Request For Proposals
Old Town Hall Window Restoration
RFP (2022-033)
Town of Salem NH

SALEM PURCHASING

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Prepared for and in coordination with

SALEM MUNICIPAL SERVICES

ENGINEERING ♦ PUBLIC WORKS ♦ UTILITIES

In association with

LCHIP Land & Community Heritage Investment Program

INVESTING IN NEW HAMPSHIRE'S HERITAGE

TOWN OF SALEM NH
REQUEST FOR BIDS
RFP 2022-033
OLD TOWN HALL
WINDOW RESTORATION

You are cordially invited to submit a proposal for Old Town Hall Window Restoration in accordance with the attached specifications, terms, and conditions listed in RFP 2022-033 Old Town Hall Window Restoration which can be obtained at https://www.townofsalemnh.org/purchasing. The Town of Salem Municipal Services Department is issuing this Request for Proposals to engage a qualified window conservationist to restore the existing historic wood windows at Old Town Hall. The scope of services is further outlined in this document and includes removal of window sash to the interior. This project is being funded fifty percent (50%) through a Land and Community Heritage Investment Program (LCHIP) Grant from the Division of Historical Resources and all work, methods, and materials must be in compliance as set forth by the Secretary of the Interior's Standards for the Treatment of Historic Properties moreover Preservation Brief #9 - The Repair of Historic Wooden Windows (John H. Myers), from the United States Department of the Interior. The Municipal Services Department will be the contract administrator for this project with additional oversight and perspective from the Historic District Commission. There will be a pre-bid meeting held on Thursday, May 19, 2022, 10:00 AM EST at the site, 310 Main Street, Salem NH. **All proposals/bids must be received by June 2, 2022, at 9:00 AM EST.** ***Two (2)*** **copies of the BID package must be submitted in a sealed envelope, plainly marked:**

RFP 2022-033
Old Town Hall Window Restoration
Town of Salem
Purchasing Office
33 Geremonty Drive
Salem NH 03079

GENERAL TERMS AND CONDITIONS

PREPARATIONS OF BIDS/PROPOSALS: Proposals shall be submitted on the forms provided and must be signed by the Bidder or his authorized representative. The person signing the proposal shall initial any corrections to entries made on the attached forms.

Vendors must provide pricing on all items appearing on the bid forms unless specific directions in the advertisement, on the bid form or in the special provisions allowed for partial bids. Failure to provide pricing on all items may disqualify the bid. Alternative bids will be considered, unless otherwise stated, only if the alternate is described completely, including, but not limited to, sample, if requested and specifications sufficient so that a comparison to the request can be made.

Any questions or inquiries must be submitted in writing, and must be received by the Purchasing Department no later than seven (7) calendar days before the Request for Proposal due date to be considered. Any changes to the Request for Proposal will be provided to all bidders of record.

The name of manufacturer, trade name, or catalog number mentioned in this request for bid description is for the purpose of designating a minimum standard of quality and type. Such references are not intended to be restrictive, although specified color, type of material and specified measurements may be mandatory.

Proposals will be considered for any brand that meets or exceeds the quality of the specifications listed. On all such proposals, the bidder shall specify the product they are proposing and shall supply sufficient data to enable a comparison to be made with the particular brand or manufacturer specified. Failure to submit the above may be sufficient grounds for rejection of the proposal.

SUBMITED BIDS/PROPOSALS: Proposals must be submitted as directed in the Notice to Qualified Firms, and on the forms provided unless otherwise specified. Proposals must be typewritten or printed in ink. Proposals must be mailed or delivered in person. Proposals that are faxed or emailed will not be accepted.

WITHDRAWING BIDS/PROPOSALS: Proposals may be withdrawn prior to the opening date and time upon written request of the Proposer. Negligence on the part of the Proposer in preparing his/her proposal shall not constitute a right to withdraw a proposal subsequent to the proposal opening.

PROPOSAL EVALUATION:

The Town reserves the right to reject any and all proposals received for the following reasons including but not limited to:

- Fails to adhere to one or more of the provisions established in the proposal.
- Fails to submit its proposal at the time or in the format specified herein or to supply the minimum information requested herein.
- Fails to meet the minimum evaluation criteria specified in this proposal.
- Fails to submit its proposal to the required address on or before the deadline date established by the Town.
- Misrepresents its services, experience and personnel by providing demonstrably false information in its proposal or fails to provide material information.
- Fails to submit its cost on the enclosed bid form.
- Refuses a reasonable request for an interview.
- Refuses to provide clarification requested by the Town.

RECEIPT AND OPENING OF PROPOSALS:

Proposals shall be submitted prior to the time fixed in the Request for Sealed Bids/RFP. Proposals received after the time so indicated shall be returned unopened.

PROPOSAL RESULTS:
All sealed bids received will be considered confidential and not available for public review until after the bid opening is conducted. Bid and RFP openings will be scheduled and opened accordingly. Results will not be given over the phone. Please send your request in writing or send an email to gfaccadio@salemnh.gov to receive sealed bid results after the public opening. All Bids, RFP's, and RFQ's will remain unofficial and if applicable confidential until the award has been posted on the Town website.

KNOWLEDGE AND EXPERIENCE: If and as requested per document, provide a description of the firm's knowledge and experience in the industry. Highlight your company's experience to provide the highest quality and effective product and reliable service and support.

REFERENCES: If and as requested per document, projects within the past ten years best illustrating current qualifications for this project.

