



**PUBLIC WORKS DEPARTMENT
BUILDING ORGANISATION**

OFFICE OF THE CHIEF ENGINEER (BUILDINGS), CHEPAUK, CHENNAI - 600 005

CIRCULAR MEMORANDUM NO. HDO (A) / 48518 / 2003, dated 30.11.2005

Sub: Buildings - Plinth Area Rates for the preparation of Rough Cost Estimate for building schemes during the year 2005-2006 - approved and communicated for adoption - Regarding.



The Plinth Area Rates for the purpose of preparation of Rough Cost Estimate for building schemes for the year 2005-2006 are approved as indicated in Annexure I, II, III, IV & V. The Superintending Engineers and Executive Engineers of Building Organisation are requested to adopt the above rates with effect from 01.11.2005 for preparing the rough cost estimate for building works.

The Superintending Engineers are requested to acknowledge the receipt of this circular memorandum along with its enclosures.

Encl.: Annexures-I, II, III, IV & V.

A. Radha Bai
for Chief Engineer (Buildings)

To
The Superintending Engineers of Buildings Organisation 30/11/05

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ANNEXURE - I

PLINTH AREA RATES FOR THE YEAR 2005-2006 FOR THE PREPARATION OF ROUGH COST ESTIMATE

Sl. No.	Type of Building	For works in Moffusil (other than corporation limits)			For works in Corporation Limits					
		Foundation	Super Structure	Roof Finishing	In Trichy, Salem, Madurai, and Tirunelveli			In Chennai & Coimbatore		
					Foundation	Super Structure	Roof Finishing	Foundation	Super Structure	Roof Finishing
1.	Residential Load Bearing	1435	3250	495	(Rate in Rupees per 1 sq.m.)					
	Framed	1655	4410	495	1505	3415	520	1580	3495	530
2.	Non-Residential Load Bearing	1105	2755	495	1740	4630	520	1820	4740	530
	Framed	1655	3310	495	1160	2895	520	1215	2960	530
3.	Hospital Load Bearing	1105	3085	495	1740	3475	520	1820	3560	530
	Framed	1655	4630	495	1160	3240	520	1215	3315	530
					1740	4860	520	1820	4975	530

Note:-

- (1) For the calculation of Foundation Cost, Plinth area at Ground level of the building is to be taken.
- (2) For the calculation of Super Structure cost, plinth area of respective floor of the building is to be taken.
- (3) For the calculation of Roof finishing cost, Plinth area at Ground level of the building is to be taken.
- (4) For School Buildings - the Super Structure cost will be 80% of Super Structure cost of Non-Residential Buildings.
- (5) For stilt floor towards Car parking, Garages, Cycle shed, Staircase Head Rooms etc., - the plinth area rate will be 65% of Super Structure cost of Non-residential building.
- (6) For basement floor, an extra 25% over the super structure cost of respective type of building is to be added.

- (7) In framed structure, where dummy columns are to be provided, a rate of Rs.165/m² of plinth area for Residential Building and a rate of Rs.135/m² for Hospital Buildings and Non-residential Buildings is to be allowed.
- (8) For upper floors, an extra @ Rs.11/m² may be added towards lift charges for each floor.
- (9) The additional rates allowed in the schedule of rates for works in Jails, Reserve forests, Hills and other Special tracts etc., shall be added to the above plinth area rates for works in respective areas.
- (10) For works in the belt area of Chennai City, the plinth area rate applicable for Chennai City shall be adopted.
- (11) For works in coastal area a rate of Rs.40/m² over the basic rate as approved in the table above, (for the total plinth area) shall be added for providing concrete of higher grade.
- (12) For super structure for Earth-quake prone areas, the rates in Annexure V shall be adopted.
- (13) All the above provisions shall be added only on the basic rates as approved in the table above.

