GUIDELINES FOR HISTORIC DISTRICTS

City of Allentown
Bureau of Planning and Zoning &
Historical Architecture Review Board

February 16, 2022

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CHAPTER 1

INTRODUCTION & PROCEDURES

1.1 PURPOSE OF THE GUIDELINES

The City of Allentown has a rich and layered history that is woven throughout its historic buildings. The built environment chronicles Allentown's development as a city and as a community. Thoughtful preservation practice allows historic places to evolve and meet new needs, while maintaining the characteristics that make the city unique.

Recognizing the value and integrity of the city's historic buildings, the City of Allentown has adopted local polices to designate historic districts and regulate proposed changes within them. The Bureau of Planning and Zoning, the Historical Architecture Review Board (HARB), and the City Council are responsible for conducting design review, recommendation, and approval processes to ensure the protection and preservation of these historic resources.

The purpose of the "Guidelines for Historic Districts" (the Guidelines) is to advise on the treatment of historic buildings in order to preserve and enhance their unique character. They articulate best practices and encourage compatible changes that protect the architectural heritage within Allentown's historic districts. The Guidelines are intended to assist property owners, residents, contractors, design professionals, local government staff, and members of the HARB in making appropriate decisions about changes to a historic property and promote good stewardship of Allentown's collective heritage, both within and outside the historic districts.

The Guidelines are based on established preservation practice and philosophy, particularly The Secretary of the Interior's Standards for the Treatment of Historic Properties. Allentown's first Guidelines were adopted in 2012. The Guidelines are updated periodically to respond to new treatments and new conditions affecting Allentown's built environment. The Guidelines have several interacting objectives: to help implement the city's Historic Preservation Plan and the Historic District Ordinance; to support the work of the HARB and Staff as the regulatory authorities responsible for preservation; to encourage property owners to use appropriate treatment approaches; to establish a framework for determining appropriateness; and to promote predictability in decision-making during the design review process.

The Guidelines do not intend to freeze buildings in time, but to manage change to prevent unnecessary or even unintentional loss of Allentown's built heritage. They are also not intended to anticipate every possible design scenario. Rather, they establish the framework within which the specific conditions of each proposed project will be reviewed and provide the versatility to develop solutions that are consistent with Allentown's preservation goals.

DESIGNATED HISTORIC DISTRICTS

Designation of local historic districts is one of the most powerful tools that the City of Allentown has to recognize and protect its architectural heritage. A local historic district is an area with specific boundaries that embodies historically and architecturally significant qualities; those qualities are protected through a public design review process to ensure that change is sensitively managed within each historic context.

A historic resource can be a district, building, site, structure, or object. Resources can be designated at the national, state, or local level. There are common misconceptions about the regulations and protections offered by each level of designation.

Local designation offers the most effective protection for historic buildings when compared to listing in the National or State Registers, because the authority of a regulatory body and its review procedure is enforced through a local preservation ordinance. National- and state-level designation and the National Register of Historic Places program is summarized in Chapter 2.

POLICY FRAMEWORK

The authority to create and regulate local historic districts comes from Pennsylvania's state-wide enabling legislation known as the Historic District Act (No. 167 of 1961). Each local historic district designation is certified by the Pennsylvania Historical & Museum Commission (the State Historic Preservation Office).

The City of Allentown's preservation policy is defined by the Historic District Ordinance, Article 1391 of the municipal zoning code. The Ordinance was adopted by City Council in 1978 and has been periodically amended and updated. The Ordinance officially designates local historic districts and creates the Historical Architectural Review Board (HARB).

The Ordinance includes the following purpose statement:

Because the heritage of the City of Allentown is among its most valued and important educational, cultural, and economic assets, it is the intent of the City to provide for the protection of historically and/or architecturally significant buildings, structures, and sites by designating certain sections of the City as historic districts in order to:

» *Protect and improve the quality of its environment through the identification, recognition, conservation, maintenance, and enhancement of buildings, sites, structures, fixtures and open spaces which constitute or reflect distinctive features of the political, economic, social, cultural or architectural history of the City.*

» *Foster appropriate use and wider public knowledge and appreciation of such features, sites, structures and open spaces.*

» *Encourage public and private efforts in support of such purposes, and by furthering such purposes, promote the public welfare, to strengthen the cultural, educational and economic life of the City.*

» *Encourage new and/or contemporary design which is visually compatible and sensitive to adjacent sites, structures and the immediate environment.*

» *Support other City policies within but not limited to the Comprehensive Plan and programs furthering historic design objectives such as the zoning ordinance to ensure cohesive development strategies.*

The Ordinance works together with the city's adopted Historic Preservation Plan to achieve the city's preservation goals. Design review by Staff and the HARB is an important step in fulfilling the Ordinance's purpose.

USEFUL LINKS

Read Allentown's Historic Preservation Plan online, including an excellent historic context of Allentown's built heritage and the social, cultural, economic, and natural factors that shaped its physical development.

A well-preserved and detailed rowhouse in the Old Allentown Historic District.

1.2 HOW TO USE THE GUIDELINES

First, find **what guidelines** could apply to your project

IF YOU WANT TO..	PROCEDURES & HISTORIC CONTEXT		DESIGN GUIDELINES			FURTHER RESOURCES
	Chapter 1	Chapter 2	Chapter 3	Chapter 4	Chapter 5	Chapter 6
Renovate or alter a historic property	○	○	●			○
Renovate or alter a non-historic property	○	○	●			○
Additions to a historic property	○	○	●	●		○
Additions to a non- historic property	○	○	●	●		○
New construction	○	○	●		●	○

○ *Recommended to review*

● *Review when planning project*

Then, go to the section needed and review the specific information that applies to your project. Most chapters are organized as follows:

3.1 ROOFS

The roof of a house is an important architectural feature and should be treated as such. Roof forms are character-defining features of architectural styles and roofs contribute to a neighborhood's rhythm and sense of scale. Roofs, associated features, and drainage systems are also functionally important and should be maintained as an interconnected system for the overall longevity of a building. Materials and details critical to the watertight integrity of the roofs, features, and drainage systems include metal flashing and trim and should be incorporated in any repair and restoration work undertaken. All efforts should be made to preserve the original roof and to properly maintain and repair roof materials as necessary.

MAINTENANCE RECOMMENDATIONS

3.1.1 Inspect roofing systems regularly. Water infiltration through the roof can ultimately damage historic features throughout a building. Identify any broken shingles, exposed sheathing or substrate, damaged or missing flashing, or areas of ponding water for repair. Inspections can be conducted from the ground using binoculars if roof access is difficult. Inspect building interiors for signs of water infiltration. Clear gutters and drainage systems regularly.

3.1.2 Keep historically painted metal roofs well painted to preserve the metal below. Paint acts as a protective layer to prevent the sheet metal from weathering.

DESIGN GUIDELINES

3.1.3 Repair and restore original and historic roofing materials whenever possible. Evaluate the condition and cost of repair of original materials before removing and replacing them. Targeted areas of repair or localized in-

should match roof slopes or shape.

3.1.7 Replace non-historic roofing materials in-kind or with recommended alternates. If the original material is documented, restoration of the original material is also an appropriate option but is not required. Original roofs may have been replaced long ago, yet asphalt shingles and similar alterations are still considered impacts to the overall appearance. Replacement materials should match the existing in color, pattern, shape, and profile. Greater flexibility is possible with non-historic roofing and using durable high-quality replacements is recommended.

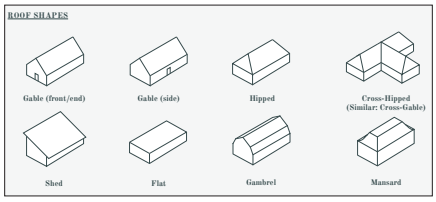
3.1.8 Preserve architectural features that give the roof its unique and building-specific character—such as dormers, turrets, chimneys, cornices, rolled ridge flashing, cresting, and finials. Repair and restore features; replace in-kind only when necessary.

3.1.9 Consider roof ventilation alternatives carefully. Ventilation options are approved on a case by case basis

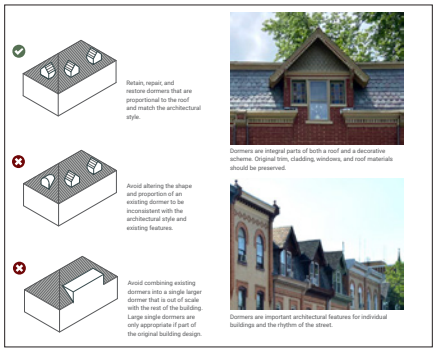
Building feature, material or work type

Design objectives and concepts that apply to all guidelines

Design guidelines. Each guideline is expressed as a specific action followed by clarifying information. Guidelines are numbered by chapter for easy reference. They are organized around the governing principles of the Standards: *maintain; repair, restore, and reuse; replace in-kind; replace with accepted alternate materials.*



Illustrated terminology and additional information boxes. When applicable, digital links to relevant published references are included.



Diagrams and photographs to illustrate specific guidelines. Diagrams of appropriate or inappropriate approaches are generalized examples and are not intended to show the only possible options.

✓ *Green check-mark indicates* ***appropriate*** *treatment*

✗ *Red check-mark indicates* ***inappropriate*** *treatment*

1.3 DESIGN REVIEW PROCEDURES

This section describes the different types of review; the application and evaluation process; and guiding historic preservation principles that apply to project planning and evaluating appropriateness. Change within locally designated historic districts is regulated through a public design review and approval process. The HARB has jurisdiction over all changes to the exterior of buildings or structures located in historic districts, when the changes are visible from a public right-of-way. This process is administered by City Staff in the Bureau of Planning and Zoning (Staff) and the Historic Architectural Review Board (HARB).

WHO'S WHO?

"Staff" refers to the Historic Preservation Planning Officer, a city staff member within the Bureau of Planning and Zoning. They also fulfill the role of HARB Secretary per the Historic District Ordinance. They are the first point of contact for proposed work. They provide pre-application guidance, issue approval for minor work, review COA applications for completeness, and facilitate the HARB review process.

The HARB is a seven-member board that was created by the Historic District Ordinance. Board members are volunteers and are appointed by the City Council. The Ordinance defines the qualifications for board members. The HARB reviews COA applications for work within local historic districts, make recommendations to City Council, and provides advisory comments for proposed demolitions within the Historic Building Demolition Control Overlay. The HARB holds a public meeting on the first Monday of every month.

PROCEDURE OVERVIEW

Unless exempt from review (see Figure 1, page 10), proposed work in historic districts is reviewed at three different levels. Some work, such as routine maintenance or interior changes, do not require review or approval. Most projects require review and approval by Staff or the HARB and obtaining Certificate of Appropriateness (COA). The level of review depends on the scope of the proposed changes. Contacting Staff early is the best first step in project planning.

A COA is required even if the proposed work does not require a building permit. Building permits and necessary approvals from other City agencies cannot be issued without Staff/HARB approval. Work approved under a COA must comply with applicable building code and zoning regulations.

A COA must be issued before work can begin. After the COA is issued, if the scope of work changes or new conditions are uncovered during the course of construction, applicants should contact Staff to discuss the changes. These should be documented to maintain compliance with the COA and keep a record of the work that has occurred. Staff and the HARB may inspect work once it is completed to confirm that it follows the issued COA.

Undertaking work without approval can result in project delays and possible violations. Unapproved changes are subject to fines and property owners may be required to correct inappropriate work and restore the building to its prior appearance.

The Historic District Ordinance allows proposed work in the historic districts to be reviewed and approved at three different levels: some work does not require review or approval; some work can be approved by Staff; and all other work is approved by the HARB.

Staff-level approval expedites the review process for certain common alterations. Staff are qualified to evaluate proposed treatments, determine compliance with the Guidelines, and potential impacts to the historic building and historic district. Staff may request consultants and may elevate an application to HARB review based on project-specific conditions.

Figure 1 (page 10) illustrates the level of review for common types of work. For projects that do not require review, only the types of work shown here do not require a COA. All other proposed work requires either Staff or HARB approval. Common types of work are shown as examples but other types of work are not excluded. Approval is contingent upon compliance with the Guidelines in the following chapters and the specific information provided to Staff as part of an application.

REVIEW CRITERIA

To evaluate the appropriateness of proposed work, Staff and the HARB must consider if the work meets these Guidelines, the review criteria included in the Historic Preservation Ordinance, and the Secretary of the Interior's Standards. Staff and the HARB must consider the following criteria per the Ordinance:

» The effect of the proposed changes upon the general historic and architectural nature of the district.

» The appropriateness of exterior architectural features which can be seen from a public street or way only.

» The general design, arrangement, texture, material, and color (only when integral to a product such as shingles or siding, but not including paint color) of the building or structure and the relation of such factors to similar features of buildings, structures, or sites in the district.

» Any matter pertinent to the preservation of the historic aspect and nature of the district.

USEFUL LINKS: PRESERVATION POLICIES

Allentown's Bureau of Planning and Zoning, Historic Preservation website.

Allentown's Historic District Ordinance, Article 1391.

Allentown's Historic Preservation Plan.

Pennsylvania's Historic District Act enables cities to create HARBs and to designate local historic districts by adopting a local ordinance. Refer to the Pennsylvania Historical & Museum Commission's website of State and Federal Preservation Laws.

Allentown's Zoning Ordinance, including Historic Building Demolition Control Overlay, Section 1314.

UNSURE IF PROPOSED WORK REQUIRES APPROVAL? HAVE QUESTIONS ABOUT WHAT WILL BE VISIBLE OR RECOMMENDED TREATMENTS? CONTACT STAFF FOR A FREE PRE-APPLICATION DISCUSSION.

DOES MY WORK REQUIRES REVIEW OR APPROVAL?

	COMMON TYPE OF WORK *	Review not required	Staff review & approval	HARB Review & approval
GENERAL	Interior repairs, alterations, or renovations with no exterior change.	✓		
	Repairs or alterations not visible from a public right-of-way (street, alley, public path, etc.)	✓		
	Routine maintenance that does not cause a change in design, material, style, texture, shape, appearance, etc. (e.g. caulk, sealant, repainting existing painted surfaces)	✓		
	Color of exterior features	✓		
	Ordinary minor repairs or in-kind replacements that do not cause a change in design, material, style, texture, shape, appearance, etc.		✓	
ROOFS	Repair or in-kind replacement of historic roofing (slate, clay tile, metal) that matches the original exactly.		✓	
	Replacement of historic roofing with alternate materials			✓
	Replacement of non-historic roofing (asphalt-based shingles, roll membranes)		✓	✓
	Repair, in-kind replacement, or new half-round gutters and smooth round downspouts.		✓	
WINDOWS	Repair of historic windows.		✓	
	In-kind replacement of historic wood or steel windows that match original exactly, including in material.		✓	
	Replacement of historic wood windows with new aluminum-clad wood windows that match the original in size, type, configuration, profile, and appearance.		✓	
	Replacement of historic wood or steel windows with other alternate materials			✓
	New or replacement storm windows (interior or exterior)		✓	
	Repair or in-kind replacement of historic shutters		✓	
	Removal of historic shutters or installation of new shutters			✓
DOORS	Repair or in-kind replacement of historic doors that match the original exactly.		✓	
	Replacement of historic or existing doors with alternate materials		◖	◖◖
	New or replacement storm doors		✓	
MASONRY	Brick and masonry repointing.		✓	
	Painting or coating exposed masonry as deterioration treatment			✓
EQUIPMENT	Installation of wall-mounted and window unit air conditioners.	✓		
	Installation of through-wall HVAC equipment, or exterior changes caused by interior work			✓
	Installation of utility meters (e.g., gas, water, electric) in accordance with the public utility agency.	✓		
	Satellite dishes		◊	◊◊
	Solar panel installations		✓	
SITE FEATURES	Installation of wood privacy fencing, wood picket, or metal spindle fencing around rear yards		✓	
	New planters and flower boxes.		✓	
SIGNS	Installation of new signs.			✓
	Installation of illuminated "OPEN" signs, measuring less than 1' x 2'.		✓	
	Removal of awnings		✓	

* *"Common work" provided as examples. It does not show all possible types of work.*
◖ *non-contributing secondary/non-visible facades*
◖◖ *primary/contributing secondary facades*
◊ *building rear or flat roof*
◊◊ *other locations*

Figure 1. Levels of Review Chart

The steps of HARB review are illustrated in the flowchart below. Additional information about what happens at each step follows on the next page.

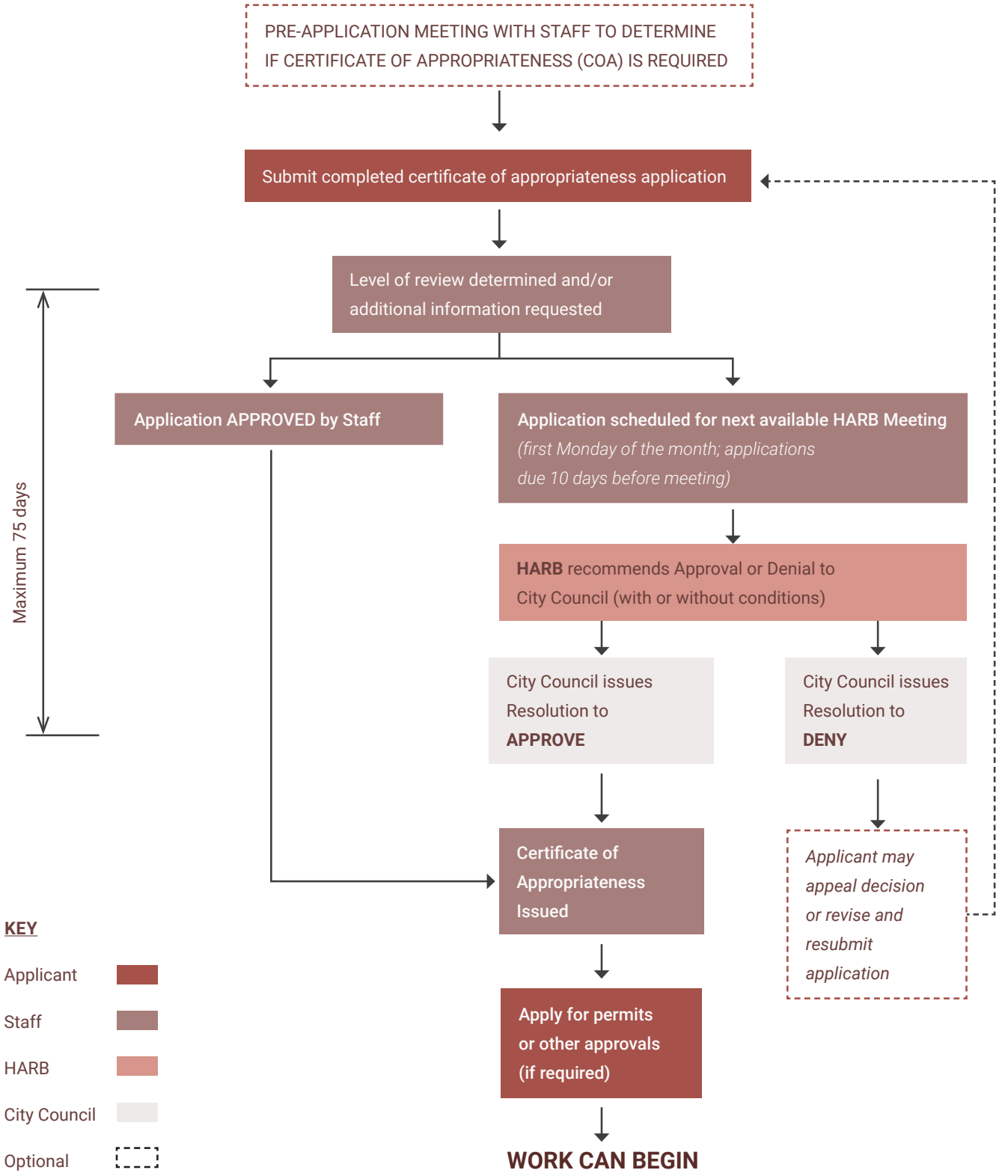


Figure 2. HARB review procedure

1.4 HARB REVIEW PROCEDURE

Step 1: Pre-Application Meeting

Applicants should meet with Staff to determine if a COA is required for the proposed work. Staff can advise applicants on appropriate treatments, visibility of the work, relevant sections of these Guidelines, and necessary application materials. This step is optional but highly encouraged to save time and effort.

For complex or major projects, applicants can also request an advisory pre-application discussion with the HARB to received feedback. This is considered an informal review and will not result in a recommendation to City Council.

Step 2: Submit COA Application

Applicants complete the COA application and submit to Staff, by email, by mail, or in person. Staff will review the submitted application for completeness and request additional information from the applicant as necessary (refer to the following Application Materials section for more information). They will determine the appropriate level of review for the proposed work.

Step 3: Staff Approval or Scheduled for HARB Review

If the proposed work meets the criteria for staff-level review and meets the Guidelines and the Historic District Ordinance criteria, Staff can approve the application and a COA can be issued. Staff will determine the visibility of the proposed work.

For all other proposed work, the application's review is scheduled for the next available HARB meeting. Applications must be submitted at least 10 days before the meeting, scheduled for the first Monday of the month. Incomplete applications, as determined by Staff, will not be scheduled.

Step 4: HARB Meeting

The HARB will review the application at a public meeting. The materials submitted by the applicant will be presented to the HARB. Staff will also prepare a preliminary report providing recommendations to the HARB. The HARB will evaluate the appropriateness of the proposed work. Applicants and/or design professionals should attend the meeting. Attending the meeting means that questions can be discussed, which may prevent unnecessary delays.

The HARB will make a recommendation to approve or deny the application, and may provide conditions for approval. The written recommendation and application are then submitted to the City Council.

The HARB may postpone or "table" an application for review at the next HARB meeting if the application does not contain enough information for the HARB to make an accurate evaluation. They will recommend what information should be submitted. Staff can assist applicants before the next meeting.

Step 5: City Council Meeting

The City Council will issue a resolution to approve or to deny the application at the next City Council meeting. The City Council is responsible for reviewing the HARB's recommendation and the application materials under the same criteria as HARB. If City Council issues a resolution to approve, the COA is issued. If the City Council issues a resolution to deny, the applicant may appeal to the Lehigh County Court of Common Pleas, or may revise the application and resubmit it to the HARB.

Step 6: Resolution and COA Issued

The issued City Council resolution and COA will be provided to the applicant. Once the COA is received, applicants can apply for building permits or approvals from other agencies (if required) or begin work.

EVALUATING IMPACTS

When Staff and the HARB evaluate the impact of proposed work, they must consider how the changes impact an individual building *and* the surrounding historic district. Impacts can be positive or negative. When planning a project, applicants should also consider potential impacts to both the building and district. The HARB must examine the different scales of potential impact when evaluating appropriateness; understanding these scales is beneficial for Staff, the HARB, and applicants alike.

» Building scale: The HARB first considers the impact to the individual building. How does the proposed work change a building feature or material? Is the feature unique to the building or a character-defining feature of its architectural style?

» Block scale: The HARB then considers impacts to the surrounding blocks (the rest of the block on either side and the block across the street). Is the building part of a group or pattern that is visible on the block? Do the proposed changes interrupt a pattern or make the historic connection between buildings less apparent? Streetscape patterns can be in materials, ornamentation, design, massing, form, proportion, rhythm, and scale.

» District scale: The HARB finally considers impacts to the historic district. How does the proposed changes impact the historic district as a whole and the reasons for its significance? Is the feature or material rare or distinctive in the district? Would the proposed change contribute positively or negatively to the cumulative effect of changes in the district? What may seem like a small change on one building can lead to a larger impact on the whole district over time.

HIERARCHY OF FACADES

Buildings can be understood to have a hierarchy of facades, meaning that certain areas of the building are highly visible and have the most importance to its architectural style and character-defining features, while other sides are less visible and less influential on the overall character. A hierarchy of facades allows more flexibility in design review and evaluating the scale of potential impacts to historic buildings and historic districts. Proposed alterations at primary and contributing secondary facades will be reviewed more closely than non-contributing secondary facades, because they have a greater potential impact.

» A primary facade is the "front" of the building, containing the main entrance and character-defining architectural features. Primary facades are visible from the public right-of-way.

» Contributing secondary facades are highly visible facades that are not the primary facade but are significant to the building's design. Typical contributing secondary facades are the side of a corner building or the sides of a detached building. These facades are just as visible as the primary facade and may contain character-defining features. Throughout these Guidelines, contributing secondary facades are also referred to as highly-visible facades.

» Non-contributing secondary facades are considered to be the rear of the building, a facade that is only visible from an alley, side facades that are only partially visible from a public right-of-way or do not influence the overall design, or are not visible.

» Non-visible facades are facades that cannot be seen by a pedestrian from any public right-of-way. These are not reviewed by HARB. If it's unclear, Staff can provide a free determination of visibility.

USEFUL LINKS

To download an application form:
Application for Certificate of Appropriateness
under "How do I apply to HARB?"

To see if a property is located in a historic district:
Bureau of Planning and Zoning's FAQ,
City Historic Districts Map

1.5 APPLICATION MATERIALS

When planning exterior work at a historic property, prepare and submit applications with plenty of time before you wish to start construction work. Consulting the Guidelines and contacting Staff early in project planning is highly recommended. This can help prepare a complete application, smooth the design review process, and save time and money.

The Certificate of Appropriateness application is available online or in person at the Bureau of Planning and Zoning. This standard application includes basic property information, applicant and owner contact information, a description of the proposed project, and a checklist of support materials. There is a $25 fee to apply. Application and support materials can be submitted by email, by mail, or in person to Staff.

The application and support materials must provide specific, accurate, and thorough information about the proposed work so that Staff and the HARB can make an informed evaluation. It is important to illustrate the condition and appearance of existing features. An application will not be considered complete unless all work items are described and detailed in support materials. The HARB has the authority to postpone making a recommendation at the public meeting and request additional information.

A complete application should include the following items:

» Completed Application for Certificate of Appropriateness.

» Property map or site plan showing the location of the building in the historic district.

» Current color photographs of the building. At least one photograph must show the entire primary facade, from the ground to the top of the roof. All facades impacted by proposed work must also be shown and views of the building from all public streets and alleys.

» Current color photographs showing details of the proposed area(s) of alteration and existing conditions of the materials and features to be impacted, including documentation of damage or deterioration.

» Current color photographs of adjacent buildings, for attached or rowhouse buildings.

» Scaled and dimensioned drawings or sketches showing the location, size, and appearance of proposed work. Plans, elevations, and details are requested. Drawings prepared by an architect or contractor are encouraged.

» Technical product specifications and manufacturer or catalog cut sheets. Dimensions, materials, appearance, and finishes should be clearly indicated.

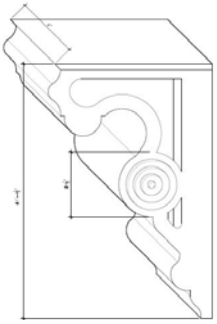
» For proposed replacement of historic materials, documentation of attempts to repair or assessments of the infeasibility of repair.

» For work to correct a violation or Building Inspection citation, a copy of the violation and required work.

» Additional information that will help Staff and the HARB visualize the proposed changes.

Current photographs showing the full building and all facades are important materials for a complete application.

Example of an elevation drawing scaled and dimensioned with annotated conditions



Example of a detail drawing for a cornice bracket, showing the dimensions and profile of the bracket.

1.6 BENEFITS OF PRESERVATION

Preservation in Allentown can play a key role in achieving the city's planning, economic, social, and environmental goals. Preserving existing buildings, compatible changes, local historic district designation, and regulatory design review promotes benefits of historic preservation that go beyond how a city looks. Historic preservation enhances community character, fosters a sense of pride and collective responsibility, and has proven to have economic, social, cultural, and environmental benefits.

ECONOMIC BENEFITS

» Studies in Pennsylvania and around the nation have demonstrated that historic district designation helps stabilize, and enhance property values, promoting reinvestment in local neighborhoods.

» Historic preservation favors local construction jobs and promotes employment and training in construction and craftsmanship.

» Preservation promotes heritage tourism, which is an increasingly important industry.

» Studies of historic neighborhoods demonstrate that older buildings support small businesses and mixed-use activity.

ENVIRONMENTAL BENEFITS

» Preservation promotes maintenance of walkable neighborhoods, as historic neighborhoods developed with pedestrian-oriented plans rather than car-oriented.

» Preservation conserves the embodied energy that went into construction since historic buildings and structures already exist. Therefore, the energy required to fabricate the lumber, bricks, and other details has already been expended.

» Keeping historic structures and material in good repair reduces the amount of material that is sent to landfills.

» Historic buildings are intrinsically "green" with substantially lower environmental impact than new construction. New construction often includes demolition of existing buildings, with construction waste accounting for 25%-30% of landfills, in addition to waste associated with the fabrication of new construction materials.

» Retrofitting existing buildings or certain elements of a building can achieve similar levels of energy efficiency and performance as a new building. Improvements are often simple and inexpensive, and avoid invasive treatments.

» The most appropriate materials for the majority of preservation projects are often historic materials that are more sustainable than non-biodegradable manufactured products such as vinyl and plastics. Historic materials can usually be repaired more easily than modern materials and do not require full replacement, therefore reducing the amount of waste and new material produced.

CULTURAL, SOCIAL, AND EDUCATIONAL BENEFITS

» Preserving historic places promotes cultural and social sustainability by supporting everyday connections between residents and the cultural heritage of the community.

» Preservation of the physical places that played roles in regional, state, and national history protects this history for current and future citizens.

» Preservation promotes an appreciation of the physical and natural environment.

» Advocacy and education can foster community pride by creating a unique sense of place and local identity, and increasing awareness and appreciation of local history.

» Repair, restoration, and preservation retains physical teaching tools about local history, local people, and past craft and construction methods.

» Historic buildings serve as physical spaces to connect with intangible history.

ADDITIONAL INFORMATION

Pennsylvania Historical and Museum Commission, Economic Benefits of Historic Preservation Activities in Pennsylvania (2011)

National Trust for Historic Preservation, Preservation & Economic Resource Center and Preservation & Sustainability Resource Center

1.7 THE SECRETARY OF THE INTERIOR'S STANDARDS

The Guidelines are based on *The Secretary of the Interior's Standards for the Treatment of Historic Properties*, commonly known as the Standards. The Standards were adopted as part of the National Preservation Act of 1966 and administered by the National Park Service. The Standards provide a consistent philosophical approach to proposed work on historic resources and are the primary tool for evaluation used by federal agencies, state governments, and local government bodies throughout the United States.

Four sets of Standards have been developed to fit specific treatment approaches for historic buildings: Preservation, Rehabilitation, Restoration, and Reconstruction. While they share a similar intent, each treatment has its own guidelines and objectives. Understanding the various treatments is important to help identify the most appropriate approach. The National Park Service's definitions of the four treatments are excerpted below:

Preservation is the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Preservation is an appropriate treatment when the objective of the project is to retain the building as it currently exists. Protection, maintenance, and repair are emphasized while replacement is minimized.

Rehabilitation is 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. In Rehabilitation, historic building materials and character-defining features are protected and maintained as they are in the Preservation treatment. However, greater latitude is given to replace extensively deteriorated, damaged, or missing features using either the same material or compatible substitute materials. Of the four treatments, only Rehabilitation allows alterations and the construction of a new addition, if necessary for a continuing or new use for the historic building.

Restoration is the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. Restoration is the treatment that should be followed when the expressed goal of the project is to make the building appear as it did at a particular—and at its most significant—time in its history.

Reconstruction is the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

Of the four treatments, the **Standards for Rehabilitation** offer the most universally applicable guidance to protect historic properties and allow for the most flexibility in project development. For this reason, the Standards for Rehabilitation are ubiquitously used for design review. The Standards for Rehabilitation are also the regulatory standard for Federal Historic Preservation Tax Incentives program.

ADDITIONAL INFORMATION

The National Park Service has developed a comprehensive collection of project planning resources. Preservation Briefs, Preservation Tech Notes, Guidelines on Sustainability and Guidelines on Flood Adaptation provide in-depth guidance and "how-to" information that is compliant with the Secretary of the Interior's Standards. Specific documents are referenced throughout these Design Guidelines. *The Standards for the Treatment of Historic Properties* and additional information are available at the National Park Service's website

THE STANDARDS FOR REHABILITATION

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.

3. Each property will 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 elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will 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.

1.8 PLANNING A PROJECT

The Guidelines are based on The Secretary of Interior's Standards for Rehabilitation which encourage the retention of existing historic materials and architectural features whenever possible. When replacement is necessary, new materials should match the original. New building elements should be designed with architectural compatibility in mind so that the harmonious exterior relationships of a given building or buildings are preserved. Useful guiding principles include:

Identify, retain, and preserve historic materials and features. Distinguishing historic architectural elements, as well as the character of a building's structure, should not be destroyed. Removal and replacement of historic architectural features is strongly discouraged and is usually approved only if such features cannot be stabilized, repaired, or restored, as determined by a design professional.

