, broken bricks or stones and efflorescence.</td>
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<tr>
<td>Inspect wood siding or shakes for peeling or flaking paint, rusted nail heads, loose or broken areas and mildew.</td>
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<tr>
<td>Inspect stucco walls for cracks, missing material or areas that appear loose or detached.</td>
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<tr>
<td>Inspect foundation for cracks or signs of damage or settling</td>
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<tr>
<td>Inspect dryer vent to ensure it is clean and clear of debris or rodents</td>
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<td></td>
</tr>
<tr>
<td>Inspect bath and kitchen exhaust ducts to ensure they are clean and clear of debris or rodents</td>
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Additions

While older homes are admired for their character and charm, many potential buyers pass them by in favor of newly constructed homes with the modern amenities they have come to expect. Even those that do purchase older homes often expect to sell and buy bigger once their family expands and the small kitchen and single bathroom no longer accommodate their needs. However, with a little vision and creativity, older homes can easily be modernized to today’s standards with the added benefit of quality craftsmanship and unparalleled charm. To start the modernizing process on your home, ask yourself the following questions:

1) Is the house structurally sound?

Before considering an expansion or renovation, make sure critical systems are sound including the foundation, framing, and roof.

2) What part of my house does not function properly for my lifestyle?

Set priorities on rooms or part of the house that are unsightly, dysfunctional, or both.

3) How concerned am I with my return on investment (ROI)?

Don’t get caught up in ROI calculations; do what fits your needs. Suffice it to say that any home renovation project will return at least one-half its cost and most return over three quarters of the investment. In the meantime, you get to enjoy the results. When you do sell, it’s likely that someone else out there probably thinks like you and will value the improvements you’ve made. However, if you are looking to make improvements that are typically desired by most homeowners, you may want to consult a real estate professional to help shed light on what is expected in today’s housing market.

4) Do I really need more square footage?

Often, existing space can be repurposed to fit your needs. Even some large two-story houses can seem small because of the layout of interior walls. Removing a non-load bearing wall can create new space and is far less expensive. Converting an attic or basement can add considerable square footage without the need for new construction. Also consider that adding to the building envelope will increase your heating/cooling load. The following are some ideas for ‘repurposing’ space within your home’s existing footprint:

- Rear porches, common in traditional floor plans, are good opportunities to convert existing footprint to other functions. Rear porches can be converted to support a new bathroom, a kitchen expansion, or both.
5) If an addition is needed, should I go up or out?

- Unfinished attic or basement space can be converted into extra bedrooms, office space, a media room, or a recreation room.
- Older houses are notorious for the lack of closet space. A small upstairs bedroom can become a large walk-in closet, a master bathroom, and even a laundry room.
- Breakfast nooks make a nice pantry if the original table and bench seating have already been removed. This area can also become a home for the refrigerator, a half bath, or provide more square footage in the kitchen.
- Remove an interior wall between the kitchen and dining areas.

More information on repurposing space specific to a particular style can be found in the Architectural Patterns section of this document.

If you decide you need to expand the envelope of your house, consider how you expand. Rear additions are most appropriate and typically the only option on narrow city lots. Moreover, zoning regulations generally provide the most leeway to the rear with an average minimum setback of 15 feet in residential districts. Side additions may also be appropriate in the form of wings or dependencies subordinate to the original house. If you have a two-story house, keeping the new foundation small and building up will save money and save valuable yard space. The following are some ideas for rear and side additions:

- Enlarge the kitchen. Kitchens are generally much larger now and have a greater function than just a place to prepare meals. Having some eat-in component is now considered mandatory. Kitchens are commonly located on the rear of the house and are ideal candidates for a rear addition.
- Add a downstairs bathroom. If the house does not have a main-floor bathroom, adding one should be a priority. Modern expectations dictate at least a half-bath on the first floor.
- Adding a large bedroom and bathroom (master suite) is ideal for vertical expansion to the rear.
- Consider relationships with outdoor living spaces. A French door on the rear can create/improve the relationship to a patio, balcony, or deck.

Remember to always consult a professional and ensure that additions are designed and built so that the form and character of the primary residence will remain intact if the addition is ever removed. More information on additions specific to a particular style can be found in the Architectural Patterns section of this document.
1) Identify Neighborhood Features and Discuss Plans with the City

New construction in any neighborhood should be sensitive to the character of surrounding houses. After perusing the architectural style descriptions, a builder or property owner should be able to identify the patterns and types of houses within the immediate surroundings of the construction project. New construction does not need to mimic neighboring patterns, but should respect their general rules of design in terms of massing, setbacks, and construction materials.

The following guide will assist builders and property owners in making basic decisions about new construction. Remember, this is meant to be a guide and in no way overrides the City’s Zoning Ordinance, Building Code, and other applicable regulations.

Before moving forward with a construction project, take a look around the neighborhood and identify its primary characteristics, such as predominant architectural patterns, building setbacks, and parking accommodations. If the surrounding neighborhood has two-story homes with shallow setbacks and on-street parking and you want a one-story house with an attached garage, this may not be the neighborhood for your project. The following questions should be considered which Planning staff can help answer:

- Does zoning permit the intended use? To determine if the subject property is in an overlay zone, please refer to Design Review in Roanoke found in the Appendix.
- Does the lot size accommodate the requirements of the development?
- Are the styles and sizes of surrounding houses in the neighborhood similar to the house you intend to construct?

2) Design the House

Once you have identified a lot that is suitable for your construction project, and have a general understanding of the types of houses in the neighborhood, you are ready to choose a design for your house that meets your building requirements, and complements the neighborhood. The goal is to be compatible with other styles in the neighborhood, no necessarily replicating older styles. Reference the design elements of surrounding houses but avoid replicating stylistic motifs that may be unique to a particular property. The following items should be considered during the design process:
Setbacks are established to provide continuity within neighborhoods, provide for a safe and healthy environment, and provide areas for recreation and outdoor activities. In many of Roanoke’s neighborhoods, homes are set relatively close together which promotes important social interactions that create friendly, attractive, and active communities. The City’s Zoning Ordinance regulates these spaces through front, side, and rear yard setbacks. It is important that you contact the Planning Division to determine minimum and maximum yard requirements before settling on a location to site your building. Another important consideration in house placement is drainage. Most water damage to the foundation is due to poor handling of stormwater.

**Front Yard:**

- The infill house should align with the setback established by adjacent homes. This will include alignment of the front facade and the porch face.

- If the adjacent houses do not follow a consistent setback, establish an average.
If adjacent lots are vacant, use the setback established by the Zoning Ordinance.

A consistent grade should be maintained on level lots or consistent grading pattern on sloped lots. A drainage channel should never be located in a front yard. For further guidance please see ‘Residential Lot Drainage’ in the City’s Stormwater Management Design Manual. This document can be found online at www.roanokeva.gov/planning.

**Side Yard:**

- Maintain average side yard setbacks based on setbacks established by adjacent houses. Exceptions for this rule can be applied to lots with severe slopes, lots with subsurface soil conditions that prove cost prohibitive to overcome, or to lots with natural amenities determined worthy of maintaining such as significant trees, structures, walls, etc.

- Easy access to the rear yard should be provided through at least one side yard for pedestrians and automobiles where appropriate.

- An open drainage channel should never be located in a side yard where visible from the street though a gentle swale integrated with landscaping is appropriate.

**Rear Yard:**

- The rear yard setback will be dictated by the front yard setback plus the depth of the house. Space should be provided for play, recreation and relaxation.

- Stormwater management practices should be accommodated in the rear yard. Runoff from the rear of the property may be directed to a shallow vegetated swale. For further guidance please see ‘Residential Lot Drainage’ in the City’s Stormwater Management Design Manual. This document can be found online at www.roanokeva.gov/planning.

**Massing** is important to compatibility within an existing neighborhood. Similar to subdivisions created today, city blocks were platted and then developed simultaneously and with consistency. Infill development should respect the pre-established development patterns of the block.

*Shallow Vegetated Swale*

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**Massing and Roof Forms**
**Building Height:**

- Building height should reflect that of adjacent houses. Generally, new construction should not differ in height by more than 20 percent from the typical buildings on the street.

**Building Width:**

- The front width of the infill house should be the same as the adjacent homes. The infill house should not vary from the average width of adjacent homes by more than 20 percent.

**Foundation Height:**

- The foundation height of the infill house should be within 20 percent of adjacent houses.
- Where the block is on a hill, the foundation height should match a projected level parallel with the hill.

