



Maintenance & Repair Guide for Designated Historic Residences in Chaska



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**CHASKA
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Congratulations on your purchase of a Chaska Historic home! We hope you enjoy the part you play in preserving Chaska's rich history for generations to come!

This document is a guide to ensuring appropriate maintenance to your historic property. It is a joint project of the Chaska Historical Society and the city's Heritage Preservation Commission (HPC).

The pamphlet is divided into two sections: **Minor Classes of Work** and **Technical Notes and Commentary**. **Minor Classes of Work** explains what qualifies as minor maintenance on specific aspects of a residence. **Minor classes of work (attached) do not require HPC review (typically), but does need to be reviewed by the HPC liason. The number to reach regarding questions for minor classes of work is 952-448-9200. (ask for City Planner).**

Technical Notes and Commentary of appropriate work practices can be found in the second section. There are specific features that are unique to Chaska buildings and require that extra care is taken. The information in this section delineates some of those special features and provides general guidelines for maintenance.

Minor Classes of Work:

(please see next page for more info)

- Windows and Doors
- Roofs and Gutters
- Masonry & Siding
- Building Additions
- Accessory Buildings
- Demolition
- Fences, Retaining Walls, Patios, Walkways & Lighting
- Structural and Mechanical
- Architectural Features & Details

Technical Notes and Commentary:

- Windows and Doors
- Masonry: Chaska Brick and Minnesota Valley Limestone
- Wood
- Metal/Cast Iron; Especially Locally-Made Cast Iron
- Shutters
- Architectural Ornaments
- Color Selection

Minor Classes of Work:

Windows & Doors

1. Replacement of window glass (but not window frame)
2. Window replacement that matches the proportion, profile, light configuration, material and overall appearance of the original window, on elevations visible from a public street and appropriate in general appearance when not visible from a public street
3. Installation of storm windows that have been painted or have a baked enamel finish (providing color matches window trim or is appropriate for the house)
4. Door replacement that matches original door opening
5. Replacement of access doors that cannot be easily seen from the street
6. Replacement, repair, or installation of storm or screen doors that are constructed of wood and stained in natural wood color or painted in a color to match the house trim
7. Caulking & weather stripping

Roofs & Gutters

1. Replacement of asphalt or fiberglass roof shingles similar to the original shingle material and shape, and a color compatible with house color
2. Replacement of slate, shake, tile or metal roof coverings where there is no change to material
3. Replacement of existing gutters & downspouts as long as the new gutters have a similar profile as those being replaced and blend with the house color scheme
4. Installation of roof and basement ventilators (only if roof vents are on back slope)
5. Removal of skylights
6. addition of new gutters that are compatible with the house

Masonry & Siding

1. Repointing and other masonry repairs when the color and composition of the mortar matches the original or existing masonry
2. Replacement of missing or deteriorated siding (except vinyl or aluminum in place of original siding) and trim that matches existing trim detail
3. Total removal of exterior asbestos, asphalt, or other artificial siding when the original masonry or siding are to be repaired and repainted

Building Additions

1. Additions not visible from the street
2. Addition of exterior stairs and decks (first floor only) that are not easily seen from a street and designed and painted to blend with the character of the house

Accessory Buildings

1. Accessory building that is not easily visible from the street, such as storage sheds, kennels, etc.
2. Satellite dishes & antennas not visible from the street (excluding antennas that would qualify as a special use per the zoning ordinance, i.e. cellular/ham radio)

Demolition

1. Removal of deteriorated accessory buildings which are not original to the site or not otherwise historically significant
2. Removal of incompatible minor alterations

Fences, Retaining Walls, Patios, Walkways & Lighting

1. Repairs to existing fences, retaining walls, patios, walkways and driveways
2. Installation of ground level walkways and patios
3. Construction or replacement of brick or stone retaining walls
4. New building lighting fixtures
5. Repair of existing yard lighting fixtures

Structural & Mechanical

1. Installation of permanent mechanical and utility equipment including heating and air conditioning units which cannot easily be seen from the street or are screened from view with shrubbery or appropriate fencing
2. Repair or replacement of masonry foundations where the original foundation material is retained or where new material matches the original; installation of metal foundation vents (on the side and rear only)

