

DESIGN REVIEW GUIDELINES

THE HISTORIC DISTRICT OF PLYMOUTH AND WHITEMARSH TOWNSHIPS

Submitted by:

Nancy Brown
David Conroy
Jennifer Dow
Paul Krepto
Richard Leonard
Jack Loughridge
Ken Parsons
Robert Sztubinski
Alan D. Tabachnick

Members, Historic Architectural Review Board

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Historic Architectural Review Board

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INTRODUCTION

Local efforts to preserve old buildings and their settings are motivated by a variety of reasons including:

- To safeguard a historical or architectural legacy
- To enrich the cultural identity of an area
- To stabilize and strengthen property values
- To attract businesses, residents, and tourists who value the area's special qualities
- Or simply to maintain a sense of place and character

The most common method for preserving old buildings and their settings is the creation of historic districts with the requirement that any changes that would potentially affect the character of the district be reviewed by an appointed citizen board. Locally-designated historic districts are not new. The first such district in the United States was designated in Charleston, South Carolina in 1931, followed by the Vieux Carre' in New Orleans in 1937.

The basic purpose of historic district regulation and procedure is to identify and protect the physical character of the district and to maintain and enhance that character based on considerations of architectural history, architecture, and design. Although buildings constitute the main focus of historic district review, including demolitions, alterations, and new construction, review boards may also monitor changes around buildings including fences and walls, parking lots, sidewalks, and streetscape treatments.

The design guidelines presented within this document are intended to serve as a framework for deciding the appropriateness of proposed changes within the district. Furthermore, the guidelines are designed to inform district property owners about rehabilitation and maintenance techniques that respect the existing architectural fabric, to serve to enhance the owners' investments, and to increase public awareness of the architectural character of the historic district and the elements that contribute to it.

The guidelines for use within the Historic District of Plymouth and Whitemarsh Townships, and correspond to these four categories: rehabilitation, renovation, and maintenance of existing buildings; new construction, demolition, and signage.

This guidance document includes the following sections:

- The Historical Architectural Review Board (HARB)
- Plymouth and Whitemarsh Township's Historic Districts
- Historic District Design Review Guidelines
- Additional References

1.0 THE HISTORICAL ARCHITECTURAL REVIEW BOARD (HARB)

The Historic Architectural Review Board (HARB) of Plymouth and Whitemarsh townships is a nine member board appointed to give counsel to the Whitemarsh Township Board of Supervisors and Plymouth Township Council, regarding the advisability of issuing any certificate of appropriateness required to be issued pursuant to the Historic District Act. The Historic District Act formally established the Historic District of Plymouth and Whitemarsh Township, and created the HARB in 1961¹.

The HARB's members include four members appointed by Plymouth Township Council (Council), four members appointed by the Whitemarsh Township Board of Supervisors (Board), and one member selected by the eight municipal representatives. The ninth member may be a resident of either municipality. At least one member of the HARB must be a registered architect, one member must be a building inspector and at least one member must be a licensed real estate broker. The member chosen by the eight municipal appointees serves for a one-year period and the position is alternately filled by a resident of Plymouth Township and a resident of Whitemarsh Township. All of the other members are appointed for terms of overlapping four years.

The role of the HARB is to advise local governments on any requests for authorization to erect, alter, reconstruct, repair, restore, or demolish all or any part or any building or structure within a Historic District. It serves in an advisory design review role in the required issue of any Certificate of Appropriateness. The purpose of the design review is to determine, based on guidelines, the appropriateness of the proposed work, considering the character of the building in question and the designated area in which it stands, in order to protect and preserve the historic resources and visual qualities which make an area distinctive. The HARB also evaluates current items of historical significance, proposes additional districts and revisions, recommends historical markers, educates the public, and advises agencies on historic and architectural sites and buildings.

In addition to those duties and powers set forth in the Historic District Act, the Historical Architectural Review Board from time to time recommends to the Board and Council changes in the map and otherwise guides the Board and Council in its administration of the Historic District Regulations.

1.1 REGISTRATION OF HISTORIC LANDMARKS

Local Designation. For a building, site, or district to become a local historic landmark, it must meet one or more of the following qualifications:

- It must be prominently identified with or best represent some major aspect of the cultural, political, economic, military, or social history of Plymouth or Whitemarsh townships, the state of Pennsylvania, or the nation;
- It must have had a major relationship with the life of an historic person or event representing some major aspect of, or ideals related to, the history of Plymouth or Whitemarsh townships, the state of Pennsylvania, or the nation;
- Buildings or structures which are to be so designated must embody the principal or unique features of an architectural type or demonstrate the style of a period of our

¹ Ordinance No. 1368 of the Township of Plymouth dated December 10, 2001 amended the Act of June 13, 1961, Public Law 282, no. 167. Whitemarsh Township likewise with Ordinance no. 746 deleted Chapter 10, with authority granted in the Act of June 13, 1961, Public Law 282, No. 167, and replaced it with a revised Chapter 10 entitled Historic District. The new ordinance is dated January 11, 2002.

history or method of construction, or serve as an illustration of the work of a master builder, designer, or architect whose genius influenced the period in which that person worked or has significance in current times.

If the building, site, or district meets one or more of the above criteria, the owner must follow the HARB process for registration.

1.1.1. The Nomination Process. Anyone who wishes to nominate a site begins by filing a nomination form with the HARB, Whitmarsh Township Building, Lafayette Hill. Once it is accepted as complete, the owner and applicant are notified, and the nomination is submitted to the HARB at a regularly scheduled meeting.

Properties listed on the National Register of Historic Places (NR) are exempted from the local nomination process and will automatically be listed as a local landmark.

1.1.2. The Determination Process. At the meeting, which is open to the public, a preliminary determination is made about the nomination. If the property is approved for further evaluation, the HARBS notifies the property owner and the applicant within ten days.

If the property owner consents to the nomination, a public hearing is scheduled at the next regularly scheduled HARB meeting, at which anyone may discuss with the HARB members whether the property meets the criteria for designation.

The HARB then makes a final determination on the nominated property with a written report within 10 business days after the HARB final decision. Copies are sent to the applicant, the owner, the Pennsylvania State Historic Preservation Office (SHPO), and all other interested parties.

If the nomination is approved for designation, the HARB report is filed with the appropriate township office. The property is then a local landmark.

1.1.3. The Reconsideration Process. If the nomination is rejected (either by preliminary determination or after a public hearing), the applicant may petition the HARB for reconsideration. The petition must be filed with the HARB two weeks prior to the next regularly scheduled meeting. All decisions may be appealed to the appropriate township office by filing an appeal.

1.1.4. National Designation. The HARB will review all National Register of Historic Places nomination forms for properties within its jurisdiction and will prepare a report for the SHPO with a recommendation of eligibility within 60 days.

a. Nominations will be reviewed at the next regularly scheduled meeting following the receipt of the nomination from the SHPO.

b. The HARB's report, containing its recommendation, will be forwarded to the Whitmarsh Board of Supervisors, Plymouth Township Council, and the property owner.

1.2 DESIGN REVIEW PROCESS

1.2.1 General Conditions for Repairs and Maintenance

The HARB approval may be given for the repair and maintenance of any exterior building feature when such work exactly reproduces (as closely as is practical) the existing design and is executed in the existing material. When a building has had an addition and/or an alteration differing from the original design elements of the structure, the owner is strongly encouraged to consult with the HARB personnel prior to making any repair, thereby possibly protecting or enhancing the owner's investment and improving the relationship and harmony between the architectural elements.

The appropriate municipality's zoning officer may approve the installation of simple window flower boxes, permanently fixed brackets or standards to display flags or for house numbers, mail boxes, small porch lights, kick plates, or door knockers.

Fire escapes, not in the street-yards or not blocking a street-yard view of the building, may be approved by the staff when the construction is unobtrusive and is painted to harmonize with the background.

Proposed installation of awnings and canopies should be of simple design and of a color compatible with the structure, and should be brought to the HARB for review. Installation of metal awnings must be reviewed by the HARB through the established application process.

The appropriate municipality's zoning officer may approve simple or historically appropriate iron porch and hand rails, sidewalk replacements with existing or historically appropriate materials, as well as the temporary removal of building components for the purpose of repair or maintenance.

