

35/13-99 3720 Bradley Lane
(Chevy Chase Village Historic District)

CHEVY CHASE SURVEY FORM, 1995

SURVEY AREA # 4



ADDRESS 3720 BRADLEY

Contact Sheet # 15-4

ARCHITECTURAL STYLE

CATEGORY: 1 ___ 2 NC ___ OOP ___

- 1. Gothic Revival
- 2. Renaissance Revival
- 3. Tudor Revival
- 4. Classical Revival
- 5. Mission
- 6. Dutch Colonial
- 7. Colonial Revival
- 8. Four Square
- 9. Craftsman
- 10. Bungalow
- 11. Art Deco
- 12. Other

NUMBER OF STORIES

1 ___ 1.5 ___ 2 2.5 W/A 3 or more ___
(indicate #)

NUMBER OF BAYS

1 ___ 2 ___ 3 4 W/A + 2 story east wing 5 ___ 6 or more ___
(indicate #)

PRINCIPAL WALL MATERIALS - 1st story

- 1. Wood - clapboard
- 2. Wood - shingle
- 3. Brick
- 4. Stone
- 5. Concrete
- 6. Aluminum/Vinyl
- 7. Stucco
- 8. Other

2nd story

- 1. Wood - clapboard
- 2. Wood - shingle
- 3. Brick
- 4. Stone
- 5. Concrete
- 6. Aluminum/Vinyl
- 7. Stucco
- 8. Other

PRINCIPAL WINDOW TYPE - 1st Story

- a. 1/1
- b. 8/8
- c. 6/1
- d. 6/6
- e. 9/1
- f. Casement
- g. Other

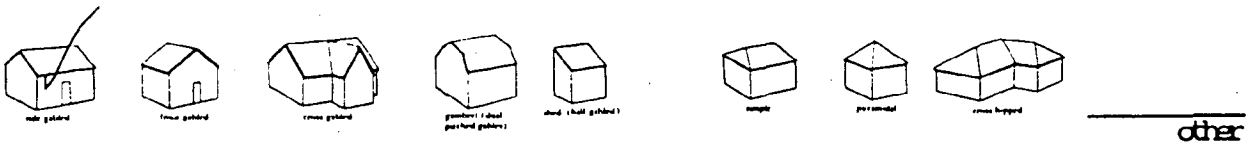
2nd Story

- a. 1/1
- b. 8/8
- c. 6/1
- d. 6/6
- e. 9/1
- f. Casement
- g. Other

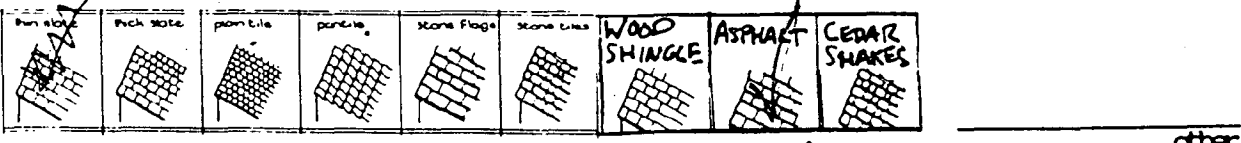
ROOF SHAPE

Gabled:

Hipped:



ROOF MATERIALS



DATE/ERA OF CONSTRUCTION by 1927 garage also

pre-1916 ___ 1916-27 1927-45 ___ post-45 ___ unknown ___

notes on back orig front gable 2 bay garage

3720 BRADLEY



House has been extended by 2 bays addition to
east side with casement window on 1st story & arched
window on 2nd.

P123- BYRON OLIVER GRAMAM HOME: 14 BRADLEY LANE (WHO'S WHO)

SITE OF C B GRAMAM HOUSE, 1931 KLINGE AREA



CHEVY CHASE SURVEY FORM, 1995

SURVEY AREA # 4

ADDRESS 3800 BRADLEY

Contact Sheet # 15-3

ARCHITECTURAL STYLE

CATEGORY: 1 ___ 2 ___ NC OOP ___

- 1. Gothic Revival
- 2. Renaissance Revival
- 3. Tudor Revival
- 4. Classical Revival
- 5. Mission
- 6. Dutch Colonial
- ~~7. Colonial Revival~~
- 8. Four Square
- 9. Craftsman
- 10. Bungalow
- 11. Art Deco
- 12. Other

MODERN - Neocolonial

NUMBER OF STORIES

1 ___ 1.5 ___ 2 2.5 ___ 3 or more ___
(indicate #)

NUMBER OF BAYS

1 ___ 2 ___ 3 ___ 4 ___ 5 6 or more 7
(indicate #)
5 on main house + 2 bay addition

PRINCIPAL WALL MATERIALS - 1st story

- 1. Wood - clapboard 3. Brick 5. Concrete 7. Stucco
- 2. Wood - shingle 4. Stone 6. Aluminum/Vinyl 8. Other ___

2nd story

- 1. Wood - clapboard 3. Brick 5. Concrete 7. Stucco
- 2. Wood - shingle 4. Stone 6. Aluminum/Vinyl 8. Other ___

PRINCIPAL WINDOW TYPE - 1st story

a. 1/1 b. 8/8 c. 6/1 d. 6/6 e. 9/1 f. Casement g. Other 12/12

2nd story

a. 1/1 b. 8/8 c. 6/1 d. 6/6 e. 9/1 f. Casement g. Other ___

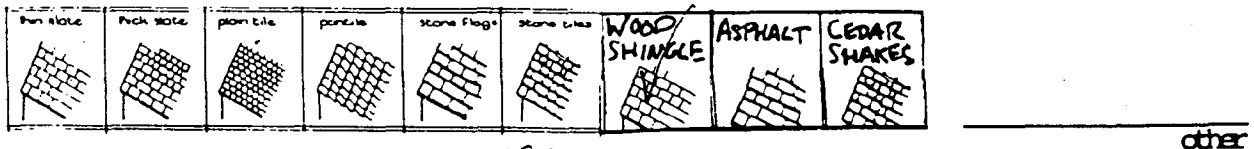
ROOF SHAPE

Gabled:

Hipped:



ROOF MATERIALS



DATE/ERA OF CONSTRUCTION 1983

pre-1916 ___ 1916-27 ___ 1927-45 ___ post-45 unknown ___

notes on back

*House on or near site by 916 - demolished?
BLDG PERMIT FOR NEW HOUSE 9-7-1983
(VLLG BLDG PERMIT LOG)*

SEARCHED



CHEVY CHASE SURVEY FORM, 1995

SURVEY AREA # 4



ADDRESS 3718 BRADLEY

Contact Sheet # 15-5

ARCHITECTURAL STYLE

CATEGORY: 1 2 NC OOP

- 1. Gothic Revival
- 2. Renaissance Revival
- 3. Tudor Revival
- 4. Classical Revival
- 5. Mission
- 6. Dutch Colonial
- 7. Colonial Revival
- 8. Four Square
- 9. Craftsman
- 10. Bungalow
- 11. Art Deco
- 12. Other

Four Square

NUMBER OF STORIES

1 1.5 2 2.5 3 or more
(indicate #)

NUMBER OF BAYS

1 2 3 4 5 6 or more
(indicate #)

PRINCIPAL WALL MATERIALS - 1st story

- 1. Wood - clapboard
- 2. Wood - shingle
- 3. Brick
- 4. Stone
- 5. Concrete
- 6. Aluminum/Vinyl
- 7. Stucco
- 8. Other

2nd story

- 1. Wood - clapboard
- 2. Wood - shingle
- 3. Brick
- 4. Stone
- 5. Concrete
- 6. Aluminum/Vinyl
- 7. Stucco
- 8. Other

PRINCIPAL WINDOW TYPE - 1st Story

- a. 1/1
- b. 8/8
- c. 6/1
- d. 6/6
- e. 9/1
- f. Casement
- g. Other

2nd Story

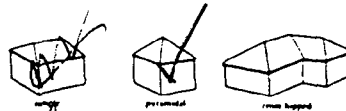
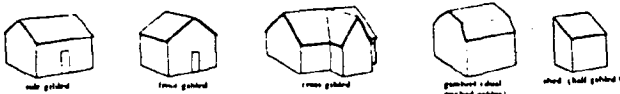
- a. 1/1
- b. 8/8
- c. 6/1
- d. 6/6
- e. 9/1
- f. Casement
- g. Other

windows in pairs

ROOF SHAPE

Gabled:

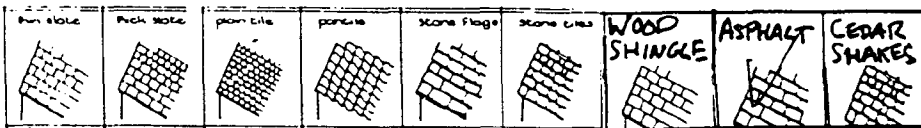
Hipped:



with big roof dormers

other

ROOF MATERIALS



other

DATE/ERA OF CONSTRUCTION by 1923

pre-1916 1916-27 1927-45 post-45 unknown

notes on back

OC 455393

✓

1923

→ NOT ON 1920 CENSUS

EUGENE COOK/KIM CORENTIAVER, HOME 18 E BRADLEY LANE
STATIONER, OFFICE 521 CONNECTICUT AVE
B. 1875

(WHO'S WHO 1923-24)

HISTORIC PRESERVATION COMMISSION STAFF REPORT

Address:	3720 Bradley Lane, Chevy Chase	Meeting Date:	05/12/99
Resource:	Chevy Chase Village Historic District	Public Notice:	04/28/99
Case Number:	35/13-99G	Report Date:	05/05/99
Review:	HAWP	Tax Credit:	None
Applicant:	Earle Silber, MD & Judith Silber	Staff:	Perry Kephart

PROPOSAL: Install Vinyl Siding over Wood Siding, Windows and Soffits.

RECOMMEND: Deny

DATE OF CONSTRUCTION: ca. 1925

SIGNIFICANCE: Contributing Resource in Chevy Chase Village Historic District.

ARCHITECTURAL DESCRIPTION

The structure is a three bay, side-gable, Colonial Revival frame residence with 8/8 windows, wood cladding and composite shingle roofing (with a small skylight on the front roof plane). The Federal Revival front door has a lattice-work portico added in 1989. Several of the wood window frames are clad in vinyl. The one-bay, two-story side addition has a wall dormer on the second level. The two car garage is from the same period as the historic resource.

PROPOSAL

The applicant proposes to cover the wood siding, soffits and window framing with vinyl material.

STAFF DISCUSSION

The streetscape on the south side of Bradley Lane forms the northern boundary of the Chevy Chase Village Historic District. The progression eastward from Connecticut Avenue from two large properties (1 Quincy Street, 3810 Bradley Lane) is to a series of Revival Style houses on smaller lots. The houses in the series were all built in the same era (before 1927, with the exception of a non-contributing house that replaces an earlier building), and are tied together by similar scale, material and design features. Two prevalent features are the two-story additions with a wall dormer, and free-standing garages built at the same time as the houses. The use of the same scale, but with individual interpretations of various Revival Styles (Tudor, Colonial, Federal, Georgian), also adds to the cohesiveness of the streetscape. An important feature of the

streetscape that relates to this application is the historic integrity of the properties and the substantial amount of original material that remains in place.

The historic integrity of the property is, at this point, substantially intact. The replacement of the slate roof with a textured composite shingle, the addition of a skylight, vinyl covering some of the window frames, and the addition of a lattice portico are notable changes to the front facade, but these changes could be reversed. Changes to the rear of the building generally do not affect the contribution of a historic resource to the streetscape of a historic district. However, removal, or replacement with a different material, of the major components of the front facade—windows, door, shutters, siding—would be seriously problematic.

Proposed changes in the historic district must take into account the basic policies listed in the Chevy Chase Village Guidelines:

Siding should be subject to moderate scrutiny if it is visible from the public right-of-way, lenient scrutiny if it is not. Artificial siding on areas visible from the public right-of-way should be discouraged where such materials would replace or damage original building materials that are in good condition. *Vinyl and aluminum siding should be discouraged.* (Italics and bolding added for emphasis.)

Windows (including window replacement) should be subject to moderate scrutiny if they are visible from the public right-of-way, lenient scrutiny if they are not. For outstanding resources, they should be subject to strict scrutiny. Addition of compatible exterior storm windows should be encouraged, whether visible from the public right-of-way or not. *Vinyl and aluminum windows (other than storm windows) should be discouraged.* (Italics and bolding added for emphasis.)

As to concern expressed with regard to repainting, the methods for removal of lead paint are addressed in numerous preservation publications, including the preservation brief attached to this report. Avoidance of wood siding maintenance is generally not considered a justification for replacement. The addition of vinyl siding is not a recommended method of mitigating lead-paint problems.

As to the interest in energy efficiency, the addition of one layer of almost any material can be expected to add somewhat to the energy conservation for a structure. However, as much of the energy loss is through the windows, adding one layer of vinyl to the walls would not provide sufficient remedy to justify changing building materials. The addition of storm windows, if energy conservation is a serious concern, would qualify for a historic preservation tax credit. If the walls are not correctly insulated, there are more satisfactory solutions than the addition of a layer of vinyl.

Paint problems are often symptomatic of moisture barrier or insulation problems behind the outside cladding. Covering the wood siding with vinyl may cause irreparable damage to the wood if moisture is trapped against the wood by the vinyl layer. Staff would recommend that the reasons for the paint failure be more thoroughly investigated before covering the wood with either paint or any other substance.

The applicants are to be commended for their concern that the historic resource be properly maintained. The proposed use of vinyl cladding cannot be considered a satisfactory solution. The staff would recommend that other solutions to the maintenance situation be explored and are available to assist in investigating other possible methods of properly maintaining the historic resource.

STAFF RECOMMENDATION

Staff recommends that the Commission deny the HAWP application to install vinyl siding, soffits and window frames at 3720 Bradley Lane, Chevy Chase. Staff's recommendation is consistent with Chapter 24A-8(a):

The Commission shall instruct the director to deny a permit if it finds, based on the evidence and information presented to or before the commission that the alteration for which the permit is sought would be inappropriate or inconsistent with, or detrimental to the preservation, enhancement or ultimate protection of the historic site, or historic resource within an historic district, and to the purposes of this chapter.

and with the Chevy Chase Village District Guidelines basic policies to be adhered to:

Preserving the integrity of the Chevy Chase Village Historic District. Any alterations should, at a minimum, perpetuate the ability to perceive the sense of time and place portrayed by the district.

Preserving the integrity of contributing structures in the district. Alterations to contributing structures should be designed in such a way that the altered structure still contributes to the district.

Vinyl and aluminum siding should be discouraged.

Vinyl and aluminum windows (other than storm windows) should be discouraged.

and Secretary of the Interior's Standards for Rehabilitation #2, and #5:

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 the property will be avoided.

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

APPLICATION FOR HISTORIC AREA WORK PERMIT

Contact Person: JUDITH SILBER

Daytime Phone No.: 301 656-6350

Tax Account No.: 213 38 0805

Name of Property Owner: EARLE SILBER M.D & JUDITH SILBER Daytime Phone No.: 301-656-6350

Address: 3720 Bradley Lane, Chevy Chase, MD, 20815
Street Number City Street Zip Code

Contractor: GRENCO Phone No.: 301-942-6377

Contractor Registration No.: 2120

Agent for Owner: ROGER GREGORY Daytime Phone No.: 301-942-6377

LOCATION OF BUILDING/PREMISE

House Number: 3720 Street: Bradley Lane

Town/City: Chevy Chase Nearest Cross Street: Connecticut Ave & Brookville Rd

Lot: 23 Block: 61 Subdivision: Chevy Chase Section No. 2

Liber: _____ Folio: _____ Parcel: _____

PART ONE: TYPE OF PERMIT ACTION AND USE

- 1A. CHECK ALL APPLICABLE:
- | | | | | | | | | |
|------------------------------------|----------------------------------|--|--|--|--|--|-------------------------------|-------------------------------|
| <input type="checkbox"/> Construct | <input type="checkbox"/> Extend | <input checked="" type="checkbox"/> Alter/Renovate | <input type="checkbox"/> A/C | <input type="checkbox"/> Slab | <input type="checkbox"/> Room Addition | <input type="checkbox"/> Porch | <input type="checkbox"/> Deck | <input type="checkbox"/> Shed |
| <input type="checkbox"/> Move | <input type="checkbox"/> Install | <input type="checkbox"/> Wreck/Raze | <input type="checkbox"/> Solar | <input type="checkbox"/> Fireplace | <input type="checkbox"/> Woodburning Stove | <input type="checkbox"/> Single Family | | |
| <input type="checkbox"/> Revision | <input type="checkbox"/> Repair | <input type="checkbox"/> Revocable | <input type="checkbox"/> Fence/Wall (complete Section 4) | <input checked="" type="checkbox"/> Other: <u>vinyl siding</u> | | | | |

1B. Construction cost estimate: \$ \$21,465.00

1C. If this is a revision of a previously approved active permit, see Permit # _____

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 WSSC 02 Septic 03 Other: _____

2B. Type of water supply: 01 WSSC 02 Well 03 Other: _____

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height _____ feet _____ inches

- 3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:
- On party line/property line Entirely on land of owner On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

Earle Silber
Judith Silber
Signature of owner or authorized agent

April 5, 1999
Date

Approved: _____ For Chairperson, Historic Preservation Commission

Disapproved: _____ Signature: _____

(4)

**THE FOLLOWING ITEMS MUST BE COMPLETED AND THE
REQUIRED DOCUMENTS MUST ACCOMPANY THIS APPLICATION.**

1. **WRITTEN DESCRIPTION OF PROJECT**

a. Description of existing structure(s) and environmental setting, including their historical features and significance:

see Attachment A

b. General description of project and its effect on the historic resource(s), the environmental setting, and, where applicable, the historic district:

see Attachment A

2. **SITE PLAN** see Attachment B

Site and environmental setting, drawn to scale. You may use your plat. Your site plan must include:

- a. the scale, north arrow, and date;
- b. dimensions of all existing and proposed structures; and
- c. site features such as walkways, driveways, fences, ponds, streams, trash dumpsters, mechanical equipment, and landscaping.

3. **PLANS AND ELEVATIONS**

You must submit 2 copies of plans and elevations in a format no larger than 11" x 17". Plans on 8 1/2" x 11" paper are preferred.

- a. **Schematic construction plans**, with marked dimensions, indicating location, size and general type of walls, window and door openings, and other fixed features of both the existing resource(s) and the proposed work.
- b. **Elevations (facades)**, with marked dimensions, clearly indicating proposed work in relation to existing construction and, when appropriate, context. All materials and fixtures proposed for the exterior must be noted on the elevations drawings. An existing and a proposed elevation drawing of each facade affected by the proposed work is required.

4. **MATERIALS SPECIFICATIONS** see Attachment A

General description of materials and manufactured items proposed for incorporation in the work of the project. This information may be included on your design drawings.

5. **PHOTOGRAPHS** see Attachment C

- a. Clearly labeled photographic prints of each facade of existing resource, including details of the affected portions. All labels should be placed on the front of photographs.
- b. Clearly label photographic prints of the resource as viewed from the public right-of-way and of the adjoining properties. All labels should be placed on the front of photographs.

ATTACHMENT A (continued): SILBER RESIDENCE

Leonard and Mary Baron (West side)
3800 Bradley Lane
Chevy Chase, MD. 20815

Richard Paisner (Rear)
21 Quincy Street
Chevy Chase, MD. 20815

John and Libby Olson (Confronting side)
3719 Bradley Lane
Chevy Chase, MD. 20815

ATTACHMENT A: SILBER RESIDENCE HISTORIC AREA WORK PERMIT APPLICATION

1. WRITTEN DESCRIPTION OF PROJECT

a. The original residence, built about 1930, sits on the northern border of the historic district in Chevy Chase Village. Since 1930, two renovations have substantially altered its exterior appearance. In 1968, a screened porch was enclosed and an addition constructed to create a suite of rooms on the northeast corner of the first floor. In 1989, the property underwent another major renovation. The outer bearing wall at the southwest corner was moved to create additional interior space; a new deck was built across the entire south side of the house; sliding glass doors replaced enclosed walls along the south wall and the rear door was moved and redesigned. At the same time, lattice trellises were added to the rear of the house and to the front entrance and the front roof line was altered with a skylight. These additions, which are pleasing but do not conform to historic authenticity, substantially changed the exterior of the house. In 1990, the slate roof was replaced with synthetic asphalt shingles.

b. The existing siding has been painted many times over the years, initially with lead-based paint. If it were to be painted again, it would require costly scraping and preparation. The proposed project would cover the existing siding with a high grade of vinyl siding manufactured by CertainTeed. The color proposed would be the same as the present color of the house. It has been brought to our attention that many other houses in the historic area have already been covered with vinyl siding. It is our opinion that the new siding will not adversely effect the environment and will improve the exterior appearance of the house which becomes unsightly periodically because of the frequent need to repaint (as often as every six years). In future years, the new siding will substantially reduce our maintenance costs. In addition, the siding will enhance the insulation of the house, making it more energy efficient during the winter and summer. These anticipated lower maintenance costs will make it possible for us to continue living in the house, which has been our residence since 1958.

4. MATERIALS SPECIFICATIONS

Monogram CertainTeed 4" smooth vinyl siding on exterior walls in the color called Natural Clay; soffits and window frames in Colonial White.

7. ADDRESSES OF ADJACENT AND CONFRONTING PROPERTY OWNERS

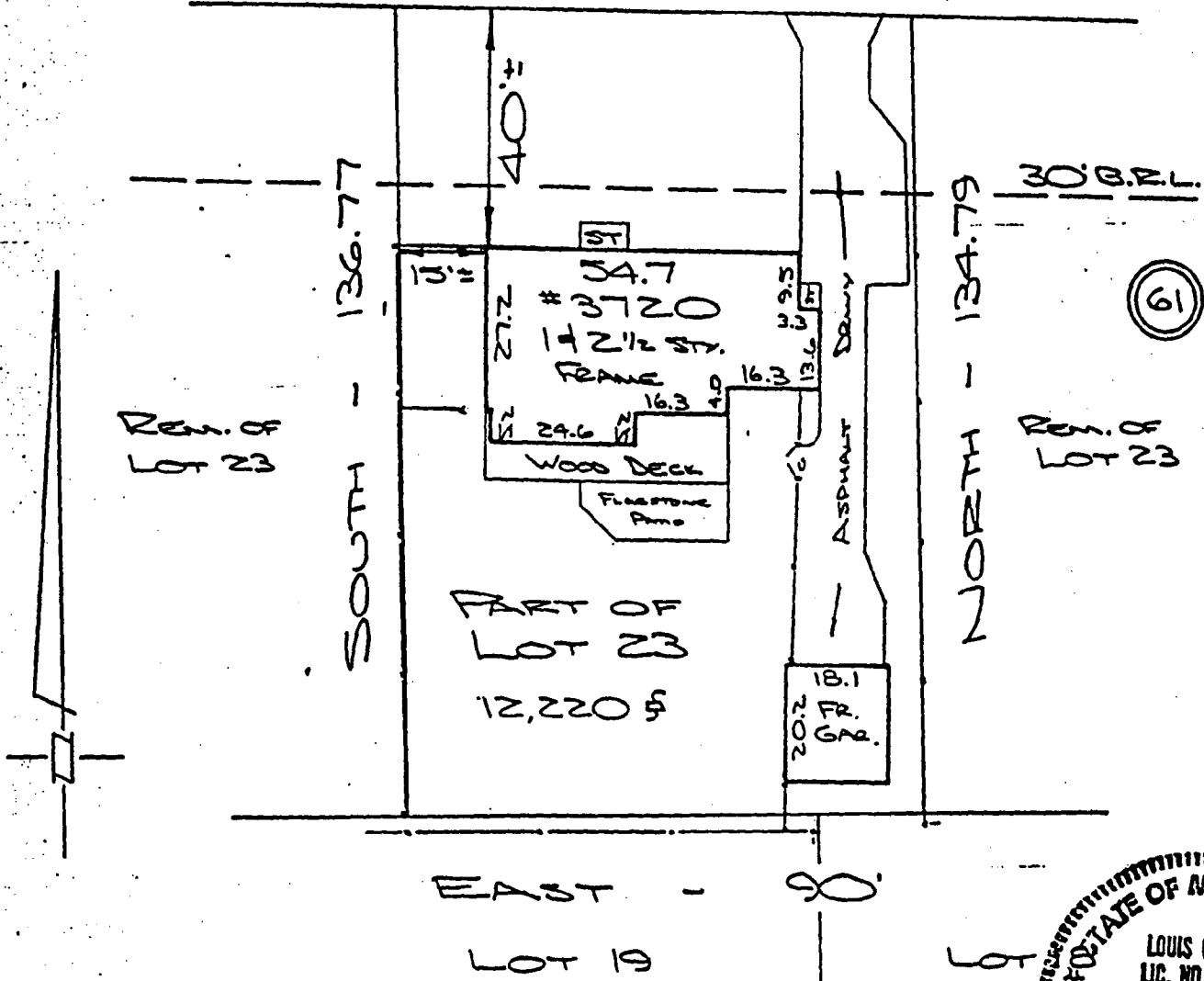
Adjoining Property Owners:

Roland Olson (East side)
3718 Bradley Lane
Chevy Chase, MD. 20815

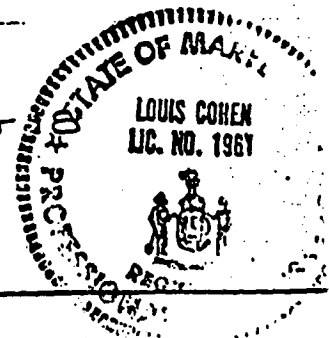
Silber Residence
Plot Plan
Attachment B

BRADLEY LANE

N. 88° 53' W. - 90.08



Note: This property does not lie within the limits of a flood hazard area as delineated on the maps of the national flood insurance program.



CAPITOL SURVEYS

NOTE: This drawing is not intended to establish property lines. It cannot be used for construction purposes. All information shown hereon taken from the land records of the county or city in which the property is located and field work performed.

HOUSE LOCATION
 PART OF LOT 23 BLOCK 61
 SECTION No. 2
CHEW CHASE
 MONTGOMERY COUNTY, MARYLAND
 Recorded in Plat Book 2 Plat 106 Scale 1" = 30'

I hereby certify that the position of all the existing improvements on the above described property have been established by accepted field practices, and that unless otherwise shown there are no visible encroachments.

