

February 24, 2011

BENICIA HISTORIC PRESERVATION REVIEW COMMISSION

REGULAR MEETING AGENDA

City Hall Commission Room

Thursday, February 24, 2011

6:30 P.M.

I. OPENING OF MEETING

A. Pledge of Allegiance

B. Roll Call of Commissioners

C. Reference to Fundamental Rights of Public - A plaque stating the Fundamental Rights of each member of the public is posted at the entrance to this meeting room per Section 4.04.030 of the City of Benicia's Open Government Ordinance.

II. ADOPTION OF AGENDA:

III. OPPORTUNITY FOR PUBLIC COMMENT

This portion of the meeting is reserved for persons wishing to address the Commission on any matter not on the agenda that is within the subject matter jurisdiction of the Historic Preservation Review Commission. State law prohibits the Commission from responding to or acting upon matters not listed on the agenda. Each speaker has a maximum of five minutes for public comment. If others have already expressed your position, you may simply indicate that you agree with a previous speaker. If appropriate, a spokesperson may present the views of your entire group. Speakers may not make personal attacks on commissioners, staff or members of the public, or make comments which are slanderous or which may invade an individual's personal privacy.

A. WRITTEN COMMENT

B. PUBLIC COMMENT

IV. PRESENTATIONS

A. OPEN GOVERNMENT PRINCIPLES

The City Attorney will make a presentation on the Open Government ordinance. The Open Government ordinance requires that all public officials and some employees read the Open Government Ordinance and attend an annual training on the ordinance. This training will also include a review of the Brown Act, the City's Code of Conduct and other related documents.

V. CONSENT CALENDAR

Consent Calendar items are considered routine and will be enacted, approved or adopted by one motion unless a request for removal for discussion or explanation is received from the Historic Preservation Review Commission or a member of the public by submitting a speaker slip for that item.

***Any Item identified as a Public Hearing has been placed on the Consent Calendar because it has not generated any public interest or dissent. However, if any member of the public wishes to comment on a Public Hearing item, or would like the item placed on the regular agenda, please notify the Community Development Staff either prior to, or at the Historic Preservation Review Commission meeting, prior to the reading of the Consent Calendar.**

A. [Approval of Minutes of January 27, 2011](#)

VI. REGULAR AGENDA ITEMS

A. [WORKSHOP - WINDOW STANDARDS](#)

PROPOSAL:

Commission will review and discuss window standards in relation to the Historic District. This addresses Priority 2.1 of the commission's Priority List of Discussion Items.

B. [PRIORITY LIST OF DISCUSSION ITEMS – Continued from January 27, 2011](#)

Staff and Commission will discuss and review the Commission's discussion items, including ranking of topics.

VII. COMMUNICATIONS FROM STAFF

A. UPDATE ON 251 WEST G STREET

VIII. COMMUNICATIONS FROM COMMISSIONERS

IX. ADJOURNMENT

Public Participation

The Benicia Historic Preservation Review Commission welcomes public participation.

Pursuant to the Brown Act, each public agency must provide the public with an opportunity to speak on any matter within the subject matter jurisdiction of the agency and which is not on the agency's agenda for that meeting. The Historic Preservation Review Commission allows speakers to speak on agendized and non-agendized matters under public comment. Comments are limited to no more than 5 minutes per speaker. By law, no action may be taken on any item raised during the public comment period although informational answers to questions may be given and matters may be referred to staff for placement on a future agenda of the Historic Preservation Review Commission.

Should you have material you wish to enter into the record, please submit it to the Commission Secretary.

Disabled Access

In compliance with the Americans with Disabilities Act (ADA), if you need special assistance to participate in this meeting, please contact the ADA Coordinator at (707) 746-4211. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

Meeting Procedures

All items listed on this agenda are for Commission discussion and/or action. In accordance with the Brown Act, each item is listed and includes, where appropriate, further description of the item and/or a recommended action. The posting of a recommended action does not limit, or necessarily indicate, what action the Commission may take.

The Historic Preservation Review Commission may not begin new public hearing items after 11 p.m. Public hearing items, which remain on the agenda, may be continued to the next regular meeting of the Commission, or to a special meeting.

Pursuant to Government Code Section 65009; if you challenge a decision of the Historic Preservation Review Commission in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing described in this notice, or in written correspondence delivered to the Historic Preservation Review Commission at, or prior to, the Public Hearing. You may also be limited by the ninety (90) day statute of limitations in which to file and serve a petition for administrative writ of mandate challenging any final City decisions regarding planning or zoning.

Appeals of Historic Preservation Review Commission decisions that are final actions, not recommendations, are considered by the Planning Commission. Appeals must be filed in the Public Works & Community Development Department in writing, stating the basis of appeal with the appeal fee within 10 business days of the date of action.

Public Records

The agenda packet for this meeting is available at the City Clerk's Office, the Benicia Public Library and the Public Works & Community Development Department during regular working hours. To the extent feasible, the packet is also available on the City's web page at www.ci.benicia.ca.us under the heading "Agendas and Minutes." Public records related to an open session agenda item that are distributed after the agenda packet is prepared are available before the meeting at the Public Works & Community Development Department's office located at 250 East L Street, Benicia, or at the meeting held in the City Hall Commission Room. If you wish to submit written information on an agenda item, please submit to Gina Eleccion, Management Analyst, as soon as possible so that it may be distributed to the Historic Preservation Review Commission.

 [Open Government \(pdf\)](#)

 [January 27, 2011 Minutes \(pdf\)](#)

 [Window Workshop \(pdf\)](#)

 [Discussion Items \(pdf\)](#)

AGENDA ITEM
HISTORIC PRESERVATION REVIEW COMMISSION MEETING:
FEBRUARY 24, 2010
INFORMATIONAL ITEMS

DATE : December 29, 2010

TO : Historic Preservation Review Commission

FROM : City Attorney

SUBJECT : **COMPLETION OF OPEN GOVERNMENT AWARENESS TRAINING**

RECOMMENDATION:

Complete open government awareness training.

EXECUTIVE SUMMARY:

The Open Government ordinance requires that all public officials and some employees read the Open Government Ordinance and attend an annual training on the ordinance. This training will also include a review of the Brown Act, the City's Code of Conduct and other related documents.

BUDGET INFORMATION:

There is no fiscal impact.

BACKGROUND:

The training includes a review of the Brown Act, conflict of interest issues, ethics, due process and open government tips for effective meetings. Please sign and return the certificate of completion (provided at the meeting) to the City Clerk's office or the City Attorney's office once you have read the ordinance and completed the training. It is not necessary to sign and return page 4 of the Code of Conduct since your signature on the certificate of completion includes verification that you have reviewed the Code.

Attachments (*provided only to Commission and City staff*):

- Title 4 of the Benicia Municipal Code (Open Government Ordinance)
- The 2011 Brown Act (previously distributed by staff)
- Participating in City Council Meetings
- Open Government Tips
- Code of Conduct
- Whistleblower Policy
- Can I Vote?



**BENICIA HISTORIC PRESERVATION REVIEW COMMISSION
REGULAR MEETING MINUTES**

**City Hall Commission Room
Thursday, January 27, 2011
6:30 P.M.**

I. OPENING OF MEETING

- A. Pledge of Allegiance**
- B. Roll Call of Commissioners**

Present: Commissioners Crompton, Mang, McKee, Taagepera, Van
Landschoot, White and Chair Haughey

Absent: None

Staff Present:

Melissa Morton, Land Use & Engineering Manager

Lisa Porras, Senior Planner

Doug Vu, Associate Planner

Gina Eleccion, Management Analyst

Harvey Higgs, Building Official

Rick Knight, Parks & Building Maintenance Superintendent

- C. Reference to Fundamental Rights of Public** - A plaque stating the Fundamental Rights of each member of the public is posted at the entrance to this meeting room per Section 4.04.030 of the City of Benicia's Open Government Ordinance.

II. ADOPTION OF AGENDA:

On motion of Commissioner Crompton, seconded by Commissioner White, the agenda was adopted by the following vote:

Ayes: Commissioners Crompton, Mang, McKee, Taagepera, Van
Landschoot, White and Chair Haughey

Noes: None

Absent: None
Abstain: None

III. OPPORTUNITY FOR PUBLIC COMMENT

A. WRITTEN COMMENT

None.

B. PUBLIC COMMENT

Jack MacCoun, 251 West G – Façade renovation is complete. He commented on the windows he installed for his living room.

IV. PRESENTATIONS

None.

V. CONSENT CALENDAR

On motion of Commissioner White, seconded by Commissioner Taagepera, the Consent Calendar was approved by the following vote:

Ayes: Commissioners Crompton, Mang, Taagepera, Van Landschoot,
White and Chair Haughey

Noes: None

Absent: None

Abstain: Commissioner McKee

A. Approval of Minutes of December 16, 2010

VI. REGULAR AGENDA ITEMS

A. CITY HALL WINDOW REPLACEMENT – 200/250 EAST L STREET

11PLN-1 Design Review
APN 88-141-060

PROPOSAL:

The applicant requests design review approval to replace existing aluminum windows with wood windows at the City Hall Complex, which is designated as a Landmark to the Downtown Historic Overlay District and makes it subject to the Downtown Historic Conservation Plan design guidelines for Commercial Building Types, Historic Structures. Due to the cost of the windows, replacement would be phased and completed over time.

Recommendation: Approve a window replacement program to an existing civic complex, based on the findings and subject to the conditions identified in the proposed resolution.

Gina Eleccion, Management Analyst, gave an overview of the replacement program. Rick Knight, Parks & Community Services Superintendent, provided a sample of the window for the commission's review. He noted that the cost is over \$200,000 to replace the front façade windows. He further noted that due to the custom windows, they would be installed professionally. He noted that they would require painting every five to seven years. He noted that the windows proposed are per the exact specifications of the windows installed in 1927. He further noted that staff is required to go out to bid for projects over a certain threshold.

