

HISTORIC RESOURCE MAINTENANCE PLAN

THE STONE LIBRARY
ADAMS NATIONAL HISTORIC SITE

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This Historic Resource Maintenance Plan (HRMP) was written for personnel of Adams National Historic Site in an endeavor to provide detailed information on the maintenance of the Stone Library. As new information becomes available it can be inserted in the loose-leaf HRMP. To further facilitate the inclusion of new material, the HRMP is comprised of sections which deal with a particular material or item in the Stone Library. Each section is broken down into three subsections dealing with general information, inspection, and maintenance. The subsection on general information describes the particular material or item and its location within the structure, notes other sections of the HRMP which are related, and discusses previous work and maintenance. The subsection on inspection makes recommendations concerning the frequency of inspection and sets forth guidelines for inspection characteristics of the particular material or item. Similarly, the subsection on maintenance recommends types and frequency of maintenance and provides guidelines for these maintenance activities.

Use of this HRMP in conjunction with a preventive maintenance inspection program will enable personnel at Adams to be responsible for the preservation and continued maintenance of the Stone Library.

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One of the requests expressed in the will of John Quincy Adams was that a fireproof building be constructed to house his library books and family manuscript papers. His son, Charles Adams, retained the Boston architect Edward Cabot to plan such a building. Cabot proposed that a library structure be located behind the 'Old House'. However, a well provided complications, so the present garden location was chosen for the library. Work on the foundation of the structure began in October 1869 and the building was completed in September 1870.

The library is rectangular in plan, thirty-eight (38) feet long by twenty-five (25) feet wide. The exterior walls are of stone and brick and the structure is roofed with slate. The roof is topped with a weathervane, a replica of the original.

The interior of the library is lit by windows from three sides. The walls are lined with oak bookshelves -- the upper level of shelves and the balcony were added in 1878. Contrasting with the bookshelves, is a marble fireplace which graces the east end of the interior. The floor in the library is covered in brown, buff, and blue tile. Furnishings in the library are predominantly mid 19th century purchases by Charles Adams. Exceptions to these 19th century pieces are two desks that belonged to John Adams and John Quincy Adams. The contents of the library include 14,000 volumes of books, prints, maps, and pamphlets.

The structure and its contents remain relatively the same as they were during the lifetime of Charles Adams and it is the policy of the NPS to preserve the Stone Library as it appeared in the mid 19th century.

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the mortar in the exterior walls and chimney stack are the subject of this section.

1-2 RELATED SECTIONS: Brick Masonry - Section 04210; Rough Stone Walls - Section 04410; Granite - Section 04424.

1-3 PREVIOUS WORK: As part of the 1962 rehabilitation of the structure the exterior walls and the chimney stack were repointed. The repointing mortar specified contained 1 part cement, 2-1/2 parts Mortaseal or equal, and not more than 8 parts sand by volume.

PART 2: INSPECTION

2-1 FREQUENCY: The mortar joints in the exterior walls and chimney stack are to be inspected quarterly.

2-2 GUIDELINES:

A. Look for open mortar joints.

B. Look for structural cracks including horizontal movement cracks, vertical and diagonal movement cracks, and shrinkage cracks. Measure and record all crack movements.

C. Look for evidence of efflorescence.

PART 3: MAINTENANCE

3-1 FREQUENCY: Mortar joints are to be repointed as required. Written approval from the Regional Historical Architect must be received before work is begun.

3-2 GUIDELINES: In preparation for repointing, all loose and deteriorated mortar must be removed and the joints raked out by hand to a depth of one inch. Care must be taken to avoid enlarging the width of the joints or damaging the stone or brickwork.

The use of a mortar which will match the existing in terms of color, strength, texture, and hardness is essential to successful repointing work. In addition, repointing work requires accurate measurement and control of the materials for the mortar mix. Once mixed, the mortar must be used within 2-1/2 hours of the initial mixing and before it has begun to set. Furthermore, successful repointing requires that no work be done when the temperature of the air is below 40^o Fahrenheit.

For additional information on repointing, see Preservation Briefs No. 2, "Repointing Mortar Joints in Historic Brick Buildings", by Robert C. Mack, Interagency Historic Architectural Services Program, Office of Archeology and Historic Preservation, National Park Service.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the exterior brick masonry walls are the subject of this section.

1-2 RELATED SECTIONS: Mortar - Section 04100.

1-3 PREVIOUS WORK: The exterior brick walls were repointed as part of the 1962 rehabilitation of the structure.

PART 2: INSPECTION

2-1 FREQUENCY: The exterior brick surfaces are to be inspected quarterly.

2-2 GUIDELINES:

- A. Check walls for proper elevation and alignment.
- B. Look for fungal growth.
- C. Look for vegetation encroachment.

PART 3: MAINTENANCE

3-1 FREQUENCY: Brick masonry repairs are to be made as required. Written approval from the Regional Historical Architect is required before work can begin.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the exterior rough stone walls are the subject of this section.

1-2 RELATED SECTIONS: Mortar - Section 04100.

1-3 PREVIOUS WORK: As part of the 1962 rehabilitation of the structure the exterior rough stone walls were repointed.

PART 2: INSPECTION

2-1 FREQUENCY: The exterior rough stone walls are to be inspected quarterly.

