Pakistan Building Code (Seismic Provisions 2007)

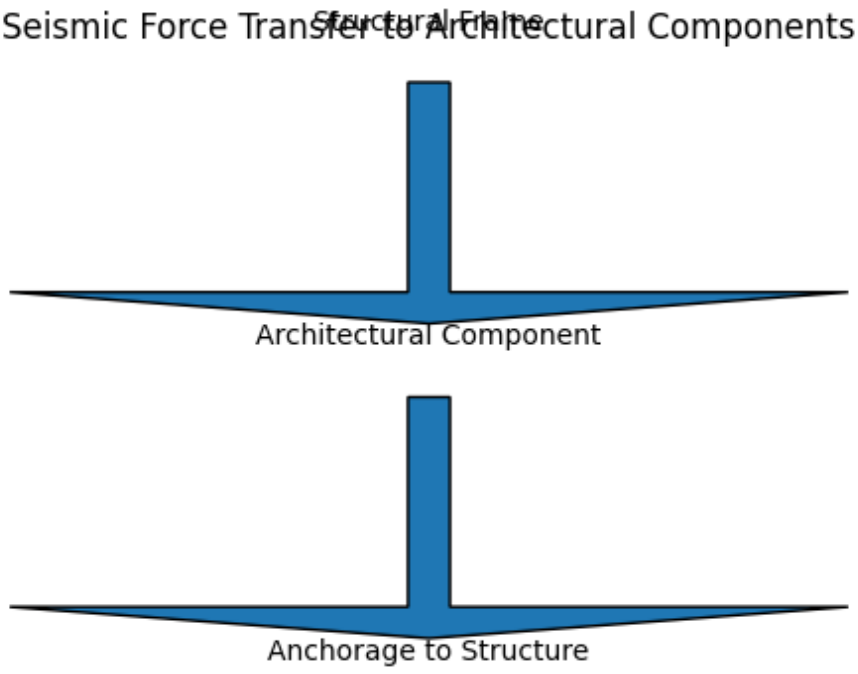
Chapter 10: Architectural Elements — Advanced Professional Interpretation

Purpose of Chapter 10

Chapter 10 addresses seismic design requirements for architectural components such as ceilings, partitions, curtain walls, and other nonstructural elements. Although these components are not part of the primary structural system, their failure can cause injuries, economic loss, and functional disruption.

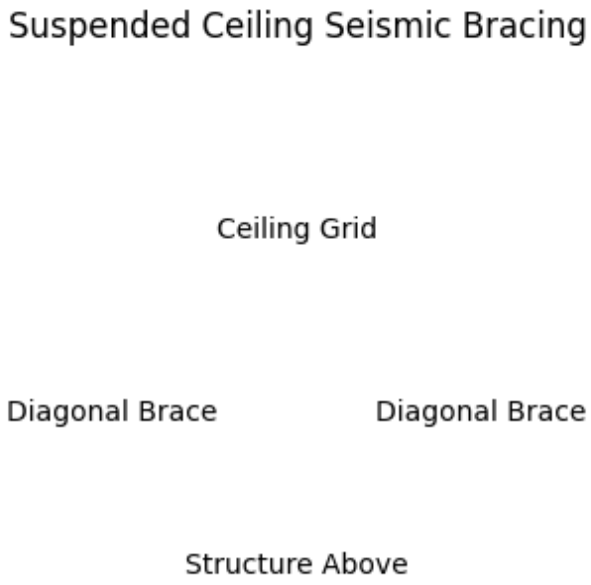
1. Seismic Loads on Architectural Components

Architectural components must be designed to resist seismic forces and accommodate structural deformations. Proper anchorage and force transfer to the main structure are essential.



2. Suspended Ceilings

Suspended ceilings must be positively braced and anchored to prevent collapse during earthquake shaking. Diagonal bracing and adequate connections to the structure above are required.

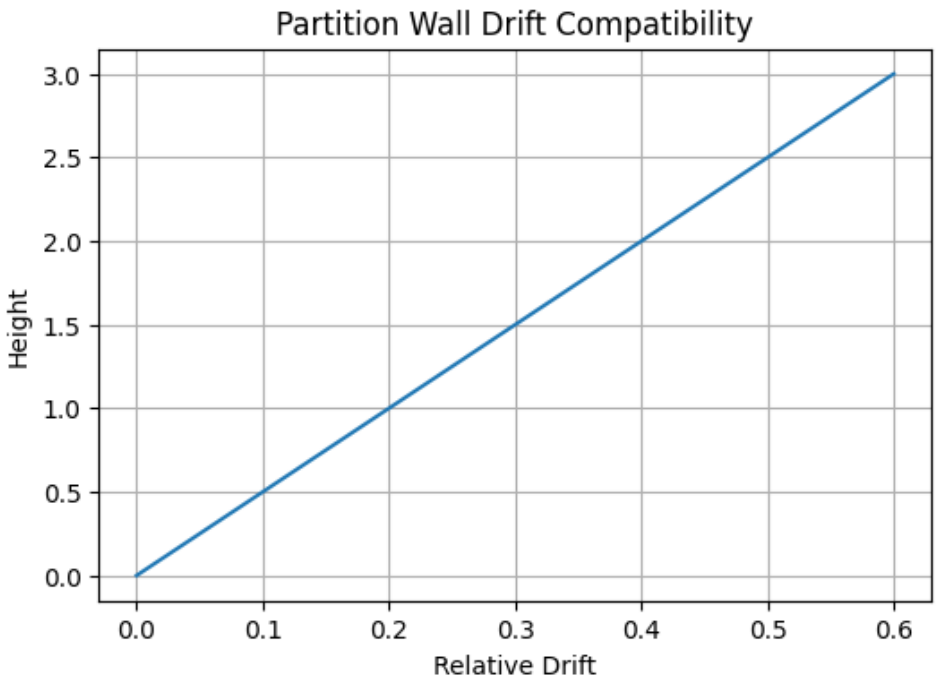


3. Access Floors

Raised access floors must be designed for seismic forces and should maintain stability under lateral movement of the supporting structure.

4. Partitions and Glazing Systems

Partitions and glazed systems must accommodate inter-storey drift without brittle failure. Proper detailing is necessary to prevent out-of-plane collapse.



Professional Risk Notes

Common earthquake damage includes falling ceilings, broken glass, and collapsed partitions. These failures often occur even when the main structure survives. Nonstructural seismic detailing is therefore critical for life safety and functionality.