The public hearing was opened. There was no public comment. The public hearing was closed.

Commissioners discussed the proposal. There was a comment about the cost of maintenance. In addition, it was noted that professional installation is beneficial. Commissioners are pleased that the window policy and Secretary of the Interior Standards are being followed.

RESOLUTION NO. 11- (HPRC) A RESOLUTION OF THE HISTORIC PRESERVATION REVIEW COMMISSION OF THE CITY OF BENICIA APPROVING A WINDOW REPLACEMENT PROGRAM TO AN EXISTING CIVIC COMPLEX LOCATED AT 200 AND 250 EAST L STREET

On motion of Commissioner White, seconded by Commissioner Van Landschoot, the above Resolution was adopted by the following vote:

Ayes: Commissioners Crompton, Mang, McKee, Taagepera, Van Landschoot, White and Chair Haughey
Noes: None
Absent: None
Abstain: None

B. VERBAL UPDATE - RELOCATION OF FORMER BENICIA HIGH SCHOOL SCOREBOARD

PROPOSAL:

As part of the City Hall parking lot upgrade project, the former Benicia High School scoreboard will have to be moved. Staff is proposing to relocate the scoreboard within the existing parking lot to preserve the historic feature in its original location.

Recommendation: Discuss relocation of the scoreboard to the eastern fence of the parking lot, adjacent to the Benicia Post Office.

Gina Eleccion, Management Analyst, gave an update that the scoreboard is currently proposed to be moved to the fence on the eastern side of the property.

Karen Burns, 1330 East 3rd Street, noted that she has a petition to relocate the scoreboard to the slope near the City Attorney's office. She commented on Dr. Sanborn and his contribution to the community. In addition, she noted that the Quonset huts are historic as well.

The public hearing was closed.

Commissioners questioned staff on the location. Melissa Morton, Land Use & Engineering Manager, noted that staff could look at the location proposed to see if it's feasible. Commissioners would not like to see this fall through the cracks.

C. 832 FIRST STREET – MINOR ALTERATIONS TO FRONT AND REAR ELEVATIONS, INCLUDING INSTALLATION OF ACCESSIBILITY RAMP

10PLN-83 Design Review
APN 089-052-300

PROPOSAL:

The applicant requests design review approval to alter an existing commercial building. Alterations consist of reconfigured doors at the front and rear elevations, and installation of a new access ramp along the primary storefront.

The existing building is located along First Street in Downtown Benicia, which makes it subject to the Downtown Historic Conservation Plan design guidelines for Upper First Street, Type 1 structures. In addition, the project is subject to the Downtown Mixed Use Master Plan's Town Core zone designation and accompanying development standards.

Recommendation: Approve alterations to an existing commercial building, consisting of reconfigured doors at the front and rear elevations, and installation of a new access ramp along the primary storefront, located at 832 First Street based on the findings and subject to the conditions listed in the proposed resolution.

Commissioner McKee recused himself due to being the architect on the project.

Lisa Porras, Senior Planner, gave an overview of the project. She noted that the applicant is proposing to modify the façade for ADA compliance. She noted that this project is in compliance with the Downtown Mixed Use Master Plan.

Commissioners questioned the sidewalk projection. It was noted that the sidewalk needs to be repaired. There was a question as to why the ADA ramp is proposed in the front. Harvey Higgs, Building Official, noted that the elevation in the rear drops a full story, so it is not feasible to install a ramp in the rear. He noted that the California Building Code requires an ADA ramp be installed. He noted that based on the valuation of the project, there is a requirement for at least \$12,000 of ADA accessibility upgrades. There were questions about other ADA ramps. Harvey Higgs noted that on the other historic buildings downtown, they met the requirements or did not exceed the valuation to require these improvements. The code is designed to increase accessibility. The entryway is given priority for ADA improvements. There was a question if a ramp could be sloped. It can't exceed 1:12 and requires a 5' square landing.

The public comment was opened.

Mark Stevens, Business Owner – He gave an overview of the proposal. He would like to see the sidewalk fixed. There are major interior improvements. He noted that the ramp was reviewed by Public Works.

Lisa Porras noted that the Engineering Division is not requiring improvements of the sidewalk. She also noted that a revised resolution was submitted that includes a condition for an encroachment agreement, rather than just an encroachment permit. Melissa Morton noted that this is required in a public right-of-way.

Melissa Morton conferred with the architect on the project. She noted that the ADA accessibility is in the single northern door. The existing double doors on the south will remain. If the grade could be brought down to less than 6", then the handrails would not be required.

Kathy Stevens, Business Owner – Noted they just want to do what's right.

The public hearing was closed.

Commissioners discussed the project. There was a suggestion to add a condition to the resolution regarding the 6" threshold and the handrail. The applicant would like to open as soon as possible. It was noted that the

ramp is not a City requirement, but an ADA requirement. There is no ability to get rear access. Commissioners would like to revise the conditions so that a railing is not required.

It was noted that in Berkeley and Napa there are not ramps and railings.

The Commission added the following condition:

1. Applicant/Architect redesign so that a railing is not required. If a rail is required, the final design would come back to the Commission for approval.

Commissioner Van Landschoot would like to see no rail. Commissioners noted that if a rail is required, that it be more simplistic.

RESOLUTION NO. 11-2 (HPRC) - A RESOLUTION OF THE HISTORIC PRESERVATION REVIEW COMMISSION OF THE CITY OF BENICIA APPROVING MINOR MODIFICATIONS TO AN EXISTING COMMERCIAL BUILDING LOCATED AT 832 FIRST STREET

On motion of Commissioner White, seconded by Commissioner Crompton, the above Resolution was adopted by the following vote:

Ayes: Commissioners Crompton, Mang, Taagepera, Van Landschoot, White and Chair Haughey
Noes: None
Absent: None
Abstain: Commissioner McKee

D. WORKSHOP - REHABILITATION OF OFFICERS QUARTERS DUPLEX AT BENICIA ARSENAL - 963 JEFFERSON STREET

08PLN-28 Design Review
APNS 80-150-020-01 AND 80-150-030-01

PROPOSAL:

The applicant requests design review approval to make the following exterior changes to the building for future use as a bed and breakfast facility: 1) Demolish the existing brick moat retaining wall, expand the moat area and construct a new moat with a concrete-masonry unit retaining wall; 2) Reconstruct the east-facing veranda, replacement of porch elements including the Corinthian columns and balustrades; 3) Reconstruct and enlarge the south entry porch; and 4) Construct a new sunken courtyard at the northwest corner of the building.

The building is designated as a Contributing Property to the Local Historic Arsenal District, which makes it subject to the Arsenal Historic Conservation Plan design guidelines for Historic Buildings. The building is also listed as a contributor to the Benicia Arsenal National Register Historic District and the Arsenal is listed as California State Landmark No. 176. The California Environmental Quality Act (CEQA) compels historic projects to be consistent with the Secretary of Interior Standards for the Treatment of Historic Properties.

Recommendation: Review the preliminary proposal and provide feedback to applicant.

Commissioner McKee rejoined the meeting.

Doug Vu, Associate Planner, gave an overview of the project. He noted that the applicant and property owner is requesting preliminary review of this project. He noted that the applicant is available to answer questions.

Mark Mitchell, Attorney, gave a presentation on the project. He noted that Stephen David has owned the property for a number of years. He noted that a number of features have been repaired on the property. Page & Turnbull prepared an analysis of the property and the proposal. He noted that Mr. David would like to retain the historic character of the building, and is sensitive to the Secretary of the Interior's Standards for Rehabilitation. Plans were reviewed. He submitted a copy of his presentation notes to the Commission. They are requesting the Commission's input.

Commissioners had specific questions about the project. Mr. Mitchell and Mr. David reviewed the plans. They noted that the restaurant is proposed to be in the basement. It was noted that the moat is collapsing.

Karen Burns, 1330 East Third – She noted that the Arsenal was listed on the National Register. She wants to safeguard the historic integrity of the building.

The following comments were provided to the applicants:

1. Railing - The Historical Building Code can be used. Section 8504 addresses this issue.
2. Front porch expanding in width is not desirable.
3. Moat along the northwest corner (rear of property) can be extended to create a courtyard for the restaurant.
4. Replace corbels.

5. East side – new CMU wall out. Don't fill in with concrete block. Could use a secure lattice.
6. Replacement Corinthian columns should be wood in material, and not polymer unless evidence can be shown where they have been appropriately used in historic buildings.
7. Page & Turnbull report was comprehensive. Report notes features that do not comply with the Standards. Recommendations to comply should be followed.
8. All changes must comply with the Secretary of the Interior Standards.
9. Concrete wall should not be constructed. Concrete piers clad with sandstone are preferable.
10. Area behind lattice should remain open.
11. Moat on east side okay. Issues with west side. Material for rail should be reviewed.
12. Mang – Lattice/concrete okay. No change to front porch size. Look at moat and columns.
13. Front doors – will be replaced.
14. Pool fence – will be replaced.
15. Replace keys in corners.
16. Streetscape is important, therefore no changes to the front façade of the building should be made.

A site visit will be scheduled for Commissioners to view the property. Karen Burns would like notification of this.

E. PRIORITY LIST OF DISCUSSION ITEMS

Staff and Commission will discuss and review the Commission's discussion items, including ranking of topics.

It was the consensus of the Commission to continue this item to the next meeting.

VII. COMMUNICATIONS FROM STAFF

A. VERBAL UPDATE ON 251 WEST G STREET

Commissioners Taagepera recused herself due to property ownership within 500'.

Gina Eleccion noted that based on Mr. Maccoun's comments, staff is not prepared to discuss this item. A memo will be prepared for the next meeting.

