

BEML LIMITED, BANGALORE

Tender Number: 6300039880	Period of contract:	04 Months
	EMD : (Rs)	1,20,049.00

Sub: Renovation of workers canteen including flooring, toilets, external and internal painting & associated civil work in Bangalore complex, BEML Ltd, Bangalore.

SCHEDULE 'A' - BILL OF QUANTITIES

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
1	Complete chipping and removal of existing old cement plaster of any thickness provided over RCC roof slab/ parapet /chajja top including removal of old water proofing APP Membrane wherever present carefully without damaging the existing structure and disposal of debris out side the site premises exceeding 1.5KM but not exceeding 5.0KM which is not objected by any civic authorities including tools & tackles etc., complete all as specified and as directed by Engineer in charge. Note: The rate is deemed to include for providing & removal of scaffolding/staging wherever necessary.	Sq.M	380.00		
2	Cleaning the existing roof slab using wire brushes to remove all dust, etc., and Providing and laying Plain Cement Concrete of mix proportion 1:2:4 using 20mm graded granite aggregates as a screed concrete over roof slab over a base coat of cement slurry with cement at 3kg/sqm. The PCC shall be laid to a proper slope & gradient, well compacted, with mechanical/manual mixing including curing etc., complete all as specified and directed by the Engineer in charge. Note: 1) The rate is deemed to include for providing & removal of centering/form work etc., 2) The rate is deemed to include for providing & removal of scaffolding/staging wherever necessary.	Cum	60.00		
3	Hacking the old existing plastering to receive new plastering providing plastering/rendering 15mm thick in cement mortar of mix proportion 1:6 over RCC roof slab, parapet walls, chajjas and admixed with M/s Fosroc make CONPLAST X420 IC/WL (200ML/Bag of cement) and the surface finished smooth and even etc.,. Complete all as specified and directed by the Engineer-in charge. Note:- Admixture use for plastering will be measured in separate item.	Sq.M	550.00		
4	Supplying and mixing M/s. Fosroc make CONPLAST X42 IC/WL while rendering for the roof slab and parapet wall surfaces as per Manufacturers instructions (200ml/bag of cement) etc., complete all as specified and directed by the Engineer in charge.	Ltrs.	15.00		
	Providing & applying Bitumat Synroof Hi – Build elastomeric premium quality liquid waterproofing system as detailed below: a) Supplying and applying premium quality acrylic waterproofing primer @ 250 grams per square meter after diluting as per the manufacturer's recommendations by allowing 3 to 4 hours for the primer to dry completely. b) Applying 2nd coat of premium quality acrylic waterproofing coating @ 350 grams per square meter using roller / brush after diluting as per the manufacturer's recommendations and simultaneously over this install 60 GSM thermally stabilized polyester reinforcement with 100mm side Laps and 150mm end laps and applying additional coat of premium quality acrylic waterproofing coating @ 350 grams per square meter using roller / brush. To Ensure there are no wrinkles or folds on the reinforcement membrane and allow it to dry for 24 hours. Applying final coat of premium quality acrylic waterproofing system @ 350 grams per square meter using roller / brush after diluting as per the manufacturer's recommendations after 24 hours of drying.				

