



“Plaza de la Estación” Shopping Center

Fuenlabrada, Madrid, Spain / 2004

Structural type
Owner
Client
Scope
Architect

prestressed slabs with prestressed sheathed and bonded rebar
Inmobiliaria Lualca
Inmobiliaria Alcosto
detailed design and construction support
Unión de Arquitectos



The Station Square Shopping Centre in Fuenlabrada has a surface area of approximately 200,000 m². On plan, it is a five-storey semi-trapezoidal building with dimensions of 190.00m x 170.00m. The modulation of the structure is 8.00m x 8.00m for its basement floors and 16.00m x 8.00m for the storeys above ground level. The basement structure consists of a reinforced slab whilst for the storeys above ground level; it is composed of a pre-stressed slab with bonded post-tensioned four-stranded steel set in an oval duct. The reinforced slabs are 0.25m or 0.32m deep whilst the depth of the abacus-free pre-stressed ones is 0.40m. The pre-stressed steel is mainly distributed upon the columns. Most of the columns have a circular cross section and are made of reinforced concrete with diameters ranging between 0.50m to 1.20m.

On one side of the building, there are two twelve-storey towers above ground level, which have an almost rectangular floor plan of 47.50m x 13.10m. The structure is composed of a 0.32m deep pre-stressed slab with bonded four-stranded post-tensioned steel set in an oval duct and a column modulation of 12.00m x 8.00m.

This building was designed to be joint-free.



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