



W E L C O M E



PUBLIC WORKS DEPARTMENT

TRAINING FOR NEWLY RECRUITED AE'S ON 18.09.2025

PRESENTED BY

Er. K RAJKUMAR, B.E.,
DEPUTY SUPERINTENDING ENGINEER, PWD,
BUILDINGS (C&M) CIRCLE,
COIMBATORE.

ESTIMATE

Estimate is nothing but a document which comprises of detailed measurements, quantities and specifications of items involved in the project with approximate cost to be incurred.

EXECUTION OF CONSTRUCTION WORK IN PWD

- Step 1 ➡ Obtain Site from the User Department & Requirement shall be obtained from the User departments.
- Step 2 ➡ Preparation of Site Plan & Detailed building plan which shall satisfy the **intended use** as well as relevant **norms** for which it is required.
- Step 3 ➡ Preparation of Detailed estimate adopting **Standard Data & SOR**
- Step 4 ➡ Obtain Administrative Sanction
- Step 5 ➡ Obtain Technical Sanction
- Step 6 ➡ Obtain Statutory Approvals like DTCP/CMDA approval, Fire NOC, Environmental Clearance (for above 2.00 lakh Sq.ft), etc.
- Step 7 ➡ Call for Tender and fix Agency
- Step 8 ➡ Execution of Construction Work and incur expenditure.
- Step 9 ➡ Completion of Work and Handing over to the User department.
- Step 10 ➡ Preparation of Completion Report, Completion Plan and inclusion of building into Register of Public Building.

PREPARATION OF SITE PLAN

DETAILED Site Plan shall be prepared as per Para 100 of D'Code and shall consist of the following details.

- Site Plan shall be prepared with required scale indicating Survey Number and Sub Division Number
- North Direction Point
- Levels at the intervals of 15m/30m
- External boundary measurements
- Trial pit particulars
- Borehole taken details
- Road/Pathways, Wells/Borewells, Streams and any building / Structure inside the site (if any)

PREPARATION OF SITE PLAN

- Electrical Lines/ Cables and Telephone lines (if any)
- Trees inside the site (if any)
- Nearby/ Adjacent roads and Approach to the site.
- Proposed building location.
- Necessary Counter signature shall be obtained from the User department in the Site Plan.
- Basic Knowledge of Tamilnadu Combined Development and Building Rules 2019 is necessary.

DETAILED PLAN

Detailed Plan will be prepared by the Chief Architect of PWD as per the requirement of User Department adopting the relevant norms and will be sent to the execution EE.

PREPARATION OF DETAILED ESTIMATE

- Detailed quantity – Standard Data – Schedule of rates – These 3 items are interlinked with each other.
- Before preparing the detailed quantity, it is mandatory to have a knowledge of Standard Data and Schedule of rates.
- The detailed estimate/ Rough Cost Estimate submitted for obtaining **Administrative sanction** shall contain the following details such as Report, **User department requisition letter**, detailed plan, Site Plan, Centre Line sketch, Footing Layout, Footing Cross-section, **Bill of Quantities with detailed specification (or) Plinth area details**, Lead, **Data (or) Plinth area rates**, Quotations (if any), Photos (if any) and Abstract with necessary Lumpsum Provisions.
- The detailed estimate submitted for **Technical Sanction** shall contain the following details such as Report, **Government orders**, detailed plan, Site Plan, Centre Line sketch, Footing Layout, Footing Cross-section, Bill of Quantities with detailed specification, Lead, Data, Quotations (if any), Photos (if any) and Abstract with necessary Lumpsum Provisions. **All the Provisions made in the estimate submitted for AS shall be incorporated in the estimate prepared for TS without omission.**

IMPORTANT POINTS TO BE REMEMBERED IN RESPECT OF ESTIMATE PREPARATION

1. Report shall contain the following details:

- Government orders and user department letters based on which the Estimate is prepared
- Location of site
- Nature of Soil
- Adopted Safe Bearing Capacity of the soil
- Chief Architect Plan Number
- Plinth Area
- Number of floors Proposed and Designed for.
- Salient features of the Buildings
- Concluded with the Estimate amount based on the year of Schedule of Rates, and the head of the account in which the amount is debitable should be mentioned.
- The signatures of Assistant Engineer, Assistant Executive Engineer, and Executive Engineer should be aligned in line, with appropriate spacing for higher officials' signatures.

- 2. Counter Signature** from the User Department is mandatory.
- 3. The Government orders and user department letters** associated with the project shall be appended after the report.
- 4. The Centre Line sketch, Footing Layout, Footing Cross-section, Detailed Quantity, Lead, Data, Quotations (if any), Photos (if any) , Abstract with LS Provisions, Detailed Plan and Site Plan** shall be duly signed by the concerned Engineers and countersigned by the User Department Officials not less than the rank of District Level.
- 5. Pavement arrangements** shall be made for every new building and same shall be included in the Detailed Estimate.
- 6. Quotations**, if necessary, should be atleast from **3 suppliers**, of which the lowest rate should be adopted.

7. For Electrical provisions, **Detailed Electrical Estimate** is mandatory and should be affixed before General Abstract.

8. General Abstract shall compulsorily be **Countersigned by the Executive Engineer (Electrical)**, unless no provisions for Electrical items have been made in the proposal.

9. Lumpsum Provisions shall be made relevantly.

10. In case, the construction is made over the existing building (Vertical expansion) or an existing building is being extended (Horizontal Expansion), portion for which the proposed construction is made is to be highlighted in the Chief Architect Plan and ensure the structural stability by verifying the design calculations made previously and foundation provided for the existing building.

11. The **Trial Pit particulars** and the **Site Plan** showing the proposed building, Compound Wall or Retaining Wall, if any, duly signed by the concerned Engineers with directions earmarked should be affixed.

12. For Administrative and Financial Sanction proposals, **8 copies** of Detailed Estimate shall be prepared. For Technical Sanction, **2 copies** of Detailed Estimate should be submitted to the Authority Concerned.

13. Revised Technical Sanction proposals should be prepared in the prescribed form (Comparative Statement) and submitted along with the original Sanctioned Estimate and Agreement.

PREPARATION OF DETAILED ESTIMATE

The selection of materials and work shall be adopted in the order of preference furnished as below.

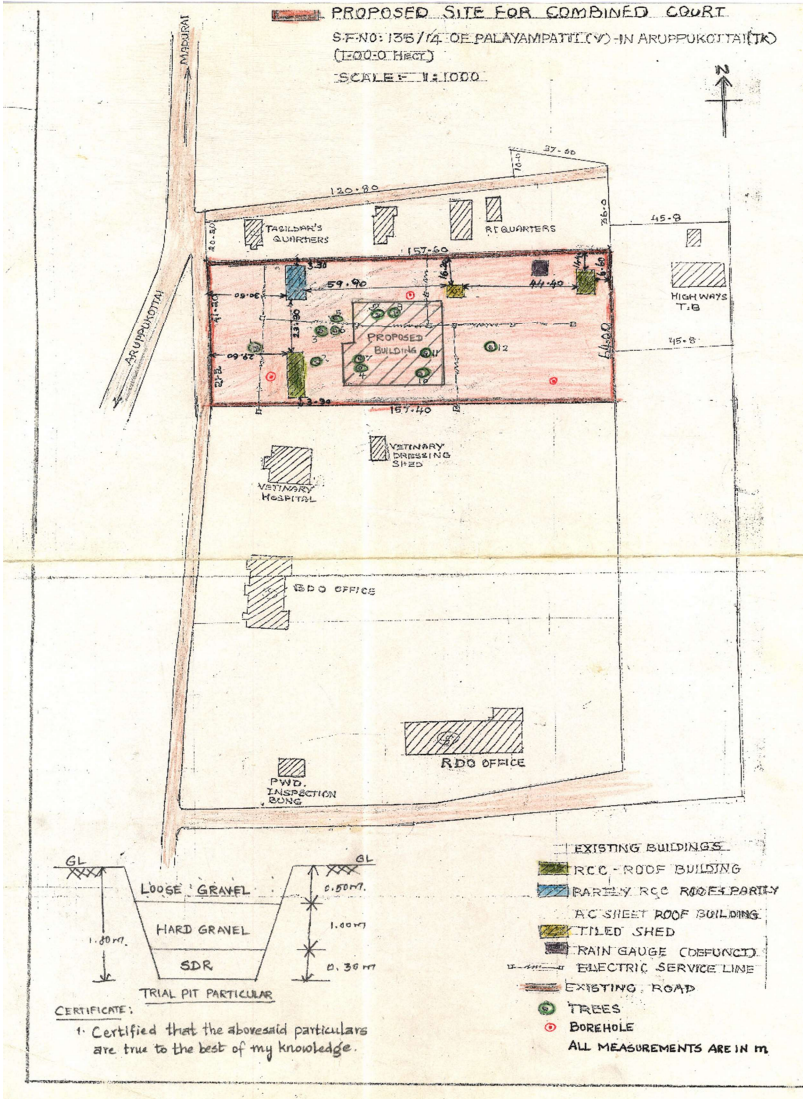
1. Requirement/ Purpose of Structure
2. Norms (As per NBC or other relevant rule)
3. Climatic/ Atmospheric conditions
4. Economic / Cost Effective consideration

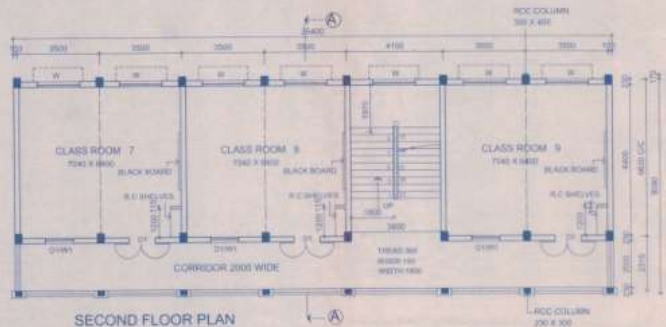
MANDATORY WORKING DRAWINGS REQUIRED

Before starting preparation of Detailed estimate, the following Working Drawings shall be prepared for the calculation of Bill of quantities

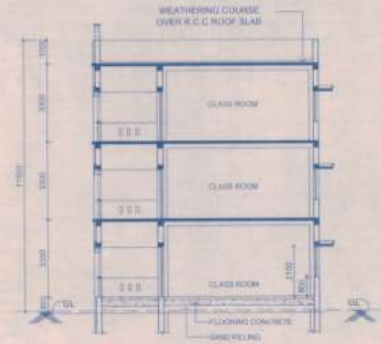
1. Site Plan
2. Centre Line sketch
3. Foundation table with column details
4. Cross section of Foundation
5. Cross section of Basement
6. Layout of Grade beam, Roof Beam, Slab
7. Terrace- Rainwater Flow Diagram
8. Layout of Water Supply system
9. Layout of Sanitary system