**Roof pitch and configuration:**

- Roof *pitch* should range between 6:12 and 12:12 to facilitate drainage. Intersecting roofs should have the same pitch as the main roof.
- Use surrounding roof types as a guide to new construction. The roof should incorporate a complex roof form such as a hipped or intersecting gable.
The roof should be in proportion to the house. It’s vertical height from underside of the eave to the ridge should not exceed the floor to floor height of the house and should not be less than 2/3 of the floor to floor height.

2/3 of Floor to Ceiling Height

Floor to Ceiling Height

2/3 of Floor to Ceiling Height

Floor to Ceiling Height

1 to 1 1/2 Story

2 Story

Hipped Dormers on a Pyramidal Hipped Roof

Minimum 12” Eave and Gable Overhang

Porches

The front porch is the symbol of the house’s front entrance and has always represented an area for people to gather and socialize. In recent decades there has been a shift to more private areas inside the house or in the rear yard. However, no matter the shift in social orientation, the front porch remains an architectural and social element in Roanoke’s neighborhoods and is an extremely important component to many of Roanoke’s homes.

Front Porch:

Front porches should be at least half the width of the dwelling’s façade and have a depth of at least 6 feet though 8 to 10 feet is recommended to create a usable space. Style and detailing should be similar to that found in the neighborhood and should be in keeping with the style of the house.
Front porch railings should have a top and bottom rail and the **baluster** ends should not be exposed but be inset into the bottom rail. To avoid gaps and separation between components, do not use pressure treated lumber that will shrink as it dries.

Front porch **columns** should be uniform in shape and style with a base and cap. Most front porch columns are about 10 inches in diameter.

The underside of the porch should be framed with lattice between pier supports and under the skirt board.

All stairs on the front porch should have enclosed (solid) risers.

The **pitch** of the porch roof should be equal or less than that of the main roof.

**Side Porch:**

- Side entries should be covered by a roof with a minimum width and depth of 36 inches.
- A side porch should set back from the front elevation towards the middle or rear of the house.

**Windows and Doors**

Windows and Doors are among the most highly visible features of any residence. In addition to being functional, they are significant character-defining elements that relate directly to stylistic influences. Before getting started, consider the size, proportion, spacing and rhythm of existing window
and door openings of neighboring buildings. New construction should reflect characteristic window and door patterns.

Doors:

- The house’s primary entrance should be located on the front elevation. It should be apparent that the front door is the main entrance. The front of a new building should always be oriented to the most prominent street that borders the property.
- Doors should incorporate paneling at a very minimum. The inclusion of glazing, sidelights, and/or a transom is strongly encouraged.

Windows:

- Windows should be proportioned to be approximately twice as tall as they are wide. All windows on the same floor should be the same height and horizontally aligned, with the exception of feature windows. Widths for windows on the same floor may vary by as much as 6 inches.
- Second floor windows should be aligned vertically with first floor windows.
The first floor windows should be approximately 6-inches taller than second floor windows. The width of first floor windows should be the same as the second floor window with which it aligns vertically.

The number of lights (panes) in an individual window should be similar to that found in the neighborhood and should be in keeping with the style of the house.

Window shutters should be designed to fit the window opening and at least appear operable by attaching them with a hinge to the window casing. Shutters should only be included when they are in keeping with the style of house.

Care should be taken to avoid blank walls. These can be broken with windows, doors, and other architectural details. A minimum of 20 percent of the wall surface between the eaves and the foundation should be covered with window and door openings on all elevations. Windows on side and rear elevations allow for natural lighting. Privacy can be maintained with interior blinds or curtains.

Where an infill house is located on a corner lot with high visibility from the street, special care should be given to developing that side elevation with detailing similar but secondary to the front elevation.

Care should be taken to avoid blank walls. These can be broken with windows, doors, and other architectural details. A minimum of 20 percent of the wall surface between the eaves and the foundation should be covered with window and door openings on all elevations. Windows on side and rear elevations allow for natural lighting. Privacy can be maintained with interior blinds or curtains.
Trim

Unless the siding material is a masonry veneer, windows, doors and corners should be trimmed as follows:

- Windows and doors should have a minimum 3 ½ inch jamb and 5 ½ inch head.
- If vinyl siding is used, an ‘integral J-channel’ should be used for windows and doors so that the siding slips in the groove of the channel behind the trim.
- Vertical corner boards at all outside and inside corners should be at least 3 ½ inches wide.
- An 8 to 10 inch frieze board should be located below the eaves.

Building Materials and Colors

To promote a sense of continuity within existing neighborhoods, select construction materials that are similar (at least in appearance and texture) to original materials found within the neighborhood. Colors of materials should be compatible with those of neighboring houses, particularly when choosing brick or stone that has an inherent color. Siding should always be horizontally oriented and painted to complement the colors found within the neighborhood.
Gallery of Examples
Garage Construction

Garages and other accessory structures contribute to the historic fabric of a neighborhood, particularly when they have retained their character. Some of the earliest accessory structures found in Roanoke are carriage houses built for upper and middle income families in Downtown neighborhoods. These structures were often two stories and contained an upstairs living area. Typically, garages began to be built in the 1920s with growing automobile ownership. These buildings were wood frame construction, with a shed or front-gable roof, a dirt floor, and a single entrance bay. The exterior wall cladding and trim on the garage often mimicked that of the main house. In recent decades, garages have been designed as primary components to homes and are often the prominent feature on many homes in Suburban neighborhoods. Historic carriage houses and garages are becoming increasingly rare due to demolition and neglect. They should be maintained and preserved as part of the historic fabric of the neighborhood. More information on the design and placement of garages can be found within each neighborhood classification of the Neighborhood Patterns section, as well as within each pattern in the Architectural Patterns section.

When adding a garage or accessory structure to an existing home or as part of new construction, it is important to remember that its design and placement will have a significant impact on the property’s overall appearance. A few simple steps will ensure the compatibility of new garages and accessory structures.

Scale and Detailing

- The scale of the garage or accessory structure should be secondary to the main house.
- Roofing forms for new garages and accessory structures should have a similar configuration to the main residence but with an equal or lower pitch.
- Double-leaf or sliding doors that incorporate glazing and plank construction (at least in appearance) should be used for garages.
- Multi-bay garages should contain a separate opening for each vehicle.
- The windows and doors of an accessory building should match those of the main residence in terms of type, scale, proportion, detailing, and rhythm.
- Choose materials and colors that are compatible with the main structure, and appropriate to the residential character of the neighborhood.
Garages and accessory structures should be located to the rear of the property. If visible from the street, their location should not detract from the street view of the house.

Garages should be placed to allow access from an alley or side yard driveway.

Garage additions to the principal dwelling should be set back from the face of the existing structure’s front façade by at least two feet.

Garage additions to the principal dwelling on corner lots should be oriented to the street of lesser importance or to an alley, if present.
Two-family dwellings (duplexes), townhouses, and multifamily (apartment) buildings developed in response to a number of factors, including population growth, economics and availability of land. The earliest multifamily structures attempted to appear as a single-family house in order to fit within the surrounding neighborhood. As the idea of multifamily structures became more acceptable and the demand for housing increased, the larger apartment building and/or complex developed as its own building type with its own distinct design criteria. The City of Roanoke experienced phenomenal periods of growth in the late nineteenth and early twentieth century. By the 1920s, growth continued at a steady pace as the City expanded its boundaries several times with annexations. This growth, coupled with the need to provide quality working class housing led to the development of multifamily structures throughout the City. The three main types of multifamily structures found in Roanoke are discussed below.

This section also serves as a guide for building new two-family dwellings, townhouse, and multifamily apartment buildings. The examples below provide a template for how to appropriately site and build a new multifamily construction project that will respect and fit into the surrounding neighborhood. The scale of the examples below varies significantly, providing a variety of options for different scenarios.

Two-Family Dwelling

The duplex was a common form to develop in Roanoke. Duplexes are located throughout the City, although primarily found in the Downtown and Traditional neighborhoods. These two-family houses are found intermingled with single-family residences in these neighborhoods.

The duplex mimicked the single-family house in form, style, and detailing. This was accomplished by maintaining the same building setback, yard configuration, and incorporating the two units within one building form. The duplex often appeared as a single-family residence. The duplex had either a single exterior entrance into a vestibule, with separate interior doors to each unit, or two exterior entrances. It may also have had either one single, full-width porch, or two separate porches. Beyond the entrance and porch, the duplex appears much like a single-family house on the exterior with a single roof and regular window and door openings. Interior plans typically consisted of a single unit per floor (so that two interior staircases were not necessary and so that kitchen and bath plumbing could be stacked) or placed side by side with each unit consisting of two levels. The most common styles used for duplexes were the Colonial Revival or the American Foursquare as their
symmetrical form allowed for the dual units. In some cases, duplexes are found in either the Tudor Revival or the Craftsman/Bungalow style where modulations in the roof form and side entrances help to hide the two units.