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5	<p>All dilutions shall be strictly as per the manufacturer's instructions as shown in the product catalogue.</p> <p>The same system shall be carried out over the vertical areas like parapets if any.</p> <p>Note 1) All materials shall be produced with samples and to obtain prior approval of EIC before commencing the work.</p> <p>2) The water proofing materials shall be tested as per the standards prescribed from the reputed laboratory for the following parameters and cost involved for conducting such test shall be borne by the Firm. The quoted rate shall be deemed to include for the cost of testing:</p> <p>a) Solid content (%)</p> <p>b) Viscosity (CPS)</p> <p>c) Density (Kg/l)</p> <p>d) Curing time (Touch dry time) at 27 degree Celsius.</p> <p>e) Tensile strength and Elongation %</p> <p>f) Hardness- Shore A scale.</p> <p>g) Permeability(Depth of penetration) mm.</p> <p>h) Coverage (Kg/m2).</p> <p>Note: The rate quoted is deemed to include for providing & erecting scaffolding, staging/ladder & providing safety nets wherever necessary and protective measures etc.,complete all as specified & directed by Engineer in Charge.</p>	Sq.M	450.00		
6	<p>Removing the existing old PVC/AC/Cast iron Pipes of any diameter & handing over the serviceable materials to M/s BEML Ltd in good condition & disposal of unserviceable materials outside the site premises and Supplying & fixing new 110 mm diameter PVC pipes (6kg/cm2) for rain water down take of first quality, approved brand, manufactured by M/s.Supreme/Astral conforming to relevant IS including all standard fittings like elbows, bends, tees, PVC Y & fixtures such as pipe clips, clamps wooden plug, screws, washers etc secured firmly to the wall/floor surfaces etc.,complete all as specified and as directed by Engineer in charge.</p>	Rmt	65.00		
7	<p>Removing the existing old wooden/steel windows and ventilators & handing over the same to BEML in good condition and Providing & fixing of Classic Openable Aluminum fit Windows made up of high grade aluminum frame of 10cm breadth approx.with Mosquito Mesh screen, fabricated & fixed as per window size made out of Aluminum Box frame slim with ssVue (stainless steel) black mesh 304 grade steel coated with epoxy black power 0.007 inch thickness along with all required frame accessories and fittings like hinges,stopppers,handles of approved colour and shade conforming to relevant IS manufactured by M/s.Phiifer etc., complete as per site conditions and all as specified and directed by Engineer in charge.</p>	Sqm	60.00		
8	<p>Preparing the existing surface of ceiling by scrapping, sandpapering, removing dust & including providing necessary repairs to cracks and filling the cracks with suitable crack filling compound and applying 2 or more coats of Premium Plastic emulsion paint of approved colour/shade manufactured by M/s. Asian Paints-(Apolite)/Berger Paints-(Easy Clean) over a coat of primer and touchup putty etc., complete all as specified and as directed by Engineer in Charge. Note: The rate is deemed to include for Providing & removal of scaffolding wherever necessary b) Wastages. 2) Removing all splashes, dirt, etc. and leaving premises in a clean state.</p>	Sqm	900.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
9	Preparing the existing surface of internal walls by scrapping, sandpapering, removing dust & including providing necessary repairs to cracks and filling the cracks with suitable crack filling compound and applying 2 or more coats of Premium Plastic emulsion paint of approved colour/shade manufactured by M/s. Asian Paints-(Apcolite)/Berger Paints-(Easy Clean) over a coat of primer and touchup putty etc., complete all as specified and as directed by Engineer in Charge. Note: The rate is deemed to include for Providing & removal of scaffolding wherever necessary b) Wastages. 2) Removing all splashes, dirt, etc. and leaving premises in a clean state.	Sqm	1000.00		
10	Preparing the existing old Painted internal wall surfaces (Dadoo surfaces) by scrapping with sand paper, providing necessary repairs to cracks, scratches and cleaning the surface from dust, dirt and filling/closing the cracks with crack filling compound and applying two coats of synthetic enamel paint manufactured by M/s Asian Paints/ Berger Paints first quality, approved colour and touch up putty wherever necessary etc., complete all as specified and as directed by Engineer in charge. Note: The rate quoted is deemed to include for providing and removal of scaffolding, staging/ladder, suspending jhoola wherever required and protective measures etc.	Sqm	280.00		
11	Preparing the existing old Painted steel surfaces like window grills, MS doors etc., by scrapping, providing necessary repairs to cracks, scratches and cleaning the surface free of dust, dirt and applying two coats of synthetic enamel paint over a coat of zinc chromate /red oxide primer as required manufactured by M/s.Asian Paints/Berger Paints etc., complete all as specified and as directed by Engineer in charge. Note: The rate quoted is deemed to include for providing and removal of scaffolding, staging/ladder, suspending jhoola wherever required and protective measures etc.	Sqm	80.00		
12	Preparing the existing old Painted wooden surfaces like doors/windows by scrapping, including necessary providing necessary repairs to cracks, scratches and cleaning the surface free of dust, dirt and applying two coats of synthetic enamel paint over a coat of primer manufactured by M/s.Asian Paints/Berger Paints first quality, approved colour etc., complete all as specified and as directed by Engineer in charge. Note: The rate quoted is deemed to include for providing and removal of scaffolding, staging/ladder, suspending jhoola wherever required and protective measures etc.	Sqm	120.00		