[Signature]
 LOUIS COHEN
 Registered Land Surveyor

DATE: Aug. 21, 1992

CASE: 1684-92 FILE 4478



SOUTH WEST CORNER



EAST VIEW & NORTHEAST CORNER

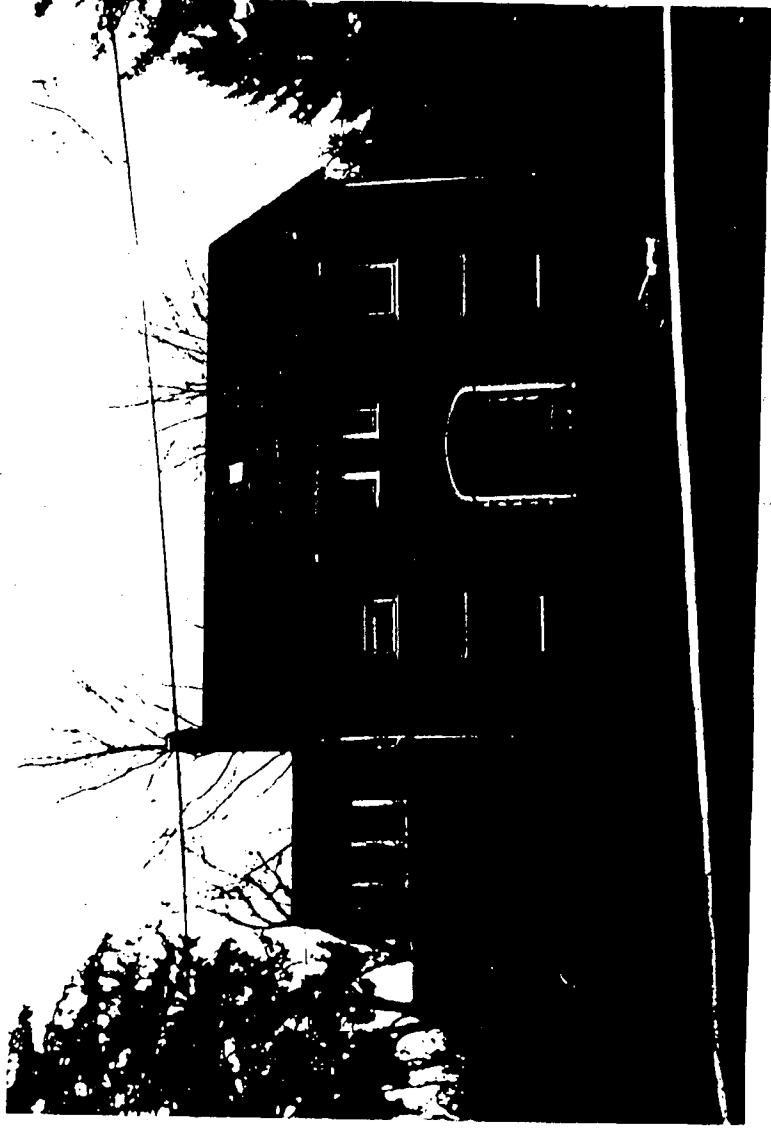
(2)



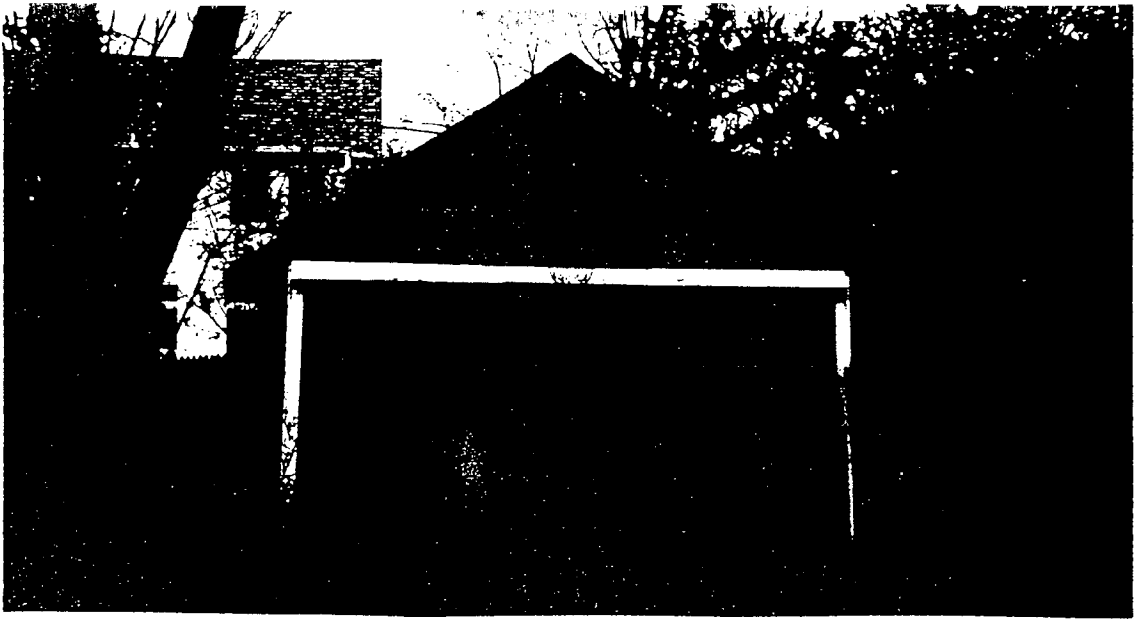
REAR VIEW: SOUTH SIDE ↑

LD

A



FRONT VIEW: NORTH SIDE ↑



11
→



12
→



37 PRESERVATION BRIEFS

Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing

Sharon C. Park, AIA, and Douglas C. Hicks



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

Lead-based paint, a toxic material, was widely used in North America on both the exteriors and interiors of buildings until well into the second half of the twentieth century. If a "historic" place is broadly defined in terms of time as having attained an age of fifty years, this means that almost every historic house contains some lead-based paint. In its deteriorated form, it produces paint chips and lead-laden dust particles that are a known health hazard to both children and adults. Children are particularly at risk when they ingest lead paint dust through direct hand-to-mouth contact and from toys or pacifiers. They are also at risk when they chew lead-painted surfaces in accessible locations. In addition to its presence in houses, leaded paint

chips, lead dust, or lead-contaminated soil in play areas can elevate a child's blood lead level to a degree that measures to reduce and control the hazard should be undertaken (see Action Level Chart, page 6)

The premise of this Preservation Brief is that historic housing can be made lead-safe for children without removing significant decorative features and finishes, or architectural trimwork that may contribute to the building's historic character (see fig. 1). *Historic housing*—encompassing private dwellings and all types of rental units—is necessarily the focus of this Brief because federal and state laws primarily address the hazards of lead and



Before



After

Figure 1. A large-scale historic rehabilitation project incorporated sensitive lead-hazard reduction measures. Interior walls and woodwork were cleaned, repaired, and repainted and compatible new floor coverings added. The total project was economically sound and undertaken in a careful manner that preserved the building's historic character. Photos: Landmarks Design Associates

lead-based paint in housing and day-care centers to protect the health of children under six years of age. Rarely are there mandated requirements for the removal of lead-based paint from non-residential buildings.

Ideally, most owners and managers should understand the health hazards created by lead-based paint and voluntarily control these hazards to protect young children. A stricter approach has been taken by some state and federal funding programs which have compliance requirements for identifying the problem, notifying tenants, and, in some cases, remedying lead hazards in housing (see Legislation Sidebar, pg.15). With new rules being written, and new products and approaches being developed, it is often difficult to find systematic and balanced methodologies for dealing with lead-based paint in historic properties.

This Preservation Brief is intended to serve as an introduction to the complex issue of historic lead-based paint and its management. It explains how to plan and implement lead-hazard control measures to strike a balance between preserving a historic building's significant materials and features and protecting human health and safety, as well as the environment. It is not meant to be a "how-to guide" for undertaking the work. Such a short-cut approach could easily result in creating a greater health risk, if proper precautions were not taken. Home renovators and construction workers should be aware that serious health problems can be caused by coming into contact with lead. For this reason, there are also laws to protect workers on the job site (see Worker Safety Sidebar, pg. 4). Controlling the amount of waste containing lead-based paint residue will also reduce the impact on the environment. All of these considerations must be weighed against the goal of providing housing that is safe for children.

Lead in Historic Paints

Lead compounds were an important component of many historic paints. Lead, in the forms of lead carbonate and lead oxides, had excellent adhesion, drying, and covering abilities. White lead, linseed oil, and inorganic pigments were the basic components for paint in the 18th, 19th, and early 20th centuries. Lead-based paint was used extensively on wooden exteriors and interior trimwork, window sash, window frames, baseboards, wainscoting, floors, frames, and high gloss wall surfaces such as those found in kitchens and bathrooms. Almost all painted metals were primed with red lead or painted with lead-based paints. Even milk (casein) and water-based paints (distemper and calcimines) could contain some lead, usually in the form of hiding agents or pigments. Varnishes sometimes contained lead. Lead compounds were also used as driers in paint and window glazing putty.

In 1978, the use of lead-based paint in residential housing was banned by the federal government. Because the hazards have been known for some time, many lead components of paint were replaced by titanium and other less toxic elements earlier in the 20th century. Since houses are periodically repainted, the most recent layer of paint will most likely *not* contain lead, but the older layers underneath probably will. Therefore, the only way to accurately determine the amount of lead present in older paint is to have it analyzed.

It is important that owners of historic properties be aware that layers of older paint can reveal a great deal about the history of a building and that paint chronology is often used to date alterations or to document decorative period colors (see figs. 2, 3). Highly significant decorative finishes, such as graining, marbleizing, stenciling, polychrome decoration, and murals should be evaluated by a painting conservator to develop the appropriate preservation treatment that will stabilize the paint and eliminate the need to remove it. If such finishes must be removed in the process of controlling lead hazards, then research, paint analysis, and documentation are advisable as a record for future research and treatment.

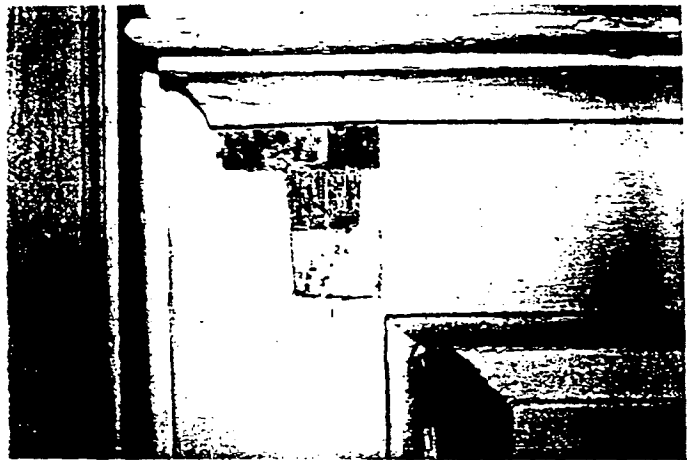


Figure 2. The paint chronology of this mantel, seen in the exposed paint layers in the left corner, proved it had been relocated from another room of the house. To restore a significant feature's paint history and the mantel to its original sequence or color by stripping off all the paint is inappropriate — and unnecessary — as part of a lead hazard reduction project. Careful surface preparation and repainting with lead-free top coats are recommended. Photo: NPS Files.



Figure 3. Significant architectural features and their finishes should not be removed during a project incorporating lead hazard controls. If the decorative stenciling above, or hand grained doors below, or painted murals need repair, then a paint conservator should be consulted. Once loose paint is consolidated or otherwise stabilized, a clear finish or other reversible clear protective surface or coating can be added to areas subject to impact or abrasion. Photos: NPS Files.

Planning for Lead Hazard Reduction in Historic Housing

Typical health department guidelines call for removing as much of the surfaces that contain lead-based paint as possible. *This results in extensive loss or modification of architectural features and finishes and is not appropriate for most historic properties* (see fig. 4). A great number of federally-assisted housing programs are moving away from this approach as too expensive and too dangerous to the immediate work environment. A preferred approach, consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*, calls for removing, controlling, or managing the hazards rather than wholesale—or even partial—removal of the historic features and finishes (fig. 5). This is generally achieved through careful cleaning and treatment of deteriorating paint, friction surfaces, surfaces accessible to young children, and lead in soil (see figs. 6, 7). Lead-based paint that is not causing a hazard is thus permitted to remain, and, in consequence, the amount of historic finishes, features and trimwork removed from a property is minimized.

Because the hazard of lead poisoning is tied to the risk of ingesting lead, careful planning can help to determine how

much risk is present and how best to allocate available financial resources. An owner, with professional assistance, can protect a historic resource and make it lead-safe using this three-step planning process:

- I. Identify the historical significance of the building and architectural character of its features and finishes;
- II. Undertake a risk assessment of interior and exterior surfaces to determine the hazards from lead and lead-based paint; and,
- III. Evaluate the options for lead hazard control in the context of historic preservation standards.
 - I. **Identify the historical significance of the building and architectural character of its features and finishes**

The historical significance, integrity, and architectural character of the building always need to be assessed before work is undertaken that might adversely affect them. An owner may need to enlist the help of a preservation architect, building conservator or historian. The State Historic Preservation Office (SHPO) may be able to provide a list of knowledgeable preservation professionals who could assist with this evaluation.



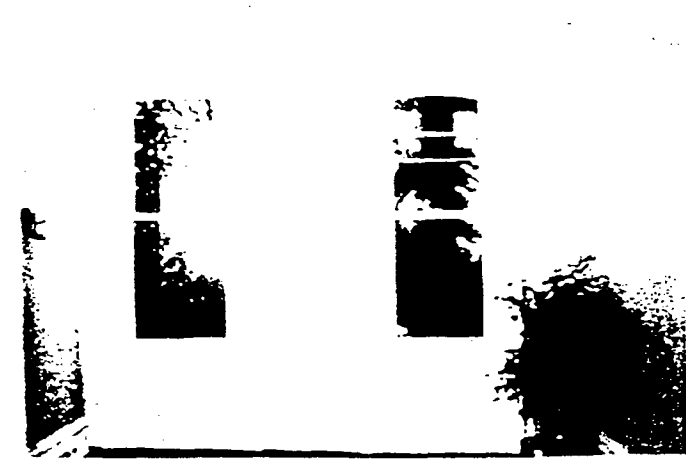
Before



Before



After



After

Figure 4. When lead paint removal is required, it is important to plan the work so that the historic character of the building is preserved. In this case, the lead-based paint was removed from the interior surfaces, but the historic features and finishes were preserved.

Figure 5. When lead paint removal is required, it is important to plan the work so that the historic character of the building is preserved. In this case, the lead-based paint was removed from the interior surfaces, but the historic features and finishes were preserved.

Figure 6. When lead paint removal is required, it is important to plan the work so that the historic character of the building is preserved. In this case, the lead-based paint was removed from the interior surfaces, but the historic features and finishes were preserved.

Worker Safety

Current worker safety standards were established by OSHA's 29 CFR Part 1926, Lead Exposure in Construction: Interim Final Rule, which became effective June 3, 1993. These standards base levels of worker protection on exposure to airborne lead dust.

They are primarily targeted to persons working within the construction industry, but apply to any workers who are exposed to lead dust for longer than a specific amount of time and duration. The Interim Final Rule establishes an action level of 30 micrograms of lead dust per cubic meter of air ($30 \mu\text{g}/\text{m}^3$) based on an eight hour, time-weighted average, as the level at which employers must initiate compliance activities; and it also establishes $50 \mu\text{g}/\text{m}^3$ of lead dust as the permitted exposure level (PEL) for workers.

The standard identifies responsibilities before, during, and after the actual abatement activity necessary to protect the worker. Before the project begins, it requires an exposure assessment, a written compliance plan, initial medical surveillance, and training. The exposure assessment determines whether a worker may be exposed to lead. OSHA has identified a number of work tasks expected to produce dust levels between 50 and $500 \mu\text{g}/\text{m}^3$ of air, including manual demolition, manual scraping, manual sanding, heat gun applications, general cleanup, and power tool use when the power tool is equipped with a dust collection system. It is an OSHA requirement that, at a minimum, a HEPA filtered half-face respirator with a protection factor of 10 be used for these operations. Initial blood lead level (BLL) base lines are established for each worker. Actual dust levels are monitored by air sampling of representative work activities, generally by an industrial hygienist or an environmental monitoring firm. Protective equipment is determined by the dust level. For all workers exposed at, or above, the action level for over 30 days in a 12-month period, BLLs are tested on a regular basis of every 2 months for the first 6 months and every 6 months thereafter. After completing a project, maintenance, medical surveillance, and recordkeeping responsibilities continue.

HEPA vacuums, HEPA respirators, and HEPA filters, which substantially reduce exposure to lead dust, are available through laboratory safety and supply catalogs and vendors.

Copies of 29 CFR Part 1926, Lead Exposure in Construction: Interim Final Rule, are available from the Department of Labor, Occupational Safety and Health Administration, or may be found in any library with a current edition of the Code of Federal Regulation (CFR).



Low-level heat guns can be used to remove lead-based paint from significant historic windows and trimwork, but a worker exposed to lead dust over an extended period of time must be protected from the hazards created during the process of paint removal. Photo: Williamsport Preservation Training Center.

Features and finishes of a historic building that exhibit distinctive characteristics of an architectural style; represent work by specialized craftsmen; or possess high artistic value should be identified so they can be protected and preserved during treatment. When it is absolutely necessary to remove a significant architectural feature or finish—as noted in the first two priorities listed below—it should be replaced with a new feature and finish that matches in design, detail, color, texture, and, in most cases, material.

Figure 6. Deteriorating operable windows often contribute to lead dust in a house. Peeling paint and small particles from abraded surfaces collect in window troughs or sills and are then carried inside by air currents, settling on floors. When the lead dust mixes with regular house dust, it can easily be ingested by a child through hand-to-mouth contact. In homes with small children, floors and other surfaces should be kept as clean as possible to avoid lead contamination.



Figure 7. Chalking exterior paint can cause dangerous lead levels in soil around a house. Lead levels are usually highest in the one foot wide area adjacent to the building foundation. In these cases, the existing soil should be replaced with new soil or sod. This is particularly important if children or small pets play in contaminated areas or inadvertently track dirt inside.



Finally, features and finishes that characterize simple, vernacular buildings should be retained and preserved; in the process of removing hazards, there are usually reasonable options for their protection. Wholesale removal of historic trim, and other seemingly less important historic material, undermines a building's overall character and integrity and, thus, is not recommended.

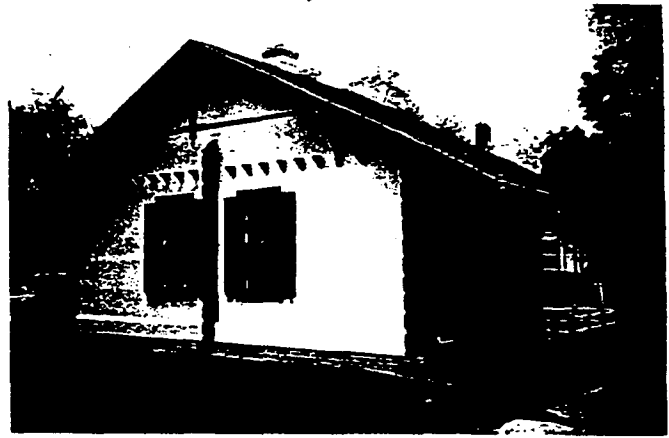
For each historic property, priorities and levels of significance. As part of a survey of a historic district (see figure 8), a list of priorities should be made in this order:

- *Highly significant* features and finishes that always be protected and preserved.
- *Significant* features and finishes that should be repaired or replaced with materials that match all visual qualities.
- *Non-significant* features and finishes that may be enclosed, or removed.

This hierarchy gives a guide to the decision-making process about appropriate materials and methods for lead paint.



Before



After

Figure 8. A survey of the property will help establish priorities for treatment based on its historical significance and physical condition. In this 1878 plank house, the original interlocking planks, corner details, projecting rafter tails, and original windows were considered highly significant features and were carefully stripped of failing paint using chemical poultices and HEPA sanding, then repainted. The less significant, but character-defining, painted porch flooring was replaced in new, but matching material. The non-historic porch screening was removed entirely. Photo before: Bryan Blundell; Photo after: Deborah Birch.

II. Undertake a risk assessment of interior and exterior surfaces to determine hazards from lead and lead-based paint.

While it can be assumed that most historic housing contains lead-based paint, it cannot be assumed that it is causing a health risk and should be removed. The purpose of a risk assessment is to determine, through testing and evaluation, where hazards from lead warrant remedial action (see fig. 9). Testing by a specialist can be done on paint, soil, or lead dust either on-site or in a laboratory using methods such as x-ray fluorescence (XRF) analyzers, chemicals, dust wipe tests, and atomic absorption spectroscopy. Risk assessments can be fairly low cost investigations of the location, condition, and severity of lead hazards found in house dust, soil, water, and deteriorating paint. Risk assessments will also address other sources of lead from hobbies, crockery, water, and the parents' work environment. A public health office should be able to provide names of certified risk assessors, paint

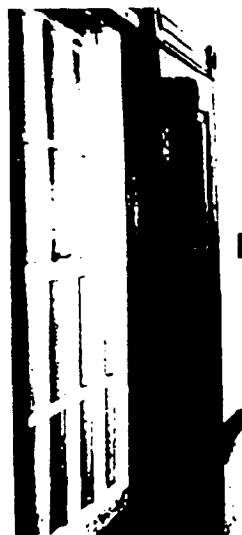
inspectors, and testing laboratories. These services are critical when owners are seeking to implement measures to reduce suspected lead hazards in housing, day-care centers, or when extensive rehabilitations are planned.

The risk assessment should record:

- the paint's location
- the paint's condition
- lead content of paint and soil
- the type of surface (friction; accessible to children for chewing; impact)
- how much lead dust is actively present
- how the family uses and cares for the house
- the age of the occupants who might come into contact with lead paint.



a



b



c

Figure 9. A variety of testing methods are used to establish how much lead is in paint, and where this paint is located. A home test kit (a) is a good screening device to determine if lead is present, but it should not be relied upon exclusively. An X-ray Fluorescence machine or scanner (b) used by a licensed professional determines, without disturbing the surface, if lead is present in underlying layers or paint, and a dust wipe test (c) sent to a laboratory for processing can be used as either a determining test, once work is completed, or as a monitoring device to determine if lead dust is present on surfaces. Paint chips can also be sent to a laboratory for analysis to determine the exact amount of lead by weight in a sample.

ACTION LEVELS

Readers should become familiar with terminology and basic levels that trigger concern and/or action. Check with the appropriate authorities if you have questions and to verify applicable action levels which may change over time.

Blood lead levels: Generally from drawn blood and not a finger stick test which can be unreliable. Units are measured in micrograms per deciliter ($\mu\text{g}/\text{dl}$) and reflect the 1995 standards from the Centers for Disease Control:

Children: 10 $\mu\text{g}/\text{dl}$; level of concern; find source of lead
 15 $\mu\text{g}/\text{dl}$ and above; intervention, counseling, medical monitoring.
 20 $\mu\text{g}/\text{dl}$ and above; medical treatment
 Adults: 25 $\mu\text{g}/\text{dl}$; level of concern; find source of lead
 50 $\mu\text{g}/\text{dl}$; OSHA standard for medical removal from the worksite

Lead in paint: Differing methods report results in differing units. Lead is considered a potential hazard if above the following levels, but can be a hazard at lower levels, if improperly handled. These are the current numbers as identified by the Department of Housing and Urban Development (1995).

Lab analysis of samples:

5,000 milligram per kilogram (mg/kg) or 5,000 parts per million (ppm), or
 0.5% lead by weight.

XRF reading: in milligram per centimeter squared
 1 mg/cm^2

lead dust wipe test: in micrograms per square foot

Floors	100 $\mu\text{g}/\text{ft}^2$;
Window sills	500 $\mu\text{g}/\text{ft}^2$;
Window troughs	800 $\mu\text{g}/\text{ft}^2$

Lead in soil: high contact bare play areas, listed as parts per million (ppm):

concern:	400 ppm
interim control	2,000 ppm
hazard abatement	5,000 ppm

It is important from a health standpoint that future tenants, painters, and construction workers know that lead-based paint is present, even under treated surfaces, in order to take precautions when work is undertaken in areas that will generate lead dust. Whenever mitigation work is completed, it is important to have a clearance test using the dust wipe method to ensure that lead-laden dust generated during the work does not remain at levels above those established by the Environmental Protection Agency (EPA) and the Department of Housing and Urban Development (HUD) (see Action Levels Chart, above). A building file could be maintained and updated whenever any additional lead hazard control work is completed.

Hazards should be removed, mitigated, or managed in the order of their health threat, as identified in a risk assessment (with 1. the greatest risk and 8. the least dangerous):

Peeling, chipping, flaking, and chewed interior lead-based paint and surfaces

Lead dust on interior surfaces

High lead in soil levels around the house and in play areas (check state requirements)

4. Deteriorated exterior painted surfaces and features
5. Friction surfaces subject to abrasion (windows, doors, painted floors)
6. Accessible, chewable surfaces (sills, rails) if small children are present
7. Impact surfaces (baseboards and door jambs)
8. Other interior surfaces showing age or deterioration (walls and ceilings)

III. Evaluate options for hazard control in the context of historic preservation standards.

The Secretary of the Interior's Standards for the Treatment of Historic Properties—established principles used to evaluate work that may impact the integrity and significance of National Register properties—can help guide suitable health control methods. The *preservation standards* call for the protection of historic materials and historic character of buildings through stabilization, conservation, maintenance, and repair. The *rehabilitation standards* call for the repair of historic materials with replacement of a character-defining feature appropriate only when its deterioration or damage is so extensive that repair is infeasible. From a preservation standpoint, selecting a hazard control method that removes only the deteriorating paint, or that involves some degree of repair, is always preferable to the total replacement of a historic feature.

By tying the remedial work to the areas of risk, it is possible to limit the amount of intrusive work on delicate or aging features of a building without jeopardizing the health and safety of the occupants. To make historic housing lead-safe, the gentlest method possible should be used to remove the offending substance—lead-laden dust, visible paint chips, lead in soil, or extensively deteriorated paint. Overly aggressive abatement may damage or destroy much more historic material than is necessary to remove lead paint, such as abrading historic surfaces. Another reason for targeting paint removal is to limit the amount of lead dust on the work site. This, in turn, helps avoid expensive worker protection, cleanup, and disposal of larger amounts of hazardous waste.

Whenever extensive amounts of lead must be removed from a property, or when methods of removing toxic substances will impact the environment, it is extremely important that the owner be aware of the issues surrounding worker safety, environmental controls, and proper disposal (see fig. 10, 11). Appropriate architectural, engineering and environmental professionals should be consulted when lead hazard projects are complex.

Following are brief explanations of the two approaches for controlling lead hazards, once they have been identified as a risk. These controls are recommended by the Department of Housing and Urban Development in *Guidelines for the Evaluation and Control of Lead-Paint Hazards in Housing*, and are summarized here to focus on the special considerations for historic housing:

Interim Controls: Short-term solutions include thorough dust removal; thorough washdown and clean-up of exposed surfaces; paint film stabilization and repainting; covering of lead-contaminated soil; and making tenants aware of lead hazards. Interim controls require ongoing maintenance and evaluation.



Figure 10. The choice of paint removal method will trigger various environmental controls and worker protection. The chemical poultice-type paint remover uses a paper backing that keeps the lead waste contained for proper disposal. The worker is adequately protected by a suit and gloves; for this work a respirator tests not required. Local laws required containment and neutralization of any after-wash water run off. Photo: NPS Files.



process. An inverted triangle (see fig. 12) shows the greatest number of residential projects fall well within the "interim controls" section. Most housing can be made safe for children using these sensitive treatments, particularly if no renovation work is anticipated. Next, where owners may have less control over the care and upkeep of housing and rental units, more aggressive means of removing hazards may be needed. Finally, large-scale projects to rehabilitate housing or convert non-residential buildings to housing may successfully incorporate "hazard abatement" as a part of the overall work.

Appropriate Methods for Controlling Lead Hazards

In selecting appropriate methods for controlling lead hazards, it is important to refer to Step I. of the survey where architecturally significant features and finishes are identified and need to be preserved. Work activities will vary according to hazard abatement needs; for example, while an interim control would be used to stabilize paint on most trimwork, an accessible window sill might need to be stripped prior to repainting. Since paint on a window sill is usually not a significant finish, such work would be appropriate. Other appropriate methods for controlling lead hazards are summarized in the accompanying chart (see fig. 13).

The method selected for removing or controlling the hazards has a direct bearing on the type of worker protection as well as the type of disposal needed, if waste is determined to be hazardous (see fig. 14). Following are

... developed or adapted to safely remove lead-based paint. On this last iron building, workers used a variety of methods: multiple layers of lead-based paint were removed with needle guns with vacuum collection; other areas containing lead-based paint were removed with sandblasting to a special waste site, and the metal was primed. The cleaned metal was primed and painted. Photo: Building Conservation Associates, Inc.

