

**BHEL:PS-WR**  
**TS : BHE/PW/PUR/UKAI-CVL2/496**  
**PRICE BID-PART-II- VOL-III**  
**RATE SCHEDULE**

**Rate Schedule for Civil works of unit-2 for UKAI R & M works.**

Item No.	Description of Items	Quantity	Unit	Rate In Rs ( Figure )	Rate in Words	Amount
<b>1.0</b>	<b>EXCAVATION</b>					
1.1	Earthwork in <b>excavation</b> in all kinds of ordinary and hard soil (including slushy soil) up to a depth of 2.0 m below ground level and stacking within a lead of 100 m,with necessary shoring, strutting, trimming and dressing of sides etc., including bailing / pumping out of surface water/rain water/sub soil water, cutting minor vegetation, if any, complete .					
a)	All kinds of soil (Ordinary and hard soil)	3000	CU. M.			
b)	Same as item 1.1 above, but for soft rock upto 2.0m below GL requiring chieseling	200	CU. M.			
1.2	Same as Item no-1.1 above but from 2.0 m - 4.0 m depth					
a)	All kinds of soil (Ordinary and hard soil) from 2.0m to 4.0m below GL	1000	CU. M.			
b)	Same as item 1.1 above, but for soft rock from 2.0m to 4.0m below GL requiring chieseling	500	CU. M.			
c)	Same as item no:-1.1 above, but for hard rock / sheet rock requiring blasting upto 2.0m to 4.0m below GL	100	CU. M.			
<b>2.0</b>	<b>BACKFILLING &amp; DISPOSAL</b>					
2.1	Earthwork in <b>backfilling</b> & compacting in layers not exceeding 200 mm around foundations, trenches , below grade slabs and all other locations , as per specs, drawings and as directed by the Engineer.					
a)	With earth obtained from stacks within a lead of 100m	3000	CU. M.			

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2.2	Removal of surplus earth & debris beyond battery limit upto 2 Km lead including transportatin, loading and unloading , dumping, stacking, levelling and dressing etc.complete as per specifications and drawings.	2000	CU. M.			
<b>3.0</b>	<b>CONCRETE</b>					
3.1	Supplying, laying in position, compacting and curing as per specification <b>plain cement concrete 1:4:8 using ordinary portland cement</b> of the following mix with 20mm down size aggregates below GL and upto 1.0M above GL , including consolidation of subgrade wherever required.	75	CU. M.			
3.2	Supplying, laying in position, curing as per specifications <b>controlled concrete using ordinary portland cement</b> of the following grades(graded coarse aggregates of 20mm down 12mm down shall be used wherever applicable)					
a)	for all depths below GL and above GL					
	ii) Grade M-25 in foundations, slabs, columns, floors, beams.etc.	600	CU. M.			
<b>4</b>	<b>REINFORCEMENT,</b>					
4.1	Supplying,bending, binding, transporting and placing in position HYSD reinforcement conforming to IS:1786. of all diameters and at all elevations using approved quality binding wires as per specifications and drawings including welding of reinforcement to the existing rods as per drawings.	30	M.T.			
<b>5</b>	<b>FORM WORK</b>					
5.1	Supplying, installing, dismantling and removing the following classes 'of <b>formwork</b> as per drawings and specifications at all levels using steel / plywood wood shuttering.	1500	SQ.M.			

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5.2	Providing <b>pockets</b> in concrete of sectional area less than 0.1 sq.m in plan by fixing and removing formwork for anchor bolts , pipe sleeves etc. as per drgs including. all materials ,labour etc. complete as per drawings and specifications.					
	a) Up to 300 mm deep	5	Nos.			
	b) 301mm to 600mm deep	20	Nos.			
	c) 601mm to 1000mm deep	4	Nos.			
	d) 1001 mm to 1500 mm deep	5	Nos.			
<b>6</b>	Taking delivery of foundation <b>hardware supplied by BHEL</b> and transporting to site, fixing in position foundation hardware such as anchor bolts, nuts, washers, anchor assembly etc. as per drawing including fixing to proper level and alignment using contractor's own templates, protecting till handover of the foundation, all complete as per drawings and specifications.	5	M.T.			
<b>7</b>	Supplying & applying suitable Bonding agent by M/s FOSROC or equivalent to be applied on old concrete surfaces as per drawing & as per manufacturer specification.	50	SQ.M.			
<b>8</b>	<b>DISMANTLING OF STRUCTURE</b>					
8.1	Dismantling and removal before modification of the following items in the existing structures with all labour, tools, transport etc. all complete including delivering as directed by Engineer.					
	a) Concrete (plain)	100	CU.M.			
	b) Concrete (rein forced)	250	CU.M.			
	c) Brickwork	50	CU.M.			

