GENERAL INFORMATION

Applicable Building Types:

1. Main structural system: 
   - RC1
   - RC2
   - RC3
   - RC4
   - RC5

2. Height range: 
   - Low (LR)
   - Medium (MR)
   - High (HR)

3. Seismic design level: 
   - Poor (PD)
   - Low (LD)
   - Medium (MD)
   - High (HD)

REINFORCED CONCRETE BUILDINGS

EXISTING STRUCTURAL DEFICIENCIES

- Soft story
- Captive column

STRUCTURAL IMPROVEMENTS AFTER STRENGTHENING

- Fragile collapse mechanism avoided

STRENGTHENING INTERVENTION DESCRIPTION

This type of intervention improves the seismic behavior of the building avoiding the short column collapse mechanism. The first step is to isolate non-structural masonry walls from the structure. After that, the remaining infill wall needs to be retrofitted in order to eliminate the out of plane failure.

ILLUSTRATIVE FIGURES

Notes

- The proposed intervention options are for illustration purposes only.
- All dimensions, details and material specification has to be specifically designed for each application case.
- Any actual reinforcement solution requires the participation of a structural engineer.
- The authors do not assume any responsibility for the use of the proposed reinforcement options.

FURTHER REFERENCES