Commissioner Taagepera rejoined the meeting.

Gina Eleccion advised the Commission that the Historic Context Statement is going to the City Council on February 15th for acceptance. Once the document is accepted, copies will be provided to the Commission.

VIII. COMMUNICATIONS FROM COMMISSIONERS

Commissioner White questioned what is going on in the space adjacent to the Rellik. Melissa Morton noted that a design review application was submitted, but could not be discussed as it is not on the agenda.

Commissioner Taagepera recommended Commissioners look at CLG requirements for the priority list of discussion items. She requested an update on the Mills Act information. She noted that she attended the CPF workshop in Berkeley. It was informative and she will share the information with the Commission.

IX. ADJOURNMENT

Chair Haughey adjourned the meeting at 9:56 p.m.



Public Works &
Community Development Department

MEMORANDUM

Date: February 17, 2011
To: Historic Preservation Review Commission
From: Gina D. Eleccion, Management Analyst
Re: Workshop - Window Standards

In December 2005, the Commission drafted Resolution No. 05-14, formalizing their desire for window standards for designated buildings in the Downtown Historic Conservation District. These window standards allowed for staff-level approval of windows meeting the criteria in the resolution. At the May 27, 2010 meeting, the Commission reviewed and modified the original resolution to incorporate National Park Service Preservation Brief 9 "The Repair of Historic Wooden Windows". Preservation Brief 9 includes standards for physical evaluation, routine maintenance, stabilization, repair, weatherization and replacement of historic wooden windows.

Resolution No. 10-4 is attached for review and discussion. The Secretary of the Interior Standards for Rehabilitation (attached) include guidelines for window repair and replacement. In addition, there are guidelines in the Downtown Historic Conservation Plan (attached).

This item is Priority 1.2 on the Commission's Priority List of Discussion Items. The Commission has requested a workshop to discuss all of the window guidelines, as well as look at window samples and components. A representative from Insight Glass will be available with samples of wood and wood-clad windows.

The purpose of the workshop is to review all of the guidelines, and the current resolution, and make any recommendations for amendments, if desired.

Attachment:

- Resolution No. 10-4 (Window Standards)
- Secretary of the Interior Standards for Rehabilitation (Windows Excerpt)
- Downtown Historic Conservation Plan (Windows Excerpt)

RESOLUTION NO. 10-4 (HPRC)

A RESOLUTION OF THE HISTORIC PRESERVATION REVIEW COMMISSION OF THE CITY OF BENICIA AMENDING ESTABLISHED WINDOW STANDARDS FOR DESIGNATED BUILDINGS IN THE DOWNTOWN HISTORIC OVERLAY DISTRICT

WHEREAS, the City of Benicia has an established Downtown Historic Overlay District; and

WHEREAS, property owners of designated buildings in the Downtown Historic Overlay District are required to obtain Historic Preservation Review Commission approval to make modifications to their structures; and

WHEREAS, on August 18, 2005, October 27, 2005, November 17, 2005, and December 22, 2005, the Historic Preservation Review Commission held public hearings on the establishment of window standards for designated buildings in the Downtown Historic Conservation District, considered the staff report, presentations, and public testimony, and directed staff to draft a Resolution formalizing the Commission's findings; and

WHEREAS, on December 22, 2005, the Historic Preservation Review Commission adopted resolution No. 05-14, establishing window standards; and

WHEREAS, on May 27, 2010, the Historic Preservation Review Commission reviewed and amended Resolution No. 05-14 to incorporate Preservation Brief 9 as Exhibit A, and clarified the process for verifying feasibility of repair of windows.

NOW, THEREFORE, the Historic Preservation Review Commission of the City of Benicia hereby resolves as follows:

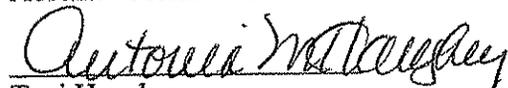
SECTION 1. The Benicia Historic Preservation Review Commission hereby determines that proposals to modify windows in a designated building in the historic district shall be repaired, if possible, or if replaced, replaced in-kind. Upon verification of feasibility of repair per National Park Service Preservation Brief 9 (Exhibit A), staff is authorized to approve window repairs or replacements meeting the above criteria. Replacement windows shall be those typical of the period and appropriate to the architectural style. Windows may contain low-E and be insulated glass when there are no muntins or true-divided lites. All other repairs and replacements, other than those approved as above, are to be reviewed by the Historic Preservation Review Commission.

The foregoing motion was made by Commissioner Crompton, seconded by Commissioner Mang, and carried by the following vote at a regular meeting of the Commission on May 27, 2010:

Ayes: Commissioners Crompton, Mang, McKee, Taagepera, White and Chair Haughey

Noes: None

Absent: Commissioner Van Landschoot



Toni Haughey

Historic Preservation Review Commission Chair

EXHIBIT 'A'

9 Preservation Briefs

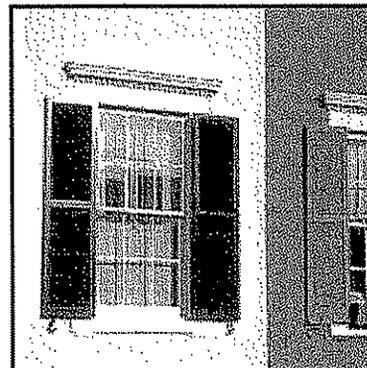
Technical Preservation Services

National Park Service
U.S. Department of the Interior

The Repair of Historic Wooden Windows

John H. Myers

- » Architectural or Historical Significance
- » Physical Evaluation
- » Repair Class I: Routine Maintenance
- » Repair Class II: Stabilization
- » Repair Class III: Splices and Parts Replacement
- » Weatherization
- » Window Replacement
- » Conclusion
- » Additional Reading



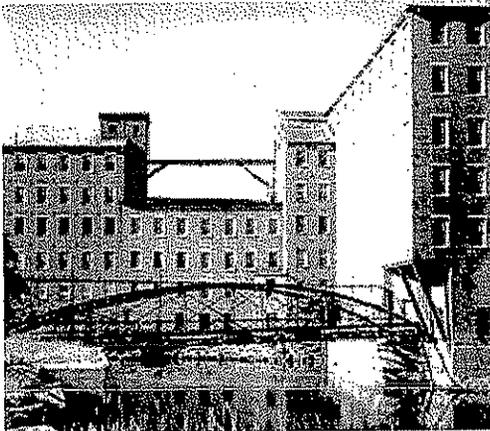
A NOTE TO OUR USERS: The web versions of the **Preservation Briefs** differ somewhat from the printed versions. Many illustrations are new, captions are simplified, illustrations are typically in color rather than black and white, and some complex charts have been omitted.

The windows on many historic buildings are an important aspect of the architectural character of those buildings. Their design, craftsmanship, or other qualities may make them worthy of preservation. This is self-evident for ornamental windows, but it can be equally true for warehouses or factories where the windows may be the most dominant visual element of an otherwise plain building. Evaluating the significance of these windows and planning for their repair or replacement can be a complex process involving both objective and subjective considerations. *The Secretary of the Interior's Standards for Rehabilitation* and the accompanying guidelines, call for respecting the significance of original materials and features, repairing and retaining them wherever possible, and when necessary, replacing them in kind. This Brief is based on the issues of significance and repair which are implicit in the standards, but the primary emphasis is on the technical issues of planning for the repair of windows including evaluation of their physical condition, techniques of repair, and design considerations when replacement is necessary.

Much of the technical section presents repair techniques as an instructional guide for the do-it-yourselfer. The information will be useful, however, for the architect, contractor, or developer on large-scale projects. It presents a methodology for approaching the evaluation and repair of existing windows, and considerations for replacement, from which the professional can develop alternatives and specify appropriate materials and procedures.

Architectural or Historical Significance

Evaluating the architectural or historical significance of windows is the first step in planning for window treatments, and a general understanding of the function and history of windows is vital to making a proper evaluation. As a part of this evaluation, one must consider four basic window functions: admitting light to the interior spaces, providing fresh air and ventilation to the interior, providing a visual link to the outside world, and enhancing the appearance of a building. No single factor can be disregarded when planning window treatments; for example, attempting to conserve energy by closing up or reducing the size of window openings may result in the use of *more* energy by increasing electric lighting loads and decreasing passive solar heat gains.



Windows are frequently important visual focal points, especially on simple facades such as this mill building. Replacement of the multi-pane windows with larger panes could dramatically alter the appearance of the building. Photo: NPS files.

Historically, the first windows in early American houses were casement windows; that is, they were hinged at the side and opened outward. In the beginning of the eighteenth century single- and double-hung windows were introduced. Subsequently many styles of these vertical sliding sash windows have come to be associated with specific building periods or architectural styles, and this is an important consideration in determining the significance of windows, especially on a local or regional basis. Site-specific, regionally oriented architectural comparisons should be made to determine the significance of windows in question. Although such comparisons may focus on specific window types and their details, the ultimate determination of significance should be made within the context of the whole building, wherein the windows are one architectural element.

After all of the factors have been evaluated, **windows should be considered significant to a building if they:** **1)** are original, **2)** reflect the original design intent for the building, **3)** reflect period or regional styles or building practices, **4)** reflect changes to the building resulting from major periods or events, or **5)** are examples of exceptional craftsmanship or design. Once this evaluation of significance has been completed, it is possible to proceed with planning appropriate treatments, beginning with an investigation of the physical condition of the windows.

