

**DEPARTMENT OF DISASTER MANAGEMENT**  
**Revised Estimate of Construction of Disaster Resilient Houses'**

| Sl. | Description of item  | No | Length(M) | Breadth(M) | Height(M) | Qty.  | Unit | Rate        | Amount          |
|-----|--|----|-----------|------------|-----------|-------|------|-------------|-----------------|
| 1   | Earthwork in excavation of foundation trenches, including layout, by excavating earth to the lines, grades and elevation as shown in the drawing providing center lines, local bench mark pillars, fixing bamboo spikes and marking layout with chalk powder filling baskets, carrying and disposing of all excavated materials at a safe distance designated by the E-I-C in all types of soils except rocky, gravelly, slushy or organic soil, leveling, ramming, dressing and preparing the base, etc. all complete for an initial excavation depth of 2m and an initial lead not exceeding 20m, including arranging all necessary tools and equipment at work site, etc. complete as per direction of the E-I-C. |    |           |            |           |       |      |             |                 |
|     | Main room  | 1  | 19.55     | 0.45       | 0.45      | 3.96  | Cum  |             |                 |
|     | Partition wall   | 1  | 3.00      | 0.45       | 0.45      | 0.61  | Cum  |             |                 |
|     | Verandha   | 2  | 2.70      | 0.45       | 0.45      | 1.09  | Cum  |             |                 |
|     |  | 1  | 1.20      | 0.45       | 0.45      | 0.24  | Cum  |             |                 |
|     | Kitchen With toilet  | 1  | 13.56     | 0.45       | 0.45      | 2.75  | Cum  |             |                 |
|     |  | 1  | 1.80      | 0.45       | 0.45      | 0.36  | Cum  |             |                 |
|     | Coridor  | 2  | 2.40      | 0.45       | 0.45      | 0.97  | Cum  |             |                 |
|     | Back filling   |    |           |            |           | 7.77  | Cum  |             |                 |
|     | Plinth area filling  | 1  | 6.10      | 3.00       | 0.30      | 5.49  | Cum  |             |                 |
|     | Coridor  | 1  | 2.40      | 2.10       | 0.30      | 1.51  | Cum  |             |                 |
|     | Kitchen With toilet  | 1  | 4.80      | 1.80       | 0.30      | 2.59  | Cum  |             |                 |
|     |  |    |           |            |           | 27.35 | Cum  |             | <b>126</b>      |
| 2   | Sand filling in foundation trenches and inside plinth with sand (minimum FM 0.80) in 150mm layers in/c leveling, watering and consolidating each layer up to finished level etc. all complete as per direction of the E-I-C. Dry density after compaction shall not be less than 95% of MDD (STD).   |    |           |            |           |       |      |             |                 |
|     | Plinth area filling  | 1  | 6.00      | 2.50       | 0.15      | 2.25  | Cum  |             |                 |
|     | Coridor  | 1  | 2.40      | 2.10       | 0.15      | 0.76  | Cum  |             |                 |
|     | Kitchen With toilet  | 1  | 4.10      | 1.40       | 0.15      | 0.86  | Cum  |             |                 |
|     |  |    |           |            | 3.87      | Cum   |      | <b>635</b>  | <b>2455.55</b>  |
| 3   | Single layer brick flat soling with 1st class or picked bricks, true to level, camber/super elevation and grade including carrying bricks, filling the interstices tightly with sand of minimum FM 0.80, etc. all complete as per direction of the E-I-C.  |    |           |            |           |       |      |             |                 |
|     | Plinth area filling  | 1  | 6.00      | 3.00       |           | 18.00 | Sqm  |             |                 |
|     | Coridor  | 1  | 2.40      | 2.10       |           | 5.04  | Sqm  |             |                 |
|     | Kitchen With toilet  | 1  | 4.10      | 1.50       |           | 6.15  | Sqm  |             |                 |
|     |  |    |           |            | 29.19     | Sqm   |      | <b>420</b>  | <b>12259.80</b> |
| 4   | Cement concrete work (1:3:6) in foundation.  |    |           |            |           |       |      |             |                 |
|     |  | 1  | 19.55     | 0.38       | 0.075     | 0.56  | Cum  |             |                 |
|     |  | 1  | 3.00      | 0.38       | 0.075     | 0.09  | Cum  |             |                 |
|     |  | 2  | 2.70      | 0.38       | 0.075     | 0.15  | Cum  |             |                 |
|     |  | 1  | 1.20      | 0.38       | 0.075     | 0.03  | Cum  |             |                 |
|     |  |    |           |            | 0.83      | Cum   |      | <b>6647</b> | <b>5522.16</b>  |
