

Bill of Quantities and Engineer's Estimate for implementation of 4700 Houses under IHP Phase IV (Stage-2)

INDIAN HOUSING PROJECT IN PLANTATION AREAS

Engineering estimate for Construction of a Typical House for Plantation Community

Type Plan I		Floor area 550 sq.ft.			
Item No.	Description	Unit	Qty	Rate Rs.	Amount Rs.
1 Preliminary work					
1.1	Site clearing and levelling				Estimate correction
1.2	Provide internal roads.				
Sub Total 1					0
2 Foundation work					
2.1	Plot levelling and foundation Excavation - In normal earth up to depth of 3' inclusive of back filling, overhauling and disposal of surplus earth.	Cube	2.69	6,050.00	22,325.00
2.2	Rubble Masonry - 6"x9" rubble masonry in foundations up to DPC with 1:6 cement mortar.	Cube	4.88	25,585.00	271,254.80
2.3	Earth filling - Filling earth and compacting with selected earth in 6" layers under floors, (as approved by Engineer) Rate includes for transport	Cube	2.19	9,537.00	20,853.00
2.4	Concrete corner columns - 8"x8" columns in 1:2:4 (20mm) concrete, reinforced with 10mm tor steel 4 nos. with 5mm stirrups at 6" spacing, including 2x2'x6" concrete column base and over gauge 1000 PCC layer, reinforced with 10mm tor steel at 6" spacing, both ways @ bottom and formwork up to roof level (5'7" high)	Nos	4	15,000.00	90,000.00
2.5	Plinth Beam - 8"x9" beam at plinth level in 1:2:4 (20mm) concrete laid on foundation rubble work in external and internal wall foundations, reinforced with 2 nos of 10mm bars at both bottom and top and with 6mm stirrups at 6" C/C.	Ltr	85	1,110.00	92,130.00
2.6	DPC - 20mm thick damp proof course in 1:2 cement and sand trowled smooth and applied with two coats of bitum, blanded with sand only on internal wall foundations.	Sqrs	0.50	24,582.00	12,291.00
Sub total 2					473,858.83
3 Walls and Slabs and Floor					
3.1	External walls - 4" Solid Cement block masonry in walls in 1:6 cement mortar.	Sqrs	7.82	22,918.00	179,218.76
3.2	Internal walls - 4" Solid Cement block masonry in walls in 1:6 cement mortar.	Sqrs	4.41	22,918.00	101,058.28
3.3	Ring Beam at Untel level 4"x4" ring beam at Untel level in 1:2:4 (20mm) concrete, reinforced with 2 nos 10mm tor steel bars placed at top and bottom with 6mm mild steel bar at 6" c/c.	Ltr	133.8	350.00	43,168.00
3.4	Front Column - Pre cast decorative concrete column to support roof in the verandah (approximately 5' clear height)	Nos	2	15,000.00	30,000.00
3.5	Slabs - 4" thick in 1:3:4 (1 1/2") concrete (filler slabs) for chimney roof and hearth including formwork. Filler material to be burnt clay bricks or other material approved by Engineer.	Sqrs	0.24	75,900.00	18,360.00
3.6	Pantry table - 4' 6" width, 2' Thick & 5' length in Fair cement concrete chassed in a black ware on three sides including 1:3 cement rendering	Item	1	15,000.00	15,000.00
3.7	Floor concrete - Laying 1000 gauge polythene with 5' side and end face under concrete layer and paving 3" thick (1:2 1/2 : 3 (1 1/2)) concrete floor (trowel finished surface)	Sqrs	4.71	24,000.00	113,040.00
Sub total 3					504,855.34