1.2.2 Certificate of Appropriateness: Review Procedures, Variances, Appeals, Penalties

Any alterations to the exterior of any property or its environment that are designed to be visible from any public way within a designated historic district must be reviewed. Any signs on a property that are designed to be visible from a public way within a district must be reviewed.

The Application Process

1. Upon receipt of a completed application for a building permit or a Certificate of Appropriateness (COA), the Building Inspector shall determine whether the work proposed needs to be forwarded to the HARB.
2. If forwarded to the HARB, the Building Inspector shall require all applicants to submit sufficient copies of materials so that all information is available. These materials should include the following:
 - a. Scaled elevation and/or a suitable 8" x 10" photograph of the building facades which are visible from a public way;
 - b. Specification of materials, colors, and construction techniques;
 - c. Overall vertical and horizontal dimensions of existing versus proposed conditions;
 - d. Site plan of the property showing existing versus proposed conditions;
 - e. Information on potential neighborhood issues related to project (access, construction, noise, vibration, changes in use, visual changes to setting, etc.)
 - f. Other information as may be reasonably deemed necessary.

3. Consideration will be made by HARB at its next regularly scheduled meeting. The applicant will be advised of the meeting time and place and invited to appear 10 days prior to the meeting.

4. HARB shall render a decision no later than 30 days after the hearing/meeting.

5. If the HARB disapproves the application it shall indicate all changes that are recommended and withhold its report for 5 days to allow the applicant to respond. If the applicant agrees to the recommendations, HARB shall in turn notify the Township so involved.

6. The written report concerning the HARB's recommendations on the issuance of a COA shall set out all findings of fact. Upon receipt of this report, the Township Council or Board of Supervisors shall consider approval at its next regularly scheduled meeting. The applicant may attend. If approved, it shall issue a COA authorizing the Building Inspector to issue a permit for the work covered. The township shall notify the applicant of its decision in writing within 5 days of the meeting in which the application was reviewed.

Appeals

If the report is not approved by the Board of Supervisors or the Township Council, the reasons shall be given to the Building Inspector, the applicant and to the Pennsylvania Historical and Museum Commission (SHPO). The applicant may appeal the disapproval to the Court of Common Pleas of Montgomery County, Pennsylvania within the time specified by law.

Penalties

No person or company proposing modifications to a building within the Historic District shall receive a building permit except in accordance the Part I, Chapter 10 of The Code of the Township of Whitemarsh and/or Part II, Chapter 7 of the Code of the Township of Plymouth, as appropriate. The Historic Architectural Review Board must review all plans prior to implementation. Any person or company commencing work prior to obtaining proper approvals, or refusing to address the recommendations of the HARB, will be subject to the enforcement remedies set forth in Chapter 10 of the Whitemarsh Township Code and Chapter 7 of the Plymouth Township Code, and will be required to undertake repairs and/or corrections to bring the property into conformity with the rules and regulations for work within the Historic District.

2.0 PLYMOUTH AND WHITEMARSH TOWNSHIPS' HISTORIC DISTRICTS

Presently there is one designated historic district governed by the HARB. The Historic District of Plymouth and Whitemarsh Townships was established in 1961 and formally recognized in 1971. At that time the Village of Plymouth Meeting was placed on the National Register of Historic Places with the Historic District being supervised by a joint Historical Architectural Review Board. There are 66 buildings and structures in the Historic District, built primarily during the late 18th and 19th centuries. The Historic District is an early Quaker village located on a prominent crossroad, at the intersection of Germantown Pike and Butler Pike. A map of the Historic District that was included in the National Register nomination can be found in Figure 1.

The National Register nomination form describes the district as follows:

“Located at the crossing of Historic Germantown Pike and the Old Butler Pike, Plymouth Meeting has been an important Quaker settlement and cross-road town since the beginning of the 18th century. The town was established on a parcel of land 600 acres in size set aside by William Penn for that purpose in 1683. The road from Plymouth Meeting to Philadelphia was laid out in 1687 (Germantown Pike), and was the first official road in what is now Montgomery County. A map from 1698 shows settlement at Plymouth Meeting, the first English settlement in what is now Montgomery County. Plymouth was soon to be a haven for Welsh Quakers.

Plymouth was also a stop on the early Postal Service, established by 1757, and the famous Germantown printer, Christopher Sowers, advertised that he stopped at Plymouth on his way up the Germantown Pike from Germantown through Plymouth, Pottstown, Reading then down Reading to Lancaster Road to Ephrata. John Watson, in his Annals of Philadelphia, written in 1857, gives a description of the delaying action of the British Troops under General Grey that occurred while the General’s scouts were returning with information as to the route of Lafayette’s American army’s retreat.

According to the nomination, “Architecturally, this area has houses of English and Welsh Quaker influence, many in good state of originality. There are good representative examples of 18th and 19th century housing within this area. Threats from modern housing projects offer an ever increasing threat to the integrity of this area, however. The Pennsylvania artist, Thomas Hovenden had his studio in a building that had housed the Quaker supported meetings on the Abolition of Slavery at which meetings many prominent Abolitionists spoke. This building still stands and is known as Abolition Hall.”

Specific buildings called out in the nomination include:

1. The Plymouth Friends Meeting House – The present Meeting House was built ca. 1708 of native limestone, in the Colonial style. In 1780, the eastern wing was added to be used as a school, and to replace the original log cabin school on the premises.
2. The Hovenden House – The present Hovenden House was built ca. 1794 and consists of an eighteenth-century rear section, which is the original part erected by the painter.
3. Abolition Hall and Barn – The barn stands directly behind the Hovenden House and was built between 1794 and 1800. It was a typical Pennsylvania stone barn. Behind the barn stands Abolition Hall. From 1881 to 1895 Abolition Hall was used as an artist’s studio.
4. Livezey House – The first portion of this 2 ½ story house was built ca. 1740. The early kitchen fireplace complete with bake oven is extant. The position of the oven and ash pit is identical in construction to that at Hope Lodge.
5. County Store and Post Office – Ca. 1827, is a three story, fifteen-room building constructed of limestone and local marble. The architecture was typical of a country store and dwelling.
6. Hinterleiter House – 18th century residence with supporting outbuildings.

7. DESCRIPTION	
CONDITION	(Check One) <input checked="" type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Deteriorated <input type="checkbox"/> Ruins <input type="checkbox"/> Unexposed
	<input type="checkbox"/> Altered <input type="checkbox"/> Unaltered <input type="checkbox"/> Moved <input checked="" type="checkbox"/> Original Site
DESCRIBE THE PRESENT AND ORIGINAL (If known) PHYSICAL APPEARANCE	
<p>The areas of Plymouth Meeting and Whitmarsh Townships considered here are those which have been in existence for over one hundred years. Attached is a copy of a ca. 1870 Map of Plymouth which shows how little the town has changed since this map was drawn up. Compare the modern map that is color coded to reveal relative ages of buildings with the aerial survey, which clearly shows that Plymouth Meeting is still basically a small community.</p>	

Figure 1: National Register Boundary of the Plymouth and Whitmarsh Township Historic District.



Figure 2: Historic Hovenden House within the Historic District.

The Historic District was formally established by both Plymouth and Whitemarsh townships, with the ordinances designed to conserve and maintain the natural, scenic, historic, and aesthetic values of our local environment. Plymouth and Whitemarsh townships have a stated purpose and intent to promote, protect, enhance, perpetuate, and preserve Historic Districts for the educational, cultural, economic, and general welfare of the public through preservation, protection and regulation of buildings, structures, and areas of historic interest or importance to the township (s); to safeguard the heritage of the township (s); and to foster civic pride. A copy of the Plymouth Township Historic District map is located in the office of the Building Inspector and is available for public inspection. A copy of the Whitemarsh Township Historic District map is located in the office of the Building Inspector and is available for public inspection.

3.0 HISTORIC DISTRICT DESIGN REVIEW GUIDELINES

The Historical and Architectural Review Board's guidelines for projects within the Plymouth Meeting Historic District emphasize repairs and improvements that are consistent with the Secretary of the Interior's Standards for Rehabilitation. The Board's guidelines are tailored to the building types found in the Historic District and in the region. The Secretary of the Interior's Standards define rehabilitation as "the process of returning a property to a state of utility through repair or alteration which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values" (Morton et al 1992:v). Historically sensitive rehabilitation is preferable to remodeling, which "typically includes replacing some of the existing building fabric, such as kitchen cabinets, with new materials, and/or adding new components, such as a bathroom" (Bucher 1996:380). Remodeling often detracts from a structure's historic appearance and significance.

