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Exterior Paint Specifications:
Wooden Structures at the Cape Neddick Light Station
August, 2016



Introduction

This specification for exterior preparation and painting takes into special consideration the harsh climatic conditions at the Cape Neddick Light Station. Included are instructions for basic identification of historic paint types, mitigating circumstances, and protecting evidence of important historic finishes.

Project administrators should inspect all surfaces to be painted for any conditions that require repair or conservation before engaging painters or scheduling their work. Any repairs and conservation should be completed before preparation for painting begins.

1. General

a. Contractor Selection

- i. Contracting firm will have at least five years of experience working with structures listed in the National Register of Historic Places.
- ii. All personnel working on the project will have at least five years of experience with the tools, techniques and skills associated with preparing and painting historic structures.

b. Quality Assurance

- i. All processes and procedures will be subject to inspection and approval by Town of York Parks and Recreation (YPR) staff or their designees.
- ii. All work will be completed in a neat, clean and workmanlike manner.

c. Certification and Compliance

- i. All workman will possess the requisite licensing, insurance and certification.
- ii. All local regulations or ordinances regarding scaffolding, parking, public streets, right-of-way, and noise levels will be observed.

d. Protection

- i. No volatile substances will be used in paint removal or application.
- ii. No flammable substances will be left in historic buildings during non-work times.
- iii. No heat-generating tools such as torches, heat guns or infrared pads will be used.
- iv. No mechanical blasting (for example, sand, walnut shell or soda) will be used for paint removal.
- v. No rotary grinders or sanders will be used for paint removal.
- vi. There will be no spray-type application of paint or primer.

e. EPA Lead Abatement

- i. For interior and exterior work, all contractors must present certification at the federal and state levels for lead abatement.
- ii. All lead abatement procedures regarding paint removal, job site preparation, and disposal must be followed in compliance with state and federal regulations.

f. Tools and Equipment

- i. Scrapers and knives only: use tools that fit the surface; only curved scrapers for curved moldings, etc.
 - ii. No mechanical tools such as rotary grinders or sanders on either the interior or exterior.
 - iii. Do not scrape to bare wood if not necessary.
 - iv. Only use reasonable force to remove failed material.
 - v. Stable paint layers remain in place as a record of paint history.
2. Before painting, all woodwork repairs must be completed in conformance with *Specifications for Repair and Restoration of Exterior Woodwork*, Groundroot Preservation Group LLC, August 2016.
3. Exterior
 - a. Inspection
 - i. Prior to preparation and painting exterior siding and trims, observe and inspect all surfaces for cracks, deflection, biological growth and decay.
 - ii. Cracks: if cracks or other areas move freely, the element must be repaired prior to painting. This must be done by a qualified architectural conservator or restoration carpenter.
 - iii. Biological Growth: prior to paint application, any moss or mold growth must be killed with a preservation-friendly fungicide such as D2®
 - iv. Decay: if decay is found, *stop* preparation and notify YPR officials for a proper course of repair or replacement. Repairs and replacements must be done by a qualified architectural conservator or restoration carpenter.
 - b. Preparation
 - i. All exterior combination storm windows and doors will be removed prior to preparation and painting.
 - ii. Paint Removal:
 1. No power-washing is permitted.
 2. Scraping: sharp edges and corners should remain sharp, flat surfaces smooth, and all curves should retain their original profiles.
 3. Use sharp, clean paint scrapers with shapes suited to the profiles of the moldings.
 4. Do not use pointed or flat scrapers to scrape round profiles.
 5. No large-scale paint removal to bare wood is permitted unless the material removes easily with moderate hand force.
 6. Any loose, flaking paint must be removed by hand with a sharp, clean tool such as a painter's "five-in-one" tool.
 7. Use only moderate hand pressure.
 8. Do not expand borders of paint removal areas beyond loose or failed paint.
 9. Leave sound material in place. This ensures that an adequate record of paint history is preserved.
 10. Overall, perfectly smooth surfaces may not be obtained by the above procedures. However, this specification stresses

accepted preservation practice and a sound, long-lasting product rather than creating a perfect aesthetic.