MODEL SITE PLAN

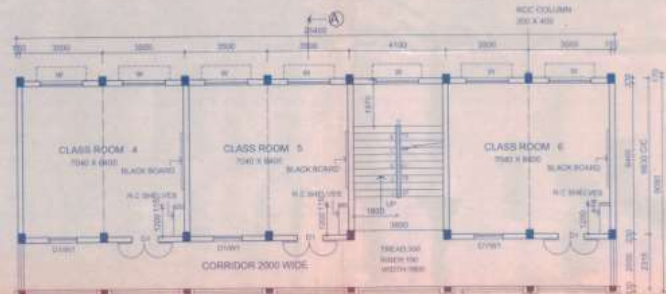




SECOND FLOOR PLAN



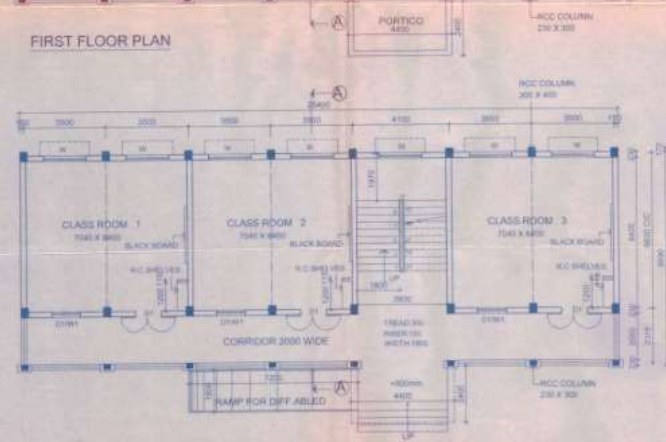
SECTION AT AA



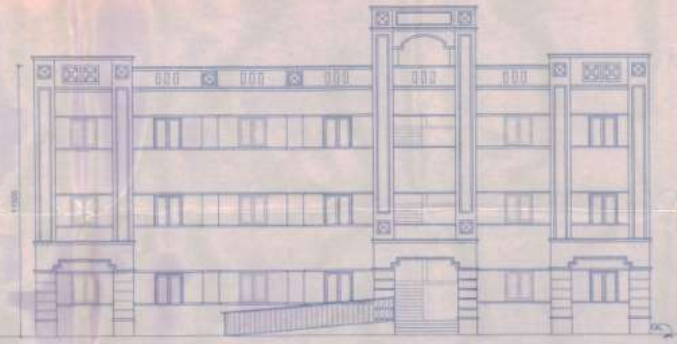
FIRST FLOOR PLAN

SCHEDULE OF JOINERY

S.NO	TYPE	WIDTH	HEIGHT	NO.	TOP	DESCRIPTION	REMARKS
1	DT	1200	2100	2700	2700	STEEL DOOR FRAMES WITH STEEL SHUTTERS	2 LEAVES
2	W	1600	1200	3600	3700	STEEL FRAMED WINDOWS WITH STEEL SHUTTERS	2 LEAVES
3	SW	1200	2100	2700	2700	STEEL FRAMED WINDOWS WITH STEEL SHUTTERS (OPENABLE FROM 800 TO 2300 MM) FIXED STEEL SHEET UP TO 800MM OPENABLE DURING EMERGENCY	2 LEAVES



GROUND FLOOR PLAN



ELEVATION

PUBLIC WORKS DEPT
TAMILNADU

S.NO	NOTES
1	ALL MEASUREMENTS ARE IN MM.
2	THIS IS A DETAILED DRAWING.
3	THIS DRG. HAS BEEN PREPARED BASED ON L.A.NO. 168/P-1/171/27.06.2016, CE (BUILDING), MADURAI REGION, MADURAI.
4	FLOOR AREA GROUND FLOOR PLAN 238.98 SQ.M FIRST FLOOR PLAN 238.98 SQ.M SECOND FLOOR PLAN 238.98 SQ.M TOTAL 716.94 SQ.M

S.NO	REVISION	SIGN	DATE

CHIEF ARCHITECT

JT. CHIEF ARCHITECT SR. ARCHITECT

ASST. ARCHITECT JUNIOR ARCHITECT

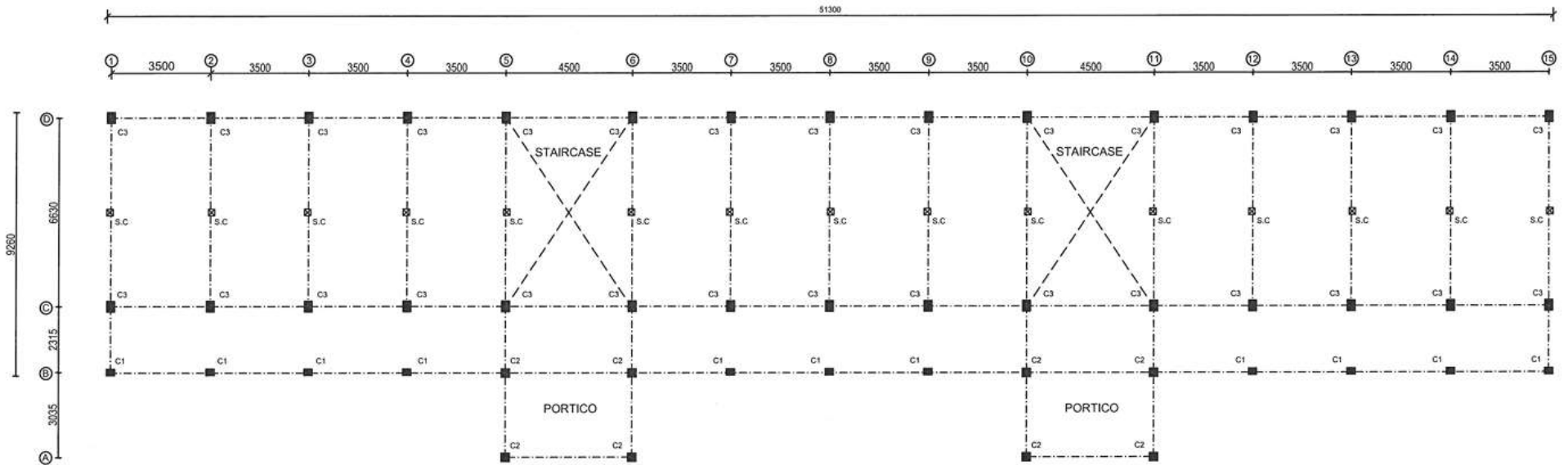
OFFICE OF THE CHIEF ARCHITECT, CHENNAI

SCALE: 1:100 DATE: 10.06.2016

DRG. BY: SVRDKA JOB NO: A-3986 ORG NO: 1

PROPOSED 9 CLASSROOMS FOR NABARD SCHOOL FOR MADURAI REGION

GROUND, FIRST & SECOND FLOOR PLAN, ELEVATION & SECTION



COLUMN SIZES:	
C1	= 230x300 = 11
C2	= 300x300 = 08
C3	= 300x400 = 30
Total	= 49

S.C. - 230 x230

KEYPLAN- OPTION 2

O/o. Superintending Engineer, P.W.D.,
Planning and Designs Circle (Building)
Chepauk, Chennai-600 005.

Designed By *M.K.S.* / 17-02-25

Checked By

Approved By *[Signature]* / 17-02-25

NOTE:

Portico Columns may be provided based on availability of land

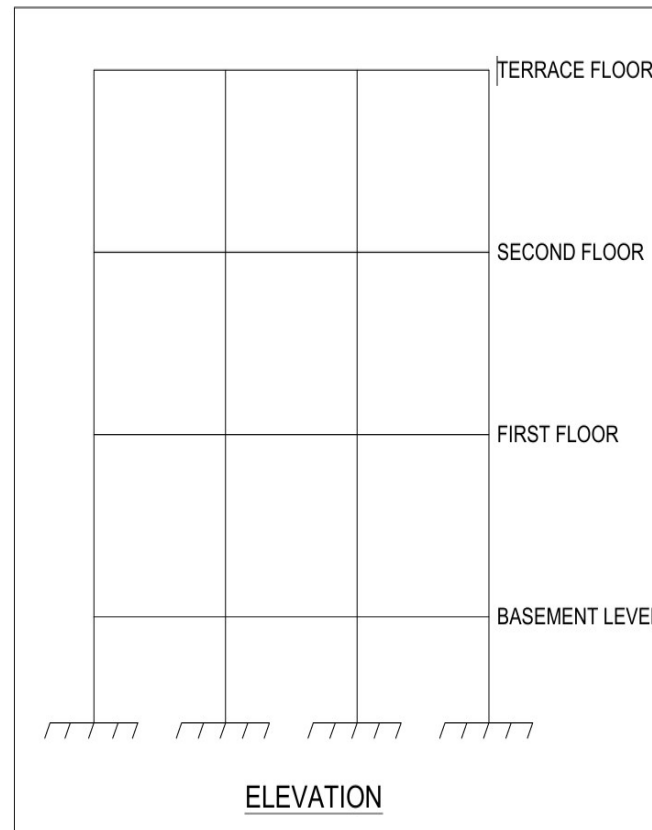
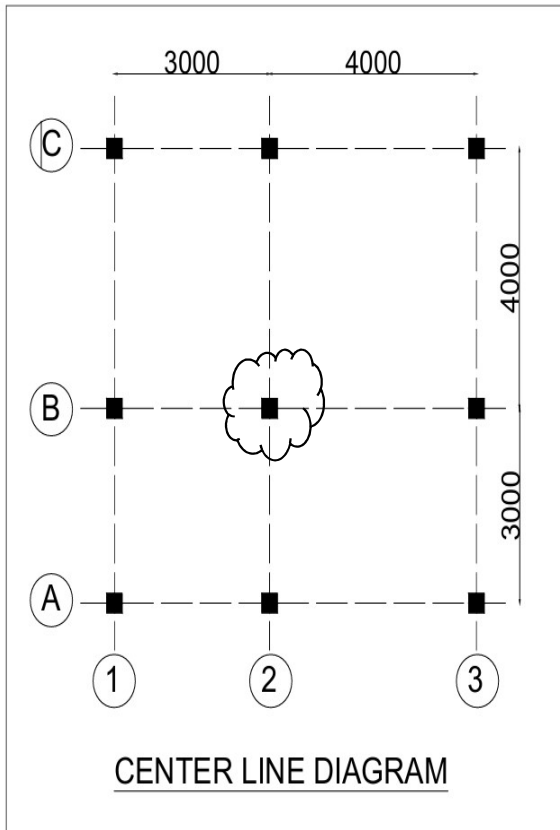
S.C - Stub Column

All Dimensions are in mm.

