

## 5. Surface Fault Rupture

### a. Trenching.

Trenching to locate exact fault positions shall be required as a part of any Natural Hazards Assessment work program if each of the following three factors exist:

i. The site lies in a designated Special Study Area for Surface Fault Rupture on the County Geologist's Natural Hazards Overlay Map Series.

ii. The subject use or building will involve human occupancy or the storage of toxic, caustic, flammable, or explosive materials.

iii. The property has either:

(A) A lineation, escarpment, or other visual evidence of a possible fault lying within 50 feet of the proposed building site;

(B) Land within a radius of 50 feet of the proposed site that has been disturbed so as to conceal any fault displacement;

(C) No surface evidence of faulting exists where a fault is inferred to exist by off-site evidence;

(D) A location in a graben which is adjacent to an active fault; or

(E) A covering of surface material that is younger than 10,000 years of age.

If trenching is not mandatory within an area delineated as subject to surface fault rupture on the County Geologist's Natural Hazards Overlay Map Series, the Natural Hazard Assessment shall determine the nature of the fault hazard by profiling and mapping.

### b. Location and extent of trenching.

Where trench studies are required, the trenches shall be dug at least 20 feet beyond the exterior of the proposed structure or use; or, if the fault is found, to the fault itself, whichever is closer. Approval by the County Geologist of the location and depth of any such trench is required before digging is commenced, and trenches, when completed and logged, shall be reviewed by the County Geologist before backfilling.

### c. Building along faults.

Structures and uses placed in the vicinity of an active fault where no trenching is required shall be set back at least 50 feet from the midpoint of the fault scarp, except in the following cases where a greater setback is required:

i. Where the scarp slope angle is over 30 percent, the setback shall be 50 feet or more from the slope break at the top and bottom of the scarp; or

ii. Where scarp profiles indicate the presence of back tilting, secondary faulting, or graben-bounding antithetic faults, the setback shall be 50 feet or more from the outermost fault or, in areas of flexure and back tilting exceeding the 1.5 degrees, it shall be at least 50 feet from the point where the slope of the prefault surface is regained, whichever is greater. Where no trenching is required but is completed at the desire of the permit applicant, a closer setback may be approved by the Zoning Administrator in accord with the findings of the Natural Hazards Assessment and trench study.