| 5   | Brick work with 1st class bricks in cement mortar (1:6) in foundation and plinth with Portland Composite cement (CEM II/AM, 42.5N) and best quality sand (minimum FM1.2), filling the interstices tightly with mortar, raking out joints, cleaning and soaking bricks at least for 24 hours before use, washing of sand, curing for requisite period, etc. all complete as per direction of the E-I-C.   |    |           |            |           |       |      |             |                 |
|     | Main room  | 1  | 19.55     | 0.38       | 0.150     | 1.11  | Cum  |             |                 |
|     | Partition wall   | 1  | 3.00      | 0.38       | 0.150     | 0.17  | Cum  |             |                 |
|     | Verandha   | 2  | 2.70      | 0.38       | 0.150     | 0.31  | Cum  |             |                 |
|     |  | 1  | 1.20      | 0.38       | 0.150     | 0.07  | Cum  |             |                 |
|     | Kitchen With toilet  | 1  | 13.56     | 0.38       | 0.150     | 0.77  | Cum  |             |                 |
|     |  | 1  | 1.80      | 0.38       | 0.150     | 0.10  | Cum  |             |                 |
|     | Coridor  | 2  | 2.40      | 0.38       | 0.150     | 0.27  | Cum  |             |                 |
|     | Main room  | 1  | 19.55     | 0.25       | 0.750     | 3.67  | Cum  |             |                 |
|     | Partition wall   | 1  | 3.00      | 0.25       | 0.750     | 0.56  | Cum  |             |                 |
|     | Verandha   | 2  | 2.70      | 0.25       | 0.750     | 1.01  | Cum  |             |                 |
|     |  | 1  | 1.20      | 0.25       | 0.750     | 0.23  | Cum  |             |                 |
|     | Kitchen With toilet  | 1  | 13.56     | 0.25       | 0.750     | 2.54  | Cum  |             |                 |
|     |  | 1  | 1.80      | 0.25       | 0.750     | 0.34  | Cum  |             |                 |
|     | Coridor  | 2  | 2.40      | 0.25       | 0.750     | 0.90  | Cum  |             |                 |
|     | 10"x10" brick pillar   | 14 | 0.25      | 0.25       | 2.700     | 2.36  | Cum  |             |                 |
|     | Stair  | 3  | 3.00      | 0.25       | 0.225     | 0.51  | Cum  |             |                 |
|     |  |    |           |            | 14.925    | cum   |      | <b>6443</b> | <b>96162.06</b> |

|    |  |                           |        |               |                 |          |
|----|--|---------------------------|--------|---------------|-----------------|----------|
| 6  | 125mm brick work with 1st class bricks in cement mortar (1:4) with Portland Composite cement (CEM II/AM, 42.5N) and best quality sand (minimum FM1.2) and making bond with connected walls with uniform width and depth joints, true to vertical and horizontal lines in/c necessary scaffolding, raking out joints, cleaning and soaking the bricks at least for 24 hours before use, washing of sand, curing for requisite period, etc. all complete as per direction of the E-I-C.  |                           |        |               |                 |          |
|    | Add for each additional floor up to 5th floor  |                           |        |               |                 |          |
|    | Main room  | 1 × 18.20 × 2.70          | 49.140 | Sqm           |                 |          |
|    | Partition wall   | 1 × 2.50 × 2.70           | 6.750  | Sqm           |                 |          |
|    | Toilet   | 1 × 7.32 × 2.40           | 17.568 | Sqm           |                 |          |
|    | Kitchen  | 1 × 6.70 × 1.20           | 8.040  | Sqm           |                 |          |
|    | D1   | 4 × 0.90 × 1.80           | -6.480 | Sqm           |                 |          |
|    | D2   | 1 × 0.75 × 1.80           | -1.350 | Sqm           |                 |          |
|    | D3   | 1 × 0.75 × 1.20           | -0.900 | Sqm           |                 |          |
|    | W1   | 4 × 0.90 × 1.06           | -3.816 | Sqm           |                 |          |
|    |  | 68.952                    | Sqm    | <b>948.00</b> | 65366.50        |          |