NO. OF STOREYS: G+2 FLOORS
GRADE OF CONCRETE: M20
GRADE OF STEEL : Fe500
S.B.C: 100, 150, 200, 250 kN/m²

TYPE DESIGN: CONSTRUCTION OF 18 CLASSROOM BUILDING (6+6+6) UNDER NABARD SCHEME IN GOVERNMENT HIGH/HIGHER SECONDARY SCHOOLS IN TAMIL NADU- OPTION 2

METHOD -1 APPROXIMATE METHOD TO FIND LOAD ON COLUMN



CALCULATION OF LOAD ON COLUMN B2 (Considering G+2 Floors)

Load influence area on Column B2
 $= (3/2 + 4/2) * (4/2 + 3/2)$
 $= 12.25 \text{ m}^2$

For heavily loaded structure, consider 20kN/Sq.m for each Floor
For Moderately Loaded structure, consider 18kN/Sq.m for each floor
For Terrace, Consider 10kN/Sq.m.

Now, Load on Column B2
 $= (3 * 18 * 12.25) + (10 * 12.25)$
 $= 784 \text{ kN}$

Say 800kN

METHOD -2 APPROXIMATE METHOD TO FIND LOAD

MASONRY BUILDING													
Exterior wall =	25 KN/ m/ floor												
Interior wall =	35 KN/ m/ floor												
FRAMED STRUCTURE													
	<table border="1"> <thead> <tr> <th></th> <th>Housing</th> <th>Office Building</th> </tr> </thead> <tbody> <tr> <td>Corner column</td> <td>22 KN/m²</td> <td>24 KN/m²</td> </tr> <tr> <td>End row middle column</td> <td>17 KN/m²</td> <td>19 KN/m²</td> </tr> <tr> <td>Interior Column</td> <td>12 KN/m²</td> <td>14 KN/m²</td> </tr> </tbody> </table>		Housing	Office Building	Corner column	22 KN/m ²	24 KN/m ²	End row middle column	17 KN/m ²	19 KN/m ²	Interior Column	12 KN/m ²	14 KN/m ²
	Housing	Office Building											
Corner column	22 KN/m ²	24 KN/m ²											
End row middle column	17 KN/m ²	19 KN/m ²											
Interior Column	12 KN/m ²	14 KN/m ²											
Corner column													
End row middle column													
Interior Column													
Add 2 KN /m ² for stair case and toilet area													

CALCULATION OF LOAD ON COLUMN B2 (Considering G+2 Floors)

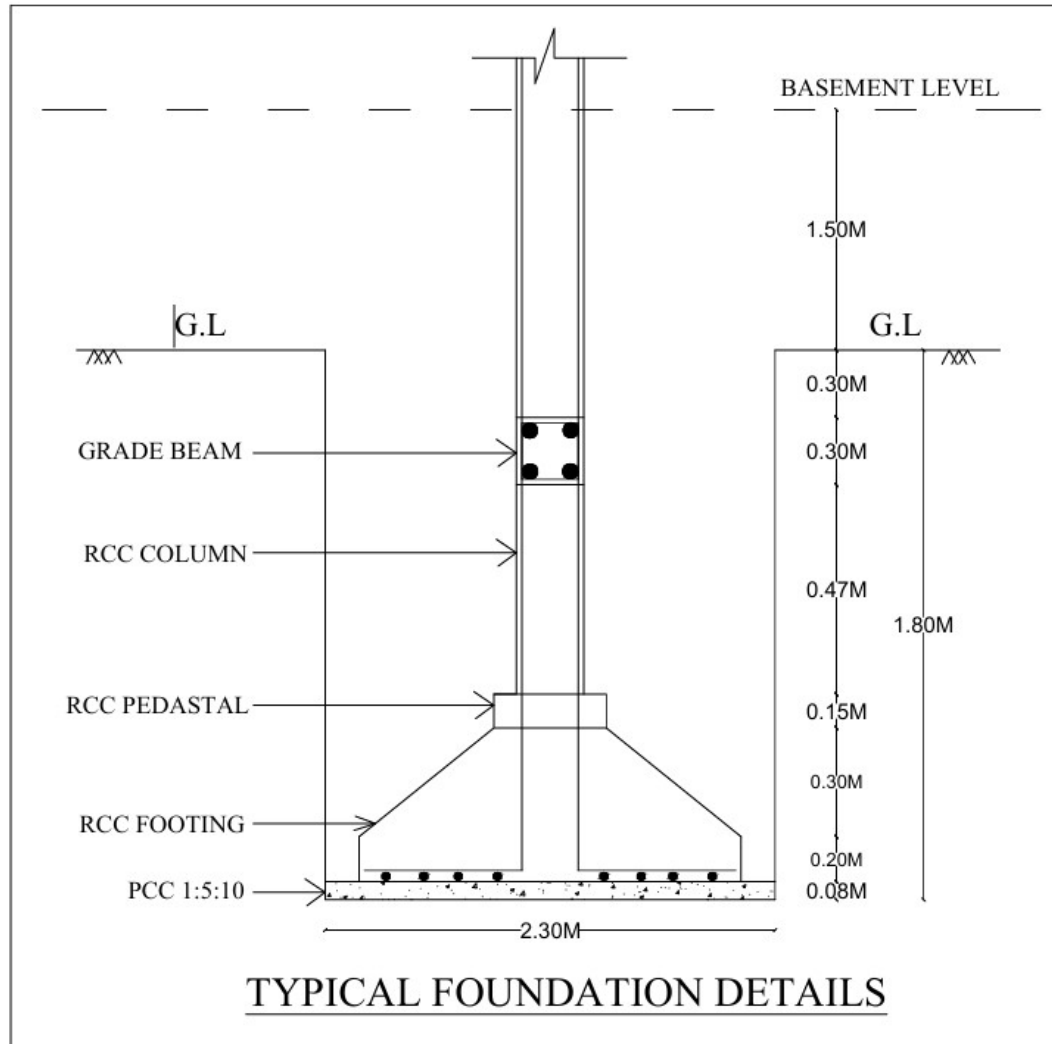
Load influence area on Column B2
 $= (3/2 + 4/2) * (4/2 + 3/2)$
 $= 12.25 \text{ Sq.m}$

Considering Column B2 as Interior Column of Office Building.

Now, Load on Column B2
 $= (3 \times 14 \times 12.25) + (10 \times 12.25)$
 $= 637 \text{ kN}$

