This guideline is developed by the Tri-Chapter Uniform Code Committee and is intended to enhance regional consistency in application and enforcement of the Building Code. Please verify acceptance of this guideline with your local building department prior to its application.

ISSUE(S):

The 2016 California Building Code (CBC) Section 1803.2 and Residential Code Section R401.4, defines when a site specific foundation and soils investigation for building and foundation systems are required. This guideline provides the criteria to determine what projects may be exempted from a soils investigation. It also delineates the minimum requirements for the design and construction of the foundation systems.

PROPOSED GUIDELINE:

A. The following are general criteria to determine when foundation and soils investigations may be exempted.
   1. A site-specific study may be exempted for buildings that are classified in risk Category I per CBC Table 1604.5 (i.e. agricultural facilities, temporary facilities, sheds, private detached garages, and pools).
   2. Unless otherwise required by the local jurisdiction, a site-specific study may be exempted for projects meeting the following criteria:
      a. New single family or duplex residential buildings classified as R-3 occupancy where buildings are no more than two stories in height and have no basement.
      b. Additions or alterations to single family or duplex residential buildings classified as R-3 occupancy where buildings are no more than two stories in height and have no basement.

B. When a site specific foundation and soils investigation is exempted, the building and foundation systems shall comply with the following general guidelines on the basis of their location:

   Non-Geological Hazard Zones:
   a. The maximum allowable foundation pressure shall not exceed 1500 psf.
   b. The minimum depth of footings shall be 18 inches below the undisturbed ground surface.
   c. The new foundation type shall be compatible with the existing foundation.
d. The maximum allowable lateral bearing pressure shall not exceed 100 psf/ft.

e. Allowable sliding resistance = 130 psf x footing soil contact area but not to exceed 0.5 x dead load on footing.

f. Allowable Frictional Resistance for Piers = 250 psf

g. Specified compressive strength of concrete shall not be less than 2500 psi.

h. Site slope not to be steeper than one unit vertical in six and half units horizontal (15.4%).

(Note: A site-specific study may still be required by the City or County geologist.)

Exemption from the foundation and soils investigation requirements shall not be deemed to grant authorization for any work to be performed in any manner in violation of the requirements set forth in Chapter 18 of the CBC, including meeting setbacks from ascending or descending slopes per CBC section 1808.7.

CODE REFERENCE(S):

2016 California Building Code

1803.2 Investigations required. Geotechnical investigations shall be conducted in accordance with Sections 1803.3 through 1803.5.

Exception: The building official shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data from adjacent areas is available that demonstrates an investigation is not necessary for any of the conditions in Section 1803.5.1 through 1803.5.6 and Section 1803.5.10 and 1803.5.11.

2016 California Residential Code

R401.4.1.1 General and where required for applications listed in Section 1.8.2.1.1 regulated by the Department of Housing and Community Development. Foundations and soils investigations shall be conducted in conformance with Health and Safety Code Sections 17953 through 17957 as summarized below.

R401.4.1.1.1 Preliminary soil report. Each city, county, or city and county shall enact an ordinance which requires a preliminary soil report, prepared by a civil engineer who is registered by the state. The report shall be based upon adequate test borings or excavations, of every subdivision, where a tentative and final map is required pursuant to Section 66426 of the Government Code.

The preliminary soil report may be waived if the building department of the city, county or city and county, or other enforcement agency charged with the administration and enforcement of the provisions of Section R401.4.1.1, shall determine that, due to the knowledge such department has as to the soil qualities of the soil of the subdivision or lot, no preliminary analysis is necessary.