

BEML LIMITED, BANGALORE COMPLEX

Tender Ref: 6300029468

DATE:-20.09.2019

ISSUED TO:	Period of contract:	THREE (03) MONTHS
	EMD :	Rs.31,640/-

Sub: Proposed Civil & Structural works in track no. 27,28,29 & 30 for METRO & MEMU projects in BEML Limited, Bangalore complex Bangalore.

SCHEDULE 'A' - BILL OF QUANTITIES

Sl. no	Description	Unit	Qty	Rate/ unit in fig. & in words Rs.	Amount Rs.
1	Earth work excavation etc complete Earthwork excavation by mechanical/ manual means for trenches, sumps, pits not exceeding 1.50m in width and not exceeding 1.50m in depth and not exceeding area 10 sqm on plan in all kinds of soil but excluding hard rock for foundation/ pits including getting out the excavated earth, with a lead upto 50 mts including dressing of sides, complete all as specified and as directed by Engineer in charge.	Cu.M	50		
2	Providing and laying in Position Plain cement concrete of mix proportion 1:4:8 using 40mm down graded granite aggregate, laid in layers not exceeding 10cms thick well compacted for foundation bed, under floors and other similar works including curing etc.,complete all as specified and as directed by Engineer in charge.	Cu.M	5		
3	Providing & laying in position Reinforced cement concrete M20 grade and of mix proportion 1:1.5:3 for rail beams using 20mm down graded granite aggregate, well compacted including curing,tools & tackles, plant & machinery charges, all incidental charges etc.,complete all as specified and directed by Engineer in charge. Note: Reinforcement will be measured and paid under relevant item	Cu.M	14		
4	Providing & laying in position Reinforced cement concrete M20 grade and of mix proportion 1:1.5:3 for sump, RCC walls, bottom slab using 20mm down graded granite aggregate, well compacted including curing,tools & tackles, plant & machinery charges, all incidental charges etc.,complete all as specified and directed by Engineer in charge. Note: Reinforcement will be measured and paid under relevant item	Cu.M	6		

5	Providing & laying Plain cement concrete of mix proportion 1:1.5:3 for flooring/hardstanding not exceeding 200mm thick using 20mm down graded granite aggregate, well compacted, finishing smooth & even including curing, tools & tackles, plant & machinery charges, all incidental charges etc., complete all as specified and directed by Engineer in charge	Cu.M	60		
6	Providing, erecting and removal of leak proof formwork for beams, RCC wall, slabs (Centring and shuttering including strutting, propping etc) using MS/ plywood, conforming to relevant IS with necessary wooden formwork supports, metal propping, MS pipe ties, bracings, staging, applying of chemical releasing agent to MS/plwood surfaces to avoid sticking of cement so as to have a smooth finish at all levels while casting the concrete member of any shape, size and thickness etc complete all as specified and directed by Engineer-in-charge.	Sq.M	75		
7	Providing TMT bars (Fe 500 grade) in reinforcement conforming to relevant IS in various diameter for various location & levels, cut to length & bent to required shape, binding spirally with MS wire (annealed) of size not less than 0.9mm dia and placing in position including all lead, lift, labour, tools & tackles, plants & machinery etc complete all as specified and directed by Engineer in Charge. Note: a) The rate quoted for the item shall be deemed to include for cement mortar cover blocks as per requirement at site. b) Reinforcement shall be measured based on actual quantity placed in position on standard weight basis and no allowance shall be made for rolling margin. c) Only authorised laps, chairs & spacers shall be measured & paid.	Kgs	1800		
8	Laying & fixing available IU rails of 52 Kg/M for BG/SG track including laying the rails over RCC beams to the correct line and level etc., complete all as specified and directed by the Engineer-in-charge. Note:- (1) The quoted rate shall include for cutting, welding & levelling the rails. (2) The quoted rate is deemed to include for labour, welding machine, gas, electrodes and consumable required for work	Kgs	6000		
9	Supplying & fixing in position MS foundation bolts for holding of rails 20mm/25mm dia. threading to required length, cutting, welding, machining including nuts & washers of required size and dia., welding the bolts to the reinforcement to the correct line and level etc complete all as specified and directed by the Engineer-in-charge Note:- (1) The quoted rate is deemed to include for bolts, nuts, washers etc. (2) The quoted rate is deemed to include for labour, welding machine, gas, electrodes and consumable required for work	Kgs	150		