AWARD OF CONTRACT; It is the policy of the Town of Salem, NH that contracts are awarded only to responsible bidders. In order to qualify as responsible, a prospective vendor must meet the following standards as they relate to this request:

- Have adequate financial resources for performance or have the ability to obtain such resources asrequired during performance.
- Have the necessary experience, organization, technical and professional qualifications, skills and facilities.
- Be able to comply with the proposed or required time of completion or performance schedule; and
- Have a demonstrated satisfactory record of performance.
- Adhere to the specifications of this bid and provide all documentation required of this bid.

The contract will be awarded to the most responsive & responsible bidder based on the best cost, qualifications, and experience, including, the quality of the equipment / product / materials / services to be provided and the support that the bidder offers during the duration of the contract terms. The lowest bidder will always be utilized first however should any scheduling conflicts occur the Town, at its discretion, reserves the right to use the second bidder as applicable to immediate and scheduled operations. Bid Proposal evaluation will be done by the Utility Division of Municipal Services and as guided in the document in the best interest of the Town.

EXECUTION OF AGREEMENT:
The successful proposer shall sign (execute) the necessary agreements for entering into the contract and return such signed agreements to the town within ten (10) calendar days from the date mailed or otherwise delivered to the successful Proposer.

APPROVAL OF AGREEMENT:
Upon receipt of the agreement that has been fully executed by the proposer, the owner will complete the execution of the agreement and return the agreement to the contractor. The Agreement accompanied by a Town issued purchase order will be delivered to the contractor and will constitute a mutual approval and agreement by both parties to abide by the terms and conditions of the agreement.

FAILURE TO EXECUTE AGREEMENT:
Failure of the successful proposer to execute the agreement at the date and time agreed upon by the Town and the successful Proposer shall be just cause for cancellation of the award and forfeiture of all deposits.

CONTRACT TERMINATION:
If at any time the proposer fails to provide proper services during the contract period, the Town of Salem, NH will have the option to terminate the contract at any time without notice.

RIGHT TO REJECT BIDS: The Town reserves the right to reject any and all sealed bids, should the Town deem it to be in the best interest of the public.

INSURANCE CERTIFICATES:

Prior to award of this contract, the Contractor shall submit insurance certificates indicating coverage for all vehicles, public liability and property damage in the following amounts:

Comprehensive General Liability	$1,000,000/$ 1,000,000
Auto Liability: Property Damage	$1,000,000/$ 1,000,000
Personal Injury	$ 1,000,000/$ 1,000,000
Workmen's Compensation	as required by the State of New Hampshire

PRICING: Unless otherwise specified all prices listed are firm for the term of the contract. All prices should include all labor and material costs, and any discounts offered. All fuel surcharges, delivery charges and miscellaneous charges that are not part of the terms and conditions of this contract will only hold up payment if they are added to the submitted invoice.

INVOICING:

Invoices must be physically mailed and/or submitted (emailed invoices unacceptable) to Accounts Payable at:

Town of Salem
c/o Accounts Payable
33 Geremonty Drive
Salem NH 03079.

The invoice must include an itemization of all items, supplies, repairs, labor furnished, including unit list pricing, and net pricing, as identified in the bid award. The total amount due shall be clear and apparent on the invoice for proper payment. Payment terms are net thirty (30) days from the date of the invoice. General terms as allowable: Invoices received before the twentieth of each month should get processed for said month with payment available through said month check disbursement.

TAX:

The Town is exempt from all sales and federal excise taxes. Our exemption number is 026000817 Please Invoice less these taxes.

DELIVERY: Deliveries are to be made only to the department or division indicated on the order and in accordance with accepted commercial practices, without extra charge for packing or containers.

GUARANTEES AND WARRANTIES: All parts and labor related to agreements must be guaranteed and include a warranty. If any work is unable to be guaranteed, the contractor must inform the Town, in writing, prior to the delivery of an item or any work being performed.

FORCE MAJEURE: Neither party shall be liable for any inability to perform its' obligations under any subsequent agreement due to war, riot, insurrection, civil commotion, fire, flood, earthquake, storm or any other act of God.

POLICE DETAILS: Police Details shall be scheduled as required for safety, by and as required by Town, and will be paid by the Municipal Services Department. The Contractor shall coordinate and confirm work schedule with the Municipal Services Department, or the designee, discuss Police Detail, if approved, and if applicable, provide detail slips back to Municipal Services.

OLD TOWN HALL WINDOW RESTORATION

INTRODUCTION

The Town of Salem Municipal Services Department is issuing this Request for Proposals to engage a qualified window conservationist to restore the existing historic wood windows at Old Town Hall. The scope of services is further outlined in this document and includes removal of window sash to the interior. This project is being funded fifty percent (50%) through a Land and Community Heritage Investment Program (LCHIP) Grant from the Division of Historical Resources and all work, methods, and materials must be in compliance as set forth by the Secretary of the Interior's Standards for the Treatment of Historic Properties. The Municipal Services Department will be the contract administrator for this project with additional oversight and perspective from the Historic District Commission.

BACKGROUND

The Salem Old Town Hall is located at 310 Main Street, just north of the intersection with Bridge Street. It sits on a 3.5-acre parcel owned by the Town of Salem on the bank of the Spicket River in the town center. This parcel was listed to the National Register of Historic Places in 2011 as contributing to the Salem Common Historic District. Included in the district are the Alice Hall Memorial Library (originally constructed as School No. 1 in 1861), north of the Old Town Hall, at 312 Main Street; the Hose House No. 2 (built 1906, now a museum for Salem police and firefighting history) at the south end of the parcel; Salem Center Burying Ground; and Salem Common/Veteran's Park, with a gazebo (built in 2000 to replace an earlier bandstand), war monuments, and hardscaped pathways at the intersection of Main and Bridge streets. This is also within the locally regulated historic district.