The Board's guidelines encourage, but do not require, restoration: "The process or product of returning, as nearly as possible an existing site, building, structure, or object to its condition at a particular time in its history, using the same construction materials and methods as the original where possible; typically the period of greatest historical significance or aesthetic integrity is chosen; may include removing later additions, making hidden repairs, and replacing missing period work..." (Bucher 1996:381).

The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings explain that

The Secretary of the Interior is responsible for establishing standards for all programs under Departmental authority and for advising Federal agencies on the preservation of historic properties listed in or eligible for listing in the National Register of Historic Places. In partial fulfillment of this responsibility, the Secretary of the Interior's Standards for Historic Preservation Projects have been developed to guide work undertaken on historic buildings; there are separate standards for acquisition, protection, stabilization, preservation, rehabilitation, restoration, and reconstruction. Initially developed by the Secretary of the Interior to determine the appropriateness of proposed work on registered properties within the Historic Preservation Fund grant-in-aid program, the Standards for Rehabilitation have been widely used over the years – particularly to determine if a rehabilitation project qualifies as a Certified Rehabilitation for Federal purposes. In addition, the Standards have guided Federal agencies in carrying out their historic preservation responsibilities for properties in Federal ownership or control; and State and local officials reviewing both Federal and nonfederal rehabilitation proposals. They have also been adopted by historic district and planning commissions across the country" (Morton et al 1992:v-vi).

The Secretary of the Interior's Standards for Rehabilitation follow:

1. A property shall be used for a historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alterations of features and spaces that characterize a property shall be avoided.

3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

KEY ELEMENTS TO REMEMBER FOR PROJECTS PROPOSED WITHIN THE HISTORIC DISTRICT

1. Repair rather than replace, where possible.
2. Retain as much original historic fabric as possible.
3. Use compatible materials and construction techniques.
4. The building site should be treated as sensitively as the elements of a historic building.
5. Proposed new construction within the Historic District must be carefully designed. Additions should be in scale to the buildings to which they are to be attached.
6. New construction should document the replication of historic features of the neighborhood.
7. General maintenance should be a part of any property, particularly of historic buildings.

8. Adaptive reuse applies to alterations or renovations necessary to utilize a building for a different purpose from which it was originally designed. Proposed new uses must be permitted by the zoning code. All plans should preserve and enhance the infrastructure of the existing neighborhood.

9. Demolition is a drastic, non-reversible action. All attempts to reuse a historic building should be explored and exhausted prior to considering demolition. Demolition is only recommended when it involves a non-significant portion of a building.

The applicant is advised to refer to the zoning guidelines of Plymouth and Whitemarsh Townships.

3.1 REHABILITATION AND MAINTENANCE

3.1.1. Roofs

The buildings within the Historic District were constructed with roofs that are significant components of their overall design and of the District's streetscape. A roof often dominates a building: the color, shape, and texture give variety, strength, and identity to a building. The maintenance and preservation of roofs in the District is therefore an important preservation strategy, as well as being crucial to the preservation of other exterior and interior elements. There are two primary components to a roof that need to be maintained: the roof itself as well as the gutters, downspouts, and flashing. All of these key elements have to be taken care of to protect the integrity of the historic building.

Types of Roofs in the Historic District

The roofs within the historic district vary from side gable, to front gable, to Mansard styles. Rooflines and shapes define a building's historic nature. The following shapes are typical of historic buildings, and many of these types can be found in the historic district.

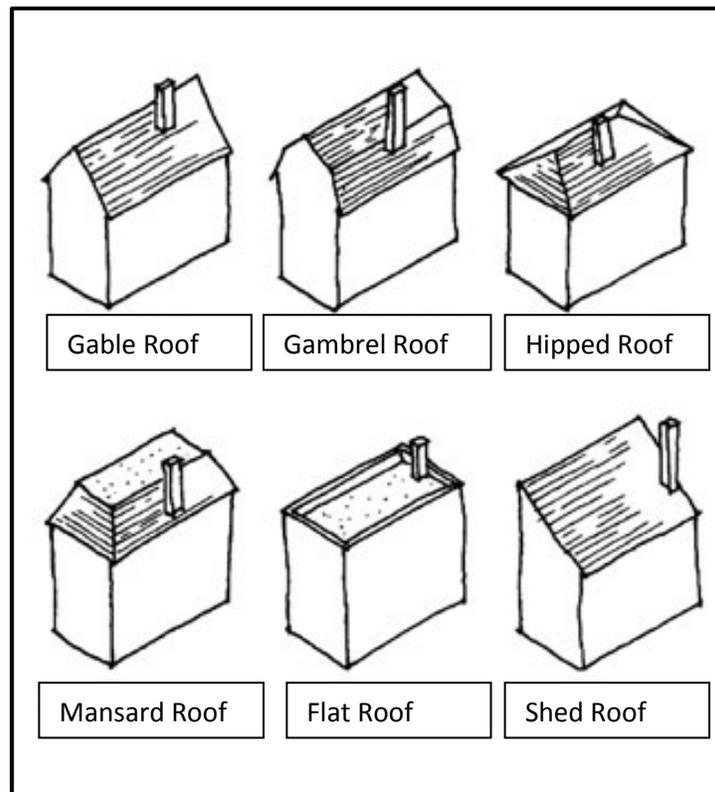


Figure 3: Illustration of various roof types that can be found in the Historic District.

Roofing Materials in the Historic District

Roofing materials vary from slate, to metal, to asphalt shingles.

Slate – a natural stone that has been used for centuries and is highly durable. Of consideration is the deterioration of the nails used to install the slate and the delamination of individual slates.

Metal roofs – metal roofs shed water effectively from a relatively low pitch. Causes of deterioration include puncturing by sharp or heavy objects and breakdown by urban pollutants.

Asphalt – asphalt shingles come in many types and designs. Replace with shingles of similar size, texture, and design.

Built-up roofing – built-up roofing for flat or shallow roofs consists of alternating layers of waterproof membranes and other materials. They deteriorate by blistering and cracking. They can be repaired by adding layers to the existing roof.

Wood – cedar – another standard material; can be repaired in part or replaced totally.

If a building within the District retains original roofing material, such as standing seam metal, wood, clay tile, or slate, efforts should be made to retain those original materials if at all possible. If there are any remaining decorative elements on the roof such as cupolas, chimneys, weathervanes, wrought iron cresting and finials, these should be retained whenever possible.

Property owners with slate roofs should be aware that some roofing contractors are unable or unwilling to repair slate roofs, and may unnecessarily suggest the removal and replacement of a viable slate roof. Repairs to slate roofs are always preferable to replacement with modern materials, and it is recommended that property owners attempt to locate contractors with experience in slate roof repair. A property owner who has no choice but to replace a slate roof, or is replacing an existing asphalt roof, should only use simulated materials in colors that match existing materials. All other roof materials and colors should obtain HARB input and approval.

Wood cornices that conceal box gutters are important components of the facades of historic buildings. Some contractors may unnecessarily advise replacement of wood cornices and box gutters with modern hanging metal gutters. Homeowners are strongly encouraged to retain wood cornices and box gutters rather than replacing them with modern gutters, and should attempt to locate contractors with experience in box gutter repair.

Gutters and Downspouts

Gutters and downspouts get the water off and away from the building. They must be constantly maintained. Enameled steel and aluminum are the most common materials used today. The enamel may serve as a prime coat for other colors. For steel, 28 gauge is the standard minimum weight while aluminum is .024 inches. Other materials include copper, tin, and vinyl. Installation is as the directions indicate. If contracted, a warranty should accompany the installation. Maintenance is crucial. Gutters and downspouts must be cleaned to flow freely. Periodically check the brackets or straps and look for leaks or rust. Drains can also be checked with a hose to insure proper function.

Flashing

Flashing is one of the most important and vulnerable parts of a roofing system. It consists of strips of sheet metal inserted at roof intersections and is a major cause of roof deterioration and water damage. It must be inspected periodically and replaced or repaired immediately if problems are found.