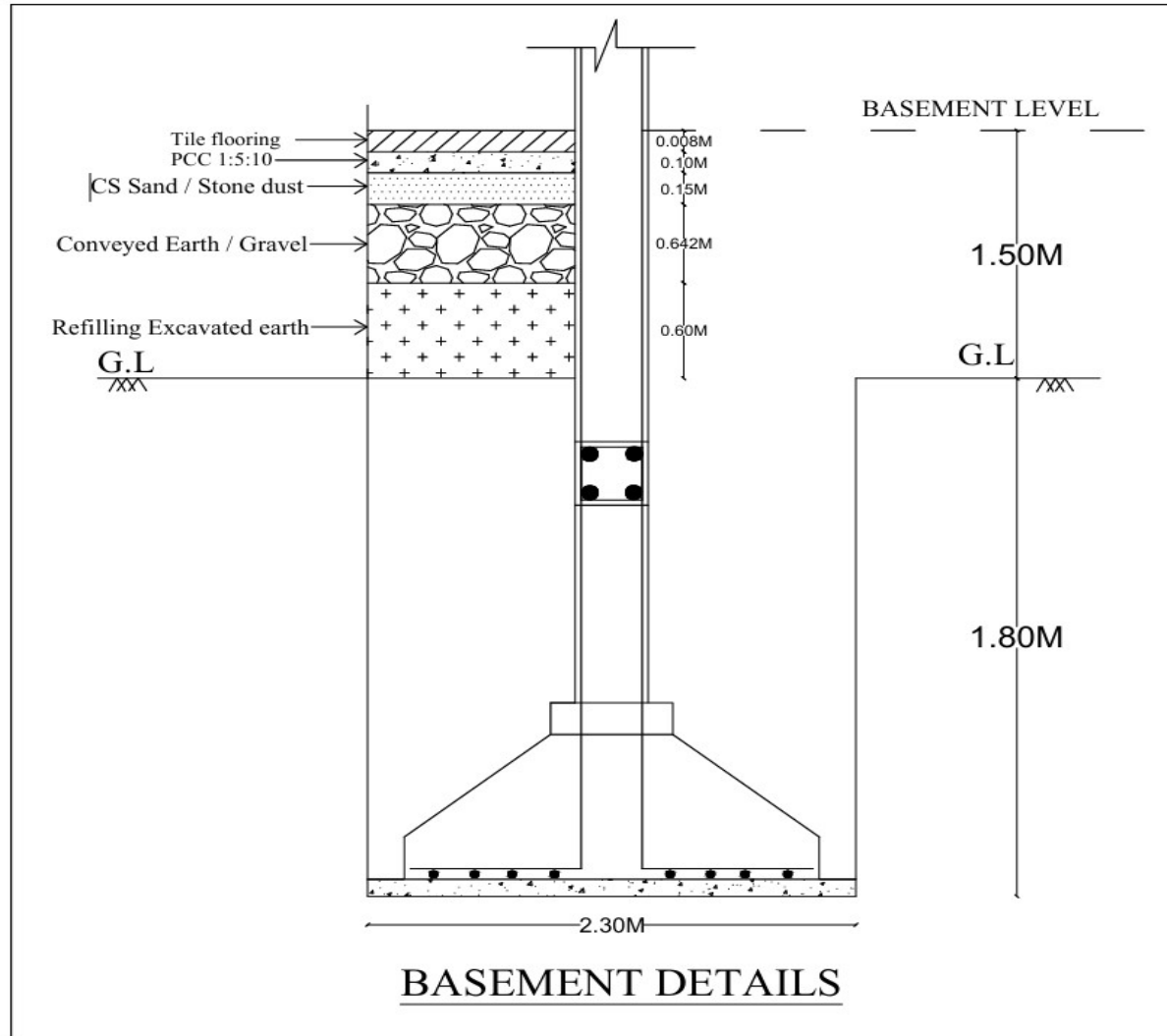
Say 650kN

TYPICAL FOUNDATION DETAILS

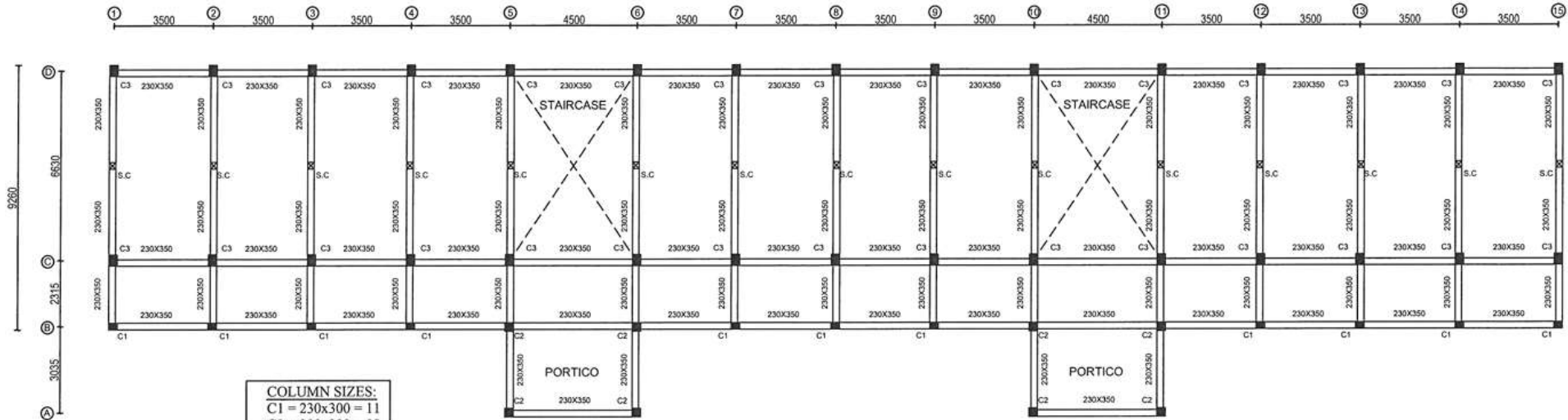


TYPICAL FOUNDATION DETAILS

BASEMENT FILLING DETAILS



51300

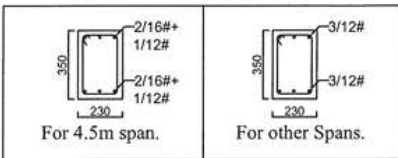


COLUMN SIZES:	
C1 = 230x300 =	11
C2 = 300x300 =	08
C3 = 300x400 =	30
Total	= 49

S.C - 230 x 230

GRADE BEAM LAYOUT- OPTION 2

GRADE BEAM DETAILS



O/o. Superintending Engineer, P.W.D.,
 Planning and Designs Circle (Building)
 Chepauk, Chennai-600 005.

Designed By *[Signature]* / 12-02-15

Checked By

Approved By *[Signature]* / 12-02-15

NOTE:

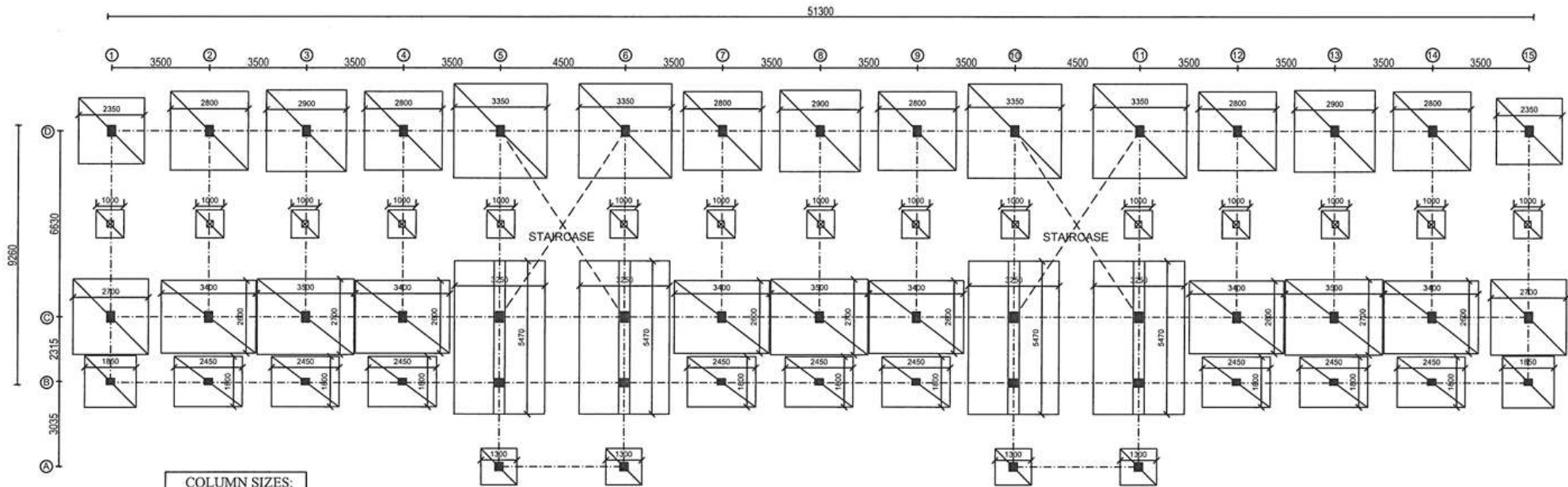
Portico Columns may be provided based on availability of land

S.C - Stub Column

All Dimensions are in mm.

NO. OF STOREYS: G+2 FLOORS
GRADE OF CONCRETE: M20
GRADE OF STEEL : Fe500
S.B.C: 100, 150, 200, 250 kN/m ²

TYPE DESIGN: CONSTRUCTION OF 18 CLASSROOM BUILDING (6+6+6) UNDER NABARD SCHEME IN GOVERNMENT HIGH/HIGHER SECONDARY SCHOOLS IN TAMIL NADU- OPTION 2



COLUMN SIZES:
 C1 = 230x300 = 11
 C2 = 300x300 = 08
 C3 = 300x400 = 30
 Total = 49

S.C - 230 x 230

FOOTING LAYOUT FOR 100 kN/m² SBC - OPTION 2

O/o. Superintending Engineer, P.W.D.,
 Planning and Designs Circle (Building)
 Chepauk, Chennai-600 005.

Designed By *P. G. S. / 12.02.25*

Checked By

Approved By *[Signature]*

NOTE:

Portico Columns may be provided based on availability of land

S.C - Stub Column

All Dimensions are in mm.

NO. OF STOREYS: G+2 FLOORS
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



















S.NO	AXIAL LOAD	COLUMNS ADOPTED	NO. OF COLS	f _{ck}	20	N/MM ²		SBC = 100 KN/m ²						
				f _y	500	N/MM ²		EFF. COVER 60 MM						
				COL SIZE mm	PEDESTAL SIZE			FOOTING SIZE				REINFORCEMENT		
					a	b	h	L	B	D	Do	AREA	PROVIDE	
mm	mm	mm	m	m	mm	mm	Sq.cm	BOTH DIRECTIONS						
SQUARE FOOTINGS FOR COLUMN SIZE 230X300MM														
1	300	B1,B15	2	230x300	330	400	150	1.85	1.85	350	200	8.45	10 # - 11 NOS	
SQUARE FOOTINGS FOR COLUMN SIZE 300X300MM														
2	150	A5,A6,A10,A11	4	300X300	400	400	150	1.30	1.30	300	200	5.34	10 # - 8 NOS	
SQUARE FOOTINGS FOR COLUMN SIZE 300X400MM														
3	500	D1,D15	2	300X400	400	500	150	2.35	2.35	450	200	13.45	10 # - 18 NOS	
4	650	C1,C15	2	300X400	400	500	150	2.70	2.70	550	200	18.41	12 # - 17 NOS	
5	700	D2,D4,D7,D9,D12,D14	6	300X400	400	500	150	2.80	2.80	550	200	19.04	12 # - 17 NOS	
6	750	D3,D8,D13	3	300X400	400	500	150	2.90	2.90	600	300	21.32	12 # - 19 NOS	
7	1000	D5,D6,D10,D11	4	300X400	400	500	150	3.35	3.35	750	300	30.00	12 # - 27 NOS	
RECTANGULAR FOOTINGS 230X300MM														
8	400	B2,B3,B4,B7,B8,B9,B12, B13,B14	9	230X300	400	330	150	2.45	1.80	450	200	X-10.36 Y-13.49	X- 10 # - 14 NOS (B) Y- 10 # - 18 NOS	
RECTANGULAR FOOTINGS 300X400MM														
9	800	C2,C4,C7,C9,C12,C14	6	300X400	400	500	150	3.40	2.60	650	300	X-21.23 Y-25.94	X- 12 # - 19 NOS (B) Y- 12 # - 23 NOS	
10	850	C3,C8,C13	3	300X400	400	500	150	3.50	2.70	650	300	X-21.96 Y-26.65	X- 12 # - 20 NOS (B) Y- 12 # - 24 NOS	
COMBINED FOOTING														
11		B5-C5,B6-C6,B10-C10, B11-C11	8	DETAILS GIVEN SEPERATELY										
STUB COLUMN														
12		STUB COLUMN		230X230	330	330	150	1.00	1.00	300	200		10 # - 6 NOS	
		TOTAL	49											
NOTE : FOR RECTANGULAR FOOTINGS, BOTTOM LAYER OF STEEL IS TO BE KEPT ALONG THE LONGER DIMENSION OF THE FOOTING.														
NOTE : 100 mm < SPACING OF BARS < 200 mm														