Maintenance is the first form of preservation. Maintenance and regular inspection of a historic building helps prevent serious deterioration of historic materials and features, which can lead to invasive and costly repairs in the future. Identifying any issues early allows minor repairs to be effective and keeps potential problems isolated, protecting the historic building for the long term. Common maintenance work includes clearing drainage systems, repainting wood, and trimming nearby plants that trap moisture.

Repair rather than replace. Deteriorated architectural features should be repaired rather than replaced whenever possible. Repair and maintenance can stabilize existing features and prevent deterioration. Repair with stabilization, consolidation, localized in-kind replacement or piecing-in of new material, and repointing, as common examples.

Replace in-kind. If repair proves inadequate, the next level of intervention involves the limited replacement of extensively deteriorated or damaged parts of features. In-kind means "like-for-like," exact replication, and use of the same material. The replacement material needs to match the old both physically and visually. Replacements must match the original in size, appearance, design, material, color, texture, and configuration. Historic evidence, in the form of physical, photographic, or records should be referenced for accurate replacement.

Replace with compatible materials. If in-kind replacement is not possible or would not address larger scale deterioration, the next intervention is replacement with alternate materials. New materials must be compatible with surrounding historic materials. Replacements must match the original material or features as closely as possible in all aspects.

Reconstruct non-surviving building features by drawing upon evidence and existing examples within the district. The objective in reconstruction is to re-create the appearance of the historic building for interpretive purposes. While the use of traditional materials and finishes is always preferred, in some instances, substitute materials may be used if they are able to convey the same visual appearance.

Alter or add elements for a new use sensitively. New elements may be introduced to the building if they are needed to ensure its continued use or for an adaptive reuse. It is necessary that such alterations do not radically change, obscure, or destroy character-defining spaces, materials, features, or finishes. Alterations and additions must not impact the surrounding historic district. Alterations and additions should be reversible in the future to the greatest extent possible.

SIGNIFICANCE, INTEGRITY, & CONDITION

Understanding your property is the best place to begin planning any project at a historic property. Three key concepts intersect to form the foundation of a successful project: significance, integrity, and condition.

Significance is simply defined as what makes a property important, on an individual level or as part of a collective. Properties can be significant for their association with important people or events in local, state, or national history, and as representations of architectural design and methods of construction and craftsmanship. Districts can reflect concentrated patterns and themes that extend beyond a specific building. Understanding why a building is individually significant and why it is contributor to its historic district leads to an identification of its character-defining features and the time period associated with that significance.

Integrity is the ability of a building or property to convey its reasons for significance. Seven aspects are used to evaluate integrity, as defined by the National Park Service below. A building or property must retain at least several aspects, not necessarily all seven, to retain historic integrity.

Location is the place where the historic property was constructed or the place where the event occurred.

Design is the combination of elements that create the form, plan, space, structure and style of the property.

Setting is the physical environment of the historic property, inclusive of the landscape and spatial relationships of the building/s.

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property.

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history.

Feeling is the property's expression of the aesthetic or historic sense of a particular period of time.

Association is the direct link between an important historic event or person and a historic property.

Condition is the physical state of the building and its components. Addressing existing conditions are generally the impetus for proposed work at a historic building. Existing conditions dictate what level of intervention is necessary and how to approach protecting and preserving a building. It is important to remember that poor condition does not equate to a loss of significance or integrity. Conditions allowed to deteriorate over time may lead to the loss of character-defining features and eventually a loss of integrity.

QUESTIONS TO CONSIDER

When planning a project, it can be helpful to ask the following questions:

» How old is the building? Does it have multiple periods of significance, or dates of early additions or alterations?

» Is it in a designated local historic district? Most exterior work in a local historic district must be reviewed by Staff or the HARB. A building outside a local district may be listed or eligible for listing on the National Register of Historic Places or may be subject to other zoning review, such the Historic Building Demolition Control Overlay. The preservation principles contained in these Guidelines are relevant to the treatment of historic properties outside local districts, even though HARB review is not required.

» Is the building individually significant and for what reason(s)? Why was the surrounding historic district designated, and how does the building contribute to that significance?

» What are the building or property's character-defining features? In other words, what physical features convey the building's and/or historic district's significance?

» Does the building retain integrity? What alterations have already occurred?

» Why is the project being proposed? What is the desired outcome? Which elements are required and which are flexible?

» What treatment approach is the most appropriate: preservation, rehabilitation, restoration, reconstruction? (Rehabilitation is usually the most appropriate.)

» What are the short- or long-term costs and what are the expected lifespans of the proposed materials? Preservation work can have real and perceived higher costs. Sometimes the materials or custom work required are more expensive. However, the costs are usually comparable or less, especially when considered in the long term. Historically appropriate materials tend to last longer and do not need to be replaced as often, which has economic and environmental benefits. Appropriate materials preserve the integrity of the building and historic district and may contribute to maintaining high property values.

» If a project proposed full or partial demotion, is demolition truly the last resort? What assessments or due diligence prove the rehabilitation is not feasible, and what alternatives have been explored?

SUSTAINABLE PRODUCTS AND RESPONSIBLE RECYCLING PRACTICES

Sustainable Practices in Building and Construction

Sustainability in the built environment considers the social, environmental and economic impacts of decisions regarding the use of materials, and reducing our footprint. Sustainable building practices involve environmentally responsible and efficient use of materials throughout a building's lifecycle.

For the purposes of these Guidelines, alternative materials have been deemed appropriate for certain categories of building components. The recommendations suggest manufacturers that meet sustainable standards by limiting the consumption of natural resources. Using these alternates should add to responsible recycling practices when replacing materials. The goal is to promote sustainable building practices and the use of products that reflect substantive environmental improvement to prevent the destruction of the environment.

Additionally, the Environmental Protection Agency (EPA) also suggests using recycled industrial goods, such as coal combustion products, foundry sand, and demolition debris in construction projects. Energy-efficient building materials are promoted through energy rebate programs.

Sustainable Recycled Materials

Some examples of sustainable building materials include sustainably harvested wood, sheep wool, hempcrete, panels made from paper flakes, baked earth, rammed earth, clay, vermiculite, flax linen, sisal, seagrass, expanded clay grains, coconut, wood fiber plates, calcium sandstone, locally obtained stone and rock, and bamboo, and non-toxic low-VOC glues and paints.

Sustainable architecture often incorporates the use of recycled or secondhand materials, such as reclaimed lumber and recycled copper. The reduction in use of new materials creates a corresponding reduction in embodied energy (energy used in the production of materials). Sustainable practices include retrofitting old structures to serve new needs in order to avoid unnecessary demolition and development. Architectural salvage and reclaimed materials are used when appropriate. When older buildings are demolished, many materials and components including wood, stone, mantels, hardware, windows, doors, trim and ornamental details may be reclaimed, renewed and reused, immediately reducing the consumption of new materials.

When introducing new materials, it is important to identify those materials that are rapidly replenished within the natural environment.

SUSTAINABLE BUILDING MATERIALS EXAMPLES

Lumber from certified forests and sustainably harvested wood

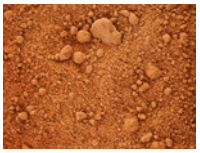

Wood fiber panel


Coconut panel


Sheep wool


Seagrass


Sisal


Clay


Expanded clay grains


Vermiculite


Earth (rammed earth, baked earth)


Rapidly renewable local plant materials like bamboo and straw.


Local stone


Hempcrete

SUSTAINABLE RECYCLED MATERIALS


Reclaimed lumber


Recycled metal


Any reclaimed material

Sustainable Alternative Materials & Technologies

Sustainability considerations and advantages/ disadvantages of certain types of alternative materials and technologies are examined in Chapter 3: Alterations to Historic Buildings, including:

» Alternative Exterior Cladding Materials
» Alternative Decking Materials
» Alternative Decorative Moldings and Trim
» Alternative Slate roofing
» Alternative Cedar and asphalt-based roofing
» Alternative Underlayment
» Alternative Gutter and Leaders

Least Sustainable Building Materials (to avoid when possible)

» Plastics including vinyl and PVC are harmful having adverse public health and environmental impacts.
» VOCs are organic pollutants in common household products including paint.
» Petroleum is a key ingredient in the manufacturing of asphalt and rubber roofs.
» Formaldehyde is found in mass produced building materials and pressed wood products including plywood paneling, MDF and particle board in the bonding adhesives.

SUSTAINABILITY PRACTICES AND STANDARDS

What is an **HPD?**

The *Health Product Declaration Open Standard* provides a framework for product manufacturers and their ingredient suppliers to report and disclose information about product and associated health information. The HPD Open Standard is a consensus, stakeholder standard governed by the HPD Collaborative, a not-for-profit member organization.

What is an **EPD?**

The *Environmental Product Declaration* is a standardized way of quantifying the environmental impact of raw material acquisition, documenting the energy use and efficiency in the harvesting of the materials as well as the emissions to air, soil, water and waste generation. These impacts include the potential for global warming and ozone depletion.

What is an **LCA?**

The *Life Cycle Assessment* is an evaluation of a product's environmental and health impacts over the product's lifespan from raw material extraction, transportation, manufacturing, use and final disposition or reuse. A Life Cycle Assessment is useful when comparing replacement materials with historic repair. It is also important to remember that for many new alternate materials may claim long lifespans based on laboratory tests but have not been used long enough to be tested in real life.

CHAPTER 2

HISTORIC DISTRICTS & ARCHITECTURAL STYLES

2.1 NATIONAL REGISTER OF HISTORIC PLACES

The National Register of Historic Places (National Register) is the nation's most comprehensive inventory of historic resources. The National Register includes public and private buildings, structures, sites, objects, and historic districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. It is administered by the National Park Service (NPS). The Pennsylvania Historical & Museum Commission (PHMC) works with NPS and acts as the State Historic Preservation Office (SHPO) for the National Register process. In Allentown, fourteen individual resources are currently listed in the National Register.

A property is "listed" in the National Register through a nomination process initiated at the local level and coordinated with PHMC. The nomination is approved by PHMC and then forwarded to NPS. A property can also be determined to be "eligible for listing" in the National Register, meaning that PHMC has formally determined that the property meets the significance criteria for listing but a nomination has not yet been prepared.

Benefits of listing in or being eligible for listing in the National Register include:

» Recognition and education about Allentown's history.

» Eligibility for federal and state tax credits, or grants programs (refer to Chapter 6 for more information).

» Review of potential adverse effects associated with projects that have federal or state involvement.

National Register listing does not restrict what can be done with a historic property, or even prevent it from being demolished. Listing in the National Register offers only limited protection for historic properties. Those protections are invoked only when a federal and/or state agency is involved in a project through funding or permitting, or if the property is seeking a tax credit or grant (refer to Chapter 6 for more information).

Being listing in the National Register is not the same as being locally designated as a historic district or individual landmark. Each policy has its own benefits and regulatory process. The National Register and local historic districts are complementary tools to recognize and protect historic resources.

The identification of historic resources is a continuous and collaborative process. Historic preservation benefits from being an iterative practice; questions about what is considered significant, how history is represented, or what important places and histories may have been overlooked drive further preservation. Local designation is a key method of recognizing the power of place to communicate history. It is supported by additional methods of identifying, documenting, and evaluating historic resources—such as historic surveys, historic context statements, and coordinated city-wide planning.

HARB'S ROLE

HARB review is not required for proposed work at a property that is only listed in or eligible for listing in the National Register. HARB reviews projects located within locally designated historic districts and consults on proposed demolition and new construction in the Historic Building Demolition Control Overlay zoning district (HBDO).

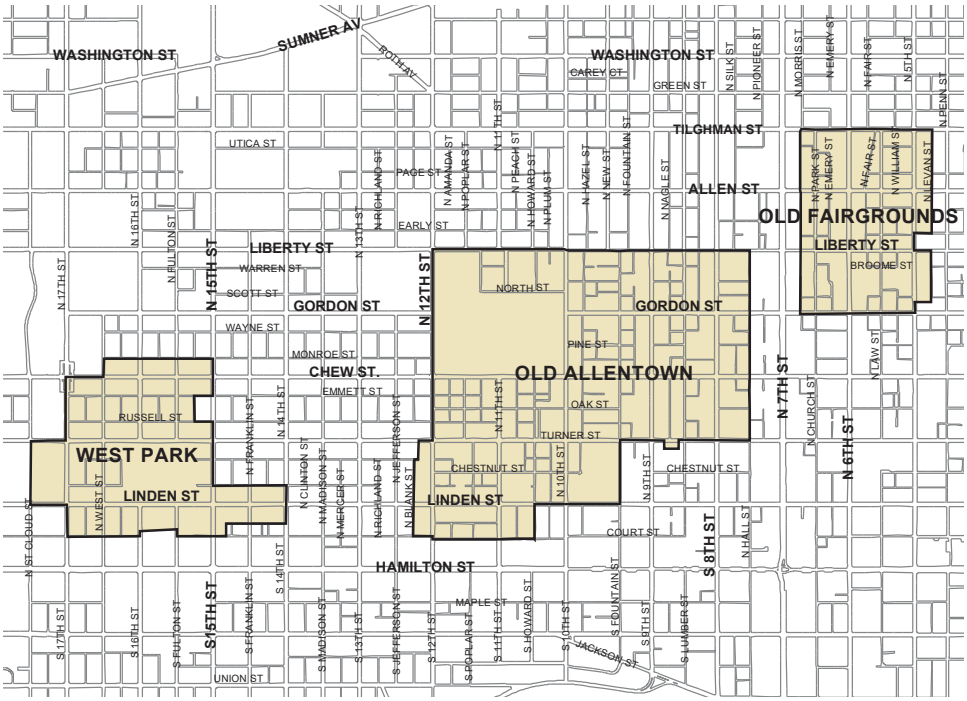
USEFUL LINKS

PHMC guides about the National Register Process and SHPO's Role and Fact Sheets

PA-SHARE, PHMC's online map and cultural resource database. Look up if a property is listed or eligible for listing and find National Register nominations and historic surveys.

National Park Service, National Register of Historic Places

2.2 ALLENTOWN'S LOCAL HISTORIC DISTRICTS



Historic districts are designated for their historic, architectural, and cultural significance and for their enduring original character that reflects a time and place in Allentown's history. A district is a concentration of buildings, structures, and spaces that visually conveys a sense of aesthetic or historical continuity. Buildings within a district may lack individual distinction, yet contribute to a district's collective significance.

A historic district's character-defining features can be understood on an individual building scale and on a street- or neighborhood-scale. As discussed in Chapter 1, identifying patterns and character-defining features is beneficial when thinking about what makes a historic district unique, when planning a project, and when evaluating potential impact from alterations. Character-defining features to consider include:

» Layout and composition, in street patterns and circulation paths, land uses, streetscape rhythms and setbacks

» Visual continuity or patterns in overall form, appearance, and materials

» Interrelationship of buildings, structures, and spaces

Allentown currently has three designated local historic districts:

» Old Allentown Historic District

» Old Fairgrounds Historic District

» West Park Historic District

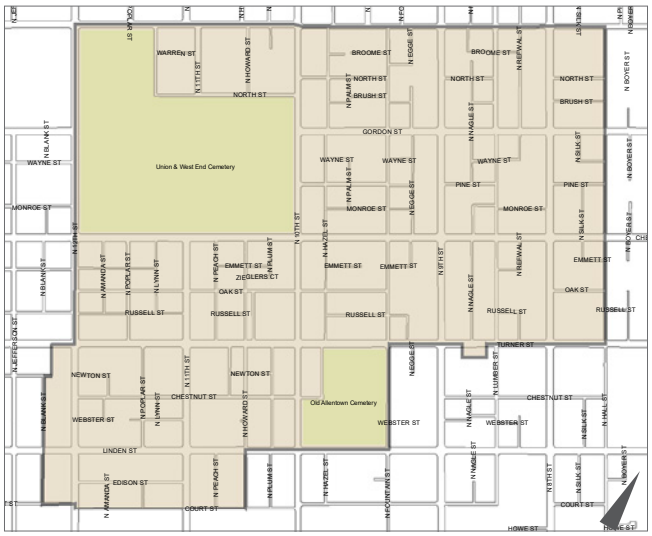
In each district, the architectural merit of the buildings themselves, the relationship between each building and its surroundings, and the connecting streets, sidewalks, and landscapes create a cohesive sense of place. A map and summary of each local district are included in the following pages.

USEFUL LINKS

For more information about Historic Districts, go to Allentown Historic Districts

To find if your property is in a Historic District visit the City's Historic District Map

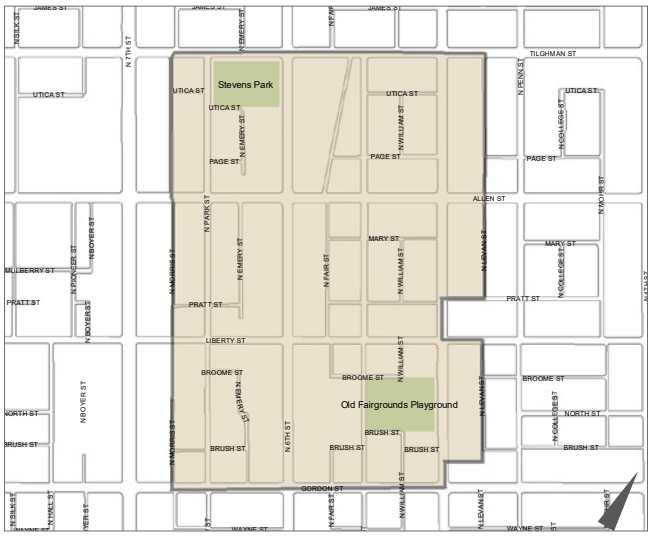
OLD ALLENTOWN HISTORIC DISTRICT



The Old Allentown Historic District is the city's first historic district. It was designated on September 6, 1978, when the Historic District Ordinance was first adopted as Ordinance #12314. The historic district was certified by PHMC on December 13, 1978. Old Allentown is a residential neighborhood that began its major development period in the 1850s and continued to the 1910s. New residential neighborhoods accommodate the growing population of Allentown and the Lehigh Valley, where new residents were drawn by a 19th century industrial boom. The neighborhood's street grid reflects the city's original plan drawn in 1762. Its network of major streets, narrow side streets, and alleys created a dense built environment and a high concentration of historic buildings constructed in similar styles and around the same time.

The district is primarily residential, peppered with stores and mixed-used buildings to serve local residents and a few industrial buildings. The district also contains the Union & West End Cemetery and Old Allentown Cemetery. Attached rowhouses are the typical building form and streets often have continuous facades of brick with distinctive cornice and door and window details. It features a mix of architectural styles popular in the mid- and late-19th century, including Federal, Italianate, Eastlake, and Second Empire.

OLD FAIRGROUNDS HISTORIC DISTRICT



The Old Fairgrounds Historic District was designated on June 17, 1981 by Ordinance #12467. It was certified by PHMC on September 9, 1981. This area originally held the Lehigh County's Agricultural Society's fairgrounds from 1852 to 1888. When the fairgrounds moved west, residential developers purchased the land. They platted new streets and alleys and constructed groups of new residences with consistent styles, materials, and detailing. The neighborhood developed quickly between 1888 and 1910, by which time it was almost entirely built up.

Attached rowhouses and semi-detached (paired or twin buildings with one shared wall) buildings are the prevalent building forms. Architectural styles from the late Victorian era prevail in the neighborhood, including Italianate, Queen Anne, Second Empire, and eclectic mixes of style influences.

WEST PARK HISTORIC DISTRICT

The West Park Historic District was designated on December 21, 2000 by Ordinance #13881. It was certified by PHMC on February 21, 2001. This residential neighborhood developed around the city's first public park, West Park. Residential construction occurred primarily between 1895 and 1930. Its residential character is interspersed with several churches and institutions, including the William Allen High School, Allentown Hospital Nurses College building, and Masonic Temple.

West Park has the most variation of the three historic districts in architectural style, scale, and building form. Examples of major architectural styles and transitions reflect its 19th to 20th period of development. Architectural styles and influences include Queen Anne, Colonial Revival, Dutch Colonial Revival, Craftsman, Prairie, and Shingle, as well as Gothic Revival and Neo-Classical at the religious and institutional buildings. Consistent setbacks from the sidewalk with front yard and porches characterize the streetscape. Attached rowhouses are the dominant form, with semi-detached pairs and detached single houses common in the southern blocks.

2.3 ARCHITECTURAL STYLES

Few buildings exhibit all features of an architectural style. In the past and even today, each architect, builder, or craftsman expressed their unique tastes and skills that reflected a period's technological and stylistic advancements. With this in mind, recognizing architectural styles and individual features is an important step to increase the overall appreciation and understanding of Allentown's built environment.

An architectural style can be expressed in a "high style" example, meaning a building that has all of the key elements and details that define that style. This academic perspective shows how many features are combined into a style as an ideal example. An architectural style can also be expressed in a "vernacular" example, meaning a building that mixes features with local traditions, mixes influences from different styles, or interprets features in a new or simpler way. Both high style and vernacular styles are important elements of a city's architectural heritage.

This guide is intended to familiarize the community with the most common architectural styles in Allentown. Illustrations of high style and local vernacular buildings show the variety of Allentown's historic buildings. The time frames are approximate, indicating the period of the style's popularity but not necessarily the construction date of a specific building. Finally, typical character-defining features for each style are noted as a resource to easily identify the constructions spread within the city.

Character-defining features are the parts of a building that define its style. They are what makes a historic building distinctive. When looking at a building, these are the types of questions that help identify features:

Start with the big picture: How tall is it? What material is it built of? What does the roof look like?

Look at the front of the building: What do the windows and doors look like? How are they spaced across the building? Is there a porch, tower, or other elements?

Then look at the details of the building: Is there ornament around the windows and doors? What does it look like where the walls meet the roof? Do these details look like the details at nearby buildings?

It is important to keep in mind that local style variations happen over time. For instance, an individual building may mix styles or have unusual features, but its character-defining features should take into account its unique history and its overall style. Vernacular styles and mixes of character-defining features is part of what makes Allentown's architecture special.

USEFUL LINKS

For additional information about character-defining features, see the National Park Service, Preservation Brief #17 "Architectural Character—Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character"

FEDERAL (1780 - 1840)

Allentown's vernacular Federal style

High Federal style

Federal Style in Allentown

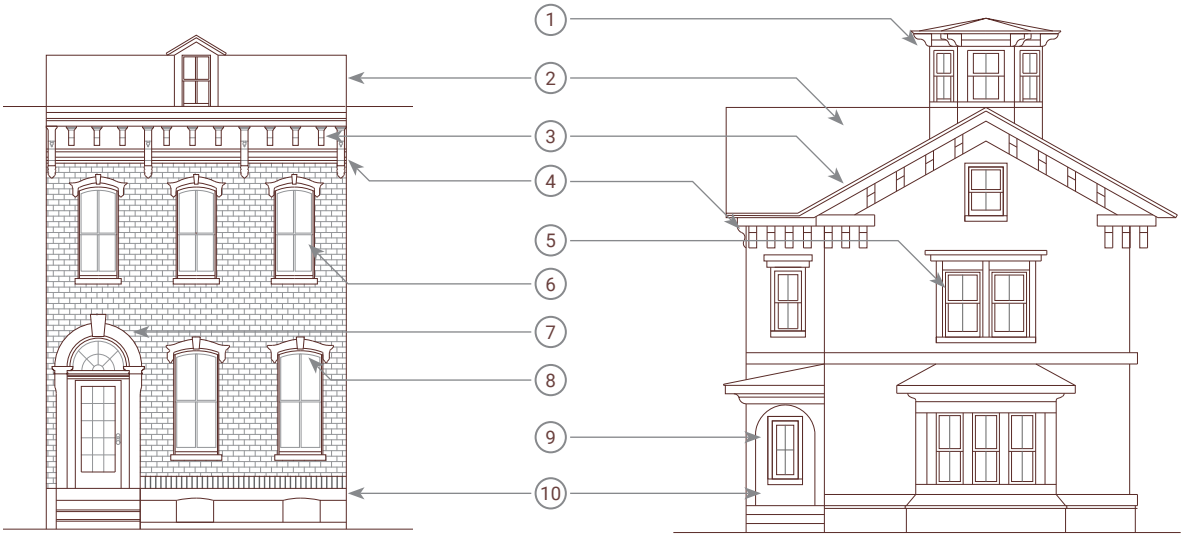
The Federal style dominated the American architectural landscape from roughly 1780 to 1840, having evolved from Georgian architecture, the principal design language of the colonial period. The term "Federal" relates to the period of American history after the Revolutionary War when the country's government was being developed. Federal style buildings have a notably understated appearance, with the primary feature being wood clapboard or brick siding. Although the style has earlier origins than the buildings in Allentown's historic districts, its forms, proportions, and designs endured in vernacular expressions well into the 19th century.

Later Federal style had an emphasis on more classical detailing. Additionally, it was this period that emphasized the transition of design and building from a trade to a profession. Rectangular plans, symmetry, simple roof shapes, refined classical decoration at entrances and windows, and typical brick and wood materials characterize this style.

Character-defining features

1. Single center dormer
2. Prominent end chimneys
3. Simple massing and side gable roof or hipped roof
4. Corner boards
5. 6 over 6 or 12 over 12 lite sash windows
6. Blinds / Shutters
7. Flat window and door lintels
8. Windows and door aligned vertically on facade
9. Wood or brick construction

ITALIANATE (1860 - 1890)



Allentown's vernacular Italianate style

High Italianate style

Italianate Style in Allentown

The Italianate style was inspired by the vernacular Italian farmhouse architecture and in reaction to the formal classical ideals in art and architecture that had been fashionable. Bracketed cornices and ornate doors and door surrounds were prevalent, and a decorative exuberance highlighted the style that quickly dominated 19th century American architecture. Italianate elements were often combined with other styles of the period like Second Empire or Queen Anne.

Typical characteristics include an asymmetrical massing or fenestration patterns that reflect the interior floor plan. The roof usually has a slight pitch, and it can be gabled, hipped, or a combination of both. The entrance includes heavily molded doors, often double and asymmetrical placement with heavy wooden bracketing. Windows are tall and slender, often two-over-two with the presence of paired arched windows. Brick construction is typical with wood detailing over doors and windows and in bracketed and molded cornices at the roof eave.

Character-defining features

1. Towers or cupolas
2. Shallow roof pitch
3. Bracketed cornice
4. Brackets, either single or double.
5. Paired windows & 2/2 sash
6. Tall window openings with arched top
7. Decorative moldings at windows and door
8. Eyebrow or arched window lintels
9. Semi-circular arch
10. Asymmetrical facade

SECOND EMPIRE (1860 - 1880)

Allentown's vernacular Second Empire style

High Second Empire style

Second Empire Style in Allentown

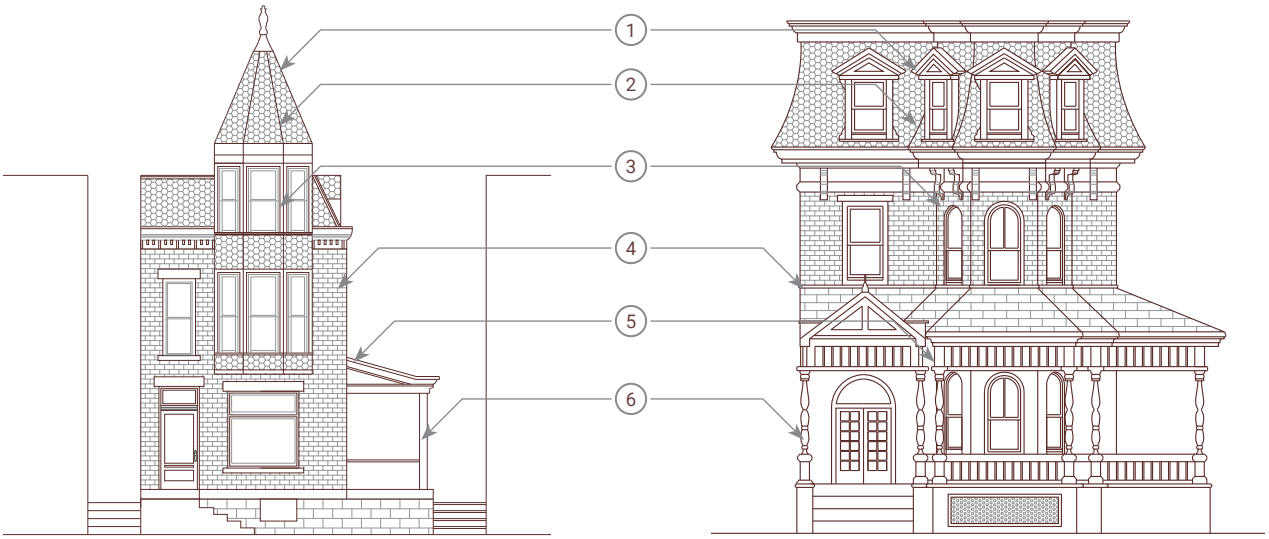
The Second Empire style, also known as French Second Empire, was closely related to the Italianate style. The style was considered modern, as it imitated the most recent French building fashions. The style is characterized by its distinctive mansard roof. Mansard roofs are steeply sloped and originated to conceal the uppermost story of a building. The details of the brackets, windows, doors and porches are all very similar to the Italianate style. In Allentown, mansard roofs are common on the primary facades of attached rowhouses and were clad in slate shingles.

Rapid growth across the United States, the expansion of the railroad, and industrialization all contributed to the development of decorative and eclectic Victorian period styles like Second Empire. The automation and mechanization of the building industry, especially in carpentry, that took hold in the latter part of the 19th century was expressed in the widespread use of elaborate detailing, which had once only been available for expensive homes.

Character-defining features

1. Mansard roof
2. Decorative slate roofing
3. Deep bracketed eaves
4. Bracketed window hoods
5. Paired doors & windows
6. Corner boards
7. Projecting portico
8. High foundation

QUEEN ANNE (1880 - 1910)



Allentown's vernacular Queen Anne style

High Queen Anne style

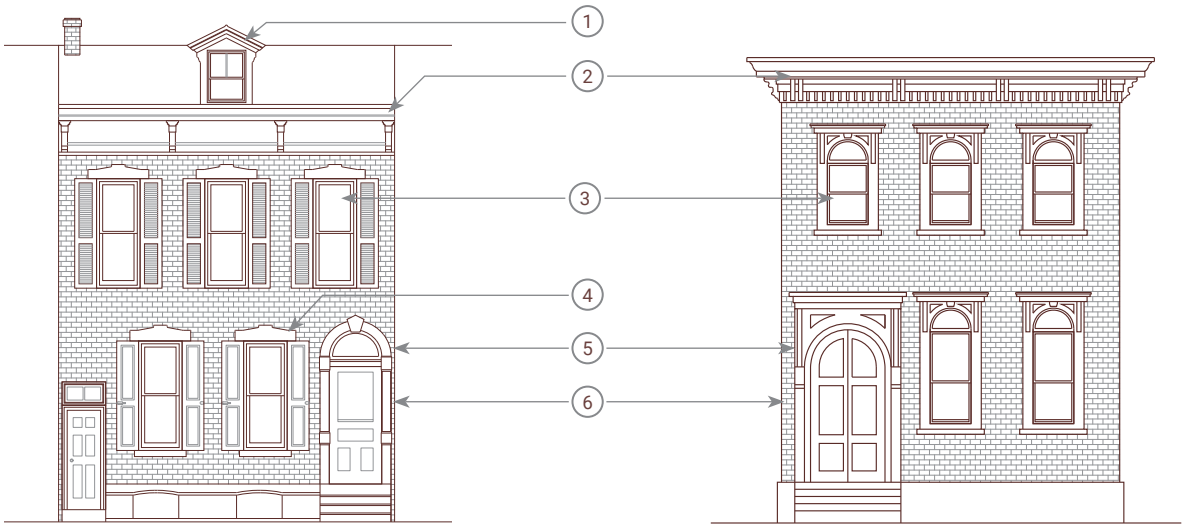
Queen Anne Style in Allentown

The Queen Anne style is most noted for its combination of original and historical motifs in varying shapes, materials, colors and textures for a visually picturesque effect. The style is typically identified by multiple roof lines and prominent porch detailing with intricate spindle work. "High style" examples have elaborate facades with multiple projections and free-form massing. Even simple vernacular examples typically have a cross gable roof, which may be articulated by an ornate cornice. Porches dominate the first story. Turned wood columns on porches, corner turrets or towers, and bay windows are also prominent features.

Commercial Queen Anne buildings have more in common with the Italianate style than the residential interpretations of Queen Anne. Typically, a commercial building can be categorized as Queen Anne if it consists of more elaborate and asymmetrical detail elements. Multiple, varied height roof lines and parapets, delineating a strong division between the first and second floors, is also a visual parameter.