| 7  | RCC:1:2:4, 17MPa, Brick Chips (BC): Reinforced cement concrete works with minimum cement content relates to mix ratio (tentative 1:2:4) and maximum water cement ratio 0.45 having minimum required average strength, $f'_{cr} = 24$ Mpa and satisfied a specified compressive strength $f'_{c} = 17$ Mpa at 28 days on standard cylinders as per standard practice of Code AASHTO/ ASTM and Portland Composite Cement conforming to BDS EN 197-1 : 2003 CEM-II 42.5N sand of minimum FM 1.8 and 20mm down well graded picked brick chips (LAA value not exceeding 38) conforming to ASTM C 33 and Aggregate Grading Appendix-3 LGED Schedule of Rates in/c breaking chips and screening through proper sieves, centering, shuttering in position, making shuttering fully leak proof & shuttering with plain 16 BWG steel sheet fitted over 38mm thick wooden plank panels and Standard size Bamboo Props suitably braced, placing of reinforcement in position, mixing the aggregates with standard mixer machine with hopper, fed by standard measuring boxes, maintaining allowable slump of 50mm (without plasticizer) & 75mm to 100mm (when plasticizer use), pouring, casting, compacting by mechanical vibrator machine and curing at least for 28 days, removing centering-shuttering after approved specified time period, i/c cost of additional testing charges of materials and cylinders required. Excluding the cost of reinforcement and its fabrication, welding, coupling, placing, binding etc. Additional quantity of cement and Plasticizer i.e. Water reducing chemical admixture of complying type A under ASTM C 494 to reduce mixing water required for normal workability and to maintain low water-cement (W/C) ratio (Doses of admixture to be fixed by the mix design as per instruction of Engineer) to be added if required to attain the strength at the contractor's own cost. etc. all complete as per direction and approval of the Engineer. |                           |        |               |                 |          |
|    | Main room  | 1 × 19.55 × 0.125 × 0.125 | 0.31   | Cum           |                 |          |
|    | Partition wall   | 1 × 3.00 × 0.125 × 0.125  | 0.05   | Cum           |                 |          |
|    | D2   | 2 × 1.00 × 0.125 × 0.125  | 0.03   | Cum           |                 |          |
|    |  |                           | 0.384  | Cum           | <b>11903.00</b> | 4565.92  |
| 8  | Supplying and fabrication of M.S High strength Ribbed or deformed bar reinforcement conforming to BDS ISO 6935-2:2006 (or standard subsequently released from BSTI) of required size and length for all types of RCC work in/c straightening removing rusts, cleaning, cutting, hooking, bending, binding or tying with supply of 22 B.W.G. annealed binding wire double fold, placing in position in/c lapping, or welding wherever required as directed, anchoring to the adjoining members wherever necessary, spacing and securing them in position by proper size concrete cover blocks (1:1) supports, metal chairs, spacers, splices or laps etc. complete in/c cost of all materials, labour, local handling, cost includes necessary equipment and machinery, loading and unloading, transportation, all other necessary incidental charges including all leads and lifts etc. to complete the work as per specifications, design, drawings and direction of the E-I-C. (Undersize reinforcement will not be accepted under any circumstance. Measurement will be made based as length of bar on standard weight i.e. 77KN/m <sup>3</sup> (BNBC Table 6.2.1) basis. Chairs, laps, Splice and separators will not be measures for payment. The cost of these remains inclusive in the unit rate).  |                           |        |               |                 |          |
|    | RB 400/400W: Ribbed bar or Deformed bar Produced and marked as BDS ISO 6935-2:2006 with minimum yield strength, $f_y(ReH)=400$ MPa, but the actual yield strength based on mill tests dose not exceed $f_y$ by more than the 125 MPa and the ratio of actual ultimate strength, $f_u(Re)$ to actual tensile yield strength ( $f_y$ ) shall be at least 1.25 and minimum total elongation after fracture (A565) & minimum total elongation and maximum force (Agt) is 16% and 2.5% respectively.  |                           | 120.00 | kg            | <b>82.54</b>    | 9904.80  |
| 9  | MS Door shutter with door frame  |                           |        |               |                 |          |
|    | Door-D1  | 3 × 0.75 × 1.80           | 4.050  | Sqm           |                 |          |
|    |  |                           | 4.05   | Sqm           | <b>5870.00</b>  | 23773.50 |
| 10 | MS Window shutter with frame and grill   |                           |        |               |                 |          |
|    | Window   | 4 × 0.90 × 1.06           | 3.816  | Sqm           |                 |          |
|    |  |                           | 3.82   | Sqm           | <b>3282.00</b>  | 12524.11 |
| 11 | Upvc door shutter with frame   |                           |        |               |                 |          |
|    |  | 2 × 0.75 × 1.80           | 2.700  | Sqm           |                 |          |
|    |  |                           | 2.70   | Sqm           | <b>3650.00</b>  | 9855.00  |

