

# Doha Metro

Client: FYAP JV  
Location: Doha, Qatar  
Products: Megashor, Rapidshor, Superslim Soldiers, Aluminium Beams, GTX Beams

## Case Study

Qatar Railway's Doha Metro is set to become an integral component of the country's rail infrastructure. With phase one well underway, the construction of the Red Line South (RLS) Elevated and At-Grade section of the project is being led by the FYAP JV, consisting of FCC, Archirodon, Yuksel and Petroserv, with formwork and shoring provided by RMD Kwikform.

The RLS project includes the construction of a 5.8km viaduct at a grade line of 0.4km; three elevated stations with one at grade, and a 1km underpass structure. As one of the elevated section across the entire Doha Metro project, FYAP JV turned to RMD Kwikform to provide the solution to support the in situ bridges and stations.

Ahmed Awaly from RMD Kwikform said: "The overall design process was very complicated as the project was divided into several subprojects, each with its own team and challenges. As the soffits sloped in all different directions across each section of the bridge, at tender stage, we worked closely with FYAP JV's technical, planning and construction teams to determine which system would accommodate every element of the project."

In the first instance, due to the elevation and varying slopes of the soffit, RMD Kwikform produced 3D designs and conducted 3D frame analysis to create a solution that was fit for all subproject teams, using only standard components. In total RMD Kwikform delivered 3,536 tonnes of equipment to site, this included Megashor and Kwikstage, Rapidshor, GTX and Aluminium Beams, and Superslim Soldiers.

Ahmed continues: "We provided our heavy duty Megashor system to support the launching gantries during their erection and at the passing of one of them above the 13-metre bridge deck. As the system can be adjusted to support various heights and lengths, and due to its high load capacity, Megashor granted each team flexibility and stability. For the large piers, we used Megashor legs and steel Superslim Soldiers to laterally support the permanent works.

"Rapidshor, Superslim Soldiers and Alform aluminium beams were also used in tandem to provide support for the construction of Al Wakra Station. Using the Rapidshor tilting heads, the curvature and sloping segments of the



bridge were accommodated without additional support or timber wedges."

By using only 'standard' kit, instead of specially designed solutions, the site team were able to erect the equipment faster and safely; this was essential due to the strict project timelines and the close proximity to nearby busy streets in Doha and Al Wakra. The RMD Kwikform site assistance team were also a constant presence on site to provide training and ongoing support.

Ahmed comments: "Alongside the design complications, another challenge we faced was effectively managing the logistics and delivery of all equipment. On securing the project we assigned a dedicated team to manage each facet of the project, from engineering, training, customer service and logistics.

"Despite the volume of drawings and materials being delivered to site, all within an incredibly tight programme, FYAP JV handed over the superstructure to Qatar Railways on time. The entire team at RMD Kwikform is extremely proud to have been involved in this project, and contributed to its success.

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