Character-defining features

1. Asymmetrical massing usually with tower or turret
2. Multiple roofs, clad with shingles
3. Bay and ornamental window
4. Mixed exterior materials, usually brick and wood
5. Full-width porch
6. Turned wood posts



Allentown's vernacular Eastlake style

High Eastlake style

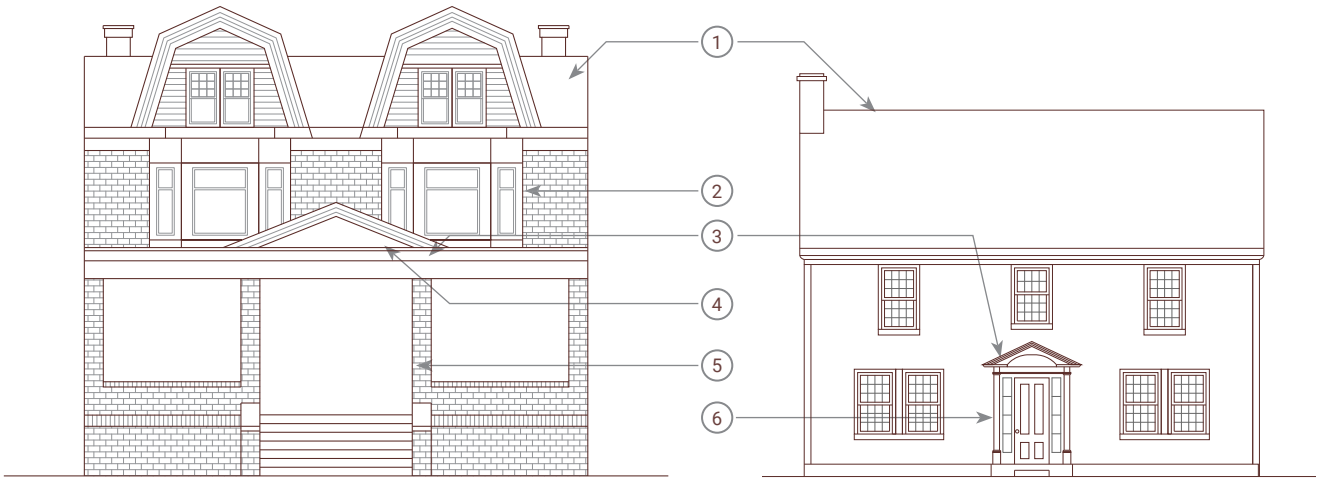
Eastlake Style in Allentown

The Eastlake style is defined by its rich ornament. It is usually considered a subset style and many houses with the Eastlake ornamentation traditionally fall within the broader Queen Anne category. Charles I. Eastlake was a British architect, known for the influential book *Hints on Household Taste in Furniture, Upholstery, and Other Details*. The Eastlake style spurred the idea that furniture should be handmade and an intricate component of the house, which was then translated to architectural interiors and exteriors. A short-lived style, the period focused on ornately carved and detailed wooden decorative elements rather than an actual building form or style. Eastlake tends to refer to the style and ornateness of the building details, while Queen Anne refers to a building's massing and asymmetry.

Incised detailing—where the pattern or motif is carved into the surface instead of carving away the background area—is a character-defining feature of this style. Carvings are typically repeated across a building at the door and window surrounds and cornice fascia. In Allentown, Eastlake style rowhouses are prevalent and rely more on ornament than massing to express their architectural style.

Character-defining features

1. Ornamental details at dormers
2. Cornice with brackets and incised detail
3. Segmental or rectangular arch window openings
4. Geometrically-shaped window lintels, flush with brick facade (flat)
5. Unpainted brick masonry facade
6. Asymmetrical facade



Allentown's vernacular Colonial Revival style

High Colonial Revival style

Colonial Revival Style in Allentown

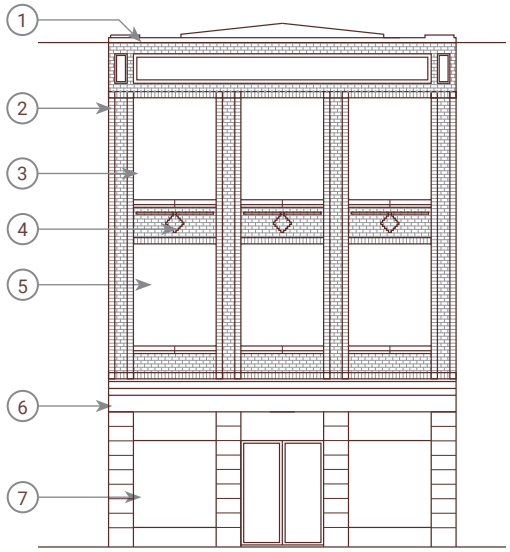
The Colonial Revival style was popularized nationally by renewed interest in reflecting (or loosely interpreting) early American styles. Notable in Colonial Revival designs was a return to a low symmetrical rectangular form with a centered door, accented by a decorative pediment supported by pilasters or slender columns. Ornament returned to the simple styling of the Federal and earlier periods, while incorporating contemporary materials. Commonly, doors include overhead fanlights or sidelights. The overall facade shows symmetrically balanced windows. Windows are generally double-hung in adjacent pairs, usually with multi-pane glazing in one or both sashes.

The Dutch Colonial Revival style is a subset style and is characterized by the gambrel roof. A gambrel roof is double-pitched, meaning that it has two roof slopes at different angles. Gable-end gambrel forms tend to be found in the West Park and Old Fairgrounds historic districts.

Character-defining features

1. Gambrel roof
2. Bay window
3. Pediment over entrance
4. Classically inspired trim and ornament
5. Front porch with columns
6. Accentuated front door, normally supported by pilasters

INDUSTRIAL (1840 - 1940)



Allentown's vernacular Industrial style

Industrial Style in Allentown

The Industrial style is a broad category that is defined equally by a building's use and how that use and function was expressed in architectural forms and features. American industrialization in the mid-19th century spurred new construction of warehouses and factories. As industrial activity increased and new industries emerged, Industrial style buildings became a ubiquitous and defining feature of many cities and towns. Allentown and the Lehigh Valley's industrial heritage is one of the region's most significant themes.

This style is typically defined by a utilitarian appearance, multi-story scale, large floor-to-ceiling heights, large window openings to capture natural daylighting, and multi-lite steel windows. Brick masonry is the dominant building material. Stone masonry and terra cotta details are common materials used for facade details. Industrial buildings would often borrow elements of contemporary styles and nearby buildings and interpret them in simplified versions, such as shaped parapets or patterned brickwork at the facade. The versatility of these buildings' large open form kept them standing even after the original businesses moved on and many have been adaptively reused.

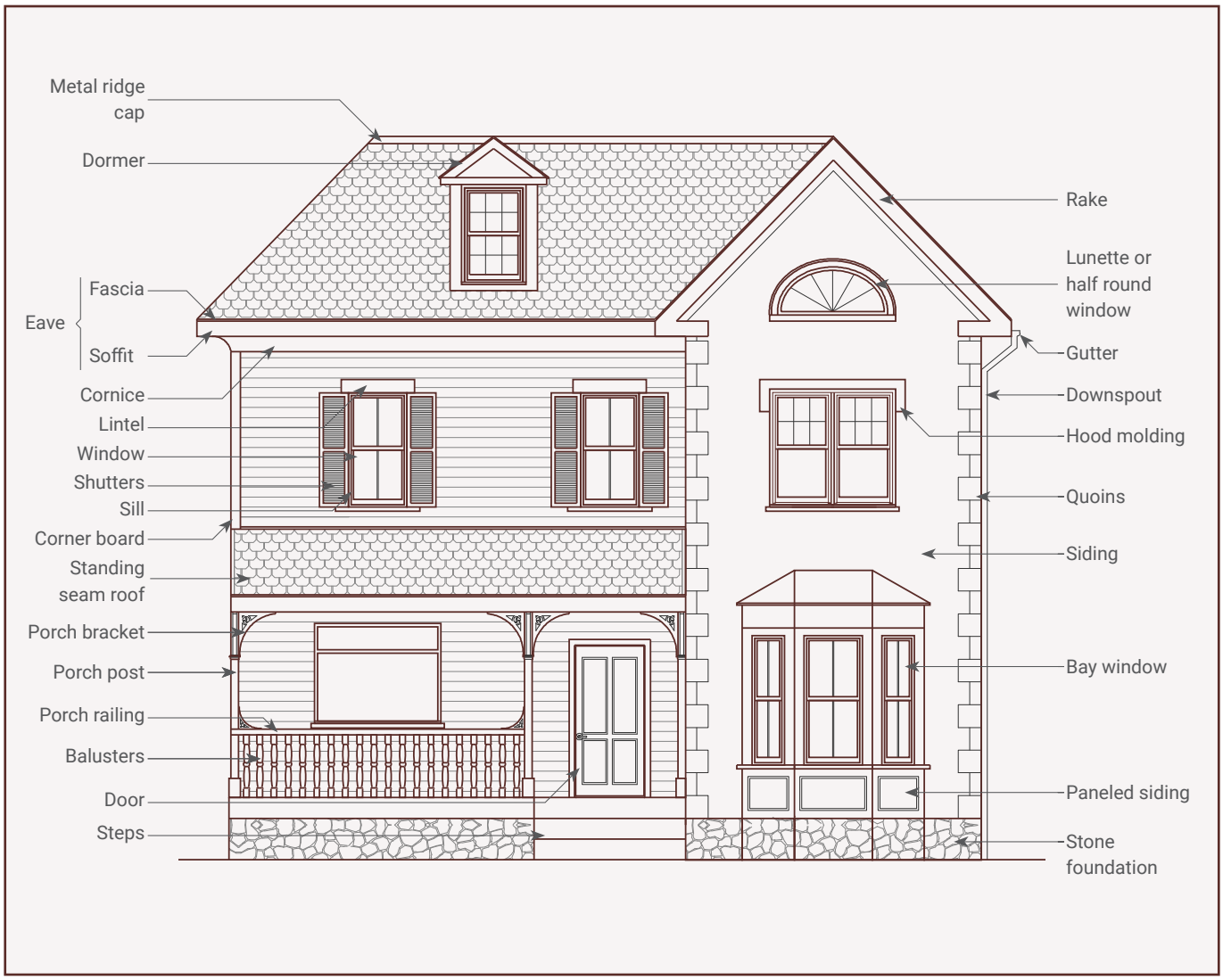
Character-defining features

1. Flat or low slope roof, sometimes with simple parapet
2. Brick masonry construction
3. Tall stories (floor-to-floor heights)
4. Ornamental brickwork or masonry details
5. Large window openings
6. Intermediate cornice
7. Ground floor storefronts or entrances (occasional in urban settings)

CHAPTER 3

GUIDELINES FOR EXISTING BUILDINGS

TYPICAL ARCHITECTURAL VOCABULARY



3.1 ROOFS

The roof of a house is an important architectural feature and should be treated as such. Roof forms are character-defining features of architectural styles and contribute to a neighborhood's rhythm and sense of scale. Roofs, associated features, and drainage systems are also functionally important and should be maintained as an interconnected system for the overall longevity of a building. Metal flashing, drainage systems, and trim are critical components to keeping a roof watertight and should be incorporated in any repair and restoration work undertaken. All efforts should be made to preserve the original roof and to maintain and repair roof materials as necessary.

MAINTENANCE RECOMMENDATIONS

3.1.1 Inspect roofing systems regularly. Water infiltration through the roof can ultimately damage historic features throughout a building. Identify any broken shingles, exposed sheathing or substrate, damaged or missing flashing, or areas of ponding water for repair. Inspections can be conducted from the ground using binoculars if roof access is difficult. Inspect building interiors for signs of water infiltration. Clear gutters and drainage systems regularly.

3.1.2 Keep historically painted metal roofs well painted to preserve the metal below. Paint acts as a protective layer to prevent the sheet metal from weathering.

DESIGN GUIDELINES

3.1.3 Repair and restore original and historic roofing materials whenever possible. Evaluate the condition and cost of repair of original materials before removing and replacing them. Targeted areas of repair or localized in-kind replacement may be the most effective and low-cost solution.

3.1.4 Repair and replace deteriorated flashing or fasteners with materials that are compatible with the roofing material. Roof problems are often caused by failure of these components rather than the historic roofing material.

3.1.5 Preserve architectural features that give the roof its unique and building-specific character—such as dormers, turrets, chimneys, cornices, rolled ridge flashing, cresting, and finials. Repair and restore features; replace in-kind only when necessary.

3.1.6 Replace historic roofing materials in-kind whenever possible if severe deterioration makes a full replacement necessary. Replacement material should match the original in material, dimension, shape, profile, color, pattern, exposure, and overall appearance.

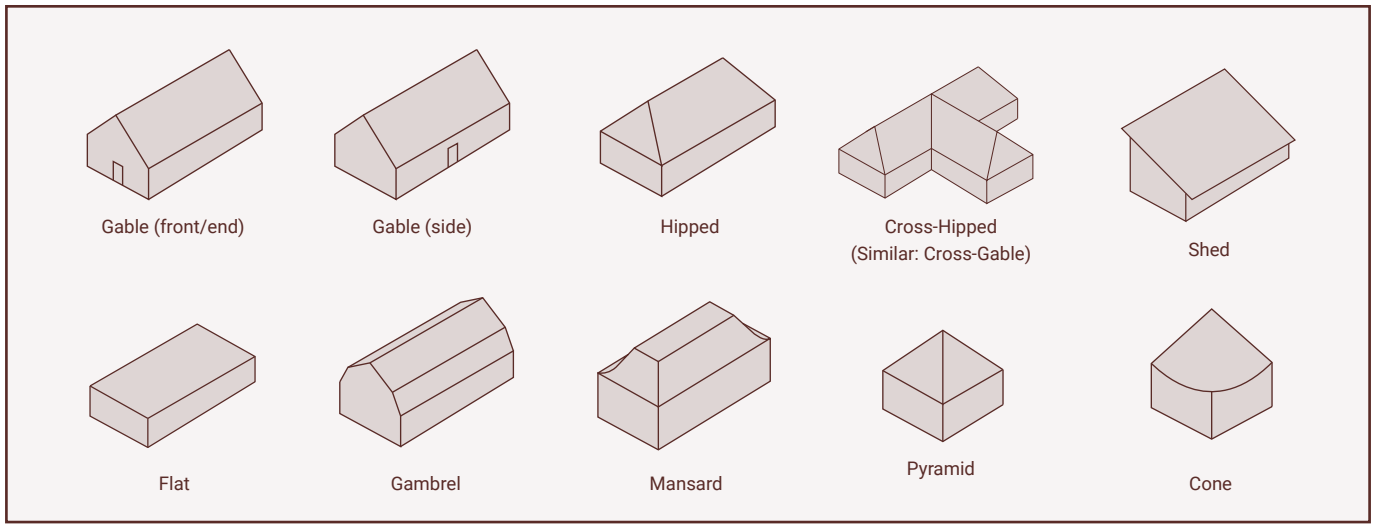
3.1.7 If in-kind replacement is not feasible, replace historic roofing materials with alternate materials that resemble the original as closely as possible. Roof replacement should be sensitive to the original appearance. Replacement materials should match roof slopes or shape.

3.1.8 Replace non-historic roofing materials in-kind or with recommended alternates. If the original material is documented, restoration of the original material is also an appropriate option but is not required. Original roofs may have been replaced long ago, yet asphalt shingles and similar alterations are still considered impacts to the overall appearance. Replacement materials should match the existing in color, pattern, shape, and profile. Greater flexibility is possible with non-historic roofing and using durable high-quality replacements is recommended.

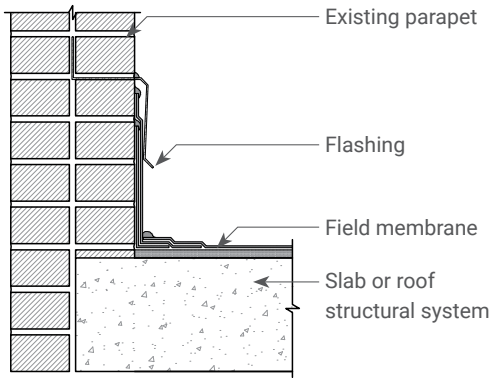
3.1.9 Consider roof ventilation alternatives carefully. Ventilation options are approved on a case by case basis and can include ridge vents, louvered vents, or soffit vents. Proper ventilation may extend the life of a roofing system, but in some cases it can lead to condensation problems with long-term effects on the roofing materials and structural components. Refer to Chapter 3.8 Mechanical and Utility Equipment for related guidelines about roof vents.

3.1.10 *Recommendation Only:* Proposed repairs or replacement of flat roofs that are not visible from the public right-of-way do not require staff approval or HARB review for a Certificate of Appropriateness. Recommended materials for flat roofs include fluid-applied membranes and modified bitumen membranes.

ROOF SHAPES



Complex and unique roof forms on larger detached buildings are also found throughout the historic districts.



Typical section of a flat roof with fluid-applied membrane. For these cases, manufacturers, sometimes in liaison with architects and contractors, can provide technical solutions that preserve the original appearance of the building.

TYPICAL HISTORIC MATERIALS

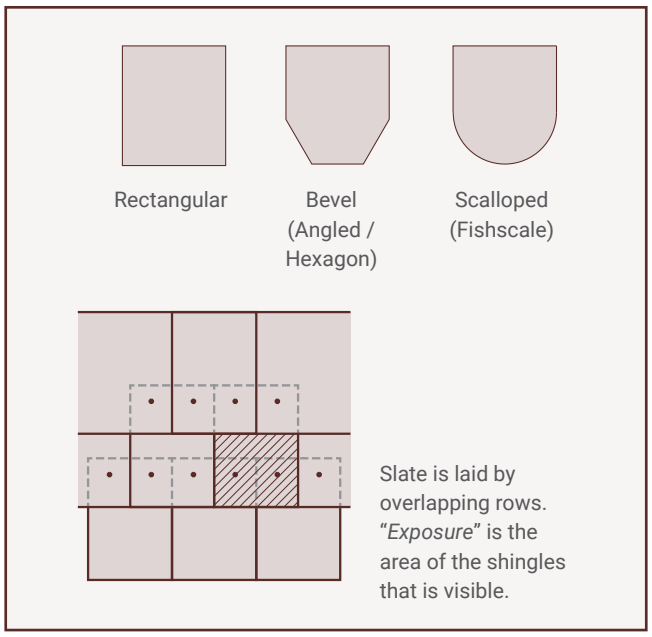
Prevalent historic roofing materials in Allentown are natural slate shingle, metal sheet, and terra cotta clay tile. Each historic material is visually distinctive, and if well-maintained and monitored can last many decades. Other historic roofing materials, like wood shingles, were not common in Allentown; however, if an uncommon material exists on a specific building or was a original documented feature, it can be considered appropriate.

Slate is a natural, durable stone with the ability to be split into thin tiles of uniform thickness to be used in roofing applications in a variety of sizes and configurations. Quarrying slate was a key industry in Pennsylvania in the 19th century, which meant that slate as a building material was more accessible and more affordable in Allentown than in many cities across the country. The color variation inherent in the natural stone formation along with the texture gives character to the building material. Slate occurs naturally in different colors: grey, blue, purple, green, and red. Slate can be cut into shaped shingles to create decorative patterns across a roof slope. In Allentown, grey-blue-purple slate and red slate are prevalent. Slate has proven over time to be extremely durable and its lifespan varies for different regions. Pennsylvania slate has proven to range from 60 to 200 years, depending on the type, and 100 years is typical. Vermont and New York slate lasts around 125 years, Virginia slate can last around 150-175 years, and many original quarries remain active. With a slate roof, issues are usually caused by fastener failure (nails, hangers) or improper installation rather than the slate shingles themselves. Slate appears on main roof slopes, turrets, and dormer roofs and sidewalls (also called cheeks) throughout Allentown.

Attached rowhouses with side gable roofs are a significant building type in the historic districts.

Three roofs show the visual differences in roof materials: original slate (left), 3-tab asphalt shingle (center), and variegated-width architectural shingle (right).

SLATE SHINGLES SHAPES



Terra cotta clay tile is made from natural clay that is shaped and fired into a strong and durable material. Tiles are typically shaped in an S-curve (pantile) or barrel shape or are flat and rectangular. Terra cotta tile roofs are a character-defining feature of the West Park Historic District. Tiles are usually red-orange in color, although rare examples of green-glazed tiles exist. Terra cotta tiles can last around 75-100 years. Roofs can be repaired by replacing individual broken tiles.

Metal roofs were typically used for porch roofs, turrets or roof features, and accessory structures. These roofs are composed of flat sheet metal fastened with either flat seams or standing seams. Historic sheet metals included copper, tin, tin-plated iron or steel, and terne plate (steel with an alloy coating of lead and tin) painted red or green. Whether or not to paint metal depends on the type of metal. Most sheet metal roofs should be painted to prevent weathering. Copper should not be painted and should be allowed develop its natural protective patina (green exterior layer).

TYPICAL ALTERNATE MATERIALS

Roofs in the historic districts may have already undergone one or several replacements. Certain "modern" materials have now been used for decades, such as asphalt shingles. From a historic preservation perspective, they are still considered alternate materials when they would not have been available at the time of a building's construction.

Sustainable roofing products and technology are rapidly evolving to respond to the demand for alternatives that are environmentally responsible products. Alternate materials that are designed to have minimal visual impact may be acceptable if they do not detract from the architectural character of the building. Alternate materials sometimes offer a more affordable option to natural materials when a roof replacement is necessary. However, alternate materials generally have a shorter life cycle and will have to be replaced more often, and some products are equally costly. Technological advancements continue to make new products available. The following recommendations reflect known performance characteristics and shall be adapted as new information becomes available. The Guidelines do not endorse any products or manufacturer; references are provided for information purposes only for comparative alternatives.

Alternative Slate Roofing

One of the primary benefits of slate is its density, and its weight offers protection as an exterior cladding and roofing

material. The material weight adds to the purchase cost as well as installation cost. Alternative materials and methods have been developed to provide options for installing true slate with lighter weights as well as composite materials that give a realistic resemblance to slate while being man-made products.

SlateTec patented true slate roofing systems utilize a heavy duty interlayment method under the slate that reduces the slate overlap which in turn reduces the number of slates required to cover and protect more area. The reduced amount of slate reduces the overall cost of the roofing system.

Nu-lok slate roofing systems are based on technology that places the slate tiles edge to edge on a grid supported by battens with a channel system to drain water effectively. This system reduces the amount of slate by up to 40%, thus reducing material costs and roof weight. Additionally, this system increases the energy efficiency of the building through the use of the batten system which allows for natural ventilation under the slate, keeping the roof cooler.

Porcelain roof tile offers a slate-look roofing tile made with recycled and reclaimed materials, has no VOCs (volatile organic compounds), is weather resistant, algae and water resistant, is lighter than slate, is color fast as it carries the same properties as porcelain, and is low maintenance.

Synthetic slate is a category of alternative slate shingles, also known as engineered or composite slate, made from blends of plastics, fibers, and rubber. These products are often made from recycled materials. They are also lighter weight than natural slate. Synthetic slate products mimic the thickness, size, shape, texture, and color of natural slate. Because they have a thicker profile than asphalt-based shingles and can match original shingle shapes more closely, they are a more appropriate replacement material if natural products are not available.

Alternative Clay Tile Roofing

Engineered composite polymer products remain the most environmentally responsible, durable, and reasonably priced alternative to clay tile roofing. Composite tiles are easier to install and closely resemble the look and feel of glazed and natural terra cotta tile, offering an appropriate alternative.

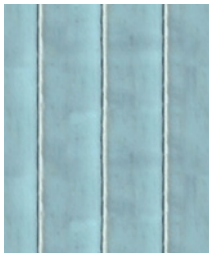
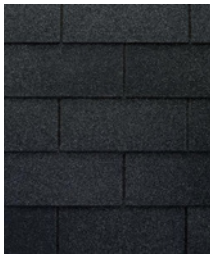
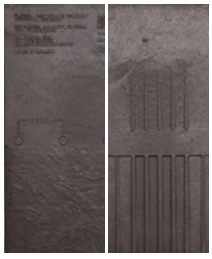
Porcelain roof tile offers a clay-tile look, is weather resistant, algae and water resistant, lighter weight than slate, color fast as it carries the same properties as porcelain and is low maintenance.

Alternative Asphalt-Based Roofing

One of the most popular conventional roofing materials, asphalt-based roofing, continues to be a rapidly evolving technology with developing more durable sustainable replacements. Generally, high-quality products should be used.

Composite shingles are an alternative to asphalt shingles. Asphalt became increasingly popular in the '70s and '80s across North America when fiberglass-based shingles were introduced to replace asbestos paper-based asphalt. Asphalt singles are made of glass fibers (most common) or cellulous fibers saturated and coated with asphalt and surfaced with ceramic-coated mineral granules. Asphalt often becomes the default substitute material for slate and tile roofs due to economic factors.

Asphalt roofs lack the aesthetic superiority and durability of natural slate, a historically appropriate and authentic building material in Allentown. Issues related to granule loss, cracking, curling, and cupping are a constant concern over the roof's lifespan, as is exposure to high winds and exposure to UV light and other climatic conditions. The lifespan of asphalt shingles has significantly reduced since

HISTORIC MATERIAL EXAMPLES	ALTERNATE MATERIAL EXAMPLES
 Slate Shingles	 Architectural Asphalt Shingle
 Copper Sheet Metal	 3-Tab Asphalt Shingle
 Terra Cotta Tile	 Synthetic Slate

the introduction of fiberglass-based shingles, and most asphalt roofs will need to be replaced after 10-15 years, making them quite costly over the life of a building.

It also bears mentioning that the fiberglass used in asphalt shingles is bonded with a formaldehyde resin, a highly adhesive but toxic material combined with petroleum-based asphalt resulting in a non-sustainable building material. However, asphalt shingles can be recycled and used for asphalt paving adhering to responsible recycling practices.

The use of high-quality asphalt shingle roofing systems, such as architectural shingles may be considered appropriate replacement materials, especially on structures with simple roof configurations.

Architectural shingles are a laminated fiberglass asphalt product. Architectural shingles replicating natural slate that are single color are acceptable alternate materials. Single color products in black or grey are acceptable. Shingles that replicate wood shingles are not appropriate because wood shingle roofs were not historically used in Allentown. Variegated colors are not acceptable. Use of color shingles to replicate an existing or documented pattern may be appropriate if the decision is based on clear evidence. Rectangular cuts, even spacing, and consistent exposure are recommended to represent the cut and dimensional appearance of historic natural slate roofs.

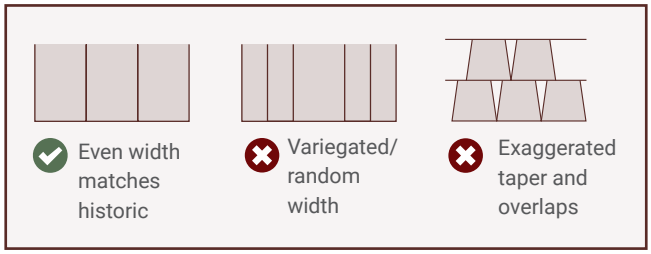
3-tab shingles are another type of single-layer fiberglass asphalt product. 3-tab shingles became popular because they are low profile and have minimal visual impact once they are installed, although they do not resemble historic materials and have a visual change on the historic building and surrounding historic district. 3-tab shingles in black and grey are acceptable. Variegated colors are not acceptable. Products with exaggerated shadow lines or thick profiles should be avoided. Compared to architectural shingle products, 3-tab roofs are constructed of a thin layer of fiberglass asphalt construction and have a flatter appearance with little separation between each shingle. 3-tab shingles are usually the lowest cost alternative and have the shortest lifespan. 3-tab shingles are being phased out by manufacturers and infrequently recommended by contractors.

Rubber shingles consist primarily of recycled materials, however rubber requires substantial additives as it naturally breaks down under exposure to UV light. Rubber has a low factor of rigidity resulting in a very low wind uplift rating. They are not a recommended materials due to unreliable performance and deterioration with UV exposure and temperature variation. Aesthetically, the rubber shingles do not compare to slate roofs in profile, texture or color.

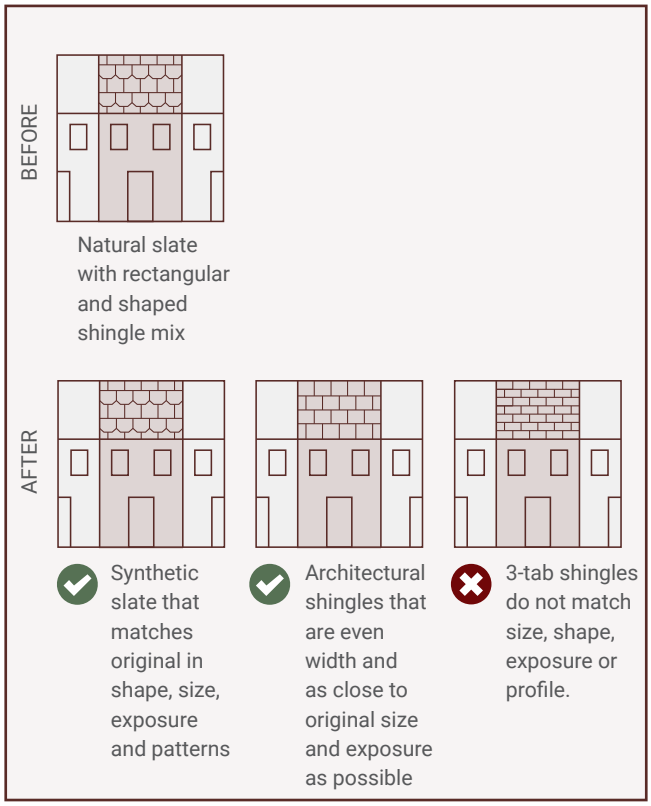
Alternative Roof Underlayment

The underlayment on roofs is typically asphalt-based, which breaks down relatively quickly. Replacing this layer is necessary to keep moisture out of the building's interior. Synthetic roof underlayment offers an alternative that weighs less and withstands the wear and tear of an exterior environment. Synthetic roof underlayment uses polymer that comes from recycled scrap materials. It also eliminates VOCs from the underlayment.

SLATE REPLACEMENT CONFIGURATIONS



SLATE REPLACEMENT



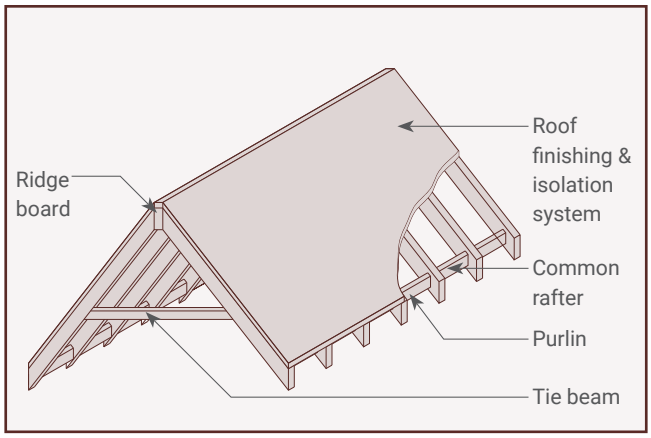
ENERGY EFFICIENCY NOTE

When looking to improve a building's energy efficiency and reduce heating and cooling costs, many people jump to window replacement. However, numerous energy studies show that most energy loss occurs at the roof. Insulating the interior of roofs or attic floors is an effective way to reduce air movement. Rigid polyurethane foam insulation is an appropriate common material. Space for air flow between the underside of the roof and the insulation should be left to protect roof materials from deteriorating. Insulating attic floors are also appropriate and avoids potential impacts to the roof structure and cladding. Exterior roof insulation changes the visual appearance of a roof and is not appropriate; only flat non-visible roofs may be appropriate exterior locations.

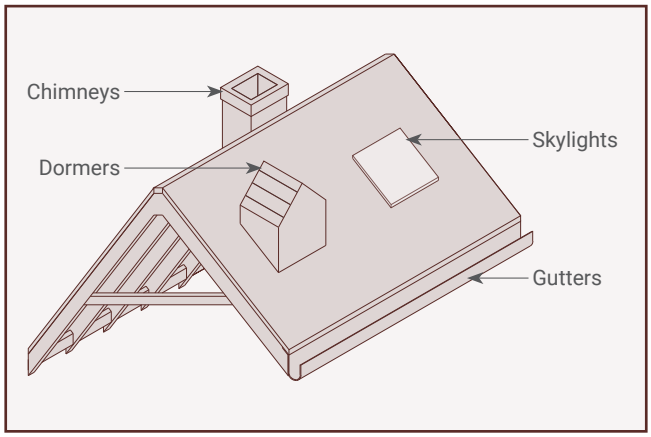
The best first step in planning energy efficiency upgrades is to conduct an energy audit. An energy audit analyzes the building's thermal performance. It identifies if energy loss is occurring and where—which means homeowners can upgrade the priority areas first and can avoid making unnecessary changes to historic materials. Learn more about energy audits and insulation in the National Park Service's online Weatherization guide.

Sustainable roof systems, such as green roofs and cool roofs, can provide energy benefits while having low impact to historic materials. Such roof systems are considered compatible if they are not visible from a public right-of-way. The most important factors when considering a green or cool roof is the increased structural load and potential moisture infiltration. A structural assessment should confirm that the roof structure can adequately support the new roof materials.

