I. PRINCIPLES FOR PRESERVATION

In order to maintain Kirkwood's sense of place, property owners should strive to preserve the historic integrity of their buildings.

A. Approaches

There are five distinct approaches for the treatment of historic properties:

- *Preservation*, which aims to retain all historic fabric through conservation, maintenance and repair;
- *Rehabilitation*, which emphasizes retention and repair of historic materials, with more latitude provided for replacement in cases where deterioration has set in;
- *Restoration*, which focuses on retention of materials from the most significant time in the property's history, while permitting removal of materials from other periods;
- *Reconstruction*, which re-creates history using all new materials; and
- *Adaptive reuse,* which uses structures for purposes other than those originally intended, allowing for new or contemporary uses while preserving the characteristics of the building that make it historic.

B. Considerations

Choosing the most appropriate treatment depends on the following considerations:

- Relative importance in history;
- Physical condition;
- Proposed use; and
- Mandated code requirements.

C. Standards Specific to Historic Preservation in Kirkwood

In the sections that follow, standards and guidelines were written specifically for Kirkwood. It is these specific standards and guidelines that form the basis of the Landmarks Commission's determination of whether or not building plans are in conformance.

D. Secretary of Interior Standards

The Landmarks Commission utilizes the Standards written by the Secretary of Interior of the National Park Service. The Standards, as follow, are applied to projects in a reasonable manner, taking into consideration economic and technical feasibility.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual

qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

II. STANDARDS FOR MAINTENANCE, REHABILITATION AND ALTERATION OF HISTORIC STRUCTURES

Maintenance is the key to preserving the character of historic buildings and neighborhoods. This section, arranged in alphabetical order, contains important items to consider when maintaining, replacing or repairing items on a historic building.

KEY CONCEPTS

- Maintain original building materials.
- Repair rather than replace.
- Replace only when original material cannot be repaired.
- If replacing, then match materials as closely as possible.

A. Architectural Details, Features and Materials

Architectural detailing is a major component in defining a building's character and style. Original architectural detailing should be preserved and maintained. If the details need to be replaced, the new materials should match the original as closely as possible. *This includes eaves, brackets, dentils, cornices, moldings, trim work, shingles, shutters, columns, pilasters, balusters, gingerbread, verge boards or any decorative or character-defining features.*

PREFERRED

- Preserve and maintain original details and features that contribute to the character of the building.
- New details and features should match originals in material and design.

DISCOURAGED

- The removal or change of details if original to the building.
- The addition of details unless original and authentic to the building and accurately based on physical, pictorial, or historical evidence (not guesswork) in materials, scale, location, proportions, form, and detailing.
- The covering of details with vinyl or aluminum or other artificial siding.
- The use of stock or out of proportion details rather than matching original.

B. Architectural Metals

Architectural metals often make up much of the distinctive character of a building. Cast iron, tin, copper and wrought iron were used for structural columns, windows, balconies and

decorative architectural details such as cornices and bulkheads. The life of these details will be prolonged if they are kept painted and free from damage. Roof damage can affect these elements, especially cornices, by allowing water to penetrate the joints, leading to rust and deterioration of the concealed inside-facing surfaces. If metal features are damaged beyond repair, replace elements with new in-kind materials matching the original feature.

PREFERRED

- Retain and maintain metal elements that contribute to the character of the building.
- Ensure that water is not standing on or behind these elements, causing rust or deterioration. Roof or gutter damage can also damage these decorative elements.
- Properly prepare metals before painting. Remove all corrosion and repair any damage. Prime all surfaces with appropriate metal primer, if required, and follow paint manufacturer's instructions. Oil based paint is typically recommended for exterior use.
- Repair metal features when possible, or replace materials in kind, when existing material is too deteriorated to repair.

DISCOURAGED

- Removal or alteration of original metal features of the building.
- Replacement of historic metal with new "updated" replacement materials.
- Neglect of moisture problems due to roof or gutter damage. Water will deteriorate metal and cause irreparable damage.
- Exposure of metal details if they were originally intended to be painted. Do not use cleaning agents that will harm the finish on the metal, whether it is a natural patina, paint or sealant. It is typically not recommended to remove patina from metal, as the patina may be protecting the metal from weather damage.
- Replacement of a feature if it can be repaired.
- Creation of a false historical sense by adding embellishment to a building when it had none before.
- Addition of features that are not appropriate for the style of the building or are incompatible in size, scale, material and color.

C. Awnings

Canvas awnings for windows and porches were common features of buildings in the early 20th century. With the widespread adoption of air conditioning after World War II, the use of awnings declined. In recent years the use of awnings has increased because they are attractive and save energy.

PREFERRED

- May be added on buildings at traditional locations such as over windows and doors and attached to porches.
- Should be of canvas, vinyl-coated, or acrylic material.
- Should be of colors to blend with the building.
- Should be made to fit the opening. Rectangular window and door openings should have straight-across, shed-type awnings, not bubble or curved forms. Awnings over windows with rounded or oval shapes should be curved to match the opening.

DISCOURAGED

- The covering or concealment of significant architectural details.

D. Concrete

Whenever possible, preserve concrete features of a building, such as steps, walkways, porches, foundations, chimneys and details. Concrete is often reinforced with metal rebar that corrodes over time due to water infiltration and the freeze/thaw cycle. Find the source of deterioration prior to patching concrete or replacing damaged components. Provide proper

slope for water drainage away from concrete foundations.

PREFERRED

- Match repaired concrete to original concrete as closely as possible in color and texture.
- Find the source of deterioration (typically rusted reinforcement bar) and replace damaged parts.
- Provide proper slope for drainage so that water does not stand on concrete surfaces and moves away from concrete foundations.

DISCOURAGED

- Patching of concrete without removing the source of deterioration.
- Using a patching material that does not match original concrete. Make sure new concrete will bond properly with existing concrete in order to avoid water penetration and further damage.
- Painting concrete.

E. Doors and Entrances

Doors and door surrounds are important features in defining the style and character of a building. For example, Colonial Revival houses typically have simple six-panel doors. Greek Revival houses typically have sidelights and transoms. Original doors should be preserved and maintained and original features should be repaired rather than replaced.

PREFERRED

- Surrounds, sidelights, transoms, and detailing should not be removed or altered.
- New doors should not replace historic doors at the front entrance or at side entrances which are visible from the street.
- Maintain the original size, shape, and placement of the door opening.
- If a replacement door is necessary, select a door that is as close as possible to the original. In replacing missing original doors, replacement doors should be similar in style, materials, glazing (glass area) and lights (pane configuration). If the original design is unknown, a secondary entrance may contain an original door which can be moved to the main entrance. Salvage companies may also have historic doors available.
- Metal storm doors, painted with a color that blends with the house and matches the primary door as closely as possible and does not obscure the primary door, are acceptable.
- "Decorator" designs available from wholesale hardware stores usually do not work for front entrances. These doors are not similar enough to the historic door designs of most historic dwellings. Doors with fake leaded glass inset designs also do not work for front entrances. For Craftsman/Bungalow dwellings, fifteen-light wood doors are readily available from wholesale stores and are acceptable for front entrances.
- If doors are introduced where none existed originally, they should be added at the rear or side facades of buildings where not visible.

