OROVILLE EARTHQUAKE OF AUGUST 1, 1975
by
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At 1:00 p.m. on Friday, August 1, 1975, the area of Oroville
Butte County, California, was shaken by an earthquake. The estimated
epicenter was southwest of the town. It was reported that the focus was
approximately five kilometers deep and would be classified as a mild
earthquake.

There were numerous aftershocks, and on Saturday, August 2nd
the authors proceeded to investigate the damage to structures.

Most of the damage was concentrated in the south part of town
as reported to the Command Post Ranger Station.

The Oroville Dam is located to the northeast of Oroville, and
it was reported that there was no damage to the dam. In general, there
was no damage to engineered structures that were built during the last
30 years, except for some movement of some expansion joints, which would
be expected. Most of the damage occurred to very old buildings, to un-
reinforced masonry, chimneys, other minor structures, and there were some
slight landslides.

A detailed report is given below of structures that this in-
vestigating team examined.

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Specific projects investigation. It was reported that a cinder block building collapsed on the south side of town at Palermo and Oakwood. This area was investigated and no cinder block structure could be found that had collapsed. On Palermo Avenue, there was a trailer park in which trailers were supported on top of stacked concrete units with wood boards between the blocks, but there was no damage to any of the structures or trailers in this area.

About a thousand feet south of the trailer park to the east of Palermo Avenue were two homes. One of the homes had both chimneys seriously damaged. The home to the east of this one belonging to D. Kister, had some slight damage to the chimney. We talked to Mrs. Kister and she reported that some of her china plates and bric-a-brac had fallen off the shelves and broken. They felt that the earthquake lasted about five seconds and there was severe shaking. She reported that she was knocked down and could not stand up during the shaking period. She did not sleep in the home during the night of August 1st, but slept in the backyard tent.

At the fire station on Palermo Road and Melvina, the watch commander stated that some of the doors came out of the rolling tracks, and one collapsed on the tank truck. These tracks, that were the guides to the overhead rolling doors, were very poorly braced and could move very easily. Adequate bracing at a very small cost would have prevented this failure. Such a failure might have been serious had there been a need for the fire trucks in an emergency. There were only a few; some bush fires under high tension wires that had swung, contacted and dropped sparks.

On the Upper Palermo Road, there were a number of homes in which the chimneys were cracked, broken and twisted. One home had the top three feet of its chimney badly cracked and it had been taken down.

Another home on Citrus Avenue had a tall chimney damaged in two places, approximately five courses from the top and five courses up from where it joined the roof. The fireplace had also moved away from the house. The home next door had an outdoor swimming pool, rectangular in plan, it was wood with a plastic lining. The southeast corner of the pool had collapsed due to the hydrodynamic force of the water and rotted wood.

There was damage done to the chimney at the Hut Beer Tavern at the intersection of Palermo Road and Wyandotte Road.

Wyandotte Cemetery on Foothill Boulevard. There were a few headstones that had fallen over and some headstones that were approximately square in plan and 4' to 6' tall rotated about the vertical axis. Some of them shifted horizontally; most of them had a torsional movement to them. While at this cemetery, at about 1:30 p.m., there was a significant ground shaking and additional aftershock. It produced a rumbling thunder sound.

Wood frame apartments under construction on Grand Avenue north of Feather River. New apartments were being built, wood frame, on the north side of the Feather River, on top of a bluff along Grand Avenue. The apartments showed no damage, and no landsliding at this point.

Pahl Goodhue Ford. Corner of Montgomery Street and Oak Street. This building and several buildings behind it were old, unreinforced brick in which there was some cracking in the building. These old buildings showed evidence of previous cracking and some slight new cracking. In general, for the age of the building, quality of the masonry work, and the quality of the mortar, these buildings performed well. There were no collapses, just minor cracks. One detail damage and condition may require removal.
St. Thomas Catholic Church, Birch Street and Sixth Avenue. This church was roped off due to some falling bricks from the bellry. Bricks were displaced at each of the corners at the top of the bellry and some of them fell down. The church was built in 1929 and is estimated to be a three or four wythe wall building. The top five feet of the chimney in the rear of the building had a vertical crack in it. Inside the church, several stations of the cross, wall pictures, fell down and others were knocked askew. The piers from the mezzanine to the roof showed movement cracks of the spandrel.

Store intersection, Foothill Boulevard and Mt. Ida Road. A sign outside of a small store on the west side of the street of Foothill Boulevard fell down in the earthquake. It appeared that the 5" pipe was badly corroded through and the earthquake was just enough to knock it down.

Eastside Elementary School, Washington Avenue and Yard Street.

A casual inspection of this plant showed that it performed very well. The old brick building had a few hairline cracks in it on the north side. These cracks may have been previously induced. This plant has been closed due to non-compliance with the State Structural Code.

Animal shelter, Table Mountain Boulevard and County Center Drive.

There is under construction a masonry addition to the animal shelter. There were retaining walls in place and the start up of other masonry walls on the project. There were no signs of distress on this construction site. It appeared that some of the cubes of block may have been shaken loose a bit, but none were turned over or knocked down.

Montgomery Street, between First and Pine, south side of the street, old brick store buildings. The walls on these old brick store buildings are probably a minimum of 60 years old.

Bird Street shopping area. On the north side of the street an old brick building that's painted red, with a silver sheet metal roof, had a bulge on the west side parapet. This old building, probably 60 years old, suffered the normal distress that would be expected. On the south side of Third Street one of the buildings was roped off, apparently due to some falling old masonry.

The Baptist Church at Foothill Boulevard and Olive Highway, northeast corner, is a concrete block structure that suffered architectural damage. On the side of the church along Foothill Boulevard, decorative masonry veneer panels two feet wide by 12 feet high had fallen away from the structural concrete block wall. The corrugated ties which extended from the block wall were bent flat against the wall and did not extend into the veneer panel. The panels, which broke at mid-height, were to be completely removed. The main structure, built in the past ten years, sustained no damage.