Roof Alteration Guidelines and Recommendations

Visible alteration of roof contours by the construction of dormers, other window openings, turrets, skylights, or vents is not permitted without HARB review. In the event that it is necessary to install

mechanical equipment on a roof within the Historic District, such equipment should be placed so that it is inconspicuous from the sidewalk and street. Placement that makes the equipment impossible to see from the sidewalk and street is always preferable.

Property owners who wish to restore an altered roof by replacing existing asphalt shingles, fiberglass shingles, or rolled sheeting with a more historically appropriate material should be certain that the substitute material they plan to use is appropriate to the age and style of their home. Conjectural use of wrought iron cresting and finials is not recommended. Property owners considering these options should review their restoration plans with the HARB.

Removal or replacement or alteration to existing visible chimneys requires review by the HARB.

In general, all necessary changes in roofing elements should resemble or match the original roof in appearance and detail. The roofing material and color used on porches and garages should resemble the main roof of the house.

General guidelines for replacing roofing materials include:

- a. Determine the total amount of the roof that needs replacing. Consider replacement if more than 20% of the roof is damaged.
- b. If one slope is worse than the other, consider replacing the more severely affected side and repairing the less deteriorated slopes.
- c. Look for any leaks. Flashing, valleys, and gutters are often sources of leaks and should be identified and fixed before replacing an entire roof.
- d. Check for moisture stains and rot in roof rafters and sheathing. Replace if necessary to control moisture and save adjacent wood structures.
- e. Check all fasteners and reuse or replace as needed.
- f. Get professional advice and assistance.
- g. Seek out several estimates and opinions.

3.1.2. Exterior Walls

Exterior walls in the historic district can be of a variety of materials, both structural and as surface treatments. Structural walls in the historic district include stone, wood, and brick. Decorative surface treatments found in the historic district include stucco, tile, and paint.

Masonry

Masonry includes brick, stone, terra cotta, concrete, stucco, and mortar. Masonry is one of the most durable materials but must be properly maintained. The first line of defense is to keep it dry. Roofs, gutters, cornices, and downspouts should be kept clear to keep the foundation dry. Painting may contribute to a moisture problem rather than eliminate it. Cleaning should be done by hand and by a skilled professional. Repointing is done to clean out the old mortar and replace with new.

New brickwork should match the old. The new mortar should match the old. The new mortar joints should be of the same shape as the old. With vigilant care one can maintain a masonry structure indefinitely.

Wood

Wood walls should be identified, retained, and preserved. Applying a stucco finish is not recommended. Provide proper drainage and protective coating. Avoid replacement siding that does not match in appearance and texture the existing or earlier siding. Property owners should repair when at all possible by patching, piecing-in, and consolidating. If a surface must be replaced, replace it in kind using surviving features as a model. The same visual appearance should persist.

Modern Cladding

Aluminum and vinyl siding are mass-produced materials intended to imitate traditional wood siding. They are thinner and lighter and subject to denting and bending. They can destroy the historical distinctive features of a building, increase deterioration, and reduce the value of the building so altered. The use of aluminum and vinyl siding should be avoided.

3.1.3. Windows and Doors

Exterior windows and doors can be character defining features of historic buildings, and were frequently used to project the wealth and standing of the owner/builder. For buildings where the owner was wealthy, a wide variety of window designs could be chosen, primarily for the main façade where the architecture could be seen by visitors and travelers. For more utilitarian buildings, less formal windows were the norm, as these structures were built for function rather than for appearance. In all cases, it should be the primary goal to retain as much of any window as possible that is from the historic period of the historic district (18th, 19th, and early 20th century). Modern aluminum, steel, vinyl windows that were inserted into window openings after the 1950s are not considered historic, but should be replaced by windows that more accurately reflect the period of the building.

The original design and placement of the windows on historic buildings should be retained. Windows that may be appropriate include Palladian, bay, fixed, casement, and double-hung. Windows considered inappropriate, depending upon the specific building, include Jalousie, aluminum sash, sliding, and picture windows. Storm windows are almost universally aluminum. If used, they should have the same number of sashes and general appearance as the windows that they cover.

Window repairs include replacing broken glass, repairing loose or rotted wood in the frame, sash, or sill, and making a window open and close as it should. Window drafts can be contained with weather stripping, storm windows, and caulking where needed. A sill can be cleaned, sanded, and filled. Rotten sections can be filled with putty or replaced. Sashes also can be filled with putty. They can also be braced if necessary. Windows that are stuck can be soaped and/or scraped. If swollen, the window must be dismantled, sanded, and rasped to return it to its original size.

If the window must be replaced, use the same material. This includes using the same size panes, replacing in pairs, or moving a window to a location to match a window that is being replaced. Maintain the original trim, caulk well, and insulate. Avoid aluminum, different shapes, fewer panes, or different sized windows. Dormer windows can also be found in old buildings. They should be preserved as found. The roof of the dormer is treated as part of the overall roof of the building. Figure 4 illustrates typical windows found in the historic district.

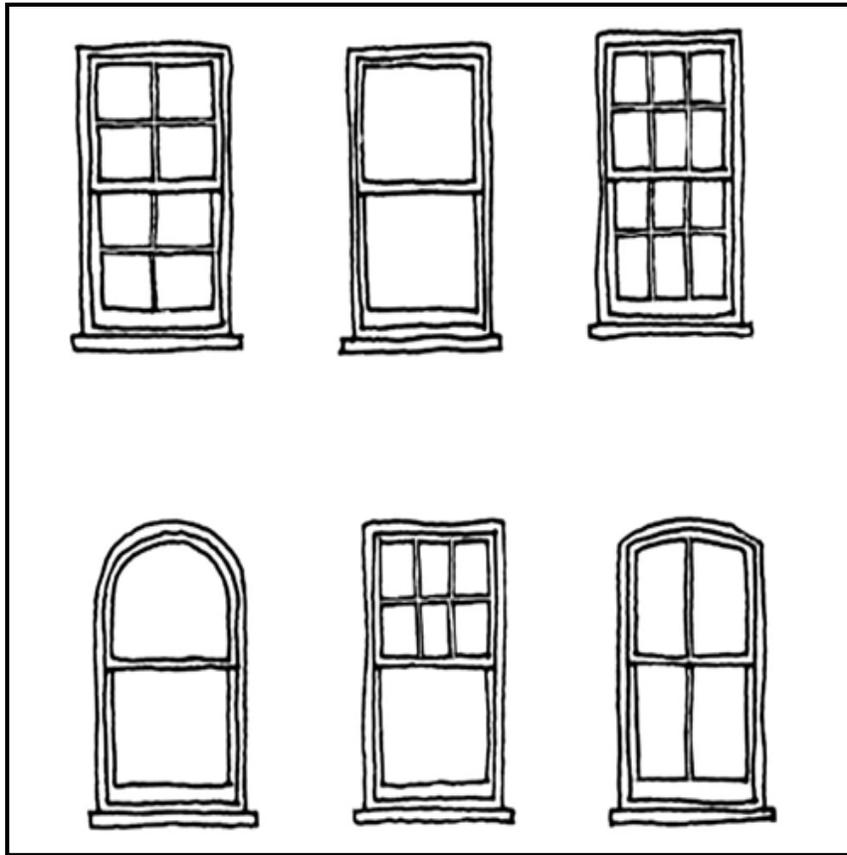


Figure 4: Window Type Guide (clockwise): 4/4, Double Hung; 1/1, Double Hung; 6/6, Double Hung; 1/1, Double Hung, in Rounded Surround; 6/1, Double Hung; 2/2, Double Hung, in Arched Surround.