DISCOURAGED

- Use of shiny aluminum or painted finishes.
- Adding sidelights, transoms, fanlights or other features where none previously existed.

F. Foundations

When repairing the foundation of the building, maintain the original materials and appearance. Leave porch pier foundations open or infill with wood lattice or vertical wood slats. Leave unpainted masonry foundations unpainted.

G. Masonry

Many of Kirkwood's buildings are of brick or brick veneer

construction. Brick can last for hundreds of years if well maintained. The key to brick and mortar preservation is to keep out water and continue to use a soft mortar when repair is needed. Low pressure cleaning with a garden hose is best. Abrasive cleaning such as sandblasting erodes the skin of the brick and can cause water infiltration. The use of hard mortars like Portland cement can cause the brick to crack and break when it cannot expand and contract with temperature changes. It is not appropriate to install artificial masonry or stone veneer to the building façade to mask original masonry. Veneer added later inappropriately should be removed in its entirety if it has not achieved historical significance.

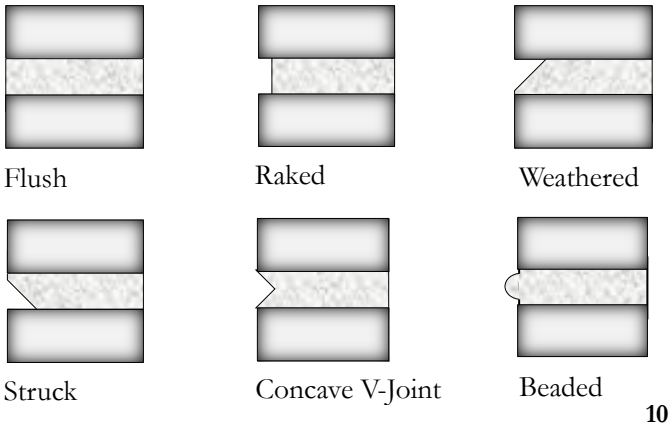
Historically, most masonry buildings were not painted. It was not uncommon, however, to paint buildings to hide poor masonry work or mismatched or deteriorated brick or stone. Buildings may have been painted with the desire to protect the masonry from further deterioration after it had been sandblasted or otherwise damaged. When repainting a historic building, care should be taken not to cause further damage. The removal of paint is typically accomplished through chemical methods. Testing in inconspicuous areas should be done prior to moving forward with paint removal on the remainder of the building. Stripping should be done utilizing the gentlest methods available, with chemical strippers that have been proven to be safe on historic masonry materials.

New mortar joints should match original joints in width, depth, color, raking profile, composition, and texture. See Figure 1: Typical Joint Profiles.

PREFERRED

- Materials original to the building should be preserved and maintained.
- Masonry should be cleaned only when necessary to remove bad stains or paint build up. If there are only a few small stains or a little dirt on the walls, it may be best to leave it rather than risk water or chemical damage.
- If cleaning is necessary, start with a gentle detergent cleanser. If brick walls have bad stains or paint is to be removed, use chemical stain and paint removers carefully. Always conduct a small test patch first on an inconspicuous part of the building to determine the effects of the chemicals. Professional help may be warranted for these kinds of jobs.
- Repairs should be done carefully to match the original brickwork and mortar. Use hand tools, not electric power saws, to remove mortar.
- Repointing (fixing the mortar between the bricks) should match the original brick and mortar regarding width, depth, color, raking profile, composition, and texture.
- Features that are missing may be replaced with other brick to match. Salvage companies may have molded or decorative bricks to match those missing on a building.

Figure 1: Typical Joint Profiles



DISCOURAGED

- Sandblasting or any kind of abrasive cleaning.
- Cleaning with high pressure water which exceeds 600 pounds per square inch.
- Addition of water-repellent coatings unless repairs have failed to stop water intrusion.
- Addition of silicone-based water sealants. Water sealants can have the effect of trapping water inside the brick and damaging interior walls.
- Painting of brick not previously painted, unless the brick and mortar is extremely mismatched from earlier repairs or patching. Previously sandblasted brick or brick in poor condition may be painted to provide a sealing coat.
- Applying stucco to brick.
- Repointing with Portland cement or other hard mortars. Use only soft mortars to match the original composition. If the original composition cannot be determined, use a historic compound such as one part lime and two parts sand.

H. Mechanical Equipment

Use shutters, operable windows, porches, curtains, awnings, shade trees and other historically appropriate non-mechanical features to reduce the heating and cooling loads. Place exterior heating, ventilation, air conditioning and solar paneling equipment where it is not visible from the front elevation. Recess equipment from the edge of the roof to make it as nonvisible as possible. If equipment cannot be concealed, specify equipment housing in a color that will blend with the historic facade. As a last resort, locate equipment behind evergreen vegetation or screening designed to blend visually with the facade.

I. Porches

Porches not only contribute to the character of a house, but also have a large social impact on the community as the public first impression of the house. Porches were much used in the days before central air conditioning and are usually rich in architectural detail. Maintain open design, architectural details, historic materials, supports and roof characteristics of porches.

PREFERRED

- Maintain all architectural details, such as but not limited to, friezes, corner brackets, railing, supports and balusters.
- Repairing a railing is better than replacing one. If a railing is replaced, the new code may require that the top of a new rail be taller than the old one, changing the proportion of the porch.

DISCOURAGED

- Adding front porches where none previously existed.
- Enclosing or screening in the front porch is not allowed.

J. Roofs, Dormers, Chimneys and Gutters

Regular maintenance of roofs, dormers, chimneys and gutters will ensure preservation of historic properties. Roofs, dormers and chimneys contribute to the visual impact and architectural character of a property and should not be radically altered. Gutters and downspouts should be maintained in their original placement and appearance with downspouts situated so as to minimize visual impact.

PREFERRED

- Maintain the shape and pitch of the original roof.
- Maintain overhangs.
- Maintain brackets and ornamental wood work.
- Replace existing roofing materials with the same type or with

materials originally used on the house.

- Maintain original chimney placement, appearance and materials. See Masonry section herein for maintenance of these materials.
- Maintain the original guttering system, especially hidden gutters or eaves designed without gutters. Use the same profile and materials as the original system.

DISCOURAGED

- Alteration of the roofline to gain interior space.
- Removal of chimneys.
- Addition of modern-looking, false chimneys.
- Creation of a new dormer on the façade where none previously existed.

K. Siding and Trim

Historic residential buildings utilized wood cladding and trim as a primary character-defining feature. Wood cladding includes clapboard siding, wall shingles, and board and batten applications. Wood was also utilized in the construction of columns, brackets, porches, fascias and eaves, and other decorative elements. Many styles of houses were defined by the use of decorative wood shingles and siding. The Queen Anne and Folk Victorian Styles typically have some application of decorative shingles. These character-defining features should be maintained throughout the life of the house.