2-2 GUIDELINES:

- A. Check all walls for proper elevation and alignment.
- B. Look for fungal growth.
- C. Look for vegetation encroachment.

PART 3: MAINTENANCE

3-1 FREQUENCY: The rough stone walls are to be repaired as required. Written approval from the Regional Historical Architect is required before work can begin.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the marble fireplace frame and mantel in Room 101 are the subject of this section.

1-2 PREVIOUS WORK: The broken marble mantel was reset and cemented together with condensed milk as part of the 1962 rehabilitation of the structure.

PART 2: INSPECTION

2-1 FREQUENCY: The marble fireplace frame and mantel are to be inspected quarterly.

2-2 GUIDELINES:

- A. Look for structural cracks.
- B. Look for evidence of indentations, burns, or damage from improper cleaning.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. During the period the library is open, all marble surfaces are to be cleaned weekly.
- B. Spot or stain removal from the marble surfaces is to take place as required.

3-2 GUIDELINES:

- A. Cleaning: All marble surfaces are to be dusted with an untreated dust cloth. At intervals determined by the rate of soiling, damp wipe the marble with a sponge dipped in clear water that has stood for 24 hours in a covered plastic bucket in contact with white marble chips. Following damp wiping, dry the marble with a soft cloth.
- B. Spot or Stain Removal: When spots or stains are observed, apply spot removal techniques promptly. For water soluble stains,

brush the marble with a lather of detergent solution, rinse, and wipe dry. More persistent spots or stains will probably require a poultice for removal -- a poultice is a device for keeping the stain moist and in continual contact with the treating liquid. A poultice can be made of white paper napkins or white cleaning tissue. The poultice should be soaked with a solution appropriate to the stain being treated -- organic stain, use hydrogen peroxide; rust stain, use a commercial rust remover; oil stain, use acetone or amyl acetate. To prevent the poultice from drying out, cover it with Saran Wrap or a piece of glass since it may require two or three days for the poultice to draw the stain out of the marble.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the granite foundation are the subject of this section.

1-2 RELATED SECTIONS: Mortar - Section 04100.

1-3 PREVIOUS WORK: In 1962, the east and south foundation walls were dug out and crushed stone put in. Repointing of the foundation also took place at that time.

PART 2: INSPECTION

2-1 FREQUENCY: The granite foundation walls are to be inspected quarterly.

2-2 GUIDELINES:

- A. Check walls for proper elevation and alignment.
- B. Look for fungal growth.
- C. Look for vegetation encroachment.
- D. Look for evidence of deterioration of the stone.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. In the spring, summer, and fall the ground at the base of the building is to be cleared of all foliage.
- B. Granite repairs are to be made as required. However, written approval from the Regional Historical Architect is required before work is to begin.

3-2 GUIDELINES: Foliage clearance will allow the sun and wind to dry out the wall and thus prevent deterioration of the masonry. The maintenance procedure is to clip foliage away from the vine trunks up to two feet above grade. Dig out rotted leaves and dirt around the vine's trunks and make sure the trench is back-filled with gravel -- this will cause the water to drain to the bottom of the trench instead of pushing through the wall.

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the millwork in the library are the subject of this section. Millwork in the library consists of the bookcases, paneling, and casings around the columns and beams.

1-2 RELATED SECTION: Wood Treatment - Section 06300.

1-3 PREVIOUS WORK: During the 1962 rehabilitation of the structure all of the bookcase tongued and grooved board backing of the east wall of Room 101 was removed and subsequently replaced following reconstruction of the wall.

PART 2: INSPECTION

2-1 FREQUENCY: All millwork in Room 101 is to be inspected quarterly.

2-2 GUIDELINES:

- A. Check surfaces for loose, warped, or cracked millwork.
- B. Look for evidence of fungal and insect attack. See Wood Treatment - Section 06300 for characteristics of fungal and insect attack.
- C. Tap or bang the wood and listen for a dead sound.
- D. Look for rust around nails or nail pulling.
- E. Look for sunken surfaces or visibly deteriorated wood.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. During the period the library is open, the millwork is to be dusted daily.
- B. Every other year in the spring, all millwork in the library is to be cleaned.

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the framing are the subject of this section.

1-2 RELATED SECTION: Wood Treatment - Section 06300.

PART 2: INSPECTION

2-1 FREQUENCY: All exposed framing members are to be inspected quarterly.

2-2 GUIDELINES:

A. Look for water stains or damage to paint films, wallpaper, or plaster.

B. Look for evidence of fungal and insect attack. See Wood Treatment - Section 06300 for characteristics of fungal and insect attack.

C. Tap or bang the wood and listen for a dead sound to the wood.

D. Lightly jump on the floors. Note deflection.

E. Probe the wood with an ice pick and note if the wood splits.

F. Look for rust around nails or nail pulling.

G. Check the anchorage of all members.

PART 3: MAINTENANCE

3-1 FREQUENCY: Framing repairs are to be made as required. However, written approval from the Regional Historical Architect must be received before work is to be done.

END

3-2 GUIDELINES:

A. Dusting: Use a treated, soft cloth for removing the dust.

B. Cleaning: Clean woodwork with a sponge and warm water. Dry immediately. Using a clean, soft cloth, rub into the woodwork an equal mixture of boiled linseed oil, turpentine, and white vinegar (this mixture can be purchased at a hardware store). Wipe off excess with a dry, lint-free cloth.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the interior and exterior blinds at Openings 1, 2, 3, and 4 are the subject of this section.