Hazard Abatement: Long-term solutions are defined as those with an expected life of 20 years or more, and involve the permanent removal of hazardous paint through methods such as: wet or controlled sanding; abrasive blasting; permanent removal of deteriorated painted surfaces through replacement; the removal or permanent covering of contaminated soil; and the use of enclosures such as dry wall to isolate painted surfaces. The use of specialized elastomeric encapsulant paints and coatings is also considered as permanent containment of lead-based paint if they receive a 20-year manufacturer's warranty and are approved by a certified risk assessor. Workers should be aware of their advantages and disadvantages in their use in historic housing.

In the context of the historic preservation standards, the most appropriate method will always be the least aggressive. More aggressive approaches are considered only in the special circumstances outlined in the three-step

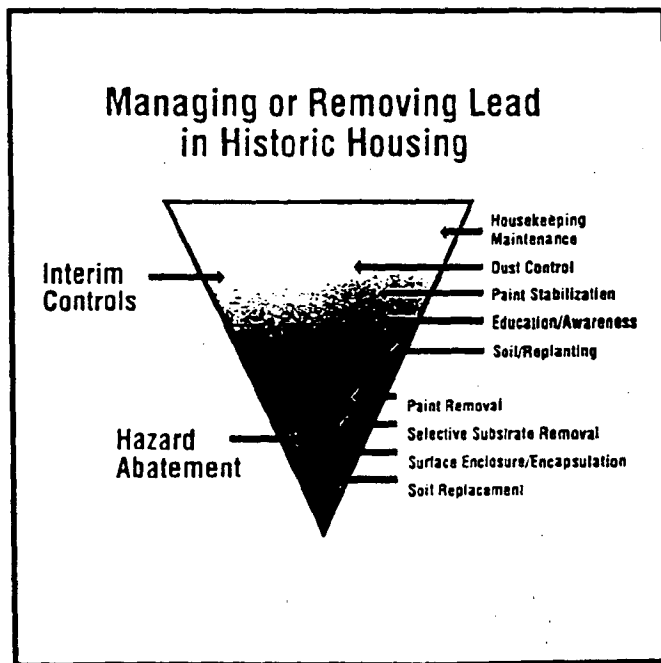


Figure 12. An inverted triangle makes the point that most of the nation's housing can be made lead-safe using interim control methods, such as dust control, paint stabilization, and good housekeeping. Shaded from light to dark, the lighter interim controls will generally not harm the historic materials. The darker, more aggressive controls, can be implemented with rehabilitation projects where paint removal, selective replacement of deteriorated elements, and encapsulation or enclosure are incorporated into other work.

MANAGING OR REMOVING LEAD-BASED PAINT IN HISTORIC BUILDINGS

Interim solutions, the preferred approach, include a combination of the following:

General maintenance	Dust control	Paint stabilization	Soil treatment	Tenant education
<p>Repair deteriorated materials;</p> <p>Control leaks;</p> <p>Maintain exterior roofs, siding, etc. to keep moisture out of building;</p> <p>Perform emergency repairs quickly if lead-based paint is exposed;</p> <p>Maintain building file with lead test data and reports, receipts or invoices on completed lead mitigation work.</p>	<p>Damp mop floor; wet broom sweep porches and steps;</p> <p>Damp dust window sills and window troughs;</p> <p>Washdown painted surfaces periodically (use tri-sodium phosphate or equivalent, if necessary);</p> <p>Clean or vacuum carpets regularly (use HEPA vacuum if lead dust returns);</p> <p>Undertake periodic inspection with annual dust wipe tests.</p>	<p>Wet-sand loose paint and repaint;</p> <p>Keep topcoats of paint in good condition;</p> <p>Selectively remove paint from friction & chewable surfaces (sills) and repaint;</p> <p>Use good quality latex, latex acrylic or oil/alkyd paints compatible with existing paint;</p> <p>Consider more durable encapsulating paints and wall lining systems if necessary.</p>	<p>Add bark mulch, sod or topsoil to bare dirt areas with high lead levels;</p> <p>Discourage children from playing in these areas by providing sand box or other safe areas;</p> <p>Do not plant vegetable garden in areas with lead in soil;</p> <p>Be careful that pets do not track contaminated soil inside house.</p>	<p>Notify tenants and workers as to the location of lead-based paint;</p> <p>Instruct tenants to keep property clean;</p> <p>Instruct tenants to notify owner or manager when repairs are necessary;</p> <p>Provide tenants with health department pamphlets on the hazards of lead-based paint.</p>

Hazard abatement removes the hazard - not necessarily all the paint or the feature, and may include:

Paint removal	Paint Encapsulation Enclosure	Replace deteriorated elements	Soil treatment	Compliance
<p>Remove deteriorated paint or paint on friction, chewable, or impact surfaces to sound layer, repaint;</p> <p>Consider using the gentlest means possible to remove paint to avoid damage to substrate: wet sanding, low level heat guns, chemical strippers, or HEPA sanding;</p> <p>Send easily removable items (shutters, doors) off-site for paint stripping, then reinstall and paint.</p>	<p>Consider encapsulating paints with 20 years warranty to seal-in older paint; or use in combination with wall liners to stabilize plaster wall surfaces prior to repainting;</p> <p>Seal lead-based painted surfaces behind rigid enclosures, such as drywall, or use luan or plywood with new coverings over previously painted floors;</p> <p>Use rubber stair treads on painted steps.</p>	<p>Remove, only when necessary, seriously deteriorated painted elements such as windows, doors, and trimwork. Replace with new elements that match the historic in appearance, detailing, and materials, when possible;</p> <p>Replace component element of a friction surface (parting bead or stops of windows) or of impact surfaces (shoe moldings) with new elements.</p>	<p>Remove contaminated soil around foundation to a depth of 3" and replace with new soil and appropriate planting material or paving;</p> <p>If site is highly contaminated from other lead sources (smelter, sandblasted water tank) consult an environmental specialist as well as a landscape architect;</p> <p>Do not alter a significant historic landscape</p>	<p>Be aware of all federal, state and local laws regarding lead-based paint abatement, environmental controls and worker safety;</p> <p>Dispose of all hazardous waste according to applicable laws;</p> <p>Be aware that methods to remove lead-based paint can cause differing amounts of lead dust which can be dangerous to workers and residents.</p>

Figure 13. This chart indicates the wide variety of treatments that can be used to control or eliminate lead-based paint hazards. For historic buildings, the *most invasive* method should be used to control the hazards identified during a risk assessment and are shown in the lighter shaded portion of the chart. The *darker portions* show the more *invasive* hazard control methods which must be carefully implemented to ensure that whenever possible, historic materials are protected. The total abatement of all surfaces is not recommended for historic buildings because it can damage historic materials and destroy the evidence of its paint colors and layering. Prepared by Sharon C. Park, AIA.

IMPACT OF VARIOUS PAINT REMOVAL/ABATEMENT TECHNIQUES

REMOVAL METHOD	IMPACT ON MATERIALS	LEAD DUST GENERATED	IMPACT ON WORKER	IMPACT ON ENVIRONMENT
Wet scraping; wet sanding; repainting	Low: Gentle to substrate; feather edges to obtain smooth paint surface	Low: Misting surfaces reduces lead dust	Low: No special protection for respiration, but wash before eating, drinking, etc.	Low-medium: Debris often general waste; check disposal requirements
Heat gun; paint removal w/ scrapers < 450°F	Low: Gentle to substrate	Medium: Flicking softened paint does create airborne lead dust	Medium: Respirator w/HEPA filters usually required	Medium: Lead-paint sludge is hazardous waste
Chemical stripping on-site; use liquid or poultice; avoid methylene chloride	Low to Medium: Avoid damage to wood texture/grain with long dwell time	Low: Chemicals are moist and reduce lead dust	Low: For lead dust; for volatile chemicals may require solvent filter mask	Medium: Lead residue hazardous; off/rinse must be filtered or contained
Controlled HEPA sanding; primarily for wooden surfaces; sander uses HEPA vacuum shroud	Low to Medium: Avoid gouging wooden surfaces; good for feathering edges	Medium to High: Worker must know how to use equipment	Medium to High: Requires respirator with HEPA filter and possibly containment of area	Medium to High: Paint debris is hazardous and must be contained in drums for disposal
Dry Abrasives on cast iron; CO ₂ , walnut shells, needle gun removal; can use vacuum shrouds	Low to Medium: Substrate must be durable and in good condition; not for soft or porous materials	Generally High: Large volume of paint chips fall freely unless there is a vacuum shroud	High: Generally requires full suiting, respirators and containment, even if vacuum shroud used	Medium to High: Increased volume of hazardous waste if abrasive is added to lead debris
Chemical stripping off-site; cold tank reduces ungluing caused by hot tank	Medium to High: Elements can be damaged during removal or in tank	Usually low: Take care when removing elements to minimize lead-laden dust	Low: Take care when washing up to remove dust; wash clothes separately	Low to Medium: Stripping contractor responsible for disposal
Feature or substrate removal and replacement	High: Loss of feature is irretrievable; Avoid wholesale removal of significant elements	Usually low: Worker exposure can be high if element hazardous due to high amounts of lead-based paint	Usually low: Varies with lead dust generated; use air monitors and wet mist area	Varies: Must do a TCLP leach test to determine if debris can go to landfill or is hazardous waste

Figure 14. This chart shows how the impact of lead hazard control work can impact a property. The paint or hazard removal methods, shaded from light to dark, are listed from low to medium to high impact on historic materials. Each method will generate varying amounts of lead dust and hazardous materials; the impact on workers and the environment will thus vary accordingly. This information gives a general overview and is not a substitute for careful air monitoring and compliance with worker protection as established by OSHA regulations, and the proper handling/disposal of hazardous waste. Prepared by Sharon C. Park, AIA.

examples of appropriate methods to use to control lead hazards within an historic preservation context.

Historic Interiors (deteriorating paint and chewed surfaces). Whenever lead-based paint (or lead-free paint covering older painted surfaces) begins to peel, chip, craze, or otherwise comes loose, it should be removed to a sound substrate and the surface repainted. If children are present and there is evidence of painted surfaces that have been chewed, such as a window sill, then these surfaces should be stripped to bare wood and repainted. The removal of peeling, flaking, chalking, and deteriorating paint may be of a small scale and undertaken by the owner, or may be extensive enough to require a paint contractor. In either case, care must be taken to avoid spreading lead dust throughout the dwelling unit. If the paint failure is extensive and the dwelling unit requires more permanent hazard removal, then an abatement contractor should be considered. Many states are now requiring that this work be undertaken by specially trained and certified workers.

If an owner undertakes interim controls, it would be advisable to receive specialized training in handling lead-based paint. Such training emphasizes isolating the area, putting plastic sheeting down to catch debris, turning off mechanical systems, taping registers closed, and taking precautions to clean up prior to handling food. Work clothes should be washed separately from regular family laundry. The preferred method for removing flaking paint is the wet sanding of surfaces because it is gentle to the substrate and controls lead dust. The key to reducing lead hazards while stabilizing flaking paint is to keep the surfaces slightly damp to avoid ingesting lead dust. Wet sanding uses special flexible sanding blocks or papers that can be rinsed in water or used along with a bottle mister. This method will generally not create enough debris to constitute hazardous waste (see fig. 15).

Other methods for selectively removing more deteriorated paint in historic housing include controlled sanding, using low-temperature heat guns, or chemical strippers. Standard safety precautions and appropriate worker protection should be used. Methods to *avoid* include uncontrolled dry abrasive methods, high heat removal (lead vaporizes at 200° F), uncontrolled water blasting, and some chemicals considered carcinogenic (methylene chloride). When possible and practicable, painted elements, such as

radiators, doors, shutters, or other easily removable items, can be taken to an off site location for paint removal.

In most cases, when interior surfaces are repainted, good quality interior latex or oil/alkyd paints may be used. The paint and primer system must be compatible with the substrate, as well as any remaining, well-bonded, paint.

Encapsulant paints and coatings, developed to contain lead-based paint, rely on an adhesive bonding of the new paint through the layers of the existing paint. The advantages of these special paint coatings is that they allow the historic substrate to remain in-place; reduce the amount of existing paint removed; can generally be applied without extensive worker protection; and are a durable finish. (They cannot, however, be used on friction surfaces.) The drawbacks include their ability to obscure carved details, unless thinly applied in several applications, and difficulty in future removal. If a specialized paint, such as an elastomeric encapsulant paint, is considered, the manufacturer should be contacted for specific instructions for its application. Unless these specialized paint systems are warranted for 20 years, they are considered as less permanent interim controls.

Lead-dust on interior finishes. Maintaining and washing painted surfaces is one of the most effective measures to prevent lead poisoning. Houses kept in a clean condition, with paint film intact and topcoated with lead-free paint or varnish, may not even pose a health risk. Dust wipe tests, which are sent to a laboratory for processing, can identify the level of lead dust present on floors, window sills, and window troughs. If lead dust is above acceptable levels, then specially modified maintenance procedures can be undertaken to reduce it. All paints deteriorate over time, so maintenance must be ongoing to control fine lead dust. The periodic washing of surfaces with a surfactant, such as tri-sodium phosphate (TSP) or its equivalent, loosens dirt and removes lead dust prior to a water rinse and touch-up painting, if necessary. This interim treatment can be extremely beneficial in controlling lead dust that is posing a hazard (see fig. 16).

Soillandscape. Soil around building foundations may contain a high level of lead from years of chalking and peeling exterior paint. This dirt can be brought indoors on shoes or by pets and small children if they play outside a house. Lead in the soil is generally found in a narrow band



Figure 15. Wet sanding of interior surfaces will keep dust levels down, reduce the need for workers' protection, and provide a sound surface for painting. Priming and repainting with oil/alkyd, latex or latex acrylic should be undertaken according to manufacturers' instructions.

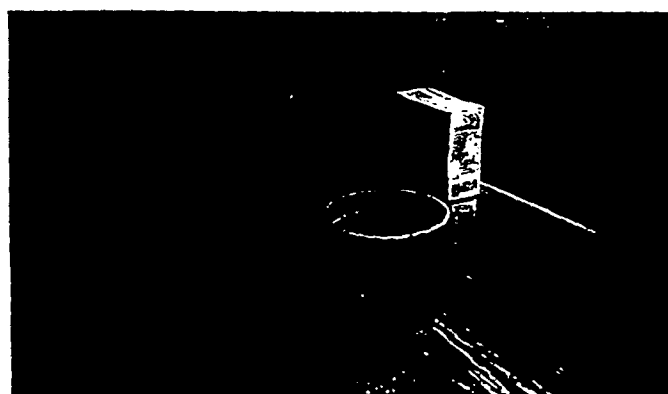


Figure 16. Washing windows and cleaning debris from window wells on a periodic basis can substantially reduce lead dust. Using water and tri-sodium phosphate (TSP or equivalent) will remove loose paint, and, after rinsing, the surface can be repainted with latex, oil/alkyd, or latex acrylic paints.

directly adjacent to the foundation. If the bare soil tests high in lead (see Action Levels Chart, pg. 6), it should be replaced to a depth of several inches or covered with new sod or plantings. Care should be taken to protect historic plantings on the building site and, in particular, historic landscapes, while mitigation work is underway (see fig. 17). If an area has become contaminated due to a variety of environmental conditions (for example, a smelter nearby or water tanks that have been sandblasted in the past), then an environmental specialist as well as a landscape preservation architect should be consulted on appropriate site protection and remedial treatments. It is inappropriate to place hard surfaces, such as concrete or macadam, over historically designed landscaped areas, which is often the recommendation of typical abatement guidelines.

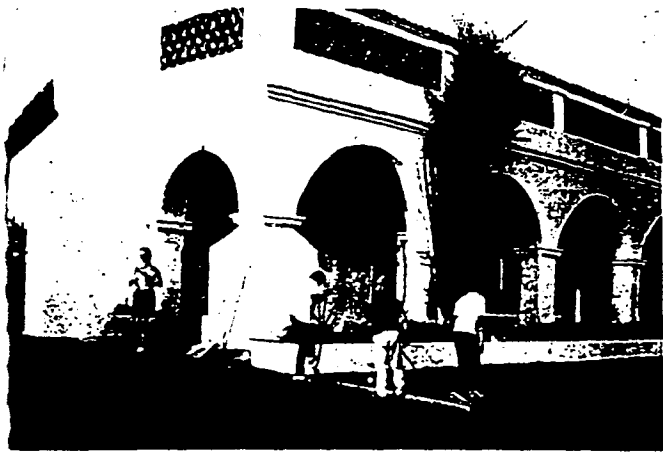


Figure 17. When historic sites are found to contain high levels of lead in the soil — particularly around foundations — it is important to reduce the hazard without destroying significant landscapes. In many cases, contaminated soil can be removed from the foundation area and appropriate plantings or ground covers replanted in new soil. Photo: Charles A. Birdbaum, ASLA

Deteriorating paint on exteriors. Deteriorating exterior paint will settle onto window ledges and be blown into the dwelling, and will also contaminate soil at the foundation, as previously discussed. Painted exteriors may include wall surfaces, porches, roof trim and brackets, cornices, formers, and window surrounds. Most exteriors need repainting every 5-10 years due to the cumulative effect of sun, wind, and rain or lack of maintenance. Methods of paint removal that do not abrade or damage the exterior materials should be evaluated. Because there is often more than one material (for example, painted brick and galvanized roof ornaments), the types of paint removal or paint stabilization systems need to be compatible with each material (see fig. 18). If paint has tailed down to the substrate, it should be removed using either controlled sanding/scraping, controlled light abrasives for cast iron and durable metals, chemicals, or low heat. If chemicals are used, it may be necessary to have the contractor contain, filter, or otherwise treat any residue or rinse water. Environmental regulations must be checked prior to work, particularly if a large amount of lead waste will be generated or public water systems affected.

A cost analysis may show that, in the long run, repair and maintenance of historic materials or in-kind replacement can be cost effective. Due to the physical condition and location of wood siding, together with the cost of paint removal, a decision may be made to remove and replace



Figure 18. As part of an urban housing grant program, the exterior of this row house was successfully made lead-safe and met the Secretary of the Interior's Standards for Rehabilitation. The exterior was washed, then repainted with exterior grade alkyd paint. The decorative roof brackets and cornice were repainted; not removed or covered as is often recommended in typical abatement guidelines. The previously altered, deteriorated window sash were replaced with new sash and jamb liners set within the historic frames. Photos: Deborah Birch.

these materials on some historic frame buildings. If the repair or replacement of historic cladding on a primary elevation is being undertaken, such replacement materials should match the historic cladding in material, size, configuration, and detail (see fig. 19). The use of an artificial siding or aluminum coil stock panning systems over wooden trimwork or sills and lintels (as recommended in some abatement guidelines) is not appropriate, particularly on principal facades of historic buildings because they change the profile appearance of the exterior trimwork and may damage historic materials and detailing during installation. Unless the siding is too deteriorated to warrant repair and the cost is too prohibitive to use matching replacement materials (i.e., wood for wood), substitute materials are not recommended.

The use of specialized encapsulant paint coatings on exteriors—in particular, moist or humid climates, and, to some extent, cold climates—is discouraged because such coatings may serve to impede the movement of moisture that naturally migrates through other paints or mask leaks that may be causing substrate decay. Thus, a carefully applied exterior paint system (either oil/alkyd or latex) with periodic repainting can be very effective.

Friction Surfaces. Interior features with surfaces that—functionally—rub together such as windows and doors, or are subject to human wear and tear, such as floor and steps, are known as friction surfaces. It is unclear how much lead dust is created when friction surfaces that contain lead-based paint, but are top-coated with lead-free paint, rub together because much of the earlier paint may have worn away. For example, if lead dust levels around windows or on painted floors are consistently above acceptable levels, treating nearby friction surfaces should be considered. If surfaces, such as operable windows, operable doors, painted porch decks, painted floors and painted steps appear to be generating lead dust, they should be controlled through isolating or removing the lead-based paint. Window and door edges can be stripped or planed, or the units stripped on or off site to remove paint prior to repainting. Simple wooden stops and parting beads for windows, which often split upon removal, can be replaced.



Before



After

Figure 19. In many cases, exterior wood siding can be repaired, selectively replaced, and repainted, as illustrated in this successful residential rehabilitation. Deteriorating wood siding was removed from the foundation to the top of the first floor windows and replaced with matching wood siding. The entire building was repainted. Photos: Crispus Attucks Community Development Corporation.



Figure 20. Operable windows have friction surfaces between the sash and the frames, which can be a source of fine lead dust. In this case, the deteriorated sash was replaced, but the historic frame remains in place, successfully isolated from the sash with a simple vinyl window liner that is part of the new sash operation.

If window sashes are severely deteriorated, it is possible to replace them, and vinyl jamb liners can effectively isolate remaining painted window jambs (see fig. 20). When vinyl liners are being treated within rehabilitation projects, however, sanding and upgrading are always recommended. In both cases, at least part of a window needs to be replaced. Window sashes should match in size, configuration, detail, and, where possible, material.

Painted floors often present a difficult problem because walking on them abrades the surface, releasing small particles of lead-based paint. It is difficult to remove lead-based paint tracks in previously painted strip flooring without sanding and vacuuming using special High Efficiency Particulate Air (HEPA) filters to control the lead dust. These operations are not highly significant in material removal, and they cannot be adequately controlled, so their replacement or covering them with a new material can be considered. Stair treads can be replaced with rubber or vinyl covers (see fig. 21).



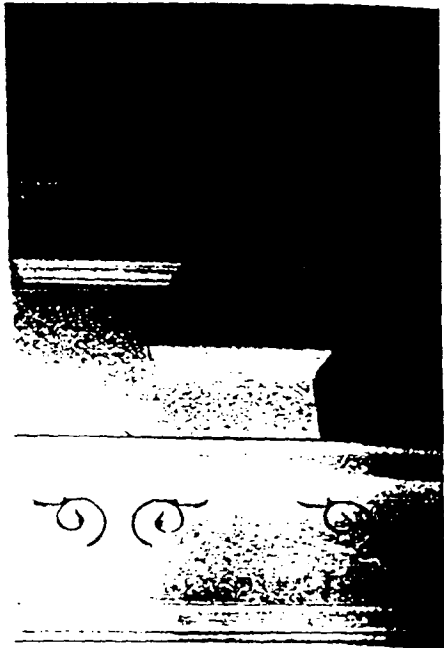
Figure 21. Painted stairs and floors can cause a problem because lead dust settles between the wooden boards. In this case, the steps were sanded, repainted, and covered with rubber stair treads. The floors could not be effectively cleaned and sealed so they were isolated with a new subflooring, and a washable tile finish installed.

Accessible, protecting, mouthable surfaces. Accessible, mouthable surfaces that can be mouthed by small children should be removed entirely, as some health guidelines recommend. All such accessible surfaces are listed as follows: handrails, stair railings, chair rails, and door edges. These surfaces and protruding edges can have all paint removed by sanding, a heat gun or chemical stripper, or by repainting the feature (see fig. 22). If the paint is removed and there is no evidence of unsupervised lead-based paint, a regular paint may be adequate once the surface has been stabilized. An encapsulant paint can be used to bind existing paint layers onto the surface and prevent them from flaking off. While encapsulant paint can be removed from a surface in the future, it does not remove the historic feature itself. If the surface is decorative or molded or decorative, the encapsulant should be applied in several thin coats to preserve detail from being obscured by the



Figure 22. Research has shown that some small children will chew on projecting window sills while teething. As part of a lead hazard control project, the edge of the sill can be smoothed to bare wood or an encapsulating paint applied. In this case, a new window sill was installed as part of a window upgrade that retained the historic trim and beam.

Figure 23. Stair banisters and railings are considered nonhazardous surfaces. In this case, the paint was not so far from lead-free. Special encapsulating paints were then applied in three layers to avoid obscuring the woodwork's detailing. It should be noted that this means that the paint is not a barrier to lead-based paint removal. Photo: Lead Paint Associates.



Impact Surfaces

Along corridors and in other high-traffic areas, simply because of their location, baseboards, window sills, and also for door and window frames, painted impact surfaces, such as door knockers, hinges, or door handles, give greater protection by stabilizing loose interior paint or by shields can be applied, or they can be repainted with a lead-free paint.

When door knockers and hinges are removed and replaced with new hardware, this is particularly true and the new hardware should protect walls and trim. Also, door knockers should avoid being painted. Brooms, broom heads, and shoe moldings should be kept away from walls and trim. If brooms are used, they should be kept away from walls and trim. If shoe moldings are used, they should be kept away from walls and trim. If brooms are used, they should be kept away from walls and trim. If shoe moldings are used, they should be kept away from walls and trim.

Other surfaces showing age or deterioration/ walls and ceilings. Many flat wall surfaces and ceilings were not painted with lead-based paint, so will need to be tested for its presence prior to any treatment. Flat surfaces that contain deteriorating lead-based paint should be repaired following the responsible approach previously cited (i.e., removing loose paint to a sound substrate, then repairing damaged plaster using a skim coat or wet plaster repair (see fig. 25). Drywall is used *only* when deterioration is too great to warrant plaster repair. If walls and ceilings have a high lead content, and extensive paint removal is not feasible, there are systems available that use elastomeric paints with special fabric liners to stabilize older, though intact, wall surfaces.

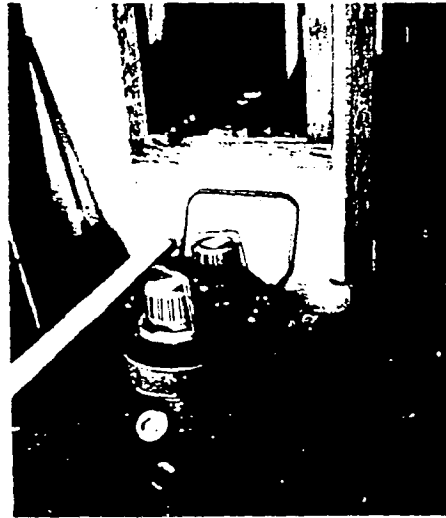
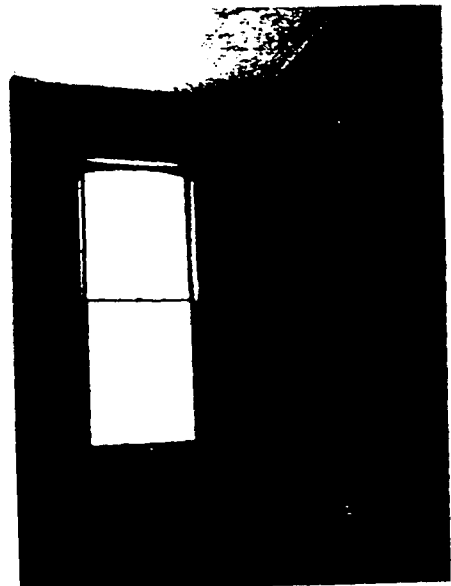


Figure 24. Historic baseboards are often bumped by brooms and vacuum cleaners, causing lead-based paint chips to fall on the floor. Shoe moldings can be added or replaced to increase protection to the baseboard itself. In this case, because the condition of the interior warranted substantial repair, simple historic board trim was replaced with new matching trim. Note the HEPA filter vacuum in the foreground. Photo: NPS file.

Figure 25. Drywall is used only when deterioration is too great to warrant plaster repair. In this case, the wall shows some damage, including a crack that may be considered so long as the underlying and remaining original relationships are maintained. In this case, the wall is being repaired with drywall. Photo: Lead Paint Associates.



If a new drywall is to be applied, care should be taken that the original plaster or put wall to trim is not lost. Also, if there are decorative elements, such as crown moldings or ceiling medallions, they should always be retained and repaired as needed.



Figure 26. Deteriorated ceiling plaster was removed and a new drywall ceiling installed. The historic ceiling medallion was preserved, and the plaster cornices repaired in place. Photo: Landmarks Design Associates.

