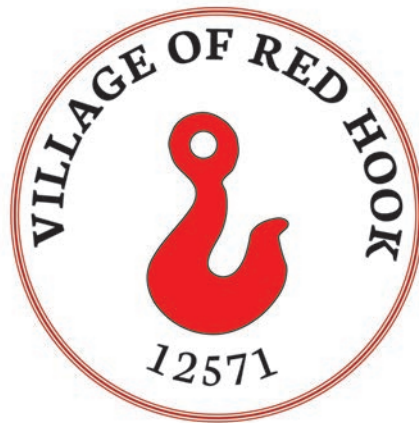


PATTERN BOOK
and
ARCHITECTURAL GUIDELINES

for

The Village of Red Hook, New York



May 20, 2013



FURTHERMORE *grants in publishing*



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PATTERNS for RED HOOK

Introduction

Purpose

The purpose of the Pattern Book and Architectural Design Guidelines is to serve as an illustrated guide for the architects, builders and residents of the Village of Red Hook as they plan new projects in the Traditional Neighborhood Development districts, design infill buildings in the General Business District or adjacent neighborhoods, and contemplate changes to the existing building stock. The design goal is to enhance and extend Red Hook's best building traditions, to promote unity without discouraging diversity.

Patterns for Red Hook is intended to:

1. Describe, for residents, developers and visitors, community patterns and celebrate community strengths that can be the building blocks for future development.
2. Assist residents, developers, volunteer boards and staff in planning change while preserving and intensifying the Village's unique character in environmentally responsible ways.

Readers will find three levels of guidance:

1. **Assistance** for owners and builders looking for information on styles and practices, sensible preservation and energy conserving techniques, and land and garden planning.
2. **Recommendations** of sound architectural practice.
3. **Regulations** recommended for plan approvals.

This written guide is enhanced by a pictorial Design Vocabulary categorized by land use type, residential, commercial and mixed-use. The photographs were selected to illustrate buildings and architectural designs which reflect the overall design intent for the Village of Red Hook. To understand style references and unfamiliar terms, please see the the appendices

Village Board Adoption

Upon adoption by the Village Board, the Pattern Book and Architectural Design Guidelines will serve as a component of the Village's Comprehensive Plan expressing the vision, goal and recommended architectural style for future development in the Village. As such, it may serve as the basis for future amendments of the Village's Zoning Law.

Pattern Books in the Hudson Valley

The Hudson Valley is the home of American pattern books going back to the work, most famously, of Andrew Jackson Downing and Calvert Vaux in the first half of the 19th century. Their guides were personal, and contained advice about style, living, architecture, décor, landscaping, horticulture and even animal husbandry, nineteenth century predecessors of today's shelter press. The present guide propounds a village's view of its future. It is a distillation of a consensus in the Village of Red Hook about which aspects of the existing village new development should emulate, which current architectural features, styles and development patterns should serve as guides for the future, and which, if any, new patterns should be added to guide new development in the 21st century.

Patterns for Planning



2011 Aerial photo of Red Hook

1. General Design Considerations

Red Hook's architecture displays great variety, not a uniform style from a particular era. It expresses an evolution, with strong examples of eras of settlement and growth for almost two centuries. Many parts of the Village contribute to its unique appeal. This Pattern Book seeks to identify community characteristics which should guide change.

New and renovated buildings, landscapes, and streetscapes should reflect the scale and design features recommended in the Patterns for Red Hook.

As a general rule, buildings should reflect a continuity of treatment in a variety of ways by:

- Maintaining the building scale.
- The use of subtly graduated changes.
- Maintaining base courses.
- The use of front porches on residential buildings.
- Maintaining cornice lines in commercial buildings of the same height.
- Extending horizontal lines of window and door openings.
- Echoing architectural style and detail and design approaches.
- Using building materials and colors recommended in the Architectural Guides.

However, the general rule should not result in a rigid uniformity. Designers should take their cues from the existing community, which displays a degree of variety and surprise within a coherent and pleasing overall context.



An Existing Traditional Neighborhood in Red Hook. Sidewalks are necessary in new neighborhoods.

2. Site Planning: Streets, Lots and Open Space

Design of a new neighborhood can:

- Foster pride of ownership.
- Offer realms of privacy.
- Encourage shared uses and activities.
- Offer variety for differing tastes and needs.
- Provide an environment both appealing and secure for children.
- Provide a safe and manageable environment for the elderly.
- Encourage healthy outdoor activity.
- Incorporate regional natural features.
- Support low-carbon footprint living patterns.
- Build on the best defining features of Red Hook's existing neighborhoods.

Site Planning and Landscape

New neighborhoods should encourage walking. Walking destinations within the area get people out of cars, into the public realm and engaged in the community.

These destinations can be vest pocket parks, landscaped (school) bus stops with comfortable shaded seating, a gazebo or other shelter near a significant view, or a fenced dog-park, to name a few. These features should punctuate the residential fabric. Uninterrupted walkways should lead to the entrance of a contiguous Village recreation area or convenience shopping areas so that the neighborhood connects with the larger community.



Walkable neighborhood parks and natural open space enhance quality of life in adjoining residential areas.



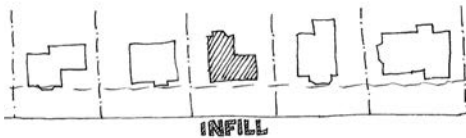
Access to natural systems is known to improve health. A healthy community affords residents everything from enticing window views of greenery to engaging walking trails through the natural world. Community satisfaction grows when an area is comfortably walkable, when in summer it is well shaded, in winter sheltered from the wind, at night adequately (but not overly) lit, and when buildings and yards are interesting to look at.

A neighborhood is memorable when it retains elements from its past—mature trees, managed waterways, enduring country lanes and rubble stone walls. All contribute to a sense of place and connect children of the 21st century with Red Hook’s historic ways of life.

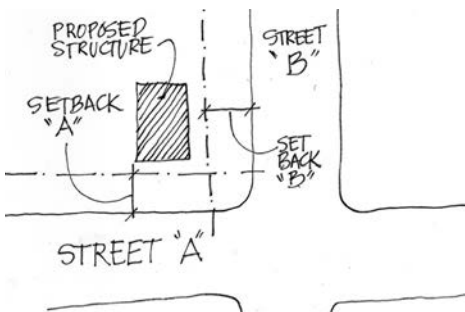




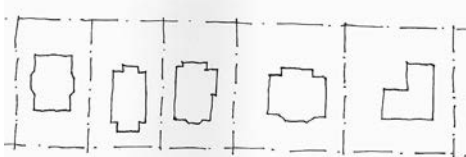
New districts and infill development should take their cues from existing neighborhoods.



GOOD: New construction should reinforce the setback pattern, but small variations provide welcome variety and relief.



Front yards should obey prevailing front yard setbacks (A & B) on each street at corner lots.



Vary spacing & form of houses & site approach on similar lots; maximum of 3 identical contiguous lots recommended (see zoning).

Streets and Set-Backs

- In general, streets should be laid out in a rational grid pattern. Blocks should be small enough to pass the “stroller test”; a walk around the block should be comfortable for a parent pushing a stroller with a young child in tow.
- In important cases, the grid may be abandoned or warped to accommodate changes in topography. An off-grid single street may weave through neighborhoods and open space, offering both the houses on the street and the traveler passing through varied site vistas.
- Each street block is a public room. The front faces of buildings with similar set-backs on opposite sides of the street define the “walls” of the public space. Street trees of a variety of species in continuous planting beds shade the public space and the sidewalks on both sides of the street. Low walls, fences or hedges can separate front yards from sidewalks. They should not interfere with a clear view of street activity for reasons of community and child safety.
- Within each block, the build-to (front set-back) for houses should be consistent. Small variations within a block are encouraged; excessive deviations are not recommended. A new structure in an infill lot should generally reinforce the dominant setback pattern of the street.
- The build-to (front set-back) line should not be uniform throughout the neighborhood. Adjacent streets may have deeper or shallower build-to lines, increasing the richness of the residential fabric.
- Structures on corner lots should obey the build-to lines of both streets.

Lots

Each block should be composed of lots of varying sizes consistent with approved zoning (see www.redhooknynvillage.org/zippacket.htm). The intention is to provide flexibility so that new development can achieve the variety and character of settlement of the existing Village neighborhoods.

Whenever possible, no more than three continuous lots should be of identical shape and dimensions. On these adjacent lots, the form and spacing of each house should be distinct to avoid uniformity. Vegetation in side yards can further delineate the public and private zones of each property while offering distinctive features to each lot.

Open Space

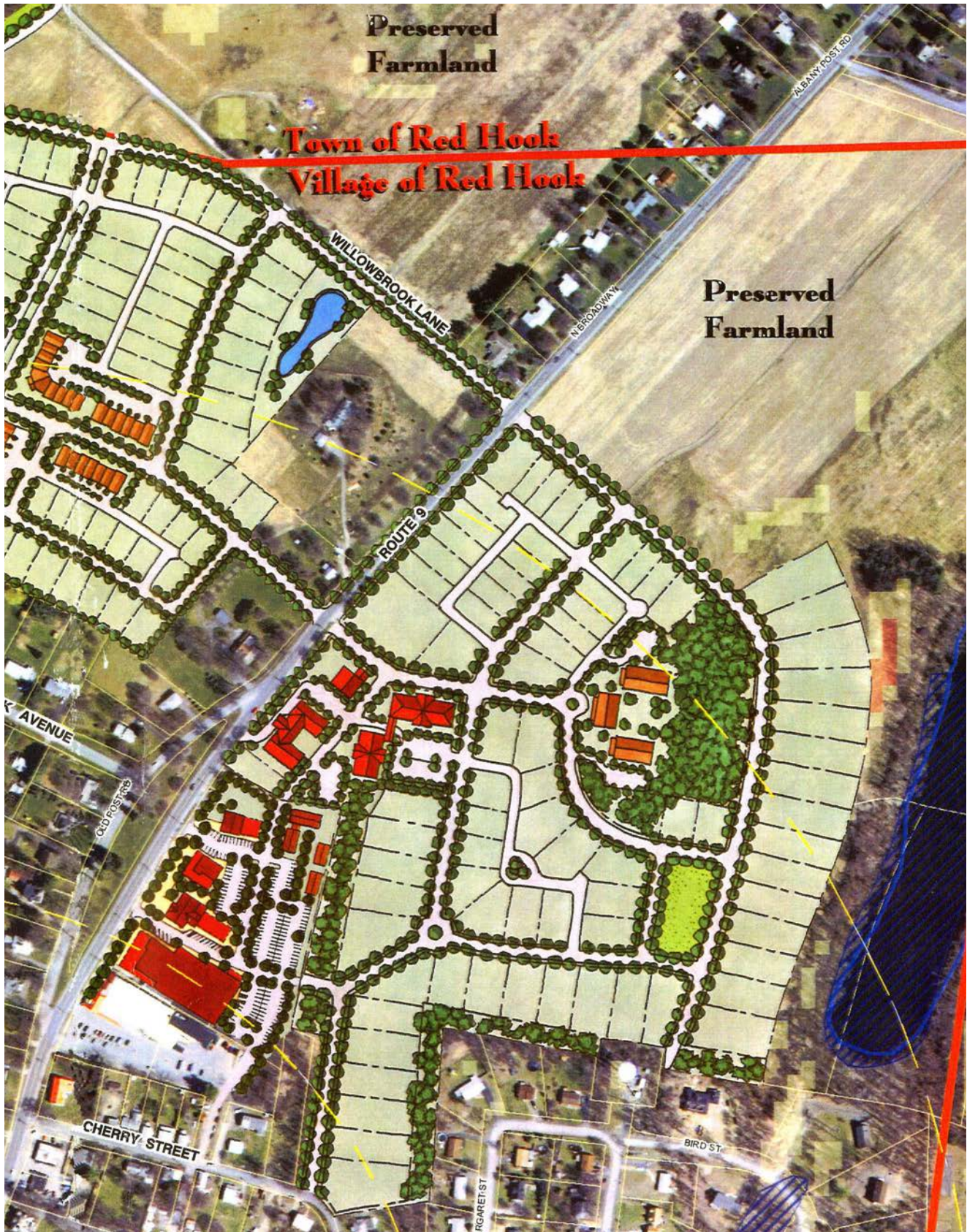
- a. Open space between buildings should be positive, logically and architecturally designed. This guide encourages multiple buildings on a lot to be related, “in conversation” with one another, not stand-alone boxes. Such multiple buildings may be organized around courtyards, greens, gardens or quadrangles that encourage pedestrian activity and incidental interaction among users. Smaller, individualized groupings of buildings are encouraged. Building locations should permit adequate fire and emergency access.
- b. Exterior public and semipublic spaces, such as courtyards or plazas (e.g. store parking lots north on Broadway) should be designed to enhance surrounding buildings, and provide amenities for users, in the form of textured paving, landscaping, lighting, street trees, benches, trash receptacles, or other items of street furniture, as appropriate. Courtyards should have recognized edges defined on at least three sides by buildings, walls, elements of landscaping, and elements of street furniture, in order to create a strong sense of enclosure.
- c. Space should be designed for cars so that, in commercial, institutional or residential settings, cars do not overwhelm the comfort and intimacy of a traditional village community. Devices are:
 - Dense evergreen screening in ample planting beds between zones.
 - Border shade trees and tree islands within parking lots to cool and beautify.
 - A network of clear pedestrian walkways to minimize people/car conflict.
 - Use of dark sky light fixtures to safely light parking areas while reducing light spill beyond drive and lot limits.
 - Inclusion, where space permits, of pedestrian amenities such as benches and trash and recycling receptacles as in other public spaces.
 - Roof-shaded parking; light colored roofs can have high reflectance compared to asphalt, reducing heat absorption; they can support photovoltaic panels to generate electricity, or green roofs to both add cooling and filter stormwater, reducing and slowing its discharge into storm drains.



Portion of Red Hook Village Center Illustrative Sketch Plan showing infill (red) compatible in scale and location, reinforcing the street line for the most part, and related open space development possibilities. Additional parking screening would be desirable.



Excerpted from Red Hook Traditional Neighborhood Illustrative Sketch Plan (see <http://www.redhook.org/>).





TND Apartment: separate dwelling unit on the back of the same lot.



TND Cottage.



TND Side by Side Duplex.



TND House.



TND Townhouses.

3. Planning Traditional Neighborhood Developments

Approvals and Submissions

- a. The Village Planning Board (or Architectural Review Committee) approves sketch plans and elevations of all buildings and the block locations within the Traditional Neighborhood Development (TND) where such buildings may be built.
- b. At the start of construction of the first dwelling in any block, the developer provides the Red Hook Village Zoning Enforcement Officer (ZEO) with a map of the block indicating the base model type elevations of homes proposed to be built in the block. This map is updated by the developer upon subsequent building permit application for the block when permits are sought from the Building Inspector/ZEO. See the Village Zoning Code for details.

Housing Types

- a. TND Apartment – a dwelling unit sharing a building lot with other dwellings or uses, and having a minimum size of 600 square feet of gross floor area and a maximum size of 1,200 square feet of gross floor area. The definition of TND Apartment does not include TND Duplex and TND Townhouse. TND Apartments may be for rent or for sale.
- b. TND Cottage – a detached single family dwelling unit that does not exceed 1,200 square feet in gross floor area.
- c. TND Duplex – two dwelling units placed one on top or another or attached side-by-side sharing one or more common walls.
- d. TND House – a detached single-family dwelling unit greater than 1,201 square feet in gross floor area.
- e. TND Townhouse – a single family dwelling unit constructed in a group of three or more attached units in which each unit extends from foundation to roof and with an open space on at least two sides.

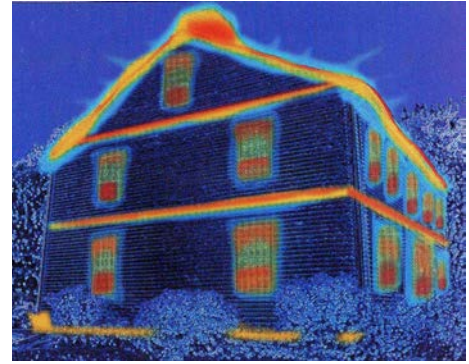
4. Planning for Sustainability

Sustainability is a fundamental principle for development in Red Hook. Sustainability begins with land planning that creates compact, walkable neighborhoods. New buildings in turn should have a tiny environmental footprint. For buildings, the objective is minimization of the amount of material and energy consumed during construction as well as during operation. Smaller buildings use fewer resources throughout their lifetime. New houses should meet the U.S. Department of Energy's Energy Star Home Rating standards. Buildings should meet or exceed standards such as the U.S. Green Building Council's LEED for Homes program or, at the more aggressive end, the Living Building Challenge or Passive House Certifications. For landscape and especially for guidance on sound water management, www.sustainablesites.org explains a sustainable site initiative expanding on the scope of LEED for Neighborhood Development Sustainable Sites.

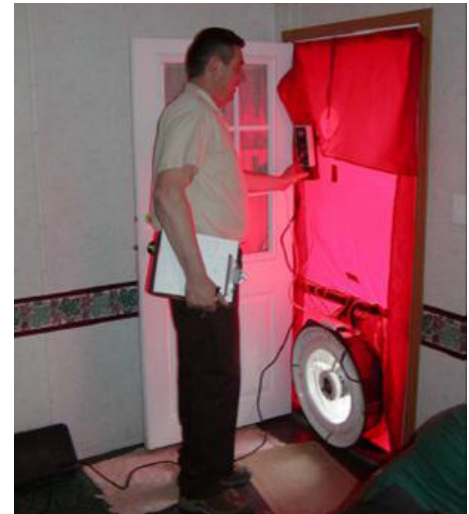
Information on local sustainability initiatives and resources is available in the **Energy and Climate Action Plan for the Town and Villages of Red Hook and Tivoli, New York** (July, 2012) (redhook.org/PDFs/CAC). Information is also available from Central Hudson (savingscentral.com), state agencies such as NYSERDA (nyserda.ny.gov) and Federal agencies including the Department of Energy. The preservation and repair of buildings is a sustainable activity. The preservation mantra of “retain, repair, replace” complements the sustainability trio of “reduce, reuse, recycle.”

