

Technical Description of BOQ Items

Sl. No	Technical Item Description	Unit	Quantity	Rate	Amount	Make, Model no & Technical Specifications
1	90 KWp (50+40 KWp at two different sites) PV SOLAR MODULES-MONO PERC HALF CUT – 550Watts (minimum 550Watts capacity) :- Design, Supply, Installation, Testing, Integration, connected / Synchronization at bus bar panel Commissioning roof top solar photo voltaic (SPV) power plant as per the technical specifications & conditions of the tender document :-					
	(a) Junior School building = 50 KWp	Each				
	(b) Squash Court = 40 KWp	Each				
	Note: 1. Optimum wattage of each module, no of modules considered and technical details should be given in technical bid. 2. Panel aluminium frame should be 40mm.					
2	DC COMBINER BOXES:- Design, Supply, Installation, Testing, Integration, the total 50kwp+40 KWp roof top solar photo voltaic (SPV) power plant as per the technical specifications & conditions of the tender document Note: Designed optimum wattage of each box, no of boxes considered and technical details should be given in technical bid					
	(a) Junior School building = 50 KWp	Each				
	(b) Squash Court = 40 KWp	Each				
3	GRID –TIE STRING INVERTERS – Design, Supply, Installation, Testing, Integration, connected / Synchronization at bus bar panel and commissioning the total 50kwp+40 KWp roof top solar photo voltaic (SPV) power plant as per the technical specifications & conditions of the tender document					
	(a) Junior School building = 50 KWp	Each				
	(b) Squash Court = 40 KWp	Each				

Sl. No	Technical Item Description	Unit	Quantity	Rate	Amount	Make, Model no & Technical Specifications
	Note: Optimum wattage of each inverter, no of inverter considered and technical details should be given in technical bid					
4	AC DISTRIBUTION BOXES : -Design, Supply, Installation, Testing, Integration, connected / Synchronization at bus bar panel and commissioning the total 50KWp+40 KWp roof top solar photo voltaic (SPV) power plant as per the technical specifications & conditions of the tender document					
	(a) Junior School building = 50 KWp	Each				
	(b) Squash Court = 40 KWp	Each				
	Note: Designed optimum wattage of each box, no of boxes considered and technical details should be given in technical bid					
5	ARMoured DATA COMMUNICATION AND SYSTEM CONTROL CABLES : - Design, Supply, Installation, Testing, Integration, connected / Synchronization at bus bar panel and commissioning the total 90kwp (50 KWp + 40 KWp) roof top solar photo voltaic (SPV) power plant as per the technical specifications & conditions of the tender document Note: Designed cable length, type, which/from item to & end item, termination details, no of cables considered and technical details in a tabular form should be given in technical bid	Mtr				
6	ALUMINUM ARMoured POWER CABLE OF 1.1KV RATING 3.5CORE 70SQMM :- Supply, installation, laying, testing, 20nos end terminations as per the technical specifications & conditions of the tender document Note: Before procurement actual distance should be measured and should take approval for procurement from YPS PATIALA.	Mtr				

Sl. No	Technical Item Description	Unit	Quantity	Rate	Amount	Make, Model no & Technical Specifications
7	<p>CABLE TRENCH 300 X 750 :-Excavation of cable trench of size 300 x 750mm depth in wet, dry & rocky conditions of the soil for cable laying on a fine sand (with out sharp edges) bed of 150mm in the excavated trench after cable laying again cover the cable by 150mm sand cover all sides with red bricks and back filling. Stacking of removed earth from all along the trench on either side after back filling and reinstatement. The excavate / removed excess sand should be transported to designated place as per YPS PATIALA official.</p>	Mtr				
8	<p>ROAD CUTTING 300X 750:- Cutting the tar road or cement road / couble stone road along with culverts either side of the road to make cable trench of size 300mm wide x 750mm depth, laying of 100mm dia, 50mm dia GI pipes and remaking to original shape both road with tar, pcc & culverts with bricks, plastering as directed by YPS PATIALA Officials for the run of Power / Telephone / LAN cables at the road crossings, building entry, underground floor and over the walls.</p>	Mtr				
9	<p>CIVIL- PCC (1:2:4) PEDESTALAS:- Plain Cement Concrete (1:2:4) nominal mix using 20mm size graded machine crushed hard granite metal (coarse aggregate – as per IS 383 – 1970 and IS 2386 Part 1 to Part 8) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (river sand), coarse aggregate, water etc. to site, including centering /Shuttering, Lift charges, curing , mixing charges, including Surface preparation by chipping of all existing loose concrete, dead mortar and cleaning of the surface from dirt, dust and other contaminations with wire brush including application of Nito bond (EP) to the old concrete to receive the fresh concrete including cost and conveyance of all materials, labour charges, all taxes, complete for finished item of work etc.</p>	CuM				

