

**BOQ FOR CIVIL WORKS FOR DEVELOPMENT OF STORAGE OPEN YARD AT 160 MW RAMGARH CAPP, Stage III**

SI No	DESCRIPTION OF ITEM	UNIT	TOTAL QTY	RATE (Rs)	AMOUNT (Rs)
<b>(A) CIVIL WORKS</b>					
<b>EARTHWORK/SITE CLEARANCE/ROADWORK</b>					
1	Clearing jungle including uprooting of rank vegetation, grass, brushwood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 200 m outside the periphery of the area cleared.	sqm	24,000.00		
2	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep, removal of any scrap material and disposal of rubbish, lead upto 50m and lift upto 1.5m in all kinds of soil.	sqm	24,000.00		
3	Levelling and grading existing yard area by cutting existing earth/quarry dust/aggregate dumps, spreading and filling the same in localised depressions to level the ground of <b>all undulations upto <math>\pm</math> 500 mm to proper grade</b> and slope complete including cost of cutting/excavating earth, backfilling wherever required, levelling, etc as per the directions of Engr I/C	sqm	20,000.00		
4	Earth work in excavation in all types of ordinary and hard soil by mechanical means (Hydraulic excavator)/manual means including stacking the excavated soil, dressing of sides and ramming of bottom, dewatering of accumulated water from any source and keeping the surface dry for subsequent works such as concreting form work etc. and disposal of surplus excavated soil as directed, disposed soil to be neatly levelled and dressed lead upto 50 meters and lift upto 1.5meter complete.	Cu.M	20.00		
5	Back filling available excavated earth in trenches, plinth, slides of foundations etc., including re-excavating the deposited soil excavated earlier, breaking clods, laying at all depths and heights in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering complete lead upto 50 Metre and lift upto 1.5 Meter.	Cu.M	10.00		
6	<b>Consolidation</b> of site area with atleast 10 passes with power road roller of 8 to 12 tonne capacity after levelling, grading, dressing to camber and consolidating with road roller including making good the undulations, watering etc. and re-rolling the subgrade and disposal of surplus earth lead upto 50 Mtrs to the satisfaction of Engr I/C	sqm	24,000.00		
7	<b>Supply and Laying</b> water bound macadam with specified stone aggregate stone screening and binding material including screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne capacity etc. complete with <b>supply for stone aggregate, screenings, kankar, moorum and red bajri etc.</b>				
	Base course with 63 mm to 45 mm size including stone screening 13.2mm size.	cum	2,400.00		
8	Providing and tilling of <b>murrum/approved quarry dust</b> as levelling course compacting the same with 8 to 10 ton road roller complete in all respects as directed by Engineer-in Charge	cum	300.00		
<b>PCC</b>					
9	<b>Plain cement concrete</b> of mix 1:3:6 (1 cement : 3 coarse sand and 6, 20 mm down graded stone aggregate) for column footing, levelling, floors etc., including cost of all materials, lead, lift, labour charges, consolidation, shuttering, curing etc. complete.	Cu. M	10.00		
<b>BRICKWORK</b>					
10	Coursed rubble masonry with hard stone in foundation, plinth and superstructure with cement mortar 1:6 (1 cement: 6 coarse sand) complete with supply of all materials and labour.	Cu. M	28.00		
<b>RCC</b>					
11	<b>Reinforced cement concrete</b> of mix 1:1.5:3 (1 cement, 1.5 coarse sand and ,3 :20 mm down graded aggregate) for column footing, sunshades, shelves, lintels etc. including cost of materials, lead lift, labour charges for concreting, curing etc. complete.	Cu. M.	8.00		
12	<b>Centring and shuttering including providing all shuttering material</b> , strutting, propping etc. and removal of form work for : Lintels, beams, plinth beams, girders, bressumers and cantilevers.	sqm	50.00		
13	<b>Providing and placing mild steel/ tor steel reinforcement</b> for RCC work including cost of all materials, labour for cutting, bending, binding and placing in position complete as per drawing and instruction of Engineer.	MT	0.50		
<b>ROOFING</b>					