ROOF ANATOMY



ROOF FEATURES



Roof Features: Dormers

The form, location, and detail of dormers contributes to the overall architecture design of the building. Dormers can range from simple to highly ornamented features. The rhythm of dormers on a primary facade and the proportion of dormers to the rest of the roof are important visual features for an individual building and for a historic district. In Allentown, slope dormers (separate features set the roof slope) and wall dormers (continuous with the main facade) are both character-defining features of the historic districts. Dormers typically have the same roof materials as the main roof and repeat the trim details or decorative schemes used throughout the building. Dormers should be preserved and restored.

MAINTENANCE RECOMMENDATIONS

3.1.11 Inspect dormer roofs regularly. Water infiltration through dormers can ultimately damage the roof structure and historic features throughout a building. Identify any broken shingles, exposed sheathing or substrate, damaged or missing flashing, or areas of ponding water for repair. Inspections can be conducted from the ground using binoculars if roof access is difficult. Inspect interiors for signs of water infiltration if accessible.

3.1.12 Ensure that flashing remains intact at junctions with the primary roof. Consider adding drip edges at dormer roofs to shed water and protect wood trim.

DESIGN GUIDELINES

3.1.13 Preserve existing dormers in form, materials, and design. Retain the dormer's form and structure, roof shape and pitch, roof and sidewall materials, cladding and ornamentation on the front face, and windows. Retain the historic number and spacing of dormers across a facade or a roof slope. Dormers often reflect the bays or symmetry of a primary facade.

3.1.14 Repair and restore existing dormers whenever possible rather than replace or remove. Repairs may include wood cladding or trim repairs, roof cladding or sheathing repairs, flashing replacement, and reinforcement of interior structural members.

3.1.15 Repair and restore historic dormer windows whenever possible. Refer to Chapter 3.5 Windows for related guidelines for windows.

3.1.16 Replace dormers with in-kind materials if severe deterioration has occurred or the roof structure has been damaged. Consult with a professional structural engineer to determine the necessary extent of repairs or replacement with the goal to limit the amount of historic fabric removed.

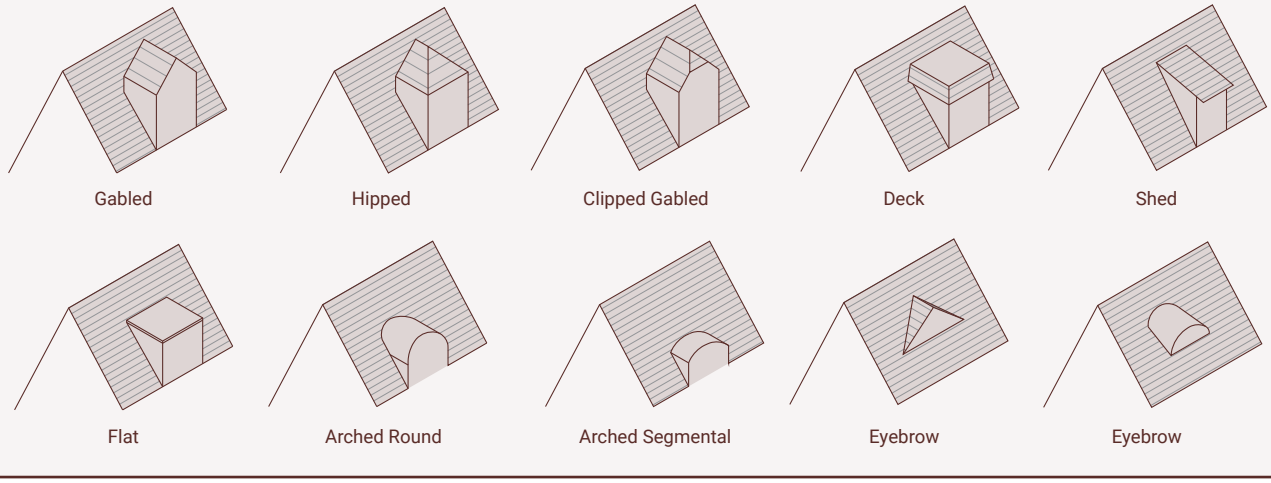
3.1.17 Avoid altering dormer shape or roof pitch. It is not appropriate to enlarge dormers or combine existing dormers into one or more larger dormers.

3.1.18 Avoid removing historic dormers if they are original or compatible with the overall design of the building.

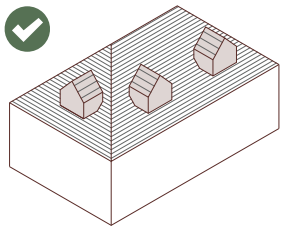
3.1.19 Consider restoration of existing dormers that were inappropriately altered in the past. These altered dormers can detract from a building's historic character, such as those that have had decorative trim removed or were enlarged to dominate the primary facade. Restoration shall be based on documentary evidence like photographs or architectural drawings.

Dormers are integral parts of both a roof and a decorative scheme. Original trim, cladding, windows, and roof materials should be preserved.

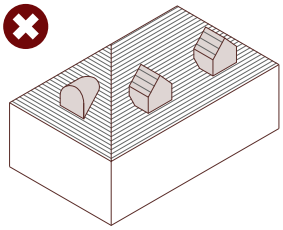
DORMER SHAPES



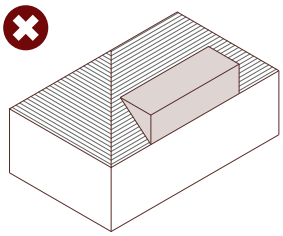
Dormers are important architectural features for individual buildings and the rhythm of the street. Single gable dormers are typically of many Allentown buildings.



Retain, repair, and restore dormers that are proportional to the roof and match the architectural style.



Avoid altering the shape and proportion of an existing dormer to be inconsistent with the architectural style and existing features.



Avoid combining existing dormers into a single larger dormer that is out of scale with the rest of the building. Large single dormers are only appropriate if part of the original building design.

REFER TO CHAPTER 4: GUIDELINES FOR ADDITIONS TO EXISTING BUILDINGS FOR GUIDELINES RELATED TO NEW DORMERS.

Roof Features: Chimneys

Chimneys are distinctive architectural features and contribute to the visual character of the historic districts. Most chimneys are exposed brick masonry, although examples of chimneys that have been painted or coated are found throughout Allentown. The location, size, and appearance of chimneys should be retained, and preserved.

MAINTENANCE RECOMMENDATIONS

3.1.20 Maintain and retain existing chimneys. Inspect chimneys for signs of deterioration: cracks in individual bricks, mortar, or an applied coating; mortar loss and receding joints; spalling masonry or loss of surface layers; and displacement. Inspections can be conducted from the ground using binoculars if roof access is difficult.

3.1.21 Stabilize chimneys if they are leaning or masonry appears displaced. Due to the age of many chimneys, slight leaning may have occurred long ago and is no longer an active condition. Consult a design professional or contractor to evaluate the risk and appropriate intervention. Stabilization can take the form of simple metal bracing that should be concealed from the public right-of-way as much as possible.

DESIGN GUIDELINES

3.1.22 Repair and restore historic chimneys. Repoint mortar joints with a compatible and historically appropriate mortar that matches the original in composition, strength, hardness, and color.

3.1.23 Rebuild chimneys if necessary to address structural concerns. Dissemble the masonry, carefully salvage and store the masonry units, and rebuild to the original profile and dimensions.

3.1.24 Repair and restore existing stucco or cementitious coatings to protect the masonry underneath. Although removal of coatings may be desirable to restore the appearance of the chimney, removal is likely to be costly and potentially harmful to the brick because the coating has adhered to the surface. The brick may be in such a deteriorated state that it cannot be repaired which will require face brick replacement or reconstruction of the chimney.

3.1.25 Retain and repair historic masonry chimney caps and terra cotta chimney pots. Replace in-kind if repair is infeasible. Replacement with a low profile copper chimney cap may also be appropriate.

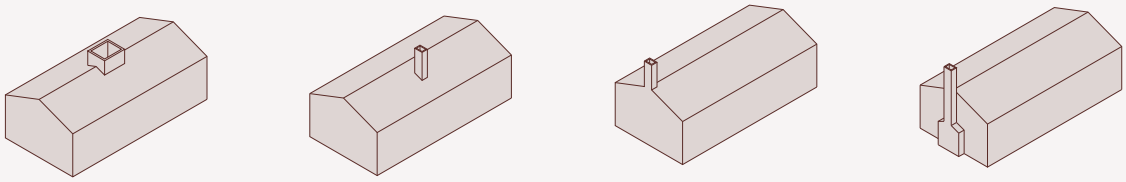
3.1.26 Avoid shortening or removing chimneys. Altering a chimney can detract from the roof appearance and the overall architectural style. Chimneys that are no longer operable should be capped and retained in place, regardless of any interior alterations.

3.1.27 Avoid adding new stucco or cementitious coatings to historically exposed brick masonry.

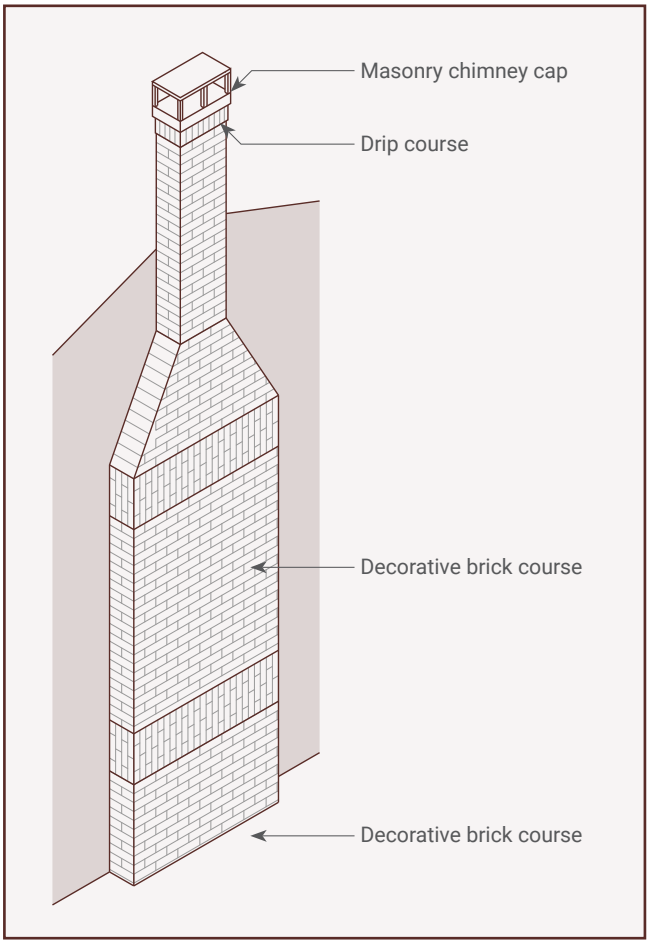
Chimneys with decorative brick coursing are distinctive and should be preserved even when capped and no longer in use.

Chimneys that retain original details and are unified with the architectural style of the building should be preserved.

CHIMNEY SHAPES



TYPICAL CHIMNEY COMPONENTS



Ridge chimneys that are visible at the shared roof ridge of attached rowhouses contribute to the rhythm of the street.

REFER TO CHAPTER 3.3: MASONRY
FOR MORE INFORMATION ABOUT
REPOINTING AND MASONRY COATINGS

Roof Features: Skylights

Skylights are not a common original feature of Allentown's historic buildings. Most skylights are later alterations used to bring light to an occupied upper floor. Adding skylights can be a major change to the appearance of a roof and the overall building. The original roof form and appearance should be preserved over the addition of skylights.

MAINTENANCE RECOMMENDATIONS

3.1.28 Maintain existing skylights to preserve the integrity and performance of the roof. Inspect for water leaks in interior spaces. Inspect and repair skylight glazing, hardware, and flashing where the skylight meets the roof.

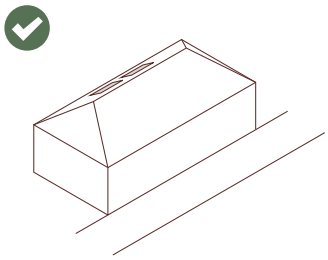
DESIGN GUIDELINES

3.1.29 Repair and restore existing skylights. Seal and waterproof all connections with the surrounding roofs. Copper flashing and fluid-applied membrane base flashing is recommended.

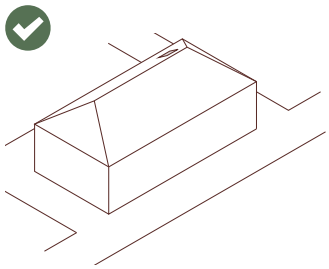
3.1.30 Replace existing skylights if repairs are not feasible and the skylights are no longer watertight. Depending on the appearance and historic nature of the skylight, an in-kind replacement may be appropriate. For non-historic or inappropriate existing skylights, a new design that is compatible with the historic roof should be pursued.

3.1.31 Select appropriate, low profile designs for new skylights or replacement skylights. Skylights should be minimally visible from the public right-of-way and be close to the roof surface. Avoid skylights that read as roof windows and bubble skylights.

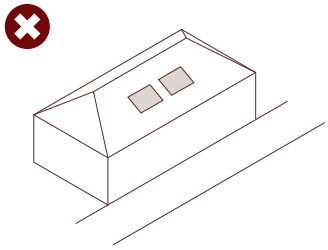
3.1.32 Avoid adding skylights to primary facade roof slopes to protect the historic appearance of the building. Locate skylights on roof slopes that are not visible from the public right-of-way. Avoid installing new skylights where none originally existed.



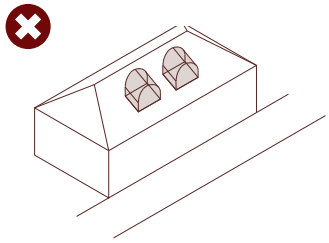
It is best to locate skylights on completely non-visible facades.



If there are no non-visible facades, locate skylights as far from the street as possible.



Avoid locating skylights on primary or highly visible facades.



Bubble skylights or visually obtrusive skylights are not appropriate.

The rear roof slopes of corner buildings are usually visible from the street, which is important to consider when adding a skylight.

Installing a new skylight at a primary facade would interrupt the historic appearance of these attached side gable roofs and would not be appropriate.

Roof Features: Gutters & Downspouts

Gutters and downspouts serve essential functions in preserving historic buildings by collecting and distributing water away from the building. They are integral parts of a roofing systems and should be maintained and designed with the overall roof form and materials in mind. Gutter profiles and shape can indicate a period of construction, especially built-in box gutters which were designed as part of eave moldings in older houses. Maintenance of drainage systems is one of the most important steps in proactively preserving historic buildings.

MAINTENANCE RECOMMENDATIONS

3.1.33 Maintain historic gutters and all components of a drainage system. Inspect and clean gutters, downspouts, scuppers, and all other drainage components regularly to remove debris and keep drainage systems in good working condition.

3.1.34 Ensure proper drainage away from the building at grade level. This can be achieved with inconspicuous leaders/elbow connectors or using stone landings with a channel to direct water. Channels in the sidewalk are also prevalent in Allentown. Excess moisture can cause deterioration of foundations and wall bases.

3.1.35 For connected porch roofs buildings, ensure proper drainage away from neighboring buildings and avoid shedding water onto other buildings or porches.

DESIGN GUIDELINES

3.1.36 Repair and restore gutters whenever possible. Types of repairs include repainting wood or metal surface, installing new fasteners, sealing or soldering cracks and open seams, and relining built-in box gutters with new copper sheet metal.

3.1.37 Replace existing gutters in-kind when replacement is necessary due to severe deterioration. Replicate the original construction method of a historic gutter if feasible.

3.1.38 Replace existing downspouts, scuppers, collection boxes, and other drainage elements in-kind. Appropriate alternates to in-kind replacement are round or rectangular downspouts. Smooth surfaces are encouraged over corrugated metal. In the case of decorative scuppers, replicate the profile and details as closely as possible.

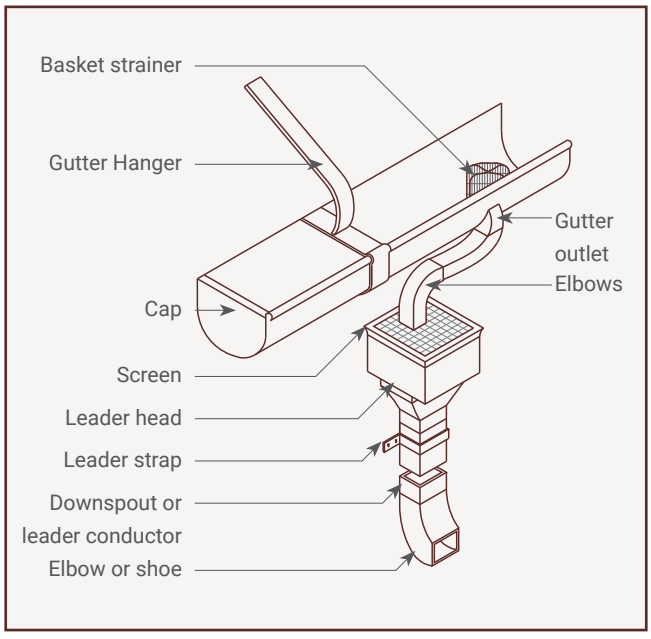
3.1.39 Consider alternate materials for gutters in locations that are difficult to access for maintenance or where original materials have demonstrated a pattern of deterioration over time. A fiberglass gutter is an acceptable replacement material for a wood built-in box gutter if it matches the original in profile, size, appearance, and finish.

3.1.40 Avoid vinyl gutters due to poor durability and non-historic appearance.

3.1.41 Install new downspouts in locations that are sensitive to the architecture and will be minimally visible. Run downspouts at secondary facades and along building or porch corners when possible.

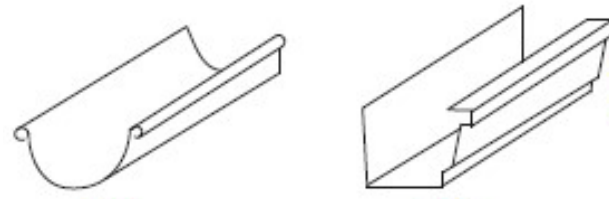
3.1.42 Paint gutters and downspouts to blend in with the building exterior. Matching the existing building trim is usually the most appropriate color selection. Copper and terne-coated stainless steel systems should be left unpainted because they weather naturally and develop a protective patina.

TYPICAL COMPONENTS OF GUTTERS



TYPICAL MATERIALS

The most common historic gutters are built into wood eave moldings or hanging metal gutters. Wood gutters are commonly lined with copper on the interior. Box gutters integrated with eave moldings are a specific design choice to hide the gutter system and demonstrate a historic construction method that should be preserved. By keeping wood surfaces well-painted and maintaining the flashing, wood built-in box gutters can be retained and preserved. Metal gutters are available in copper, galvanized steel, and aluminum. Copper has the best longevity and performance. Molded profile aluminum gutters, also known as K-style gutters, are not recommended because they usually conflict with existing trim profiles, and aluminum is more vulnerable to mechanical damage and galvanic deterioration in proximity with other metals. Vinyl is a not recommended material for cold environments and has a short lifespan. Composite fiberglass gutters are increasingly available and can be made in custom profiles based on the existing gutter but are not recommended because of poor long-term performance. For hanging gutters (attached below the roof eave), half-round gutters are a suitable alternate for a historic building as a low visual impact option. Molded profile gutters are only appropriate as an in-kind replacement of a previously altered gutter.



Half round gutter

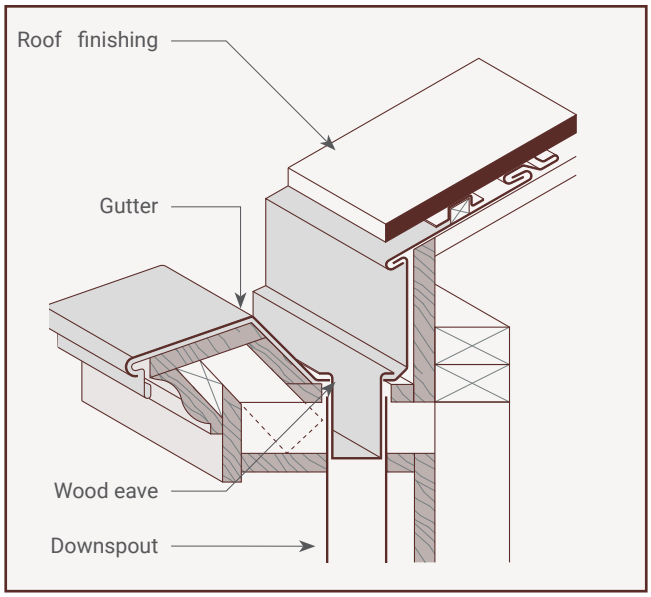
K style gutter

(Courtesy of Artefact Inc.)

INCREASING GUTTER & DOWNSPOUT CAPACITY

The preferred preservation treatments for drainage systems are to repair and replace in-kind. However, existing systems may be undersized for increased amounts of rainfall resulting from climate change, causing overflows and potential damage to historic buildings. In some cases, it may be appropriate to increase the size and capacity of gutters, downspouts, and similar drainage components based on deterioration and a capacity water study.

BUILT-IN GUTTER EXAMPLE



Built-in gutters are built as part of the wooden eave detail of a roof rather than attached to the fascia.

The drainage system shared by these two rowhouses has been painted to blend in with the rest of the building details. Downspouts connect to each building's built-in box gutter.

3.2 WOOD SIDING & TRIM

The exterior wood elements of Allentown's historic properties contribute to the historic districts' architectural character and visual variety. Maintaining and repairing existing materials should always be the first approach. If repair is not possible, in-kind materials should match the old as closely as possible. Exterior wood in Allentown is used for decorative trim, cornices, bay windows, window sills and lintels, and occasionally exterior wall cladding. Historic wood elements should be retained and preserved.

MAINTENANCE RECOMMENDATIONS

3.2.1 Clean exterior surfaces periodically using the gentlest methods possible. Avoid using high pressure power washing and any abrasive cleaning or stripping methods that can damage the historic wood siding and detailing. Conduct cleaning tests in a small, non-visible area of the building to determine the most appropriate method.

3.2.2 Provide proper drainage so that water does not stand on flat, horizontal surfaces or accumulate in decorative features. Inspecting a building after rain is an easy way to detect standing water or drainage blocks.

3.2.3 Keep wood surfaces well-painted. Paint layers help protect wood from moisture, biological growth, and ultraviolet light. Paint removal should be considered only where there is paint surface deterioration and as part of an overall maintenance program which involves repainting or applying other appropriate protective coatings.

DESIGN GUIDELINES

3.2.4 Repair and restore wood siding, cladding, and trim whenever possible. Preserve wood features such as cornices, brackets, window and door moldings, and bay windows. Trim work is an essential part of a building's architectural character. Unique features of a building should be preserved. Repair historic wood features by patching, piecing-in or Dutchman repairs, consolidating or otherwise reinforcing the wood using recognized preservation methods. Repair may also include limited replacement in-kind of extensively deteriorated or missing parts of wood features.

3.2.5 Replace deteriorated materials in-kind if repair is infeasible. New materials should replicate the original as closely as possible in material composition, size, profile, shape, pattern, and appearance. If historic wood siding or trim was an identifiable or visually distinctive species, it is recommended that the same species be used for the replacement.

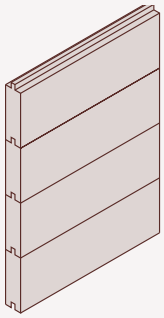
3.2.6 Avoid installation of aluminum, vinyl, or synthetic materials that were unavailable when a building was constructed. Aluminum, vinyl, fiber-cement, or other synthetic cladding are not appropriate for historic properties because of their visual impact and because their installation can cause other deterioration problems. It is not appropriate to cap or cover existing wood with these types of materials. It is not appropriate to remove original wood cladding or trim features and replace them with aluminum, vinyl, fiber-cement, or synthetic materials.

3.2.7 Consider removal of existing aluminum, vinyl, or synthetic cladding over building features. Historic materials sometimes remain intact below this type of cladding and can be restored. In-kind replacement of existing non-historic siding that was in place before the historic district was designated may be allowed in some cases. Consult with Staff and HARB during early project planning stages. Provide photographs or documentation of existing conditions and wall materials below non-historic siding to help determine the appropriate treatment.

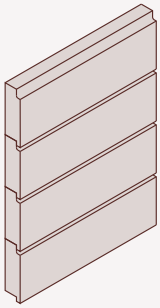
3.2.8 Inspect painted wood thoroughly to determine whether repainting is necessary or if cleaning is all that is required.

3.2.9 Remove peeling, flaking, or failing paint to the next sound layer of paint using the gentlest methods possible to protect the integrity of the historic wood surface. Acceptable methods for paint removal include hand-scraping and hand-sanding, and when necessary, mild chemical strippers or gentle micro-abrasion methods. Sand blasting, high pressure power washing, and mechanical grinders should not be used to remove paint from any surface. Evaluate the condition of the wood surface (also referred to as the substrate) and address any moisture infiltration and deterioration issues before priming and repainting.

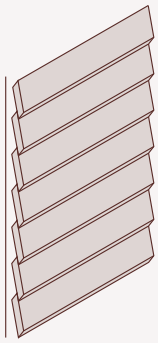
WOOD SIDING TYPES



Flush boards



Drop-lap



Clapboards (weatherboard)

3.2.10 Paint once the surface is clean and dry. Use a paint type that will adhere properly to the wood surface, such as oil-based paint. Marine grade paints are also recommended because they perform well over longer periods of time in wet climates.

3.2.11 Recommendation Only: Repaint with the existing colors, appropriate to the building's period of significance, and compatible with the historic character of the district. Paint color is not reviewed by HARB but it is recommended to select colors sensitive to the historic surroundings.

COMMON ISSUES AND TYPES OF DETERIORATION

Exterior woodwork is particularly affected by environmental influences such as moisture, sunlight, insects, vegetation and biological growth. Regular inspection, maintenance, and minor repairs can slow the rate of deterioration and preserve historic fabric in place.

Signs of wood deterioration include ***paint failure, nail popping, splintering, warping, cracking, rough surfaces, and softening and rotting of the wood to the point it is easily punctured with hand tools***.

Covering wood siding or trim with synthetic siding can trap water and prevent the proper evaporation of moisture, which leads to wood decay and deterioration. While clapboards and trim establish the historic character of a house, aluminum and vinyl siding erode its architectural integrity by encasing parts of the building in an artificial skin. Often important ornamental details are removed because it is easier to install siding on flat surfaces than to work around brackets, cornices, or window and door trim.

Replacement cladding is usually installed for one of two reasons: to mask existing problems or to reduce the maintenance cost of painting. While cladding may cover a problem, it will not rectify it and may even accelerate existing causes of damage. For instance, paint failure and wood rot are often caused by faulty gutters and downspouts. If this drainage system is not repaired before installation, runoff water may get trapped behind the siding, causing even more damage.

Examples of wood clapboard facades.

USEFUL LINKS

NPS, Preservation Brief #10: Exterior Paint Problems on Historic Woodwork

ENERGY EFFICIENCY NOTE

When looking to improve a building's energy efficiency and reduce heating and cooling costs, many people jump to window replacement. However, numerous energy studies show that most energy loss occurs at the roof. Uninsulated walls can also contribute to energy loss, but can lead to moisture problems and deterioration. Insulating wood frame structures alter the water vapor exchange and can trap moisture. Insulating wood frame walls with blown-in insulation—where insulation is injected into the wall cavity through holes in the interior finish—is possible but should be investigated with caution. Exterior insulation finishing systems (EIFS) or impermeable panel systems at exterior walls are not appropriate.

The best first step in planning energy efficiency upgrades is to conduct an energy audit. An energy audit analyzes the building's thermal performance. It identifies if energy loss is occurring and where—which means homeowners can upgrade the priority areas first and can avoid making unnecessary changes to historic materials. Learn more about energy audits and insulation in the National Park Service's online Weatherization guide.

USEFUL LINKS

For additional information about lead paint and historic buildings see:

NPS, Preservation Brief #37: Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing.

PHMC: Guidance for Lead Based Paint Abatement in Historic Preservation Projects.

TYPICAL WOOD ARCHITECTURAL FEATURES

Examples of typical wood architectural features

3.3 MASONRY

Brick and stone masonry are two of the key building materials in Allentown. A building's masonry is an essential component that defines the building envelope. Exterior masonry contributes both visually and functionally to the historic districts' overall feel. Maintaining and repairing existing materials should always be the first approach when planning a project. The variety of materials, colors, and textures of masonry buildings should be preserved as they contribute to the visual distinction of Allentown.

MAINTENANCE RECOMMENDATIONS

3.3.1 Maintain and preserve original exterior masonry walls and details. Clean using the gentlest methods possible to remove dirt, staining, and biological growth that might be obscuring other conditions. Avoid excessive use of water and saturation of masonry walls. Clean masonry only as necessary to inspect conditions or prepare for repair/ restoration work. Sandblasting and high-pressure abrasive methods are never appropriate methods.

DESIGN GUIDELINES

3.3.2 Repair and restore brick masonry whenever possible. Attempt to repair deteriorated or damaged areas prior to replacement. Appropriate repairs include repointing (repairing mortar joints), crack repair, brick stitching, and select area replacement. Avoid removing excess material or a larger area than is required to complete the repair. New bricks should match the existing in color, profile, dimension, surface texture, and composition and physical properties.

3.3.3 Repair and restore existing stone masonry. Attempt to repair deteriorated or damaged areas prior to replacement. Appropriate repairs include repointing, crack repair, Dutchman repairs (in-kind localized patching), and patching with compatible compounds. New masonry unit should match the existing in type of stone, color, profile, dimension, and surface texture.

3.3.4 Repoint brick and stone masonry with a compatible and historically appropriate mortar that matches the original in composition, strength, hardness, and texture. Match new mortar joints to surrounding areas in width, tooling profile, and color. Cut back and repoint mortar joints using hand tools only; mechanical grinders and similar power tools are not recommended as they can lead to excessive damage.

3.3.5 Replace or rebuild exterior masonry walls or features with in-kind materials if repair is not feasible. Replacement masonry units should match the existing in color, profile, dimension, surface texture, and composition and physical properties. Replicate the existing brick bond (how the bricks are laid).

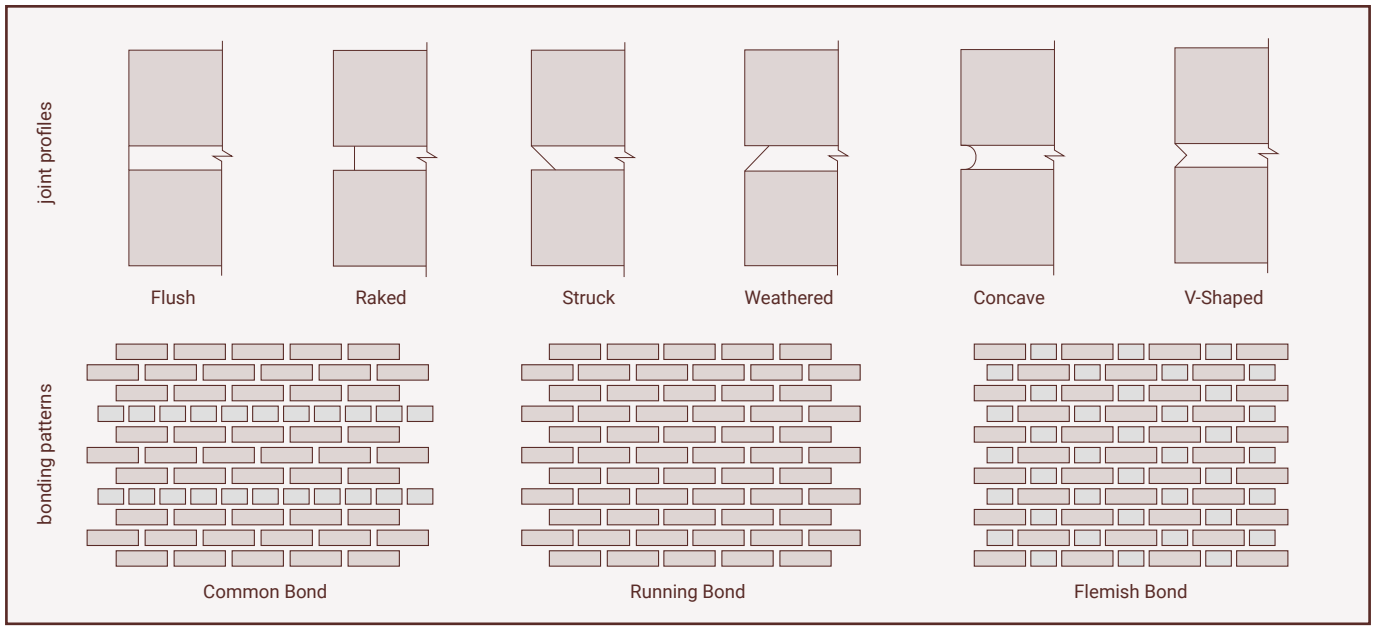
3.3.6 Preserve and restore decorative masonry elements that are important character-defining features, such as brick corbels and patterned brick courses. Avoid altering, concealing or covering, or removing decorative masonry.