13	Dismantling the existing granite slab of counter platform in any thickness including cement mortar backing coat carefully without damaging the support walls in any description including disposal of debris out side the site premises not exceeding 5.0KM which is not objected by any civic authorities etc., complete all as specified and as directed by Engineer in charge. Note: The rate is deemed to include for providing & removal of scaffolding/staging wherever necessary.	Sqm	25.00		
14	Demolition/dismantling the existing cement concrete / coping concrete in any description and in any position including disposal of debris outside the site premises to a distance not exceeding 5.0KM which is not objected by any local civic authorities etc., complete all as specified and as directed by Engineer in charge. Note: The dismantled materials shall be removed immediately from the premises without disturbing the regular production activities and the quoted rate is deemed to include for all lead & lift etc.	Cum	5.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
15	Dismantling the existing BBM walls in any description including disposal of debris out side the site premises not exceeding 5.0KM which is not objected by any civic authorities etc., complete all as specified and as directed by Engineer in charge. Note: The rate is deemed to include for providing & removal of scaffolding/staging wherever necessary.	Cum	10.00		
16	Providing and constructing 230mm thick/required thickness burnt brick masonry in cement mortar of mix proportion 1:6 using first class table moulded bricks for superstructure at required heights including tools & tackles, curing etc., complete all as specified & directed by Engineer in charge. Note: The rate quoted is deemed to include for providing & removal of scaffolding, staging/safety nets wherever necessary.	Sqm	15.00		
17	Dismantling the existing structural steel MS Sections, MS Gates and other structural steel members fixed to the wall without damaging the adjacent walls & handing over the same to BEML in good condition and stacking at a place shown etc., complete all as specified & directed by Engineer-in-charge. Note: 1) The rate quoted is deemed to include for welding machine, rods, gas, consumables, labour, transportation etc. 2) The rate quoted is deemed to include for providing & removal of scaffolding, staging wherever necessary etc.	Kgs	2200.00		
18	Supplying, Fabricating, hoisting and erecting in position MS Structural steel for roof truss, purlins & cladding work using MS Structural steel sections viz., channels, plates, angles, cleats, flats, fixing to correct line & level including cutting, welding, bending to required shape, cleaning the rust and scales, shims & packing pieces required for erection at all elevation heights & levels etc., complete all as specified and as directed by Engineer in charge. Note: a) The rate quoted is deemed to include for labour, welding machine, welding rods, gas etc. b) The rate quoted is deemed to include for scaffolding, staging/ladder & providing safety nets wherever necessary and protective measures etc.	Kgs	4000.00		
19	Removing the existing corrugated/semi-corrugated AC/GI/ FRP roof sheet including 'J' bolts, washers carefully, stacking the usable sheets and shifting to salvage stores inside the factory premises and carting away the unusable/broken sheets/curves outside the factory premises not exceeding 5KM which is not objected by local civic authorities etc., complete all as specified & directed by the Engineer-in-charge. Note:- a) Clear area of roof sheet excluding lap length shall be measured for payment. b) The rate quoted is deemed to include for Providing & removal of scaffolding, staging/safety nets wherever necessary. c) The rate is quoted is deemed to include for arranging the vehicle for shifting the usable sheets to salvage store as shown inside the factory. d) The rate is deemed to include for carting away the broken/unusable sheets outside the site premises.	Sqm	530.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
20	<p>Supplying & fixing 0.6mm thick galvalume single skin HI-Rib trapezoidal/approved profile PPGL colour coated sheet for roof & cladding of approved color & shade, 1060mm supply width, 975mm-1000mm covered width 29mm-30mm crest height, 24mm crest width with min. 195mm-200mm pitch minimum 0.50mm thick TCT, Galvalume(55% aluminum-43%Zinc Coating), 150 GSM with minimum yield strength of 550 Mpa. The sheet shall have wide pans with stiffening ribs manufactured by M/s JSW/TATA. The sheet shall be fixed by means of anticorrosive self drilling self tapping mechanically galvanised fasteners with integral EPDM washers. The scope shall include all sealing of joints, curves, edges or other accessories with silicon sealant. The sheet shall be laid with a minimum lap of 150mm at the ends and special male & female lapping at each side. The minimum lap of sheets with ridges, hips & valleys shall be 200mm. The sheets shall be secured to purlins by means of self driven screws or GI J or L hook bolts and nuts with bitumen and GI limpet washer as per the requirement of site and as directed, etc , complete all as specified and as directed by Engineer in charge.</p> <p>Note:- 1) The finished/Covered area of roof sheet excluding lap length shall be measured for payment. 2) The rate quoted is deemed to include for providing and removal of scaffolding, staging/ladder wherever necessary and protective measures etc.</p>	Sqm	520.00		
21	<p>Supplying and fixing M/s. Tuflite / PC Lite/Lexon corrugated 2mm uniform thickness polycarbonate sheet for roof conforming to relevant IS fixed to the existing galvalume sheet to suit the profile with necessary hardware screws/washers and sealant to ensure leak proof joints etc., complete all as specified & directed by Engineer in charge.</p> <p>Note:- Clear a) area of roof sheet excluding lap length shall be measured for payment. b) The rate quoted for the item is deemed to include Providing & removal of scaffolding, staging/staging wherever necessary.</p>	Sqm	20.00		