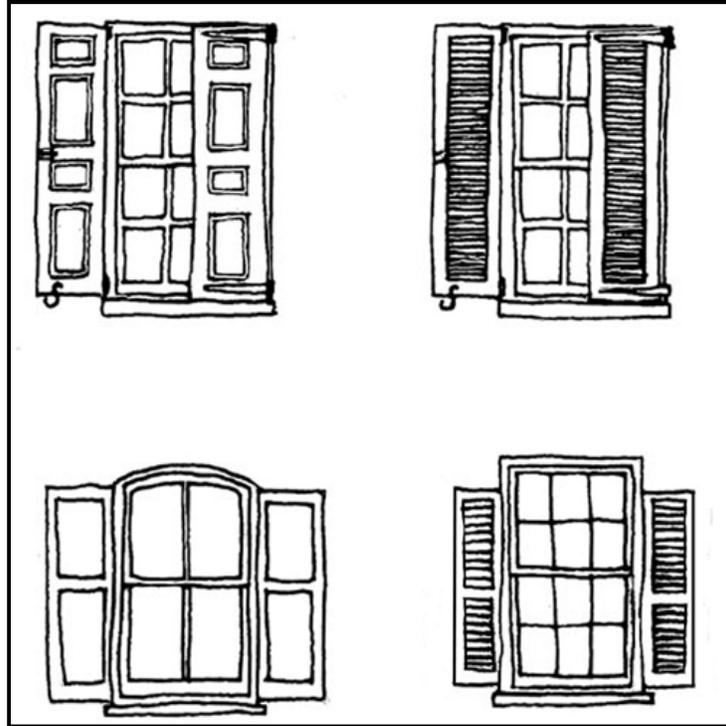
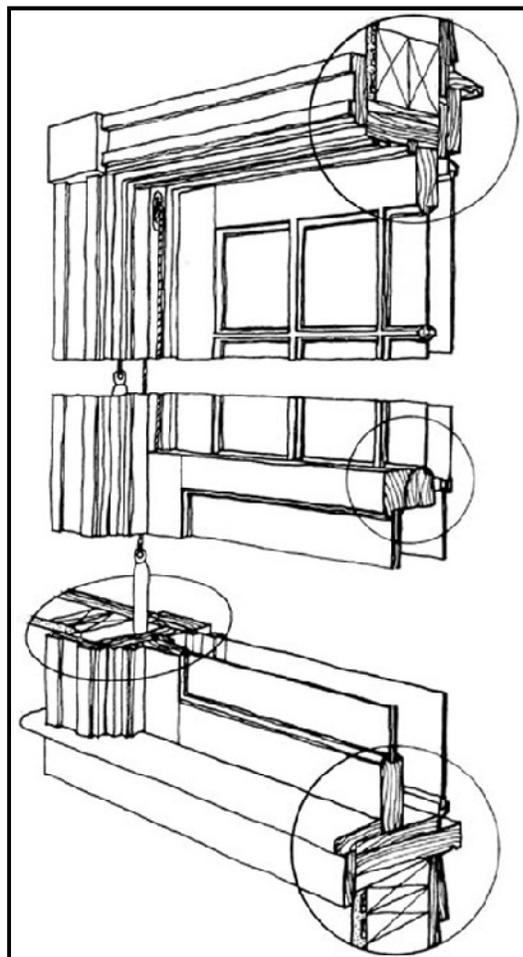


Figure 5: Appropriate and Inappropriate Shutters in the District. Top row - 6/6 double hung window with 4 panel shutters; 6/6 double hung window with louvered shutters.

Bottom Row: Example of 2 panel shutters that do not fit the arched opening and would not be recommended; Example of louvered shutters that are incorrect size for the window and would not be recommended.

Plaster on Lath
 Header
 Interior Casing or Trim
 Pully
 Sash Cord or Chain
 Stile
JAMB
 Weight
 Studs
 Weight Pocket
 Jamb
 Stop
 Stool
 Apron
 Rail
 Sill Framing
 Plaster on Lath



Siding
 Sheathing
 Drip Cap
 Casing
 Blind Stop
 Rail

HEAD
 Muntin

 Single Glazing
 Aluminum Storm Window

MEETING RAIL

SILL
 Sill
 Sub Sill
 Sheathing
 Siding

Figure 6: Double Hung Window Components.

Doors

Like windows, doors can also possess architectural merit, and any **original front doors should be preserved wherever possible**. If a new door is needed, it should resemble the old door as much as possible. It is also advised to try to retain the door parts – hinges, screws, brass door handles – as much as is feasible. Residences frequently have simple round or oval knobs made of materials such as brass, bronze, or ceramic. Figure 7 illustrates typical interior and exterior door types. Sample doors are as follows:

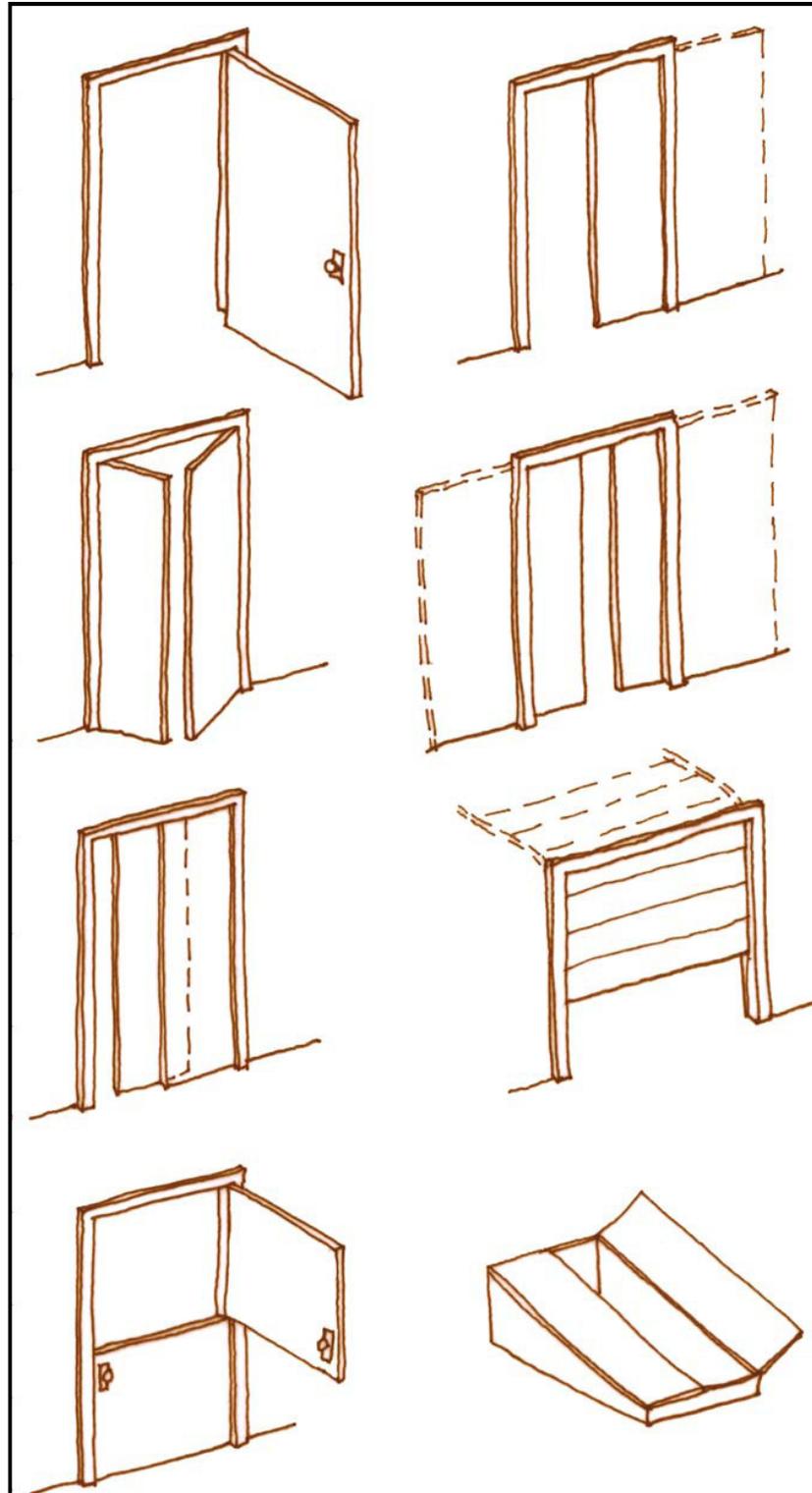


Figure 7: Typical Interior and Exterior Doors.

