Protect and Preserve the Historic Places That Matter to You

HOW TO

[Images of people involved in historic preservation activities]
Author’s Note

This publication was originally intended to be an update of Preservation Pennsylvania’s 1998 Crisis Handbook: A Guide to Community Action. But, after spending more than four years traveling around Pennsylvania providing technical assistance to those needing help with preservation projects, this seemed to me like an opportunity to not only tell people what to do in the event of a preservation crisis, but to talk about how to avoid them whenever possible. Having recently spent several days in workshops with Donovan Rypkema, I also wanted to fold in many of the valuable concepts and techniques provided in his Feasibility Assessment Manual for Reusing Historic Buildings. And while I was at it, I thought I’d do my best to address some common questions and use examples to illustrate some best practices and common pitfalls that I have seen here in Pennsylvania. I sincerely hope that the resulting document is useful to you as you work to protect and preserve the historic places that matter to you.

Sincerely,

Erin Hammerstedt

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This project was supported by the National Park Service’s Challenge Cost Share Program.
Points of view are those of the author(s) and do not necessarily represent the position of the Department of the Interior.
Section 2: Understand The Building

The previous section of this guide discussed how to gather information about the situation and public sentiment, define your purpose and establish goals and objectives, and build support. By working through this section, you will learn more about the historic property and what will likely be required if you decide to help rehabilitate it for a new use. You will study the building’s history and significance, as well as its physical condition, including what may be required to satisfy building codes and other pertinent regulations.

RESEARCH THE PROPERTY’S HISTORY
As part of your project, you should understand when the building was built and for what purpose, and how it relates to its surroundings. While it may not be feasible or desirable to continue the building’s original use, it will help you to understand what the important character-defining features of the property are so that they can be preserved when improvements are made to accommodate continued or new use.

Observe Physical Clues
Start by taking a good look at the building to see if it provides you with clues as to its date(s) of construction and original use. Date stones are the most obvious indicator, but features such as window size and configuration, detailing around the main entrance and cornice or roofline, and even the materials used can help you determine when the building was constructed. You can use books like Field Guide to American Houses by Virginia and Lee McAlester, to identify the features on your building and determine a likely range of dates associated with their use. A historic preservation specialist or architect can help you with this, if necessary.

Conduct Documentary Research
Once you have a general understanding of the building’s form and style, take a look at other sources of information. Tax assessment records often include a date of construction. But beware, in many places, this is not an accurate date. An arbitrary year is often assigned to all old buildings. Tax assessment data is public information and can be found online or at your local tax assessment office.

Historic maps don’t provide a specific date of construction but can help you to narrow construction down to a particular period. For instance, if the property you are concerned about is not included on a map dating to 1875 but does appear on the 1889 map, it is relatively safe to assume that it was constructed between those dates. Some historic maps are available online; others can be found at historical societies or libraries in your area.

Like historic maps, deeds can sometimes help you narrow down a range of possible construction dates. Deeds tell you who owned a property for a specific range of dates. It is relatively rare for a deed to specifically mention construction date, but sometimes, a deed will say something like, “84.5 acres of land containing a brick house and frame barn,” or “the property commonly known as Hosterman’s General Store.” If you are so lucky, you know that the building existed prior to the date of the deed. By checking the previous deed(s), you can begin to narrow down the possibilities. Recorded deeds are public records and can be found online or at your local recorder of deeds office. To trace deeds, start with the current deed for the address or tax parcel, and use the reference in the deeds to follow them backwards in time.

Additional historical information can be found in local and county histories, and in documents such as city directories, historic atlases or old newspapers. Some of these documents can be found online, but more will be housed at your local historical society and/or library.

Understand the Changes that have occurred
Once you have assessed the building visually and completed your archival research, compare the two. Does the date of construction that you determined based on documentary sources match the visual appearance of the building? If not, what has changed? And what do those changes represent or reflect? Was the family growing and adding on to their home? Did changes in dairying practices result in modifications to the barn? Was there a fire in town that resulted in the loss of an older building and its replacement with a new one? While integrity and authenticity are fairly important, it is OK if a property has changed over time. Original is not always the goal. In fact, in many cases, the changes are themselves significant as a reflection of the evolution of the property and story that it tells.

