

# Blue Bonnet Hills Local Historic District

## Preservation Plan and Design Standards

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The following text is the edited text with clarifications included. Once adopted this text will be incorporated with the document that has information and descriptive images and graphics.

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### Design Review Process

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#### DISTRICT BOUNDARIES

The district boundaries follow those of the "Blue Bonnet Hills Addition, being the Paul Pfeifer Subdivision," platted in 1928. The boundaries are E. Annie Street to the north, East Side Drive to the east, and Leland Street to the south. To the west, the boundaries are Newning Avenue and Brackenridge Street. The district includes homes on the south side of the 500 block of E. Annie Street, two homes on Brackenridge Street (1913 & 1915), homes in the 1800 to 2000 block of East Side Drive, homes on the north side of Leland Street west of Newning Avenue, all homes in the 500 block of Lockhart Drive, all homes in the 500 block of E. Mary Street, the homes in the 1800 to 2000 block of Newning Avenue, and all homes on Terrace Drive.

#### CERTIFICATE OF APPROPRIATENESS

##### PURPOSE OF THE CERTIFICATE OF APPROPRIATENESS

The Certificate of Appropriateness review process ensures that proposed changes to a property in the historic district comply with these Design Standards. A Certificate of Appropriateness must be granted before a building permit will be issued by the City.

##### ACTIVITIES THAT REQUIRE A CERTIFICATE OF APPROPRIATENESS

The design review process does not require property owners to proactively make changes to their properties, such as restoring buildings to their historic appearance. The design review process only comes into play once a property owner initiates a construction project that is substantial enough to require a Certificate of Appropriateness.

According to the City of Austin Land Development Code, a person must obtain a Certificate of Appropriateness to change, restore, remove, or demolish an exterior architectural or site feature of a structure that is contributing to the historic district. A Certificate of Appropriateness is not necessary for work proposed to non-contributing ~~buildin~~~~buildings~~ within the District, and these Design Standards do not apply to non-contributing buildings. However, the owners of non-contributing buildings (especially of historic age) may want to consider these standards as guidelines for considering design options that reflect the architectural character of the neighborhood.

A Certificate of Appropriateness is NOT required for:

- o Remodeling the interior of the building;
- o Routine maintenance projects, provided that work follows the treatment guidelines set forth in Appendix C to ensure that the work does not affect the historic character of the resource. This can include painting, repointing of masonry, foundation repair, etc., or
- o Remodeling of non-contributing buildings.

A Certificate of Appropriateness IS required for the following:

- o Replacing siding, porches, doors, windows, or roofing materials;
- o Exterior alterations to existing buildings and sites including, but not limited to, the construction of additions, decks, pools, or the installation of new windows, doors or roofs;
- o Demolition of existing buildings or parts of buildings;
- o New construction;
- o Relocation of existing buildings into or out of the district; or
- o Landscape changes requiring a City permit.

The City Historic Preservation Office will review applications to determine if a Certificate of Appropriateness is necessary.

##### PROCESS FOR OBTAINING A CERTIFICATE OF APPROPRIATENESS

Applications for a Certificate of Appropriateness must be submitted to the City Historic Preservation Office in accordance with the submission schedule provided by the City Historic Preservation Office. The application form and

[current fee schedule](#) can be obtained from the City Historic Preservation Office or the City of Austin website. Property owners can contact City staff in the early planning stages of a project for assistance in interpreting the Standards, for suggested solutions to problems, and for explanation of the review process and requirements. The Historic Preservation Office staff can also provide on-site consultations and other technical assistance.

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The City Historic Preservation Office conducts a preliminary review of the application for a Certificate of Appropriateness and might contact the applicant to get additional information or to suggest changes to the application.

Depending on the scale of the project, the application for a Certificate of Appropriateness will be evaluated by either the City Historic Preservation Officer or the City of Austin Historic Landmark Commission, in accordance with the criteria below.

The City Historic Preservation Officer may administratively approve applications for Certificates of Appropriateness for the following:

- o Accurate restoration or reconstruction of a documented missing historic architectural element of the structure or site;

Changes that do not affect the appearance of the structure or site from an adjacent public street, limited to:

- o Demolition of garages, sheds, carports, or other outbuildings that are non-contributing;
- o Construction of a ground-floor, one-story addition or outbuilding with less than 600 square feet of gross floor area;
- o Two-story additions to the rear of two-story houses; or
- o A pool, deck, fence, back porch enclosure, or other minor feature.

The Historic Landmark Commission must hear all other Certificates of Appropriateness.

The Historic Preservation Office or Historic Landmark Commission may grant the Certificate of Appropriateness if the application conforms to these Design Standards. If the Certificate of Appropriateness is not granted, the Historic Landmark Commission may require the applicant to modify the proposed work and revise the application accordingly. Appeal of a denial of a Certificate of Appropriateness can be made to the appropriate land use commission and, if denied, to the City Council in accordance with City Code.

Each property is unique and its lot size and shape can vary. Therefore, the Historic Landmark Commission reviews each case individually and allows exceptions to the Design Standards if it determines that the proposed design will maintain the relevant character-defining features of the property and the District. Demonstrating financial hardship is a separate and distinct process, set forth in City of Austin Code, Ordinance No. 20090806-068.

#### RESPONSIBILITIES OF THE APPLICANT

The responsibility for demonstrating that the proposed project meets these Design Standards lies with the applicant. The applicant shall submit sufficient photographs or physical documentation to demonstrate that the proposed project meets these standards. The Historic Preservation Office or Historic Landmark Commission can require additional documentation as necessary.

The historic property can also be designated a Recorded Texas Historic Landmark (RTHL) or a State Antiquities Landmark (SAL), which requires review by the Texas Historical Commission (THC). In this case, the applicant is responsible for submitting the proposed work to the THC for review independent of the Local Historic District review process.

#### PENALTIES FOR VIOLATIONS

Any person or corporation who violates provisions of the Standards is subject to the same criminal misdemeanor and civil penalties that apply to any other violation of the City Code.

#### PERIODIC REVIEW

These Design Standards are not intended to be static. They are subject to periodic review, revision, and amendment. The process for revising or amending the Design Standards shall follow the process set forth for Neighborhood Plans, as described in City of Austin Code, which states:

The director shall conduct a general review of a neighborhood plan not earlier than five years after the adoption of the plan and may recommend amendments of a plan to the Planning Commission and council. The director shall include neighborhood stakeholder input in the review process.

## Architectural Character of the District

### GENERAL LANDSCAPE CHARACTERISTICS

The following description of the overall landscape and streetscape of the District is based upon the section titled "Understanding Residential Suburbs as Cultural Landscapes" in the *National Register Bulletin for Historic Residential Suburbs: Guidelines for Evaluation and Documentation for the National Register of Historic Places*.<sup>1</sup>

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#### LAND USE

##### HISTORIC LAND USE PATTERNS

This Blue Bonnet Hills (BBH) historic district has historically been a residential district consisting mostly of single-family detached residential houses on small lots (less than 0.5 acre) with a few relatively larger (0.5-1 acre) lots. The district does not contain any commercial or institutional properties, though Fulmore Middle School lies just to the west of the district and Travis Heights Elementary lies just to the east. The district was originally platted with a number of single-family residential lots located east of East Side Drive, the district's eastern boundary, but in 1929 the city purchased this land for what now is the Blunn Creek Greenbelt, a creekside city park currently running through the middle of the greater Travis Heights residential neighborhood. The park is not a part of the BBH historic district.

##### CURRENT LAND USE PATTERNS

Today, land use within the district's boundaries continues to be primarily single-family residential mixed with small amounts of new multi-family residential buildings. The relative amount of multi-family residential uses within the district has increased over time.

##### MULTI-FAMILY RESIDENTIAL LAND USE

Although the district historically included only single-family residences, today a few lots have been recently re-developed for multi-family use on Terrace Drive.

### RESPONSES TO THE NATURAL ENVIRONMENT

#### TOPOGRAPHY

The topography of the district generally slopes down to Blunn Creek, east of the district. The average slope of this decline is steep enough to have historically encouraged the use of retaining walls and full-height basement levels on some lots, particularly along Annie, Mary, Lockhart, Terrace, and East Side Drive. Many homes in this area also have 5 to 10-step tall front stairs to reconcile the significant grade difference from the street.

#### TREES AND NATURAL LANDSCAPE

Many of the district's lots are shaded by dense mature tree cover, while others have only a few large shade trees. Along some streets such as Lockhart, the tree canopy is effectively contiguous over the street. Only along the edges of the district, where it borders Fulmore Middle School and the Blunn Creek Greenbelt, does the density of tree cover give way to more open park-like spaces.

#### DESIGNED LANDSCAPE

The designed landscape elements within the district are varied and eclectic. Generous front yards, commonly twenty to forty feet deep, are as often heavily covered with dense groundcover, plantings, fences and stone-lined gardens as they are open grass lawns with a few shade trees. Because there are only a few streets with sidewalks and roadside mailboxes in the district, many yards have walkways of various types from the street to the front door or porch. These walkways are generally separate from driveways, which often lead to the side or rear of the buildings. Often fences and short retaining walls line the edge of the street. Additionally, a lack of sidewalks promotes dense plantings along the street curb, which often spill over into the street. This, along with the dense tree canopy and landscape variety, helps give the district a sense of vibrancy and maturity.

### PATTERNS OF SPATIAL ORGANIZATION

#### SUBDIVISION OF LOTS

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<sup>1</sup> This National Register Bulletin is available online at <http://www.nps.gov/nr/publications/bulletins/suburbs/index.htm>

Lots in the district are nearly all rectangular and less than 0.5 acre, though some lots are double-width. Others, such as 1924 Newning, are uniquely large (0.5-1 acre) and squareish. A few other corner lots have unique shapes.

#### ORGANIZATION OF LOTS

Buildings are generally oriented towards the street and are set back from the lot line by twenty to forty feet. In a typical small lot, a driveway will extend from the street past the side of the house to the rear of the lot where there might be a back yard, a garage or other outbuildings, but in some instances lots do not have driveways. On larger lots, the main building will either have a large setback or it will have a typical setback and a large rear yard with outbuildings or secondary dwellings.

#### CIRCULATION NETWORKS

##### STREET PATTERNS

The street pattern in the district is generally rectilinear with slight curves. In some areas the street intersections tend to be relatively wide, occasionally containing small landscaped islands such as at the intersection of Brackenridge Street and Terrace Drive. There are no cul-de-sac street endings in the district.

##### MAJOR THOROUGHFARES

The major north-to-south collector roads for the district are Newning Avenue and East Side Drive, which lead south to Leland and north to Annie and Monroe, from which drivers can access South Congress Avenue, the major arterial road for the area. However, many of these collector streets are indistinguishable from the local streets in the district in terms of width; all roads in the district are two-lane undivided streets.

##### ALLEYSALLEYS

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##### SIDEWALKS

Sidewalks are present in very few locations in the district. Those that exist are only present in front of a single house or two on a block.

#### BOUNDARY DEMARCATIONS

##### DISTRICT BOUNDARIES

The boundaries are E. Annie Street to the north, East Side Drive to the east, and Leland Street to the south. To the west, the boundaries are Newning Avenue and Brackenridge Street. The district includes homes on the south side of the 500 block of E. Annie Street, two homes on Brackenridge Street (1913 & 1915), homes in the 1800 to 2000 block of East Side Drive, homes on the north side of Leland Street west of Newning Avenue, all homes in the 500 block of Lockhart Drive, all homes in the 500 block of E. Mary Street, the homes in the 1800 to 2000 block of Newning Avenue, and all homes on Terrace Drive.

##### PROPERTY BOUNDARIES

Property boundaries vary throughout the district, though it is common for individual properties to have fences and vegetation dividing parcels in the back yard. Generally, front yards are open to the street, though there are many examples of properties with fences, gates, low retaining walls and/or vegetation along the street. Fence styles vary throughout the district but they generally are below six feet.

#### SMALL-SCALE ELEMENTS

Common smaller-scale elements found along the district's street edges include wooden electrical poles, basic street signage, fire hydrants, and other nondescript infrastructural elements such as electrical boxes. When street lighting is provided, it is typically attached to the electrical poles. Other than these elements, the arrangement of street edges of the district are left to the eclectic whims of the property owners.