22	<p>Surface excavation in all kinds of soils including removal of rank vegetation/bushes and clearing the area etc.,and disposal of unusable materials or debris outside the site premises to a distance not exceeding 5.0 KM not objected by local civic authorities including lead ,lift etc.</p>	Sqm	80.00		
23	<p>Providing & laying bedding layer of 20mm thickness in Cement Mortar 1:6 in floor & skirtings, finished smooth & even to required gradient etc., complete all as specified and directed by Engineer in charge.</p>	Sqm	8.00		
24	<p>Removing the Wooden door shutter of size approximately 1.35m x 2.35m carefully by manual means carefully without breaking, stacking at a place all as shown & re- fixing back the shutter in the same location with necessary modifications including altering the height of shutter if required including providing & fixing all necessary hardware items viz 125mm size MS door hinges, 150mm size aluminum aldrop, 150mm size aluminum powder coated tower bolts, 150mm size aluminum powder coated handles etc.,complete all as specified and as directed by Engineer in Charge. Note: The rate quoted is deemed to include for making good the adjacent portion of wall/plastering if damaged during dismantling.</p>	Each	3.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
25	Supplying and fixing 40mm thick polished black Granite slab on brick/Concrete support walls for counterplatform and jointed neatly with cement mortar and pointed with black oxide or coloured cement compound to match the colour of granite including grinding the edges (Nosing) half round alround the slab as per the template etc., complete all as specified and directed by Engineer in charge. Note: The quoted rate is inclusive of a) wastages. b) Brick wall supports will be measured & paid seperately under relevant item.	Sqm	25.00		
26	Earth work excavation by mechanical means/manual means in foundation trenches exceeding 1.5 Mtrs in depth & not exceeding 3.0 mtrs in depth in all kinds of soil but excluding hard rock for foundations/ pits including getting out the excavated earth and disposal of debris out side the premises to a distance exceeding 1.5m ¬ exceeding 5km, disposal of surplus excavated soil as directed including dressing of sides, dewatering ground water/rain water, compaction etc.,complete all as specified and as directed by Engineer in charge.	Cum	10.00		
27	Preparing the old Painted surface of external walls including stucco area by water washing, sand papering/wire brushing including providing necessary repairs to cracks, and cleaning the surface from dust, dirt and filling/closing the cracks with suitable crack filling compound and applying two coats of exterior emulsion paint of first quality approved brand and colour manufactured by M/s. Asian Paints (Apex ultima)/Berger Paints after successively drying each coat over a coat of primer and touch up putty wherever necessary etc., complete all as specified and directed by Engineer in Charge. Note: 1) The rate quoted is deemed to include for providing and removal of scaffolding, staging/ladder, suspending jhoola wherever required and protective measures etc. 2) Cleaning the floor surface after painting. 3) wastages.	Sqm	400.00		
28	Taking out old serviceable glass of any description, from old wooden or metal frames, or stone or concrete or brick surrounds, any thickness or size; hacking out old putty or removing beads etc, including making good the surfaces etc and Supplying and fixing new 5.5 mm thick plain sheet glass (not exceeding 0.50 Sqm) conforming to relevant IS to the existing window panes and glazing with oil putty, firmly secured etc., complete all as specified and as directed by Engineer in charge.complete all as specified and as directed by Engineer in charge.	Sqm	90.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
29	Supplying, fixing in position 20mm diameter M20 MS hexagonal foundation bolts of required length including threading of required length, welding, drilling/fixing MS bolts over the pedestal reinforcement bars for proper alignment & center line, to maintain desired level surface including necessary hardware items viz., nuts, washers of required size and diameter to the correct line and level etc., complete all as specified and directed by Engineer in charge..	Kgs	80.00		
30	Preparing the existing surface by cleaning, hacking etc., & Supplying and fixing Anti skid ceramic coloured floor tiles of minimum 300 mmX300 mmx8mm thick or bigger size of approved colour/pattern laid over a bedding layer of CM 1:4,15mm thick manufactured by M/s RAK/Kajaria/Somany or equivalent approved make to proper slope and joints neatly finished and pointed with jointing powder of matching colour pigment etc., complete all as specified and directed by Engineer-in-Charge. Note: 1)The rate quoted is deemed to include for all wastages. 2) The rate is deemed to include for dismantling the existing old mosaic floor tiles in any thickness, hacking out old plastering & disposal of unserviceable materials from the premises.	Sqm	16.00		
31	Supplying and fixing coloured ceramic dado tiles for dado minimum size 450mm x 350mmx7mm thick or bigger size of approved colour/pattern laid over a backing coat of Cement Mortar 1:4,15mm thick manufactured by M/sRAK/Kajaria/Somany or equivalent approved make and joints neatly finished and pointed with jointing powder of matching colour pigment etc., complete all as specified and directed by Engineer-in-Charge. Note: 1) The rate is deemed to include for providing a dubbing coat of 15mm thick in Cement Mortar 1:6 on irregular face of walls. 2) Wastages. 3) The rate is deemed to include for dismantling the existing old mosaic wall tiles in any thickness, including existing old washbasin, hacking out old plastering & disposal of unserviceable materials from the premises.	Sqm	28.00		