Substitute sidings, such as aluminum and vinyl, are not recommended as they damage the integrity of a historic house by altering the depth and dimension of walls, doors and windows. Substitute siding also cannot achieve the trim detail that wood offers and its application may lead to the removal or covering of decorative details. Synthetic siding is not always maintenance free as seams around windows and doors still need to be caulked, original colors fade, and dirt builds up in grooves. The color choices of substitute siding is often limited, making historic multicolored paint schemes difficult to achieve. Many of these siding materials may quickly look outdated, whereas wood siding is timeless and will not go out of fashion. Placing siding and aluminum trim over existing wood could trap moisture behind the new siding thereby causing rot, hidden fungi and mold growth, but this is preferred if the alternative is total removal of the original siding. The Landmarks Commission recommends that new materials match the original while recognizing that this approach is not always cost effective.

PREFERRED

- Maintain rather than replace wood or original siding with another material.
- Preparation of wood surfaces and proper priming will add longevity to paint applications.
- Paint stripping should be done by the gentlest means possible.
- Choose a paint scheme appropriate for the home's architectural style and the time period in which it was constructed and utilize high quality exterior paint.
- Deteriorated siding or decorative elements should be patched or consolidated in place, or replaced with in-kind materials.
- When replacing materials, match the overall dimension, thickness, profile, scale and finish of the original fabric.
- Apply corner boards, except in structures where they were not originally present such as Shingle style homes.
- Maintain the original size and profile of window frames, door-frames and soffits.
- Remove existing inappropriate siding that covers original, historic materials.
- Where wood cladding and trim are desirable but not economical, Hardie Board or fiber cement product is preferred.

- If synthetic siding is to be used, placement over original wood siding is preferred to total removal.

DISCOURAGED

- The application of new paint to existing deteriorated paint that has cracked or has too many layers.
- The installation of aluminum, vinyl, or other synthetic siding in place of the original, historic siding or building elements.
- The removal or covering of character-defining elements from a house.

L. Site Work (Including Hardscape, Fences and Landscaping)

Historic walkways and driveways should be maintained and resurfaced with the same material. If replacement is necessary, paving materials should be traditional to the home and the neighborhood. New walkways should use traditional placement, usually straight from the street or public sidewalk to the building entrance in pre-automobile homes and from driveway to the entrance in post-automobile development. If necessary, ramps or other access aids should be placed as unobtrusively as possible. New driveways should use traditional placement, usually straight along the side of the house. Parking areas should be located to the rear of the house or, with screening, to the side behind the front elevation. See Concrete section herein for more specific maintenance.

Historic fences and retaining walls should be maintained and not removed. Use styles and traditional materials (wood, wrought iron, masonry) appropriate to the house and the district. New fences should be placed behind the front elevation of the building; privacy fences should be at or behind the rear elevation. The location of fences in front yards is disruptive to continuous neighborhood lawns and is discouraged. Chain link fence enclosures should be situated out of the public view or screened with a traditional fence or evergreen vegetation.

Recreational structures such as pools or play equipment should be placed unobtrusively and to the rear of the property as possible. Placement of structures to the side of the property may be acceptable with a screening fence or evergreen vegetation. Modern decks are permitted at the rear of the house.

Landscaping and landscaping features were traditionally designed conjointly with the main building. Historic landscaping may serve to enhance a view to or from the main building, or to screen something, such as a foundation, from view. Mature trees should not be removed unless dead, diseased or a safety hazard. Native plants, screenings, buffers and historic landscape patterns should be maintained.

PREFERRED

- Maintain historic walkways and driveways in traditional materials.
- New walkways and driveways should respect traditional placement.
- Historic fences and retaining walls should be maintained.
- New fences should be appropriate in style and material to the house and district, and placed behind the front elevation.
- Recreational structures should be placed to the rear of the property.

DISCOURAGED

- Creation of circular drives where none existed historically.
- Parking in front of the façade of the house.

- Fences in front yards.
- Visible recreational structures.
- Modern decks at the front or side elevation.

M. Stucco

Stucco was applied to many of Kirkwood's buildings, either at the time of construction or in later years. If the stucco is important to the historic character of the building (as it is in many residential applications), it must be maintained as would any other exterior cladding. If the stucco was added inappropriately and masks historic architectural features, or was utilized to create architectural details that were not originally present, then it may be carefully removed to expose the historic facade.

PREFERRED

- Always remove loose stucco and repair damaged areas before painting.
- Patched areas should match original stucco as closely as possible in appearance and texture.
- Carefully remove stucco that was inappropriately applied to exterior facades and that masks historic features of the building.
- Install only historically-appropriate, authentic stucco.

DISCOURAGED

- The removal of stucco from a building where it was installed to mask damaged masonry, unless the underlying masonry will be restored to its original appearance. Stucco on a secondary facade is an appropriate repair for severely deteriorated masonry.
- Adding stucco to a building that has not been covered before.
- The installation of modern synthetic stucco systems.

N. Windows

Windows are the basic character-defining feature of a house. It is preferable to repair rather than replace original windows. If windows must be replaced due to complete deterioration and/or for energy savings, replace like windows for like windows. New windows on side and rear elevations should match historic windows in materials, size and design.

PREFERRED

- Maintain size and shape of openings.
- Keep the number of panes the same as the original.
- Aluminum clad/wood interior with simulated divided lights are approved replacement for all wood windows.
- The size of the shutters should match the size of the window.

DISCOURAGED

- The addition or removal of windows on the front façade.
- The addition of shutters where none previously existed.

III. STANDARDS FOR ALTERATION OF NON-HISTORIC STRUCTURES IN HISTORIC DISTRICTS

A historic district may contain non-historic structures that are designated as "non-contributing" resources to the district. Such structures are either (1) less that the historic age of 50 years or (2) if over 50 years old, too altered from original appearance to be considered contributing. Because these non-contributing resources are typically adjacent to historic places on the streetscape, the Landmarks Commission advises that alterations to non-contributing resources ought to compliment the architectural style of the home and the character of the historic district. Attention should be paid to the relationship of the house to its yard, the surrounding structures and the streetscape. The Standards of the previous section for maintenance, rehabilitation and alteration of contributing resources should be followed to ensure that once a resource reaches 50 years of age, it can then be considered contributing.

Any alterations should be in keeping with the architectural style of the home and should follow similar lines of the streetscape while addressing the impact of placement and size on neighboring homes. Features should be balanced with the streetscape to avoid too little or too much ornamentation. For example, large side windows may create privacy and lighting issues for neighboring historic homes and excessive recessed lighting in soffits, porches and overhangs may create visual discord.

PREFERRED

- Architectural styling should be proportional and compatible, especially in single-style architectural districts such as Central Place, Savoy or Craig Woods.
- Landscape (hard and soft) should complement existing in district.
- Window and door styles should match neighboring homes for placement and size.
- Where wood cladding and trim are desirable but not economical, Hardie Board or fiber cement product is preferred.

DISCOURAGED

- Disproportionate styles.
- Synthetic siding implementation if it conflicts with existing streetscape siding.
- Mixing and wrapping façades. Often the sides as seen from the streetscape are insufficient; e.g., the front is compatible, but the sides are not.
- Unbalanced features or too much ornamentation.
- Use of too much reflective material in window or other features.

IV. STANDARDS FOR DEMOLITION AND/OR RELOCATION

Demolition of landmarks, structures on landmark sites and buildings within local historic districts means permanent dismantling and removal of structures that may be historically and/or architecturally significant. Once an application for a demolition permit has been filed with the Building Department, a minimum automatic stay of 60 days is activated. The purpose of this period of review, which effectively and temporarily stays demolition, is to determine whether or not preservation of the structure should be encouraged and made a viable alternative.