Many buildings in Red Hook were built before the era of cheap energy and retain useful “green” features such as porches or large overhangs shading the interior, shade trees, operable windows and shutters, and wind driven attic ventilators, features also useful for new buildings. Retaining these features is more sustainable than adding new solar collectors or geothermal systems which require large amounts of energy for their manufacture and installation. Most importantly, the energy performance of all buildings should be monitored and improved wherever possible.

Tree shelter belts, bio-swales, rain gardens, shrub borders for wildlife habitat and porous paving are among many appealing features to enhance a property and improve its environmental citizenship.

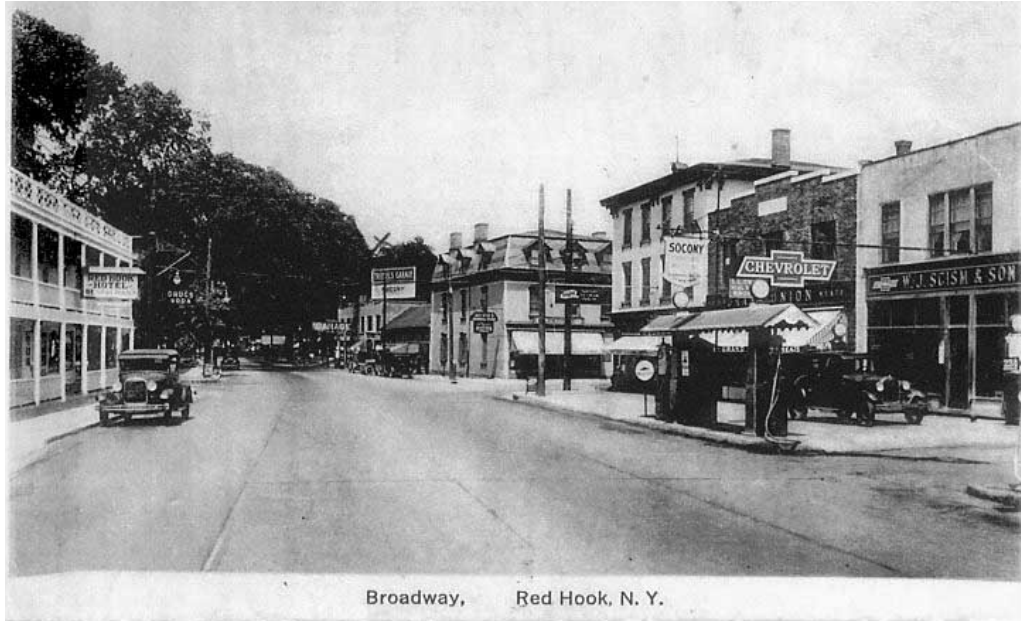


New techniques like infra-red photography (above) and blower door testing (below) highlight leaks and help builders make new and existing buildings efficient while retaining character.



Porch shades the house, saving energy for cooling. Porous paving reduces runoff & recharges the aquifer.

II. Patterns for Downtown



1. Guidelines for the General Business District

Planning Considerations: Red Hook General Business District

The nucleus of the Village of Red Hook is its General Business District (GBD), which is the dense, active “urban” core of the Village.

To ensure that buildings enhance the local sense of place, they should incorporate, in contemporary expression, the massing, scale and proportion of detailing found in Red Hook’s best historic structures..

The carefully observed patterns of existing historic buildings should guide new construction, renovations, and additions in this manner. This does not mean, however, that there is not a place for new or innovative contemporary architecture in or near the downtown. The best way to pay homage to historic buildings is with a design effort that is equal to the architectural and building craft traditions that produced the original structures. Respect for the scale, form and materials of the older buildings can infuse the design of an addition or infill building without dictating that it be an imitation. Copycat structures are not encouraged. Taking inspiration from the past does not mean cherry-picking architectural gestures from disparate sources to “historicize” a new structure.

Site Orientation – Infill Development Plan

Buildings should be architecturally distinctive through overall profile, entrance treatment and detailing. Buildings with more than one façade facing a public street or internal open space should provide enhanced façade treatments on the secondary sides of the building (e.g. RHV parking lot/Prince Street/South Broadway shopping plaza, etc.)

Buildings should face public streets, and have entries on those primary facades. Buildings should not be oriented toward a parking lot unless they are part of an interior-block plaza.

Buildings on corner lots are significant structures with at least two facades visible from the street. If deemed appropriate by the Planning Board, such buildings may be designed with additional height and architectural embellishments, such as corner towers, to emphasize their location.

Historic or architecturally significant buildings should be protected from demolition or encroachment by incompatible structures or site development. The Secretary of the Interior's Standards for Rehabilitation of Historic Properties are a useful guide for renovating architecturally or historically significant buildings.

Focal points or points of visible termination should be occupied by prominent structures that employ enhanced height, massing, distinctive treatments, designed landscaping, or other distinguishing features.

Building Articulation and Mass

The ensemble effect of commercial buildings determines the character of the downtown. The downtown experience must satisfy two kinds of users—pedestrians and people in cars. Building recognition should be easy at driving speeds while variety and articulation can be savored at walking speeds. While each building should be distinctive, the uninterrupted sequence of buildings sharing the same frontage set-back serves as a defining enclosure for the downtown public way and establishes a sense of place. Both variety and consistency—perceptible at human scale—should govern planning for downtown improvements and new construction.



A mural extends the retail presence and interest to the secondary side.



Passages to parking lots should be treated as improved public space, not neglected leftovers.



Infill buildings should reinforce the street line with location and entries.



Variation and offsets add interest to the streetscape.



Additions (in red) set to the rear of existing building and lot.

Arcades, Galleries, Mews and Alleys

Arcades and galleries provide partial shelter over store front windows and sidewalks. Mews and alleys connect the main sidewalk with features behind stores. Employ these features to extend downtown character to supporting off-street spaces. Take cues from neighboring buildings for architectural compatibility



An arcade can provide welcome shelter.

Pavement Materials and Textures

The parkway in front of commercial/mixed-use buildings should be paved with brick to match the pattern, field dimension, brick dimensions and color of the existing parkway. Open spaces for street trees should be provided. The area between the edge of the sidewalk and the building façade should be paved with material similar to that currently existing in the pedestrian circulation system. Sidewalks of generous widths accommodate both strolling shoppers and errand-runners and allow room for cafes and other fair weather commerce. Curbing is to be made of granite, or exposed concrete in a square section and should connect to and match existing curbing.



Brick paving provides compatible infill in the Village Center.

The acoustic, thermal, visual, water permeability and tactile properties of the paving materials should be appropriate for pedestrians. Modular masonry materials such as brick, slate, and concrete pavers, or gridded cast-in paving materials, such as concrete slabs, should be used on sidewalks, pedestrian walkways, pathways, crosswalks, public or semipublic plazas, courtyards and open spaces.

Plantings

Plantings strategically deployed enhance the pedestrian experience within the dense, built-up limits of the downtown. Open spaces for street trees should be provided along commercial streets. Several trees planted together in continuous tree pits improve tree survival and are recommended where extensive pavement increases stress. The Red Hook Village Green Committee may be consulted to advise on location and size of tree planting areas. Well-maintained shrubs, perennials and annuals in small plots and containers inject welcome vitality into center village shopping.

Street Furniture

Street furniture includes benches, waste and recycling containers, planters, telephone booths bus shelters, bicycle racks, water fountains and bollards. Street furniture should be compatible with the architecture of the surrounding buildings, the character of the area and other elements of the streetscape. The design—materials, scale, and color—of street furniture should be sympathetic to its architectural context. Seating should be deployed along commercial streets in a rhythm to foster comfortable walks between stopping places.



Even narrow planted areas, at grade (above) or in planters (below), can have an important impact in a pedestrian area..



Shading, from trees (below) or canopies (above) provide welcome relief in a heavily paved area..





Market and Broadway c. 1949. The typical 3 part commercial arrangement with storefront base, sign course and projecting top cornice has shown great durability over time.



Side walls are animated by the glazed storefront enclosure, upper floor porch, windows and other decorative touches.



Wood clapboard is part of the traditional Village Center material palette.

2. Patterns for Commercial Buildings

Façade Treatment and Materials

All sides of a building exposed to the public should have an articulated base course and cornice. The base course should align with either the kick plate or sill level of the first story. A cornice which terminates or caps the top of a building wall may project horizontally from the vertical face of the building and may be ornamented with mouldings, brackets, or other details. The middle section of a building may be horizontally divided at the floor, lintel, or sill levels with a belt or string course.

Long unbroken roofs, windowless walls or service areas visible from the public view are discouraged. Where a windowless wall is necessary, the uninterrupted wall can be relieved by 12" offsets, masonry articulation, false windows, trellises, recessed or projecting display cases, and landscaping.

Façade treatment and façade materials for commercial and/or mixed use buildings include:

- Wood or composite clapboard.
- Brick (brown and red range) laid in English, Common, or Flemish bond, with mortar joints not exceeding ½ inch, all mortar joints to be struck.
- Stucco.
- Board and batten.

In mixed-use buildings, there should be a discernable difference in facade treatment between ground floor commercial uses and upper level commercial or apartment uses. The cornice line above the ground floor delineates the retail/commercial zone. Different colors, designs or setbacks differentiate commercial and residential entrances. Distinct exterior materials, signs, awnings, and exterior lighting further highlight the building's commercial floor level.

All mechanical equipment, whether roof or ground-mounted, should be completely screened from contiguous properties, and adjacent streets in a manner that is compatible with the architectural treatment of the principal building.

Storefronts

Storefronts are the welcoming face of commercial districts and a key element in building facades. Attractive storefronts encourage pedestrians or passersby in vehicles to slow down, linger and shop.

Red Hook boasts a notable collection of 19th century and early 20th century commercial buildings in its General Business District. Many of the buildings' facades have survived intact and continue to reflect popular architectural styles of their original construction period. Most are 2-3 story mixed-use buildings with commercial space on the first floor and residential above. Masonry façades frame recessed entryways and showcase large plate glass display windows. Storefronts connect buildings directly with the pedestrian world.

Increasing appreciation of historic downtowns and commercial districts is based on their architectural character and the economic dynamism they provide. Most commercial district success stories have had historic preservation as a major component. Thoughtful changes and careful rehabilitations can increase business for owners, increase property values, and attract visitors.

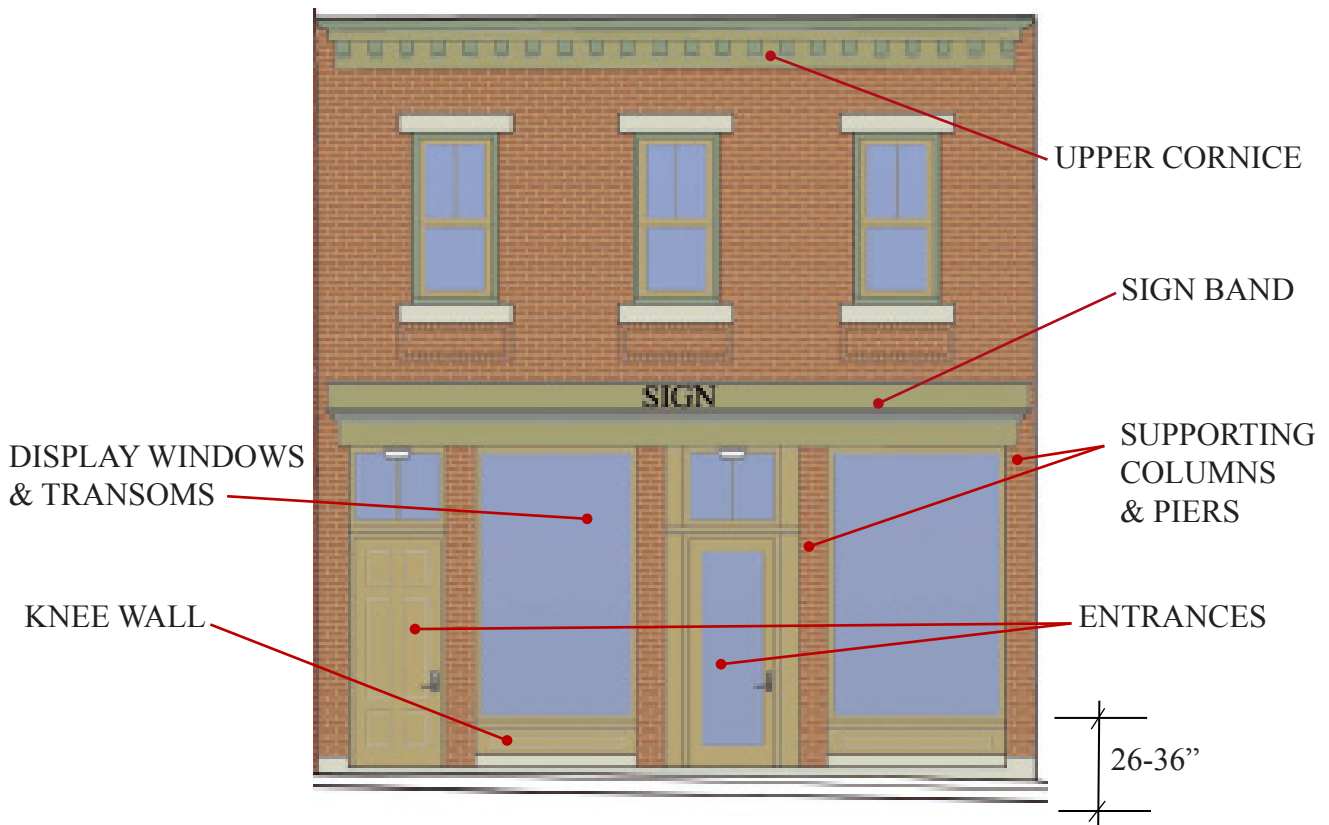
Storefronts are frequently altered by changes in use and to express contemporary tastes, and in the process buildings risk an erosion of their historic character. Maintaining, preserving, and restoring historic storefronts is especially important to downtown character. Well preserved buildings provide enduring “packages” for the changing contents of a retail zone. Alterations that replace or conceal original details (wood, brick, glass, etc) detract from a building's inherent character, as do replacement materials such as vinyl, fiberglass, or aluminum. Alterations that change the size of the storefront opening or display window area also diminish its historic character.

The general pattern is that storefront design should be based upon traditional Red Hook examples.



Good examples on Market Street of variations on the traditional 3 part (storefront with lower sign cornice or arcade, upper band and upper cornice) commercial building pattern.

Traditional Storefront Features



Recommendations for Storefronts:

- Emphasize primary entries to store fronts through the use of architectural features such as roofs, recessions into the facade, pilasters or other details that emphasize the entrance.
- Distribute windows to achieve the generally consistent rhythm of voids and solids of traditional buildings.
- Locate windows to be 26 to 36 inches off the ground with high lintels consistent with traditional window proportions.
- Allocate a maximum of 70% of the ground floor façade area for primary display windows. Proportion doorways, windows, and other openings in the façade to reflect pedestrian scale and movement.
- Use traditional canvas awnings without interior illumination in buildings with multiple storefronts, and use compatible awnings as a means of unifying the structure.
- Retain and preserve storefronts and elements sympathetic to surrounding commercial buildings and districts, including materials, dimensions, colors, signage types, and special features such as display windows, transoms, mid-cornices and lighting.
- Err on the side of simplicity rather than ornateness.
- Retain original inset entries.

- Use storefront contents to provide interest to passersby.
- Light storefront interiors to provide interest and security at street level in the evening.
- Locate transom windows above awnings.
- Avoid aluminum framed - plate glass “storefronts”.
- Avoid solid metal security gates or roll-down metal windows. Link or grill-type security devices are acceptable only if installed from the inside, within the window or door frames. Security grills should be recessed and concealed during normal business hours. Install security grills which provide a sense of transparency, in light colors.

Recommendations for Upper Levels:

- Primary façade windows on the second floor should be a minimum of 24 inches from the corner.
- The outer glazing of the primary façade windows should be set back a minimum of three inches from the outer plane of the wall. At a minimum, a decorated lintel, face frame, and drip mold over the doors and windows are recommended.
- True divided lights or simulated divided lights are acceptable. Clip-on muntins are discouraged;
- Fixed or retractable awnings are acceptable on upper levels where appropriate, if they do the following: a. complement the building’s architectural style, materials, colors, and details; b. do not conceal architectural features, such as cornices, columns, pilasters, or decorative details; c. do not disrupt the balanced look of the façade; and d. are designed as an integral part of the façade. Canvas is the preferred material, although other durable fabrics may be used. Metal or aluminum awnings are not recommended.
- Air-conditioning units in transoms, with condensate drips on the entries, are discouraged.

Roofs and Roof Material

Flat roofs may be appropriate in conjunction with commercial uses when enclosed by a continuous parapet. Parapets should be set at a height required to conceal mechanical equipment to the satisfaction of the Planning Board. Flat roofs should have an articulated cornice line that generally corresponds to a consistent cornice line on the neighboring buildings.

Flat roofs should be avoided on one-story buildings and are recommended for use on buildings with a minimum of two stories, provided that all visibly exposed walls have articulated cornices that project horizontally from the vertical building wall plane.

Fire Escapes

Fire escapes are not recommended on a building’s front façade. On new buildings requiring a second means of egress pursuant to the local building codes, internal stairs, exterior stairs, or other code-compliant means of egress should be used.