3.3.7 Avoid painting, sealing, or coating historically unpainted brick masonry. Adding exterior coatings can trap moisture and cause deterioration of masonry walls. It also detracts from a building's architectural character.

3.3.8 For existing painted or coated exterior walls, maintain and repair the painted surface rather than attempt removal. Removal is not recommended due to the likelihood of damaging the masonry substrate. Avoid removing paint or coatings that are firmly adhered to the masonry. Consider removal of non-historic coatings only if they are demonstrated to be causing or exacerbating other types of deterioration.

Typical brick masonry construction

JOINT PROFILES & BONDING PATTERNS



COMMON ISSUES & TYPES OF DETERIORATION

The use of brick and stone masonry construction is a defining characteristic of Allentown's historic buildings. If properly maintained, these materials can last for centuries. However, deferred maintenance and improper repairs can result in deterioration.

Water infiltration is the most common cause of deterioration in brick and stone. Failure can occur in the masonry units themselves or the mortar that holds masonry in place. Infiltration can be caused by numerous factors: poorly functioning gutters, downspouts, and flashing; ponding water at foundations or projecting ledges; vegetation growing on or near walls; and non-breathable paints, sealants, and veneers.

Water infiltration can cause rising damp and efflorescence. Rising damp is groundwater that is absorbed into the base brick and stone walls through capillary action. Moisture evaporates at exterior and interior surfaces, which can stain the brick. Efflorescence is a white haze caused by dissolved salt migrating through the masonry. When water in the masonry evaporates, a layer of salt is left behind.

Improper past repairs and repointing are other typical causes of deterioration. Historic mortars are a mix of lime, sand, various types of small aggregate, and water. Newer mortar mixes contain Portland cement rather than lime (or in a much higher proportion than lime), resulting in a harder mortar. Lime-based mortars are softer, meaning that they are more pliable and adaptive to temperature-related expansion and contraction, and allow air and vapor transmission, which protects the masonry units. Mortars that are harder than the masonry it surrounds force water and salts to permeate through the masonry rather than mortar, which can lead to spalling and cracking. Damage to masonry units makes exterior walls more vulnerable to water infiltration and creates more costly, time-consuming, and invasive repairs.

Aggressive cleaning methods can also cause deterioration. Harsh chemical cleaners, sandblasting, or high-pressure water or abrasive cleaners erode both the protective surface finish of masonry units and mortar joints, making historic masonry more vulnerable to deterioration and failure.

Past painting or coating of historically unpainted masonry can lead to deterioration, especially where non-breathable sealants were used. Incompatible paints (such as an elastomeric paint) and coatings trap moisture and prevent the natural evaporation of water and salts out of exterior walls.

Efflorescence is a white haze caused by the migration of salts through masonry units.

Mortar is incompatible with historic masonry when it is too hard and causes brick spalling and breakage.

REPAIR AND RESTORATION RECOMMENDATIONS

Repair and restoration of historic masonry can protect a building's structural integrity and its historic integrity. When addressing conditions like efflorescence or spalling face brick, it is critical to address the source of the problem to provide a long-lasting solution, rather than only performing aesthetic repairs. For masonry, this generally means tracing the route of water infiltration and conducting repairs for other building features.

Use the gentlest methods possible to clean exterior masonry walls. Conduct inconspicuous test patches to determine the gentlest and most effective method. Cleaning with low pressure water or misting and soft hand brushes is the most basic method. Pressure is measured in psi (pounds per square inch) and should be below the maximum of 300-400 psi. Care should be taken not to saturate the wall and introduce unnecessary water. Mild and environmentally safe chemical cleaners are another acceptable method. New technologies for low pressure, micro-abrasive cleaning methods have emerged that are gentle enough to remove dirt without compromising surface layers and have been approved for use by the National Park Service.

Painting historically exposed masonry is not advised. Where masonry has been painted, depending on the type of paint used, removal can prove impossible and/or economically infeasible because of the time and material costs required. An additional concern is the condition of the brick masonry once the paint is removed. The brick may be in a deteriorated state that cannot be repaired which will require face brick replacement (replacement of the outermost layer).

Coating historically exposed masonry with stucco or synthetic veneers is also not advised for the same reasons. Many buildings in Allentown had stucco or veneer coatings added over exposed brick long ago. Common repairs are patching and crack repair. The patching material should match or be compatible with the composition of the coating.

In rare cases where application of an exterior product is advisable to protect deteriorating brick, applying a breathable masonry paint is a recommended alternative and has been approved by the National Park Service. A permeable paint, such as a mineral silica type paint, allows the masonry to breathe and for water evaporation to take place. Addition of a coating should be determined with a qualified design professional and contractor. Technical product information and documentation of the poor masonry condition should be provided to Staff and HARB for review.

Knowing the period of construction of a building and the sequence of past repairs can help determine the appropriate mortar. Soft, lime-based mortars are generally the most appropriate for repointing. Any repointing mortar should have little to no Portland cement in the mixture and should be designed for the specific type of historic masonry. Laboratory testing of mortar samples by an architectural conservator can determine the specific mixture and inform the selection of a compatible repointing mortar. Knowing when a building was painted or coated will help determine the type of product that was used, and therefore what treatment method will be most effective.

MORTAR TYPES

Five mortar types, each with a corresponding recommended mix, have been established by the American Society for Testing and Materials (ASTM) to distinguish high strength mortar from soft flexible mortars. Mortar properties are summarized by their strength and proportion (ratio) of cement to lime to sand in the mixture.

Type M: 2,500 psi, 4:1:12
Type S: 1,800 psi, 2:1:8
Type N: 750 psi, 1:1:5
Type O: 350 psi, 1:2:8
Type K: 75 psi, 1:3:10
Type L: low strength, 0:1:3

Soft, high lime content mortars are best for historic properties. Type O is typically specified for historic properties. Mortars can be mixed with pigments or other additives to match historic conditions.

USEFUL LINKS

NPS, Preservation Brief #1: Cleaning and Water-Repellent Treatments for Historic Masonry Buildings

NPS, Preservation Brief #2: Repointing Mortar Joints in Historic Masonry Buildings

NPS, Preservation Tech Notes, Masonry #4: Non-Destructive Evaluation Techniques for Masonry Construction

Masonry Features: Foundations

Foundations are one of the most important features to consider in the preservation of historic building because they maintain the structural integrity of a building. Without proper maintenance, foundations must be repaired or replaced through a labor-intensive process. Historic foundations in Allentown are masonry and concrete and generally concealed below grade. Maintenance and care of foundation materials is critical to preserving historic buildings.

MAINTENANCE GUIDELINES

3.3.9 Protect and maintain historic foundations by designing retaining walls, landscaping, and other site features to keep water from collecting near the foundation walls. Ensure that gutters and downspouts are clear and effectively direct water away from the foundation walls.

3.3.10 For buildings with exterior basement access (such as stairs from the street), maintain bulkheads and covers over stairs to prevent water collecting near the foundation walls. Inspect drainage components at basement entrances and inspect masonry for signs of rising damp, efflorescence, or cracking.

DESIGN GUIDELINES

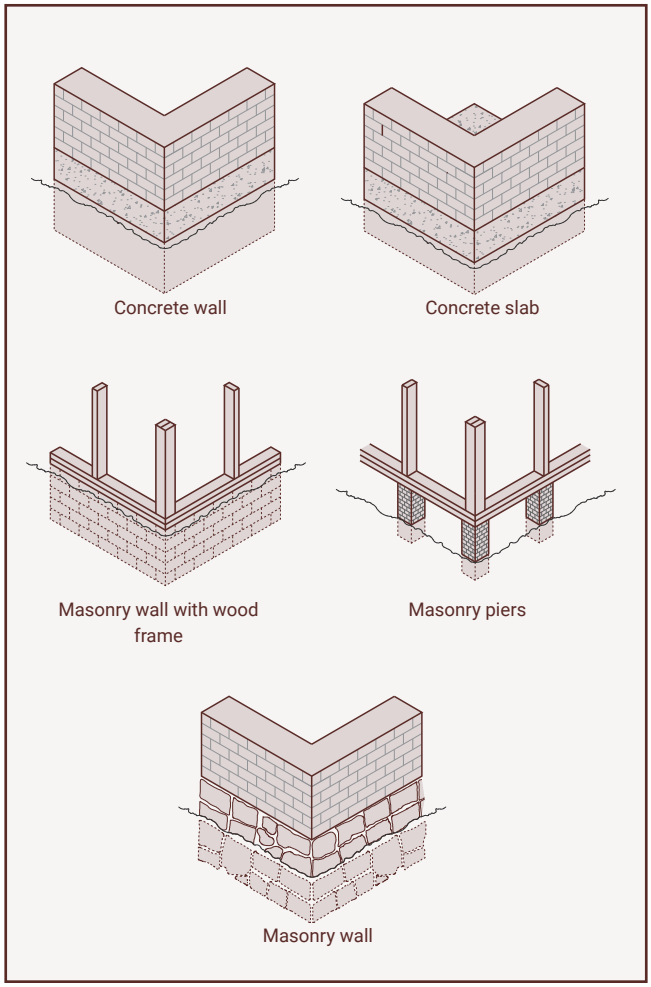
3.3.11 Repair and restore original foundations whenever possible. Avoid applying a coating over an exposed masonry foundation to create a uniform appearance or to hide the deteriorated masonry. Identify and address the source of deterioration as soon as possible.

3.3.12 Repair and restore basement level iron grates and windows. These features are factors in the performance of masonry walls and foundations. These should be as watertight as possible.

3.3.13 Replace historic foundation materials in-kind if the existing masonry is beyond repair and structurally compromised. If the foundation material cannot be repaired or patched, only replace the minimum amount of material needed to make the repair. Alternate materials for structural requirements or improved durability are appropriate.

3.3.14 Avoid increasing a building's height when replacing a foundation wall as it will alter the proportions of the building and impact the surrounding streetscape.

FOUNDATION TYPES



3.4 METALS

Architectural metals were used for many decorative elements during Allentown's major periods of development. Typical historic metals were copper, aluminum, zinc, steel, terneplate, wrought iron, and cast iron. Typical historic techniques were pressed ornament, brake-formed, cast, and wrought or hand-formed. These techniques, details, and textures are visible throughout the historic districts. Common metal features are bay windows, cornices, parapet moldings, and three-dimensional ornament. The guidelines for historic metals apply to all type of features even if they are not explicitly mentioned in this chapter. Historic architectural metals should be preserved and restored.

MAINTENANCE RECOMMENDATIONS

3.4.1 Maintain historic metals by inspecting for dents, cracks, perforations, open seams, corrosion, or rust (a type of corrosion if the metal contains iron).

3.4.2 Maintain historically painted or coated metals by keeping surface well painted and intact.

3.4.3 Clean metals using the gentlest methods possible and using products compatible with the type of metal. Cleaning is only recommended to remove corrosion, soiling, or biological growth prior to repair or repainting. Cleaning is not recommended only for appearance. Avoid harsh abrasive or chemical cleaners as they may cause further deterioration, pitting, or scarring. Natural patinas should be left intact.

DESIGN GUIDELINES

3.4.4 Retain and preserve architectural metals as character-defining features of historic buildings and historic districts. Covering or concealing historic metal features with new materials (such as vinyl), or removing features without replacing them in-kind, is not appropriate because it negatively impacts historic character.

3.4.5 Repair and restore historic metals whenever possible. Repairs include soldering, stitching, sealing, and localized in-kind replacements.

3.4.6 Replace in-kind if metals are severely deteriorated. In-kind replacements should match the original in type of metal, color, finish, texture, profile, and appearance. Replacement copper is an exception for color matching; new copper should not be painted or coated and should weather naturally to develop its natural green-color patina.

3.4.7 If in-kind replacement is not feasible, use an alternative metal that replicates the original in texture, finish, level of detail, and appearance as closely as possible. Vinyl or other synthetic materials are not appropriate as alternative materials, as these substitutes do not sufficiently replicate the appearance of historic metals.

Copper cladding at bay window.

USEFUL LINKS

For more information about the history and preservation of architectural metals, see: Metals in America's Historic Buildings.

REFER TO CHAPTER 3.1: ROOFS FOR MORE GUIDELINES RELATED TO METAL ROOFS

3.5 WINDOWS

Original windows are one of the most important characteristics of historic buildings. The shape, size, and style of windows are distinguishable features of most architectural styles. Windows on primary facades are especially important to retain. Alterations to windows are highly noticeable and can detract from a building's historic character. Windows are often one of the first elements of a historic building to be altered or replaced, yet they can be easily and effectively repaired and retained. These guidelines are based on tiered levels of intervention with the overarching principle that original windows should be retained, repaired, and reused to the greatest extent possible.

MAINTENANCE RECOMMENDATIONS

3.5.1 Retain and preserve historic windows and all associated components whenever possible, including window sash, frame, hardware, lintel, sill, trim, hood, shutters, and glazing (glass). Retain original windows in type, shape, size, operation, and material. Preserve existing glazing including stained glass as a distinctive feature of the window.

3.5.2 Keep historic wood windows in good condition by maintaining sound layers of paint at exterior and interior surfaces. Where wood has been exposed by paint failure, clean with the gentle methods possible and using lead-safe practices prior to repainting. Scrape peeling or flaking paint using hand tools down to the next sound layer of paint and ensure that the surface is clear of dirt and debris before priming and repainting.

3.5.3 Maintain operable windows, which have inherent energy-efficient advantages for air circulation. Remove paint that has sealed a window closed from the exterior and/or interior.

3.5.4 Inspect and test hardware. Ensure sash locks bring sashes together tightly to keep windows watertight.

3.5.5 Consider weatherization improvements that have minimal impact to historic fabric including sealing or recaulking around exterior and interior trim, installing weatherstripping, and installing storm windows (either exterior or interior) to improve energy efficiency.

3.5.6 Install storm windows customized to fit each window frame properly. Wood and aluminum materials are appropriate. The horizontal rails should align with window sashes. Window finishes should match the window trim or blend with the color scheme of the building. Interior storm windows may be recommended for windows with distinctive lites, artistic glazing, or irregular shapes to preserve the exterior appearance.

DESIGN GUIDELINES

3.5.7 Repair, restore, and reuse original windows prior to replacing them. Where one component of a window is deteriorated or broken, repair or replace the individual piece rather than replace the entire window unit. Repair or selectively replace in-kind existing hardware to ensure window operability, including sash cords, weights, and pulleys. Repaired windows have been shown to achieve energy performance levels comparable to replacement windows.

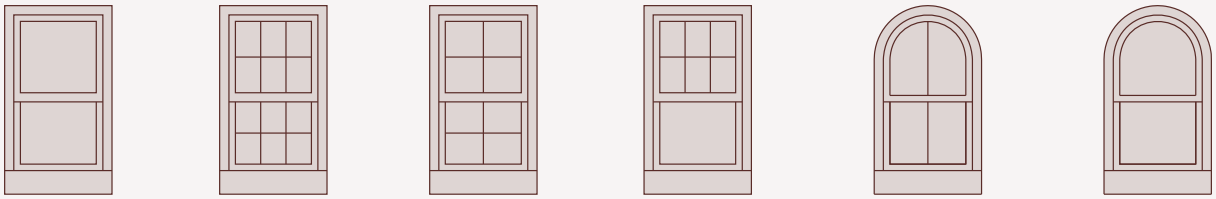
3.5.8 Replace windows in-kind if original windows are deteriorated beyond feasible repair. Wood is the preferred material for most replacement windows. Replacement windows should match the original as closely as possible in material, size, type, operation, profile, and appearance. Replicate the existing dimensions of glazing, configuration of muntins, or unique decorative lites. Match sash and frame thickness and window depths. For existing non-original windows, it is preferred to replace with wood windows rather than new alternate materials.

3.5.9 Replace windows with alternate materials if in-kind replacement is not feasible. Replacement windows must match the original as closely as possible in type, size, operation, profile, appearance, and configuration of lites and muntins. Aluminum-clad wood windows are an appropriate alternate because they can replicate the original appearance and material. Composite wood or fiberglass windows with paintable exterior surfaces can be appropriate alternates if they match the original appearance, but are not recommended from a sustainability perspective. Vinyl windows are not appropriate due to short lifespan, poor performance, and inability to match historic profiles.

3.5.10 Preserve the ratio of window openings to solid wall surfaces. Increasing or reducing openings can impact the proportions of a facade and can look out of place within the

COMMON WINDOW CONFIGURATIONS

**Numbers indicate the lites (or lights) described as "x over x"*



1/1 Window | 6/6 Window | 4/4 Window | 6/1 Window | 2/2 Arch-top window | 1/1 Arch-top window

larger streetscape. Changing the size of openings will also require a Building Permit because it changes the amount of enclosed space on a facade.

3.5.11 Retain the historic pattern of window openings (fenestration pattern), especially on primary facades. Avoid inserting new windows into a facade or infilling existing windows. The position, number, and arrangement of windows defines the rhythm of a facade and can be a character-defining feature of an architectural style or a type of building use. If creating new openings or infilling existing ones is necessary for a project such as an adaptive reuse, locate openings on side or rear facades.

3.5.12 If replacing a single window on a facade, replicate the existing windows of that facade.

3.5.13 Replace single-pane glazing in-kind whenever possible. Install double-glazed windows with simulated divided lights only upon consultation with Staff/HARB. Replicate the dimensions, details, and appearance of the original window. Simulated divided light muntins should be attached to the window exterior, not sandwiched between the panes of glass.

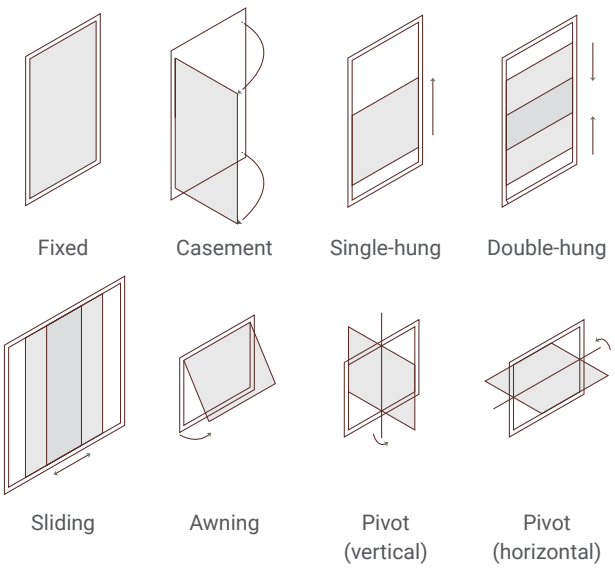
3.5.14 Avoid reflective glazing in restored or new windows. Reflective glazing makes a window's lites and muntins difficult to see and alters the visual impact from the street. This change makes alterations in the historic district more conspicuous. Clear (non-tinted) and non-reflective glazing and low-e coatings are appropriate.

3.5.15 Replace deteriorated window trim or decorative elements only as necessary to match the size, profile, and material of the original elements. For window lintels or hoods that project from the facade plane and are vulnerable to water collection, consider installing of metal drip edges to shed water away from windows. Copper is recommended and should be left to weather naturally; aluminum is acceptable and should be painted to match surrounding materials. Avoid encasing wood sills with metal or vinyl, as this will trap moisture and may cause more damage.

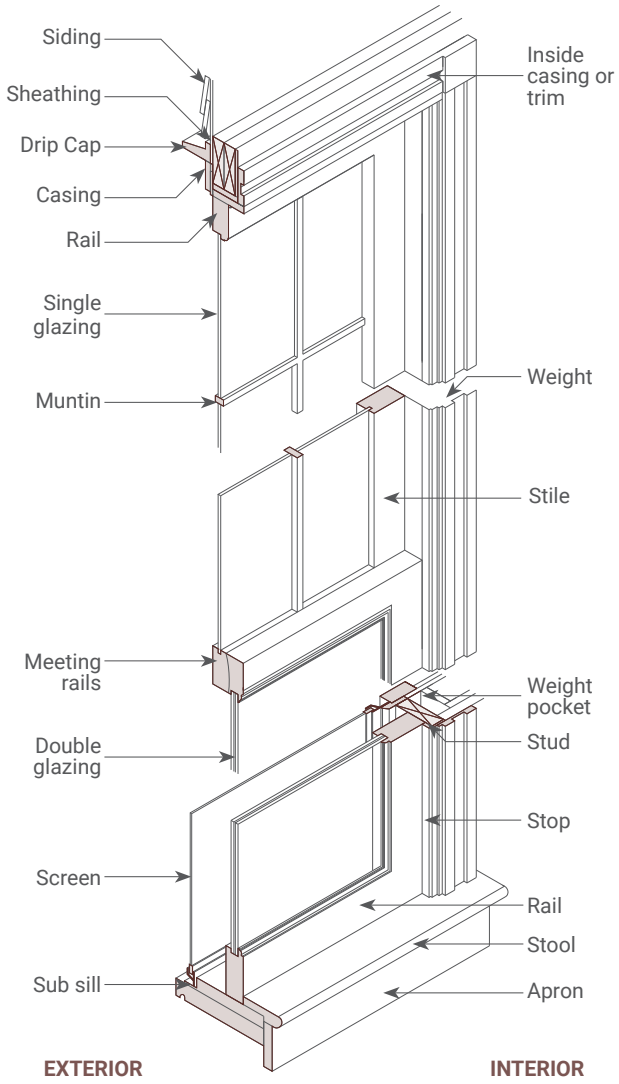
1/1 double-hung wood windows at a bay window.

1 / 1 double hung window example

WINDOW OPERATION TYPES



COMPONENTS OF A TYPICAL DOUBLE-HUNG WINDOW



TYPICAL MATERIALS

The vast majority of historic windows are made of wood. Use of traditional wood for windows is recommended for reasons of historic and material integrity, aesthetics, and durability. Steel windows are common in industrial buildings, so in those cases metal may be appropriate. Despite new technology and product manufacturing, synthetic materials often do not sufficiently resemble original materials, have a short lifespan, and often use less sustainable materials. Well-maintained wood windows can last longer, be repaired, and do not detract from a building's historic character.

REPAIR AND RESTORATION RECOMMENDATIONS

One advantage of historic windows is that they were made as an assembly of individual components; when one component breaks or fails, only that piece needed to be repaired or replaced. This construction extends the life of historic windows and allows original materials to remain in place as long as possible. Small, localized repairs can be more cost-effective than entire replacement, in addition to being preferred from a preservation perspective.

New windows are manufactured as a single complete unit, meaning that once one component is damaged, the entire window must be replaced.

Windows can be repaired and restored even when deterioration appears severe. Repair small cracks, dents, and gouges in wood surfaces with wood filler. Larger areas of deteriorated or rotted wood can be repaired with Dutchman repairs or consolidated with epoxy mixtures. A Dutchman repair is where unsound material is cut out and a new wood piece installed as a replacement. Repair loose glazing by installing new glazing putty and repairing the muntins or sash members that hold glazing lites in place.

Keeping wood windows well painted will extend their lifespan. Prior to repainting, wood windows should be cleaned and flaking paint gently removed to the next sound layer of paint. Preparation of the wood substrate is important so the new paint will adhere properly. Use a paint type that will adhere properly to the wood surface, such as oil-based paint. Marine grade paints are recommended because they perform well in wet coastal climates over long periods of time.

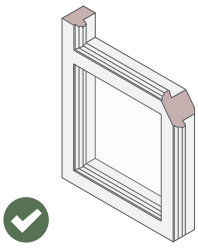
When planning or proposing window replacement, applicants should be prepared to demonstrate that all other repair and restoration options have been studied and that replacement is the only reasonable option. The feasibility of

each of the following levels of repair should be assessed: restoration of the entire existing window through repairs to sashes, sills, and individual components; individual sash replacement; and full replacement of windows with exact in-kind replacements. Applications should demonstrate the type and extent of deterioration; for proposed multiple window replacements, each window should be described.

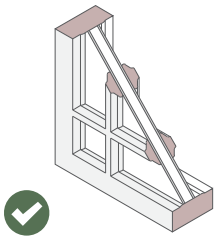
ENERGY EFFICIENCY NOTE

When looking to improve a building's energy efficiency and reduce heating and cooling costs, many people jump to window replacement. However, other building features and systems may be responsible for energy losses. Roof insulation and equipment upgrades are typical priority items. Repair of historic windows and low-impact weatherization can usually achieve the same energy efficiency as a new window.

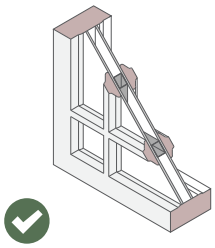
The best first step in planning energy efficiency upgrades is to conduct an energy audit. An energy audit analyzes the building's thermal performance. It identifies if energy loss is occurring and where—which means homeowners can upgrade the priority areas first and can avoid making unnecessary changes to historic materials. Learn more about energy audits and windows in the National Park Service's online Weatherization guide.



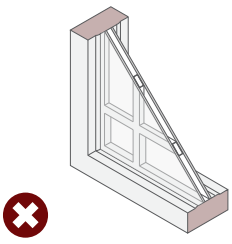
Authentic Divided Lite
Separate pieces of glass glazed between muntin bars.



Simulated Divide Lite
An alternative to mimic the look of authentic divided lites with SDL bars that are permanently adhered to both sides of the glass.



Simulated Divide Lite with Spacer Lite
Paired with SDL bars on the exterior of the glass, a spacer bar is installed between glass.



Grilles-between-the-Glass
Grilles permanently installed between the glass panes. Interior grilles do not convey lite configurations and impact visual character.

WHY PRESERVE HISTORIC WINDOWS?

Historic windows can be repaired and restored in parts, rather than entirely replaced like new windows must, reducing material waste and long-term costs.

Simple repairs of caulking, weatherstripping, and replacing glazing compound can address air transfer between a sash, frame, and wall.

Low-impact alterations like storm windows and interior films are effective improvements for heat gain/loss through glazing. Interior storm windows have less visual impact than exterior.

Preservation conserves the energy already expended to make the windows.

Historic windows are essential aesthetic elements that preserve the appearance, proportion, and material texture of a building.

SUSTAINABILITY NOTE

The challenge of improving the energy efficiency of buildings with single pane windows and doors without affecting the historic appearance of the buildings can be accommodated with exterior storm windows and the application of window film that has no visual impact.

Products on the market include UV protection film and thermal climate control window film that have no visual impact and can improve the window's energy efficiency by reducing the solar heat gain coefficient and U-value-heat loss.

UV coatings help protect the historic fabric of a building including textiles, art, furnishings, as well as people from the damaging effects of UV rays. The film can be applied to the glazing if single pane and can be a laminated inter-layer if using double pane glazing.

Window Features: Shutters

Historic wood shutters were functional window features used to control light and provide protection from the weather. Shutters can be characteristic of certain architectural styles and impact the visual relationship between windows and the rest of a facade. Existing shutters should be retained and preserved.

MAINTENANCE RECOMMENDATIONS

3.5.16 Maintain historic wood shutters by inspecting for peeling paint, wood rot, or damaged hardware. Scrape, prime, and repaint painted wood shutters.

DESIGN GUIDELINES

3.5.17 Repair and restore existing wood shutters whenever possible.

3.5.18 Replace existing shutters in-kind if repair is not feasible. Replacement shutters should be wood or painted composite wood and match the original in size, shape, placement, proportion, and appearance. Avoid vinyl or aluminum shutters as these are not appropriate historic materials.

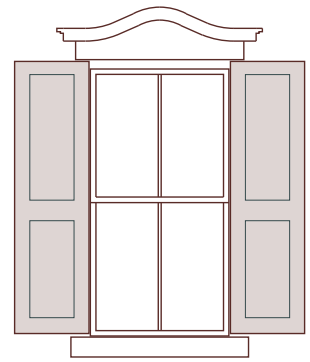
3.5.19 Repair and reuse original hardware, including hinges, shutter dogs (or tie-backs), rings, interior hooks and slide bolts. Replace in-kind if reuse is not possible.

3.5.20 Avoid removing existing shutters without replacement. Where they remain intact, shutters are considered a character-defining feature of the building.

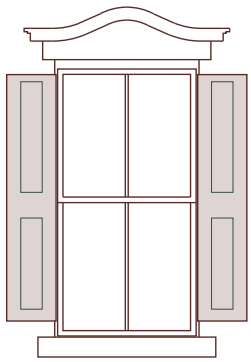
3.5.21 Install new shutters only if shutters existed previously at the building. Historic photographs or shutter hardware remaining at walls or windows can indicate if shutters once existed. New shutters may not be appropriate for every architectural style or type of building.

3.5.22 Match new shutters to the size and shape of the window. Each shutter should be one half of the width of the window, in order to cover the entire window if closed. The shutter shape should match the window (arched, rectangular, etc.)

3.5.23 Hang shutters so that in a closed position over the window the louvers would shed water away from the building. Louvers should point up when the shutters are open and point down when the shutters are closed. This design mimics the original protective function of shutters.



Appropriate sized shutters are one-half the size of the sashes.

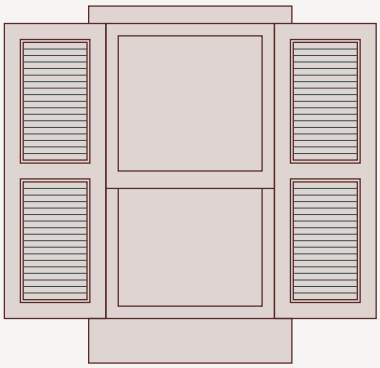


Inappropriate shutters are too narrow to cover the window.

SUSTAINABILITY NOTE

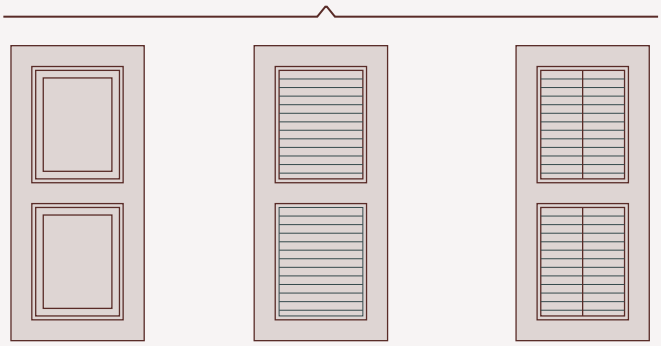
Maintaining existing or replicating previous shutters can provide shading and reduce heat gain or loss. Replacement wood shutters can often be found at material salvage company and are recommended for reuse as a sustainable and appropriate option.

Examples of appropriate paneled wood shutters blinds.



Shutters and blinds should fit over window, and be fastened to window casing, NOT the siding

Common shutters and blinds shapes



Paneled Shutter | Fixed Louvers Blind | Movable Louvers Blind

Example of a construction that incorporates blind and movable louvers shutters into the facade

Examples of appropriate paneled wood shutters / blinds.

USEFUL LINKS

For additional Window resources, refer to:

NPS, Preservation Brief #9 "The Repair of Historic Wooden Windows"

National Trust for Historic Preservation, "Historic Wood Windows"

Preservation Pennsylvania, "Considering the Repair, Retrofit, and Replacement of Historic Windows"

For weatherization guidance, including windows and doors, refer to NPS "Weatherization: Repair and Upgrade Windows and Doors"

3.6 DOORS

The composition of a door and its surrounding trim are significant architectural features. The proportion, shape, and detail of a historic door contributes to the architectural style of the building. Historic doors include front doors, grocer's alley doors, and side and rear doors. The relationship between a primary entry, a primary facade, and the street also contributes to the historic feel of a district. Doors and entrances should be maintained and preserved.

MAINTENANCE RECOMMENDATIONS

3.6.1 Keep historic doors in good condition by maintaining sound layers of paint at exterior and interior surfaces. Historic doors are typically made of wood. Where wood has been exposed by paint failure, clean with the gentlest methods possible prior to repainting. Scrape peeling or flaking paint using hand tools down to the next sound layer of paint and ensure that the surface is clear of dirt and debris before priming and repainting.

3.6.2 Maintain historic doors by keeping hardware in good operation. Damaged or deteriorated hardware can cause doors to become out of plumb with the opening and not operate properly. Individual repairs or in-kind replacement helps maintain historic doors.

3.6.3 Consider weatherization improvements that have minimal impact to historic fabric before considering door replacement. Improvements include installing weatherstripping and installing storm doors. Weatherization and repairs should be attempted first and their performance monitored.

3.6.4 Install exterior storm door with a full-light (full view) appearance to keep the visibility of the original historic door. Storm doors should be finished or painted to blend in with the door trim.

DESIGN GUIDELINES

3.6.5 Repair and restore historic doors whenever possible rather than replace them. Historic doors include front doors, rear doors, and grocer's alley doors. Original materials should not be discarded. If repair and reuse is not possible, salvage may be an option and the existing feature used as a template for replication.

3.6.6 Repair, restore, and reuse existing door frames, jambs, threshold, fixed transoms, and similar components. Existing components are usually historic wood. Replace in-kind if existing materials are severely deteriorated. Replicate the profile and width of door frames, jambs, and transoms in order to preserve the solid-to-void ratio of the entrance.