Maintenance after Hazard Control Treatment

Following treatment, particularly where interim controls have been used, ongoing maintenance and re-evaluation become critical. In urban areas, even fully lead-safe houses can be re-contaminated within a year from lead or dirt outside the immediate property. Thus, housing interiors must be kept clean, once lead hazard control measures have been implemented. Dust levels should be kept down by wet sweeping porch steps and entrances on a regular basis. Vacuum cleaning and dusting should be repeated inside on a weekly basis or even more often. Vinyl, tile, and wood floor surfaces should be similarly damp mopped. Damp washing of window troughs and sills to remove new dust should be encouraged several times a year, particularly in the spring and fall when windows will be open. Carpets and area rugs should be steam cleaned or washed periodically if they appear to hold outside dirt.

Housing should be inspected frequently for signs of deterioration by both owner and occupant. Tenants need to be made aware of the location of lead-based paint under lead-free top coats and instructed to contact the owners or property managers when the paint film becomes disturbed (see figure 27). Any leaks, peeling paint, or evidence of



Figure 27. Wall leaks can cause historic surfaces to deteriorate, thereby exposing underlayers of lead-based paint. If painted surfaces show signs of deterioration, they should be repaired as soon as possible.

conditions that may generate lead-dust should be identified and corrected immediately. Occupants must be notified prior to any major dust-producing project. Dry sanding, burning, compressed air cleaning or blasting should be not be used. Repairs, repainting, or remodeling activities that have the potential of raising significant amounts of lead dust should be undertaken in ways that isolate the area, reduce lead-laden dust as much as possible, and protect the occupants.

Yearly dust wipe tests are recommended to ensure that dust levels remain below actionable levels. Houses or dwelling units that fail the dust-wipe test should be thoroughly re-cleaned with TSP, or its equivalent, washed down, wet vacuumed and followed by HEPA vacuuming, if necessary, until a clearance dust wipe test shows the area to be under actionable levels (see Action Levels chart). Spaces that are thoroughly cleaned and maintained in good condition are not a health risk (see fig. 28).



Figure 28. This recently completed housing, which is now lead-safe, could become re-contaminated from lead in air if children are not maintained. Damp mopping floor surfaces and regular dusting to keep the house clean will ensure its continuing safety.

Conclusion

The three-step planning process outlined in this Brief provides owners and managers of historic housing with responsible methods for protecting historic paint layers and architectural elements, such as windows, trimwork, and decorative finishes. Exposed decorative finishes, such as painted murals or grained doors, can be stabilized by a paint conservator without destroying their significance.

Reducing and controlling lead hazards can be successfully accomplished without destroying the character-defining features and finishes of historic buildings. Federal and state laws generally support the reasonable control of lead-based paint hazards through a variety of treatments, ranging from modified maintenance to selective substrate removal. The key to protecting children, workers, and the environment is to be informed about the hazards of lead, to control exposure to lead dust and lead in soil, and to follow existing regulations. In all cases, methods that control lead hazards should be selected that minimize the impact to historic resources while ensuring that housing is lead-safe for children.

LEAD-BASED PAINT LEGISLATION

The following summarizes several important regulations that affect lead-hazard reduction projects. Owner's should be aware that regulations change and they have a responsibility to check state and local ordinances as well.

Federal Legislation:

Title X (Ten) Residential Lead-Based Paint Hazard Reduction Act of 1992 is part of the Housing and Community Development Act of 1992 (Public Law 102-550). It established that HUD issue "The Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing" (1995) to outline risk assessments, interim controls, and abatement of lead-based paint hazards in housing. Title X calls for the reduction of lead in housing that is *federally supported* and outlines the federal responsibility towards its own residential units and the need for disclosure of lead in residences, even private residences, prior to sale.

Interim Final Regulations of Lead in Construction Standards (29CFR 1926.62). Issued by the Department of Labor, Occupational Safety and Health Administration (OSHA), these regulations address worker safety, training, and protective measures. It is based in part on environmental air sampling to determine the amount of lead dust generated by various activities.

Toxic Substance Control Act; Title IV. The Environmental Protective Agency (EPA) has jurisdiction for setting standards for lead abatement. Also, EPA controls the handling and disposal of hazardous waste generated during an abatement project. EPA will develop standards to establish lead hazards, to certify abatement contractors, and to establish work practice standards for abatement activity. EPA Regional Offices can provide guidance on the appropriate regulatory agency for states within their region.

State Laws: States generally have the authority to regulate the removal and transportation of lead based paint and the generated waste generally through the appropriate

state environmental and public health agencies. Most requirements are for mitigation in the case of a lead-poisoned child, or for protection of children, or for oversight to ensure the safe handling and disposal of lead waste. When undertaking a lead-based paint reduction program, it is important to determine which laws are in place that may affect your project. Call the appropriate officials.

Local Ordinances: Check with local health departments, Poison Control Centers, and offices of housing and community development to determine if there are laws that require compliance by building owners. Rarely are owners required to remove lead-based paint and most laws are to ensure safety if a project is undertaken as part of a larger rehabilitation. Special use permits may be required when an environmental impact may occur due to a cleaning treatment that could contaminate water or affect water treatment. Determine whether projects are considered abatements and will require special contractors and permits.

Owner's Responsibility: Owners are ultimately responsible for ensuring that hazardous waste is properly disposed of when it is generated on their own sites. Owners should check with their state office to determine if the abatement project requires a certified contractor. (National certification requirements are not yet in place.) Owners should establish that the contractor is responsible for the safety of the crew and that all applicable laws are followed, and that transporters and disposers of hazardous waste have liability insurance as a protection for the owner. If an interim treatment is being used to reduce lead hazards, the owner should notify the contractor that lead-based paint is present and that it is the contractor's responsibility to follow appropriate work practices to protect workers and to complete a thorough clean-up to ensure that lead-laden dust is not present after the work is completed.

Glossary of Terms

Deteriorated Lead-Based Paint: Paint known to contain lead that shows signs of peeling, chipping, chalking, blistering, alligating or otherwise separating from its substrate.

Dust Removal: The process of removing dust to avoid creating a greater problem of spreading lead particles; usually through wet or damp collection or through the use of special HEPA vacuums.

Hazard Abatement: Long-term measures to remove the hazards of lead-based paint through selective paint stripping of deteriorated areas; or, in some cases, replacement of deteriorated features.

Hazard Control: Measures to reduce lead hazards to make housing safe for young children. Can be accomplished with interim (short-term) or hazard abatement (long-term) controls.

Interim Control: Short-term methods to remove lead dust, stabilize deteriorating surfaces, and repaint surfaces. Maintenance can ensure that housing remains lead-safe.

Lead-based Paint: Any existing paint, varnish, shellac or other coating that is in excess of 1.0 mg/cm² as measured by an XRF detector or greater than 0.5% by weight from laboratory analysis (5,000 ppm, 5,000 ug/g, or 5,000 mg/kg). For new products, the Consumer Safety Act notes 0.06% as the maximum amount of lead allowed in paint.

Lead-safe: The act of making a property safe from contamination by lead-based paint, lead-dust, and lead in soil generally through short and long-term methods to remove it, or to isolate it from small children.

Risk Assessment: An on-site investigation to determine the presence and condition of lead-based paint, including limited test samples, and an evaluation of the age, condition, housekeeping practices, and uses of a residence.

Further Reading

Chase, Sara B. *Preservation Brief 28: Painting Historic Interiors*. Washington, DC: US Department of the Interior, National Park Service, 1992.

"Coping with Contamination: A Primer for Preservationist," *Information; Booklet No. 70*. Washington, DC: National Trust for Historic Preservation, 1993.

Historic Buildings and the Lead Paint Hazard. Hartford, CT: Connecticut Historical Commission, 1990.

"Health Hazards in National Park Service Buildings", *NPS-76 Housing Design and Rehabilitation*. Washington DC: US Department of the Interior, National Park Service, 1995.

Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing. Washington, DC: US Department of Housing and Urban Development, 1995.

Jandl, H. Ward. *Preservation Brief 18: Rehabilitating Historic Interiors - Identifying and Preserving Character-defining Elements*. Washington, DC: US Department of the Interior, National Park Service, 1988.

MacDonald, Marylee. "Getting Rid of Lead." *Old House Journal*, July/Aug 1992.

Myers, John H. *Preservation Briefs 9; Repair of Historic Wooden Windows*. Washington, DC: US Department of the Interior, National Park Service, 1981.

OSHA Lead in Construction Standard (29 CFR 1926.62), Occupational Safety and Health Administration, May 4, 1993 (Federal Register).

Park, Sharon C. and Camille Martone. "Lead-Based Paint in Historic Buildings," *CRM Bulletin*. Washington, DC: US Department of the Interior, National Park Service. Vol. 13, No. 1, 1990.

Park, Sharon C. "Managing Lead in Building Interiors: An Emerging Approach," *Interiors Handbook for Historic Buildings, Vol. II*. Washington DC: Historic Preservation Education Foundation, 1993.

Park, Sharon C. "What to do about Lead-Based Paint," *CRM Bulletin*. Washington, DC: U.S. Department of the Interior, National Park Service. Vol. 17, No. 4, 1994.

The Secretary of the Interior's Standards for the Treatment of Historic Properties. Washington, DC: US Department of the Interior, National Park Service, 1992.

Title X (Residential Lead-Based Paint Hazard Reduction Act of 1992) of Housing and Community Development Act of 1992 (P.L. 102-550), October 28, 1992.

Weeks, Kay D. and David Look. AIA. *Preservation Briefs 10; Exterior Paint Problems on Historic Woodwork*. Washington DC: US Department of the Interior, National Park Service, 1982.

This successfully completed project combined federal low income housing and historic preservation tax credits as part of a substantial rehabilitation that applied lead-hazard reduction methods consistent with the guidance in this Preservation Brief. Photo: Landmarks Design Associates



Photographs courtesy of Landmarks Design Associates

Front cover: Most residences in the historic building were lead-based paint. It was widely used in the building's original construction as well as interior finishes. The rehabilitation included a core to control lead-based paint hazards. Photo: National Housing Community Development Corporation.

Acknowledgements

Sharon C. Park, AIA, is the Senior Historical Architect for the Preservation Assistance Division of the National Park Service. Douglas C. Hicks is the Deputy Chief of the Williamsport Preservation Training Center of the National Park Service. Both authors served on the National Park Service Housing Task Force addressing lead-safe employee housing and on various national panels to discuss combining lead-safe housing, worker safety, and historic preservation concerns.

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This publication has been prepared under the authority of the Secretary of the Interior to develop and maintain a national system of historic preservation. Comments about this publication should be sent to the Preservation Assistance Division, National Park Service, P.O. Box 518, Washington, DC 20013-7127. This publication is available for sale without penalty. Normal profit margins will be observed. For more information, contact the National Park Service at the address above.

M-NCPPC



MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING

THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

Date: May 27 1999

MEMORANDUM

TO: Robert Hubbard, Director
Department of Permitting Services

FROM: *EPC* Gwen Wright, Coordinator
Historic Preservation

SUBJECT: Historic Area Work Permit

The Montgomery County Historic Preservation Commission has reviewed the attached application for an Historic Area Work Permit. This application was:

 Approved

 X Denied

 Approved with Conditions: _____

and HPC Staff will review and stamp the construction drawings prior to the applicant's applying for a building permit with DPS; and

THE BUILDING PERMIT FOR THIS PROJECT SHALL BE ISSUED CONDITIONAL UPON ADHERENCE TO THE APPROVED HISTORIC AREA WORK PERMIT (HAWP).

Applicant: DR SALLE SILBER & Ms. JUDITH SILBER

Address: 3720 BRADLEY LANE, CHEVY CHASE, MD. 20815

and subject to the general condition that, after issuance of the Montgomery County Department of Permitting Services (DPS) permit, the applicant arrange for a field inspection by calling the DPS Field Services Office at (301)217-6240 prior to commencement of work and not more than two weeks following completion of work.



RETURN TO DEPARTMENT OF PERMITTING SERVICES
250 HUNGEFORD DRIVE, 2nd FLOOR ROCKVILLE, MD 20850
301.217-6376

DPS - #8

**HISTORIC PRESERVATION COMMISSION
301/563-3400**

**APPLICATION FOR
HISTORIC AREA WORK PERMIT**

Contact Person: JUDITH SILBER
Daytime Phone No.: 301 656-6350

Tax Account No.: 213 38 0805
Name of Property Owner: EARLE SILBER M.D & JUDITH SILBER Daytime Phone No.: 301-656-6350
Address: 3720 Bradley Lane, Chevy Chase, MD, 20815
Street Number City Street Zip Code
Contractor: GRENCO Phone No.: 301-942-6377
Contractor Registration No.: 2120
Agent for Owner: ROGER GREGORY Daytime Phone No.: 301-942-6377

LOCATION OF BUILDING/PREMISE

House Number: 3720 Street: Bradley Lane
Town/City: Chevy Chase Nearest Cross Street: Connecticut Ave & Brookville Rd.
Lot: 23 Block: 61 Subdivision: Chevy Chase Section No. 2
Liber: _____ Folio: _____ Parcel: _____

PART ONE: TYPE OF PERMIT ACTION AND USE

1A. CHECK ALL APPLICABLE: Construct Extend Alter/Renovate A/C Slab Room Addition Porch Deck Shed
 Move Install Wreck/Raze Solar Fireplace Woodburning Stove Single Family
 Revision Repair Revocable Fence/Wall (complete Section 4) Other: vinyl siding

1B. Construction cost estimate: \$ \$21,465.00

1C. If this is a revision of a previously approved active permit, see Permit # _____

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 WSSC 02 Septic 03 Other: _____
2B. Type of water supply: 01 WSSC 02 Well 03 Other: _____

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height _____ feet _____ inches
3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:
 On party line/property line Entirely on land of owner On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

Earle Silber
Judith Silber Date: April 5, 1999
Signature of owner or authorized agent

Approved: _____ For Chairperson, Historic Preservation Commission
Disapproved: X Signature: [Signature] Date: 5/12/99
Application/Permit No.: 9904070069 Date Filed: 4/7/99 Date Issued: _____

35/13-996

HISTORIC PRESERVATION COMMISSION

of

MONTGOMERY COUNTY

**8787 Georgia Avenue
Silver Spring, Maryland 20910**

301-563-3400

Case No. 35/13-99G Received April 7, 1999

Public Appearance May 12, 1999

Before the Montgomery County Historic Preservation Commission

Application of Earle Silber, M.D. & Judith Silber
3720 Bradley Lane, Chevy Chase

DECISION AND OPINION OF THE COMMISSION

Decision of the Commission: DENY the Applicant's proposal to cover the wood siding, window frames and soffits with vinyl siding.

Commission Motion: At the May 12, 1999 meeting of the Historic Preservation Commission, Commissioner Velasquez presented a motion to deny the application to cover the existing wood siding, soffits, and window frames with vinyl siding. Commissioner Watkins seconded the motion. Commissioners Velasquez, Watkins, Eig, Kousoulas, and Breslin voted in favor of the motion. Commissioners Trumble and Spurlock were absent. The motion passed 5-0.

BACKGROUND:

The following terms are defined in Section 24A-2 of the Code:

Commission: The historic preservation commission of Montgomery County, Maryland.

Director: The director of the department of permitting services of Montgomery County, Maryland or his designee.

Exterior features: The architectural style, design and general arrangement of the exterior of an historic resource, including the color, nature and texture of building materials, and the type and style of all windows, doors, light fixtures, signs or other similar items found on or related to the exterior of an historic resource.

Historic District: A group of historic resources which are significant as a cohesive unit and contribute to the historical, architectural, archeological or cultural values within the Maryland-Washington Regional District and which has been so designated in the master plan for historic preservation.

Historic resource: A district, site, building, structure or object, including its appurtenances and environmental setting, which is significant in national, state or local history, architecture, archeology or culture.

On April 7, 1999, Earle and Judith Silber completed an application for a Historic Area Work Permit (HAWP) to cover the wood siding, window frames, and soffits of the house at 3720 Bradley Lane with vinyl material.

3720 Bradley Lane is designated as a contributing resource in the Chevy Chase Village Historic District, which was added to the Master Plan For Historic Preservation in 1998. The amendment to the Master Plan for Historic Preservation creating the Chevy Chase Village Historic District was also incorporated as an amendment to the 1990 Bethesda-Chevy Chase Master Plan, and as an amendment to the General Plan for the Physical Development of the Maryland-Washington Regional District within Montgomery County, Maryland.

The designation in the 1998 amendment lists the residence as:

- Circa 1916-1927 Colonial Revival noted for its architectural significance.
- A side-gabled, wood clapboard-clad residence with 8/8 windows and an asphalt roof.
- Includes an outbuilding that is a contributing resource.

In the immediate vicinity and on the same side of Bradley Lane are a number of contributing residences from the same period of construction as 3720 Bradley Lane (1916-1927), which are also similar in design and scale, with a variety of original materials such as brick, wood, and stucco used as cladding. These include 3706 Bradley Lane, 3708 Bradley Lane, and 3710 Bradley Lane.

The northern boundary of the Chevy Chase Village Historic District is delineated by Bradley

Lane. This boundary line is strong both visually and historically as it correlates with the Chevy Chase Land Company's platting of Section 2. There is a strong continuity of architecture and landscaping within the district boundaries.

EVIDENCE IN THE RECORD:

A written staff recommendation on this case was prepared and sent to the Commission on May 5, 1999. At the May 12, 1999 HPC meeting, staff person Perry Kephart showed 35mm slides of the site and presented an oral report on the staff recommendation. Staff recommended denial of the proposed vinyl covering, as it was not consistent with the historic character of the Chevy Chase Village Historic District, was not consistent with the Historic Preservation Policy Guidelines in the designation amendment, and was not consistent with the criteria for approval in 24A-8.

Staff's specific concerns about the proposed use of vinyl siding that constituted reasons for denial were:

1. The basic principles listed in the Chevy Chase Village Guidelines state that vinyl and aluminum siding and windows should be discouraged.
2. The residence is a substantially intact example of the early 20th century Colonial Revival Style that is predominantly identified with this historic district. Covering of the major wood components of the front facade, including the window frames, soffits, and siding would negatively impact the integrity of the historic resource.
3. The wood siding, window frames, and soffits are in good to excellent condition.
4. The concerns with regard to lead paint removal are clearly addressed in numerous preservation publications. The addition of vinyl siding is not recommended as a method of mitigating lead paint situations.
5. The addition of a layer of vinyl siding to increase the energy efficiency of a structure and to make up for the lack of interior insulation is not a sufficient or satisfactory remedy.
6. If there are problems with paint adherence, they are often symptomatic of moisture barrier or insulation problems behind the outside cladding. Adding a layer of vinyl would exacerbate the effect of these problems.
7. A physical examination of the siding revealed that the earlier painting work had not been performed in a satisfactory manner in that the surfaces had not been adequately prepared for additional paint coverage.

8. Covering wood siding with vinyl can cause irreparable damage to the historic wood cladding if there is moisture trapped against the wood by the vinyl layer.
9. The avoidance of wood siding maintenance is not considered a justification for its replacement. The covering of original cladding material simply because it requires maintenance is counter to the principles of reasonable stewardship of historic resources. Whenever possible, original materials should be retained or, if deteriorated, should be replaced in kind.
10. In the basic policies for the historic district, preserving the integrity of the district includes preserving the integrity of contributing structures in the district. Changes to the front facade of the subject property would constitute a significant change to the streetscape of which it is a part.
11. The subject property and the neighboring houses along the southern side of Bradley Lane form the northern boundary line of the Chevy Chase Village Historic District. The houses that are on the boundary line of the historic district should be recognized as serving an important function due to their location at a point at which a differentiation occurs between those houses that are in the designated area and those that have not been designated as being of historical or architectural significance. Loss of integrity in a boundary structure will erode the visual integrity of the historic borders of the district.

Staff also pointed out that the applicants are to be commended for their concern that the historic resource is to be properly maintained, but that the use of vinyl covering cannot be considered a satisfactory maintenance practice and that other solutions to the maintenance situation are available and that maintenance of the historic materials qualifies for tax credits from both the state and local governments.

The applicants, Earle and Judith Silber, attended the May 12th HPC meeting.

Judith Silber testified that the house had been painted many times and that the preparation work had been carefully done and the paint had not adhered properly. She said that experts had said that there are no moisture problems. The integrity of the historic structure had, she indicated, already been compromised by the addition of vinyl covering over some window frames, and by the other changes to the structure, including a rear addition. Finally, she stated that a different type of siding should be approved if the integrity of the original wood cladding had already been compromised by the use of vinyl on some of the window frames.

Dr. Silber testified that economic issues must be taken into account. He pointed out that even tax

credits would not be enough to offset the cost, which the architect had told him were reasonable. He noted that the walls are not insulated at this time. He noted that they are applying to cover the siding, not for its removal. He testified that they are active in their community and want to be able to continue to reside at that house. In that regard, he asked that attention should be paid to the emotional issue of human continuity that was affected by the economic aspects of this application.

The Local Advisory Panel for the historic district was not present, but in their comments dated April 28, 1999 indicated that they did not object to the staff recommendation for denial and added that when original materials are not in good condition, certain types of artificial siding such as fiber reinforced cement siding should be considered by the HPC. They also noted that energy efficiency should be generally given greater weight in the review process.

Commissioner Velasquez said that she was concerned that the Chevy Chase Village Guidelines had specifically said that vinyl siding was not recommended.

Commissioner Eig pointed out that vinyl and aluminum siding are not maintenance free over the long term. She also noted that owning a wood-clad house simply means that one owns a house that has to be painted.

Commissioner Watkins agreed with the previous remarks, agreed with the LAP comments, and upheld the principles in the Guidelines.

Commissioner Breslin sympathized with the need to address the issue of peeling paint, but agreed with the historic district Guidelines and those of the Secretary of the Interior.

Commissioner Velasquez added that she could not support the use of vinyl siding. She indicated that she felt that painting a house every six years was not unreasonable.

Commissioner Kousoulas agreed with the comments of the other commissioners and added that changing the basic siding of a historic resource was beyond anything that would be considered appropriate. He also indicated that the commission does not have sufficient information to weigh economic considerations and must approve or disapprove of an application on the basis of issues relating to the historicity of the house.

CRITERIA FOR APPROVAL AND FINDINGS OF THE COMMISSION:

The criteria which the Commission must evaluate in determining whether to deny a Historic Area Work Permit application are found in Section 24A-8(a) of the Montgomery County Code, 1984, as amended.

Section 24A-8(a) provides that:

The Commission shall instruct the director to deny a permit if it finds, based on the evidence and information presented to or before the commission that the alteration for which the permit is sought would be inappropriate or inconsistent with, or detrimental to the preservation enhancement or ultimate protection of the historic site, or historic resource within an historic district, and to the purposes of this chapter.

In analyzing whether the criteria for issuance of a Historic Area Work Permit have been met, the Commission also evaluates the evidence in the record in light of the Historic Preservation Policy Guidelines in the Amendment to the Approved and Adopted Master Plan for Historic Preservation in Montgomery County, Maryland: Chevy Chase Village Historic District. In particular Guidelines #2, #3, and #4 and Principles for *Siding* and *Windows* are applicable in this case:

- Guideline 2: Preserving the integrity of contributing structures in the district. Alterations to contributing structures should be designed in such a way that the altered structure still contributes to the district.
- Guideline 3: Maintaining the variety of architectural styles and the tradition of architectural excellence.
- Guideline 4: Design review emphasis should be restricted to changes that will be visible from the front or side public right-of-way, or that would be visible in the absence of vegetation or landscaping.

Siding should be subject to moderate scrutiny if it is visible from the public right-of-way, lenient scrutiny if it is not. Artificial siding on areas visible from the public right-of-way should be discouraged where such materials would replace or damage original building materials that are in good condition. Vinyl and aluminum siding should be discouraged.

Windows (including window replacement) should be subject to moderate scrutiny if they are visible from the public right-of-way, lenient scrutiny if they are not. For outstanding resources, they should be subject to strict scrutiny. Addition of compatible exterior storm windows should be encouraged, whether visible from the public right-of way or not. Vinyl and aluminum windows (other than storm windows) should be discouraged.

The Commission also evaluates the evidence in light of generally accepted principles of historic preservation, including the Secretary of the Interior's Standards for Rehabilitation and Guidelines, as noted in the Commission's adopted Executive Regulations. In particular Standards #2 and #5 are applicable in this case:

Standard 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 the property will be avoided.

Standard 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be retained and preserved.

Based on this, the Commission finds that:

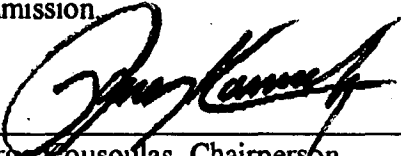
1. 3720 Bradley Lane is a contributing resource in the Chevy Chase Village Historic District. For this reason it is essential to preserve the historic character, including the original material, of this resource and maintain its integrity.
2. The Chevy Chase Village Guidelines state that vinyl siding should be discouraged.
3. The concerns as to energy efficiency would not be addressed by the addition of a layer of vinyl siding.
4. The concerns as to lead paint removal can be addressed by other methods that would not require use of vinyl siding.
5. The wood siding, soffits, and window frames could be irreparably damaged by the use of a vinyl covering.
6. The proposal for replacement and design modification constitutes changes that specifically impair the existing architectural features that contribute to the historic character of the contributing resource and the Chevy Chase Village Historic District as a whole.

CONCLUSION:

The Commission was guided in its decision by Chapter 24A, by the Historic Preservation Policy Guidelines in the Amendment to the Approved and Adopted Master Plan for Historic Preservation in Montgomery County, Maryland: Chevy Chase Village Historic District, and by the Secretary of the Interior's Standards for Rehabilitation.

Based on the evidence in the record and the Commission's findings, as required by Section 24A-8(a) of the Montgomery County Code, 1984, as amended, the Commission must **deny** the application of Earle Silber, M.D. and Judith Silber for a Historic Area Work Permit (HAWP) to cover the wood clapboard siding, wood window frames, and wood soffits with vinyl siding at 3720 Bradley Lane in the Chevy Chase Village Historic District.

If any party is aggrieved by the decision of the Commission, pursuant to Section 24A-70(h) of the Montgomery County Code, an appeal may be filed within thirty (30) days with the Board of Appeals, which will review the Commission's decision de novo. The Board of Appeals has full and exclusive authority to hear and decide all appeals taken from the decision of the Commission. The Board of Appeals has the authority to affirm, modify, or reverse the order or decision of the Commission.

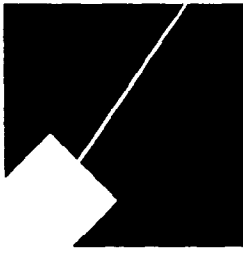


George Rousoulas, Chairperson
Montgomery County
Historic Preservation Commission

5-26-99

Date

M-NCPPC



MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING

THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

MEMORANDUM

DATE: 5-27-99
TO: Local Advisory Panel/Town Government
FROM: Historic Preservation Section, M-NCPPC

VILLAGE OF CHEVY CHASE

Robin D. Ziek, Historic Preservation Planner
EPC Perry Kephart, Historic Preservation Planner

SUBJECT: Historic Area Work Permit Application - HPC Decision

The Historic Preservation Commission reviewed this project on 5-12-99.
A copy of the HPC decision is enclosed for your information.

Thank you for providing your comments to the HPC. Community involvement is a key component of historic preservation in Montgomery County. If you have any questions, please do not hesitate to call this office at (301) 563-3400.

