

**BEML LIMITED BANGALORE COMPLEX**

Ref: 6300030030

Date: 04.11.2019

ISSUED TO:	Period of contract:	05 Months
	EMD :	Rs. 1,30,000/-

**SCHEDULE 'A' - BILL OF QUANTITIES**

**(A) Sub:- Renovation/Refurbishing of BOGIE FRAME hangar by replacing the existing old roof sheet, curves, rain water downtake pipes & miscellaneous civil works at BEML limited Bangalore Complex, Bangalore 560075.**

Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
1	Removing the existing corrugated/semi-corrugated AC/GI/FRP roof sheets including J bolts, washers carefully at a minimum height of 10Mtrs approx, stacking the usable sheets at a place shown & handing over to civil maintenance department and shifting the unusable roof sheets to salvage stores upto 1.00Km distance etc., complete all as specified & directed by the Engineer-in-charge. <b>Note: Clear area of roof sheet excluding lap length shall only be measured for payment</b>	Sq.M	1525		
2	Removing the existing corrugated/semi-corrugated AC <b>curves</b> including J bolts, washers carefully at a minimum height of 10Mtrs approx, stacking the usable curves at a place shown & handing over to civil maintenance department and shifting the unusable roof sheets to salvage stores upto 1.00Km distance etc., complete all as specified & directed by the Engineer-in-charge. <b>Note: Clear area of curve sheet excluding lap length shall only be measured for payment</b>	Sq.M	180		
3	Taking down/dismantling the broken north light plain/round glass carefully from the MS/metal frames by hacking out old putty or removing beads including making good breakages if any in taking out etc., complete all as specified & directed by the Engineer-in-charge.	Sq.M	16		
4	Taking down the existing AC/GI/PVC rain water down take pipes any size or pattern including all fittings, heads, shoes, bends, swan necks etc., including cleaning and handing over the usable material to civil maintenance dept. and stacking at a place shown etc., complete all as specified and directed by the Engineer-in-charge.	RM	195		
5	Dismantling the existing brick masonry wall built in Cement mortar including all quoins, arches, pillars etc., complete all as specified and directed by the Engineer-in-charge.	Cu.M	4		
6	Providing and applying water proofing treatment for the existing GI/AC/Aluminium gutters & roof exhaust/extractors using Bitumat Synroof Hi - Build elastomeric premium quality liquid waterproofing system including one layer of 60 GSM thermally bonded special polyester reinforcement carried out at the full Gutter area etc., complete all as specified & directed by the Engineer-in-charge <b>Note: The rate is deemed to include for cleaning the gutters to the full length before carrying out the waterproofing treatment.</b>	RM	200		

Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
7	Supplying & fixing M/s. JSW/TATA/BHUSHAN make single skin HI-Rib trapezoidal profile PPGL colour coated (sky blue) sheeting for roof 1060mm supply width, 975mm-1000mm covered width 29mm-30mm crest height, 24mm crest width with min. 195mm-200mm pitch in 0.60mm thick TCT Galvalume(55% aluminum-43%Zinc Coating) 150 GSM with 550 Mpa minimum tensile strength conforming to IS277, Alloy Coated conforming to As 1397 inclusive of all taxes & duties, transportation etc including all hardware/fixtures like colour matched nylon head self tapping corrosion protected mechanically galvanised fasteners with integral washer etc , complete all as specified and as directed by Engineer in charge. Note: Clear area of roof sheet excluding lap length shall only be measured for payment	Sq.M	1435		
8	Supplying and fixing M/s. Bayers/JSW/Everest make corrugated <b>2mm thick (uniform thickness) polycarbonate sheet for roof</b> conforming to relevant IS with necessary hardware screws/washers and sealant, sheets fixed to suite the existing galvalume roof sheet profile such that no leakage occurs etc., complete all as specified & directed by Engineer in charge. Note: Clear area of roof sheet excluding lap length shall only be measured for payment	Sq.M	90		
9	Supplying and fixing 0.60mm TCT Galvalume north light curves (55% aluminum-43%Zinc Coating) 150 GSM with 550 Mpa minimum tensile strength conforming to IS277, Alloy Coated conforming to As 1397 inclusive of all taxes & duties, transportation etc including all hardware/fixtures like colour matched nylon head self tapping corrosion protected mechanically galvanised fasteners with integral washer etc , complete all as specified and as directed by Engineer in charge. Note: Clear area of roof curve excluding lap length shall only be measured for payment	Sq.M	182		
10	Supplying and fixing M/s. Bayers/JSW/Everest make plain 2mm thick (uniform thickness) polycarbonate sheet for north light glasses conforming to relevant IS with necessary hardware screws/washers and sealant, sheets fixed to the existing MS window frames such that no leakage occurs etc., complete all as specified & directed by Engineer in charge.	Sq.M	16		
11	Providing & fixing 150 mm dia PVC class 2 pipes (6kg/cm <sup>2</sup> ) for rain water down take of first quality, approved brand, conforming to relevant IS manufactured by M/s.Supreme/Finolex/Prince including all standard fittings like elbows, bends, tees tail pieces & fixtures such as pipe clips, clamps wooden plug, screws, washers etc secured firmly to the wall surfaces etc.,complete all as specified and as directed by Engineer in charge.	RM	195		
12	Providing and constructing 230mm thick/required thickness burnt <b>brick masonry in CM 1:6</b> using first class table moulded bricks for superstore at required heights including tools & tackles, curing etc., complete all as specified & directed by Engineer in charge.	Cu.M	5		

Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
13	Providing Rendering/Plastering for the external brick masonry wall / concrete surfaces in cement mortar of mix proportion 1:6, 20mm thick including tools & tackles, scaffolding, curing etc., complete as specified and directed by Engineer in charge.	Sq.M	30		
14	Providing Rendering/Plastering for the internal brick masonry wall / concrete surfaces in cement mortar of mix proportion 1:4, 15mm thick including tools & tackles, scaffolding, curing etc., complete as specified and directed by Engineer in charge.	Sq.M	30		
15	Preparing the existing old Painted external walls by scrapping, sand papering, including providing necessary repairs to cracks, scratches and cleaning the surface from dust, dirt and applying two coats of Exterior emulsion paint (ACE) with touch up putty wherever necessary of first quality approved colour manufactured by M/s.Asian Paints/Berger etc., complete all as specified and as directed by Engineer in charge.	Sq.M	30		
16	Preparing the existing old Painted surface of internal walls by scrapping, sand papering, including 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 Plastic emulsion paint over a coat of primer and touch up putty wherever necessary of first quality, approved colour manufactured by M/s.Asian Paints/Berger paints etc., complete all as specified and as directed by Engineer in charge.	Sq.M	30		
17	Carting away the damaged roof sheets, curves, debris, muck, broken glasses and dumping at a place shown inside factory within a lead not exceeding 5.00Km etc complete all as specified & directed by the Engineer-in-charge	Cum	20		
	Total Amount excluding GST			Rs.	
	GST Amount			Rs.	
	Total Amount inclusive of GST			Rs.	
TOTAL AMOUNT IN WORDS: RUPEES					

**(B)Sub:- Renovation/Refurbishing of ICF hangar by replacing the existing old roof sheet, curves, rain water downtake pipes & miscellaneous civil works at BEML limited Bangalore Complex, Bangalore 560075.**

Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
1	Removing the existing corrugated/semi-corrugated AC/GI/FRP roof sheets including J bolts, washers carefully at a minimum height of 10Mtrs approx, stacking the usable sheets at a place shown & handing over to civil maintenance department and shifting the unusable roof sheets to salvage stores upto 1.00Km distance etc., complete all as specified & directed by the Engineer-in-charge. <b>Note: Clear area of roof sheet excluding lap length shall only be measured for payment</b>	Sq.M	1460		

Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
2	Removing the existing corrugated/semi-corrugated AC <b>curves</b> including J bolts, washers carefully at a minimum height of 10Mtrs approx, stacking the usable curves at a place shown & handing over to civil maintenance department and shifting the unusable roof sheets to salvage stores upto 1.00Km distance etc., complete all as specified & directed by the Engineer-in-charge. <b>Note: Clear area of curve sheet excluding lap length shall only be measured for payment</b>	Sq.M	162		
3	Taking down/dismantling the broken north light plain/round glass carefully from the MS/metal frames by hacking out old putty or removing beads including making good breakages if any in taking out etc., complete all as specified & directed by the Engineer-in-charge.	Sq.M	30		
4	Taking down the existing AC/GI/PVC rain water down take pipes any size or pattern including all fittings, heads, shoes, bends, swan necks etc., including cleaning and handing over the usable material to civil maintenance dept. and stacking at a place shown etc., complete all as specified and directed by the Engineer-in-charge.	RM	175		
5	Dismantling the existing brick masonry wall built in Cement mortar including all quoins, arches, pillars etc., complete all as specified and directed by the Engineer-in-charge.	Cu.M	2		
6	Providing and applying water proofing treatment for the existing GI/AC/Aluminium gutters & roof exhaust/extractors using Bitumat Synroof Hi – Build elastomeric premium quality liquid waterproofing system including one layer of 60 GSM thermally bonded special polyester reinforcement carried out at the full Gutter area etc., complete all as specified & directed by the Engineer-in-charge <b>Note: The rate is deemed to include for cleaning the gutters to the full length before carrying out the waterproofing treatment.</b>	RM	180		
7	Supplying & fixing M/s. JSW/TATA/BHUSHAN make single skin HI-Rib trapezoidal profile PPGL colour coated (sky blue) sheeting for roof 1060mm supply width, 975mm-1000mm covered width 29mm-30mm crest height, 24mm crest width with min. 195mm-200mm pitch in 0.60mm thick TCT Galvalume(55% aluminum-43%Zinc Coating) 150 GSM with 550 Mpa minimum tensile strength conforming to IS277, Alloy Coated conforming to As 1397 inclusive of all taxes & duties, transportation etc including all hardware/fixtures like colour matched nylon head self tapping corrosion protected mechanically galvanised fasteners with integral washer etc , complete all as specified and as directed by Engineer in charge. Note: Clear area of roof sheet excluding lap length shall only be measured for payment	Sq.M	1371		
8	Supplying and fixing M/s. Bayers/JSW/Everest make corrugated <b>2mm thick (uniform thickness) polycarbonate sheet for roof</b> conforming to relevant IS with necessary hardware screws/washers and sealant, sheets fixed to suite the existing galvalume roof sheet profile such that no leakage occurs etc., complete all as specified & directed by Engineer in charge. Note: Clear area of roof sheet excluding lap length shall only be measured for payment	Sq.M	76		

Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
9	Supplying and fixing 0.60mm TCT Galvalume north light curves (55% aluminum-43%Zinc Coating) 150 GSM with 550 Mpa minimum tensile strength conforming to IS277, Alloy Coated conforming to As 1397 inclusive of all taxes & duties, transportation etc including all hardware/fixtures like colour matched nylon head self tapping corrosion protected mechanically galvanised fasteners with integral washer etc , complete all as specified and as directed by Engineer in charge. Note: Clear area of roof curve excluding lap length shall only be measured for payment	Sq.M	162		
10	Supplying and fixing M/s. Bayers/JSW/Everest make plain 2mm thick (uniform thickness) polycarbonate sheet for north light glasses conforming to relevant IS with necessary hardware screws/washers and sealant, sheets fixed to the existing MS window frames such that no leakage occurs etc., complete all as specified & directed by Engineer in charge.	Sq.M	30		
11	Providing & fixing 150 mm dia PVC class 2 pipes (6kg/cm <sup>2</sup> ) for rain water down take of first quality, approved brand, conforming to relevant IS manufactured by M/s.Supreme/Finolex/Prince including all standard fittings like elbows, bends, tees tail pieces & fixtures such as pipe clips, clamps wooden plug, screws, washers etc secured firmly to the wall surfaces etc.,complete all as specified and as directed by Engineer in charge.	RM	175		
12	Providing and constructing 230mm thick/required thickness burnt <b>brick masonry in CM 1:6</b> using first class table moulded bricks for superstore at required heights including tools & tackles, curing etc., complete all as specified & directed by Engineer in charge.	Cu.M	2		
13	Providing Rendering/Plastering for the external brick masonry wall / concrete surfaces in cement mortar of mix proportion 1:6, 20mm thick including tools & tackles, scaffolding, curing etc., complete as specified and directed by Engineer in charge.	Sq.M	30		
14	Providing Rendering/Plastering for the internal brick masonry wall / concrete surfaces in cement mortar of mix proportion 1:4, 15mm thick including tools & tackles, scaffolding, curing etc., complete as specified and directed by Engineer in charge.	Sq.M	30		
15	Preparing the existing old Painted external walls by scrapping, sand papering, including providing necessary repairs to cracks, scratches and cleaning the surface from dust, dirt and applying two coats of Exterior emulsion paint (ACE) with touch up putty wherever necessary of first quality approved colour manufactured by M/s.Asian Paints/Berger etc., complete all as specified and as directed by Engineer in charge.	Sq.M	30		
16	Preparing the existing old Painted surface of internal walls by scrapping, sand papering, including 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 Plastic emulsion paint over a coat of primer and touch up putty wherever necessary of first quality, approved colour manufactured by M/s.Asian Paints/Berger paints etc., complete all as specified and as directed by Engineer in charge.	Sq.M	30		

Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
17	Carting away the damaged roof sheets, curves, debris, muck, broken glasses and dumping at a place shown inside factory within a lead not exceeding 5.00Km etc complete all as specified & directed by the Engineer-in-charge	Cu.M	15		
	Total Amount excluding GST			Rs.	
	GST Amount			Rs.	
	Total Amount inclusive of GST			Rs.	
TOTAL AMOUNT IN WORDS: RUPEES					
<b>(C)Sub:- Renovation/Refurbishing of Tool room hangar by replacing the existing old roof sheet, curves, rain water downtake pipes &amp; miscellaneous civil works at BEML limited Bangalore Complex, Bangalore 560075.</b>					

Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
1	Removing the existing corrugated/semi-corrugated AC/GI/FRP roof sheets including J bolts, washers carefully at a minimum height of 10Mtrs approx, stacking the usable sheets at a place shown & handing over to civil maintenance department and shifting the unusable roof sheets to salvage stores upto 1.00Km distance etc., complete all as specified & directed by the Engineer-in-charge. <b>Note: Clear area of roof sheet excluding lap length shall only be measured for payment</b>	Sq.M	1675		
2	Removing the existing corrugated/semi-corrugated AC <b>curves</b> including J bolts, washers carefully at a minimum height of 10Mtrs approx, stacking the usable curves at a place shown & handing over to civil maintenance department and shifting the unusable roof sheets to salvage stores upto 1.00Km distance etc., complete all as specified & directed by the Engineer-in-charge. <b>Note: Clear area of curve sheet excluding lap length shall only be measured for payment</b>	Sq.M	197		
3	Taking down/dismantling the broken north light plain/round glass carefully from the MS/metal frames by hacking out old putty or removing beads including making good breakages if any in taking out etc., complete all as specified & directed by the Engineer-in-charge.	Sq.M	15		
4	Taking down the existing AC/GI/PVC rain water down take pipes any size or pattern including all fittings, heads, shoes, bends, swan necks etc., including cleaning and handing over the usable material to civil maintenance dept. and stacking at a place shown etc., complete all as specified and directed by the Engineer-in-charge.	RM	347		
5	Dismantling the existing brick masonry wall built in Cement mortar including all quoins, arches, pillars etc., complete all as specified and directed by the Engineer-in-charge.	Cu.M	4		

Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
6	<p>Providing and applying water proofing treatment for the existing GI/AC/Aluminium gutters &amp; roof exhaust/extractors using Bitumat Synroof Hi – Build elastomeric premium quality liquid waterproofing system including one layer of 60 GSM thermally bonded special polyester reinforcement carried out at the full Gutter area etc., complete all as specified &amp; directed by the Engineer-in-charge</p> <p><b>Note: The rate is deemed to include for cleaning the gutters to the full length before carrying out the waterproofing treatment.</b></p>	RM	220		
7	<p>Supplying &amp; fixing M/s. JSW/TATA/BHUSHAN make single skin HI-Rib trapezoidal profile PPGL colour coated (sky blue) sheeting for roof 1060mm supply width, 975mm-1000mm covered width 29mm-30mm crest height, 24mm crest width with min. 195mm-200mm pitch in 0.60mm thick TCT Galvalume(55% aluminum-43%Zinc Coating) 150 GSM with 550 Mpa minimum tensile strength conforming to IS277, Alloy Coated conforming to As 1397 inclusive of all taxes &amp; duties, transportation etc including all hardware/fixtures like colour matched nylon head self tapping corrosion protected mechanically galvanised fasteners with integral washer etc , complete all as specified and as directed by Engineer in charge.</p> <p>Note: Clear area of roof sheet excluding lap length shall only be measured for payment</p>	Sq.M	1639		
8	<p>Supplying and fixing 0.60mm TCT Galvalume north light curves (55% aluminum-43%Zinc Coating) 150 GSM with 550 Mpa minimum tensile strength conforming to IS277, Alloy Coated conforming to As 1397 inclusive of all taxes &amp; duties, transportation etc including all hardware/fixtures like colour matched nylon head self tapping corrosion protected mechanically galvanised fasteners with integral washer etc , complete all as specified and as directed by Engineer in charge.</p> <p>Note: Clear area of roof curve excluding lap length shall only be measured for payment</p>	Sq.M	199		
9	<p>Supplying and fixing M/s. Bayers/JSW/Everest make plain 2mm thick (uniform thickness) polycarbonate sheet for north light glasses conforming to relevant IS with necessary hardware screws/washers and sealant, sheets fixed to the existing MS window frames such that no leakage occurs etc., complete all as specified &amp; directed by Engineer in charge.</p>	Sq.M	16		
10	<p>Providing &amp; fixing 150 mm dia PVC class 2 pipes (6kg/cm<sup>2</sup>) for rain water down take of first quality, approved brand, conforming to relevant IS manufactured by M/s.Supreme/Finolex/Prince including all standard fittings like elbows, bends, tees tail pieces &amp; fixtures such as pipe clips, clamps wooden plug, screws, washers etc secured firmly to the wall surfaces etc.,complete all as specified and as directed by Engineer in charge.</p>	RM	347		
11	<p>Providing and constructing 230mm thick/required thickness burnt <b>brick masonry in CM 1:6</b> using first class table moulded bricks for superstore at required heights including tools &amp; tackles, curing etc., complete all as specified &amp; directed by Engineer in charge.</p>	Cu.M	4		

Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
12	Providing Rendering/Plastering for the external brick masonry wall / concrete surfaces in cement mortar of mix proportion 1:6, 20mm thick including tools & tackles, scaffolding, curing etc., complete as specified and directed by Engineer in charge.	Sq.M	20		
13	Providing Rendering/Plastering for the internal brick masonry wall / concrete surfaces in cement mortar of mix proportion 1:4, 15mm thick including tools & tackles, scaffolding, curing etc., complete as specified and directed by Engineer in charge.	Sq.M	20		
14	Preparing the existing old Painted external walls by scrapping, sand papering, including providing necessary repairs to cracks, scratches and cleaning the surface from dust, dirt and applying two coats of Exterior emulsion paint (ACE) with touch up putty wherever necessary of first quality approved colour manufactured by M/s.Asian Paints/Berger etc., complete all as specified and as directed by Engineer in charge.	Sq.M	20		
15	Preparing the existing old Painted surface of internal walls by scrapping, sand papering, including 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 Plastic emulsion paint over a coat of primer and touch up putty wherever necessary of first quality, approved colour manufactured by M/s.Asian Paints/Berger paints etc., complete all as specified and as directed by Engineer in charge.	Sq.M	20		
16	Carting away the damaged roof sheets, curves, debris, muck, broken glasses and dumping at a place shown inside factory within a lead not exceeding 5.00Km etc complete all as specified & directed by the Engineer-in-charge	Cu.M	15		
Total Amount excluding GST				Rs.	
GST Amount				Rs.	
Total Amount inclusive of GST				Rs.	
© TOTAL AMOUNT IN WORDS: RUPEES					
A+B+C	GRAND TOTAL COST OF BOGIE FRAME, ICF & TOOL ROOM HANGARS EXCLUDING GST			Rs.	
A+B+C	GRAND TOTAL OF GST AMOUNT FOR BOGIE FRAME, ICF & TOOL ROOM HANGARS			Rs.	
A+B+C	GRAND TOTAL COST OF BOGIE FRAME, ICF & TOOL ROOM HANGARS INCLUDING GST			Rs.	

**THE FOLLOWING NOTES ARE APPLICABLE FOR ALL ABOVE 3 SECTIONS(A,B & C)**

- (1) The Contractors quoted rate is deemed to include for providing and removal of scaffolding/staging as required for all the above mentioned works.
- (2) The Contractor to note that the dismantled materials should be removed and shifted immediately from the site premises without disturbing the regular production activities in the area and in the adjoining hangars and the rate is deemed to include for the same
- (3) The labour employed for the work should be covered under ESI & PF
- (4) Since the work has to be carried out at a min height of 10Mtrs, it is responsibility of the Contractor to provide all safety/PPE for the labour/workmen employed for the work and the work to be carried out after obtaining necessary safety permit as per BEML format for the days work
- (5) The work has to be carried out on a day to day basis by the Contractor under the supervision of the Contractor himself or under the supervision of a qualified technical personnel employed by the Contractor till the completion of the Days work

Signature of the Contractor  
With seal



Sl. No	Description	Unit	Qty	Rate/unit in figures & in words Rs.	Amount(Rs)
--------	-------------	------	-----	-------------------------------------	------------



28700















