

Project Manual

Miscellaneous Building and Site Repairs

at

TIPTON-HAYNES
Johnson City, Tennessee

August 21, 2015

Tennessee Historical Commission
Major Maintenance Work Program



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PART 1 - GENERAL

1.01 SCOPE OF THE WORK

- A. Tipton-Haynes is a nationally important historic site. As such, the Contractor, his/her subcontractors and vendors shall take the utmost care to protect the structures and its grounds. The Contractor shall also take all necessary precautions to protect all historic building materials to eliminate damage to those materials.
 - 1. See also Item 1.09 of this document.
- B. Requirements of the Work are contained in the Contract Documents and include cross references herein to published information, which is not necessarily bound therein.
- C. The Work of this Contract shall include the furnishing of labor, equipment, materials, tools, construction equipment and machinery, storage, transportation, insurance, taxes, superintendence, coordination and miscellaneous services required for the construction and completion of the Work, whether temporary or permanent and whether or not incorporated into the Work. All work shall be performed in strict accordance with the Contract Documents.
- D. Due to the age of these structures, it assumed that all paint is lead-based paint. The Contractor shall take all necessary precautions as identified by authorities having jurisdiction for protecting its workers and the public.
- E. General Verbal Summary: Without force and effect on requirements of the Contract Documents, the description of the Work of the Contract can be summarized as follows:
 - 1. Main House
 - a. Install UV film protection on the interior of all window panes
 - b. Remove the rear entry door and plane the edges to allow for free movement. Repaint the edges of the door and frame where repaired to match similar adjacent surfaces (note: may require decorative painting). See Illustration Nos. 1 and 2.
 - c. Paint the exterior wall that contains the rear door (where currently painted "white") from room corner to room corner and from ceiling to top of base. Match the existing color and sheen. Scrape all loose and flaking paint. Sand the edges of the remaining paint at the joint with raw wood and fill as needed for a smooth transition. See Illustration No. 3.
 - d. Inspect the wood ceiling near the same rear door for rot. Remove all deteriorated wood ceiling planks and install new ones where required. Match the existing wood species, size, shape and surface texture.

Reattach the loose diffuser grille to the ceiling. Paint the entire ceiling in this room to match the existing paint color and sheen. See Illustration Nos. 4 and 5.

- e. Remove the cupped wood floor boards at the rear door. Replace with new wood boards of same wood species, size, shape, surface texture, varying widths, and length. "Tooth in" new boards to fit original condition length. Coordinate extent of replacement with Owner's Representative. Stain the new flooring components to match the adjacent remaining original wood flooring (no sealer). See Illustration No. 6.

2. Law Office

- a. Install UV film protection on the interior of all window panes including sidelights and transom.

3. Joiner's Shop - Alternate #2

- a. Replace all exterior deteriorated wood siding, trim and front door plank components. Match existing size, shape, exposure and texture/saw marks. Match existing wood species using vintage material. Secure loose siding and trim using nails of similar type. See Illustration Nos. 7-11.

Replace deteriorated front wood floor band/purloin (at front door) with similar member of same wood species, size shape, notching, etc. Secure existing framing, etc. to new member as required.

- b. Paint exterior at all previously painted surfaces. All new replacement materials that replace items previously painted shall be primed on all 6 sides.

4. Necessary - Alternate #1

- a. Replace the existing exterior 2-part wood base on all sides with new 1-1/4" thick x 11" high (verify current field conditions for size) wood base that will cover the deteriorated ends of the existing vertical siding that will remain. See Illustration No. 12. New members shall be circular sawn. Prime all six surfaces of the new wood base.
- b. Paint all previously painted exterior surfaces and new replacement base.

5. Hog Pen – Alternate #1

- a. Replace deteriorated horizontal wood boards at window/door using vintage wood material of similar size, thickness and wood species. See Illustration No. 13.
- b. Replace missing board using vintage material at side hole chute of similar thickness, wood species. See Illustration No. 14.

- c. Clean the interior by removing all unused materials and remove all dirt, and dust using a medium-pressure rinse.
6. Barn – Alternate #1
- a. Repair the existing barn doors to operate (open and close) smoothly by relocating the existing hinge pins/rods and reattach (fill all holes of former peg holes with new vintage wood pegs). See Illustration No 15.

Replace the missing wood pegs on the sliding keepers of the barn doors using vintage material of similar species - approximate size of peg: 1-1/2" diameter and extending 4-5 inches beyond the existing sliding keeper/bolt. See Illustration No. 16. New wood pegs to extend into existing holes fully.

Where the ends of modern metal screws are visible to view on barn doors or their wood hardware, recess screws and install vintage wood pegs to cover recessed screws. Pegs to match size of pegs on other door handle.

Install vintage wood pegs in all open holes of the barn doors and their wood hardware. Typical.
 - b. Secure the ladders to the lofts with new wood pegs as needed. See Illustration Nos. 17 and 18.
7. Corn Crib – Alternate #1
- a. Replace all deteriorated/rotten floor boards (approximately 8) in the open "dogtrot" section between log pens using vintage material of similar wood species, size, shape and surface texture. The existing floor boards are approximately 2-1/2 inches thick and 9'-0" long. The widths vary, but the widest is approximately 9 inches. The top surface is adzed. Secure using square nails. See Illustration No. 19.
8. Visitor Center
- a. Visitor Center
 - 1) Install new signage on front of building. See the attached Drawing A2.0.
 - 2) Over the work area below, remove the wood framed screen over the roof trench and asphalt shingles in the immediate area. Install a new wood framed roof cricket between gable roofs with plywood decking using self adhering roofing membrane and matching asphalt shingles. Extend the sheet metal exhaust fan as needed for the installation of the new cricket. Modify the existing metal gutter as indicated on the attached Drawing A2.1. See also Illustration No. 20.

- 3) Library Exterior Door: Remove the existing storm door and replace with a new storm door. Storm door shall also have a section of double hung tempered glass with a retractable insect screen in front of the lower section of glass. Color: brown. See Illustration No. 21.
 - 4) Install new rough sawn cedar closure board at top of wall with diamond- shaped vents (backed with black galvanized hardware cloth; vents spaced between every other rafter tail) on rear elevation of log section where existing galvanized hardware cloth currently exists. Cut new closure board to fit neatly between the rafter tails with least number of board cuts possible. See Illustration Nos. 22 and 23.
- b. Apartment:
- 1) Second Bedroom
 - a) Provide new vinyl window blinds to match existing.
 - 2) Remove all existing storm windows and doors with new custom size prefinished aluminum storm windows and doors. Color: brown. New storm windows shall be double hung with tempered glass and an aluminum insect screen in front of the lower sash. The new storm doors shall also have a section of double hung tempered glass with a retractable insect screen in front of the lower section of glass.
 - 3) Inspect all existing wood window sash, frames and sills for rot/deterioration and replace as needed with western red cedar, cypress or other naturally decay resistant materials. Finger jointed material is NOT permitted. Prime all six (6) sides of replacement materials. Replace all broken glass and deteriorated glazing compound. See Illustration No. 24.
 - 4) Paint the wood window sash and their frames and the door frames brown to match the new storm windows and doors.
 - 5) Rework the existing built-in roof gutter system on the entry facade of the apartment to prevent water from accessing the gutter. See the attached Drawing A2.2. Install new wood blocking and exterior grade plywood decking to fill in the gutter and cover with sheet metal flashing, roof felt and asphalt shingles to match the existing shingles (Note: repairs include filling in the built-in gutter under the porch roof extension). Replace any deteriorated wood materials on the eave as needed. See Illustration No. 25. Match existing wood materials and finish.

Install new half round pre-finished aluminum gutters to either side of the porch roof extension and round downspouts at each end of the apartment elevation. Slope gutter to drains. Turn the downspouts out at the bottom to run the water away from the

structure. See Illustration No. 26.

- 6) At the porch roof extension over the apartment entry door, remove the existing roof finishes down to the wood roof deck. Replace any deteriorated wood materials of the porch roof extension and its supports. Match the existing materials and finish.

Install new self-adhering roof membrane over the wood decking and run under the asphalt shingles above the joint of the porch roof extension and main roof above a minimum of 18-inches. Install new asphalt shingles matching the existing adjacent materials. Install a PVC roof diverter on top of the porch roof extension to divert water away from the apartment entry door. See the attached Drawing A2.3 and Illustration Nos. 26 - 27.

- 7) In the attic, install insulation at the joint between the ducts to the diffusers at each location to prevent condensation.

12. Paint (General)

- a. Where specific areas of repainting are noted above and the paint is flaking or not adhered, remove the loose or flaking paint as needed and sand the surface to provide a smooth transition between the top of the paint and the exposed wood.

Inspect the wood surface for stability. Where the wood is soft, but no greater than 1/32-1/16-inch deep, apply marine spar varnish diluted 50-percent with mineral spirits before priming and painting. Severely weathered wood may require two applications of the diluted marine spar varnish to harden properly.

13. Site

- a. Buffalo Road Gate:

- 1) Remove existing log gate posts and gate at Buffalo Road. See Illustration No. 28. Coordinate location of new gates with the Owner Representative. Remove trees in the area of the new gate to install and operate gates. Cut to ground. Do not grind stumps.

Coordinate locations of new gate posts with State Department of Archaeology. Install new cedar log posts for new gate. Insert into ground minimally 42 inches (**see Item 1.06.C this section for requirements regarding soil disturbance**).

Fill remaining hole with concrete. Compact soil around new gate post and cover top of concrete minimally 4 inches with sifted topsoil.

- 2) Provide a new (cedar) 2- leaf wooden gate with gate chain, Knox brand padlock (keyed to the Johnson City, TN Fire Marshal's key) and strap hinges with screw pintles. **Gate shall not be painted.** Hardware to be painted black. See the attached Drawing A2.4.

b. Visitor Center

- 1) Relocate three ornamental trees in front of Visitor Center and replant in location to be determined by the Owner Representative. Fill holes that the trees were removed from (**see Item 1.06.C this section for requirements regarding soil disturbance**). See Illustration No. 29.
- 2) Remove sign at right corner of Visitor Center that reads: (top sign) "No Parking. Fire Lane" and (bottom sign) "Visitor Center." Turn over to the Site Director. Also remove bird house and its pole left of the front flag pole. Fill hole with top soil. Turn over bird house to Site Director. See Illustration No. 30.
- 3) Remove existing plank fencing at corner of Visitor Center. Install new wood fence screen and wooden gates, new gate posts, gate chain, Knox brand padlock (keyed to the Johnson City, TN Fire Marshal's key) and strap hinges with screw pintles. **Gate shall not be painted.** See the attached Drawing A2.5.

- c. Install Owner-provided State Historic Site sign in location directed by the Owner's Representative. Coordinate sign's foundation excavations with Owner's Representative and Tennessee Department of Archaeology. Fill holes with concrete and cover with sifted topsoil, seed and straw.

E. Historic Site Responsibilities

1. The Historic Site shall be responsible for moving and/or protecting furnishings and objects that are in the way of work to be completed under this Contract. Historic Site is to be notified if any furnishings or objects are in the way with sufficient time to remove them.

- F. The general requirements of the Work are contained in the attached Specification sections.

1.02 QUALITY ASSURANCE

- A. Contractor to provide knowledge of and ability to conform to the Secretary of Interior Standards for the Treatment of Historic Properties by providing evidence of having successfully performed similar work.

1.03 OWNER'S AND SITE REPRESENTATIVES

A. Owner's Representative

1. The Owner's Representative for this project will be the Tennessee Historical Commission's Historic Preservation Specialist. The Owner's Representative is responsible for the administration of this contract including responses to Contractor questions and other issues requiring resolution during the course of the project.

B. Historic Site Representative

1. The Historic Site Representative will be a single person designated at the site to represent the site for the duration of the project.
2. The Historic Site Representative will be responsible for monitoring the progress of the Work with respect to the Contractor's care and protection of the historic structures during the course of the Contractor's operations as well as Contractor's access to and use of portions of the site or the site's facilities.
3. The Historic Site Representative will coordinate site interpretation and activities with the needs of the Contractor for access to various parts of the site during the course of the project.
4. The Historic Site Representative will be responsible for communicating any questions or issues arising during the course of the Project.

1.04 CONTRACTOR USE OF PREMISES

- A. Coordinate use of the premises with the Historic Site Representative. Access to site, site facilities, utilities, parking, materials storage, etc., shall be coordinated with the Historic Site Representative.
- B. Do not unreasonably encumber the site during the execution of the Work of this Contract. The Work will be done in such a manner that it will not hinder in any way the day-to-day operations of the site. Coordinate work schedule and use of premises (parking, utilities, etc.) with Historic Site Director. The site will remain open to the public and may have special events or other activities that may affect the Contractor's work schedule. Within ten days receipt of order, the Historic Site Representative will provide a list of days or times when work should not take place.
- C. Contractor and his employees to wear appropriate clothing and act in an appropriate manner toward staff and visitors.
- D. Assume full responsibility for the protection and safekeeping of products stored on the premises.
- E. All tools shall be stored and used in a secure manner. Walkways and footpaths shall be clear of debris, rubble and tools when the Work is not underway and at the end of each work day.

- F. Site will make available electricity and water to the Contractor for the completion of the Work.
- G. Contractor shall be responsible for installation/maintenance of his own telephone communications for use of Contractor and subcontractors.

1.05 SITE INSPECTION

- A. The Contractor acknowledges that he has satisfied himself as to the nature and location of the Work, the general and local conditions, particularly those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads, uncertainties of weather, ground water table or similar physical conditions at the site, the conformation and condition of the ground, the character, quality and quantity of surface and substrate materials to be encountered, the character of equipment and facilities needed prior to and during the prosecution of the Work and all other matters which can in any way affect the Work of the cost thereof under this Contract.