REALITY CHECK
While understanding the story of a place is important, historic preservation is about more than just the history. It is about how the environment – including buildings, landscapes and artifacts – survives to tell that story. If the building has been lost, are there features on the landscape that let you know what was once there? Might there be artifacts or features underground that provide information about people, activities or events important to our history? If there is physically nothing left, or the remnants can no longer tell the story, it is time to move away from historic preservation tools and consider interpretation of the history in another manner. That is not to say that the building cannot or should not be preserved. It just means that standard preservation tools and strategies might not be available to or appropriate for the project.
ESTABLISH THE PROPERTY’S SIGNIFICANCE

Historic properties mean different things to different people. Before moving ahead with your project, take some time to understand the significance of the property you are concerned about.

Talk with the property owner to learn what the building means to him or her. Is it important to them because it was the home of their ancestors, or was the building constructed by their family to house their business? Or is it important to them as a real estate investment or financial asset?

Talk with local elected officials and community groups, and review existing local and regional comprehensive or preservation plans to determine what the significance of the property is to the community. Do they highlight it as an important cultural asset or historic property, or one with potential for economic development? Do they have tools in place that help protect it or that limit what can be done with it?

By understanding what the significance of the property is to those in the area, you will have more success in moving your project forward.

REALITY CHECK

People often try to make the argument that the property they are concerned about is more historic than another and, thus, should get special attention or additional resources. Properties either meet or do not meet the criteria for inclusion in the National Register of Historic Places. At the national and state levels, they are not graded or ranked against one another to determine which ones are the best or most important. It is up to your community to determine what resources are your top priorities for preservation, and do what needs to be done to protect them whether they are included in the National Register or not.

Historic Designation

In addition to knowing what the significance of the property is locally, it will be useful to know whether it has been designated as a historic resource at the state or national level. If the historic and/or architectural significance of the property has not yet been evaluated, you may want to do so since historic designation at the state or national level does not impose regulation and may help a project by providing additional recognition and/or resources.

The National Register of Historic Places

The National Register of Historic Places (National Register) is the official national list of historic places that have been deemed worthy of preservation. In general terms, in order to be eligible for the National Register, a property must be at least 50 years old, and must:

- be associated with events, activities or developments that were important in the past;
- have a strong connection to people who were important in the past;
- exemplify significant architectural or engineering achievements; or
- have the potential to yield important information about the past through archaeological investigation.

The property must also retain integrity to physically reflect its significance. Even if the property’s story is important, if the physical remnants of that story aren’t intact, the property will probably not qualify for the National Register. For more information about the National Register of Historic Places, please see page 4.

State Level Historic Designation

Most states maintain a database of historic properties, as well. Many use the same criteria for evaluation as the National Register, but others have developed additional or alternative criteria. Check with your State Historic Preservation Office for more information on the process and criteria for historic designation in your state.

SMITH HOUSE, Mercersburg, Pa.

The home of Justice William Smith is considered by many to be the birthplace of the Second Amendment, commonly known as the right to bear arms. In 1765, Smith’s Rebellion was the first armed resistance against British military rule leading up to the American Revolution, and many believed it changed the face of history. The rebellion was reportedly planned in Smith’s house, and the battle occurred nearby.

The drawing above shows the Smith House as it is believed to have looked in the 1760’s when Smith’s Rebellion occurred. The photo below shows the house in 2010, when its National Register eligibility was being evaluated. Although this property may indeed be significant, because it no longer visually reflects the period when William Smith occupied it, it is not eligible for inclusion in the National Register for its association with those events or individuals.
ASSESS THE BUILDING’S CONDITION
There are several factors to consider when deciding whether a particular building can and should be saved or preserved. These include, but are not limited to: the significance of the property; its value (economic, cultural and environmental); what will be required to rehabilitate (or preserve or restore) it; and what will be required to maintain and operate it after rehabilitation.

Having a firm understanding of the condition of the property is an important part of that decision-making process. Sometimes small problems are misunderstood, and are unnecessarily perceived as obstacles. Other times, buildings are too far gone for preservation or rehabilitation to make sense. Almost any building can be saved. But that doesn’t mean that doing so is always a smart decision. Whenever possible, consult with a professional experienced in assessing the condition of historic buildings. Don’t mistake a building that needs to be repointed or repainted as one that is not structurally sound. Don’t let crumbling plaster or damaged floors make you think that a building cannot be rehabilitated. But do take the condition of those materials into consideration, and know that there will be time and expenses related to repairing or replacing them.