G\wp\laphawp.ltr

ATTACHMENT A (continued): SILBER RESIDENCE

Leonard and Mary Baron (West side)
3800 Bradley Lane
Chevy Chase, MD. 20815

Richard Paisner (Rear)
21 Quincy Street
Chevy Chase, MD. 20815

John and Libby Olson (Confronting side)
3719 Bradley Lane
Chevy Chase, MD. 20815



MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

Date: May 27, 1999

MEMORANDUM

TO: Robert Hubbard, Director
Department of Permitting Services

FROM: *EPK* Gwen Wright, Coordinator
Historic Preservation

SUBJECT: Historic Area Work Permit

The Montgomery County Historic Preservation Commission has reviewed the attached application for an Historic Area Work Permit. This application was:

 Approved

 ~~Denied~~

 Approved with Conditions: _____

and HPC Staff will review and stamp the construction drawings prior to the applicant's applying for a building permit with DPS; and

THE BUILDING PERMIT FOR THIS PROJECT SHALL BE ISSUED CONDITIONAL UPON ADHERENCE TO THE APPROVED HISTORIC AREA WORK PERMIT (HAWP).

Applicant: DR. SALLE SILBER & MRS. JUDITH SILBER

Address: 3720 BRADLEY LANE, CHEVY CHASE, MD. 20815

and subject to the general condition that, after issuance of the Montgomery County Department of Permitting Services (DPS) permit, the applicant arrange for a field inspection by calling the DPS Field Services Office at (301)217-6240 prior to commencement of work and not more than two weeks following completion of work.

HISTORIC PRESERVATION COMMISSION

of

MONTGOMERY COUNTY

**8787 Georgia Avenue
Silver Spring, Maryland 20910**

301-563-3400

Case No. 35/13-99G Received April 7, 1999

Public Appearance May 12, 1999

Before the Montgomery County Historic Preservation Commission

Application of Earle Silber, M.D. & Judith Silber
3720 Bradley Lane, Chevy Chase

DECISION AND OPINION OF THE COMMISSION

Decision of the Commission: DENY the Applicant's proposal to cover the wood siding, window frames and soffits with vinyl siding.

Commission Motion: At the May 12, 1999 meeting of the Historic Preservation Commission, Commissioner Velasquez presented a motion to deny the application to cover the existing wood siding, soffits, and window frames with vinyl siding. Commissioner Watkins seconded the motion. Commissioners Velasquez, Watkins, Eig, Kousoulas, and Breslin voted in favor of the motion. Commissioners Trumble and Spurlock were absent. The motion passed 5-0.

BACKGROUND:

The following terms are defined in Section 24A-2 of the Code:

Commission: The historic preservation commission of Montgomery County, Maryland.

Director: The director of the department of permitting services of Montgomery County, Maryland or his designee.

Exterior features: The architectural style, design and general arrangement of the exterior of an historic resource, including the color, nature and texture of building materials, and the type and style of all windows, doors, light fixtures, signs or other similar items found on or related to the exterior of an historic resource.

Historic District: A group of historic resources which are significant as a cohesive unit and contribute to the historical, architectural, archeological or cultural values within the Maryland-Washington Regional District and which has been so designated in the master plan for historic preservation.

Historic resource: A district, site, building, structure or object, including its appurtenances and environmental setting, which is significant in national, state or local history, architecture, archeology or culture.

On April 7, 1999, Earle and Judith Silber completed an application for a Historic Area Work Permit (HAWP) to cover the wood siding, window frames, and soffits of the house at 3720 Bradley Lane with vinyl material.

3720 Bradley Lane is designated as a contributing resource in the Chevy Chase Village Historic District, which was added to the Master Plan For Historic Preservation in 1998. The amendment to the Master Plan for Historic Preservation creating the Chevy Chase Village Historic District was also incorporated as an amendment to the 1990 Bethesda-Chevy Chase Master Plan, and as an amendment to the General Plan for the Physical Development of the Maryland-Washington Regional District within Montgomery County, Maryland.

The designation in the 1998 amendment lists the residence as:

- Circa 1916-1927 Colonial Revival noted for its architectural significance.
- A side-gabled, wood clapboard-clad residence with 8/8 windows and an asphalt roof.
- Includes an outbuilding that is a contributing resource.

In the immediate vicinity and on the same side of Bradley Lane are a number of contributing residences from the same period of construction as 3720 Bradley Lane (1916-1927), which are also similar in design and scale, with a variety of original materials such as brick, wood, and stucco used as cladding. These include 3706 Bradley Lane, 3708 Bradley Lane, and 3710 Bradley Lane.

The northern boundary of the Chevy Chase Village Historic District is delineated by Bradley

Lane. This boundary line is strong both visually and historically as it correlates with the Chevy Chase Land Company's platting of Section 2. There is a strong continuity of architecture and landscaping within the district boundaries.

EVIDENCE IN THE RECORD:

A written staff recommendation on this case was prepared and sent to the Commission on May 5, 1999. At the May 12, 1999 HPC meeting, staff person Perry Kephart showed 35mm slides of the site and presented an oral report on the staff recommendation. Staff recommended denial of the proposed vinyl covering, as it was not consistent with the historic character of the Chevy Chase Village Historic District, was not consistent with the Historic Preservation Policy Guidelines in the designation amendment, and was not consistent with the criteria for approval in 24A-8.

Staff's specific concerns about the proposed use of vinyl siding that constituted reasons for denial were:

1. The basic principles listed in the Chevy Chase Village Guidelines state that vinyl and aluminum siding and windows should be discouraged.
2. The residence is a substantially intact example of the early 20th century Colonial Revival Style that is predominantly identified with this historic district. Covering of the major wood components of the front facade, including the window frames, soffits, and siding would negatively impact the integrity of the historic resource.
3. The wood siding, window frames, and soffits are in good to excellent condition.
4. The concerns with regard to lead paint removal are clearly addressed in numerous preservation publications. The addition of vinyl siding is not recommended as a method of mitigating lead paint situations..
5. The addition of a layer of vinyl siding to increase the energy efficiency of a structure and to make up for the lack of interior insulation is not a sufficient or satisfactory remedy.
6. If there are problems with paint adherence, they are often symptomatic of moisture barrier or insulation problems behind the outside cladding. Adding a layer of vinyl would exacerbate the effect of these problems.
7. A physical examination of the siding revealed that the earlier painting work had not been performed in a satisfactory manner in that the surfaces had not been adequately prepared for additional paint coverage.

8. Covering wood siding with vinyl can cause irreparable damage to the historic wood cladding if there is moisture trapped against the wood by the vinyl layer.
9. The avoidance of wood siding maintenance is not considered a justification for its replacement. The covering of original cladding material simply because it requires maintenance is counter to the principles of reasonable stewardship of historic resources. Whenever possible, original materials should be retained or, if deteriorated, should be replaced in kind.
10. In the basic policies for the historic district, preserving the integrity of the district includes preserving the integrity of contributing structures in the district. Changes to the front facade of the subject property would constitute a significant change to the streetscape of which it is a part.
11. The subject property and the neighboring houses along the southern side of Bradley Lane form the northern boundary line of the Chevy Chase Village Historic District. The houses that are on the boundary line of the historic district should be recognized as serving an important function due to their location at a point at which a differentiation occurs between those houses that are in the designated area and those that have not been designated as being of historical or architectural significance. Loss of integrity in a boundary structure will erode the visual integrity of the historic borders of the district.

Staff also pointed out that the applicants are to be commended for their concern that the historic resource is to be properly maintained, but that the use of vinyl covering cannot be considered a satisfactory maintenance practice and that other solutions to the maintenance situation are available and that maintenance of the historic materials qualifies for tax credits from both the state and local governments.

The applicants, Earle and Judith Silber, attended the May 12th HPC meeting.

Judith Silber testified that the house had been painted many times and that the preparation work had been carefully done and the paint had not adhered properly. She said that experts had said that there are no moisture problems. The integrity of the historic structure had, she indicated, already been compromised by the addition of vinyl covering over some window frames, and by the other changes to the structure, including a rear addition. Finally, she stated that a different type of siding should be approved if the integrity of the original wood cladding had already been compromised by the use of vinyl on some of the window frames.

Dr. Silber testified that economic issues must be taken into account. He pointed out that even tax

credits would not be enough to offset the cost, which the architect had told him were reasonable. He noted that the walls are not insulated at this time. He noted that they are applying to cover the siding, not for its removal. He testified that they are active in their community and want to be able to continue to reside at that house. In that regard, he asked that attention should be paid to the emotional issue of human continuity that was affected by the economic aspects of this application.

The Local Advisory Panel for the historic district was not present, but in their comments dated April 28, 1999 indicated that they did not object to the staff recommendation for denial and added that when original materials are not in good condition, certain types of artificial siding such as fiber reinforced cement siding should be considered by the HPC. They also noted that energy efficiency should be generally given greater weight in the review process.

Commissioner Velasquez said that she was concerned that the Chevy Chase Village Guidelines had specifically said that vinyl siding was not recommended.

Commissioner Eig pointed out that vinyl and aluminum siding are not maintenance free over the long term. She also noted that owning a wood-clad house simply means that one owns a house that has to be painted.

Commissioner Watkins agreed with the previous remarks, agreed with the LAP comments, and upheld the principles in the Guidelines.

Commissioner Breslin sympathized with the need to address the issue of peeling paint, but agreed with the historic district Guidelines and those of the Secretary of the Interior.

Commissioner Velasquez added that she could not support the use of vinyl siding. She indicated that she felt that painting a house every six years was not unreasonable.

Commissioner Kousoulas agreed with the comments of the other commissioners and added that changing the basic siding of a historic resource was beyond anything that would be considered appropriate. He also indicated that the commission does not have sufficient information to weigh economic considerations and must approve or disapprove of an application on the basis of issues relating to the historicity of the house.

CRITERIA FOR APPROVAL AND FINDINGS OF THE COMMISSION:

The criteria which the Commission must evaluate in determining whether to deny a Historic Area Work Permit application are found in Section 24A-8(a) of the Montgomery County Code, 1984, as amended.

Section 24A-8(a) provides that:

The Commission shall instruct the director to deny a permit if it finds, based on the evidence and information presented to or before the commission that the alteration for which the permit is sought would be inappropriate or inconsistent with, or detrimental to the preservation enhancement or ultimate protection of the historic site, or historic resource within an historic district, and to the purposes of this chapter.

In analyzing whether the criteria for issuance of a Historic Area Work Permit have been met, the Commission also evaluates the evidence in the record in light of the Historic Preservation Policy Guidelines in the Amendment to the Approved and Adopted Master Plan for Historic Preservation in Montgomery County, Maryland: Chevy Chase Village Historic District. In particular Guidelines #2, #3, and #4 and Principles for *Siding* and *Windows* are applicable in this case:

- Guideline 2: Preserving the integrity of contributing structures in the district. Alterations to contributing structures should be designed in such a way that the altered structure still contributes to the district.
- Guideline 3: Maintaining the variety of architectural styles and the tradition of architectural excellence.
- Guideline 4: Design review emphasis should be restricted to changes that will be visible from the front or side public right-of-way, or that would be visible in the absence of vegetation or landscaping.

Siding should be subject to moderate scrutiny if it is visible from the public right-of-way, lenient scrutiny if it is not. Artificial siding on areas visible from the public right-of-way should be discouraged where such materials would replace or damage original building materials that are in good condition. Vinyl and aluminum siding should be discouraged.

Windows (including window replacement) should be subject to moderate scrutiny if they are visible from the public right-of-way, lenient scrutiny if they are not. For outstanding resources, they should be subject to strict scrutiny. Addition of compatible exterior storm windows should be encouraged, whether visible from the public right-of-way or not. Vinyl and aluminum windows (other than storm windows) should be discouraged.

The Commission also evaluates the evidence in light of generally accepted principles of historic preservation, including the Secretary of the Interior's Standards for Rehabilitation and Guidelines, as noted in the Commission's adopted Executive Regulations. In particular Standards #2 and #5 are applicable in this case:

Standard 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 the property will be avoided.

Standard 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be retained and preserved.

Based on this, the Commission finds that:

1. 3720 Bradley Lane is a contributing resource in the Chevy Chase Village Historic District. For this reason it is essential to preserve the historic character, including the original material, of this resource and maintain its integrity.
2. The Chevy Chase Village Guidelines state that vinyl siding should be discouraged.
3. The concerns as to energy efficiency would not be addressed by the addition of a layer of vinyl siding.
4. The concerns as to lead paint removal can be addressed by other methods that would not require use of vinyl siding.
5. The wood siding, soffits, and window frames could be irreparably damaged by the use of a vinyl covering.
6. The proposal for replacement and design modification constitutes changes that specifically impair the existing architectural features that contribute to the historic character of the contributing resource and the Chevy Chase Village Historic District as a whole.

CONCLUSION:

The Commission was guided in its decision by Chapter 24A, by the Historic Preservation Policy Guidelines in the Amendment to the Approved and Adopted Master Plan for Historic Preservation in Montgomery County, Maryland: Chevy Chase Village Historic District, and by the Secretary of the Interior's Standards for Rehabilitation.

Based on the evidence in the record and the Commission's findings, as required by Section 24A-8(a) of the Montgomery County Code, 1984, as amended, the Commission must deny the application of Earle Silber, M.D. and Judith Silber for a Historic Area Work Permit (HAWP) to cover the wood clapboard siding, wood window frames, and wood soffits with vinyl siding at 3720 Bradley Lane in the Chevy Chase Village Historic District.

If any party is aggrieved by the decision of the Commission, pursuant to Section 24A-70(h) of the Montgomery County Code, an appeal may be filed within thirty (30) days with the Board of Appeals, which will review the Commission's decision de novo. The Board of Appeals has full and exclusive authority to hear and decide all appeals taken from the decision of the Commission. The Board of Appeals has the authority to affirm, modify, or reverse the order or decision of the Commission.



George Kousoulas, Chairperson
Montgomery County
Historic Preservation Commission

5-26-99

Date

HISTORIC PRESERVATION COMMISSION STAFF REPORT

Address: 3720 Bradley Lane, Chevy Chase **Meeting Date:** 05/12/99
Resource: Chevy Chase Village Historic District **Public Notice:** 04/28/99
Case Number: 35/13-99G **Report Date:** 05/05/99
Review: HAWP **Tax Credit:** None
Applicant: Earle Silber, MD & Judith Silber **Staff:** Perry Kephart

PROPOSAL: Install Vinyl Siding over Wood Siding, Windows and Soffits.

RECOMMEND: Deny

DATE OF CONSTRUCTION: ca. 1925

SIGNIFICANCE: Contributing Resource in Chevy Chase Village Historic District.

ARCHITECTURAL DESCRIPTION

The structure is a three bay, side-gable, Colonial Revival frame residence with 8/8 windows, wood cladding and composite shingle roofing (with a small skylight on the front roof plane). The Federal Revival front door has a lattice-work portico added in 1989. Several of the wood window frames are clad in vinyl. The one-bay, two-story side addition has a wall dormer on the second level. The two car garage is from the same period as the historic resource.

PROPOSAL

The applicant proposes to cover the wood siding, soffits and window framing with vinyl material.

STAFF DISCUSSION

The streetscape on the south side of Bradley Lane forms the northern boundary of the Chevy Chase Village Historic District. The progression eastward from Connecticut Avenue from two large properties (1 Quincy Street, 3810 Bradley Lane) is to a series of Revival Style houses on smaller lots. The houses in the series were all built in the same era (before 1927, with the exception of a non-contributing house that replaces an earlier building), and are tied together by similar scale, material and design features. Two prevalent features are the two-story additions with a wall dormer, and free-standing garages built at the same time as the houses. The use of the same scale, but with individual interpretations of various Revival Styles (Tudor, Colonial, Federal, Georgian), also adds to the cohesiveness of the streetscape. An important feature of the

streetscape that relates to this application is the historic integrity of the properties and the substantial amount of original material that remains in place.

The historic integrity of the property is, at this point, substantially intact. The replacement of the slate roof with a textured composite shingle, the addition of a skylight, vinyl covering some of the window frames, and the addition of a lattice portico are notable changes to the front facade, but these changes could be reversed. Changes to the rear of the building generally do not affect the contribution of a historic resource to the streetscape of a historic district. However, removal, or replacement with a different material, of the major components of the front facade—windows, door, shutters, siding—would be seriously problematic.

Proposed changes in the historic district must take into account the basic policies listed in the Chevy Chase Village Guidelines:

Siding should be subject to moderate scrutiny if it is visible from the public right-of-way, lenient scrutiny if it is not. Artificial siding on areas visible from the public right-of-way should be discouraged where such materials would replace or damage original building materials that are in good condition. *Vinyl and aluminum siding should be discouraged.* (Italics and bolding added for emphasis.)

Windows (including window replacement) should be subject to moderate scrutiny if they are visible from the public right-of-way, lenient scrutiny if they are not. For outstanding resources, they should be subject to strict scrutiny. Addition of compatible exterior storm windows should be encouraged, whether visible from the public right-of way or not. *Vinyl and aluminum windows (other than storm windows) should be discouraged.* (Italics and bolding added for emphasis.)

As to concern expressed with regard to repainting, the methods for removal of lead paint are addressed in numerous preservation publications, including the preservation brief attached to this report. Avoidance of wood siding maintenance is generally not considered a justification for replacement. The addition of vinyl siding is not a recommended method of mitigating lead paint problems.

As to the interest in energy efficiency, the addition of one layer of almost any material can be expected to add somewhat to the energy conservation for a structure. However, as much of the energy loss is through the windows, adding one layer of vinyl to the walls would not provide sufficient remedy to justify changing building materials. The addition of storm windows, if energy conservation is a serious concern, would qualify for a historic preservation tax credit. If the walls are not correctly insulated, there are more satisfactory solutions than the addition of a layer of vinyl.

Paint problems are often symptomatic of moisture barrier or insulation problems behind the outside cladding. Covering the wood siding with vinyl may cause irreparable damage to the wood if moisture is trapped against the wood by the vinyl layer. Staff would recommend that the reasons for the paint failure be more thoroughly investigated before covering the wood with either paint or any other substance.

The applicants are to be commended for their concern that the historic resource be properly maintained. The proposed use of vinyl cladding cannot be considered a satisfactory solution. The staff would recommend that other solutions to the maintenance situation be explored and are available to assist in investigating other possible methods of properly maintaining the historic resource.

STAFF RECOMMENDATION

Staff recommends that the Commission **deny** the HAWP application to install vinyl siding, soffits and window frames at 3720 Bradley Lane, Chevy Chase. Staff's recommendation is consistent with Chapter 24A-8(a):

The Commission shall instruct the director to deny a permit if it finds, based on the evidence and information presented to or before the commission that the alteration for which the permit is sought would be inappropriate or inconsistent with, or detrimental to the preservation, enhancement or ultimate protection of the historic site, or historic resource within an historic district, and to the purposes of this chapter.

and with the Chevy Chase Village District Guidelines basic policies to be adhered to:

Preserving the integrity of the Chevy Chase Village Historic District. Any alterations should, at a minimum, perpetuate the ability to perceive the sense of time and place portrayed by the district.

Preserving the integrity of contributing structures in the district. Alterations to contributing structures should be designed in such a way that the altered structure still contributes to the district.

Vinyl and aluminum siding should be discouraged.

Vinyl and aluminum windows (other than storm windows) should be discouraged.

and Secretary of the Interior's Standards for Rehabilitation #2, and #5:

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 the property will be avoided.

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

Date: 4/28/99

Sender: "Bourke Tom" <bourket@wdni.com>

To: HPC fax <Private_User@wdni.com>, KEPHART, Wright, Ziek

cc: "Harwood Corbin" <Beanmb@aol.com>, "Elliott Bob" <bob-elliott@worldnet.att.net>, "Stephens Betsy" <bstephens@ibm.net>, "Schiro Jerry (CCV)" <ccv@erols.com>, "Feldman Gail" <Gailvy@aol.com>, "Wellington Peter" <pwellington@steptoe.com>, "Bourke Tom" <bourket@wdni.com>

Priority: Normal

Subject: LAP Comments on April 28 HAWPs

To: HPC Staff

From: Chevy Chase Village LAP

Please convey the following comments to the HPC at the April 28 hearing:

A. The LAP supports the staff's recommendations for approval at 100 Primrose and 20 West Kirke, and commends the staff for its appropriate application of the Village Guidelines in regard to these projects.

B. The LAP does not object to the staff's recommendation for denial at 3720 Bradley Lane, but offers the following additional comments. The Guidelines recognize that certain types of artificial siding should be permitted, particularly when the original building materials are not in good condition.

There are new products on the market, such as fiber-cement siding (Hardie Board is one brand name), which should be considered by the HPC. Given continuing improvements in technology, the LAP intends to re-examine the issue of vinyl siding in connection with possible revisions to the Guidelines. We also consider energy efficiency to be an issue that should be given greater weight in the review process. Further, we note an error in the heading of the staff's report, which states "PROPOSAL: Replace Wood Siding" (emphasis added) As we understand it, the applicant proposes to retain the wood siding, but to cover it with vinyl siding. Insofar as this may be a change that could be reversed, it is less of a threat to the historic integrity of the property. Finally, we recommend that the applicant be fully informed of the significant tax credits available for maintenance of the wood siding and other aspects of the property.

Submitted by
Tom Bourke
Chairman

HISTORIC PRESERVATION COMMISSION STAFF REPORT

Address: 3720 Bradley Lane, Chevy Chase **Meeting Date:** 05/12/99
Resource: Chevy Chase Village Historic District **Public Notice:** 04/28/99
Case Number: 35/13-99G **Report Date:** 05/05/99
Review: HAWP **Tax Credit:** None
Applicant: Earle Silber, MD & Judith Silber **Staff:** Perry Kephart

PROPOSAL: Install Vinyl Siding over Wood Siding, Windows and Soffits.

RECOMMEND: Deny

DATE OF CONSTRUCTION: ca. 1925

SIGNIFICANCE: Contributing Resource in Chevy Chase Village Historic District.

ARCHITECTURAL DESCRIPTION

The structure is a three bay, side-gable, Colonial Revival frame residence with 8/8 windows, wood cladding and composite shingle roofing (with a small skylight on the front roof plane). The Federal Revival front door has a lattice-work portico added in 1989. Several of the wood window frames are clad in vinyl. The one-bay, two-story side addition has a wall dormer on the second level. The two car garage is from the same period as the historic resource.

PROPOSAL

The applicant proposes to cover the wood siding, soffits and window framing with vinyl material.

STAFF DISCUSSION

The streetscape on the south side of Bradley Lane forms the northern boundary of the Chevy Chase Village Historic District. The progression eastward from Connecticut Avenue from two large properties (1 Quincy Street, 3810 Bradley Lane) is to a series of Revival Style houses on smaller lots. The houses in the series were all built in the same era (before 1927, with the exception of a non-contributing house that replaces an earlier building), and are tied together by similar scale, material and design features. Two prevalent features are the two-story additions with a wall dormer, and free-standing garages built at the same time as the houses. The use of the same scale, but with individual interpretations of various Revival Styles (Tudor, Colonial, Federal, Georgian), also adds to the cohesiveness of the streetscape. An important feature of the

25

①

1) Painted many times
other painting - was thoroughly sanded
& feathered. Paint still did not
hold

2) experts have said there is no
moisture prob.

3) integrity has been compromised

4) siding should be stayed if any
material has been compromised

25

1) economic issues - even w/ tax
credits - estimates of \$2K.

Ann Lewis - architect said \$2K
was reasonable.

2) walls are not insulated at
this time -

3) not removing siding - just
covering.

4) active in that community - want
to be able to live in the house
attention to the human continuity

streetscape that relates to this application is the historic integrity of the properties and the substantial amount of original material that remains in place.

The historic integrity of the property is, at this point, substantially intact. The replacement of the slate roof with a textured composite shingle, the addition of a skylight, vinyl covering some of the window frames, and the addition of a lattice portico are notable changes to the front facade, but these changes could be reversed. Changes to the rear of the building generally do not affect the contribution of a historic resource to the streetscape of a historic district. However, removal, or replacement with a different material, of the major components of the front facade—windows, door, shutters, siding—would be seriously problematic.

Proposed changes in the historic district must take into account the basic policies listed in the Chevy Chase Village Guidelines:

Siding should be subject to moderate scrutiny if it is visible from the public right-of-way, lenient scrutiny if it is not. Artificial siding on areas visible from the public right-of-way should be discouraged where such materials would replace or damage original building materials that are in good condition. *Vinyl and aluminum siding should be discouraged.* (Italics and bolding added for emphasis.)

Windows (including window replacement) should be subject to moderate scrutiny if they are visible from the public right-of-way, lenient scrutiny if they are not. For outstanding resources, they should be subject to strict scrutiny. Addition of compatible exterior storm windows should be encouraged, whether visible from the public right-of way or not. *Vinyl and aluminum windows (other than storm windows) should be discouraged.* (Italics and bolding added for emphasis.)

As to concern expressed with regard to repainting, the methods for removal of lead paint are addressed in numerous preservation publications, including the preservation brief attached to this report. Avoidance of wood siding maintenance is generally not considered a justification for replacement. The addition of vinyl siding is not a recommended method of mitigating lead paint problems.

As to the interest in energy efficiency, the addition of one layer of almost any material can be expected to add somewhat to the energy conservation for a structure. However, as much of the energy loss is through the windows, adding one layer of vinyl to the walls would not provide sufficient remedy to justify changing building materials. The addition of storm windows, if energy conservation is a serious concern, would qualify for a historic preservation tax credit. If the walls are not correctly insulated, there are more satisfactory solutions than the addition of a layer of vinyl.

Paint problems are often symptomatic of moisture barrier or insulation problems behind the outside cladding. Covering the wood siding with vinyl may cause irreparable damage to the wood if moisture is trapped against the wood by the vinyl layer. Staff would recommend that the reasons for the paint failure be more thoroughly investigated before covering the wood with either paint or any other substance.

Comments of HPC

SV - concerned that LAP has specifically ⁽²⁾
said vinyl siding

EE - vinyl/alum siding do not last
owing a wood clad here has to be painted

LW - agree & uphold LAP

SB - as owner of here w/ painting pt of
sympathetic but agree w/ CCV of
\$019⁰⁰.

SV - ~~to~~ cannot support use of vinyl
siding - painting a here every
6 years

GK - have to agree w/ others -
changing the basic siding
is beyond anything would
be considered

- we don't weigh economics
harder -

- judge on basis of history of
the house.

The applicants are to be commended for their concern that the historic resource be properly maintained. The proposed use of vinyl cladding cannot be considered a satisfactory solution. The staff would recommend that other solutions to the maintenance situation be explored and are available to assist in investigating other possible methods of properly maintaining the historic resource.

STAFF RECOMMENDATION

Staff recommends that the Commission deny the HAWP application to install vinyl siding, soffits and window frames at 3720 Bradley Lane, Chevy Chase. Staff's recommendation is consistent with Chapter 24A-8(a):

The Commission shall instruct the director to deny a permit if it finds, based on the evidence and information presented to or before the commission that the alteration for which the permit is sought would be inappropriate or inconsistent with, or detrimental to the preservation, enhancement or ultimate protection of the historic site, or historic resource within an historic district, and to the purposes of this chapter.

and with the Chevy Chase Village District Guidelines basic policies to be adhered to:

Preserving the integrity of the Chevy Chase Village Historic District. Any alterations should, at a minimum, perpetuate the ability to perceive the sense of time and place portrayed by the district.

Preserving the integrity of contributing structures in the district. Alterations to contributing structures should be designed in such a way that the altered structure still contributes to the district.

Vinyl and aluminum siding should be discouraged.

Vinyl and aluminum windows (other than storm windows) should be discouraged.

and Secretary of the Interior's Standards for Rehabilitation #2, and #5:

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 the property will be avoided.

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

Dis.
- read from brochure. re. email (3)

6w - 15 days will get written
~~of~~ decision

SU - more that _____ be denied

LW - 2nd

S-O man -

EE

LW

6K

SU

SB.

