

Bill of quantity for the work Provisioning of well equipped cabins at all entry and exit points of mines with proper arrangement to fix RFID & Boom barrier at different location of Barka-Sayal Area.

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| 1 | (Civil works) Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil. | 109.8000 | cum | 188.45 | 20691.81 |
| 2 | Supplying and filling in plinth with Jamuna sand under floors, including watering, ramming, consolidating and dressing complete. | 19.8000 | cum | 1844 | 36511.20 |
| 3 | Providing and laying cement concrete of specified grade excluding the cost of centering and shuttering in all works up to plinth level : 1:4:8 (1cement : 4 fine sand : 8graded stone aggregates 40 mm nominal size). | 24.3600 | cum | 5167.75 | 125886.39 |
| 4 | Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 5.0 in foundation and plinth in: Cement mortar 1:6 (1 cement : 6 coarse sand) | 75.6000 | cum | 5322.15 | 402354.54 |
| 5 | Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement in all works up to plinth level : 1:1.5:3 (1cement : 1.5coarse sand : 3 graded stone aggregates 20 mm nominal size). | 15.6000 | cum | 7365.5 | 114901.80 |
| 6 | Centering and shuttering including strutting, propping etc. and removal of form for: Lintels, beams, plinth beams, girders, bressumers and cantilevers | 124.5600 | sqm | 470.7 | 58630.39 |
| 7 | Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars | 1245.3600 | Kg | 75.85 | 94460.56 |
| 8 | Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5m. | 101.5200 | cum | 114.4 | 11613.89 |

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| 9 | <p>Designing, providing, installing and fixing factory finished custom designed cold form Light Gauge Steel Framed super structure comprising of steel wall panel, trusses, purlins etc manufactured out of minimum 0.75 mm thick steel sheet as per design requirements. The steel sheet shall be galvanized (AZ-150gms Aluminium Zinc Alloy coated steel having minimum yield strength 300-550 Mpa) conforming to AISI specifications and IBC 2009 for cold formed steel framing and construction and also as per IS: 875-1987, ISO 800- 1984 and IS:801- 1975. The wind load shall be as per provisions of IS 875 (part -III). LGSFS frame shall be designed as per IS: 801 using commercially available software such as Frame CAD Pro-11.7/ STAAD PRO-V8i/ ArchitekV2.5.16/ Revit architecture-2011 or equivalent. Proper usage of Connection Accessories like Heavy Duty Tension Ties, Light Duty Hold-ons, Twist Straps (to connect truss with wall frames), Strong Tie, Tie Rod, H-Brackets, Boxing Sections, L-Shaped Angles for better structural stability. The framing section shall be cold form C-type having minimum web depth 89 mm x 39mm flange x 11mm lip in required length as per structural design requirement duly punched with dimple/slot at required locations as per approved drawings. The slots will be along centre line of webs and shall be spaced minimum 250mm away from both ends of the member. The frame can be supplied in panelized or knock down condition in specific dimensions and fastened with screws extending through the steel beyond by minimum of three exposed threads. All self drilling tapping screws for joining the members shall have a Type II coating in accordance with ASTM B633(13) or equivalent corrosion protection of gauge 10 & 12, TPI 16 & 8 of length 20mm. The frames shall be fixed to RCC slab or Tie beam over Neoprene rubber using self expanding carbon steel anchor bolt of dia as per approved drawings, design subject to minimum 12mm diameter and 121mm length conforming to AISI 304 and 316 at 500mm c/c with minimum embedment of 100mm in RCC (RCC to be paid separately) and located not more than 300mm from corners or termination of bottom tracks complete in all respects.</p> | 9497.4000 | kg | 199.1 | 1890932.34 |
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| 10 | <p>Providing and fixing of external wall system on Light gauge steel frame work with . Outer face having 6mm thick heavy duty fiber cement board fixed on 9mm thick heavy duty fiber cement board confirming to IS 14862:2000, category IV type A (High pressure steam cured) as per standard sizes fixed with self-drilling / taping screws / fasteners @ 60cm c/c of approved make. A groove of 2 mm to 3mm shall be maintained and grooves shall be sealed with silicon based sealant. The board shall be fixed in a staggered pattern.Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick of 8 to 10 gauge of length varying from 25 to 45 mm and internal face 12.5mm thick gypsum plaster board fixed on 8mm thick fiber cement board confirming to IS 14862:2000 of category III type B (High pressure steam cured) as per standard sizes fixed with self-drilling / taping screws / fasteners @ 60cm c/c of approved make, proper taping and jointing to be done using fiber mesh tape and epoxy and acrylic based jointing compound for seamless finish.(cost of frame work to be paid for separately).</p> | 1205.4393 | sqm | 2823.15 | 3403135.88 |
| 11 | <p>Providing and fixing internal wall panels on Light gauge steel frame work with 12.5mm thick gypsum plaster board conforming IS 2095:2011 fixed on 8mm thick fiber cement board conforming to IS 14862:2000 of category III type B (High pressure steam cured) as per standard sizes fixed with self-drilling / taping screws / fasteners @ 60cm c/c of approved make, Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick of 8 to 10 gauge of length varying from 25 to 45 mm. Proper taping and jointing to be done using fiber mesh tape and epoxy and acrylic based jointing compound for seamless finish.(cost of frame work to be paid for separately)</p> | 462.8400 | sqm | 1599.15 | 740150.59 |
| 12 | <p>Providing and fixing in position, 230mm thick factory made Expanded Polystyrene Core (EPS Core) roof/floor panels made of 3 mm dia G.I. wire mesh with 50 mm pitch in both the directions and on both faces of panel, kept at 120-135 mm gap and connected by the zig zag G.I. wire of 3 mm dia at alternate row by welding (at an angle ranging from 50-70 degree). The EPS core shall consist of 100 mm thick EPS of density not less than 20kg/ per cum. The bottom side of the panel shall be finished by applying a layer of 60-65 mm thick cement mortar 1: 3 {1 cement: 3 coarse sand (not having more than 40% stone chips of size upto 6 mm)} with the help of shotcreting equipment etc at a pressure of not less than 1 bar (100Kn/m2) and surface finished with trowel. The top face of the panel shall be provided and finished by applying 70-75 mm thick layer of cement concrete 1:1.5: 3 (1 cement :1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size). Fixing operations of roof/floor panels shall be completed in all respect as per drawings and specifications and under the overall direction of the Engineer-in-charge.</p> | 324.1200 | sqm | 3662.4 | 1187057.09 |