Standoff lettering is effective and reinforces the architecture.



State highway signage may help motorists passing through but it does harm to village character.



Uncoordinated signage leads to clutter.



Small side mounted "flag" signs can animate the streetscape.

Signage

Historically during the 19th and early 20th century, signs were a key feature of storefronts and continue today to shape the character of a business district. Within the General Business District, signage should be compatible in design with the historic character of the district and should be installed in a manner that does not diminish or damage important architectural features. Size, materials, graphics, and legibility of the typeface, color, and method of attachment must be considered when designing new signage for the historic commercial area.

In the commercial arteries, signage is often multiplied by merchants' perceptions that more signs and bigger signs will improve their business. In fact legibility is often improved by sign controls that reduce the visual clutter and "noise" in the vicinity of the store. Limiting letter size and the number of signs permitted per establishment can further these goals.

Signs in the core business district should be exclusively on buildings themselves rather than on separate sign standards or poles, though small (less than 6 sf) signs may be acceptable in front yards if required for identification, and if they avoid clutter, as noted in the illustration to the left.

Signage on Broadway (Route 9) and Market Street (Route 199) are often directed at people in vehicles moving at higher speeds. Some of the signs are independent pole signs rather than signs on buildings. Larger letter sizes may be appropriate there. Illuminated signs should emphasize stencil cut illuminated letters rather than backlit solid lettering, since that will reduce stray light, glare and clutter, while enhancing the message going to people passing by.

Recommendations:

- Install signs in scale with the whole building as well as the storefront.
- Make signs compatible with the graphics, colors and style of the building and its neighbors.
- Locate signs on the traditional sign cornice over the first story on older commercial buildings.

III. Patterns for Residential Neighborhoods

A neighborhood should include related but distinct well-fashioned buildings in a setting that affords both shared public space and vistas and also private retreats with personal signatures. Read below for:

- **Patterns for Houses:** Buildings and building components
- **Patterns for Yards:** Site improvements, open space, plantings, gardens

1. Patterns for Houses: Similarity and Dissimilarity

No three detached homes with the same basic plan and style should be constructed within 250 feet of each other on the same street unless there is substantial differentiation in the front elevation in at least three of the following features: porch and window configuration; roof style; exterior materials on at least 50% of the front façade of the houses; the width of lot and/or house.

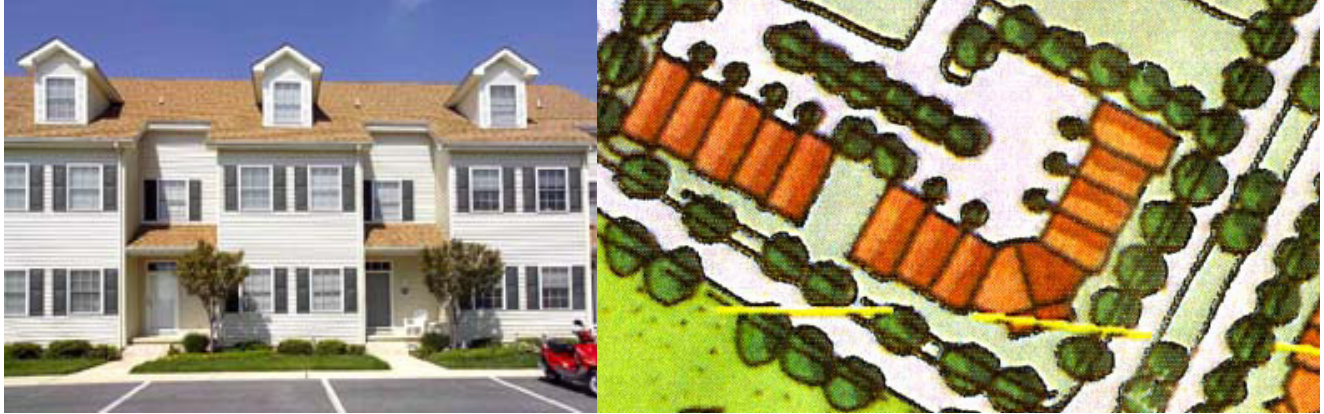
A block consisting of between one and ten lots is to be developed with a minimum of three different base model type homes. Blocks consisting of between eleven and thirty lots should be developed with a minimum of four base types. Each base model type home in any block should have at least two alternative front elevations containing varied design features as listed above.

Buildings should relate to each other in scale and design. Collections of buildings should achieve a continuity of treatment and consistent scale through careful design: by introducing subtly graduated changes; by maintaining base courses; by the use of front porches or stoops; by generally maintaining cornice lines in buildings; by extending horizontal lines of windows and doors; and by echoing and adapting architectural styles and details, design themes, and materials from the local context.



There is a long tradition of repetitive builder's houses in the U.S. (see above). Over many years, modifications and landscape changes bring variety as in Red Hook (left below) and Ossining NY (right below). New developments can build in that variety using simple elements like porches and exterior treatment (right above).





Attached townhouses or rowhouses, as contemplated in the Red Hook illustrative plan, right, face a special challenge in creating variety within continuity.

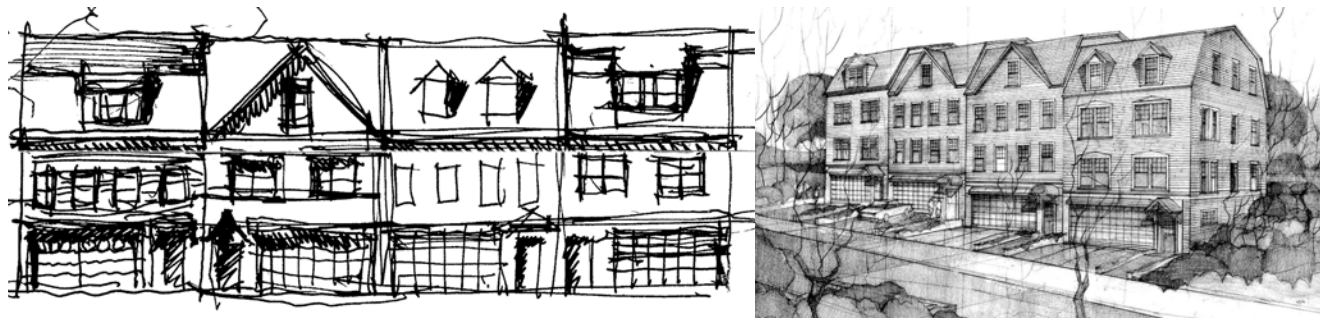
2. Patterns for Townhouses: Special Recommendations

Townhouses should have a coherent architectural style, vocabulary and color scheme for the ensemble, with articulation and variety introduced within that ensemble to identify and differentiate units. The Village Zoning Code puts it this way: “Units should provide interest through the use of varying forms, architectural detail and positioning on the site while maintaining continuity as one project.”

No more than eight town house units should be built in a row. If there are eight units in a row within that fabric, then there should be a common pedestrian passageway to the rear alley, courtyard, park or other common community space.

The facades of townhouses on elevations which face streets should be clad in brick, wood or fiber cement composite clapboard siding, or with board and batten siding. Open or covered stoops are recommended on townhouses, although porches are also acceptable.

Balconies and porches should be made of wood, wood composite and/or earth based materials such brick, stone, fiber cement siding and/or stucco. Railings should be made of wood, wood composite or metal. Vinyl windows and shutters, plastic gutters, or similar materials are discouraged. A variety of architectural features and building materials is recommended to give each building or group of buildings a distinct character.



Through techniques like those shown in the sketches above, it is possible to create variety in attached buildings, whether in wood frame (left) or masonry bearing wall (right) building traditions. Front garages, required by site constraints in this case, are not recommended.



Townhouses can be built in a variety of materials and with varying degrees of articulation, from significant changes in shape in the wood-frame example on the left above to a more subtle sequence in the masonry and wood frame example on the right...

Two-Family or Double Houses

Two-family houses and double houses are a special category of attached dwellings. They share some of the same characteristics as detached single family houses, as well as those of attached town houses. A successful two-family house often looks like a medium to large detached single family residence. Nevertheless, to be successful, each unit often needs to have its entrance and identity clearly expressed.

Unlike townhouse, which are always side by side, two and three-family houses can consist of either side-by-side examples or unit over unit arrangements, where the upper unit or units are reached by a staircase.

There is a long tradition of double houses in the Hudson Valley. The U.S. Military Academy at West point has examples of this house type from the nineteenth century, where they were often used as Officers' Housing. Other examples can be found in Wappinger's Falls and other locations in Dutchess County.



There is a robust tradition of double house design in the Hudson Valley, with many examples to inspire contemporary designers.

3. Patterns for Houses: New Construction and Additions

New construction, additions and renovations can quickly change neighborhood character. Guidelines can reinforce those aspects of character that the community considers most positive, such as residential scale, street side articulation, appropriate building placement on the property, ratio of built to unbuilt area on the site and architectural style. The guidelines should communicate shared goals that challenge rather than limit the creativity of designers and builders.

All building projects are renovations, depending on the perspective from which they are viewed. A new porch on a house is a renovation to that building; a new house on a vacant lot is a renovation to the neighborhood. A new development is effectively a renovation to the larger landscape of the village. The guidance at each scale comes from the best aspects of the style of the building, the feeling of the adjoining buildings and the overall character of the larger neighborhood and community.

Scale and placement are the most important characteristics to control for new buildings; stylistic details are secondary. Fresh, creative architectural approaches should not be discouraged if they represent a level of effort and excellence that meets the historic or neighborhood standard. The best buildings that have survived from previous eras do not have to be surrounded by half-hearted facsimiles of themselves; they may benefit more from the best efforts of our own era. In some cases quiet “background” buildings may be the best approach, rather than aggressive structures that call attention to themselves or upstage existing local favorites or landmarks.



Designs for new houses at different scales, like those on the right of each pair above & below, can learn from the best examples of traditional houses in the Village, like those on the left.

Traditional forms can be adapted to contemporary uses, as in the passive solar cottage design, above.

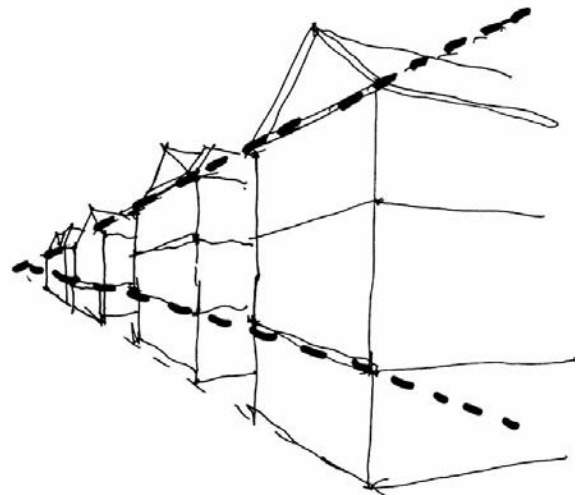


Recommendations for New Construction:

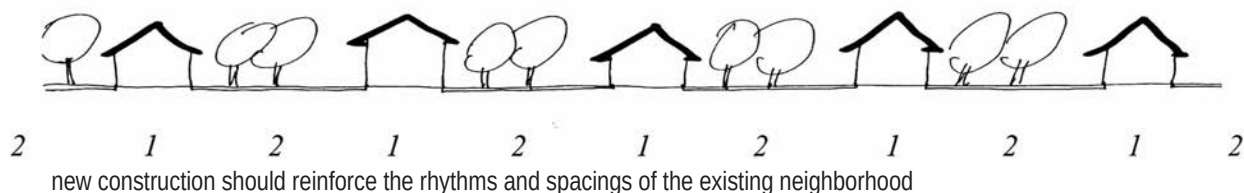
- Site new buildings and their landscape elements so they follow the neighborhood patterns of lot placement with similar setbacks.
- Size new structures so they are sympathetic in scale to existing buildings.
- Site accessory structures behind the primary one.
- Use materials compatible with the context.
- Respect the façade designs and rhythms of nearby structures.
- Protect significant existing landscape features during construction. (See “Trees” in landscape section).
- Do not create artificial mounds or land forms under or around new structures; ground floor level should relate to the existing grade in a manner similar to neighboring buildings.
- Do not mirror or closely copy an adjacent existing building.
- Do not overwhelm the neighboring buildings with out of scale construction.
- Use materials consistent with a prevailing neighborhood palette (for example, clapboards and shingles, or stone and stucco).
- Adopt and acknowledge established neighborhood patterns and motifs.
- Use contemporary building techniques, including sustainable methods and materials.
- Do not position a new principal or accessory structure to disrupt important local views or settlement patterns.
- Do not use obviously imitative materials in the vicinity of the actual material being imitated.
- Do not use conjecture to design in an imitative style or building form inconsistent with the context.



New infill structures, like the boxy, incompatible middle building above, should not disrupt the scale and character of the surrounding neighborhood.



Infill construction should reinforce alignments such as cornice lines, height, porch lines, and floor elevations from the neighboring buildings.





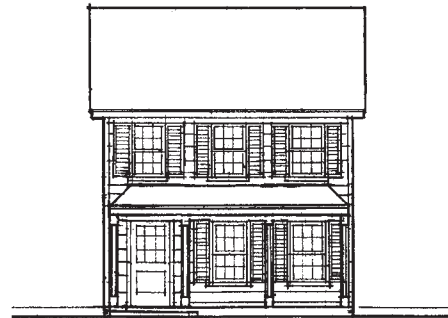
Front Elevation



Alternative Front Elevations



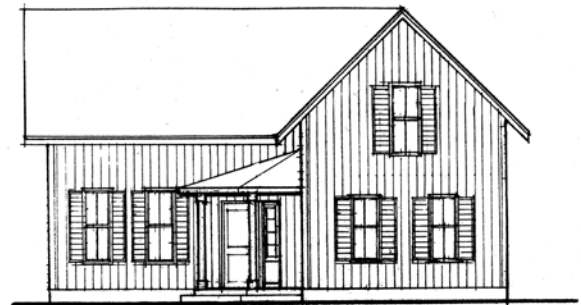
Dutch Colonial Form



Side Hall/Greek Revival Form



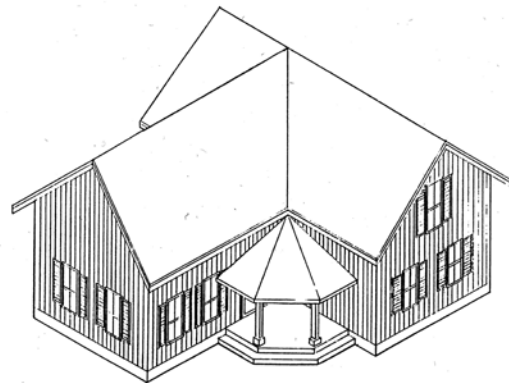
Alternative Front Elevations



Front Elevation



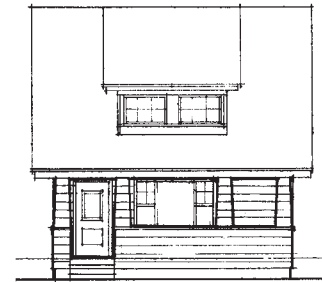
Center Hall/Federal-Greek Revival Form



Picturesque Cottage Form



Neo-Colonial Form



Front Elevation

Illustrations from:

HOUSING DESIGNED to BUILD NEIGHBORHOODS

Affordable House Plans Inspired by Dutchess County Traditions

Dutchess County Planning Department Publication

These designs show that traditional Dutchess County house forms can be adapted for contemporary residences.

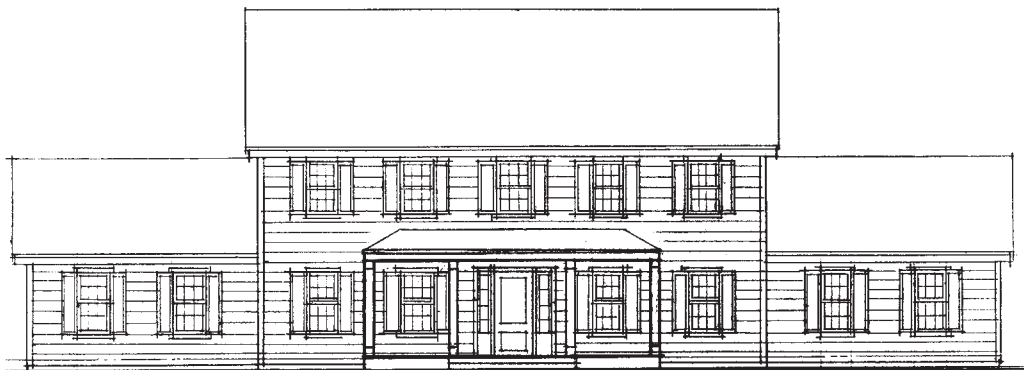
These designs are part of a toolkit of patterns whose use can ensure that new developments look and feel at home in their context and connect to Dutchess County design traditions.



Arts & Crafts or Bungalow Form



Two-Family Federal Form



Multi-Family Federal Form



Additions

An acute observer of an addition to an intact historic building should be able to distinguish the new work from the original. The addition can use materials and proportions of the original, or it can be a distinct, contemporary design. In either case, the addition should not overpower the original and should sit well in its larger context.