Sl. No	Technical Item Description	Unit	Quantity	Rate	Amount	Make, Model no & Technical Specifications
10	CIVIL- RCC (1:2:4) PEDESTALAS:- Reinforced Cement Concrete (1:2:4) nominal mix using 20mm size graded machine crushed hard granite metal (coarse aggregate – as per IS 383 – 1970 and IS 2386 Part 1 to Part 8) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (river sand), coarse aggregate, water etc. to site, including centering /Shuttering ,Lift charges, curing ,mixing charges, including cost of steel as per drawing & GI binding wire, including Surface preparation by chipping of all existing loose concrete, dead mortar and cleaning of the surface from dirt, dust and other contaminations with wire brush including application of Nito bond (EP) to the old concrete to receive the fresh concrete including cost and conveyance of all materials, labour charges, all taxes, complete for finished item of work etc.	CuM				
11	CIVIL- DRILLING OF HOLES ABOVE TERRACE:- Drilling holes of 16mm dia and 100mm deep in RCC beam with pneumatic compressor and placing of 10mm dia Tor steel bars/ FASTNER and grouting the holes in HILTY RE 500 including cost of steel and its fabrication charges , cost and conveyance of all materials and labour charges , all taxes, leads, lifts etc. complete for finished item of work	Nos				
12	CIVIL –STRUCTURAL STEEL (SUPPORT STRUCTURE FOR SOLAR PANELS) WITH 80 X 40 X 15 x 2 MM GI COATED C- SECTIONS:- Providing, fabricating and fixing in postion of structural steel (support structure for solar panels) with 80 x 40 x 15 x 2mm GI coated Square Hollow Sections of Jindal/ Tata/Jyoti make for fixing of Solar Panels as show in the detailed approved drawings including cutting, welding, hoisting & including cost and conveyance of all materials, all taxes, labour charges for fabrication erection at site work for all heights etc., complete as directed by the Engineer-in- Charge for finished item of work	Kg				

Sl. No	Technical Item Description	Unit	Quantity	Rate	Amount	Make, Model no & Technical Specifications
13	CIVIL- PLASTERING 12MM THICK SINGLE COAT IN CM(1:5):- Plastering 12mm thick single coat in CM(1:5) using screened sand including cost and conveyance of all materials like cement, river sand, water etc., to site, including sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, curing as directed by Engineer-in-charge etc., complete for finished item of work	Sqm				
14	CIVIL-SUPPLY AND INSTALLATION GI PERFORATED CABLE TRAY WITH COVER AND GI JUNCTION BOX :- Supply and Installation of different sizes of GI perforated cable tray with cover and junction boxes along with required angle supports, with coupler plates, Anchor bolts and nuts including cost and conveyance of all materials etc., complete and the tray should be fitted on the wall / Ceiling/Fencing poles etc. complete.	Kg				
15	EARTHING AND LIGHTNING PROTECTION:- Design, Supply, Installation, Testing, Integration, connected / Synchronization at bus bar panel located DG room and commissioning the total 50 KWp + 40 KWp roof top solar photo voltaic (SPV) power plant as per the technical specifications & conditions of the tender document Note: 1)Designed GI strip length & size, type, which/from item to & end item, termination details, no of earth pits considered and technical details in a tabular form should be given in technical bid	Nos				