**THE FOLLOWING ITEMS MUST BE COMPLETED AND THE
REQUIRED DOCUMENTS MUST ACCOMPANY THIS APPLICATION.**

1. **WRITTEN DESCRIPTION OF PROJECT**

a. Description of existing structure(s) and environmental setting, including their historical features and significance:

See Attachment A

b. General description of project and its effect on the historic resource(s), the environmental setting, and, where applicable, the historic district:

see Attachment A

2. **SITE PLAN**

see Attachment B

Site and environmental setting, drawn to scale. You may use your plat. Your site plan must include:

- a. the scale, north arrow, and date;
- b. dimensions of all existing and proposed structures; and
- c. site features such as walkways, driveways, fences, ponds, streams, trash dumpsters, mechanical equipment, and landscaping.

3. **PLANS AND ELEVATIONS**

You must submit 2 copies of plans and elevations in a format no larger than 11" x 17". Plans on 8 1/2" x 11" paper are preferred.

- a. **Schematic construction plans**, with marked dimensions, indicating location, size and general type of walls, window and door openings, and other fixed features of both the existing resource(s) and the proposed work.
- b. Elevations (facades), with marked dimensions, clearly indicating proposed work in relation to existing construction and, when appropriate, context. All materials and fixtures proposed for the exterior must be noted on the elevations drawings. An existing and a proposed elevation drawing of each facade affected by the proposed work is required.

4. **MATERIALS SPECIFICATIONS**

see Attachment A

General description of materials and manufactured items proposed for incorporation in the work of the project. This information may be included on your design drawings.

5. **PHOTOGRAPHS**

see Attachment C

- a. Clearly labeled photographic prints of each facade of existing resource, including details of the affected portions. All labels should be placed on the front of photographs.
- b. Clearly label photographic prints of the resource as viewed from the public right-of-way and of the adjoining properties. All labels should be placed on the front of photographs.

ATTACHMENT A (continued): SILBER RESIDENCE

Leonard and Mary Baron (West side)
3800 Bradley Lane
Chevy Chase, MD. 20815

Richard Paisner (Rear)
21 Quincy Street
Chevy Chase, MD. 20815

John and Libby Olson (Confronting side)
3719 Bradley Lane
Chevy Chase, MD. 20815

APPLICATION FOR HISTORIC AREA WORK PERMIT

Contact Person: JUDITH SILBER

Daytime Phone No.: 301 656-6350

Tax Account No.: 213 38 0805

Name of Property Owner: EARLE SILBER M.D & JUDITH SILBER Daytime Phone No.: 301-656-6350

Address: 3720 Bradley Lane, Chevy Chase, MD, 20815
Street Number City State Zip Code

Contractor: GRENCO Phone No.: 301-942-6377

Contractor Registration No.: 2120

Agent for Owner: ROGER GREGORY Daytime Phone No.: 301-942-6377

LOCATION OF BUILDING/PREMISE

House Number: 3720 Street: Bradley Lane

Town/City: Chevy Chase Nearest Cross Street: Connecticut Ave & Brookville Rd.

Lot: 23 Block: 61 Subdivision: Chevy Chase Section No. 2

Liber: _____ Folio: _____ Parcel: _____

PART ONE: TYPE OF PERMIT ACTION AND USE

1A. CHECK ALL APPLICABLE:

- Construct
- Extend
- Alter/Renovate
- Move
- Install
- Wreck/Raze
- Revision
- Repair
- Revocable

CHECK ALL APPLICABLE:

- A/C
- Slab
- Room Addition
- Porch
- Deck
- Shed
- Solar
- Fireplace
- Woodburning Stove
- Single Family
- Fence/Wall (complete Section 4)
- Other: vinyl siding

1B. Construction cost estimate: \$ \$21,465.00

1C. If this is a revision of a previously approved active permit, see Permit # _____

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 WSSC 02 Septic 03 Other: _____

2B. Type of water supply: 01 WSSC 02 Well 03 Other: _____

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height _____ feet _____ inches

3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:

- On party line/property line
- Entirely on land of owner
- On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

Earle Silber
Judith Silber
 Signature of owner or authorized agent

April 5, 1999
 Date

Approved: _____ For Chairperson, Historic Preservation Commission

(4)

ATTACHMENT A: SILBER RESIDENCE HISTORIC AREA WORK PERMIT APPLICATION

1. WRITTEN DESCRIPTION OF PROJECT

a. The original residence, built about 1930, sits on the northern border of the historic district in Chevy Chase Village. Since 1930, two renovations have substantially altered its exterior appearance. In 1968, a screened porch was enclosed and an addition constructed to create a suite of rooms on the northeast corner of the first floor. In 1989, the property underwent another major renovation. The outer bearing wall at the southwest corner was moved to create additional interior space; a new deck was built across the entire south side of the house; sliding glass doors replaced enclosed walls along the south wall and the rear door was moved and redesigned. At the same time, lattice trellises were added to the rear of the house and to the front entrance and the front roof line was altered with a skylight. These additions, which are pleasing but do not conform to historic authenticity, substantially changed the exterior of the house. In 1990, the slate roof was replaced with synthetic asphalt shingles.

b. The existing siding has been painted many times over the years, initially with lead-based paint. If it were to be painted again, it would require costly scraping and preparation. The proposed project would cover the existing siding with a high grade of vinyl siding manufactured by CertainTeed. The color proposed would be the same as the present color of the house. It has been brought to our attention that many other houses in the historic area have already been covered with vinyl siding. It is our opinion that the new siding will not adversely effect the environment and will improve the exterior appearance of the house which becomes unsightly periodically because of the frequent need to repaint (as often as every six years). In future years, the new siding will substantially reduce our maintenance costs. In addition, the siding will enhance the insulation of the house, making it more energy efficient during the winter and summer. These anticipated lower maintenance costs will make it possible for us to continue living in the house, which has been our residence since 1958.

4. MATERIALS SPECIFICATIONS

Monogram CertainTeed 4" smooth vinyl siding on exterior walls in the color called Natural Clay; soffits and window frames in Colonial White.

7. ADDRESSES OF ADJACENT AND CONFRONTING PROPERTY OWNERS

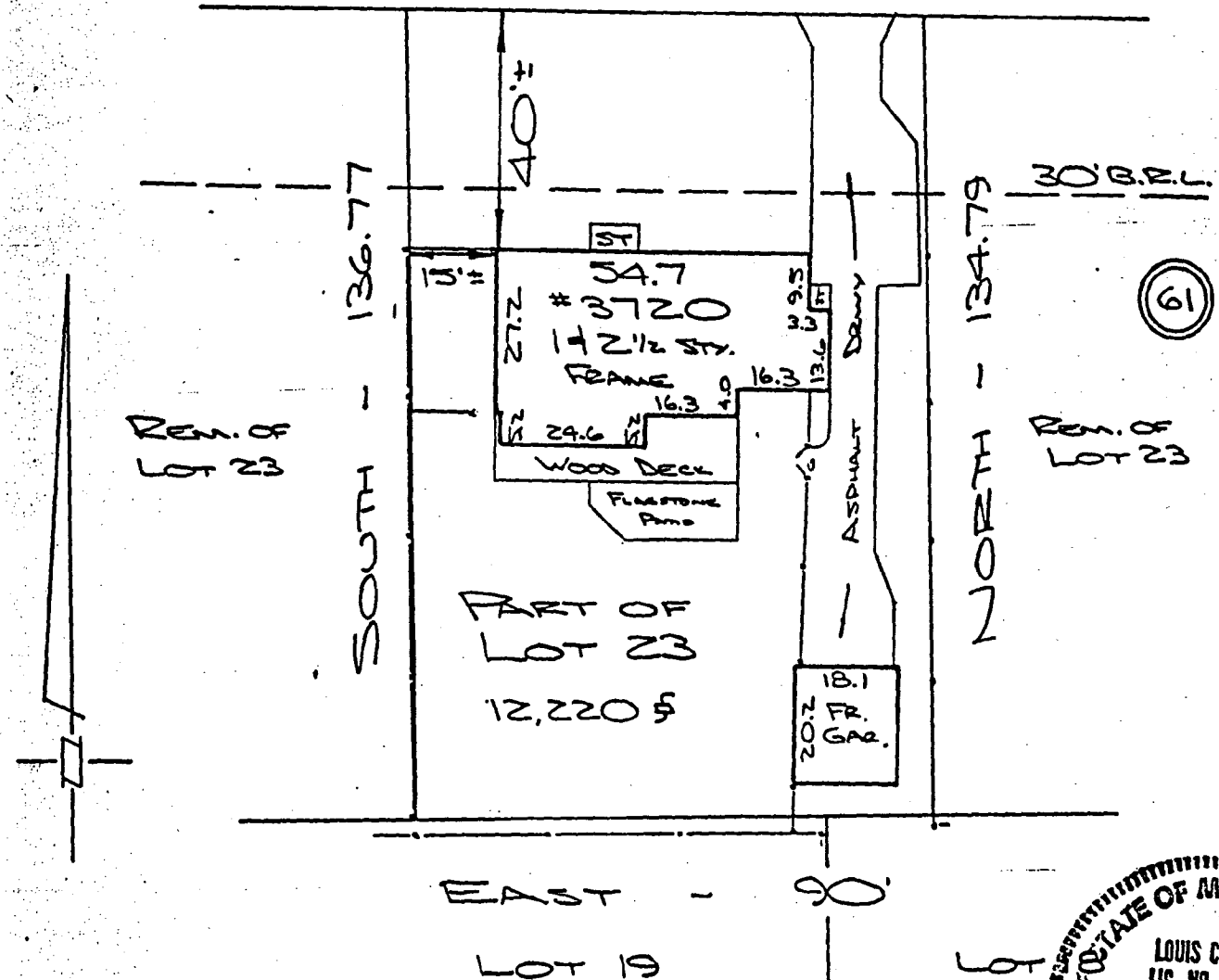
Adjoining Property Owners:

Roland Olson (East side)
3718 Bradley Lane
Chevy Chase, MD. 20815

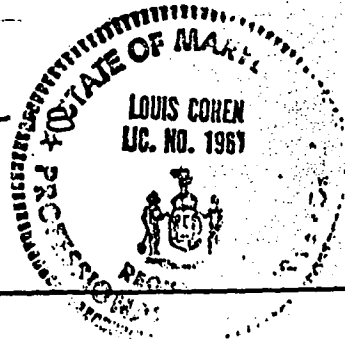
Silber Residence
 Plot Plan
 Attachment B

BRADLEY LANE

N. 88° 53' W. - 90.08



Note: This property does not lie within the limits of a flood hazard area as delineated on the maps of the national flood insurance program.



CAPITOL SURVEYS

NOTE: This drawing is not intended to establish property lines. It cannot be used for construction purposes. All information shown hereon taken from the land records of the county or city in which the property is located and field work performed.

HOUSE LOCATION
 PART OF LOT 23 BLOCK 61
 SECTION No. 2
CHEVY CHASE
 MONTGOMERY COUNTY, MARYLAND
 Recorded in Plat Book 2 Plat 106 Scale 1" = 30'

I hereby certify that the position of all the existing improvements on the above described property have been established by accepted field practices, and that unless otherwise shown there are no visible encroachments.

[Signature]
 LOUIS COHEN
 Registered Land Surveyor
 Maryland No. 1967

DATE: Aug. 21, 1992

CASE: 1684-92 FILE: 44084



SOUTH WEST CORNER



EAST VIEW & NORTHEAST CORNER

(9)

OVER 47

11

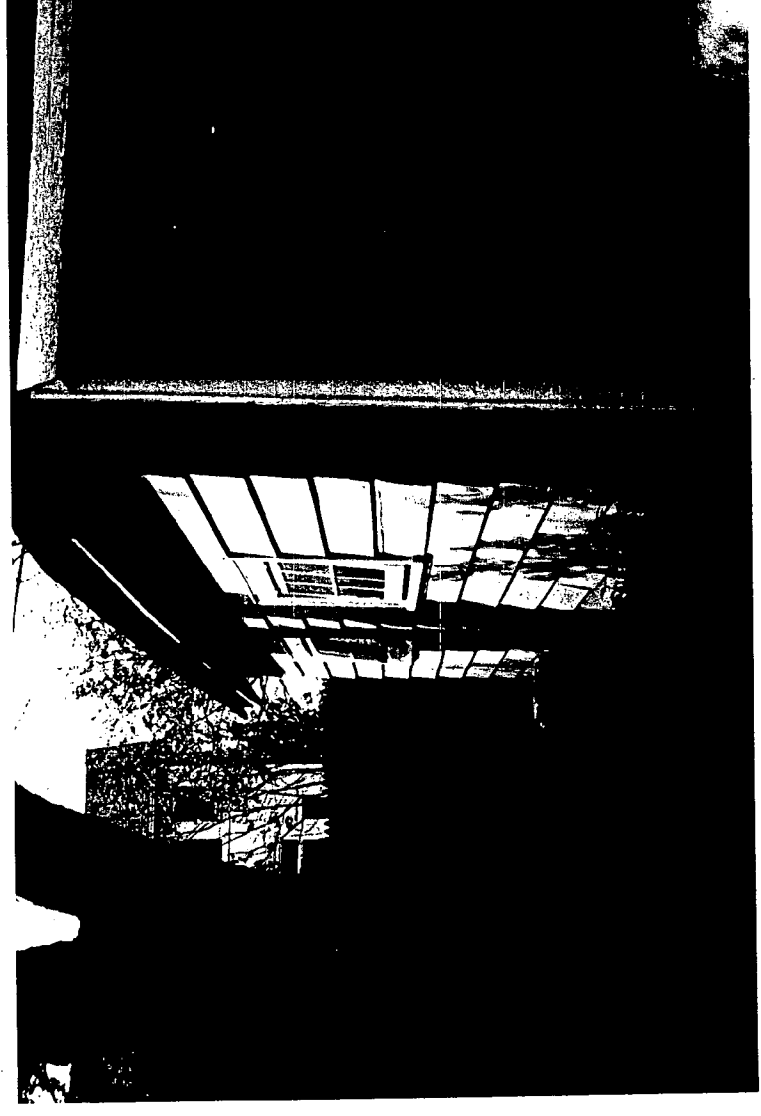
D



REAR VIEW: SOUTH SIDE ↑



FRONT VIEW: NORTH SIDE ↑



LD

DE ↑

SIDE ↑

TH
CME

37 PRESERVATION BRIEFS

Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing

Sharon C. Park, AIA, and Douglas C. Hicks



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

Lead-based paint, a toxic material, was widely used in North America on both the exteriors and interiors of buildings until well into the second half of the twentieth century. If a "historic" place is broadly defined in terms of time as having attained an age of fifty years, this means that almost every historic house contains some lead-based paint. In its deteriorated form, it produces paint chips and lead-laden dust particles that are a known health hazard to both children and adults. Children are particularly at risk when they ingest lead paint dust through direct hand-to-mouth contact and from toys or pacifiers. They are also at risk when they chew lead-painted surfaces in accessible locations. In addition to its presence in houses, leaded paint

chips, lead dust, or lead-contaminated soil in play areas can elevate a child's blood lead level to a degree that measures to reduce and control the hazard should be undertaken (see Action Level Chart, page 6)

The premise of this Preservation Brief is that historic housing can be made lead-safe for children without removing significant decorative features and finishes, or architectural trimwork that may contribute to the building's historic character (see fig. 1). *Historic housing*—encompassing private dwellings and all types of rental units—is necessarily the focus of this Brief because federal and state laws primarily address the hazards of lead and



Before



After

Figure 1. A large-scale historic rehabilitation project incorporated sensitive lead-hazard reduction measures. Interior walls and woodwork were cleaned, repaired, and repainted and compatible new floor coverings added. The total project was economically sound and undertaken in a careful manner that preserved the building's historic character. Photos: Landmarks Design Associates.

lead-based paint in housing and day-care centers to protect the health of children under six years of age. Rarely are there mandated requirements for the removal of lead-based paint from non-residential buildings.

Ideally, most owners and managers should understand the health hazards created by lead-based paint and voluntarily control these hazards to protect young children. A stricter approach has been taken by some state and federal funding programs which have compliance requirements for identifying the problem, notifying tenants, and, in some cases, remedying lead hazards in housing (see Legislation Sidebar, pg.15). With new rules being written, and new products and approaches being developed, it is often difficult to find systematic and balanced methodologies for dealing with lead-based paint in historic properties.

This Preservation Brief is intended to serve as an introduction to the complex issue of historic lead-based paint and its management. It explains how to plan and implement lead-hazard control measures to strike a balance between preserving a historic building's significant materials and features and protecting human health and safety, as well as the environment. It is not meant to be a "how-to guide" for undertaking the work. Such a short-cut approach could easily result in creating a greater health risk, if proper precautions were not taken. Home renovators and construction workers should be aware that serious health problems can be caused by coming into contact with lead. For this reason, there are also laws to protect workers on the job site (see Worker Safety Sidebar, pg. 4). Controlling the amount of waste containing lead-based paint residue will also reduce the impact on the environment. All of these considerations must be weighed against the goal of providing housing that is safe for children.

Lead in Historic Paints

Lead compounds were an important component of many historic paints. Lead, in the forms of lead carbonate and lead oxides, had excellent adhesion, drying, and covering abilities. White lead, linseed oil, and inorganic pigments were the basic components for paint in the 18th, 19th, and early 20th centuries. Lead-based paint was used extensively on wooden exteriors and interior trimwork, window sash, window frames, baseboards, wainscoting, doors, frames, and high gloss wall surfaces such as those found in kitchens and bathrooms. Almost all painted metals were primed with red lead or painted with lead-based paints. Even milk (casein) and water-based paints (distemper and calcimines) could contain some lead, usually in the form of hiding agents or pigments. Varnishes sometimes contained lead. Lead compounds were also used as driers in paint and window glazing putty.

In 1978, the use of lead-based paint in residential housing was banned by the federal government. Because the hazards have been known for some time, many lead components of paint were replaced by titanium and other less toxic elements earlier in the 20th century. Since houses are periodically repainted, the most recent layer of paint will most likely *not* contain lead, but the older layers underneath probably will. Therefore, the only way to accurately determine the amount of lead present in older paint is to have it analyzed.

It is important that owners of historic properties be aware that layers of older paint can reveal a great deal about the history of a building and that paint chronology is often used to date alterations or to document decorative period colors (see figs. 2, 3). Highly significant decorative finishes, such as graining, marbleizing, stenciling, polychrome decoration, and murals should be evaluated by a painting conservator to develop the appropriate preservation treatment that will stabilize the paint and eliminate the need to remove it. If such finishes must be removed in the process of controlling lead hazards, then research, paint analysis, and documentation are advisable as a record for future research and treatment.

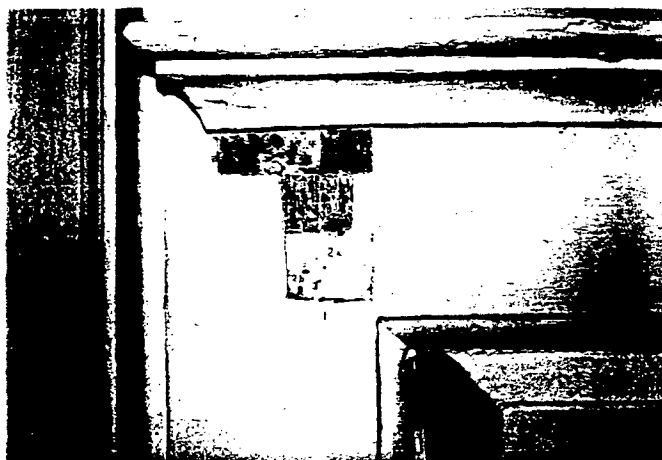


Figure 2. The paint chronology of this mantel, seen in the exposed paint layers in the left corner, proved it had been relocated from another room of the house. To remove a significant feature's paint history and the evidence of its original sequence of color by stripping off all the paint is inappropriate — and unnecessary — as part of a lead hazard reduction project. Careful surface preparation and repainting with lead-free top coats is recommended. Photo: NPS Files.



Figure 3. Significant architectural features and their finishes should not be removed during a project incorporating lead hazard controls. If the decorative stencilling above, or hand grained doors below, or painted murals need repair, then a paint conservator should be consulted. Once loose paint is consolidated or otherwise stabilized, a clear finish or other reversible clear protective surface or coating can be added to areas subject to impact or abrasion. Photos: NPS Files.

Planning for Lead Hazard Reduction in Historic Housing

Typical health department guidelines call for removing as much of the surfaces that contain lead-based paint as possible. *This results in extensive loss or modification of architectural features and finishes and is not appropriate for most historic properties* (see fig. 4). A great number of federally-assisted housing programs are moving away from this approach as too expensive and too dangerous to the immediate work environment. A preferred approach, consistent with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*, calls for removing, controlling, or managing the hazards rather than wholesale—or even partial—removal of the historic features and finishes (fig. 5). This is generally achieved through careful cleaning and treatment of deteriorating paint, friction surfaces, surfaces accessible to young children, and lead in soil (see figs. 6, 7). Lead-based paint that is not causing a hazard is thus permitted to remain, and, in consequence, the amount of historic finishes, features and trimwork removed from a property is minimized.

Because the hazard of lead poisoning is tied to the risk of ingesting lead, careful planning can help to determine how

much risk is present and how best to allocate available financial resources. An owner, with professional assistance, can protect a historic resource and make it lead-safe using this three-step planning process:

- I. Identify the historical significance of the building and architectural character of its features and finishes;
 - II. Undertake a risk assessment of interior and exterior surfaces to determine the hazards from lead and lead-based paint; and,
 - III. Evaluate the options for lead hazard control in the context of historic preservation standards.
- I. Identify the historical significance of the building and architectural character of its features and finishes**

The historical significance, integrity, and architectural character of the building always need to be assessed before work is undertaken that might adversely affect them. An owner may need to enlist the help of a preservation architect, building conservator or historian. The State Historic Preservation Office (SHPO) may be able to provide a list of knowledgeable preservation professionals who could assist with this evaluation.



Before

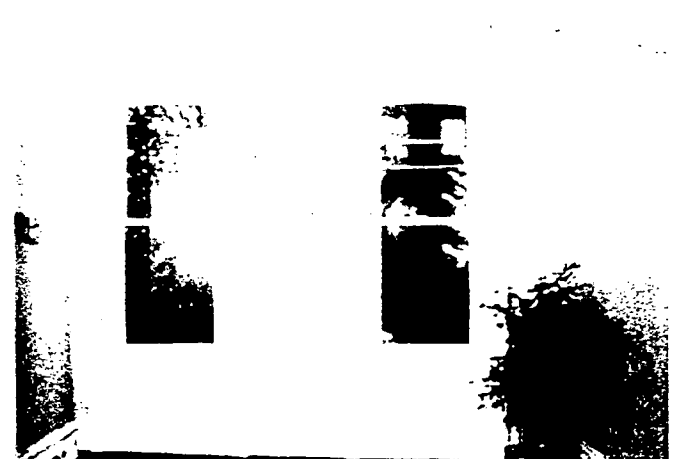


After

Figure 4. The typical method for abating lead-based paint through substrate removal is not consistent with the *Standards for Rehabilitation*. In this project, all the historic trim, baseboards, and the transoms were removed. While the unit is lead-safe, its character has been severely altered. Figure 5 shows a similar but successful balance of historic preservation and lead hazard control work. Photo: NPS Files.



Before



After

Figure 5. When historic interiors are rehabilitated, it is possible to remove the offending substance, such as deteriorated paint, without removing the features. In this case, the walls were repaired, and the trim and baseboards were stripped of paint to a sound substrate, then repainted. Photos: Landmarks Design Associates.

Worker Safety

Current worker safety standards were established by OSHA's 29 CFR Part 1926, Lead Exposure in Construction; Interim Final Rule, which became effective June 3, 1993. These standards base levels of worker protection on exposure to airborne lead dust. They are primarily targeted to persons working within the construction industry, but apply to any workers who are exposed to lead dust for

longer than a specific amount of time and duration. The Interim Final Rule establishes an action level of 30 micrograms of lead dust per cubic meter of air ($30 \text{ ug}/\text{m}^3$) based on an eight hour, time-weighted average, as the level at which employers must initiate compliance activities; and it also establishes $50 \text{ ug}/\text{m}^3$ of lead dust as the permitted exposure level (PEL) for workers.

The standard identifies responsibilities before, during, and after the actual abatement activity necessary to protect the worker. Before the project begins, it requires an exposure assessment, a written compliance plan, initial medical surveillance, and training. The exposure assessment determines whether a worker may be exposed to lead. OSHA has identified a number of work tasks expected to produce dust levels between 50 and $500 \text{ ug}/\text{m}^3$ of air, including manual demolition, manual scraping, manual sanding, heat gun applications, general cleanup, and power tool use when the power tool is equipped with a dust collection system. It is an OSHA requirement that, at a minimum, a HEPA filtered half-face respirator with a protection factor of 10 be used for these operations. Initial blood lead level (BLL) base lines are established for each worker. Actual dust levels are monitored by air sampling of representative work activities, generally by an industrial hygienist or an environmental monitoring firm. Protective equipment is determined by the dust level. For all workers exposed at, or above, the action level for over 30 days in a 12-month period, BLLs are tested on a regular basis of every 2 months for the first 6 months and every 6 months thereafter. After completing a project, maintenance, medical surveillance, and recordkeeping responsibilities continue.

HEPA vacuums, HEPA respirators, and HEPA filters, which substantially reduce exposure to lead dust, are available through laboratory safety and supply catalogs and vendors.

Copies of 29 CFR Part 1926, Lead Exposure in Construction: Interim Final Rule, are available from the Department of Labor, Occupational Safety and Health Administration, or may be found in any library with a current edition of the Code of Federal Regulation (CFR).



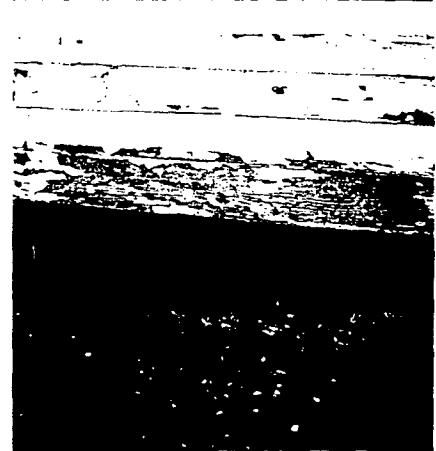
Low-level heat guns can be used to remove lead-based paint from significant historic windows and trimwork, but a worker exposed to lead dust over an extended period of time must be protected from the hazards created during the process of paint removal. Photo: Williamsport Preservation Training Center.

Features and finishes of a historic building that exhibit distinctive characteristics of an architectural style; represent work by specialized craftsmen; or possess high artistic value should be identified so they can be protected and preserved during treatment. When it is absolutely necessary to remove a significant architectural feature or finish—as noted in the first two priorities listed below—it should be replaced with a new feature and finish that matches in design, detail, color, texture, and, in most cases, material.

Figure 6. Deteriorating operable windows often contribute to lead dust in a house. Peeling paint and small particles from abraded surfaces collect in window troughs or sills and are then carried inside by air currents, settling on floors. When the lead dust mixes with regular house dust, it can easily be ingested by a child through hand-to-mouth contact. In homes with small children, floors and other surfaces should be kept as clean as possible to avoid lead contamination.



Figure 7. Chalking exterior paint can cause dangerous lead levels in soil around a house. Lead levels are usually highest in the one foot wide area adjacent to the building foundation. In these cases, the existing soil should be replaced with new soil or sod. This is particularly important if children and small pets play in contaminated areas. They inadvertently track the dirt inside.