(14) PROVISIONS INCLUDED IN FOUNDATION RATE:

- (a) The rate given for foundation is applicable for Ground Floor + 2 Floors in the case of Load bearing structure.
- (b) The rate given for foundation is applicable for Ground Floor + 3 Floors in the case of Framed structure.
- (c) The rate given for foundation is to be calculated based on plinth area at Ground Floor of the building only.
- (d) The depth of foundation assumed is 1.5 m below G.L. with conventional stepped footing in the case of Load bearing structure.
- (e) The depth of foundation assumed is 1.8 m below G.L. with isolated footing in the case of Framed Structure.
- (f) The foundation rate is inclusive of Earth Work, Sand filling, PCC 1:5:10 for Mat Concrete, Brick Work / Random Rubble Masonry in Cement Mortar, Re-filling the sides of foundation, Plinth beam including cost of centering, Cement Concrete, Steel, Damp Proof Course, Sand filling in basement and flooring concrete in Ground Floor in the case of Load bearing structure.

- (g) The foundation rate is inclusive of Earth Work, Sand filling, PCC 1:5:10 for mat concrete, cement concrete, centering, Steel, for column footing, Pedestal, Column, Re-filling the sides of foundation, plinth beam, Brick work in Cement Mortar, Damp Proof Course, Sand filling in basement and flooring concrete in Ground Floor in the case of framed structure.
- (h) The foundation rates are applicable for building with basement at 0.6m height from ground level.

(15) PROVISIONS INCLUDED IN SUPER STRUCTURE RATE:

- (a) This rate is inclusive of Brick work, RCC, Steel, Centering, Plastering, joinery items with steel frames and M.D.F. shutter for doors, steel glazed windows and steel glazed ventilators, Grano flooring 25 mm thick in the case of residential & non residential buildings, mosaic tile flooring in the case of Hospital building and Rain water down fall pipe of adequate dia.
- (b) The height of each floor has been taken as 3.30 m average.
- (c) This rate is inclusive of provision for Anti skid ceramic tile flooring and glazed tile dadoing in Toilets.
- (d) This rate is inclusive of plastering with Cement Mortar 1:5, 12 mm thick, white washing two coats over one coat of white washing for interior walls and colour washing two coats over one coat of white washing for exterior faces.

(16) PROVISIONS INCLUDED IN ROOF FINISHING RATE:

- (a) This rate is inclusive of weathering course, finishing with pressed tiles, providing parapet wall with Brick work in Cement Mortar, plastering, white washing for interior faces and colour washing for exterior walls.

(17) EXTRA PROVISIONS TO BE ALLOWED OVER THE ABOVE RATE:

- (a) In Foundation:-

Sl.No.	Type of foundation	Rate in Rupees per one sq.m.	Area to which applicable
(i)	For stub column arrangements for Load bearing structure	440	plinth area at Ground level
(ii)	For combined footing	275	plinth area at Ground level
(iii)	For strip raft	1105	plinth area at Ground level

Sl.No.	Type of foundation	Rate in Rupees per one sq.m.	Area to which applicable
(iv)	For raft (Floating Raft)	1655	plinth area at Ground level
(v)	For every additional 0.3m basement height	165	plinth area at Ground level
(vi)	For every additional 0.3 m depth In foundation	110	plinth area at Ground level
(vii)	For every additional floor over initial Ground + 3 floors in case of Framed structure	230	Respective floor area
(viii)	For Anti-termite treatment	55	plinth area at Ground level
(ix)	Pile Foundation		
	(a) Upto 4 storeys for a depth of 15m	3860	plinth area at Ground level
	(b) More than 4 storeys but less than 8 floors	4960	plinth area at Ground level
	(c) More than 8 floors	6750	plinth area at Ground level
	(d) Add extra for every one metre depth, if the depth of pile exceeds 15m	220	plinth area at Ground level
	(e) Deduct extra for every one metre depth, if the depth of pile is less than 15m	110	plinth area at Ground level
Note: If bored cast insitu piles are proposed add extra 10% over the pile foundation rate workedout, towards Bentonite etc.,			