SI No	DESCRIPTION OF ITEM	UNIT	TOTAL QTY	RATE (Rs)	AMOUNT (Rs)
14	Steel work in built up section/framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer and two coats of approved enamel paint using structural steel for gates, railings, frames, gratings, purlins etc.	kg	1,800.00		
15	Providing and fixing <b>corrugated Asbestos cement sheet 6 mm thick</b> roofing and side cladding fixed with polymer coated J or L hooks bolts and nuts 8mm diameter with bitumen and GI limpet washer complete including steel primer and 2 coats of approved paint at overlaps. as per tech. specification.	Sq.M	20.00		
<b>FINISHING</b>					
16	50 mm thk. Ironic Topping Cement Concrete flooring consisting(1-admixture:1 coarse sand: 2-stone aggregate 6mm nominal size) by volume <b>with metallic hardening compound</b> of approved quality is mixed in the ratio(4:1) (4 cement : 1 metallic floor) hardening compound of approved quality by weight including cement slurry rounding off edges and strips etc. but excluding the cost of nose of steps etc. complete.	Sq. M	35.00		
17	<b>Plastering work</b> with cement mortar <b>1:6</b> (1 cement : 6 fine sand) 12 mm thick after scrapping and cleaning the masoary joints including scaffolding, cost of materials, labour, mixing , leads & lifts, curing etc. complete.	Sq. M	200.00		
18	<b>Providing and fixing steel glazed windows and ventilators</b> of operable standard rolled steel section joints mitred and welded with 15 x 3 mm lugs, 10 cm long, with steel lugs embedded in cement concrete blocks 15 x 10 x 10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 approved graded hard stone aggregate 20 mm nominal size) or with wooden plugs and screws or raw plugs and screws or with fixing clips or with bolts and nuts as required <b>including providing and fixing of glass panels</b> with glazing clips and special metal sash putty of approved make complete including painting with two coats of approved quality synthetic enamel paint over a base coat of red oxide zinc chromate primer including the cost of minor repair work, if required. Windows and ventilators will be <b>provided with horizontal steel bars (8 mm x 8 mm)</b> , welded to the frame @ 150 mm ncluding supply of MS frames, bars glazing etc. all complete	Sq. M	3.00		
19	Providing and fixing ISI marked flush door shutters non decorative type , core of block board construction with frame of ist class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters 30 mm thick including ISI marked stainless steel butt hinges, handle,tower and slide bolts, complete with necessary screws and other accessories	Sq. M	6.00		
20	Providing three coats of <b>white wash</b> to give a smooth and even shade including cost of materials, cleaning and preparation of surface, scaffolding etc. complete.	sqm	200.00		
<b>FENCING</b>					
21	<b>1.5 m</b> high fencing with <b>2.0 m angle iron 50 x 50x 6 mm posts</b> placed every 3 m centre to centre embedded in cement concrete block, every 15th post last but one end post and corner post shall be struttred on both sides and end post on one side only and provided with 10 horizontal lines and two diagonals inter woven with horizontalwires of barbed wire 9.38 Kg per 100 m (min) between the two posts and fixed with GI stapies, turn buckles etc. complete.				
	With G.I. barbed wire (Payment to be made for per metre of complete fencing)	Metre	950.00		
22	<b>Supplying and fixing at site 2.0 mtrs high 50x50x6 mm Angle iron post &amp; strut</b> of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. Etc. complete <b>including a priming coat and two coats of enamel paint, earth excavation, providing PCC 1:3:6 (450X450X500 mm), shuttering if required, curing, surplus earth disposal, etc</b> complete in all respects.	kg	3,300.00		
<b>(B) ELECTRICAL WORKS</b>					
23	Providing and fixing 1 x 40 Watt Batten type <b>flourescent tube fitting</b> (Crompton / Philips / Bajaj make),fabricated from CRCA sheet steel and finished with stove enamel paint complete with Accessories like flourescent lamp,copper wound polyster choke, starter, seat, rotor holder and terminal block duly pre-wired with copper conductor, including connections, fixing on wall, false ceiling or under roof tusties with clamps as required	Nos.	4.00		
24	Providing and fixing of following sweep <b>exhaust fan/ceiling fan/wall mounted fan</b> (Khaitan / Crompton make) single phase alongwith gravity louvers, frame / tripod for holding the motor including making necessary opening in wall, supply & fixing of assembly with grouting bolts, making connections, loop earthing etc.				
a)	Ceiling fan upto 48"	Nos.	2.00		
25	Providing & fixing of 240 V, 5 / 15 Amp 6 <b>Pin Power socket</b> outlet point (with 15 A switch ). Switch / socket to be fitted in suitable size 20 SWG metal type box with 3mm sunmica sheet	Nos.	4.00		
26	Providing & fixing 5A piano type switch for Light / Fan Control (Anchor make)	Nos.	6.00		