If the historic property you are working with is not structurally stable, has environmental issues, has dated or deficient mechanical systems, or will need extensive repair or replacement of finish materials, there will be costs associated with making the necessary improvements. It is important that you consider those factors when trying to determine whether the improvements are worth making and can realistically be accomplished.

Structural Integrity
People commonly say that historic buildings must come down because they are not structurally sound and are thus a danger to human life. While this can be true, it is less common than reported and should occur even less often than that. Buildings very rarely become unsafe overnight; even earthquakes and fires don’t necessarily render a building unsound. Much more often, buildings are allowed to deteriorate over time. This deterioration should be prevented or minimized through good maintenance (which can be required using local ordinances), making it rare to find a building that is truly unsafe.

Fire and water are the primary forces that cause problems in historic buildings. Fire can compromise the structural integrity of wood, metal and masonry building components. And water, especially when allowed to come into contact with building materials over extended periods of time, can cause both cosmetic and structural problems. Buildings that have been damaged by fire or water may be able to be rehabilitated. Damaged elements can be repaired or replaced, and mold can be removed. But fires and flood events are cues to you to look carefully at the building for problems that may occur as a result.

Although most often caused by disasters or water infiltration over time, structural problems can occur in other instances as well. Perhaps an interior wall was removed or an opening expanded, leaving insufficient support for the mass above. Or maybe a roof that was designed to carry wood shingles has been covered in much heavier slate. Or, over time, structural members have been penetrated to accommodate modern utilities or attacked by termites or other pests, leaving them weak.

Most severe structural problems present themselves in obvious visible ways, or at least provide visual clues that problems exist. At the same time, not every sag, bulge or crack is a sign of a structural problem. If you see something that concerns you or anticipate that structural problems may exist, hire a professional to assess the condition of the building. Work with others in your area to identify a professional preservationist, architect or engineer with experience working with historic buildings to ensure a valuable assessment. In some places, such as Pennsylvania and Vermont, small grants may be available to help pay for a structural or conditions assessment. Please contact your State Historic Preservation Office or statewide preservation nonprofit for more information.

REALITY CHECK – MAINTENANCE IS KEY
Maintaining buildings in good condition is essential to their preservation. Good roof and site drainage will prevent potential water problems and make taking care of a property much easier and less costly. Maintaining the interior in good condition will help to limit fire hazards and make the building more attractive for occupancy, thus increasing its value.

It is wise to have a cyclical maintenance plan that addresses seasonal and annual activities such as gutter cleaning and tree trimming, as well as periodic projects such as painting and repointing.

MOUNT BETHEL FIREHOUSE,
Northampton County, Pa.

This firehouse has structural problems that are clearly visible and must be considered as part of determining how to move forward with the project. This wall almost certainly could be repaired (through partial reconstruction), but the owner should consider whether doing so makes sense based on the significance and value of the property in its location.
BE REALISTIC ABOUT BUILDING CODES

When they hear the phrase “building codes,” many people throw their hands up in despair, feeling that bringing a building up to code is an insurmountable task. Most often, this is the result of a misunderstanding of code requirements, or an inability or unwillingness to hire the necessary professionals to get the work done properly. Building codes exist to protect us, and in many cases, they help to protect the buildings we care about.

Every building rehabilitation project is unique, and every state, county and municipality has different codes and interpretations of those codes. Therefore, it is essential that you meet with your local code official early in your project to identify the codes used in your area and discuss the requirements that may apply to your project. We recommend that you include a design professional, such as an architect or engineer, in that conversation to act as a translator between code language and common English.

Model Codes

There are no national building codes that govern all building activity. However, the International Code Council has prepared a family of model codes that have been widely adopted and are in use around the country. Where they have been adopted, two of these codes – Chapter 34 of the International Building Code (IBC) or the International Existing Building Code (IEBC) – apply to projects involving the rehabilitation of historic buildings, which are a subset of the larger body of existing buildings.

Chapter 34 of the IBC and the IEBC allow existing buildings to be regulated with different requirements than new buildings, and permit the Building Code Official (BCO) to regulate historic buildings with alternative or less restrictive requirements than other existing buildings.