Architectural Features & Details

1. Exterior painting (except masonry, unless already painted) using colors compatible with other historic buildings within the City of Chaska
2. Repair or replacement of porch floors, ceilings, columns, and balustrades, or other architectural features with new materials that match original features in details
3. Repair or replacement of exterior stairs or steps which are made of masonry or painted wood designed to blend in with the house and are compatible with other historic buildings within the City of Chaska

4. Repair or replacement of awnings, canopies, or shutters when there is no change in design, materials, or appearance
5. Installation of house numbers and mailboxes that are compatible with the original in style, size, and material
6. Repair or replacement of building architectural details when there is no change in design, materials, or appearance

Technical Notes and Commentary:

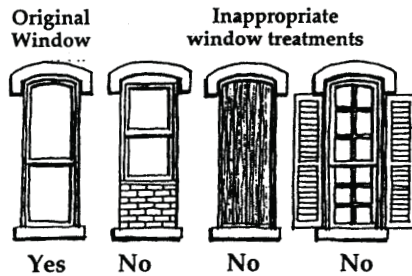
Windows & Doors

*Preservation Design Manual, Chaska, Mn
December 23, 2003*

Uncover boarded up windows and repair the original sash. Retain as much as possible of the original. In historic residences original windows contribute character and probably fit the opening better than modern replacement windows. Storm windows are preferred to replacement when concerned about energy and insulating. When adding interior or exterior storm windows consider the following:

1. Exterior storms are more efficient but have a greater visual impact. This can be reduced by choosing an appropriate color enamel finish for the aluminum frame.
2. Interior storms have little exterior impact and can be hidden with interior window treatments. However, they should be sealed to prevent interior air from entering the space and causing moisture buildup.

If window replacements are necessary, they should match the original in size and shape. Never replace multi-pane windows with a single large pane of glass. Select a window that completely fills the masonry opening, rather than relying on standard sized replacement windows and filler panels that reduce the area of glazed opening. Many manufacturers now make excellent replacement windows and replacement sash units that are easier to install and, in many instances, very low maintenance materials with high energy efficiency.



Remove all damaged putty from wood frame windows that will be repaired being careful not to damage the wood. Re-glaze by laying a bead of putty around the perimeter. Press the glass panel into place and insert glazing points to hold it. Bevel a final seal around edge of the glass. Metal frame windows require a glazing compound. New glass should match original in size, shape, color and reflective quality.

Retain original entry doors as well. When replacing, match the original appearance and materials as closely as possible. Wood panel doors with a large glass panel were most common at the turn of the century. Wood is therefore the preferred material for replacement doors, however, steel or aluminum with a baked enamel finish may be used. Colonial, Early American or extremely decorative doors are inappropriate and should be avoided.

Masonry & Siding

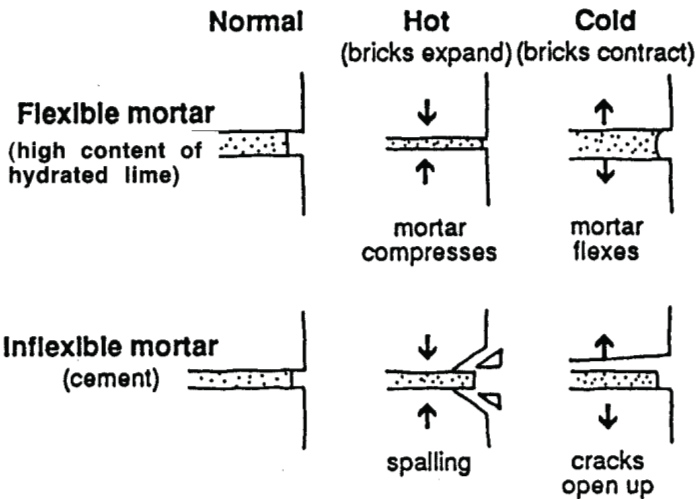
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Masonry: Chaska Brick and Minnesota Valley Limestone

Brick and stone are extremely durable building materials. However, they can deteriorate. Water is most often the cause of this deterioration. Routinely inspect the roof and flashing gutters and down spouts of your residence to ensure they are working properly. Eliminate conditions that cause water to be absorbed into brick. One instance of this kind of damage that is often overlooked and which can be easily corrected is to prevent condensation from air conditioner units or other mechanical equipment from dripping onto brick surfaces.