At or about the end of the 60-day period, the action on the Certificate of Appropriateness for demolition will be set for a public hearing. At the public hearing, staff presents findings of fact on the structure, comments are received from the public, and the Landmarks Commission evaluates the case using the following criteria for determination:

- Is it historically and/or architecturally significant? If so, has it been altered and made insignificant?
- What is its history of use in relation to the neighborhood and comprehensive plan?
- Is adaptive reuse feasible and appropriate (e.g., changing use from residential to commercial; vice-versa, etc.)?
- If listed on the National Register of Historic Places, can tax credits be utilized?
- Can the resource be located to another site? Generally this approach would be a last resort to demolition.
- Additional reasonable considerations, including whether or not:
  - The structure poses an imminent threat to public health or safety.
  - Preservation causes undue economic hardship on the owner.
  - Proposed replacement structure is more appropriate and compatible with the historic character of the landmark or district than the structure proposed for demolition.

A determination is made by the Landmarks Commission through a motion to extend the stay of demolition up to a maximum of 270 days from the date of application; or, pending no motion, permitting a demolition when the minimum period of 60 days lapses. Procedures for the temporary stay of demolition are available upon request.

V. STANDARDS FOR NEW CONSTRUCTION

New construction should be architecturally compatible with the streetscape without exactly duplicating existing buildings. A new building should stand out as new, while adhering to the historic qualities of the neighborhood. It should seek to contribute to the district's future evolution just as the existing buildings show its past development. A newly constructed building should be a good neighbor both in design elements and features.

A. Design Elements

The design of buildings is based on the creation and organization of formal elements into a work of architecture. To accomplish this, the designer needs to look at the Alignment, Massing, Pattern, Proportion and Rhythm of the site and neighboring structures and understand how these elements work in composition with each other. For example, if all of the historic buildings are two stories, new construction should also be two stories.

1. Alignment

The alignment is the orientation of some object or set of objects in relation to others in order to form a straight line. The alignment of roof lines, structures heights, window heights, floor lines and setbacks are important to the context of a historic district. Structures or features of structures in a district that do not align with neighboring structures stand out and break the coherency of the streetscape. At the design review, the designer of the new structure should be prepared to explain the alignment with respect to the neighboring structures.

PREFERRED

- Orientation to the street: Most of the houses in Kirkwood's historic districts have an entry sequence of spaces from public (street and sidewalk) to semi private (a porch) to private (the house). As an example; most dwellings in the Jefferson-Argonne historic district have their fronts oriented towards the street and this characteristic should be maintained by new construction.
- Location, proportion, height, roof shape and depth of porches should be consistent with existing buildings. Porches which extend partially or fully across the main facade are recommended. Porch heights should be consistent with those of adjacent buildings. Porch depths should be a minimum of six feet.
- Foundation height: New construction should be consistent with existing foundation and floor to ceiling heights. Height of foundations should be a minimum of 1 foot, six inches and a maximum of two feet above grade.
- Floor-to-ceiling heights: Floor to ceiling heights need to match neighboring houses. Floor to ceiling heights should not be less than eight feet. See Figure2: Alignment.
- Placement on the lot: Front and side yard setbacks should respect the setbacks found along the block. See Figure3: Alignment of Home to Street.
- Design elements not identified as "Preferred" should be discussed with the Landmarks Commission at the early design phase meeting.

Figure 2: Alignment. New construction should be consistent with existing foundation and floor-to-ceiling heights.

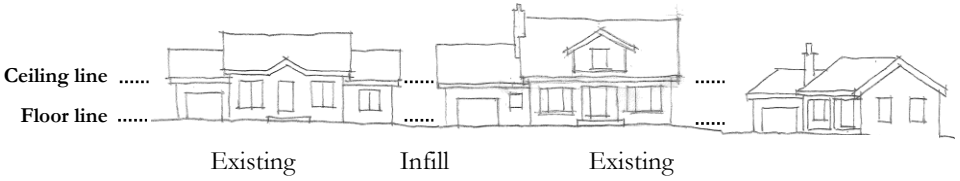
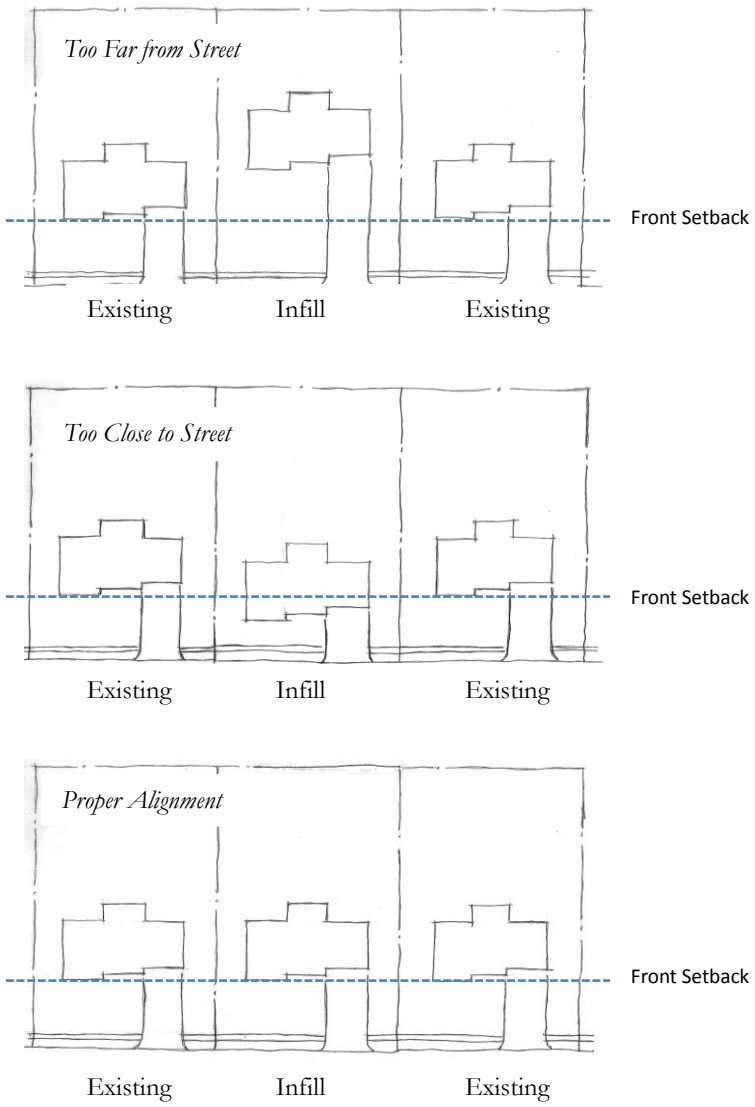


Figure 3: Alignment of Home to Street



2. Massing

The concept of massing is the arrangement of three dimensional components (height, width, and depth) of a structure that gives the impression of weight and density. Massing may also be determined by a building's solid wall surfaces, openings and setbacks. For example, a building with large areas of blank walls may feel more massive than a building with numerous windows or doors. New buildings with more than 3 wall planes that create multi-layer setbacks on the front façade are generally incompatible with the massing of historic buildings. At the design review, the designer should be prepared to explain how the massing of the new structure relates to the volume of the surrounding buildings. See Figures 4 and 5: Compatible and Incompatible Infill Massing.