For the purposes of the IBC and IEBC, a historic building is one that has been listed in or officially determined eligible for the National Register of Historic Places (either individually or as a contributing element of a historic district) at the state or national level, or designated as a historic property locally. If your municipality has adopted both the IBC and IEBC, as you initiate your project, you will need to choose which one of these codes you will use. You may not bounce back and forth between Chapter 34 of the IBC and the IEBC. You must choose one or the other and use it consistently.

It is your responsibility to: 1) demonstrate to your BCO that the building has been designated as historic; 2) let him/her know which building code you plan to use for your project; and 3) make him/her aware in a respectful manner that you are seeking to satisfy the intent of the code without damaging the building’s important character defining features. The earlier in the project you can have this conversation, the more likely you are to avoid frustration and unnecessary project revisions.

Do not address code deficiencies piece by piece. Instead, meet with your architect and code official to look at the building as a whole, identify all of its deficiencies, and come up with acceptable solutions to address them. The goal is to find a middle ground between total preservation and total conformity to the code that provides both “acceptable safety” and “maximum reasonable preservation.”

When Building Codes Apply

Building codes are updated every few years to incorporate new requirements that react to real-life experiences with building safety. As a result, the vast majority of existing buildings do not meet the current code. Buildings that do not conform to current regulations are not necessarily dangerous or inadequate. It is not necessary and would not be reasonable to require everyone to upgrade their building every few years to meet the new regulations. As an alternative, when work is being done to existing buildings, they must be adapted to meet current needs, with the level of code conformance required varying in proportion to the rehabilitation work being done. When the work is minor repair, minimal code conformance is mandated. As the level of work increases, so does the level of compliance with current codes required. To avoid frustration and delay, consult with your local BCO early in the planning stages of your project to determine what level of alteration you will be performing, and what the associated code requirements are.

Remember, for historic buildings, alternative solutions may be possible. Almost every code contains a provision allowing compliance by alternative means and materials. However, acceptance of such alternative solutions and materials is at the discretion of the BCO. To get approval, it is the responsibility of the property owner and/or project designer to demonstrate to the code official that the proposed solutions are necessary to preserve important historic features and that they meet the intent of the code.
**PLAN TO IMPROVE ACCESSIBILITY**

The Americans with Disabilities Act (ADA) is a federal law that provides comprehensive civil rights to people with disabilities. Among other things, the ADA sets forth requirements that must be met when using and altering existing facilities where goods and services are provided to the public. ADA is enforced by the United States Department of Justice (DOJ).

Title II of the ADA applies to “Public Facilities,” such as schools, municipal buildings, libraries and museums. “Public Accommodations,” which are private entities that own, lease or use facilities that provide goods and services to the public, such as restaurants, stores, and office buildings, are covered under ADA Title III. In general, ADA does not apply to private clubs where membership is restricted, religious organizations including houses of worship, or private residences and apartments, unless they also serve as a place of public accommodation. For example, a church that houses a daycare or a house that contains a hair salon would likely need to meet ADA requirements.

For purposes of ADA, qualified historic properties are those that are listed in or eligible for listing in the National Register of Historic Places (either individually or as a contributing element of a historic district) or are designated as historic locally.

Historic properties are not exempt from the ADA, state statutes or local ordinances regarding accessibility. However, qualified historic buildings are not required to comply with the same accessibility requirements that apply to new and non-historic buildings if doing so would have a significant adverse impact on important character-defining features. There are provisions in the ADA that allow for alternate solutions to improve accessibility while preserving historic properties where full compliance with ADA would threaten or destroy the historic or architectural significance of a qualified historic building.

**Requirements for Historic Properties**

State and local government facilities, public accommodations and commercial facilities must be “readily accessible and usable” by individuals with disabilities by meeting the design standards specified in the ADA Standards for Accessible Design (SAD).

Recognizing the need to balance historic preservation and accessibility requirements, SAD sets forth a three-tiered hierarchy of compliance for qualified historic properties.

1) Whenever possible, projects must meet the same standards that apply to accessibility improvements in non-historic existing buildings. In general, these standards require accessible routes from public sidewalks or parking areas to the building, accessible entrances, accessible routes within the building, and accessible facilities such as restrooms.