Physical Evaluation

The key to successful planning for window treatments is a careful evaluation of existing physical conditions on a unit-by-unit basis. A graphic or photographic system may be devised to record existing conditions and illustrate the scope of any necessary repairs. Another effective tool is a window schedule which lists all of the parts of each window unit. Spaces by each part allow notes on existing conditions and repair instructions. When such a schedule is completed, it indicates the precise tasks to be performed in the repair of each unit and becomes a part of the specifications. In any evaluation, one should note at a minimum:

- **1)** window location
- **2)** condition of the paint

- 3) condition of the frame and sill
- 4) condition of the sash (rails, stiles and muntins)
- 5) glazing problems
- 6) hardware, and
- 7) the overall condition of the window (excellent, fair, poor, and so forth)

Many factors such as poor design, moisture, vandalism, insect attack, and lack of maintenance can contribute to window deterioration, but moisture is the primary contributing factor in wooden window decay. All window units should be inspected to see if water is entering around the edges of the frame and, if so, the joints or seams should be caulked to eliminate this danger. The glazing putty should be checked for cracked, loose, or missing sections which allow water to saturate the wood, especially at the joints. The back putty on the interior side of the pane should also be inspected, because it creates a seal which prevents condensation from running down into the joinery. The sill should be examined to insure that it slopes downward away from the building and allows water to drain off. In addition, it may be advisable to cut a dripline along the underside of the sill. This almost invisible treatment will insure proper water runoff, particularly if the bottom of the sill is flat. Any conditions, including poor original design, which permit water to come in contact with the wood or to puddle on the sill must be corrected as they contribute to deterioration of the window.

One clue to the location of areas of excessive moisture is the condition of the paint; therefore, each window should be examined for areas of paint failure. Since excessive moisture is detrimental to the paint bond, areas of paint blistering, cracking, flaking, and peeling usually identify points of water penetration, moisture saturation, and potential deterioration. Failure of the paint should not, however, be mistakenly interpreted as a sign that the wood is in poor condition and hence, irreparable. Wood is frequently in sound physical condition beneath unsightly paint. After noting areas of paint failure, the next step is to inspect the condition of the wood, particularly at the points identified during the paint examination.



Deterioration of poorly maintained windows usually begins on horizontal surfaces and at joints, where water can collect and saturate the wood. Photo: NPS files.

Each window should be examined for operational soundness beginning with the lower portions of the frame and sash. Exterior rainwater and interior condensation can flow downward along the window, entering and collecting at points where the flow is blocked. The sill, joints between the sill and jamb, corners of the bottom rails and muntin joints are typical points where water collects and deterioration begins. The operation of the window (continuous opening and closing over the years and seasonal temperature changes) weakens the joints, causing movement and slight separation. This process makes the joints more vulnerable to water which is readily absorbed into the endgrain of the wood. If severe deterioration exists in these areas, it will usually be apparent on visual inspection, but other less severely deteriorated areas of the wood may be tested by two traditional methods using a small ice pick.

An ice pick or an awl may be used to test wood for soundness. The technique is simply to jab the pick into a wetted wood surface at an angle and pry up a small section of the wood. Sound wood will separate in long fibrous splinters, but decayed wood will lift up in short irregular pieces due to the breakdown of fiber strength.

Another method of testing for soundness consists of pushing a sharp object into the wood, perpendicular to the surface. If deterioration has begun from the hidden side of a member and the core is badly decayed, the visible surface may appear to be sound wood. Pressure on the probe can force it through an apparently sound skin to penetrate deeply into decayed wood. This technique is especially useful for checking sills where visual access to the underside is restricted.

Following the inspection and analysis of the results, the scope of the necessary repairs will be evident and a plan for the rehabilitation can be formulated. Generally the actions necessary to return a window to "like new" condition will fall into three broad categories: **1) routine maintenance procedures, 2) structural stabilization, and 3) parts replacement.** These categories will be discussed in the following sections and will be referred to respectively as **Repair Class I, Repair Class II, and Repair Class III.** Each successive repair class represents an increasing level of difficulty, expense, and work time. Note that most of the points mentioned in Repair Class I are routine maintenance items and should be provided in a regular maintenance program for any building. The neglect of these routine items can contribute to many common window problems.

Before undertaking any of the repairs mentioned in the following sections all sources of moisture penetration should be identified and eliminated, and all existing decay fungi destroyed in order to arrest the deterioration process. Many commercially available fungicides and wood preservatives are toxic, so it is extremely important to follow the manufacturer's recommendations for application, and store all chemical materials away from children and animals. After fungicidal and preservative treatment the windows may be stabilized, retained, and restored with every expectation for a long service life.

Repair Class I: Routine Maintenance

Repairs to wooden windows are usually labor intensive and relatively uncomplicated. On small scale projects this allows the do-it-yourselfer to save money by repairing all or part of the windows. On larger projects it presents the opportunity for time and money which might otherwise be spent on the removal and replacement of existing windows, to be spent on repairs, subsequently saving all or part of the material cost of new window units. Regardless of the actual costs, or who performs the work, the evaluation process described earlier will provide the knowledge from which to specify an appropriate work program, establish the work element priorities, and identify the level of skill needed by the labor force.



This historic double-hung window has many layers of paint, some cracked and missing putty, slight separation at the joints, broken sash cords, and one cracked pane. Photo: NPS files.

The routine maintenance required to upgrade a window to "like new" condition normally includes the following steps: 1) some degree of interior and exterior paint removal, 2) removal and repair of sash (including reglazing where necessary), 3) repairs to the frame, 4) weatherstripping and reinstallation of the sash, and 5) repainting. These operations are illustrated for a typical



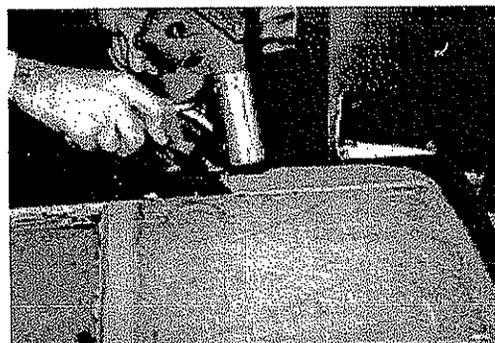
After removing paint from the seam between the interior stop and the jamb, the stop can be pried out and gradually worked loose using a pair of putty knives as shown. Photo: NPS files.

double-hung wooden window, but they may be adapted to other window types and styles as applicable.

Historic windows have usually acquired many layers of paint over time. Removal of excess layers or peeling and flaking paint will facilitate operation of the window and restore the clarity of the original detailing. Some degree of paint removal is also necessary as a first step in the proper surface preparation for subsequent refinishing (if paint color analysis is desired, it should be conducted prior to the onset of the paint removal). There are several safe and effective techniques for removing paint from wood, depending on the amount of paint to be removed.

Paint removal should begin on the interior frames, being careful to remove the paint from the interior stop and the parting bead, particularly along the

seam where these stops meet the jamb. This can be accomplished by running a utility knife along the length of the seam, breaking the paint bond. It will then be much easier to remove the stop, the parting bead and the sash. The interior stop may be initially loosened from the sash side to avoid visible scarring of the wood and then gradually pried loose using a pair of putty knives, working up and down the stop in small increments. With the stop removed, the lower or interior sash may be withdrawn. The sash cords should be detached from the sides of the sash and their ends may be pinned with a nail or tied in a knot to prevent them from falling into the weight pocket.



Sash can be removed and repaired in a convenient work area. Paint is being removed from this sash with a hot air gun. Photo: NPS files.

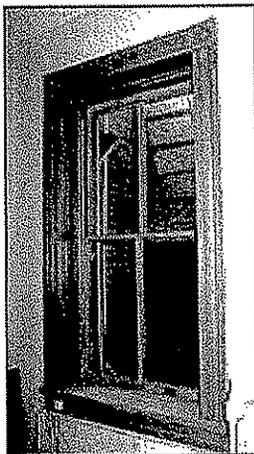
Removal of the upper sash on double-hung units is similar but the parting bead which holds it in place is set into a groove in the center of the stile and is thinner and more delicate than the interior stop. After removing any paint along the seam, the parting bead should be carefully pried out and worked free in the same manner as the interior stop. The upper sash can be removed in the same manner as the lower one and both sash taken to a convenient work area (in order to remove the sash the interior stop and parting bead need only be removed from one side of the window). Window openings can be covered with polyethylene sheets or plywood sheathing while the sash are out for repair.

The sash can be stripped of paint using appropriate techniques, but if any heat treatment is used, the glass should be removed or protected from the sudden temperature change which can cause breakage. An overlay of aluminum foil on gypsum board or asbestos can protect the glass from such rapid temperature change. It is important to protect the glass because it may be historic and often adds character to the window. Deteriorated putty should be removed manually, taking care not to damage the wood along the rabbet. If the glass is to be removed, the glazing points which hold the glass in place can be extracted and the panes numbered and removed for cleaning and reuse in the same openings. With the glass panes out, the remaining putty can be removed and the sash can be sanded, patched, and primed with a preservative primer. Hardened putty in the rabbets may be softened by heating with a soldering iron at the

point of removal. Putty remaining on the glass may be softened by soaking the panes in linseed oil, and then removed with less risk of breaking the glass. Before reinstalling the glass, a bead of glazing compound or linseed oil putty should be laid around the rabbet to cushion and seal the glass. Glazing compound should only be used on wood which has been brushed with linseed oil and primed with an oil based primer or paint. The pane is then pressed into place and the glazing points are pushed into the wood around the perimeter of the pane.

The final glazing compound or putty is applied and beveled to complete the seal. The sash can be refinished as desired on the inside and painted on the outside as soon as a "skin" has formed on the putty, usually in 2 or 3 days. Exterior paint should cover the beveled glazing compound or putty and lap over onto the glass slightly to complete a weather-tight seal. After the proper curing times have elapsed for paint and putty, the sash will be ready for reinstallation.