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| 13 | Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction and of approved size and design/ shape laid in required colour and pattern over and including 50mm thick compacted bed of course sand, filling the joints with coarse sand etc. all complete as per the direction of Engineer-in-charge. | 222.9600 | sqm | 752.85 | 167855.44 |
| 14 | Providing and laying gang saw cut 18 mm thick, mirror polished pre-moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1cement : 4 coarse sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge. With granite stone of area less than 0.50 sqm. | 179.6400 | sqm | 3466.35 | 622695.11 |
| 15 | Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 408 | 451.4400 | metre | 345 | 155746.80 |
| 16 | Providing and fixing at all height false ceiling including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm diax40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm diax230mm long G.I. wire at every junction including fixing the gypsum board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed all complete as per | 179.6400 | sqm | 1037.85 | 186439.37 |

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| | drawing and specification and direction of the Engineer in Charge but excluding the cost of painting with : 12.5 mm thick tapered edge gypsum moisture resistant board. | | | | |
| 17 | Providing and fixing anodized aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections / appropriate Z sections and other sections of approved make confirming to IS: 733 and IS: 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of the gaps at junctions, at top, bottom and sides with required PVC / neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angles, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws all complete as per architectural drawings and the direction of Engineer-in-charge. (Glazing and paneling to be paid for separately): For fixed portions: Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, minimum anodic coating of grade AC 15). | 537.8400 | kg | 367.1 | 197441.06 |
| 18 | Providing and fixing anodized aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections / appropriate Z sections and other sections of approved make confirming to IS: 733 and IS: 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of the gaps at junctions, at top, bottom and sides with required PVC / neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angles, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws all complete as per architectural drawings and the direction of Engineer-in-charge. (Glazing and paneling to be paid for separately): For shutters of doors, windows & ventilators including providing and fixing hinges / pivots and making provision for fixing of fittings wherever required including cost of PVC / Neoprene gasket required (fittings shall be paid for separately): Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, minimum anodic coating of grade AC 15). | 425.6400 | kg | 434 | 184727.76 |
| 19 | Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per architectural drawings and the direction of Engineer-in-charge (cost of aluminium snap beading shall be paid in basic item): With float glass panes of 5.50 mm thickness.. | 215.7600 | sqm | 1090.1 | 235199.98 |

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| 20 | Providing and fixing 12mm thick prelaminated three layer medium density (exterior grade) particle board Grade 1, Type II confirming to IS: 12823 bonded with phenol formaldehyde synthetic resin of approved brand and manufacture in paneling fixed in aluminium doors, windows shutters and partition frames with C.P. brass/ stainless screws etc. complete as per architectural drawings and the direction of Engineer-in-charge: Prelaminated particle board with decorative lamination on both sides. | 46.5600 | sqm | 789.7 | 36768.43 |
| 21 | Supplying and installation of delineators (road way indicators, hazard markers, object markers), 80-100 cm high above ground level, painted black and white in 15 cm wide strips, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and conforming to IRC-79 and the drawings. | 480.0000 | nos. | 821 | 394080.00 |
| 22 | Provision of 15 nos rumble strips covered with premix bituminous carpet, 15-20 mm high at center, 250 mm wide placed at 1 m center to center at approved locations to control speed, marked with white strips of road marking paint. | 324.0000 | metre | 2000 | 648000.00 |
| 23 | Providing and laying factory made coloured chamfered edge Cement Concrete paver blocks of required strength, thickness & size/shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of fine sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with jamuna sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand in footpath, parks, lawns, drive ways or light traffic parking etc. complete as per manufacturer's specifications & direction of Engineer-in-Charge. 60mm thick C.C. paver block of M-35 grade with approved colour, design & pattern. | 3000.0000 | sqm | 805.1 | 2415300.00 |
| 24 | (Electrification works) Wiring for light point/fan point/exhaust fan point call bell point with 1.5 sq. mm. FR PVC insulated copper conductor single core cable in surface/recessed PVC conduit with piano type switch, phenolic laminated sheet, suitable size M.S. box and earthing the point with 1.5 sq. mm. FR PVC insulated copper conductor single core cable etc. as required. | 72.00 | Mtr | 791 | 56952.00 |
| 25 | Wiring for circuit /sub main wiring along with earth wire with the following size of PVC insulated copper conductor, single core cable in surface/recessed PVC conduit as required: 2x2.5sq.mm. +1x2.sqr.mm.earth wire. | 420.00 | Nos | 227 | 95340.00 |
| 26 | Supply and fixing following piano type switch/ socket on the existing switch box /cover including connections etc. as required. 3 Pin 5/6 Amp switch | 84.00 | Nos | 41 | 3444.00 |
| 27 | Supply and fixing following piano type switch/ socket on the existing switch box /cover including connections etc. as | 84.00 | Each | 56 | 4704.00 |