2) Where the State Historic Preservation Office (SHPO) or Advisory Council on Historic Preservation (ACHP) determines that compliance with the requirements for accessible routes, entrances or toilet facilities would threaten or destroy the historic significance of the property, exceptions for that element may apply. This provides greater flexibility in an attempt to provide an improved level of access while preserving the historic property. Use of these exceptions is not provided across the board; for example, if you are able to provide accessible restrooms without compromising the important features of your building, you will be required to do so, even if providing accessible routes or entrances is not possible.

3) In the rare instances where meeting even the minimum requirements would still threaten or destroy the historic significance of the property, alternative methods of access to programs or services may be provided. For example, a house museum may offer an audio/video program to depict portions of the building that are not accessible; or a restaurant or store that cannot be made accessible may offer curbside service or home delivery. This, too, requires confirmation from the SHPO or ACHP that there would be significant adverse impact to the historic property.

**Barrier Removal**

Building code and accessibility upgrades are usually only required when alterations are planned. However, there is an obligation under ADA to remove architectural and communication barriers from public accommodations in existing buildings even when no alterations are planned if the removal is “readily achievable,” or can be accomplished without much difficulty or expense, based on the size and resources of the business or organization. If complete barrier removal is not readily achievable, work to remove barriers must be ongoing as resources become available.

DOJ encourages public accommodations to work with design and preservation professionals, code officials and organizations representing persons with disabilities to identify existing barriers and develop a plan to address their removal. The following four priorities may be used to help guide decisions regarding barrier removal:

1) provide access from a site arrival point (i.e., sidewalk or parking area);
2) provide access to areas where goods and services are made available to the public;
3) provide access to restrooms, if restrooms are available to customers; and
4) other necessary measures.

If full compliance is not achievable, at least 20% of rehabilitation costs must be spent on improving handicap accessibility when alterations take place.

**RESOURCES**

CONSIDER FIRE SUPPRESSION

Preventing fires from starting is the best way to keep people safe and protect historic properties. Keeping heat sources such as matches, cigarettes, candles, electrical wires, heaters and furnaces away from things that can burn such as paper, fabric, wood or plastic is the best way to prevent fires. When fires do start, it is important to keep them small. This can be done through compartmentalization, or limiting the space in which the fire can burn, or suppression, such as putting water or appropriate chemicals on the fire.

Fire Suppression

Just as there are automated fire detection and alarm systems that notify people of fires, there are automated fire suppression systems that can go to work immediately to begin putting out a fire, which increases life safety and reduces damage caused by the fire and traditional fire fighting methods. Fire suppression systems are becoming a requirement in more and more building codes every year, and their installation is usually a good idea even when not required. If a fire suppression system already exists in your building, check to make sure it works and that the water supply is adequate. If a fire suppression system is not already in place, consider installing one as part of your rehabilitation project.

Conventional fire suppression systems consist of the following components: a water supply, a network of pipes or tubes that transport water through the building, and a series of sprinkler heads that distribute the water on the fire. There are a variety of types of each of these components. The use of your building, its historic features and your budget will help you select the components that suit the needs of your project. Please see Fire Detection & Suppression for Buildings in Historic Districts for additional information that will help guide you through these decisions.

Common Misunderstandings

Sprinkler heads are heat activated, and go off individually only when the temperature in their immediate area is extremely high (typically in excess of 165 degrees F). They are not activated by smoke. Despite what is commonly shown in movies, sprinkler heads do not go off when an alarm is pulled, nor do they all activate at once. Only those sprinkler heads in the vicinity of the fire will be activated. Automatic sprinklers cannot, however, turn themselves off. Once they have been activated, you or your local fire or water department will need to shut off water to the system to stop the flow of water.

Many people, especially those concerned about the interior finishes or contents of their historic building, worry about water damage associated with automatic fire suppression systems. Typical sprinkler heads distribute an average of 15 to 20 gallons of water per minute of flow. Statistically, more than 82% of all fires are controlled by four or fewer simultaneously operating sprinkler heads. This is significantly less than the water that is introduced into a building by a fire hose – which typically dispenses between 100 and 250 gallons per minute, and multiple hoses are often required.

People often say that they don’t want to install sprinklers because water will ruin their belongings. Remember, sprinklers are only activated when there is a fire. Fire and water from fire hoses will certainly cause more damage to your possessions than water from sprinkler heads working to extinguish a fire. In cases where water is not an appropriate suppression agent, alternative fire suppression systems can be used.