#### LOCAL ARCHITECTURAL TYPE AND CHARACTER

Property types and architectural styles are useful categories for analyzing general types of historic resources commonly found within historic districts. The inventory of historic properties (Appendix C of the local historic district application) provides a list of the specific property types and architectural styles found within the historic district. The following analysis sets forth typical character-defining features of property types and architectural styles that are within the period of significance from 1928 to 1946. Note that many examples of historic resources do not strictly fit any property type or architectural style classification. Similarly, a typical example of a property type or architectural style may exhibit some of the character-defining features below, but not all. Other examples of historic resources may

combine eclectic elements from several property types or architectural styles. This analysis of property types and architectural styles seeks to find commonalities among general trends, though the inventory of resources within a historic district inevitably will include exceptions.

Property type designation is primarily based upon the function intended for the building at the time of its construction. Because form follows function, properties that share a use-type often share similarities in floor plan, roof form, size, and scale. Similar property types often are clustered together due to a variety of factors influencing development, including proximity to transportation, property values, desire for visibility versus desire for privacy, and convenience. Property Type Classifications are based on a combination of the resource's original use or function, stylistic influences, and form/plan type. Although this system works well for the majority of the identified resources, some properties are unique and may not fall under a single standard property type classification. Standard classifications for architectural forms and styles are set forth by the National Park Service in *Bulletin No. 16a, How to Complete the National Register Registration Form*.

#### L-PLAN

Most L-plan houses were constructed after the arrival of the railroad using milled lumber with prefabricated decorative elements. These houses typically are one or one-and-a-half stories in height with an L-shaped floor plan and a cross-gabled roof form. Historic additions to the rear of the building are typical. L-plan houses are usually set back with a front yard. Wood or cast iron fences may be present. Original barns or sheds may be present. Although not original, detached garages may have been added within the district's period of significance.

- Exterior Walls: Typically constructed with wood siding or wood shingles finished with paint, although occasionally brick or stone.
- Foundation: Pier and beam, typically with brick or wood piers.
- Porches: Typically partial-width set within the interior angle of the L-plan. Often feature decorative wood detailing in the Queen Anne Style, such as turned porch posts, turned balusters, and spindle friezes. Mid-twentieth century examples may employ Minimal Traditional Style detailing.
- Roofs: Originally usually metal shingle, corrugated metal, or standing seam metal. Often feature decorative wood detailing in the Queen Anne Style, such as bargeboards.
- Windows: Double-hung wood-sash, often with a two-over-two or four-over-four configuration. Often feature projecting bay windows or dormer windows.
- Doors: Typically paneled wood with glazing.
- Chimneys: Original stone or brick masonry chimney or metal stovepipe typically located at interior of floor plan or at gable ends.

#### BUNGALOW

The bungalow is a nationally popular house form that was always constructed after the arrival of the railroad, and typically constructed after local popularization of the automobile. Bungalow plans were standardized, often distributed through lumber companies. Bungalows are usually one-story in height, but sometimes one-and-a-half or two-stories. Floor plans usually are organized with the living room, dining room, and kitchen aligned on one side of the house, and the bedrooms aligned on the other side, so that corridor space is minimized. In Austin, bungalows typically are set back from the street, with a front yard. Concrete sidewalks or driveway runners may be present. Because bungalows often were constructed after the advent of the automobile, a detached garage may be associated with the house, and/or a porte cochere attached to a side of the house.

- Exterior Walls: Typically constructed of milled lumber with wood siding finished with paint, but sometimes constructed of brick or stone masonry.
- Foundation: Typically pier and beam with brick piers, but sometimes concrete stem wall and footing.
- Porches: Typically partial-width with a front-gabled roof form and wood or concrete porch floor. Often feature Craftsman Style tapered porch piers, sometimes on wood or stone bases. However, sometimes feature Classical Revival Style, Tudor Revival Style, Spanish Colonial Revival Style, or Mission Revival Style porch supports and detailing.
- Roofs: Roof form typically front- or side-gabled, with deep eaves. Originally usually standing seam metal or asphalt or asbestos shingle. Often detailed with exposed rafter ends.
- Windows: Double-hung wood-sash, usually with a one-over-one configuration. Often feature wood screens with geometric detailing on the upper sash with Craftsman Style or Prairie Style motifs. Eyebrow gable windows may be present.
- Doors: Typically paneled wood with glazing.

- Chimneys: Typically brick masonry chimney located at the side elevation.

## RANCH

The Ranch house probably is the most common house form found in Austin. These houses were constructed nationwide beginning ca. 1940 and continuing with the post-World War II housing boom. Ranch houses were constructed using prefabricated building materials, and often standardized plans were repeated within subdivisions. The Ranch house form is nearly always one-story. The footprint may be rectangular, L-plan, rambling and irregular, or even split-level. The interior floor plan of a Ranch house is open, with free-flowing living, dining, and kitchen spaces, many of which open out to outdoor spaces, such as courtyards or patios. Ranch houses typically lack applied architectural ornament, and instead feature details integral to the design of the house that are influenced by the Ranch Style, Modern Style, or Contemporary Style. In Austin, neighborhoods of Ranch houses include typically suburban landscape patterns, with houses set back from the street with a front yard. Concrete sidewalks and driveways are often present. Garages or carports are integral to the overall form and design of the Ranch house, and most examples include an attached carport or one- or two-car garage.

- Exterior Walls: Sometimes constructed of milled lumber with wood siding finished with paint or asbestos shingle siding, and sometimes brick or stone masonry. Masonry units often thin with horizontal emphasis, such as Roman brick or flagstone.
- Foundation: Typically concrete slab.
- Porches: Typically partial-width and recessed under the main roof form. Often feature geometric wood or decorative metal porch supports, or porch roof may be cantilevered. Porch floors typically concrete. Brick or stone planters sometimes integrated into porch design.
- Roofs: typically low-sloped and hipped or side-gabled, sometimes with deep eaves. Originally usually asphalt or asbestos shingle.
- Windows: Often wood or metal casement; awning or jalousie; or double-hung metal sash. Often feature large, fixed-pane picture windows.
- Doors: Typically wood, often with geometric glazing or relief patterns.
- Chimneys: When present, often wide, constructed of Roman brick or flagstone masonry, and set asymmetrically on front façade.

## DOMESTIC OUTBUILDINGS

The detached garage is the overwhelmingly most common historic domestic outbuilding found in Austin. Detached garages typically are one-story in height with a rectangular footprint and a single, open interior space. Garage apartments may be two stories in height, with an open garage space on the ground floor and a living space above. Some domestic properties retain agricultural outbuildings, such as barns or sheds, which pre-date the residential development of the surrounding neighborhood. Domestic outbuildings typically are sited at the rear of the lot, behind the main house.

- Exterior Walls: Most commonly wood siding or board-and-batten, but may be brick or stone.
- Foundation: Usually poured concrete slab, but some examples have no foundation, only a dirt floor.
- Porches: Domestic outbuildings seldom include porches.
- Roofs: Roof form most often front-gabled, but may be side-gabled or hipped. Roofing material usually matches the associated main house.
- Windows: Usually limited to side façades. Window materials and configuration typically match associated main house.
- Doors: In garages, overhead rolling doors are common, but original hasp-hung doors or hinged doors may be present.
- Chimneys: Domestic outbuildings seldom include chimneys.

## ARCHITECTURAL STYLES OF AUSTIN

Not all historic resources are exemplary of a particular architectural style. On the other hand, some eclectically combine several styles (especially early twentieth century Revival styles). Other historic resources were constructed during a period of stylistic transition, featuring some elements of a more traditional style (such as Minimal Traditional) combined with other elements of a more progressive style (such as Ranch or Modern). Architectural styles found within the Historic District are listed below. Architectural styles can be integral to the form of the building and related to the property type, or can be displayed through decorative ornament applied to a building. Some typical character-

defining features of each architectural style are listed. A resource does not need to display all of the listed character-defining features to be considered a good example of a style; however, when these character-defining features are intact, they must be preserved in order to preserve the overall character of the architectural style. Resources also may exhibit different stylistic elements due to changes over time. If these changes occurred during the historic district's period of significance, such changes should be respected and possibly retained during restoration or rehabilitation projects. Photos of examples of each style are provided with each property type section.

Architectural styles can be integral to the form of the building or manifested in decorative ornament applied to a building. While property types often are clustered together, architectural styles may be very eclectic within a grouping. Architectural styles often vary depending on date of construction or historic use. Some architectural styles were very popular for a confined period of time but then declined in popularity, but because many architectural styles—especially “Revival” styles—have their roots in earlier architectural styles, they are used throughout the historic period rather than in one confined era. Standard classifications for architectural styles are set forth by the National Park Service in Bulletin No. 16a, *How to Complete the National Register Registration Form*, and are derived from texts in American Architectural History such as *American Architecture Since 1780: A Guide to Architectural Styles* by Marcus Whiffen; *Identifying American Architecture* by John J. G. Blumenson; *What Style Is It?* by John Poppeliers, S. Allen Chambers, and Nancy B. Schwartz; and *A Field Guide to American Houses* by Virginia and Lee McAlester. (Refer to in *Appendix D: Additional Resources*.) The inventory of historic resources identified a variety of architectural styles extant within the Historic District today (see *Section C* of this application).

## REVIVAL STYLES

### TUDOR REVIVAL

- Building Form: Bungalow, L-plan, or irregular.
- Exterior Walls: Usually brick masonry in varying colors, patterns, and textures, with exaggerated mortar joints, sometimes seeping. Sometimes stucco. Faux half-timbering often adorning gable-ends. Wing walls or buttresses sometimes accenting front façade.
- Foundation: Usually skirted with brick.
- Porches: If present, sometimes include low-sloped Gothic arches supported by brick piers.
- Roofs: Gable-on-hip or front gabled. Often complex. Eaves sometimes swept.
- Windows: Usually double-hung wood sash. Window openings sometimes feature low-sloped Gothic arches. Sometimes feature picture windows with leaded glass in a lattice pattern.
- Doors: Round-arched wood doors with small lites.
- Chimneys: Prominent brick chimneys, often on front façade. Sometimes feature chimney caps with corbelling or crenellations.

### COLONIAL REVIVAL

- Building form: American four-square, two-story center-passage, or bungalow.
- Exterior walls: Typically red brick.
- Foundations: Typically pier and beam skirted with brick.
- Porches: Often lack porches. Sometimes include front-gabled or arched awnings over the main entrance, supported by brackets. If present, porches usually partial-width, with front-gabled roof supported by white wood or stone columns.
- Roofs: Side-gable. Wood cornice and enclosed eaves, often painted white.
- Windows: Typically double-hung wood sash, painted white. Often flanked by wood shutters.
- Doors: Typically wood, sometimes topped with fanlights. Commonly include sidelights, ornate door surrounds, pediments, etc.
- Chimneys: Typically red brick.

## EARLY TWENTIETH-CENTURY AMERICAN STYLES

### PRAIRIE

- Building Form: American four-square, L-plan or bungalow.
- Exterior Walls: Typically brick or stone, with wood trim details.
- Foundation: Typically skirted with wood, stone or brick.
- Porches: Partial-width or full-width, often with front-gabled roof, typically supported by tapered wood or massive square stone or brick columns.
- Roofs: Low-sloped hipped or gabled, with deep eaves, often with clean, boxed ends.
- Windows: Typically double-hung wood sash, often with decorative transoms and wood screens with geometric detail.
- Doors: Typically wood with glazing, sometimes with transoms and sidelights.

- Chimneys: Brick, sometimes with corbelling or stone coping.

#### CRAFTSMAN

- Building Form: L-plan or bungalow.
- Exterior Walls: Typically wood siding or asbestos shingle, sometimes brick. Sometimes feature wood shingle detailing.
- Foundation: Typically skirted with wood or brick. Skirt walls sometimes battered.
- Porches: Partial-width or full-width, often with front-gabled roof, typically supported by tapered wood or stone columns but sometimes supported by decorative metal posts.
- Roofs: Low-sloped hipped or gabled, with deep eaves, often with exposed rafter ends.
- Windows: Typically double-hung wood sash, often with wood screens with geometric detail.
- Doors: Typically wood with glazing, sometimes with transoms and sidelights.
- Chimneys: Brick, sometimes with corbelling or stone coping.

