



Mission Viejo RACES – ARES HANDBOOK



TABLE PS-2
MODIFIED MERCALLI INTENSITY SCALE

EFFECTS		MAGNITUDE
1.	Not felt except by a very few, and only under special circumstances.	Below 3.0 magnitude on Richter Scale.
2.	Felt by persons at rest and on upper floors.	3.0-3.9 magnitude on Richter Scale.
3.	Felt indoors. Hanging objects swing slightly. Vibration feels like passing of light trucks. May not be recognized as an earthquake.	4.0-4.9 magnitude on Richter Scale.)
4.	Hanging objects swing noticeably. Vibration like passing of heavy trucks. Standing automobiles rock. Windows, dishes, doors rattle. Glasses clink. Wooden walls and frames creak.	4.0-4.9 magnitude on Richter Scale.)
5.	Felt outdoors by most people. Sleepers awakened. Liquids may spill. Small unstable objects displaced. Doors swing, close, open. Pictures move. Some breakage of plaster.	4.0-4.9 magnitude on Richter Scale.
6.	Felt by all. Persons walk unsteadily. Windows, dishes, glassware broken. Objects, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry cracked. Small bells ring (church, school). Trees, bushes shaken visibly.	5.0-5.90 magnitude on Richter Scale.
7.	Difficult to stand. Noticed by drivers of automobiles. Hanging objects shake. Furniture broken. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices; also unbraced parapets and architectural ornaments. Waves on ponds; water turbid with mud. Small slides and caving in along sand and gravel banks. Large bells ring. Concrete irrigation ditches damaged.	6.0-6.9 magnitude on Richter Scale
8.	Steering of automobiles affected. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundation if not bolted down; loose panel walls thrown out. Branches broken from trees. Cracks in wet ground and on steep slopes.	6.0-6.9 magnitude on Richter Scale.
9.	General panic. Masonry destroyed or heavily damaged. General damage to foundations. Frames cracked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground.	7.0-7.9 magnitude on Richter Scale.
10.	Most masonry and frame structures destroyed with their foundations. Some well built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.	7.0-7.9 magnitude on Richter Scale.
11.	Rails bent greatly. Underground pipelines completely out of service. Damage severe to wood frame structures, especially near shock centers. Few, if any masonry structures remain standing. Large, well built bridges destroyed by the wrecking of supporting piers or pillars.	8.0-8.9 magnitude on Richter Scale.
12.	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into air.	8.0-8.9 magnitude on Richter Scale

Source: Orange County Fire Department, Emergency Management Division, 1986.

PUBLIC SAFETY ELEMENT
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