Figure 4: Compatible Infill Massing

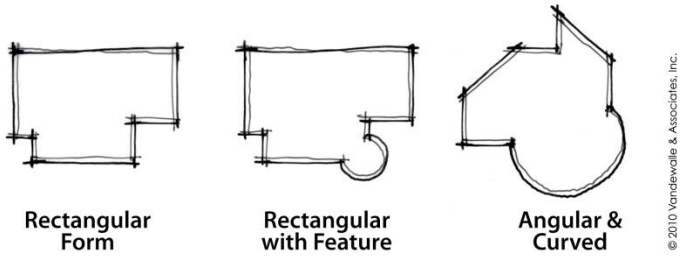
5: Incompatible Infill Massing

Existing Infill Existing

PREFERRED

- Shape: Variations of rectangular and square forms are most appropriate for most districts. The shape needs to be similar to the neighboring houses. See Figure 6: Floor Plan Configuration Shapes.
- Scale (height and width): The scale of a new building should respect the prevailing scale of surrounding buildings. If the streetscape consists of 1 ½ story houses, then the new house should be 1 ½ stories.
- Roof shape and pitch: New construction should be consistent with the neighboring buildings in roof forms, heights and spacing.
- Design elements not identified as "Preferred" should be discussed with the Landmarks Commission at the early design phase meeting.

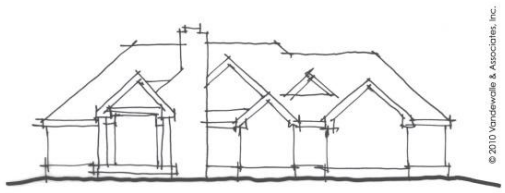
Figure6: Floor Plan Configuration Shapes



DISCOURAGED:

- Designing new buildings that do not respect the massing of historic buildings.
- Angular (other than 90 degrees) or curved walls – in plan or elevation – as a dominant or repetitive feature.
- Buildings with more than 3 wall planes creating multi-layer setbacks on the front facade. See Figure 7: Multi-Layer Setbacks Discouraged.

Figure 7 Multi-Layer Setbacks Discouraged –



Multi-Layer Setbacks

3. Pattern

Pattern is the repetition of design elements such as lines, shapes and forms. The patterns in a historic district are seen as the combination of design features or elements in a regular

arrangement that acts as a unit. For example, the pattern could be formed by repetition of the placement of windows and doors. The location of the porches and front door could be considered a pattern. A structure or elements of a structure which break the pattern of the streetscape will look out of place. At the design review, the designer will be asked if they have identified and continued any patterns in the house and along the streetscape.

4. Proportion

Proportion in the historic district is the balance between the dimensions of building elements or form. This relationship may be between the massing of one structure to the next or between design features, like windows or doors, on one structure versus the next. For example, if features of a building are too small or too large in relationship to the whole building or to a neighboring building, the feature would be "out of scale." During the design review the Commissioners will examine the compatibility of the proposed infill structure's proportions to that of its neighbors.

PREFERRED

- The design of new buildings should respect the existing proportions of historic buildings.
- The design features should be in proportion to those on the new structure and neighboring structures.

DISCOURAGED

- New buildings that are drastically out of proportion to existing historic buildings.

5. Rhythm

Rhythm is the recurring pattern of lines, shapes, forms or colors. Rhythm follows the repetition and alternation of features through a spatial progression. The repetition of building façade elements, such as windows, doors, pillars, masonry belt courses and the like, give an elevation its rhythm. The space between freestanding buildings, as well as the height of roofs, cornices, eaves and other roof projections, establishes the rhythm of a street.

PREFERRED

- New buildings should respect the rhythm of their neighboring buildings.
- New buildings should respect the rhythm established by existing windows, doors, pillars, belt courses, and the like.

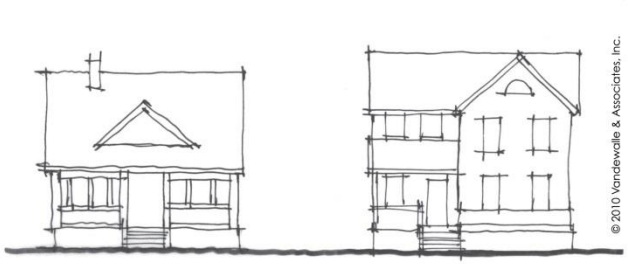
DISCOURAGED

- Designing a new building that does not respect the rhythm of existing historic buildings

B. Design features

Compatible new construction should reinforce typical features that buildings display along the streetscape such as similar roof forms, building materials, window and door size and placement, porch size and location, and foundation heights. New construction should contribute to the character of the historic district by respecting the district's design features – including landscaping, outbuildings and other important characteristics of the district. In general, new houses in historic districts should be simple in overall building form. See Figure 8: Simple Building Form.

Figure 8: Simple Building Form



A design that may be appropriate along one block may not work for a different block. For example, a new residence compatible with Craftsman/Bungalow designs may not be appropriate for a block where Victorian era architecture predominates and vice versa. Each new building has to be evaluated within its exact location and surroundings – its context. The Commission will evaluate new construction for architectural detailing, materials, doors and windows, and roof style.

1. Architectural Detailing

To be consistent with the preferred character of residential infill development, architectural detailing should be constructed of high quality materials, sized and configured in proportion with the scale of the architectural features, and match the architectural style of the house as a whole. New houses should have details consistent with adjacent historic buildings including eave widths, soffit details and fascia boards. Ornamentation from an existing building may be used as the basis for those on a new building, but should usually not be copied exactly. Long, uninterrupted facades should be articulated by the use of architectural elements such as recesses, bays, projections or change of wall plane. See Figure 9: Façade Treatment.

Figure 9: Façade Treatment

Discouraged Preferred Discouraged

PREFERRED

- Design new buildings with details that are compatible to the details and ornamentation of the house's style and the style of neighboring historic buildings.
- Hide or architecturally integrate utility equipment.
- Use products that yield durability and represent a long life-cycle.
- Design elements not identified as "Preferred" should be discussed with the Landmarks Commission at the early design phase meeting.

DISCOURAGED

- Designing new buildings with details and ornamentation that are very different than those on the surrounding historic buildings.
- Exactly copying details and ornaments from a historic building for a new building.
- Locating utility equipment on the front façade, in the front yard, or visible from a street.

2. Materials and Material Quality

New buildings should be constructed of materials similar to the

building materials found throughout the neighborhood. The consistency and repetition of building materials of the historic district form a cohesive environment. A new stucco-clad house would not be appropriately placed on a neighborhood block of wood-sided homes. When presenting the design to the Landmarks Commission, it is recommended that the designer bring in photos of buildings in the neighborhood to show that the proposed materials will complement existing materials.