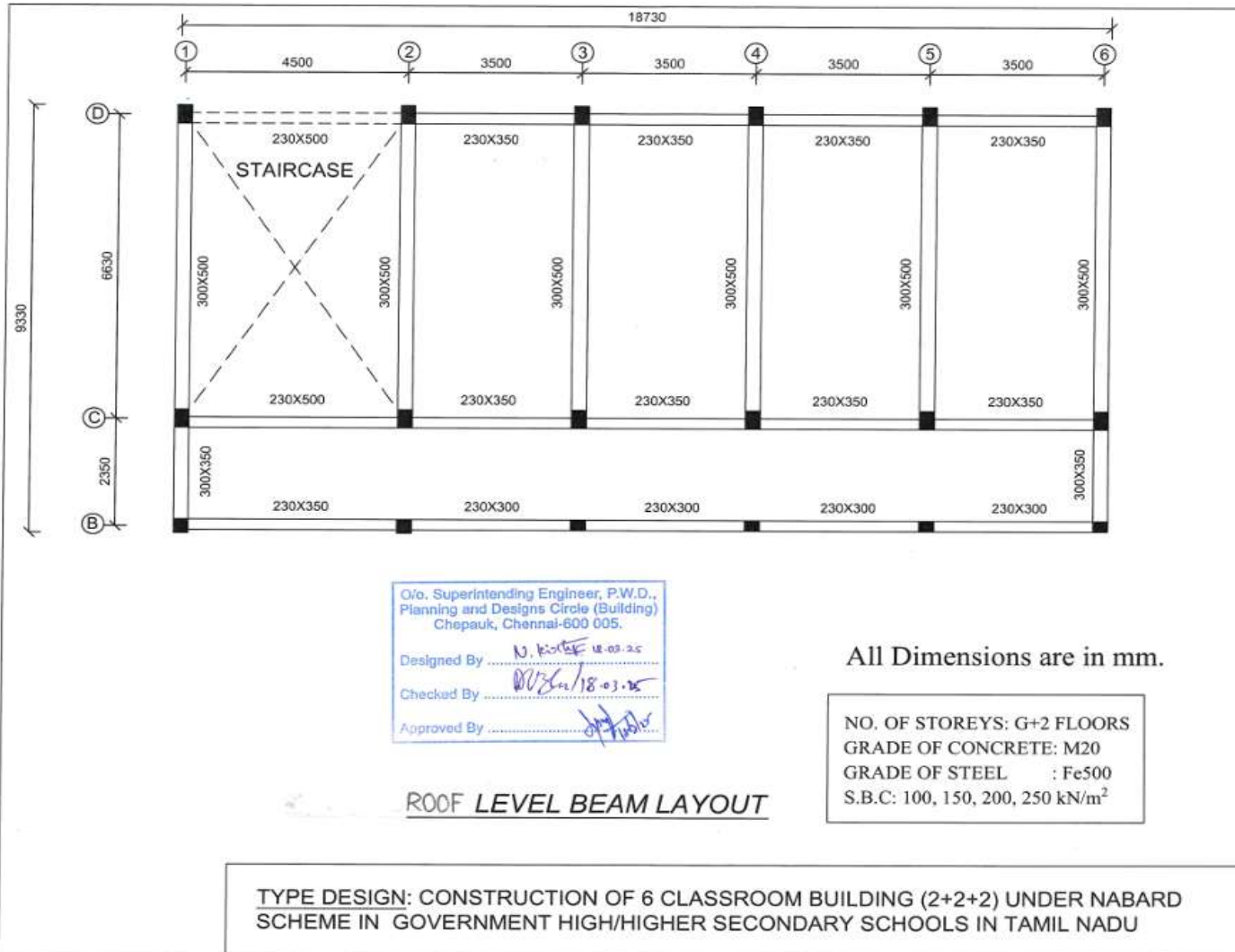
O/o. Superintending Engineer, P.W.D.,
Planning and Designs Circle (Building)
Chepauk, Chennai-600 005.

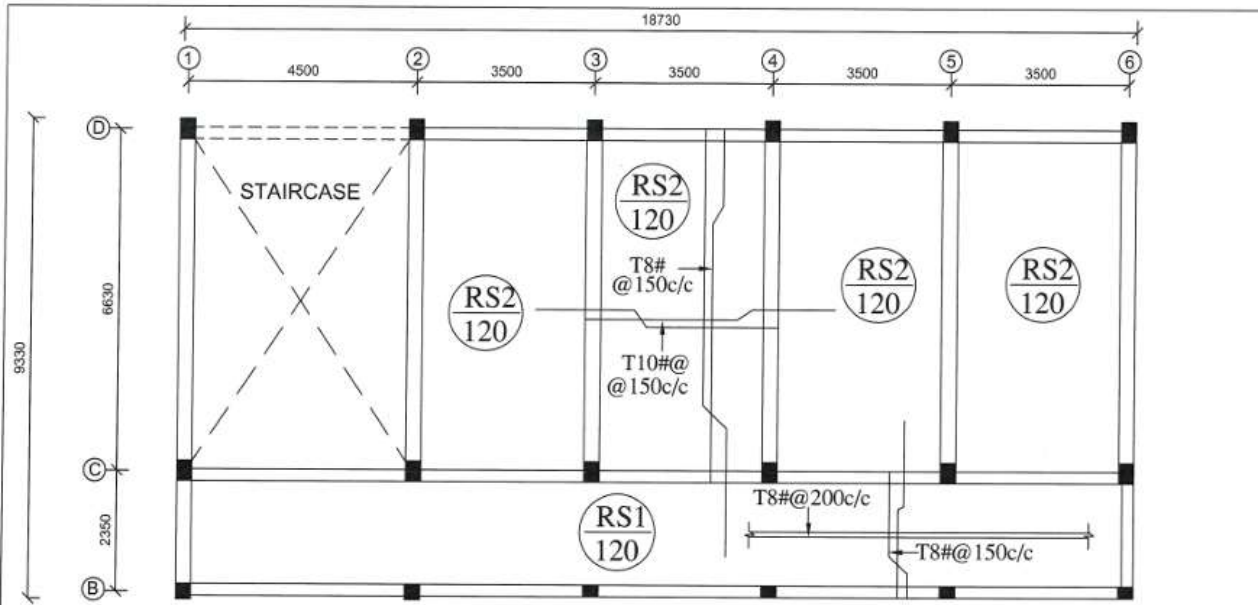
Designed By *At 20/12-02-25*

Checked By

Approved By *[Signature]*

S.NO	COLUMNS ADOPTED	NO. OF COLS.	STOREYS			
			GROUND FLOOR	FIRST FLOOR	SECOND FLOOR	HEAD ROOM
1	COLUMN SIZE 230x 300 B1,B2,B3,B4,B7,B8,B9,B12,B13,B14,B15	11	 4/16#-2/12#	 6/12#	 6/12#	
2	COLUMN SIZE 300x 300 A5,A6,A10,A11	04	 8/12#			
3	COLUMN SIZE 300x 300 B5,B6,B10,B11	04	 4/16#-4/12#	 8/12#	 8/12#	
4	COLUMN SIZE 300x 400 C1,D1,C15,D15	04	 8/16#	 8/16#	 8/16#	
5	COLUMN SIZE 300x 400 C2,D2,C4,D4,C7,D7,C9,D9,C12,D12,C14,D14	12	 8/20#	 4/20#-4/16#	 4/20#-4/16#	
6	COLUMN SIZE 300x 400 C3,D3,C8,D8,C13,D13	06	 4/25#-4/20#	 8/20#	 8/20#	
7	COLUMN SIZE 300x 400 C5,C6,D5,D6,C10,D10,C11,D11	8	 4/25#-4/20#	 4/25#-4/20#	 4/25#-4/20#	 8/20#
NUMBER OF COLUMNS		49				
NOTES - TIES 8# @ 150 c/c, 8# @ 100 c/c is to be provided near Beam -Column junction and near lapping of main rods.			<div style="border: 1px solid black; padding: 5px;"> <p>C/o. Superintending Engineer, P.W.D., Planning and Designs Circle (Building) Chennai-600 005.</p> <p>Designed By <i>[Signature]</i> 17-02-15</p> <p>Checked By <i>[Signature]</i></p> <p>Approved By <i>[Signature]</i></p> </div>			
M20 GRADE CONCRETE						
Fe500 GRADE STEEL						
TYPE DESIGN - CONSTRUCTION OF 18 CLASSROOM BUILDING (6*6*6) UNDER NABARD SCHEME IN GOVERNMENT HIGH/HIGHER SECONDARY SCHOOLS IN TAMIL NADU - OPTION 2						





O/o, Superintending Engineer, P.W.D.,
 Planning and Designs Circle (Building)
 Chepauk, Chennai-600 005.

Designed By N. Kishor 18.03.25

Checked By M. S. S. / 18.03.25

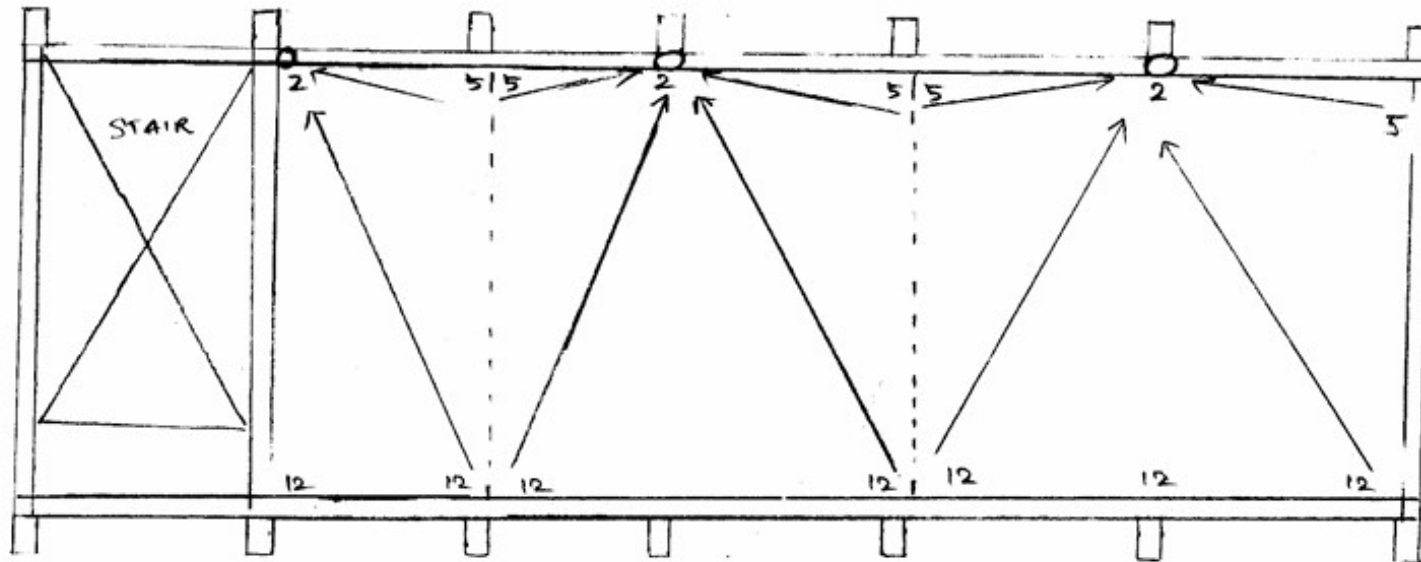
Approved By [Signature]

All Dimensions are in mm.

NO. OF STOREYS: G+2 FLOORS
 GRADE OF CONCRETE: M20
 GRADE OF STEEL : Fe500
 S.B.C: 100, 150, 200, 250 kN/m²

ROOF LEVEL SLAB DETAILING

TYPE DESIGN: CONSTRUCTION OF 6 CLASSROOM BUILDING (2+2+2) UNDER NABARD SCHEME IN GOVERNMENT HIGH/HIGHER SECONDARY SCHOOLS IN TAMIL NADU



RAIN WATER FLOW DIAGRAM FOR SCIENCE LAB

MODEL REPORT ACCOMPANYING THE ESTIMATE SENT FOR ADMINISTRATIVE SANCTION FOR THE CONSTRUCTION OF -----at-----

ESTIMATE AMOUNT:- Rs.