The lot layout for a duplex is similar to that of a single-family dwelling, although it may be slightly wider. The duplex usually features a single, shared front and rear yard. Typically, one walkway led from the public sidewalk to the single front porch or split in front of the house to two porches.

Accessory structures, such as garages, are also similar to that of a single-family dwelling, although expanded to accommodate two cars. As in single-family dwellings in the Downtown and Traditional neighborhoods, the garages are usually located at the rear of the lot with access either from the alley or driveway.
Townhouses are found throughout the various neighborhoods of Roanoke and are seen as a less obvious form of multifamily housing than the apartment building. Constructed as single-family units that are attached to adjacent single-family units, the townhouse differs from the duplex in that they are located on individual lots and are always arranged side by side. Townhouses always have individual porches, entrances, and walkways. While the townhouse fits into a traditionally single-family neighborhood, it does feature a more condensed rhythm as the units are smaller than a typical single-family dwelling. The attached townhouse may include more stories on a shallower footprint to allow maximum light from the front and rear elevations, which will have the only exposure available for interior units. A variety of styles are used in designing attached townhouses. The simpler, more symmetrical Colonial Revival style is often used to give the row of townhouses a unified appearance. On the other hand, the more picturesque revival styles, such as the Tudor Revival with its varying materials, window and door arrangements, and roof forms, are often used to help differentiate the various units within a row.

The lot layout of the townhouse is similar to a single-family dwelling, just smaller. It will feature its own walkway and may have its own backyard or front courtyard. Garages may be shared as either one large unit along the rear of the lot or as single or double units. In the more modern examples, or where topography allows, the garages may be integrated into the rear or basement level of the townhouse.
The apartment building emerged as a new building form in Roanoke in the early twentieth century. Built as early as 1909, apartment buildings are typically integrated into the fabric of Downtown and Traditional neighborhoods. In the earlier neighborhoods, the apartment building was typically located on a larger lot located along a public streetcar or bus route. Apartment buildings in Roanoke, with a few exceptions, are three or four stories, as all levels were typically accessed by a stairwell. The primary design challenge was to get as many units on a site in an efficient manner that also provided adequate light and ventilation.

The smaller apartment buildings, often found in the Old Southwest or Gainsboro neighborhoods, were rectangular in form with four to six units per floor along a central, double-loaded corridor that allowed each apartment to have an exterior wall for light and ventilation. These smaller apartment buildings typically have a single entrance, in keeping with the single-family dwellings around them. The apartment building shown in the example contains 4 units on a 9,874 square foot lot.
As apartment buildings grew in size, they began to take on “U”- or “W”-shaped configurations to allow for more units with the same requirement of an exterior wall for light and ventilation. This new configuration also began to change the way an apartment building was organized. The size now required more than one staircase or corridor, which in turn led to more exterior entrances, often one or more per building block. Although the larger apartment building or complex typically respects the same setback of its neighbors, the new configuration was oriented around an interior courtyard rather than the street, so the entrances no longer directly addressed the street. Even though the U- and W- shaped configurations broke the facade into house-sized segments, the apartment building no longer tried to hide the fact that it housed multiple housing units.

Although the apartment building often differed in size, massing, and form from the surrounding single-family neighborhoods, they typically used the same materials and stylistic detailing that were popular at the time and found throughout the neighborhood. Apartment buildings are found in a variety of styles throughout Roanoke, including Colonial Revival, Tudor Revival, Georgian Revival, and International styles. The symmetry and formality of Colonial Revival and Georgian Revival styles were based on early plantation examples in Virginia where the primary house was flanked by wings or dependencies. In contrast, the varying forms, materials, and massing of the Tudor-Revival style also lent itself to making the large building form more intimate or personalized. The International style was used to embrace the modern style of living in its construction, design, and form.
The primary difference in the large apartment building is its configuration on the lot. While following the same setback as its surroundings, the “U” and “W” shaped configurations turned away from the street to an inner courtyard for the first time. This created a central, shared yard or green space for the residents. In an effort to maximize use of the lot, the apartment building typically had no rear or side yard. Garages were either located in the rear of the building on the basement level, where topography allowed, or in a separate building along the alley.

The example on the opposite page of the “U” shaped apartment building contains 12 units on a 25,093 square foot lot. The example on this page of the “W” shaped apartment building contains 60 units on a 50,026 square foot lot. Both are integral components of a residential neighborhood containing a mix of single-family, two-family, and multifamily dwellings.
Gallery of Examples
Landscaping enhances the visual character of the home, reduces energy costs (provides shade and wind protection), and blends the home into the landscape character that is found throughout the neighborhood. A well planned yard provides opportunities for relaxation, limited recreational space, and privacy as required by the homeowners.

**Front Yard**

- **Concrete Parking Strips**
- **Permeable Paver System**
- **Decorative Brick Pavers**
- **Concrete**
- **Concrete Steps**
- **Front Walkway**

**Driveways:**
- Parking should always be provided off an alley if present. However, if a driveway is provided from the street, it should extend to the side or rear of the house to prevent parking in the front yard. Concrete parking strips or permeable paver system are encouraged as they reduce the amount of impervious surface created by the driveway.

**Walkways:**
- A walkway should connect the main entrance of the house to the public sidewalk or street. The walkway should be at least 4 feet in width and made of poured concrete or decorative brick pavers that complement the architectural style of the house.
- Steps from the sidewalk to the front walkway, should be made of brick pavers or concrete.
Retaining Walls:

- Existing retaining walls adjacent to the sidewalk should be maintained. Failing walls should be reconstructed, but should maintain the character of the original wall.
- Where a new retaining wall is needed, it should be constructed of materials similar to existing retaining walls found in the neighborhood. The most common materials used are stone, stone textured concrete block, or decorative concrete.

Fencing:

- Front yard fencing should be limited to decorative wrought iron or painted wood picket fencing. Front yard fencing includes all fencing from the front of the house (not the porch) to the public sidewalk or right-of-way line. The maximum fencing height should not exceed three feet. Chain link, wood privacy, or split log fences should not be used in the front yard.
- The planting of evergreen shrubs can be used in place of a fence. The shrubs should be maintained to a maximum height of three feet.
Plantings:

- Perimeter planting along the property line and other landscaping is encouraged. Care should be taken to select plants that will not eventually overgrow and hide sections of the house or porch.

- The front yard should be planted in grass, ivy or any evergreen ground cover, or a combination of all. Some grass area is important to help define a front yard.

- Existing trees in good health should remain, while the planting of new trees is strongly encouraged where appropriate. The type of tree and its location should blend in with other existing trees on your lot and on the neighboring lots. For new construction, extra credit is given towards the landscaping requirements of the City’s Zoning Ordinance when existing trees are retained.

- The planting of trees and shrubbery is encouraged in front yards. The plant and tree types should be similar to those found in the surrounding neighborhood and should be suitable for urban landscapes. The selection of trees should consider tree height and root ball size at maturity in order to ensure that the tree will not damage the house, its foundation, sidewalks, and or retaining walls. Many local nurseries have information that will assist you in selecting appropriate trees or shrubs for your yard.

- Use plantings native to Virginia. Since native plants have been growing and evolving for many years, they have adapted to local soils and climate. Thus they are more likely to require less care than exotic plants, which cuts down on the need for water, fertilizer, and pesticides.

Driveways:

- Parking should always be provided off an alley if present. Concrete parking strips or permeable pavement systems are encouraged as they reduce the amount of impervious surface created by the driveway.

Fencing:

- Fencing in the rear yard, where visible from the street, should be decorative. Chain link fencing or the structural side of a privacy fence should not be visible from the street.

- Rear and side yard fencing should not exceed six feet. Rear yard fences should be considered to provide security and privacy.
The rear and side yards should be planted with grass, ivy or any evergreen ground cover, or a combination of all. Grass is important for recreation and play areas.

The planting of trees and shrubbery in the rear and side yards as landscaping elements is strongly encouraged. The plant and tree types should be similar to those in the surrounding neighborhood and should be suitable for urban landscapes. The selection of trees should consider height and root ball size at maturity that will not eventually damage the house and its foundation. Many local nurseries have information helpful in the selection of appropriate plant and tree material.