1.06 REQUIREMENTS FOR NEW AND EXISTING CONSTRUCTION

- A. Exercise the utmost care to protect all existing utility lines from damage during the progress of the Work.
- B. Any portion of the existing buildings or existing utility services not included as part of this Contract or any portion of the Work damaged because of failure to provide the protection required shall be removed and replaced with historically appropriate matching materials and construction at the Contractor's expense. This Work shall be accomplished subject to the Owner's Representative.
- C. Any subsurface disturbance (digging or excavation) requires oversight by the State Department of Archaeology at State expense. The Contractor shall notify the Owner's Representative one week prior to any disturbance.**

1.07 REPLACEMENT AND REPAIR OF ANY STRUCTURES THAT HAVE BEEN DESTROYED IN THE PROGRESS OF THE WORK

- A. Because of the installation of the new items, it may become necessary to remove portions of the existing site improvements, equipment, and/or utility services. Unless specifically noted otherwise in this Project Manual, the Contractor shall be responsible for replacing, in a condition of identical appearance, construction, design, working order, and strength as its previous state any such portion of the existing site improvements and/or utility services so required to be disturbed. The replaced item shall meet the approval of the Owner's Representative before final approval of the Project is given.

1.08 OWNER OCCUPANCY

- A. The premises will be occupied during the entire construction period and the site's normal operations will be conducted by site personnel. The greatest of attention and care shall be administered in the handling of the visiting public.
- B. Cooperate with the Historic Site Representative in scheduling of operations to minimize conflict and to facilitate site usage.
- C. Special Events: The sites may during the course of the Work have scheduled special events that will result in the Contractor being required to suspend operations for a specific period of time. The Historic Site Representative is responsible for providing the Contractor with a schedule of events within ten days of the Contractor receiving Receipt of Order. The schedule may be modified by the Historic Site Representative only when the Contractor has been given ten days notice of such a schedule change.

1.09 HISTORICAL SIGNIFICANCE

- A. The Contractor is to be aware that the existing structures and sites are of significant historical importance and all work shall be performed with due care and awareness by the Contractor's personnel and subcontractors. No cutting or removal of existing materials or surfaces shall be performed that are not specifically detailed or called for as part of the Work. Conduct of the Contractor's personnel and subcontractors while on site shall respect the rights of the visiting public. The Historic Site Representative or Owner's Representative retains the right to request the removal of any of the Contractor's personnel or subcontractors for any reason.

PART 2 - PRODUCTS (Not applicable).

PART 3 - EXECUTION (Not applicable).



Illustration No. 1: Main House – Rear Door.



Illustration No. 2: Main House – Rear Door - Decorative Graining at Frame Edge.

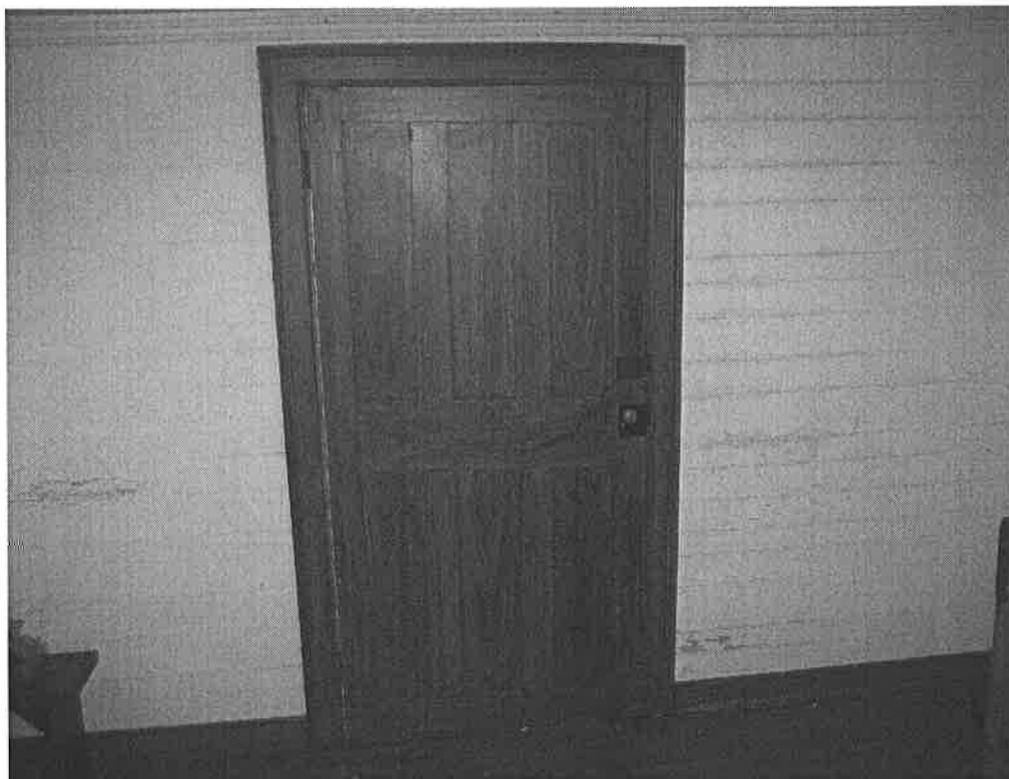


Illustration No. 3: Main House – Rear Door – Paint Wall Containing Door.



Illustration No. 4: Main House – Rear Entry Area – Replace Deteriorated Wood Clg.

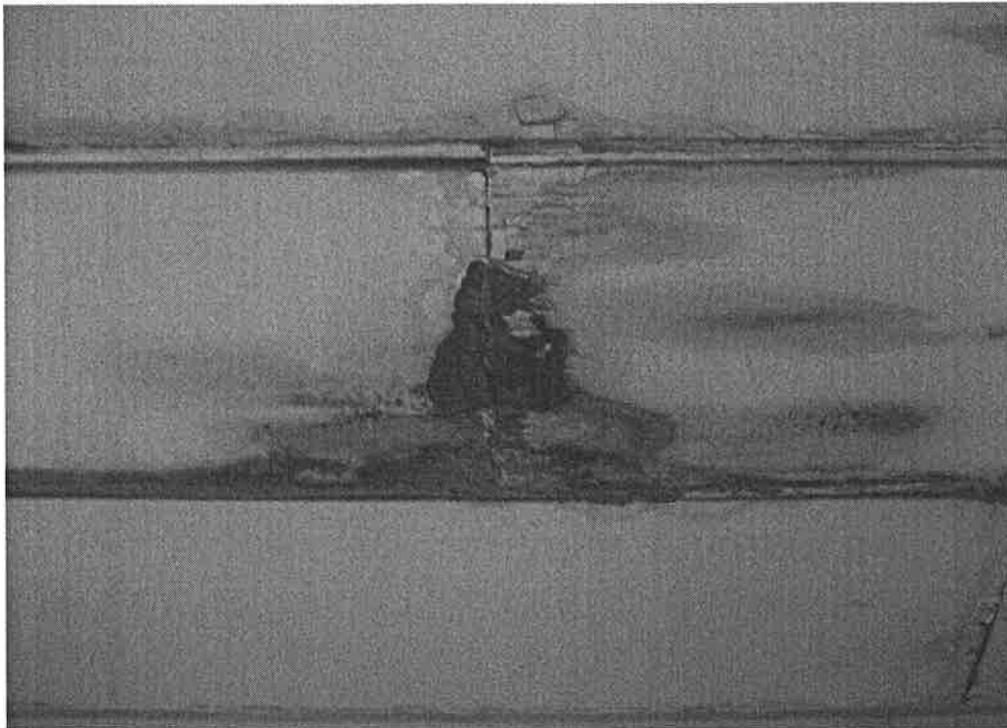


Illustration No. 5: Main House – Rear Entry Area – Replace Deteriorated Wood Clg.



Illustration No. 6 – Main House – Rear Entry - Replace Cupped Floor Boards

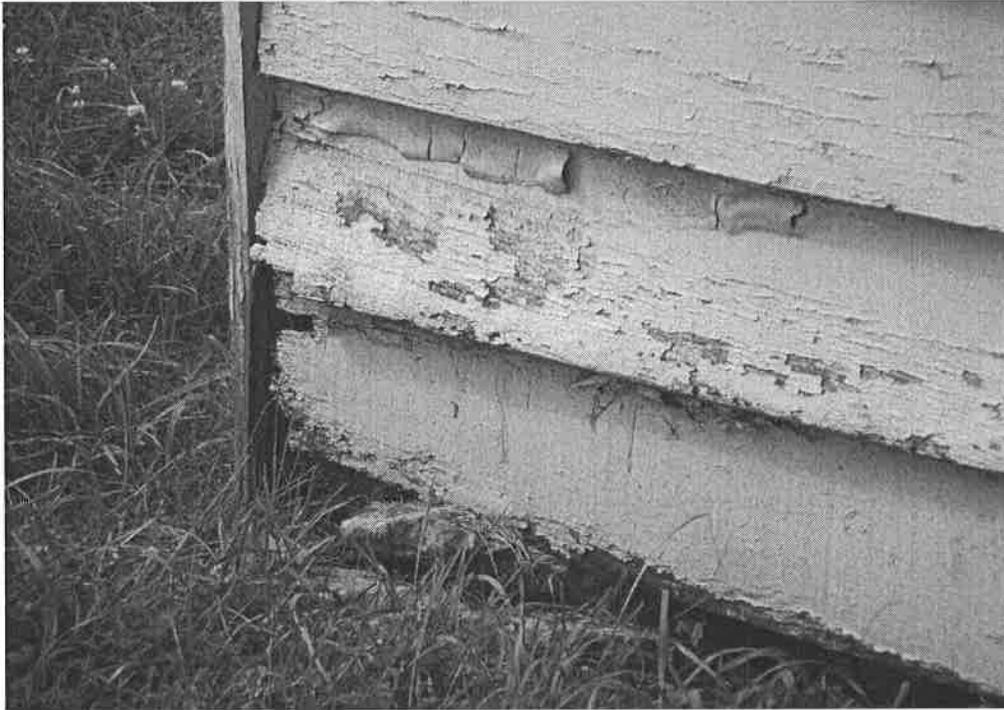


Illustration No. 7: Joiner's Shop: Replace All Deteriorated Wood Siding and Trim.



Illustration No. 8: Joiner's Shop: Replace All Deteriorated Wood Siding and Trim.

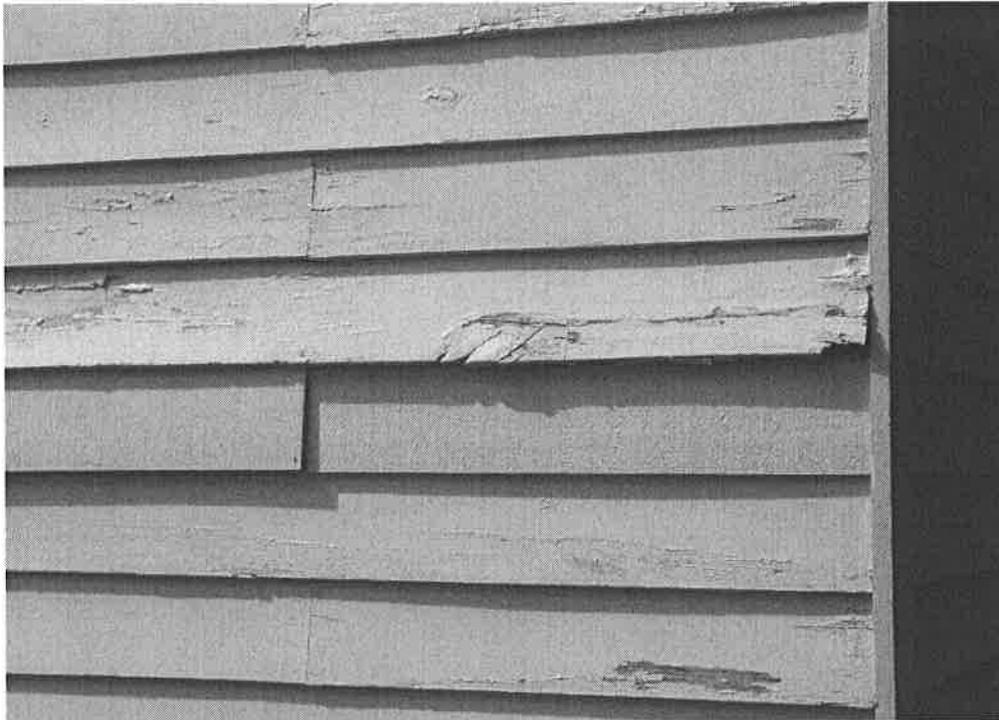


Illustration No. 9: Joiner's Shop: Replace All Deteriorated Wood Siding and Trim.

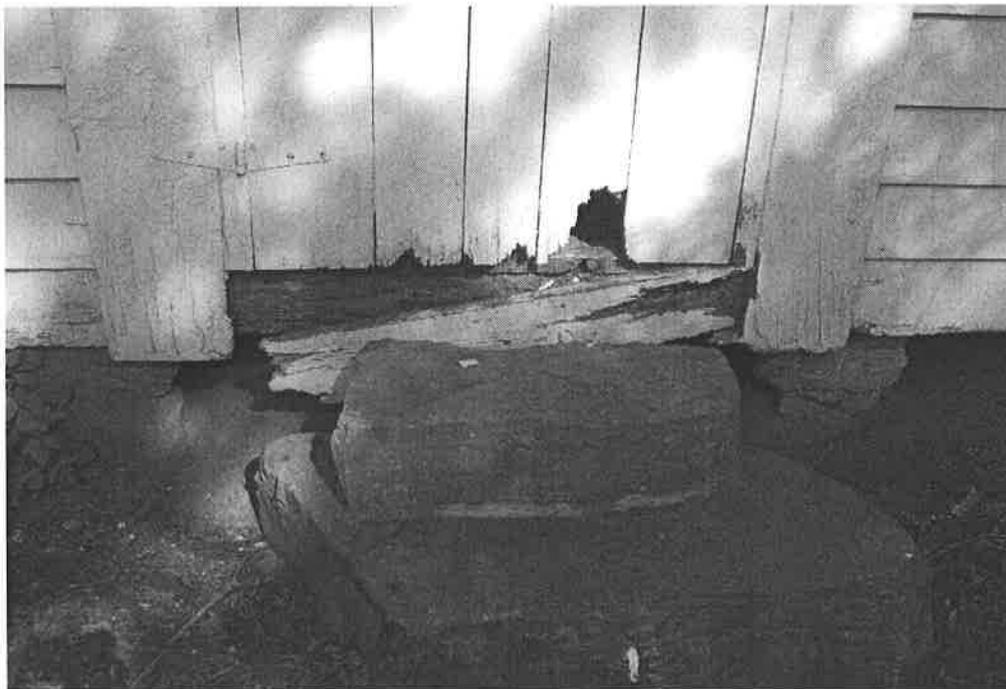


Illustration No. 10: Joiner's Shop: Deteriorated Wood Trim at Door and Door Sill.

