

## عنوان مقاله:

Occupant Friendly Seismic Strengthening of Reinforced Concrete Building Structures

## محل انتشار:

کنفرانس بین المللی سبک سازی و زلزله (سال: 1389)

تعداد صفحات اصل مقاله: 12

## نویسنده:

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## خلاصه مقاله:

An innovative non-evacuation retrofitting technique has been developed for reinforced concrete building structures, which constitute the major portion of the existing building stock in Turkey and in the region. The introduction of cast-in-place reinforced concrete infill walls, connected to the existing frame members, is known to be very effective in improving the overall seismic structural performance. However, this technique is not suitable for strengthening of the existing building stock, since it involves messy construction works and requires evacuation. The idea behind the proposed method is to transform the existing hollow masonry infill walls into structural walls by reinforcing them with relatively high strength precast concrete panels epoxy glued to the wall and dowel connected to the frame members in order to enhance the lateral stiffness of the frame. The panels to be assembled on the wall are small enough to be handled by two workers. All specimens were tested to failure under reversed cyclic quasi-static lateral loading resembling seismic action, besides constant vertical load. Apart from minor variations in behaviour resulting from various parameters studied, all strengthened specimens exhibited superior performance compared to the reference specimens which were designed to represent the present state of ordinary reinforced concrete building frames with hollow brick infill walls plastered on both sides.

## کلمات کلیدی:

Reinforced concrete structures, seismic strengthening, seismic retrofitting, seismic upgrading

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/82186>

