

Historic New England Exterior Paint Specification for Wood

SECTION 09 00 00

Note: Not all items in this document will apply to every painting project. Italicized sections are meant to be reviewed, eliminated, added-to or specified.

FINISHES

SECTION I—GENERAL

1.1—RELATED DOCUMENTS

- A. *Related Documents:* The general provisions of the Contract, including Section 01 00 00 General Requirements; Section 08 01 52.71 Wood Window Rehabilitation; Section 06 40 13 Exterior Architectural Woodwork; Annotated Project Photographs, Drawings and any other related Construction Documents apply to the work specified in this section.

1.2—DESCRIPTION OF WORK

- A. The extent of Exterior Painting includes, but is not limited to the following:
1. All work to conform to current OSHA and EPA standards for lead paint removal.
 2. Assess substrate and determine if conditions require repair or may otherwise adversely impact the success of the project.
 3. Wash all surfaces to be painted using Owner approved solution.
 4. Scrape loose paint by hand; retain paint where directed by Project Manager.
 5. Sand surface and feather edges to provide a smooth transition between layers of paint accumulation.
 6. Apply one coat of primer using method best suited for application; finish by brush. Spot prime all nail heads with a rust inhibitor. Caulk all joints or gaps 1/8" or less around doors, windows, or vertical joints of siding using latex caulk.
 7. Lightly sand rough or fuzzed areas by hand.
 8. Apply at least two finish coats of paint using method best suited for application; finish by brush. Ensure full coverage and uniform color by applying additional coats as required.
 9. Review areas indicating stains due to corrosion of hardware.
 10. Glaze and paint sash where directed.
 11. Remove, label, assess, paint and reinstall shutters where directed.
 12. Paint and label owner provided sample paint sticks.
- B. The intent of this work shall be to provide a very high quality, durable paint finish, while preventing any removal, destruction or adverse affects to the historic substrate.

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- C. Work will include completion of Owner provided daily job reports detailing weather and daily site activities.
- D. Digital photographs of 300 dpi or greater showing work undertaken when Owner is not present.
- B. The work includes preparation and painting with a three coat system (prime and finish coating) of exterior exposed materials and surfaces of all exterior surfaces and finishes.
- C. Paint as used herein means all coating systems materials, including primers, emulsions, enamels, sealers, and other applied materials used as a primer or finish coating.
- D. A coat refers to an application of paint at the required millimeter. thickness for each coating applied, as specified by the manufacturer.
- E. Paint all exposed surfaces whether or not colors are designated, except where the natural (unpainted) finish of the materials is obviously intended and specifically noted as a surface not to be painted. Where items or surfaces are not specifically mentioned consult with Owner for direction as these areas will likely be painted the same as adjacent areas or material.
- F. No samples shall be required for this work, unless specified by contract documents.

1.3 – TEMPORARY FACILITIES AND CONSTRUCTION AIDS

- A. Temporary Facilities: Contractor is responsible for installation and maintenance of portable toilet; location to be determined with Owner prior to start of project. Portable toilet must be removed within one week following the accepted completion of the work.
- B. Scaffolding:
 - 1. Contractor to set up OSHA approved staging if necessary at elevations as outlined in a pre-determined schedule. The schedule shall be subject to the approval of the Owner.
 - 2. Scaffolding will remain in place until the accepted completion of the job or a specific portion of the job, and removed within one week of accepted completion of the work.
 - 3. Any holes made for attaching scaffolding to the house are to be filled and repaired in a method approved by the Owner.
- C. Dumpster: Contractor to coordinate the installation and removal of construction dumpster for debris. Approved location of dumpster onsite to be determined by Contractor and Owner.

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1.4 – PROJECT MANAGEMENT

- A. Documentation and Communication: Contractor shall create reports based on details uncovered during the Project work not already outlined in the specifications. Work shall be photographed by Contractor when Owner is not on-site. Photographs shall be at least 300 dpi. Details and suggested repair options shall be photo documented and submitted to the Owner for review.
- B. Weekly Meetings: Contractor, Owner, and possible advisors and/or subcontractors to the Project are to meet on a weekly basis, which will include a site walkthrough and roundtable discussion of progress.

1.5 – SUBSTITUTIONS

- A. Owner's Approval Required:
 - 1. The Owner will consider proposals for substitution of materials, equipment, and methods only when such proposals are accompanied by full and complete technical data and all other information required.
 - 2. Do not substitute materials, equipment or methods unless such substitution has been specifically approved in writing for this work by the Owner.
- B. Availability of Specified Items:
 - 1. Verify that all specified items will be available in time for installation during orderly and timely progress of the work.
 - 2. In the event specified item or items will not be available on a timely basis, so notify the Owner.