3.6.7 Repair, restore, and reuse hardware whenever possible. Replace hardware in-kind if necessary. New hardware should match the original hardware as closely as possible if the original hardware remains. If not, hardware that is compatible with the era of construction and style of the building is recommended. Avoid replacing historic hardware with digital locks, combination locks, keypads, or similar technology.

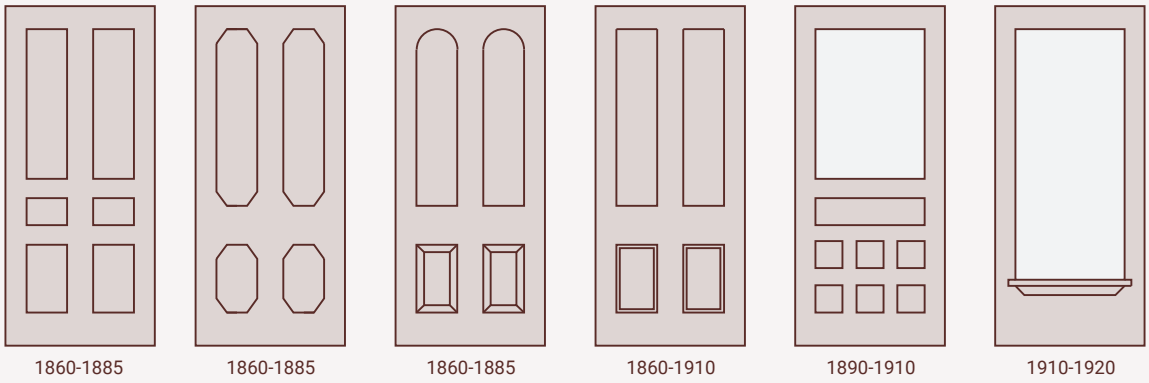
3.6.8 Replace doors in-kind if repair is not feasible. Replacement doors should duplicate the original in material, design, size, profile, and operation. Original doors may be used as a template for replication. Wood is the most appropriate material for residential doors. Paneled wood doors should have the same number, size, and profile of panels as the historic door. If the original design is unknown, the building's style and date of construction should inform the appropriate replacement.

3.6.9 Replace with durable alternate materials if in-kind replacement is not feasible. Composite wood doors and fiberglass doors are acceptable replacements if new doors match the original in size, style, configuration, detail, and appearance. However, these products are not recommended from a sustainability perspective. They have shorter lifespan and deteriorate when exposed to moisture, weathering, and temperature variation. For replacement doors, avoid metal doors (including metal doors that imitate paneled wood), as they do not have the same appearance and texture of historic wood. Avoid pre-hung doors (doors that are purchased already installed in a frame) when replacing a door, because these require the removal of historic fabric and can change the size of the opening.

3.6.10 Preserve the size of the existing door opening. New doors should be custom sized if necessary. Avoid enlarging or filling in original door openings to fit new stock sizes. This

COMMON DOOR STYLES

** Approximate time periods of popularity.*

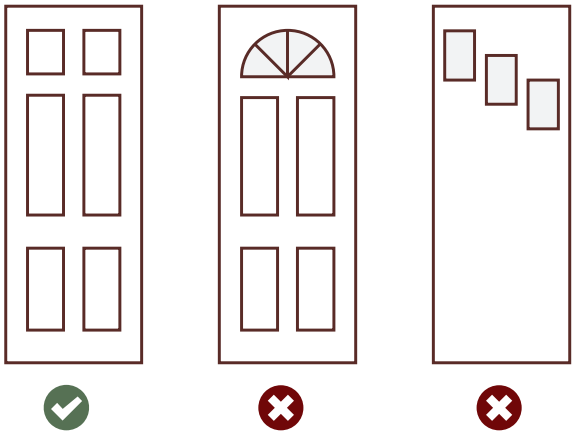


alteration will impact the historic character of the building. This action will also require a Building Permit because it changes the amount of enclosed space on a facade.

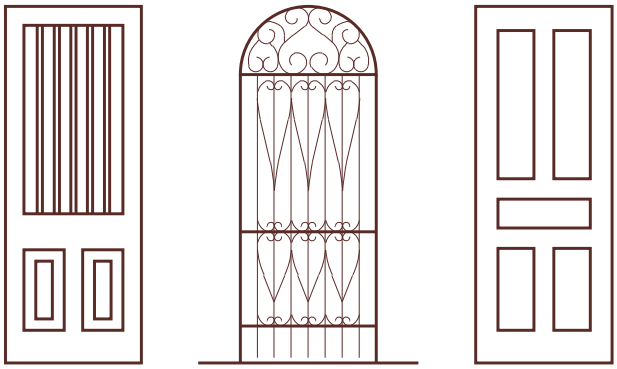
3.6.11 Consider replacement of a previously altered door with a historically appropriate wood door.

3.6.12 Avoid replacing of a historic door solely for the purpose of improving thermal performance. This intervention is not appropriate for historic material. Install weatherproofing or a storm door prior to replacement.

3.6.13 Avoid creating new door openings on the primary facade. New side or rear doors should be minimally visible from the street. The size and location of new openings should be compatible with the rest of the facade. This type of work will also require a Building Permit.

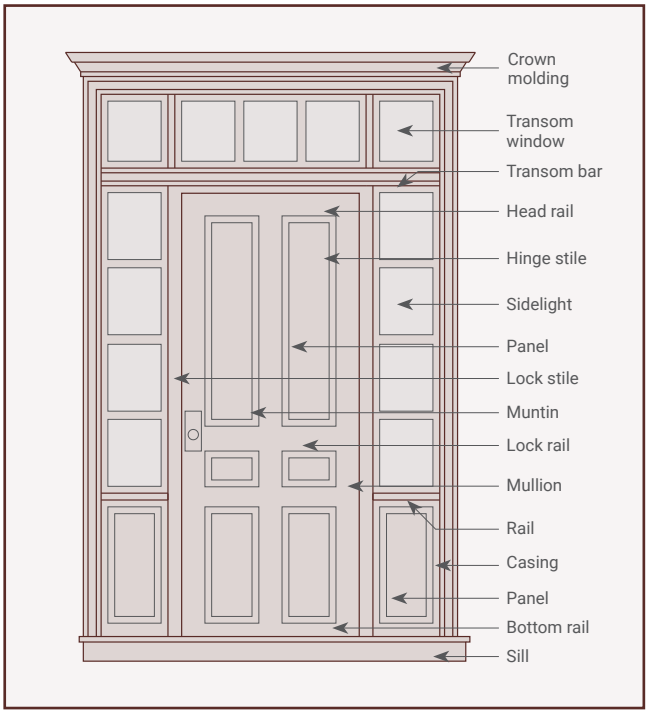


Typical door styles (recommended and not recommended)



Grocer's alley door styles in Allentown

TYPICAL DOOR COMPONENTS



3.7 PORCHES & STEPS

Front porches and entry steps are distinctive characteristics of Allentown's historic architecture and streetscapes and should be retained and preserved. Porches are often continuous across several buildings or a full block. Roofs are often connected, and the design details are repeated to create a cohesive appearance. The prominent porches enhance the wide variety of architectural styles in Allentown's historic districts. The following guidelines apply to all types of front and rear porches, entry steps, rear yard balconies, or decks visible from the public right-of-way.

MAINTENANCE RECOMMENDATIONS

3.7.1 Clean porch roof drainage systems regularly. Ensure that water drains away from the individual building and neighboring buildings, especially if porch roofs are connected across multiple buildings.

3.7.2 Keep wood elements well painted. Paint acts as a protective layer for the wood below and prevents rotting and deterioration.

DESIGN GUIDELINES

3.7.3 Repair and restore existing porches and steps whenever possible. Salvage, repair, and reuse existing components including deck floor boards, railings, balusters, posts, and decorative trim. Repair and restore basement level windows or metal grates that are part of the porch base.

3.7.4 Replace individual deteriorated components in-kind with new materials matching the original in material composition, size, shape, profile, dimension, appearance, and finish. Custom fabrication is encouraged and may be necessary to provide an exact match. Where an exact match of the historic element cannot be found or fabricated, the new element should match the original as closely as possible.

3.7.5 Retain and repair original handrails or railings. Replace in-kind if repair is not feasible. Replacement handrails should match the existing in material, size, and appearance as closely as possible. Installation of handrails where they did not previously exist is generally not recommended due to the visual and physical impact on historic fabric; however, installation of a simple, compatible design may be acceptable for the purpose of safety and ease of access.

3.7.6 Consider restoration of previously altered porches with historically appropriate elements. Consult historic photographs to identify the original appearance. If the building is part of a pair or an attached row that was designed together, consult nearby buildings for examples.

3.7.7 Replace porches only if repair and select replacement is not feasible. A full demolition and rebuild is rarely necessary except in cases of severe deterioration and life safety concerns. Replicate the original design as closely as possible, allowing for structural and code requirements. Install flashing and waterproofing at all connections between the porch and main building.

3.7.8 If in-kind replacement is not feasible, replace with appropriate alternate materials that respect the original appearance and are durable. Composite wood decking is an appropriate alternate for tongue-and-groove wood floors if boards are similar to the original dimensions. Ceramic tile, carpet, or cementitious coatings over wood are not appropriate floor materials. Steel, iron, and aluminum railings are acceptable replacements. Vinyl railings and trim are not appropriate alternate materials for wood elements. Use of dimensional lumber for visible parts of a porch is not appropriate.

3.7.9 Avoid enclosing historically open porches on primary and highly visible facades. Enclosure with glass or screens at rear or non-visible features may be acceptable. Enclosure with walls or opaque materials is not recommended. Avoid removing, altering, or covering historic details.

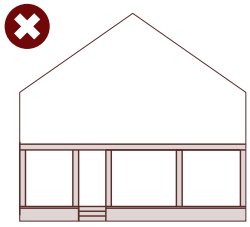
3.7.10 Avoid removing a historic porch roof or full porch. Removal will negatively impact the building's historic character. Consult with Planning Staff and HARB about the reason for removal (i.e. cause of deterioration). A porch that was added after the original construction of building may have gained significance in its own right. Porches can be appropriate for the building as a reflection of its development over time and as an expression of a later architectural style.

TYPICAL MATERIALS

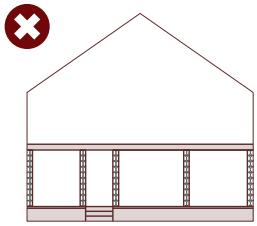
Wood, masonry, and concrete are the typical historic materials for porches. Common historic materials for entry steps include concrete, granite, brick with bluestone landings, and marble.

Many porches in the historic districts have already undergone one or several alterations. These changes may have occurred long before the historic district was designated. Common changes include replacement of turned wood posts for metal posts, capping or removing decorative trim with vinyl, and roof replacements. Although these materials are existing and may have been intact for many decades, it is not desirable to replace them in-kind. From a historic preservation perspective, restoration of the original materials or appearance is preferred.

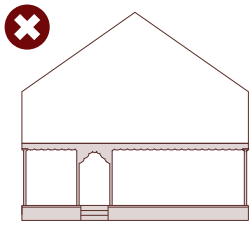
Porches should be restored with in-kind materials and following their original architectural style and proportions



A porch should not be enclosed to generate additional interior space to the original construction



Avoid the use of metal or visibly alternative materials when replacing porch supports or columns



It is not appropriate to change the original architectural style of the porch

"Allentown" porch roof

Continuous front porches

Detailed porch woodwork

3.8 MECHANICAL & UTILITY EQUIPMENT

Preserving the historic appearance of individual buildings and the sense of scale and materials throughout a historic district is a key goal of local designation. Mechanical and utility equipment can be one of the most visually intrusive additions to a historic district; however, modern building systems such as mechanical, electrical, and plumbing provide necessary functions that keep historic properties livable and comfortable. Systems should be installed sensitively.

Advancements in technology and the integration of sustainable design practices have become part of the on-going conversation within the realm of historic preservation. Prompted by the desire to be energy and cost efficient, many property owners are eager to incorporate new heating, cooling and ventilation systems (HVAC) into their existing and historic buildings. Likewise, the need to incorporate communication technologies must be sensitively done to achieve a balance between preservation objectives and modern convenience and functionality.

However, roof- and surface-mounted equipment is a broad category of alteration that can affect the historic integrity of a building. This section addresses mechanical and utility equipment as a subset of that category, understanding that these building systems are desirable or necessary modern conveniences but need to be sensitively incorporated into an existing building. These systems require attachment to historic exteriors and penetration through historic materials. Therefore, they must be evaluated for their cumulative impact on a historic building and its surrounding context.

Care must be taken to avoid the incremental loss of integrity during any systems upgrade on historic properties. A thoughtful approach to the systems upgrade should respectfully retain the historic fabric, consider integration of new systems to be reversible and understand the life-cycle benefit of the upgrade work toward the long-term preservation of the existing building.

The following guidelines are grouped by general system or design concern for clarity. It is understood that mechanical equipment technologies continue to evolve, especially those that strive to improve energy efficiency. Guiding principles of minimal visibility, sensitive screening, limited penetrations, and reversible installation will hold true regardless of the product or system.

Applicants are encouraged to communicate with design professionals, contractors or equipment installers, and City departments when planning and installing a new system if the building is in a historic district. It is possible they are not aware of historic district regulations but should work with homeowners to create an appropriate solution.

HVAC DESIGN GUIDELINES

3.8.1 Limit the number of roof and wall penetrations when designing and installing new HVAC systems. Penetrations, whether located on a roof or exterior wall, increase the risk of water infiltration and damage to the building envelope. Properly flash and waterproof all penetrations.

3.8.2 Place rooftop mechanical units away from the primary facade and views from the public right-of-way. Minimize visibility of the entire system to the greatest extent possible. Conceal units behind existing roof features such as rear roof slopes or chimneys without causing damage to historic fabric. Select small and low-profile units for mechanical equipment that must be placed on the roof, if possible. Keep the height of dunnage beams (to support the mechanical units) low and no more than 8-12 inches above the roof surface.

3.8.3 Avoid altering roof shapes or configurations or slope pitches to accommodate roof-mounted equipment. This includes altering or removing roof features such as chimneys or dormers. Mechanical systems should be designed around the existing roof.

3.8.4 For mini-split or wall-mounted systems, place wall-penetrating units on rear or non-visible facades. Place units at grade adjacent to rear or non-visible facades.

3.8.5 Screen mechanical units at grade with landscaping features or historically appropriate fencing if units cannot be placed out of view from the street.

Install equipment, dunnage, and related mounting systems in the least invasive method feasible so that the alteration is reversible in the future.

ALTERNATIVE HVAC

Alternative heating, cooling and ventilation systems offer modern conveniences and improved comfort. In some cases, these can use solar power to operate, helping to reduce their carbon footprint. Often integrating these newer technologies into existing and historic buildings can be challenging due to low clearances and ceiling heights and the limitations of the existing construction without wall cavities or chases to run ductwork and piping. Following are recommended HVAC systems that can successfully be integrated with limited impact to the historic fabric of existing structures.

» **Ductless heat pump**: also known as mini-split systems, are versatile and efficient cooling and heating systems that can be accommodated within existing building fabric and specifically within historic spaces which may contain low ceiling clearances, little to no space between the exterior wall and the interior finishes as well as decorative ornament and wood paneling. Heat pump systems include small sized condensers that can be remotely located on the exterior, piped to internal units that can stand alone or can be discreetly located and ducted. The exterior units can be mounted on secondary facades or at the ground level, screened with plantings, knee-walls or fencing where appropriate. Heat pumps are powered by electricity (which can be supplied through solar power) making them an environmentally friendly and preferred alternative over fossil fuel powered systems. There are 3 types of heat pumps including air-source, geothermal and a combination thereof. The principles and equipment behind all three are virtually the same, the source of power is what differs.

» **Radiant heating (walls and floors):** this system supply heat directly to the floor or panels in the wall or ceiling transferring heat to the surface. Radiant heat is more efficient that forced-air and baseboard type heating systems because it is spread evenly through the spaces and there are not dead spots or duct losses for air to escape. There are two types of systems, electric and hydronic-liquid based, each having their own advantage. The electric system consists of electric heating cables built into the floor, powered off the electrical grid or through solar power while the hydronic system which pumps hot water through tubing laid in a pattern under the floor powered by a gas or liquid propane-fired boiler. Both systems can be operated from energy efficient power sources with small compact equipment internal to the building. This type of system is laid beneath the floor surface, which requires removal and reinstallation of the flooring in the case of an historic and existing building retrofit.

» **Forced Air & Central Air:** Forced air systems provide heating and central air systems provide cooling. The heating component is powered by a gas or propane fired furnace and the cooling is powered by electricity. The heating and cooling are distributed through a ducted system. Forced air systems require space in the interior for the furnace and space to conceal the ductwork which can be challenging to retrofit in historic and existing buildings. Additionally, the compressor required is located on the exterior of the building, creating a visual impact which can be screened with landscaping, knee-walls or appropriate fencing.

VENTING DESIGN GUIDELINES

New roof penetrations are sometimes necessary for items such as plumbing vents, gas risers, and laundry machine exhausts. Many buildings will already have some penetrations from existing building systems. Active (mechanical) air circulation and venting for interior spaces such as attics may require installation of vents into the roofing and eave assembly; adding vents to allow for passive air circulation (without mechanical air conditioning) can also be an appropriate treatment. These types of vents include ridge vents, soffit vents, gable vents, or turbine vents. For utilities located in a basement, pipes and vents located at grade level may be necessary for functionality. This can result in a group of gooseneck pipes that are incongruous with the streetscape.

3.8.6 Inspect existing roof and wall penetrations to ensure they remain watertight. Repair or replace flashing as necessary. A roof repair or re-roofing project is an ideal time to assess the condition of existing penetrations or to coordinate the installation of new penetrations for flashing and waterproofing to be seamlessly integrated into the roof system.

3.8.7 Limit the number of new penetrations when designing a new or updated system. Penetrations, whether located on a roof or exterior wall, increase the risk of water infiltration and damage to the building envelope. Properly flash and waterproof all new penetrations.

3.8.8 Minimize the visibility of vents and penetrations at primary facades and from the public right-of-way. Locate rooftop vents and penetrations on rear roofs, rear or non-visible roof slopes, or conceal behind chimneys. Minimize the visibility of vents in eave soffits or wall penetrations through sensitive placement, material and color selection, and painting. Place ground-level pipes and vents in rear yards and along non-visible facades.

3.8.9 Consider reusing existing lines and vents when designing or upgrading the system, if there is sufficient capacity. Using existing vents reduces the disturbance of historic materials and avoids unnecessary penetrations in the building envelope.

3.8.10 Select low profile ridge vents when possible to minimize visibility and blend into the surrounding historic fabric. Selection of ridge vents in a color or finish to minimize contrast with the roofing material is encouraged. Avoid tall vents that stick out prominently from the roof surface, such as turbine vents, when possible.

3.8.11 For soffit vents, select narrow vents with paintable surfaces to minimize impact to historic eave appearances. Thin rectangular soffit vents can be continuous or interspersed along an eave as necessary for sufficient ventilation. Round soffit vents are available but are more visually intrusive.

3.8.12 Shield open vents to prevent rainwater from entering the building with appropriate low profile caps or associated fittings.

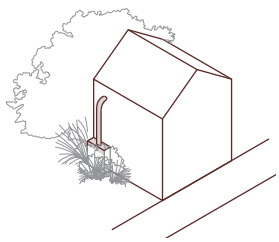
3.8.13 Avoid introducing new ventilation and penetrations to unoccupied spaces without frequent air circulation that were not designed for occupancy (such as below a small turret roof). Ventilation in this case can lead to moisture infiltration, condensation and deterioration of historic materials.

UTILITY METER DESIGN GUIDELINES

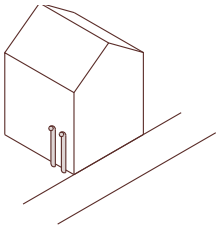
Installation of utility meters does not require Staff or HARB review and all work should be coordinated with the public utility agency. However, utility meters can be highly visible alterations and intrude on the historic character of the historic districts. The following guidelines are recommendations.

3.8.14 Install meters in a location and manner that minimizes visibility from the public right-of-way. In cases where meters cannot be completely obscured from view, set installations back from the street and reduce visibility to the greatest extent possible. Installation of meters on a primary facade is not recommended. Consult with a public utility representative to determine alternative locations for meters. Locate equipment in a basement or on rear facades whenever possible.

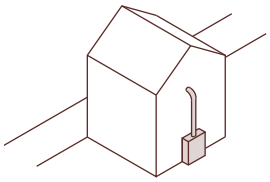
3.8.15 Minimize the visual impact of existing meters through the use of appropriate fencing, screens, or landscaping, provided all other public utility requirements are met. Utility meters are often located at public rights-of-way, so concealment may not be feasible.



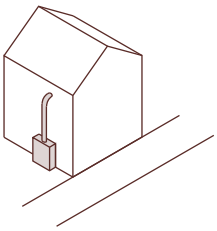
Use greenery and landscape design to mitigate the visibility of the HVAC systems



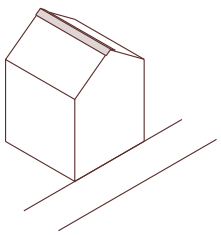
Gooseneck exhaust pipes or similar should not be located on visible facades and roof slopes



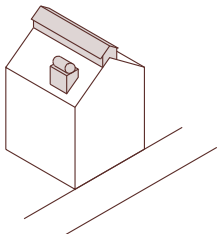
Locate HVAC sytems on the rear facade or where it is not-visible from the street



Avoid locating HVAC systems close to the street or on the main facade



Appropriate ridge vents are low-profile and integrated with roof material and flashing



Prominent ridge vents and large stand-alone vents are not appropriate

3.9 TECHNOLOGY & EQUIPMENT

Roof- and surface-mounted equipment is a broad category of alteration that can affect the historic integrity of a building. This section addresses various types of technological equipment and devices that are attached to a building yet are not part of a building system such as heating or plumbing. The guiding principles of minimal visibility, sensitive screening, limited penetrations, and reversible installation apply regardless of the type of equipment. These guidelines shall apply to all exterior-mounted features beyond the following categories.

SATELLITE DISH DESIGN GUIDELINES

3.9.1 Locate satellite dishes on non-visible facades and rear roof slopes so they are not visible from the public right-of-way. Satellite dishes may be placed in rear yards.

3.9.2 Avoid mounting satellite dishes to historic materials if possible. Install in the least intrusive manner feasible so the alteration may be reversible in the future. At masonry walls, anchor satellite dishes into mortar joints rather than the brick.

WIRING DESIGN GUIDELINES

3.9.3 Install all wiring, conduit, and similar elements in a location and manner that minimizes visibility from the public right-of-way. Installation of conduit and wiring on a primary facade is not appropriate.

3.9.4 Conceal exterior wiring to the greatest extent possible. Run wiring into a building interior and fish into walls rather than string wiring along the exterior walls. When wires are unable to be run inside, they should be run along unobtrusive edges (such as the corner of the building). Avoid running wires diagonally across a facade. If conduit or wiring is paintable, paint to blend in with the background material.

3.9.5 Consolidate telephone, electric, cable, and similar wiring whenever possible and string to a single point on the building.

3.9.6 Remove excess wiring or equipment that is no longer in use to prevent visual clutter and potential safety hazards. Avoid low hanging wires for public safety. Removals should only be conducted by the public utility company or qualified professionals.

3.9.7 Minimize the visual impact of existing meters through the use of appropriate fencing, screens, or landscaping, provided all other public utilities requirements are met.

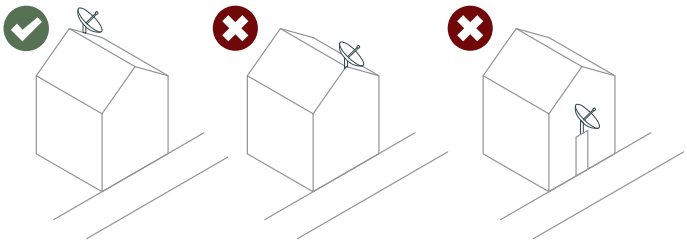
SECURITY & COMMUNICATION DEVICES DESIGN GUIDELINES

3.9.8 Locate exterior-mounted security cameras and similar devices on secondary facades if possible to minimize visibility from the public right-of-way. Although locating such devices at primary entrances may be desirable from a convenience perspective, it is not historically appropriate and can detract from a significant architectural feature.

3.9.9 If placement on a secondary facade is not feasible, place devices in the most concealed location possible. Contemporary technology should be minimally visible from the public right-of-way.

3.9.10 Avoid mounting devices to historic materials if possible. Install in the least intrusive manner feasible so the alteration may be reversed in the future.

3.9.11 Select equipment in a compatible color to match the building's color scheme in order to visually blend the device with the surface upon which it is mounted. Paint devices and conduit to blend in, if the surfaces are paintable.



Locate satellite dishes in non-visible areas of the roof or on rear facades

It is not appropriate to install a satellite dish on the main or front roof line of a property

A satellite dish should not be located on features like doors, windows, cornices, etc.

USEFUL LINKS

See the City's Policy on Placement of Satellite Dishes in Historic Districts.

3.10 SOLAR ENERGY & ENERGY IMPROVEMENTS

This section addresses solar collectors (in other words, solar panels) as most widely available products for renewable building energy. As with other roof- and surface-mounted equipment, the design objectives of minimal visibility, sensitive screening, limited penetrations, and reversible installation apply regardless of the type of equipment. The guidelines are geared towards these systems but are applicable to any new technology. The design principles remain the same for any alternative energy system: balance the functional benefits of a new system with sensitive treatment of the historic building. Creative solutions can almost always be developed to achieve both efficiency and preservation goals.

DESIGN GUIDELINES

3.10.1 Conduct an energy audit to understand the building's thermal performance. This helps the new system perform most efficiently and can identify other minor building repairs to reduce energy loss.

3.10.2 Preserve the historic character of a building when planning a solar or alternative energy system. Avoid removing, covering, or altering significant and character-defining features of a building to accommodate solar energy systems, including roof slopes, dormers, chimneys, windows, and exterior wood and masonry walls.

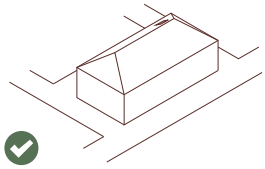
3.10.3 Minimize visibility of solar panels, mounting equipment, and necessary mechanical equipment from the public right-of-way. For pitched roofs, locate solar collectors on rear roof slopes whenever possible. For pitched roofs where all slopes are visible, locate collectors as far back from the street as possible. For flat roofs, locate collectors as far back from the top of street-facing facades as possible.

3.10.4 Attach solar collectors or other equipment in the least invasive method feasible so that the alteration is reversible in the future.

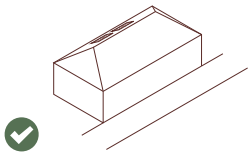
3.10.5 Install solar collectors or equipment as flat as possible to the surface where they are installed. Placement parallel to the roof surface is encouraged. If a horizontal or vertical tilt is required for functionality, adjust the pitch to use the smallest angle possible.

3.10.6 Choose energy systems, mounting equipment, and necessary mechanical equipment in a color compatible with existing roof materials whenever possible and with non-reflective finishes.

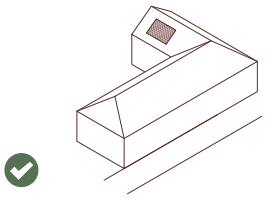
3.10.7 For architecturally integrated solar systems, choose low profile materials in a compatible and non-reflective color and that match historic materials as closely as possible. Such systems include solar shingles or integrated into standing seam metal roofs. Installations on primary facades may be appropriate where metal roofing exists and no visual change occurs; other systems must be evaluated on a base-by-case basis based on visual impact and physical characteristics.



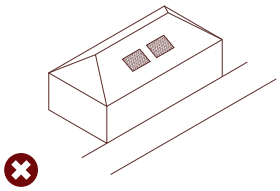
If there is a secondary street, it is possible to locate solar panels on the upper corner of the rear roof slope



Locate solar panels on the rear roof slope



Locate solar panels on the roofs of side facades toward rear of the property



Avoid locating solar panels on the roof facing the street or the main facade

TECHNOLOGY CONSIDERATIONS

Solar energy systems are a rapidly evolving technology. New products are expected to increase in availability and design. It benefits all Allentown residents to evaluate commercial claims about efficiency, conduct performance monitoring, and consider when new systems may be appropriate for use within the historic districts. Applicants are encouraged to bring questions about new products to Staff and the HARB.

3.11 ACCESSORY STRUCTURES

Accessory structures are broadly defined as outbuildings and structures that are located on a property and are subordinate to the main building. Detached garages, carriage houses, and sheds are common types of accessory structures. Appropriate preservation treatments can depend on the history and significance of the existing accessory structure. In general, accessory structures should respect the primacy of the main building. Historic materials, setting, and urban patterns should be preserved.

ACCESSORY VS. EXISTING STRUCTURES

A historic accessory structure is considered to be one that was built at the same time as the main building, as an early addition to the property and built within the property's period of significance, or was functionally related to the building and its reason for significance. Many historic structures tell the story of a property and were designed with the same style, details, and materials as the main building. They can be significant in their original function, siting, and relationship to the street. They can also contribute to the character of a historic district's urban pattern and network of secondary streets and alleys. Historic structures are contributing features of a historic property and a historic district, and they should be preserved with the same care as the main building.

Other existing structures were constructed much later or replaced an original structure. An accessory structure is considered "not historic" when it does not relate to the building's significance or does not contribute to the character of the historic district. Existing structures may have been significantly altered over time, and even if they were original, they no longer retain historic integrity. Just because a structure already exists in the historic district does not mean it is appropriate or should be emulated in future work. Greater flexibility for alterations may be appropriate in some cases. These categories of structure can tolerate a higher degree of intervention since they have little to no historic fabric to be impacted. However, proposed changes can still impact the surrounding historic district.

MAINTENANCE RECOMMENDATIONS

3.11.1 Preserve and retain accessory structures in their original location, materials, scale, design, and materials. Conduct periodic inspections of roofs, drainage systems, and exterior envelopes as would be done for a main building.

DESIGN GUIDELINES

3.11.2 Repair and restore existing materials and building features. Attempt to repair and reuse existing materials before considering removal and replacement. Notable features include original doors (in their appearance, type of operation, and materials), roof shape, and exterior envelope materials.

3.11.3 Replace deteriorated materials or features in-kind, if repair is not feasible. Replacements should match the original in material, profile, size, dimension, texture, and appearance.

3.11.4 If in-kind replacement is not feasible, alternate materials may be appropriate if the replacements match the original in size, profile, dimension, texture, and appearance as closely as possible.

3.11.5 Consider restoration of original features or reversal of inappropriate past changes at historic accessory structures. Restoration should be based on historic documentation or physical evidence of the original.

3.11.6 Preserve the original function and use of accessory structures whenever possible. Rehabilitation or conversation for a new use may be appropriate in some cases, if the conversion does not result in visible or substantial changes. Such projects must also comply with all zoning requirements and municipal codes.

3.11.7 Retain existing height and massing of the structure. Avoid altering the overall proportions of the building. Minimize any enlargement of, or addition to, accessory structures. Accessory structures should remain subordinate to the main building. Minimize visibility of the addition from the street. Enlargements and additions should be compatible with the existing in massing, scale, proportion, rhythm, and materials.

3.11.8 Avoid adding features or details that never existed on structures. It is not appropriate to alter an accessory structure just to match the main building if it did not historically match; this action may convey a false sense of the property's historical development.

3.11.9 Avoid moving or relocating historic accessory structures to new areas of a property. Avoid altering a structure's spatial relationship to the main building, other site features, or the street.

3.11.10 Where existing accessory structures are not original to the property, are not considered an addition that has gained significance in its own right, or have been altered to such a degree that they no longer retain historic integrity, more flexibility in alteration design and material may be appropriate. Alterations should respect the main building in architectural style, proportions, and appearance.

3.11.11 Avoid demolition of accessory structures. Demolition of existing accessory structures should only be considered for non-historic structures that do not contribute to the historic character of the building or district, or that detract from this historic character. Non-historic status and appropriateness of demolition must be determined by the HARB during the application process.

Accessory structures along an alley

Example of an accessory structure with the same roof type as the main building and distinctive highly-visible doors.

Accessory structure with distinctive architectural features

REFER TO CHAPTER 5: GUIDELINES FOR NEW CONSTRUCTION FOR NEW ACCESSORY STRUCTURES.

3.12 FENCES & STREETSCAPE FEATURES

Fences can contribute to the visual character of the streetscape, especially when they are located in front of primary and highly visible facades. Wood and wrought iron are the most common historic materials. Historic fences should be preserved and treated as character-defining features of the individual building and surrounding historic district. Fences, historic and new, should not detract from the architectural character of the building or of the streetscape in the historic district. Other outdoor features should also minimize impacts to the streetscape.

DESIGN GUIDELINES

3.12.1 Repair and restore existing historic fences whenever possible. Preserve all fence components include vertical balusters; horizontal members including fence caps/top rails, intermediate, and base rails; stone curbs; and intermediate and end posts. Repair may also include localized in-kind replacement of severely deteriorated or missing components.

