REPAIR AND REPLACEMENT OF HISTORIC EXTERIOR STAIRCASES AND STEPS

The Virgin Islands possess many fine examples of historic staircases. These range from elaborate double-flight, welcoming arms stairs to simple, but often picturesque, arched steps over gullets. Many of the staircases are masonry. Historic examples are usually brick and rubble stone, covered at least in part by stucco. Other examples are wood, including many wood staircases placed in arcades, which provide access to second-story residences.

Repair and Preservation
All historic staircases should be carefully repaired and preserved as part of any restoration or rehabilitation effort. If more substantial repairs are required, efforts should be made to carefully duplicate historic detailing.

Portland Cement Patches
Generally, historic staircases employed more traditional and softer-lime mortars. Most, however, have been patched over the years with relatively modern, grey Portland cement. The best procedure is to remove the grey patches using a chisel. The new mortar may still rely on a proportionately high Portland content, but slightly more expensive white Portland should be substituted.

The following is a recommended mortar mix for repairs and patches to historic masonry staircases:

Mortar:

a) Portland Cement: ASTM C150, Type 1 White

b) Lime, ASTM C207, Type S, High Plasticity

c) Sand: ASTM C144, fine washed

Many relatively modest houses have staircases demonstrating high levels of craftsmanship. The example on the right has long been lost. Drawing by Pamela Gosner, Historic Architecture of the Virgin Islands.
d) Admixture: Use a water reducing and plasticizing agent to reduce water content and drying shrinkage. "Omicron Mortarproofing" a product of Master Building Company or Equivalent. Follow manufacturer's instructions for use.

c) Potable water: Free of impurities and organic material.

Proportioning:
a) 1 part white Portland cement; 1 part lime; 5-6 parts sand, recommended mix.

b) Sample areas should be tested and examined by the architect or supervisor prior to settling on the final mix.

Repairs to Concrete Steps
Many Virgin Islands buildings have concrete steps, often replacing earlier stone and brick steps or sometimes simply encasing them. Concrete steps often can be spot repaired. Be certain to undercut damaged areas. Do not "feather-edge" or overlap joints.

Wood Steps and Staircases
Wood steps or staircases are relatively rare for historic buildings. Typical exterior stairs to second story residences of commercial buildings are masonry. However, there is some precedent for wood steps, both in alleys or courtyards or, especially in Christiansted and Fredericksted, within arcades.

Whenever possible, historic enclosed wood stairs should be retained. Doors, paneling and other elements should follow historic precedent.

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