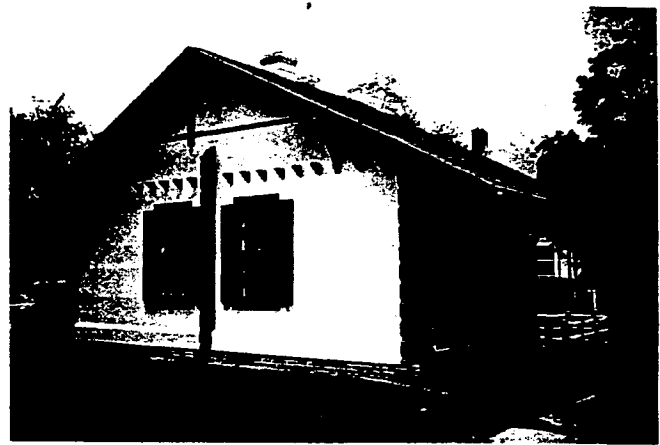


Finally, features and finishes that characterize simple, vernacular buildings should be retained and preserved; in the process of removing hazards, there are usually reasonable options for their protection. Wholesale removal of historic trim, and other seemingly less important historic material, undermines a building's overall character and integrity and, thus, is never recommended.

For each historic property, features will vary in significance. As part of a survey of each historic property (see figure 8), a list of priorities should be made, in this order:

- *Highly significant features and finishes that should always be protected and preserved;*
- *Significant features and finishes that should be carefully repaired or, if necessary, replaced in kind or to match all visual qualities; and*
- *Non-significant or altered areas where removal, repair, enclosure, or replacement could occur.*

This hierarchy gives an owner a working guide for making decisions about appropriate methods of removing lead paint.



Before

After

Figure 8. A survey of the property will help establish priorities for treatment based on its historical significance and physical condition. In this 1878 plank house, the original interlocking planks, corner details, projecting rafter tails, and original windows were considered highly significant features and were carefully stripped of failing paint using chemical poultices and HEPA sanding, then repainted. The less significant, but character-defining, painted porch flooring was replaced in new, but matching material. The non-historic porch screening was removed entirely. Photo before: Bryan Blundell; Photo after: Deborah Birch.

II. Undertake a risk assessment of interior and exterior surfaces to determine hazards from lead and lead-based paint.

While it can be assumed that most historic housing contains lead-based paint, it cannot be assumed that it is causing a health risk and should be removed. The purpose of a risk assessment is to determine, through testing and evaluation, where hazards from lead warrant remedial action (see fig. 9). Testing by a specialist can be done on paint, soil, or lead dust either on-site or in a laboratory using methods such as x-ray fluorescence (XRF) analyzers, chemicals, dust wipe tests, and atomic absorption spectroscopy. Risk assessments can be fairly low cost investigations of the location, condition, and severity of lead hazards found in house dust, soil, water, and deteriorating paint. Risk assessments will also address other sources of lead from hobbies, crockery, water, and the parents' work environment. A public health office should be able to provide names of certified risk assessors, paint

inspectors, and testing laboratories. These services are critical when owners are seeking to implement measures to reduce suspected lead hazards in housing, day-care centers, or when extensive rehabilitations are planned.

The risk assessment should record:

- the paint's location
- the paint's condition
- lead content of paint and soil
- the type of surface (friction; accessible to children for chewing; impact)
- how much lead dust is actively present
- how the family uses and cares for the house
- the age of the occupants who might come into contact with lead paint.



a



b



c

Figure 9. A variety of testing methods are used to establish how much lead is in paint and where this paint is located: a home test kit (a) is a good screening device to determine if lead is present, but it should not be relied upon exclusively; an X-ray Fluorescence machine or scanner (b), used by a licensed professional, determines, without disturbing the surface, if lead is present in underlying layers of paint; and a dust wipe test (c), sent to a laboratory for processing, can be used as either a clearance test, once work is completed, or as a monitoring device to determine if lead dust is present on surfaces. Paint chips can also be sent to a laboratory for analysis to determine the exact amount of lead by weight in a sample.

ACTION LEVELS

Readers should become familiar with terminology and basic levels that trigger concern and/or action. Check with the appropriate authorities if you have questions and to verify applicable action levels which may change over time.

Blood lead levels: Generally from drawn blood and not a finger stick test which can be unreliable. Units are measured in micrograms per deciliter ($\mu\text{g}/\text{dl}$) and reflect the 1995 standards from the Centers for Disease Control:

Children:	10 $\mu\text{g}/\text{dl}$; level of concern; find source of lead
	15 $\mu\text{g}/\text{dl}$ and above; intervention, counseling, medical monitoring.
	20 $\mu\text{g}/\text{dl}$ and above; medical treatment
Adults:	25 $\mu\text{g}/\text{dl}$; level of concern; find source of lead
	50 $\mu\text{g}/\text{dl}$; OSHA standard for medical removal from the worksite

Lead in paint: Differing methods report results in differing units. Lead is considered a potential hazard if above the following levels, but can be a hazard at lower levels, if improperly handled. These are the current numbers as identified by the Department of Housing and Urban Development (1995).

Lab analysis of samples:

5,000 milligram per kilogram (mg/kg) or 5,000 parts per million (ppm), or
0.5% lead by weight.

XRF reading: in milligram per centimeter squared
1 mg/cm^2

lead dust wipe test: in micrograms per square foot

Floors	100 $\mu\text{g}/\text{ft}^2$;
Window sills	500 $\mu\text{g}/\text{ft}^2$;
Window troughs	800 $\mu\text{g}/\text{ft}^2$

Lead in soil: high contact bare play areas, listed as parts per million (ppm):

concern:	400 ppm
interim control	2,000 ppm
hazard abatement	5,000 ppm

4. Deteriorated exterior painted surfaces and features
5. Friction surfaces subject to abrasion (windows, doors, painted floors)
6. Accessible, chewable surfaces (sills, rails) if small children are present
7. Impact surfaces (baseboards and door jambs)
8. Other interior surfaces showing age or deterioration (walls and ceilings)

III. Evaluate options for hazard control in the context of historic preservation standards.

The Secretary of the Interior's Standards for the Treatment of Historic Properties—established principles used to evaluate work that may impact the integrity and significance of National Register properties—can help guide suitable health control methods. The *preservation standards* call for the protection of historic materials and historic character of buildings through stabilization, conservation, maintenance, and repair. The *rehabilitation standards* call for the repair of historic materials with replacement of a character-defining feature appropriate only when its deterioration or damage is so extensive that repair is infeasible. From a preservation standpoint, selecting a hazard control method that removes only the deteriorating paint, or that involves some degree of repair, is always preferable to the total replacement of a historic feature.

By tying the remedial work to the areas of risk, it is possible to limit the amount of intrusive work on delicate or aging features of a building without jeopardizing the health and safety of the occupants. To make historic housing lead-safe, the gentlest method possible should be used to remove the offending substance—lead-laden dust, visible paint chips, lead in soil, or extensively deteriorated paint. Overly aggressive abatement may damage or destroy much more historic material than is necessary to remove lead paint, such as abrading historic surfaces. Another reason for targeting paint removal is to limit the amount of lead dust on the work site. This, in turn, helps avoid expensive worker protection, cleanup, and disposal of larger amounts of hazardous waste.

Whenever extensive amounts of lead must be removed from a property, or when methods of removing toxic substances will impact the environment, it is extremely important that the owner be aware of the issues surrounding worker safety, environmental controls, and proper disposal (see fig. 10, 11). Appropriate architectural, engineering and environmental professionals should be consulted when lead hazard projects are complex.

Following are brief explanations of the two approaches for controlling lead hazards, once they have been identified as a risk. These controls are recommended by the Department of Housing and Urban Development in *Guidelines for the Evaluation and Control of Lead-Paint Hazards in Housing*, and are summarized here to focus on the special considerations for historic housing:

Interim Controls: Short-term solutions include thorough dust removal; thorough washdown and clean-up of exposed surfaces; paint film stabilization and repainting; covering of lead-contaminated soil; and making tenants aware of lead hazards. Interim controls require ongoing maintenance and evaluation.

It is important from a health standpoint that future tenants, painters, and construction workers know that lead-based paint is present, even under treated surfaces, in order to take precautions when work is undertaken in areas that will generate lead dust. Whenever mitigation work is completed, it is important to have a clearance test using the *dust wipe method* to ensure that lead-laden dust generated during the work does not remain at levels above those established by the Environmental Protection Agency (EPA) and the Department of Housing and Urban Development (HUD) (see Action Levels Chart, above). A building file should be maintained and updated whenever any additional lead hazard control work is completed.

Hazards should be removed, mitigated, or managed in the order of their health threat, as identified in a risk assessment (with 1. the greatest risk and 8. the least dangerous):

1. Peeling, chipping, flaking, and chewed interior lead-based paint and surfaces
2. Lead dust on interior surfaces
3. High lead in soil levels around the house and in play areas (check state requirements)



Figure 10. The choice of paint removal method will trigger various environmental controls and worker protection. The chemical poultice-type paint remover uses a paper backing that keeps the lead waste contained for proper disposal. The worker is adequately protected by a suit and gloves; for this work a respirator was not required. Local laws required containment and neutralization of any after-wash water run off. Photo: NPS Files.



Various methods are being developed or adapted to safely remove lead-based paint from various substrates. On this cast iron building undergoing rehabilitation for apartment units, multiple layers of lead-based paint were removed with pneumatic needle guns with vacuum attachments. Paint bags and waste containing lead-based paint were placed in 55 gallon drums for transport to a special waste site, and the workers were fully protected. The cleaned metal was primed and repainted. Photo: Building Conservation Associates, Inc.

Hazard Abatement: Long-term solutions are defined as those with an expected life of 20 years or more, and involve the permanent removal of hazardous paint through methods such as heat guns or controlled sanding/abrasive methods; permanent removal of deteriorated painted features through replacement; the removal or permanent covering of contaminated soil; and the use of enclosures such as dry wall to isolate painted surfaces. The use of specialized elastomeric encapsulant paints and coatings can be considered as permanent containment of lead-based paint if they receive a 20-year manufacturer's warranty and are approved by a certified risk assessor. Workers should be aware of their advantages and limitations for use in historic housing.

Within the context of the historic preservation standards, the most appropriate method will always be the least invasive. More invasive approaches are considered only under the special circumstances outlined in the three-step

process. An inverted triangle (see fig. 12) shows the greatest number of residential projects fall well within the "interim controls" section. Most housing can be made safe for children using these sensitive treatments, particularly if no renovation work is anticipated. Next, where owners may have less control over the care and upkeep of housing and rental units, more aggressive means of removing hazards may be needed. Finally, large-scale projects to rehabilitate housing or convert non-residential buildings to housing may successfully incorporate "hazard abatement" as a part of the overall work.

Appropriate Methods for Controlling Lead Hazards

In selecting appropriate methods for controlling lead hazards, it is important to refer to Step I. of the survey where architecturally significant features and finishes are identified and need to be preserved. Work activities will vary according to hazard abatement needs; for example, while an interim control would be used to stabilize paint on most trimwork, an accessible window sill might need to be stripped prior to repainting. Since paint on a window sill is usually not a significant finish, such work would be appropriate. Other appropriate methods for controlling lead hazards are summarized in the accompanying chart (see fig. 13).

The method selected for removing or controlling the hazards has a direct bearing on the type of worker protection as well as the type of disposal needed, if waste is determined to be hazardous (see fig. 14). Following are

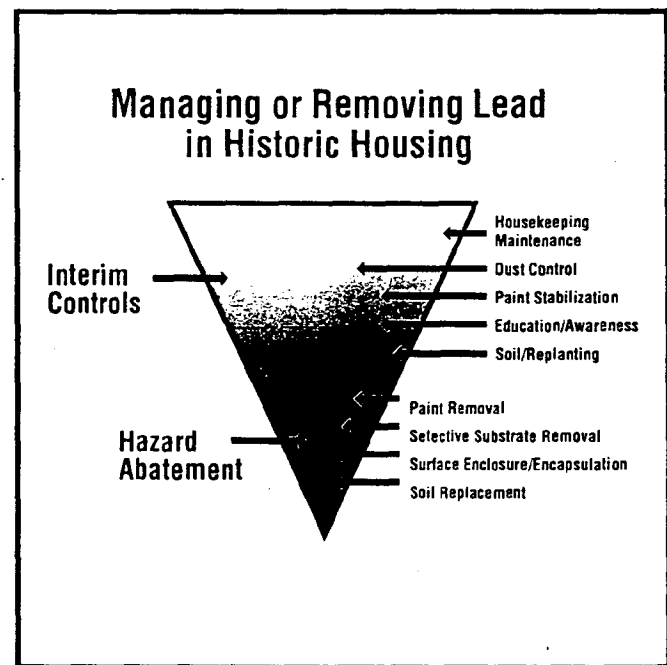


Figure 12. An inverted triangle makes the point that most of the nation's housing can be made lead-safe using interim control methods, such as dust control, paint stabilization, and good housekeeping. Shaded from light to dark, the lighter interim controls will generally not harm the historic materials. The darker, more aggressive controls, can be implemented with rehabilitation projects where paint removal, selective replacement of deteriorated elements, and encapsulation or enclosure are incorporated into other work.

MANAGING OR REMOVING LEAD-BASED PAINT IN HISTORIC BUILDINGS

Interim solutions, the preferred approach, include a combination of the following:

General maintenance	Dust control	Paint stabilization	Soil treatment	Tenant education
<p>Repair deteriorated materials;</p> <p>Control leaks;</p> <p>Maintain exterior roofs, siding, etc. to keep moisture out of building;</p> <p>Perform emergency repairs quickly if lead-based paint is exposed;</p> <p>Maintain building file with lead test data and reports, receipts or invoices on completed lead mitigation work.</p>	<p>Damp mop floor; wet broom sweep porches and steps;</p> <p>Damp dust window sills and window troughs;</p> <p>Washdown painted surfaces periodically (use tri-sodium phosphate or equivalent, if necessary);</p> <p>Clean or vacuum carpets regularly (use HEPA vacuum if lead dust returns);</p> <p>Undertake periodic inspection with annual dust wipe tests.</p>	<p>Wet-sand loose paint and repaint;</p> <p>Keep topcoats of paint in good condition;</p> <p>Selectively remove paint from friction & chewable surfaces (sills) and repaint;</p> <p>Use good quality latex, latex acrylic or oil/alkyd paints compatible with existing paint;</p> <p>Consider more durable encapsulating paints and wall lining systems if necessary.</p>	<p>Add bark mulch, sod or topsoil to bare dirt areas with high lead levels;</p> <p>Discourage children from playing in these areas by providing sand box or other safe areas;</p> <p>Do not plant vegetable garden in areas with lead in soil;</p> <p>Be careful that pets do not track contaminated soil inside house.</p>	<p>Notify tenants and workers as to the location of lead-based paint;</p> <p>Instruct tenants to keep property clean;</p> <p>Instruct tenants to notify owner or manager when repairs are necessary;</p> <p>Provide tenants with health department pamphlets on the hazards of lead-based paint.</p>

Hazard abatement removes the hazard - not necessarily all the paint or the feature, and may include:

Paint removal	Paint Encapsulation Enclosure	Replace deteriorated elements	Soil treatment	Compliance
<p>Remove deteriorated paint or paint on friction, chewable, or impact surfaces to sound layer, repaint;</p> <p>Consider using the gentlest means possible to remove paint to avoid damage to substrate: wet sanding, low level heat guns, chemical strippers, or HEPA sanding;</p> <p>Send easily removable items (shutters, doors) off-site for paint stripping, then reinstall and paint.</p>	<p>Consider encapsulating paints with 20 years warranty to seal-in older paint; or use in combination with wall liners to stabilize plaster wall surfaces prior to repainting;</p> <p>Seal lead-based painted surfaces behind rigid enclosures, such as drywall, or use luan or plywood with new coverings over previously painted floors;</p> <p>Use rubber stair treads on painted steps.</p>	<p>Remove, only when necessary, seriously deteriorated painted elements such as windows, doors, and trimwork. Replace with new elements that match the historic in appearance, detailing, and materials, when possible;</p> <p>Replace component element of a friction surface (parting bead or stops of windows) or of impact surfaces (shoe moldings) with new elements.</p>	<p>Remove contaminated soil around foundation to a depth of 3" and replace with new soil and appropriate planting material or paving;</p> <p>If site is highly contaminated from other lead sources (smelter, sandblasted water tank) consult an environmental specialist as well as a landscape architect;</p> <p>Do not alter a significant historic landscape</p>	<p>Be aware of all federal, state and local laws regarding lead-based paint abatement, environmental controls and worker safety;</p> <p>Dispose of all hazardous waste according to applicable laws;</p> <p>Be aware that methods to remove lead-based paint can cause differing amounts of lead dust which can be dangerous to workers and residents.</p>

Figure 13. This chart indicates the wide variety of treatments that can be used to control or eliminate lead-based paint hazards. For historic buildings, the least invasive method should be used to control the hazards identified during a risk assessment and are shown in the lighter shaded portion of the chart. The darker portions show the more invasive hazard control methods which must be carefully implemented to ensure that whenever possible, historic materials are protected. The total abatement of all surfaces is not recommended for historic buildings because it can damage historic materials and destroy the evidence of early paint colors and layering. Prepared by Sharon C. Park, AIA.

IMPACT OF VARIOUS PAINT REMOVAL/ABATEMENT TECHNIQUES

REMOVAL METHOD	IMPACT ON MATERIALS	LEAD DUST GENERATED	IMPACT ON WORKER	IMPACT ON ENVIRONMENT
Wet scraping; wet sanding; repainting	Low: Gentle to substrate; feather edges to obtain smooth paint surface	Low: Misting surfaces reduces lead dust	Low: No special protection for respiration, but wash before eating, drinking, etc.	Low-medium: Debris often general waste; check disposal requirements
Heat gun; paint removal w/ scrapers < 450°F	Low: Gentle to substrate	Medium: Flicking softened paint does create airborne lead dust	Medium: Respirator w/HEPA filters usually required.	Medium: Lead-paint sludge is hazardous waste
Chemical stripping on-site; use liquid or poultice; avoid methylene chloride	Low to Medium: Avoid damage to wood texture/grain with long dwell time	Low: Chemicals are moist and reduce lead dust	Low: For lead dust; for volatile chemicals may require solvent filter mask	Medium: Lead residue hazardous; off/rinse must be filtered or contained
Controlled HEPA sanding; primarily for wooden surfaces; sander uses HEPA vacuum shroud	Low to Medium: Avoid gouging wooden surfaces: good for feathering edges	Medium to High: Worker must know how to use equipment	Medium to High: Requires respirator with HEPA filter and possibly containment of area	Medium to High: Paint debris is hazardous and must be contained in drums for disposal
Dry Abrasives on cast iron; CO ₂ , walnut shells, needle gun removal; can use vacuum shrouds	Low to Medium: Substrate must be durable and in good condition: not for soft or porous materials	Generally High: Large volume of paint chips fall freely unless there is a vacuum shroud	High: Generally requires full suiting, respirators and containment, even if vacuum shroud used	Medium to High: Increased volume of hazardous waste if abrasive is added to lead debris
Chemical stripping off-site; cold tank reduces ungluing caused by hot tank	Medium to High: Elements can be damaged during removal or in tank	Usually low: Take care when removing elements to minimize lead-laden dust	Low: Take care when washing up to remove dust; wash clothes separately	Low to Medium: Stripping contractor responsible for disposal
Feature or substrate removal and replacement	High: Loss of feature is irretrievable; Avoid wholesale removal of significant elements	Usually low: Worker exposure can be high if element hazardous due to high amounts of lead-based paint	Usually low: Varies with lead dust generated; use air monitors and wet mist area	Varies: Must do a TCLP leach test to determine if debris can go to landfill or is hazardous waste

Figure 14. This chart shows how the impact of lead hazard control work can impact a property. The paint or hazard removal methods, shaded from light to dark, are listed from low to medium to high impact on historic materials. Each method will generate varying amounts of lead dust and hazardous materials; the impact on workers and the environment will thus vary accordingly. This information gives a general overview and is not a substitute for careful air monitoring and compliance with worker protection as established by OSHA regulations, and the proper handling/disposal of hazardous waste. Prepared by Sharon C. Park, AIA.

examples of appropriate methods to use to control lead hazards within an historic preservation context.

Historic Interiors (deteriorating paint and chewed surfaces). Whenever lead-based paint (or lead-free paint covering older painted surfaces) begins to peel, chip, craze, or otherwise comes loose, it should be removed to a sound substrate and the surface repainted. If children are present and there is evidence of painted surfaces that have been chewed, such as a window sill, then these surfaces should be stripped to bare wood and repainted. The removal of peeling, flaking, chalking, and deteriorating paint may be of a small scale and undertaken by the owner, or may be extensive enough to require a paint contractor. In either case, care must be taken to avoid spreading lead dust throughout the dwelling unit. If the paint failure is extensive and the dwelling unit requires more permanent hazard removal, then an abatement contractor should be considered. Many states are now requiring that this work be undertaken by specially trained and certified workers.

If an owner undertakes interim controls, it would be advisable to receive specialized training in handling lead-based paint. Such training emphasizes isolating the area, putting plastic sheeting down to catch debris, turning off mechanical systems, taping registers closed, and taking precautions to clean up prior to handling food. Work clothes should be washed separately from regular family laundry. The preferred method for removing flaking paint is the wet sanding of surfaces because it is gentle to the substrate and controls lead dust. The key to reducing lead hazards while stabilizing flaking paint is to keep the surfaces slightly damp to avoid ingesting lead dust. Wet sanding uses special flexible sanding blocks or papers that can be rinsed in water or used along with a bottle mister. This method will generally not create enough debris to constitute hazardous waste (see fig. 15).

Other methods for selectively removing more deteriorated paint in historic housing include controlled sanding, using low-temperature heat guns, or chemical strippers. Standard safety precautions and appropriate worker protection should be used. Methods to *avoid* include uncontrolled dry abrasive methods, high heat removal (lead vaporizes at 1100° F), uncontrolled water blasting, and some chemicals considered carcinogenic (methylene chloride). When possible and practicable, painted elements, such as

radiators, doors, shutters, or other easily removable items, can be taken to an off site location for paint removal.

In most cases, when interior surfaces are repainted, good quality interior latex or oil/alkyd paints may be used. The paint and primer system must be compatible with the substrate, as well as any remaining, well-bonded, paint.

Encapsulant paints and coatings, developed to contain lead-based paint, rely on an adhesive bonding of the new paint through the layers of the existing paint. The advantages of these special paint coatings is that they allow the historic substrate to remain in-place; reduce the amount of existing paint removed; can generally be applied without extensive worker protection; and are a durable finish. (They cannot, however, be used on friction surfaces.) The drawbacks include their ability to obscure carved details, unless thinly applied in several applications, and difficulty in future removal. If a specialized paint, such as an elastomeric encapsulant paint, is considered, the manufacturer should be contacted for specific instructions for its application. Unless these specialized paint systems are warranted for 20 years, they are considered as less permanent interim controls.

Lead-dust on interior finishes. Maintaining and washing painted surfaces is one of the most effective measures to prevent lead poisoning. Houses kept in a clean condition, with paint film intact and topcoated with lead-free paint or varnish, may not even pose a health risk. Dust wipe tests, which are sent to a laboratory for processing, can identify the level of lead dust present on floors, window sills, and window troughs. If lead dust is above acceptable levels, then specially modified maintenance procedures can be undertaken to reduce it. All paints deteriorate over time, so maintenance must be ongoing to control fine lead dust. The periodic washing of surfaces with a surfactant, such as tri-sodium phosphate (TSP) or its equivalent, loosens dirt and removes lead dust prior to a water rinse and touch-up painting, if necessary. This interim treatment can be extremely beneficial in controlling lead dust that is posing a hazard (see fig. 16).

Soil/landscape. Soil around building foundations may contain a high level of lead from years of chalking and peeling exterior paint. This dirt can be brought indoors on shoes or by pets and small children if they play outside a house. Lead in the soil is generally found in a narrow band



Figure 15. Wet sanding of interior surfaces will keep dust levels down, reduce the need for workers' protection, and provide a sound surface for repainting. Priming and repainting with oil/alkyd, latex or latex acrylic should be undertaken according to manufacturers' instructions.

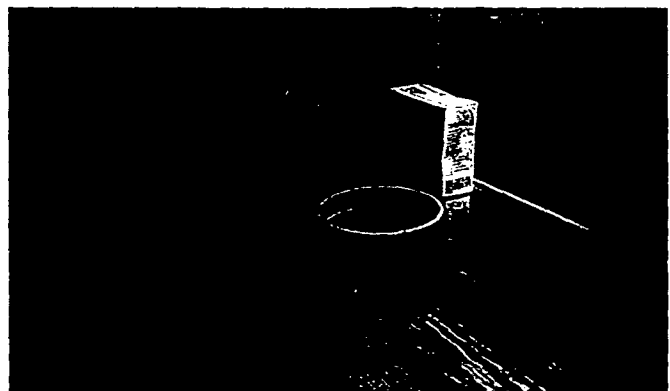


Figure 16. Washing windows and cleaning debris from window wells on a periodic basis can substantially reduce lead dust. Using water and tri-sodium phosphate (TSP or equivalent) will remove loose paint, and, after rinsing, the surface can be repainted with latex, oil/alkyd, or latex acrylic paints.

directly adjacent to the foundation. If the bare soil tests high in lead (see Action Levels Chart, pg. 6), it should be replaced to a depth of several inches or covered with new sod or plantings. Care should be taken to protect historic plantings on the building site and, in particular, historic landscapes, while mitigation work is underway (see fig. 17). If an area has become contaminated due to a variety of environmental conditions (for example, a smelter nearby or water tanks that have been sandblasted in the past), then an environmental specialist as well as a landscape preservation architect should be consulted on appropriate site protection and remedial treatments. It is inappropriate to place hard surfaces, such as concrete or macadam, over historically designed landscaped areas, which is often the recommendation of typical abatement guidelines.

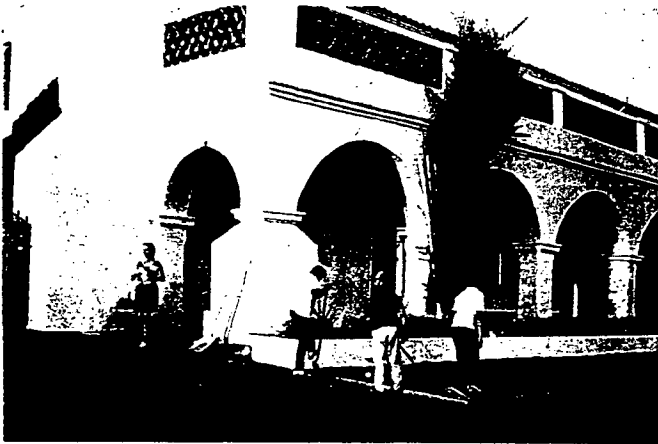


Figure 17. When historic sites are found to contain high levels of lead in bare soil — particularly around foundations — it is important to reduce the hazard without destroying significant landscapes. In many cases, contaminated soil can be removed from the foundation area and appropriate plantings or ground covers replanted in new soil. Photo: Charles A. Birnbaum, ASLA.

Deteriorating paint on exteriors. Deteriorating exterior paint will settle onto window ledges and be blown into the dwelling, and will also contaminate soil at the foundation, as previously discussed. Painted exteriors may include wall surfaces, porches, roof trim and brackets, cornices, dormers, and window surrounds. Most exteriors need repainting every 5-10 years due to the cumulative effect of sun, wind, and rain or lack of maintenance. Methods of paint removal that do not abrade or damage the exterior materials should be evaluated. Because there is often more than one material (for example, painted brick and galvanized roof ornaments), the types of paint removal or paint stabilization systems need to be compatible with each material (see fig. 18). If paint has failed down to the substrate, it should be removed using either controlled sanding/scraping, controlled light abrasives for cast iron and durable metals, chemicals, or low heat. If chemicals are used, it may be necessary to have the contractor contain, filter, or otherwise treat any residue or rinse water. Environmental regulations must be checked prior to work, particularly if a large amount of lead waste will be generated or public water systems affected.