While the sash are out of the frame, the condition of the wood in the jamb and sill can be evaluated. Repair and refinishing of the frame may proceed concurrently with repairs to the sash, taking advantage of the curing times for the paints and putty used on the sash. One of the most common work items is the replacement of the sash cords with new rope cords or with chains. The weight pocket is frequently accessible through a door on the face of the frame near the sill, but if no door exists, the trim on the interior face may be removed for access. Sash weights may be increased for easier window operation by elderly or handicapped persons. Additional repairs to the frame and sash may include consolidation or replacement of deteriorated wood. Techniques for these repairs are discussed in the following sections.



Following the relatively simple repairs, the window is weathertight, like new in appearance, and serviceable for many years to come. Photo: NPS files.

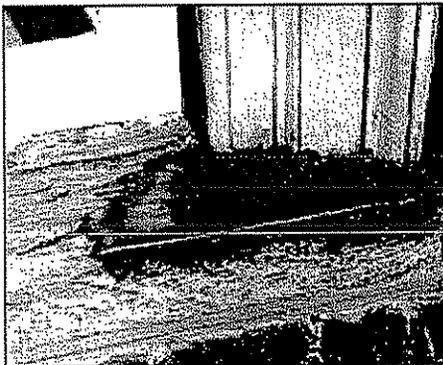
The operations just discussed summarize the efforts necessary to restore a window with minor deterioration to "like new" condition. The techniques can be applied by an unskilled person with minimal training and experience. To demonstrate the practicality of this approach, and photograph it, a Technical Preservation Services staff member repaired a wooden double-hung, two over two window which had been in service over ninety years. The wood was structurally sound but the window had one broken pane, many layers of paint, broken sash cords and inadequate, worn-out weatherstripping. The staff member found that the frame could be stripped of paint and the sash removed quite easily. Paint, putty and glass removal required about one hour for each sash, and the reglazing of both sash was accomplished in about one hour. Weatherstripping of the sash and frame, replacement of the sash cords and reinstallation of the sash, parting bead, and stop required an hour and a half. These times refer only to individual operations; the entire process took several days due to the drying and curing times for putty, primer, and paint, however, work on other window units could have been in progress during these lag times.

Repair Class II: Stabilization

The preceding description of a window repair job focused on a unit which was operationally sound. Many windows will show some additional degree of physical deterioration, especially in the vulnerable areas mentioned earlier, but even badly

damaged windows can be repaired using simple processes. Partially decayed wood can be waterproofed, patched, built-up, or consolidated and then painted to achieve a sound condition, good appearance, and greatly extended life. Three techniques for repairing partially decayed or weathered wood are discussed in this section, and all three can be accomplished using products available at most hardware stores.

One established technique for repairing wood which is split, checked or shows signs of rot, is to: **1)** dry the wood, **2)** treat decayed areas with a fungicide, **3)** waterproof with two or three applications of boiled linseed oil (applications every 24 hours), **4)** fill cracks and holes with putty, and **5)** after a "skin" forms on the putty, paint the surface. Care should be taken with the use of fungicide which is toxic. Follow the manufacturers' directions and use only on areas which will be painted. When using any technique of building up or patching a flat surface, the finished surface should be sloped slightly to carry water away from the window and not allow it to puddle. Caulking of the joints between the sill and the jamb will help reduce further water penetration.



This illustrates a two-part epoxy patching compound used to fill the surface of a weathered sill and rebuild the missing edge. When the epoxy cures, it can be sanded smooth and painted to achieve a durable and waterproof repair. Photo: NPS files.

When sills or other members exhibit surface weathering they may also be built-up using wood putties or homemade mixtures such as sawdust and resorcinol glue, or whiting and varnish. These mixtures can be built up in successive layers, then sanded, primed, and painted. The same caution about proper slope for flat surfaces applies to this technique.

Wood may also be strengthened and stabilized by consolidation, using semirigid epoxies which saturate the porous decayed wood and then harden. The surface of the consolidated wood can then be filled with a semirigid epoxy patching compound, sanded and painted. Epoxy patching compounds can be used to build up missing sections or decayed ends of members. Profiles can

be duplicated using hand molds, which are created by pressing a ball of patching compound over a sound section of the profile which has been rubbed with butcher's wax. This can be a very efficient technique where there are many typical repairs to be done. The process has been widely used and proven in marine applications; and proprietary products are available at hardware and marine supply stores. Although epoxy materials may be comparatively expensive, they hold the promise of being among the most durable and long lasting materials available for wood repair. More information on epoxies can be found in the publication "Epoxies for Wood Repairs in Historic Buildings," cited in the bibliography.

Any of the three techniques discussed can stabilize and restore the appearance of the window unit. There are times, however, when the degree of deterioration is so advanced that stabilization is impractical, and the only way to retain some of the original fabric is to replace damaged parts.

Repair Class III: Splices and Parts Replacement

When parts of the frame or sash are so badly deteriorated that they cannot be stabilized there are methods which permit the retention of some of the existing or original fabric.

These methods involve replacing the deteriorated parts with new matching pieces, or splicing new wood into existing members. The techniques require more skill and are more expensive than any of the previously discussed alternatives. It is necessary to remove the sash and/or the affected parts of the frame and have a carpenter or woodworking mill reproduce the damaged or missing parts. Most millwork firms can duplicate parts, such as muntins, bottom rails, or sills, which can then be incorporated into the existing window, but it may be necessary to shop around because there are several factors controlling the practicality of this approach. Some woodworking mills do not like to repair old sash because nails or other foreign objects in the sash can damage expensive knives (which cost far more than their profits on small repair jobs); others do not have cutting knives to duplicate muntin profiles. Some firms prefer to concentrate on larger jobs with more profit potential, and some may not have a craftsman who can duplicate the parts. A little searching should locate a firm which will do the job, and at a reasonable price. If such a firm does not exist locally, there are firms which undertake this kind of repair and ship nationwide. It is possible, however, for the advanced do-it-yourselfer or craftsman with a table saw to duplicate moulding profiles using techniques discussed by Gordie Whittington in "Simplified Methods for Reproducing Wood Mouldings," *Bulletin* of the Association for Preservation Technology, Vol. III, No. 4, 1971, or illustrated more recently in *The Old House*, Time-Life Books, Alexandria, Virginia, 1979.

The repairs discussed in this section involve window frames which may be in very deteriorated condition, possibly requiring removal; therefore, caution is in order. The actual construction of wooden window frames and sash is not complicated. Pegged mortise and tenon units can be disassembled easily, if the units are out of the building. The installation or connection of some frames to the surrounding structure, especially masonry walls, can complicate the work immeasurably, and may even require dismantling of the wall. It may be useful, therefore, to take the following approach to frame repair: **1)** conduct regular maintenance of sound frames to achieve the longest life possible, **2)** make necessary repairs in place, wherever possible, using stabilization and splicing techniques, and **3)** if removal is necessary, thoroughly investigate the structural detailing and seek appropriate professional consultation.

Another alternative may be considered if parts replacement is required, and that is sash replacement. If extensive replacement of parts is necessary and the job becomes prohibitively expensive it may be more practical to purchase new sash which can be installed into the existing frames. Such sash are available as exact custom reproductions, reasonable facsimiles (custom windows with similar profiles), and contemporary wooden sash which are similar in appearance. There are companies which still manufacture high quality wooden sash which would duplicate most historic sash. A few calls to local building suppliers may provide a source of appropriate replacement sash, but if not, check with local historical associations, the state historic preservation office, or preservation related magazines and supply catalogs for information.

If a rehabilitation project has a large number of windows such as a commercial building or an industrial complex, there may be less of a problem arriving at a solution. Once the evaluation of the windows is completed and the scope of the work is known, there may be a potential economy of scale. Woodworking mills may be interested in the work from a large project; new sash in volume may be considerably less expensive per unit; crews can be assembled and trained on site to perform all of the window repairs; and a few extensive repairs can be absorbed (without undue burden) into the total budget for a large number of sound windows. While it may be expensive for the average historic home owner to pay seventy dollars or more for a mill to grind a custom knife to duplicate four or five bad muntins, that cost becomes negligible on large commercial projects which may have several hundred windows.

Most windows should not require the extensive repairs discussed in this section. The ones which do are usually in buildings which have been abandoned for long periods or have totally lacked maintenance for years. It is necessary to thoroughly investigate the alternatives for windows which do require extensive repairs to arrive at a solution which retains historic significance and is also economically feasible. Even for projects requiring repairs identified in this section, if the percentage of parts replacement per window is low, or the number of windows requiring repair is small, repair can still be a cost effective solution.

Weatherization

A window which is repaired should be made as energy efficient as possible by the use of appropriate weatherstripping to reduce air infiltration. A wide variety of products are available to assist in this task. Felt may be fastened to the top, bottom, and meeting rails, but may have the disadvantage of absorbing and holding moisture, particularly at the bottom rail. Rolled vinyl strips may also be tacked into place in appropriate locations to reduce infiltration. Metal strips or new plastic spring strips may be used on the rails and, if space permits, in the channels between the sash and jamb. Weatherstripping is a historic treatment, but old weatherstripping (felt) is not likely to perform very satisfactorily. Appropriate contemporary weatherstripping should be considered an integral part of the repair process for windows. The use of sash locks installed on the meeting rail will insure that the sash are kept tightly closed so that the weatherstripping will function more effectively to reduce infiltration. Although such locks will not always be historically accurate, they will usually be viewed as an acceptable contemporary modification in the interest of improved thermal performance.

Many styles of storm windows are available to improve the thermal performance of existing windows. The use of exterior storm windows should be investigated whenever feasible because they are thermally efficient, cost-effective, reversible, and allow the retention of original windows (see "Preservation Briefs: 3"). Storm window frames may be made of wood, aluminum, vinyl, or plastic; however, the use of unfinished aluminum storms should be avoided. The visual impact of storms may be minimized by selecting colors which match existing trim color. Arched top storms are available for windows with special shapes. Although interior storm windows appear to offer an attractive option for achieving double glazing with minimal visual impact, the potential for damaging condensation problems must be addressed. Moisture which becomes trapped between the layers of glazing can condense on the colder, outer prime window, potentially leading to deterioration. The correct approach to using interior storms is to create a seal on the interior storm while allowing some ventilation around the prime window. In actual practice, the creation of such a durable, airtight seal is difficult.