1-2 RELATED SECTIONS: Wood Treatment - Section 06300; Finish Hardware - Section 08710; Painting - Section 09902.

PART 2: INSPECTION

2-1 FREQUENCY: The interior and exterior blinds of Openings 1, 2, 3, and 4 are to be inspected quarterly.

2-2 GUIDELINES:

- A. Look for loose, broken, deteriorated, or damaged rails and side stiles.
- B. Look for material damage such as broken slats and split or cracked wood panels.
- C. Look for water stains.
- D. Look for damage to paint films.
- E. Look for evidence of fungal and insect attack. See Wood Treatment - Section 06300 for characteristics of fungal and insect attack.
- F. Tap or bang the wood and listen for a dead sound.
- G. Look for rust around nails or nail pulling.
- H. Look for sunken surfaces or visibly deteriorated wood.
- I. Look for vegetation encroachment.
- J. Look for broken or inoperative hardware.
- K. Check all hinges for securing anchoring.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. Once in the spring and fall, clean the slats and frames.
- B. The wood blinds are to be painted only when necessary (ten year intervals will probably be satisfactory). However, written approval from the Regional Historical Architect must be received before painting is to begin.
- C. The wood blinds are to be repaired as required. However, written approval from the Regional Historical Architect must be received before repairs are to be made.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the wood in the structure are the subject of this section.

1-2 RELATED SECTIONS: Framing - Section 06110; Millwork - Section 06220; Wood Shutters and Blinds - Section 06222; Wood Stairs and Railings - Section 06431; Wood Doors - Section 08210; Wood Strip Flooring - Section 09560.

1-3 PREVIOUS WORK: As part of the rehabilitation of the structure in 1962 the library was fumigated by Safety Fumigant Company of Hingham, Massachusetts. Also as part of the 1962 work, all surfaces of wood furring which were exposed were painted with 5 percent pentachlorophenol solution.

PART 2: INSPECTION

2-1 FREQUENCY: Inspections of wood elements with respect to fungal and insect attack are included in the inspection of individual items.

2-2 GUIDELINES:

A. Fungi: Fungi are a low form of plant life which inhabit wood. Since they are a low form of plant life, they can not manufacture their own food but must depend on organic material already prepared for their use. Therefore, fungi convert wood they are invading into simple digestable products, and in the process the wood loses weight and strength.

While there are many fungi, they vary widely in their precise effects. However, three groups of these plants may be distinguished -- wood-destroying fungi, wood-staining fungi, and molds.

1. Wood-Destroying Fungi: Decay of wood is the result of the activities of low forms of plants known as wood-destroying fungi. Conditions necessary for the development of decay-producing fungi in wood are (1) a supply of suitable food, (2) a sufficient degree of moisture, (3) a small amount of air, and (4) a favorable temperature. A deficiency in any one of these conditions will inhibit the growth of a fungus.

Two broad types of decay may be recognized. One type of decay is white rot which tends to remove more lignin than cellulose from the wood resulting in a whitish cellulose complex. The fungi in the second type, brown rot, generally make a more concentrated attack on the cellulose and leave a brownish residue which can be readily crumbled into powder. When inspecting for decay, (1) Look for white rot which is characterized by the wood losing color and appearing whiter than normal. The wood does not crack across the grain and, until the wood has been severely degraded, it does not shrink or collapse. (2) Look for brown rot which is characterized by a brown color and that the wood tends to crack across the grain, shrink, and collapse.

2. Wood-Staining Fungi: Wood-staining fungi give rise to discolorations in wood without noticeably affecting the continuity and texture of the material. Blue stain (sapstain) is the most common of these type of fungi. When inspecting for blue stain, (1) Look for small, flask-shaped fruiting bodies which appear like minute black specks. Using a hand lens, these will look like small black hairs, somewhat bulbous at the base. (2) Look for a bluish to bluish-black or brown color on the wood surface.

3. Mold: Mold is objectionable chiefly because of the appearance that it gives to the infected material. The appearance of mold is that of cottony growths ranging in color from white to black. Although mold chiefly affects the looks of wood, the fact that it is present means that the environmental conditions are conducive to the development of wood-destroying fungi. When inspecting for mold, (1) In softwoods, look for surface discoloration of green, black, or orange. (2) In hardwoods, look for evidence of various size dark spots.

B. Insects: Wood-boring insects burrow through wood to obtain both food and shelter. The resultant insect holes or burrows not only affect the appearance of the wood but, by breaking up the continuity of its fibers, reduce the structural strength of the material. Insects that are capable of seriously deteriorating wood are termites, beetles, and carpenter ants.