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| | required. 3 Pin 5/6 Amp socket outlet | | | | |
| 28 | Supplying and fixing metal box of 180 mm x 100 mm x 60 mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing sheet cover in front including providing & fixing 6 pin 5/6 & 15/16 amps socket outlet & 15/16 amps piano type switch connection painting etc as required. | 24.00 | Each | 398 | 9552.00 |
| 29 | Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required. | 12.00 | Mtr | 1357 | 16284.00 |
| 30 | Wiring for circuit /sub main wiring along with earth wire with the following size of PVC insulated copper conductor, single core cable in surface/recessed PVC conduit as required: 2 x 4.0 sq.mm. +1x4.sqr.mm.earth wire. | 300.00 | Each | 279 | 83700.00 |
| 31 | Supplying and fixing 3 pin, 5 amps ceiling rose on the existing junction box/wooden block including connection etc as req. | 48.00 | Each | 69 | 3312.00 |
| 32 | Supplying and fixing brass batten/angle holder including connection etc. as required. | 36.00 | | 105 | 3780.00 |
| 33 | Supplying and fixing metal box of following sizes(nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required. 150 mm X 75 MM X 60 MM Deep | 60.00 | Each | 172 | 10320.00 |
| 34 | Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface /recess, complete with tinned copper bus bar, neutral bus bar earth bar, din bar, detachable Gland plate, interconnections, powder painted including earthing etc required. (But without MCB/RCCB/ Isolator) - 6 way, Double door | 12.00 | Each | 1878 | 22536.00 |
| 35 | Supplying and fixing 5 amps to 32 amps rating 240 volts, 'C' curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB, DB complete with conn ection, testing and commissioning etc. as req. single pole | 48.00 | Each | 215 | 10320.00 |
| 36 | Supplying and fixing 5 amps to 32 amps rating 240 volts, 'C' curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB, DB complete with connection, testing and commissioning etc. as required. single pole & Netural(32A) | 12.00 | Each | 515 | 6180.00 |
| 37 | Supplying and fixing following rating, two pole, 240 V, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required. 40 Amp | 12.00 | Each | 371 | 4452.00 |
| 38 | Installation of maintnance free chemical earthing 50 mm dia, 03 mtr long with Backfill compound chemical 4 Bag | 12.00 | Meter | 11250 | 135000.00 |

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| | (Per Bag 25 Kg) | | | | |
| 39 | Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required. | 180.00 | Mtr. | 55 | 9900.00 |
| 40 | Providing and Fixing Service Wire 6 Sq.mm 02 Core Copper | 480.00 | Each | 201 | 96480.00 |
| 41 | PROVIDING AND FIXING OF 1.5 TON, 5 STAR AIR CONDITIONER(INVERTER TYPE) | 12.00 | Each | 35029.18 | 420350.16 |
| 42 | PROVIDING AND FIXING OF 5 STAR BLDC FAN | 12.00 | Each | 2743.06 | 32916.72 |
| 43 | PROVIDING AND FIXING 20 W LED Tubelight | 24.00 | Each | 520.24 | 12485.76 |
| 44 | PROVIDING AND FIXING 12 W LED Bulb | 24.00 | Each | 453.5 | 10884.00 |
| 45 | (Furniture items) Supplying and fixing Executive Table (for detail specification please refer NIT) | 12.00 | each | 16016.95 | 192203.40 |
| 46 | Supplying and fixing Executive Chair (for detail specification please refer NIT) | 12.00 | each | 8218.644 | 98623.73 |
| 47 | Supplying and fixing Computer table (for detail specification please refer NIT) | 24.00 | each | 3388.983 | 81335.59 |
| 48 | Supplying and fixing Computer chair(for detail specification please refer NIT) | 24.00 | each | 1694.915 | 40677.96 |
| 49 | Supplying and fixing File Cabinet(for detail specification please refer NIT) | 12.00 | each | 5083.051 | 60996.61 |
| | | | | Total Rs. | 14853310.36 |
| | | | | GST @18% | 2673595.87 |
| | | | | Total cost incl. GST Rs. | 17526906.23 |