Recommendations for Additions:

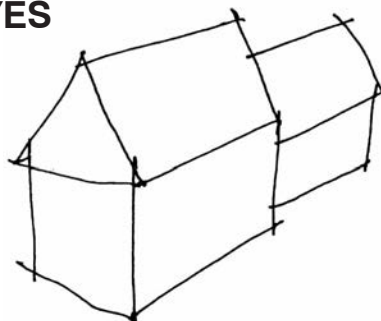
- Site additions so they are less prominent than the existing building, which in general means located to the side or rear.
- Size additions so they are subordinate in scale to the existing building and its neighbors.
- Study approaches that create connectors to independent volumes rather than additions that “fatten up” and distort the original volume.
- Offset rather than align additions with the planes of the existing building.
- Meld small changes into the existing architectural composition.
- Adopt a clear design approach to the relationship between existing and new construction. Use a connector or “hyphen” between the original structure and an addition in a different style or form and distinguish clearly between them.
- Harmonize materials on new additions with existing.
- Undertake new additions and adjacent or related new construction so that, if removed in the future, the essential form and integrity of the existing property and its environment will be intact.
- Protect significant existing landscape features during construction. (See Trees in landscape section)
- Do not obscure or remove the best or character-defining elements of the existing structure.
- Do not align the plane of new work with existing and thereby erase the outline or shape of the original building.
- Do not juxtapose natural materials with imitation materials.



Successful strategies for expansion that retain the character of existing buildings include the creation of pavilions that are linked by a connector or “hyphen”, as in the three examples above.

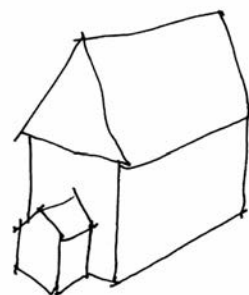
- Do not overwhelm the original or neighboring buildings with the size or shape of the addition.
- Distinguish between existing and new construction.
- Review and follow the Secretary of the Interior Standards for Rehabilitation (see Appendix A).
- Pay special attention to material type, profiles, ornament, exposure and texture.
- Harmonize new work with existing patterns of solid (siding) and void (windows).
- Do not move historic structures around on the site or to another site unless it is the last resort to save the structure.
- Do not deconstruct and rebuild existing buildings unless it is the only method of securing the structure.
- Do not locate new work where it impacts historic fabric.
- Do not create pseudo-historic additions.

YES



additions are best to the rear
(above) NOT in front (below).

NO



Compatible side additions, slightly set back, (above and below) preserve the identity of the original structure.



Rear additions (above and below) are subordinate to and do not damage the character of the original house volume.





Second Empire or "Chateausque".



American "Four Square" (plus Victorian spindled porch).



One of those hybrids: "Free Classic Queen Anne/Italianate".



Italianate.

4. Patterns for Houses: Style

Red Hook's early settlement, its economic growth during the 19th century and the early decades of the 20th leaves us with today's wealth and variety of historic architecture. Few of Red Hook's buildings neatly fall into a single style category today. Architectural trends overlap and evolve.

Buildings change as time passes, needs and fashions change, owners' finances shift and new building technologies become available. Many of Red Hook's buildings have been incrementally modified over time.

As a rule, Red Hook's houses are simple, solid examples of 19th and 20th century American building craft, not exceptional examples of an individual style. Nevertheless, it is helpful to understand architectural styles to evaluate each building project so that the new work reinforces the style or blend of stylistic elements particular to the neighborhood. Please see the Appendices for style reference sources.

To ensure that they enhance the local sense of place, new buildings should be either traditional in their architectural character, or be a contemporary reworking of traditional styles and forms with respect to scale, proportion, character and materials of historic structures. Buildings should be architecturally individualized through infrastructure, entrance treatment, and detailing. Duplexes may be designed to appear as a single building, such as a large single family detached dwelling.

Balconies, stoops, open porches, decks, bay windows, raised doorways, chimneys and awnings protecting from the front façade may lie within the front yard for all housing types. In new developments, building designs should vary in terms of footprint, architectural elevations, window placement, type of roof, height, front entrance, and porch locations. Colors, materials, and architectural detail should be limited in number, compatibility and repetition throughout the neighborhood.

A sampling of Red Hook's architectural variety can be seen on the facing page.



This is a hybrid, a simple Greek Revival cottage with decorative Victorian cutout columns and brackets.



Bungalow--perhaps a kit or catalogue house.



Mid-Century Modern.



A compact "Working-man's Tudor". Sears and other suppliers sold many similar models. This may be an example of a catalogue house.



Greek Revival: 1849 Chamberlain Cottage by A. J. Davis.



2nd Empire/ Chateausque.



The retention of the arched insets and base flashing are good. The metal cap should be smaller.



This traditional gable dormer has a good scale; the valley and sidewall flashings should be improved.



Gutters and leaders should be tidy and match siding and trim colors and conditions.

5. Patterns for Houses: Roofs

Roof shape and material are key character defining building elements. New buildings may employ new materials but should also emulate patterns and inherit craft lessons from older buildings. These architectural features should be used to give various plans distinctive architectural quality.

Chimneys

Traditional chimneys were built in keeping with the building use and style. Many chimneys are made of brick or stone. A waterproof and stable chimney must have sound mortar joints suitable for the masonry units it is made of. To re-point an existing chimney, select mortar to match the existing mortar in strength (softer than modern mortar, which has more Portland cement and little or no lime) and color. A mason experienced with old buildings will know how to match the mortar not only in strength, cement color and sand granule size and color, but also in joint spacing and profile as well. The mortar must be softer than the masonry so that it can adjust to settlement and vibration and also not crack the masonry as it moves.

Dormers

A dormer is a volume projecting from a sloped roof. A dormer window is a vertical window in that projection. The size, number and shape of dormers have a major impact on the appearance of the structure. With a repair, the dormer's outer walls should match the exterior walls of the building. Do not wrap roofing material around dormer walls.

Gutters and downspouts

Gutters should be architecturally compatible with the style of the building. Discharge spouts should have splash pads or be discharged into cisterns or rain gardens. Yankee gutters, diverters, concealed gutters, and box gutters should be compatible with the prevailing architectural style of the building. Multiple gutter connections to a single leader should be avoided.

Early gutters were made of tin, wood, copper and galvanized metals. More recent gutters are often made of aluminum and vinyl. Proper water management is crucial to the life of a building. Keeping gutters and leaders leaf-free and intact protects the walls of the building from water-scouring, reduces water migrating into the basement and storm washout of soil around the building. Copper and stainless steel have the

Galvanic Corrosion Potential Between Common Metals

	Zinc	Alum.	Galvanized Steel	Iron/Steel	Lead	Brass, Bronze	Copper	Stainless Steel (passive)
Zinc	—	low	low	high	low	high	high	high
Aluminum	low	—	low	medium	medium	high	high	low
Galvanized steel	low	low	—	medium	low	medium	medium	medium
Lead	low	medium	low	low	—	medium	medium	medium
Copper	high	high	medium	high	medium	medium	—	high
Stainless steel	high	low	medium	medium	medium	high	high	—

Low: No significant galvanic action is likely to occur.

Medium: Galvanic corrosion may occur under certain conditions or over a long period of time.

High: Galvanic corrosion is likely so avoid direct contact.

This chart provides guidance when combining metals, such as copper and aluminum.
(2006 John Wiley & Sons, Best Practices Guide to Residential Construction)

longest useful life, as much as 100 years, or more. Galvanized steel can last for 50 years or more with proper care, and its lifetime can be longer if it is kept painted. Plastic, aluminum and vinyl gutters have a shorter lifetime, partly because they are more easily distorted or damaged. New non-lead coatings are available to substitute for lead-coated copper or lead/tin flashing and solders.

Dissimilar metals may damage each other through a process known as galvanic action. Charts like the above are available that indicate which metals can be used together in specific applications.

Flashing

The material used for flashing will often determine the lifetime of a roof system. Tile or slate, for example, might well outlast galvanized flashing. Care in the selection and the craft of flashing is fundamental to all roofing projects.

Roof Ventilation

Roofs will last longer if they stay cool and can dry out. There are traditional as well as contemporary techniques for keeping roofs cold and dry. They include ventilation of the attic under the roof or the use of spacers under the roofing to allow air movement for drying and cooling. With the advent of unvented attics for energy savings, the spacer technique must be used, employing wood or plastic spacers or “smart” bumpy membranes that allow air movement under roofing. On pitched roofs, the air must exit through vents at the ridge. These vents should be installed to minimize their visual impact. Some vents allow the outlet to be on one side, so they can be facing away from the most important view.



Traditional roof furring provides ventilation for shingles above.



Original sunburst & special dormer details still carry the day in spite of the reduced glass openings of replacement windows.



Mechanical systems should be concealed to the extent possible.



Laminated solar panels integral to roof (above) reduce visual impact by comparison to panels (below).



Equipment placement could be better integrated with the building.



Satellite dishes & antennae create clutter and are water entry points.

Rooftop Equipment

There is a variety of kinds of equipment that tend to clutter the exteriors of buildings, including the roofs. They include plumbing vents, fan outlets, air conditioning condensers, TV antennas, satellite dishes, electrical service boxes and more recently, renewable energy features such as solar panels or wind turbines. It is important to understand the function of each item to successfully minimize the negative impact it has on appearance. It is sometimes possible to eliminate features, or to negotiate an alternative installation with the service provider or installer. Careful placement is the first step, followed by various techniques for screening and camouflaging the equipment, minimizing the exposure from the most likely vantage points affecting neighbors or the public.

Recommendations:

- Roof types should be front or side gable, mansard, hipped, or saltbox, or a combination. Larger buildings may require a combination of roof types and pitches to break up the façade, so long as they are consistent with the architectural style of the building.
- Cross gables and dormers should be used to distinguish one building from its neighbor. Dormers may be hipped, gable, shed, pedimented or eyebrow.
- Sloped roofs should have a minimum pitch of 9:12, except for porches and sheds, which should be no less than 2:12. Roofs should be covered in shingles (dimensioned asphalt/fiberglass, slate, wood) or metal (standing seam). Where hipped roofs are used, the minimum pitch should be 8:12.
- Both gable and hipped roofs should provide overhanging eaves on all sides that extend a minimum of one foot beyond the building wall. Exposed rafter tails and brackets are recommended for overhanging eaves, where appropriate to the architectural style of the building. Architectural embellishments that add visual interest to roofs, such as dormers, chimneys, cupolas, and other similar elements are encouraged.

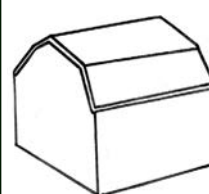
- Understand the nature of the existing roof sheathing and roof ventilation before installing or replacing the roofing system.
- Select a flashing material compatible with the roofing materials.
- Use new roof materials compatible with any nearby traditional materials in design, composition, dimension, pattern, texture, color and detail.
- When designing dormers in new structures, study the style, shape, materials and trim detailing of successful traditional dormers.
- Keep the scale of dormers subordinate to the larger roof form.
- Select materials and installation appropriate in material, scale and texture to the style of the structure.
- Lengthen the life of the roof and building through regular inspection and maintenance: clean gutters and downspouts, repair flashing, repaint trim, maintain ventilation, fix leaks promptly.
- Place new paraphernalia such as an air conditioning unit, satellite dish or solar panel on the roof(s) least visible to the public way; use building-integrated features (for example photovoltaic systems integrated into roofing material or solar cells imbedded in glass windows or skylights).
- Fireplace chimneys should be clad in either brick, stone, stucco, or clapboard and located at gable ends or centrally.
- Chimney tops should have practical or decorative details, e.g. corbelling, overhanging, capstone, etc. to protect the chimney and punctuate the roofline.
- Any other flues should be finished to match the color of the roof.
- In infill or renovation/ addition projects, mimic closely and preserve original roof forms including shape, pitch, line, overhang and integral functional or decorative features.
- In existing buildings, use appropriate techniques to install, maintain, protect and repair traditional features, materials and details.



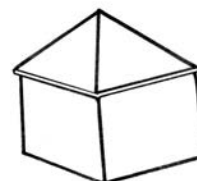
Red Hook has many distinctive roofs.



SOME POPULAR HISTORIC ROOF FORMS IN Red Hook



GAMBREL



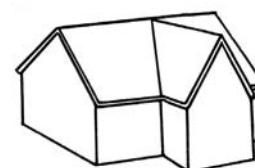
PYRAMID



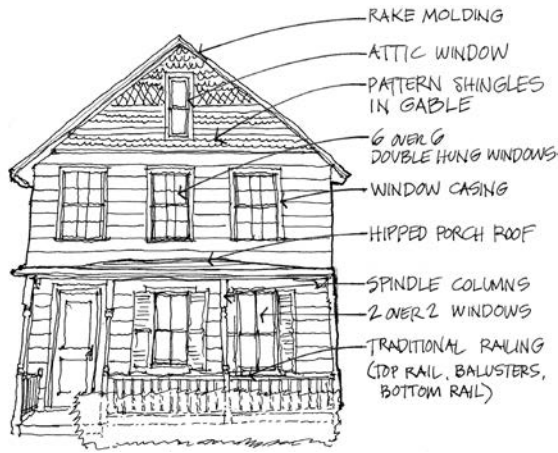
MANSARD



GABLE FRONT



CROSS GABLE



Components of a typical late 19th century house exterior.



Clapboards are the prevailing siding material, occasionally complemented by fancy shingling, as in this "fish-scale" gable treatment.



Exterior materials require good maintenance, including the brick, half-timbering and stucco of this Tudor Revival.

6. Patterns for Houses: Exteriors

Façade Treatment and Materials

Exterior materials, colors and architectural details should work together to create a consistent result. Buildings should employ the materials, colors and details integral to their particular style and sympathetic to Red Hook's existing building stock.

The architectural treatment of the front façade should be continued in its major features around all visibly exposed sides of a building, to ensure a consistency of style, materials, colors and details on all sides. Blank wall or service area treatments are not recommended for side and/or rear elevations which are visible from the public view.

All residential buildings, except for senior housing, should be raised a minimum of 18 inches above the residential sidewalk grade. All visible facades should contain an articulated base. The above grade foundation to sill height should be covered with either brick, split-face CMU, brick pattern concrete, or other masonry solution appropriate to the architecture.

Siding

In Red Hook, historic buildings are commonly clad in wood, brick, and stucco. Residential, commercial and institutional buildings also occasionally display attractive stone, terra cotta, and metal surface materials - appropriately expressing the variety of styles and tastes incorporated into 18th, 19th, and early 20th century architectural designs. Surface materials, details, textures and finishes are integral to a building's character and value.

Recommended façade materials for residential buildings include wood or composite clapboard and shingles, brick (English, Common, Flemish Bond), or wood board and batten.

Consider texture, pattern, scale, and detail of original exterior wall and trim material when building new or repairing deteriorated exterior walls and trim. When

repairing, selective replacement is usually all that is necessary. Match the characteristics of the original material such as the distinct bonding pattern of a brick wall, the texture and depth of wood siding, and the three dimensional quality of wood molding.

Replacing or covering up wall materials with artificial sidings (vinyl, aluminum), cement board, faux stone or brick, stucco-like coatings, or other non-compatible materials is not appropriate, since it diminishes the architectural integrity of the building. Installation of these materials often means removing or concealing valuable architectural trim and details.

Although frequently advertised as “maintenance free” or “low maintenance” many contemporary siding products prove not to be as durable as the original materials, and their recent production makes them less environmentally-friendly.

Recommendations:

- Vinyl and aluminum siding are not recommended. Cement fiber siding is recommended, especially where combustibility is a concern.
- Brick left natural with its fired finish will require less maintenance, but painted brick is an option with precedent in the business district.
- Buildings using clapboard or simulated clapboard should have between 3 ½ inches to 6 inch exposure.
- Corner boards should not be less than four inches or more than eight inches and should protrude from the siding surface to create a shadow line.
- In infill projects or additions, match nearby materials in thickness, exposure, profile and texture.
- Use exterior materials that are traditionally consistent with the character and form of a building, based on regional practices.
- Maintain and repair the material surfaces and details of exterior walls using maintenance and methods appropriate to the specific material.
- Replace a missing exterior wall feature with a new feature or detail that is based upon accurate documentation (photographs, written records, etc.) of the original; new designs should match existing elements in scale, material, and detail.



Board and batten siding is a Red Hook pattern.



Well installed shingling and a carefully executed color scheme work together-note gutters and leaders painted to match siding & trim.



Narrow exposures (4") of clapboards add a rich texture and character to a facade.



Natural (above) or painted brick (below) are acceptable patterns.





Traditional windows often were shaped to a gable end as above and below.



There are many historic round-top windows in Red Hook, but they have been overused in new construction.



A hood and ornament can add grace to a double hung window.

7. Patterns for Houses: Windows

Windows add depth and variety to building facades and are critical in determining a building's character. In Red Hook, one finds many window styles: double hung, casement, tilting, awning and fixed. The wood double-hung window is most common in residential buildings, and can be found in houses of a variety of architectural types.

Windows provided daylight and ventilation before electric lighting and air conditioning systems. In new construction windows can and should meet the highest level of energy efficiency and weather-tightness and still adapt to a variety of styles and contexts. The performance of the entire window, including its frame, should be evaluated when making a selection, rather than looking at only the ratings of the window glass itself.

To be contextual in an infill project, new windows should adapt the proportions and locations of windows in similar traditional building types in the vicinity. In addition, the new windows should use key features, such as muntin profiles, rail and stile proportions and glazing patterns, which are important to creating the character of the building. New windows with exterior rather than removable interior muntins will cast shadows and have a traditional appearance.

For renovations, retain and repair windows, since replacement windows rarely have an attractive economic payback and have a large carbon footprint. Repair is less disruptive to an existing building's fabric. Replacement also normally requires compromises in appearance. Common conditions such as flaking paint, broken glass, failing putty or jammed hardware are easily repaired and do not require replacement. If a window component is beyond repair, replace *in kind* only the deteriorated element while keeping the rest of the window.

Old windows can achieve a high level of energy efficiency if care is taken. Make sure the interior and exterior trim is tight and well caulked around the window unit. Re-putty around glass panes, install weather stripping around the sash, install pulley seals, and repair or rehabilitate sash locks so meeting rails meet and can be pulled together tightly to eliminate drafts. Add interior or exterior storm windows for additional winter protection.