The Salem Old Town Hall was constructed in 1738, serving originally as the Salem Meeting House. It was a traditional meeting house with a large single meeting space with galleries above the main level. It served both religious and civic functions as the meetinghouse for the early inhabitants of Salem until 1838, when it was moved to its present location and used as their Town Hall. The single space was divided into two stories. Since then, it has undergone several some other changes, most notably in 1900 when a renovation was sponsored by Edward Searles and designed by architect Henry Vaughn giving it Tudor Revival elements. It was listed on the New Hampshire State Register of Historic Places in 2009 and at the same time was determined individually eligible for listing in the National Register of Historic Places. In 2011 it was listed as contributing to the Salem Commons Historic District. The property is owned and maintained by both the Town of Salem and Salem Historical Society as the town's museum and meeting place for the Salem Historical Society and the Salem Historic District Commission.

LCHIP DESCRIPTION OF PROPOSED WORK

The Town of Salem, Municipal Services Department, and the Historic District Commission were recipients of a 2022 LCHIP Grant. The purpose of the project described herein is to protect and enhance the historic character and preservation values of the 1738 Salem Old Town Hall located at 310 Main St, Salem, NH 03079, by undertaking the following work:

Window restoration.

The following general existing conditions have been identified and described in the Conditions Assessment Report by the Preservation Company of Kensington NH in June of 2021. Appendix A includes pictures and details respectively of the windows and accompanying elevations. Interested Contractors should attend the pre-bid conference to view the windows up close and understand extent of work.

The windows are in extremely poor condition throughout the building. They have not received maintenance in many years, and only three windows on the southwest corner have exterior storm windows to protect the sash. Window repair is the most pressing need for the building, as several have broken or missing panes of glass. The first-floor windows contain older, nineteenth century window sash, though the 2-light lower sash were added in the early twentieth century. The northernmost window, adjacent to the main entrance on the west elevation, is missing a pane of glass and is in extremely poor condition. The three windows in the first-floor office, in the southwest corner of the building, are the only windows that have exterior aluminum, triple-track storm windows, though the two on the south elevation are missing the top storm sash. They also have heat tape applied to the panes of glass, installed in the 1970s or 1980s to combat heat loss during the winter, though these are no longer functional. The single window on the first floor of the north elevation has an exterior screen installed over the lower sash, which is rusted in the corners.

All first-floor windows have visible deterioration from weathering as well as loss of glazing putty. All windows need full restoration, including wood repairs, new glazing putty, and reinstallation to restore functionality. The 6/2 configuration, though uncommon and contrasting with the 16/16 windows of the upper floor, should be retained since it is a visual record of the changes made to the building over time. Storm windows can be installed to aid in energy efficiency during the cold months. Exterior storm windows will protect and prolong the life of the window sash, though interior storms preserve the visual appearance of the exterior.

The second-floor windows throughout the building have a 16/16 double-hung configuration. These are ca. 1900 additions as part of the Searles renovation. All the windows and most of the sills are in poor condition. The second-floor windows of the east elevation also have the heat tape applied to the interior, though they no longer function. Most are no longer functional and have been painted shut. Storm windows could be added to the interior to assist in energy loss during the winters and would retain the visibility of the windows on the exterior. Alternatively, exterior storm windows can be installed to both improve efficiency and protect the exteriors of the windows.

The 9/9 double-hung sash on the east elevation are the oldest in the building, some sash possibly dating to the first half of the nineteenth century. These windows are also in very poor condition, showing paint and putty loss on the exterior and degradation of the wood. A full restoration is necessary and will likely require a greater amount of wood repair or replacement. Each gable end has paired, arched, double-hung windows and a lunette window above within the gables. These are early twentieth century additions installed when the secondary roof was installed, as can be seen in the ca. 1905 photograph. These windows are also in poor condition, as the glazing putty is visibly lifting and peeling on most of the windows. Storm windows could also be added to the arched windows, but the lunette windows are not visible from the interior and are only open to attic levels.

The recently rebuilt bathroom addition on the southeast corner has two new 4/4 double-hung windows. These new construction windows have insulated glass and will not need any storm windows.

General Scope Considerations:

The Municipal Services Department desires to refurbish the existing windows and to restore them as applicable to their original configuration and condition. As part of this effort the selected Contractor will be required to:

- Remove window sash to the interior. Windows that do not have storm windows would have to be boarded up.
- In our workshop: remove all exterior glazing putty
- Number and label glass as to location, replace any broken or scratched panes with similar character salvage glass
- Remove exterior paint via steam, infrared heat, and hand scraping (no chemicals) Scuff interior to prepare for refinishing
- Repair any damaged muntin's, weak joints, surface damage
- Re-putty glaze exterior with Sarco Type M putty
- Prime exterior with alkyd primer
- Apply two topcoats of customer specified paint to exterior and interior
- Re-install with new sash cords and bronze weather stripping
- Install storm windows after discussion and/or decision with Historic District Commission: Exterior storm windows will protect and prolong the life of the window sash, though interior storms preserve the visual appearance of the exterior.
- Clean original hardware and appurtenances and/or replace as historically applicable with new

The selected Contractor will be required to provide all labor, materials, equipment, and supervision necessary to complete the Project. All work performed for Window Restoration shall be by qualified preservationists and as guided by Preservation Brief #9 - The Repair of Historic Wooden Windows (John H. Myers), from the United States Department of the Interior (Appendix B). Proper means and methods shall be used for removal and abatement of paint and glazing assuming that some of the existing materials could be hazardous. Any waste from the windows will be handled appropriately by the Contractor during the process including disposal. The Contractor shall be required to comply with all applicable laws and regulations related to this process throughout the duration of the project.