Window Replacement

Although the retention of original or existing windows is always desirable and this Brief is intended to encourage that goal, there is a point when the condition of a window may clearly indicate replacement. The decision process for selecting replacement windows should not begin with a survey of contemporary window products which are available as replacements, but should begin with a look at the windows which are being replaced. Attempt to understand the contribution of the window(s) to the appearance of the facade including: **1)** the pattern of the openings and their size; **2)** proportions of the

frame and sash; **3)** configuration of window panes; **4)** muntin profiles; **5)** type of wood; **6)** paint color; **7)** characteristics of the glass; and **8)** associated details such as arched tops, hoods, or other decorative elements. Develop an understanding of how the window reflects the period, style, or regional characteristics of the building, or represents technological development.

Armed with an awareness of the significance of the existing window, begin to search for a replacement which retains as much of the character of the historic window as possible. There are many sources of suitable new windows. Continue looking until an acceptable replacement can be found. Check building supply firms, local woodworking mills, carpenters, preservation oriented magazines, or catalogs or suppliers of old building materials, for product information. Local historical associations and state historic preservation offices may be good sources of information on products which have been used successfully in preservation projects.

Consider energy efficiency as one of the factors for replacements, but do not let it dominate the issue. Energy conservation is no excuse for the wholesale destruction of historic windows which can be made thermally efficient by historically and aesthetically acceptable means. In fact, a historic wooden window with a high quality storm window added should thermally outperform a new double-glazed metal window which does not have thermal breaks (insulation between the inner and outer frames intended to break the path of heat flow). This occurs because the wood has far better insulating value than the metal, and in addition many historic windows have high ratios of wood to glass, thus reducing the area of highest heat transfer. One measure of heat transfer is the U-value, the number of Btu's per hour transferred through a square foot of material. When comparing thermal performance, the lower the U-value the better the performance. According to ASHRAE 1977 Fundamentals, the U-values for single glazed wooden windows range from 0.88 to 0.99. The addition of a storm window should reduce these figures to a range of 0.44 to 0.49. A non-thermal break, double-glazed metal window has a U-value of about 0.6.

Conclusion

Technical Preservation Services recommends the retention and repair of original windows whenever possible. We believe that the repair and weatherization of existing wooden windows is more practical than most people realize, and that many windows are unfortunately replaced because of a lack of awareness of techniques for evaluation, repair, and weatherization. Wooden windows which are repaired and properly maintained will have greatly extended service lives while contributing to the historic character of the building. Thus, an important element of a building's significance will have been preserved for the future.

Additional Reading

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Washington, D.C. 1981

Home page logo: Historic six-over-six windows--preserved. Photo: NPS files.

This publication has been prepared pursuant to the National Historic Preservation Act of 1966, as amended, which directs the Secretary of the Interior to develop and make available information concerning historic properties. Technical Preservation Services (TPS), Heritage Preservation Services Division, National Park Service prepares standards, guidelines, and other educational materials on responsible historic preservation treatments for a broad public.

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Standards for Rehabilitation

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in a such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Guidelines for Rehabilitating Historic Buildings

Introduction

In Rehabilitation, historic building materials and character-defining features are protected and maintained as they are in the treatment Preservation; however, an assumption is made prior to work that existing historic fabric has become damaged or deteriorated over time and, as a result, more repair and replacement will be required. Thus, latitude is given in the Standards for Rehabilitation and Guidelines for Rehabilitation to replace extensively deteriorated, damaged, or missing features using either traditional or substitute materials. Of the four treatments, only Rehabilitation includes an opportunity to make possible an efficient contemporary use through alterations and additions.

Identify, Retain, and Preserve Historic Materials and Features

Like Preservation, guidance for the treatment Rehabilitation begins with recommendations to identify the form and detailing of those architectural materials and features that are important in defining the building's historic character and which must be retained in order to preserve that character. Therefore, guidance on *identifying, retaining and preserving* character-defining features is always given first. The character of a historic building may be defined by the form and detailing of exterior materials, such as masonry, wood, and metal; exterior features, such as roofs, porches, and windows; interior

materials, such as plaster and paint; and interior features, such as moldings and stairways, room configuration and spatial relationships, as well as structural and mechanical systems.

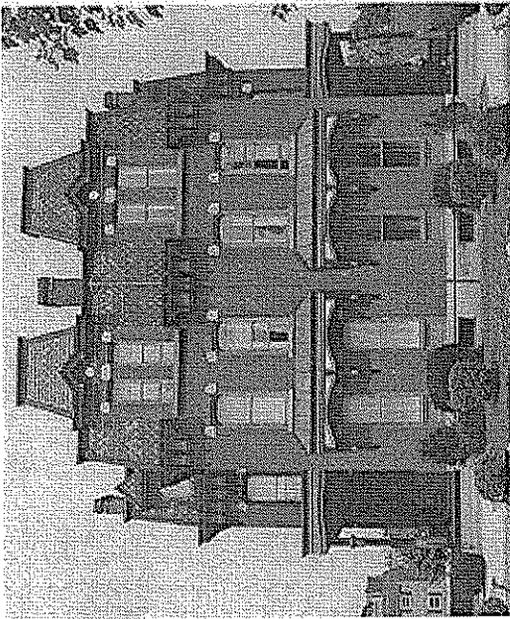
Protect and Maintain Historic Materials and Features

After identifying those materials and features that are important and must be retained in the process of Rehabilitation work, then *protecting and maintaining* them are addressed. Protection generally involves the least degree of intervention and is preparatory to other work. For example, protection includes the maintenance of historic material through treatments such as rust removal, caulking, limited paint removal, and re-application of protective coatings; the cyclical cleaning of roof gutter systems; or installation of fencing, alarm systems and other temporary protective measures. Although a historic building will usually require more extensive work, an overall evaluation of its physical condition should always begin at this level.

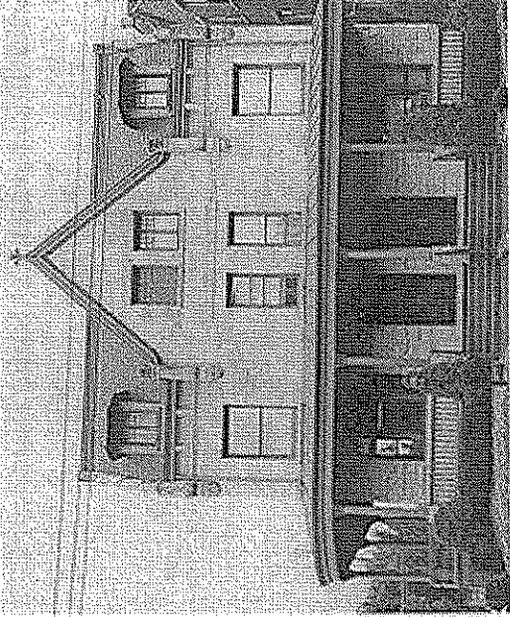
Repair Historic Materials and Features

Next, when the physical condition of character-defining materials and features warrants additional work *repairing* is recommended. Rehabilitation guidance for the repair of historic materials such as masonry, wood, and architectural metals again begins with the least degree of intervention possible such as patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading them according to recognized preservation methods. Repairing also includes the limited replacement in kind—or with

Note: The Guidelines for Rehabilitating Historic Buildings in this chapter have already appeared in *The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings*, published in 1992.



Originally built as single-family, semi-detached duplexes, these houses were rehabilitated for a new use as rental apartments. While some alteration to non-significant interior features and spaces was necessary in each one, the exteriors were essentially preserved. Photos: Mistic, Inc.



compatible substitute material—of extensively deteriorated or missing parts of features when there are surviving prototypes (for example, brackets, dentils, steps, plaster, or portions of slate or tile roofing).

Although using the same kind of material is always the preferred option, substitute material is acceptable if the form and design as well as the substitute material itself convey the visual appearance of the remaining parts of the feature and finish.

Replace Deteriorated Historic Materials and Features

Following repair in the hierarchy, **Rehabilitation** guidance is provided for *replacing* an entire character-defining feature with new material because the level of deterioration or damage of materials precludes repair (for example, an exterior cornice; an interior

staircase; or a complete porch or storefront). If the essential form and detailing are still evident so that the physical evidence can be used to re-establish the feature as an integral part of the rehabilitation, then its replacement is appropriate. Like the guidance for repair, the preferred option is always replacement of the entire feature in kind, that is, with the same material. Because this approach may not always be technically or economically feasible, provisions are made to consider the use of a compatible substitute material.

It should be noted that, while the National Park Service guidelines recommend the replacement of an entire character-defining feature that is extensively deteriorated, they never recommend removal and replacement with new material of a feature that—although damaged or deteriorated—could reasonably be repaired and thus preserved.

Design for the Replacement of Missing Historic Features

When an entire interior or exterior feature is missing (for example, an entrance, or cast iron facade; or a principal staircase), it no longer plays a role in physically defining the historic character of the building unless it can be accurately recovered in form and detailing through the process of carefully documenting the historical appearance. Although accepting the loss is one possibility, where an important architectural feature is missing, its replacement is always recommended in the **Rehabilitation** guidelines as the *first* or preferred, course of action. Thus, if adequate historical, pictorial, and physical documentation exists so that the feature may be accurately reproduced, and if it is desirable to re-establish the feature as part of the building's historical appearance, then designing and constructing a new feature based on such information is appropriate. However, a *second* acceptable option for the replacement feature is a new design that is compatible with the remaining character-defining features of the historic building. The new design should always take into account the size, scale, and material of the historic building itself and, most importantly, should be clearly differentiated so that a false historical appearance is not created.

