

ADMINISTRATIVE MANUAL
COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

S001.0

ALTERNATE SETBACK AND SETBACKS FROM DESCENDING SLOPE

The 2014 County of Los Angeles Building Code (CLABC) Section 1808.7.5 permits the use of an alternate setback. The following requirements shall be met in order to allow a reduction of setback and clearance:

- For each specific slope where an alternate setback is requested, the static, seismic, and surficial factors of safety shall meet Los Angeles County minimum standards.
- Shear strength parameters utilized in the slope stability analyses shall be obtained from samples taken from the specific slope where alternate setback is required.
- The cohesion of the soil in fill slopes is equal to or greater than 250 psf.
- Adequate bearing and passive pressure capacities are developed.
- The slope gradient is not steeper than 1:1 (horizontal to vertical) for natural slopes and 1½:1 for cut and fill slopes.
- Adequate drainage is provided for the slope.
- Similar slopes in the general area have performed adequately.
- The geotechnical consultant must specifically justify and recommend the reduced slope setback and clearance. Note: the proposed alternate setback is subject to review by the Geotechnical and Materials Engineering Division and subject to approval of the Building Official.

When the above provisions are complied with, the required slope setback and clearance set forth in CLABC Section 1808.7, may be reduced in accordance with the following table:

<u>Static and Surficial Factor of Safety (F.S.)</u>	<u>Maximum Reduction (percentage)</u>
1.5 ≤ F.S. < 2.0	100 (F.S. – 1.5)
F.S. ≥ 2.0	50

Slope setbacks required by the Los Angeles County Building Code are based upon the assumption that the slope in question is grossly and surficially stable. Building Code Section 1805.3.2 states that the intent is to provide vertical and lateral support for the footing without detrimental settlement. Therefore, if factors of safety demonstrate that the adjacent descending slope is potentially unstable the setback must be increased and measured from a hypothetical surface demonstrating factors of safety that meet or exceed all County minimum standards for slope stability (grossly and surficially stable). This hypothetical slope surface representing a stable slope is often called a “geotechnical setback plane or line”.

A stable slope and “geotechnical setback plane or line” must meet or exceed all minimum factors of safety requirements for slope stability as indicated below:

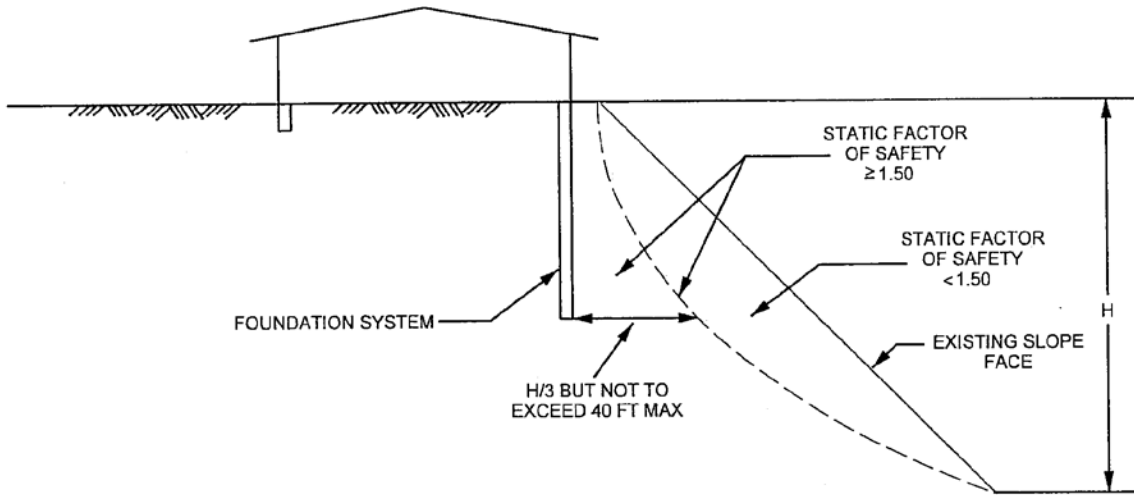
- Static Slope Stability factor of safety of 1.50 or greater. (gross stability)
- Seismic Slope Stability factor of safety of 1.10 or greater. (gross stability)
- Surficial Slope Stability factor of safety of 1.50 or greater. (surficial stability)

The “geotechnical setback plane or line” must be based on the most conservative hypothetical failure surface of these three slope stability analyses. The County setback requirement must be applied to the hypothetical slope surface representing the stable slope. The “geotechnical setback plane or line” must be established beyond and below all potentially unstable portions of the slopes shown in the following attached Figures (a), (b), and (c).