- iii. Sanding: if tests reveal that the edges of scraped areas can be sanded and feathered to create smooth transitions, use sandpaper starting with 60 or 80-grit sandpaper, and finishing with 150-grit sandpaper.
 - 1. If bare wood is exposed, do not sand or continue to sand, as the surface of the wood could become damaged.
 - 2. Make every effort to preserve the profiles of all historic moldings. Avoid distorting or rounding off sharp edges and curves in moldings by sanding.
 - 3. Prior to installation of paint, all bare wood will be treated with a mixture consisting of 30% boiled linseed oil and 70% pure gum spirits of turpentine. This will be applied liberally until it soaks evenly into the wood. This will be allowed to dry for at least 48 hours prior to the application of primer and paint.

c. Rust Abatement

Use of non-treated steel nails for siding and trim installation has led to corrosion and bleeding through paint in the harsh, saline environment. Without complete replacement of fastening hardware, this problem is likely to persist. However, with proper preparation, the process can be slowed down and controlled considerably.

- i. For all future repairs use only stainless steel nails and trim screws.
- ii. Remove all easily removable corroding hardware, including all staples, nails and screws securing the decorative holiday lighting.
- iii. To treat existing siding and trim nails, follow these procedures:
 - 1. Nails flush with, or proud of wooden surfaces:
 - a. Gently hand-sand all nail heads that are flush with, or proud of the surfaces with 150-grit sandpaper, removing paint and corrosion, until a bright metal finish is achieved.
 - b. Do not sand excessively to avoid damage or reduction of the nail heads thickness.
 - c. With an artist's brush, dab Penetrol® onto each nail head. Also cover any differential staining on wood and paint surrounding the nails. This will seal the metal and stains against further water penetration. Allow to dry completely before installing primer and paint.
 - 2. Nails with heads below the surface plane of the wood:
 - a. Further counter-sink with a steel nail punch to a depth if 1/8" below the surface of the wood.
 - b. Fill each area with a linseed oil-based putty such as Swedish putty
<http://www.guggenheimcolorbyfpe.com/store/pc/viewPrd.asp?idproduct=99>
 - c. Install flush with the surface of the wood, and remove all excess.
 - d. Allow to cure as per manufacturer's specifications prior to installing primer and paint.

d. Primer

i. For uniform, smooth surfaces in good repair, use a high-quality acrylic primer. The underlying coatings likely contain both oil and acrylic paints, and oil paint does not adhere properly when applied over acrylic. Select among:

1. Fine Paints of Europe Eurolux Acrylic Primer
2. Sherwin-Williams DTM Acrylic Primer Finish
3. Benjamin Moore Fresh Start Exterior Acrylic Primer
4. For irregular or heavily-repaired surfaces, or surfaces with extremely thick paint buildup, use XIM Peel Bond primer

ii. Paint Application

1. No paint should be applied until moisture levels in all wooden elements are consistently below 15%. All primer and paint installed on exterior elements must be finished by hand with neat, parallel brush strokes.
2. No surface finishing with sprayers or rollers is permitted.
3. Rollers are permitted for initial application but paint must be finished with brushes while wet.
4. For clapboards and trim, brush strokes must always run parallel to the long dimension of each element.
5. Primer and paint will be worked deeply into all crevices, joints and cracks by hand with the brush.
6. Apply all primers and paints according to manufacturer's specifications regarding environmental conditions, temperature and cure times.

e. Finish Coat Paint

1. For clapboards/ siding:
2. Use high-quality, *semigloss/satin* acrylic paint. Select among:
 - a. Fine Paints of Europe Eurolux acrylic paint
 - b. Sherwin-Williams SuperPaint Exterior Acrylic Latex Paint
 - c. Benjamin Moore Regal Select Exterior Paint
3. Apply two finish coats to all elements per Section 3b above.
4. Do not use stain; modern latex and oil exterior stains are little more than thinned paint and have a record of poor performance and colorfastness.
5. Appropriate cure times will be allowed as per manufacturers' recommendations.
6. Cure for a minimum of 21 days prior to reinstallation of storm windows and doors. This will prevent possible welding of the new paint surfaces to the metal storms.