1. Termites: Termites can be classified into two types: subterranean and nonsubterranean. In the northeast, subterranean termites are the most prevalent. Subterranean termites are by nature soil inhabiting, entering wood only from the ground, and require a constant supply of moisture for their existence. They readily invade both sound and decaying timbers set in or on damp soil and also have the ability to build covered runways over impenetrable obstructions as well as to erect towers directly upward from the earth and thus reach wood removed from contact with the

ground. The runways and towers, constructed of tiny fragments of earth and partly digested wood cemented together by insect excretions, enable the termites to establish suitable moisture conditions in wood that would otherwise be so dry as to be immune to their attacks. Once they have gained access to a structure, subterranean termites may extend their workings to considerable height. When inspecting for subterranean termites, (1) Look for the presence of small earthen tubes or tunnels built over the surface of the foundation or projecting vertically from the ground to the wood directly overhead. (2) Using a sharp object such as an ice pick, try to penetrate the wood by stabbing. If termites have eaten away the soft portion of the wood, the ice pick will penetrate the wood easily. (3) Look for the seasonal swarming of the winged reproductives.

2. Beetles: Beetles tend to produce so-called "powder-post" defects in wood. This damage is done by the larvae or grubs of the beetles as they bore through the wood for food and shelter, leaving the undigested parts of the wood in the form of a fine powder. When an infested piece is moved or jarred, this powdery residue falls out of the holes that were made in the surface of the wood by the winged adults as they emerged to spread the infestation. The beetle larvae honeycomb the wood with their irregular and often large burrows. When the attack is severe, the larvae leave little sound wood other than a thin outer shell. When inspecting for beetles, (1) Look for piles of very fine sawdust on or beneath the wood. (2) Look for small round or oval shotholes in the wood surface. (3) Place black paper beneath any indication of shotholes. Return in two weeks and examine the paper for any indication of fine sawdust.

3. Carpenter Ants: Carpenter ants tend to infest wood after decay has begun to soften the material. The ants excavate the wood for shelter, rather than for food. However, unlike termites which commonly plug their unused galleries with a woody frass, the ants keep their runways free from all refuse. Furthermore, their workers are not as secretive as those of termites and may be frequently seen in the vicinity of the wood they are excavating. When inspecting for carpenter ants, look for black or brown ants in the vicinity of the wood.

PART 3: MAINTENANCE

3-1 FREQUENCY: Treatment of wood should take place as required. However, written approval from the Regional Historical Architect is required before treatment is to begin.

3-2 GUIDELINES: A wood preservative is used to combat fungi and insects by penetrating the wood fibers, eliminating the food supply, and giving long-lasting protection.

A. Creosote: Creosote is an oil-borne preservative of distillates of various tars. Creosote is highly toxic to all wood-destroying organisms and is relatively insoluble in water, but tends to have a strong odor and to bleed through, making surfaces unsatisfactory for painting.

B. Pentachlorophenol: Pentachlorophenol is an organic compound that is usually used in a 5 percent solution with light or heavy oils. Pentachlorophenol is highly toxic to destructive organisms; has good penetration qualities; is highly resistant to leaching; and usually is a cleaner, easier to handle wood product than Creosote. However, its use is limited due to its high toxicity to humans and animals as well as plants and flowers.

C. Copper-8-Quinolinolate: Copper-8-quinolinolate (solubilized) is an odorless, oil-borne preservative that provides excellent decay resistance. It is not toxic or irritating to humans or animals. However, it is not recommended for in-ground use.

D. Tributyltin oxide: Tributyltin oxide (TBTO) is recommended for wood that comes in contact with the public and for the safety of persons working with treated wood. A .3 percent solution of TBTO is available commercially in a product called Oz Clear manufactured by the Ozmose Company of Buffalo, New York. A .5 percent solution can be achieved by mixing a quart of TBTO in a fifty-five gallon drum of white kerosene or other suitable vehicle.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the movable stair in Room 101 are the subject of this section.

1-2 PREVIOUS WORK: The movable stair was reconditioned as part of the 1962 rehabilitation of the structure.

PART 2: INSPECTION

2-1 FREQUENCY: The movable stair in Room 101 is to be inspected quarterly.

2-2 GUIDELINES:

- A. Look for evidence of cracked, weathered, or rotten wood.
- B. Check all treads for loose or broken tread nosing; excessive wear; paint or tread covering deterioration; and loose, eroded, or slippery tread.
- C. Look for water stains.
- D. Look for evidence of fungal and insect attack. See Wood Treatment - Section 06300 for characteristics of fungal and insect attack.
- E. Look for nail pulling.
- F. Examine hardware which attaches the stair to the balcony.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. During the period the library is open, the woodwork of the stair is to be dusted daily.
- B. Every other year in the spring, the woodwork of the stair is to be cleaned.

3-2 GUIDELINES:

A. Dusting: Use a treated, soft cloth for removing dust.

B. Cleaning: Rub into woodwork (except top of treads) an equal mixture of boiled linseed oil, turpentine, and white vinegar. Wipe off any excess.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the 1870 slate roof are the subject of this section.

1-2 RELATED SECTION: Flashing - Section 07620.

PART 2: INSPECTION

2-1 FREQUENCY:

A. The slate roof is to be inspected every spring - this time is best because it follows the severe winter conditions and is followed by the period best suited for roofing work.

B. The slate roof is to be inspected after exposure of the surface to unusually severe weather conditions such as very strong winds, hail, or long-continued rain.

2-2 GUIDELINES:

A. Check for loose, cracked, broken, or missing slate.

B. Check for loose or missing fasteners.

C. Check if the slate sheds water properly and that water can not blow in.

PART 3: MAINTENANCE

3-1 FREQUENCY: The slate roof is to be repaired as required. However, written approval from the Regional Historical Architect is required before any work is to be started.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the flashing and maintain a watertight roof are the subject of this section.

