



Project - Climate Resilient two-class room Building

Location - For areas with Moderate or strong bearing capacity and small settlement soils

Client - UNICEF

| Nº | Description | Unit | Qty. | Unit price in USD | Amount in USD |
|-------------------------------------|--|----------------|--------|-------------------|---------------|
| A. Sub-Structure | | | | | |
| 1 | 1. Excavation & Earth Work | | | | |
| | Unless other wise stated, Rate shall include for | Note | | | |
| a | Back filling with selected excavated material & consolidating. Surface treatment; compaction before filling / foundation. | Note | | | |
| b | Disposal of surplus soil as directed & keeping all excavations free from water unless other wise measured separately. | Note | | | |
| c | Any additional excavation for working space. | Note | | | |
| d | Contractor will do the setting out according to the drawing and directions given by supervisor Engineer and get approval from UNICEF Engineer before close the earth work/excavation portions and Foundation activities. | Note | | | |
| 1.1 | Site preparation includes clearing, grubbing, excavating, and removal of all loose and organic soils (depth not exceeding 200mm), leveling, and compacting for the area of 17400mm x 104000mm. The price shall includes working space 1m wide for each sides etc. | m ² | 215.00 | | |
| 1.2 | Trenche excavation for foundation with width 600 mm wide around the perimeter of class rooms and 400mm wide around the Verandah depth not exceeding 600mm as per Engineer direction. | m ³ | 30.00 | | |
| 1.2 | Backfill around the strip masonry foundation and under ground floor slab with selected material (marram) with 96% compacted density and Engineer in-charge at each 200 m thick layer. | m ³ | 53.00 | | |
| 1.4 | Anti - termite treatment to fillings and tops of foundations as " Aldrex" or equal and approved insecticide treatment. Apply in accordance with the manufacturer's printed instructions and include for 10 years warranty period. | m ² | 145.00 | | - |
| Sub-total carried to summary | | | | | |
| 2. Concrete Work. | | | | | |
| a | Rate shall include for depositing, handling, hoisting into position, vibrating and making good after removal of formwork etc. | Note | | | |
| b | Concrete price shall includes all formwork required for the particular activity, reinforcement mentioend as per design for the specific activities, poring and curing for minimume 7-days unless other wise stated separately. | Note | | | |
| c | All the aggregate must be granite free from dust and wall graded. Sand with silt content should be less than 8% and pure from dust, organic mtaterials and impurities (measure by volume for mix-ratio with standard measuring box size of 50x40x20cm) and cement with compressive strength of 32.5 Mpa. | Note | | | |

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| d | Use Mild steel reinforcement for longitudinal and distribution bars to BS 4449 and characteristic strength $f_y = 460\text{N/mm}^2$ and to BS 4449 and characteristic strength $f_y = 250\text{N/mm}^2$ respectively and Dia 6mm pre fabricated 200x200mm squared BRC mesh (similar with A-142). | Note | | | |
| 2.1 | Lean concrete at the bottom of the foundation to the size of 100mm thick and 600 mm wide around the perimeter of class rooms and 400mm wide around the Verandah with ratio of 1:3:6 | m^3 | 5.00 | | |
| 2.2 | Column Footing: Nine number 400 x 400 x 700 mm footing foundation for column with 1:2:4 (20) concrete. | m^3 | 1.90 | | |
| 2.3 | Tie beam of: 200 x 200mm with 4 nos of 10 mm TS bar and 6 mm strups at 200 mm c/c. in C-20 Mpa grade concrete with mix ratio 1:2:4. | m | 75.00 | | |
| 2.4 | Lintel beam of : 150 mm x 200mm at 1.2 meter from foundation as shown in drawing with 4 nos of 10 mm TS bar and 6 mm strups at 200 mm c/c. with 1:2:4 (20) concrete. | m | 30.00 | | |
| 2.5 | Roof beam of 200mm cx 200mm at 1.2 meter in same sloep of truss as shown in drawing with 4 nos of 10 mm TS bar and 6 mm strups at 200 mm c/c. with 1:2:4 (20) concrete. | m | 25.00 | | |
| 2.6 | Ground floor slb: 100 mm thick floor concrete slab of C-20 Mpa grade with mix ratio 1:2:4 and one layer of 8 gauge polithine layer under the concrete. | m^3 | 15.00 | | |
| 2.7 | | | | | |
| | Sub-total carried to summary | | | | ===== |
| | 3.Massonary Work. | | | | |
| a | Rate shall include for loading,unloading,lifting, handling, weighting all rough and fair cutting, plumbing angles, normal straight cutting, forming rebated reveals and raking out joints for plastering. | Note | | | |
| b | All completed works must be cured with clear water 3 times per day at least for one week | Note | | | |
| 3.1 | Foundation Masonary(Classrooms): Construction of 400mm thick foundation wall with minimum height of 600mm as per the drawing with solid block with minimum compressive strength of 17.5 N/mm ² , in cement-sand mortar ratio of 1:4 joint not exceed 20mm to class room building | m^3 | 16.00 | | |
| 3.2 | Foundation Masonary(Verandah): Construction of 400mm thick foundation wall with minimum height of 600mm as per the drawing with solid block with minimum compressive strength of 17.5 N/mm ² , in cement-sand mortar ratio of 1:4 joint not exceed 20mm to class room building | m^3 | 5.50 | | |
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| | Sub-total carried to summary | | | | ===== |
| | B. Super-Structure | | | | |
| | 4. Super Structure | | | | |
| a | Rate shall include for lifting, handling, weighting all rough and fair cutting, plumbing angles, normal straight cutting, forming rebated reveals and raking out joints for plastering. | Note | | | |
| b | All completed works must be cured with clear water 3 times per day at least for one week | Note | | | |
| 4.1 | DPC: application of 2 coat of DPC for foundation | m^2 | 15.00 | | |

