



Design description

Cycling is becoming increasingly important and is becoming more and more of a focus as an elementary component of urban development. The creation of the necessary infrastructure includes both the construction of cycle paths and the creation of parking facilities for bicycles, as well as the provision of charging stations for e-bikes.

This conceptual design takes a sustainable approach, using UHPFRC to create a filigree, resource-saving supporting structure. In addition, PV panels attached to the roof provide an intelligent power supply for the lighting and e-bike charging stations.

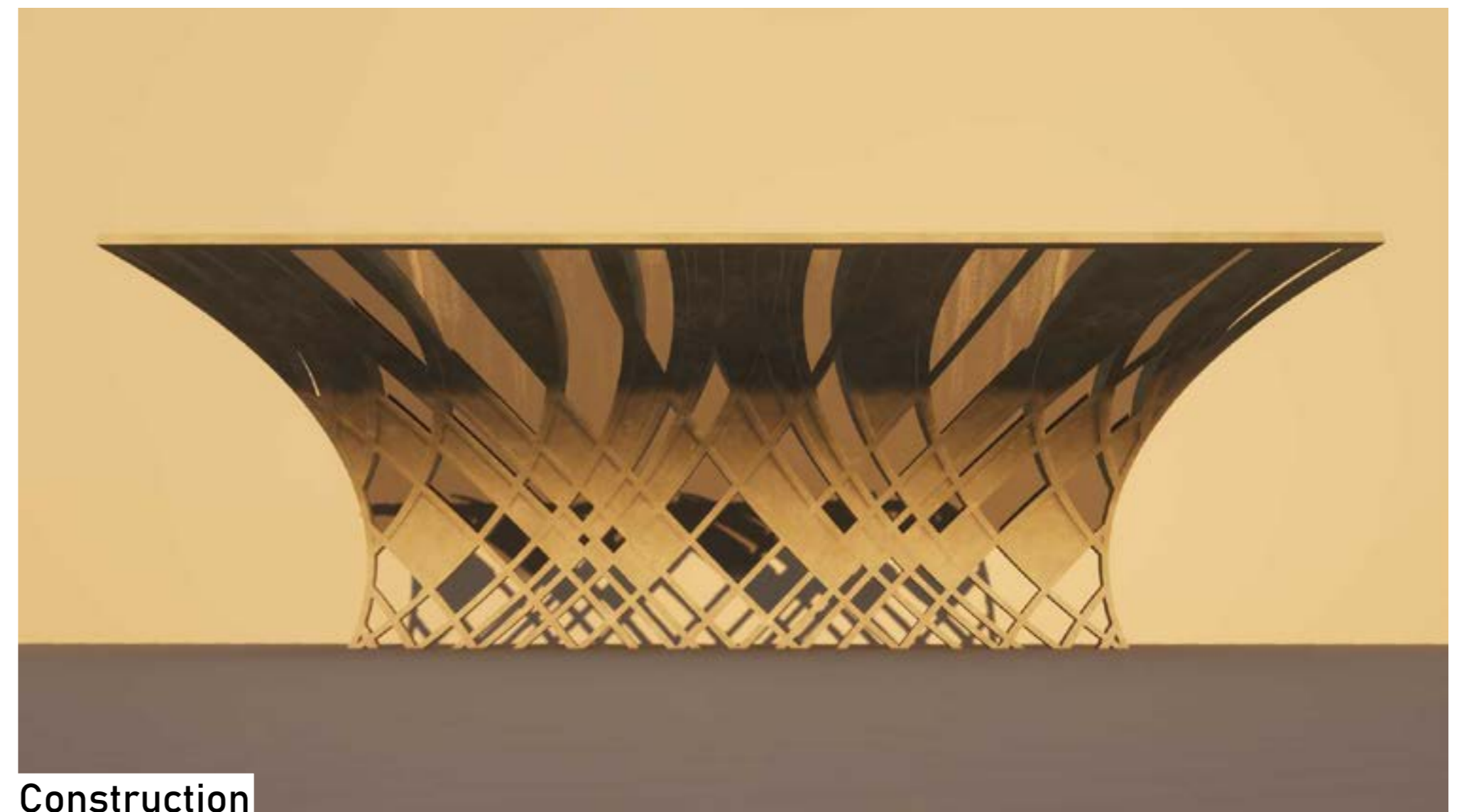
Structural description

The load-bearing structure of this design consists of curved cantilever beams, which are arranged alternately at an angle of 45 degrees and taper towards the edge of the roof. This filigree aesthetic is only achieved through the use of UHPFRC.

