California Geological Survey

75TH ANNIVERSARY

California Division of the State Architect

1933 Long Beach Earthquake

AND

The Field Act, improving the design and building standards for California schools

The Earthquake

Occurred March 10, 1933, at 5:54 p.m.
Magnitude 6.4
120 fatalities
$50 million in damages (1933 dollars)

Damage was most significant to poorly designed and unreinforced brick structures.

120 schools in and around the Long Beach area were damaged, of which 70 were destroyed.

Experts concluded that if children were in school at the time of the earthquake, casualties from the earthquake would have been in the thousands.

Ground-Shaking Damage to Schools

John Muir Elementary School
Long Beach

Compton Junior High School
Compton

The Field Act

The California Legislature enacted the Field Act just one month after the earthquake due to the findings that loose subsoils, poor workmanship, and substandard materials all contributed to the failure of schools.

The Field Act and its subsequent revisions authorized the Division of the State Architect (DSA) to review and approve all public school plans and specifications and to furnish general supervision of the construction work.

The California Geological Survey assists the DSA by reviewing geologic hazards affecting schools under the Field Act.

Since the passage of the Field Act, no school has collapsed due to a seismic event, and there has been no loss of life.

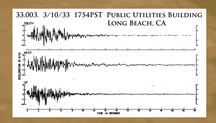
Earthquake-Related Ground Failure

Liquefaction lateral spread damaged road near Seal Beach.

Landslide along coastal bluff damaged home in San Clemente.

Related California Geological Survey (CGS) Earthquake Programs

CGS works with DSA to address geologic hazards for schools under the Field Act.



First California earthquake recorded by accelograph. Today, CGS's Strong-Motion Instrumentation Program collects these data statewide to better understand ground shaking effects.

Map of Long Beach area liquefaction hazard zone (green), CGS's Seismic Hazard Program.

Franklin Junior High School Long Beach

Before Earthquake

After Earthquake

Today

CALIFORNIA GEOLOGICAL SURVEY (CGS) is regarded as the primary source of geological and seismological products and services for decision making by California's government agencies, its businesses and the public.
For more Information, visit the California Geological Survey Website: **http://www.conservation.ca.gov/cgs/News/LongBeach.htm**

Background image: Vertically exaggerated, oblique view of Landsat image draped on space shuttle radar topography (NASA).

Photo and figure sources: U.S. Geological Survey, the Historical Society of Long Beach, H.M. Engle, James Laub (Long Beach Unified School District), and CGS.