1-2 RELATED SECTIONS: Slate Shingles - Section 07314; Skylight - Section 07810.

1-3 PREVIOUS WORK: The flashing was checked and replaced where necessary with 16 ounce lead coated copper flashing as part of the 1962 rehabilitation of the structure.

PART 2: INSPECTION

2-1 FREQUENCY:

A. The flashing is to be inspected every spring - this time is best because it follows the severe winter conditions and is followed by the period best suited for flashing repairs.

B. The flashing is to be inspected after exposure to unusually severe weather conditions such as very strong winds, hail, or long-continued rain.

2-2 GUIDELINES:

A. Check if the flashing appears to be able to move with changes in temperature.

B. Check that all joints are such that water can work through them only against the force of gravity.

C. Check the flashing around the skylight and chimney stack.

PART 3: MAINTENANCE

3-1 FREQUENCY: Repairs to the flashing are to be made as required. However, written approval from the Regional Historical Architect is required before any repairs can be made.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the gutters are the subject of this section. The gutters are made of 20 ounce copper and are on the south and north sides of the structure. Water is directed to the ground with 20 ounce copper leaders.

1-2 RELATED SECTION: Painting - Section 09902.

1-3 PREVIOUS WORK: As part of the 1962 rehabilitation of the structure, a 5 inch diameter gutter was installed on the south wall eaves. At the same time, a 3 inch square leader with an elbow turn out at the bottom was also installed at the west end of this gutter.

PART 2: INSPECTION

2-1 FREQUENCY: Once a month from October to December and also in April, the gutters and leaders are to be inspected.

2-2 GUIDELINES:

- A. Check if they are large enough to handle the discharge.
- B. Check if gutters have sufficient pitch to carry the water off quickly and not leave any pockets of standing water.
- C. Check gutters to see that there are no obstructions to free flow.
- D. Check condition of all joints, i.e. soldered or joined joints.
- E. Check downspouts for attachment to goosenecks and wall dogs.
- F. Check seams for evidence of splits.
- G. Check the condition of paint surfaces.

PART 3: MAINTENANCE

3-1 FREQUENCY:

A. Once a month from October to December and also in April, remove all debris or impediments to water flow. After cleaning, test the gutters for leaks by stopping up the downspout connection with a rubber plumbers test plug and filling with water and checking the level after several hours.

B. The gutters and downspouts are only to be painted when necessary (ten year intervals will probably be satisfactory). Written approval from the Regional Historical Architect is required before painting is to begin.

C. Repairs to the gutters and downspouts are to be made as required. However, written approval from the Regional Historical Architect is required before repairs are to be made.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the skylight on the north roof slope are the subject of this section.

1-2 RELATED SECTIONS: Flashing - Section 07620; Painting - Section 09902.

1-3 PREVIOUS WORK: The skylight frame was replaced as necessary. The sash glass had the putty renewed, and the whole skylight was recaulked as part of the 1962 rehabilitation of the structure.

PART 2: INSPECTION

2-1 FREQUENCY: The skylight is to be inspected quarterly.

2-2 GUIDELINES:

- A. Look for loose, broken, deteriorated, or damaged frames and sash.
- B. Look for material damage such as cracked or broken glass.
- C. Check for deteriorated putty.
- D. Look for paint deterioration.
- E. Check the flashing. See Flashing - Section 07620 for inspection guidelines.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. The skylight frame should not be painted unless absolutely necessary (ten year intervals will probably be satisfactory). Written approval from the Regional Historical Architect is required before painting is to begin.
- B. Repairs to the skylight are to be made as required. However, written approval from the Regional Historical Architect is required before work is to begin.

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to maintain a tight seal between the wood doors and the masonry walls are the subject of this section.

1-2 RELATED SECTION: Wood Doors - Section 08210.

PART 2: INSPECTION

2-1 FREQUENCY: Quarterly inspection of the wood doors is to include examination of the caulking.

PART 3: MAINTENANCE

3-1 FREQUENCY: Caulking is to be done as required. However, written approval from the Regional Historical Architect is required before work is to begin.

3-2 GUIDELINES: Caulking compounds will generally bond tightly to nearly any material except such substances as wax, grease, or oil. However, adhesion is also dependent on the cleanliness and dryness of the bonding surfaces. Even though the steps required to ensure cleanliness depends on the circumstances, the following can serve as a guide (1) All loose material must be removed. (2) Rust, paint, surface oxides, and other coatings must be removed. (3) All oil, grease, wax, silicone, and similar substances which are used as parting agents or bond breakers must be removed. (4) All concrete must be fully cured before applying any caulking compound in joints which are subject to movement.

Caulking compounds (D.A.P. or approved equal) may be applied with a putty knife or a caulking gun, the latter being recommended for general use. One poor aspect of gun application is that cracks often develop as a result of bridging the joint, thus leaving an air pocket behind the compound. This can be avoided by using a tip small enough to reach the bottom of the joint and by holding the gun at an angle permitting the operator to see that the compound is completely filling the joint. After filling, the caulking compound should be forced into the joint or crack with a beading tool, pressing against the compound to ensure that it adheres to the back and sides of the joint or crack. The compound should then be finished flush with the surrounding surface.