The Contractor will be required to put in place an appropriate temporary window solution while the window sashes are in the shop for restoration. Municipal Services will collaborate with the Contractor on best means and methods of this including assistance as applicable with materials, labor, and coordination understanding the current use of the building as the Town Museum.

All work shall follow Standards for Rehabilitation taking into consideration the economic and technical feasibility of the request and understanding the purview as such by LCHIP's grant acceptance process.

In general:

- 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.

- 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.
- 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.
- Changes to a property that have acquired historic significance in their own right will be retained and preserved.
- Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- 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.
- 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.
- Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- New additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

PROCUREMENT SCHEDULE

The schedule for this procurement is as follows:

- Issue RFP — May 10, 2022
- Pre-Bid Meeting — May 19, 2022. 310 Main Street at 10:00 AM
- Last Day for Questions/Clarifications — May 24, 2022
- Answers for Questions by Addendum — May 27, 2022
- Proposals Due — June 2, 2022 by 9:00 AM delivered to 33 Geremonty Drive
- Notice of Award — June 8, 2022 or shortly thereafter

Time is of the essence

Upon confirmation of bid award and as approved by LCHIP, the Town would like the Contractor to commit to a timeline of three to four weeks per batches of windows. Generally speaking a batch would be considered anywhere from four to ten windows. The time of year for work shall be of the essence and urgency understanding the removal of windows during the winter months however Municipal Services will assist and be open to work continuing through the colder months. The expiration for the LCHIP Grant is December 31, 2023, at which time all work and review must be completed.

LUMP SUM PRICE

This will be a Lump Sum type contract. Contractors will be required to submit with their proposal a Lump Sum Price for the work. The Lump Sum Price shall include sufficient funds to cover all of the expenses necessary to complete the Project, including, but not limited to, profit, home and field office overhead, supervision, labor, materials, equipment, bonds, insurance and other services as may be required to obtain the necessary permits, and construct the work. The lump sum should also include sufficient funding to fund items that are not specifically identified in this request, but which are reasonably inferable there from. Contractors will be required to submit with their proposal on the bid form - Appendix C.

Payment for work will be established through an initial deposit upon signing contract and subsequent payments per batches upon completion, or based on mutually established terms, and acceptance of work by LCHIP.

SELECTION AND AWARD

The selection and award will be based on the following and/or as determined as the most responsible and qualified bid in the Town's best interest:

- Lowest Responsible Bid and References – Appendix C

Lump Sum:

Defined as the all-inclusive price submitted understanding the quote and within the margin of expected cost for this project.

References:

Contractor will provide at least three (3) complete references from clients that have used the Contractor's services in the past. References must include the following information (must be current):

- Reference's organization or company name.
- Reference's physical mailing address, phone number and email address.
- Contact person.
- Description and date of project and/or type(s) of services provided for each reference.

The Town reserves the right to contact listed references once an award or notification to the Contractor is made.

- Knowledge and Experience

Includes a summary of experience that pertains to the disciplines described in this request for historic building window restoration. Appendix D

- Key Personnel Background

Name, position, licenses, certifications, and related years' experience and responsibilities of key personnel assigned to this work. Appendix E

BID DELIVERABLES

1. Appendix C - BID Sheet completed in full and correct. The bid is Lump Sum all inclusive of the work and as requested in the document. The Bid shall be identified numerically and written in words on the BID Sheet. References listed accordingly.
2. Appendix D – Knowledge and Experience
3. Appendix E – Key Personnel Background
4. Appendix F - Signatory Forms completed and signed accordingly.
5. All proposals must be received at Salem Town Hall, 33 Geremonty Drive, by 9:00 AM EST on June 2, 2022. Two (2) copies of the BID package must be submitted in a sealed envelope, plainly marked:
   RFP 2022-033
   Old Town Hall Window Restoration
   Town of Salem
   Purchasing Office
   33 Geremonty Drive
   Salem NH 03079 .

APPENDIX A

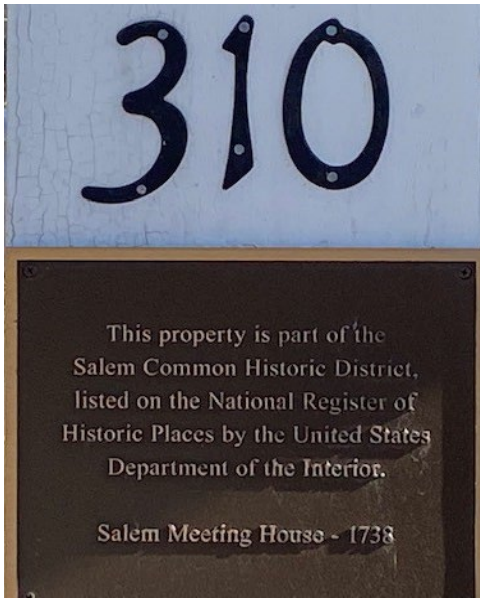

PHOTO 1-2: West Elevation, 6/2 double-hung windows on the first-floor level. Window by entrance is in poor condition with a missing pane of glass in the upper sash.