Recommendations:

General

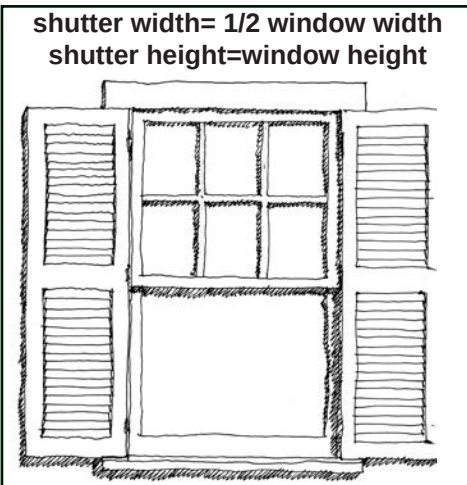
- All windows, with the exception of storefronts, should be vertical in proportion. True divided light windows or simulated divided light should be used in accordance with the style of the buildings. Do not use windows with snap-on grids.
- Doors and windows that operate as sliders are discouraged along street frontages.
- Sidelights, if they exist, should not be less than 12 inches in width. Fanlights or transom windows may be placed above doors. Transoms, fanlights and sidelights should have true divided lights where compatible with the architectural style of the building.
- Windows should be architecturally compatible with the style, materials, colors and details of the context. Windows should be vertically proportioned. To the extent possible, upper story windows should be vertically aligned with the location of windows and doors on the ground level, including storefront or display windows.
- Where appropriate to the architectural style, shutters should be provided on all windows fronting a street or visible from the public right-of-way. Each shutter should be proportioned to cover $\frac{1}{2}$ the width of the window.

Windows on Residential Streets:

- Glazing on the primary residential façade should not exceed 30% of that façade.
- No more than three windows should be grouped together on the primary façade.
- First and second story primary façade windows should be proportioned vertically, except for gable windows, which may be shared so long as the grouping is compatible with the architectural style of the building.
- The outer glazing of the window should be set back a minimum of two inches from the outer plane of the wall (actual dimension).
- At minimum, there should be a face frame decorative lintel and drip mould around windows.
- A minimum of 3 inch casing/trim at the window jambs is encouraged, where compatible with the material and architectural style. Retain materials and repair existing windows.



Above: a well-proportioned traditional double hung window, with head flashing, casing and sill.



Shutters should follow the proportions in the diagram above, as in the example below.





Above: correct installation of shutter and storm window; below: incorrect shutters.



Windows in Renovations, Additions and Adaptive Reuse:

- Match original materials, dimensions, glazing and trim when replacing units.
- Follow EPA lead paint precautions.
- Install storm windows or screens that do not obscure the original windows; for double-hung windows, for example, align the horizontal bar or rail with the original meeting window rail; install wood or aluminum storm and screen windows in colors that match the original window casing or paint them accordingly.
- Implement a regular maintenance plan.
- Pay attention to the energy performance of your window system.
- Match shutter style (for example louvered or recessed paneled) to original.

High Performance Double-Hung Window Rehabilitation:

- Remove stops (note pre-drilled grommet holes at left).
- Remove excess paint on window sash.
- Replace chains or ropes.
- Install interlocking weatherstripping all sides of sash and jambs.
- Replace parting strips as required.
- Install pulley seals over pulleys.
- Lubricate runners on jambs.
- Install high quality storm window (metal triple track version shown at left).

8. Patterns for Houses: Skylights

A skylight is a two-edged sword. It can bring welcome light into a building's interior. At the same time, it can create uncomfortable conditions in the interior in summer and winter by virtue of heat gain or heat loss; and it can disrupt an old or historic building's appearance.

The pattern for skylights is that in general they should not be visible from the street. In old buildings, skylights are often added to make use of previously unused spaces such as attics. Their insertion, however, should be carefully designed, and they should be no larger than absolutely necessary. From a sustainability point of view, while daylight can reduce artificial lighting, the increase in air-conditioning loads from an inappropriately designed skylight would more than wipe out the potential energy savings. Where skylights exist, they can often be repaired or carefully reglazed with contemporary glass.

Recommendations:

- Locate new skylights away from the primary public view.
- Look for ways to introduce light from vertical windows or clerestories rather than skylights.
- Use flat, low profile skylights following the roof slope.
- Install moveable shading underneath to reduce heat gain.
- Match the skylight frame to the roofing color.
- Make skylights as small as possible.
- Do not install bubble skylights or skylights built up on high curbs.
- Do not install skylights near the eaves or overhang at the lower edge of a roof.
- Do not use reflective glass.



do
retain & restore original materials



don't use frames that contrast with roof color



do allow clearances for drainage--this case is a little too tight



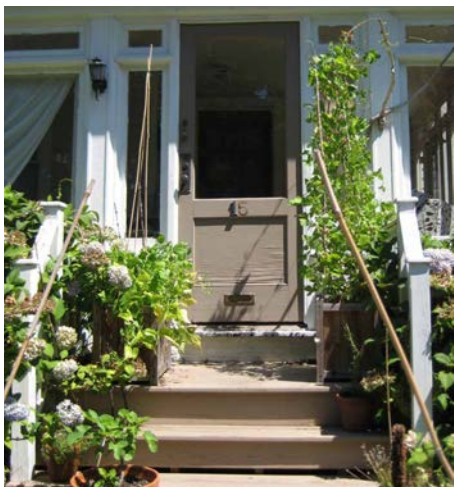
do
retain & restore original assemblies



Successful entries consist of an assembly of elements including railing, step, molded surround and finally the doors themselves.



Door, surround, rail and lights all work together.



The door as the centerpiece of a welcoming entry sequence.

9. Patterns for Houses: Entries and Doors

Doors are among the most heavily used building elements, subject to intense wear and tear. They are also a key character defining element that should be carefully chosen to reinforce the building's style. Before buying a stock door that may or may not be compatible, it is worth a close look at Red Hook door patterns: the doors of existing buildings.

Match key features, such as glazing, rail and stile proportions, and panel sizes, as closely as possible in order to reinforce the character and architectural integrity of the neighborhood. Decorative trim, entablatures, sidelights and transoms are as significant as the door. These key features subtly contribute to a design's sense of authenticity. Contemporary materials, such as vinyl and aluminum, are inappropriate.

Whether designing storm/screen doors, or replacing worn out units, builders will find that the new installation, properly weatherstripped, can contribute to energy efficiency in the building. Storm/screen doors should be constructed of wood and should be as transparent as possible, providing maximum visibility of the historic door. Avoid installing any storm/screen with vertical stiles, inappropriate ornamentation, or of an incompatible material.

For existing buildings, a cyclical maintenance routine should include regular inspection, careful repair, and painting. Avoid replacing an original door unless the door has deteriorated beyond repair. Use the original material if available.

Door Hardware

Door hardware is found in a diversity of sizes, shapes, materials, finishes and details. Individual hardware components vary with the size of the door and the style of the building. Larger doors require heftier hinges. High-style buildings commonly have heavily ornamented pieces while an early 20th century style residence might employ stock hardware from a contemporaneous mail-order catalog.

Repairs

Hardware provides a level of architectural detail that affects a building's impression. Knobs, rosettes, hinges, locks and back-plates should be consistent in appearance.

Recommendations for New Construction:

- Architectural elements such as lintels, pediments, columns, porticos, porches, overhangs, railings, balustrades, fanlights, transoms and sidelights should articulate entrances and doors. The doors, together with these elements, should be architecturally compatible with the style, materials, colors and details of the building as a whole.
- Secondary doors should not be on the primary street façade. Where employed on secondary facades, these doors should be architecturally consistent with the building's style. Second floor balcony doors should be hinged single-leaf or French door. Sliding doors should not be used where swinging doors can be installed.
- Sidelights, where planned, should not be less than 12 inches in width. Fanlights or transom windows may be placed above doors. Transoms, fanlights and sidelights should have true divided lights where compatible with the architectural style of the building.
- Use sustainably harvested wood or certified green composites.

Door Patterns for Renovation and Expansion:

- Match the original door type and overall configuration of glass, panels and detail.
- Use appropriate repair techniques to maintain, protect and repair existing features, materials and details.
- Install a wood storm or screen door to increase energy efficiency.
- Select a storm door that provides maximum visibility of the primary door.
- Use colors that are compatible with the door and trim paint schemes.
- Install weatherstripping and caulking to decrease energy loss.
- When renovating, retain door surrounds, trim and details, such as decorative entablatures, moldings, pilasters, sidelights, and transoms.
- Regularly paint or varnish exterior doors.
- Retain and reuse original hardware, recondition if needed.



Red Hook has many great examples (above) of entrances that set patterns to be followed in new buildings.



Welcoming entry porches will shed water away from the arrival path.



Some traditional porch entries rely on their gutters to shed water.

10. Patterns for Houses: Porches, Porticos and Stoops

Porches, porticos and front entrances are prominent elements of a building façade and play a major role in defining a building's character. The particulars of these entrance features are indicators of the era and style of the building. Builders should learn from the existing patterns in and around Red Hook.

As significant features of the “face” of a building, and moreover as patterns for new construction, existing porches and porch details should be preserved through ongoing maintenance and prompt repair. Character defining elements include overall size and proportion, columns, brackets, railings, balustrades, balusters, steps and lattice (see glossary in appendices).

Traditionally, porches are outdoor living spaces where residents can relax and also observe and greet passersby. Porches and porticos shelter people from the weather as they arrive and leave the building. The overhang of porches facing south and west shade front windows and cool the building, and they are often located to receive prevailing breezes. Porch floors are usually finished with tongue and groove, painted pine boards oriented perpendicular to the building and sloping from the building face to the porch exterior. They are often built on piers, with latticework between the piers to improve the appearance and deter animals from entering and nesting under the porch. These features present special challenges to those planning to build or renovate. Ideally porches should remain as open rooms and should not be enclosed.

In the years following original construction, many residents have enclosed porches—some adding screens against insects, some creating sun rooms with an array of either seasonal or permanent windows. Some have fully enclosed their porches with solid materials and few windows.

New work on enclosed porches not original to the building should attempt to restore the articulation and transparency of the previous porch by spacing, recessing and enlarging windows and door(s) to obey the original porch pattern.

Recommendations:

- Residential units should have a porch, covered portico, or decorative entrance on their street façade, or on both street sides on corners.
- Front porches should be located on the façade facing the sidewalk and may be wrapped around the dwelling's side wall. The minimum porch size should be 8 ft. from the front wall to the enclosing porch rail. The porch length, if architecturally compatible and feasible, should be 10 ft.
- Porch superstructures should be faced with wood, synthetic wood products, or brick.
- Porches can include chamfered posts or more complex styles with elaborate spindle work, friezes and spandrels.
- Porch roofs should be supported by posts, piers, or columns. Posts should be a minimum of five inches by five inches and the width should be proportioned to the height at a minimum ratio of 1:10.
- Columns should be of classic proportions and have a correct entablature as determined by the architectural style.
- Balusters and/or spindles should be a minimum of 1 ½ inches and be installed with a maximum distance between finishes of no more than 4 inches.
- All porch components should be stained or painted.
- Porches may be enclosed with screens. The screen framing should be stylistically compatible with the porch.
- Provide architectural relief with covered porticos, small decorated roofs on front columns or supported by wall-mounted decorative brackets over a raised stoop.
- Stoops and steps should be brick, slate, wood or stone.
- Railings and banisters should be painted or stained wood, synthetic wood or wrought iron with architectural emphasis on the corners and newel posts.
- Steps should be a minimum of 36 inches wide and should be placed on the front side of the stoop platform. Alternative entry treatments should be employed for handicap and senior accessibility.
- Decks in rear yards should be no more than 21 inches above grade. Property owners should not alter existing property grades without Planning Board approval.



Red Hook provides an encyclopedia of porch styles, shapes and materials for the designer.



Ornament often celebrates the functions of architectural elements.



Flourishes like those above and below are often found on porches and entries.



Ornament often has a dressier side (right above) facing the major street.

11. Patterns for Houses: Ornamentation and Details

Exterior decoration of 18th century buildings followed local builders' craftsmanship traditions. In the 19th century, pattern books offered a wealth of design ideas to builders, and many ornamental features were mass produced offering a wide array of decoration to middle class customers. With this information and these materials available, builders and their customers explored styles as they never had before. This leaves present builders and property owners with intriguing puzzles to solve.

Understand the style(s) of an existing structure or establish a clear stylistic approach for a new design. Recognize and employ common ornamental features in the development of the project. Note surface materials, textures, and finishes that determine the character of a decorative feature.

When renovating, retain and recondition all surviving original exterior details. Many decorative elements can be easily repaired through securing loose components, cleaning and painting. Extremely deteriorated features can be replaced to match the existing. In some cases, missing or severely deteriorated ornamentation on the front façade of a building can be replaced with ornament from a wall less visible to the public. If exact replication of a failed or missing element is not possible, a replacement should be fabricated with the same size, scale, texture, and three-dimensionality of the missing feature.

When building new, adaptively reusing or expanding, decoration should be designed based on the context or historic images or documentation. Avoid installing features borrowed from styles and historic periods not found in the Village.

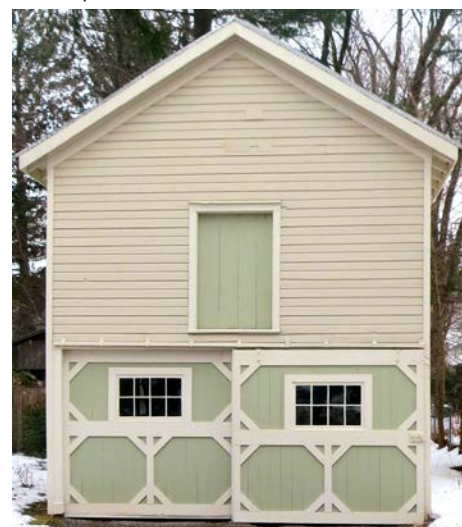
Most exterior decorative elements are exposed to weather and subject to deterioration. Use durable materials, and prepare and protect them before installation. Some contemporary substitute materials, such as fiberglass for details, are acceptable. For existing features, routine inspections will identify key features that require special attention and upkeep. Following a maintenance plan will preserve ornamental materials and features, prevent costly repairs or replacement, and retain a building's architectural integrity.

Recommendations:

- Substantial trim boards should be used at gables and eaves, in sizes and shapes appropriate to the architectural style.
- Trim ornament may be elaborated to any of the following:
 - Plain or decorated frieze.
 - Overhanging eaves of a minimum 12 inches with or without exposed rafter tails in conformity with the building's architectural style.
 - Boxed cornice.
 - Denticulated and/or bracketed cornices.
 - Ornate Victorian bracketed cornices.
- Tight eaves should be finished by molding. Windows with decorative lintels, sill and side trim are encouraged. Doors trimmed with decorative lintel and casings with back bands are encouraged. Corner boards should be 4" wide minimum.
- Decorative elements such as pergolas, cupolas, and belvederes are encouraged, where opportunity exists, to provide emphasis to structures located in prominent positions.
- Towers may be considered on buildings located in prominent positions able to accommodate special architectural treatment, such as corner lots. Towers should not extend more than 15 feet above the roof ridge line (see zoning code). They should be in character with the architectural style of a building. A tower's floor plan should not exceed 15 feet by 15 feet. Zoning board approval may be required if tower exceeds the maximum bulk regulation height requirements.



A simple ornament like this sill console can dress up an entire facade.



This Red Hook pattern shows that even making a garage or outbuilding facade can be the occasion of great beauty by arranging its basic elements and using color skillfully.



A graceful tower punctuates a corner lot.

Paint Colors

Paint colors should be appropriate to the style and setting of the building. Color selection should not only enhance the building being painted but also complement surrounding buildings.

Simple color schemes for walls and decorative features are preferable. The colors selected for the storefront portion of a commercial building should be used throughout the painted exterior of the overall building. This unifies the upper and lower portions of the building's façade. 19th and early 20th century color schemes often employ 4 or more colors to distinguish body (siding) and 3 other elements, often including doors, window sash and trim. There are numerous publications that illustrate approaches to paint colors (see bibliography).

For existing buildings, a paint analysis can pay great dividends in identifying the history of the building. Using carefully removed paint chips or "bullets", a trained conservator can microscopically identify the colors and paint types used on an existing building exterior or the interior in different eras.

Assume that paint layers placed before 1973 contain lead. Any work that involves those layers must follow the Environmental Protection Agency's rules. See appendices for contact information.



Paint sampling in the final location can ensure that the colors work as intended in day-light, which tends to make colors look lighter and often cooler than on small paint chips.



1. Patterns for Yards: Planning

New landscapes in Red Hook can follow favorite historic patterns while benefiting from a 21st century understanding of environmental sustainability. In fact, there is a synergy between traditional gardening and new green, low-impact land management.

Local Precedent

While there is interesting variety in Red Hook yards, the generality is that they follow semi-rural residential conventions, demonstrating a planning approach from the mid-19th century pattern books so influential in the Hudson Valley. Often, the most presentable landscape elements—tended lawns, shrubs, trees and flowers—are found in front of the house. Functional elements such as a wood pile, play equipment, tool shed, barbeque equipment, and vegetable garden may be found in the rear. Consistent with Red Hook’s rural character, hiding functional and sometimes unsightly elements does not appear to be as high a priority as in suburban neighborhoods. Many neighborhoods are “porous” with views among back yards and gardens.

Recommendations:

- New developments should allow for an open, rural—even “farm yard” look.
- A preferred approach is to create visual separations between ornamental and utilitarian features in properties.
- While maintaining an overall consistency within a block, landscape plans for new houses should mimic the individual expression found house to house in existing neighborhoods.



There are often views through yards that should be encouraged to maintain Village character.