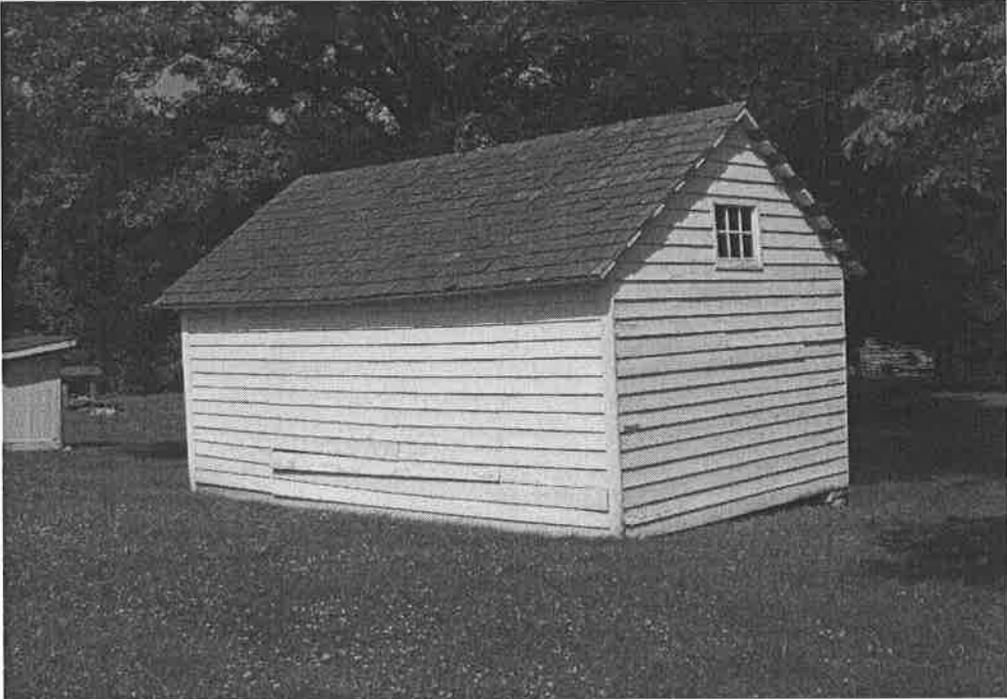


Illustration No. 11: Joiner's Shop: Replace all Deteriorated Exterior Wood Trim.

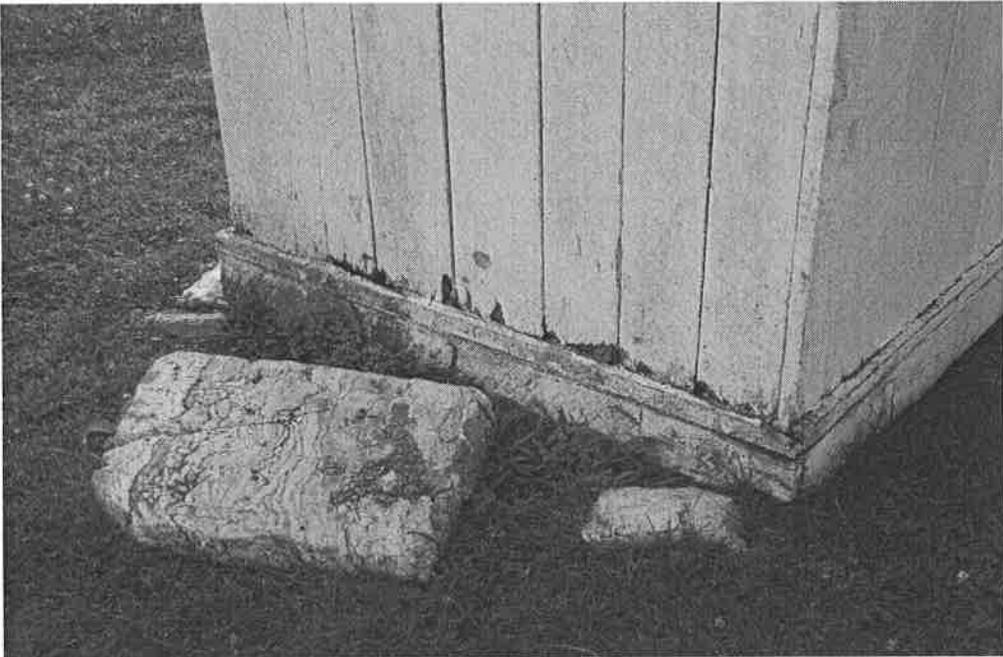


Illustration No. 12: Necessary: Replace the Wood Base.

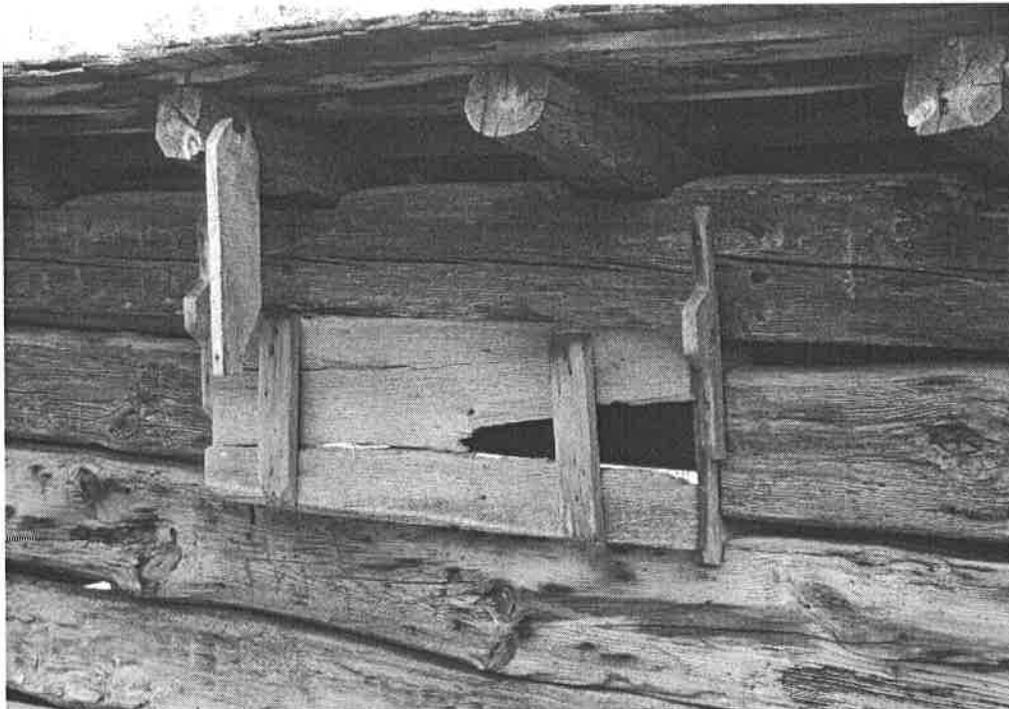


Illustration No. 13: Hog Pen: Replace Horizontal Boards at Window/Door.



Illustration No. 14: Hog Pen: Replace Missing Board at Side Chute.

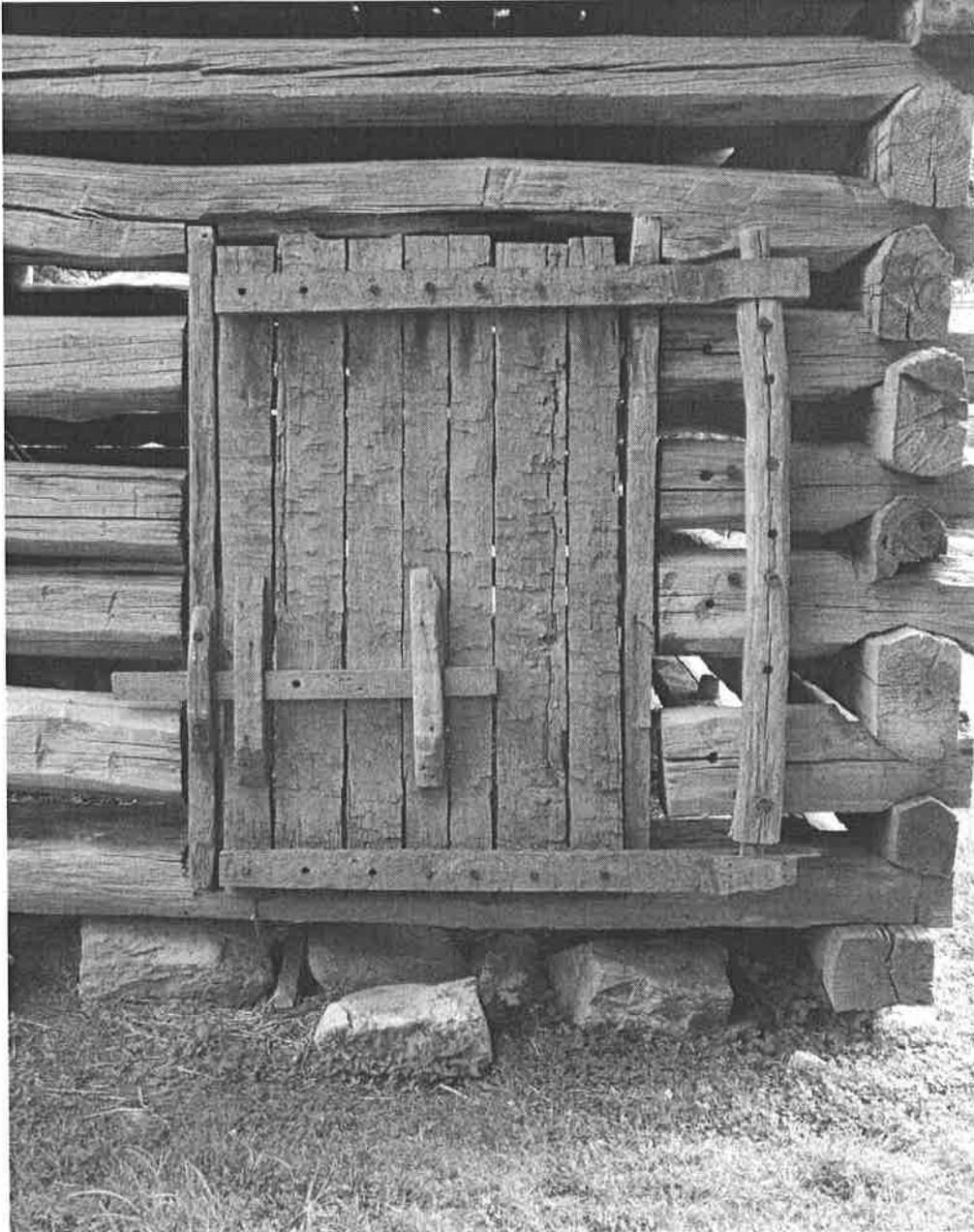


Illustration No. 15: Barn: Rework Door Hinges for Smooth Operation

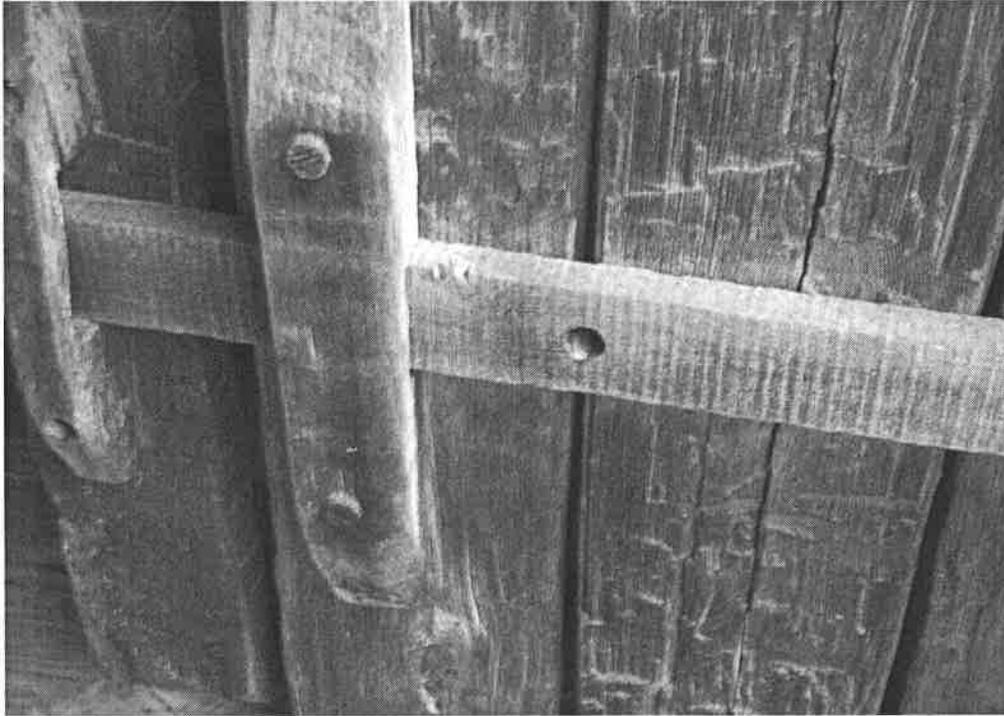


Illustration No. 16: Barn: Install New Wood Peg in Door Slider.



Illustration No. 17: Barn: Secure Ladders to Logs.

