



EXPLANATION

- ↙ Computed displacement of a point on the ground--Arrow head indicates position of the point in 1989
- ↘ Computed displacement of a point on the roof of a house--Arrow head indicates position of the point in 1989

Displacements were computed from x-y-z coordinates of photo-identifiable points visible in vertical aerial photography of December 2, 1969 and June 2, 1989. The coordinates were measured in terms of eastings, northings, and elevation above sea level using a Kern DSR-11 analytical stereoplotter (measurements by James Messerich, USGS, Denver, Colo.). The 1989 stereomodel was constrained using the same surveyed ground control as R.M. Towill Corp. used to produce the topographic base map. The 1969 model was constrained using coordinates of photo-identifiable points in the valley bottom and on Waahila Ridge from the 1989 stereomodel

0 10 FEET
DISPLACEMENT SCALE

Base from R.M. Towill Corporation
"Aerial Topographic map of Portion of Manoa Valley"
Honolulu, Hawaii, 1989

Origin of coordinates: Hawaiian State Plane, Zone

100 0 100 200 300 400 FEET
50 0 50 100 METERS

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL

This map is preliminary and has not
been reviewed for conformity with
U.S. Geological Survey editorial standards.

**DISPLACEMENT OF POINTS IN THE LANDSLIDE COMPLEX IN MANOA
VALLEY, HONOLULU, HAWAII**

By

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