Andrew Jackson Downing's recommendations for land use included model plans for properties that anticipate many of the features now recommended in contemporary treatises on low-impact, sustainable landscaping.

In the plan at the right, from *Victorian Cottage Residences* (Dover reprint, New York, 1981), Downing proposes a plan "for a pleasant suburban residence" that includes **A**, the house, **B**, the carriage entry, **D**, the stable, **G**, a lawn with trees and shrubs, **F**, a kitchen garden conveniently placed to get manure for the hot-beds from the stable, and a fruit garden of dwarf trees at **I**.

With native plantings for shade, screening and habitat, and local food production, this plan from 150 years ago is freshly relevant to our current environmental concerns.

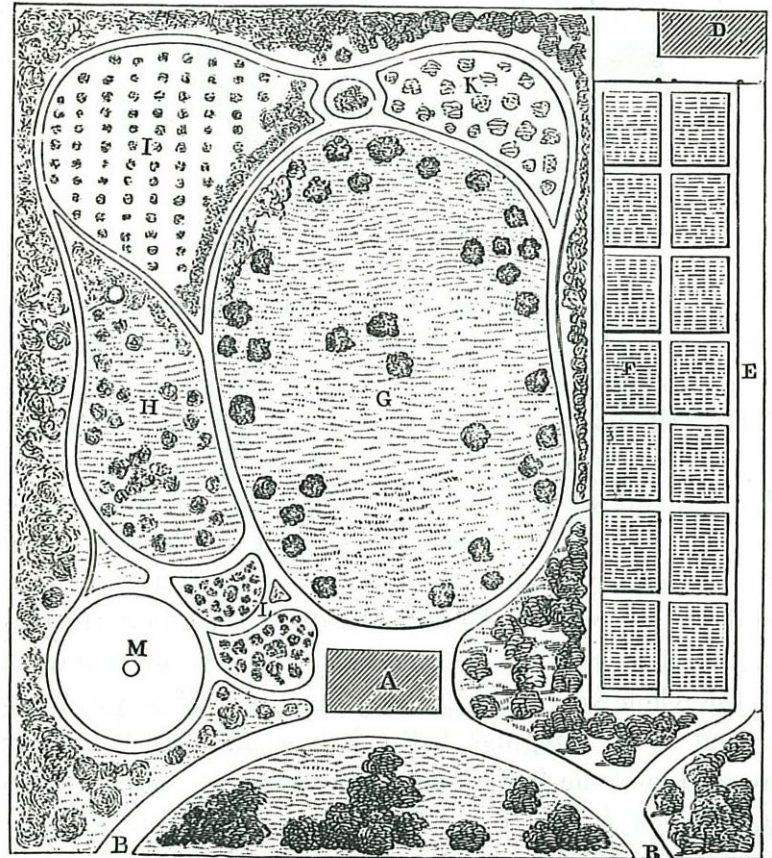


Fig. 153.

Historic Precedent

In the 19th century, Downing and his disciples counseled the swelling ranks of suburban and village residents on how to manage and enjoy their small plots of land. He discouraged fences and plantings blocking views of the front of the house. Mass production of the manual reel mower allowed homeowners to grow lawns, features strongly promoted by Downing and other tastemakers. Ideally, front lawns of individual properties were to run together so neighbors would share views of long expanses of grass up and down the street. Not every one followed these directives, but the lawn "fashion" as a suburban feature endures.

For those wishing to recreate landscape of a particular period in Red Hook's history, the best references are particular period photographs of that place, and contemporaneous writings by past residents describing their property and gardening efforts. Lacking this invaluable documentation, works by Andrew Jackson Downing and others lay out the desired trends of the mid-nineteenth century. (see appendices for guides to historic plantings) The Egbert Benson Historical Society is a resource for photographs of local scenes to guide landscape recreations.

Foundation plantings became customary only after the First World War when building construction included exposed masonry foundations made of unsightly utilitarian materials. Before that, building and porch fronts were on view, often punctuated by a select few ornamental shrubs carefully placed.

Recommendations:

- Maintain a generally open front yard.
- While maintaining clear open views between house and street, reduce the area devoted to lawn by using shrubs, perennials and grasses that will increase plant diversity and reduce watering, mowing, fertilizer and pesticide use.
- Consider limiting the use of foundation plantings unless the base of the building needs to be concealed or there are special privacy concerns.



Postcards and other documents can serve as useful references for those searching for ideas or inspiration for the design and arrangement of their yards. One can look to these documents for ideas about plantings, about hardscape and about the relationship between outdoor and indoor space



This may be especially true for those interested in recreating landscapes, but it can also be instructive for people wishing to make their outdoor spaces sympathetic to a new house in a traditional neighborhood design.



Split rail fencing is a rural pattern to adopt at the edges of fields and open spaces.



Metal fencing (above and below) is an attractive and durable pattern for more developed portions of the Village. It can be made of cast iron, wrought iron, steel or aluminum.



Picket fences are a traditional pattern.

2. Pattern for Yards: Fences

Fences are useful to enclose pets, constrain toddlers and protect gardens from deer and wandering neighbors. Fences are mandated around swimming pools. High fences at the perimeter of a property and especially at the front property line are unwelcoming and isolate the property from the community. Opaque (solid) fences afford privacy and screen clutter from public view. In rare road configurations, an opaque fence may protect ground floor windows from the headlight glare of turning cars. Fencing should serve necessary practical purposes while contributing to the appeal of the neighborhood. In the 19th century, the design and detailing of fencing was part of the builder's craft, so when fencing was used, it often coordinated well with the house.

Recommendations:

- Except for pool enclosures, fences on property lines should be no more than 3 ½ feet tall.
- Entrances, gates and corners should be articulated with decorative post treatment. Specific design emphasis should be given to the pattern of pickets and post finials.
- Solid (opaque) fences should be in side and rear yards only.
- Walls and fences should be architecturally compatible with the style, materials and colors of the principal building on the same lot. Treatments for front yards include:
 - Stone or brick walls with a stone or cast-stone cap,
 - Wood or synthetic wood picket fences.
 - Decorative metal fences, masonry and stone piers
- Fences should be made of traditional materials e.g. wood, stone, brick, wrought iron. Composite wood is also acceptable.
- Highway-style guard rails, stockade or contemporary security fencing (chain-link, vinyl strip, barbed or razor wire) are not recommended.
- Framed lattice panel enclosures may be employed toward the back of the property to hide unsightly outdoor features. Unless historic images from an existing property show the lattice grid in a diagonal orientation, the lattice grid should be installed on vertical/horizontal axes and stained or painted to harmonize with the house.

3. Pattern for Yards: Walls

Historically, dry-laid rubble stone walls in farmland were built of rocks cleared from agricultural fields. In Village settings and on properties of prosperous citizens, mortared stone or brick walls articulated with piers and caps were popular.

Recommendations:

- Select wall materials in keeping with the buildings on the property. Choices include dry-laid stone walls, mortared stone walls, mortared brick walls, concrete walls with stone or brick veneer.
- Avoid contemporary interlocking concrete blocks and timber construction (so-called railroad ties) in areas in public view.
- If a property includes salvageable site features, repairs should be consistent with the construction era of the site element. Match stone or brick, mortar color and construction details.



Low dry-laid wall provides excellent drainage for garden bed.



Mortared brick wall at sitting height with a brick coping.



Weep holes at base of large retaining wall relieve water pressure.



Front yard or entry drive treatment: dry-laid stone with an ornamental cast-stone or carved stone cap.



Traditional dry-laid gravity wall in a rustic style.



A timeless garden element enhances a shady yard.



Screening would reduce the impact of this equipment collection.



Unused vehicles and equipment are best stored where screened from public view.

4. Patterns for Yards: Things in the Yard

For all neighborhoods, the goal should be to “furnish” the yard in keeping with the character of the neighborhood. Proposed improvements on a property should harmonize with the character of the house and the character of similar neighboring properties. The Building Department can advise which of the items listed below call for Village review.

Items include but are not limited to:

- Air conditioning equipment
- Back up generator
- Clothes-drying structure or ropes
- Compost pile or container
- Dog house
- Garage
- Garden house
- Gazebo, pergola, arbor
- Ornamental garden pool or water feature
- Permanent barbeque installation or fire pit
- Permanent built-in outdoor furniture
- Play equipment
- Propane tank
- Rain barrel
- Solar panels secured to ground
- Splash block
- Sports paraphernalia—basketball hoop, soccer goal etc.
- Storage structure/tool shed
- Trash and recycling containers
- Vegetable garden
- Wading or swimming pool, spa and pool equipment

If residents choose a community because of its integration of “designed” and natural landscape features, efforts to screen necessary utilitarian elements are recommended. Air conditioning equipment, propane tanks, plastic wading pools and other elements interfering with the beauty of each property must be located to have the least visual impact on passersby, on neighbors, and on the resident’s enjoyment of his or her yard.

Recommendations:

- For new utility structures, use materials and forms compatible with the principle building.
- If elements such as splash blocks and rain barrels must be located at front corners of the building, they may be screened.
- Unsightly equipment and recycling and trash storage areas may be screened from public view at the ground level using masonry, or wooden walls, landscaping, hedging or a combination thereof that is compatible with the architectural and landscape characteristics of the building.
- For yard elements needing repair: rehabilitate, replace in kind existing elements. Take material and color cues from the existing primary and accessory buildings on the property so they have a family resemblance.



Try to screen household and play equipment to minimize impact on adjacent properties.



Unscreened splash block.



Open grid paving supports grass & stays green if use is light.



Informal parking tracks (above & below) allow more green-and less paving-on the property.



5. Patterns for Yards: Cars

By far the most striking change in the landscape since earlier days in Red Hook is the vast increase in numbers of cars, the loss of green space to paving for the storage of cars and the widening and hardening of road and path surfaces. Sacrifice of lawn and garden space in the front yard for supplementary parking compromises the property's character.

Recommendations:

- Use existing garages to store car when they are not in use.
- Locate supplementary open air parking at the back of the property if feasible.
- Screen supplementary open air parking with vegetation or fencing.
- Reduce the paved drive and parking area.
- Asphalt should be minimized.
- For a single family household, try tandem parking rather than building a double-wide parking bay.
- Consider a combined drive with the next door neighbor. With shared maintenance and plowing, individual costs are lower, storm water runoff is reduced and plants in the additional unpaved area will lower ambient temperatures in summer while taking up CO₂.
- Consider open grid pavement if anticipating infrequent and temporary need for additional drive area and off-street parking. This honeycomb structure, inter-planted with grass, can give the impression of continuous lawn while being structured to hold the weight of a car. Cars parked for long periods of time will shade out and kill the grass. Heavy traffic will kill the grass.
- Use gravel as a drive surface if the slope is not so great that only a hard continuous surface will be practical.
- Consider double ribbon paving strips in grass leading to rear parking.
- Plan tree, vegetation strips and islands around the paving.
- Contain storm water running off the pavement in a slow-percolating swale or rain garden.
- Do not light more than necessary for safety.
- Do not park cars in the front yard.

6. Patterns for Yards: Paths and Paving

Paths and pavement should be safe and comfortable to navigate. As with drives, residents should try to minimize storm water runoff from impervious surfaces. Paving absorbs and holds heat, so reduced paving will yield lower temperatures around the house. Light-colored paving holds less heat than dark-colored paving.

Recommendations:

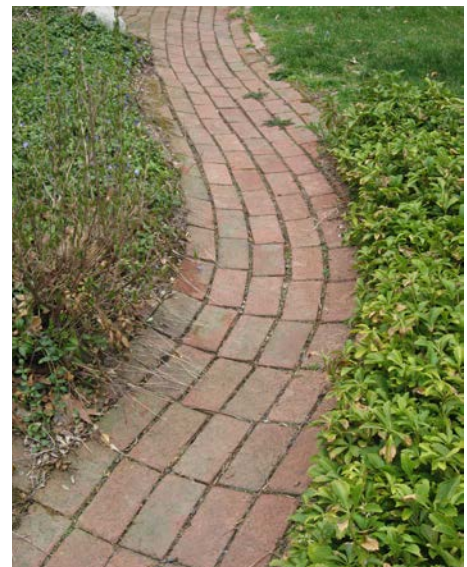
- Use porous paving if feasible: gravel, flagstones, concrete pavers or severe weather brick pavers well-laid on a compacted pervious gravel bed.
- Avoid obviously fake simulated stone and paving in ornamental patterns inconsistent with the building's character.
- Review accessibility requirements and applicable codes with building code officials if a ramp is contemplated.
- Paths for handicap access into a building must have an 8.3% (or shallower) slope with flattened landings at designated intervals; a handrail is required if the slope is greater than 5%. Consult the Building Department for additional local regulations.
- Provide a smooth wheelchair travel surface. Ramps on a sloping grade may be concrete, tightly spaced, mortared flagstone or paving units. For a natural ramp, a well-compacted gravel/stone dust surface is preferable to gravel alone. For a ramp raised above grade, surfacing can be rot-resistant wood, treated wood or wood composite.
- Integrate accommodations for wheelchair access into the overall design of the property, keeping the public face of the building unencumbered. For private houses, try to place the ramp leading to the front entrance along the side of the house or in another less visible location. The house should continue to follow the patterns of the neighborhood.
- If a handrail along the ramp is necessary, select a design that will be least conspicuous and can be easily screened. If the handrail must be visible, select a railing consistent in material and color with the porch rail or other trim on the house.



Bluestone paths on stone dust and gravel bed are a vintage pattern.



Stepping stones (above) form attractive paths and allow maximum water absorption.



Brick pavers can make a graceful, stable path.



Old-time sustainable watering method.



Bio-swales channel, filter and absorb stormwater, reducing the need for expensive, carbon-intensive infrastructure



Cisterns are traditional features with a renewed relevance for water conservation.

7. Patterns for Yards: Water Management & Conservation

Changing weather patterns call for increased caution in water management during and after construction.

Recommendations:

- Follow guidance from Red Hook building officials and New York State Storm Water Management Design Manual (Aug 2010 or later).
- Observe drainage patterns prior to undertaking changes.
- Thoroughly assess the impact of a change on neighboring properties and waterways.
- Employ robust corrective measures to mitigate negative impacts.
- To the greatest extent possible, rely on rainfall to irrigate plantings. Avoid use of potable water for landscaping. Bio-swales, rain gardens, minimal and porous paving and collected roof run-off for garden watering all contribute to water conservation and aquifer recharge.



Rain Garden: 2/3 of roof runoff at this property is piped to a gravel reservoir beneath this garden

8. Patterns for Yards: Grade Changes

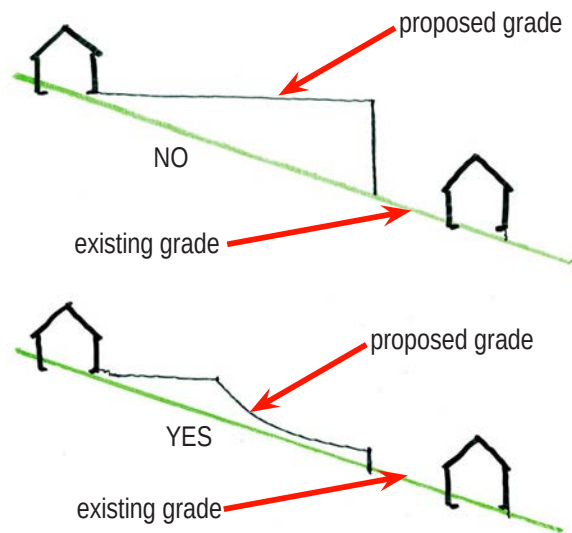
Shaping land well makes for livable landscapes. It requires careful design and engineering, sound construction and clever water management.

Recommendations:

- Consult the Red Hook Building Department to learn what kind of professional services are necessary to design and file the work.
- Consult an engineer or landscape architect to assess the safety and aesthetics of a proposed change. If appropriate, commission professional drawings to ensure that storm water issues are addressed and the work meets standards for health and safety.
- On sloping sites, recognize the impact changes may have on properties above and below. Changes may affect views, available sunshine and drainage patterns.
- Do not build high retaining walls to support oversized flat areas that lack precedent in the community.
- Consult an arborist about what measures are needed to protect vegetation if grade changes are anticipated. Proposed construction may affect a tree's root system so seriously that the tree will die or be too dangerous to keep on the property. (see Trees following pages)



Misplaced fill (suffocating tree root systems) and construction activity killed **all** trees near this work.



Shape land in harmony with existing topography



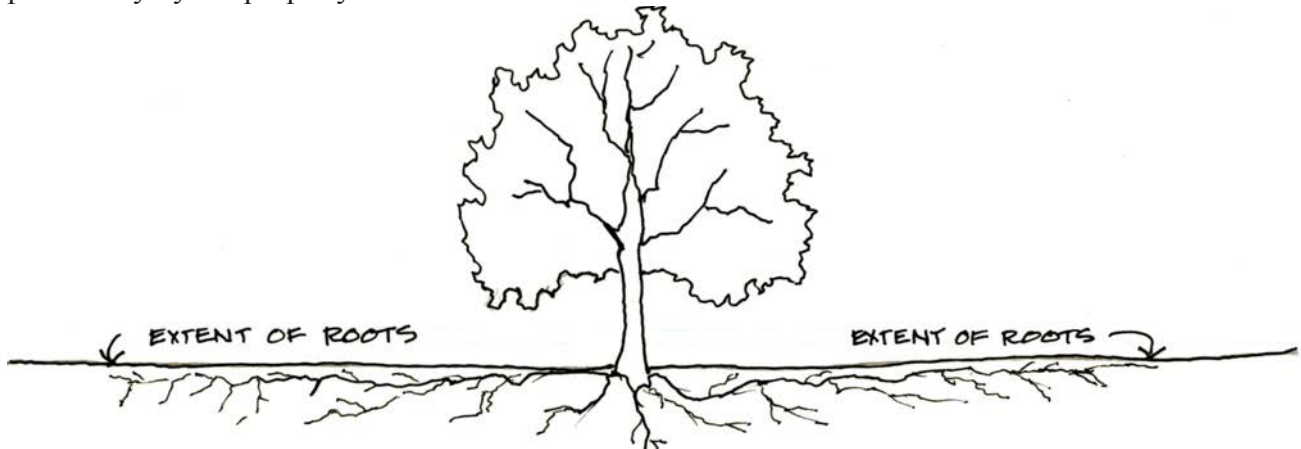
Handicapped access should use natural grade to the extent possible to minimize the visual intrusion of a structured ramp.