Two possible variants were developed for the areas between the cantilever beams. On the one hand, the open areas can be closed with malleable glass, giving the structure an open and light design. Secondly, these areas can be fitted with PV panels on the roof side to ensure a sustainable power supply.



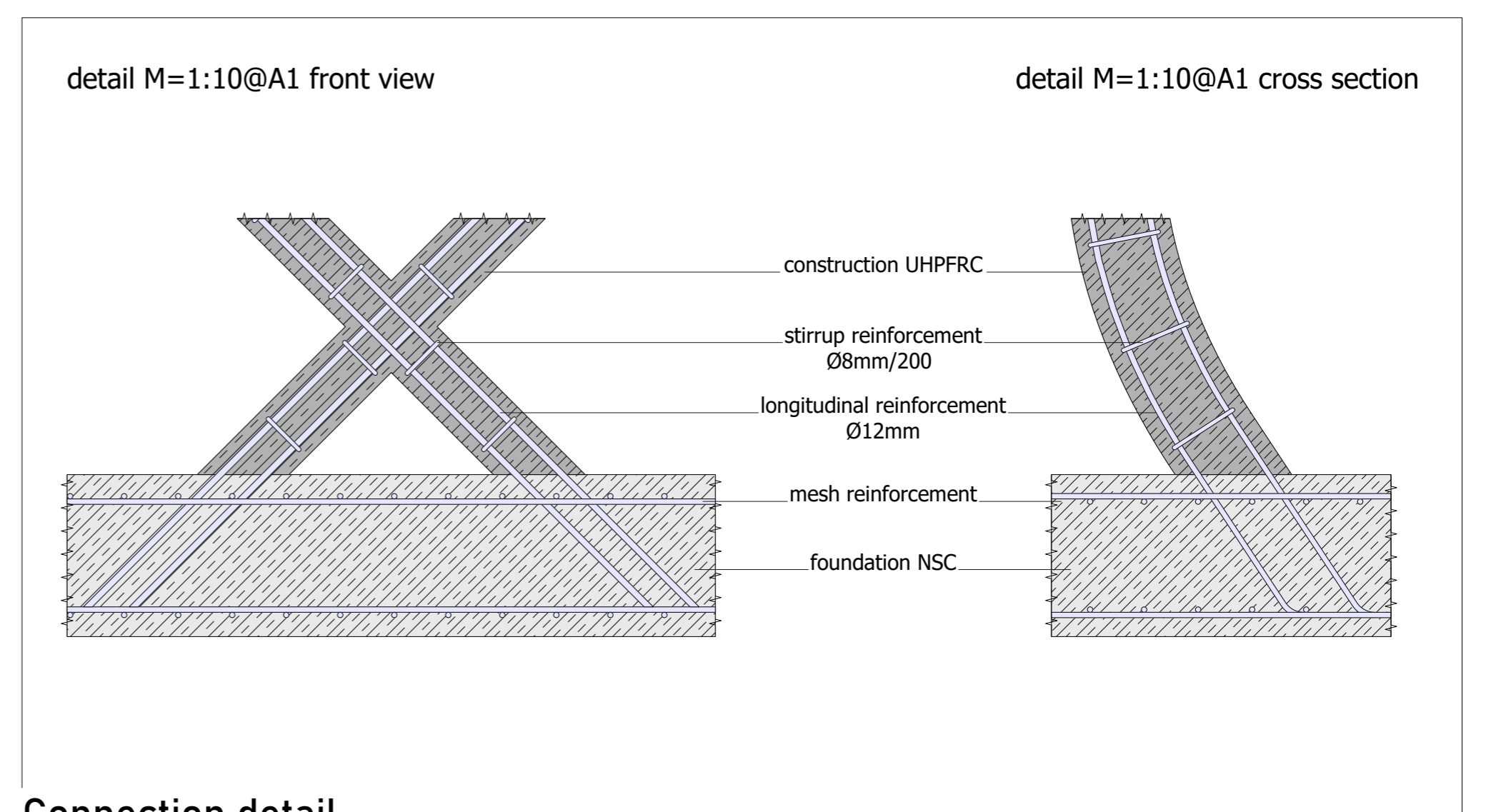
Integrated lighting



Construction



Roof mounted PV-panels



Connection detail