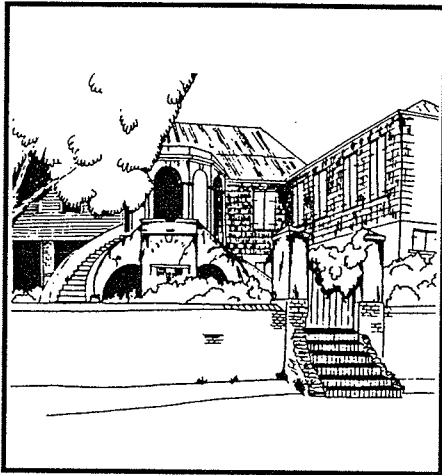


REPAIR AND REPLACEMENT OF HISTORIC EXTERIOR STAIRCASES AND STEPS

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 gutters. 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.

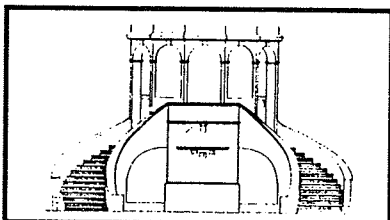


Historic stairs and steps are found both at gates and to provide access to the principal floor of residences. Every effort should be made to preserve original examples. Drawing by Pamela Gosner, *Historic Architecture of the Virgin Islands*.

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Repair and Preservation

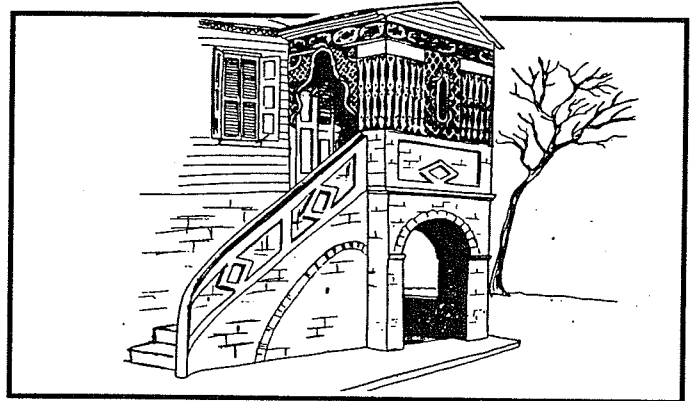
All historic staircases should be carefully repaired and preserved as part of any restoration or rehabilitation effort. If more substantial repairs are required, efforts should be made to carefully duplicate historic detailing.



Historic details, such as this double flight staircase, must be carefully reproduced during major repairs.

Portland Cement Patches

Generally, historic staircases employed more traditional and



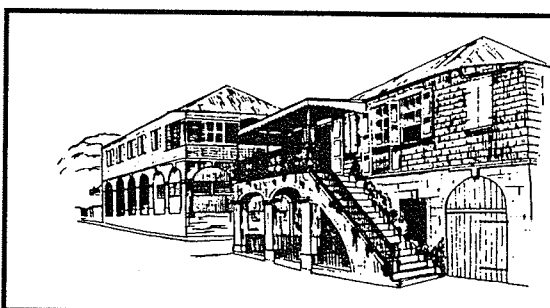
Details, such as relieving arches, lozenge panels and --especially in this example -- decorative porches must all be preserved during repairs.

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.

e) **Potable water:** Free of impurities and organic material.

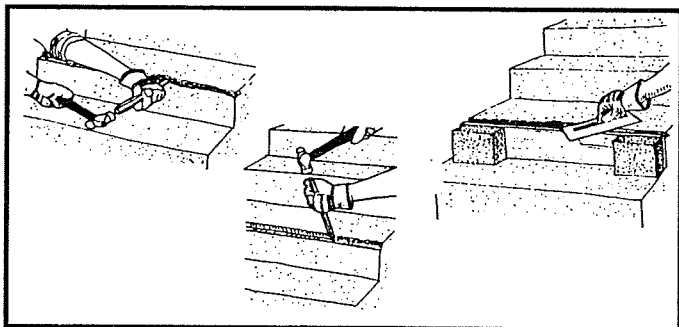
Proportioning:

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

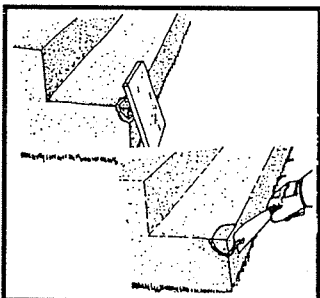
b) Sample areas should be tested and examined by the architect or supervisor prior to settling on the final mix.

