

Section 1 Sept 2005

First 8 foot section of the rehab is at south end of the greenhouse. Initial focus is on the outer enclosure. The glass removal and replacement is done starting with removal of the vent sashes and removal of glass in vertical sequence, 3 columns at a time. In this way, glass, wood and steel repairs can be completed with access to the vertical column from the adjacent opening.



Context

Wood muntins, mullions and sash in the building shell have a white painted finish on the inside and exterior surfaces. This finish tests positive for lead content.

Initial observations

The existing paint is assumed to be the original finish. The wood is typically exposed with partial paint coverage remaining. Sash frames are made of fir, indicating they are not original.



Proposed practice

All wood components are painted to protect and preserve the wood. Two coats of exterior grade alkyd primer are brush applied to existing and new wood. Surfaces are finished with two coats of acrylic solid colour stain following re-installation. Lower sash frames will be re-used if sound. All replacement sash will be made of yellow cedar. New sash are manufactured as required off site. The existing sash is used as a model for new fabrication, as there are no design drawings or samples of original fabric. Steel and cast iron are primed with marine red oxide and finished with marine enamel.

Results from first section

First coat of primer applied with Penetrol 10% to enhance the penetration and adhesion to the scraped and sanded wood and epoxy filler. Second coat of primer is applied after sanding, without thinning, after installation. Application to all surfaces provides uniform coverage and appearance, and creates a good surface to accept glazing putty. Paint over glazing putty requires additional curing time, due to the oil content of the putty. Stain application over putty does not result in an acceptable finish.



Recommended practice

Acrylic solid colour stain will continue to be used on interior surfaces due to the benefit of application in humid conditions, long service life and ease of maintenance. Putty will be finished after substantial curing time to allow initial drying of surface oils. The finish for putty and adjacent wood surfaces shall be an exterior grade alkyd oil base paint. System Three Rot Fix and Sculpwood epoxy putty makes viable the retention of 80% the original wood .

Conservation practice

The existing wood components are substantially sound and will be re-used with the aid of epoxy resin stabilizers and fillers. Future rot will be inhibited by insertion of borax at high moisture exposure locations such as the base of the vertical glazing frames. We are able to use 25 percent of the lower sash.



Project priorities

Preservation of wood components is accomplished with careful removal and preparation using hand methods and remedial repair methods. The integrity of the steel structure is assured by replacement of deteriorated fasteners with high quality contemporary materials. Drawn glass is recovered and re-used to its best advantage to demonstrate the original character of the light.

Future caretaking

Exterior wood surfaces and glazing putty should be recoated to minimize effects of sun and rain. Glazing putty should be repaired as any cracking or breakout occurs.