		Type Plan I	Floor area 550 sq.ft.			
Item No.	Description	Unit	Qty	Rate Rs.	Amount Rs.	
4	Doors & Windows					
4.1	Door Type D1 - Supplying and fixing 3'-0" x 7'-0" timber door frame (2"x4") & sash & bottom sash 1 1/4" thick (both in class I timber) including iron furniture & mortise lock and including applying two coats of approved quality enamel paint to new wood work after preparing surface as directed.	Nos	1	50,000.00	50,000.00	
4.2	Door Type D2 - Supplying and fixing 2'-0" x 7'-0" timber door frame (2"x4") & ledge & bottom sash 1 1/4" thick (both in class I timber), including iron furniture & lock, for floor door and including applying two coats of approved quality enamel paint to new wood work after preparing.	Nos	2	45,000.00	90,000.00	
4.3	Door Type D3 - Toilet door - Supplying and fixing 2'-0" x 6'-0" timber edge & lath door sash (both in class I timber) fixed directly to the wall with side plugs and iron screws, including 2 iron hinges and lock set and including applying two coats of approved quality enamel paint to new wood work after preparing.	Nos	1	22,000.00	22,000.00	
4.4	Window Type W1 - Supplying and fixing 5'-0" x 4'-0" (2"x4") timber window frame & 1" thick sashes both in class I timber including 3mm thick glass panes and iron furniture. Including applying two coats of approved quality enamel paint to new wood work after preparing surface as directed. Rate to including fixing 12mm. dia. iron bars as detailed for safety and painted with two coats of anti-corrosive paint after preparation of surface.	Nos	1	75,000.00	75,000.00	
4.5	Window Type W2 - Supplying and fixing 4'-0" x 4'-0" (2"x4") timber window frame & 1" thick sashes both in class I timber including 3mm thick glass panes with iron furniture and including applying two coats of approved quality enamel paint to new wood work after preparing surface as directed. Rate to including fixing 12mm. dia. iron bars as detailed for safety and painted with two coats of anti-corrosive paint after preparation of surface.	Nos	2	60,000.00	120,000.00	
4.5	Window Type W3 - Supplying and fixing 3'-0" x 4'-0" (2"x4") timber window frame & 1" thick sashes both in class I timber including 3mm thick glass panes with iron furniture and including applying two coats of approved quality enamel paint to new wood work after preparing surface as directed. Rate to including fixing 12mm. dia. iron bars for safety and painted with two coats of anti-corrosive paint after preparation of surface.	Nos	1	20,000.00	20,000.00	
4.6a	Window Type W4 - Supplying and fixing 3'-6" x 3'-6" (2"x4") timber window frame & 1" thick sashes both in class I timber including 3mm thick glass panes with iron furniture and including applying two coats of approved quality enamel paint to new wood work after preparing surface as directed.	Nos	1	12,000.00	12,000.00	
Sub total 4					389,000.00	
5	Roof work					
5.1	Roof Covering & Ridge - Supplying and installing 0.47mm thick Zinc Aluminum metal roof capping on 100x50x2mm galvanized lip panel frame work with all accessories including flashing for the eave and fasteners for fix valance board.	Sqft	825.88	675.00	558,144.00	
5.2	Valance Board - Valance boards in Untreated timber beaded 222mm x 20mm thick, supplying and fixing, including one coat of primer and two coats of chrome paint.	Lft	54.3	375.00	20,437.50	
5.3	Gutters - Supplying & fixing Gutters (colour Zr/A) (The nominal base metal thickness (BMT) should be 0.42 mm and total coated thickness (TC) not less than 0.47 mm. 457mm girth with brackets not exceeding 3.5mtrs. Rate includes for social. The coating mass of the Zr/A sheet is A2150/Maximum 100gms/sq m total on both sides)	Lft	54.3	585.00	53,573.50	