A cost analysis may show that, in the long run, repair and maintenance of historic materials or in-kind replacement can be cost effective. Due to the physical condition and location of wood siding, together with the cost of paint removal, a decision may be made to remove and replace



Figure 18. As part of an urban housing grant program, the exterior of this row house was successfully made lead-safe and met the Secretary of the Interior's Standards for Rehabilitation. The exterior was washed, then repainted with exterior grade alkyd paint. The decorative roof brackets and cornice were repainted; not removed or covered as is often recommended in typical abatement guidelines. The previously altered, deteriorated window sash were replaced with new sash and jamb liners set within the historic frames. Photos: Deborah Birch.

these materials on some historic frame buildings. If the repair or replacement of historic cladding on a primary elevation is being undertaken, such replacement materials should match the historic cladding in material, size, configuration, and detail (see fig. 19). The use of an artificial siding or aluminum coil stock panning systems over wooden trimwork or sills and lintels (as recommended in some abatement guidelines) is not appropriate, particularly on principal facades of historic buildings because they change the profile appearance of the exterior trimwork and may damage historic materials and detailing during installation. Unless the siding is too deteriorated to warrant repair and the cost is too prohibitive to use matching replacement materials (i.e., wood for wood), substitute materials are not recommended.

The use of specialized encapsulant paint coatings on exteriors—in particular, moist or humid climates, and, to some extent, cold climates—is discouraged because such coatings may serve to impede the movement of moisture that naturally migrates through other paints or mask leaks that may be causing substrate decay. Thus, a carefully applied exterior paint system (either oil/alkyd or latex) with periodic repainting can be very effective.

Friction Surfaces. Interior features with surfaces that—functionally—rub together such as windows and doors, or are subject to human wear and tear, such as floor and steps, are known as friction surfaces. It is unclear how much lead dust is created when friction surfaces that contain lead-based paint, but are top-coated with lead-free paint, rub together because much of the earlier paint may have worn away. For example, if lead dust levels around windows or on painted floors are consistently above acceptable levels, treating nearby friction surfaces should be considered. If surfaces, such as operable windows, operable doors, painted porch decks, painted floors and painted steps appear to be generating lead dust, they should be controlled through isolating or removing the lead-based paint. Window and door edges can be stripped or planed, or the units stripped on or off site to remove paint prior to repainting. Simple wooden stops and parting beads for windows, which often split upon removal, can be replaced.



Before



After

Figure 19. In many cases, exterior wood siding can be repaired, selectively replaced, and repainted, as illustrated in this successful residential rehabilitation. Deteriorating wood siding was removed from the foundation to the top of the first floor windows and replaced with matching wood siding. The entire building was repainted. Photos: Crispus Attucks Community Development Corporation.



Figure 20. Operable windows have friction surfaces between the sash and the frames, which can be a source of fine lead dust. In this case, the deteriorated sash was replaced, but the historic frame remains in place, successfully isolated from the sash with a simple vinyl jamb liner that is part of the new sash operation.



Figure 21. Painted stairs and floors can cause a problem because lead dust settles between the wooden boards. In this case, the steps were sanded, repainted, and covered with rubber stair treads. The floors could not be effectively cleaned and sealed so they were isolated with a new subflooring, and a washable tile finish installed.

If window sash are severely deteriorated, it is possible to replace them; and vinyl jamb liners can effectively isolate remaining painted window jambs (see fig. 20). When windows are being treated within rehabilitation projects, their repair and upgrading are always recommended. In the event that part or all of a window needs to be replaced, the new work should match in size, configuration, detail, and, whenever possible, material.

Painted floors often present a difficult problem because walking on them abrades the surface, releasing small particles of lead-based paint. It is difficult to remove lead dust between the cracks in previously painted strip flooring even after sanding and vacuuming using special High Efficiency Particulate Air (HEPA) filters to control the lead dust. If painted floors are not highly significant in material, design, or craftsmanship, and they cannot be adequately cleaned and refinished, then replacing or covering them with new flooring may be considered. Stair treads can be easily fitted with rubber or vinyl covers (see fig. 21).

Accessible, projecting, mouthable surfaces. Accessible, chewable surfaces that can be mouthed by small children need not be removed entirely, as some health guidelines recommend. These accessible surfaces are listed as projecting surfaces within a child's reach, including window sills, banister railings, chair rails, and door edges. In many cases, the projecting edges can have all paint removed using wet sanding, a heat gun or chemical strippers, prior to repainting the feature (see fig. 22). If the homeowner feels that there is no evidence of unsupervised mouthing of surfaces, a regular paint may be adequate once painted surfaces have been stabilized. An encapsulant paint that adhesively bonds existing paint layers onto the substrate extends durability. While encapsulant paint systems are difficult to remove from a surface in the future, they permit retention of the historic feature itself. If encapsulant paint is used on molded or decorative woodwork, it should be applied in several thin coats to prevent the architectural detail from being obscured by the heavy paint (see fig. 23).



Figure 22. Research has shown that some small children will chew on projecting window sills while teething. As part of a lead hazard control project, the edge of the sill can be stripped to bare wood or an encapsulating paint applied. In this case, a new window sill was installed as part of a window upgrade that retained the historic trim and frame.

Other surfaces showing age or deterioration/ walls and ceilings. Many flat wall surfaces and ceilings were not painted with lead-based paint, so will need to be tested for its presence prior to any treatment. Flat surfaces that contain deteriorating lead-based paint should be repaired following the responsible approach previously cited (i.e., removing loose paint to a sound substrate, then repairing damaged plaster using a skim coat or wet plaster repair (see fig. 25). Drywall is used *only* when deterioration is too great to warrant plaster repair. If walls and ceilings have a high lead content, and extensive paint removal is not feasible, there are systems available that use elastomeric paints with special fabric liners to stabilize older, though intact, wall surfaces.

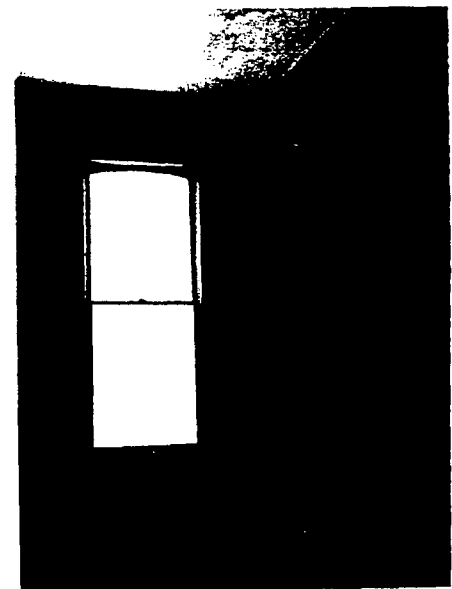


Figure 24. Historic baseboards are often bumped by brooms and vacuum cleaners, causing lead-based paint chips to fall on the floor. Shoe moldings can be added or replaced to increase protection to the baseboard itself. In this case, because the condition of the interior warranted substantial repair, simple historic board trim was replaced with new matching trim. Note the HEPA filter vacuum in the foreground. Photo: NPS file.

Figure 23. Stair banisters and railings are considered mouthable surfaces. In this case, the old paint was wet sanded to a sound layer. Special encapsulation paints were then applied in three thin layers to avoid obscuring the woodwork's fine detailing. It should be noted that many encapsulant paints are not treated with a bitter agent to discourage mouth contact. Photo: Landmarks Design Associates.



Figure 25. In some cases, even concrete deteriorated plaster and remaining is adequate. If the plaster is seriously damaged or falling, drywall may be considered so long as the molding and window reveal relationships are retained. In this case, plaster between the windows was removed and repaired and the sill wall plaster was replaced with drywall. Photo: Landmarks Design Associates.



Impact Surfaces. Painted surfaces near doorways and along corridors tend to become chipped and scraped simply because of their location. This is particularly true of baseboards, which were designed to protect wall surfaces, and also for doorbells. Owners should avoid hitting painted impact surfaces with vacuums, brooms, baby carriages, or wheeled toys. Adding new shoe moldings can give greater protection to some baseboards. In most cases, stabilizing loose paint and repainting with a high quality interior paint will provide a durable surface. Clear panels or shields can be installed in narrow doorways, if abrasion continues, or these areas can be stripped of paint and repainted. Features in poor condition may need to be replaced with new, matching materials (see fig. 24).

If a new drywall surface needs to be applied, care should be taken that the historic relationship of wall to trim is not lost. Also, if there are significant features, such as crown moldings or ceiling medallions, they should always be retained and repaired (see fig. 26).



Figure 26. Deteriorated ceiling plaster was removed and a new drywall ceiling installed. The historic ceiling medallion was preserved, and the plaster cornices repaired in place. Photo: Landmarks Design Associates.

Maintenance after Hazard Control Treatment

Following treatment, particularly where interim controls have been used, ongoing maintenance and re-evaluation become critical. In urban areas, even fully lead-safe houses can be re-contaminated within a year from lead or dirt outside the immediate property. Thus, housing interiors must be kept clean, once lead hazard control measures have been implemented. Dust levels should be kept down by wet sweeping porch steps and entrances on a regular basis. Vacuum cleaning and dusting should be repeated inside on a weekly basis or even more often. Vinyl, tile, and wood floor surfaces should be similarly damp mopped. Damp washing of window troughs and sills to remove new dust should be encouraged several times a year, particularly in the spring and fall when windows will be open. Carpets and area rugs should be steam cleaned or washed periodically if they appear to hold outside dirt.

Housing should be inspected frequently for signs of deterioration by both owner and occupant. Tenants need to be made aware of the location of lead-based paint under lead-free top coats and instructed to contact the owners or property managers when the paint film becomes disturbed (see figure 27). Any leaks, peeling paint, or evidence of



Figure 27. Wall leaks can cause historic surfaces to deteriorate, thereby exposing underlayers of lead-based paint. If painted surfaces show signs of deterioration, they should be repaired as soon as possible.

conditions that may generate lead-dust should be identified and corrected immediately. Occupants must be notified prior to any major dust-producing project. Dry sanding, burning, compressed air cleaning or blasting should be not be used. Repairs, repainting, or remodeling activities that have the potential of raising significant amounts of lead dust should be undertaken in ways that isolate the area, reduce lead-laden dust as much as possible, and protect the occupants.

Yearly dust wipe tests are recommended to ensure that dust levels remain below actionable levels. Houses or dwelling units that fail the dust-wipe test should be thoroughly re-cleaned with TSP, or its equivalent, washed down, wet vacuumed and followed by HEPA vacuuming, if necessary, until a clearance dust wipe test shows the area to be under actionable levels (see Action Levels chart). Spaces that are thoroughly cleaned and maintained in good condition are not a health risk (see fig. 28).

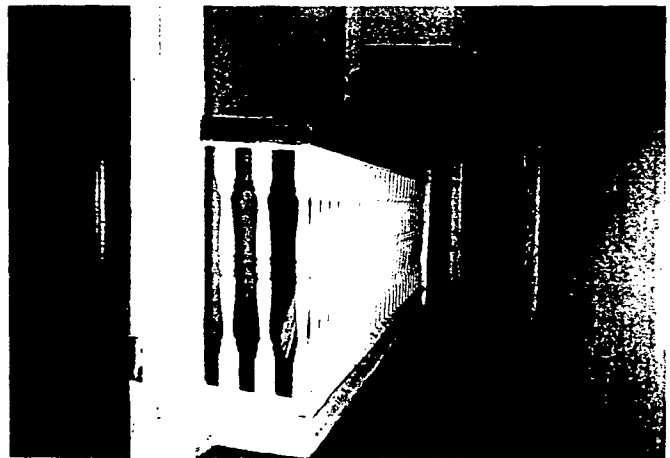


Figure 28. This recently completed housing, which is now lead-safe, could become re-contaminated from lead if safe conditions are not maintained. Damp mopping floor surfaces and regular dusting to keep the house clean will ensure its continuing safety.

Conclusion

The three-step planning process outlined in this Brief provides owners and managers of historic housing with responsible methods for protecting historic paint layers and architectural elements, such as windows, trimwork, and decorative finishes. Exposed decorative finishes, such as painted murals or grained doors can be stabilized by a paint conservator without destroying their significance.

Reducing and controlling lead hazards can be successfully accomplished without destroying the character-defining features and finishes of historic buildings. Federal and state laws generally support the reasonable control of lead-based paint hazards through a variety of treatments, ranging from modified maintenance to selective substrate removal. The key to protecting children, workers, and the environment is to be informed about the hazards of lead, to control exposure to lead dust and lead in soil, and to follow existing regulations. In all cases, methods that control lead hazards should be selected that minimize the impact to historic resources while ensuring that housing is lead-safe for children.

LEAD-BASED PAINT LEGISLATION

The following summarizes several important regulations that affect lead-hazard reduction projects. Owner's should be aware that regulations change and they have a responsibility to check state and local ordinances as well.

Federal Legislation:

Title X (Ten) Residential Lead-Based Paint Hazard Reduction Act of 1992 is part of the Housing and Community Development Act of 1992 (Public Law 102-550). It established that HUD issue "The Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing" (1995) to outline risk assessments, interim controls, and abatement of lead-based paint hazards in housing. Title X calls for the reduction of lead in housing that is *federally supported* and outlines the federal responsibility towards its own residential units and the need for disclosure of lead in residences, even private residences, prior to sale.

Interim Final Regulations of Lead in Construction Standards (29CFR 1926.62). Issued by the Department of Labor, Occupational Safety and Health Administration (OSHA), these regulations address worker safety, training, and protective measures. It is based in part on environmental air sampling to determine the amount of lead dust generated by various activities.

Toxic Substance Control Act; Title IV. The Environmental Protective Agency (EPA) has jurisdiction for setting standards for lead abatement. Also, EPA controls the handling and disposal of hazardous waste generated during an abatement project. EPA will develop standards to establish lead hazards, to certify abatement contractors, and to establish work practice standards for abatement activity. EPA Regional Offices can provide guidance on the appropriate regulatory agency for states within their region.

State Laws: States generally have the authority to regulate the removal and transportation of lead based paint and the generated waste generally through the appropriate

state environmental and public health agencies. Most requirements are for mitigation in the case of a lead-poisoned child, or for protection of children, or for oversight to ensure the safe handling and disposal of lead waste. When undertaking a lead-based paint reduction program, it is important to determine which laws are in place that may affect your project. Call the appropriate officials.

Local Ordinances: Check with local health departments, Poison Control Centers, and offices of housing and community development to determine if there are laws that require compliance by building owners. Rarely are owners required to remove lead-based paint and most laws are to ensure safety if a project is undertaken as part of a larger rehabilitation. Special use permits may be required when an environmental impact may occur due to a cleaning treatment that could contaminate water or affect water treatment. Determine whether projects are considered abatements and will require special contractors and permits.

Owner's Responsibility: Owners are ultimately responsible for ensuring that hazardous waste is properly disposed of when it is generated on their own sites. Owners should check with their state office to determine if the abatement project requires a certified contractor. (National certification requirements are not yet in place.) Owners should establish that the contractor is responsible for the safety of the crew and that all applicable laws are followed, and that transporters and disposers of hazardous waste have liability insurance as a protection for the owner. If an interim treatment is being used to reduce lead hazards, the owner should notify the contractor that lead-based paint is present and that it is the contractor's responsibility to follow appropriate work practices to protect workers and to complete a thorough clean-up to ensure that lead-laden dust is not present after the work is completed.

Glossary of Terms

Deteriorated Lead-Based Paint: Paint known to contain lead that shows signs of peeling, chipping, chalking, blistering, alligatoring or otherwise separating from its substrate.

Dust Removal: The process of removing dust to avoid creating a greater problem of spreading lead particles; usually through wet or damp collection or through the use of special HEPA vacuums.

Hazard Abatement: Long-term measures to remove the hazards of lead-based paint through selective paint stripping of deteriorated areas; or, in some cases, replacement of deteriorated features.

Hazard Control: Measures to reduce lead hazards to make housing safe for young children. Can be accomplished with interim (short-term) or hazard abatement (long-term) controls.

Interim Control: Short-term methods to remove lead dust, stabilize deteriorating surfaces, and repaint surfaces. Maintenance can ensure that housing remains lead-safe.

Lead-based Paint: Any existing paint, varnish, shellac or other coating that is in excess of 1.0 mg/cm² as measured by an XRF detector or greater than 0.5% by weight from laboratory analysis (5,000 ppm, 5,000 ug/g, or 5,000 mg/kg). For new products, the Consumer Safety Act notes 0.06% as the maximum amount of lead allowed in paint.

Lead-safe: The act of making a property safe from contamination by lead-based paint, lead-dust, and lead in soil generally through short and long-term methods to remove it, or to isolate it from small children.

Risk Assessment: An on-site investigation to determine the presence and condition of lead-based paint, including limited test samples, and an evaluation of the age, condition, housekeeping practices, and uses of a residence.

Further Reading

Chase, Sara B. *Preservation Brief 28: Painting Historic Interiors*. Washington, DC: US Department of the Interior, National Park Service, 1992.

"Coping with Contamination: A Primer for Preservationist," *Information; Booklet No. 70*. Washington, DC: National Trust for Historic Preservation, 1993.

Historic Buildings and the Lead Paint Hazard. Hartford, CT: Connecticut Historical Commission, 1990.

"Health Hazards in National Park Service Buildings", *NPS-76 Housing Design and Rehabilitation*. Washington DC: US Department of the Interior, National Park Service, 1995.

Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing. Washington, DC: US Department of Housing and Urban Development, 1995.

Jandl, H. Ward. *Preservation Brief 18: Rehabilitating Historic Interiors - Identifying and Preserving Character-defining Elements*. Washington, DC: US Department of the Interior, National Park Service, 1988.

MacDonald, Marylee. "Getting Rid of Lead." *Old House Journal*, July/Aug 1992.

Myers, John H. *Preservation Briefs 9; Repair of Historic Wooden Windows*. Washington, DC: US Department of the Interior, National Park Service, 1981.

OSHA Lead in Construction Standard (29 CFR 1926.62), Occupational Safety and Health Administration, May 4, 1993 (Federal Register).

Park, Sharon C. and Camille Martone. "Lead-Based Paint in Historic Buildings," *CRM Bulletin*. Washington, DC: US Department of the Interior, National Park Service. Vol. 13, No. 1, 1990.

Park, Sharon C. "Managing Lead in Building Interiors: An Emerging Approach," *Interiors Handbook for Historic Buildings, Vol. II*. Washington DC: Historic Preservation Education Foundation, 1993.

Park, Sharon C. "What to do about Lead-Based Paint," *CRM Bulletin*. Washington, DC: U.S. Department of the Interior, National Park Service. Vol. 17, No. 4, 1994.

The Secretary of the Interior's Standards for the Treatment of Historic Properties. Washington, DC: US Department of the Interior, National Park Service, 1992.

Title X (Residential Lead-Based Paint Hazard Reduction Act of 1992) of Housing and Community Development Act of 1992 (P.L. 102-550), October 28, 1992.

Weeks, Kay D. and David Look, AIA. *Preservation Briefs 10; Exterior Paint Problems on Historic Woodwork*. Washington DC: US Department of the Interior, National Park Service. 1982.

This successfully completed project combined federal low income housing and historic preservation tax credits as part of a substantial rehabilitation that applied lead-hazard reduction methods consistent with the guidance in this Preservation Brief. Photo: Landmarks Design Associates.



Photographs courtesy of the authors unless identified.

Front cover: Most residences painted prior to 1975 will contain some lead-based paint. It was widely used on interior wall, trim, siding, and windows as well as exterior finishes. This apartment stairhall retains its historic character after a successful rehabilitation project that included work to control lead-based paint hazards. Photo: Crispus Attucks Community Development Corporation.

Acknowledgements

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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. Comments about this publication should be directed to the Preservation Assistance Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127. This publication is not copyrighted and can be reproduced without penalty. Normal procedures for crediting the authors and the National Park Service are appreciated.



REAR VIEW: SOUTH SIDE ↑



SOUTH WEST CORNER



FRONT VIEW: NORTH SIDE ↑



EAST VIEW & NORTHEAST CORNER

OVER ↑

GARAGE



EAST SIDE →



WEST SIDE →



NORTH
SIDE →

PHOTOGRAPHS OF SILBER
RESIDENCE
FOR

HISTORIC AREA WORK PERMIT

ATTACHMENT A: SILBER RESIDENCE HISTORIC AREA WORK PERMIT APPLICATION

1. WRITTEN DESCRIPTION OF PROJECT

a. The original residence, built about 1930, sits on the northern border of the historic district in Chevy Chase Village. Since 1930, two renovations have substantially altered its exterior appearance. In 1968, a screened porch was enclosed and an addition constructed to create a suite of rooms on the northeast corner of the first floor. In 1989, the property underwent another major renovation. The outer bearing wall at the southwest corner was moved to create additional interior space; a new deck was built across the entire south side of the house; sliding glass doors replaced enclosed walls along the south wall and the rear door was moved and redesigned. At the same time, lattice trellises were added to the rear of the house and to the front entrance and the front roof line was altered with a skylight. These additions, which are pleasing but do not conform to historic authenticity, substantially changed the exterior of the house. In 1990, the slate roof was replaced with synthetic asphalt shingles.

b. The existing siding has been painted many times over the years, initially with lead-based paint. If it were to be painted again, it would require costly scraping and preparation. The proposed project would cover the existing siding with a high grade of vinyl siding manufactured by CertainTeed. The color proposed would be the same as the present color of the house. It has been brought to our attention that many other houses in the historic area have already been covered with vinyl siding. It is our opinion that the new siding will not adversely effect the environment and will improve the exterior appearance of the house which becomes unsightly periodically because of the frequent need to repaint (as often as every six years). In future years, the new siding will substantially reduce our maintenance costs. In addition, the siding will enhance the insulation of the house, making it more energy efficient during the winter and summer. These anticipated lower maintenance costs will make it possible for us to continue living in the house, which has been our residence since 1958.

4. MATERIALS SPECIFICATIONS

Monogram CertainTeed 4" smooth vinyl siding on exterior walls in the color called Natural Clay; soffits and window frames in Colonial White.

7. ADDRESSES OF ADJACENT AND CONFRONTING PROPERTY OWNERS

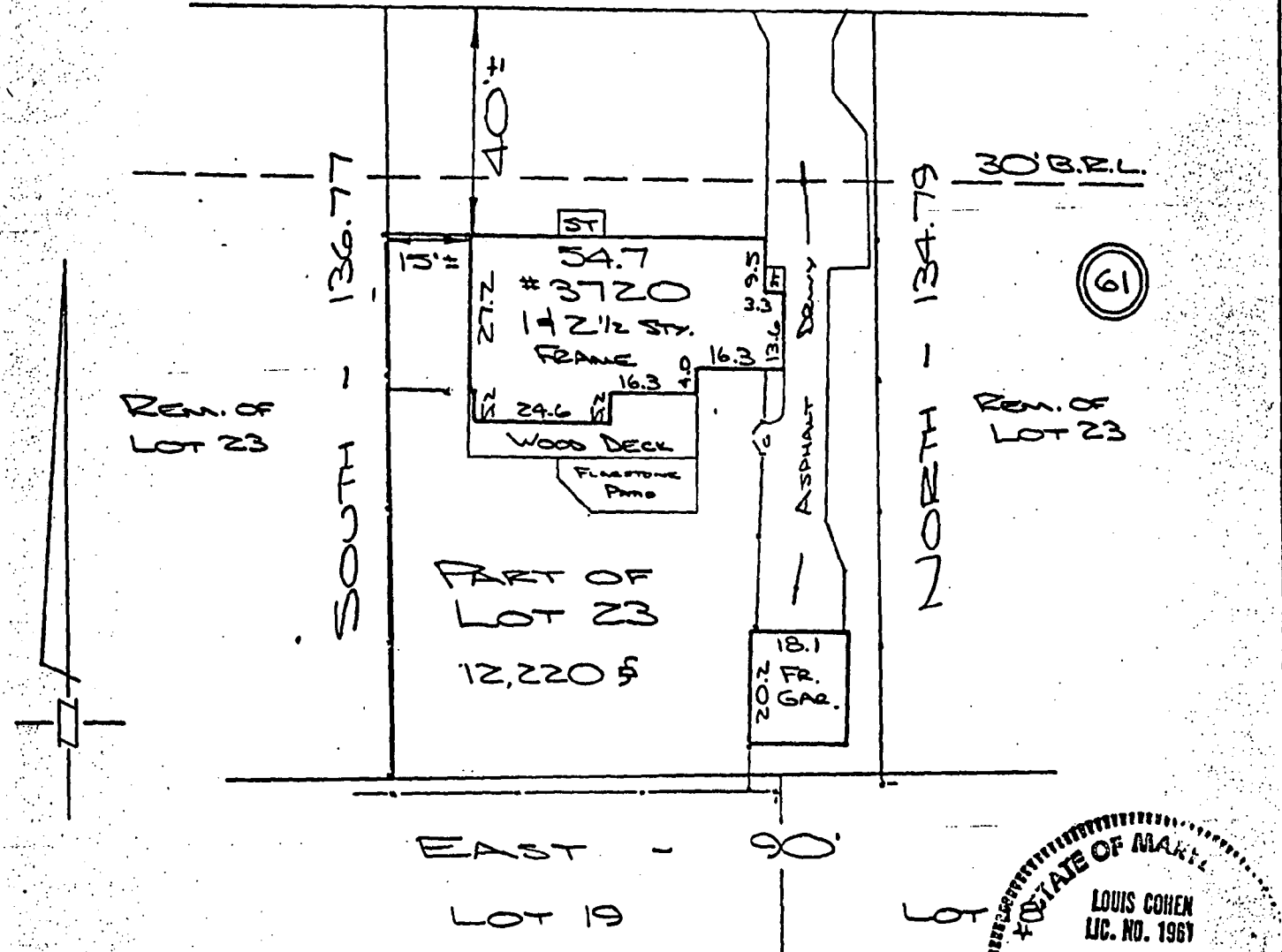
Adjoining Property Owners:

Roland Olson (East side)
3718 Bradley Lane
Chevy Chase, MD. 20815

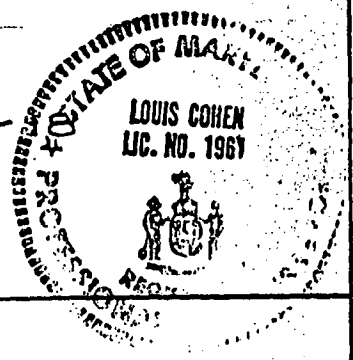
Silber Residence
 Plot Plan
 Attachment B

BRADLEY LANE

N. 88° 53' W. - 90.08



Note: This property does not lie within the limits of a flood hazard area as delineated on the maps of the national flood insurance program.



CAPITOL SURVEYS

NOTE: This drawing is not intended to establish property lines. It cannot be used for construction purposes. All information shown hereon taken from the land records of the county or city in which the property is located and field work performed.

HOUSE LOCATION
 PART OF LOT 23 BLOCK 61
 SECTION No. 2
CHEVY CHASE
 MONTGOMERY COUNTY, MARYLAND
 Recorded in Plat Book 2 Plat 106 Scale 1" = 30'

I hereby certify that the position of all the existing improvements on the above described property have been established by accepted field practices, and that unless otherwise shown there are no visible encroachments.

[Signature]
 LOUIS COHEN
 Registered Land Surveyor
 Maryland No. 1961

DATE: Aug. 21, 1992

CASE: 1684-92

FILE: 44084