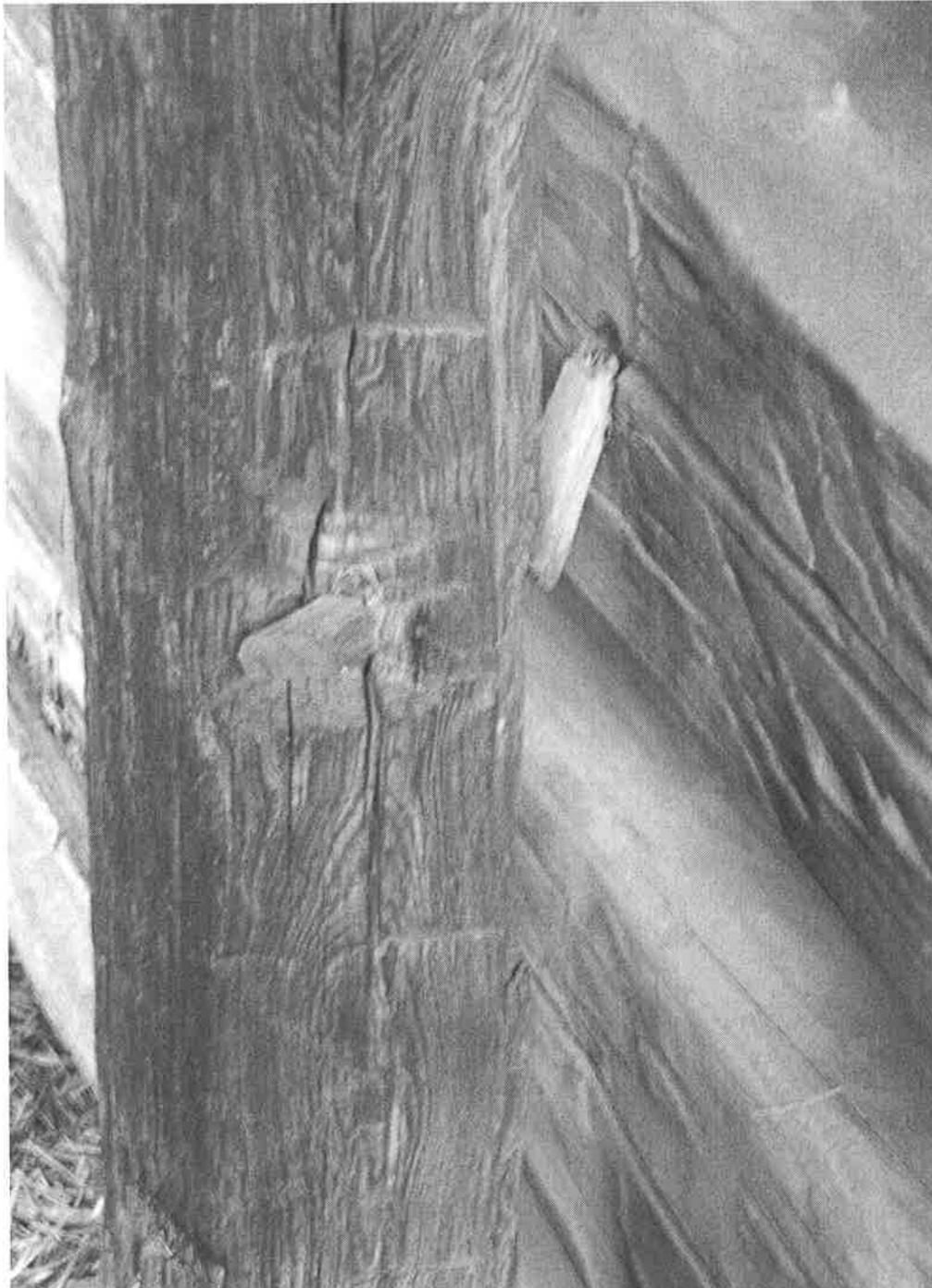


Illustration No. 18: Barn: Broken Peg at Ladder Rail.



Illustration No. 19: Corn Crib: Replace all Deteriorated Floor Boards in Dogtrot.



Illustration No. 20: Visitor Center Apartment: Remove Wood Framed Screen at Roof Drain. Install New Wood Framed Roof Cricket with Asphalt Shingles.



Illustration No. 21: Main House: Replace all Deteriorated or Cracked Wood Siding.



Illustration No. 22: Visitor Center: Remove Existing Hardware Cloth at Rear of Visitor Center Eave.

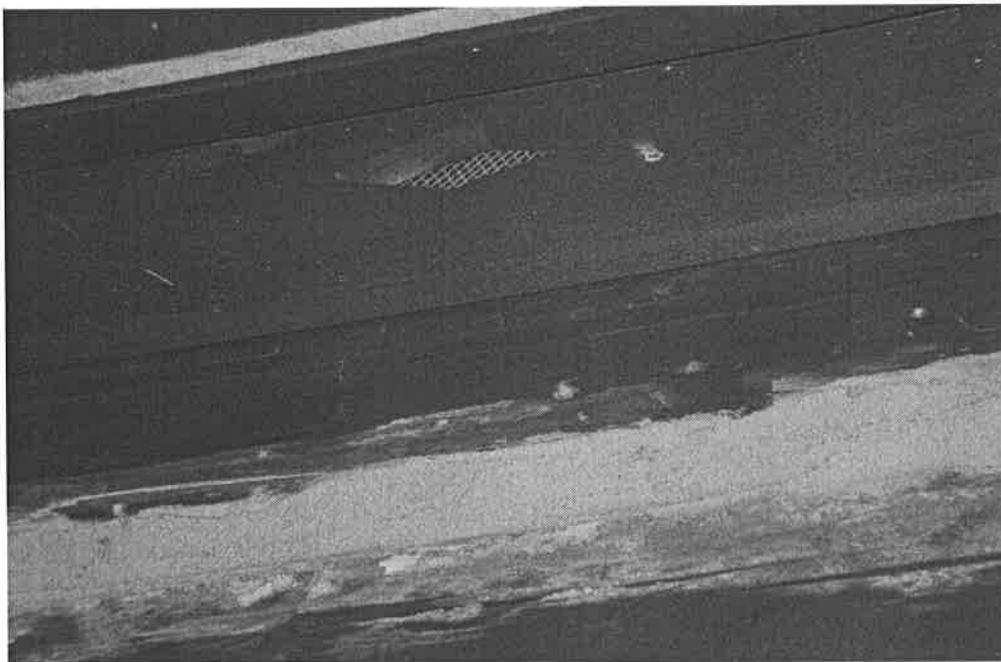


Illustration No. 23: Visitor Center: Install New Eave Closure Boards at Rear of Visitor Center Above Log Section Similar to These.



Illustration No. 24: Visitor Center Apartment: Replace Deteriorated Wood Window Sash and Frame Components. Replace Deteriorated Glazing Compound.

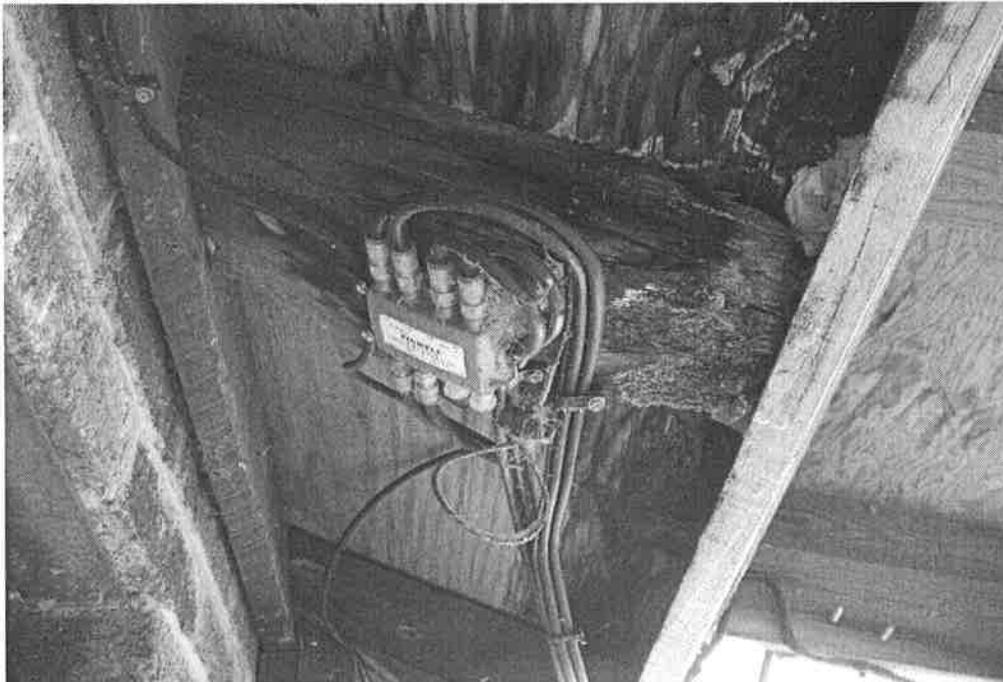


Illustration No. 25: Visitor Center Apartment: Replace Deteriorated Wood



Illustration No. 26: Visitor Center Apartment: Infill Old Gutter; Install New Gutter



Illustration No. 27: Visitor Center Apartment: Reroof "Porch" Extension



Illustration No. 28: Site: Install New Wood Entry Gate Posts and Gate.



Illustration No. 29: Site: Relocate Three Ornamental Trees as Directed.



Illustration No. 30: Site: Remove Sign and Post at Corner of Visitor Center

END OF SECTION 01 11 13

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section specifies administrative and procedural requirements for Alternates.
- B. Definition: An Alternate is an amount proposed by Bidders and stated on the Bid Form for certain construction activities defined in the Bidding Requirements that may be added to or deducted from Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems or installation methods described in Contract Documents.
- C. Coordination: Coordinate related Work and modify or adjust adjacent Work as necessary to ensure that Work affected by each accepted Alternate is complete and fully integrated into the project. Costs for each alternate shall include cost of related coordination, modification or adjustment.
- D. Notification: Immediately following the award of the Contract, prepare and distribute to each party involved, notification of the status of each Alternate. Indicate whether Alternates have been accepted, rejected or deferred for consideration at a later date. Include a complete description of negotiated modifications to Alternates.
- E. Schedule: A "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials and methods necessary to achieve the Work described under each Alternate.
 - 1. Include as part of each Alternate, miscellaneous devices, accessory objects and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.

PART 2 - PRODUCTS (Not Applicable).

PART 3 – EXECUTION (Not Applicable).

3.01 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Miscellaneous Items

1. Necessary: See Section 01 11 13 – Summary of Work in the specifications; Item 1.01.E.4 for scope.
2. Hog Pen: See Section 01 11 13 – Summary of Work in the specifications; Item 1.01.E.5 for scope.
3. Barn: See Section 01 11 13 – Summary of Work in the specifications; Item 1.01.E.6 for scope.
4. Corn Crib: See Section 01 11 13 – Summary of Work in the specifications; Item 1.01.E.7 for scope.

B. Alternate No. 2: Joiner's Shop: See Section 01 11 13 – Summary of Work in the specifications; Item 1.01.E.3 for scope.

END OF SECTION 01 23 00

PART 1 - GENERAL

1.01 SCOPE

- A. The Department of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* shall be considered as a part of this Contract.
- B. Copies of the *Standards and Guidelines* may be obtained from:

Tennessee Historical Commission
2941 Lebanon Road
Nashville, TN 37214
615-532-1550

1.02 PROJECT CONTACTS

- A. Owner's Representative

Ms. Martha Akins, Director of Historic Sites
Tennessee Historical Commission
2941 Lebanon Road
Nashville, TN 37214
615-532-1550 ext. 107

- B. Historic Site Representative

Ms. Penny McLaughlin, Director
Tipton-Haynes
PO Box 434
(2620 South Roan Street)
Johnson City, TN 37601
423-926-3631

PART 2 - PRODUCTS (Not applicable).

PART 3 - EXECUTION (Not applicable).

END OF SECTION 01 30 00

PART 1 - GENERAL

1.01 CODES AND REGULATIONS

A. The following are Regulatory Requirements that are typically used for State building Projects. Depending on the use of the building, other codes and regulations may also apply. This list is provided as a convenience to the Contractor and is not to be considered all inclusive of codes and regulations that may apply. The Contractor shall comply with all pertinent codes, standards, regulations and laws.

1. 2006 International Building Code
2. 2006 International Plumbing Code
3. 2006 International Gas Code
4. 2006 International Mechanical Code
5. 1995 CABO Model Energy Code and ASHRA 90
6. 2006 NFPA 101, Life Safety Code
7. 2010 ADA Standards for Accessible Design
8. 2011 Tennessee Elevator Code and its Supplements
9. 2007 Edition of Boiler and Unfired Pressure Vessel Inspection Law, Rules and Regulations.
10. Tennessee Chapter 0780-2-1, Electrical Installations.
11. Tennessee Equitable Restroom Act Rules and Regulations.

B. Other codes and regulations are listed below. This list is provided as a convenience to the Contractor and is not to be considered all inclusive of Codes and regulations that may apply. The Contractor shall comply with all pertinent codes, standards, regulations and laws.

1. The Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. National Park Service, Department of the Interior. Rev. 1990.

PART 2 - PRODUCTS (Not applicable).

PART 3 - EXECUTION (Not applicable).

END OF SECTION 01 41 15

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

- A. Specific administrative and procedural minimum actions are specified in this Section as extensions of provisions in the General Conditions and other Contract Documents. These requirements have been included for the special purposes as indicated. Nothing in this Section is intended to limit types and amounts of temporary work required and no omission from this Section will be recognized as an indication by the Owner's Representative that such temporary activity is NOT required for the successful completion of the Work and compliance with the requirements of the Contract Documents.

1.02 QUALITY ASSURANCE

- A. In addition to compliance with governing regulations and rules/recommendations of franchised utility companies, comply with specific requirements indicated and applicable local industry standards for construction work.

1.03 JOB CONDITIONS

- A. Establish and initiate use of each temporary facility at that time first reasonably required for proper performance of the Work. Terminate use and remove facilities at the earliest reasonable time, when no longer needed or when permanent facilities have, with authorized use, replaced the need.
- B. Install, operate, maintain and protect temporary facilities in a manner and at locations that will be safe, non-hazardous, sanitary and protective of persons and property and free of deleterious effects.

PART 2 - PRODUCTS

2.01 TEMPORARY UTILITY SERVICES

- A. Sites will provide water and electricity unless these services are abused, as determined by Historic Site Representative. Temporary services required include, not by way of limitation, telephone and any other services needed by the Contractor. Comply with service companies' recommendations on materials and methods, or engage service companies to install services. Locate and relocate services (as necessary) to minimize interference with construction and site visitation operations.