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| 4.2 | Wall Masonry (front and back side): Construction of 150mm thick super structure wall with minimum height of 1500mm for front side and 1800mm for rare side as per the drawing with solid block with minimum compressive strength of 17.5 N/mm ² , in cement-sand mortar ratio of 1:4 mortar | m ³ | 7.50 | | |
| 4.3 | Wall Masonry (three gable walls): Construction of 200mm thick super structure gable wall with minimum height of 3000mm at side and 3650 in center of the wall as per the drawing with solid block with minimum compressive strength of 17.5 N/mm ² , in cement-sand mortar ratio of 1:4 mortar. | m ³ | 14.00 | | |
| 4.4 | Masonry Step and Ram: Construction of steps and ram with 200 mm thick solid concrete block side wall cement-sand mortar ratio of 1:4 joint not exceed 20mm, selected material fill to 100mm below the level of the wall and then BRC A-142 mesh rough finish 100 mm thick concrete surface with 1:2:4 ratio as shown in the drawing and directed by Engineer. | m ³ | 2.50 | | |
| | Sub-total carried to summary | | | | - |
| | 5. Finishing | | | | |
| a | Rate shall include for providing and supplying of plastering, screening, paint, preparation of surface cleaning down, smoothing, knotting, stepping etc. protection of floors and fitting, removing and cleaning of doors etc. upon completion of painting work. | Note | | | |
| b | All colors and quality of paint should be approved by UNICEF before any action taken. | Note | | | |
| c | The rate shall include for pre-cleaning, preparing of the surface (chiseling all smooth surfaces to receive mortar), sand washing (sand with >8% silt content should wash before use), use of appropriate mix-ratio of 1:4 cement to sand and end polishing with all necessary finishing activities. | Note | | | |
| d | Follow curing at least minimum 7 days (3 times per day) | Note | | | |
| 5.1 | Painting: Apply one coat of primer or weathered shield and apply two coats of emulsion paint for internal wall and weather guard for external wall as instructed by UNICEF Engineer | m ² | 262.00 | | |
| | Ditto but for blackboard painting | m ² | 9.60 | | |
| 5.2 | Foundation Plastering: Apply 20mm thick plastering with 1:3 cement sand mortar to foundation | m ² | 36.00 | | |
| 5.3 | Super Structure 150 mm wall Plastering: Apply 20mm thick plastering with 1:3 cement sand mortar to foundation | m ² | 98.00 | | |
| 5.6 | Super Structure gable wall Plastering: Apply 20mm thick plastering with 1:3 cement sand mortar to external and internal wall. | m ² | 134.00 | | |
| 5.7 | Plastering for blackboard: Apply 20mm thick plastering with 1:3 cement sand mortar ratio to blackboard area of 4000x1200mm with chalk and duster holder as shown on the drawing/directed by Engineer and smooth finish with cement paste. | m ² | 9.60 | | |
| 5.8 | Rendering: Rendering with 1:3 cement sand mortar up to 20 mm thick with appropriate slope for water flow, inside the class room and make is smooth cement floor finishing. | m ² | 145.00 | | |
| 5.9 | Rendering for verandah, steps and slope entrance: Rendering with 1:3 cement sand mortar up to 20 mm thick with appropriate slope for water flow, inside the class room and make is smooth cement floor | m ² | 58.00 | | |
| | Sub-total carried to summary | | | | - |
| | 6. Metal work. | | | | |
| a | The work shall include supply, fabricate and installation of RHS/CHS metal posts and metallic doors made out of approved quality metal to be finish as per the respective specification & drawings. | Note | | | |