Repairs to Concrete Steps

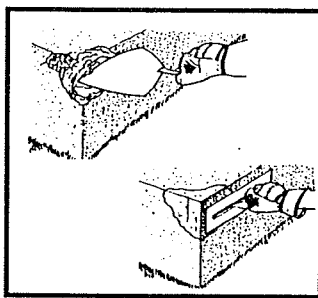
Many Virgin Islands buildings have concrete steps, often replacing earlier stone and brick steps or sometimes simply encasing them. Concrete steps often can be spot repaired. Be certain to undercut damaged areas. Do not "feather-edge" or overlap joints.



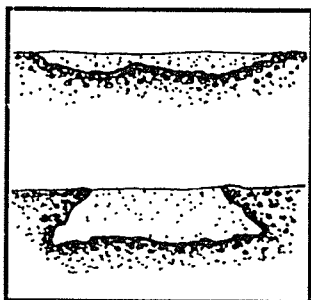
Simple repairs to damaged edges of concrete steps. Be sure to undercut damaged sections. Use a board as a form and do not feather the edges. Remember, if your staircase is a historic one or has brick treads, such repairs are not recommended.



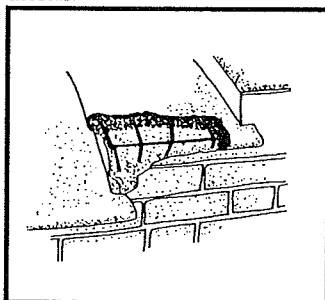
Broken corners can be reattached using a proper modern cement.



Missing sections can also be filled -- again, being sure not to feather the edges. Always thoroughly wet the area to be repaired prior to adding mortar.



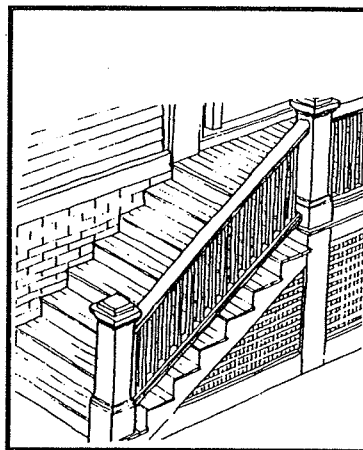
Surface damage can be repaired in a similar way. Again, always undercut.



Severely damaged sections may need to be "built-up" and reinforced. Use stainless steel reinforcing rods.

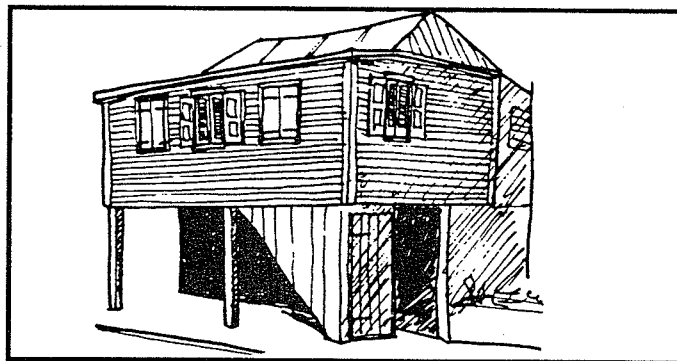
Wood Steps and Staircases

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 Frederiksted, within arcades.



A possible design for a simple wood side stair in keeping with historic examples.

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



Simple enclosed wood stairs such as these are important to the character of historic districts. Be sure to use correct details - including historic plank doors - when making changes or repairs.

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