Type Plan I				Floor area 560 sq.ft.	
Item No	Description	Unit	Qty	Rate Rs.	Amount Rs.
5.4	Down pipe - Supplying & fixing down pipes colour Zn/Al 200mm x 100mm (The nominal base metal thickness(AMT) should be 0.42 mm and total coated thickness(TCT) not less than 0.47 mm) with brackets not exceeding 1.2m c/w of the pipe, rate includes for scaffolds. The coating mass of the Zn/Al sheet is 42100(gram) i.e. 130gms/sq.m total on both sides)	Lft	45	1,105.00	49,555.00
Sub Total 5					679,713.00
6 Plastering & Finishing					
6.1	Laying 4" wide and 1/2" deep (plaster bands) with 12mm (1/2") 1:1:2 lime cement mortar along the reveals of doors/windows and ring beams on external surfaces.	Lft	174	90.00	15,660.00
6.2	Internal plastering - in 12 mm thick 1:1:5 with cement lime mortar and finish with lime putty to walls and roves up to wall plate level.	Sqrs	16.66	12,401.00	206,846.66
6.3	Plinth plaster - rendering with 1:2 cement mixer & finish with cement putty (1/2") thick around the house.	Sqrs	1.20	13,892.00	17,896.47
6.4	Plastering & finishing external wall -Plastering 1:1:5 semi rough & point with tow coat of water proof (Weather shield) after preparing surface.	Sqrs	7.93	22,000.00	174,650.00
6.5	Finishing internal wall - Emulsion paint after preparing surface.	Sqrs	15.88	2,875.00	47,421.24
Sub Total 6					464,176.39
7 Water supply and electrical internal installations					
7.1	Supply and installed 500 liter PVC water tank.	Nos	1	13,338.00	13,338.00
7.2	20mm diameter type 1000 uPvc pipes & fittings.	Lft	65	105.00	6,825.00
7.3	50mm diameter type 400 uPvc pipes & fittings for waste water line from tank.	Lft	12	400.00	4,900.00
7.4	20mm diameter pipe valve & fittings (w/c).	Nos	1	575.00	575.00
7.5	50mm diameter plastic Bin Top & fittings for wash basin, toilet and out side of house.	Nos	5	700.00	3,500.00
7.6	Supplying and laying 50mm (1 1/2") Type 800 uPvc pipes with all specials.	Lft	6	301.00	3,006.00
7.7	Supplying and fixing 6 way Single Phase Distribution Board including 32 A 2P solar, 436 (6) R.C.D. (30mA), 104 Nos single pole M.C.B.s.	Item	1	25,954.00	25,954.00
7.8	6A socket outlet - wiring to be carried out with 2 x 2.5mm ² PVC insulated PVC sheathed copper cables and 2.5mm ² earth cable wire in concealed conduit in wall and above ceiling to be supplied and installed in a working order rate to include all necessary fittings.	Nos	4	7,539.00	30,156.00
7.9	Pendant type lamp point wiring - to be carried out with 2 x 1.0 mm ² PVC insulated PVC sheathed copper cables wired in concealed conduit in wall and above ceiling to be supplied and installed in a working order including main switch and 15W CFL (a/b) for room 1/2 and toilet.	Nos	5	4,057.00	20,285.00
7.10	2 Nos. of Pendant type lamp points to be controlled by one switch - 60W CFL wirings to be carried out with 2 x 1.0 mm ² PVC insulated PVC sheathed copper cables wire in concealed conduit in wall and above ceiling, to be supplied and installed in a working order.	Nos	2	5,611.00	11,222.00
7.11	50mm x 50mm x 2mm angle iron bracket complete with insulators, C brackets and wooden meter box with glass panel.	Item	1	4,655.00	4,655.00
7.12	50mm diameter medium gauge GI earth pipe minimum 1800 mm long connected to system.	Item	1	2,616.00	2,616.00
Sub total 7					116,722.00
8 Total					

Item No.	Type Plan Description	Unit	Qty	Floor area 850 sq.ft.	
				Rate Rs.	Amount Rs.
8.1	Type 400 pvc 110mm for sewer line supplied and laid in excavated trench, backfilled (joints embedded in 1:3:6:40mm) concrete including necessary excavation, back filling, and compaction, insert depth up to 500mm.	L.F.	10	599.00	5,990.00
8.2	Approved squatting pan with trap supplied and fixed to working order including connection to sewer line.	Nos	1	16,493.00	16,493.00
8.3	Construction of toilet Double pit including glass and rubble work.	Sqm	1	64,000.00	64,000.00
Sub total 8					86,483.00
Total including beneficiary contribution					3,710,802.36
Beneficiary contribution					20,000.00
Total excluding beneficiary contribution					2,699,802.36