PHOTO 3: Upper window 16/16 double-hung window at the second-floor level. Glazing putty is in poor condition, and lower right pane of glass is cracked. Early twentieth century trim cap was added to the fascia board above the header.

PHOTO 4 - South elevation, paired arched windows and lunette within the gable are twentieth century additions. Glazing putty on each window is visibly lifting or missing.

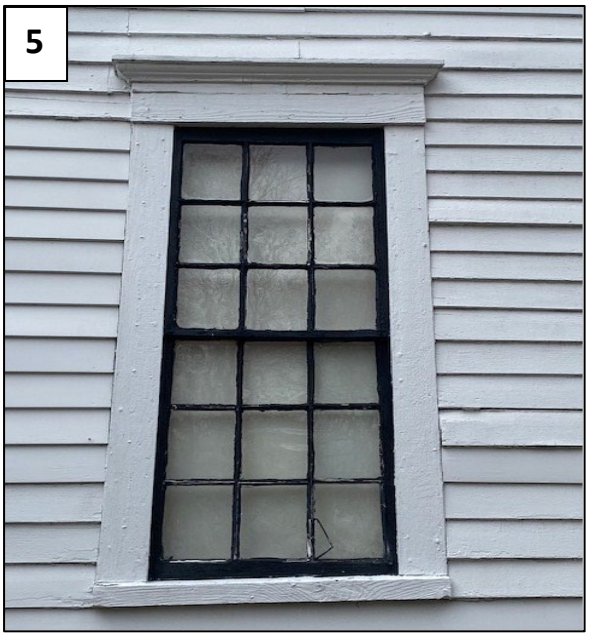

PHOTO 5 – East Elevation, 9/9 double-hung window on the first floor of the east elevation. These may be the oldest surviving windows in the building, potentially dating to the eighteenth century.

PHOTO – North Elevation, Window on the first floor, north elevation, with rusted screen installed over the lower sash.

U.S. Department of the Interior
National Park Service
Cultural Resources
Heritage Preservation Services

Preservation Briefs: 9
The Repair of Historic Wooden Windows

John H. Myers

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 (see figure 1). 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.

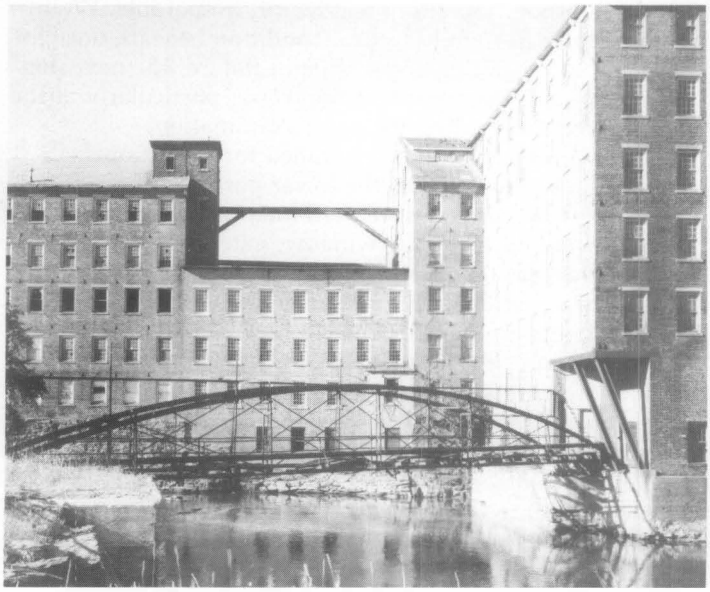

Figure 1. *Windows are frequently important visual focal points, especially on simple facades such as this mill building. Replacement of the multi-pane windows here with larger panes could dramatically change the appearance of the building. The areas of missing windows convey the impression of such a change. Photo: John T. Lowe*

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.

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 (see figure 2).