The vertical elements of the door are the stiles and the rails, the crosspieces that contain panels. Panels can be wood or glass and are held in place in grooves or by moldings. The panels should move freely. Doors deteriorate from exposure over time. Wood is easily maintained and repaired. Paint or clear a

clear finish such as varnish creates a protective finish. Too much paint can result in build-up and interference with joint movement.

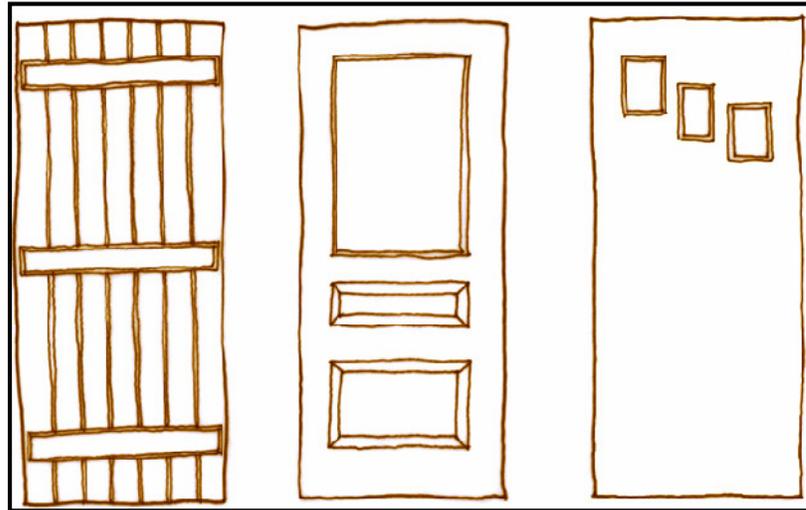


Figure 8: Door 1 – Batten form; Door 2 – Paneled Form; Door 3 – Flush Door (not appropriate in the historic district)

3.1.4. Porches and Entrances

Porches were also frequently decorative elements integral to the architectural design of 18th and 19th century buildings, as well as early 20th century buildings. Porches protected the residents and visitors from the weather, and also provide a covered outdoor sitting area where social activities could occur. They are important elements to retain. A number of buildings in the historic district, over the years, have been modified and their front porches have been removed. It is critical that any porches that remain on buildings within the historic district are retained, if at all possible.

Most porches are one story and extend the full length of the building's front wall. Others may cover only the front entrance. Porches have elements such as columns, posts, pilasters, balustrades, railings, pediments, stairs, floors, ceilings, and ornamental trim. Repair all parts that can be restored. Replace only what cannot be repaired. Use historical materials i.e. replace a wooden porch with a wooden porch.

The approaches to an historic building are also very important in appreciating the building within its setting. Approaches can include steps, brick walks, flagstone pavers, and other elements. Steps are most often wood or stone. When repairing, continue the materials of the porch and maintain the historical orientation. Position steps in a similar line as originally constructed. Railings should match the balustrade. Aluminum and iron are not good replacements for wood. The characteristic of the historic balustrade should be maintained. Door hoods provide shelter over an entrance – retain door hoods wherever possible, and as historically appropriate for the building.

When adding a porch to a historic building, do not destroy the historic materials and features of the building. Enclosing a porch is a radical change and is not recommended.

3.1.5. Architectural Trim

Gables, cornices, brackets, finials, and other ornaments maintain the historic nature of a building. They should be identified, retained and preserved. Gables can be an eye-catching feature of a building, especially when they include decorative treatments such as shingles, siding, etc. ***The shingles, siding, decorative bric-a-brac, and paint should all be maintained***, if possible.

3.1.6. Metals

Metals, including copper, iron, and tin were frequently used as exterior design elements during the 19th and 20th centuries, and can still be found on buildings within the Plymouth and Whitemarsh Historic District. ***Metals on historic buildings within the Historic District should be protected against corrosion*** by standing water. Protect these surfaces whenever possible. Do not combine different metals creating an incompatible feature. Avoid painting or covering metals that were meant to be exposed. This is especially true for decorative copper which was frequently used for gutters, downspouts, and other decorative features.

3.1.7. Exterior Painting

Paint has been used as an exterior and interior decorative treatment on buildings and structures for thousands of years, and most of the buildings within the Historic District would have had painted (or whitewashed) exteriors. It is important to try to **identify the original paint surfaces** on the historic buildings within the Historic District, prior to repainting, to ensure that a correct color is chosen. Paint analysis is a relatively common practice to identify colors and types of paints that may have been used on historic buildings, and consultants are available to conduct those studies. Where possible, it is important to maintain the original color of a building in the Historic District, undertaking appropriate studies to determine what the original colors were. It should be noted that there could be multiple paint layers on the exterior of a building, so it is important to select a professional to determine the original paint color for a specific exterior surface.

Exterior colors and color schemes should be appropriate to the architectural style and period of the building. Certain paint manufacturers offer historically accurate exterior paint colors, including specific palettes for different architectural styles (see Finnaren and Haley, or Benjamin Moore, both offer historic color charts). In most cases, color schemes can be organized according to the body, major trim, minor trim, and shutter colors. The body color covers wall surfaces, and on commercial buildings includes any storefront piers. In some cases, the body color will be natural brick or stone and will not require painting. Major trim includes the cornice, window frames, decorative window crowns, storefront cornices, storefront columns, and bulkheads. Minor trim consists of window sashes, doors, and storefront frames. Shutters are typically painted yet another color. While early nineteenth-century buildings historically featured simple color schemes – brick walls, white exterior woodwork, and dark green shutters and front door, for example – later Victorian styles featured color schemes which might include several colors. However, overly elaborate color schemes, and all color schemes employing multiple pastel colors, are not appropriate. The so-called “painted ladies” are based on popular images of Victorian architecture, not on history.

When a historic building is repainted, the removal of all paint layers to bare wood is not recommended.

Except for heavily weathered paint, scraping off loose material in preparation for new coats of paint is sufficient. Unpainted brick surfaces generally should not be painted. Painted brick surfaces should remain painted. In some instances, paint may be removed from brick, but typically it is not recommended. On commercial buildings, the paint scheme for the entire building should be

coordinated, including building cornice, upper-floor windows and shutters, storefront, and doors. Storefronts should not be repainted without taking into account the color scheme and condition of paint on the entire facade. Finally, historically unpainted metals, such as brass storefront framing or hardware, should not be painted.

3.1.8. Chimneys

Chimneys are an important part of the architecture of a building. Some architectural styles incorporate prominent and massive chimneys into their designs. The original chimney should be kept intact as much as possible. Major repairs should always be done by a professional. A chimney should be straight, sound, well pointed with good mortar, and functional.

3.1.9. Signs

A COA is necessary in the Historic District for the placement or alteration of any business sign. The signs will be judged based on their size, location, and design. Illumination should be indirect and prevent glare. Acceptable signs include those framed on a background, painted on a building or mounted on a building, individual letters cut and mounted small plaques, and hanging shingles close to a building. Additional requirements are found within the permitting requirements of the Township Council or Board of Supervisors.

3.1.10. Site Features

The site features help to define a property's historic character. Features within the property line are considered part of the site. Where possible, **retain walks, paths, fences, lights, and benches**. Radically changing a grade level is not recommended. Replace steps, railings, paving and fencing with the same materials or with materials with the same visual appearance. When introducing new features such as parking or a driveway, be as unobtrusive as possible.

Fencing should be sturdy and blend with the color and design of the building. Conspicuous designs or bold colors should be avoided.

Secondary buildings also contribute to the overall character of a property. They often reflect the style of the main building. Even garages may match the original building. An outbuilding is significant if it dates to the original construction, functioned as an important part of the property, exemplifies the architectural style, and has a strong relationship to other buildings on the property. They should be retained when possible, and well-maintained. Demolition is feasible but should only be considered when the outbuilding is severely damaged or when the impact on the overall property will be minimal. New outbuildings also may sometimes be appropriate. When constructed they should maintain the historic coordination of the buildings and not damage other buildings or site features.

Utilities can be located on the ground, placed on a roof, or attached to a wall. Conceal these whenever possible. Coordinate with fencing and vegetation. Paint if appropriate. Install in less conspicuous places such as rear or side walls.

