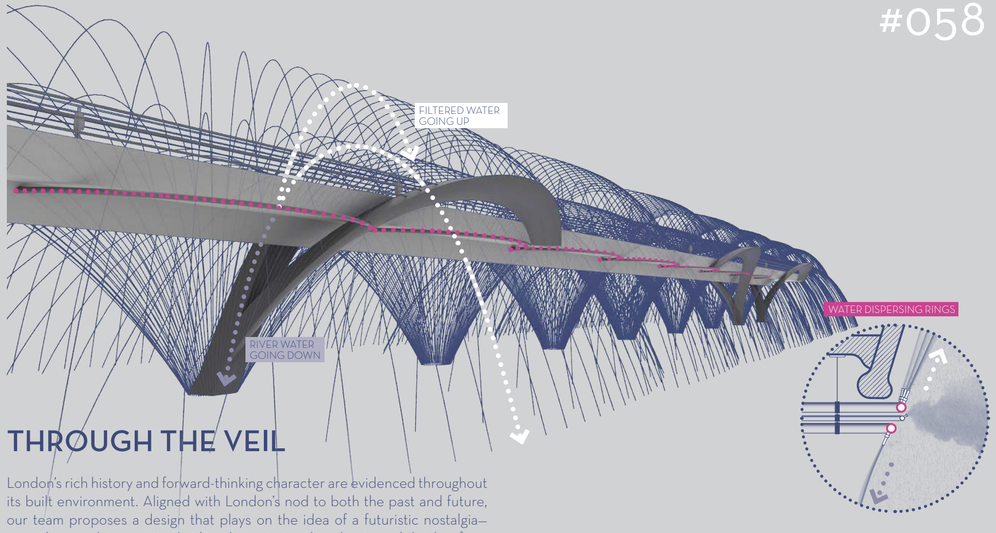


THROUGH THE VEIL

London's rich history and forward-thinking character are evidenced throughout its built environment. Aligned with London's nod to both the past and future, our team proposes a design that plays on the idea of a futuristic nostalgia—a modern and innovative bridge that mimics the classic arch-bridge form through the spectacle of water.

From a distance, viewers witness a magical phenomenon—a fantastic view of aqueous arches flowing above and then falling into the Thames below. As pedestrians' silhouettes peek through a misty veil, nozzles suspended from the underbelly of the bridge create sweeping arches of water along its expanse, re-interpreting the rigid forms of its neighboring bridges. While cyclists pedal through the bridge's center, pedestrians stroll along the stepped sidewalks. Here, they experience the water performance from 'backstage,' where the flowing bend of the water extends just above their heads to create an extraordinary sensory experience.

The moment the water performance ends, the bridge transforms from a grand water spectacle into a slender extrusion of high-strength concrete. Like a lady of typical Victorian dress that casts off her crinoline, exposing her rigid corset, the close of the water theatrics reveals an engineering marvel – a super minimal structure poised above the Thames, stunning in its own simplicity. Conceived as two broad arch piers that support a slender central span, the modern bridge allows for strikingly open views of the city.

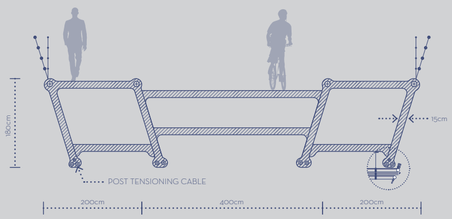
Our team is committed to creating a one-of-a-kind experience that will serve as a landmark recognized for its theatrics, as well as its innovations in engineering. Modern yet a re-interpretation of classic forms, the bridge embodies both innovation and tradition. Fixed yet sensational, it acts as a timeless intervention in the urban fabric, connecting people through a shared sensory experience of water, movement, and spirit.

STRUCTURE

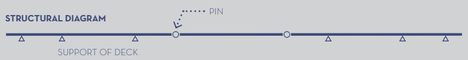
The Nine Elms bridge is structurally conceived as two broad arch piers that support a slender central span. The arch pier is a strong structural element created by the linking of opposing arch forms by the deck as well as by tension ties that lock the forms together. This form allows the side spans of the deck to be supported at multiple points reducing its thickness. The central span is a simple beam element and is supported by the arch piers on either side. The imbalance created by the central span on the arch pier is resisted by its broad legs- or even by a continuation of the tension cable to land.

All deck elements are envisioned as slender posttension precast elements that are locked together. The cross section of this deck uses the balustrade as well as the level changes between cycling and walking paths to create structural depth. These cross sections are made of lightweight high strength concrete with post tensioning hardware which is installed once the deck is ready for assembly.

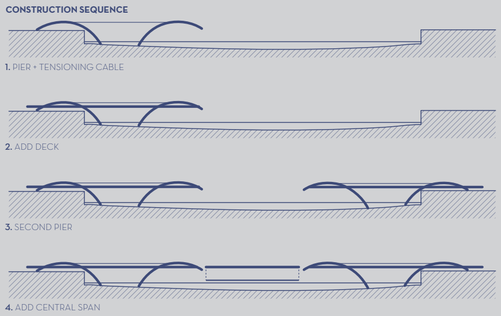
The arch pier construction would be of standard concrete with impact protection at the waterline. At their highest points the arch piers would be linked by a series of tension cables that would allow for post tensioning once the deck was installed.

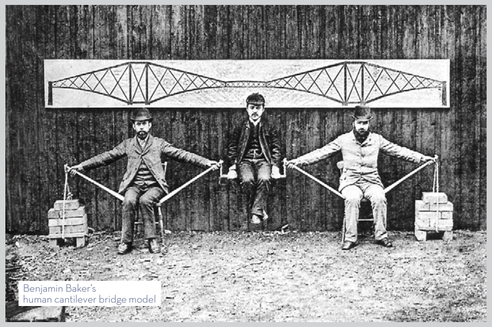


Ductal Profile
Pont du Diable, Gignac, France
Architect: Rudy Ricciotti

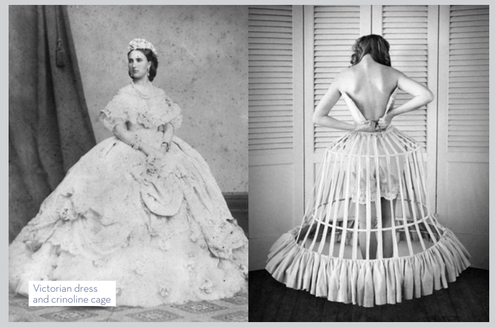


The construction process would minimize river interruption by allowing the piers to be constructed independently and sequentially. Generally the deck sections would be constructed on land and slid into place for the arch piers. The final seventy metre central segment could be constructed on land and finally hoisted into place using the arch piers themselves as cranes.





Benjamin Baker's
human cantilever bridge model



Victorian dress
and crinoline cage