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the french doors and storm sash of Openings 1, 2, and 3, and the door and storm sash of Opening 4 are the subject of this section.

1-2 RELATED SECTIONS: Wood Treatment - Section 06300; Finish Hardware - Section 08710; Glass - Section 08810; Painting - Section 09902.

1-3 PREVIOUS WORK: During the 1962 rehabilitation of the structure, storm sash were constructed for Openings 1, 2, and 3. In addition, rotted areas at the bottom of the door frames were removed and replaced.

PART 2: INSPECTION

2-1 FREQUENCY: The french doors and storm sash of Openings 1, 2, and 3 as well as the door and storm sash of Opening 4 are to be inspected quarterly.

2-2 GUIDELINES:

- A. Look for loose, broken, deteriorated, or damaged frames.
- B. Look for material damage such as cracked or broken glass, split or cracked wood panels, and warped or broken screening.
- C. Look for evidence of any swelling, shrinking, or warping.
- D. Look for paint deterioration.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. Once in the spring and fall, the trim and panels of all wood doors are to be cleaned.
- B. Annually in the spring, varnish the threshold at Opening 4.
- C. Annually, the screen at Opening 4 is to be cleaned and painted.

D. The wood doors are only to be painted when necessary (five year intervals will probably be satisfactory). Written approval from the Regional Historical Architect is required before painting is to begin.

E. Repairs to the doors are to be made as necessary. However, written approval from the Regional Historical Architect is required before any work is to begin.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the hardware are the subject of this section.

1-2 RELATED SECTIONS: Wood Shutters and Blinds - Section 06222; Wood Doors - Section 08210.

PART 2: INSPECTION

2-1 FREQUENCY: As part of the quarterly inspection of the wood blinds and wood doors, all hardware is to be inspected.

2-2 GUIDELINES:

- A. Look for broken or inoperative hardware.
- B. Check all hinges for secure anchoring.
- C. Look for missing hinge pins.

PART 3: MAINTENANCE

3-1 GUIDELINES: No hardware is to be removed, altered or added without the written approval of the Regional Historical Architect.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to care for the glass in the doors and storm sash of Openings 1, 2, 3, and 4 are the subject of this section.

1-2 RELATED SECTION: Wood Doors - Section 08210.

1-3 PREVIOUS WORK: During the 1962 rehabilitation of the structure, storm sash were constructed for Openings 1, 2, 3, and 4. Therefore, all glass in these new sash date from 1962.

PART 2: INSPECTION

2-1 FREQUENCY: All glass panes in the doors and storm sash of Openings 1, 2, 3, and 4 are to be inspected quarterly.

2-2 GUIDELINES:

- A. Look for cracked, broken, or warped panes.
- B. Check the condition of glazing putty.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. In the spring and fall, all interior and exterior glass surfaces are to be washed.
- B. Cracked or warped panes are not to be replaced without written approval from the Regional Historical Architect.

3-2 GUIDELINES:

A. Washing: Washing glass requires two sponges, three buckets, a squeegee, and the cleaning solution. To prepare the cleaning solution, mix nonsudsing household ammonia with water or ethylene glycol monoethyl ether and a nonionic detergent, one-tenth ounce of each in one gallon of water. Begin the washing procedure by dipping the sponge in the cleaning solution and subsequently squeezing it out. Apply the cleaning solution to the top sash and then work down to the bottom. Remove the dirty water from

the glass with a sponge, and dry with a squeegee. Rinse all surfaces adjacent to the glass to remove the cleaning solution and dry.

B. Replacing Glass: Remove the broken glass from the sash and chip off the old putty with a chisel or jackknife. Next, pull the glazier's points and scrape the wood where the new glass is to rest. After scraping the wood well, give the wood a coat of linseed oil -- this will prevent the wood from absorbing the oil in the putty. In order to cut the replacement glass, all four sides and both diagonals should be measured since some sash are not true. The glass should be cut $1/16$ to $1/8$ inch smaller than the opening so as to allow for expansion and irregularities. To place the glass, spread about $1/16$ inch of putty on the rabbet of the sash and then press the glass gently into place. Next, install glazier's points, 3 or 4 on each side of the glass, by forcing them into the sash, long side first, with the edge of a screw driver.

C. Putty: The use and type of putty is to be recommended by the Regional Historical Architect. To prepare putty for use, knead it on a nonabsorptive surface such as a glass plate until the mass is pliable. Then take a small piece of putty and roll it out between the palms of the hands so as to form a pencil-shaped roll. Lay the rolls end to end on the glass where it abuts the sash, one side at a time. Press the putty down firmly but gently with a putty knife drawing it along the sash from one end to the other. Cut off excess putty and fill any depressions. Be careful not to spread the putty far enough over the surface to show on the inside of the window. Remove putty stains from the glass with a cloth moistened with mineral spirits. After two days, paint the putty to match the sash. Be sure to lap the paint slightly onto the glass so as to seal the edge of the putty and thus retard its shrinkage.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the plaster surfaces in Room 101 are the subject of this section.

1-2 RELATED SECTION: Painting - Section 09902.