#### MODERNISTIC

- Building Form: Split-Level or irregular.
- Exterior Walls: Often smooth stucco, sometimes with brick detailing
- Foundation: Concrete slab.
- Porches: If present, typically a small stoop or recessed asymmetrically.
- Roofs: Flat with parapet, sometimes with small coping at roof line
- Windows: Steel fixed and casement frames, also often round "porthole" windows and glass brick; windows often wrap corners
- Doors: Wood, often with small simple square or circular lites.
- Chimneys: If present, broad and simple stuccoed brick or stone.

#### MID-CENTURY STYLES

##### MINIMAL TRADITIONAL

- Building Form: L-plan, modified L-plan, bungalow, or ranch.
- Exterior walls: Wood siding or asphalt shingle. Decorative wood shingles, board-and-batten, or waney-edge siding sometimes present at gable ends. Brick or stone veneer sometimes present at water table.
- Foundation: Pier and beam with wood skirt, or concrete slab.
- Porches: Typically partial-width, supported by simple wood posts, geometric wood posts, or decorative metal posts.
- Roofs: Cross-gabled or gable-on-hip.
- Windows: Casement or double-hung, wood or metal sash. Fixed picture windows sometimes present at front façade. Decorative wood shutters common.
- Doors: Wood, often with small lites in geometric patterns.
- Chimneys: If present, simple brick or stone.

##### RANCH STYLE

- Building Form: Ranch or Split-Level.
- Exterior Walls: Often brick or stone masonry, often using Roman brick or flagstone; sometimes wood siding or asbestos shingle siding.
- Foundation: Concrete slab.
- Porches: If present, typically recessed under main roof form and supported by simple wood posts or decorative metal posts. Floor typically concrete. Integral stone or brick planters often common. Details may exhibit influences of Revival Styles.
- Roofs: Low-sloped hipped or side-gabled, with deep eaves. Clerestory windows sometimes present at gable ends or below eaves. Details may exhibit influences of Revival Styles.
- Windows: Double-hung, casement, awning or jalousie, with wood or metal sash.
- Doors: Wood, often with small lites in geometric patterns. Decorative metal screen doors.
- Chimneys: If present, broad and simple brick or stone.



## Design Standards

For the purposes of these Design Standards the words "should" and "may" indicate that a property owner is encouraged to meet the standard and are recommendations for best practices, but are not obligatory.

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The words "shall" and "must" denote requirements to meet the standard.

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The term "compatible design" refers to height, setback, massing and scale of a building; it does not refer to style.

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Demolition of existing buildings or parts of buildings;

New construction;

Relocation of existing buildings into or out of the district; or

Landscape changes requiring a City permit.

The City Historic Preservation Office will review applications to determine if a Certificate of Appropriateness is necessary.

#### PROCESS FOR OBTAINING A CERTIFICATE OF APPROPRIATENESS

Applications for a Certificate of Appropriateness must be submitted to the City Historic Preservation Office in accordance with the submission schedule provided by the City Historic Preservation Office. The application form can be obtained from the City Historic Preservation Office or the City of Austin website. Property owners can contact City staff in the early planning stages of a project for assistance in interpreting the Standards, for suggested solutions to problems, and for explanation of the review process and requirements. The Historic Preservation Office staff can also provide on-site consultations and other technical assistance.

The City Historic Preservation Office conducts a preliminary review of the application for a Certificate of Appropriateness and might contact the applicant to get additional information or to suggest changes to the application.

Depending on the scale of the project, the application for a Certificate of Appropriateness will be evaluated by either the City Historic Preservation Officer or the City of Austin Historic Landmark Commission, in accordance with the criteria below.

The City Historic Preservation Officer may administratively approve applications for Certificates of Appropriateness for the following:

- Accurate restoration or reconstruction of a documented missing historic architectural element of the structure or site;

- Changes that do not affect the appearance of the structure or site from an adjacent public street, limited to:

  - Demolition of garages, sheds, carports, or other outbuildings that are non-contributing;

  - Construction of a ground-floor, one-story addition or outbuilding with less than 600 square feet of gross floor area;

  - Two-story additions to the rear of two-story houses; or

  - A pool, deck, fence, back porch enclosure, or other minor feature.

Administrative approvals:

The Historic Landmark Commission must hear all other Certificates of Appropriateness.

The Historic Preservation Office or Historic Landmark Commission may grant the Certificate of Appropriateness if the application conforms to these Design Standards. If the Certificate of Appropriateness is not granted, the Historic Landmark Commission may require the applicant to modify the proposed work and revise the application accordingly. Appeal of a denial of a Certificate of Appropriateness can be made to the appropriate land use commission and, if denied, to the City Council in accordance with City Code.

Each property is unique and its lot size and shape can vary. Therefore, the Historic Landmark Commission reviews each case individually and allows exceptions to the Design Standards if it determines that the proposed design will maintain the relevant character-defining features of the property and the District. Demonstrating financial hardship is a separate and distinct process, set forth in City of Austin Code, Ordinance No. 20090806-068.

#### RESPONSIBILITIES OF THE APPLICANT

The responsibility for demonstrating that the proposed project meets these Design Standards lies with the applicant. The applicant shall submit sufficient photographs or physical documentation to demonstrate that the proposed project meets these standards. The Historic Preservation Office or Historic Landmark Commission can require additional documentation as necessary.

The historic property can also be designated a Recorded Texas Historic Landmark (RTHL) or a State Antiquities Landmark (SAL), which requires review by the Texas Historical Commission (THC). In this case, the applicant is responsible for submitting the proposed work to the THC for review independent of the Local Historic District review process.

#### PENALTIES FOR VIOLATIONS

Any person or corporation who violates provisions of the Standards is subject to the same criminal misdemeanor and civil penalties that apply to any other violation of the City Code.

#### PERIODIC REVIEW

These Design Standards are not intended to be static. They are subject to periodic review, revision, and amendment. The process for revising or amending the Design Standards shall follow the process set forth for Neighborhood Plans, as described in City of Austin Code, which states:

The director shall conduct a general review of a neighborhood plan not earlier than five years after the adoption of the plan and may recommend amendments of a plan to the Planning Commission and council. The director shall include neighborhood stakeholder input in the review process

## GENERAL

All work requiring a Certificate of Appropriateness within the District ~~shall will~~ follow the Design Standards set forth below. The Design Standards are based upon the Secretary of Interior's Standards for Preservation, Rehabilitation, Restoration, or Reconstruction, as appropriate. These Standards can be found in the Appendix and on the National Park Service website at <http://www.nps.gov/hps/tps/standguide/>. The following Design Standards clarify the interpretation of the Secretary of Interior's Standards for application within the District.

The Design Standards apply to all contributing properties and new construction within the Local Historic District. For a list of contributing properties, see Appendix B. The Design Standards apply only to the exterior elements of buildings that are visible from the street (disregarding vegetation, fences, or other barriers). All contributing properties within the District will be reviewed with primary reference to the front street appearance of the house and a greater degree of flexibility on the other sides of the house. Houses located on corner lots will be treated the same as houses on interior lots for the purposes of these Standards.

The term "in-kind replacement" means the replacement of a current element (whether a single material or a whole feature) with a new element whose material has the same profile (e.g. thickness), dimension (e.g. width and height), and texture (e.g. grain, smoothness) as the material of the current or historic element. Color is not regulated. This new material might or might not be the same material as the current or historic material. Materials can replicate profile, dimensions, and texture and still not be appropriate because their use could be damaging to surrounding materials due to different vapor transmission rates or expansion and contraction properties. If the historic element does not exist, replication of that material must be based on historical documentation of the building; if no documentation exists, it must be based on the historic elements typically found on buildings of a similar age, type, and style in the District. Refer to the Architectural Character section of these Design Standards for information about building styles and features found in the District.

## RETENTION OF HISTORIC STYLE

Respect the historic style of contributing buildings and retain their historic features, including character-defining elements and building scale and massing, as described in the Architectural Character section of these Design Standards. ~~Avoid Re~~replacing and altering historic-age elements of contributing buildings should be avoided unless they are deteriorated beyond repair, except for specific cases mentioned in the following sections. For historic-age elements deteriorated beyond repair, only replace them "in-kind", except for specific cases mentioned in the sections below. For non-historic elements, either perform an in-kind replacement or remove the element.

## AVOIDANCE OF FALSE HISTORICISM

Do not add stylistic elements that were not originally present, as evidenced by historic documentation. Avoid alterations that have no historic basis and that seek to create the appearance of a different architectural period or a false sense of history. For example, do not add Victorian trim to a Craftsman bungalow or Craftsman details to a 1950s ranch-style house or cottage.

## SEQUENCE OF APPROPRIATE TREATMENT OPTIONS

Treatment for historic materials within the District should shall follow the sequence of priorities set forth in the Secretary's Standards: preservation first, then rehabilitation, then restoration of missing elements if necessary, and, finally, new construction. In order to gain a Certificate of Appropriateness, the applicant shall objectively demonstrate that the proposed project has selected the least intrusive treatment option that is feasible because of the condition of the existing historic materials.

For additional guidance, the National Park Service publishes the *Interpreting the Standards Bulletins* and *Preservation Briefs*, available online at the following sites:

<http://www.nps.gov/tps/standards/applying-rehabilitation.htm>

<http://www.nps.gov/tps/how-to-preserve.htm>

#### WHEN TO PRESERVE

Repair rather than replace deteriorated historic features and architectural elements whenever possible. Many times, materials that initially appear beyond repair can be preserved successfully. Guidelines for the conservation of historic materials are set forth in the Appendix to these Design Standards and are available in National Park Service *Preservation Briefs*.

#### WHEN TO REHABILITATE

If an original architectural feature has deteriorated beyond repair, the replacement shall match the historic feature in size, scale, profile, and finish. The substitution of recycled historic materials is acceptable, provided that the replacement material is compatible with the historic style and character of the resource. In order to be appropriate, synthetic or composite replacement materials shall match the original in size, scale, profile, and finish. Additional recommendations for the rehabilitation of historic materials are provided in the Appendix to these Design Standards.

#### WHEN TO RESTORE

Missing architectural features can be restored using photographs, historic architectural drawings, or physical evidence as a guide. Physical evidence can include other matching elements that remain extant on the building or a “ghost” showing where the missing element was attached. The restored element shall match the original in size, scale, profile, and finish. Typically, reconstruction of an entire missing building is not appropriate.

#### WHEN TO CONSTRUCT NEW

New construction within the district is appropriate only if it will not demolish or significantly alter an extant contributing resource. For example, new construction might be appropriate on an empty lot or to the rear of a contributing resource.

### ARCHITECTURAL BARRIERS AND ACCESSIBILITY

When needed or required, accessibility to historic properties can be achieved with careful and creative design solutions. Ramps, lifts, and accessible entrances shall be designed in compliance with applicable standards to avoid damage to character-defining features of a historic building. Contributing buildings might qualify for variances from the Texas Accessibility Standards. Contact the THC Division of Architecture or the Texas Department of Licensing and Regulation (TDLR) for inquiries regarding the Texas Accessibility Standards.

### ENERGY EFFICIENCY

Construction of any new structures or alterations of existing structures shall be done in such a way as to meet or exceed the intent and requirements of current energy codes except in cases where compliance with the codes would adversely impact the historic character of the property or district.

In no case, however, shall compliance with energy or building codes be used as a reason to demolish a historic, contributing, or potentially contributing structure, or to change a structure in such a way that its historic features are modified or removed. The City of Austin recognizes that protection of our cultural heritage contributes to sustainable communities and preserves the value of embodied energy used in the construction of the building.

### REPAIR AND REHABILITATION OF CONTRIBUTING BUILDINGS

#### FAÇADE

Retain the original street elevations of the building that are-is most visible from the public right-of-way. The other elevations of the building should be retained to the greatest extent possible. Do not change the character, appearance, configuration, or materials of the façade, except to restore buildings to their original appearance.

Do not add architectural features to a building that it never had (e.g., do not add a front porch to a house that never had one).

#### EXTERIOR WALLS

Repair damaged exterior wall materials, details, and ornamentation to the greatest extent possible. Replace only those sections that are deteriorated beyond repair. Replace deteriorated wall materials, details, and ornamentation in kind, to match existing wall materials.

Do not apply aluminum or vinyl as a replacement for a primary building material. These artificial siding materials can cause irreparable damage to underlying materials and structural members. Fiber cement siding and other board siding that matches wood siding in profile, dimension, and texture may be used as an in-kind replacement material for siding deteriorated beyond repair.