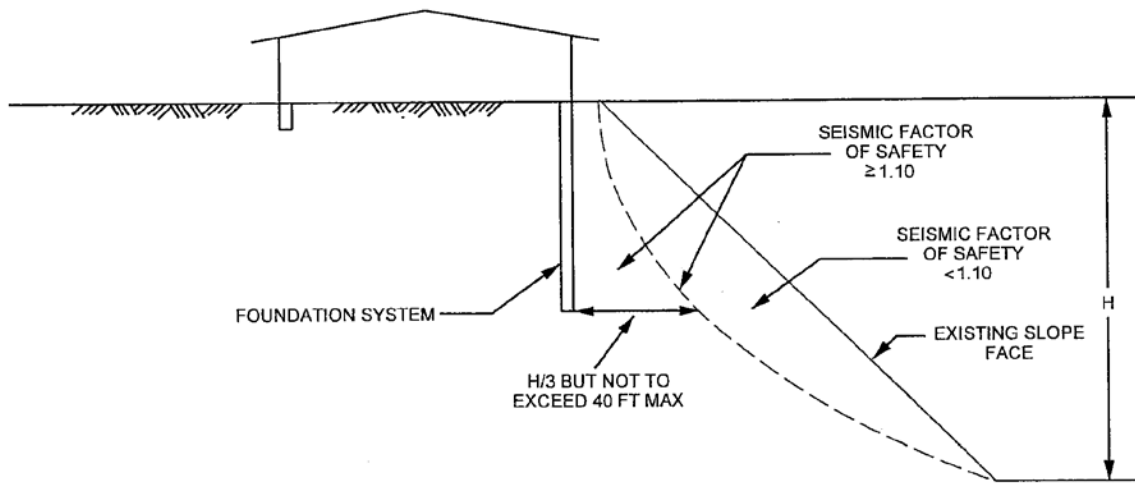
Approved By:



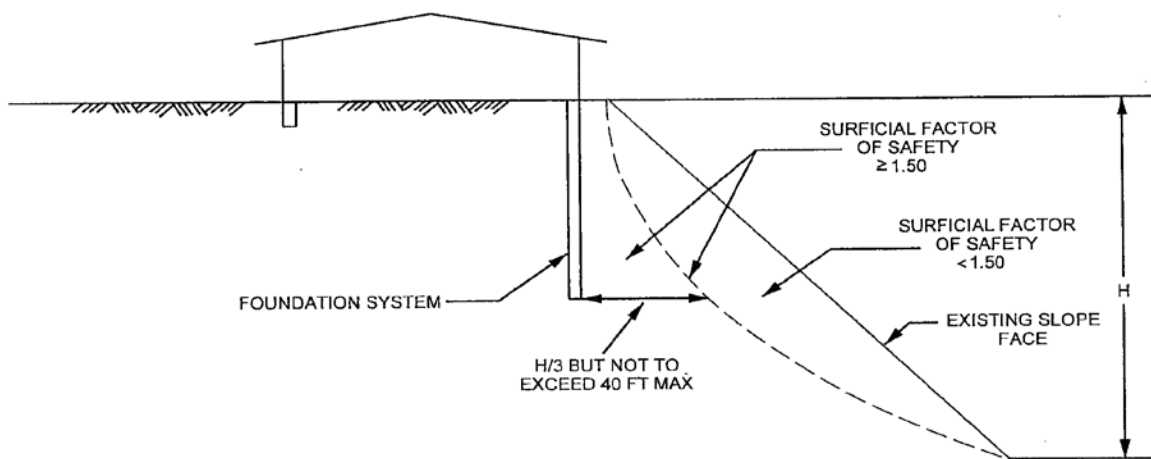
Michael A. Montgomery
Assistant Division Head



(a) STATIC CONDITION



(b) SEISMIC CONDITION



(c) SURFICIAL CONDITION