3.12.2 Replace historic fences in kind if repair is not feasible. New fences should match the original as closely as possible in materials, profile, appearance, and height. The proportion of fence components relative to each other and the transparency of the fence should be replicated. Avoid reducing the visibility of a historic building through the fence or infilling sections with opaque materials.

3.12.3 If in-kind replacement is not possible, alternative replacement designs and materials may be acceptable. Alternatives should match the original in size, profile, transparency, and exterior finish as closely as possible.

3.12.4 For new fences at primary or highly visible facades, select designs that complement the architectural style of the building. Appropriate fence types include picket, capped picket, and spindle. Spindle fences may be wood or metal (wrought iron is the most historically appropriate metal; steel or painted aluminum may be considered as well). Ornate metal balusters with twists, scrollwork, or cast iron details are only appropriate if such designs are original to the building. Simple and discreet designs are preferred when the original fence appearance is unknown.

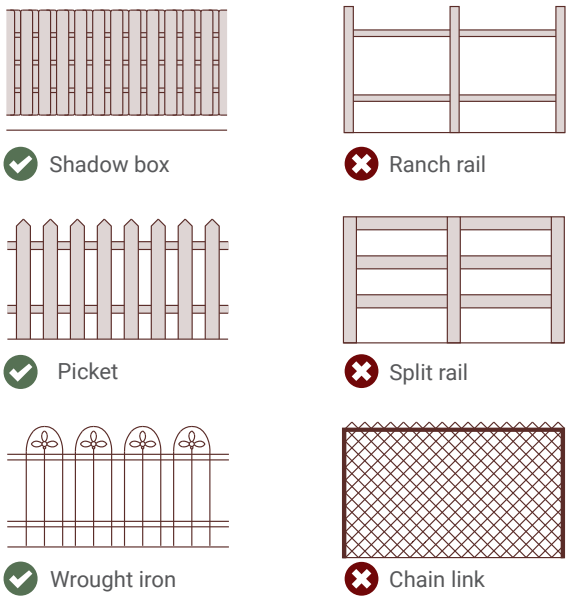
3.12.5 For new privacy fences or screening for mechanical equipment, select simple designs that respect the primacy of the historic building. Allow for transparency whenever possible and minimize the amount of opaque areas. Appropriate fence types include capped flat board, lattice, and flat board with lattice panels. Wood is the most appropriate material.

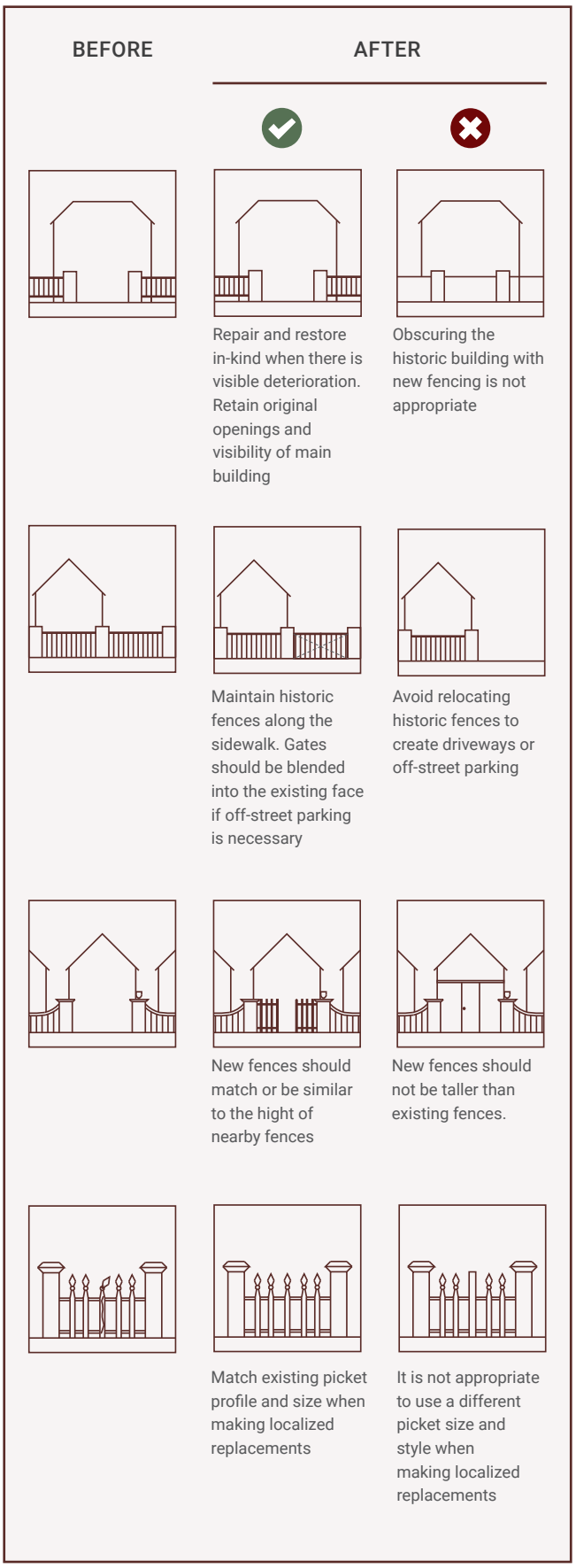
3.12.6 Avoid chain-link fences, PVC (vinyl or plastic) fences, split-rail or ranch-rail fences, shaped metal rod fences from modern stock profiles, or similar non-historic alternate materials and styles.

3.12.7 Match the height of new fences to the height of nearby fences. Primary facade fences should be low and should not obscure the view of the building. Avoid excessive height that negatively impacts the pedestrian experience on the sidewalk and is out of proportion with the rest of the neighborhood.

3.12.8 For non-original or previously-altered fences, consider restoring the original fence appearance (if documented) or replacement with a simple appropriate design. In-kind replacement of non-historic vinyl fences is not encouraged.

3.12.9 Avoid removing historic fences unnecessarily to create driveways, off-street parking, site improvements, or similar. This alteration impacts rhythm and visual continuity of the streetscape.





APPLICATION RECOMMENDATION

Define the goals of the fence in the application: is it a decorative fence at the primary facade or a privacy or screening fence? Clearly show its proposed location and its potential visibility from the street. Fences at primary facades and along sidewalks have different review considerations from side or rear yard fences.

RETAINING WALL GUIDELINES

3.12.10 Repair and restore historic masonry retaining walls. Repointing with a compatible mortar is usually the first repair step. Preserve the existing height and appearance.

3.12.11 Replace historic masonry retaining walls in-kind. New masonry should match the original as closely as possible in material, size, dimension, color, profile, and surface texture. Replacement or rebuilt walls should match the original height, dimensions, bonding or coursing pattern, and appearance.

3.12.12 Construct new retaining walls that are visible from a public right-of-way with masonry materials that are compatible in size, color, and appearance to the historic building and the surrounding streetscape. Simple constructions are the most appropriate.

3.12.13 *Recommendation Only*: The HARB does not review landscaping work. However, maintaining lawns or planted areas is encouraged, especially when front yards and consistent setbacks are part of a streetscape pattern. Keeping landscaped areas well maintained and well drained also protects the base of buildings from moisture and plant growth.

WINDOW BOXES & PLANTER GUIDELINES

3.12.14 Attach window boxes in such a manner that does not damage historic materials or obscure architectural features. Window boxes attached to masonry walls should be anchored into mortar joints, not the masonry units.

3.12.15 Consider maintenance impacts when adding new window boxes. Although they can enhance the visual character of a building and are an individual expression, window boxes have the potential to trap moisture near historic masonry walls if improperly designed. Monitor for consistently damp areas, ponding water below window boxes, and efflorescence; remove window boxes if necessary.

3.12.16 Match window boxes' width to the width of the window opening. Window boxes should be scaled to the proportions and size of the windows.

3.12.17 Paint window boxes to match the building's trim, windows, or wall materials; black is also usually appropriate. Simple and discreet designs are appropriate and should not detract from the building's

3.12.18 Retain and repair existing permanent planters. Permanent planters must not encroach on the public right-of-way. Constructing new permanent planters at primary facades is generally not appropriate. Moveable planters are appropriate because they are not attached to, and therefore do not damage, historic materials and because they are considered temporary features.

SITE LIGHTING GUIDELINES

3.12.19 Retain and preserve historic lighting fixtures. Repair, restore, and reuse historic fixtures whenever possible, as these contribute to the historic character of the building. Keeping historic fixtures in original location is the most appropriate. If they cannot be retained in place, relocate fixtures to allow for reuse.

3.12.20 Replace in-kind if historic fixtures are severely deteriorated and cannot be repaired. New fixtures should match the original as closely as possible in size, style, material, finish, and appearance.

3.12.21 If in-kind replacement is not feasible or new fixtures are being installed, select new fixtures that are compatible with the scale and style of the building and its primary facade components (usually windows and doors). Small, simple, and discreet designs are generally the most appropriate.

3.12.22 Attach all fixtures in such a manner that does not damage historic materials or obscure architectural features. Fixtures attached to masonry walls should be anchored into mortar joints, not the masonry units.

3.12.23 Conceal conduit and wiring to the greatest extent possible and paint any visible writing to match the background material. Exposed conduit at primary facades is not appropriate.

3.12.24 Avoid installing floodlights and spotlights. They are not appropriate on primary or highly visible facades. They are not recommended for rear facades because they can be disruptive to neighboring buildings. Exceptions may be made on a case by case basis where security is necessary.

This example shows an appropriate approach for lighting replacement that mirrors the building's architectural style and its construction period.

Lights that match the historical period of the building are appropriate for main facades.

Avoid installing lights that are out-of-date with the architectural style of the construction

3.13 COMMERCIAL STOREFRONTS

Commercial storefronts are an important part of the mixed-use character of Allentown's historic districts. Although the districts are primarily residential, scattered commercial storefronts were historically incorporated in the ground floor of buildings and add a dynamic element to the streetscape. Storefronts are likely to have been altered over time, perhaps several times, while the upper stories of the historic building usually retain more historic materials. Each building will have specific considerations based on the changes that have occurred and what remains intact. The overarching design objectives are to preserve remaining historic storefronts, to restore inappropriately altered storefronts, and to design compatible new storefronts.

DESIGN GUIDELINES

3.13.1 Preserve existing features of historic ground floor storefronts and primary facades. Avoid removing, destroying, or obscuring the typical storefront features that are character-defining features. The retention and appearance of these features, as well as the dominant scale and massing of buildings, should guide alterations.

3.13.2 Preserve the historic pattern of the storefront and facade, such as the location of the entrance, the size and number of display windows, configuration of display windows and transoms, and recessed entrances.

3.13.3 Repair and restore historic storefront materials and features whenever possible.

3.13.4 Replace in-kind any materials, features, or components of storefronts that are irreparably damaged or missing. In-kind replacements should match the original in material, size, profile, and appearance.

3.13.5 Consider removing non-historic alterations that are not consistent with the original design of the storefront and overall architectural style. Consult available information such as historic photographs to inform the restoration of a facade.

3.13.6 Retain elements of the historic storefront that may be uncovered during the course of a project. Parts of a historic storefront may remain intact underneath current materials (such as metal transom panels or wall veneers), and should be retained, restored, and incorporated into the new storefront design whenever possible. Hidden facade elements can be identified by looking closely at deteriorated areas, by temporarily removing small areas of exterior material, or be exposed during construction. Contact Staff if new conditions are discovered and document new information in photographs.

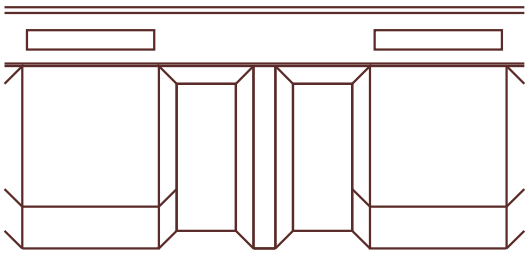
3.13.7 Retain, repair, and restore storefront transom windows. Transom windows—the upper portion of traditional storefronts—are important character-defining features and are often modified. They contribute to visual unity across a block face and allow more daylight to the interior. Transom windows should not be removed, covered, or enclosed. Retain historic glass or pattern of lites within the transoms.

3.13.8 Consider restoring transom windows if the original windows are no longer extant. Reference historic photographs or other available resources, if possible, when designing or replacing transom windows. Where possible, retain the dimensions of the historic transoms.

3.13.9 Where a historic storefront no longer exists, greater flexibility in design and materials is possible. An alternative design that is a contemporary interpretation of the historic storefront may be considered. A new storefront should be compatible with the historic building and the streetscape. Simple designs that respond to the rhythm and proportion of the building facade and/or interpret visible patterns on the block are usually the most appropriate. Consider referencing the surrounding context and related architectural style of the building with regards to proportion, placement, and scale.

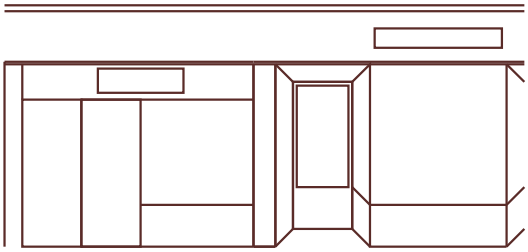
3.13.10 If historic materials no longer exist but the appearance of the historic storefront is documented in photographs or drawings, consider reconstruction or honoring its proportions and configuration in the new design. It is not required to recreate the storefront exactly. Reconstruction is an option, if there is enough evidence, or the historic appearance can inspire the new design.

TYPICAL STOREFRONT COMPOSITION



Storefronts should maintain their original layout and existing facade components and materials

Wood storefront with recessed entrance and transom windows



It is not appropriate to disrupt the facade with alternative proportions or materials that don't match cohesively with the rest of the property.

Commercial Storefronts Features: Signage

Signage is an important and often necessary aspect of commercial activity within historic districts. Individual creativity and expression are encouraged and well-designed signs can enhance the visual interest of a streetscape. In a historic district, signs should respect the architectural character of both the individual building and the rest of the block. Signs in historic districts should reflect the high quality materials and architectural styles of the surrounding buildings. All signage must also comply with the Zoning Ordinance.

DESIGN GUIDELINES

3.13.11 Repair and restore original or historic signage whenever possible. Replace in-kind if materials are severely deteriorated. It is rare that original or historic signage remains intact within the historic districts today, but any example should be preserved.

3.13.12 Locate new signs in historically appropriate locations, such as the sign band directly below a cornice or the ends of a facade at the second story.

3.13.13 Reuse existing hardware, supports, and brackets if possible to reduce the number of new holes created in exterior walls. Patch and repair holes or similar damage caused by previous signs installations.

3.13.14 Attach signs in a method that does not damage historic materials. For signs attached to a masonry facade, anchors should be placed in mortar joints, not in the masonry unit. Installations should be reversible and should only require minor repairs or patches if removed in the future.

3.13.15 Scale signs to be compatible with the proportions and scale of the storefront and building. Compatible proportions should minimize the visual impact of the sign when looking at the building or streetscape. Small signs are usually the most appropriate. The size of signs and lettering should prioritize pedestrians rather than vehicles. Text heights between 6 and 12 inches is generally recommended.

3.13.16 For wall or projecting signs, use simple shapes and profiles such as ovals and rectangles. Shaped signs that relate to the business use may be appropriate on a case-by-case basis but are usually not recommended.

3.13.17 For projecting signs, use brackets that are simple in design and profile. Single rods and scrollwork are both historically appropriate. Metal brackets with black painted or coated finishes are the most appropriate and minimize the visual impact to the building and street.

3.13.18 For window signs (surface-wvapplied or painted), maintain the transparency of the window by using lettering and/or logos without a solid background. High transparency lettering and window-applied signage helps to minimize the visual impact to the building and street. Solid backgrounds are not encouraged but are not prohibited. An advantage of window signs is that they are easily reversible and do not damage historic materials.

3.13.19 Design signs to complement the architectural character of the building and the surrounding historic districts. Individual expression and creativity are encouraged while respecting the primary of historic character. Simple fonts are recommended and both serif or sans serif fonts can be appropriate. Use colors that promote legibility and complement the building's existing color scheme; muted tones, colors found in nature, white, and black are generally appropriate. Avoid excessively ornate fonts, a mix of many different fonts, and bright, neon, or high-contrast color schemes.

3.13.20 Coordinate the fonts and color palettes used if multiple signs are proposed for an individual building.

3.13.21 Use high-quality and durable materials. Wood was the most common material historically for signs, especially projecting and hanging signs, and is appropriate. Metal brackets and hardware are appropriate. Metal lettering and signs, pigmented glass, and painted lettering are also appropriate. Box signs are not recommended, and internally-illuminated box signs are not permitted by the Zoning Ordinance. Avoid vinyl and plastic lettering and signs.

3.13.22 Comply with all Zoning Ordinance requirements including those related to number, size, and location of signs.

3.13.23 Avoid covering or obscuring architecturally significant or distinctive features. Removing or destroying historic elements for the purpose of installing a sign is not appropriate.

AWNINGS GUIDELINES

3.13.24 Avoid installing new awnings above storefronts where none currently exists and where none existed historically. New awnings (or similar canopies or projecting structures) are not appropriate because they obscure historic materials and alter the visual character of the street.

3.13.25 Replicate an original awning based on documentary evidence may be approved by the HARB on a case-by-case basis.

3.13.26 For existing awnings, repair and replace in-kind. Awnings may also be removed. Awnings should not exceed the width of the storefront or entrances.

LIGHTING GUIDELINES

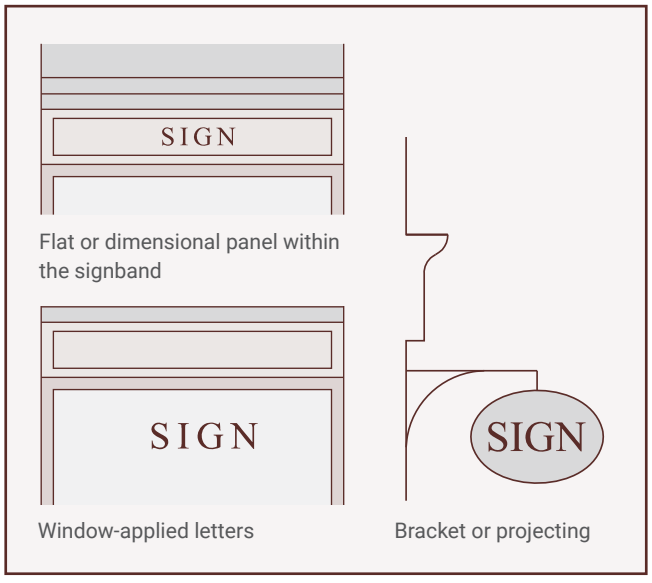
3.13.27 Use sign illumination and lights that are simple and complement the historic building and district. Simple gooseneck lights mounted above the sign are recommended as historically appropriate shape and profile.

3.13.28 Direct lighting toward the sign and avoid excessive illumination of areas outside of the sign. Uplighting is not appropriate.

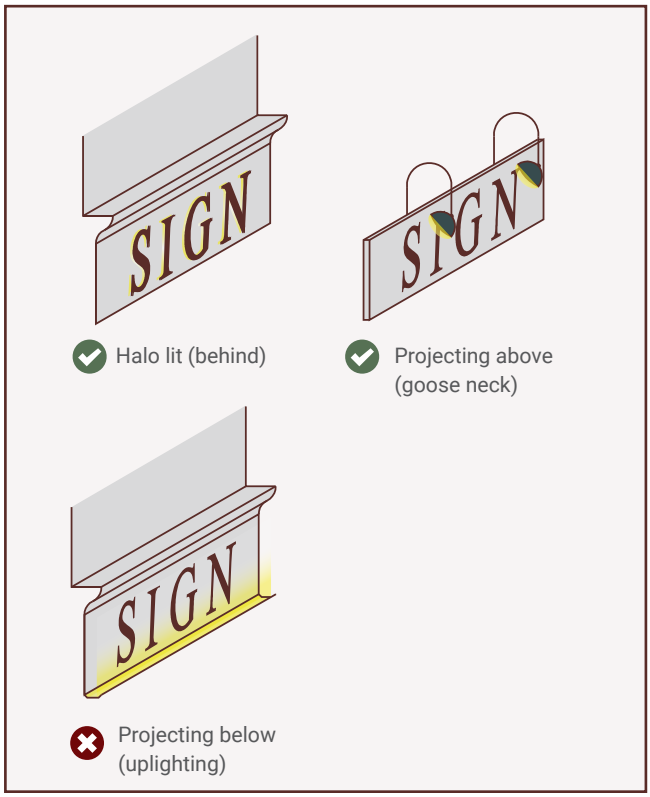
3.13.29 Conceal wiring, conduits, and similar equipment. Paint any elements that cannot be concealed to blend in with background materials.

3.13.30 Attach light fixtures that are not integrated into the sign in a method that does not damage historic materials or features.

SIGNAGE TYPES



SIGNAGE LIGHTING



HARB REVIEW

The HARB does not regulate the content of a sign -in other words what the sign says. Rather, the HARB regulates how the content is presented. They are responsible for evaluating how a sign's appearance may visually impact the historic building and the surrounding blocks of the historic district.

The HARB also does not regulate the use of a building. Use(s) must comply with the city's Zoning Ordinance.

USEFUL LINKS

NPS, Preservation Brief #11 Rehabilitating Historic Storefronts

City of Allentown Zoning Ordinance

3.14 ACCESSIBILITY & CODE REQUIRED WORK

The types of change proposed to bring historic buildings into compliance with egress or accessibility codes often overlap. Therefore, this chapter addresses both categories of work and their common guiding principles. This chapter begins with guidelines that are generally applicable, whether a project is being undertaken for emergency egress and/or accessibility improvements, and whether the proposed work is required for code compliance or undertaken voluntarily. The chapter is then divided into work categories to provide specific recommendations where applicable. The overarching design objective for these improvements is to provide safe, respectful, and equal access in historic buildings.

Sensitively altering historic buildings so that they are physically accessible to all is a desirable goal. Often alterations to original materials are required to create barrier-free access. Barrier-free access can be required from a life safety/emergency egress perspective and a universal accessibility perspective. Exterior ramps, lifts, landscape work and site regrading, and entrances changes are common solutions.

There is no one solution for incorporating barrier-free access in historic buildings. Staff and the HARB can assist property owners in developing appropriate solutions or alternatives. An appropriate solution can almost always be devised that achieves a project's needs while minimizing impacts to the historic building. Cost, technical feasibility, and integrity of historic fabric will be considered by HARB in evaluating options.

PROJECT PLANNING GUIDELINES

3.14.1 Define the projects goals. Define the project parameters that are required to achieve building code and accessibility code compliance. Understanding the goals and requirements will help applicants, Staff, and the HARB evaluate appropriateness.

3.14.2 Conduct an assessment of the building in order to determine code deficiencies and to establish a hierarchy of historic fabric. This hierarchy should distinguish historic fabric or spaces that are priorities for preservation, fabric that can tolerate minor alteration, and areas of opportunity for major interventions. This type of assessment is typically performed by an architect or other professional consultant.

DESIGN GUIDELINES

3.14.3 Identify character-defining features and original materials so that work will not result in their damage or loss. Retain historic materials, building elements, and features whenever possible.

3.14.4 Design and construct modifications in such a manner that they do not destroy, remove, or obscure (within reason) historic materials. Consider provisions for reversibility so that modifications can be easily removed without damaging historic fabric in the future.

3.14.5 If an addition to a building is planned, consider incorporating work into areas of new construction rather than areas with historic materials.

3.14.6 Select exterior finishes that match the historic building or are visually compatible, or paint when possible without causing damage to the underlying material.

3.14.7 Document historic and existing materials in the area of proposed work prior to construction in photographs and/or drawings. Submit documentation to Staff to include in the property file.

3.14.8 If adding handrails to historic properties becomes necessary in order to address accessibility and life safety issues, design simple handrails that do not detract from historic railings and so they do not detract from the character-defining features of the property. Simple wood or metal railings are appropriate options.

ACCESSIBILITY GUIDELINES

The Americans With Disabilities Act is a civil rights law enacted in 1990 prohibiting discrimination against persons with disabilities and ensuring equal opportunity for them in public accommodations, commercial facilities, transportation, employment, and government services. The United States Access Board is responsible for developing and updating the ADA guidelines that State building codes enforce; the current publication is the 2010 ADA Standards

for Accessible Design. Pennsylvania's statewide Uniform Construction Code also adopts the International Building Code Accessibility Requirements.

To the fullest extent possible, property owners should comply with federal, state, and local provisions while preserving the integrity of the character-defining features of their buildings and sites. Accessibility criteria for existing buildings are addressed in the 2010 ADA Standards for Accessible Design and the Pennsylvania Existing Building Code. There is additional flexibility for designated historic buildings. Where compliance with requirements for accessible entrances, circulation, or building features would significantly alter historic fabric or negatively impact the significance for which the building is designated, alternatives can be designed and permitted. Proposed repairs, alterations, additions, or changes in occupancy require a full review of accessibility requirements and options to establish technical feasibility. The objective shall always be to increase accessibility and barrier-free circulation wherever possible. Exterior ramps and lifts to provide building access are among the most common and most visible alterations for historic buildings.

3.14.9 Provide access through a primary entrance whenever feasible. As often as possible, the accessible route should be the circulation route used by the general public.

3.14.10 Retain original and historic doors, locations and proportion of door openings, and hardware whenever possible. If removal of doors becomes necessary, retain frames and jambs in place. Significant permanent changes to original doors, porticos, or stairs at a primary entrance are not recommended.

3.14.11 If use of the primary entrance is not feasible, provide alternatives to develop at least one accessible entrance on a secondary facade, located close to the primary entrance.

3.14.12 Avoid rear or service entrances as the only accessible means of access.

3.14.13 For accessible entrances not at the primary entrance, provide directional signage that complies with all regulations while being minimally visually intrusive.

3.14.14 Design alterations, modifications, and new entrances to be compatible with the building's architectural style and materials, and that is visually cohesive.

3.14.15 Provide compliant thresholds, hardware, and similar details that are compatible with the historic building in appearance and finish whenever possible, or are simple and visually cohesive. Modify existing door sills or thresholds to accommodate ground level entry if ramps and/or lifts are provided at the building interior.

3.14.16 Modify sidewalk or walkway elevations a few inches, where possible to provide an accessible entry and meet all code requirements at ground level entrances.

EMERGENCY REPAIR GUIDELINES

Emergency repairs can be considered a type of code-required work. Emergency repairs are defined as repairs that are time sensitive for the continued habitation of a building or the health and safety of its occupants, as determined by the City's Building Inspector or code official. An expedited review process can address immediate corrective work, but a Certificate of Appropriateness application and HARB review is still required.

If emergency repairs are required, contact Staff and provide information about the conditions and/or the official inspection report. An on-site emergency review of the property will be conducted by the City's Building Inspector and Staff and HARB members or city staff requested by Staff. This review will result in an approved prescribed scope of work limited to correcting the emergency conditions and complying with health and safety codes. With this approval, the Building Inspector may issue a building permit without first obtaining a Certificate of Appropriateness issued by the City Council. Following this meeting, an application for the proposed work must be submitted to Staff for HARB review and documentation in the property file.

3.14.17 Use temporary protections or stabilization measures to comply with requirements and protect remaining historic materials. Temporary or short-term protections can address immediate concerns and allow more time to plan and execute appropriate repairs and restorations.

3.14.18 To the greatest extent possible, emergency repairs should retain, salvage, repair, restore, and reuse historic materials and features.

3.14.19 Replace in-kind whenever possible. Replacement with alternate materials should follow the recommendations contained in these Guidelines.

MEANS OF EGRESS GUIDELINES

Historic buildings are subject to comply with Chapter 12 of the Pennsylvania Existing Building Code, which is based on the International Existing Building Code (IEBC). The IEBC allows flexibility for existing buildings because it is not always possible to achieve code compliance within an existing building. It allows for the reuse and adaptation of existing building while balancing improvements. Projects that exceed a certain amount of change may trigger a requirement to comply with the current codes.

Egress requirements are calculated by a building's maximum number of occupants (occupant load) and its use (such as residential, business, or educational). The number of entrances and exits impacts the number of occupants allowed. Minimum requirements differ according to use.

This type of work is especially relevant for adaptive reuse projects and converting single-family residences into multi-unit residences. The objective of code-required work shall always be to ensure that all life safety, emergency access and exit, and means of egress requirements are met while minimizing impacts to historic fabric and the visual character of the surrounding historic district.

3.14.20 Locate fire escapes, secondary egress stairs, and similar additions on non-visible facades whenever possible.

3.14.21 Minimize visibility of fire escapes, egress stairs, and life safety modifications from the street if a non-visible location cannot be determined.

3.14.22 Incorporate secondary means of egress in a manner that minimizes impacts to the historic building and materials.

3.14.23 Keep egress features and additions to the minimum functional size.

3.14.24 Paint or treat materials as a means of protecting the material below (such as wood or metal) and to be visually compatible with the building. Paint colors are recommended to match the exterior wall.

APPLICATION CHECKLIST

» Color photographs of the location(s) where work is proposed and the condition of existing material(s).

» Scaled architectural drawings or sketches of the proposed solution(s), including plans and elevations.

» Clear definition of the project goals and assessment of code deficiencies or constraints. This type of assessment is typically performed by an architect, contractor, or other professional consultant, but a consultant is not required.

» Reference code sections.

» If work is proposed because of a Building violation or citation, submit a copy of the violation notice with the application. Staff can correspond with other city agencies. This helps the HARB understand the proposed work.

» Technical specifications of proposed products (such as a lift or handrail) indicating dimensions, appearance, materials, and color. Product specifications and catalogue cut sheets can usually be downloaded from the manufacturer's website.

USEFUL LINKS

For additional information on addressing accessibility requirements for historic buildings, see NPS Preservation Brief #32 "Making Historic Properties Accessible."

For information about Allentown building permits and codes, refer to the City of Allentown Bureau of Building Standards and Safety and Office of Building Permits and Inspections websites.

3.15 DEMOLITION

Demolition of a historic building is an irreversible alteration and a detrimental loss to Allentown's architectural heritage. Demolition of existing historic buildings or historic accessory buildings for the sole purpose of redeveloping the property with new construction is never appropriate. Demolition is never encouraged and can almost always be avoided through restoration, rehabilitation, and adaptive reuse. The objective of demolition review is to explore alternatives to demolition and ensure that due diligence has been conducted.

DESIGN GUIDELINES

3.15.1 Pursue alternatives to demolition before proposing demolition. Applicants are encouraged to work with Staff and the HARB on developing alternative solutions. Possible alternatives include preservation, restoration, adaptive reuse, relocation, or transfer to a new owner willing to rehabilitate the building.

3.15.2 Evaluate the significance of the building and its contribution to the historic district. Determine if the building has individual architectural, cultural, or social significance or is associated with significant people or events. It is recommended to reference the National Register of Historic Places' criteria for significance. Determine its contribution to the historic district. Buildings that are eligible or listed in the National Register and/or are significant features of the historic district should be preserved.

3.15.3 Determine if the building retains historic integrity. Evaluate the cumulative impact of past alterations. Buildings that have been altered to such an extent that they no longer convey their significance or contribute to historic district may have more flexibility in review.

3.15.4 Evaluate the impacts of the proposed demolition on the historic district. Evaluate the impacts to the adjacent buildings, the immediate surroundings, and the historic district as a whole.

3.15.5 Provide documentation that the feasibility of rehabilitation has been sufficiently investigated and alternatives to demolition have been explored. Documentation may include feasibility studies, professional conditions assessments, structural report by a licensed engineer, cost estimates, or similar due diligence. Documentation can be provided in written descriptions, photographs, drawings, and financial data.

3.15.6 Provide documentation that transfer of the building to a new owner was attempted and demonstrate efforts to find a buyer willing to retain and rehabilitate the building.

3.15.7 Consider architectural, structural, and economic feasibility factors. Demolition is not appropriate if due diligence demonstrates that there is an economically viable use, even if that use is not the "highest and best" use.

3.15.8 If demolition is proposed because the City's Building Inspector has declared a clear and present danger, provide official documentation with the application. The Building Inspector may determine that a building is in a state of collapse or has deteriorated to such a point that it is a public safety concern. This finding should be supported by documentation from a licensed structural engineer.

3.15.9 Avoid demolition by neglect through regular maintenance, repair, and restoration. Severe deterioration and poor condition that is the result of neglect can be considered a self-created hardship and is not an appropriate justification for demolition.

3.15.10 Consider the factor of compatibility within the historic district. Buildings were constructed after the district's period of significance or are intrusive to historic patterns of material, design, scale, proportion, and massing may be reviewed with greater flexibility.

3.15.11 For accessory structures, determine if the structure contributes to the historic character of the building or block. Consider the relationship and historical connection of the accessory structure to the primary building. Demolition of existing accessory structures can be considered appropriate for non-historic structures that do not contribute to the historic character of the building or district or that detract from this historic

character. Non-historic or non-contributing status must be determined by Staff or the HARB.

