

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES  
(AIIMS), ANSARI NAGAR, NEW DELHI**

**Construction of Sump pit with drainage  
facilities with all ancillary works near entrance  
gate of Rajkumari Amrit Kaur (RAK) OPD at  
AIIMS, New Delhi**

**• BILL OF QUANTITIES  
(B.O.Q. / Price Bid)**

**VOLUME - II**

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**HSCC (INDIA) LTD.  
(CONSULTANTS & ENGINEERS FOR MEGA HOSPITALS & LABORATORIES)  
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**Tender No. HSCC/AIIMS/RAKOPD/SUMP/2013**

## BILL OF QUANTITIES

**Construction of Sump pit with drainage facilities with all ancillary works near entrance gate of Rajkumari Amrit Kaur (RAK) OPD at AIIMS, New Delhi**

S.No.	Description	Unit	Quantity	Rate (in Rs.) (in Figures)	Rate (in Rs.) (in Words)	Amount (in Rs.)
1	Earth work in excavation by mechanical means(Hydraulic excavation)/manual means in foundation trenches or drains(not exceeding 1.5m in width or 10sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m.					
1.1	All kinds of soil	cum	38.58			
2	Extra for every additional lift of 1.5m or part thereof in excavation/banking excavated or stacked materials.					
2.1	All kinds of soil	cum	16.32			
3	Providing and Laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:					
a)	1:4:8(1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size)	cum	1.48			
4	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:					
a)	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20mm nominal size)	cum	1.73			
	(Cement - OPC 43 Grade confirming to BIS-8112 ACC, Ultra Tech, JK)					

S.No.	Description	Unit	Quantity	Rate (in Rs.) (in Figures)	Rate (in Rs.) (in Words)	Amount (in Rs.)
5	Centering and Shuttering including strutting, propping etc. and removal of form for:					
a)	Suspended floors, roofs, landings, balconies and access platform	sqm	8.4			
6	Steel reinforcement for RCC work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.					
a)	Thermo-Mechanically Treated bars	Kg	576.01			
	(TMT steel confirming to BIS - 1786 Rathi, SAIL, TATA)					
7	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality					
a)	EHD - 35					
i)	Circular shape 560 mm internal dia	each	1			
8	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS:10910, on 12mm dia steel bar conforming to IS:1786, having minimum cross section as 23mm x 25mm and over all minimum length 263mm and width as 165mm with minimum 112mm space between protruded legs having 2mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x30x15 cm cement concrete block 1:3:6(1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	each	10			

S.No.	Description	Unit	Quantity	Rate (in Rs.) (in Figures)	Rate (in Rs.) (in Words)	Amount (in Rs.)
9	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	5.71			
10	Brick work with common burnt clay modular bricks of class designation 7.5 in foundation and plinth in:					
a)	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	10.41			
11	12 mm cement plaster finished with a floating coat of neat cement of mix :					
a)	1:4 (1 cement: 4 fine sand)	sqm	42.00			
12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.					
a)	80 mm dia nominal bore	meter	500			
	(GI Pipe- Jindal-Hisar, Tata, Prakash Surya, BST, Sail)					
13	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :					
a)	80 mm dia nominal bore	meter	500			
14	Providing and fixing gun metal non- return valve of approved quality (screwed end) :					
a)	80 mm dia nominal bore					
i)	Vertical	each	4			
	(NRV- Kirloskar, Kilburn, Zoloto, Castle)					
15	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :					

S.No.	Description	Unit	Quantity	Rate (in Rs.) (in Figures)	Rate (in Rs.) (in Words)	Amount (in Rs.)
a)	150 mm dia. R.C.C. pipe	meter	50			
	(IS marked pipe)					
<b>16</b>	<b>Modification in existing Panel of OPD Block incorporating following MCCB</b>					
	100Amp 415 volts, 35 KA (Isc), Four pole MCCB with thermal magnetic release having variable current settings with overload, short ckt protection .					
	R,Y&B phase indicating lamp (LED type) with 2A control SP MCB					
	Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.					
	1 No. 0 to 500 V Digital voltmeter with selector switch.					
	Digital ammeter with selector switch with one set of C.Ts.					
	<b>Mdification in Panel As mention Above:</b>	Set	1			
	<b>(MCCB- L&amp;T, Siemens, ABB, Schenider, Havell's)</b>					
<b>17</b>	<b>MV PANEL</b>					
	100Amp 415 volts, 35 KA (Isc), Four pole MCCB with thermal magnetic release having variable current settings with overload, short ckt protection .					
	R,Y&B phase indicating lamp (LED type) with 2A control SP MCB					
	Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.					
	1 No. 0 to 500 V Digital voltmeter with selector switch.					
	Digital ammeter with selector switch with one set of C.Ts.					
<b>B</b>	<b>BUSBARS:</b>					
	200 Amp TPN Aluminium busbars					
<b>c)</b>	<b>OUTGOING:</b>					

S.No.	Description	Unit	Quantity	Rate (in Rs.) (in Figures)	Rate (in Rs.) (in Words)	Amount (in Rs.)
i)	<b>5 Nos. MCCB as per following details/specifications:</b>					
	32 Amp 415 volts, 25 KA (Isc), TPN MCCB with thermal magnetic release having variable current settings with overload, short ckt protection .					
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.					
	Indicating lamps with 2A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB					
	Digital ammeter with selector switch with one set of suitable C.Ts.					
	<b>MV Panel As mention Above:</b>	Set	1			
	<b>(Panel- Krypton Power Control, Risha Control Engineers, NEC (Nitya Electro Controls)</b>					
<b>18</b>	Supply of following sizes of 1.1 kv grade multicore XLPE aluminium conductor PVC sheathed armoured AYYF cable as per IS:1554					
a)	3.5 core 35 Sqmm	meter	150			
<b>19</b>	Laying & Termination of PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of 35 Sqmm size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.	meter	150			

S.No.	Description	Unit	Quantity	Rate (in Rs.) (in Figures)	Rate (in Rs.) (in Words)	Amount (in Rs.)
20	Supply, installing, testing and commissioning vertical fully floodable type <b>submersible drainage pump of non-corrosive material equivalent</b> in close coupled design single stage, suitable for handling minimum 10 mm dia solids for transferring waste water from sump to outside the building <b>with float switch for automatic start and stop arrangement with panel and wiring, chain and pulley, mechanical seal</b> complete in all respect as per instruction of the Engineer in charge. (The shop drawing or the pumps along with its characteristics curves, model and technical data etc. are to be submitted for approval before purchase of pump). Star delta suitable starter complete in all respect for automatic/manual operation of pump, start and stop push button contactor with required overload protection and single phase preventor.					
	Material of Construction (M.O.C): Corrosion Resistant in general : Casing — Cast Iron : Impeller — CI					
	: Bearings — Anti friction, prelubricated ball bearings, packed with grease for life.					
	Motor: — Dry Motor with built in over load protection Protection - IP68. Insulation Class - F					
	Duty of each pump					
	450 LPM against 10M head	each	4			
	(Grundfos, KSB, Mather & Platt)					
	<b>GRAND TOTAL</b>					

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