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 pro-

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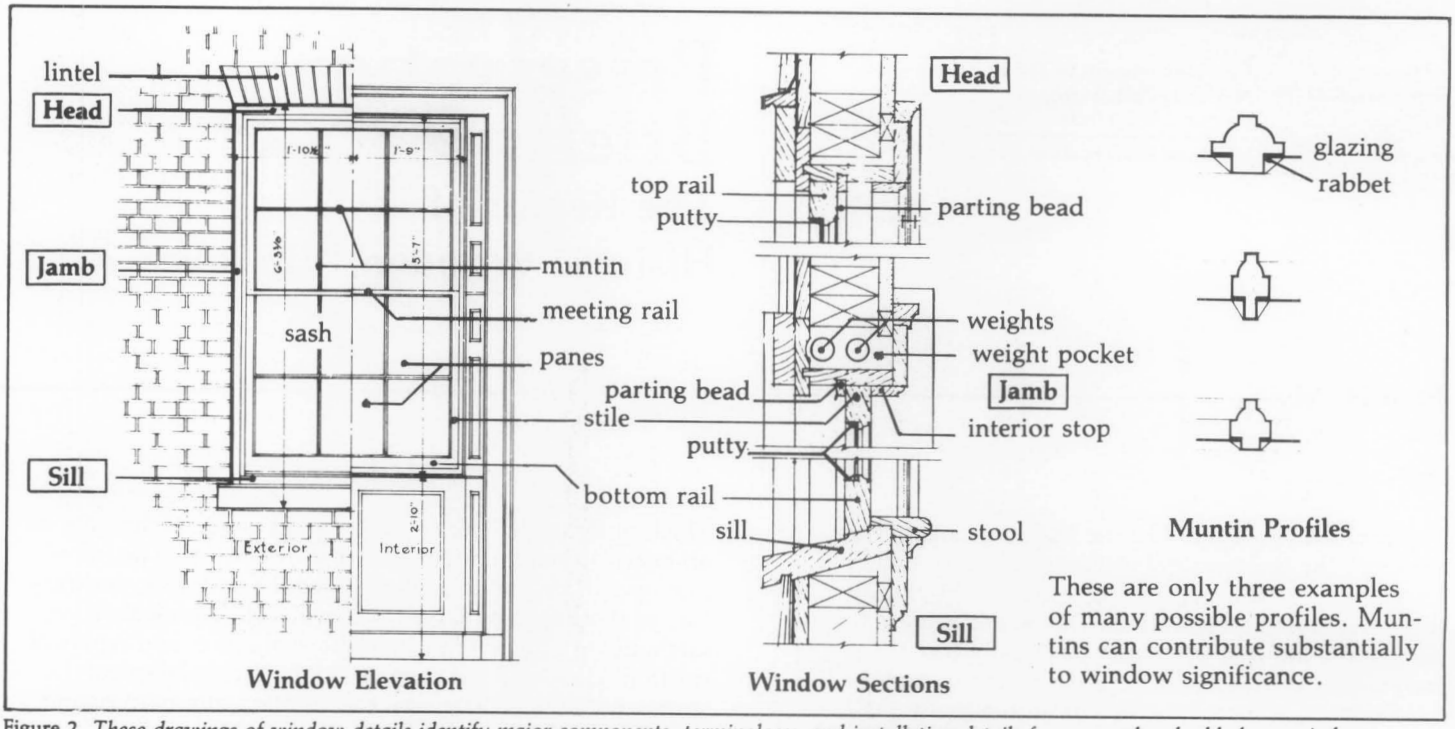

Figure 2. *These drawings of window details identify major components, terminology, and installation details for a wooden double-hung window.*

ceed 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 run-off, 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.

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 (see figure 3). 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 end-grain 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 sec-

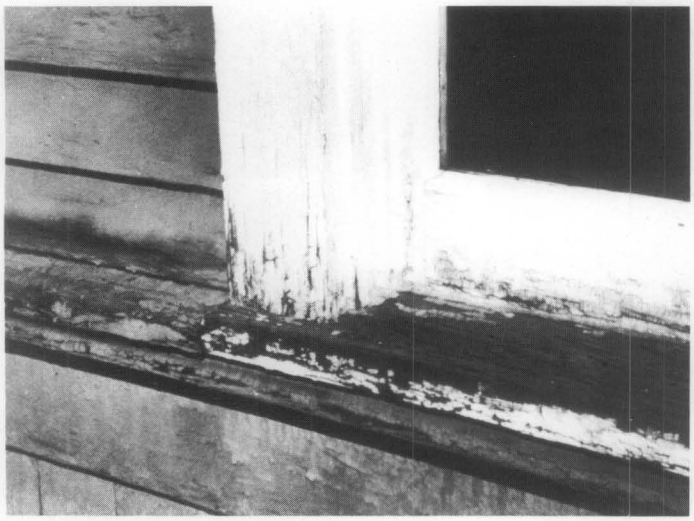

Figure 3. *Deterioration of poorly maintained windows usually begins on horizontal surfaces and at joints where water can collect and saturate the wood. The problem areas are clearly indicated by paint failure due to moisture. Photo: Baird M. Smith, AIA*

tion 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.

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 double-hung wooden window (see figures 4a-f), 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. Several techniques such as scraping, chemical stripping, and the use of a hot air gun are discussed in "Preservation Briefs: 10 Paint Removal from Historic Woodwork" (see Additional Reading section at end).

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 (see figure 4b). 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.

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 (see figure 4c), the glass should be removed or protected from the sudden temperature change which can cause breakage. An

Figure 4a. *The following series of photographs of the repair of a historic double-hung window use a unit which is structurally sound but has many layers of paint, some cracked and missing putty, slight separation at the joints, broken sash cords, and one cracked pane. Photo: John H. Myers*

Figure 4b. *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. To avoid visible scarring of the wood, the sash can be raised and the stop pried loose initially from the outer side. Photo: John H. Myers*

Figure 4c. *Sash can be removed and repaired in a convenient work area. Paint is being removed from this sash with a hot air gun while an asbestos sheet protects the glass from sudden temperature change. Photo: John H. Myers*