1.6 – SUBMITTALS

- A. Submit manufacturer's literature and data on any relevant materials.
- B. Submit manufacturer's warranty information.
- C. Submit completed daily job reports provided by Owner detailing work accomplished each day, trades present, and the weather.
- D. Submit digital photographs of at least 300 dpi or greater detailing each step of work.
- E. At project completion, a minimum of 1 quart of each type and color of paint/primer from the same production run (batch mix) used will be left, properly labeled and identified, and dated for Owner's later use in maintenance. Store where directed. Color formulas and vendor information for each color used will also be given to Owner for future reference.
- F. Submit labeled paint stick (provided by Owner), .

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1.7 – PROTECTION

- A. Perform all work that disturbs lead-containing paint (LCP), handle all material that involves lead-containing paint, and transport and dispose of all lead-containing paint and residue in compliance with all applicable federal, state, and local laws and regulations for identification, removal, labeling, handling, containerization, transportation, and disposal of lead-containing material.
- B. Provide protection for roofs, entrances, windows, walls and landscape as necessary to prevent damage during entire course of work of this Section.
- C. Repair or replace to Owner's satisfaction all building elements and materials damaged by weather resulting from openings that did not sufficiently exclude weather at no additional cost.
- D. Provide protective barriers to ensure the safety of visitors and site staff.
 - 1. Take all the safety of passersby near scaffolding and work areas. This includes setting up cones and safety tape as a barrier to block off areas as needed.
- E. Take all necessary precautions to protect all persons, whether engaged in work of this Section or not, from all hazards of any kind associated with the work of this Section.
- F. Take all necessary precautions to prevent fire and spread of fire.
- G. Provide a properly rated 10 lb. fire extinguisher close by all workstations.
- H. Provide adequate ventilation during use of volatile or noxious substances.
- I. All MSDS are to be available and copies kept on-site until Project completion. All persons using materials are to be familiar with information contained within the documents and proper safety precautions are to be followed.

1.8 – QUALITY ASSURANCE

- A. General: Painting Contractor shall be skilled and experienced in this type of painting and equipped to perform workmanship in accordance with industry standards, manufacturer's specifications and all applicable building codes.
 - 1. Employ only tradespeople experienced in painting.
 - 2. Any subcontractors used are subject to the approval of the Owner.
- B. Materials: Obtain all paint from one manufacturer, at the same time, and from the same distributor to ensure homogeneity of manufacture and formula.
 - 1. All materials will be used according to manufacturer's specifications and standard industry practices.
 - 2. Contractor shall ensure that all project materials are protected from adverse weather during construction.
- C. Prior to beginning any work, evaluate substrate and notify Owner of conditions which require repair or may otherwise adversely impact the success of the project.

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1.9 – PRODUCT HANDLING

- A. All products shall be stored and installed in a manner which upholds the manufacturer's warranty unless directed to do otherwise by the Owner.
- B. All materials will be delivered to the site in their original containers bearing manufacturer's label and instructions.

1.10 – JOB CONDITIONS

- A. Pre-work Conference: Prior to the initiation of any work, meet at the project site with the Contractor, all approved subcontractors, and the Owner to discuss the project. Owner will record the discussions of the conference and the decisions and agreements (or disagreements) reached, and furnish a copy of the minutes to each party. Review foreseeable methods and procedures related to the painting work, including but not necessarily limited to the following:
 - 1. Review project requirements (Specifications and other Contract Documents).
 - 2. Review required submittals, both completed and yet to be completed.
 - 3. Review availability of materials, tradespeople, equipment and facilities needed to make progress and avoid delays.
 - 4. Review weather and forecasted weather conditions, and procedures for coping with unfavorable conditions, including the possibility of temporary coverings.
 - 5. Review procedures needed for protection of the building during the remainder of the construction period.
 - 6. Review staging strategy if required.
 - 7. Verify all quantities, dimensions and materials in the field.
- B. Weather Condition Limitations: Proceed with work only when weather conditions will permit unrestricted use of materials, ensure quality control and ensure water will not enter the building envelope. All installation procedures must comply with standard construction practices and manufacturer's recommendations where applicable.
- C. Examination of Substrate: The Contractor must examine the substrate and other conditions within which the repairs are to be performed, and notify the Owner of any unsatisfactory conditions. Do not proceed with any work until unsatisfactory conditions have been corrected in an acceptable manner and approved by the Owner.
- D. Weekly Site Meetings: Meet weekly with Owner to review work performed, challenges encountered or anticipated, and upcoming work. Project Manager will record the discussions of the conference and the decisions and agreements (or disagreements) reached, and furnish a copy of the minutes to each party.
- E. Every effort shall be made to accommodate the reasonable needs of the Historic New England site personnel in relation to scheduling.