(b) **IN SUPER STRUCTURE:-**

Sl.No	Description of work	Rate	
(i)	For every additional 1 m height over the initial height of 3.30 m	Rs.240/m ²	
(ii)	Flooring:- (Actual area of flooring has to be considered)	In Residential & Non-residential Buildings	In Hospital Buildings
	(a) Grey colour mosaic tiles	Rs.330/m ²	NIL
	(b) Other colour mosaic tiles	Rs.440/m ²	Rs.110/m ²
	(c) Ceramic tiles (not less than 305 x 305 x 6 mm size)	Rs.440/m ²	Rs.110/m ²
	(d) Marble (macrona) (not less than 600 x 600 x 18mm size)	Rs.935/m ²	Rs.635/m ²

	(e) Marble (White) (not less than 600 x 600 x 18 mm size)	Rs.1045/m ²	Rs.715/m ²
	(f) Marble (Adanga) (not less than 600 x 600 x 18 mm size)	Rs.825/m ²	Rs.495/m ²
	(g) Marbonite tiles (not less than 600 x 600 x 8 mm size)	Rs.1045/m ²	Rs.715/m ²
	(h) Rajasthan Kota Stone (Plain)	Rs.605/m ²	Rs.275/m ²
	(i) Rajasthan Kota stone (Laid in combination with marble strips)	Rs.770/m ²	Rs.440/m ²
	(j) Cuddappa slab	Rs.275/m ²	Not recommended
(iii)	Joinery: (for any joinery like Aluminium (or) any other equivalent types of joineries if proposed) – Add extra	Rs.275/m ² of floor area	
(iv)	Cement painting if proposed:-		
	(a) For internal faces and External faces	Rs.220/m ² based on floor area	
	(b) For external faces only	Rs.110/m ² based on floor area	

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 30/11/05

ANNEXURE - II
OPTIONAL ITEMS

Sl.No.	Description of work	Rate in Rupees per one sq.m.	Area to which applicable
(1)	False ceiling using G.I. Channel Sections etc., (if proposed):-		
	(a) False ceiling with plain Gypsum board	715	Ceiling area proposed
	(b) False ceiling with perforated Gypsum board using G.I. channel sections etc.,		
	(i) Without Glass wool	825	Ceiling area proposed
	(ii) with Glass wool 50mm thick below A.C. sheet roofing	990	Ceiling area proposed
	(iii) with Glass wool 25mm thick below R.C.C. roofing	910	Ceiling area proposed
(2)	Wall Panelling using G.I.Channel Sections etc., (with Gypsum board) if proposed:-		
	(a) Wall panelling with perforated Gypsum board with Glass wool of 25mm thick	825	Wall panelling area proposed
	(b) Wall panelling with plain Gypsum board without Glass wool	660	Wall panelling area proposed

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ANNEXURE - III

ELECTRICAL, WATER SUPPLY AND SANITARY ITEMS OF WORKS

Sl.No.	Description of work	Rate in Rupees per one sq.m.	Area to which applicable
(1)	A.C. Provision for office buildings and in Hospitals, (if proposed):-		
	(a) For non-ductable A.C. units	3150	Floor area proposed
	(b) For ductable type A.C. plants	4200	Floor area proposed
Note The above rates are not inclusive of civil works such as construction of plant room, false ceiling, etc.			