Use plantings native to Virginia. Since native plants have been growing and evolving for many years, they have adapted to local soils and climate. Thus they are more likely to require less care than exotic plants, which cuts down on the need for water, fertilizer, and pesticides.
As porches regain their popularity, they are more often included as an essential amenity in new construction. Unfortunately, the construction of a new porch is rarely executed properly. This section dissect the components of a porch and shows how they can be properly constructed with readily available materials. The front porch is made up of four basic components; 1) roof, 2) columns and railings, 3) deck and lattice, and 4) steps.
The porch roof usually has a shallow *pitch* of no greater than 4:12. A roof pitch less than 3:12 will require a metal or other special roofing system. The porch roof is either a *hipped* roof configuration (sloping up from its three exposed sides) or a monopitch configuration (shed roof sloping up from the front edge with vertical *gable* surfaces on its two remaining exposed sides).
The porch roof structure is constructed of either wood trusses or conventional roof rafters with ceiling joists. The porch roof structure is made up of a top chord (rafter) at the slope of the roof and a bottom chord (ceiling joist) which is horizontal and is the support for the porch ceiling. The roof structure bears on the porch beam or entablature (see description below) which extends along the front and two sides of the porch. The roof structure then extends up to and is anchored to the exterior wall of the house. The bottom chord or ceiling joist, of the roof structure extends beyond the beam (entablature) approximately one foot to form the porch roof overhang or eave. The eave of the porch roof consists of a fascia which is a vertical trim board extending along the edge of the porch roof and anchored to the end of the porch top (and sometimes bottom) chord, and a soffit which is anchored to the underside of the bottom chord where it extends beyond the beam (entablature). The last component of the porch roof is the porch ceiling which is anchored to the bottom of the bottom chord of the porch roof structure.

The porch entablature (beam), which supports the roof structure, is either a box beam construction or two to three heavy wood members, usually 2” by 10” or 2” x 12” boards anchored together. Either beam assembly is then wrapped with trim boards on each side and along the bottom. A porch with an omitted, hidden, or undersized entablature creates an unstable appearance.
The porch columns provide the support for the porch roof beam (entablature), which supports the roof structure. Seen as decorative elements of the porch assembly, they take on many forms, from the smooth round Doric columns to the fluted round Corinthian columns with elaborate capitals to the intricate turned wood columns, to the tapered square box columns. They extend from the entablature to the porch deck and are supported by the porch deck beam below the porch deck.

Porch railings provide safety and some degree of privacy. The railing, anchored to the columns at each end, consists of a top rail, a bottom rail, and vertical balusters (pickets) anchored to the top and bottom rails. Like the columns, the rail systems are a decorative element of the porch and range in shape from decorative turned wood components, to sawn balusters, to simple square wood elements.
The porch deck structure is composed of treated wood girders and joists. The wood girders, usually several heavy wood members anchored together, are anchored to the house’s exterior wall and then extend to and are supported at the porch’s perimeter by piers. The wood joists are single heavy wood members, usually 2” by 10” or 2” by 12” boards, extending between and anchored to the girders. Wood (not pressure treated) or synthetic tongue and groove decking is then anchored to this system to form the porch floor. Vertically oriented 1 inche x 2 inch strips can also be used in Traditional neighborhoods where the porch deck is fairly low (less than 3 feet). The decking should overhangs at least one inch beyond the skirt board to create a shadow line. A finished wood skirt board is attached to the front and sides of the porch structure (girders). The porch piers provide the final support member for the porch. They are usually constructed of brick and are located below each column location. The piers extend below grade to a concrete footing.

Lattice is installed in the opening created between the piers and between the bottom of the skirt board and the ground. The lattice assembly consists of a treated wood frame anchored to the piers at each side and to the bottom of the girder at its top. Lattice is then installed in a vertical/horizontal grid pattern and anchored to the treated wood lattice frame.

Figure 9: Porch Deck and Lattice
The last item of a front porch is the porch steps. This assembly consists of stringers which are heavy treated wood member cut to form the horizontal (tread) and vertical (riser) notches of the stair assembly. The risers are located at each edge of the stair assembly (sometimes, with wide stairs, a middle risers is added). They are anchored to the porch girder at the top and bear on a concrete footing or paved walkway at the bottom. Heavy wood members are then anchored to the horizontal notch of the stringer to form the stair treads. Wood members are then anchored to the vertical notch of the stringers to form the closed risers. Risers should never be left uncovered. Where the porch steps consist of three or more risers, it is advisable to provide porch railing on either side of the stairs. The railing, typically made of wood or wrought iron, is anchored to the column at the top and the bottom tread or walkway at the bottom.

*Painting. All exposed wood and iron members of the porch assembly described above should be painted using an alkyd-based primer and two topcoats of either an alkyd-based or latex-based top coat. Porch decking should receive a decking paint for its top coats.
Hidden Gutter:

The hidden gutter is just as it sounds, a gutter built into the roof system in such a manner that it is concealed from view from the ground. It is found in many slate or metal roofs in the Roanoke area. The downspouts, most always round, pass through the roof’s soffit through a metal sleeve, with a conventional downspout attached to the bottom of the sleeve where it passes through the eave’s soffit. Most all hidden gutters were framed in wood and clad in metal. A variation of the hidden gutter was a raised panel anchored to the roof that formed a ‘V’ with the roof’s slope and therefore a gutter form. Unfortunately, as an integral component of the roofing system, hidden gutters are out-of-sight and out-of-mind and therefore rarely well maintained (removing leaves and debris, checking for leaks, etc.) and therefore were prone to failure. A leak in a hidden gutter usually means the roof is now leaking making the problem even worse. The well maintained hidden gutter is an architectural ‘gem’ and should be retained and maintained whenever possible. ‘Decking over’ hidden gutters and adding conventional gutters was once commonplace, but owners more often restore hidden gutters to their original function.
Surface Gutters:

Most gutters today, and many of the gutters in Roanoke’s older homes, are surface gutters. Again, just as the name implies, these gutters are attached to the edge of the roof’s eave, by way of spikes or brackets anchored to the eave’s fascia or by hangers or straps that are anchored to the roofing surfaces. Most of Roanoke’s early gutters were made of galvanized metal with some copper exceptions found in the area. The joints of the galvanized gutters were soldered although a mechanical joinery, with metal screws and sealant, is used in more current installations. The most common material used for gutters and downspouts today is aluminum. Vinyl guttering is also found as an alternate material. There are two basic configurations found in the area; the half round gutter which usually has a round downspout, and a more decorative ‘ogee’ gutter usually found with a rectangular downspout.
Security in any neighborhood is always an important issue. When improving an older home or constructing a new home, one needs to be aware of appropriate lighting and other measures that will make the home more secure. Lighting walkways and entrances while placing plants in strategic locations that do not obstruct the view of entries and side yards will help make a home more secure. Below are basic measures one can take to promote a safe and secure home.

Basic Security Measures

• Older homes should be lighted and landscaped in ways that eliminate areas of poor visibility around the home from the street or adjacent homes.

• New homes should be sited and configured so that they minimize areas of poor visibility from the street or adjacent homes (e.g., maintaining a consistent front yard setback with neighbors).

• Security lights should be used to illuminate a potentially dark or non-secure area. Flood and spot lights should be avoided as they often create glare or light trespass on neighboring properties. Simply keeping a front or back porch light on throughout the night provides an effective deterrent.

• The placement of any fences or plant materials should be evaluated for its potential to create a hidden or unsecured area.

• All windows should be provided with locks.

• All entry doors should be provided with deadbolt locks.

• When an entry door does not have glass, the door should be provided with a peep hole or visual access by way of an adjacent window.

• When visible from the street, window grills or bars should be decorative and complement the architectural style of the home.
Green Building

What is Green Building?

Builders and homeowners across the country are becoming increasingly interested in green building. A green home is one that has been built using environmentally sensitive construction techniques, generate less waste and/or uses less energy, water, and natural resources. The green building movement is synonymous with sustainable building practices, which advocate environmentally responsible construction as both a philosophy and a set of real-life applications. For example, sustainable recommendations might include swapping out light bulbs for compact fluorescents, investing in renewable energy sources like wind and solar power, and planting native trees and vegetation.

How is it applied?

For new construction, a design team might use recycled or local materials, which do not require transportation over long distances. Builders might choose wood from forests that have been certified for sustainable practices. The choice of building materials may include paints, carpets and adhesives that produce low levels of unsafe organic compounds. Carbon dioxide sensors may be installed to regulate fresh airflow.

Although most sustainable development is aimed at new buildings, increasingly people are becoming aware that the reuse and sustainable restoration of older buildings is the best green building technique of all. After all, “recycling” an old building conserves materials and energy, and eliminates the negative environmental, social, and economic consequences of demolition, which also translates into fewer trips to the landfill. When you preserve an existing building, you not only preserve the architectural pattern that contributes to neighborhood character, you preserve the materials and the energy that went into a building’s original construction. In addition to the new found focus on “carbon footprints,” there is increasing talk of “sustainable preservation.”