3.15.12 For accessory structures, consider the structure's spatial relationship to primary streets, secondary streets, and alleys, and its overall visibility within the district. Structures located on primary streets will have greater visibility within the district. Demolition of structures located only on secondary streets and alleys may be appropriate because of its reduced visual impact, but must also be evaluated for contributing character.

3.15.13 Evaluate the potential impacts and appropriateness of proposed demolition first, regardless of proposed future development. It is appropriate that the HARB evaluate proposed demolition as a stand-alone project because the proposed plans for new construction may change. After the HARB has evaluated significance, integrity, and potential impacts, they may consider the contribution or impact of proposed future development to the historic district. New construction is subject to Chapter 5: Guidelines for New Construction.

3.15.14 If demolition is pursued, salvage building features and historic materials that are suitable for reuse. Architectural salvage is a responsible environmental practice and is encouraged so that historic materials could be reused at other historic buildings. Demolition work must comply with all applicable codes and health and safety regulations.

3.15.15 If demolition is pursued, document the building thoroughly prior to demolition. Photographs and measured drawings (plans, elevations, sections, and details of unique features) or similar documentation should be submitted to Staff for inclusion in the property file.

HARB REVIEW

Demolition of a building or structure within the local historic districts requires a Certificate of Appropriateness and a Demolition Permit. The Certificate of Appropriateness must be issued by the City Council based on the HARB's review and recommendation. The Demolition Permit application process is regulated by the Bureau of Building Standards & Safety. A Demolition Permit cannot be issued without an approved Certificate of Appropriateness.

Proposed demolitions must be reviewed by the HARB. Applications must include relevant and specific information about the historic building or structure, the existing conditions, investigative assessments, the reason for the proposed demolition, and information about future use of the property. Support materials are critical for the HARB to make an informed determination of appropriateness. Due diligence must clearly demonstrate that rehabilitation is not feasible, and therefore demolition is the only feasible option.

The HARB may determine that the applicant has conducted sufficient due diligence and submitted substantial proof that demolition is the only feasible action. They may determine that the applicant has made reasonable efforts to analyze alternatives to demolition and has presented those alternatives to the HARB with accompanying due diligence. In making a recommendation to the City Council, the HARB may include conditions of approval.

DEMOLITION APPLICATION CHECKLIST

» Color photographs of all facades of the building, detailed conditions, and immediate surroundings. A key plan or map showing the photograph locations is recommended.

» Site plan / property map.

» Description of the building to be demolished, including age and historic designation status.

» Description of the reason for proposing demolition.

» If applicable, official City of Allentown Building Inspector report or documentation declaring a clear and present danger at the property.

» Documentation of evaluation of alternatives to demolition (including but not limited to feasibility studies, condition assessment, professional reports, and cost estimates).

» Documentation of efforts to transfer the building to an owner willing to rehabilitate the building (including but not limited to evidence the property was offered for sale, the price(s), the period of time it was offered, and how the property was advertised).

» Description of proposed redevelopment. Architectural drawings or depictions of proposed work are encouraged as supplementary information but will not be the subject of the formal review. Proposed redevelopment is a secondary consideration to the proposed demolition.

CHAPTER 4

GUIDELINES FOR ADDITIONS TO EXISTING BUILDINGS

4.1 ADDITIONS TO EXISTING BUILDINGS

This chapter outlines guidelines that should be consulted when planning an addition to an existing building located within one of Allentown's historic districts. Additions should be planned sensitively to have a minimal impact on historic character. An addition is considered any new space that expands the envelope or footprint of a historic building, such as new rooms, dormers, porches, or mechanical equipment enclosures. The guidelines in this section are intended to give property owners, architects, contractors, and the HARB a set of principles that, when followed, accommodate change and safeguard a building's distinctive form, visual character, and relationship to its neighbors.

An addition to a historic property should be carefully considered. The impact to the individual building features and to the public appearance of the building will be important factors in approving proposed designs. The architectural style of the addition should aim to be compatible yet differentiated from the historic building. This can be achieved through sensitive scale and massing, as well as simplified references to character-defining features or ornamentation of the original building. Depending on the building's history, it may already have additions that occurred during the historic district's period of significance and that contribute to the building's historic character. Other existing additions may not relate to the architecture or may detract from it.

The HARB evaluates compatibility according to eight factors of the design: height, massing, size and scale, setback, proportion, materials, detailing, and fenestration.

Additions inherently cause alteration of historic fabric. Therefore, the guidelines from Chapter 3: Guidelines for Existing Buildings should also be considered for holistic project planning.

HEIGHT GUIDELINES

4.1.1 Design additions to be lower in height than the main building. Reduced height is generally the most appropriate approach for adding to historic buildings.

4.1.2 For additions that are the same height of the main building, set back or separate the addition volume, often achieved by a "hyphen" or smaller connecting space. From the street, the roofline of the addition should not be visible above the roofline of the original building.

4.1.3 Avoid additions that exceed the height of the main building.

MASSING GUIDELINES

4.1.4 Respect the massing and forms of the main building when designing an addition.

4.1.5 Respect existing historic additions. Avoid demolishing additions and alterations that date to the building or district's period of significance, as they can provide a physical record of historic development patterns.

4.1.6 Maintain roof forms that complement the existing building and the identified architectural style. Typically, the shape and pitch of the addition roof should echo that of the main building. Simple shed and flat roofs are also appropriate.

4.1.7 Avoid making additions to primary facades. Additions to primary facades of historic buildings are not considered appropriate because they obscure the building's original appearance from the street and diminish the building's integrity.

4.1.8 Avoid adding new porches on primary facades. However, this type of project may be appropriate as a restoration if it replicates an original feature, enhances the patterns of the district, and does not create a false sense of history. The appropriateness of the addition will be evaluated in the context of the specific building and its surroundings.

4.1.9 Dormer additions should not overwhelm the historic roof and should be scaled to preserve the predominance of the original roof form. New dormers are inappropriately large if they span from end to end of the original roof or if they reach from eave to ridge, or if they occupy the majority of the roof slope's area. New dormers on primary facades are rarely appropriate.

4.1.10 Reconstructed porches, stoops, or similar features should respect the proportion of the facade and match the prevailing patterns on the block in height, widths, and overall proportion. Porches are character-defining features of Allentown's historic districts, especially block-long groups of continuous porches.

SIZE AND SCALE GUIDELINES

4.1.11 Let the existing height and width of the main building dictate the size of the addition so that it does not compete in size, scale, or design. Appropriate scale should ensure that an addition does not overwhelm the primary building.

4.1.12 Consider adjacent properties when sizing an addition. Additions should not encroach on the overall rhythm and spacing of the neighborhood.

SETBACK GUIDELINES

4.1.13 Locate additions where they will be least visible from the public street and do not distract from the main building. Additions with little to no visibility will have less of an impact on the historic district.

4.1.14 Construct additions at the rear of a historic building whenever possible. This approach maintains the historic visual impression of the building as seen from the street, as well as the overall streetscape patterns and rhythms.

4.1.15 Set back side additions from the primary facade to distinguish the original building and minimize impacts to the streetscape.

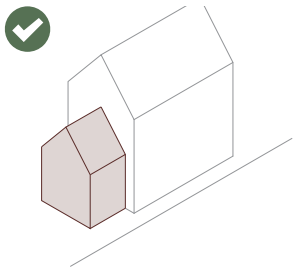
4.1.16 Set back rooftop additions from the primary facade to reduce their visibility from the street. Consider whether the building has multiple highly visible facades. Preserve the original roof form.

4.1.17 Comply with all Zoning Ordinance requirements including those related to property line setbacks and building coverage.

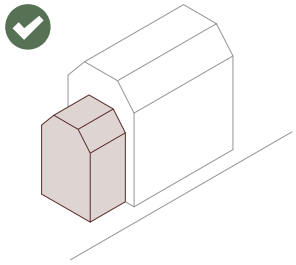
PROPORTION GUIDELINES

4.1.18 Reference the distinctive architectural features of the historic building and use similar forms and proportions to achieve compatibility. For example, maintain proportions of door and window shapes, size, and type; finished floor height; and roof pitch and style.

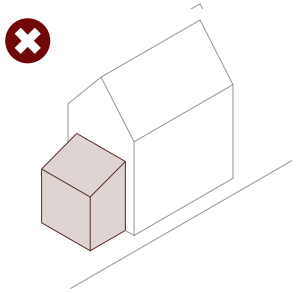
4.1.19 Reconstructed porches, stoops, or similar features should respect the proportion of the facade and match the



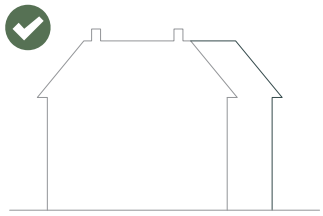
Locate additions on the rear or side facades in a discreet manner that does not diminish the original building's integrity.



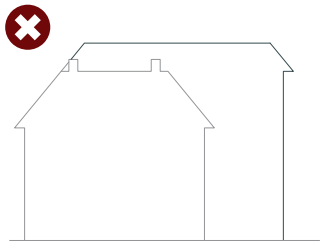
Additions should respect the massing and proportion of the main building, even if it simplifies the design.



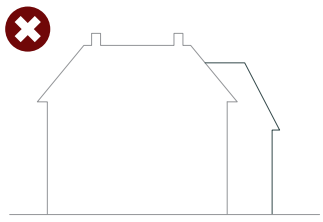
Avoid making additions with a significant difference in architectural style or massing.



Maintain the scale of the original building.



Additions should not exceed the height of the main volume.



Avoid additions that do not follow the proportions of the main building.

prevailing patterns on the block in height, widths, and overall proportion. Porches are character-defining features of Allentown's historic districts, especially block-long groups of continuous porches.

MATERIALS GUIDELINES

4.1.20 Select materials used for additions to be similar to those found on the main building. High-quality, durable, and sustainable materials are encouraged (refer to Chapter 1). Materials selections can reflect the time of the addition's construction, indicating it is new and not historic, while honoring the key materials and textures of the main building.

4.1.21 Design new porches, stoops, decks, patios, or similar features to reflect the historic character, architectural detail, and materials of the main building. Traditional wood, brick, and concrete materials are appropriate.

DETAILING GUIDELINES

4.1.22 Design decorative features to be compatible with those found on the main building. Simplified interpretations of features are most appropriate. New features can be distinguished from the building's historic features in size, profile, and appearance.

4.1.23 Design an addition to be compatible with the original building and respect its historic character. Avoid matching the addition too closely to the historic building and creating a false impression that the addition is an original feature. Avoid designing an addition in a style, scale, and material palette that contrasts significantly with the historic building, simply for the sake of differentiation.

4.1.24 Whenever possible, elect to make alterations and additions in areas that have undergone non-historic alterations and avoid obscuring or removing character-defining features when creating an addition.

FENESTRATION GUIDELINES

4.1.25 Respect the location, pattern, and type of windows and doors at the main building. Consider using it as the primary reference for the design for the new windows at the addition.

4.1.26 Design new dormers to be compatible with the existing architectural style and window pattern of the main building. Locate new dormers on rear or side roof slopes to reduce visibility. Adding new dormers to a primary facade is not appropriate, unless reconstructing original dormers based on documentary evidence.

USEFUL LINKS

For additional guidance, refer to the National Park Service, Preservation Brief #14 "New Exterior Additions to Historic Buildings."

CHAPTER 5

GUIDELINES FOR NEW CONSTRUCTION

5.1 NEW BUILDINGS

This chapter provides design guidelines for construction of new buildings within Allentown's historic districts. Although uncommon, when opportunities arise for new development the new buildings should be harmonious with the existing buildings in terms of site placement, massing and height, architectural style, and exterior materials. Demolition of existing historic buildings, historic additions, or contributing carriage houses for the sole purpose of redeveloping the property is never appropriate.

Variation in architectural styles is characteristic of Allentown and has been part of the historic districts' development over time. Local vocabulary of materials and decorative elements found in historic buildings should guide future construction so that new buildings are appropriate for the surrounding area in terms of scale and building materials.

The purpose of these guidelines is not to copy historic buildings or require that certain architectural styles be used. Rather, cohesion and compatibility are the goals. As with new additions to historic buildings, "compatible yet differentiated" is an important principle that should guide the architectural design of new buildings.

Infill construction should be sensitive to its immediate surrounding context. Every effort should be made to integrate new construction with the surrounding area and to enhance the aesthetic appeal of the entire historic district. Identifying the distinctive characteristics of the historic district can inspire appropriate massing, compatible scale, and complementary architectural features.

The HARB evaluates compatibility according to eight factors of the design: height, massing, size and scale, setback, proportion, materials, detailing, and fenestration.

HEIGHT GUIDELINES

5.1.1 Match the overall height of the new building to the surrounding buildings. The height of the roofline(s) should be consistent with the height of the nearby buildings. Most blocks in the historic districts are made up of rowhouses with a consistent height.

5.1.2 For blocks with buildings of different heights, identify the overall pattern and average height to blend the new building into the rhythm of the block.

5.1.3 Design the height of the primary facade(s) and the height of interior floors to be consistent with the surrounding buildings.

5.1.4 Match the height of new building features with the features of surrounding buildings. For example, the height of front porches and front doors should be consistent.

MASSING GUIDELINES

5.1.5 Consider simple rectangular volumes rather than elaborate building forms to be consistent with the historic district's massing and character.

5.1.6 If a building is taller than the predominant two-, three-, and four-story height in historic districts, step back any floors that are taller than the average height of historic buildings, so that upper floors are partially concealed when viewed from the street. Taller buildings are not recommended within the districts but may be allowed "as of right" by zoning regulations. Balance building elements to produce an appropriately-scaled building. Divide a large building mass by using setbacks and smaller facade modules to reduce perceived mass and height.

SIZE AND SCALE GUIDELINES

5.1.7 Honor the scale of surrounding buildings. Avoid scaling new construction to be larger than the neighboring buildings and immediate block context.

5.1.8 Consider how the new building relates to the adjacent buildings and the buildings across the street. Maintain the overall size and scale of the block, especially when viewed as a pedestrian.

SETBACK GUIDELINES

5.1.9 Arrange main entrances to face the street to respect the general historic rhythm of the historic district. Additional entrances may be located on the secondary or rear facades.

5.1.10 For corner lots or buildings with high visibility from multiple public rights-of-way, treat all facades with equal consideration of design, rhythm, and relationship to the streetscape. Generally, the primary facade should face the main (largest) street and orient the entrance to match the dominant pattern of the block. A corner entrance may also be appropriate.

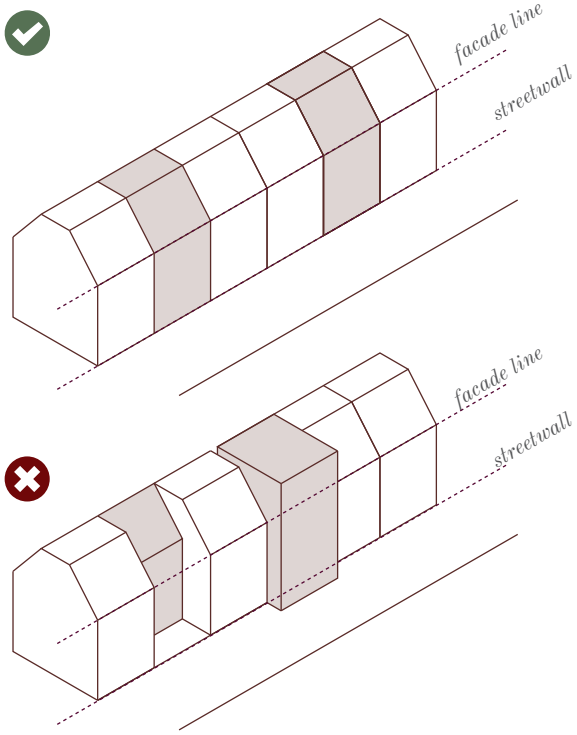
5.1.11 Respect established setbacks and spacing between the buildings already in the historic district. Locate new buildings in-plane with the existing streetwall.

PROPORTION GUIDELINES

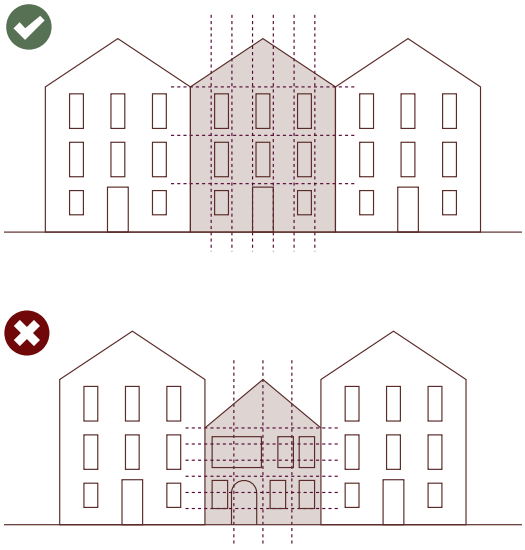
5.1.12 Respect the overall proportions of surrounding historic buildings in the design of the new facade. Examine the surrounding buildings for horizontal and vertical patterns—such as consistent cornice lines, windows, entrances, roofs, or facades rhythm.

5.1.13 Match the proportion of building features, such as windows or cornices, to surrounding buildings and use consistent proportions across the new building's facades.

Example of a streetscape with a defined street wall and consistent facade proportions



New construction should match with existing context in mass and scale and prevailing setbacks along a streetscape. Heights and widths should follow established rhythm.



Maintain the overall proportions of windows and doors. Respect facade rhythms on the street, such as the number of bays and symmetry.

MATERIALS GUIDELINES

5.1.14 Reference the materials appropriate for the surrounding neighborhood's historic character to maintain compatibility. Colors that are part of the material (inherent), such as the color of brick, and textures of nearby historic materials can inform the choice of materials for the new building.

5.1.15 Incorporate local materials and materials that are dominant in the surrounding neighborhood to enhance the overall quality of the streetscape. It is highly encouraged to use sustainable material options.

5.1.16 Avoid vinyl materials, plastics, non-durable materials and materials that are not considered appropriate alternatives for historic materials within these Guidelines.

DETAILING GUIDELINES

5.1.17 Respect historic architectural influences already found in historic districts in the design of new buildings. Employ design strategies that differentiate new development from historic buildings to avoid creating a false sense of history. Simplified details or interpretations of historic features are appropriate design approaches. Avoid directly copying details from an existing building.

5.1.18 Include sustainable construction features such as solar collectors in the design of any new construction to integrate them as seamlessly as possible with the building. Thoughtful planning at the early stages of a design project can help ensure that a historically sensitive design and energy efficiency goals are achieved.

5.1.19 Design new construction to take advantage of energy saving and generating opportunities. This can be accomplished by designing windows to maximize daylighting and using shading that is appropriate in scale, design, and materials, while maintaining compatibility with surrounding properties.

5.1.20 Conceal mechanical and utility equipment from view from the public street(s). If full concealment is not possible, set back equipment and adjust heights to be minimally visible.

FENESTRATION GUIDELINES

5.1.21 Respect the solid-to-void ratio of surrounding historic buildings in the new building. This ratio refers to the amount of exterior wall surface (solid) compared to the size of window and door openings (voids).

5.1.22 Avoid oversized windows and doors that are out of character with the building and the openings in neighboring buildings. Scale windows and doors to be consistent with historic sizes and the pedestrian-oriented scale of the historic districts.

5.1.23 Respect the window and door details of surrounding buildings and be consistent with their style and their surrounding context. Use the nearby buildings as references for sills, lintels, and trim.

5.2 NEW ACCESSORY BUILDINGS

Construction of accessory structures includes new detached garages or secondary dwelling units on unbuilt areas of an existing lot. This type of development requires careful consideration of the relationship between the main building and the neighboring buildings. Demolition of non-original, non-contributing detached accessory structures to make way for a new accessory structure may be acceptable upon consultation with the HARB, if the new construction will improve the overall appearance of the property and will not detract from the character of the historic district.

HEIGHT GUIDELINES

5.2.1 Keep the height of new accessory structures lower than the height of the main building.

5.2.2 Match the height of nearby accessory structures, especially in highly visible streets or alleys.

MASSING GUIDELINES

5.2.3 Use simple rectangular volumes rather than elaborate forms to complement the main building's massing.

5.2.4 Reflect the massing and roof types of nearby accessory structures.

SIZE AND SCALE GUIDELINES

5.2.5 Scale accessory structures to have a compatible scale that does not overwhelm the main building. Avoid a structure that is taller than the main building or historic additions and that obstructs views of the historic building from the public street.

SETBACK GUIDELINES

5.2.6 Locate accessory structures at the rear of a property and preserve the primacy of the main building. Minimize visibility from the public street.

5.2.7 Avoid interrupting established setbacks in the surrounding area, whether the setback in relation to the main building or to the street. The network of secondary streets and alleys formed around historic stables and rear structures in Allentown is a character-defining feature of the historic districts. New accessory structures should consider this setting and blend into the block.

PROPORTION GUIDELINES

5.2.8 Respect the overall proportions of the main building. The proportion of building features, such as doors and windows, should be consistent across the new accessory structure and with the proportions of the main building.

MATERIALS GUIDELINES

5.2.9 Design accessory structures to be compatible with the main building's design. Consider using materials that are found on the main building or are common within the historic district, such as brick, stone, and wood.

5.2.10 Avoid vinyl materials, plastics, non-durable materials and materials that are not considered appropriate alternatives for historic materials within these Guidelines.

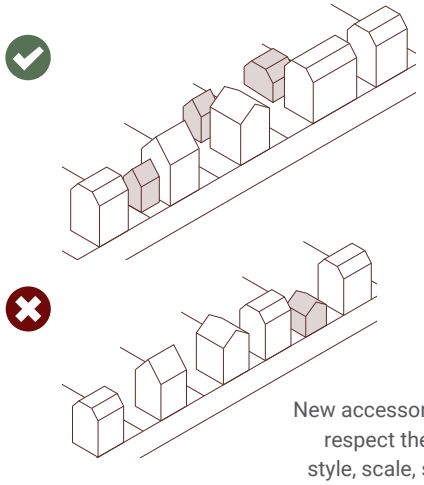
DETAILING GUIDELINES

5.2.11 Respect the main building's architectural style and details. The new structure should be subordinate to the main building and any historic additions and should not detract from the original design. Consider simplified details or interpretations of historic features on the main building.

FENESTRATION GUIDELINES

5.2.12 Respect the size, shape, and solid-to-void ratio of the main building's windows and doors.

5.2.13 Avoid oversized windows and doors that are out of character with the main building and/or nearby accessory structures that contribute to the character of secondary streets and alleys.



New accessory structures should respect the historic building in style, scale, setback, and overall relationship to surroundings.

CHAPTER 6

FURTHER RESOURCES

6.1 GLOSSARY

Adaptive reuse: The process by which structurally sound older buildings are developed for economically viable new uses. Such buildings may be historically important, architecturally distinctive, or simply underutilized.

Asphalt composition shingles: Shingles made from roofing felt coated with asphalt and mineral granules.

Bay window: The common term for a minor projection containing a window that extends beyond the surrounding façade plane. (See page 30 for a sketch or 60 for a photograph)

Brick stitching: A repair technique which removes deteriorated bricks in full size units, from joint to joint in the area of cracking or deterioration. New bricks, matching the original in strength, dimension, pattern, texture and color are "stitched" or set into place where the damaged or missing units were located. The new bricks are set in mortar and pointed to match the original mortar.

Casement window: A window with the sash hinged on the jamb (vertical side member). (See page 61)

Clapboard siding: A siding material consisting of narrow wood boards applied horizontally, with the lower edge overlapping the board below.

Compatible. The ability of alterations and new designs to be located in or near historic properties and districts without adverse effect. Some elements affecting design compatibility include location, height, scale, mass and bulk of structures; building materials; architectural details; circulation and access; landscaping; and parking impacts. Compatibility refers to the sensitivity of development proposals in maintaining the character and context of historic properties and districts.

Composite patch repair: A repair treatment carried out by patching selected areas of deteriorating masonry with a cementitious, mortar material.

Conservation: The measures taken to extend the life of cultural heritage and historic fabric of the built environment. The aim of conservation is to maintain the physical and cultural characteristics of the object to ensure that its value is not diminished and that it will outlive our limited time span.

Consolidation repair: Chemical compounds, both organic and inorganic, which enact a process of stone consolidation, which fortifies weathered stone and wood, while simultaneously warding against further deterioration.

Contributing building: Building or structure in historic district that generally has historic, architectural, cultural, or archeological significance that is part of the historic district's reason for being designated; sometimes referred to as a "contributor" or a "contributing resource."

Cornice: The common name for the decorative projecting element at the top of a facade; commonly bracketed and located above a frieze. (See page 36)

Crack repair: A repair technique in which the crack is routed out, creating a clean void that is then injected with grout to seal the opening.

Dormer: A minor projection on a pitched roof, usually bearing a window on its front face. Dormers can have a variety of roof forms. (See page 36, 43, 44)

Dutchman repair: A type of piecing-in repair, typical for masonry and wood. In areas where materials is missing or requires a patch, a hole is carefully squared off and the patch carried out with a piece of matching material set into the hole and secured.

Eave: The lower edge of a roof slope that intersects with the exterior wall. (See page 36)

Efflorescence: A process and condition where water-soluble salts leached out of masonry or concrete by capillary action by evaporation and white haze or powdery surface deposits remain.

Embodied energy: The energy already used to manufacture, create, and construct existing buildings.

Facade: An exterior building face or side.

Facade plane: The predominant vertical surface at which the physical features of a facade are arranged.

Fenestration: The physical arrangement of windows on a building's exterior walls.

Fixed window: A window sash that does not move or open.

Flashing: Thin metal sheets used to prevent moisture infiltration at joints of roof planes and between the roof and vertical surfaces.

Gable: The upper area of an exterior wall that is located between the roof slopes. (See page 38)

Hierarchy of facades: It refers to the order of importance of a building's facades depending on their visibility, architectural style, and character-defining features.

High style: A building that has all of the details associated with a specific architectural style and is considered an "academic" or "pure" example of the style.

Hipped roof: A roof form where all sides slope between the roof ridge and eaves. (See page 38)

Hung sash window: A window in which one or more sashes move vertically.

Hyphen: A minor volume that connects two larger volumes.

Infill: New construction located within an **existing**, historic setting

In-Kind: The replacement of an element with a new element of the same material, color, texture, shape and form as the original. Often used interchangeably with "like-for-like."

Integrity: The ability of a historic property to convey its significance through aspects of location, design, setting, materials, workmanship, association, and feeling. Synonymous with "historic integrity" in National Park Service use.

Lite: A piece of glass located within a window. Commonly also spelled as "light."

Massing: The distribution of a building's volume through space. The overall size, height, shape and composition of the exterior of volumes of a building, especially when the structure has major and minor elements.

Muntin: A narrow member that separates the lites within a window sash. (See page 61)

Non-contributing building: Building or structure in historic district that does not have historic, architectural, cultural, or archeological significance and is not part of the historic district's reason

for being designated; sometimes referred to as a “non-contributor” or a “non-contributing resource.”

Parapet: The area of a building’s exterior walls where they extend above a roof; it can be flat or stepped/shaped.

Porch: A component of a building that shelters a building entrance and contains occupiable space.

Preservation: The act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction.

Primary Facade: The exterior face of a building at the street or public right-of-way and/or the face of the building with the main entrance. The primary facade is usually distinguished by architectural features or ornamental details.

Proportion: The relationship of the size, shape, and location of one building element to all the other elements.

Reconstruction: The re-creation of vanished buildings or building features on their original site. This is one of the most radical levels of intervention. It is also one of the most hazardous culturally: all attempts to reconstruct the past, no matter what academic and scientific resources are available, necessarily involve subjective hypothesis.

Rehabilitation: 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.

Repair: The process of restoring to good or sound condition after decay or damage.

Replication: The creation of a mirror image of an existing building or building feature. The construction of an exact copy of a detail or feature removed from the original.

Restoration: The act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period.

Right-of-way: Public land that is accessible to anyone, including streets, sidewalks, alleys, pedestrian paths, and parks.

Secondary facade: A building face that does not front on the main street, or does not contain the building’s main entrance but does front a street or public right-of-way. “Contributing” secondary facades have some important architectural features and are visually supporting the primary facade. “Non-contributing” secondary facades do not have important architectural features.

Setback: The distance between a property line and a building, especially at the front of a lot.

Shed roof: A roof form characterized by a single slope. (See page 38)

Simulated divided lites: A window in which two panes of glass are assembled in the sash and imitate the appearance of true divided lites using exterior muntin bars or interior spacer bars sandwiched between the glass.

Spalling: Chipping, flaking, and small areas of material loss at the face of masonry units or concrete.

Streetscape: The visual character of a roadway's setting, including paving, plant life, and adjacent buildings and structures.

Stucco: An exterior finish composed of some combination of portland cement, lime and sand, which are mixed with water and applied to a wall in a wet coating and allowed to dry.

Solid-to-void ratio: The proportional relationship between solid wall areas and window/door openings.

Transom: A horizontal window opening above a door or window.

True divided lites: A window in which individual panes of glass or lites are assembled in the sash and divided using muntins.

Weatherstripping: A narrow compressible band used between the edge of a window or door and the jambs, sill, head and meeting rail to seal against air and water infiltration.

Window sash: The overall frame that contains the glazing and possibly muntins of a window.

Vernacular: A building that does not have details associated with a specific architectural style, but is a simple building with modest detailing and form. Historically, factors often influencing vernacular building were things such as local building materials, local climate and building forms used by successive generations.

ABBREVIATIONS

COA: Certificate of Appropriateness

HARB: Historical Architecture Review Board

National Register, NR: National Register of Historic Places

NPS: National Park Service

PHMC: Pennsylvania Historical & Museum Commission

Staff: City of Allentown Historic Preservation Planning Office, Bureau of Planning and Zoning staff.

The Standards: The Secretary of the Interior's Standards for the Treatment of Historic Properties.

6.2 PRESERVATION RESOURCES

The Allentown Department of Planning & Zoning maintains a useful collection of historic preservation resources online.

They have information about potential funding, architectural and building materials salvage, technical guides, and preservation organization. Readers are encouraged to check out these resources and check for newly added information. Many of the same resources are referenced throughout this document and are included below.

When reading this document digitally, all hyperlinks can be clicked and will lead to the organization's website.

ALLENTOWN RESOURCES

Old Allentown Preservation Association

West Park Civic Association

Union and West End Cemetery

Allentown Preservation League

Community Action Lehigh Valley

Lehigh County Historical Society

PENNSYLVANIA RESOURCES

Pennsylvania Historical and Museum Commission (State Historic Preservation Office)

Preservation Pennsylvania

10Thousand Friends of Pennsylvania

Historical Society of Pennsylvania

Association for Preservation Technology - Delaware Valley Chapter

NATIONAL RESOURCES

National Park Service, Technical Preservation Services

Highlighted resources:

Preservation Briefs. Washington, DC: National Park Service, Technical Preservation Services. Online publications.

Grimmer, Anne E. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*. Washington, DC: National Park Service, Technical Preservation Services, 2017. Online publication.

Preservation By Topic Index for online resources.

Sustainability resources and guidance.

National Center for Preservation Technology & Training.

National Trust for Historic Preservation and the National Trust's Preservation Leadership Forum

Association for Preservation Technology

Partners for Sacred Places

PRESERVATION INCENTIVES

Federal Historic Preservation Tax Incentives

A property listed in or eligible for listing in the National Register of Historic Places is eligible for the Federal Historic Preservation Tax Credit, also commonly referenced as the Rehabilitation Tax Credit. An income tax credit is available for the rehabilitation of historic properties, up to 20% of the cost of the rehabilitation. Properties must be income-producing to apply, which means that owner-occupied residences are not eligible. Proposed work at historic properties pursuing the tax credit must comply with the Standards for Rehabilitation.

For more information, refer to the National Park Service's Tax Incentives for Preserving Historic Properties website.

Pennsylvania Historic Preservation Tax Credit

The Pennsylvania Department of Community and Economic Development manages the state-level Historic Preservation Tax Credit program. Similar to the federal program, a property that is listed in or eligible for listing in the National Register of Historic Places and is income-producing may apply for a tax credit. Under the state program, a rehabilitation project is eligible to receive up to 25% of the cost of the rehabilitation in tax credits, and up to 30% if connected to a workforce housing project. The state credit can be paired with federal rehabilitation tax credits.

For more information, refer to the Pennsylvania Department of Community and Economic Development's Historic Preservation Tax Credit website.

GENERAL REFERENCE

Print publications can be found at local and regional libraries.

Allentown Bureau of Planning and Zoning, Historic Property Research Guide. Online publication link.

Bucher, Ward (ed.). *Dictionary of Building Preservation*. New York: John Wylie & Sons, 1996

McAlester, Virginia Savage. *A Field Guide to American Houses*. New York: Alfred A. Knopf, 1984, rev. 2013. Print.

Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation. Economic Benefits of Historic Preservation Activities in Pennsylvania. 2011. Online publication.

Penn State University Libraries, Digital Collection of Sanborn Fire Insurance Maps.

Poore, Patricia (ed.). *The Old-House Journal: Guide to Restoration*. New York: Dutton, 1992.

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