PREFERRED

- Exterior materials used for new buildings should be compatible in size, texture, surface finish and other defining characteristics with the exteriors of neighboring buildings.
- Foundations: Most foundations are of stone/brick, poured concrete or concrete block. Poured concrete is more appropriate than concrete block. If concrete block is used, a stucco wash is recommended to provide a smooth surface. Exposed foundation walls should be detailed with masonry or siding.
- Brick Dwellings: If the new construction is of brick, the brick should closely match typical mortar and brick color tones found in the district and along the block.
- Frame Dwellings: If the new construction is of frame, the preferred exterior material is horizontal wood or concrete fiber board siding which has a minimum four (4) inches exposure and a maximum of ten (10) inches exposure (where such exterior material does not conflict with neighboring structures).
- Consistent use of exterior finish materials on all façades and features of the house.
- If change of material is needed, change at shift of wall plane.
- If change of material occurs in turning corner from front façade to side façade, then front material shall wrap corner and terminate at architectural feature (i.e.: window/door trim, roof overhang, etc.), or at a minimum of 16 inches from corner.
- Products that yield durability and represent a long life-cycle.
- Copper or lead flashing. If other materials are used, flashing to match color of adjacent building material.
- Design elements not identified as "Preferred" should be discussed with the Landmarks Commission at the early design phase meeting.

DISCOURAGED

- Vinyl siding where it does not exist on a landmark or in adjacent structures in a historic district.
- White or light mortars that provide too much contrast with typical dark brick color.
- Single pieces of stone mixed in with bricks, with the exception of stone lintels, key stones or column caps.
- Engineered wood siding (oriented stand board (OSB), hardboard, and plywood).
- More than 2 primary exterior wall materials.
- More than 2 visible roofing materials, colors, or styles.
- Unfinished concrete block and poured-in-place walls exposed more than 1 foot high on a front façade or 2 feet high on a side or rear façade.
- Roof and wall materials that are not consistent with the architectural style.
- Roof and wall materials uncharacteristic of single-family construction.

3. Doors and Windows (exterior)

The location, size, configuration, and character of exterior windows and doors (and, by extension, their frames and trim) influence the perceived scale, façade patterns, and architectural character of new houses. To be consistent with the preferred character of residential development, windows and doors should be in keeping with the size, proportions, and style of the

house and used to achieve a desirable façade composition.

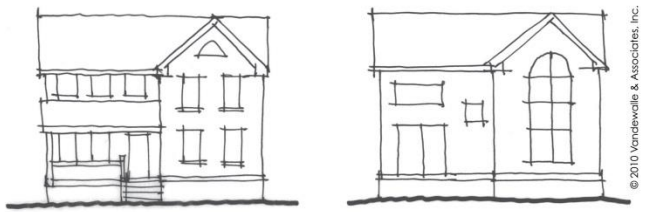
PREFERRED

- Window and door style consistent with the architectural style of new structure.
- The window and door proportions need to match the adjacent houses. During the design review, it is recommended that the designer bring in photos showing windows and doors of buildings in the neighborhood.
- Wood construction is preferred for windows. However, the use of aluminum-clad wood windows is also acceptable as long as they are similar in type to other windows in the neighborhood.
- Generally, new windows should be rectangular sash whose proportions on the main facade should not exceed three-to-one in a height to width ratio or be any less than two to one in height-to-width (two-to-one proportions are preferred). Casement, slider, picture or geometric-shaped (other than rectangular) windows may be used when appropriate to the architectural style of new structures and consistent with neighboring structures.
- Recessed openings, unless this is not in keeping with the home's architectural style or the predominate style in the neighborhood.
- Same window type, style, material, and color on all façades.
- Trim and detailing around all windows.
- Storm windows and screens that match window profile.
- All windows shall be operable, unless this is not in keeping with the home's architectural style or the predominate style in the neighborhood.
- Shutters in proportion to the window.
- Design elements not identified as "Preferred" should be discussed with the Landmarks Commission at the early design phase meeting.

DISCOURAGED

- The use of plastic or "snap-in" muntins (window pane dividers).
- More than one window or door header height that does not match dominant header height on individual floors, except for transom windows.
- More than 3 window types or 3 window sizes on front and side façades. See Figure 10: Window and Door Placement and Configuration.

Figure 10: Window and Door Placement and Configuration

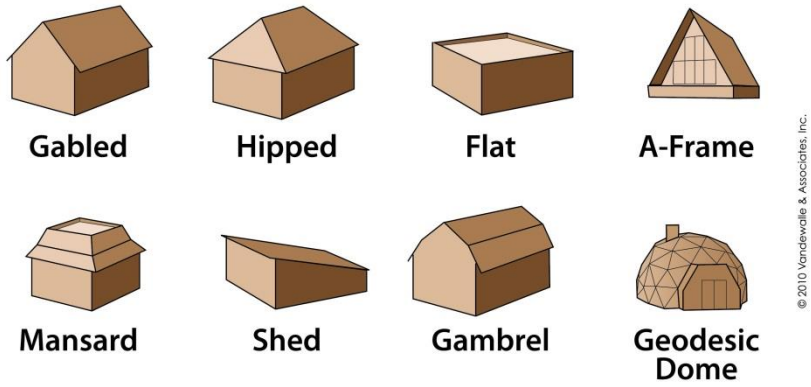


- More than 2 door types on front and side façades.
- Sliding glass doors on front façade, unless in keeping with the home's architectural style or the predominate style in the neighborhood.
- Metal awnings.
- Double-wide (or larger) front facing garage doors on attached garages.
- Front facing garage doors taller than 7.5 **(8 in ARB)** feet on attached garages.
- Moderate to highly reflective glass.
- Monumentally scaled openings, unless in keeping with the home's architectural style or the predominate style in the neighborhood.

4. Roof Shape and Pitch

The shape and pitch of an addition's roof should respect the style of the historic building to which it is attached. The shape and pitch of a new building's roof in historic districts should also be compatible with that of neighboring buildings. For example, a flat roof with an elaborate cornice would probably not be compatible in a street with gable end roofs. See Figure 11: Roof Styles.

Figure 11: Roof Styles



PREFERRED

- The roof shape and pitch of a new building should be compatible with that of neighboring buildings.
- New construction should be consistent in roof forms, heights, pitches and spacing.
- Integrate gutters and downspouts with eaves and soffits.

DISCOURAGED

- Incompatible roof shape and pitch for the home style and the streetscape. See Figure 12: Roof Pitch
- Multiple roof and eave lines (more than 3) on the front façade. See Figure13: Roof and Eave Lines.
- The use of incompatible roof profiles on a new accessory building or addition which detracts from historic buildings and districts.

Figure12: Roof Pitch -

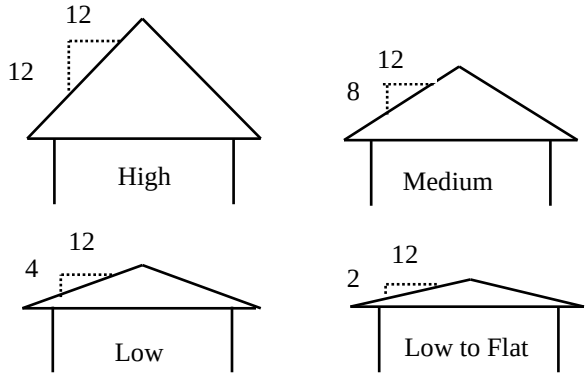


Figure13: Roof and Eave Lines

VI. STANDARDS FOR OUTBUILDINGS

In addition to the above section on new construction, the following shall be required for new outbuildings. If a new outbuilding is to be added to a property in a historic district, it should be located to enhance the view sheds to and from the principal building, as well as enhance the character of the entire district. If no historic outbuildings exist, a new outbuilding should be located outside of the primary view sheds to and from the historic building and district.