Alterations/Additions for the New Use

Some exterior and interior alterations to a historic building are generally needed to assure its continued

use, but it is most important that such alterations do not radically change, obscure, or destroy character-defining spaces, materials, features, or finishes.

Alterations may include providing additional parking space on an existing historic building site; curbing new entrances or windows on secondary elevations; inserting an additional floor; installing an entirely new mechanical system; or creating an atrium or light well. Alteration may also include the selective removal of buildings or other features of the environment or building site that are intrusive and therefore detract from the overall historic character.

The construction of an exterior addition on a historic building may seem to be essential for the new use, but it is emphasized in the **Rehabilitation** guidelines that such new additions should be avoided, if possible, and considered *only* after it is determined that those needs cannot be met by altering secondary, i.e., non character-defining interior spaces. If, after a thorough evaluation of interior solutions, an exterior addition is still judged to be the only viable alternative, it should be designed and constructed to be clearly differentiated from the historic building and so that the character-defining features are not radically changed, obscured, damaged, or destroyed.

Additions and alterations to historic buildings are referenced within specific sections of the **Rehabilitation** guidelines such as Sire, Roofs, Structural Systems, etc., but are addressed in detail in *New Additions to Historic Buildings*, found at the end of this chapter.

Building Exterior

Windows

Recommended

Identifying, retaining, and preserving windows—and their functional and decorative features—that are important in defining the overall historic character of the building. Such features can include frames, sash, muntins, glazing, sills, heads, hoodmolds, paneled or decorated jambs and moldings, and interior and exterior shutters and blinds.

Conducting an in-depth survey of the condition of existing windows early in rehabilitation planning so that repair and upgrading methods and possible replacement options can be fully explored.

Protecting and maintaining the wood and architectural metals which comprise the window frame, sash, muntins, and surrounds through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and re-application of protective coating systems.

Making windows weathertight by re-caulking and replacing or installing weatherstripping. These actions also improve thermal efficiency.

Not Recommended

Removing or radically changing windows which are important in defining the historic character of the building so that, as a result, the character is diminished.

Changing the number, location, size or glazing pattern of windows, through cutting new openings, blocking-in windows, and installing replacement sash that do not fit the historic window opening.

Changing the historic appearance of windows through the use of inappropriate designs, materials, finishes, or colors which noticeably change the sash, depth of reveal, and muntin configuration; the reflectivity and color of the glazing; or the appearance of the frame.

Obscuring historic window trim with metal or other material.

Stripping windows of historic material such as wood, cast iron, and bronze.

Replacing windows solely because of peeling paint, broken glass, stuck sash, and high air infiltration. These conditions, in themselves, are no indication that windows are beyond repair.

Failing to provide adequate protection of materials on a cyclical basis so that deterioration of the window results.

Retrofitting or replacing windows rather than maintaining the sash, frame, and glazing.

Recommended

Evaluating the overall condition of materials to determine whether more than protection and maintenance are required, i.e. if repairs to windows and window features will be required.

Repairing window frames and sash by patching, splicing, consolidating or otherwise reinforcing. Such repair may also include replacement in kind—or with compatible substitute material—of those parts that are either extensively deteriorated or are missing when there are surviving prototypes such as architraves, hoodmolds, sash, sills, and interior or exterior shutters and blinds.

Replacing in kind an entire window that is too deteriorated to repair using the same sash and pane configuration and other design details. If using the same kind of material is not technically or economically feasible when replacing windows deteriorated beyond repair, then a compatible substitute material may be considered.

Not Recommended

Failing to undertake adequate measures to assure the protection of historic windows.

Replacing an entire window when repair of materials and limited replacement of deteriorated or missing parts are appropriate.

Failing to reuse serviceable window hardware such as brass sash lifts and sash locks.

Using substitute material for the replacement part that does not convey the visual appearance of the surviving parts of the window or that is physically or chemically incompatible.

Removing a character-defining window that is unrepairable and blocking it in; or replacing it with a new window that does not convey the same visual appearance.

The following work is highlighted to indicate that it represents the particularly complex technical or design aspects of Rehabilitation projects and should only be considered after the preservation concerns listed above have been addressed.

Recommended

Design for the Replacement of Missing Historic Features

Designing and installing new windows when the historic windows (frames, sash and glazing) are completely missing. The replacement windows may be an accurate restoration using historical, pictorial, and physical documentation; or be a new design that is compatible with the window openings and the historic character of the building.

Alterations/Additions for the New Use

Designing and installing additional windows on rear or other non-character-defining elevations if required by the new use. New window openings may also be cut into exposed party walls. Such design should be compatible with the overall design of the building, but not duplicate the fenestration pattern and detailing of a character-defining elevation.

Providing a setback in the design of dropped ceilings when they are required for the new use to allow for the full height of the window openings.

Not Recommended

Creating a false historical appearance because the replaced window is based on insufficient historical, pictorial, and physical documentation.

Introducing a new design that is incompatible with the historic character of the building.

Installing new windows, including frames, sash, and muntin configuration that are incompatible with the building's historic appearance or obscure, damage, or destroy character-defining features.

Inserting new floors or furred-down ceilings which cut across the glazed areas of windows so that the exterior form and appearance of the windows are changed.

Historic Buildings

These design guidelines apply to all categories of designated historic residential buildings within the historic district and to landmarks which lie outside district boundaries. They are also applicable to historic institutional buildings in residential zoning districts. They are intended to guide renovation work as well as building additions. They are applicable to potentially contributing buildings to the extent that it is still feasible to implement them. Since some of these buildings have already undergone major design changes which may be difficult to reverse and are inconsistent with the guidelines, the decision to apply them will have to be made on discretionary, case by case basis. However, whenever feasible, any inappropriate modifications should be reversed and additional modifications should follow the guidelines to the extent that a consistent design will result.

Policy 1: Design Integrity

Maintain the design integrity and distinguishing features of historic buildings.

Guidelines

- 1.1 Additions or alterations which alter the height, bulk, principal facade elements, distinguishing architectural features or overall architectural character of a landmark building when viewed from the street are inappropriate.
- 1.2 Building additions should be located to the rear of the existing structure whenever possible.
- 1.3 Where necessary to locate additions to the side of an existing building, the addition should be set back behind the line of the front facade. If the addition is large, it may be appropriate to provide some visual separation (i.e., narrow link such as breezeway, hallway etc.) between the new and old construction.

1.4 Second floor additions which do not significantly alter roof forms are appropriate except where they will alter the principal facade(s) or character of a landmark building.

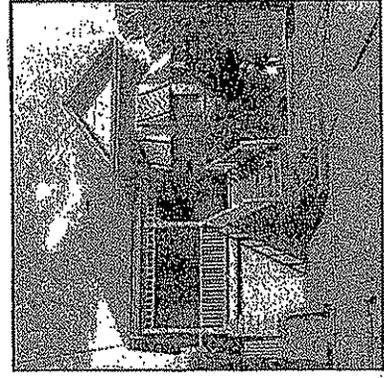
1.5 Additions to existing buildings should employ the same materials and opening proportions as the original. It is not necessary or even desirable to make the addition look identical, especially if original workmanship or details cannot be matched.

1.6 Raising up historic structures to allow space for additional ground floor improvements or development is generally inappropriate if it alters the street facade(s) in a way that detracts from the original composition, or changes the proportion of the facade(s).

1.7 Exceptions to raising historic structures may be granted to add a garage below the main floor level when little or no increase in building height or change in the proportions of the facade will result, and there is no feasible alternative to locating the garage.



1.1



1.7 Appropriate Exception

1.8 Other exceptions to raising historic structures should be considered on a case by case basis, consistent with guideline 1.6. In general, new window openings should be limited and consistent with the original design intent. New entries/door openings should be avoided altogether on street facades but may be located around the corner of the building. The architectural style, details and original materials of the building should be carried throughout.

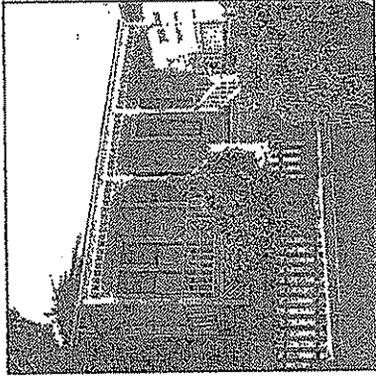
1.9 When historic structures are raised or altered at the basement or ground floor level, special care should be taken to retain or restore porches, steps and railings as close to their original form as possible, and to use landscaping at the base of the building to reduce visual perceptions of any increase in height.

Policy 2: Facade Elements And Details

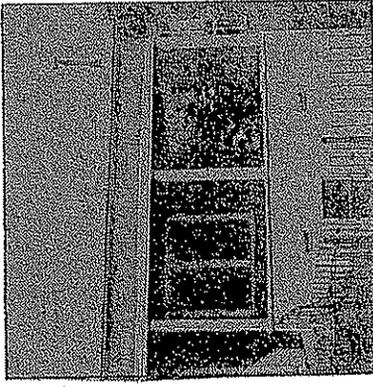
Retain the traditional facade elements, proportions and architectural details which give historic buildings their special character and use appropriate replacements where necessary.

Guidelines

- 2.1 Architectural elements such as porches, steps and railings should not be removed. Replacements, where required, should be similar in character to the original.
- 2.2 Maintain the proportions of existing door and window openings and the pattern of existing window sash in replacement work or additions.
- 2.3 New or replacement window sash should match the original sash in thickness, depth, pattern and finish. Where the original has been completely removed, new windows should match the existing unless a replacement program for the entire facade using the original style sash is undertaken.