|    |   |                            |         |                 |                |          |          |
|----|---|----------------------------|---------|-----------------|----------------|----------|----------|
| 12 | Minimum 12 mm thick Plaster (1:4) with net cement finishing work. Plinth area.  |                            |         |                 |                |          |          |
|    | Main room   | 1 × ##### × 0.60           | 10.97   | Sqm             |                |          |          |
|    | Coridor   | 2 × 3.600 × 0.60           | 4.32    | Sqm             |                |          |          |
|    | Kitchen and toilet  | 1 × ##### × 0.60           | 7.20    | Sqm             |                |          |          |
|    |   |                            | 22.49   | Sqm             | <b>243.00</b>  |          | 5464.58  |
| 13 | Minimum 12mm thick cement plaster (1:6) with Portland Composite cement (CEM II/AM, 42.5N) and best quality sand (minimum FM1.2) to wall both inner and outer surface, finishing the corner and edges in/c washing of sand cleaning the surface, scaffolding and curing for the requisite period etc. all complete as per direction of the E-I-C.  |                            |         |                 |                |          |          |
|    | Qty same as brick work x2   | 2 × 68.95 × 1.00           | 137.904 | Sqm             |                |          |          |
|    |   |                            | 137.90  | sqm             | <b>222.00</b>  |          | 30614.69 |
| 14 | 25 mm thick patent stone floor (1:2:4)  |                            |         |                 |                |          |          |
|    | Main room   | 1 × 6.50 × 3.25            | 21.125  | Sqm             |                |          |          |
|    | Coridor   | 1 × 3.60 × 1.80            | 6.480   | Sqm             |                |          |          |
|    | Kitchen and toilet  | 1 × 4.50 × 1.80            | 8.100   | Sqm             |                |          |          |
|    |   |                            | 35.71   | Sqm             | <b>450.00</b>  |          | 16067.25 |
| 15 | White washing three coats over a coat of priming with slacked stone lime mixed with gums, blue. Lime mix prepared at least 12 hours before use, in/c removing the floating materials from the mixture, surface cleaning to free all foreign materials before application of each coat. Applying one vertical and one horizontal wash for each coat and successive coat is to be applied after drying up of previous coat i/c cost of hair brush, providing necessary scaffolding and necessary cleaning the plinth, floors, doors, windows, partions and ventilators by washing, rubbing as if necessary before and after the wash, polishing the surface with sand paper etc. all complete for all floors i/c cost of all materials as per direction of the E-I-C. |                            |         |                 |                |          |          |
|    | Same as Qtn of plaster  |                            | 137.904 | Sqm             |                |          |          |
|    |   |                            | 137.90  | sqm             | <b>25.00</b>   |          | 3447.60  |
| 16 | Supplying, fitting and fixing Bangladesh pattern "BISF STANDARD" Long Oriental Pan (Model-320, size 540mmx 425mmx 270mm, Bowl size-390mmx 210mm x 190mm or equivalent) with foot rest of vitreous China and preparing the base of pan with cement concrete (1:2:4) and with wire net or rods including making holes wherever required and mending good the damages, etc. all complete as per direction of the E-I-C.  |                            |         |                 |                |          |          |
|    | White [BISF STANDARD]   |                            |         |                 |                |          |          |
|    |   |                            | 1.00    | each            | <b>1313.08</b> |          | 1313.08  |
| 17 | Supplying, fitting, fixing and laying 150mm/200mm dia PVC "B" class pipe water grade (LIRA / AZIZ / NATIONAL POLYMER BRAND or equivalent) best quality sewerage pipe including necessary fittings and joints with high class solution and at the base and sides filling with best quality local sand all around the pipe (not less than 25mm) upto the required depth etc. complete as per type, plan and direction of the E-I-C.   |                            |         |                 |                |          |          |
|    | 150mm dia PVC "B" class Pipe and minimum wall thickness 4.5mm   |                            |         |                 |                |          |          |