- B. Materials shall be new and shall be adequate for the purposes intended and shall not create unsafe conditions nor violate requirements of applicable codes.
- C. Water: Non-potable water shall be acceptable for industrial, cleaning and fire fighting purposes only.
- D. Enclosures: Furnish, install and maintain for the duration of construction all required tarpaulins, barricades, warning signs, and other temporary construction necessary for proper completion of the Work in compliance with all pertinent safety and other regulations.
- E. Access Provisions
 - 1. Provide temporary access elements as reasonably required to perform the Work and facilitate its inspection during installation. Comply with reasonable requests of governing authorities performing inspections.
- F. Access Roads and Parking Areas
 - 1. Repair damage caused by construction activities to finish paving course after possibility of damage from construction operations has passed.
- G. Site Operations: The sites will be open to visitors during the sites' regularly scheduled operating hours during the course of construction. Contractor shall work with the sites to provide safe access to the building for visitors.

2.02 SECURITY/PROTECTION PROVISIONS

- A. The types of temporary security and protection provisions required include, but not by way of limitation:
 - 1. Barricades.
 - 2. Personnel security program (theft protection).
 - 3. Warning signs/lights.
 - 4. Environmental protection.
- B. Provide facilities and services as necessary to effectively protect project from losses and persons from injury during the course of construction.
- C. Fire Protection
 - 1. Smoking is prohibited in and within the immediate vicinity of all historic structures.

2.03 TEMPORARY SUPPORT FACILITIES

- A. Provide all general services as may be reasonably required for proficient performance of the Work and accommodation of personnel at the site including Owner's Representative and Historic Site personnel. Discontinue and remove temporary support facilities and make incidental similar use of permanent work of the Project only when and in manner authorized by the Owner's Representative and, if not otherwise indicated, immediately before the time of Substantial Completion. Locate temporary support facilities for the convenience of the users and for minimum interference with construction activities.

2.04 HISTORIC SITE PROVISIONS

- A. Historic site will make available the following facilities and services:
 - 1. Sites for construction facilities, staging and construction personnel parking. This area is to be limited so as to cause the least amount of disruption to the site. Closed storage for new materials or for materials to be reused will not be available.
 - 2. Access to electrical and water connections.

PART 3 - EXECUTION

3.01 REMOVAL

- A. Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the Work. Remove all such temporary facilities and controls as rapidly as the progress of the Work will permit.

3.02 CLEANING DURING CONSTRUCTION

- A. Hazards Control
 - 1. Store volatile wastes in covered metal containers and remove from premises daily. Prevent accumulation of wastes, which create hazardous conditions. Provide adequate ventilation during use of volatile or noxious substances. Conduct cleaning and disposal operations to comply with local ordinances, state laws and anti-pollution laws.
 - a. Do not burn or bury rubbish and waste materials on project site.
 - b. Do not dispose of wastes into streams or waterways.

- B. Care shall be taken by all workmen not to mark, soil, or otherwise deface finished surfaces. In the event that any finished surface becomes defaced in any way by mechanics or workmen, the Contractor responsible shall clean and restore such surfaces to their original condition.
- C. Handle materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.
- D. Schedule cleaning operations so that dust and other contaminants resulting from the cleaning process will not fall on adjoining surfaces.
- E. Temporarily place waste materials, debris and rubbish in appropriate containers. Remove these materials from the site and legally dispose of at public or private dumping areas off property. Daily removal will not be required, but unsightly accumulation of waste, debris and rubbish is not acceptable. Sites are to be clean and free of debris at completion of the work at each respective site.

END OF SECTION 01 52 00

PART 1 - GENERAL

1.01 SCOPE

- A. At completion of the Work, complete the following to leave the Project clean and ready for acceptance or occupancy.
1. In preparation for Substantial Completion or occupancy, conduct Final Inspection of sight-exposed exterior and interior surfaces.
 2. Remove grease, dust, dirt, stains, labels, shoeprints, and other foreign materials from sight-exposed exterior finished surfaces.
 3. Repair, patch and touch-up marred surfaces to specified finish to match adjacent surfaces.
 4. Broom clean paved surfaces: rake clean other surfaces of grounds.
 5. Recleaning will not be required after the work has been inspected unless later operations of the Contractor, in the opinion of the Owner's Representative makes recleaning of certain portions necessary.

PART 2 - PRODUCTS (Not applicable).

PART 3 - EXECUTION (Not applicable).

END OF SECTION 01 71 00

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Replacement front wood floor band/purloin (at front door) of the Joiner's Shop.
 - 2. Match size and thickness of member being removed.
 - 3. Match surface texture of timber being removed.

1.03 DEFINITIONS

- A. Heavy Timber: Rectangular solid-wood framing members 5 inches nominal and larger in both dimensions.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who has completed heavy timber construction similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. Timber Standard: Comply with AITC 108, "Standard for Heavy Timber Construction."

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Schedule delivery of heavy timber to avoid extended on-site storage and to avoid delaying the Work.
- B. Keep materials under cover and dry. Protect from weather and contact with damp or wet surfaces. Provide for air circulation within and around stacks and under temporary coverings.

PART 2 - PRODUCTS

2.01 HEAVY TIMBER, GENERAL

- A. General: Comply with DOC PS 20, "American Softwood Lumber Standard," and with applicable grading rules of inspection agencies certified by ALSC's Board of Review.
- B. Grade Stamps: Provide heavy timber with each piece factory marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, species, grade, moisture content at time of surfacing, and mill.
 - 1. For exposed heavy timber, apply grade stamps to surfaces that will not be exposed to view or omit grade stamps and provide certificates of inspection issued by inspection agency.

2.02 TIMBER FRAMING

- A. Timber Grade: Select Structural.
 - 1. Species: Match existing.
 - 2. Timber Grade: No. 1.
- B. End Sealer: Manufacturer's standard, transparent, colorless wood sealer that is effective in retarding the transmission of moisture at cross-grain cuts and is compatible with indicated finish.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General: Remove existing timber and shore remainder of wall as required to maintain lines and levels until permanent supporting members are in place.
- B. Handle and temporarily support heavy timber to prevent surface damage, compression, and other effects that might interfere with indicated finish.
- C. Notch to match member removed. Secure in similar method to beams to either side and any beams that tie into this beam.
- D. Coat crosscuts with end sealer.

3.02 ADJUSTING AND CLEANING

- A. Repair damaged surfaces and finishes after completing erection. Replace damaged heavy timber if repairs are not approved by Designer.

END OF SECTION 06 13 00

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Replacement wood members to match existing. Unless noted otherwise, the Contractor shall match the existing wood species of the items being replaced.
 - 2. Prime all six (6) sides of new materials that replace previously painted materials.
- B. Site Gate: western red cedar.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 9 Section "Painting" for field finishing of architectural woodwork.

1.03 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing architectural woodwork similar to that indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to product required units.
- B. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of exterior architectural woodwork, construction, finishes, and other requirements.
 - 1. Provide AWI certification labels or compliance certificate indicating that woodwork complies with requirements of grades specified.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Delivery and Storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels. Provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.

1.05 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation of exterior woodwork only when existing and forecasted weather conditions permit work to be performed and at least one coat of specified finish to be applied without exposure to rain, snow, or dampness.
- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed and indicate measurements on Shop Drawings.
 - 2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating wood work without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

PART 2 - PRODUCTS

2.01 MATERIALS, GENERAL

- A. Lumber Standards: Comply with PS 20 "American Softwood Lumber Standard" for lumber and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee Board of Review.
- B. Inspection Agencies: Inspection agencies and the abbreviations used to reference them with lumber grades and species include the following:
 - 1. WWPA – Western Wood Products Association.
- C. Grade Stamps: Provide lumber with each piece factory-marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading, grade, species, moisture content at time of surfacing, and mill.
 - 1. For exposed lumber furnish pieces with grade stamps applied to ends or back of each piece, or omit grade stamps entirely and provide certificates of grade compliance issued by inspection agency.

2.02 EXTERIOR RUNNING TRIM AND SIDING

- A. For new materials as noted in Item 1.02A above, provide lumber complying with the following requirements including those of the grading agency listed with species.
 - 1. Species: Match existing.
 - 2. Grade: (Free of knots).
 - 3. Texture: Surfaced (smooth).
- B. Site Gates: western red cedar.

2.04 MISCELLANEOUS MATERIALS

- A. Fasteners for Exterior Finish Carpentry: Stainless steel, noncorrosive aluminum or hot-dip galvanized nails, in sufficient length to penetrate minimum of 1 ½ inches into substrate unless recommended otherwise by manufacturer.
 - 1. Countersink nails and fill surface where face nailing is unavoidable.
- B. Adhesives: Adhesives used in fabrication of construction panels shall be limited to phenol formaldehyde; no urea formaldehyde adhesives will be permitted.
- B. Moisture content: 19 percent maximum for lumber items not specified to receive wood preservative treatment.

2.05 FABRICATION

- B. Wood Moisture Content: Comply with requirements of specified inspection agencies and manufacturer's recommendations for moisture content of finish carpentry in relation to relative humidity conditions existing during time of fabrication and in installation areas. Provide finish carpentry with moisture content that is compatible with Project requirements.
- B. Fabricate finish carpentry to dimensions, profiles and details to match existing.

2.06 INSTALLATION MATERIALS

- B. Blocking, Shims, and Nailers: Softwood or hardwood lumber, pressure-preservative treated, kiln-dried to less than 15 percent moisture content.
- C. Nails: Aluminum or stainless steel.
- D. Screws: Aluminum or stainless steel.

- D. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts, unless otherwise indicated. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.07 SHOP PRIMING

- A. Woodwork for Opaque Finish: Shop prime woodwork for paint finish with one coat of wood primer specified in Division 9 Section "Painting".
- B. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.
 - 1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting installation and performance of finish carpentry. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Condition woodwork to average prevailing humidity conditions in installation areas before installation.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.
- C. Backprime lumber for painted finish exposed on the exterior. Comply with requirements for surface preparation and application in Section "Painting."

3.03 INSTALLATION

- A. Quality Standard: Install woodwork to comply with AWI Section 1700 for the same grade specified in Part 2 of this Section for type of woodwork involved.

- B. Install woodwork true and straight with no distortions. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- C. Scribe and cut woodwork to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
- C. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing. Use fine finishing nails for exposed nailing, countersunk and filled flush with woodwork.
- D. Complete the finishing work specified in this Section to extent not completed at shop or before installation of woodwork. Fill nail and screw holes with matching filler where exposed.
- E. Refer to Division 9 Sections for final finishing of installed architectural woodwork.

3.04 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

3.05 PROTECTION

- A. Provide final protection and maintain conditions that ensure finish carpentry is without damage or deterioration at time of Substantial Completion.

END OF SECTION 06 20 00

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Building insulation in blanket/batt form.

1.03 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data for each type of insulation product specified.

1.04 QUALITY ASSURANCE

- A. Fire Performance Characteristics: Provide insulation materials identical to those whose indicated fire performance characteristics have been determined per the ASTM test method indicated below, by UL or other testing and inspecting organizations acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing and inspecting organization.
 - 1. Surface Burning Characteristic: ASTM E 84.
 - 2. Fire Resistance Ratings: ASTM E 119.
- B. Single-Source Responsibility for Insulation Products: Obtain each type of building insulation from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of the Work.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's recommendations for handling, storage, and protection during installation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide insulation products of one of the following:
 - 1. Manufacturers of Glass Fiber Insulation:
 - . CertainTeed Corp.
 - a. Manville: Building Insulations Div., Manville Sales Corp.
 - b. Owens/Corning Fiberglas Corp.

2.02 INSULATING MATERIALS

- A. General: Provide insulating materials that comply with requirements and with referenced standards.
 - 1. Preformed Units: Sizes to fit applications indicated, selected from manufacturer's standard thicknesses, widths, and lengths.
- B. Unfaced Mineral Fiber Blanket/Batt Insulation: (For use above ceilings/bottom of truss chord.) Thermal insulation produced by combining mineral fibers of type described below to comply with ASTM C 665 for Type I and ASTM E 136.
 - 1. Mineral Fiber Type: Fibers manufactured from glass.
 - 2. Surface Burning Characteristics: Maximum flame spread and smoke developed values of 10 or less.
 - 3. Thermal Resistance: R-30.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates and conditions with Installer present, for compliance with requirements of the Sections in which substrates and related work are specified and to determine if other conditions affecting performance of insulation are satisfactory. Do not proceed with installation of insulation until unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's instructions applicable to products and application indicated. If printed instructions are not available or do not apply to project conditions, consult manufacturer's technical representative for specific recommendations before proceeding with installation of insulation.
- B. Apply insulation units to substrate Complying with manufacturer's recommendations. If no specific method is indicated, use mechanical anchorage to provide permanent placement and support of units.

3.03 PROTECTION

- A. General: Protect installed insulation and vapor retarders from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation will be subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 07 21 16

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.02 DESCRIPTION OF WORK

- A. Extent of shingles is indicated on drawings.

1.03 QUALITY ASSURANCE

- A. UL Listing: Provide labeled materials which have been tested and listed by UL for Class and Rating indicated for each shingle type required.

1.04 SUBMITTALS

- A. Product Data: Submit technical product data, installation instructions and recommendations from shingle manufacturer, including data that materials comply with requirements.
- B. Samples: Submit full range of samples for color and texture selection. After selection, submit 2 full-size shingles for verification of each color/style/texture selected.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's unopened, labeled bundles, rolls or containers.
- B. Store materials to avoid water damage, and store rolled goods on end. Comply with manufacturer's recommendations for job-site storage and protection.

1.06 JOB CONDITIONS

- A. Substrate: Proceed with shingle work only after substrate construction and penetrating work have been completed.
- B. Weather Conditions: Proceed with shingle work only when weather conditions are in compliance with manufacturer's recommendations and when substrate is completely dry.

1.07 SPECIFIED PRODUCT WARRANTY

- A. Provide shingle manufacturer's warranty on installed work, agreeing to pay for repair or replacement of defective shingles as necessary to eliminate leaks. Period of warranty is 25 years from date of substantial completion.