1-3 PREVIOUS WORK: Portions of the ceiling were replastered during the rehabilitation of the structure in 1962. Following the replastering, the ceiling was painted with one coat of Pratt and Lambert Vapex Wall Primer and two coats of Pratt and Lambert Lyt-all Flowing Flat.

PART 2: INSPECTION

2-1 FREQUENCY: Inspect the plaster ceiling in Room 101 annually.

2-2 GUIDELINES:

- A. Measure and record all cracks.
- B. Look for deterioration of the plaster.
- C. Look for paint deterioration.

PART 3: MAINTENANCE

3-1 FREQUENCY:

A. The plaster ceiling is to be painted only when necessary (ten year intervals will probably be satisfactory). Written approval from the Regional Historical Architect is required before painting is to begin.

B. Repairs to the ceiling are to be made as required. However, written approval from the Regional Historical Architect is required before work is to begin.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the ceramic floor tile in Room 101 are the subject of this section.

1-2 PREVIOUS WORK: Loose tile were reset and missing tile replaced during the rehabilitation of the structure in 1962.

PART 2: INSPECTION

2-1 FREQUENCY: The ceramic mosaic floor in Room 101 is to be inspected each spring.

2-2 GUIDELINES:

- A. Look for loose, missing, or broken tiles.
- B. Look for open joints.
- C. Look for evidence of burns or damage from improper cleaning.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. During the period the library is open, the ceramic mosaic floor is to be dry mopped daily.
- B. In the early spring and late summer, the ceramic mosaic tile is to be cleaned.

3-2 GUIDELINES:

- A. Dry Mopping: Dry mopping requires a dust mop furnished with a treated pad to hold the dust, a radiator brush, and a dust pan. When dry mopping, only lift the mop from the floor when it is necessary. Likewise, plan dry mopping so as to require as few steps as possible. Use the radiator brush to reach areas not covered by the dust mop.
- B. Cleaning: Cleaning of the floor tile requires two sponges, a bucket, a non-yellowing wax, and a buffing machine. Clean the tile with a sponge and warm water. Dry immediately. Wax the tile with a non-yellowing wax. Buff wax.

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the wood balcony floor in Room 101 are the subject of this section.

PART 2: INSPECTION

2-1 FREQUENCY: The balcony floor in Room 101 is to be inspected quarterly.

2-2 GUIDELINES:

- A. Look for warped, cupped, or loose boards.
- B. Look for slivers, cracks, or loose knots.
- C. Look for evidence of water or other damage from improper cleaning, condensation, or wood decay.
- D. Look for marks caused by furniture or high heels.
- E. Check for squeeks.
- F. Look for raised or loose nails.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. During the period the library is open, the balcony floor is to be dry mopped weekly.
- B. Each spring, examine the condition of the wax surface. If necessary, remove wax and rewax.

3-2 GUIDELINES:

- A. Dry Mopping: A dust mop furnished with a treated pad to hold the dust, a radiator brush, and a dust pan are required for dry mopping. When dry mopping, only lift the mop from the floor when it is necessary. Likewise, plan dry mopping so as to require as few steps as possible. Use the radiator brush to reach areas not covered by the dust mop.

B. Wax Stripping: To strip paste wax from the wood strip flooring, use a coarse cloth saturated in turpentine. If dirt spots remain, scrub lightly with a piece of "000" steel wool. Change the cloth or steel wool when they become clogged with old wax. Be sure to store all soiled cloths in a metal safety container to guard against combustion. Likewise since both turpentine and the wax are flammable, observe safety rules. Personnel should not smoke in the area and should make sure the room is well ventilated.

C. Waxing: Clean cloths, a bucket, and paste wax (Butchers Wax) are required for waxing of wood floors. To wax the flooring, wet a soft, clean cloth. After wringing out the cloth, place a small amount of paste wax on the cloth. Wipe the wax over the floor leaving a thin and even coating. Remember, it is not necessary to wax right to the baseboard since the buffing operation will spread the wax to the edges of the room in every place except the inside corners. After polishing, sweep the floor to pick up stray wax grains that are loose on the floor.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to preserve the painted surfaces are the subject of this section.

1-2 RELATED SECTIONS: Millwork - Section 06220; Wood Shutters and Blinds - Section 06222; Gutters and Downspouts - Section 07631; Skylights - Section 07810; Wood Doors - Section 08210.

1-3 PREVIOUS WORK: During the 1962 rehabilitation of the structure, all appropriate surfaces were painted. Specifications for the work called for paints and stains to be manufactured by Pratt and Lambert, Inc. or approved equal according to the following schedule:

A. Exterior Woodwork: Old woodwork was to have received one coat of P & L House Paint Exterior Primer and one coat of P & L Vendura Trim and Shutter Finish. New woodwork was to have received one coat of P & L House Paint Exterior Primer and two coats of P & L Vendura Trim and Shutter Finish.

B. Interior Woodwork: New woodwork was to have received one coat of Fillex with each gallon thinned with 1/2 gallon mineral spirits, one coat of P & L oil stain to match existing, and one coat 38" Pale Trim Varnish Dull.

C. Plaster Ceiling: The ceiling was to have received one coat of Vapex Wall Primer and two coats of Lyt-all Flowing Flat.

PART 2: INSPECTION

2-1 FREQUENCY: Inspections of paint surfaces are to be included in the inspection of individual items.

