



Cuatro Vientos Bridge

Pamplona, Spain / 2011

Structural type
Characteristics
Client
Scope

suspension bridge
self anchored, main span 128 m
Ayuntamiento de Pamplona
detailed design



The winning proposal in the competition for the New Cuatro Vientos Bridge in Pamplona started from the analysis of the existing bridges which cross the River Arga in the city, with the end conclusion that there was still room for an innovative bridge type.

The unique character which was looked for, both as a gateway and a link, led to the discarding of straight deck or arch with superior deck solutions, looking more towards myriad solutions with references to the carriageway.

At the same time it was analyzed how and where to locate the symbol of the gateway, initially considering the possibility that the greater prominence should be given to the new roundabout, although in the end it was decided that the ideal position would be on the bend of the river, away from the buildings which surround the roundabout and which would upstage its importance, and because symbolically the Trinitarian Meanders points towards the exit of the city, but still belonging to it, and for that reason the gateway should remain on the side of the Trinitarian Platform, on the left-hand side. Moreover, the linking effect should not leave aside neither the river nor the river park and therefore the bridge should remain connected with the pedestrian traffic.

The short list finally discarded a portal arch solution which began close to the roundabout and a similar solution which had the pylons in the roundabout but the piers in the area of the future river park.

The proposed solution is a 114.20m span self-anchored suspension bridge. The suspension solution was so chosen for its moderate span length, for being innovative in the city of Pamplona, uncommon in Spain and offering a symbolic weight associated to the symbol of Navarra which is 'chains'.

The pylons have been projected as two large pointed triangles, having a 28.50m base, which converge quickly until meeting together at a height of 28.0m, which is the same height as the main nave in the Cathedral of Pamplona. This coincidence expresses the human scale in the project and offers a certain gothic appearance to the gateway.

The inclined planes also recall the face of the sharpened merlons from the stronghold of the Fortress City of Pamplona, as we go on a metaphorical search of affinity for signs of identity with the city, and these converge at the tip giving support to the main cables.

The pylons house the abutment-counterweight in their base on the left bank, with its southern face so inclined as to coincide with the angle of the pylons. The counterweight shall be constructed employing recycled concrete, so as to compensate the waste generated by the restructuring of the masonry bridge situated upstream.



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