One way to help determine the size, scale, proportion, style, color, etc. of a new outbuilding is to work within the time period and style of the surrounding buildings. If the building was built before 1910, an outbuilding similar to a carriage house is probably appropriate. Most outbuildings built after 1910 are for automobiles.

The preferred location of outbuildings is in the rear of the lot or recessed from the front of the house by at least 10 feet. For example, garages are typically placed in the rear of the lot not easily visible from the street within the Jefferson-Argonne Historic District. Garage access is primarily from a driveway at the front of each lot, through the property, to the detached garage near the rear of the property. Garages are located at least partially behind the main residence and do not visually compete with the main house. New garage designs should follow these historic precedents set by the neighboring houses.

The design of the outbuilding as a whole should incorporate the details of the adjacent historic building. Details such as cornice molding need not be as elaborate as the detail on the existing structure, but similar details can be achieved with moderate investment. All features of the new outbuilding including doors, windows, and the like, should also take into consideration the historic character of the existing building and be of similar material, color, style and size. Roof slopes and types should be similar to, or the same as, those on the house. If the house has a steeply pitched gable roof, then the garage should have the same.

Additionally, the new outbuilding should be similar to the other outbuildings in the neighborhood. For example, if the majority of the existing outbuildings in the neighborhood are single car garages, a three car garage would be inappropriate as it violates the scale and proportion of the existing structures. When designing a new outbuilding, keep the Secretary of the Interior's Standards for Rehabilitation in mind.

Carriage houses are typically larger than garages. They were usually divided into three spaces. One large space which held the carriage was located next to another area for the horses. Above these spaces was one large space used as a hay loft. Carriage houses were built quite large and were usually quite tall, but they looked natural in proportion to the large Victorian houses.

Early **garages** were much smaller than carriage houses because automobiles were much smaller than carriages and required no adjacent storage for animals or hay. In the beginning of the automobile era, houses were also being built smaller so new garages were more proportionate to the size of the houses. Garages are often not as elaborate as carriage houses, but would reflect the style of the house. As today's automobiles are larger than those of the 1910s and 20s, garages may now need to be

built larger to accommodate them.

Often it is necessary to have **Outbuildings** to store yard equipment and countless other necessities. However, modern structures are often utility centered and do not aesthetically blend with historic structures. They can be disproportionately large and bulky when built next to existing historic buildings. New outbuildings, like historic outbuildings, should complement the existing structure and should be similar in scale, proportion, style, color, and materials, and should have the same roof shape as the existing building.

PREFERRED

- New outbuildings should be located to enhance the overall character of the entire resource.
- New outbuildings should be smaller in scale than the primary building.
- New outbuildings should be simple in design but reflecting the general character of the primary building. For example, use gable roof forms if the main dwelling has a gable roof, hipped roof forms if the main dwelling has a hipped roof, etc.
- New outbuildings should be located as traditional for the street, near an alley or at the side of the dwelling, not close to or attached to the primary building. See Figure 14: Example of a Recommended Garage.
- If attached to the home, garage wings should be added at the rear rather than the side. See Figure 15: Garage Wings.
- Wood or concrete fiberboard siding.
- Compatible in design, shape, materials, colors and roof shape and pitch to the main building.
- If no outbuildings currently exist, new outbuildings should be located outside of primary view sheds to and from the historic building.

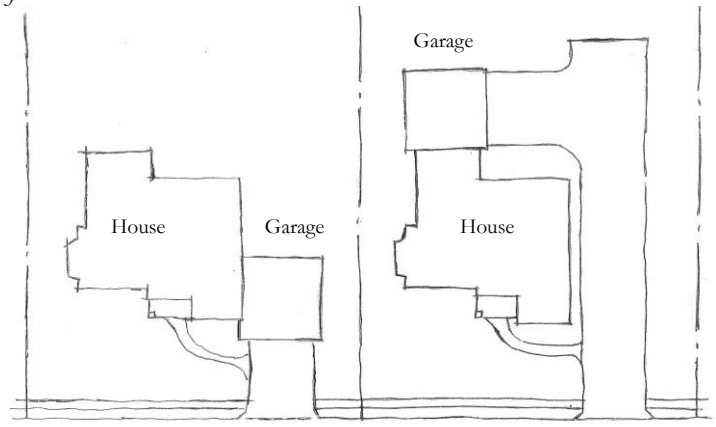
Figure 14: Example of a Recommended Garage

Preferred

Discouraged: Garages on primary facades in historic areas.

- If visible from the street, secondary buildings should have an emphasis on historic designs and detailing. For garages wood multi-paneled doors are more appropriate than paneled doors of vinyl, aluminum, or steel. Wood paneled overhead roll-up doors are widely available and are appropriate for new garages.
- Carports should be located at the rear of buildings unless historically located in the front of existing homes (such as in Craig Woods). Most readily available carport designs have flat roofs and metal support columns and are not compatible with older building designs. Carports imitative of porte-cocheres (drive-thru wings on historic dwellings) with wood or brick columns, flat roofs, and wood construction may be added to sides of dwellings visible from the street.
- Design elements not identified as "Preferred" should be discussed with the Landmarks Commission at the early design phase meeting.

Figure15: Garage Wings: should be added at rear rather than side facades.



DISCOURAGED

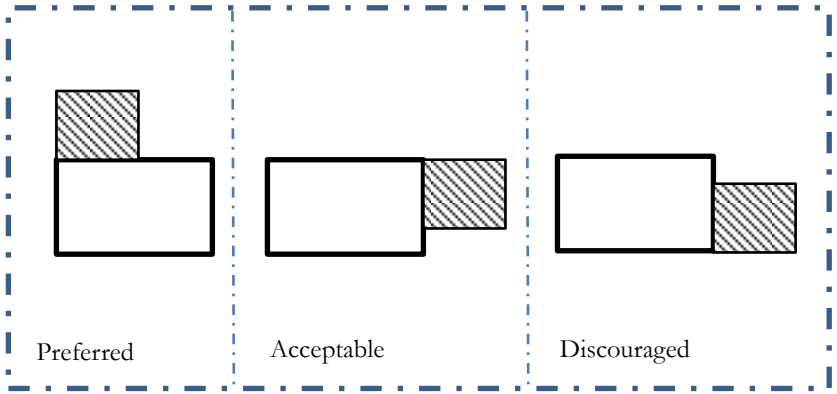
- Garages on primary facades in historic areas.
- Garages that span more than 50% of the width of the front façade if located on primary façade,
- Locating outbuildings within primary view sheds to and from a historic building.
- Applying fancy moldings to a prefabricated modern looking garage.
- Outbuildings that are not appropriate for the style of the main building or are incompatible in size, scale, material, roof shape/pitch, detailing and color.