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| b | "Welding joint" is deemed to be in accordance with the specification and for the material to which it is to be used. Gusset plates, shoe plates, ends, caps, cleats, brackets, stiffeners, bolts, etc., have been included to the rate of the associated steel work. | Note | | | |
| c | The contractor shall refer to all relevant specifications and drawings prior to pricing and it shall be his responsibility to complete the said works to the entire satisfaction of the Engineer at no additional cost. | Note | | | |
| d | Cleaning and applying one coat oil-bas anti-rust paint before for all metal including welding | Note | | | |
| 6.1 | Column: Supply and fix 80 x 80 x 2 mm RHS welded at the bottom with 80x80x2mm RHS anchor to the concrete and erected up to the height of the roof and welded with roofing structured or binded with roofing structure. | m | 18.00 | | |
| | Ditto but 75mm dia CHS post Verendaha | m | 27.00 | | |
| 6.3 | RHS tie beam: Supply and weld 80 x 80 x 2 mm RHS top tie beam between each metal posts. | m | 46.00 | | |
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| 6.5 | Door: Supply, fabricate and fix double open door size of 1200 x 1200 mm, from 40 x 40 x 2 mm RHS outer and separate members with half bottom 1.2 mm metal sheet and half top galvanized wire mesh, stainless steel door hinge size of 70 x 50 x 1.2 mm and door lock with welded handle as shown on the door schedule. Price shall include all the | m | 2 | | |
| | Sub-total carried to summary | | | | = |
| | 7.Roof work | | | | |
| a | The rate shall include cutting, hoisting, fixing in position, welding and bolted with self-screw bolt and special shape washers for all complete works Engineer in-charge. | Note | | | |
| b | Before and After fabrication wire brushed to clean all RHS metal surfaces and paint with one coat of matt anti corrosive with necessary accessories. | Note | | | |
| c | All welds are 6mm thick fillet weld & allowance for rolling margin. | Note | | | |
| 7.1 | Truss: Supply and fix three number of steel roof as per the specification mentioned in the drawing with bottom chord of 40mm x 60 mm x 3 mm, 40mm x 60 mm x 3 mm top chord and 3 mm thick, internal vertical and parallel specn with 40mm x 60 mm x 3 mm top chord and slope span with 40mm x 20 mm x 3 mm top chord | Nos. | 4.00 | | |
| 7.2 | Purlin: supply and fix 40mm x 40mm x 2 mm purline as shown in the drawing connecting truss with welding and cable wall with anchor bolt or embedded steel | m | 245.00 | | |
| 7.3 | Rafter: additional 80mmx40mmx2mm RHS rafter from gable wall up to 1st purline, parallel to top chord of the steel roof truss | m | 10.00 | | |
| 7.4 | Roofing sheet: Supplying & fixing of Gauge-28 pre-painted Super V - IT4 and approved color with three (3) years manufacturer warranty roofing sheet on RHS purlins and rafter with dia.4.3mm x 100mm long fastener bolt with water tight washers and necessary fasteners and other fixing arrangements. the laps between roofing sheet should be minimum 30 cm. The edges of the roofing sheet should be sealed by appropriate material and conform no water leak. | m ² | 205.00 | | |
| 7.5 | Ridge covering: supply and fix ridge cover with same brand of roofing sheet with all necessary hooks, washer and nuts and water tight. The laps should be more than 30cm between roofing sheet and ridge cover | m | 17.00 | | |

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| | Sub-total carried to summary | | | | |
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