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Item No.	Description of Items	Quantity	Unit	Rate In Rs ( Figure )	Rate in Words	Amount
	d) Doors, windows, ventilators	10	SQ.M.			
	e) 50 Tk.premix carpet	200	SQ.M.			
	f) Structural steel	5	M.T.			
	g) WBM/soling for roads of 230mm thick	400	SQ.M			
<b>9</b>	Providing and placing in position, compacting , curing <b>Reinforced concrete for paving of M20 grade</b> including laying in approved size panels, leaving grooves for sealing joints, cost of form work, finishing of top surface as required but excluding cost of reinforcement which will be paid under relevant items, etc.all complete for floors and pavement as per drawing and specifications.	50	CU.M.			
<b>10</b>	Providing and Fixing in position <b>25mm thick 'shalitex'</b> or approved equivalent fibre board in expansion joints etc all complete as per specifications and drawings.	15	SQ.M.			
<b>11</b>	Supplying and laying <b>sealing compound</b> with premium grade Silicon sealant (SILPRUF of GE Silicon or approved equivalent) conforming to IS:1834 as per specification.					
	a) 20mm wide,25mm deep	20	R.M.			
	b) 10mm wide,40mm deep	10	R.M.			
<b>12</b>	<b>MASONRY &amp; ALLIED WORKS,</b>					
a)	Supplying and laying of <b>coarsed rubble stone massonary</b> in cement mortar 1:6 in foundations and basement as per specifications.	100	CU.M.			

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b)	Supplying and laying in position minimum <b>50 kg/cm<sup>2</sup> brick work in foundation</b> and upto plinth in cement sand mortar (1:6) including mixing mortar, laying bricks,raking of joints, curing etc., all complete as per drawings as specifications.	50	CU.M.			
c)	Supplying and laying in position minimum 50 kg/cm <sup>2</sup> brick work in foundation and upto plinth in cement sand mortar (1:6) including mixing mortar, laying bricks,raking of joints, curing etc., all complete as per drawings as specifications in super-structure at all elevations	120	CU.M.			
d)	Supplying and laying <b>damp proof course 40mm thick</b> with plain concrete (1:1 <sup>1/2</sup> : 3) nominal mix by volume with 12mm down size aggregates and minimum 3% admixture of water proofing compound with all materials complete as per specifications.	15	SQ.M			
e)	Providing <b>12mm thick cement-sand (1:3) plastering with smooth cement Neeru finish</b> to the interior faces of the walls & RCC columns coming in line with side of the wall at various elevations including mixing, laying , finishing,curing, rounding corners, cutting grooves, wherever required, etc. with all materials complete as per drawings and specifications.	250	SQ.M.			

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f)	Providing <b>sand faced cement plaster 20mm thick</b> in two layes first layer of 14mm in cement mortar 1:4 & second layer of 6mm thickness in cement mortar 1:2 using approved quality sand for second layer, on RCC and brickwork including mixing , laying , finishing curing, rounding corners, cutting groves, wherever required, with all materials complete as per drags. and specifications.	250	SQ.M			
g)	Providing minimum <b>6 mm thick (1:3) cement sand plaster</b> over concrete surfaces of columns, beams, slabs etc. similar to item 7.7 above	100	SQ.M.			
<b>13</b>	<b>FLOORING</b>					
a)	Supplying and laying <b>40mm thick precast terrazzo tiled</b> flooring of approved quality and colour at various elevations including preparations of base laying underbed & tiles with white cement based topping, curing rubbing , polishing etc. with all materials complete as per drgs., finish schedule and specifications.	60	SQ.M.			
b)	Providing 3 mm thick neat cement finish over concrete base for flooring paving etc.	50	SQ.M.			
c)	Supplying and fixing <b>ceramic tiles</b> of sizes 300X300X8mm for flooring and 300X200X6 for dado up to 2.1 m elevations including pereparation of base laying underbed, finishing and rounding corners and junctions, curing etc. completcas per drawings and specifications.	30	SQ.M.			

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d)	Providing <b>50mm thick heavy duty cement flooring</b> comprising 35mm cement concrete base laying underbed in panels bound by 3X40mm PVC/ stainless steel 4X40mm glass strips followed by 15mm thick wearing top layer of cement, metallic hardner and stone aggregate, finishing, curing etc. all coplete with dust protective coating as per specifications.	75	SQ.M.			

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<b>14</b>	<b>FALSE CEILING</b>					
a)	Providing and fixing <b>aluminum linear false ceiling system "LUXALON"</b> by Hunter Douglas comprising of 84mm wide 16mm deep roll formed panels consisting of length upto 6 m, coil coated on both sides, rolled formed from stove enamelled corrosion resistant 0.5mm thick aluminium alloy AA-5050 or 3005 and perforated panels for return air as per air conditioning requirements including 32mm wide & 39mm deep panel carriers made of roll formed coated steel with 0.95mm thick aluminium alloy with cutouts to hold the panels in the module of 90/100mm , including suspending carries from roof by 4mm dia galvanised steel hanger with steel by "j" hooks & nylon inserts, height adjustment clips made of spring steel at .max 1.2 m c/c including providing profiles gap closure strips etc., slit openings for fixing supply/return air grill, lighting fixtures, AC diffusers etc. all complete as per drawings and specifications.	15	SQ.M.			