1. This approximate estimate for the construction of -----
at-----

is initiated on the request of-----

vide his/her letter No.----- dated -----

2. This estimate is prepared based on the drawing evolved in CA. Job. No. -----
Dr. No-----The plinth area of the proposed construction is-----

The proposed construction is of a load bearing/RC framed structure with-----
storeys ultimate. This estimate is prepared for -----storeys. This estimate

provides for the following

3 Lumpsum provision for the following are included in the estimate

(i) Providing internal and external electrification.

(ii) Levelling the site, forming approach road, lawns, etc.

(iii) Providing pavement and drain.

(iv) Finishing the Front elevation

(v) Providing lift arrangements.

(vi) Provision for Labour Welfare fund

(vii) Provision for Foundation Stone laying and Inaugural Function

(viii) Provision for Photographic Charges

(ix) Unforeseen items not exceeding 1.25%

(x) P. S. charges and contingencies not exceeding 1.25%

4. This estimate is prepared considering plinth area rates for the year 2025
2026 approved by the Chief Engineer, PWD (Buildings) in his Memo. No-----

-----the total value of the estimate works out to Rs.-----lakhs. This
estimate amount is valid for the year-----only. For any subsequent year
of an escalation at the rate of 10%, is to be added to the estimate value.

5. The expenditure to the above works is to be charged under Head of Account.

MODEL REPORT TO ACCOMPANY THE DETAILED ESTIMATE SUBMITTED FOR TECHNICAL SANCTION

THE CONSTRUCTION OF-----

ESTIMATE Rs.-----

1. In G. O. Ms. No-----Dated-----the Govt. have
accorded administrative sanction for Rs.-----lakhs towards the
construction of-----

2. Detailed plans for the work have been prepared by the Chief Architect, PWD in No-----
---Dr. No-----As per the plans, the building proposed to be
constructed is of framed/load bearing wall structure It consists of-----

3. Some of the salient specifications adopted are detailed below:

- (i) Foundation: (a) Cement concrete 1:5:10, 30 cm thick and 1.00m with (or)
(b) Isolated footing in M20/or under raamed pile foundation. (or)
(c)-----

(A safe bearing capacity of-----t/m² is assumed for design purposes).

- (ii)Basement: Brick work in CM 1:5 using-----Bricks of-----Size
(iii) Plinth beam or: Grade beam RCC M20 of size-----cm x-----cm.
(iv) Superstructure: Brick work in CM 1:5 Using metric bricks/stock bricks/-----
(v) Roofing: RCC M20-----cm thick slab.
(vi) Flooring: Flooring of-----type
finished with-----
(vii) Beams and tie beams: Beams in RCC M20 of size-----for main beams and
of size-----for Tie or cross beams.
(viii) Partition walls: Partition walls of-----cm thick with CM 1:3 using-----Bricks.
(xi) Plastering: Plastering with CM 1:5-----mm thick
(x) Doors, Windows & Ventilators: The doors and windows of-----type
| With-----frames
and-----shutters

4. The following special provisions are also included in this estimate.

- (i)-----
(ii)-----
(iii)-----
(iv)-----

5. Lumpsum provisions are provided in the estimate for the following items.

- (i) Providing internal and external electrification.
(ii) Levelling the site, forming approach road, lawns, etc.
(iii) Providing pavment and drain.
(iv) Finishing the Front elevation
(v) Providing lift arrangements.
(vi) Provision for Labour Welfare fund
(vii) Provision for Foundation Stone laying and Inaugural Function
(viii) Provision for Photographic Charges
(ix) Unforeseen items not exceeding 1.25%
(x) P. S. charges and contingencies not exceeding 1.25%

Provision for the following Items have not been made in the estimate due to-----

6. The detailed estimate is prepared based on the schedule of rates for the year-----
and it works out to-----

7. The expenditure is chargeable to-----

EARTH WORK EXCAVATION FOR FOUNDATION

Unit of measurement:- cu.m

- **Mechanical / Manual means** – Depends on the site condition and nature of work
- **Depth Criteria:** (Standard Data book)
 - ❖ Up to 2.40 m depth
 - ❖ Above 2.40 m – 3.30m depth
 - ❖ Above 3.30m and every additional 1m depth and part thereof.
- The Data for this item includes refilling back with the excavated earth.
- Measurement in this item generally includes:
 - ❖ Footing excavation (Isolated / Combined)
 - ❖ Grade Beam Excavation
 - ❖ Ramp wall excavation, etc

EARTH WORK OPEN EXCAVATION

Unit of measurement:- cu.m

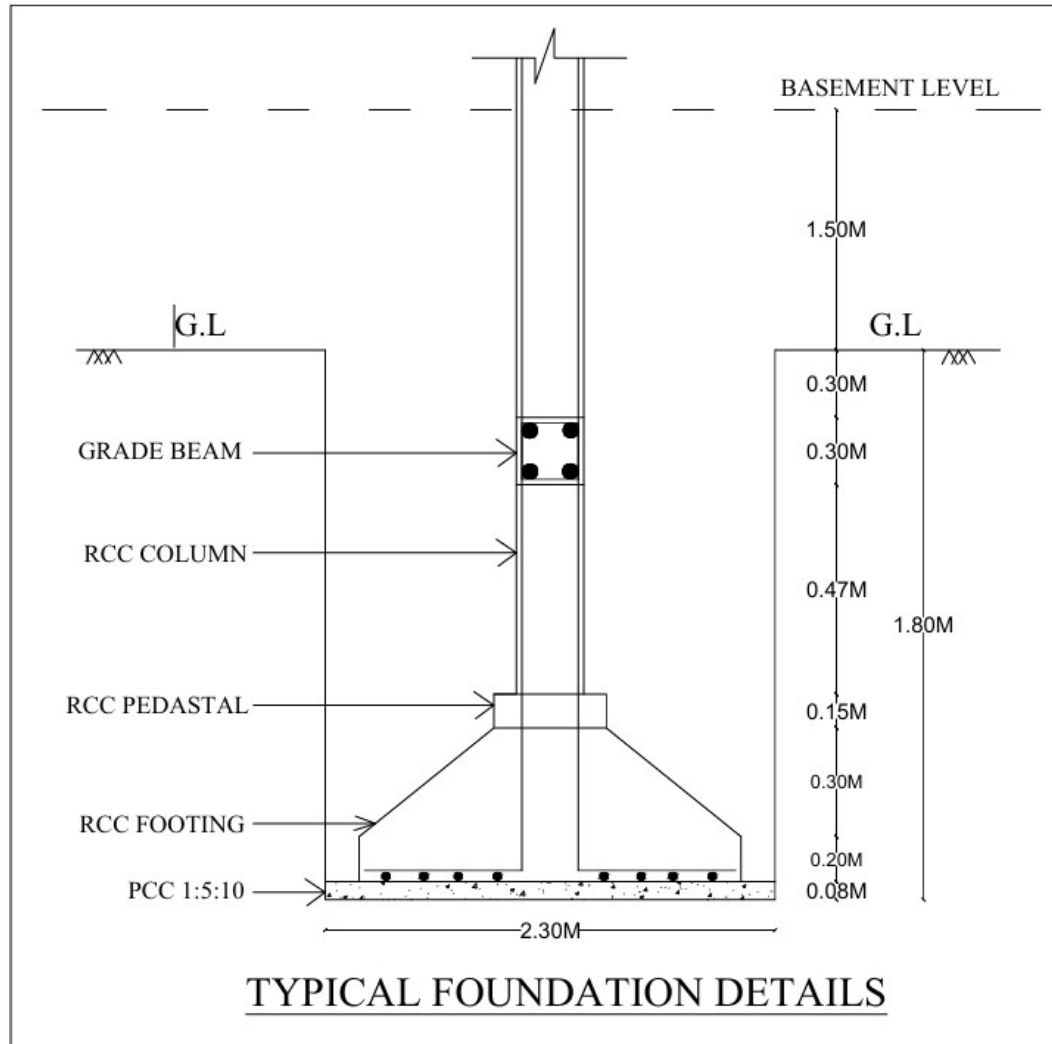
- **Mechanical / Manual means** - Depends on the site condition and nature of work
- Depth Criteria: (Standard Data book)
 - ❖ Up to 2.40 m depth
 - ❖ Above 2.40 m and every additional 1m depth and part thereof.
- The Data for this item **does not include refilling back** with the excavated earth.
- Measurement in this item generally includes:
 - ❖ Sump
 - ❖ Septic Tank
 - ❖ Dispersion Trench
 - ❖ Inspection Chamber
 - ❖ Pavement
 - ❖ Steps

Cement Concrete 1:5:10 using 40 mm gauge hard broken granite stone jelly for Foundation

Unit of measurement:- cu.m

- Mixing by **Mechanical / Manual** means
- Depth Criteria: (Schedule of Rates)
 - ❖ Below Ground Level: upto 1.50 m, 1.50m to 4.50m, 4.50m to 9.00m, for every additional 4.50m.
- Generally **CC 1:5:10 of 8cm to 10cm** thick is provided below the concrete elements which are in direct contact with the soil, to avoid adverse reactions in concrete.
- Measurement in this item generally includes:
 - ❖ Footing
 - ❖ Grade Beam & Toe beam (Staircase)
 - ❖ Ramp Walls
 - ❖ Entrance Steps
 - ❖ Septic Tank
 - ❖ Sump
 - ❖ Inspection Chamber

TYPICAL FOUNDATION DETAILS



FILLING THE BASEMENT

Unit of measurement:- cu.m

- ❑ **Basement Filling** is made with crushed stone Sand (m-sand), Conveyed Earth / Gravel, Excavated Earth and **top levelling course** is made with **10 cm thick Cement Concrete 1:5:10 for flooring**
- ❑ Generally **0.15 m thick m-sand** shall be proposed **beneath CC 1:5:10** in the basement filling.
- ❑ The **Excavated Earth quantity** shall be arrived by adding the quantity of earth replaced by the volume of concrete below the Ground level (RCC & PCC) and the quantity of open earthwork excavation. i.e.,

Qty. of Excavated Earth = [Qty. of Concrete for Footing & Grade Beam] + [Qty. of CC 1:5:10 for Footing & Grade beam] + [85–90% of Qty. Open Earthwork Excavation]

Qty. of Conveyed Earth / Gravel = Overall filling qty. required - M.Sand Qty.- Excavated Earth Qty.

BRICKWORK

- Brick walls act as a Panel wall in Framed Structure i.e., the Brick Walls don't transfer load. So, Brickwork in Cement Mortar 1:6 is generally proposed for walls in Framed Structure.
- Brickwork in Cement Mortar 1:5 is generally proposed for load bearing walls, Entrance Steps and Ramp
- For Water retaining structures such as Sump, Septic Tank, etc , Brickwork in rich mortar i.e., Cement mortar 1:3 is preferred.
- Brick material and type shall be chosen with respect to type of structure, in accordance with IS 2212 with required Class designation i.e., 7.5, 10, 12.5 & locally available material nearby site.
- Brick partition walls of 11.00cm thickness is provided as per the Chief Architect Plan and is measured in sq.m.

