



1st HS Railway in Egypt viaducts

Alexandria, Egypt / 2022

Owner
Client
Constructor

GARB (General Authority for Roads and Bridges)
GIECO (Gharably Integrated Engineering Co. S.A.E.), Hassan Allam Roads & Bridges, Nile Company for Roads and Bridges, RME (Rowad Modern Engineering), Samcrete, El Motahed;
GIECO (Gharably Integrated Engineering Co. S.A.E.), Hassan Allam Roads & Bridges, Nile Company for Roads and Bridges, RME (Rowad Modern Engineering), Samcrete, El Motaheda Company, Redicon
detailed design

Scope



FHECOR is participating together with AHE (Arab House of Engineering) in the Detailed Design of the structures included in five segments of the first line of High Speed Railway in Egypt, between the cities of El Ain El Sokhna in the Red Sea and New El Alamein in the Mediterranean Sea.

The scope of works includes the design of 8 viaducts with a total length of more than 13km, the culverts and a section 7km where the HSR is placed on top of a concrete slab supported on piles.

The typical section of viaduct is formed with 29m simply supported spans and a width of 13.66m, where the deck is designed with two post-tensioned precast U-girders. There are some special sections where the deck width increases up to 38.20m, where the deck is designed with 6 U-girders and portal frames to span different obstacles in the transverse direction.

The scope of works also includes the design of two special viaducts where the decks are made continuous and are designed with a post-tensioned concrete box girder. In these bridges, the maximum span length reaches 60m.

The foundation of the viaducts is made in all cases with bored piles. several viaducts and drainage works included in this section.



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