3.1.11. New Construction

New construction is not prohibited in the Historic District. However, care must be taken in the design and construction of new buildings and structures to ensure that they are compatible with the existing historic fabric within the Historic District. The applicant must show that the proposed design is compatible in scale and design with other existing historic buildings. Considerations include building height, front façade proportions, proportion of openings, rhythm of solids to voids, horizontal lines, the

site, materials, details, color, and landscaping. The HARB can be of great assistance during this design process.

3.1.12. Archaeological Resources

The Plymouth Whitemarsh Historic District contains many areas of archaeological sensitivity, and these areas must be treated appropriately by current and potential property owners. For example, wells, cellars, and basements may contain archaeological resources. In addition, the rear yards of most buildings in the district may have once contained support outbuildings such as privies, smokehouses, springhouses, sheds, barns, and shops. Archaeological materials related to the Native American occupation in this area prior to the arrival of Europeans could also be located on land within the Historic District. Any archaeological materials uncovered should be reported, left undisturbed, and be professionally excavated and recorded. Please notify the HARB if any such materials are found on a property in the Historic District.

KEY CONTACTS AND INFORMATION

Historical Architectural Review Board

616 Germantown Pike

Lafayette Hill, PA 19444

Phone: 610-825-3535

Fax: 610-825-9416

Email: mail@whitemarshtwp.org

Whitemarsh Township

616 Germantown Pike

Lafayette Hill, PA 19444

Phone: 610-825-3535

Fax: 610-825-9416

www.whitemarshtwp.org

Building, Zoning, and Engineering: 610-825-3535 ext. 2206

Plymouth Township

700 Belvoir Road

Plymouth Meeting, PA 19462

Phone: 610-277-4100

www.plymouthtownship.org

Zoning/Planning: 610-277-4103

PROFESSIONAL TECHNICAL SUPPORT – Get Help

There are a wide variety of agencies and organizations in the region that can provide technical support for your project involving historic properties. Many of these organizations maintain lists of cultural resource management professionals, including restoration architects, architectural historians, archaeologists, historians, material conservationists, paint analysts, and others. Make sure you check the references of any consultant or contractor you are interested in hiring for your project.

Local Resources:

Plymouth Meeting Historical Society

2130 Sierra Rd
Plymouth Meeting, PA 19462
610-828-8111

The Historical Society of Montgomery County, Pennsylvania

1654 DeKalb Street
Norristown, PA 19401
(610) 272-0297
<http://www.hsmcpa.org/>

Preservation Alliance for Greater Philadelphia

1616 Walnut Street, Suite 1620
Philadelphia, PA 19103
215-546-1146
<http://www.preservationalliance.com/>

AIA Philadelphia

1218 Arch Street
Philadelphia, PA 19107
215-569-3186
http://www.aiaphiladelphia.org/comm_preservation/

Statewide Resources:

Pennsylvania Historical and Museum Commission

Bureau for Historic Preservation
Commonwealth Keystone Building, Second Floor
400 North Street
Harrisburg, PA 17120-0093
717-783-8946
www.phmc.state.pa.us

Preservation Pennsylvania

257 North Street
Harrisburg, PA 17101
717-234-2310

<http://www.preservationpa.org/>

National Resources:**National Trust for Historic Preservation****Northeast Field Office**

6401 Germantown Avenue
Philadelphia, Pennsylvania 19144
215-848-8033

<http://www.preservationnation.org/about-us/regional-offices/northeast/>

National Park Service

Heritage Preservation Services
1849 C Street, NW
Washington, DC 20240
(202) 513-7270

<http://www.nps.gov/history/hps/>

National Park Service

Technical Preservation Services
1849 C Street, NW
Washington, DC 20240

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

Educational Program Resources:

There are also a number of historic preservation programs in the region that can provide expert opinions and information on different historic preservation and design issues. These institutions also offer a wide variety of coursework on history, historic preservation, and restoration topics. These local institutions include:

University of Pennsylvania School of Design

102 Meyerson Hall
210 South 34th Street
Philadelphia, PA 19104
215-898-3425

<http://www.design.upenn.edu/about>

Bucks County Community College

275 Swamp Road

Newtown, Pennsylvania 18940

215-968-8000

<http://www.bucks.edu/academics/departments/social/hp/>

GLOSSARY OF ARCHITECTURAL TERMS

A

architrave. 1) The lowest horizontal element of a classical entablature; 2) The ornamental moldings (trim) around windows, doors, and other wall openings.

asymmetrical. Not symmetrical

B

baluster. A shaped, short vertical member, often circular in section, supporting a railing or capping.

balustrade. An assembly consisting of a railing or capping supported by a series of balusters.

bay. A regularly repeated main division of a building design. A building whose facade is five windows wide may be described as a five-bay building.

bay window. A window structure projecting beyond the main wall plane; if attached to the building above ground level, properly called an oriel.

blind. A louvered shutter that excludes vision and direct sunlight, but not indirect light and air, from a house.

bond. The setting pattern of bricks or stones, such as common bond, Flemish bond, etc.

bracket. A projecting support placed under an architectural overhang such as a cornice; often ornate.

C

capital. The top member (cap) of a column.

casement sash, casement window. A window sash which is side-hinged; a window having casement sashes.

casing. The exposed architectural trim or lining around a wall opening.

clapboards. Narrow boards applied horizontally to an exterior wall, each of which overlaps the one below it to create a continuous skin over the wooden frame.

classical. 1) Decorative elements deriving directly or indirectly from the architectural vocabulary of ancient Greece and Rome; 2) architectural harmony based on the principles of ancient Greek and Roman architecture.

column. A long vertical structural member that supports a load; in classical terms, a cylindrical support having a base, shaft, and capital. (Note: In the Doric order the column has no base.)

cornice. Strictly, the upper projecting part of an entablature; in carpenter/builder terminology, any projected molding ("crown molding") which crowns or finishes a horizontal fascia; the exterior assembly which closes the joint between the wall and roof of a building.

Corinthian. One of the classical orders of ancient Greek and Roman architecture, characterized by slender fluted columns and an elaborate capital decorated with acanthus leaves and scrolls.

D

Doric. One of the five classical orders, column usually without a base and with a simple capital.

dormer. A roofed structure with a vertical window that projects from a pitched roof.

double-hung sash window. A window with two vertical sliding sashes, each closing half of the window opening.

E

eave. The lower part of a roof that projects beyond the wall.

elevation. The perpendicular view of a side of a building; an accurate drawing of one side of a building that represents its true dimensions in the plane perpendicular to the line of sight.

ell. A wing or addition extended at a right angle from the principal dimension of building, resulting in an "L" shaped plan.

entablature. The horizontal member carried by columns, composed of architrave (bottom), frieze, and cornice (top).

F
facade. The exterior front face of a building; usually the most ornate or articulated elevation.

fanlight. A half-circular or half-elliptical window; often placed over a door.

fascia. Any long, flat horizontal band or member.

fenestration. The arrangement and design of window and door openings in a building.

French door. A door with a top and bottom rail, stiles (sides), and glass panes throughout most of its length.

frontispiece. An ornamental portal or entrance bay around a main door.

G
gable. The vertical triangular shape of a building wall above the cornice height, formed by two sloping roof planes.

H
header. In brick masonry, a brick laid so that its end is exposed in the finished wall surface.

hip. The external angle at the intersection of two roof planes; a hip roof has roof planes that slope toward the eaves on all sides of the building.

hood. A projecting cover placed over an opening to shelter it.

I
in kind. Replacement building component matching the original component in material, size, profile, texture, and color.

Ionic. One of the three main orders of classical Greek architecture, characterized by two opposed volutes (scrolls) in the capital.

L
light. A pane of glass installed in a window sash.

lintel. A horizontal structural member that spans an opening, for example a window lintel.

M
Mansard. A roof that is double pitched, the lower being much steeper, designed to allow a full story height within the attic space.

mass. Bulk or three-dimensional size of an object.

massing. The combination of several masses to create a building volume; organization of the shape of a building, as differentiated from wall treatment, fenestration, etc.

mullion. A vertical member separating windows, doors, or panels set in series; often used for structural purposes.

muntin. A slender member separating and encasing panes of glass in a window sash.

O
order. In classical architecture, a column with base (usually) shaft, capital, and entablature, embellished and proportioned according to one of the accepted styles - Doric, Ionic, and Corinthian.

oriel. A window structure projecting beyond the main wall plane attached to the building above ground level.