2-2 GUIDELINES:

A. Look for soiling, in which dirt collects on the surface.

B. Look for flatting, in which the gloss disappears.

C. Look for chalking, in which the surface becomes powdery and the accumulated dirt is at least partly thrown off leaving the surface dull but fairly clean.

D. Look for fissuring: either checking, in which small superficial cracks eventually penetrate to the wood; or cracking, in which the fissures pass through to the wood almost immediately.

E. Look for disintegration: either crumbling, which develops from checking and causes small fragments cut off by checking to fall away; or flaking, in which the small scales caused by cracking curl up at the edges, and finally fall away.

PART 3: MAINTENANCE

3-1 FREQUENCY: Painting is to be kept to a minimum so as to reduce paint build-up. Written approval from the Regional Historical Architect is required before any painting is to begin.

3-2 GUIDELINES:

A. Exterior Painting Useful Life: The useful life of exterior surfaces is based on vertical surfaces fully exposed to the weather being the determinant of major repainting requirements. Some minor surfaces such as window sills and other horizontal surfaces are subject to more rapid paint wear and may have to be painted more frequently. On the other hand, parts of buildings that are sheltered from sun and rain by over-hanging eaves, by proximity to other buildings, or by reason of northern exposure hold their paint longer than the more severely exposed parts. These sheltered parts should be painted less often.

B. Interior Painting Useful Life: The useful life of interior painting is determined by mechanical abrasion, the wear of repeated washing, or discoloration by stains or dirt not readily removed by washing. The useful life is therefore highly variable and must be determined for individual cases.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required for the maintenance of the heat exchanger are the subject of this section. Steam is supplied to the exchanger from an oil fired boiler in the Carriage House.

1-2 RELATED SECTION: Humidifier - Section 15781.

PART 2: INSPECTION

2-1 FREQUENCY: The heat exchanger is to be inspected monthly. The inspection should be carried out by a qualified heating contractor through an inspection/maintenance contract.

2-2 GUIDELINES:

- A. Check all moving parts, lubricate as required.
- B. Check operating pressure and temperature of the various systems and make adjustments as required.
- C. Check all equipment oil levels and maintain as required.
- D. Inspect and test all equipment and piping for leaks and repair if necessary.
- E. Inspect and adjust all controls including the automatic temperature controls.
- F. Check all motors and bearings.
- G. Check all electrical connections, clean and tighten as required.
- H. Inspect and adjust all valves and dampers.
- I. Inspect and adjust tension of all belts, replace as required.
- J. Perform visual inspection of all mechanical connections and tighten bolts, screws, nuts, and connection devices as required.
- K. Inspect and clean all coils, screens, and strainers as required.

L. Report in writing to the Superintendent any major defects which need repair.

M. All additional preventive maintenance required for the various systems shall be rendered by Contractor as necessary or as directed by Park Superintendent.

PART 3: MAINTENANCE

3-1 FREQUENCY:

A. The temperature in the library is to be maintained at 50° Fahrenheit.

B. Repairs to the heating system are to be made as required and should be handled through the inspection/maintenance contract.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to maintain the humidifier which is located in the heating duct of the exterior vault are the subject of this section. Installed in 1967, the humidifier is a "Humid-Aire" by Hamilton Humidity, Inc., model No. FH 300-B.

1-2 RELATED SECTION: Heat Exchanger - Section 15730.

PART 2: INSPECTION

2-1 FREQUENCY: The humidifier is to be inspected monthly. The inspection should be carried out by a qualified heating contractor through an inspection/maintenance contract for the heating system at the park.

PART 3: MAINTENANCE

3-1 FREQUENCY:

- A. Relative humidity is to be maintained at 40 percent.
- B. Drain the reservoir of the humidifier monthly.
- C. Repairs to the humidifier are to be made as required and should be handled through the inspection/maintenance contract.

END

PART 1: GENERAL

1-1 DESCRIPTION: Inspection and maintenance procedures required to maintain the electrical system are the subject of this section.

1-2 PREVIOUS WORK: During the 1962 rehabilitation of the structure, the connection for electric power for the interior of the building was changed to the heating vault and installed in the cupboard where the cold air return is.

PART 2: INSPECTION

2-1 FREQUENCY: The electrical service and distribution system is to be inspected quarterly. It is recommended that the park contract with a qualified electrician to conduct this inspection.

2-2 GUIDELINES:

A. Where wiring and electrical equipment are not isolated by conduit or other suitable enclosure, check that tools, materials, or other objects are kept where accidental contact with wiring or current carrying parts cannot occur.

B. Where barrier guards are used in place of enclosures, check to see that they are in place and in good condition. If metal guards are used that can be charged due to leakage, contact with live parts because of chafed insulation, or otherwise, make sure they are grounded.

C. Check insulation on open wiring for deterioration caused by age, abrasion, moisture, oil, heat, or other causes.

D. Check open wiring to see that it is properly supported without excessive sag between points of support and that it does not come in contact with grounded pipes or equipment.

E. Examine all lighting fixtures for grounded connections. Report all of those found to be undergrounded.

PART 3: MAINTENANCE

3-1 FREQUENCY: Repairs to the electrical service and distribution system are to be made by a qualified electrician. The

electrician should not remove any wiring or make changes until the work has been approved by the Regional Historical Architect.

END

