

Structural Strengthening and supporting system for J STATION Jerusalem

Annex 1 - Bill of Quantities

CONSULTANT: AKDA		#REF!							
Nr.	ITEM	DESCRIPTION OF WORK NEEDED / SPECIFICATIONS	UNIT	QUANTITY	RATE €	TOTAL EURO	Location		
							Area	Room	
1.00	STEEL WORKS				TOT	€	-		
	<p>Preamble: Temporary supporting system to be constructed to support the concrete slab while installing the steel beams, location, and type of the supporting system to be agreed with supervision engineer on site supporting system is included in the price. Relocation of any electrical, mechanical, or AC units prevents installing the new supporting system, the price to be included. Removal of old steel supporting system as per drawings and engineer instructions, price to be included. Demolition and removal of gypsum false ceiling in the areas of the new supporting system and redo the gypsum ceiling, price to be included. Removing plaster layer behind steel beams on walls or drop beams to reach the structural concrete and make it smooth by steel brush to receive the steel beams, price to be included. All Steel should be Galvanize in a Hot Dipp, Galvanizing should be after fabrication. All Bolts and nuts to be of Grade (8.8) structural for all sizes Tightening Torque for Bolts should be as follows M 16 8.8 not less than 70 NM M 14 8.8 not less than 45 NM M 12 8.8 not less than 30 NM Welding on site is not allowed except approved by site Engineer Fabrication and welding should only be done by a certified welder, the contractor must submit the certification for approval. Epoxy to fill all around the anchors for the full length of the anchor, HILTI HIT HY 200 R V3 or equivalent, included in the price. Drilling for Anchors for the whole width of the wall or the drop beam and the steel beams to be 20mm diameter, and the price of drilling is included. All works should be submitted for approval only by shop drawings. Quantities to be measured by weight for all parts of the structure excluding bolts and welds. Bolts and Welds are included in the price Arc Welding tests (Ultrasonic nondestructive test) Bolts Torque test included in the price Cranes for installation and transportation are included in the price.</p>								
1.01	Supply and install a steel strengthening beams, made from Hot Galvanized after fabrication, (HEA260 & UPE300) , bolts and nuts to be grade (8.8) structural grade, welding rods Zika 5mm arch welding rods, All steel sections and thicknesses should be applied. Contractor shall take exact dimensions, and provide the supervising engineer with detailed shop drawings of the work.	Rate includes temporary supporting system, removal of old steel beams, plaster chesiling, services relocation, detailed shopdrawings and installation method also includes all types of fixing and connections (base plates, End Plates, Fin Plates, Anchoring Bolts, Bolts, Welds, epoxy, and bracings), , also includes testing for welds and bolts.	kg	7500		€	-		