~~Do not~~Avoid painting masonry that has not already been painted. Moisture can become trapped between the paint and masonry, causing deterioration of the underlying materials and structural members. Painting of exterior walls is not otherwise regulated.

#### PORCHES

Do not remove any element of an original front porch, except non character-defining porch floors, which may be replaced with a concrete slab on grade if desired, as long as all other elements are retained.

Do not enclose a front porch. To screen a front porch, install the screen in a way that is reversible, does not damage any historic fabric, and is compatible with the historic design.

Repair damaged porch elements whenever possible. If replacement is necessary, replace in kind only those elements deteriorated beyond repair. The replacement material shall not promote the deterioration of adjacent materials (refer to treatment guidelines in Appendix C.) Do not add porch elements that were not historically present.

If original porch elements are missing, they may be restored to their historic appearance if sufficient documentation exists to ensure accuracy.

#### ROOFS

Maintain and repair character-defining roof materials whenever possible. If the roof material is not a character-defining feature of the building (e.g. asphalt shingles) or if it has been replaced, it may be replaced with the original material, with an in-kind material, or with a metal roof if desired. Refer to the Architectural Character section of these Design Standards for information about character-defining roof materials found in the District.

Maintain the shape and slope of the original roof as seen from the street.

Maintain original decorative roof elements, such as exposed rafter ends, bargeboards, or cornices. Do not add decorative roof elements that were not historically present.

Maintain original dormers. Refer to treatment recommendations and repair methods for historic materials included in the Appendix to these Design Standards.

New dormers must match existing dormers in design and scale or match dormers on similar houses in the District. New dormers must be located on the side- or rear-facing slopes of the roof of the building. Refer to the Architectural Character section of these Design Standards for information about dormers found in the District.

#### WINDOWS AND SCREENS

The Secretary of Interior Standards specify that original windows and doors are significant features of historic structures and replacing windows is not always the most sustainable or cost effective method of increasing energy efficiency. Therefore, retaining original windows and doors is encouraged but not required on contributing buildings. When installing new windows, whenever possible, retain the original windows and doors of contributing structures. When not possible, install new windows that match-match the historic or original windows in terms of size, type, configuration, material, form, appearance, and detail. ~~The replacement of windows is not a best practice for either historic preservation or sustainable design.~~

Do not enlarge, ~~move, or enclose~~ original window openings visible from the street unless required to accommodate standard modern window dimensions. When accommodating standard modern window dimensions, the original proportions of height and width should be maintained. Do not move or enclose original window openings visible from the street. Do not add new window openings except for small supplementary windows on the sides of buildings, such as high windows installed for new bathrooms. If possible, restore original window openings that have been enclosed.

~~Retain and restore~~ Original windows, window surrounds, shutters, and screens should be retained and repaired unless deteriorated beyond repair. If original windows, shutters, or screens are to be replaced, deteriorated beyond repair, replace them in-kind. The relationship between the replacement windows, the window surrounds, the shutters, and the screens (if present) shall match the original relationship. Refer to treatment recommendations for windows included in the Appendix to these Design Standards.

~~If the original windows, shutters, or screens are no longer extant, replace them in-kind. The relationship between the new windows, the window surrounds, and the screens (if present) shall be comparable to original examples of houses of a similar style and era of construction within the District. Refer to the Architectural Character section of these Design Standards.~~

Muntins are the parts of the window that divide panes of glass and can affect the historic appearance of a house significantly. Homeowners shall use the exterior muntin pattern, profile, and size appropriate for the historic building when replacement windows are necessary. Do not use false muntins inserted inside the glass. Matching the profile of the original window requires the use of either true divided lites or dimensional muntins placed on the outside of the glass matched with spacers that are an appropriate color, material, and thickness on the inside of the glass, so that the window appears to have true divided lites even when viewed from an oblique angle.

Although some substitute materials, such as extruded aluminum or fiberglass, may be used for replacement windows, the appearance of the window from the public right-of-way shall closely resemble the original in size, configuration, profile, and finish. Vinyl is not an appropriate substitute material from any visible from the street.

Storm windows and window inserts can provide increased energy efficiency and soundproofing without damaging historic windows. Interior storm windows and inserts can be used to maintain the historic exterior appearance of the window. Storm windows and inserts shall be installed in such a way that they do not damage historic fabric.

## DOORS

Do not enlarge, ~~move, or enclose~~ original door openings visible from the public right-of-way street more than typical sizing of current industry standard window dimensions. Do not move, or enclose original door openings visible from the street. If possible, restore original doors openings that have been enclosed.

~~Retain~~ Original doors, door surrounds, sidelights, and transoms, should be retained and restored whenever possible. Refer to treatment recommendations for historic materials included in the Appendix to these Design Standards.

If a replacement door surround, sidelight, or transom is necessary, replace it in-kind. If a replacement door is necessary, replace with an in-kind door or select a new style of door that is historically appropriate for the style of house. Refer to the Architectural Character section of these Design Standards. Steel and hollow-wood doors are not appropriate for main entries within the District.

## CHIMNEYS

Maintain original chimneys. Refer to treatment recommendations and repair methods for historic materials included in the Appendix to these Design Standards.

New chimneys must match existing chimneys in design and scale, or they must match chimneys on similar houses in the District. Refer to the Architectural Character section of these Design Standards for information about chimneys found in the District.

## MECHANICAL EQUIPMENT

Locate all new mechanical or energy conservation equipment in a location that does not obscure the primary view of the building.

When mechanical equipment must be attached to the exterior wall of the house, do not damage the original exterior wall material. On masonry walls, all attachments shall anchor into the mortar rather than the masonry unit.

## PHOTOVOLTAIC AND SOLAR THERMAL INSTALLATIONS

Photovoltaic and solar thermal installations must be designed to be in scale with the existing structure's roofline and must not damage historical architectural features or materials. These roof systems must be on the same plane as the roof. The color of the panels must be compatible with surrounding roof materials.

Locate solar collectors on the side or rear roof pitch of the primary historic structure to the maximum extent possible. Alternatively, locate solar collectors on a garage or outbuilding or consider a ground-mount system where solar access to the primary structure is limited. However, if these options are impossible due to limited solar access, solar collectors may be located on a front roof pitch. Avoid or minimize the impact of new construction on solar access for adjoining properties.

On sloped roofs, mount solar collectors flush with the surface and select collectors that are similar in color to the roof surface to reduce visibility. On flat roofs, mount solar collectors flush with the surface if possible. Where solar access limitations preclude a flush mount, locate panels towards the rear of the roof whenever possible.

#### OTHER EQUIPMENT

Rainwater collection systems that are visible from the public street ~~must-should~~ use traditional materials such as metal and wood whenever possible; use of PVC containers or piping ~~should be minimized from the public view as much as possible. is not permitted within the public view.~~

Wind power systems shall be located to the rear of the site or on new (rear) building additions whenever possible. ~~The color of the turbine must be muted and it must be free from graphics.~~

### ADDITIONS TO CONTRIBUTING BUILDINGS

#### LOCATION AND HEIGHT

Design new additions so that they do not visually overpower the existing building, compromise its historic character, or destroy any significant historic features or materials. Additions shall appear subordinate to the existing house. Locate additions as inconspicuously as possible. Consider the effect that the addition will have on the existing and neighboring buildings. Large additions may be constructed as separate buildings and connected to the existing building with a linking element such as a breezeway.

All character-defining features on historic-age exterior façades that are visible from the public right-of-way shall remain intact.

Retain as much of the historic building fabric as possible in the construction of the addition.

Design the addition to complement the scale and massing of the original historic building.

Minimize the appearance of the addition from the public right-of-way facing the front façade parallel to the front lot line. The historic building's overall shape as viewed from the front lot line shall appear relatively unaltered. Whenever possible, additions shall be located behind the building, and shall be neither taller nor wider than, the historic building. Whenever possible, an addition including any upstairs addition, shall be set back so it does not overwhelm the original house from the front street-view.

Do not locate an addition flush with the original front façade or projecting beyond width of the original front façade. If the historic building has a side-gabled, hipped, or pyramidal roof form, the addition shall be set back behind the ridgeline of the original roof. If the original historic building has a front-gabled or flat roof form, the addition should be set no closer to the front facade than half the width of the facade. For example, if the front façade is thirty feet (30') wide, then the addition shall be set back from the front façade by at least fifteen feet (15').

#### DESIGN AND STYLE

Additions shall be inconspicuous, subordinate, and compatible with the historic building, but also differentiated so as not to give a false sense of history.

Additions need not mirror or replicate the historic architecture of the existing house, and may reflect contemporary interpretations of traditional designs and details. For example, homeowner may choose different siding, vertical board, connectors, or other means of differentiating the addition from the original structure.

If an addition will be visible from the street (either from the front or from the side), design the addition to be inconspicuous and subordinate to the historic building and to complement the overall proportions and fenestration patterns of the historic parts of the original building. For instance, additions that are visible from the street shall have window-to-wall area ratios, floor-to-floor heights, window patterns, and bay divisions similar to those on the existing house.

Creation of usable upstairs space by constructing upstairs dormers is appropriate provided that they match existing dormers in design and scale or that they match dormers on similar houses in the District. Do not place dormers on a front façade, and minimize the size and scale of dormers on side façades.

When constructing a two-story new building or rear addition, consider the use of landscape screening at the back and side property lines to diminish the visibility of the new construction in order to respect the privacy of the project property and that of the adjacent property owners.

#### EXTERIOR WALLS

If an addition will be visible from the street (either from the front or from the side), design the addition to complement the exterior wall materials of the original part of the house and the collective character of the district.

Differentiate the exterior wall materials of the addition from the existing house by means of a hyphen or joint using a different material, varying trim boards, a slightly varying dimension of materials, varying orientation of materials, or other means.

#### PORCHES

New front porches cannot be added to buildings that did not historically have a front porch.

Back porches, side balconies, and decks shall not be visible from the street when the house is viewed from the public right-of-way.

#### ROOFS

Whenever possible, the roof form of the new addition ~~should shall~~ not be visible above the ridgeline of the original roof when the front of the house is viewed from the street.

If it is visible from the street, an addition shall use a simple roof style and slope that complements the roof on the existing house.

Use materials for the roof that match or are compatible with the roof on the existing house.

~~Locate solar panels on the back of the roof whenever possible so that they are not visible from the street. Locate solar panels on side or rear roof pitch of the primary historic structure to the maximum extent feasible to minimize visibility from the public right-of-way while maximizing solar access. Consider locating solar panels on a garage or outbuilding or consider a ground-mount system where solar access to the primary structure is limited. If solar panels cannot be located on a side or rear roof pitch, or outbuilding due to the orientation not allowing sufficient solar access, they may be located on a front roof pitch.~~

Solar panels should be flush with the surface of a sloped roof whenever possible, and select panels that are similar in color to the roof surface to reduce visibility. On flat roofs, solar panels should be mounted flush with the surface of the roof to the maximum extent feasible. Where solar access limitations preclude a flush mount, panels should be located towards the rear of the roof whenever possible, where visibility from the public right-of-way will be minimized.

#### WINDOWS AND SCREENS

If an addition will be visible from the street (either from the front or from the side), use windows that complement those on the existing house with regard to fenestration pattern, size, configuration, profile, and finish.

For windows on additions, avoid false muntins attached to the windows or inserted between the glass in the windows.

Metal screens might be appropriate for windows in additions. Use anodized or coated metal screens to minimize their visual presence.



## DOORS

If an addition will be visible from the street (either from the front or from the side), use doors that complement those on the existing house but are of a simpler design, so that they do not detract from the original main entrance.

## CHIMNEYS

If an addition will be visible from the street (either from the front or from the side), new chimneys shall be made of a material compatible with the original house and shall be in a style and proportion compatible with the building.

## NON-CONTRIBUTING BUILDINGS

A building that is non-contributing to the district, because of its age or because it has received unsympathetic remodeling, can be renovated in a manner compatible both with the architectural style of the building and the overall character of the District. The standards provided below for new construction can also serve as a guide for alterations to non-contributing buildings.

Alterations to a historic non-contributing building can be removed to return the building to its historic appearance, based upon physical or photographic evidence.

## NEW CONSTRUCTION

New construction within the District shall reflect building forms, materials, massing, proportions, roof forms, fenestration patterns, and architectural styles historically present within the District. All current City of Austin codes and ordinances regulating compatibility of new construction shall be followed.