Unit of measurement:

Full brick Wall - cu.m

Half brick / Partition Wall - sq.m

Note:

Height of the brickwork is generally taken upto roof beam bottom and D/f Joineries, Lintel beam, Sill slab is suitably done.

LIFT CHARGES – BRICKWORK:

- If the basement height of the brick masonry is more than 1.00 m above average Ground Level, then the quantity of the brickwork shall be taken as follows:
 - Qty. of brickwork up to height of 1.00 from G.L. – Foundation and Basement.
 - Qty. of brickwork above 1.00 from G.L. – Superstructure in Ground Floor.
- If the height of the brick wall in superstructure is more than 4.50 m from the plinth level, then the quantity of the brickwork shall be taken as follows:

Qty. of brickwork up to height of 4.50 m from floor level ie., plinth level in GL	-	Rate for Superstructure in Ground Floor
Qty. of brickwork above 4.50 m height from floor level ie., plinth level in GL	-	Rate for Superstructure in Ground Floor + Additional Lift Charges over the rate of preceding floor for every 4.50 m.
- The quantity of Parapet Wall measurement shall be made in the preceding floor. (i.e., if the parapet wall is constructed over Ground Floor Roof i.e., in the First Floor, the measurement of Parapet Wall to be made in Ground Floor itself)

DAMP PROOF COURSE

Unit of measurement:- sq.m

- DPC is to be provided beneath the Brick on edge course to **protect the seepage of water in to the Superstructure.**
- Damp Proof Course may be provided either in Cement Mortar 1:4, 12 mm thick (or) PCC 1:2:4, 40 mm thick

CENTERING & SHUTTERING

Unit of measurement:- sq.m

- Centering to be made for all RCC components and the type available in standard Data are as follows:

Centering - Column footings, column pedestals, plinth beams, grade beams, staircase steps, Sill slabs

Centering - RCC Floor/Roof Beam, Lintels, Cantilever Beams, Bed Blocks etc.. with necessary supports and strutting

- upto 3.60m height
- 3.60m to 4.90m height
- 4.90m to 5.50m height

Centering - RCC Floor Slab, Roof Slab, Loft, Landing Slabs, Sunshades, etc with necessary supports and strutting

- upto 3.60m height
- 3.60m to 4.90m height
- 4.90m to 5.50m height

Centering - Rectangular or square RCC columns etc

Centering - Vertical slab, Side slabs of boxing, Vertical drops, Facia, Vertical wall, etc.

Note:

- Any overlap of centering area should be deducted appropriately.
- Like deduction of beam butting in column centering, deduction of Sunshade butting in Lintel beam centering

Note:

- If the height of the Slab / Beam is above 5.50 m above Basement level, then in addition to the centering measurement, provision for additional strutting shall be made suitably.
- For Curved Surface of Slab / Beams, 50% rate of respective items shall be added.
- For Circular Columns, 100% rate of rectangular column centering shall be added.

REINFORCED CEMENT CONCRETE

Unit of measurement:- cu.m

- Grade of Concrete shall be selected based on the exposure condition, as per IS 456:2000

Sl. No	Exposure condition	For Reinforced Concrete
		Minimum Grade of Concrete
1	Mild	M20
2	Moderate	M25
3	Severe	M30
4	Very severe	M35
5	Extreme	M40

Sl.No (1)	Environment (2)	Exposure conditions (3)
i)	Mild	Concrete surfaces protected against weather or aggressive condition, except those situated in coastal area
ii)	Moderate	Concrete surfaces sheltered from severe rain or freezing whilst wet. Concrete exposed to condensation and rain. Concrete continuously under water. Concrete in contact or buried under non-aggressive soil / ground water. Concrete surfaces sheltered from saturated salt air in coastal area
iii)	Severe	Concrete surfaces exposed to severe rain, alternate wetting and drying or occasional freezing whilst wet or severe condensation Concrete completely immersed in sea water. Concrete exposed to coastal environment.
iv)	Very severe	Concrete surfaces exposed to sea water spray, corrosion fumes or severe freezing condition whilst wet. Concrete in contact with or buried under aggressive sub-oil / ground water.
v)	Extreme	Surface of members in tidal zone. Members in direct contact with liquid / solid aggressive chemicals.

Extract from the Technical Circular No. AEE / T10 / 3356 / 2017, Dated:27.04.2017.

Sl. No	Exposure condition	Grade of Concrete	Distance from Sea Water Front
1	Mild	M20	Beyond 24 Km
2	Moderate	M25	Beyond 10Km and up to 24 km
3	Severe	M30	Up to 10 km

- If higher RCC grade is required owing to the structural requirement, then it shall be adopted irrespective of the Exposure condition.

LIFT CHARGES – CONCRETE

- If the basement height of the concrete is more than 1.00 m above average Ground Level, then the quantity of the concrete shall be taken as follows:
 - Qty. of concrete up to height of 1.00 from G.L. – Foundation and Basement.
 - Qty. of concrete above 1.00 from G.L. – Superstructure in Ground Floor.

- If the height of the concrete in superstructure is more than 4.50 m from the plinth level, then the quantity of the concrete shall be taken as follows:

Qty. of concrete up to height of 4.50 m from floor level ie., plinth level in GL	-	Rate for Superstructure in Ground Floor
Qty. of concrete above 4.50 m height from floor level ie., plinth level in GL	-	Rate for Superstructure in Ground Floor + Additional Lift Charges over the rate of preceding floor for every 4.50 m.

MILD STEEL / RIBBED TOR STEEL GRILLS FOR ALL RCC WORKS

Unit of measurement:- quintal

- Steel for estimate purpose shall be calculated based on volume of concrete i.e.,

$$\text{Qty. of Steel (kg)} = \text{Volume of RCC element} \times \text{Co-efficient (kg/m}^3\text{)}$$

- Quantity of Steel shall be calculated floorwise viz., Foundation and Basement, Super Structure in Ground Floor, Super Structure in First Floor, etc.,
- The Co-efficient taken to arrive Steel quantity for different RCC elements are as below:

QUANTITY OF STEEL FOR STRUCTURAL MEMBERS FOR THE PURPOSE OF ESTIMATION

For the purpose of uniformity in the preparation of detailed estimate, the following standards is suggested while calculating the quantity of steel reinforcement in various R.C.C. members.

Sl.NO	R.C.C. member	Co-efficient taken in kg/m³
1.	Slab	80-100
2.	Beam	225
3.	Staircase – Waist slab & Retaining Wall	150
4.	Footing	50-75
5.	Plinth Beam, Grade Beam, lintels, Sunshade Fins, vertical drop	100
6.	Column	As details furnished below

Quantity of Steel in kg/m³ in R.C.C. Columns.

<u>225</u>										
<u>225</u>	<u>225</u>									
<u>300</u>	<u>225</u>	<u>225</u>								
<u>300</u>	<u>300</u>	<u>225</u>	<u>225</u>							
<u>350</u>	<u>300</u>	<u>300</u>	<u>225</u>	<u>225</u>						
<u>350</u>	<u>350</u>	<u>300</u>	<u>300</u>	<u>225</u>	<u>225</u>					
<u>400</u>	<u>350</u>	<u>350</u>	<u>300</u>	<u>300</u>	<u>225</u>	<u>225</u>				
<u>400</u>	<u>400</u>	<u>350</u>	<u>350</u>	<u>300</u>	<u>300</u>	<u>225</u>	<u>225</u>			
<u>400</u>	<u>400</u>	<u>400</u>	<u>350</u>	<u>350</u>	<u>300</u>	<u>300</u>	<u>225</u>	<u>225</u>		
<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>	<u>350</u>	<u>350</u>	<u>300</u>	<u>300</u>	<u>225</u>	<u>225</u>	

Total No. of Storey → 10 9 8 7 6 5 4 3 2 1

Cement Concrete 1:5:10 (One cement, Five crushed stone sand and Ten hard broken stone) for flooring

Unit of measurement:- cu.m

- The top 0.10 m of the basement filling is generally provided with CC 1:5:10 and acts as levelling course for the flooring.
- Specification - Cement Concrete 1:5:10 (One cement, Five crushed stone sand and Ten hard broken stone) using 40 mm gauge hard broken jelly for flooring including laying, consolidating, finishing, **rendering the top surface rough to receive the floor finish**, curing, etc. complete complying with standard specification. (The rate is inclusive of necessary planking for panelling wherever necessary and as directed by the departmental officers).

ROOF FINISH

Unit of measurement:

Weathering Course / PCC - cu.m.

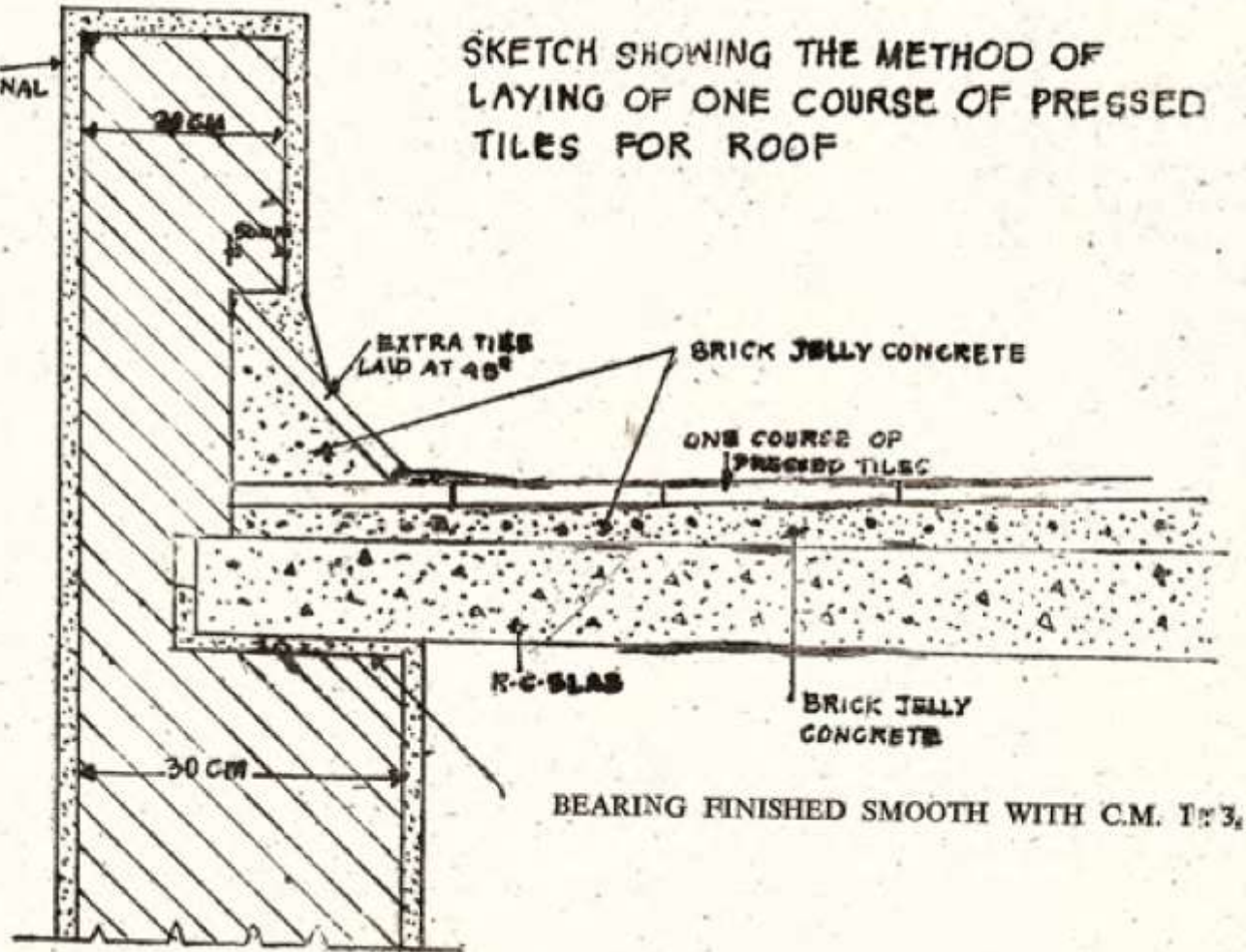
Machine Pressed / Solar Tiles / Combination Mortar - sq.m.