PART 2 - PRODUCTS

2.01 ASPHALT SHINGLE MATERIALS

- A. Asphalt Shingles, UL Class "A", Standard Weight: Mineral- surfaced, self-sealing, asphalt fiberglass strip shingles complying with ASTM D 3018, bearing UL Class "A" external fire exposure label and UL "Wind Resistant" label. Color shall match existing shingles as close as possible.
 - 1. Products: Subject to compliance with requirements, provide shingles as manufactured by GAF Building Materials Corporation, Owens Corning, Certainteed Corporation, or an approved equal.
 - a. Match design and color of existing shingles.
- B. Asphalt-Saturated Roofing Felt: complying with ASTM D 226 and ASTM D 4869, 36" wide, approximate weight 30 lbs./square.
- C. Leak Barrier Sheets: granular faced, fiberglass reinforced roll, 36" wide, approximate weight 85# for 2.0 square roll.
- D. Self-Adhering Sheet Underlayment, Granular Surfaced: ASTM D 1970, minimum of 55 mils (1.4 mm) thick; glass-fiber-mat-reinforced, SBS-modified asphalt; mineral-granule surfaced; with release-paper backing; cold applied as manufactured by Atlas Roofing Corporation, Carlisle Coatings & Waterproofing, GAF Materials Corporation, Owens Corning, or approved equal

- E. Asphalt Plastic Cement: Fibrated asphalt cement complying with ASTM D 2822, designed for trowel application.
- F. Nails: Hot-dip galvanized 11 or 12-gage, sharp- pointed, conventional roofing nails with barbed shanks, minimum 3/8" diameter head, and of sufficient length to penetrate through plywood decking.
- G. Metal Drip Edge: Minimum .032" aluminum sheet complying with requirements of Division-7 section "Flashing and Sheet Metal", brake-formed to provide 3" roof deck flange, and 1-1/2" fascia flange with 3/8" drip at lower edge. Furnish in 8' or 10' lengths.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine substrate and conditions under which shingling work is to be performed and must notify Contractor in writing of unsatisfactory conditions. Do not proceed with shingling work until unsatisfactory conditions have been corrected.

3.02 PREPARATION OF SUBSTRATE

- A. Clean substrate of any projections and substances detrimental to shingling work. Cover knotholes or other minor voids in substrate with sheet metal flashing secured with roofing nails.
- B. Coordinate installation of shingles with flashing and other adjoining work to ensure proper sequencing. Do not install shingle roofing until all vent stacks and other penetrations through roofing have been installed and are securely fastened against movement.

3.03 INSTALLATION

- A. General: Comply with instructions and recommendations of shingle manufacturer, except to extent more stringent requirements are indicated.
- B. Underlayment: Apply one layer #30 felt horizontally over entire surface, lapping succeeding courses 2" minimum and fastening with sufficient nails to hold in place until shingle application.
- C. Shingles: Install starter strip of roll roofing or inverted shingles with tabs removed; fasten shingles in pattern, weather exposure and number of fasteners per shingle

as recommended by manufacturer. Use horizontal and vertical chalk lines to ensure straight coursing.

- D. Flashing: Install GAF Weatherwatch leak barrier at all valleys, ridges, rake edges and flashing at walls and other penetrations.
- E. Comply with installation details and recommendations of shingle manufacturer and NRCA Steep Roofing Manual.
- H. Flashing and Edge Protection: Install metal flashing, vent flashing and edge protection as indicated and in compliance with details and recommendations of the NRCA Steep Roofing Manual.
- I. Ridge Vents: Provide ridge vents at ridge of all shingle roofs if indicated on drawings in approved manner.

3.04 EXTRA STOCK

- A. Provide minimum of 3% of installed quantity of each type/color/ texture shingle used in the work. Provide in unopened clearly labeled bundles or containers.

END OF SECTION 07 31 13

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide materials, labor, equipment and services necessary to furnish, deliver and install work of this Section.
- B. All sheet metal items are not necessarily individually described. The most important parts and those requiring detailed description are usually mentioned. Other work as indicated or necessary shall be provided unless specifically excluded from the Work of this Section. The Work shall include, but shall not be limited to the installation of new flashing.
- C. Scope of Work
 - 1. Provide prefinished aluminum gutters, downspouts and flashing as identified for repairs to the Visitor Center apartment.

1.02 GENERAL

- A. The Contractor shall carefully examine all surfaces prepare for flashing, etc. and shall see that the necessary corrections are made before proceeding with this work.
- B. Do not proceed with the installation of flashing and sheet metal until substrate construction to receive the work is completed.
- C. During construction, care shall be taken to prevent damage to surrounding areas by walking or placing heavy materials on them. Toward completion, all damaged work shall be repaired, all stains and debris shall be removed and the work shall be left in perfect condition.
- D. The Contractor shall supply, move and maintain scaffolding or rigging where required in a secure manner during the course of the work.

1.03 QUALITY ASSURANCE

- A. Reference Standards: for workmanship, comply with details and descriptions in *Architectural Sheet Metal Manual* by The Sheet Metal and Air Conditioning Contractors National Association (SMACNA), referred to as "SMACNA Manual."

1.04 PROJECT CONDITIONS

- A. Coordinate work of this section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of work and protection of materials and finishes.

1.05 PRODUCT DELIVERY, STORAGE

- A. Store materials on clean raised platforms with weather protective covering when stored outdoors.
- B. Store rolled goods on end.
- C. Provide continuous protection of materials against wetting.

1.06 GUARANTEE

- A. A written guarantee shall be furnished that the materials used are in strict accordance with these specifications including the compatibility of all materials used, and that any and all repairs required on the roof due to defective materials or workmanship furnished under this Contract shall be made without cost to the Owner.

PART 2 - PRODUCTS

2.01 MISCELLANEOUS MATERIALS AND ACCESSORIES

- A. Nails, screws, straps, fasteners, and anchors shall be of a material compatible with items being secured and compatible with any other existing metal or material. Use best grade. All other materials, not specifically described, but required for a complete and proper installation of flashing and sheet metal, shall be new and first quality.
- B. Sheet Aluminum: ASTM B 209, alloy 3003, temper H14, AA-C12C42R1x fluorocarbon coating; thickness as indicated below, color as selected by Designer.
 - 0. Exposed aluminum flashing, gutters, downspouts, scuppers and conductor head guards: .040.
- C. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.

- D. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of work, matching or compatible with material being installed, noncorrosive, size and gage required for performance.
- E. Fasteners: Same metal as flashing/sheet metal or other non-corrosive metal as recommended by sheet manufacturer. Match finish of exposed heads with material being fastened.
- G. Bituminous Coating: SSPC - Paint 12, solvent-type bituminous mastic, nominally free of sulfur, compounded for 15-mil dry film thickness per coat.
- H. Roofing Cement: ASTM D 2822, asphaltic or that appropriate for use with EPDM roofing.
- I. Solder: For use with copper, provide 50-50 tin/lead solder (ASTM B 32), with rosin flux.
- J. Roofing felt: Asphalt or coal tar saturated felt weighing not less than 30 lbs. Per 100 square feet.
- K. Paper Slip-Sheet: 4 to 6 lb. Rosin-sized building paper.

2.02 FABRICATION

- A. General Metal Fabrication: Shop-fabricate work to greatest extent possible. Comply with details shown and with applicable requirements of SMACNA "Architectural Sheet Metal Manual" and other recognized industry practices. Fabricate for waterproof and weather-resistant performance, with expansion provisions for running work, sufficient to permanently prevent leakage, damage, or deterioration of the work. Form work to fit substrates. Comply with material manufacturer instructions and recommendations for forming material. Form exposed sheet metal work without excessive oil canning, buckling, and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.
- B. Work shall be performed in strict compliance with recommended standard practice. Lines, arise angles, breaks, etc. shall be sharp and true.

- C. Expansion Provisions: Where lapped or bayonet-type expansion provisions in work cannot be used or would not be sufficiently water/weatherproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).
- D. Gutters, Downspouts, Scuppers and Conductor Head Guards: Fabricate exposed gutters, downspouts, scuppers and conductor heads to size and shape indicated of prefinished aluminum.
- E. Downspout Heads: Fabricate downspout heads to size and shape indicated of welded construction with downspout outlet tube.
- F. Sealant Joints: Where movable, nonexpansion type joints are indicated or required for proper performance of work, form metal to provide for proper installation of elastomeric sealant, in compliance with SMACNA standards.
- G. Separations: Provide for separation of metal from noncompatible metal or corrosive substrates by coating concealed surfaces at locations of contact, with bituminous coating or other permanent separation as recommended by manufacturer/fabricator.
- H. Aluminum Finish: Provide high performance organic coating, AA-C12C42R1x. Prepare, pretreat, and apply coating to all exposed aluminum surfaces to comply with coating and resin manufacturer's instructions.
 - 1. Fluorocarbon 3-Coat Coating System: Manufacturer's standard 3-coat thermo-cured system, composed of specially formulated inhibitive primer and fluorocarbon color coat, and clear fluorocarbon topcoat, with both color coat and clear topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; comply with AAMA 605.2.
 - 2. Color and Gloss: As selected by Designer from manufacturer's standard colors and gloss.

PART 3 - EXECUTION

3.01 INSTALLATION REQUIREMENTS

- A. General: Except as otherwise indicated, comply with manufacturer's installation instructions and recommendations and with SMACNA "Architectural Sheet Metal Manual." Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weatherproof.

- B. Underlayment and Coordination With Roofing: Where aluminum or copper is to be installed directly on cementitious or wood substrates, install a slip sheet of red rosin paper and a continuous course of polyethylene underlayment. At all edge-of-roof locations coordinate with the roofing contractor to extend the roofing membrane up and over top of the elements being covered by aluminum copings or flashings.
 - C. Brace and anchor gutters and downspouts in a rigid manner, brace and anchor gutters every three feet and anchor downspout with pre-finished aluminum strap with stainless steel screws every 7' - 0" to walls.
 - D. Verify all dimensions by taking field measurements, proper fit and attachment of all parts are required.
 - E. Form sections true and accurate in size, in maximum possible lengths, free of distortions and defects detrimental to appearance or performance. Allow for expansion joints.
 - F. Unless otherwise specified, all flashing shall be sized to existing flashing.
 - G. The exposed edge of all flashing shall be folded under ½ inch in such a manner as to conceal them from view.
 - H. Commence work after any required masonry repairs.
- 3.02 GUTTERS, DOWNSPOUTS, SCUPPERS AND CONDUCTOR-HEAD GUARDS
- A. Fabricate gutters, downspouts and conductor head guards to shape size and details shown on drawings of .030 prefinish aluminum.
 - B. Gutter brackets for exposed gutters shall be fabricated of 1/8" aluminum 1" wide and spaced 30" o.c. Provide two aluminum screws to anchor each bracket to structure and one aluminum screw to secure gutter.
 - C. Install aluminum outlet tubes with aluminum downspout head for aluminum gutters.
 - D. Install 1-1/4" wide hangers formed of .040 prefinish aluminum to support downspouts. Anchor hangers to wall with brass screws.

3.03 PERFORMANCE

- A. Watertight/weatherproof performance of sheet metal work is required.
1. Finish weather tight and water tight.
 2. Make all lock seam flat and true to line and sweated fill of solder.
 3. Make all lock seams and lap seams when soldered at least ½ inch wide.
 4. Where lap seams are not soldered, lap according to pitch, but in no case less than 3 inches.
 5. Make all flat and lap seams in the direction of flow.
- B. Joints
1. Join parts with rivets or sheet metal screws where necessary for strength and stiffness.
 2. Provide suitable watertight expansion joints for all runs of more than 40 feet, except where closer spacing is required for proper installation.
 3. Joints can corners shall be accurately machined, files and fitted and rigidly framed together and connected. All components shall be matched to produce perfect continuity of line and design. Joints and connections in the exterior face metal shall be made weathertight. Face of metal shall have hairline joints.
- C. Nailing
1. Whenever possible, secure metal by means of clips or cleats, without nailing through the metal.
 2. In general, space all nails, rivets and screws not more than 8 inches apart and when exposed to weather, use lead washers.
 3. For nailing into wood, used barbed roofing nails 1-1/4 inch long by 11 gauge.

3.03 CLEANING AND PROTECTION

- A. Contractor shall remove rubbish and debris resulting from this work from the premises on completion. Leave the area affected by this work clean of all debris and dust.
- B. Clean exposed metal surfaces, removing substances that might cause corrosion of metal or deterioration of finishes.
- C. Protection: Advise Contractor of required procedures for surveillance and protection of flashings and sheet metal work during construction to ensure that work will be without damage or deterioration other than natural weathering at time of Substantial Completion.

END OF SECTION 07 62 00

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 GENERAL REQUIRMENTS

- A. This item includes the furnishing and installation of all sealants and other related items necessary to completely caulk at joints between wood and masonry on all sides of sash frames and between wood frames and trim as necessary to provide paintable surface where wood components are replaced or the existing sealant has failed.

1.03 PRODUCT HANDLING

- A. Deliver sealants and related accessories to the job site in factory sealed, unopened containers bearing the manufacturer's name and product designation.
- B. Store in unopened containers. Follow manufacturer's recommendations for storage temperatures and shelf life.
- C. Follow manufacturer's recommendation for handling products containing toxic materials. Keep flammable material away from heat, sparks and open flame. Use recommended solvents and cleaning agents for cleaning tools, equipment and skin.

PART 2 – PRODUCTS

2.01 SEALANTS

- A. All sealants, primers, and accessories shall be nonstaining to adjacent exposed materials.
 - 1. Products having similar application and usage shall be of the same manufacturer and type.
 - 2. Unless otherwise specified, color shall be selected from approved manufacturer's standard range.
 - 3. Use gun consistency compounds unless otherwise required by job conditions.

- B. Sealant shall be one part acrylic terpolymer sealant:
 - 1. Tremco "Mono."
 - 2. Schnee-Morehead, Inc. "Acryl-R Acrylic Sealant."
 - 3. Or Approved Equal.
- C. Color to match finish materials as close as possible.