### ORIENTATION, SET-BACKS, AND HEIGHT

New or moved structures shall be positioned on their lots to maintain the existing patterns of the street.

Front and side yard setbacks shall match the prevalent setback of the contributing houses on the same side of the street. When the historic street pattern is irregular, new construction shall match an adjacent contributing property.

The height of new construction shall be compatible with the streetscape and the dimensions of the lot. The height of new construction shall not exceed the height of the tallest contributing building on a similarly sized lot on the block.

### DESIGN AND STYLE

Quality of construction and materials shall always be more important than applied stylistic detailing.

Design new buildings so that they are compatible with the historic character of the District but are discernible from historic buildings in the District.

The building forms and architectural styles that historically were present within the District can serve as a model for new construction. Refer to the inventory of historic properties and the Architectural Character section of these Design Standards to determine which building types and styles were present historically within the district. Discourage using historical styles that were not present during the District's period of significance as a basis for new construction, to avoid false historicism.

It might be appropriate to incorporate compatible architectural features from existing houses on the street, such as porch columns or transoms, but avoid historical architectural features that do not appear on contributing houses in the District.

New construction need not mirror or replicate the historic architecture of existing houses and can reflect contemporary interpretations of traditional designs and details. However, it must be compatible in scale and massing with surrounding historic buildings.

### EXTERIOR WALLS

Exterior wall materials used in new construction shall be generally compatible with the character of wall materials in the district in scale, type, size, finish, color, and texture.

Exterior materials shall correspond to the building form and architectural style of the new building in a way that responds to historical trends. Refer to the Architectural Character section of these Design Standards.

#### PORCHES

A new building is encouraged to have a front porch. If all of the contributing buildings immediately surrounding the new building include porches, then the new building shall include a porch.

Porch posts or columns, railings, and detailing shall correspond to the building form and architectural style of the new building in a way that responds to historical trends. Refer to the Architectural Character section of these Design Standards for further details.

In general, do not add false historical architectural elements, such as brackets or gingerbread detailing on a new porch. The Historic Landmark Commission can approve exceptions to this standard if the overall design of the new building accurately interprets the appearance of a historical style present within the District.

Locate new decks, balconies, and porches to the rear of new residential structures within the District.

#### ROOFS

Roofs shall be simple in form, reflecting the character of the roofs on contributing houses within the district

Roof forms shall correspond to the building form and architectural style of the new building in a way that responds to historical trends. Refer to the Architectural Character section for further details.

Roof features and details such as dormers, eave detailing, and bargeboards shall correspond to the building form and architectural style of the new building in a way that responds to historical trends. Refer to the Architectural Character section for further details.

Roof materials shall reflect the character of the roofs on contributing houses within the district, as well as the historic character of houses with a similar building form and architectural style.

#### WINDOWS AND SCREENS

Windows and screens in new construction shall reflect the proportions, configuration, and patterns of windows and doors in historic buildings within the District. The relationship between the new windows, the window surrounds, and the screens (if present) shall respond to historic buildings within the District.

Windows and doors in new construction shall correspond to the building form and architectural style of the new building in a way that responds to historical trends. Refer to the Architectural Character section of these Design Standards for further details.

Avoid false muntins attached to or inserted between the glass in windows.

#### DOORS

Front doors shall be visible from the street.

Match the style, proportions, materials, and finish of the door to the overall style and design of the house.

#### CHIMNEYS

Chimneys in new construction shall reflect the configuration and patterns of chimneys in historic buildings within the District.

Chimneys in new construction shall correspond to the building form and architectural style of the new building in a way that responds to historical trends. Refer to the Architectural Character section of these Design Standards for further details.

#### GARAGES AND ACCESSORY BUILDINGS

Locate detached garages and accessory buildings at the side or rear of new residential structures within the District.

Design garages and accessory buildings to be compatible in scale for the property and to have an appropriate site relationship to both the main structure and to surrounding structures.

The materials and finishes used for new garages and outbuildings, including garage doors, shall correspond both to the overall character of the district and to the building type and style of the new house.

#### INDEPENDENT FENCES AND WALLS

Avoid constructing new front yard fences where they were not historically present on the lot.

Fences and walls shall not obscure the front elevation of the primary structure on the property. Fences along the street shall not exceed four feet in height.

Fence materials, scale, and finish shall reflect historic trends visible on other contributing houses within the district.

#### TOPOGRAPHY

Maintain and repair the grade of the site as much as possible to preserve the historic grade. Do not otherwise alter the current grade of the site except to restore it back to its historic state. The current grade of the site shall not be artificially raised to gain additional building height.

#### LANDSCAPING

Preserve existing trees in accordance with the City of Austin Tree and Natural Area Preservation Ordinance.

Driveway configurations shall maintain the streetscape pattern historically appropriate to the District.

Consider ribbon drives or concrete lattice drives that have a lower impervious cover and improve percolation of rainwater, reduce run-off, and minimize the visual impact of the driveway and parking spaces.

When constructing a two-story new building or rear addition, consider the use of landscape screening at the back and side property lines to diminish the visibility of the new construction and to respect the privacy of the project property and that of the adjacent property owners.

#### MECHANICAL EQUIPMENT

Locate all new mechanical or energy conservation equipment in a manner that does not obscure the primary view of the building.

Rainwater collection systems that are visible from the public street must use traditional materials such as metal and wood; use of PVC containers or piping is not permitted within the public view.

Wind power systems shall be located to the rear of the site or on new (rear) building additions. The color of the turbine must be muted and the turbine must be free from graphics.

## Appendix A: Glossary

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The following glossary provides definitions for common architectural terms used in these Design Standards. A good reference for illustrated definitions is the *Illustrated Dictionary of Historic Architecture*, edited by Cyril M. Harris.

**Apron:** A plain or decorated piece of trim found directly below the sill of a window.

**Arch:** A curved and sometimes pointed structural member used to span an opening.

**Areaway:** A sunken area around a basement window or doorway, or mechanical air intake.

**Attic:** The room or space in the roof of a building.

**Awning Window:** A window that is hinged at the top and swings outward.

**Balcony:** A railed projecting platform found above ground level on a building.

**Baluster:** One of a series of short pillars or other uprights that support a handrail or coping.

**Balustrade:** A series of balusters connected on top by a coping or a handrail and sometimes on the bottom by a bottom rail; used on staircases, balconies, and porches.

**Bargeboard:** A board, sometimes decorative, that adorns the gable-end of a gabled roof.

**Base:** The lowest part of a column.

**Basement:** The story below the main floor; may be partially or totally below ground level.

**Battered Foundation:** A foundation that is inclined, so that it appears to slope as it rises upward.

**Bay:** A space protruding from the exterior wall that contains a bay window.

**Bay Window:** A projecting window with an angular plan.

**Bead Board:** Wood paneling with grooves.

**Board and Batten:** Wood siding with wide boards, placed vertically, and narrow strips of wood (battens) covering the seams between the boards.

**Boxed Eaves:** Eaves that are enclosed with a fascia and panels under the soffit.

**Bracket:** A projecting support used under cornices, eaves, balconies, or windows to provide structural or visual support.

**Brick:** A usually rectangular building or paving unit made of fired clay.

**Canopy:** A projection over a niche or doorway; often decorative or decorated.

**Capital:** The uppermost part, or head, of a column or pilaster.

**Casement:** A hinged window that opens horizontally like a door.

**Casing:** The finished visible framework around a door or window.

**Cement Mortar:** A mixture of cement, lime, sand, or other aggregates with water; used in plastering and bricklaying.

**Certificate of Appropriateness:** The documentation provided by the Historic Landmark Commission after review of proposed changes to a contributing structure in the historic district certifying that the proposed change is in conformance with these Design Standards. The process for obtaining a Certificate of Appropriateness is discussed in the Design Review Process section of these Design Standards.

**Clapboard:** A thin board, thinner at one edge than the other, laid horizontally and with edges overlapping on a wooden-framed building.

**Column:** A round, vertical support. In classical architecture the column has three parts, base, shaft, and capital.

**Concrete:** Made by mixing cement or mortar with water and various aggregates such as sand, gravel, or pebbles

**Concrete Block:** A hollow or solid rectangular block made of Portland cement, aggregates, and water; used in the construction of walls, foundations, and piers, etc., also called a concrete masonry unit.

**Concrete Masonry Unit:** Concrete block.

**Contributing Resource:** A building, structure, or object that contributes to the historic character of the historic district. The district nomination includes an inventory and maps listing all contributing resources.

**Coping:** The protective uppermost course of a wall or parapet.

**Corbelling:** Pattern in a masonry wall formed by projecting or overhanging masonry units.

**Corner Boards:** Boards placed at the corners of exterior walls to finish corners and to protect the ends of the wood siding.

*Cornice:* In classical architecture the upper, projecting section of an entablature; also the projecting ornamental mold-ing along the top of a building or a wall.

*Course:* A horizontal row of stones, bricks, or other masonry units.

*Crenellation:* A parapet with alternating solid and void spaces, originally used for defense; also known as battlement.

*Dentil:* A small rectangular block used in a series to form a moulding below the cornice.

*Dormer:* A vertically set window on a sloping roof; also the roofed structure housing such a window.

*Double-hung Window:* A window of two (or more) sash, or glazed frames, set in vertically grooved frames and ca-pable of being raised or lowered independently of each other.

*Downspout:* A pipe that carries water from the gutters to the ground or sewer connection.

*Eaves:* The lower edge of a roof that projects beyond the building wall.

*EIFS:* Exterior insulation and finish system that resembles stucco, popular in the 1980s – 2000s.

*Elevation:* An exterior wall of a building; a drawing of a building as seen from a horizontal position.

*Ell:* An extension that is at right angles to the length of the building.

*Engaged Column:* A column that is partially attached to a wall.

*Entablature:* The horizontal beam-like member supported by columns containing three parts: the lower architrave, the middle frieze, and the upper cornice.

*Eye-brow Dormer:* A low dormer with a wavy line over the lintel, resembling the curve of an eyebrow.

*Efflorescence:* A growth of salt crystals on a surface caused by the evaporation of water. It typically occurs when water is present on concrete, brick, or natural stone.

*Façade:* An exterior wall of a building.

*Fachwerk:* Method of heavy timber framing combined with rubble masonry between the timbers, typically finished with stucco; typically associated with German settlers in Central Texas.

*Fanlight:* An arched window with muntins that radiate like a fan; typically used as a transom.

*Fascia:* The flat area or board covering the ends of roof rafters, or other flat areas.

*Fenestration:* The arrangement of windows and other exterior openings on a building .

*Fixed Sash:* A window, or part of a window, that does not open.

*Flashing:* Pieces of metal used around wall and roof junctions and angles as a means of preventing water infiltration.

*Flat Roof:* A roof that has only enough pitch so that water can drain.

*Gable:* The triangular upper part of a wall under the end of a ridged roof, or a wall rising above the end of a ridged roof.

*Gable Roof:* A sloping (ridged) roof that terminates at one or both ends in a gable. A roof formed by two pitched roof surfaces.

*Gambrel Roof:* A roof having a double slope on two sides of a building. The most common example is a barn roof.

*Gazebo:* An outdoor pavilion or summer house popular for lawns and gardens of rural houses in the Victorian era.

*Gothic arch:* An arch that comes to a point at its apex, such as a lancet arch.

*Gutter:* A channel of wood or metal running along the eaves of the house, used for catching and carrying water.

*Half-timbered:* Descriptive of 16th and 17th century houses built with heavy timber framing with the spaces filled in with plaster or masonry. This style of building was imitated in the 19th and early 20th centuries in the Tudor Revival style.

*Hipped Roof:* A roof formed by four pitched roof surfaces.

*Hood:* A protective and sometimes decorative cover over doors or windows.

*Hopper Window:* A window that is hinged on the bottom and swings inward.

*Jalousie Window:* A window composed of angled, overlapping slats of glass, arranged horizontally like a shutter in order to tilt open for ventilation.

*Keystone:* The central stone of an arch.

*Lattice:* Open work produced by interlacing of laths or other thin strips, often used as screening, especially in the base of the porch.

*Leaded Glass Window:* A window composed of pieces of glass that are held in place with lead strips; the glass can be clear, colored, or stained.

*Lime Mortar:* A mortar made of lime (calcium oxide) and sand, typically used prior to the 1930s, that is more flexible than mortars made of Portland cement.