The US Green Building Council (USGBC) and the LEED program have been working on initiatives and guidelines for making new and older homes green. The USGBC publishes the Green Home Guide (www.greenhomeguide.org) which is an excellent resource for all homeowners and builders. This resource is updated often and provides a vast amount of information that will help you green your home and make for a healthier lifestyle in general. The Green Home Guide website identifies what makes a home green, provides guidance on green home programs, provides the Regreen Remodeling Guidelines, and discusses ways to live a green lifestyle with links to additional resources and a news and events page. The information below will help you identify what a green home is and also provide guidance on making your home green.
Location:

The selected location for a green building is as important as how it is built from a sustainability perspective. Green homes should never be built on environmentally sensitive lands (wetlands, prime farmland, etc.). Instead, green buildings should be located in compact development patterns (typically 6 units per acre or on approximately 5,000 to 7,000 square foot lots) that are suitable for pedestrian access to schools, shops, work, parks, and transit. Compact development preserves open space and reduces air emissions and pollution by supporting multiple modes of transportation.

Green Building Materials:

Green homes should be constructed or renovated with non-toxic building materials (not vinyl) and low- and zero- volatile organic compound (VOC) paints and sealants. Renewable wood-based products such as bamboo should be used for wood features throughout the interior of the home. The Forest Stewardship Council (http://www.fscus.org/) provides guidance on other renewable wood-based products. Salvaged materials are used where possible and may include doors, windows, sinks, cabinets and many other items that have been recycled from the community. The Habitat Store, affiliated with Habitat for Humanity, in downtown Roanoke provides recycled home construction supplies.

When constructing a new home or renovating an existing home to be green, the disposal of waste should be done in an environmentally friendly way. Many of the items removed from an existing home can be recycled in ways that are better than taking them to the landfill. It is important to work with your builder to ensure that materials are disposed of in appropriate ways that allow them to be recycled or reused where appropriate. The Roanoke Valley Cool Cities Coalition (http://www.rvccc.org/) can provide further guidance and there are many resources available on the internet.

Insulation:

A well-insulated home provides for a comfortable indoor environment while keeping heating and cooling costs at a minimum. New exterior doors and windows should have Energy Star ratings and be properly sealed to limit heat gain in the summer and to reduce heat loss in the winter (for older windows and doors please see the Maintenance Section). Types of insulation vary widely (rolls, blown-in, foam, etc.) and your application should be non-toxic and provide for an appropriate R value. According to Energy Star, cost-effective insulation should have the following R values:
For Ceilings: R-38 to R-49  
For Wood Frame Walls: R-11 to R-26  
For Floors: R-13 to R-25  
For Basement Walls: R-11 to R-19

Energy Efficiency and Renewable Energy:

Green homes consist of energy efficient lighting, heating, cooling, and water heating systems. All appliances should have Energy Star ratings. Using renewable energy at your home is an increasing trend that is becoming more cost effective and easier to accomplish as the technologies develop. Renewable energy sources include solar, wind, geothermal, biomass, and so forth. The US Department of Energy- Office of Energy Efficiency and Renewable Energy offers the Solar Energy Technology Program (http://www1.eere.energy.gov/solar/) which provides detailed information on solar energies including photovoltaics and solar heating systems. Additionally, national retailers are capitalizing on this trend and are now providing solar power systems in their stores. For more information on photovoltaics and solar energy, use the link above as well as other research methods to find applications that are appropriate for your use. Local building supply stores will also be able to provide guidance.

Wind energy technology for residential use is not as technologically advanced as solar energy. However, capturing wind energy is an additional source of renewable energy that is increasing in popularity. Currently, the US Department of Energy- Office of Energy Efficiency and Renewable Energy provides the Wind and Hydropower Technologies Program (http://www1.eere.energy.gov/windandhydro/) for industrial uses. Scaled-down versions of these applications do exist for residential uses and are envisioned to be more readily available and cost effective as the technology advances. For information specific to Virginia on wind energy, visit James Madison University’s Virginia Wind Energy Collaborative webpage (http://vwec.cisat.jmu.edu/).

Home Gardening/ Rainwater Collection/ Rain Gardens:

In addition to the renewable energy sources stated above, home gardening has become increasingly popular, especially with the rise in food prices. The US Department of Agriculture provides information on home gardening (http://www.usda.gov) with many useful links and resources that will assist you in your gardening projects. Additionally, the Virginia Cooperative Extension (http://www.ext.vt.edu/) offers educational programs and resources for various forms of gardening from large farms to home gardening of vegetables and fruits. Gardens may range in size based on your lot size, and may even be accomplished indoors with potted plants.
Rainwater collection and reuse is also an important green initiative that can be accomplished at your home. Rainwater collection systems vary widely and may be purchased or created following do-it-yourself manuals and guides. Rainwater collection may be used for non-potable household, landscape and agricultural use without placing burdens on the public water system. A typical rainwater collection system consists of a collection area (roof, etc.); a collection system (gutters, downspouts, piping, etc.) for getting the rainwater to the storage tank or cistern; and a water distribution system for accessing and distributing the water as needed. Abundant information on rainwater collection systems is available online through various web searches.

Rain gardens are also increasing in popularity and help to manage rainwater runoff for individual or groups of lots at a time without placing runoff into public stormwater collection systems. Many new residential and commercial development projects are including community rain gardens in their designs. Rain gardens need to be properly sited in a low-lying location in order to catch the rainwater runoff. Runoff typically comes from the roof of the home, driveway and other impervious surfaces found on the property. Runoff may need to be diverted into the rain garden through piping or other means if necessary. In order to function properly and absorb as much water as possible, the rain garden must consist of native or adaptive plant species that are deeply rooted and tolerate both wet and dry conditions. If properly installed, the rain gardens will not only beautify your home but also reduce and control rainwater runoff and provide ecological benefits to the area.

Roanoke City’s Special Tax Rate on Energy-Efficient Buildings

A special tax rate is available for energy-efficient residential buildings that exceed the energy efficient standards as prescribed by the Virginia Uniform Statewide Building Code by thirty (30) percent. The special tax rate applies to the building only and must be certified by a licensed design professional or contractor who is not related to the applicant. The exemption remains in effect for five (5) years. More information on the City’s special tax rate on energy-efficient buildings can be found at www.roanokeva.gov/realestate.

Green Certifications

The following are three certifications that can be earned by practicing sustainable construction techniques. Most of these certifications are only available to licenced contractors but many of the underlying principles can be used to improve the efficiency of your own home.

LEED

The U.S. Green Building Council (USGBC) is a nonprofit organization that administers the Leadership in Energy and Environmental Design (LEED) program, a rating system that has become influential in recent years in shaping new construction, particularly commercial buildings. Known as LEED, the system was developed in 2000 to measure the effectiveness of sustainable design projects. Points are awarded in six categories, including...
water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. Structures are certified if they meet basic requirements, while those that go above and beyond the minimum can receive silver, gold, or platinum ratings based on their scores. Although the Green Building Council does not have standards for historic buildings, in 2007 the USGBC launched a new rating system for houses, joining other groups such as the National Association of Home Builders, Energy Star, and EarthCraft ratings.

LEED for Homes promotes the construction and design of high-performance green homes that use less energy, water, and natural resources; creates less waste; and is healthier and more comfortable for the occupants. Benefits include lower energy and water bills, reduced greenhouse gas emissions, and less exposure to mold, mildew, and other indoor toxins. A LEED qualified builder must perform the work in order for your project to meet the requirements for a LEED certified home.

Websites:  www.usgbc.com
www.usgbc.org
www.greenhomeguide.org

Energy Star

The Energy Star program is a joint effort between the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy to promote the use of energy efficient building practices and products. Energy Star is a voluntary program that sets performance guidelines that are intended to reduce greenhouse gas emissions from commercial buildings, manufacturing plants and residences.

To earn an Energy Star rating, a home must meet certain EPA guidelines for energy reduction and air pollution. The rating takes into account effective insulation, window efficiency, efficient duct systems, efficient heating and cooling equipment, and other household products. Energy Star also promotes a variety of energy-saving appliances, such as lighting fixtures, small fluorescent bulbs, ventilation fans, dishwashers, refrigerators, and washing machines. The program includes on-site tests and inspections conducted by third-party inspectors who award a blue Energy Star mark, which is a government-backed symbol that verifies a home is energy-efficient.

If a home qualifies as Energy Star efficient, homeowners then can opt for an Energy Star Indoor Package label, a new EPA specification that rates indoor air quality. Homes that receive this label include more than 60 additional features that control moisture, chemical exposure, ventilation, and filtration. Here are a few ways to incorporate the Energy Star program into your own home:
If you are looking for new household products, look for ones that have earned the ENERGY STAR rating. These items meet strict energy efficiency guidelines set by the EPA and US Department of Energy.