|    |   |                            | 8.00    | m               | <b>541.00</b>  |          | 4328.00  |
|    |   |                            |         |                 |                |          |          |
| 18 | Supplying and making well matured natural seasoned solid wood works in frames of roof truss of required length and size with wall plates as per design in/c supplying, fabricating, hoisting, scaffolding, fitting and fixing in position with bolts and nuts f all complete as per direction of the E-I-C.   |                            |         |                 |                |          |          |
|    | Wooden work   |                            |         |                 |                |          |          |
|    | Tie beam  | 2 × 0.100 × 0.075 × 3.300  | 0.050   | Cum             |                |          |          |
|    | Wall plate (long)   | 2 × 0.075 × 0.075 × 6.600  | 0.074   | Cum             |                |          |          |
|    | Wall plate (short)  | 3 × 0.075 × 0.075 × 3.300  | 0.056   | Cum             |                |          |          |
|    | Passage   | 2 × 0.100 × 0.075 × 1.500  | 0.023   | Cum             |                |          |          |
|    | Ver   | 2 × 0.100 × 0.075 × 2.400  | 0.036   | Cum             |                |          |          |
|    | Rafter main room  | 18 × 0.050 × 0.050 × 2.400 | 0.108   | Cum             |                |          |          |
|    | Rafter ver  | 2 × 0.050 × 0.050 × 2.400  | 0.012   | Cum             |                |          |          |
|    | Kitchen-wall plate  | 2 × 0.075 × 0.075 × 4.000  | 0.045   | Cum             |                |          |          |
|    |   | 2 × 0.050 × 0.075 × 1.800  | 0.014   | Cum             |                |          |          |
|    | Pssage  | 3 × 0.100 × 0.075 × 1.500  | 0.034   | Cum             |                |          |          |
|    | Rafter kitchen  | 5 × 0.050 × 0.050 × 1.800  | 0.023   | Cum             |                |          |          |
|    | Purlin  | 5 × 0.025 × 0.038 × 6.000  | 0.029   | Cum             |                |          |          |
|    |   | 6 × 0.025 × 0.038 × 3.000  | 0.017   | Cum             |                |          |          |
|    | Kitchen   | 4 × 0.025 × 0.038 × 1.000  | 0.004   | Cum             |                |          |          |
|    |   | 5 × 0.025 × 0.038 × 2.400  | 0.011   | Cum             |                |          |          |
|    |   | 0.533                      | Cum     | <b>60000.00</b> |                | 32009.25 |          |
| 19 | Supplying, fitting and fixing 0.46mm thick galvanized iron corrugated sheet (Bangladesh made) roofing fitted and fixed on MS sections with 'J' hook or wooden purlins with screws, limpet washers and putty etc. all complete as per direction of the E-I-C.  |                            |         |                 |                |          |          |
|    | 26 BWG sheet- Main room   | 2 × 7.00 × 2.40 × 1.000    | 33.600  | sqm             |                |          |          |
|    |   | 2 × 3.00 × 0.65 × 1.000    | 3.900   | sqm             |                |          |          |
|    |   | 1 × 5.00 × 2.70 × 1.000    | 13.500  | sqm             |                |          |          |
|    | Passage   | 1 × 1.50 × 2.10 × 1.000    | 3.150   | sqm             |                |          |          |
|    | Ver   | 1 × 3.00 × 2.40 × 1.000    | 7.200   | sqm             |                |          |          |

|    |  |        |     |   |                   |
|----|--|--------|-----|---|-------------------|
|    |  | 61.350 | sqm | <b>772.83</b>                             | 47413.12          |
| 20 | Galvanized ridging   | 15.00  | m   | <b>300.82</b>                             | 4512.30           |
| 21 | 3'-0" R.C.C ring For latrine   | 12.00  | Nos | <b>400.00</b>                             | 4800.00           |
| 21 | Painting to door and window frames, shutters and any type of MS rod, FI bar, MS box, MS angle grill, gate etc. in two coats with synthetic enamel paint of best quality and approved colour over a coat of priming. Applying one vertical and one horizontal coat. |        |     |   |                   |
|    | Qty same as shutterx2  | 8.10   | sqm | <b>124.46</b>                             | 1008.13           |
| 22 | Contingency  |        | LS  |   | 3000.00           |
|    |  |        |     | Total Amount Tk.=                         | <b>399813.40</b>  |
|    |  |        |     | Deduction for vat IT & Contractor profit= | <b>99953.35</b>   |
|    |  |        |     | <b>Net Amount=</b>                        | <b>299,860.05</b> |