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SECTION II – PRODUCTS

2.1 – MATERIALS

A. Cleaning:

1. Gentlest means possible should be utilized. Attempt to use water at a pressure less than 60 psi and a natural bristle brush before moving on to a harsher means.
2. If stubborn biological staining exists, a 3:1 hot water: bleach mixture should be applied by handheld compression tank sprayer or by hand with a natural brush. Thoroughly rinse the area with clean water at a pressure of less than 60 psi.
3. The use of tri-sodium-phosphate (TSP) or other products containing phosphates or sodium (soluble salts) is forbidden.

B. Paint Removal:

1. Mechanical: Scrape with hand tools all surfaces exhibiting areas of loose or peeling paint, and areas of adhesion failure. Hand sanding after scraping is preferable using a grit no lower than 80, but appropriate to achieve a smooth surface but not remove substrate. Sandpaper should be industrial, open-coat. Random orbital or palm sanders may be used, only following agreement by owner, so long as no or very minimal removal of existing substrate results. Any sander must have attached dust collector.
 - a. Sand paper of the appropriate grit should also be used to sand rough or fuzzed areas left after priming—but should not expose substrate.
2. *Heat*: If areas have been specified to be stripped bare of paint, this will be accomplished by an infrared heater or steam. No heat guns will be used on fragments in situ.
3. *Chemical*: Chemical strippers shall be reserved for use in special situations, and shall never be used unless specified according to the scope of work of the contract documents. If a chemical stripper is used, preference will be given to an environmentally friendly product; no methylene chloride strippers shall be used. Chemical strippers shall never be used in situ.

C. Wood Treatment:

1. For rotted and deteriorated areas, utilize a two-part wood epoxy consolidant applied per manufactures' directions. No styrene products should be used.
2. If an application of wood treatment is deemed necessary prior to application of paint, Historic New England will determine or approve the product to be used.

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- D. Primer:
 - 1. Primer shall be (*Primer Manufacturer, Primer Color, Primer Number, Primer Sheen*). All primer shall be obtained from the same vendor at the same time.
- E. Caulk:
 - 1. Should caulk be necessary, it shall be latex based and approved by the Owner.
- F. Paint:
 - 1. Paint shall be (*Paint Manufacture, Paint Color, Paint Number & Paint Sheen*). All paint shall be obtained from the same vendor at the same time.

SECTION III – EXECUTION

3.1 – GENERAL PROCEDURES

- A. Perform preparations and cleaning procedures in strict accordance with manufacturer's instructions and as herein specified, for each substrate condition. Progression of work from preparation to priming and painting shall proceed in a timely fashion so as to not allow time for bared, prepped, or primed, unfinished or incompletely finished substrate to dwell unnecessarily in the weather before receiving finish coats.
- B. The goal of any painting project shall be to provide a very high quality, durable paint finish, while retaining as much of the paint history as possible and protecting the historic substrate from any unnecessary or adverse damage.
- C. Take all necessary precautions to protect building elements and finishes from damage by precipitation during work of this Section.
- D. Every effort shall be made to accommodate the reasonable needs of the Historic New England site personnel in relation to scheduling.
- E. Every effort shall be made to protect any and all landscaping from harm.
- F. Do not apply material when temperature of surface and surrounding areas is below 50 degrees F, unless otherwise permitted by manufacturer's instructions.
- G. Do not apply paint in snow, rain, fog or mist; or when the relative humidity exceeds 85%; or to damp or wet surfaces. The moisture content of the surfaces to be painted must be 13% or less. Moisture content will be tested in several areas of each elevation prior to the application of any paint materials.
- H. All manufacturer's printed instructions are to be followed unless otherwise instructed in this document or by the Owner directly.
- I. Perform all work that disturbs lead-containing paint, handle all material that involves lead-containing paint, and transport and dispose of all lead-containing paint and residue in compliance with all applicable federal, state and local laws containing paint and residue in compliance with all applicable federal, state and local laws and regulations for identification, removal, labeling, handling, containerization, transportation, and disposal of lead-containing material.