P

Palladian window. A three-part window consisting of a prominent center window unit, often arched, flanked by smaller windows.

pane. A flat sheet of glass cut to size for glazing use in a window; also called a light.

parapet. A low guarding wall at the edge of a roof or balcony; the portion of a fire wall or party wall above the roof level.

parge. A coating of cement-based mortar (stucco) applied over rough masonry work.

pediment. In classical architecture, the triangular gable end of a roof above a horizontal cornice; a similar triangular form over a door or window.

pergola. A garden structure with an open wood framed roof, often latticed.

picket fence. A fence formed by a series of vertical pales, posts, or stakes and joined together by horizontal rails.

pilaster. A flat vertical element applied to the wall surface that simulates a classical column.

pitch, roof. The slope of a roof; usually expressed as a ratio of vertical rise to horizontal run (inches vertical in 12 inches horizontal).

plan. A two-dimensional view of a building, or horizontal section of it, seen from above; hence, a precise drawing showing the arrangement of design, including wall openings and dimensions.

porch. A structure attached to a building to shelter an entrance or to serve as a semi-enclosed space, usually roofed and generally open-sided.

proportion. The relation of one dimension to another; usually described as a numerical ratio; in architecture, proportions determine the

creation of visual order through coordination of shapes in a design.

Q

quoin. A masonry (or simulated masonry) unit applied to the corner of a building; often slightly projecting.

R

rhythm. In architecture, the repeated pattern of building elements such as doors and windows.

ridge, ridge line. The horizontal line formed by the juncture of the upper edges of two sloping roof planes.

S

sash. The movable framework holding the glass in a window.

segmental arch. An arch in which the arched portion is less than a semi-circle.

shed roof. A single-pitched roof over a small room; often attached to a main structure.

shutter. An external movable screen or door used to cover a wall opening, especially a window; originally for security purposes; often confused with louvered blinds.

sidelight. A framed area of fixed glass alongside a door or window opening.

sill. The horizontal lower member of a window or other frame.

single pile. A floor plan that is one room deep.

site plan. An accurate scaled drawing of a site (lot) as if seen from above, describing the property boundary and orientation, the location of buildings, driveways, walks and other constructed site improvements, the retained vegetation, and new plantings and finished grade contours.

skylight. A glazed opening in a roof plane that admits light.

stoop. An uncovered platform and steps at an entrance.

streetscape. A setting or expanse consisting of the street, landscaping, and buildings along a street, as seen by the eye in one view.

stretcher. A brick laid with the long side visible in the finished work.

string course. A horizontal course of masonry or wood trim which projects from a wall.

symmetrical. A similarity of form or arrangement on either side of a dividing line.

T

transom. A horizontal bar of wood or stone separating a door from a transom window above it.

V

vernacular. A mode of building based on regional forms and materials.

W

water table. A horizontal course of masonry or wood trim separating the foundation walls from the exterior walls above.

(Glossary definitions are in part based on Historic Architecture Sourcebook by Cyril M. Harris, Ed., New York: McGraw-Hill Book Company, 1977.)

ADDITIONAL REFERENCES

National Park Service, U. S. Department of the Interior, Technical Preservation Services, Preservation Briefs: All of these can be found on-line following this link:

<http://www.nps.gov/history/hps/tps/briefs/presbhom.htm>

01: [Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings](#)

02: [Repointing Mortar Joints in Historic Masonry Buildings](#)

03: [Conserving Energy in Historic Buildings](#)

04: [Roofing for Historic Buildings](#)

05: [The Preservation of Historic Adobe Buildings](#)

06: [Dangers of Abrasive Cleaning to Historic Buildings](#)

07: [The Preservation of Historic Glazed Architectural Terra-Cotta](#)

08: [Aluminum and Vinyl Siding on Historic Buildings: The Appropriateness of Substitute Materials for Resurfacing Historic Wood Frame Buildings](#)

09: [The Repair of Historic Wooden Windows](#)

10: [Exterior Paint Problems on Historic Woodwork](#)

11: [Rehabilitating Historic Storefronts](#)

12: [The Preservation of Historic Pigmented Structural Glass \(Vitrolite and Carrara Glass\)](#)

13: [The Repair and Thermal Upgrading of Historic Steel Windows](#)

14: [New Exterior Additions to Historic Buildings: Preservation Concerns](#)

15: [Preservation of Historic Concrete](#)

16: [The Use of Substitute Materials on Historic Building Exteriors](#)

17: [Architectural Character - Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character](#)

18: [Rehabilitating Interiors in Historic Buildings - Identifying Character-Defining Elements](#)

19: [The Repair and Replacement of Historic Wooden Shingle Roofs](#)

20: [The Preservation of Historic Barns](#)

21: [Repairing Historic Flat Plaster - Walls and Ceilings](#)

- [22: The Preservation and Repair of Historic **Stucco**](#)
- [23: Preserving Historic **Ornamental Plaster**](#)
- [24: **Heating, Ventilating, and Cooling** Historic Buildings: Problems and Recommended Approaches](#)
- [25: The Preservation of Historic **Signs**](#)
- [26: The Preservation and Repair of Historic **Log Buildings**](#)
- [27: The Maintenance and Repair of Architectural **Cast Iron**](#)
- [28: **Painting** Historic Interiors](#)
- [29: The Repair, Replacement, and Maintenance of Historic **Slate Roofs**](#)
- [30: The Preservation and Repair of Historic **Clay Tile Roofs**](#)
- [31: **Mothballing** Historic Buildings](#)
- [32: Making Historic Properties **Accessible**](#)
- [33: The Preservation and Repair of Historic **Stained and Leaded Glass**](#)
- [34: Applied Decoration for Historic Interiors: Preserving Historic **Composition Ornament**](#)
- [35: Understanding Old Buildings: The Process of Architectural **Investigation**](#)
- [36: Protecting **Cultural Landscapes**: Planning, Treatment and Management of Historic Landscapes](#)
- [37: Appropriate Methods of Reducing **Lead-Paint Hazards** in Historic Housing](#)
- [38: Removing **Graffiti from Historic Masonry**](#)
- [39: Holding the Line: Controlling Unwanted **Moisture** in Historic Buildings](#)
- [40: Preserving Historic **Ceramic Tile** Floors](#)
- [41: The **Seismic Retrofit** of Historic Buildings: Keeping Preservation in the Forefront](#)
- [42: The Maintenance, Repair and Replacement of **Historic Cast Stone**](#)
- [43: The Preparation and Use of **Historic Structure Reports**](#)
- [44: The Use of **Awnings** on Historic Buildings: Repair, Replacement and New Design](#)
- [45: Preserving Historic Wooden **Porches**](#)
- [46: The Preservation and Reuse of Historic **Gas Stations**](#)

47: Maintaining the Exterior of Small and Medium Size Historic Buildings

Other Sources of Information

Information on the Plymouth Meeting Historic District

National Register Nomination Form –Available on National Park Service website

Plymouth Meeting Historical Preservation Plan – 1974 – On file at the Plymouth Meeting Historical Society,

Books

Friedman, Donald

2000 The Investigation of Buildings, A Guide for Architects, Engineers, and Owners. W.W. Norton and Company, New York.

McAlester, Virginia and Lee

2003 A Field Guide to American Houses. Alfred A. Knopf, Inc. New York.

Maddex, Diane, ed.

1985 All About Old Buildings: The Whole Preservation Catalog. National Trust for Historic Preservation. The Preservation Press, Washington, D.C.

Phillips, Steven J.

1994 Old House Dictionary: An Illustrated Guide to American Domestic Architecture 1600 to 1940. The Preservation Press, Washington, D.C.

Organizations and Web Sites

National Trust for Historic Preservation – www.nthp.org

Society for Industrial Archaeology – www.sia-web.org

Common Ground: Preserving Our Nation's Heritage – www.nps.gov/history/CRMJournal

National Park Service Heritage News – www.nps.gov/history/HeritageNews

Finnaren & Haley Paint Guides- <http://fhpaint.com/architectural/docs/resources.html>

Benjamin Moore Paints -

http://www.benjaminmoore.com/bmpsweb/portals/bmps.portal?nfpb=true&pageLabel=fh_home