VII. STANDARDS FOR ADDITIONS

The Landmarks Commission is required to review additions to landmark structures. It may also review additions to a resource in a historic district on an advisory basis. New additions and adjacent or related new construction should be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

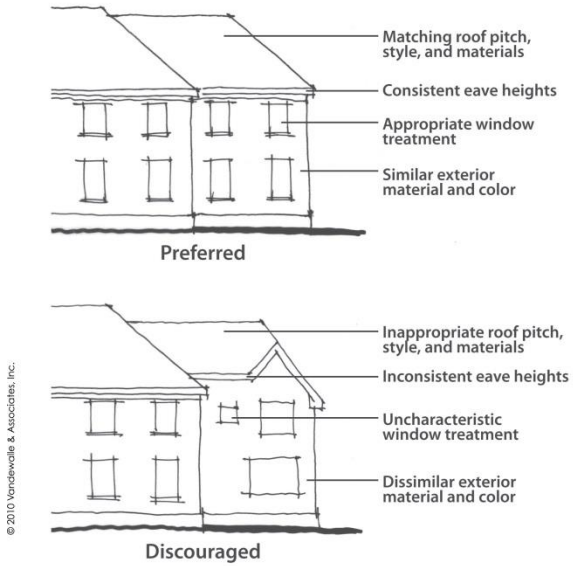
New additions are often desired to enlarge a space or add to the overall square footage of a home. The location of an addition is critical to its compatibility. Per the Secretary of the Interior's Standards for Rehabilitation, additions should be located to the rear of the building or on a secondary facade, and should not destroy historic materials that characterize the property. See Figure 16: Preferred Placement and Size of Addition.

Figure16: Preferred Placement and Size of Addition



New work should be differentiated from the old and be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment. See Figure 17: Additions.

Figure 17: Additions



PREFERRED

- Additions to historic buildings should be located on rear and other secondary façades. Side additions may be acceptable if they do not compete with the primary structure, are not highly visible from the public right-of-way and create a discernable break at the juncture with the original structure.
- Additions should be compatible with the architectural style of the original structure but should be differentiated from the old.

- New additions should be designed in a manner that if removed in the future, the form and integrity of the historic structure will not be impaired.
- Additions should be smaller than the primary structure.
- Additions should be kept simple and appropriate in proportion, shape, materials, color and detail
- Exterior materials used for additions should be compatible in size, texture, surface finish and other defining characteristics with the exterior of the historic building to which it is attached.
- New construction on the front façade should respect porch configurations on the block.
- Additions should be designed with details and ornamentations that are compatible in amount, location, elaborateness and other defining features to the details and ornamentation on a historic building to which it is attached.
- Additions should match roof pitch, style and materials and have consistent eave heights.
- Design elements not identified as "Preferred" should be discussed with the Landmarks Commission at the early design phase meeting.

DISCOURAGED

- Locating additions to historic buildings on front or other primary façades.
- Locating additions within primary view sheds to and from a historic building.
- Designing additions without any details and ornamentation if the historic building contains details and ornamentations.
- An addition that does not respect the scale of the historic building to which it is attached.

EXCEPTIONS

- Flat roofs are discouraged in general unless appropriate to a specific architectural style and characteristic of a particular historic district.

VIII. SUSTAINABILITY AND GREEN CONSTRUCTION

Help Kirkwood remain a *Green Tree City* by employing green products and preserving its resources for the next generation. Green home-building supplies are available at a growing number of specialty stores, as well as nationwide chains and the internet. Before buying, check labels for information on environmental claims, recycled content and place of manufacture. Remember that widely available products are sold under many brand names and that many major manufacturers offer both green and non-green products. Look for materials made of reclaimed, reused or recycled content. Also take into consideration the fossil fuels that have to be burned to ship certain "green" products. Curbing energy use is the single most important thing in "Going Green". Make sure the building is tight by beefing up insulation of walls, doors and windows. Buy appliances with the EPA's *Energy Star* and *WaterSense* labels, switch to energy-saving compact fluorescent bulbs and install a tankless water heater. It is equally important to buy well-made products that are also aesthetically pleasing because they will be retained longer.

PREFERRED

- Reuse of the existing buildings and building materials.
- Operable windows on the south and southwest sides of the building that will have a better chance to catch the prevailing wind.
- Outdoor rooms located on the east or west side of buildings that will have greater access to summer breezes.
- Roof drainage collected in rain barrels or underground storage tanks.
- Rain Gardens that are designed to help filter, slowdown and absorb rain water before it enters the public storm water system.
- If Solar panels are being proposed, integrate them into the roof or façade of the building.
- Permeable paving material. Paved surfaces should be kept to less than 10% of the property.
- Sustainable roofing materials such as clay tile, slate, wood shake and recycled synthetic tiles.
- Insulation should conform to ASHRAE 90.1 2009 or latest code, whichever is greater.
- Attic R-38.
- Walls R-13 + R-3.8 continues.
- Below grade walls 7.5 continues.
- Doors U-0.7.
- Windows U-0.4.
- Landscaping that is native to Missouri.
- Any irrigation system shall be controlled by a smart controller that uses evapotranspiration and weather data to adjust irrigation schedules and that complies with the minimum requirements below when tested in accordance with IA Smart Water Application Technology (SWAT) Climatologically Based Controllers 7th Draft Testing Protocol. All such control systems shall also incorporate an on-site rain or moisture sensor that automatically shuts the system off after a predetermined amount of rainfall or sensed moisture in the soil.
- Irrigation adequacy – 80 percent minimum ET.
- Irrigation excess – not to exceed 10 percent.

DISCOURAGED

- Electric wind turbines.
- Paved surfaces on more than 25% of the property.
- Vinyl siding as it is energy intensive to make and creates highly toxic byproducts during manufacturing, disposal or when burned in a house fire.
- Engineered wood siding (OSB, hardboard, and plywood) as it is less durable than solid wood.

IX. ADAPTIVE RE-USE

A very important aspect of preservation is recycling - adapting old buildings to uses different from the ones for which they were originally intended - a practical means of preservation. Legislation[1] has made this form of recycling both economically and architecturally attractive.

Creative adaptation can meet modern needs and provide pride in our heritage; establish a link with the past; respect the aesthetics and craftsmanship of another time; give ample creative opportunity for architectural innovation and problem solving; enhance the urban fabric; offer greater security, stability and beauty; and conserve basic materials. Such re-use allows us to live and/or work in converted schools, to shop in converted post offices, and to study in converted train stations. Without an attempt to use some imagination in preserving and updating, our heritage buildings may be lost. If these worthwhile buildings are to be saved, they will have to be saved for something other than mere restoration.

Adaptive reuse requires harmony of old and new. Contextualism pushes the concept of harmony beyond individual buildings to include entire blocks and neighborhoods. While the success of an adaptive reuse project depends largely on how compatible the new use is to the old building, compatibility within the surrounding environment is also important. A building should relate to, and be respectful of, its existing context. It should make a positive contribution, not only by its function, but by being something special on the street. The key to the success of adaptive reuse is recognizing those buildings or streets that are special, whether for architectural, historical, or cultural reasons. These are the structures we must struggle to retain.

[1] Tax Reform Act of 1976 and Economic Recovery Tax Act of 1981.