For this building, installation of a sprinkler system was less expensive and had less of an impact on the surrounding historic district than adding a fire escape.

Fire Suppression System vs. Fire Escape

Many historic communities across the country are being littered with modern fire escapes in response to fire safety requirements in the building codes. While it is absolutely essential that people are able to exit buildings safely in the event of fire, fire escapes are not the only way to do so. Before ruling out a fire suppression system and installing a fire escape, understand the real costs associated with each alternative, including financial costs associated with design, construction and operation, as well as the impact to the integrity and character of the historic building and its surroundings. You may be surprised to find that not only are they less visually intrusive, but fire suppression systems are often comparable in cost—and they have the added benefit of helping to protect the building and its contents, as well as its occupants.
UPGRADE MECHANICAL SYSTEMS
Because of their importance in making buildings usable and their cost to install, repair and operate, mechanical systems should also be considered when evaluating a building’s condition.

Electric
What is the age and condition of the property’s electric service and wiring? Is the service ample to support modern use? Is the wiring relatively new and in good condition? Electrical problems are one of the leading causes of destructive and dangerous fires, so serious consideration should be given to upgrading electrical systems as part of a comprehensive rehabilitation project.

Plumbing
Plumbing systems often require less frequent modification than electric or heating and cooling systems. However, they should still be considered. Is the plumbing on a property adequate? Will modifications be necessary to accommodate modern use? If so, those costs should be included as part of the project.

Heating/Cooling
In order for a historic building to be suitable for modern use, it will most likely need to have some sort of operating heating and/or cooling system in place. What is the current heating/cooling system? Is it operable? Is it efficient? If not, what needs to be done to remedy this?

Concealing Mechanical Systems
Some of the largest expenses associated with installing and repairing mechanical systems in historic buildings are those incurred concealing a new system and accessing systems that have previously been concealed. For instance, it costs significantly more to install a fire suppression system in a historic building if the pipes must be concealed from view and thus be run inside of existing walls. Similarly, repairing a damaged electric line or pipe will be more labor intensive and thus costly when behind interior walls than when exposed in a basement. Concealing systems makes them less visually intrusive but often requires a more substantial physical impact to the historic building materials. The values of aesthetics, physical impact and economy should be weighed during the decision-making process for each individual project, with the goal of striking a healthy balance among the three.

IMPROVE ENERGY EFFICIENCY
When planning rehabilitation projects, people often budget for replacing windows and doors in order to improve energy efficiency. Studies have shown conclusively that this is NOT a cost-effective effort, and that much greater energy savings can be made at much less cost.

The greatest benefits are typically realized by
1) modifying use behavior;
2) limiting air infiltration through measures such as caulking and weather-stripping;
3) installing insulation in the attic;
4) upgrading mechanical systems and appliances to be more efficient;
5) utilizing shading devices such as trees, awnings and shades; and
6) repairing or upgrading windows and doors.

Weatherization
Weatherizing a historic building involves implementing cost-effective measures to make a building’s envelope more energy efficient in a way that has minimal impact on the historic building’s design and materials.

Before energy improvement measures are implemented, an energy audit should be undertaken to evaluate the building’s current thermal performance and identify any deficiencies that may exist. This will provide the basis for an action plan of steps necessary to reduce energy consumption.

RESOURCES
ADDRESS ENVIRONMENTAL ISSUES

Historic buildings often contain materials that are considered to be environmental hazards. Most commonly, this includes lead paint, asbestos and/or mold in the building, or petroleum products or chemicals in the ground on the site. The presence of these or other environmental issues does not mean that a building cannot be rehabilitated. However, you should take care to understand the extent of the issue and the remediation process and be realistic about the cost of addressing the problem. When in doubt, hire professional experts to assess the environmental issues and make recommendations. Beware of hiring consultants or contractors that profit from remediation to do the assessment, as they may have an interest in exaggerating the need for intervention.

Lead

Lead, which is harmful to our health when ingested, was once used in many household items, including ceramics, cans, toys, paint, and plumbing fixtures, as well as in gasoline. While it is still present around us in various forms, the most commonly recognized form of lead hazard in historic buildings is lead paint, which can be ingested when it is chipped or becomes dust.

