

## JAPAN: Summary of Building Types, Vulnerability to Collapse and Occupancy

Completed by: Charles Scawthorn, Kyoto University, Katsura Campus, Kyoto, Japan 606

E-mail address: cscawthorn@att.net

List construction type <i>(refer to Tables 2 and 3 for suggested categories, sources of data to help answer this question)</i>	Probability of collapse (%) building type when subjected to the specified shaking intensity <i>(refer to instructions on page 5)</i>				Fraction of population who LIVES in this building type <i>(refer to instructions on page 5 for help in estimating)</i>		Fraction of population who WORKS in this building type <i>(refer to instructions on page 5 for help in estimating)</i>		Peak average number of occupants per building <i>(refer to instructions on page 5 for help in estimating)</i>	
	MMI/MSK IX (~0.65-1.24g)	MMI/MSK VIII (~0.34-0.65g)	MMI/MSK VII (~0.18-0.34g)	MMI/MSK VI (~0.092-.18g)	urban areas	rural areas	Urban areas	rural areas	day	night
9 Unreinforced brick masonry in cement mortar with reinforced concrete floor/roof slabs	30	20	5	0.1			-	-	200	-
10 Confined brick/block masonry with concrete posts/tie columns and beams	20	5	1	-			3	3	100	10
15 RC MRF Designed with seismic features (various ages)	10	2	1	-			10	10	1000	100
16 RC MRF Frame with unreinforced masonry infill walls	10	5	1	-			-	-	1000	100
17 RC MRF Flat slab structure	15	3	1	-			5	5	300	50
19 RC MRF Frame with concrete shear walls-dual system	4	1	-	-			10	-	500	100
21 RC SW Walls cast in-situ	2	1	-	-	30	2	10	5	1000	1000
24 STL MRF With cast in-situ concrete walls	2	1	-	-			20	10	1000	1000
25 STL MR with lightweight partitions	4	1	-	-			20	10	1000	1000
26 STL CBF	4	1	-	-			10	10	1000	1000
30 WOODEN; PRE-1981	50	10	5	2	30	50	8	17	3	6
30 WOODEN; POST-1981	15	5	1	-	40	48	4	30	3	6