



## **Retrofitting of Beams for Shopping Mall in Manila**

This shopping mall is one of the largest malls in the Philippines and is located at North EDSA, Quezon City. It accommodates a growing number of shoppers every day. During a mall expansion exercise a new cooling system was installed including additional cooling cell and cooling tower on the existing roof deck of one portion of the mall.

A structural analysis showed that the the existing roof beams needed to be strengthened in flexure and shear to cater for the new loading. A FRP retrofit scheme was proposed by the consultant and the Tyfo SCH41 Fibrwrap System was chosen to strengthen the effected beams.