

Civil Engineers may design any building or structure except a hospital or public school, which are excluded by state law. Civil engineers may also perform structural and geotechnical (soils) engineering within the limits set by state and local authorities. Civil engineers analyze and design buildings to withstand the natural forces of gravity, earthquakes, or wind, and can provide advice regarding structural design requirements to architects and contractors, as well as to consumers, and may design any building or structure except a hospital or public school. Civil engineers prepare design and repair recommendations for drainage systems, septic systems, foundations, and retaining walls. They also prepare grading plans and topographic maps of the elevations and contours of the land. Civil engineers also may design swimming pools.

Structural Engineers are civil engineers who have obtained additional experience and passed a specialized engineering examination which authorizes them to use the title “Structural Engineer.” Structural engineering is a sub-specialty of Civil Engineer. Structural engineer’s specialized knowledge and experience enables them to analyze and design buildings or other structures including public schools and hospitals. Structural engineers also provide advice regarding structural design requirements to architects, contractors, and consumers.

Geotechnical Engineers are civil engineers who have obtained additional experience and passed a specialized geotechnical engineering examination which authorizes them to use the titles “Geotechnical Engineer,” “Soil Engineer,” or “Soils Engineer,” and is a sub-specialty of Civil Engineering for soils analysis. Geotechnical engineering includes the investigation and engineering evaluation of earth materials including soil, rock, groundwater, and man-made materials and their interaction with earth retention systems, foundations, and other civil engineering works. Geotechnical engineers apply the principles of soil mechanics and the earth sciences and are knowledgeable about engineering laws, formulas, construction techniques, and performance evaluation of civil engineering works influenced by earth materials.

Engineering Geologists specialize in soil analysis as related to the support of individual structures. They are not authorized to design structures, and will generally work on projects concurrently with other engineers by providing important and valuable soils data.

Architects may design buildings of any type within the limits set by state and local authorities. The State of California excludes structural portions of hospitals.

For further information on California State Engineers regarding
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