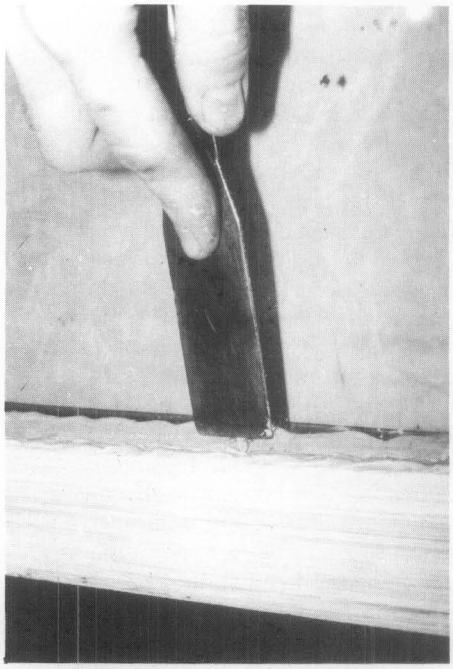

Figure 4d. *Reglazing or replacement of the putty requires that the existing putty be removed manually, the glazing points be extracted, the glass removed, and the back putty scraped out. To reglaze, a bed of putty is laid around the perimeter of the rabbet, the pane is pressed into place, glazing points are inserted to hold the pane (shown), and a final seal of putty is beveled around the edge of the glass. Photo: John H. Myers*

Figure 4e. *A common repair is the replacement of broken sash cords with new cords (shown) or with chains. The weight pocket is often accessible through a removable plate in the jamb, or by removing the interior trim. Photo: John H. Myers*

Figure 4f. *Following the relatively simple repairs, the window is weathertight, like new in appearance, and serviceable for many years to come. Both the historic material and the detailing and craftsmanship of this original window have been preserved. Photo: John H. Myers*

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 (see figure 4d). 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 weathertight 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 (see figure 4e). 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.

The operations just discussed summarize the efforts necessary to restore a window with minor deterioration to "like new" condition (see figure 4f). 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.

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 semi-rigid epoxies which saturate the porous decayed wood and then harden. The surface of the consolidated wood can then be filled with a semi-rigid epoxy patching compound, sanded and painted (see figure 5). Epoxy patching compounds can be used to build up

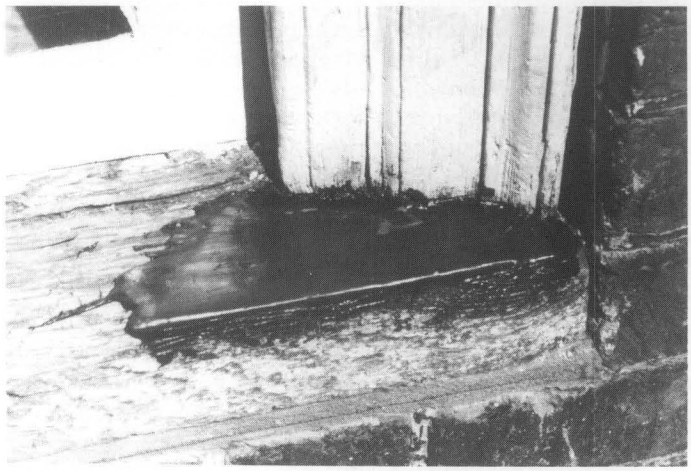

Figure 5. *This illustrates a two-part epoxy patching compound used to fill the surface of a weathered sill and rebuild the missing edge. When the epoxy cures, it can be sanded smooth and painted to achieve a durable and waterproof repair. Photo: John H. Myers*

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. Technical Preservation Services has published *Epoxies for Wood Repairs in Historic Buildings* (see Additional Reading section at end), which discusses the theory and techniques of epoxy repairs. 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.

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

ASHRAE Handbook-1977 Fundamentals. New York: American Society of Heating, Refrigerating and Air-conditioning Engineers, 1978 (chapter 26).

Ferro, Maximillian. *Preservation: Present Pathway to Fall River's Future.* Fall River, Massachusetts: City of Fall River, 1979 (chapter 7).

"Fixing Double-Hung Windows." *Old House Journal* (no. 12, 1979): 135.

Look, David W. "Preservation Briefs: 10 Paint Removal from Historic Woodwork." Washington, DC: Technical Preservation Services, U.S. Department of the Interior, forthcoming.

Morrison, Hugh. *Early American Architecture.* New York: Oxford University Press, 1952.

Phillips, Morgan, and Selwyn, Judith. *Epoxies for Wood Repairs in Historic Buildings.* Washington, DC: Technical Preservation Services, U.S. Department of the Interior (Government Printing Office, Stock No. 024-016-00095-1), 1978.

Rehab Right. Oakland, California: City of Oakland Planning Department, 1978 (pp. 78-83).

"Sealing Leaky Windows." *Old House Journal* (no. 1, 1973): 5.

Smith, Baird M. "Preservation Briefs: 3 Conserving Energy in Historic Buildings." Washington, DC: Technical Preservation Services, U.S. Department of the Interior, 1978.

1981

APPENDIX C

BID AND REFERENCE FORM

CONTRACTOR:_____SIGNATURE:_____DATE:_____

CONTRACTOR ATTENDED THE PRE-BID CONFERENCE: YES _____ NO _____

OLD TOWN HALL WINDOW RESTORATION: The Municipal Services Department desires to refurbish the existing windows and to restore them as applicable to their original configuration and condition. This will be a Lump Sum type contract. Contractors will be required to submit with their proposal a Lump Sum Price for the work. The Lump Sum Price shall include sufficient funds to cover all of the expenses necessary to complete the Project, including, but not limited to, profit, home and field office overhead, supervision, labor, materials, equipment, bonds, insurance and other services as may be required to obtain the necessary permits, and construct the work. The lump sum should also include sufficient funding to fund items that are not specifically identified in this request, but which are reasonably inferable there from.

LUMP SUM:____**$**_____

WRITTEN:_____

Contractor will provide at least three (3) complete references from clients that have used the Contractor's services in the past. References must include the following information (must be current):

- Reference's organization or company name.
- Reference's physical mailing address, phone number and email address.
- Contact person.
- Description and date of project and/or type(s) of services provided for each reference.