SI No	DESCRIPTION OF ITEM	UNIT	TOTAL QTY	RATE (Rs)	AMOUNT (Rs)
27	Circuit/Sub main wiring in 20/25 mm PVC conduit including supplying of all conduits, clamps, wires, complete				
a)	2x2.5 sq. mm + 1x2.5 sqmm earth wire	RM	100.00		
28	<b>Point Wiring</b> of the following points (including supply of Wires, conduits, clamps, boards, other misc. items) with 1.5 sq.mm colour coated FR PVC insulated copper conductor wires as per IS- 650/1100 volts grade in surface/recessed PVC conduits (medium grade) including laying of 20 SWG GI wire, conduit fitting, fixing of piano type control switches (Anchor make) in suitable sized 20 SWG metal box with 3 mm phenolic laminated sheet having provision for fan regulator, 5 Amp switch socket ( supplied above ) included in scope )				
a)	Light Point	Points	4.00		
b)	Wiring for ceiling fan and regulator	Points	2.00		
29	<b>Laying</b> of following type of PVC Insulated, PVC armoured standard <b>aluminium conductor cable</b> conforming to IS:1554-1976 (part 1), glanding with single compression gland, termination of both end in DB & SFU. The cable has to be laid underground on sand cushion including backfilling, suitable clamp, clamping on surface including all materials etc. complete.This includes road crossing for which suitable GI Pipe to be provided by the contractor. <b>ONLY CABLE WILL BE SUPPLIED BY BHEL. ALL OTHER MATERIALS REQUIRED FOR THE WORK IS TO BE SUPPLIED BY THE CONTRACTOR</b>				
a)	3 1/2 Core x 50 Sq.mm armoured cable	RM	400.00		
a)	2c/3c/4c upto 16 sq.mm armoured cable	RM	500.00		
30	Earthing Flat 25 x 6 for Earthing 0.5 mtr below ground as strip earth electrode including soldering as required.	RM	50.00		
<b>GROSS TOTAL OF ALL THE ABOVE WORKS A+B</b>					

**NOTE**

- 1 In case of omission in quoting any rate, the evaluation will be done considering the highest quoted rate obtained against that item but the work, if awarded, will be on the lowest quoted rate obtained against that item.
- 2 The rate shall be entered in figures as well as in words. In case of difference in rates between words and figures, the lesser of the two will be treated as valid rate.
- 3 The bidders shall enter both 'Unit Rate' & 'Amount'. In case of any mismatch between 'Total Amount based on Unit Rate' & 'Total Amount as quoted', the higher of the two shall be considered for evaluation and the lower of the two shall be considered for award.
- 4 The quantities indicated against each item above are tentative and are liable to vary depending upon the site requirement. The contractor has to supply / install actual quantities as per advice of BHEL Engineer and accordingly the final contract price shall be worked out.
- 5 Evaluation of the bids shall be done based on total price against this BOQ.