If you are looking to make larger home improvements, EPA offers tools and resources to help you plan and undertake projects that will reduce your energy bills and improve the comfort of your home.

If you are looking to buy or build a new home, look for one that has earned the ENERGY STAR rating or discuss the opportunity with your builder.

Website: www.energystar.com

The EarthCraft House program is a voluntary agreement that seeks to reduce pollution and conserve natural resources. The EarthCraft program was created in 1999 by the Greater Atlanta Homebuilders Association. It seeks to promote green building practices for new construction and renovation. For new home construction, EarthCraft homes must meet Energy Star certification criteria. EarthCraft house guidelines include categories such as site planning, the use of energy-efficient design and building materials, waste management, indoor air quality, and water conservation. Any home that has been EarthCraft certified has also received an Energy Star certification. Builders who exceed the standard criteria can receive a select or platinum status certificate.

The EarthCraft House Renovation program deals with existing homes, as well as expansions and additions. Similar to the EarthCraft new homes program, contractors who participate in the renovation program must attend classroom training. Before work commences, an EarthCraft inspector will assess a home and write a series of recommendations that homeowners can choose from. A house can then be certified as an EarthCraft project when the added green features score enough points on an EarthCraft House scoring worksheet.

Following the model set in Atlanta, the EarthCraft House program became a statewide program in Virginia in 2005. To receive an EarthCraft rating for a new home or renovation project, a builder who is familiar with EarthCraft must be used. More information on the EarthCraft House program in Virginia can be found at:

Website: www.ecvirginia.org
1. Switch to compact fluorescent light bulbs (CFLs). By replacing some or all of the incandescent light bulbs in your home, heat production and energy use can be reduced.

2. Program your thermostat. Programmable thermostats allow you to program heating and cooling systems to reduce output at times when no one is home, or during evening hours when people are likely to be sleeping. The thermostat should be kept at 78° F or higher during the summer, and at 62° F or lower in the winter. Or, open the widows and turn on a fan. Most older homes were designed with good cross-ventilation; so take advantage of your home’s layout.

3. Plug air leaks. Leaks commonly occur around windows, doors and other wall openings. Leaks can be plugged easily with weather stripping or caulking.

4. Keep original windows intact. Studies show that older windows can perform as well as replacements. Weatherstrip them so that they seal tightly, caulk the exterior trim, and repair cracked glazing or putty around glass. You’ll reduce landfill waste and the demand for new materials. Remember, vinyl is not a green building material. It is a nonbiodegradable material that gives off toxic byproducts when it’s made.

5. Insulate the attic, basement and crawl space. About 20 percent of energy costs come from heat loss in those areas.

6. Install fireplace draft stoppers, attic door covers, and dryer vent seals that open only when your dryer is in use. An open dampener in a fireplace can increase energy costs by 30 percent, and attic doors and dryer vent ducts are notorious energy sieves.

7. Tune up heating and cooling (HVAC) systems. Your HVAC system should be checked every two years to ensure efficiency. The filter should be cleaned monthly during peak usage.

8. Choose Energy Star appliances. When considering the price of a new appliance, take into account the purchase price, as well as the long-term savings associated with an energy-efficient appliance. Energy Star-rated products have been tested for a higher level of energy efficiency than average appliances.

9. Buy local. Buying local products reduces the amount of fossil fuels required for transportation of food from other locations. It also reduces the quantity of plastic and paper products consumed in packaging of products brought in from other areas.
10. Use low-VOC products. Indoor air quality can be achieved by switching to products that don’t give off “volatile organic compounds.” Common low or no-VOC products include low-VOC paint and low-VOC cleaning products.

11. Use wood alternatives or FSC-certified wood products. Consider using environmentally sensitive and renewable products such as linoleum, bamboo, recycled-content tile or non-VOC carpet. Choose wood products from sustainably managed forests, such as those certified by the Forest Stewardship Council.

12. Choose rapidly renewable flooring materials. Flooring options include those made from grasses and trees that mature in roughly half the time it takes hardwood trees to reach market size. Bamboo, cork, and eucalyptus flooring products are a sustainable alternative to traditional hardwoods.

13. Reduce Water Use. Use less water indoors by adding aerators to sink faucets, and by changing to low-flow showerheads. Outdoors, incorporate native vegetation to landscape plans, add a rain barrel for plant irrigation; minimize high-maintenance landscaping such as turf grass, a step that will conserve water.

14. Use native plantings. Since native plants have been growing and evolving for many years, they have adapted to local soils and climate. Thus they are more likely to require less care than exotic plants, which cuts down on the need for water, fertilizer and pesticides.

15. Plant a rain garden in a low lying area to slow runoff from downspouts and driveways. Deep rooted plants that like water, but can sustain a drought, should be used.

16. Compost food scraps, grass, dead plants, and other yard clippings.

17. Plant trees to provide shade and wind protection, which can save energy on heating and air-conditioning.

18. Use nontoxic gardening techniques. Avoid the over-application of pesticides, which have a negative impact on air and drinking water.

19. Carpool, use public transportation, walk or bike when possible. Green transportation can reduce energy expenditures and carbon emissions from your daily routine. One advantage to buying or building a home in a Downtown or Traditional neighborhood is that all of these options are usually available.

20. Save paper by using the electronic version of the *Residential Pattern Book for the City of Roanoke.*
The City of Roanoke has two overlay districts that regulate residential design – the Historic Neighborhoods (H-2) District and the Neighborhood Design (ND) District. You can determine if your property is located within one of these districts, by accessing the City’s Geographic Information Systems (GIS) page:

2. Select ‘GIS - Real Estate’ from the bottom of the page.
3. Select ‘Search/Query’ from the bottom of the page.
4. Search for your property by Owner Name, Street Name or Tax Number.
5. Select applicable parcel number. An aerial photograph and ‘Parcel Details’ will appear.
6. Scroll down to ‘Zoning Lot Information’ and select ‘Click Here for Overlay Zoning’.
7. If an ‘H-2’ or ‘NDD’ appear on the aerial photograph, your property is located in one of these overlay zones.

Established in 1987 through a citizen-initiated process, the purpose of the H-2 Historic Neighborhood District is to identify, preserve, enhance, and maintain architectural and historic landmarks, structures, and districts. The H-2 overlay district is intended to encourage and regulate new construction that is compatible with the neighborhood, develop and maintain appropriate settings and environments for such landmarks, structures, and districts. Designs must be compatible with the character of the overlay district with respect to building location and scale, roof forms, windows and doors, trim, siding, and porches.

In the H-2 overlay district, a Certificate of Appropriateness is required for any exterior alterations, modifications, new construction, or demolition. Appropriateness of alterations, new construction, or demolition are made by the Architectural Review Board based upon the H-2 Architectural Design Guidelines.

The overlay district originally included all of the Old Southwest, and portions of the Mountain View and Hurt Park neighborhoods. A portion of the Gainsboro neighborhood was later added to the overlay district. Figure 1 on the following page is a map of the H-2 District. For more information on the H-2 Historic Overlay District, please visit the ‘Urban Design Standards’ page at www.roanokeva.gov/planning.
The Neighborhood Design (ND) District is an overlay zone within the City’s Zoning Ordinance that regulates the design of new residential construction and modifications in core urban neighborhoods. It was developed in response to citizen concerns about the incompatible design of new construction in traditional neighborhoods. The district’s design standards are based on common architectural elements found in traditional neighborhoods and work to ensure new construction is compatible with the surrounding neighborhood. Consistent building lines, usable front porches, better orientation to the street, large windows, complex roof forms, and improved pedestrian connections are a few requirements of the district.

In 2002, Roanoke City Council approved and implemented the first Neighborhood Design District in the Melrose-Rugby neighborhood. In 2005,
the district was expanded to all or part of 15 additional neighborhoods which are depicted in Figure 2. For more information on the ND District, please visit the ‘Urban Design Standards’ page at www.roanokeva.gov/planning.