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- J. All materials shall comply with fire safety standards. Take all necessary precautions to prevent fire and spread of fire.
- K. The site shall be kept clean and free of debris, paint chips, and all equipment; the work area shall be cleaned in an orderly fashion before work completion daily.

3.2 – EVALUATE SUBSTRATE

- A. Thoroughly assess substrate to determine if any carpentry repairs are necessary prior to beginning the painting project (siding, sills, thresholds, etc.).
- B. Notify Owner if repairs are suggested and identify all locations for review.
- C. Contractor should not perform any repairs prior to consultation with Owner.

3.3 – CLEANING

- A. When cleaning the gentlest means possible should always be utilized. Always test a small area of the cleaning agent prior to washing the entire surface. Owner must approve condition prior to proceeding. Clean surfaces of dirt and mildew if needed by the following methods:
 - 1. Attempt to use water at a pressure less than 60 psi (garden hose) and a natural bristle brush before upgrading to a harsher method.
 - 2. If stubborn biological staining exists, a 3:1 hot water:bleach mixture should be used. The mixture can be applied by handheld compression tank sprayer, or by hand with a natural brush. All areas to be treated must be thoroughly rinsed with clean water at a pressure of less than 60 psi before proceeding further. Surfaces must be allowed to dry at least 48 hours before any material application.
 - 3. Window sash should be cleaned by hand and may be rinsed by handheld compression tank sprayer. Care should be taken to avoid any damage to the sash or leaking around the windows. Surfaces must be allowed to dry at least 48 hours before any material application.
 - 4. The use of tri-sodium-phosphate (TSP) or other products containing phosphates or sodium (soluble salts) is forbidden.
 - 5. Power washing is not permitted.
- B. If difficulty washing the surface is encountered, confer with Owner to discuss further options.
- C. Take all necessary precautions to protect building elements and finishes from damage by precipitation during work of this Section.

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3.3 – PAINT RETENTION

- A. Preference shall always be given to retain well adhered paint.
- B. Retain samples of paint layers in situ as directed by Owner. Samples shall be maintained at the following locations:
 - 1. Windows: leave a 1”x1” square in the upper right corner of each top rail and on the top right corner of the window hood or casing.
 - 2. Siding: leave the upper three courses of siding intact with the original finishes.
 - 3. Trim: leave a 3”x3” square in the upper right corner of the trim where possible.
 - 4. Additional Elements: to be decided in consultation with Owner.

3.4 – PAINT REMOVAL

- A. Mechanical: Scrape with hand tools all other surfaces exhibiting areas of loose or peeling paint, and areas of adhesion failure. Feather all rough edges with by hand sanding to provide a smooth transition between paint layers and substrate. As it is imperative that the substrate be free of all marks from sanding and tools, a disc sander will not be considered. Random orbital or palm sanders may be used, only following agreement by the owner, so long as no or very minimal removal of existing substrate results. Agreement by the owner will be contingent upon an accepted sample of the orbital sanding. Any sander must have attached dust collector.
- B. *Heat*: If areas have been specified to be stripped bare of paint, this will be accomplished by use of an infrared heater or steam. No heat guns will be used. Infrared heat will be used according to manufacturer’s instructions and with care never to overheat wood. Historic New England shall only approve stripping wood on buildings where paint analysis has been performed. Should a noticeably complete collection of paint layers be discovered during work, notify the Owner to allow for sample collection.
- C. *Chemical*: Chemical strippers shall be reserved for use in special situations, and shall never be used unless specified according to the scope of work of the contract documents. No methylene chloride strippers shall be used. Chemical strippers shall never be used in situ.

3.5 – WOOD TREATMENT

- A. If Contractor believes an area requires wood consolidation, review area with Owner for approval. If a consolidant must be applied, a non-styrene based two-part epoxy should be used. All epoxies must be approved by Owner.
- B. If an application of wood rejuvenator is deemed necessary prior to an application of paint, Historic New England will determine or approve the product to be used. Products are to be applied according to manufacturer’s directions and surfaces

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must be allowed to dry a minimum of 24-48 hours.