Sl. No	Description	Unit	Qty	Rate/unit in fig. & in words Rs.	Amount (Rs)
32	Supplying and Laying the 20mm diameter, heavy grade CPVC water tubing manufactured by M/s.Supreme/Astral/Ashirwad/equivalent approved make, laid in required length/gradient in walls, flooring & trenches including all standard CPVC fittings such as elbows, collars, Tees, MTA, FTA, PVC Clamps including cutting & making good the floor/walls with cement mortar wherever necessary etc., complete all as specified and directed by Engineer-in-charge. Note: The rate quoted is deemed to include for providing and removal of scaffolding/staging wherever necessary.	Rmt	12.00		
33	Supplying and fixing 15mm dia brass chromium plated Long body bibcock of first quality approved brand manufactured by M/s.ESS /Parryware/ Johnson/Hindware etc., complete as specified and directed by Engineer in charge.	No	6.00		
34	Supplying and fixing heavy duty HILTI HIT -V-5.8 M16x260mm anchor bolt In RCC columns/walls/beam using RE-500. The system should be made of two coponets, first consisting of resin and hardner in a soft foil pack of 330, 5:1 ratio and second inserting HIT-V-5.8 M16 x 165mm. The cost shall be inclusive of drilling and fixing of the anchor into the filled hole, the installtion and the setting instructions should be strictly followed as per the manufacturers recommendation.	No	12.00		
35	Providing necessary repairs to the false ceiling at first floor by repacing the old broken false ceiling tiles and replacing with new 600mmx600 grid false ceiling tile with all hardware items, necessary frame work of aluminum/GI channels secured & fixed firmly. The ceiling shall be in perfect level and smooth in finish etc. all complete and as specified and directed by Engineer in charge. Note : Rate quoted for the item deemed to include all wastages Note: The rate is deemed to include for Providing & removal of scaffolding wherever necessary b) Wastages.	Sqm	5.00		
36	Providing and laying in Position Plain cement concrete 150mm thick of mix proportion 1:2:4 using 20mm graded down size granite aggregate, laid in layers for hard standing concrete including finishing the top surface even, well compacted including curing, compacting etc.,complete all as specified and directed by Engineer in charge. Note: The rate quoted by the Contractor for the item is deemed to include for providing and removal of form work/centering/shuttering wherever necessary.	Sq.M	60.00		
Note:- rate quoted for the above items is deemed to include for providing and removal of scaffolding/staging wherever necessary. 2) The contractors/ prospective bidders shall visit the site and acquaint themselves with the site conditions before submission of bid/ quote. 3) The contractor to note that the dismantled materials should be removed and shifted immediately from the site premises without disturbing the regular production activities .					
Total value of work excluding GST (Rs).					
GST (Rs).					
Total value of work inclusive of GST (Rs)					

(Total Amount in words Rupees.....)

Signature of the Contractor with seal