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b)	Providing and fixing <b>under deck insulation</b> on the ceiling system (at soffit of the slab) consisting of 40 thick resin bonded minearal fibre wool board conforming to IS:8183 ,Group-1 (having adensity of 40 kg/m <sup>3</sup> ) faced with alluminium foil , as non-combustible as per BS:476, part - 4 including fixing the insulation to soffit / sides of beams by means of approved quality adhesive and providing & fixing 3 mm thick 190 x 25 mm L-shaped M.S. slotted cleats to the soffit of the slab with dash fasteners @ 600 mm c / c, both ways securing the insulation with chicken wire net ting stretched tightly over the insulation and held by 14 SWG G.I. wire tied diagonally through the slots of cleats etc., all complete as per drgs. and spec.	15	SQ.M.			
<b>15</b>	<b>PAINTING</b>					
a)	Providing & applying to interior surfaces two or three coats of <b>Oil Bound distemper</b> of approved shade & make confirming to IS : 428 to obtain a even finish and uniform color over a coat of primer as per manufacture recommendation including cost of paint, surface preparation, scaffolding etc, all complete as per spec. and drawing.	250	SQ.M.			

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Item No.	Description of Items	Quantity	Unit	Rate In Rs ( Figure )	Rate in Words	Amount
b)	Providing and applying two coats of <b>plastic emulsion paint</b> conforming to IS : 5411 , of approve shade, over 2 coats of suitable primer as per manufacturer recommendation , including cost of paint, surface preparation with 2 mm thick plaster of paris punning, materials, scaffolding etc. all complete as per specification, scraping / removing of old paints, making the surface good with plaster of paris in case of old surface, all complete as per specification and to the satification of engineer / architect incharge.	100	SQ.M.			
c)	Providing three or more coats of <b>white wash</b> to give a smooth and even shade including cleaning & preperation of surfaces scaffolding etc., complete	250	SQ.M.			
<b>16</b>	<b>DOORS, WINDOWS &amp; VENTILATORS</b>					
A)	Providing and fixing <b>steel windows</b> conforming to IS: 1361 including handles, peg stays, stoppers, hinges , and painting with two coats of approved make epoxy paint over a coat of suitable primer etc.all complete as per drawing and specifications.					
	a) fixed type	10	SQ.M.			
	b) openable type	5	SQ.M.			

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Item No.	Description of Items	Quantity	Unit	Rate In Rs ( Figure )	Rate in Words	Amount
B)	Supplying and erecting including assembling fitting and fixing best quality <b>45mm thk. hollow steel doors</b> double plated with 18 gauge MS sheets, pressed steel frames at various elevations including frames, shutters, fittings and fixtures, CP mortice lock cum handle mastic caulking, grouting the frames, painting with 2 coats of approved quality epoxy paint over approved primer/ min. 30 micron etc. complete as per specifications.					
	a) Single shutter	5	SQ.M.			
	b) Double shutter	5	SQ.M.			
17	Supplying fitting and fixing the following <b>glazing</b> specials at various elevations including supplying rubber beading, cost of all materials etc. complete as per specifications to alluminium windows, doors & partitions.					
a)	4mm thick toughened clear glass	10	SQ.M.			
b)	5.5 mm thick toughened clear glass	15	SQ.M.			
c)	6.3 mm thick laminated safety glass	15	SQ.M.			
d)	6 mm thick <b><u>transprant float glass</u></b>	25	SQ.M.			

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Item No.	Description of Items	Quantity	Unit	Rate In Rs ( Figure )	Rate in Words	Amount
18	Supplying and erecting including assembling fitting and fixing <b>anodised aluminum windows</b> of INDAL , <b>Jindal</b> or approved equivalent at various elevations including frames and shutters , transomes, mullions, fittings and fixtures, aluminium beading, but excluding glazing, complete as per specifications and drgs. (alluminium hollow sections should be infilled with timber of silver oak)					

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a)	Openable type	5	SQ.M.			
b)	Fixed type	5	SQ.M.			
<b>19</b>	Supplying and erecting including assembling fitting and fixing <b>Aluminium partition</b> frames with matching doors etc., with frames, shutters, double acting heavy duty floor springs, fittings, and fixtures, mortice lock, alluminium beading but excluding glazing etc. complete ( aluminium hollow sections should be infilled with timber of silver oak)	20	SQ.M.			
<b>20</b>	Supplying,fitting and fixing <b>anodised aluminium framed doors</b> only and specs. Same as item above but to be fixed masonry openings. ( aluminium hollow sectins should be infilled with timber of silver oak)	10	SQ.M.			
<b>21</b>	Supplying,laying and rolling <b>stone solling</b> of consolidated thickness 250mm in 2layers including spreiding binding material(sand / morrum) watering and compaction etc. all complete.	300	SQ.M.			
	TOTAL					
	REBATE ON TOTAL QUOTED COST IF ANY					
	NET AMOUNT QUOTED IN RS					
	NET AMOUNT QUOTED IN WORDS ( RS.....)					