9. Patterns for Yards: Vegetation

When planning plantings, inventory strong features of a property—trees, rock outcroppings, natural drainage configurations, solar orientation, notable views—that may be assets to preserve and exploit.

Trees

Trees are character-builders in a neighborhood, some rising to informal landmark status. Mature trees impart a sense of history while cooling communities and taking up CO₂. Ideally, to be most sustainable, a property should include a multi-generational collection of trees, so younger trees can succeed declining old-timers. Before removing a tree, assess what the loss of shade will do to the temperature of the house (and air conditioning bills), to the neighbor's property, and to the comfort of the public way by the property.



Most fine roots supporting tree life grow in the top 6 inches of soil.

Tree Root Area Rule of Thumb

Young Trees:

- Measure diameter of trunk at 4 ½ feet above grade.
- Multiply results by 0.75.

A 9" diameter young tree should have a circle of undisturbed soil with a radius of 6.75 feet—total diameter of 13.5 feet.

Mid-aged Trees:

- 1.0 times trunk diameter at 4 ½ feet above grade

Old Trees:

- 1.25 to 1.5 times trunk diameter at 4 ½ feet above grade

A 40 inch diameter tree should have a circle of undisturbed soil with a radius of 60 feet—total diameter of 120 feet.

Tree preservation

The root system of a mature tree extends well beyond its drip line (see illustration). Most of its roots are found in the top 6 to 24 inches of soil. Changes in grade—either digging and cutting roots, or adding soil and smothering roots—have a profound, enduring, negative effect on the health of the tree. Instead of trenching within root zones, use of an auger or air-spade is recommended to install underground piping and utilities.

- Avoid major soil disturbance within root zones of trees.
- Avoid parking on the root zones of trees.
- Do not top trees.

(See appendices for more information on trees and construction.)

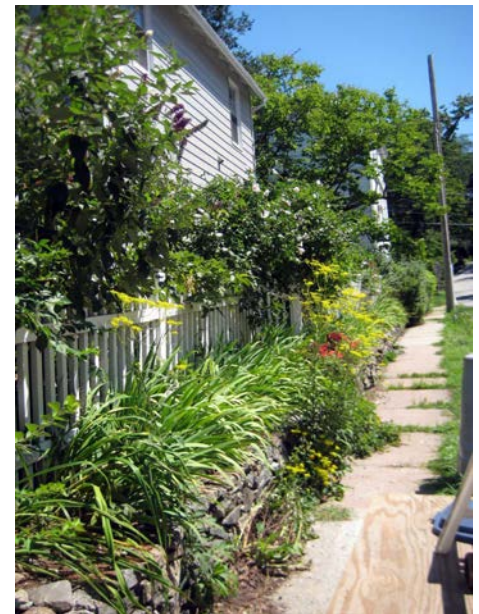


Plant selection

From early European settlement, there was an exchange of seeds and plants between the new and old worlds. American gardeners relished plants imported from Europe and the Orient, so a faithful reconstruction of a historic Red Hook garden might include so-called “exotic” plants used when the community was young. Today, while many exotics coexist with native plants as good neighbors, some imported plants (such as Norway maple, Japanese honey suckle, barberry, porcelain berry) have proven invasive and threaten native ecosystems.

Recommendations:

- In keeping with contemporary trends, consider use of native plants.
- Seek species adapted to Red Hook growing conditions, to the particular soils, slope, moisture and sun exposure of each garden and to the anticipated capacity for garden maintenance.
- Use traditional popular exotics known not to invade the local ecosystem.
- Select water-thrifty plants. If irrigation is necessary, use drip irrigation and moisture sensors to minimize water use.
- Check with local gardeners and the Dutchess County Cooperative Extension to learn which plants are “least-likely-to-be-eaten” by deer and other browsing animals.
- Consider the impact of garden changes on the neighbors and on the character of the street.



Drought tolerant plants predominate in this cottage garden.



Electrified sconces have become a convention for exterior lighting of traditional houses.



Low level, shielded lighting is best for path and landscape illumination.



Graceful early to mid-20th c. style downlights can be lamped with LEDs and CFLs to be relatively efficient, and shielded for minimal glare and “Dark Sky” compliance .

10. Patterns for Yards: Exterior Lighting

Exterior lighting was minimal during most of Red Hook’s development. In the 20th century, a porch light or sconce at the door showed the way to the front entrance. Street lights if any were widely spaced. Heavy use of landscape lighting on residential properties only took hold in the middle of the 20th century. Today’s residents are accustomed to more outdoor illumination and depend on it for security. New understandings about the environmental and cost-benefits of reduced landscape lighting have produced the Dark Sky initiative (see Appendix C). This approach to exterior lighting dovetails with efforts to approximate the character of historic Red Hook.

Even illumination can improve night vision. Understanding night vision will help you plan appropriate exterior lighting. Eyes adapt to low light levels. The glare of a direct light source overrides that adaptation, and blinds the eyes to potential hazards in darker areas that would otherwise be visible.

Recommendations:

- Increase general visibility by reducing glare.
- Light the property so it contributes to the safety and continuity in the neighborhood.
- For way-finding—e.g. the paths to the front door, garbage enclosure and garage—and lighting for outdoor recreation areas, use inconspicuous contemporary “dark sky” fixtures that conceal the light source while illuminating paths, drives, and patios.
- If desired, use illumination without spill to light the street address.
- Adopt ways to reduce electricity use such as timers, light or motion sensors and fluorescent or LED lamps.
- Choose porch and front door lights consistent with the period of the house.
- Do not allow light trespass from one property to the next.
- Do not have outdoor lights on longer than functionally necessary.
- For existing houses, do not choose generic old-fashioned fixtures such as nautical lanterns and colonial lamplights foreign to the character of the house.
- Do not throw light on facades, trees and shrubs.
- Do not use unshielded exterior floodlights.

11. Patterns for Yards: Sustainable Landscape -- Marrying Traditional and Green

To minimize the carbon footprint and water use of landscape changes, land planning should build on the strengths of the site, conserve areas unspoiled where possible, and correct problems with simple efficient measures.

Among objectives are:

- Protect undisturbed soils.
- Work with the contours of the land; do not try to overpower them.
- Follow highest standards for storm water management and erosion control.
- Minimize impervious surfaces.
- Compost on site as much organic waste as possible.
- Preserve healthy existing vegetation where possible.
- Select area-appropriate drought and flood tolerant plants.
- Avoid use of invasive plants non-native to the local ecosystem.
- Select plants and features that require little maintenance from fossil fueled equipment.
- Conserve on-site water; minimize use of potable water for landscaping
- Prevent fertilizer run-off into waterways.
- Minimize use of pesticides.
- Plan the land to encourage walking.



Appendix A: Information Sources for Designers & Builders

Traditional Neighborhood Design/Smart Growth

<http://www.nrdc.org/smartgrowth/> is sponsored by the National Resources Defense Council and contains a set of resources for homeowners, builders and others on designing and planning communities in an efficient, environmentally friendly manner.

Congress for the New Urbanism, available online at <http://www.cnu.org>,

“*Neighborhood Street Design Guidelines: An ITE Proposed Recommended Practice*,” ITE Journal, ITE, 2004.

Robert Steuteville, Philip Langdon, et al. (2009), *New Urbanism: Best Practices Guide*, Fourth Edition. Ithaca, NY: New Urban News Publications.

Brian Ohm, James LeGro, and Chuck Strunser (April, 2001; approved by the Wisconsin Legislature: July 28, 2001), *A Model Ordinance for a Traditional Neighborhood Development*. Madison, WI: University of Wisconsin Extension. www.urpl.wisc.edu/people/ohm/tndord.pdf.

Rural by Design, Randall Arendt, Elizabeth A. Brabec, Lincoln Institute of Land Policy, Environmental Law Foundation, University of Massachusetts at Amherst. Center for Rural Massachusetts

A Pattern Book for Neighborly Houses The Institute for Classical Architecture & Classical America NY, NY . Habitat for Humanity, by Urban Design Associates, Pittsburgh PA 2007.

Peter Calthorpe (1995), *The Next American Metropolis: Ecology, Community, and the American Dream*, 3rd edition. New York, NY: Princeton Architectural Press.

Traditional Building

Traditional Building

An excellent resource for locating manufacturers and tradesmen.
www.traditionalbuilding.com

www.oldhouseonline.com opens to an array of Old House periodicals and more.

Old House Journal Magazine, *Old-House Interiors*, *Early Homes*

Old House Journal is full of useful articles for builders and homeowners, and especially owners of traditionally designed houses. Published 6 times a year. Many articles are also available online at www.oldhousejournal.com

Foulks, William G. *Historic Building Facades. The Manual for Maintenance and Rehabilitation*. New York: John Wiley and Sons, Inc., 1997.

Poore, Patricia. *The Old House Journal Guide to Restoration*. New York: Penguin Books, 1992.

Taylor, Julie, ed. *Northeast Preservation Sourcebook*. Vienna, VA: Preservation Publications, LLC, 1999. A directory of 6,500 regional preservation suppliers, including manufacturers, contractors, and design professionals. Updated frequently.

The National Trust for Historic Preservation offers useful guidance for owners of vintage buildings on such subjects as weatherization and lead paint. A visit to their website links you to countrywide efforts to maintain America's legacy.

<http://www.preservationnation.org/issues/>

National Park Service (NPS)/Department of the Interior offers restoration standards, design guidelines and useful technical information including the entire preservation briefs and tech notes series. An easy to use, detailed and illustrated guide to the Secretary of the Interior's Standards for Rehabilitation is available at

www.nps.gov/history/hps/tps/standguide/

Preservation Briefs provide guidance on preserving, rehabilitating and restoring old and historic buildings. <http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

Tech Notes are similar to Preservation briefs and offer case studies of restoration problems and solutions. They are available at:

<http://www.nps.gov/history/hps/tps/technotes/tnhome.htm>

Historic New England

Historic New England offers information on subjects such as historic paint colors, funding sources, finding contractors, and more. See especially their Preservation and Publications listings.

www.historicnewengland.org

Sustainable Design

Wilson, Alex, *Your Green Home, A Guide to Planning a Healthy, Environmentally Friendly New Home*, New Society Publishers, Canada, 2006. This is a good general guide to green house building from a leader in the field.

Building Green/Environmental Building News: a reliable, up-to-date source for the latest information on green building products, research, and practices. <http://www.buildinggreen.com>.

Sustainable Landscapes

Thompson, J. William and Sorvig, Kim, *Sustainable Landscape Construction: A Guide to Green Building Outdoors*. Washington, D.C., Island Press, 2000.

Authoritative discussion of environmentally progressive landscape planning and construction approaches. Excellent guidance on water use, energy conservation, sustainable maintenance.

Style

The following are basic illustrated guides to American House styles:

Baker, John Milnes, *American House Styles*, W.W. Norton & Company, New York 1994

McAlester, Virginia and Lee, *A Field Guide to American Houses*, Alfred A. Knopf, NY 1986

Walker, Lester, *American Shelter, an Illustrated Encyclopedia of the American Home*, The Overlook Press, Woodstock, NY 1981.

Appendix B: Descriptions and Definitions

Glossary of Common Architectural Terms

Some definitions shown below are quoted from Cyril M. Harris. *Dictionary of Architecture & Construction*. New York: McGraw-Hill, Inc., 1993. Some are quoted from Baker H. Morrow. *A Dictionary of Landscape Architecture*. Albuquerque: University of New Mexico Press, 1987.

arch – a curved structure designed to support weight above. Arches can also be used as a decorative element on an exterior facade. Types of arches can include round, pointed, segmental, and Tudor.

architrave – in classical architecture, the lowest member of the entablature, the beam that spans from column to column, resting on column capitals.

backplate – a flat piece of wood or metal on a wall or ceiling to which fixtures or fittings are attached.

back prime – to apply paint or stain on the reverse or hidden side of an object, usually for protection against the weather; with wood, to provide protection from moisture so wood does not cup or become distorted.

baluster – a short, vertically-oriented member designed to support a handrail. A row of repeating balusters form a balustrade.

bay – a vertical opening on the exterior façade of a structure. This term is commonly used to describe a building's exterior dimensions. For example: 4 bays wide, 5 bays deep.

bay window – a window in a protruded bay, or the bay itself.

board and batten – a type of wall cladding for wood-frame houses; closely space, applied boards or sheets of plywood, the joints of which are covered by narrow wood strips.

bonding pattern – a repeated pattern of masonry units in a planar surface.

brace – a stiffener in a wall assembly, often diagonal.

bracket – any overhanging member projecting from a wall to support a weight (such as a cornice) acting outside the wall.

cheek wall – a narrow, upright section of wall, often forming the side of a masonry element such as a porch or stoop; in landscape construction, a wall built alongside a series of steps to retain abutting earth.

clapboard – a type of house siding consisting of horizontal beveled pieces of wood that are thinner at the top than the bottom.

column – a vertically-oriented structural support. In Classical architecture, the appearance and configuration of columns on a given structure was based upon one three schools of design known as Doric, Ionic, and Corinthian.

compressive strength – the maximum compressive stress which a material is capable of sustaining.
consolidation – binding wood fibers or other fragments together with a material such as epoxy to achieve an intact, durable form.

corbel – a Classical architectural element consisting of a decorative molding extending from a wall for structural support, decorative purposes, or both. Usually masonry.

corner board – a board which is used as trim on the external corner of a wood-frame structure and against which the ends of the siding are fitted.

cornice – a molded horizontal projection or mold that crowns or finishes the top of a wall, façade, building or storefront; the uppermost and most prominent part of a Classical entablature
course – a layer of masonry units running horizontally, sometimes as a decorative band.

crenellation – a decorative roof element designed to lend the appearance of a Medieval castle that consists of a series of vertical cutouts made into a parapet. Utilized at times in Gothic Revival architecture and various subtypes, such as Collegiate Gothic.

dentil – small, tooth-like moldings, usually found on a structure's cornice.

dormer – a structure projecting from a sloping roof that usually has a vertical window or vent
double hung window – a window with two sashes, one of which slides over the other.

downspout – a vertical pipe, often of sheet metal, used to conduct water from a roof-drain or gutter to the ground, subsurface pipe, splash block or cistern.

dutchman – a small piece or wedge inserted as filler to stop an opening, or, a small piece of material used to cover a defect, to hide a badly made joint etc.

eave – on a roof, the underside of the portion of the roof that projects beyond the edge of a wall.
entablature – in Classical architecture, beams or horizontal band (molds) supported by columns
façade – the exterior face of a building which is the architectural front, sometimes distinguished from the other faces by elaboration of architectural or ornamental details.

entasis - the intentional slight convex curving of the vertical profile of a tapered column; used to overcome the optical illusion of concavity that characterizes straightsided columns.

facade – external face or elevation of a building, especially the principal front.

fanlight – a semicircular window opening over a doorway. See also Transom.

flashing – a thin impervious material placed in construction (e.g. in mortar joints and through air spaces in masonry) to prevent water penetration and /or to provide water drainage, esp. between a roof and wall, and over exterior door openings and windows.

fascia – a flat board with a plain vertical face at the eaves level. Rain gutters are often mounted on it.

frieze – the central portion of a Classical entablature, located between the architrave below and the cornice above, also horizontal trim connecting the siding and cornice at the top of a façade (exterior) or wall (interior).

gable roof – a type of roof containing a triangle-shaped vertical surface between a roof’s ridge and eaves.

galvanic action – an electrochemical action which takes place when dissimilar metals are in contact in the presence of an electrolyte, resulting in corrosion.

http://www.pemnet.com/design_info/galvanic.html gives a basic description of the phenomenon.

galvanized metal – galvanized iron sheet metal of iron coated with zinc to prevent rusting; used extensively for flashings, roof gutter, gravel stops, flexible metal roofing, etc.

gambrel roof – a type of roof in which each of its sides has two different slopes between the central ridge and the eaves. Commonly found on Dutch Colonial structures.

glazing – setting glass in an opening; the glass surface of a glazed opening.

glazing bar – one of the vertical or horizontal bars within a window frame which hold the panes of glass; a muntin.

half-timbering – the use of exposed wood framing on exterior of a structure. Originally used on Medieval-era structures in Europe, it is commonly associated with Tudor Revival structures in the United States and is often false half-timbering, purely a decorative element.

hipped (hip) roof – a roof which slopes upwards from the adjoining sides of a building, requiring “hip” rafters at the corners.

keystone – on an arch, the stone located at the highest point, defining the position of the other stones that make up the rest of the arch.

knee wall – a low wall that is less than one story tall and normally meets a sloping roof or ceiling.

lancet window – also known as a pointed arch window, these are narrow, tall windows in which the top of the opening is curved, with the two vertical sides meeting at a point. Common on Gothic Revival structures.

lattice – a network, often diagonal, of strips, rods, bars, laths, or straps of metal or wood, used as protection, screening or for airy, ornamental constructions.

laylight – a glazed opening in a ceiling to admit light (either natural or artificial) to a room below.

leader – a vertical pipe, often of sheet metal, used to conduct water from a roof-drain or gutter to the ground, subsurface pipe, splash block or cistern.

lime mortar – a mortar made by mixing lime putty and sand; often used in historic masonry because of its flexibility and compatibility with softer masonry units.