**Figure 2: Neighborhood Design District**
# Material Manufacturers

## Roofing
- Berridge Manufacturing Co.  
  [Visit Website](www.berridge.com)
- CertainTeed  
  [Visit Website](www.certainteed.com)
- Owens Corning  
  [Visit Website](www.owenscorning.com)

## Wall Cladding
- CertainTeed  
  [Visit Website](www.certainteed.com)
- James Hardie  
  [Visit Website](www.jameshardie.com)
- LP Building Products  
  [Visit Website](www.lpcorp.com)
- Nailite  
  [Visit Website](www.nailiteinternational.com)
- Nichiha  
  [Visit Website](www.nichiha.com)
- Vintage Woodworks  
  [Visit Website](www.vintagewoodworks.com)

## Columns
- Arndt & Herman  
  [Visit Website](www.arndtandherman.com)
- Chadsworth Incorporated  
  [Visit Website](www.columns.com)
- Chemcrest  
  [Visit Website](www.chemcrest.com)
- Column & Post  
  [Visit Website](www.columnpost.com)
- Fypon  
  [Visit Website](www.fypon.com)
- HB&G  
  [Visit Website](www.hbgcolumns.com)
- Turncraft  
  [Visit Website](www.turncraft.com)
- Vintage Woodworks  
  [Visit Website](www.vintagewoodworks.com)

## Balustrade
- Arndt & Herman  
  [Visit Website](www.arndtandherman.com)
- Chadsworth Incorporated  
  [Visit Website](www.columns.com)
- Chemcrest  
  [Visit Website](www.chemcrest.com)
- Fypon  
  [Visit Website](www.fypon.com)
- HB&G  
  [Visit Website](www.hbgcolumns.com)
- Vintage Woodworks  
  [Visit Website](www.vintagewoodworks.com)

## Lattice
- Permalatt Products  
  [Visit Website](www.permalatt.com)
- Royal Wood  
  [Visit Website](www.royalwood.com)

## Windows
- Allied Winow Inc.  
  [Visit Website](www.invisiblestorms.com)
- Anderson Windows & Doors  
  [Visit Website](www.andersonwindows.com)
- Jeld-Wen Windows & Doors  
  [Visit Website](www.jeld-wen.com)
- Marvin Windows & Doors  
  [Visit Website](www.marvin.com)
- MW Windows & Doors  
  [Visit Website](www.mwwindows.com)
- Peachtree Doors & Windows  
  [Visit Website](www.peachtreedoor.com)
- Pella  
  [Visit Website](www.pella.com)
- Windsor Windows & Doors  
  [Visit Website](www.windsorwindows.com)
- TrimLine Windows  
  [Visit Website](www.trimlinewindows.com)
Entry Doors
- Anderson Windows & Doors (www.andersonwindows.com)
- Designer Doors (www.designerdoors.com)
- Jeld-Wen Windows & Doors (www.jeld-wen.com)
- Marvin Windows & Doors (www.marvin.com)
- MW Windows & Doors (www.mwwindows.com)
- Peachtree Doors & Windows (www.peachtreedoor.com)
- Pella (www.pella.com)
- Simpson (www.simpsondoor.com)
- Therma-Tru Doors (www.thermatru.com)
- Windsor Windows & Doors (www.windsorwindows.com)
- Vintage Woodworks (www.vintagewoodworks.com)

Shutters
- Designer Doors (www.designerdoors.com)
- J&L Shutters (www.jlshutters.com)
- Southern Shutter Company (www.southernshutter.com)
- Timberlane Shutters (www.timberlane.com)

Trim, Molding and Brackets
- Arndt & Herman (www.arndtandherman.com)
- Azek Building Products (www.azek.com)
- CertainTeed (www.certainteed.com)
- Chemcrest (www.chemcrest.com)
- Fypon (www.fypon.com)
- James Hardie (www.jameshardie.com)
- LP Building Products (www.lpcorp.com)
- Royal Wood (www.royalwood.com)
- Vintage Woodworks (www.vintagewoodworks.com)

Garage Doors
- Amarr Garage Doors (www.amarr.com)
- Clopay (www.cloplaydoor.com)
- Designer Doors (www.designerdoors.com)

Lighting Fixtures
- Rejuvenation (www.rejuvenation.com)

*Most websites provide a search engine to help you locate a local retailer of their products. Wood products are available at local lumber and building supply stores.*
## Resource List

### Architectural History

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Publisher</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harris, Cyril M.</td>
<td><em>Illustrated Dictionary of Historic Architecture.</em></td>
<td>Toronto: General Publishing Company</td>
<td>1977</td>
</tr>
</tbody>
</table>
**City Documents**

Architectural Design Guidelines  
www.roanokeva.gov/planning

Neighborhood Design District Standards  
www.roanokeva.gov/planning

Neighborhood Plans  
www.roanokeva.gov/planning

Stormwater Management Ordinance  
www.roanokeva.gov/planning

Street Design Guidelines  
www.roanokeva.gov/planning

*Vision 2001-2020, City of Roanoke’s Comprehensive Plan*  
www.roanokeva.gov/planning

Zoning Ordinance  
www.roanokeva.gov/planning

**Green Building**


**Landscaping**


**Local and Regional Resources**


History Museum of Western Virginia
www.history-museum.org


Roanoke Public Libraries Virginia Room
www.roanokeva.gov/library


New Construction


Period Sources and Pattern Books


**Periodicals**

Arts & Craft Homes and the Revival  
www.artsandcraftshomes.com

Fine Homebuilding  
www.finehomebuilding.com

National Parks Service Preservation Briefs  
www.nps.gov/history/hps/tps/briefs/presbhom.htm

New Old House  
www.newoldhousemag.com
Old House Gardens
www.oldhousegardens.com

Old House Interiors
www.oldhouseinteriors.com

Old House Journal
www.oldhousejournal.com

Period Homes
www.period-homes.com

This Old House
www.thisoldhouse.com

Style 1900 Magazine
www.style1900.com

American Association of State and Local History
www.aaslh.org

Association for Preservation Technology International
www.apti.org

Association for the Preservation of Virginia Antiquities
www.apva.org

National Trust for Historic Preservation
www.nationaltrust.org

Preservation Trades Network
www.PTN.org and www.IPTW.org

Roanoke Valley Preservation Foundation
www.roanokepreservation.org

Virginia Department of Historic Resources
www.dhr.virginia.gov
Preservation, Restoration, and Remodeling


Glossary

Architrave
The lowest member of an entablature; it is usually in the form of a beam that spans between columns on a porch. See Entabulature for image.

Balloon Framing
Begun in Chicago in the 1830s and popular during the Queen Anne period, this framing system eliminated the previous post-and-beam construction and used only closely spaced, 2-inch wide boards of varying widths, such as the common 2” x 4” studs, joined only by nails. The boards (or studs) extend the full height of the building from the foundation to the roof, unlike the subsequent Platform Framing.

Baluster
The uprights supporting a handrail.

Balustrade
The whole assembly of a railing system including the top rail, balusters, and the bottom rail along the edge of a balcony, porch, and steps.

Bay
A vertical division of a building marked by windows and doors (e.g. if a house is three bays wide it has two windows and a door). Bays also refer to the spaces between columns on a porch.

Belt Course
A projecting, horizontal band of masonry extending across the face of a building.

Beveled Glass
Found in many late 19th-century and 20th-century wood entrance doors where the rectangular shaped glazing has a 1-inch bevel around its entire periphery. These bevels act as prisms in the sunlight creating a spectrum of colors.

Bond, Brick
The outer face pattern of brick courses. A header is a brick laid so that only its shorter side appears on the surface. A stretcher is the face of the longer side.
Boxed Eave

Where the *rafter tails* are enclosed by a fascia and *soffit*.

Bracket

A small structural support located under *eaves*, balconies, or other overhangs. Frequently used for ornamentation rather than structural support.

Brickmold

Window or door trim in a masonry building, usually 2 inches wide.

Capital

The uppermost part of a column or *pilaster*; it is often embellished with classical ornament, such as Doric, Ionic, or Corinthian orders.

Carport

In modern architecture, the car became more important and closer to the house; its port (attachment) became a pass-through roofed area that allowed the car to park beside the house door instead of in a garage. The *carport* is the modern version of the *porte-cochere*.

Casement Window

A window that opens on hinges like a door with diamond or square panes of glass.

Central Passage Plan

A floor plan that denotes a central passage with flanking rooms and is denoted on the exterior façade as well with three symmetrical *bays*. 
Appendix/Glossary

Clapboard
Long boards lapping (clapping) each other horizontally on a wooden frame building; sometimes referred to as weatherboard.

Clerestory Windows
A horizontal band of windows set high in a wall.

Column
A round, vertical support consisting of a base, shaft and capital.

Coping
A protective cap or top of a brick wall or chimney, often of cast-concrete or stone; it protects the masonry below from water penetration.

Corner Boards
A board that is used as trim on the external corner of a wood frame structure.

Cornice
Decorated trim work where the roof meets the wall.

Course
A layer of masonry units, such as brick or stone, running horizontally. See Bond.

Dentils
Small closely spaced blocks projecting from a cornice. See Cornice for image.

Diapering
Decorative feature in a diamond-shaped pattern.