10	Fabricating, welding the available MS plate over the reinforcement for laying of BG/SG rails, including cutting, welding the MS plates of required size & shape to the steel reinforcement and secured firmly to the correct line and level etc complete. all as specified and directed by the Engineer-in-charge Note:- (1) The net area of MS plates shall be measured for the purpose of payment converting to standard weight basis (2) The quoted rate is deemed to include for labour, welding machine, gas, electrodes and consumable required for work	Kgs	75		
11	Demolition/dismantling the existing cement concrete flooring/ Hardstanding concrete including flooring tiles in any description and in any position not otherwise specifically provided etc and disposal of unserviceable materials from the premises etc., complete all as specified and as directed by engineer in charge. Note: The dismantled materials /debris should be removed immediately from the premises without disturbing the regular production activities and the quoted rate includes all lead & lift	Cu.M	70		
12	Removing the existing old BG/SG rails from the concrete members and stacking at a place shown by BEML including cutting, welding, etc complete all as specified and directed by the Engineer-in-charge Note:- Dismantling of concrete shall be measured and paid under the relevant item.	Kgs	6000		
13	Carting away unwanted and unusable excavated soil outside the site premises to a distance exceeding 1.50KM but not exceeding 5.0KM and dumping at a place shown in BEML Township including all lead and lift etc., complete all as specified and as directed by Engineer in charge.	Cu.M	118		
14	Returning & filling under floors layer by layer including consolidation, well ramming etc., complete all as specified and as directed by Engineer in charge.	Cu.M	11		
15	Supplying & fixing 150mm dia. PVC class 2 pipes (6kg/cm ²) under floors of first quality, conforming to relevant IS manufactured by M/s. Supreme/ Finolex/Prince with all standard fittings like elbows, bends, tees tail pieces & fixtures such as pipe clips, clamps wooden plug, screws, washers etc secured firmly etc., complete all as specified and as directed by Engineer in charge.	RM	15		
16	Providing and laying soling of 150mm compacted thickness below floor/foundation with approved quality broken boulders or quarried stone 100 to 150mm size laid in layers, well packed to the correct line & level, interstices filled with stone chips, sand or moorum and consolidated including transportation etc complete all as specified and as directed by Engineer in charge.	Sq.M	250		

17	Providing and constructing concrete solid block masonry wall of size 400 x 150 x 200mm / required size set in cement mortar 1:6 including necessary curing, tools & tackles etc complete all as specified and directed by Engineer in charge	Cu.M	6		
18	Rendering 15mm thick in Cement Mortar 1:4 on fair faces of masonry or concrete surfaces including finishing the surfaces even & smooth as required at site, curing etc., complete all as specified and directed by Engineer in charge.	Sq.M	70		
19	Rendering 20mm thick in Cement Mortar 1:6 on masonry or concrete surfaces including finishing the surfaces even and smooth as required at site, curing etc., complete as specified and directed by Engineer in charge	Sq.M	50		
20	Removing the existing damaged FRP/AC roof sheets from the structural steel members, handing over the serviceable materials to BEML, stacking at a place shown including shifting and disposing the broken roof sheets as specified and directed by Engineer in charge	Sq.M	100		
21	Supplying and fixing 2mm thick FRP roof sheet of 1st quality conforming to relevant IS fixed with screws & washers to the existing steel members etc complete., all as specified and directed by the Engineer-in-charge	Sq.M	100		
22	Removing / cutting out the existing concrete/ RCC Slabs set in cement mortar / cement concrete flooring/ hard standing in any position by trimming surface/enlarging the joints and stacking of the slabs at a place shown & Refixing back in position the existing RCC slabs including setting/pointing in CM1:4, neatly finished to match with the adjoining drain slabs, set in line with the existing floor surface.hardstanding concrete etc., complete all as specified and as directed by Engineer in charge.	Cu.M	4		
23	Dismantling the existing MS structural steel lean to shed, MS doors, MS partitions etc and stacking at a place shown at site to re-use and re-fix the members once again to form a lean to shed etc., complete all as specified and directed by the Engineer in charge. Note: Re-fixing/re-erecting the structural steel members once again to form a lean to shed would be measured & paid separately under relevant item	Kgs	4000		

24	Fabricating, hoisting and erecting in position available MS Structural steel frame work to form a lean to shed with partitions using available ISMC channels, MS plates, MS angles, MS flats, purlins etc., including cutting, welding, bending to required shape bolting, cleaning the rust and scales to the satisfaction of Engineer in charge, shims & packing pieces will be required for levelling of the work, for erection at all elevations, levels & heights etc., complete all as specified and as directed by Engineer in charge. Note: The contractor's quoted rate is deemed to include for labour, welding machine, electrodes, gas & all consumables required for work etc.	Kgs	7500		
25	Preparing the existing old Painted steel surfaces and MS structural steel sections by scrapping, including providing necessary repairs to cracks, scratches and cleaning the surface from dust, dirt and applying two coats of synthetic enamel paint of approved colour manufactured by M/s.Asian Paints/Berger Paints etc., complete all as specified and as directed by Engineer in charge.	Sq.M	50		
26	Fabricating and fixing the available MS roof ridge sheet to the existing structural steel members etc complete using screws, bolts etc., complete all as specified and directed by the Engineer in charge.	RM	35		
27	Fixing available galvanised, corrugated mild steel sheeting fixed with screws, washers etc., all as specified and directed by the Engineer-in-charge	Sq.M	20		
	Note:				
	(1)The rate quoted for all the above items is deemed to include for providing and removal of scaffolding/staging as required for execution of the work under the relevant item				
	(2)Interested bidders/contractors are requested to visit the site and acquaint themselves with the site conditions before submission of their quote/offer for the work.				
	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