2.02 JOINT FILLERS

- A. Backer rod shall be polyethylene or polyurethane foam rod.

2.03 JOINT PRIMER/SEALER

- A. Provide the type and size of joint primer/sealer recommended by the sealant manufacturer for the joint surfaces to be primed or sealed. Nonstaining type.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Where required (material replacement or sealant failure), clean all open joints of existing caulking materials, removing all foreign matter such as dirt, dust, moisture, frost, rust, mill scale, paint, lacquer, and protective coatings. All joints shall be free of loose particles.
- B. Use no cleaning solvents which leave residue. Wipe joints free of solvent using clean, dry white cloths or white lintless paper. Do not permit solvent to air dry.

3.02 INSTALLATION

- A. Apply materials in accordance with manufacturer's written instructions.
- B. Prime wood surfaces with varnish diluted 50 percent with approved thinner.
- C. Use masking tape where practical to control lap of materials onto adjacent surfaces or to facilitate tooling. Remove tape immediately after caulking and sealing.
- D. Colored sealants shall be installed to match the surrounding colors.

1. If the conditions do not clearly present the proper color solution, refer the question to the Designer.

3.03 CLEANING

- A. Clean adjacent surfaces soiled by caulking and sealing operations.

END OF SECTION 07 90 05

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work of this section shall be governed by the Contract Documents. Provide materials, labor, equipment, and services necessary to furnish, deliver, and install all work of this section as specified herein, and/or as required by job conditions.

1.02 SUMMARY

- A. This Section includes custom storm windows and door in the apartment of the Visitor Center and a storm door to the Visitor Center at the exterior library door – See Section 01 11 13 – Summary of Work.
- B. Related Sections include the following:
 - 1. Section 07 90 0e – Joint Sealants.

1.03 SUBMITTALS

- A. Submittals: Follow Section 01 33 00 – Submittals.
 - 1. Provide manufacturer's standard literature for each type.
- B. Submit two (2) samples illustrating color and texture of finish.
- C. Product Data: Provide component dimensions, anchorage and fasteners, glass and related data.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in prefinished aluminum storm windows and storm door manufacturer with five years experience.

1.05 SPECIAL WARRANTY

- A. Windows: Provide a five (5) year warranty against faulty materials, paint and workmanship.
- B. Doors: Manufacturer's standard limited ten (10) warranty.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. The storm windows are specified using the Operating Historic One Lite With Screen (HOL-OP). Removable prefinished aluminum windows as manufactured by Allied Windows with charcoal aluminum insect screen. Other manufacturers may include AES Windows, or approved equal. Submit substitutions prior to bid.
- B. The storm doors are specified using the Larson Manufacturing Storm Doors; Model #830-14 Ventilating Self-Storm Window and Screen System door with tempered glass and magnetic weatherstripping, bottom expander for adjusting to uneven sills, DuraTech surface over solid wood core; Color: Earthtone Brown.. Other manufacturers may include York Doors, or other approved manufacturers. Submit substitutions prior to bid.

2.02 MATERIALS

A. Storm Windows:

- 1. Aluminum shall be of commercial quality and of proper alloy for window construction free from defects impairing strength and durability. All straight extruded sections shall be of 6063-T5 alloy and temper and shall have a minimum ultimate tensile strength of 22,000 P.S.I. and a yield of 16,000 P.S.I.
- 2. Window Members: Master frame members shall be of extruded aluminum with a 3/8" x 1 3/8" dimension. All extrusions shall be of sufficient strength to perform as designed. Window members shall have a nominal wall thickness of not less than .062". All corner keys shall be of extruded aluminum.
- 3. Window Fasteners: All screws and other miscellaneous fastening devices incorporated shall be zinc plated, cadmium plated or other non-corrosive metals compatible with aluminum.
- 4. Window Assembly: All windows shall be assembled in a secure and workmanlike manner. The master frame and insert frame(s) shall be of mitered head and sill. Frame rails and stiles shall be neatly joined together using extruded aluminum corner keys staked in place.
- 5. Window Sill Expander: Sill expander shall be of "H" type with minimum wall thickness of .062" and .125" web thickness, and modified to permit weepage.
- 6. Window Inserts: Insert(s) shall be freely removable and equipped with a full bottom rail lift handle. Insert(s) held in place by cam action clips.
- 7. Window Hardware: All insert clips shall be nylon, or zinc die cast.
- 8. Window Finish: The exposed surfaces of all aluminum members shall be clean and free from serious surface blemishes. Standard finishes shall be

electrostatically applied baked acrylic enamel in Bronze. Painted finish shall meet AAMA 603.6.

9. Window Glass: Glass shall be not less than "B" quality. Standard factory glazing shall be "DSB" (1/8").
10. Window Glazing Material: Glass shall be held in place with removable and reusable vinyl glazing splines. Vinyl shall be manufactured from virgin polyvinyl chloride. All corners shall be neatly mitered.

PART 3 – EXECUTION

3.01 GENERAL

- A. The installer shall securely fasten windows and doors in place to a straight, plumb and level condition, without distortion of the windows or doors and shall make final adjustments for proper operation in accordance with the manufacturer's instructions.
- B. Repair and damage to painted finish.
- C. Clean all glass.

END OF SECTION 08 58 00

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes hardware for the site gates.
 - 1. Strap Hinges.

PART 2 - PRODUCTS

2.01 STRAP HINGES AND PINTLES

- A. Strap Hinges: Match existing length and shape; heavy duty use; hand forged steel.
- B. Number of Hinges: 2 per gate.
- C. Manufacturers:
 - 1. Ball and Ball: Heavy Hand Forged Hinges (Ball and Ball: phone 610-363-7330; website: ballandball.com).
 - 2. Hardware Source: Strap Hinges (Hardware Source: phone 877-944-6437; website: hardwaresource.com).
 - 3. Approved equal.

2.02 HARDWARE FINISHES

- A. Finish:
 - 1. Black.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install each hardware item in compliance with the manufacturer's instructions and recommendations.
- B. Set units level, plumb, and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

3.02 ADJUSTING, CLEANING, AND DEMONSTRATING

- A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.
- B. Clean adjacent surfaces soiled by hardware installation.

END OF SECTION 08 71 00

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work of this section shall be governed by the Contract Documents. Provide materials, labor, equipment, and services necessary to furnish, deliver, and install all work of this section as specified herein, and/or as required by job conditions.
- B. The Work shall include but not limited to the following:
 - 1. Replace all broken glass with new clear glass in the Visitor Center apartment windows.
 - 2. All deteriorated glazing compound shall be removed at the Visitor Center's apartment windows and reglazed.
 - 3. Install new UV film on all glass panes of the Main House and Law Office.

1.02 PROJECT CONDITIONS

- A. Coordinate work of this section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of work and protection of materials and finishes.

1.03 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the site ready for use in the manufacturer's original and unopened containers and packaging, bearing labels as to type. Delivered materials shall be identical to approved samples.
- B. Store materials under cover in a dry and clean location, off the ground. Remove materials which are damaged or otherwise not suitable for installation and replace with acceptable materials.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Glazing Compound: Permanently flexible face glazing compound.
 - 1. DAP "1012."
 - 2. UGL Glazol.
 - 3. Or an equal acceptable to the Designer.
- B. Glass: Clear annealed float glass [ASTM C 1036, Type I, Quality-Q3, Class I (clear)] or as required from local authorities having jurisdiction.
- C. UV Film: On all glass panes identified, install UV protection clear window film that does not produce reflectivity and blocks 99.9-percent of UV rays; clear with 15-year commercial warranty as manufactured by 3-M Window Film Prestige Series, Vista Window Film, or approved equal. Install sample for final approval by Owner before commencing the rest of the installation.
- D. Linseed oil.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Remove all existing glazing compound, brushing clean and install glass and glazing materials under the environmental conditions recommended by the manufacturers.
- B. Brush raw wood with linseed oil prior to priming.
- C. Prime surfaces to receive glazing materials unless recommended otherwise, in writing, by the manufacturers,
- C. Protect adjoining surfaces not to receive glazing materials against staining or damage.

3.02 INSTALLATION

- A. Lay a glazing compound bead in the rabbet to cushion and seal the glass.
- B. Press glass into place in the glazing compound bead.

- C. Install glass compounds on clean, dry, dirt and dust free surfaces in accordance with the approved manufacturer's recommendations, in a waterproof manner. Clean surfaces to receive glazing materials with cleaning agents as required.
- D. Glazing profile shall match predominate existing profile.
- E. Remove excess glazing materials from glass and adjacent surfaces during the working time of the materials so as to prevent staining and discoloration.

3.03 PROTECTION AND CLEANING

- A. The Contractor shall be responsible for damage to, or breakage of Work caused by his operations during delivery and installation.
- B. Before final acceptance remove the protective materials and clean surfaces of dirt smears, paint spots, mortar, or other extraneous materials from both sides of each pane of glass, at all exterior locations.

END OF SECTION 08 80 00

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes surface preparation, painting, and finishing of exposed interior and exterior items and surfaces requiring painting as noted in Section 01 11 13 – Summary of Work.

1. See Section 01 11 13 – Summary of Work for locations of items to be painted. Colors to be selected by Owner Representative
2. Surface preparation, priming, and finish coats specified in this Section are in addition to shop-priming and surface treatment specified under other Sections.
 - a. Backprime all painted new exterior wood materials. Prime cut ends of all painted exterior wood materials.
 - b. Remove mildew before repainting.
 - c. Due to the age of these structures, it assumed that all paint is lead-based paint. The Contractor shall take all necessary precautions as identified by authorities having jurisdiction for protecting its workers and the public.
 - d. Scrape all loose and flaking paint where select areas of painting are noted in the Summary of Work.

Where the wood is then exposed and the wood is soft, but no greater than 1/32-1/16-inch deep, apply marine spar varnish diluted 50-percent with mineral spirits before priming and painting. Severely weathered wood may require two applications of the diluted marine spar varnish to harden properly.

3. Contractor shall verify compatibility of new paint materials with existing paint materials.
 4. Contractor to verify paint mediums and sheen with Historic Site Director prior to painting.
- B. Paint exposed surfaces except where a surface or material is specifically indicated not to be painted or is to remain natural.

- C. Painting is not required on prefinished items, finished metal surfaces, concealed surfaces, operating parts, and labels unless specifically noted.
1. Prefinished items not to be painted include the following:
 - a. Finished mechanical and electrical equipment
 - b. Light fixtures
 - c. Switchgear
 - d. Distribution cabinets
 2. Concealed surfaces not to be painted include wall or ceiling surfaces in the following generally inaccessible areas:
 - a. Furred areas
 3. Finished metal surfaces not to be painted include:
 - a. Copper
 - b. Bronze
 - c. Brass
- D. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 6 "Finish Carpentry".

1.03 SUBMITTALS

- A. General: Submit the following according to Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for each paint system specified, including block fillers and primers.
1. Provide the manufacturer's technical information including label analysis and instructions for handling, storage, and application of each material proposed for use.
 2. List each material and cross-reference the specific coating, finish system, and application. Identify each material by the manufacturer's catalog number and general classification.
 3. Certification by the manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).
- C. Samples for Verification Purposes: Provide samples of each color and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate.

1.04 QUALITY ASSURANCE

- A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to those indicated for the Project that have resulted in a construction record of successful in-service performance.
- B. Single-Source Responsibility: Provide primers and undercoat paint produced by the same manufacturer as the finish coats.
- C. Field Samples: On wall surfaces, other exterior and interior components, duplicate finishes of prepared samples. Provide full-coat finish samples on at least 100 sq. ft. of surface until required sheen, color, and texture are obtained; simulate finished lighting conditions for review of in-place work.
 - 1. Final acceptance of colors will be from job-applied samples.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:
 - 1. Product name or title of material.
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer's stock number and date of manufacture.
 - 4. Contents by volume, for pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.
 - 1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.06 JOB CONDITIONS

- A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 deg F (10 deg C) and 90 deg F (32 deg C).
- B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 deg F (7 deg C) and 95 deg F (35 deg C).
- C. Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.
- D. Inspect existing painted surfaces to be painted and prepare them to be repainted as scheduled. Existing surfaces shall receive two finish coats as specified for new work, if applying over existing sound painted surface.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
- B. Manufacturer: Subject to compliance with requirements, provide products of one of the following:
 - 1. Porter Paints
 - 2. PPG Industries, Pittsburgh Paints
 - 3. The Sherwin-Williams Company
 - 4. Benjamin Moore

2.02 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, primers, finish coat materials, and related materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by the manufacturer based on testing and field experience.

- B. Material Quality: Provide the manufacturer's best-quality trade sale paint material of the various coating types specified. Paint material containers not displaying manufacturer's product identification will not be acceptable.
 - 1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish the manufacturer's material data and certificates of performance for proposed substitutions.

2.03 PRIMERS

- A. Primers: Provide the manufacturer's recommended factory-formulated primers that are compatible with the substrate and finish coats indicated.
 - 1. Backprime all painted exterior wood materials. Prime cut ends of all painted exterior wood materials.

2.04 UNDERCOAT MATERIALS

- A. Undercoat Materials: Provide the manufacturer's recommended factory-formulated undercoat materials that are compatible with the substrate and finish coats indicated.

2.04 FINISH PAINT MATERIAL

- A. Finish Paint: Provide the manufacturer's recommended factory-formulated finish-coat materials that are compatible with the substrate and undercoats and as indicated on paint schedule.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine existing and new substrates and conditions under which painting will be performed for compliance with paint application requirements. Surfaces receiving paint must be thoroughly dry before paint or stain finish is applied.

1. Do not begin to apply finish until unsatisfactory conditions have been corrected.
 2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
1. Notify the Owner's Representative about anticipated problems using the materials specified over substrates primed by others.

3.02 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted, or provide surface-applied protection prior to surface preparation and painting. Remove these items, if necessary, to completely paint the items and adjacent surfaces. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease prior to cleaning. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
1. Mildew Removal: Mix one cup of non-ammoniated detergent, one quart household bleach, and one gallon water. Scrub surface with medium soft brush. Add an additional quart of bleach for particularly stubborn spots. After the area is mildew free, rinse with a direct stream of water from the nozzle of a garden hose and permit to dry thoroughly.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to the manufacturer's instructions for each particular substrate condition and as specified.
1. Provide barrier coats over incompatible primers or remove and reprime. Notify Owner's Representative in writing about anticipated problems using the specified finish-coat material with substrates primed by others.

2. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
 3. Ferrous Metals: Clean ungalvanized ferrous metal surfaces that have not been shop-coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods.
 - a. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by the paint manufacturer, and touch up with the same primer as the shop coat.
 4. Remove loose, scaling or defective paint on brick where noted in an approved manner so new paint will adhere to existing surfaces. Use solvent or mechanical method.
 5. Existing Surfaces: Clean and prepare existing surfaces to be repainted. Patch, scrape, sand and remove oil, grease and other agents which will not be compatible with new paint materials. Apply barrier coat if necessary to prevent bleed through. Existing surfaces to be painted shall be finished the same as new surfaces. A paint compatibility test shall be required on existing surfaces to be painted, before painting same.
- D. Materials Preparation: Carefully mix and prepare paint materials according to manufacturer's directions.
1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
 2. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.
 3. Use only thinners approved by the paint manufacturer and only within recommended limits.
- E. Tinting: Tint each undercoat a lighter shade to facilitate identification of each coat where multiple coats of the same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.03 APPLICATION

- A. General: Apply paint according to manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.

- B. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 - 1. Provide finish coats that are compatible with primers used.
 - 2. The number of coats required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce a smooth even surface.
 - 3. Apply additional coats if undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners are covered.
 - 4. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, nonspecular black paint.
 - 5. Sand lightly between each succeeding enamel or finish coat.
 - 6. Omit primer on metal surfaces that have been shop-primed and touch-up primer before painting.

- C. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
 - 1. Allow sufficient time between successive coats to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.

- D. Application Procedures: Apply paints and coatings by brush according to the manufacturer's directions.

- E. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime-coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.

- F. Pigmented (Opaque) Finishes: Completely cover to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

- G. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with specified requirements.

3.04 CLEANING

- A. Cleanup: At the end of each work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
 - 1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

3.05 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Owner's Representative.
- B. Protect existing surfaces not to be painted or finished under this contract.
- C. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others protect their work after completing painting operations.
 - 1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.06 EXTERIOR PAINT SCHEDULE

- A. General: Provide the following paint systems for the various substrates, as indicated (note: Sherwin Williams is the basis of design. Other paint manufacturers of equal quality may be substituted with approval by the Designer).
- B. Ferrous Metal:
1. Gloss Alkyd Enamel Finish: 2 finish coats over primer.
 - a. Primer: SW – All Surface Enamel Alkyd Gloss Primer - #A11W-00210.
 - b. First Coat: SW – All Surface Alkyd Enamel - #A11B-00200.
 - c. Second Coat: SW – All Surface Alkyd Enamel - #A11B-00200.
- C. New Painted Woodwork:
1. Match Existing Paint Sheen: 2 finish coats over primer.
 - a. Primer: SW – Alkyd Primer - #101.
 - b. First Coat: SW – Duration Exterior Latex Satin - #K33W-00151.
 - c. Second Coat: SW – Duration Exterior Latex Satin - #K33W-00151.
- D. Existing Painted Woodwork (Where Scraping Does **Not** Expose the Wood):
1. Match Existing Paint Sheen: 2 finish coats.
 - a. First Coat: SW – Duration Exterior Latex Satin - #K33W-00151.
 - b. Second Coat: SW – Duration Exterior Latex Satin - #K33W-00151.
- E. Existing Painted Woodwork (Where Scraping **Does** Expose the Wood And Its Soft):
- a. Marine Spar Varnish (Where Required): Minwax Indoor/Outdoor Helmsman Spar Urethane – may require 2 coats.
 - b. Primer: SW – Alkyd Primer - #101.
 - c. First Coat: SW – Duration Exterior Latex Satin - #K33W-00151.
 - d. Second Coat: SW – Duration Exterior Latex Satin - #K33W-00151.

3.07 INTERIOR PAINT SCHEDULE

A. Woodwork (Painted):

1. Eggshell Latex Finish - 2 finish coats over primer.
 - a. Primer: SW Harmony Low Odor Interior Latex Primer #B11.
 - b. First Coat: SW Harmony Low Odor Interior Latex Eggshell - #B10W-00551.
 - c. Second Coat: SW Harmony Low Odor Interior Latex Eggshell - #B10W-00551.

B. Woodwork (Stained):

1. Stain Without Polyurethane Finish Coat
 - a. Stain: SW Wood Classics Wood Stain – color match to existing wood being removed.

END OF SECTION 09 91 23

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Work of this Section shall be governed by the Contract Documents. Provide materials, labor, equipment, and services necessary to furnish, deliver, and install all work of this Section as shown on the drawings, as specified herein, and/or as required by job conditions.
- B. The work shall include but not be limited to the following:
 - 1. Repairing decorative graining at the rear door of the Main House where planed.

1.02 QUALITY ASSURANCES

- A. The Contractor shall demonstrate to the Owner's satisfaction that his firm is qualified by reason of previous experience, as detailed in the Qualification Statement, to undertake the Work.
- B. Personnel employed on the decorative painting (graining) shall be fully experienced in the various type of historic painting techniques required. For each person employed to execute this specialized work, evidence of previously completed projects in which each participated shall be submitted for the Designer's review.
- C. Reference Standards:
 - 1. American Society for Testing & Materials (ASTM)
 - 2. American National Standards Institute (ANSI)
 - 3. National Paint Varnish & Lacquer Association
 - 4. Steel Structures Painting Council (SSPC)

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's technical information including paint label analysis and application instructions for each material prepare for use.
- B. Samples:
 - 1. Graining: Provide a sample on the new painted wood door areas affected by the work for Designer's review. Repeat or modify sample work until Designer's approval is obtained. No portion of the final work may proceed without Designer's explicit approval of color, design, materials, application techniques and artistic effect.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original containers and packaging, bearing original labels with brand, type and color of paint clearly visible. Delivered material shall be identical to approved literature and samples submitted.
- B. Store paint and paint materials and mix only in such rooms or space within the building as are assigned for such purposes. Keep Storage place clean and neat with floor covered with heavy building paper and then with tarpaulins.
- C. Store paint, varnish, enamel, oil, turpentine and other combustible or inflammable materials within the building in receptacles with tight covers. Remove oily or paint saturated cloths, rags, or waste from the building after each day's work as directed.

1.05 JOB CONDITIONS

- A. Environmental Requirements
 - 1. Maintain an ambient temperature of not less than 50 degrees F in all spaces or locations, where this work is in progress.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Painting and finishing products: standard best or top brands produced for each particular kind of material required herein.

2.02 MATERIALS

- A. Provide best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers.
- B. Color Pigments: True, non-fading, applicable types to suit substrates and service indicated. Pigments to be ground in oil and dispersed in non-yellowing medium to be approved by the Designer. No use of a universal tinting system to obtain colors will be permitted.
- C. Paint content restrictions shall conform to all current requirements of EPA, OSHA and all other federal, state and local codes and regulations having jurisdictions.
 - 1. Shall not contain lead compounds of which the lead content (calculated as Pb) is in excess of $\frac{1}{2}$ of 1 percent of the total weight of the contained solids (including pigments, film solids, and driers);
 - 2. Shall not contain compounds of antimony, arsenic, cadmium, mercury, or selenium of which the metal content individual or in total (calculated as Sb, As, Cd, Hg, Se, respectively) is in excess of 0.06 percent by weight of the contained solids (including pigments, film solids, and driers);
 - 3. Shall not contain barium compounds of which the water soluble barium (calculated as Ba) is in excess of one percent of the total barium in such coatings.
- D. Paints, coating, and stains shall conform to the American National Standards Institute Specifications Z66.1.
- E. Method of determination of concentrations of lead and quantities of mercury shall be in accordance with ASTM-D-2088 and ASTM D-2206 respectively.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Examine surfaces to which this work is to be applied and notify the Designer if conditions exist which are detrimental to the proper and expeditious installation of the work. Starting of work shall imply acceptance of surfaces to perform work as specified.

3.02 PREPARATION OF SURFACES

A. General

1. Clean room spaces and surfaces so they are dust-free before painting is started. Remove grease and other extraneous matter which would affect the finished work.
2. Provide and use drop cloths and exercise care to protect finished surfaces of floors and other work. Immediately remove spatter, stains and droppings from such surfaces, when painting above wainscots and around other finished surfaces, furnishings and equipment.
3. Do repairing or spackling of surfaces necessary for proper application of paint. Dislodge dirt, mortar splatter and other foreign matter by scraping, brushing or other means.
4. Thoroughly dry and clean surfaces of oil, grease, dirt, rust, and where necessary properly prepare surfaces by sand papering smooth.
5. Take every precaution to prevent damage by fire. Storage and protection of materials shall conform to all regulations, codes and ordinances having jurisdiction.
6. Remove or mask hardware, hardware accessories, switch plates, machine surfaces and similar items before painting and afterwards replace or remove masking. Such removal and reinstallation shall be done by workmen skilled in the trades involved.

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- A. Apply painting materials using skilled mechanics well versed in the several branches of the work. Perform each painting operation in accordance with the best practices which are consistent with the surfaces being finished and the type of materials being applied. Painting materials: Free of skins, lumps or foreign matter with the solids kept well stirred while being applied.

- B. Apply paint evenly and smoothly by brush. Roller and spray painting not permitted. Do not apply successive coats until the preceding coats are thoroughly dry and hard. Sand wood between coats to produce even and smooth surfaces.
- C. Materials for succeeding coats on any one surface, shall be the products of the same manufacturer who finished the first prime-sealer coat or undercoat for the particular surface, except when metal primers are used as specified under other sections of the specifications.
- D. Each coat shall be thoroughly dry before succeeding coats are applied. Allow a minimum of 24 hours between coats on surfaces, unless otherwise specified by the manufacturer.
- E. Apply additional coats to those listed in Schedule of Finish Types at no additional cost when undercoats, stains, or other conditions, show through final coat of paint, until paint film is to insure that surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.

3.04 PAINTING SCHEDULE

- A. Wood Materials to be Painted:
 - 1. See Section 01 11 13 – Summary of Work.
 - 2. Color and sheen shall match existing adjacent remaining original design.
- B. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate, to establish a total dry film thickness as indicated or, if not indicated, as recommended by coating manufacturer.
- C. Prime Coats:
 - 1. Apply prime coat to materials that is required to be painted or finished.
 - 2. Recoat primed and sealed surfaces where there is evidence of suction spots, or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.
- D. Pigmented Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, and appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- E. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not in compliance with specified requirements.

3.05 PROTECTION

- A. Work under this section shall not chip, crack, peel, or discolor or have other defects due to improper materials or workmanship, or improper preparation of the surfaces. Refinish unsatisfactory work at no additional cost to the Owner.
- B. When so directed, retouch where necessary, and restore where damaged or defective, and clean off paint spots from floors, walls, finished hardware, glass and other surfaces not scheduled to receive paint, and leave painted surfaces clean and in a satisfactory condition.
- C. Upon completion of work, remove surplus materials, empty packages and containers and debris from the site and dispose by legal means.
- D. Acceptance by the Designer shall be governed by body, finishes and colors. Apply additional coats as required to produce proper finish and coverage, in accordance with the approved samples.
- E. Clean surfaces at completion and before acceptance of work.
- F. Protect the work and the work of other trades against damage or injury by the materials, tools and equipment used in connection with the painting. Repair work that is damaged as the result of the painting operations at the Contractor's expense and Owner's satisfaction.
- G. Upon completion of painting work, clean window glass and other paint spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- H. Take particular care to protect historic surfaces throughout the building. Protect all existing surfaces, whether to be painted or not, against damage by painting and finishing work. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to Designer. Provide "Wet paint" signs as required to protect newly -painted finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.
- I. Repair and repaint all defective surfaces that have been painted, stained, finished, or otherwise treated under this Section, to the satisfaction of the Designer and at no additional cost. Rejected surfaces shall be repainted over the entire plane on which they occur (corner to corner/top to bottom/etc.) and as otherwise required by Designer.

END OF SECTION 09 91 25

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Cut aluminum letters.

1.02 SCOPE

- A. Furnish letters and hardware necessary to install cut metal letters shown on drawings and herein specified.

1.03 SUBMITTALS

- A. Manufacturer's descriptive literature and specifications.
- B. Shop drawings.
- C. Installation instructions.
- D. Provide a sample letter and standoff for final approval before ordering the signage.

1.04 QUALITY ASSURANCE

- A. Manufacturer to have a minimum of 20 years experience in manufacturing letters.
- B. All letters to be manufactured by one manufacturer.

PART 2 - PRODUCTS (Not applicable)

2.01 ACCEPTABLE MANUFACTURERS

- A. Impact Architectural Signs.
- B. Woodland Manufacturing.
- C. Approved equal.

2.02 MATERIALS

- A. Aluminum – 5052 Alloy.

2.03 FINISHES

A. Aluminum

1. Natural satin faces, bead-blasted returns, 2-part hardened acrylic polyurethane clear coat.

2.04 THICKNESS

A. Aluminum – ¼”.

2.05 FONT STYLES

A. As indicated on drawings.

2.06 MOUNTING HARDWARE

- A. Cut metal letters are tapped for threaded stud insertion.
- B. All aluminum letters under 18” use aluminum studs.
- C. All other letters use stainless steel studs.
- D. Use spacers to “float” letters from wall ¼”.
- E. Paper installation template with should be provided.

2.07 FABRICATION

- A. Letters shall be made of aluminum.
- B. Letters shall be of the styles shown on the drawings and shall be ¼” high.
- C. Finish shall be natural satin faces, bead-blasted returns, 2-part hardened acrylic polyurethane clear coat.
- D. Mounting shall be ¼” off face of existing wall and a mounting template location on an existing wood surface.

PART 3 - EXECUTION (Not applicable)

3.01 INSTALLATION

- A. A qualified installer shall install cut metal letters.
- B. Install signs level, plumb, and the height indicated with sig surfaces free from distortion or other defects in appearance.

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3.02 WARRANTY

- A. Letters should be guaranteed for the life of the business against defects.

END OF SECTION 01 41 15