Double-Hung Window
A window system, invented by the Dutch, where two sashes are “hung” from counterweighted pulleys in overlapping vertical sliding tracks. Prior to 1850, the upper sash was usually fixed. These windows are often described by the number of lights, or panes, included in each sash. For example, the window below would be described as a six-over-one double-hung window.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eave</td>
<td>The projecting overhang of a roof.</td>
</tr>
<tr>
<td>Ell</td>
<td>An extension of a house at right angles to the main structure.</td>
</tr>
<tr>
<td>Entablature</td>
<td>The beam member that is supported by the <em>columns</em> below and is horizontally divided into three subsections; the <em>architrave</em> first, then <em>frieze</em>, then <em>cornice</em>.</td>
</tr>
<tr>
<td>Etched Glass</td>
<td>The same as carved glass, which was used on doors and windows.</td>
</tr>
<tr>
<td>Facade</td>
<td>The front or principal exterior face of a building.</td>
</tr>
<tr>
<td>Fascia</td>
<td>A plain, wide horizontal band between the <em>cornice</em> and the roof of a building.</td>
</tr>
<tr>
<td>Feature Window</td>
<td>A fixed-paned window of varying sizes often embellished with stained, <em>beveled</em> or <em>etched</em> glass boarders.</td>
</tr>
<tr>
<td>Fenestration</td>
<td>The arrangement of windows in the façade of a building.</td>
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<tr>
<td>Finial</td>
<td>An ornament that terminates the point of a <em>gable</em> or spire.</td>
</tr>
<tr>
<td>Frieze</td>
<td>The middle horizontal member of a classical <em>entablature</em> (above the architrave and below the <em>cornice</em>). See <em>Cornice</em> for image.</td>
</tr>
<tr>
<td>Gable End</td>
<td>The triangular upper part of a wall formed by a <em>pitched</em> roof.</td>
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<tr>
<td>Gable Roof</td>
<td>A roof of two equal slopes joined to create a gable at each end.</td>
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<tr>
<td><strong>Gambrel Roof</strong></td>
<td>While it was first found in America in New England in about 1650, the <em>gambrel</em> roof was probably most popular in the early years of the twentieth century in the Dutch Colonial Revival house.</td>
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<tr>
<td><strong>German Lap Siding</strong></td>
<td>A type of wood lap siding that is more decorative with a groove that allows for a deeper shadow line.</td>
</tr>
<tr>
<td><strong>Gingerbread</strong></td>
<td>Decorative elements of intricately turned or sawn wood applied to the exterior trim; especially popular during the Victorian era.</td>
</tr>
<tr>
<td><strong>Glazing</strong></td>
<td>Another term for glass that is used in a window.</td>
</tr>
<tr>
<td><strong>Half-Timbering</strong></td>
<td>The term refers to the half of the timber frame that is exposed and infilled with plaster or stucco. Used originally in English and French medieval houses and minor public buildings. Popular here during the Tudor Revival period.</td>
</tr>
<tr>
<td><strong>Hipped Roof</strong></td>
<td>A roof with four uniformly sloped sides, leaving no <em>gable ends</em>.</td>
</tr>
<tr>
<td><strong>Jack Arch</strong></td>
<td>A flat or straight masonry arch over a window or door opening.</td>
</tr>
<tr>
<td><strong>Jalousie Window</strong></td>
<td>Window comprised of glass louvers that overlap one another and tilt open to permit air flow.</td>
</tr>
</tbody>
</table>
Knee Brace
A diagonal brace set in the corner of a rectangular frame, typically found on Craftsman style houses.

Massing
The bulk or size of a building.

Modillions
Small *bracket*-shaped ornaments under a *cornice*.

Multi-light
Having many lights or glass panes, as a window or door.

Muntin
Small bars separating and holding panes of glass within a window *sash* or a glazed door.

Novelty Siding
Decorative horizontal, tongue-and-groove boards, molded to give a shadow line at the joint to simulate *clapboard* siding. Used extensively on Queen Anne houses, typically on the second floor, with the first floor have clapboard siding.

Palladian Window
A three-part window consisting of a taller center window, usually with an arched top, flanked by two shorter windows. Also known as a Venetian Window.

Picture Window
A large fixed-glass window in the façade of a house. Common in Suburban Ranch houses in the 1950s and 1960s.

Pediment
A low-*pitched* decorative *gable*, typically triangular shaped; also found over doors and windows.

Pilaster
A half-column attached to a wall.

Pillar
A square or rectangular upright support.
### Pitch
The measure of a roof’s slope or angle of incline. The slope of a roof is commonly expressed in inches of vertical rise per foot of horizontal run. For example, a 7:12 pitch means that the roof rises 7 inches for every 12 inches it runs.

![Pitch Diagram]

### Platform Framing
The studs are placed between the floors, creating separate platforms; this system is more rigid than *balloon framing*, which it replaced.

### Porte-Cochere (or Carriage Porch)
From the French, for a vehicular entry (opening) into an enclosed, residential courtyard. It is the American predecessor to the *carport*: a carriage or horse port for sheltered arrival at a house. It is a covered entrance attached (port) to the side of the house over a driveway at the side door to protect those entering or leaving a vehicle.

![Porte-Cochere Image]

### Portico
A small covered entrance to a building, consisting of a roof that is often topped with a *pediment*, and supported by *columns*.

### Quoin
In masonry, accented stone or brick blocks used to accentuate the outer corners of a building.

### Rafter
One of a series of beams that forms the slope of a *pitched* roof

![Exposed Rafter Image]

### Rafter Tails
The exposed ends of *rafters* that are visible along the *eave*; as opposed to a *boxed eave*.

### Ribbon Window
Windows in a continuous horizontal band.

### Sash
The wood frame of a window in which the glass panes are set.

### Sidelights
Stationary glass panes flanking an entrance door.
Side Passage Plan
A floor plan with a side hall with one to the side that was denoted on the exterior façade with two or three asymmetrical bays.

Simulated Divided Light
Refers to a light in a window sash that is visually subdivided by applied muntins that simulates true divided muntins.

Sleeping Porch
Used during the Victorian era for sleeping during summer nights, they were located on rear corners with high walls for privacy and numerous sliding (or otherwise opening) windows for ventilation. Often removed or converted to open porches during renovations, it is important to consider retaining the elements of sleeping porches, especially the windows.

Soffit
The underside of a roof overhang.

Soldier Course
A course of bricks where the stretchers (long sides) of the bricks are set vertically.

Spindlework
Long thin pieces of wood that are shaped like a spindle, used in decorative banding in the Queen Anne style of architecture.

Surrounds
The framework and associated trim around a door or window.

Swags
Classical ornamentation resembling evergreen branches hanging in a curve between two points.

Transom/Transom Bar
The transom is the window or opening above a door or window, and the transom bar is the horizontal bar that separates them and is used for support for the glass.
**Tudor Arch**
A low elliptical or pointed arch; usually drawn from four centers.

**Turned Wood**
Wooden elements such as spindles or *balusters* produced by a lathe.

**Vergeboard (or Bargeboard)**
A decorative board along the rake of a *gable* that conceals the *rafters*.  

![Vergeboard](image-url)
My House

Description and History of my House

Address

Photograph of my House
The following three sections provide an area to create a wish list of projects and document those that have been completed. The first section is for your wish list of projects. A blank area is provided to insert paint samples, magazine clippings, sketches, descriptions, and estimated costs of future improvements you have planned for your home. The second section is a table where completed projects can be recorded, including their location, description, and final cost. The third section provides space for before and after photographs so you can look back and see how far you and your home have come!
Project Ideas

Exterior
(Paint Colors, Roofing, Windows,
Doors, Porch, Deck, Etc.)
Living Room
(Paint Colors, Flooring, Fixtures, Furnishings, Etc.)

Total: $___________________
Dining Room
(Paint Colors, Flooring, Fixtures,
Furnishings, Etc.)

Total: $___________________
Appendix/My House

Kitchen
(Layout, Cabinets, Hardware, Countertops, Flooring, Fixtures, Appliances, Paint Color, Etc.)

Total: $_______________
Bedroom
(Paint Colors, Flooring, Fixtures, Furnishings, Etc.)

Total: $___________________
Appendix/My House

Bathroom
(Layout, Flooring, Fixtures, Paint
Colors, Etc.)

Total: $___________________
Addition
(Design, Materials, Finishes, Etc.)
Accessory Structure
(Design, Materials, Finishes, Etc.)

Total: $___________________
Landscaping
(Layout, Plantings, Etc.)

Total: $___________________
### Record of Completed Projects

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Cost</th>
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Before & After Photographs

Before

After
Before

After
Acknowledgments

Planning Commission
Chairman Henry Scholz
Vice Chairman Paula Prince
   D. Kent Chrisman
   Robert B. Manetta
   Angela Penn
   Richard Rife
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   Mark Clark, Contractor
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