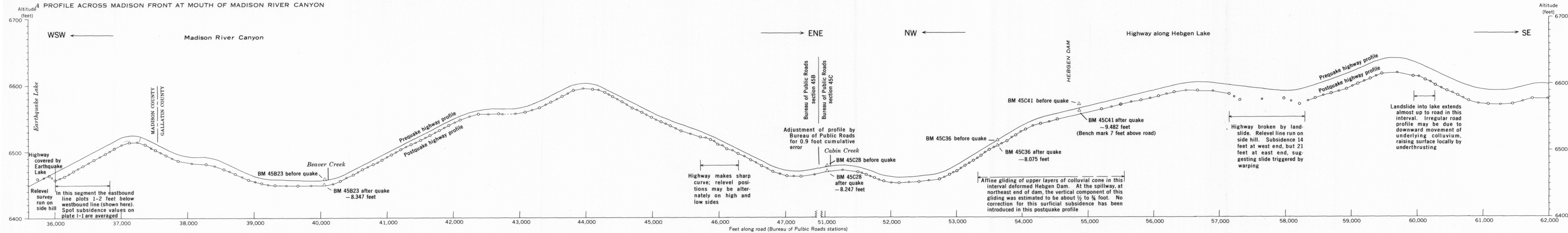


A PROFILE ACROSS MADISON FRONT AT MOUTH OF MADISON RIVER CANYON



B PROFILE ALONG UPPER MADISON RIVER CANYON AND LOWER HEBGGEN LAKE VALLEY

PROFILES OF SUBSIDENCE OF MONTANA STATE HIGHWAY 499 IN MADISON RIVER CANYON, SHOWING ABSOLUTE ALTITUDE OF HIGHWAY BEFORE AND AFTER HEBGGEN LAKE EARTHQUAKE

EXPLANATION

Prequake highway profile, by Bureau of Public Roads, 1932-33

Postquake highway profile, as defined by individual level-rod readings by U.S. Coast and Geodetic Survey, September-October, 1959

Altitudes computed by W. B. Myers, U.S. Geological Survey, from level observations by Observers G. D. McNeil and F. C. Munfrada, supervised by Ens. W. N. Grabler, U.S.C. and G.S.

Small circles, altitude of road shoulder at instrument stations, determined by subtracting 5.0 feet from altitude of telescope axis.

Large circles, altitude of head of turning pin at base of level rod. Pin stands 2-6 inches above road shoulder, so its height is virtually that of the crown of the highway.

Figure A plotted from eastbound run and confirmed by westbound run; figure B plotted from westbound run and checked in sample segments by eastbound run

△ BM 45B23 after quake

Bench mark, surveyed in the fall of 1934 and again in September-October, 1959, by the U.S. Coast and Geodetic Survey  
1934 leveling confirmed 1932-33 Bureau of Public Roads' bench mark altitude within 0.24 feet

Distance between prequake and postquake profiles indicates absolute subsidence during earthquake