lintel – a horizontal member located above a window or other opening.

louver – an assembly of sloping, overlapping blades or slats; may be fixed or adjustable; designed to admit air and/or light in varying degrees and to exclude rain and snow; esp. used in doors, windows and the intake and discharge of mechanical ventilation systems.

mass – the physical size and bulk of a building or structure.

medallion – a decorative circular or oval shaped ornament.

meeting rail – in a double-hung window, the horizontal member at the top of the lower sash, or the horizontal member at the bottom of the upper sash.

modillion – a horizontal bracket or block at the underside of a cornice.

molding – a member of construction or decoration so treated as to introduce varieties of outline or contour in edges or surfaces...as on cornices, capitals, bases, door and window jambs and heads, etc. may be of any building material, but almost all derive...from wood ...or stone prototypes.

muntin – a secondary framing member to hold panes within and window, window wall or glazed door; also called a glazing bar, sash bar, window bar, or division bar.

oculus - a circular window or opening, often placed in a central location on a structure's façade.

parapet – a wall at the edge of a roofline, often extending beyond it, that defines the end of the structure's façade and the beginning of the roof.

pediment – the triangular surface of a gable roof, or a similarly-styled triangular molding surrounding a window or entryway.

pilaster – an engaged column or pier; a simulated pillar that projects slightly from the wall, often with capital and base.

plumbing vent – or stack vent or soil vent pipe; a pipe penetrating the roof that vents sewer gasses from household drains.

portico – a porch or covered walk consisting of a roof supported by columns, often at a structure's entry.

profile – in architecture, the outline of a built assembly.

quoins – decorative brickwork or stonework utilized at the corners of a structure's exterior walls.

rafters – rectangular timbers used in the construction of pitched roofs supporting the roof covering.

rail – a horizontal piece in a frame or paneling as a door rail, or in the framework of a window sash
ridge – line at the intersection of upper edges of two sloping roof surfaces.

rosette – a round pattern with a carved or painted conventionalized floral motif; a circular or oval decorative wood plaque use in joinery, such as one applied to a wall to receive the end of s stair rail; an ornamental nailhead or screwhead.

sandblast – to use sand, propelled by an air blast on metal, masonry, concrete, etc., to remove dirt, rust, or paint, or to decorate the surface with a rough texture.

sash – a frame that encloses a window’s glass surface.

sheathing – the covering (usually wood boards, plywood, or composite boards) placed over exterior studding or rafters of a building; provides a base for the application of wall or roof cladding.

shingle – a roofing unit of wood, asphaltic material, slate, tile, concrete, asbestos cement, or other material cut to stock lengths, widths, and thickness; used as an exterior covering on sloping roofs and side walls; applied in an overlapping fashion.

side light – a framed area of fixed glass at the side of a door or window.

sill – the lowest horizontal member at the bottom of a wood framed wall into which posts and studs are tenoned. It also refers to the lowest horizontal member in a frame or opening for a window or door.

skylight – in a roof, an opening which is glazed with a transparent or translucent material; used to admit diffused light to the space below.

soffit – the exposed undersurface of any overhead component of a building, such as an arch, balcony, beam, cornice, lintel, or vault.

spacer bar – a metal or plastic element used to separate layers of architectural glass.

splash block – a small masonry block laid on the ground below a downspout to carry roof drainage away from a building and to prevent soil erosion.

springer – the lowest stone on each side of an arch.

stile – one of the upright structural members of a frame, as at the outer edge of a door or window sash.

stucco – an exterior wall covering made of plaster applied over wood or metal lath.

terra-cotta – hard, unglazed fired clay; used for ornamental work and roof and floor tile.

tongue and groove flooring - wood flooring boards joined by the insertion of the tongue of one board into the corresponding groove of the adjacent board.

transom – a glazed area or window located above a doorway or other opening.

valley – the trough or gutter formed by the intersection of two inclined planes of a roof.

voussoir – a wedge-shaped stone used in the construction of an arch.

waterfall awning – rigid curved metal framework with a stretched awning cover.

window hood – a projected architectural element over a window opening; also called a hood mold or label.

Sustainable Landscape Planning: Glossary of Green Building Terms

Definitions culled from a glossary from a LEED (Leadership in Energy and Environmental Design of the U.S. Green Building Council) publication for New Construction can help you manage your property in environmentally desirable ways.

biodiversity - the variety of life in all forms, levels and combinations, including ecosystem diversity, species diversity, and genetic diversity.

drip irrigation - a high-efficiency irrigation method in which water is delivered at low pressure through buried mains and sub-mains. From the sub-mains, water is distributed to the soil from a network of perforated tubes or emitters. Drip irrigation is a type of micro-irrigation.

ENERGY STAR rating - the rating a building earns using the ENERGY STAR Portfolio Manager to compare building energy performance to similar buildings in similar climates. A score of 50 represents average building performance.

erosion -- a combination of processes in which materials of the earth's surface are loosened, dissolved or worn away, and transported from one place to another by natural agents (such as water, wind or gravity).

graywater (also spelled greywater and gray water) - defined by the Uniform Plumbing Code (UPC) in its Appendix G, titled "Graywater Systems for Single-Family Dwellings," as "untreated household wastewater which has not come into contact with toilet waste. Graywater includes used water from bathtubs, showers, bathroom wash basins, and water from clothes-washer and laundry tubs. It shall not include wastewater from kitchen sinks or dishwashers."

The International Plumbing Code (IPC) defines graywater in its Appendix C, titled "Graywater Recycling Systems," as "wastewater discharged from lavatories, bathtubs, showers, clothes washers, and laundry sinks."

Some state and local authorities allow kitchen sink wastewater to be included in graywater. Other differences with the UPC and UOC definitions can probably be found in state and local codes. Project teams should comply with the graywater definitions as established by the authority having jurisdiction in their areas.

greenhouse gases - gases such as carbon dioxide, methane and CFCs that are relatively transparent to the higher-energy sunlight, but trap lower-energy infrared radiation.

heat island effect - occurs when warmer temperatures are experienced in urban landscapes compared to adjacent rural areas as a result of solar energy retention on constructed surfaces. Principal surfaces that contribute to the heat island effect include streets, sidewalks parking lots and buildings.

impervious surfaces - surfaces that promote runoff of precipitation volumes instead of infiltration into the subsurface. The imperviousness or degree of runoff potential can be estimated for different surface materials.

invasive plants - both indigenous and non-indigenous species or strains that are characteristically adaptable, aggressive, have a high reproductive capacity and tend to overrun the ecosystems in which they inhabit. Collectively they are one of the great threats to biodiversity and ecosystem stability.

light pollution - waste light from building sites that produces glare, is directed upward to the sky or is directed off the site.

native (indigenous) plants - plants that have adapted to a given area during a defined time period and are not invasive. In America, the term often refers to plants growing in a region prior to the time of settlement by people of European descent.

open-grid pavement - defined for LEED purposes as pavement that is less than 50% impervious and contains vegetation in the open cells.

perviousness - the percent of the surface area of a paving material that is open and allows moisture to pass through the material and soak into the earth below the paving system.

regionally extracted materials - for LEED for New Construction purposes, projects must have their sources for materials within a designated radius of the project site.

remediation - the process of cleaning up a contaminated site by physical, chemical or biological means. Remediation processes are typically applied to contaminated soil and groundwater.

stormwater runoff - water volumes that are created during precipitation events and that flow over surfaces into sewer systems or receiving waters. All precipitation waters that leave project site boundaries on the surface are considered to be stormwater runoff volumes.

sustainable forestry - the practice of managing forest resources to meet the long-term forest product needs of humans while maintaining the biodiversity of forested landscapes. The primary goal is to restore, enhance and sustain a full range of forest values—economic, social and ecological.

wetland vegetation - plants that require saturated soils to survive as well as certain tree and other plant species that can tolerate prolonged wet soil conditions.

Appendix C: Building & Landscape Elements

Roofing Information

Jenkins, Joseph. *The Slate Roof Bible: Understanding, Installing and Restoring the World's Finest Roof*. Joseph Jenkins, Inc., 2003.

“From Asbestos to Zinc: Roofing for Historic Buildings.”

This site is an electronic version of an exhibit prepared for roofing professionals attending the 1999 Roofing Conference and Exposition for Historic Buildings in Philadelphia, Pennsylvania. With good illustrations, it includes information on different types of historic roofing and gutters and modern variations. <http://www.nps.gov/history/hps/tps/roofingexhibit/introduction.htm>

“Preservation Brief No. 4: Roofing for Historic Buildings.”

available at <http://www.nps.gov/history/hps/tps/briefs/brief04.htm>

“Preservation Brief 29: The Repair, Replacement, and Maintenance of Historic Slate Roofs.” Available at <http://www.nps.gov/history/hps/tps/briefs/brief29.htm>.

“Preservation Brief 30: The Preservation and Repair of Historic Clay Tile Roofs.”

Available at <http://www.nps.gov/history/hps/tps/briefs/brief30.htm>.

Slate Roof Stand-Ins: A buyer's guide to man-made substitutes for natural stone.

Available at www.oldhousejournal.com/magazine/2002/july/slate.shtml.

“Standing Seam Metal Roof” *Old House Journal*, July/August 2002 .

Masonry information

London, Mark. *Masonry: How to Care for Old and Historic Brick and Stone*.

Washington, D.C.: The Preservation Press, 1988.

“Brick by Brick” *Old House Journal*, May/June 1994.

Includes a glossary of brick types and masonry materials to aid in matching.

“Mastering Brick Maintenance,” *Old House Journal*, May June 1994.

Good guide to maintaining brick exteriors.

“Preservation Brief 01: Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings,” available at <http://www.nps.gov/history/hps/tps/briefs/brief01.htm>.

“Preservation Brief 02: Repointing Mortar Joints in Historic Masonry Buildings.”

Available at <http://www.nps.gov/history/hps/tps/briefs/brief02.htm>.

“Preservation Brief 22: The Preservation and Repair of Historic Stucco.”

Available at <http://www.nps.gov/history/hps/tps/briefs/brief22.htm>.

Paint: Lead and safety

www.epa.gov/getleadsafe This site describes the risks of lead paint and the new certification program for dealing with lead paint.

Go to nps_hps-info@nps.gov to order a hard copy of *Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing*.

Delany, Marc and Livingston, Dennis. *Maintaining a Lead Safe Home: A Do-It-Yourself Manual for Home Owners and Property Managers* paper, 1997.

Paint schemes

Rossiter, E.K. and F. A. Wright. *Authentic Color Schemes for Victorian Houses: Comstock's Modern House Painting* 1883. Mineola, NY: Dover Publications, Inc. 2001

An unabridged reproduction of an 1883 painting guide with many color plates showing authentic color schemes for Queen Anne houses.

Moss, Roger. *Century of Color: Exterior Decoration for American Buildings, 1820-1920*. Watkins Glen, NY: The American Life Foundation, 1981.

Includes many historic color plates of Four Squares, Colonial Revival, and Queen Anne style houses and an architectural glossary.

Moss, Roger W. (Editor). *Paint in America: The Colors of Historic Buildings*. Washington, D.C.: The National Trust for Historic Preservation, 1994.

A more technical guide that includes chapters on paint analysis techniques, paint technology, and painting techniques.

Moss, Roger W. and Winkler, Gail Caskey, *Victorian Exterior Decoration. How to Paint Your Nineteenth Century American House Historically*. New York: Henry Holt and Co., 1992.

A clearly written guide to paint treatments and shifts in fashion through the 19th century including advice on how to achieve historic colors with currently available products.

Bock, Gordon. "Colorful Issues in Choosing Exterior Paint," article available at www.oldhousejournal.com/magazine/2001/march_april/exterior_paint/default.shtml.

"Preservation Brief 10: Exterior Paint Problems" <http://www.nps.gov/history/hps/tps/briefs/brief10.htm>. Good leads on proper preparation, application, paint selection.

"Preservation Brief 28: Painting Historic Interiors." <http://www.nps.gov/history/hps/tps/briefs/brief28.htm>. Although this article is about interior paints, it includes useful sections on paint investigation, paint formulations, and surface preparation.

The entire National Trust Historic Color paint collection listing colors in all National Trust Properties is found at this site.

<http://www.preservationnation.org/about-us/partners/corporate-partners/valspar/paint.html>

An associated link offers an extensive array of colors to help you with paint selection.,

<http://www.valsparpaint.com/en/explore-colors/color-selector/index.html#>.

Shutters

http://www.oldhousejournal.com/magazine/2002/august/shutters_dos_donts.shtml

Brief clear article on shutters.

Additions and New Construction

Byard, Paul. *The Architecture of Additions: Design and Regulation*. New York: W.W. Norton, 1999. A thoughtful architect/lawyer examines significant and often controversial additions through history. A helpful text for designers and land use board members.

Shirley, Frank. *New Rooms for Old Houses*. Newton, CT: Taunton Press, 2007. The architect author helps readers work comfortably within American house styles to meet new space needs. Illustrated with examples of successful alterations/additions.

Outdoor lighting

<http://www.darksky.org/outdoorlighting> Recommendations from the International Dark Sky Association explain objectives and economies of modified lighting. Can be incorporated into codes as a standard.

Landscape Precedents

“Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes.” Available at <http://www.nps.gov/history/hps/tps/briefs/brief36.htm>

<http://www.nps.gov/history/hps/tps/briefs/brief32.htm> This Preservation Brief provides excellent grounding in making historic properties accessible.

Adams, Denise Wiles, *Restoring American Gardens: An Encyclopedia of Heirloom Ornamental Plants*. Portland, Cambridge: Timber Press, 2004.

Well illustrated, inclusive, clear overview of the development of American garden tastes and plant selections. Especially useful for those interested in middle class garden habits.

Doell, M. Christine Klim, *Gardens of the Gilded Age*. Syracuse, New York: Syracuse University Press, 1986. An apt and excellent overview of garden design and practice on prosperous properties in the 19th century.

Downing, Andrew Jackson, *Landscape Gardening and Rural Architecture*. New York. Dover Publications, 1991 reprint of 1865 7th edition.

A primary source. Inspiration and advice from America’s tastemaker on home and grounds. Downing’s works launched a Hudson Valley landscape style that spread across the country.

Favretti, Rudy J., *For Every House A Garden: A Guide for Reproducing Period Gardens*. Chester, Connecticut: Pequot Press, 1977.

Thumbnail descriptions of period-appropriate gardens.

Favretti; Rudy J., and Putnam, Joy. *Landscapes and Gardens for Historic Buildings*. Nashville: American Association for State and Local History, 1978.

Leighton, Ann. *American Gardens in the Eighteenth Century “For Use or for Delight”*. Amherst: University of Massachusetts Press, 1986.

Leighton is an excellent first reference for information on plant usage.

Leighton, Ann, *American Gardens of the Nineteenth Century “For Comfort and Affluence”*. Amherst: University of Massachusetts Press, 1987. Leighton has culled contemporary garden writers, and plant catalogs to provide a bountiful overview of 19th century gardening.

Scott, Frank, *Victorian Gardens: The Art of Beautifying Suburban Home Grounds*. New York: D. Appleton and Co., 1879 (reprint) Watkins Glen: American Life Foundation.

A Downing disciple, Scott offers detailed instruction on landscape construction and plants and gives guidance on planning village improvements.

Sternberg, Guy. “Living History” *Old House Journal*, November/December 2002, pages 31-35.

Horticultural information

There are countless excellent contemporary how-to gardening books and references about classes of plants. Googling a topic will yield both authoritative information from experts and anecdotal lore from devoted gardeners. Some books listed below explore the benefits of native plants.

Dirr Michael A., *Dirr's Hardy Trees and Shrubs: An Illustrated Encyclopedia*. Portland, Oregon. Timber Press, 1997. This is an unparalleled basic reference.

Summers, Carolyn. *Designing Gardens With Flora Of The American East*. New Brunswick, New Jersey and London. Rutgers University Press, 2010.

Attractive volume by a Hudson Valley writer describing the benefits and uses of native plants.

Tallamy, Douglas W., *Bringing Nature Home*. Portland, Oregon. Timber Press. 2007.
Informed advocacy for use of native plants to promote ecosystems.

The Cary Institute of Ecosystem Studies in Millbrook, NY has programs that are open to the public on subjects related to land use, horticulture, ecology, horticulture and related topics. See <http://www.caryinstitute.org>.

Westchester County has a Native Plant Center with a display garden at Westchester Community College, www.nativeplantcenter.org, offers programs, trips and an annual native plant sale. The organization promotes increased use of native plants.

Cornell University is a leader in horticultural research and teaching. The University offers excellent downloadable publications on plantings and especially useful planting recommendations for developed areas. <http://hort.cals.cornell.edu/cals/hort/extension/publications.cfm>

Dutchess County's Cornell Cooperative Extension is at 2715 U.S. 44 Millbrook, NY 12545 (845) 677-8223 <http://www.ccedutchess.org/> Reach the local agent at dutchess@cornell.edu. The local Coop Extension offers programs and answers questions about gardening.

[Don't plant these!](#) is an excellent pdf created by the Village of Irvington NY Tree Commission showing the most serious invasive plants and best substitutes.

Tree selection, protection, pruning

<http://hort.cals.cornell.edu/cals/hort/extension/publications.cfm>

Cornell's DVD and online publications can help you select size- and culture- appropriate trees for your property. "Tough Trees for Tough Sites" (DVD) and "Recommended Urban Trees" (downloadable) are especially useful.

<http://www.ext.colostate.edu/pubs/garden/02926.html> Clear discussion of the importance of root health for tree survival; issues to address during construction.

Two authoritative pieces on tree topping problems.

<http://www.utextension.utk.edu/publications/spfiles/sp549.pdf>

<http://www.extension.iastate.edu/publications/sul7.pdf>