*Lintel:* The piece of timber, stone, or metal that spans above an opening and supports the weight of the wall above it.

*Lites:* Window panes.

*Mansard Roof:* A roof having two slopes on all four sides; the lower slope is much steeper than the upper.

*Moulding:* Decorative strip of wood used for ornamentation or finishing.

*Mullion:* A large vertical member separating two casements or coupled windows or doors.

*Muntin:* One of the thin strips of wood used to separate panes of glass within a window.

*Newel Post:* The post supporting the handrail at the top and bottom of a stairway.

*Non-Contributing Resource:* A building, structure, or object that does not contribute to the historic character of the historic district. The district nomination includes an inventory and maps listing all non-contributing resources.

*Paneled Door:* A door constructed with recessed rectangular panels surrounded by raised mouldings.

*Parapet:* A low wall or protective railing, usually used around the edge of a roof or around a balcony.

*Patio:* A usually paved and shaded area adjoining or enclosed by the walls of a house.

*Pediment:* A triangular section framed by a horizontal moulding on its base and two sloping mouldings on each side.

*Period of Significance:* The span of time during which a resource or district was associated with the events that give it significance; for a residential historic district, this period may span from the initial date of development until the date when houses had been constructed on the majority of lots, or when housing construction slowed.

*Pilaster:* A rectangular column or shallow pier attached to a wall.

*Porch:* A covered entrance or semi-enclosed space projecting from the façade of a building. May be open sided, screened, or glass enclosed.

*Porte Cochere:* A roofed structure attached to a building and extending over a driveway, allowing vehicles to pass through.

*Portland Cement:* A hydraulic cement binder for concrete and mortar; typically not used in construction prior to the 1930s.

*Preservation:* Defined by the National Park Service as treatment that “places a high premium on the retention of all historic fabric through conservation, maintenance and repair. It reflects a building's continuum over time, through successive occupancies, and the respectful changes and alterations that are made”. See <http://www.nps.gov/hps/tps/standguide/>

*Pier and Beam Foundation:* Foundation consisting of vertical piers set below grade, which support horizontal beams.

*Pyramidal Roof:* A pyramid-shaped roof with four sides of equal slope and shape.

*Quoins:* Large or rusticated stone blocks at the corners of a masonry building.

*Rafters:* The sloping members of a roof upon which the roof covering is placed

*Rail:* A horizontal bar or beam that creates a barrier at the outer edge of a space such as a porch

*Reconstruction:* Treatment that establishes limited opportunities to re-create a non-surviving site, landscape, building, structure, or object in all new materials. See <http://www.nps.gov/hps/tps/standguide/>

*Rehabilitation:* Treatment defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values. See <http://www.nps.gov/hps/tps/standguide/>

*Restoration:* Treatment that focuses on the retention of materials from the most significant time in a property's history, while permitting the removal of materials from other periods. See <http://www.nps.gov/hps/tps/standguide/>

*Retaining Wall:* A braced or freestanding wall that bears against an earthen backing

*Side Light:* A vertical window flanking a door

*Sill:* Horizontal member at the bottom of a window or door opening

*Shed Roof:* A roof containing only one sloping plane

*Soffit:* The underside of an overhanging element, such as the eaves of a roof

*Spalling:* Small fragments or chips of stone, brick, or stucco that may fall off in layers.

*Storm Window:* A secondary window installed to protect and/or reinforce the main window

*Stucco:* Exterior finish material composed of either Portland cement or lime and sand mixed with water

*Transom:* A horizontal window over a door

*Vigas:* A heavy wood rafter – especially a rough-hewn log – used to support the roof in Spanish Colonial or Mission Style architecture

*Waney-edge Siding:* Siding with an irregularly rippled edge, formed by removing the bark but retaining the profile of the wood

*Water Table:* A projecting ledge or moulding near the base of the exterior wall designed to shed rainwater.

*Wing Wall:* A portion of the front façade extending past the side façade, often sloping down from the eaves to the ground at an angle.

## Appendix B: Secretary of the Interior's Standards for Rehabilitation

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 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 archaeological 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.



## Appendix C: Treatment Guidelines

### INTRODUCTION

This section intends to provide property owners with the most basic of information regarding building material conservation and repair. It is not meant to replace professional architectural, structural, material conservation, or construction consultation.

When seeking professional assistance, be sure to select an architect, engineer, material conservation, or contractor based upon similar, successful past experience and excellent references.

The historic exterior material palette of Austin includes the following materials:

### EXTERIOR SIDING

**Brick:** typically buff colored "Austin Common" brick whose clay was quarried and fired on the banks of the Colorado River and Shoal Creek. The arrival of the railroad in 1871, brought new materials including other types and colors of brick.

**Stone:** The most common building stone in Austin is limestone. Cordova Cream limestone was used first, and then Cordova Shell became popular in the 1930s. Leuders, Salado, and other types of limestones are also found, but less common. Sandstone (both Pecos red and crème) and granite (Texas red and Tennessee grey) are used to a lesser extent. Some modern buildings utilize marble.

**Wood:** The most common exterior material for Austin homes is wood. Most early homes were constructed of old-growth pine milled from nearby Bastrop. Other exterior grade woods include fir and cypress. Oak, pecan, mesquite, and walnut were generally used for interior finishes. Many of the earliest homes were clad with vertically laid "board and batten" siding. This was followed by many profile design options (shiplap, beveled, Dutch lap, waterfall) laid horizontally.

Less common exterior materials for Austin buildings constructed prior to 1970 include stucco, terra cotta, tile, cast stone, and exposed concrete.

### ROOFING

**Wood shingle or shake:** Most early buildings in Austin had wood shingle (thinner, finer, sawn) or shake (thicker, split wood) roofs. Wood shingle and shake roofs generally last 20 years.

**Metal:** Many forms of metal roofs could be seen in Austin including standing seam, flat seam, and pressed metal shingle systems. Common metals were galvanized steel, tin, terne, lead, and copper. Metal roofs, because they are fairly easy to repair, can last upwards of 50 years or more depending on the material.

**Slate:** Many of the finer homes constructed after 1871 in the Second Empire or Italianate style had slate roofs with metal cresting or decorative ridge caps. Slate roofs, if installed properly with adequate structural support, can last 75-100 years.

**Tile:** Most common at the University of Texas, but also used in fine homes, clay tile roofs use barrel shaped or French (flat) tiles. The most common color for these roofs is dark red or a variegated mix running from dark reds to crèmes.

**Composition Shingle:** Composition and asbestos roof tiles became popular in the United States in the 1930s. Many original asbestos shingle roofs are still in good functional condition.

### WINDOWS

**Wood:** Wood is the original material used in window assemblies in the United States. It is easily shaped to a variety of profiles, has high structural strength, and original old-growth wood windows can last upwards of 300 years, if properly maintained. Wood species used in the fabrication of sash were typically tight-grained, old growth wood such as yellow pine, cypress, or fir. These older woods are unmatched in quality in today's stock: they have higher strength and are more resistance to rot and decay than modern harvested woods.

**Steel:** Rolled steel windows became popular in Austin in the early 1930s. The casement and pivot styles were particularly beneficial in warmer climates, such as Austin, prior to the use of central air conditioning. The higher end of steel sash windows, "Browne Windows," were equipped with bronze hardware and originally provided with interior bronze screens.

**Aluminum:** Came into use in the 1960s, reflecting modern designs that allowed for larger expanses of uninterrupted glass. The modern curtain wall system is constructed of aluminum. Aluminum windows were a

popular replacement to original wood windows. Anodized aluminum windows have an expected life span of 20 years, and repair methods have not been refined. Aluminum is also the most conductive frame material available, and is more prone to condensation in the winter months.

Bronze: Typically used in commercial storefronts from the 1890s through the 1960s, there are not many systems of this type remaining in Austin.

Glass: Windows are typically glazed with single pane 1/8" clear float glass, back-bedded in the sash and glazed with various types of putties.

Awnings: Historic photographs of Austin homes reveal that many west- and south-facing windows were protected by awnings in the earlier part of the twentieth century. Anchors from these awnings are still evident at many buildings. These awnings were drawn to protect the windows during the hot summer months, and retracted during the winter to provide natural warmth to the interior. Awnings have a typical life span of 5-10 years.

#### COMMON CAUSES OF DETERIORATION

The most common source of deterioration in a building is water infiltration. Conditions that allow material decay from water include cracked or peeling paint; open or deteriorated mortar joints, window glazing or stucco finishes; roof leaks; poor site drainage; or broken windows. Other sources of deterioration include damage to unpainted wood from sunlight, mechanical damage from impact force, graffiti, foundation settlement due to unstable soils (also related to poor site drainage), and improperly detailed additions and building alterations. The effects of water damage include rot, spalling, mold, efflorescence, and material discoloration.

#### WHEN TO PRESERVE AND RESTORE IN-PLACE

Historic building materials and workmanship are typically higher quality than similar materials and installations found in the market today. Old growth wood used in original construction, in particular, is irreplaceable with modern wood products. Similarly, original brick is very challenging and sometimes very costly to match. It is best to prioritize sensitive repair and avoid damage (such as sandblasting or painting) to existing masonry.

#### WHEN TO REPLACE MATERIALS

Prioritize conservation of original fabric to the maximum extent feasible, and replace original materials in kind only if they are deteriorated beyond repair. Accurately reconstruct missing elements based on historic documentation. Design replacement elements in keeping with the original property type and architectural style.

#### TREATMENT GUIDELINES FOR SPECIFIC MATERIALS

##### WOOD SIDING AND TRIM

The dimension, texture, profile, and details of original wood siding contribute to the overall historic character of the building and district. The Secretary of Interior's Rehabilitation Guidelines recommend identifying, retaining, and preserving older and historic exterior wood siding and trim to maintain the historic character of the building.

##### RECOMMENDATIONS

Most wood used on the exterior of older buildings in Austin is old growth pine or cypress. Old growth wood used in original construction is generally tight-grained and more resistant to rot and insects.

The best way to maintain wood siding and trim is to maintain the paint layer to protect the wood from water infiltration. A sound paint film will keep the wood from absorbing water. Once wood begins absorbing water, it is more prone to deterioration due to rot and insect infestation.

If original wood siding shows signs of limited rot, it can be repaired using epoxy repair compounds. Epoxy-based liquid consolidants can also be used to strengthen wood and make it more rot resistant where it is vulnerable. Wood that is severely deteriorated can be replaced to match the original appearance in form, installation, and quality. When replacing wood, look for materials that are free of knots, cracks, checks, warping, or twisting. Allow new wood to acclimate to the site before it is installed so that the new wood has a similar moisture content to the original adjacent wood when it is installed. This will reduce the chance of cracking, warping, and twisting of the new wood once it is installed.

Use of synthetic or composite materials to replace original wood trim or siding should be carefully evaluated on a case-by-case basis. Make sure to compare the rate of expansion and contraction for the proposed

material to make sure that it is similar to wood, otherwise the assembly will be vulnerable to open cracks at joints, twisting and warping of composite materials.

## GENERAL MASONRY

Masonry includes brick, terra cotta, and any type of stone. The character of the masonry is affected by many things including the type of stone or brick used, the color or color variation, the pattern in which the masonry is laid (running bond, random ashlar, coursed ashlar, etc), and the appearance and detailing of the mortar joints. Most older masonry buildings have the ability to last hundreds of years when properly maintained. Maintaining and preserving all historic masonry building features, whether walls, cornices, or columns, should be the main priority for all preservation projects involving this building material.

Masonry walls and mortar joints should be carefully inspected for signs of deterioration. Masonry is porous and must be protected from water infiltration by maintaining proper roofing, site drainage, and sound mortar joints. Water infiltration causes damage through cycles of freezing and thawing and by carrying salts into the masonry. Cleaning, repointing, and surface treatments must be undertaken with extreme care to avoid permanent damage.

## RECOMMENDATIONS

Inspect masonry walls for signs of cracking, spalling, open joints, movement, discoloration, and interior dampness. Determine the source of problems.

Reduce or eliminate sources of water around masonry. Keep gutters clean, make sure that downspouts are not leaking, and make sure that the ground slopes away from the building for proper drainage. Long-term exposure of masonry to water will cause deterioration.

Clean historic masonry using the gentlest means possible. Try different methods and techniques to find the method that works best without causing damage to the surface. Proposed cleaning products should be evaluated to ensure that they are compatible with the type of masonry to be cleaned. Often a neutral detergent, light scrubbing, and rinsing with clean water will suffice.

