



# King Juan Carlos Móstoles Hospital

Madrid, Spain / 2010-2011

Structural type  
Characteristics  
Owner  
Client  
Scope  
Architect

concrete slabs, pre-stressed concrete slabs  
180 x 200 sqm. expansion-joint free. (260 beds)  
Comunidad de Madrid  
OHL  
detailed design and construction support  
Rafael de la Hoz-GHESA



The building's height is divided into two clearly distinguishable zones. The first prism-shaped floors house the hospitals' different medical units (outpatients, diagnosis and general treatment) and act as the base for the two oval-shaped towers which house the hospitalization wards.

The floor is rectangular in shape, measures 179.4x148.2 m<sup>2</sup> and is free of expansion joints.

The competent soil layers are variable in depth and for that reason the building has been founded on variable length 85cm diameter piles. The prism-shaped part of the building is composed of five storeys (basement, ground floor, first floor, second floor and technical floor area) and is supported on a 7.80m x 7.80m column grid layout.

The basement floor, used for installations and car-parking, has been executed with a 20cm deep concrete bed. In the area where the competent soil is to be found at a lower level, a 30cm deep solid slab supported on concrete footings has been employed.

The remaining floors in the "plinth building" have employed 40, 35 or 30cm deep solid slabs depending on the design loads applicable. Access to the building is through either the ground or first floors and the other hospital uses, such as: outpatients, stores, diagnosis or intensive care may be done through the first and second floors. The technical floor, located between the third and second floors is destined to building installations.

From the third floor up, the oval-shaped blocks rise upwards which house the hospitalization wards. The column distribution changes slightly here, giving way to transfer columns set on 70cm deep post-tensioned solid slabs. Out of the oval-blocked area of the building, there is a 25cm deep slab which acts as the roof to the prism-shaped structure.

The two oval-shaped blocks are composed of five-storeys including both the base floor and the roof level. There is a central patio between the two blocks and the wards run around this patio area.

The central patios are covered by a lentil-shaped metal canopy.



C/ Barquillo 23, 2º | 28004 Madrid | España  
T. (+34) 917 014 460 | F. (+34) 915 327 864  
[www.fhecor.com](http://www.fhecor.com) | [fhecor@fhecor.es](mailto:fhecor@fhecor.es)