(2)	Lift (if proposed):-	
	(a) Passenger Lift	
	(i) 8 persons capacity (Upto Ground + Four floors)	Rs. 9.45 lakhs
	(ii) 10 persons capacity (Upto Ground + Four floors)	Rs. 10.50 lakhs
	(iii) 13 persons capacity (Upto Ground + Four floors)	Rs. 11.55 lakhs
	(b) Bed-cum-Passenger Lift	
	(i) 15 persons capacity (Upto Ground + Four floors)	Rs. 15.75 lakhs
	(ii) 20 persons capacity (Upto Ground + Four floors)	Rs. 16.80 lakhs
	(iii) 26 persons capacity (Upto Ground + Four floors)	Rs. 17.85 lakhs
	(c) Dump Lift (Upto Ground + Four floors)	Rs. 5.25 lakhs
Note:		
1. Provision for civil works such as construction of lift pit, shaft, machine room, etc., are not included in the above rates.		
2. For passenger lift and bed-cum-passenger lift - For every additional floor over the Ground + Four floors an extra at Rs. 78,750/- shall be allowed for each floor.		
3. For Dump lift - For every additional floor over the Ground + Four floors an extra at Rs. 31,500/- shall be allowed for each floor.		
5. For lift pit an extra at Rs. 8,400/- per sq. mt. of lift well sectional area shall be allowed.		

Sl.No.	Description of work	Rate
(3)	High Tension Supply:-	
	(i) With transformer upto 250 KVA	Rs. 15.75 lakhs
	(ii) With transformer upto 500 KVA	Rs. 26.25 lakhs
	(iii) With transformer upto 1000 KVA	Rs. 42.00 lakhs
Note: 1. Rates are inclusive of service connection charges payable to TNEB. 2. Provision for civil works such as, construction of transformer, MV panel room, etc., are not included in the above rates.		

(4)	Generator Set:	
	(i) 100 KVA capacity	Rs. 8.40 lakhs
	(ii) 125 KVA capacity	Rs. 9.45 lakhs
	(iii) 160 KVA capacity	Rs. 11.55 lakhs
	(iv) 250 KVA capacity	Rs. 18.90 lakhs
Note: 1. Cost of construction of Generator room not included in the above rates.		

(5)	Cold storage facilities for Mortuary:	
	(i) 9 Bodies capacity	Rs. 9.45 lakhs
	(ii) 12 Bodies capacity	Rs. 11.55 lakhs
Note: 1. Cost of Mortuary building not included in the above rates.		

(6)	Public Address System:	
	For mini Conference Hall / Meeting Hall	Rs. 3.15 lakhs
(7)	Intercom with EPABX arrangements upto 300 lines	Rs. 15.75 lakhs
(8)	Lightning Arrester (For more than 5 storeys)	Rs. 2.10 lakhs
(9)	Civil Aviation lights for buildings more than 8 storeys	Rs. 1.05 lakhs

(10)	Internal Water Supply, Sanitary Arrangements & Electrical Arrangements			
Sl.No	Type of Buildings	Water Supply	Sanitary Arrangements	Electrical Arrangements
Rate in rupees per one sq.m.				
1	Residential	275	220	495
2	Non-Residential	220	165	440
3	Hospital	275	220	495

(11) External Water Supply, Sanitary Arrangements & Electrical Arrangements							
Sl.No	Type of Building	Water Supply		Sanitary Arrangements		Electrical Arrangements	
		Within existing well developed campus	New campus	Within existing well developed campus	New campus	Within existing well developed campus	New campus
		Rate in rupees per one sq.m.					
1	Residential	165	330	55	110	165	330
2	Non-Residential	165	330	55	110	165	330
3	Hospital	165	330	55	110	165	330

Note:

1. The above rate is applicable only for ground and first floors on plinth area basis..

2. For every upper floor over the basic ground and first floor, 50% of respective floor area alone shall be taken into account for making provision towards external water supply and sanitary arrangements.

3. For every upper floor over the basic ground and first floor, 20% of respective floor area alone shall be taken into account, for making provision towards external electrification arrangements.


 for Chief Engineer (Buildings)