Large cracks or pieces falling from or missing from historic masonry walls indicate structural concerns that need to be addressed. This may occur if concealed iron anchors are exposed to water, become corroded, and expand, if the stone is uncommonly weak by nature, or if the building is exposed to structural forces such as high clay soils or foundation movement. Where serious cracking or deterioration is observed, consult a structural engineer experienced in historic preservation to investigate possible structural issues.

Historic masonry should not be painted. Masonry is naturally a breathable material; the moisture level will fluctuate within the walls over time. Painting the masonry will inhibit or stop the breathability of the masonry, and may cause water to migrate to the interior of the building or create pressure at the exterior film, causing "pocking" or spalling of the surface.

The application of a masonry sealer is generally not recommended, and should only be considered under the advice of an experienced materials conservator. Similar to painting masonry, any sealers prevent the masonry from breathing, and can trap moisture within the wall, which can cause irreversible pocking, cracking, spalling, and masonry deterioration.

Do not sandblast masonry with any product or media without the qualified professional guidance of an experienced historic preservation professional. Blasting media tends to remove the hard outer surface of stone and brick, leaving the material more porous and vulnerable to accelerated deterioration. The building will look good for a short while, then will rapidly deteriorate.

Do not cut new openings or remove substantial portions of masonry walls.

Do not install exterior insulation finish systems (EIFS) over historic masonry.

Masonry repair and replacement is a complex subject. Repairs should only be performed by those skilled in preservation techniques. The National Park Service has numerous publications to provide guidance (see Appendix).

## MASONRY CLEANING

Exterior stone and brick can provide an attractive organic surface for mold or algae growth, especially on the north elevation or in locations that are in shade most of the day. In most cases this staining does not cause damage to the masonry, it is simply unsightly. Other materials including copper, tar, rust, and paint overspray can also stain masonry. Each type of stain requires a different cleaning technique, and most require some

form of professional assistance. As noted in the introduction, seek assistance from experienced companies who have dealt with the same issues in previous projects, ask for references, and do not hesitate to ask questions. The wrong decision in masonry cleaning can have irreversible effects.

#### RECOMMENDATIONS

Clean masonry only when heavy soiling causes actual deterioration, not necessarily just unsightly discoloration.

Use the gentlest means possible when cleaning, such as a low-pressure water spray (100-300 psi) and natural-bristle brushes. Under-clean rather than over-clean.

Do not blast water at high pressure (over 300 psi). Never sandblast.

Thoroughly research the cleaning products being considered to ensure that they are appropriate for the project, or consult with an architect for product recommendations. Most cleaning products are designed for one type of stone or brick. The product that may be best to clean granite, for example, will cause limestone to dissolve. Extreme caution and extensive research is required to select the best products for the project's particular needs.

Test cleaning methods in a small area. When possible, allow the test area to weather for several months.

Repoint first; clean second in order to limit water penetration during the cleaning process.

Clean masonry when temperatures will remain above fifty degrees Fahrenheit for at least three days after the completion of cleaning.

Follow all manufacturers' recommendations for pre-treating, cleaning, and neutralizing the cleaning surface. Severe and irreversible damage will be caused to most brick, sandstone, and limestone with an improperly selected or improperly installed cleaning system. If in doubt, consult a preservation architect or material conservator.

Consider removing bushes and undergrowth of trees adjacent to the building in order to allow improved air circulation. This will reduce the occurrence of mold and algae growth.

For additional information: Preservation Brief No. 1 - Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings, by Robert C. Mack, FAIA and Anne Grimmer, Technical Preservation Series, National Park Service.

#### BRICK

Brick vary considerably in color, texture, and quality, depending upon materials and manufacture. Like a loaf of bread, bricks are baked, creating a hard outer crust that protects a soft interior. Although bricks last a long time, they are still vulnerable to deterioration and will rapidly deteriorate without a hard outer crust. Early "Austin Common" brick is more porous than modern hard-fired brick, but that does not mean that it is inferior or cannot perform well for hundreds of years.

#### RECOMMENDATIONS

Do not replace sections of historic brick with brick that is substantially stronger than the original brick.

When repairing a section of a brick wall, match the existing brick in color, size, and texture; and the existing wall in pattern and profile. Too new brick masonry into existing. Match existing joints in color, texture, joint size, and profile. Require test panels for approval.

Remove each cracked or spalled brick individually and replace to match.

#### NATURAL STONE

Natural stone varies in composition and durability. Identifying stone type is essential when considering treatment options. Central Texas homes can utilize several different natural stones, each with its own properties and considerations. Corroded metal embedded in masonry must be repaired by an experienced contractor in accordance with accepted structural and preservation techniques. When completed, repairs should match the original appearance or the material or surface.

#### LIMESTONE

Limestone is a very common building material in Central Texas and Austin, with the most common type of limestone called "Cordova Cream." Found on many historic and contemporary buildings throughout the city, this buttery yellow/white stone readily absorbs water, and while generally a durable stone, there are

deterioration problems associated with it. It is likely the most common natural stone used in residential architecture in Austin. Cordova Shell limestone is also used in many Austin homes. Cordova Shell, with visible shells in the matrix of the stone, is actually slightly stronger and less vulnerable to water damage than Cordova Cream.

#### GRANITE

Granite is a durable, dense building stone that is used in some of the high style homes of the late nineteenth century and in mid to late twentieth century governmental buildings in downtown Austin. Perhaps the most well known type of granite in Central Texas and Austin is the "Texas Pink Granite" from the Marble Falls quarry that produced the stone for the state capitol.

#### SLATE

Slate is used as a roof material on some of the high style homes of the late twentieth century, particularly in the Second Empire and Italianate Style. When slate is exposed to water for extended periods of time, as may happen with a leaking gutter or poor site drainage, repair or replacement of the deteriorated stone may be required.

#### MORTARS

Nineteenth century and early twentieth century mortars have a higher percentage of lime in their mix than more modern mortars. The lime creates a cushion for the masonry and allows for slight movement of the building without cracking. There are few masons who are experienced with repairing this type of mortar – be sure to ask for their experience in this area before hiring.

#### RECOMMENDATIONS

Repoint only joints that are unsound. Do not remove all joints in an effort to achieve a uniform appearance when repointing. The large-scale removal of mortar joints often results in damage to historic masonry.

Remove unsound mortar joints carefully with hand tools that are narrower than the joint. Mortar removal techniques should avoid any damage to the masonry. Power tools used in mortar removal have the ability to do significant and irreversible damage to adjacent masonry. Mortar removal processes should be tested before approval to ensure that the craftsman has the abilities needed to perform the work correctly.

Remove unsound mortar to a depth of two-and-one-half times the width of the joint, or to sound mortar, whichever is greater.

Use a mortar that is compatible with historic masonry. Replacement mortar should be equivalent to or softer than the original. Modern mortar mixtures tend to be harder than the surrounding masonry, causing moisture to be trapped in the joints and inhibiting the natural expansion and contraction of the masonry.

Portland cement came into use in Texas around 1910. This added ingredient made mortar much stronger, much less flexible, and changed the color of the mortar to a cold gray. Mortar with a high Portland cement content has a higher strength, but is prone to cracking because it is not flexible.

Deteriorated, cracked, or missing mortar should be replaced (or "repointed") to match the original mortar in composition (the ratio of lime:cement:sand), color (which is largely gained from the sand), texture (gained from the grading of the sand and cement), and tooling or shape of the mortar joint (concave, raised bead, struck flush with the surface, etc).

Do not apply waterproofing or other surface coatings to masonry buildings as a substitute for repointing and general maintenance.

Never use synthetic caulking compounds to repoint historic masonry.

Property owners should consult with a masonry restoration professional before undertaking a major repointing project. Property owners should use contractors familiar with historic masonry. Trained material conservators can easily and inexpensively complete historic mortar testing. This is recommended for all large repointing jobs.

#### METALS

Metals are typically used for decorative railings, columns, window sash, gutters and downspouts, window and door lintels, and decorative features of the building. Historic metals include cast iron, wrought iron, copper, lead-coated copper, zinc, aluminum (generally post 1940), and steel. As with most other building materials, water provides the greatest source of deterioration to metals.

## RECOMMENDATIONS

Historic metals, such as iron and steel, are generally ungalvanized or have lost their galvanic coating. Iron and steel corrode, rust, and expand in dimension when exposed to water. This corrosion causes cracking when embedded in masonry and concrete, and staining and rot at wood. Rust can be scraped from the metal, then the metal treated with a zinc-rich primer or galvanizing compound to renew the protection of the metal. All exterior iron and steel must be painted.

Historic copper and lead-coated copper have a naturally occurring oxidation layer that protects the metal from deterioration. These metals can last for 70-100 years, and develop a protective patina that should be maintained.

Zinc was often used for fine historic details such as applied moldings in soffits and pressed metal panels. Should zinc deterioration be observed, consult with a qualified professional for recommended repairs.

Aluminum became a popular window and railing material following World War II. Similar to steel, many alloys of aluminum are used in the construction industry. It will corrode in highly acidic or basic environments (exposure to coastal environments, clay soils).

Avoid galvanic corrosion by separating dissimilar metals.

## WINDOWS

Original windows should be repaired rather than replaced in order to maintain the historic integrity of the building, retain typically very high quality materials used in the original construction, and reduce waste. Several measures can be taken to increase the longevity of the original windows so that more costly repairs are not required. These measures include replacement of deteriorated glazing compound and perimeter sealants, proper surface preparation, priming and painting of sash and frames, epoxy repairs to individual elements, installation of clear interior window films, and optional installation of interior storm windows. Where existing window materials are deteriorated beyond repair, individual components or assemblies can be replaced in kind by skilled craftsmen. Typical scopes of repair presented below are categorized by degree of current deterioration.

### GOOD CONDITION

(should be evaluated for need on a case-by-case basis every 2-3 years)

Maintain sound exterior paint film, sealants, weatherstripping, and glazing compounds, and make minor repairs as needed.

### FAIR CONDITION

(usually after 20 years or more of no maintenance)

Work should begin with a test of the window sash and glazing compound for lead and asbestos content. If hazardous, consult with an environmental engineer for appropriate abatement. Remove loose and unsound paint, and sand edges smooth.

For wood sash and frames, repair signs of early rot using epoxy consolidant and filler. Pay particular attention to window sills, which are more vulnerable to rot and deterioration. Avoid nailing mortise and tenon sash joints.

For metal windows, wire brush clean to remove rust and scale, clean hardware, and spot weld loose joints.

Preserve original glass wherever it is in good condition. Aged glass acquires a wavy appearance that most people find very attractive. Where glass replacement is required, backbed glass in glazing compound, and replace deteriorated glazing compound with new putty to match original, allowing compound to cure for at least a month prior to painting (review manufacturer's recommendations).

Mask hardware, prep, prime with an oil-based primer on wood or a red oxide metal primer on metal, and paint window sash and frames with 100% acrylic coatings to match original color. Adjust hardware and repair or replace weatherstripping as needed.

### POOR CONDITION

(usually after 30 years or more of no maintenance):

Test windows for lead and asbestos content. If hazardous, consult with an environmental engineer for appropriate abatement.

Consider removal of sash for off-site treatment if feasible.

Remove and salvage glass. Remove old glazing putty and backbedding.

Remove loose and unsound paint, and sand smooth, making sure to maintain original profiles and sharp edges in the process.

For wood sash and frames, remove rot, pre-treat remaining wood with an epoxy consolidant, and then fill using epoxy filler and sand smooth. Replace severely deteriorated elements in-kind to match original wood species and grain density. Consider the appropriateness of biocide and wood preservative treatments especially at north facing, shaded or otherwise vulnerable locations.

For metal window sash, strip all paint using mechanical removal processes that do not pit or damage the metal. Replace individual sash and frame elements that are severely corroded to the point of delamination. After removing all corrosion, epoxy repair moderately deteriorated elements to rebuild the original material profile. Once repairs are complete and before re-glazing, prime all metal with a rust inhibitive primer, and all wood with a high quality oil-based primer.

Backbed salvaged glass, install new glazing compound to match original profile, and allow to cure for at least a month prior to painting (review manufacturer's recommendations).

Mask hardware, prep and paint window sash and frames with 100% acrylic coatings to match original color. Clean, adjust and lubricate hardware. Replace weatherstripping to form a tight seal.

