Section 4 Date: October 20,2005

Cast fittings used to connect wood muntins and mullions to the steel structure have resisted corrosion, but the fasteners have disintegrated.

Context

Replacement fittings must be fabricated or manufactured because parts are not available through greenhouse suppliers and manufacturers.

Initial observations

Many small cast fittings are lost because they have simply fallen off the structure. Manual fabricating of parts does not result in a reasonable representation of the original item. This method is costly in labour and may not achieve the durability of the original cast iron.

Proposed practice

We will contract out the custom casting of 3 fittings. Options will be considered based on cost, material to be cast, quantity required for the complete project, and method of casting.

Results from fourth section

Temporary fittings required for the completion of assembly are created from original parts re-located, adapted contemporary fasteners and hand fabricated steel and aluminum pieces. These will be replaced with reproductions in cast red brass when they are available.

Recommended practice

Red or Naval brass will facilitate a cost effective casting process for small quantities, as required for this project. The alloy is resistant to corrosion and has a low galvanic potential when in contact with steel and stainless steel.

Conservation practice

All cast iron fittings that can be salvaged are prepared with protective finishes and re-used. Broken castings are welded if all pieces can be located. Use of stainless steel bolts and wood screws will increase the strength and integrity of the structure, resisting corrosion in a marine atmosphere.

Project priorities

Assure that the structure of the building is sound and any change of material should contribute to extended life of service and ease of future maintenance.

Future caretaking

Periodic inspection will confirm fasteners are secure. If required, maintenance or replacement will be completed.