Buildings that pre-date 1978 often contain lead paint. Left untouched, lead paint is not dangerous. However, when it is chipped, sanded or otherwise disturbed, it can be inhaled or swallowed. By maintaining a clean space—during renovation projects as well as general occupancy and operation of a building—the hazards associated with lead paint can be kept to a minimum. For instance, window sills should be dusted or vacuumed regularly to minimize ingestion of lead dust.

During renovation projects where painted historic materials such as wood and plaster or old plumbing will be disturbed, caution should be exercised to contain and safely dispose of any dust and paint chips created. The area in which the project is being done should be isolated from the rest of the building by closing doors and turning off circulating air, using plastic sheeting as necessary to enclose the space. Items that can be removed from the room, such as carpets, furniture and books should be taken out of the work area, and items that cannot be removed should be tightly wrapped in plastic.

Water can be used to help minimize the creation and movement of dust during work. The area should be carefully cleaned upon completion, and the paint chips and other materials disposed of properly. People working with materials that might contain lead should wear a respirator during work and clean their clothes, skin and hair thoroughly upon completion to avoid ingesting significant amounts of lead dust. Taking these basic precautions can all but eliminate the health hazards associated with lead paint.

To minimize the risks associated with lead paint, the Environmental Protection Agency (EPA) passed a rule that requires contractors performing renovation, repair, and painting projects that disturb lead-based paint in pre-1978 buildings obtain certification in lead-safe work practices. There are a variety of certification levels, but contractors with training and experience in lead-safe renovation and/or lead hazard abatement can be hired to ensure lead safety.

The ingestion of significant quantities of lead can be harmful to human health. While lead must be taken seriously, the hazards associated with the presence of lead can be easily managed and are rarely significant enough to be justification for a preservation project not being feasible.

RESOURCES

MITIGATING HAZARDS

In many cases, the presence of lead paint and/or asbestos in a historic building is cited as the reason that a rehabilitation project is not feasible. Those not interested in seeing the historic building survive try to appeal to the emotions of those that don’t fully understand the materials by stating that the presence of these materials is a hazard to human health, and thus must be removed. They talk about the high costs associated with removing the lead or asbestos hazard, and show that it makes the project too expensive.

Both lead and asbestos can pose a hazard to human health when ingested. When left intact and maintained in good condition or encapsulated, these materials cannot be ingested. However, when removed for replacement or demolished, those materials are made friable, thus posing a health hazard.

While there are costs associated with mitigating lead or asbestos hazards, it is important to note that those hazards must be mitigated as part of demolition, as well. Thus, mitigation costs must be factored into the demolition alternative, as well, negating their validity as a point of argument against the feasibility of rehabilitation.

In community discussions regarding whether to rehabilitate or demolish the former East Oreland School in Upper Dublin, Pa., costs associated with mitigating environmental hazards and addressing building code and accessibility requirements were cited as primary reasons for demolition.

RESOURCES

Asbestos in Your Home: http://www.epa.gov/asbestos/pubs/ashome.html#4
Mold

Mold, which is not unique to older and historic buildings, can also be harmful to human health. Mold begins to grow on materials that stay wet longer than two or three days. The longer it grows, the greater the health hazard and the harder it is to control. Professionals can be hired to clean up mold. If you plan to remove mold yourself, the following process is recommended.

- Wear protective gear during clean up, especially a mask to prevent excessive inhalation.
- Isolate the work area by sealing off doors and vents. Do not run the central air during mold clean-up.
- Remove and replace moldy porous materials, such as carpeting and upholstery, wet insulation, gypsum board or drywall, and ceiling tiles.
- Remove vinyl wallpaper and flooring, since they hold moisture in floors and walls.
- Clean surface mold from non-porous materials such as concrete, glass, metal and solid wood. Wash dirty or moldy materials with non-phosphate, non-sudsy all-purpose cleaners. Use a disinfectant to kill any mold missed by the cleaning, then rinse to remove any sediment, chemicals and mold spores.
- Consider applying a borate treatment to wood framing to provide resistance to termites, decay and mold.
- DO NOT apply sealants to wood.
- Dry all wet materials as quickly as possible by closing windows and turning on the air conditioner or heat, running fans, and using a dehumidifier, if possible.
- Continue looking for signs of moisture or new mold growth. If mold returns, repeat cleaning and use speed drying equipment.