2.1



3.1 Inappropriate Stucco

Policy 3: Integrity Of Materials

Maintain the integrity of original building materials.

Guidelines

- 3.1 Original siding material should not be replaced, covered over or clad with another material such as stucco, wood or composition shingles, aluminum siding, and the like.
- 3.2 Where original materials have been covered over, use the gentlest means possible to remove them. Certain cladding such as stucco may be difficult, if not impossible, to remove without destroying the underlying material.
- 3.3 Where inappropriate or later materials have been removed, they should be replaced with the original material.
- 3.4 When necessary to re-roof, the original or a similar material, generally composition shingles, should be used.

- 3.5 Integrally colored materials such as brick or stone and stained wood (shingles, rafters, trim) should not be painted over. Sandblasting of masonry surfaces to remove paint will damage the material. Other methods should be used.
- 3.6 Where necessary to re-build or replace an existing chimney or add a new one, the original material, generally brick, should be used.

Policy 4: Appropriate Materials, Colors And Finishes

Promote the use of appropriate materials in restorations, renovations and additions to historic buildings and colors which complement their styles and particular combination of building materials.

Guidelines

- 4.1 Use original materials wherever possible in restoration, renovation or repair work and use the same materials for building additions.
- 4.2 When necessary to use a substitute material, take care that its outward appearance, durability, texture and finish will be as close as possible to that of the original. If the original material was painted, be sure that the substitute will accept and retain the same painted finish.
- 4.3 Wood window sash is preferred for historic buildings. Vinyl clad wood or factory finished (i.e., baked enamel) aluminum frames may be acceptable as long as the original design can be duplicated.
- 4.4 Materials or colors listed as inappropriate for new construction are also inappropriate for historic buildings (New Construction - Policy 4).

4.5 Paint colors and color schemes should be appropriate to the style and design intent of the building. Some examples follow:

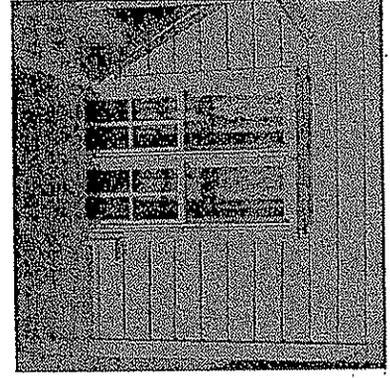
"Salt Box" or "New England"
White, off-white or neutral base; contrasting window sash and/or trim (optional).

Italianate or Classical
Monochrome: white or off-white; contrasting window sash (optional).

Queen Anne or Stick/Eastlake
Polychrome: white, light pastel or earth-toned base color; one to three compatible trim colors.

Craftsman
Monochrome: medium to dark stained wood (original); use similar paint color if original finish cannot be restored.

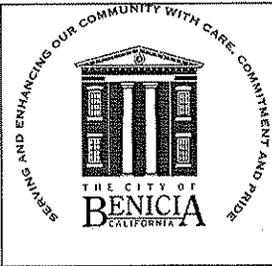
Mediterranean, Tudor English or Norman Revival
White, off-white or light beige; contrasting painted, trim similar in color to dark stained wood.



4.3



Stick/Eastlake 4.5



Public Works &
Community Development Department

MEMORANDUM

Date: February 17, 2011
To: Historic Preservation Review Commission
From: Gina D. Eleccion, Management Analyst *GDE*
Re: Status of Priority List of Discussion Items

Per adopted Rules and Procedures, the Historic Preservation Review Commission shall maintain a list of priority items (Exhibit A, attached). This list provides the basis of both Strategic Plan (excerpt attached) priorities to City Council, as well as ongoing topics for discussion and action by the Commission. This list shall be reviewed and prioritized on a semi-annual basis. Items may be added to, or removed from the list by a majority consensus of the Commission.

It should be noted that Commission work plans are determined by the City Council. This list will be reviewed as part of the 2011-2013 Strategic Plan/Budget process. The City Council intends to hold a meeting with all Commissions to discuss the Budget and Strategic Plan process.

As some items have been added, and others are complete, staff is requesting that the Commission re-evaluate the list and rank the topics in order of priority. This will provide a realistic work plan for both the Commission and Staff. Staff will continue to update the Commission on the status of the discussion items during staff communications.

As a reminder, these items are agendaized based on meeting availability and staff workload. The original intention of the discussion items was not to have an agenda item at each meeting, but rather to address the highest priority items quickly, and then deal with the other items as workload allows. Staff recognizes the Commission's desire to have these items agendaized.

Attachment:

- Exhibit A – Priority List of Discussion Items
- Strategic Plan Excerpt – Strategic Issue 5

Priority List of Items

Priority	Projects	Status
1	<p>Downtown Historic Conservation Plan Update Topics</p> <p>Includes:</p> <ol style="list-style-type: none"> 1. Window Standards – Review existing resolution establishing window standards 2. Craftsman Cottages (included in Historic Context) 3. Paint Standards for the H overlay district 4. Design Guidelines for non-historic homes <p>Skylights</p>	<p>Incorporating Historic Resource Inventory update May 2010 – Updated window policy (Reso. No. 10-4)</p> <p>May 2010 – Reviewed paint/skylights</p>
Priority	Topics	Status
1	Commanding Officer's Quarters – Standards of Use	Requested by Commission (agendized 7/22/10) Chair Haughey to draft letter to P&CS Director
2	Definitions of "repair", "emergency", "minor"	Requested by Commission
3	<p>Title 17.54</p> <ul style="list-style-type: none"> • Listing Process - Formal process for property owners to restore non-historic properties and apply for designation as a contributor or landmark <p>Demolition Ordinance</p>	<p>In process</p> <p>Directed by City Council, further requested by Commissioner Taagepara</p>
4	Downtown Mixed Use Master Plan Amendment	Requested by Commissioner McKee (will provide specific issues to clarify his request)
5	Preservation of Historic Sites	<p>Requested by Commissioner White (memo submitted 7-20-09)</p> <p>8-25-10: Met with P&CS staff and Historical Society members. National Register nomination being prepared for Von Pfister General Store. Parks to pursue stabilization and Carey & Co. contract obligations</p>

<u>ANNUAL</u>		Status
	Mills Act Compliance Report	Report on annual inspections (Spring/Summer)
	Certified Local Government Report	Discussion of annual report submitted to SHPO (November/December)
	City-owned Historic Buildings (Project Status and Maintenance)	Parks & Community Services Dept. will prepare an annual status report (Summer)
<u>COMPLETED</u>		
	<p>Historic Context</p> <p>Includes:</p> <ol style="list-style-type: none"> 1. Portuguese Influence 1. Properties over 50 years old 	<p>Complete. Need to distribute. 2009 – received grant</p> <p>2008 – Applied for grant. Did not receive.</p>
	Story Pole requirement for projects that require Design Review in the H overlay district	Complete. Implementation program of the Downtown Mixed-Use Master Plan
	Mills Act Monitoring	Complete. Monitoring Program adopted 8-31-06
	Property Maintenance Issues	Complete. Staff report 9-28-06. No further action required
	Design Review for all single-family homes in the H overlay district	Complete until update of DHCP to include design guidelines
	Mills Act Program – Training, discussion of overall program and recommendation to City Council for amendments	<p>Completed November 2008 - Additional discussion on program eligibility. Minimal changes recommended.</p> <p>SHPO training early Spring 2008</p> <p>Program overview 7-24-08</p> <p>Council amended November 2010</p>
	Standing Historic Subcommittee with Benicia Historical Society	April 23, 2009 – Commission discussed forming committees for specific topics as time allows

		Requested by Bonnie Silveria
Information to Historic Property Owners and Realtors (Notification of historic property designation status & eligibility for Mills Act)	<p>Completed Certified resolution (No. 09-26) recorded with County Recorder with list of properties.</p> <p>Previous action - Staff report 1-25-07. Staff to draft language to be included on deed. Will cost City approximately \$15,000 to implement.</p>	
Secretary of the Interior Standards for Treatment of Historic Properties	Ongoing SHPO training (Mark Huck) February 2008 Additional discussion requested by Chair Mang	
Mills Act Program Update	Completed July 2010 Recommendation to City Council to update Program Guidelines	
Fee Schedule and Design Review Process (for both historic and non-historic properties)	Requested by Commissioner Mang Completed September 2010 Agendized as Communication from Staff on 9/23/10 Requested by Commissioner Taagepera	

- List to be reviewed bi-annually (January & July)
- Strategic Plan Projects require Council direction/funding
- Discussion Topics to be agendized reasonably, based on required agenda items and staff workload
- Chair/Staff set agendas

STRATEGIC ISSUE 5: Maintain and Enhance a High Quality of Life

STRATEGIES	ACTIONS
1) Provide community activity centers	1) (a) Complete design of Community Center (b) Complete construction of Community Center
2) Implement the Downtown Master Plan	2) (a) Pursue outside funds for Downtown improvements (streetscape, parking and traffic calming enhancements) (b) Prepare and approve a mixed-use project for the City's E Street lot (c) Pursue planning grant for Downtown Waterfront Park
3) Promote arts and culture	3) Establish arts & cultural commission
4) Preserve City-owned historic structures	4) (a) Complete and begin occupancy of Commanding Officer's Quarters (b) Improve and restore City-owned historic structures (e.g., Benicia Historical Museum, SP Depot, Clocktower)
5) Provide support to disadvantaged segments of the community	5) (a) Obtain neighborhood stabilization and CDBG grants to provide a transitional shelter (b) Facilitate construction of affordable housing per updated Housing Element (c) Continue funding for Human Services grants
6) Enhance Benicia Public Library's capacity to meet expanding needs for information, communication and literacy	6) Obtain funding for Library basement