Tuckpointing: Prior to 1900, brick buildings used a soft mortar that was very high in its lime content. This type of mortar worked well

with soft brick, like the kind found in so many Chaska residences, but the mortar gradually erodes away as water runs over it and seasons change. If mortar joints are loose, crumbling or have receded more than $\frac{1}{2}$ inch, they should be repointed. (Repointing and tuckpointing mean the same thing). New mortar should match existing mortar in style, size, composition and color. Mortar should be softer than the bricks to allow for seasonal expansion and contraction of bricks. This also allows general building stresses to be relieved through the mortar joints preventing cracking or spalling of bricks. Modern mortars often have a base of Portland cement that is harder than older bricks. Therefore, consult a mason who is experienced with historic residences of this period before you undertake a tuckpointing project on an old residence.



When tuckpointing a residence, the size and profile of the joints are vital to the character of the residence. All joints should be cut by hand to a depth of 1", neatly repointed and tooled by hand. It is important to remember that tuckpointing periodically is much easier, less expensive and less damaging to the residence than replacing bricks. Properly maintained joints should only need tuckpointing once every 50-75 years. A masonry contractor may be tempted to remove mortar using high-speed grinding tools, but this type of aggressive mortar removal is difficult to control and can quickly damage bricks, especially at the vertical "head joints".

Cleaning: When cleaning a masonry building, always use the gentlest means possible. Water spraying and hand scrubbing with a natural bristle brush followed by a moderate pressure rinse,(200 to 400 psi) is usually sufficient. The drawback to this method is that some types of limestone may be stained by impurities in the stone and may dry unevenly.

Steam cleaning has the advantage of removing dirt from ornately carved areas. However, it is usually slower and more expensive than water spraying.

If paint or heavy grime needs to be removed, chemical cleaners can be employed. Cleaners should be alkaline-based because limestone is sensitive to acid. Alkaline cleaners are comprised of a detergent and an alkali-ammonia or potassium hydroxide. Once cleaned, rinse the masonry material in a two-step process. First use a slightly acid rinse (acetic acid) to neutralize the alkali, followed by rinsing with water to remove all chemicals.

Whichever method is used, first “trial clean” a four by six foot section on a portion of the residence that does not show. This section should be allowed to weather for a couple of weeks to a month to determine the effect cleaning will have on the entire building.

Sandblasting: **Sandblasting is a process that should never be used on a brick building.** This process can disqualify a project from being considered for federal tax credits and from being placed on the National Register of Historic Places. Although some masonry material suppliers advocate use of chemical sealers to try and rehabilitate brick that has been previously damaged, their performance is widely variable and often unreliable. Because the most important characteristic of Chaska residential buildings is usually their Chaska brick, it is much preferable to avoid damaging the brick in the first place.

Chaska brick is essentially a soft baked clay. When brick is sandblasted its outer layer is eroded. Once that protective layer is damaged or removed, the remaining brick is highly susceptible to

erosion and deteriorates rapidly. If such deterioration has already started it may be minimized with paint or a clear sealer. Paint is preferred because it allows the natural migration of moisture. Some clear sealers tend to reduce the migration of moisture and allow subflorescence--formation of salt crystals--which may cause spalling. Consult a professional for the best approach to combat deterioration if your building was previously sandblasted. Further detailed recommendations about maintaining historic brick and mortar are also available through the *Preservation Briefs* series of publications available on-line and linked through the National Park Service web page.

Removing stucco: Several historic residences in downtown Chaska have a coating of stucco applied over their exterior brick that was not original to the building. Occasionally this was done as a “quick fix” for soiled brickwork or as a way of creating a fresh, “new” appearance. Unfortunately, the stucco creates a much more “monolithic.” appearance and conceals one of a Chaska brick building’s most desirable characteristics; the brick itself. Before proceeding, experiment with removal in a less-visible test area.