This basement was not dried out quickly after a flood, so mold began to grow on the walls. Porous materials, like carpet and drywall should be replaced, while non-porous materials can be cleaned and disinfected to remove the mold and mold spores.

Pests

Insects and other pests such as mice and squirrels can damage historic buildings, and should be considered when assessing the condition of a building. Insects are most likely to infest wood that is exposed (not painted) or damp. Thus, maintaining a building in good condition is important to prevent insect infestation.

- Termites live in colonies that can be quite large and thus highly destructive to buildings. They eat wood from the inside out, so often where they are present, wood looks intact from the outside but has been structurally compromised within. Termites generally access wood above ground by building tubes to travel through, which are the telltale sign of a termite infestation.
- Carpenter Ants are large and live in protected cavities above ground, often in buildings. Carpenter ant colonies tend to start in moist areas. Unlike termites, carpenter ants do not eat wood. However, as their colony grows, they expand their original cavity, which means they often have to remove wood or other materials, causing damage to historic buildings. Relatively large, oval holes in wood are often signs of carpenter ant infestation.
- Powderpost Beetles and Woodworms colonize in old, seasoned wood and can do significant damage. They create small circular entry holes, and often kick out wood dust or frass as they bore through the wood. Products containing sodium borate can be used to treat wood to prevent powderpost beetle infestation.
- Carpenter Bees are large bees that look like bumblebees, and bore large round holes in exposed wood trim elements. They do not cause significant structural damage, but their holes should be closed to prevent water infiltration and resulting damage.

In some cases, professional treatment is required to eliminate insects or repair the damage caused to structural elements. Insect damage is rarely severe enough to be irreparable. Where structural members have been compromised, they can often be stabilized by attaching another member or replacement. But insect damage and necessary repairs should be considered when assessing the condition of a historic building.
Conclusion

EVALUATE THE PROJECT

This four-part document was intended to provide you with information and tools that you may need to make informed decisions about your historic preservation project. Section 1 discussed the importance of understanding the problem and how to build support for your effort. Section 2 was intended to provide additional information about your building, and what your rehabilitation project will likely entail. Section 3 talked about the need to consider a wide range of alternatives for the historic property, and use appropriate tools to move the project forward. And, finally, Section 4 provided an overview of the financial considerations associated with historic preservation projects.

By now, you have defined the problem and understand how the community feels about it. You understand the building’s significance and condition, and recognize its cultural, environmental and economic value. You understand the requirements associated with making changes to its use, as well as the costs associated with doing so. You have assessed where the necessary funds will come from and have an idea of whether or not the new use will be sustainable.

So now you can make a responsible decision about whether to take on this preservation project. Is the building important to you? Is there a reasonable chance that you will be successful and able to sustain the project over time? If so, go for it!

Our goal is not to discourage you from embarking on a project, but rather to encourage you to think it all the way through before jumping in. In most cases, if there was an easy solution the project would already be done. The historic properties that need our help are those where there isn’t an easy answer. That doesn’t mean that you shouldn’t attempt the project. Just approach it in a logical manner, and think it through carefully. With some creativity and a lot of hard work, many preservation projects are accomplished every year.

Saving historic properties is often a slow process, and one that requires creativity and persistence. Don’t get discouraged if your project takes time. In fact, assume it will take at least twice (if not three times) as long as you think it should. While some properties are rehabilitated in just a year or two, it is not uncommon for projects led by individuals or volunteer-based organizations, among others, to take ten years or more. Realize that historic preservation is a marathon not a sprint, and pace yourself accordingly. For lengthy or phased projects, remember that cyclical maintenance and repairs may be required even before the project is complete.

Good luck with your historic preservation project. Don’t hesitate to reach out to your partners at your local and state preservation nonprofit, your State Historic Preservation Office and the National Park Service if you need help along the way.

Each year, Preservation Pennsylvania works with its partners to recognize preservation projects with awards. And each year we are stunned by how much good work is happening and the challenges that are being overcome along the way. Check with your state or local nonprofit or your State Historic Preservation Office to see if there are preservation awards in your area.

Real Estate Check

Nothing is ever really “saved.” Ongoing maintenance is critical to sustaining historic properties. Vacancy and deferred maintenance commonly results in the endangerment of historic properties. Even some well-intentioned property owners are guilty of allowing demolition by neglect.