#### ENERGY EFFICIENCY

Single pane glass has an insulating value (R-value) between 0.85 and 0.91, about the same as a ¾" sheet of plywood or 4" of common brick. Double insulating glass has an insulating value two to four times that of single pane glass, defined by the characteristics of the airspace separating the two panes of glass. Single pane windows can be retrofitted with interior storm windows to double their insulating value, and some types of window sash can be retrofitted with insulated glass when desired. However, there are several drawbacks to insulated glass. Insulated glass is far more costly than single pane glass, costing from 2.5 to 3 times as much as single pane glass. When an insulated glass panel breaks from storm damage, vandalism, or accidental damage, a new one must be custom-fabricated, which typically takes 2-3 days to order and 3-4 days to install, whereas simple single pane glass can be replaced the same day. Insulated glass panels with four times the energy efficiency of single pane glass have low-e or tinted glass and argon-filled chambers, making them even more costly to replace to match adjacent elements. Although technology for insulated glass panels has greatly improved in the last decade, seals still break on individual panes, causing the airspace between glass to fill with condensation and permanently cloud. Finally, from a purely environmental perspective, the manufacturing, shipping and handling requirements for insulated glass panels far exceeds those of plate glass. Given the variables affecting glass selection, a careful study of life cycle costs and impacts to historic character should be conducted prior to glass replacement on any project.

As mentioned above, several steps can be taken to improve the energy efficiency of existing windows. According to the U.S. Department of Energy, the three most beneficial steps to improve energy efficiency include caulking and weatherstripping, window treatments and coverings, and interior storm windows.

Awnings reduce solar heat gain in the summer by up to 65% on south facing windows and 77% on west facing windows, and are historically appropriate for many architectural styles. Modern awning materials can be more water repellent and mildew resistant.

Thorough sealing of windows needs to be balanced with ventilation requirements for the building. It is more desirable, in general, to seal the windows and obtain fresh air for ventilation through a filtered air system. On the other hand, natural ventilation in spring and fall months in Austin can be uniquely accomplished through opening historic windows.

Interior storm windows maintain the historic exterior character of the building while improving the thermal efficiency by the window as much as 100%. The exterior-facing side of the storm window can be treated with a low-e coating to further reduce heat gain. Interior storms must be ventilated to prevent excessive heat build up and accelerated damage to the interior face of original windows.

New technology is producing completely clear window films that in no way detract from the historic character of a window. These can be used to reduce ultraviolet light by as much as 99% and reduce solar heat gain by as much as 21%. Tinted window films can reduce solar heat gain by as much as 78%, but negatively affect exterior character and indoor light quality. Window films typically have a 10-20 year life span.

#### PAINT

At its most practical level, exterior paint serves as the outer protective layer that prevents deterioration of wood and metal. In general, unfinished brick masonry should not be painted, and stone masonry should not be painted under any circumstances. Paint seals out moisture when it is sound and tight. A cracked paint surface will allow water to seep into the substrate and be trapped, creating a prime opportunity for substrate deterioration. This substrate deterioration could result in much more costly repairs if left unchecked.

On an aesthetic level, paint enhances the appearance and value of a property. It is often used to enhance architectural features. There is an abundance of information available on appropriate paint colors for historic properties. Many architects, paint suppliers, and publications can provide you with additional information on this topic.

Exterior paint finishes can be expected to last 5-10 years depending on the quality of the paint used, the condition of the substrate materials, weather exposure, and the quality of the application process.

In instances where multiple layers of paint have built up to excess, causing deep paint failure, it may be best to remove them completely. If that is determined the best solution, consider documenting the paint history before stripping. This can be accomplished by a professional, you can sand the layers to create a crater and match the revealed colors to a manufacturer's paint system, or you can save large paint chips (with all layers intact) in labeled bags for future reference. Test paint for lead content before removal. If lead is present, observe all safety precautions.

Surface preparation is possibly the most important aspect of exterior paint work, and can take from 3 to 10 times the amount of time to actually paint the building. This work should include surface cleaning, removal of all unsound paint, sanding, repair of substrate materials<sup>1</sup>, priming, sealing joints, and finally, painting.

Most exterior paints available today are latex systems. The highest quality latex paints are generally 100% acrylic paints. Oil-based or alkyd paint may be the best option for metals. Latex paints are generally thicker and more flexible; alkyd paints are more brittle. It is important to determine what type of paint is being painted over. If painting over alkyd paint with latex, always sand and prime the entire surface first, because latex will not adhere to alkyd paint. Follow all manufacturers' instructions to ensure the longest-lasting paint job.

References: Preservation Brief No. 10: Exterior Paint Problems on Historic Woodwork, Kay Weeks and David Look, National Park Service Technical Preservation series.

#### RECOMMENDATIONS

Maintain paint surfaces free of cracks, peeling, mold and mildew to the maximum extent feasible.

Test for lead paint on houses that were constructed prior to 1979. Research best practices for worker protection and lead paint management at <http://epa.gov/lead/pubs/renovation.htm>.

Remove loose and unsound paint using the gentlest means possible, and sand surfaces to create smooth transitions between paint layers. Avoid damage to the substrate material.

Prime all bare wood and metal with a high quality alkyd primer (latex primers are acceptable for wood, but some say not as good).

Seal all open joints with a paintable exterior grade sealant

Follow all manufacturer's instructions for paint finish applications – two thin coats can be better than one thick coat.



## Appendix D: Additional Resources

### LOCAL RESOURCES

- City of Austin Historic Preservation Office  
[www.austintexas.gov/department/historic-preservation](http://www.austintexas.gov/department/historic-preservation)
- Preservation Austin  
[www.preservationaustin.org](http://www.preservationaustin.org)
- University of Texas Historic Preservation  
[soa.utexas.edu/programs/historic-preservation](http://soa.utexas.edu/programs/historic-preservation)
- Travis County Historical Commission  
[www.co.travis.tx.us/historical\\_commission/default.asp](http://www.co.travis.tx.us/historical_commission/default.asp)
- Austin Convention Center and Visitors Bureau  
[www.austintexas.org](http://www.austintexas.org)
- City of Austin Tree Ordinance  
[www.austintexas.gov/department/city-arborist](http://www.austintexas.gov/department/city-arborist)
- Austin Energy  
[www.austinenergy.com/](http://www.austinenergy.com/)
- City of Austin Residential Design and Compatibility Standards  
[www.austintexas.gov/department/residential-design-compatibility-standards](http://www.austintexas.gov/department/residential-design-compatibility-standards)
- City of Austin Neighborhood Planning  
[www.austintexas.gov/department/neighborhood-planning](http://www.austintexas.gov/department/neighborhood-planning)

### TEXAS STATE RESOURCES

- Texas Historical Commission  
<http://www.thc.state.tx.us>

### NATIONAL RESOURCES

- Advisory Council on Historic Preservation  
(Sources of Financial Assistance for Historic Preservation Projects)  
<http://www.achp.gov/funding.html>
- Citizen's Guide to Section 106 Review  
<http://www.achp.gov/citizensguide.html>
- National Archives  
<http://www.archives.gov/>
- National Coalition for History  
<http://historycoalition.org/>
- National Park Service  
<http://www.nps.gov>
- Heritage Preservation Services  
<http://www.nps.gov/history/hps/index.htm>
- National Park Service Preservation Briefs  
<http://www.nps.gov/hps/tps/briefs/presbhom.htm>
- National Park Service Cultural Resources  
<http://www.nps.gov/history>
- National Park Service Technical Preservation Services  
<http://www.nps.gov/history/hps/tps/index.htm>
- National Park Service The Secretary of the Interior's Standards for Rehabilitation

<http://www.nps.gov/hps/tps/tax/rehabstandards.htm>  
National Park Service Illustrated Rehabilitation Guidelines  
<http://www.nps.gov/hps/tps/tax/rhb/index.htm>  
National Park Service Interpreting the Standards Bulletins  
<http://www.nps.gov/hps/tps/tax/ITS/itshome.htm>  
National Register of Historic Places  
<http://www.nps.gov/nr/index.htm>  
Laws, Executive Orders & Regulations  
<http://www.nps.gov/history/laws.htm>  
Heritage News Blog  
<http://heritagenews.cr.nps.gov/index/index.cfm>  
Historic Preservation Grants Division  
<http://www.nps.gov/history/hps/hpg>  
Historic Preservation Fund  
<http://www.nps.gov/history/hps/hpg/HPF/index.htm>  
Incentives! A Guide to the Federal Historic Preservation Tax Incentives Program for Income-Producing Properties  
<http://www.nps.gov/history/hps/tps/tax/incentives/index.htm>  
Save America's Treasures  
<http://www.nps.gov/history/hps/treasures/index.htm>  
Historic Preservation Tax Services  
<http://www.nps.gov/history/hps/tps/tax/index.htm>  
National Trust for Historic Preservation  
<http://www.preservationnation.org>  
National Trust Preservation Fund  
(Offers several types of financial assistance to nonprofit organizations, public agencies, for-profit companies, and individuals involved in preservation-related projects.)  
<http://www.preservationnation.org/resources/find-funding>  
Public Policy Department's Advocacy Center  
<http://www.preservationnation.org/take-action/advocacy-center>  
Public Policy Weekly Bulletin email alerts  
<http://www.preservationnation.org/resources/newsletters/public-policy-weeklybulletin/public-policy-weekly-bulletin.html>  
Center for State and Local Policy  
<http://www.preservationnation.org/resources/public-policy/center-for-state-local-policy>  
National Trust for Historic Preservation rss feeds (sign up for all feeds below at the following link)  
<http://www.preservationnation.org/about-us/press-room/rss.html>  
Preserve America  
<http://www.preserveamerica.gov>  
PreservationDirectory  
"Preservation Library: articles, regulations and policy"  
<http://www.preservationdirectory.com/PreservationBlogs/LibraryArticles.aspx>  
"Legislation & Public Policy Issues in Preservation"  
<http://www.preservationdirectory.com/PreservationBlogs/ArticleCategories.aspx>  
PreservationDirectory.com Blog  
<http://www.preservationdirectory.com/PreservationBlogs/ArticleCategories.aspx>

## EXAMPLES OF STANDARDS FROM OTHER CITIES

Ann Arbor, Michigan

<http://www.a2gov.org/government/communityservices/planninganddevelopment/historicpreservation/Pages/Historic%20District%20Commission%20Main%20Page.aspx>

Baltimore, Maryland (Sustainability)

<http://www.baltimorecity.gov/Government/BoardsandCommissions/HistoricalArchitecturalPreservation/ProceduresandGuidelines.aspx>

Harrisburg, Pennsylvania

<http://www.harrisburgpa.gov/Resident/DBHD/Planning>

New Castle County, Delaware (Windows)

<http://www2.nccde.org/landuse/Planning/Historic/Guidelines/default.aspx>

Raleigh, North Carolina

<http://www.rhdc.org/LocalHistoricDistrictLandmarkServices/DesignReview>

Ripon, Wisconsin (Commercial)

<http://www.riponmainst.com/riponmainst/Design%20Guidelines.htm>

San Antonio

<http://www.sanantonio.gov/planning/neighborhoods>

## SUSTAINABILITY RESOURCES

The Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings

<http://www.nps.gov/history/hps/tps/download/guidelines-sustainability.pdf>

Historic Building Energy Efficiency Guide, Boulder, CO

<http://www.bouldercolorado.gov/files/PDS/historicpres/>

HistoricPreservationBrochure\_web.pdf

WBDG Historic Preservation Subcommittee, "Sustainable Historic Preservation"

[http://www.wbdg.org/resources/sustainable\\_hp.php](http://www.wbdg.org/resources/sustainable_hp.php)

National Trust for Historic Preservation Sustainability Information:

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

## WORKSHOPS & SEMINARS

Architectural Heritage Center Educational Programs

<http://www.visitahc.org/educationprograms.html>

PreservationDirectory.com Preservation Events & Conferences Directory

<http://www.preservationdirectory.com/PreservationNewsEvents/NewsEvents.aspx>

National Trust for Historic Preservation Conferences & Training

<http://www.preservationnation.org/resources/training>

Heritage Conservation Network: International Hands-on Workshops for Architectural & Site Conservation

<http://www.heritageconservation.net>

American Association for State & Local History Workshops

<http://www.aaslh.org/workshop.htm>

Association for Preservation Technology

<http://www.apti.org>

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