

Pakistan Building Code (Seismic Provisions 2007)

Chapter 1: Scope — Advanced Professional Interpretation

Technical Purpose of Chapter 1

Chapter 1 establishes the legal, engineering, and regulatory boundary of the seismic provisions. It defines what must be designed using this code, what is excluded, and the intended performance philosophy.

1. Objective and General Principles — Deep Engineering View

The code prescribes minimum seismic resistance requirements for buildings subjected to earthquake ground motion. Compliance ensures life-safety performance but does not guarantee damage-free performance.

Design Philosophy Embedded in the Code:

- Collapse prevention during the design basis earthquake (DBE)
- Protection of human life is the primary objective
- Structural damage is permitted and expected
- Nonstructural damage may be significant
- Post-earthquake operability is NOT guaranteed

2. Scope of Application — Detailed Interpretation

The provisions apply to reinforced concrete, structural steel, and masonry buildings and building-like structures. Non-building structures are only included where specifically permitted.

3. Explicit Exclusions — Why They Matter

Infrastructure systems such as bridges, dams, tunnels, pipelines, and power plants are excluded because their seismic behavior differs fundamentally from buildings and requires specialized standards.

4. Buildings with Seismic Isolation or Control Systems

Structures using base isolation or advanced control systems are excluded because these systems fundamentally change seismic response and require project-specific analysis.

5. Regulatory Control and Engineer's Responsibility

For projects outside the defined scope, the concerned government departments or autonomous organizations must specify the applicable seismic requirements. Engineers must verify scope early in the project lifecycle.