ANNEXURE - IV

OTHER PROVISIONS

Sl.No.	Description of work	Rate
(1)	Construction of compound wall to a normal height of 1.50m from ground level with required number of gates, grills, etc.,	Rs.990 / RM.
(2)	Approach Road	
	(a) Forming approach road in layers of 450 mm thick sand gravel mix of ratio 1:1 as base layer, W.B.M. Laid in two layers of 75 mm thick each (total 150 mm thick) including cost of small culverts come across, forming berms, etc.,	Rs.275 / sq.m.
	(b) Black topping over WBM including tack coat and seal coat	Rs.80 / sq.m.
(3)	Pavement around the building	
	(a) For a width of 1.2 m	Rs.550 / RM.
	(b) For a width of 2.0 m	Rs.880 / RM.
Note: Pavement around the building is to be done for a width of 1.20 m if the sub soil is of ordinary nature; and it is to be done for a width of 2.0 m, if the sub soil is of expansive soil. The above rates include provision for earth work excavation to a depth of 450 mm, PCC 1:5:10, sand filling, kerb wall with Brick work in cement mortar at external face of pavement, one impervious layer, cost of precast pavement slab of specified shape with pointing etc.,		
(4)	Finishing the Elevation	
	(a) For all buildings	Not exceeding 1% of total value of Building
	(b) For prestigious / Heritage Buildings	Not exceeding 2½% of total value of building
(5)	Soil investigation (minimum)	Rs.20,000/-
	Note: If the area is more, higher provision towards soil investigation may be allowed.	
(6)	Advertisement Charges	Provision is to be made depending on the norms prescribed for publication in Newspapers.

(7)	Provision for foundation stone laying and inaugural function	To be made only for works costing over Rs. 10.00 lakhs at Rs. 13,000/- (Rs.3,000/- + Rs.10,000/-)
(8)	Rain Water Harvesting	Rs.7720/- pit
(9)	Provision for Lawn (optional)	
	(a) Residential	@ 1.50 % of building cost
	(b) Hospital & Non-Residential	@ 3.0 % of building cost
(10)	Labour Welfare Fund	@ 0.3 % of building cost
(11)	Unforeseen items	@ 2.5 % of building cost
(12)	P.S. charges and Contingencies	@ 2.5 % of building cost

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for Chief Engineer (Buildings)
30/11/05

ANNEXURE - V
PLINTH AREA RATE FOR SUPER STRUCTURE
OF EARTH QUAKE RESISTANT STRUCTURES.

Sl.No.	Type of building	MOFFUSIL	TRICHY, SALEM, MADURAI & TIRUNELVELI	CHENNAI & COIMBAORE
			RATE IN RUPEES PER 1 SQ.M. FOR EVERY FLOOR	
1	RESIDENTIAL			
	(a) Load bearing (upto G + 2)	3495	3675	3850
	(b) Framed Structure			
	(i) upto two Floors	4410	4630	4740
	(ii) 3 & 4 th Floors	4410	4630	4740
	(iii) 5 & 6 th Floors	4850	5095	5335
	(iv) 7 & 8 th Floors	4850	5095	5335
	(v) above 8 th Floor	4850	5095	5335
	(vi) Stilt Floor	3085	3240	3390
2	NON RESIDENTIAL			
	(a) Load bearing (upto G + 2)	2960	3115	3260
	(b) Framed Structure			
	(i) upto two Floors	3310	3475	3555
	(ii) 3 & 4 th Floors	3310	3475	3555
	(iii) 5 & 6 th Floors	3640	3820	4005
	(iv) 7 & 8 th Floors	3640	3820	4005
	(v) above 8 th Floor	3800	3990	4180
	(vi) Stilt Floor	2315	2430	2545
3	HOSPITAL			
	(a) Load bearing (upto G + 2)	3320	3485	3650
	(b) Framed Structure			
	(i) upto two Floors	4630	4860	5095
	(ii) 3 & 4 th Floors	5095	5350	5605
	(iii) 5 & 6 th Floors	5095	5350	5605
	(iv) 7 & 8 th Floors	5555	5835	6110
	(v) above 8 th Floor	5555	5835	6110
	(vi) Stilt Floor	3240	3400	3565

NOTE:

1. For calculating the rates, the respective floor area has to be considered.
2. For works in special tracts like Jails, reserve forest, hill areas etc., the respective extra percentage over the mofussil rate is to be given.