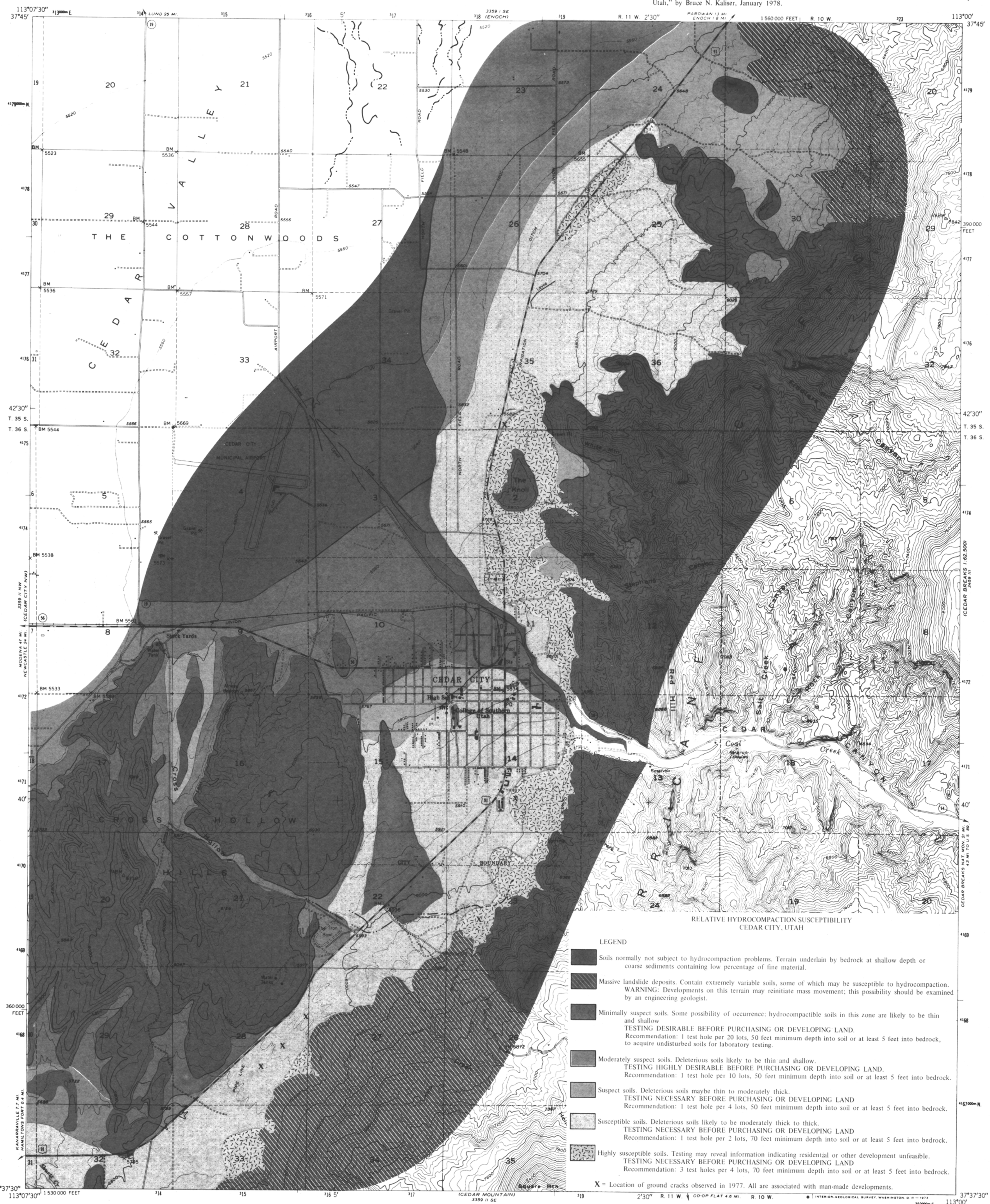
STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
UTAH GEOLOGICAL AND MINERAL SURVEY

Map 46

Plate to accompany UGMS Report of Investigation No. 124, "Ground Surface Subsidence in Cedar City Utah," by Bruce N. Kaliser, January 1978.



RELATIVE HYDROCOMPACTION SUSCEPTIBILITY
CEDAR CITY, UTAH

LEGEND

Soils normally not subject to hydrocompaction problems. Terrain underlain by bedrock at shallow depth or coarse sediments containing low percentage of fine material.

Massive landslide deposits. Contain extremely variable soils, some of which may be susceptible to hydrocompaction. WARNING: Developments on this terrain may reinitiate mass movement; this possibility should be examined by an engineering geologist.

Minimally suspect soils. Some possibility of occurrence; hydrocompactible soils in this zone are likely to be thin and shallow
TESTING DESIRABLE BEFORE PURCHASING OR DEVELOPING LAND.
Recommendation: 1 test hole per 20 lots, 50 feet minimum depth into soil or at least 5 feet into bedrock, to acquire undisturbed soils for laboratory testing.

Moderately suspect soils. Deleterious soils likely to be thin and shallow.
TESTING HIGHLY DESIRABLE BEFORE PURCHASING OR DEVELOPING LAND.
Recommendation: 1 test hole per 10 lots, 50 feet minimum depth into soil or at least 5 feet into bedrock.

Suspect soils. Deleterious soils maybe thin to moderately thick.
TESTING NECESSARY BEFORE PURCHASING OR DEVELOPING LAND
Recommendation: 1 test hole per 4 lots, 50 feet minimum depth into soil or at least 5 feet into bedrock.

Susceptible soils. Deleterious soils likely to be moderately thick to thick.
TESTING NECESSARY BEFORE PURCHASING OR DEVELOPING LAND
Recommendation: 1 test hole per 2 lots, 70 feet minimum depth into soil or at least 5 feet into bedrock.

Highly susceptible soils. Testing may reveal information indicating residential or other development unfeasible.
TESTING NECESSARY BEFORE PURCHASING OR DEVELOPING LAND
Recommendation: 3 test holes per 4 lots, 70 feet minimum depth into soil or at least 5 feet into bedrock.

X = Location of ground cracks observed in 1977. All are associated with man-made developments.

Relative degree of susceptibility to hydrocompaction is depicted on this map (see legend). Geomorphologic analysis, with aerial photographs at a scale of 1:20,000 as the primary tool, was principally employed in the preparation of this map. Only limited field checking has been done; no drilling, sampling or testing undertaken other than that shown in RI No. 124.

This map has been constructed utilizing all information available through March 1978, and is subject to revision as additional data from future drilling becomes available..

Purpose of this map is to inform all interested government agencies, private enterprises, and individuals planning to construct new buildings or to purchase existing buildings of a potential natural hazard from unstable ground, termed "hydrocompaction". This geologic phenomenon may be aggravated by activities of man.

Appropriations No. 01-61-03
Archives Approval 7800157

SCALE 1:24 000

1 MILE — 7000 FEET — 1 KILOMETER

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 10 FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

Map prepared for City of Cedar City by State of Utah, Geological & Mineral Survey.

Since this is a natural hazard, no liability is implied or assumed by the State of Utah, Four Corners Regional Commission, the City of Cedar City, nor the county of Iron County.

April, 1978

ROAD CLASSIFICATION

Heavy-duty — 4 LANE | 6 LANE — Light-duty
Medium-duty — 4 LANE | 6 LANE — Unimproved dirt
U. S. Route — State Route

UTAH
QUADRANGLE LOCATION

CEDAR CITY, UTAH

U.S. Geological Survey 7½' Quadrangle