Appendix 1

Buildings - Structural Safety Checklist

Structural safety has to do with the safety of buildings, especially those aspects related to weight-bearing structures such as foundations, walls, beams, roof trusses. Stair cases and railings are also included here.

Find out what building codes apply and other related regulations. With the assistance of engineering support where necessary, identify all structural safety concerns that should be dealt with immediately or be further investigated and addressed. Decide on strategies for addressing these issues and agree on a plan of action.

The structural safety of buildings may be at risk as a result of any of these conditions:

1. LOCATION and SOIL

- Buildings on marshy soil or next to marshes
- Below or on a landslide-prone slope
- On steep slope with natural or uncontrolled run-off (water) from above or from neighbouring property
- In an area prone to flooding
- On the coast by the sea less than 25 metre from the high water mark

2. AGE OF BUILDING and BUILDING CODES

- Constructed prior to implementation and enforcement of building codes
- Constructed without regard for compliance with building codes
- Building codes do not address the hazards you face (state hazards)
- Buildings of more than five years old, without appropriate maintenance work done
- Old / poorly done electrical installations

3. LOAD CARRYING SYSTEM

- Concrete structures weakened by spalling concrete and rusting reinforcing bars
- Rusting galvanized steel roof structures
- Rotting or termite infested wooden beams and roof structures
- Cracked concrete walls, cross-walls and beams

4. BUILDING HEIGHT

- Buildings of 2 or more storeys with cracked walls and beams

5. DESIGN

- Different storeys have same height, but have openings of different sizes and locations
- Openings too close (less than 1.8 meters) to staircases / escape routes
- Staircases that are too narrow
- Storeys with only one exit staircase.
- Under-rated (according to building codes) fire resisting features, such as fire and exit doors, escape routes, protected lobby and staircase, compartment walls etc..

- Galvanised steel railings that are rusted or broken
- Galvanised steel railings with gaps between bars, or between railings and concrete structure, large enough for a small child to go through
- Narrow roof overhangs that allow verandahs and corridors to get wet and slippery during rain.
- Poor finishing of building structure, eg slippery floors and steps

- **6. WATER DAMAGE**
- Rainwater leaks from roofs, causing damage inside the building
- Interior dampness or odor