Though modern stucco is often applied over metal lath with penetrating mechanical fasteners, the stucco on most Chaska residences is simply applied as a thick coating and should be removable by careful hand-tool methods. Several Chaska brick residences have already received this kind of restoration treatment, and while the work can be accomplished with hand labor, property owners are encouraged to consult a technician who has performed this kind of stucco removal previously. Stucco removal will often be followed up with a general repointing and masonry cleaning treatment to restore the residence’s original appearance and material character.

Architectural Features & Details

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Wood

Decorative facade elements were often made of wood. Whenever possible, original woodwork should be retained and missing pieces should be replaced to maintain the building’s integrity. Wood should

be cleaned with the gentlest method possible. Check for soft, rotted or split areas. Always maintain a good coat of paint or sealer to protect wood from the weather.

Sandblasting and water blasting: Both processes are equally damaging to wood. Sandblasting erodes the soft fibers on the wood surface leaving the harder fibers. A pitted surface with ridges and valleys is the result. Water blasting forces water into the wood rather than--sometimes in addition to--removing paint.

Metal/Cast Iron; especially locally-made cast iron

First determine the metal composition of your facade. You may want to consult an architectural professional because this can be tricky.

Cast iron and iron alloy: Remove paint build up and all rust. If not severe, this can be done with hand scraping and a wire brush. Extensive paint buildup can be removed with dry grit blasting at 80 to 100 psi. This method is effective, economical and provides a good surface for painting. However, all adjoining masonry and wood should be protected. Re-caulk and putty heads of screws and bolts before painting to prevent moisture from reentering the joints.

Soft, sheet and plated metals: Softer metals such as tin, lead and copper should never be cleaned mechanically because they can be easily damaged by abrasion. These metals are best cleaned with a chemical method.

After cleaning any metal, apply a rust-inhibiting primer coat. Once dry, apply the final coats in a color that is appropriate for your facade design and local context. *Rustoleum*TM produces an excellent line of penetrating rust-inhibiting coatings, as do other commercial paint manufacturers.

Shutters

Late 19th and early 20th century residences seldom used shutters as part of the window treatment. However, because of its earlier date, Chaska is again an exception to this general rule. Unless they were original features of the building shutters should be avoided since they would create a false sense of the building's historical character. Often,

evidence that shutters originally existed can be confirmed by historical photos or by evidence of shutter attachment hardware on the brick or window surrounds.

If shutters were original, new shutter panels should exactly match the size and shape of the window opening. This means that the shutters are one-half the width of the masonry rough opening around the window, and in most instances, with a curved top to match the opening. Shutters from the period of the 1860s and 1870s would be expected to be of a “panel and frame” type.

Architectural Ornaments

Architectural ornaments were usually the first casualty over time. Consult historic photographs to determine what ornaments were original to the facade. Since many commercial facades were similar, the ornamented areas were often replicated in easily reproduced materials like pressed metal. If pieces are missing, new ones may be fabricated. If pieces are damaged or decayed, repair the cause of the damage as well as repairing or replacing the ornament with similar materials.

A variety of decorative features may have existed on a residence in the past. Such features may include awnings, window hoods, brackets, cast-iron columns, and shutters. Examine the residence carefully to see whether any evidence of such “lost” items can be detected. Elements like these were often used to emphasize lines, composition, and texture of the facade.

Color Selection

Color selection is more than just a matter of personal preference. As a general rule historic residences should reflect colors that were available at the time the residence was constructed. Earth tones were more popular during the later half of the 19th century and lighter shades were popular in later decades. In Chaska, there is substantial evidence of a “cream” color of paint for trimwork, accented by dark burgandy or dark green paint that created a kind of visual “lightness” for the openings in relationship to their cream-colored brick surrounds. Research the history of your residence to determine the appropriate colors. Sometimes vestiges of the original paint color can be detected under later coatings.

Keep color schemes simple by choosing two or three colors; a base color, a second color for major trim and a third color to highlight minor trim. Choose the base color first. (Again, a cream color would be most typical on Chaska brick buildings). If the building is brick or stone, the natural masonry material will most often be the base color. Then choose trim colors to complement the base color. Most paint manufacturers have a line of historically-appropriate paint colors for various historical periods. Excessively bright or contemporary color schemes should be avoided.

Thank you for your attention to appropriate ongoing maintenance to your historic property! It is through your work and attention to detail that Chaska's residences continue to reflect the community's valued heritage.