REFERENCE 1:

REFERENCE 2:

REFERENCE 3:

APPENDIX D

KNOWLEDGE AND EXPERIENCE

CONTRACTOR:_____SIGNATURE:_____DATE:_____

Includes a summary of knowledge and experience that pertains to the disciplines and methods described in this document for restoration of historic windows.

STATEMENT OF QUALIFICATIONS	CIRCLE ONE	
Contractor (Company) has full ability to perform the work and does not sub-contract out.	YES	NO
Contractor (Company) shall have been in business as a General Contractor or Home Improvement Contractor and registered/licensed for at least five (5) years. **YEARS IN BUSINESS: REGISTRATION#:**	YES	NO
There must be at least one Experienced Preservationist who fully understands and has performed work under the purview of an LCHIP project including means and methods of the Secretary of the Interior's Standards for the Treatment of Historic Properties. **LEAD PRESERVATIONIST:**	YES	NO
The Contractor has the appropriate staff and equipment to remove windows and restore appropriately at there own facility including handling any types of waste requiring documentation. **TOTAL STAFF: LOCATION OF BUSINES/SHOP:**	YES	NO
Contractor has performed window restoration specifically and as guided per Preservation Brief #9 - The Repair of Historic Wooden Windows (John H. Myers), from the United States Department of the Interior.	YES	NO
Contractor has completed projects for municipalities.	YES	NO
Contractor has completed and is certified per EPA's Lead Renovation, Repair and Painting Rule (RRP) Rule requiring that firms performing renovation, repair and painting projects that disturb lead-based paint in homes built before 1978 be certified by EPA (or an EPA-authorized state), use certified renovators who are trained by EPA-approved training providers and follow lead-safe work practices	YES	NO

APPENDIX E

KEY PERSONNEL BACKGROUND

CONTRACTOR:_____SIGNATURE:_____DATE:_____

Name, position, certifications, and related years' experience of key personnel assigned to this work.

APPENDIX F

SIGNATORY DECLARATION

I, the undersigned, acknowledge completion and receipt of the Authorized Signatory Declaration Form, and fully understand my responsibility as an Authorized Signatory on this document and all subsequent forms thereof requiring signature. In particular I understand rules regarding the referencing, checking, and verification as necessary for disclosure to award this bid or proposal as requested and defined within this document. The bid document as submitted has not been altered knowing all information must be filled out correctly for consideration. It is hereby understood that the Town of Salem reserves the right to reject any and all proposals or parts of proposals; to waive any defects, information, and minor irregularities; to accept exceptions to these specifications; to award contracts, or to cancel this request, if it is in the Town's best interest to do so.

Written Name of Authorized Signatory: _____

Title: _____

Signature: _____

Date: _____

Company: _____

Address: _____

_____

Phone: _____

Email: _____

NON-COLLUSION STATEMENT

By Submission of the Bid or Proposal, the Bidder Certifies that:

1. This bid or proposal has been independently arrived at without collusion with any other competitor or potential competitor;

2. This bid proposal has not been knowingly disclosed and will not be knowingly disclosed prior to the opening of bids or proposals for this project, to any other bidder, competitor, or potential competitor;

3. No attempt has been made to induce any other person, partnership or corporation to submit or not to submit a bid or proposal;

4. The person signing this bid or proposal certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the bidder as well as to the person signing in its behalf;

5. That attached hereto (if a corporate bidder) is a certified copy of a resolution authorizing the execution of the certificate by the signatory of this bid or proposal on behalf of the corporate bidder.

Signature: _____

Date: _____

INDEMNIFICATION AGREEMENT

The successful vendor agrees to indemnify, investigate, protect, defend, and save harmless the Town of Salem, NH, it's officials, officers, agents, and employees from any and all claims and losses accruing or resulting to any and all contractors, subcontractors, suppliers, laborers and any other person, firm or corporation furnishing or supplying work, services, materials, equipment or supplies in connection with the performance of this contract and from any and all claims and losses accruing or resulting to any person, firm or corporation which may be injured or damaged by the vendor in the performance of this contract. In any case, the forgoing provisions concerning indemnification shall not be construed to indemnify the Town for damage arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the Town or its employees. This indemnification shall survive the expiration or early termination of this contract.

Signature: _____

Date: _____

NO BID QUESTIONNAIRE

If you choose not to bid, please complete the questionnaire below and return it with your response by the bid opening date. Your assistance in helping us to analyze no bid rationale is very much appreciated.

A no bid is submitted in reply to the Town of Salem, NH invitation in reference to:

_____

Given the following:

_____Item not supplied by our company
_____Bid Specification (Provide reason)

_____

_____Profit Margin too low
_____Past experience with the Town of Salem (Provide reason)

_____

_____Insufficient time allowed to prepare and respond to bid request
_____Bid requirements (Provide reason)

_____

_____Priority of other business opportunities limits time.
_____Other reason(s): _____

_____

_____

Signature: _____

Date: _____

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▸ **Go to *www.irs.gov/FormW9* for instructions and the latest information.**

Give Form to the requester. Do not send to the IRS.

Print or type. See **Specific Instructions** on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▸ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▸

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

Requester's name and address (optional)

6 City, state, and ZIP code

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN,* later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–		–				

or

Employer identification number

		–							

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	**Signature of U.S. person** ▸	**Date** ▸

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9.*

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*