3.6 – PRIMING

- A. Primer shall be (*Primer Manufacturer, Primer Color, Primer Number, Primer Sheen*) of type specified in the “Materials” section of this document and shall be compatible make and composition as finish paint. No substitutions will be accepted without written approval from Owner.
- B. Apply primer in accordance with manufacturer’s directions. Materials to be applied by method best suited for application: brush, roller, or spray. All paint to be finished by brush application* (*unless a more modern technique is historically appropriate).
- C. Apply each coat at not less than recommended spreading rate to provide the dry film millimeter thickness specified by the manufacturer for each paint coating.
- D. Allow at least 4-24 hours dry time (depending on manufacturer’s specification) before proceeding with any additional paint application. Coating failure may result by application of additional paint over non-dry film.
- E. Apply additional coating where undercoats, stains, or other conditions show through paint film, until uniform finish color is achieved.
- F. Exposed nail heads to be spot primed with a rust inhibitor.
- G. New wood shall be primed on all sides (especially end grain) prior to installation or fabrication of structure. All wood to be installed with ground contact will be treated with wood preservative approved by Owner.
- H. All joints or gaps around doors, windows, or vertical joints of siding where water invasion may occur are to be filled with an approved latex caulk, not to be applied until primer coating is dry. Silicone caulks are not approved. Never caulk horizontal clapboard laps.
- I. All areas indicating stains due to corrosion of hardware shall be, pending Owner approval, removed, properly labeled and stored in an agreed-upon location on-site. Rust and corrosion shall be removed by wire brush. All surfaces are to be primed with a rust inhibiting primer, and reinstalled after finish painting, if possible.

3.7 – FINISH PAINT

- A. Upon completion of previous treatments, inspect all surfaces prior to paint application. Lightly hand sand rough or fuzzed areas. Care should be taken not to expose substrate or re-priming will be necessary.
- B. Apply (*Finish Paint Manufacturer, Paint Color, Paint Number & Sheen*) as specified in contract documents and according to manufacturer’s directions; film thickness as per material specifications. Upon completion of coat, inspect all surfaces and allow to dry before applying a second coating.
- A. Apply additional paint coating where undercoats, stains, or other conditions show through paint film, until uniform finish color is achieved.

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- B. Apply a coat of finish paint to the Owner provided sample stick for every coat of finish paint applied to the surface. Label the sample stick on the back with the following information:
 - 1. Project name; paint manufacturer; paint type; color name; color formula; sheen; vendor; number of coats; date of application & Contractor name.

3.8 – WINDOW SASH

- C. Prepare surfaces following all guidelines in Sections 3.2-3.6.
- D. Remove all loose and deteriorated glazing. If necessary secure loose glass with glazing points and apply glazing material selected by Owner. Allow glazing to cure and harden before paint application.
- E. Cracked glass is not to be replaced without prior approval of Owner. Replace with like glass unless new glass usage is approved. All glass replaced is to be dated in the bottom right corner under glazing for future identification.
- F. Apply primer to sash (shellac based paint cannot be applied over glazing). On all window sash extend paint $\frac{1}{16}$ " onto glass to seal glazing. If sash is operable, it is important to paint bottom edge to prevent water invasion. Do not paint previously unpainted surfaces without prior approval from Owner. If sash is removed, do not paint the pocket-facing edge of the stiles.
- G. If sash is operable apply paraffin wax or equivalent to sliding surfaces (jambs, insides of stops, parting beads, and sash sides, if accessible) to facilitate ease of operation.
- H. It is desirable for all windows to be operable. No windows should be rendered inoperable by painting shut.
- I. Clean glass prior to finish paint application with a solution not containing ammonia.
- J. Apply finish paint following all guidelines in Section 3.7. As with the primer, extend paint $\frac{1}{16}$ " onto glass to seal glazing. If it is necessary to clean the glass after applying the finish paint, do not break the paint seal between the glass and the finish paint. If seal is broken, a new layer of finish paint must be applied.

3.9 – SHUTTERS

- A. Prepare surfaces following all guidelines in 3.2-3.6.
- B. Remove shutters and properly tag with current location using shutter schedule provided by Owner. Store in an area directed by Owner.
- C. Owner & Contractor will assess the need for repairs once the shutters have been removed. Any required repairs will be specified separately and Owner & Contractor shall agree on this work prior to commencement.
- D. Apply primer following all guidelines in Section 3.6.
- E. Apply finish paint following all guidelines in Section 3.7.

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3.10 – CLEAN-UP

- A. Perform operations so as to keep work areas and premises clean, and free from accumulation of scrap materials, debris and other surplus material (at the end of every workday).
- B. Remove all debris from site and dispose of properly in accordance with all EPA regulations. Recycle debris when possible.
- C. No materials or debris will be permitted to drop free, but shall be removed by use of material hoists, rubbish chutes, or other method approved by the Owner.
- D. No materials or debris will be permitted to be passed through the finished interior without proper protection in a manner approved by the Owner.
- E. The landscape is to be left in as-found or better condition upon the completion of the project.