- Roof Finish consists of two components i.e., (i) PCC/ Weathering Course to achieve the required slope and (ii) Top finishing with tiles / Combination mortar.
- The purpose of roof finish is to ensure proper drainage of water entering the roof through Rainwater downfall pipe, which is achieved by forming ridge appropriately and depression near Rainwater downfall pipe with a proper slope.
- PCC / Weathering Course is provided with an average thickness not below 5.00 cm / 8.00 cm respectively for the entire roof area. Further, Splashing portion is also provided in PCC / Weathering Course.
- The PCC / Weathering Course shall be finished with either Machine pressed tiles, Solar Reflective Tiles (or) sometimes with Combination Mortar.
- 1 number of Rainwater Downfall Pipe of size 110mm dia shall be provided for every 40 sq.m. of roof area.

- The protection against water penetration for the roof finish is enhanced by efficient drainage of surface water.
- For this purpose, the slope of the terrace with lime concrete and tile finish shall not be less than 1 in 60 and the slope in the case of plain lime concrete finish shall not be less than 1 in 50.

12 MM THICK EXTERNAL
RENDERING

SKETCH SHOWING THE METHOD OF
LAYING OF ONE COURSE OF PRESSED
TILES FOR ROOF



EXTRA TIE
LAID AT 45°

BRICK JELLY CONCRETE

ONE COURSE OF
PRESSED TILES

R.C. SLAB

BRICK JELLY
CONCRETE

BEARING FINISHED SMOOTH WITH C.M. 1:3

20 CM

30 CM

FLOOR FINISH

➤ The type of flooring depends on the purpose for the room is being used and should be chosen appropriately.

Area	Type of Floor Finish generally used
Room Flooring except Toilets	Double charged Vitrified Tiles / Kota Flooring / Fine polished Granite Flooring / Industrial tiles with full vitrification
Toilet Flooring	Ceramic Tiles
Dadoing of toilet walls / Hospital Walls	Ceramic/Vitrified Tiles
Pavement	Granolithic Flooring/Pre cast PCC Slab of varying thickness is provided appropriately
Ramp, Entrance Landing	Anti Skid Tiles / Granolithic Floor finish
Entrance Steps	Anti-Skid step tiles (includes nosing) / Granite Flooring with leather finish / Granolithic Floor finish
Top of working Table	Granite Stone slab/Cuddapah Slab with double nosing

Unit of measurement:- Sq.m

Note:

- Skirting of 0.10 m is provided in appropriate floor finish to ensure easy maintenance of floors.
- Quantity of Dadoing is to be deducted in Plastering quantity.
- PVC beading shall be provided between the adjacent Wall tiles.

Note for Flooring measurement:

- Addition of Door sill
- Deduction for joineries width in skirting area (taken as perimeter of room) to be done.

Note for dadoing tiles measurement:

(generally taken as perimeter of room X height of wall tile), deduction for Joineries viz., doors and ventilators shall be considered.

CUPBOARD ARRANGEMENTS

- Vertical walls of Cupboard shall be provided generally in brick partition wall and shelves in cuddapah slabs / precast slabs of appropriate thickness.
- Wooden Cupboard Shutter provision shall be made, if necessary

HANDRAIL ARRANGEMENTS

- Handrail arrangements shall be made for Ramp, Steps & Landing. Various types of handrail arrangements are as follows:

Type of Handrail arrangements	Unit of Measurement
Stainless Steel Handrail	sq.m.
Stainless Steel Handrail near wet riser	Rm
50 mm dia GI handicapped persons Handrail (includes railing at two levels with balustrades)	Rm
40 mm dia GI pipe handrail	Rm
Steel Balustrades	sq.m.

JOINERIES

Unit of measurement:-

Door Frames – Rm

Door Shutters, Door, Windows, Ventilators – sq.m.

➤ Type of Joineries shall be selected in accordance with usage and atmospheric conditions and as per Joinery details furnished in CA plan.

Door Frames	Door Shutters	Door with frame	Windows	Ventilators
<ul style="list-style-type: none">• CRCA• Stainless Steel• RCC	<ul style="list-style-type: none">• Solid core particle board flush shutter• Medium Density Fiber door	<ul style="list-style-type: none">• Teakwood Door (only for main entrance)• UPVC door• Wooden Polymer Composite door (preferred for Toilet door)• Solid PVC door• Aluminium doors• Steel sheeted Door	<ul style="list-style-type: none">• Steel sheeted Window• Steel glazed window• UPVC window• Aluminium (openable / sliding)	<ul style="list-style-type: none">• UPVC Ventilator• Swing Ventilators• 'N' type ventilator

PLASTERING

Unit of measurement:– sq.m.

Specification for Plastering	Components
Plastering in Cement Mortar 1:5, 12 mm thick in single coat / 20 mm thick in double coat	Brick Masonry walls
Special Ceiling Plastering in Cement Mortar 1:3, 10 mm thick	Exposed Concrete Surfaces
Plastering in Cement Mortar 1:3, 20 mm thick	Bottom of Water retaining structures such as Sump, Septic Tank, Chamber, etc.,
Plastering in Cement Mortar 1:3, 12 mm thick	Side Walls of Water retaining structures such as Sump, Septic Tank, Chamber, etc.,
Plastering in Cement Mortar 1:3, 10 mm thick	Top slabs of Water retaining structures such as Sump, Septic Tank, Chamber, etc.,
Stucco Plastering	Basement walls Outer

Note:

- Qty. of Plastering in CM 1:5 = $\left(\frac{\text{Qty. of full Brickwork}}{0.23} \times 2\right) + (\text{Qty. of Brick Partition wall} \times 2)$
- Special Ceiling Plastering = 80% to 90% of Beam, Slab & Column Centering

PAINTING

Unit of measurement:– sq.m.

➤ Types:

White /
Colour Wah
using Lime

Cement Paint

Distemper

Emulsion
Paint

- Plastic Emulsion (Inner painting)
- Exterior Emulsion (Outer painting)

Texture Paint
(Elevation
Purpose)

➤ Painting shall be done either after applying Wall Putty or without the same.

➤ Synthetic Enamel Paint – Wood Works & Iron Works.

Note:

- Area of Inner painting = 60% of Total Plastered area
- Area of Outer painting = 40% of Total Plastered area
- Area of Enamel Paint = Area of Joineries X Coefficients

PAINING COEFFICIENTS

PAINING COEFFICIENTS

Sl. No.	Description of work	Multipling Co-efficient
	Wood Work – Doors – Windows, etc	
1	Paneled or framed and Braced doors, Windows, etc	1.30 (for each side)
2	Ledged and battened or ledged, battened and braced doors, windows, etc.	1.30 (for each side)
3	Flush doors, etc.	1.20 (for each side)
4	Partly panelled and partly glazed or gauged doors, windows, etc.	1.00 (for each side)
5	Fully glazed or gauged doors, windows, etc.	0.80 (for each side)
6	Fully venetioned or louvered doors, windows, etc.	1.80 (for each side)
7	Trellis (or Jaffri) work one way or two way	2 (for Painting all over)
8	Carved or enriched work	2 (for each side)
9	Weather boarding	1.20 (for each side)
10	Wood single roofing	1.10 (for each side)
11	Boarding with cover fillets and match boarding	1.05 (for each side)
12	Tile and slate battening	0.80 (for painting all over)
13	Plain sheeted Steel doors or windows	1.10 (for each side)
14	Fully glazed or gauged steel doors and windows	0.50 (for each side)
15	Partly panelled and partly glazed or gauged doors and windows	0.80 (for each side)
16	Corrugated sheeted steel doors or windows	1.25 (for each side)
17	Collapsible gates	1.50 (for painting all over)
18	Rolling shutters of interlocked laths	1.10 (for each side)
	GENERAL WORK:	
19	Expanded metal, hard drawn wire fabric of approved quality, grill work and gratings guard bars, balustrades, railing and partitions	1.00 (for painting all over)
20	Open balustrade and gates including standard braces, rails, stays, etc. in timber or steel	1.00 (for painting all over)
21	Corrugated iron sheeting in roofs, side cladding, etc.	1.14 (for each side)
22	A.C. Corrugated sheeting in roofs, side cladding, etc.	1.20 (for each side)
23	A.C. Semi-Corrugated sheeting in roofs side cladding, etc. (or Nainital pattern using plain sheets)	1.10 (for each side)
24	Wire gauge Shutters including painting of wire gauge	1.00 (for each side)

Note :

The height shall be taken from the bottom of the lowest rail, if the balustrades do not go below it (or from the lower end balustrades, if they project below the lowest rail) upto the top of balustrades but not upto the top of standards, if they are higher than the balustrades.

WATER SUPPLY LINE

Materials:

UPVC

- Class 5 – Pressure 10 kg/cm² – withstands less pressure
- Class 6 – Pressure 12 kg/cm² – withstands more pressure

CPVC

- SDR 11 – withstands more pressure
- SDR 13.5 – withstands less pressure

Galvanized Iron (GI) pipes- B Class

PVC pipes – 10 kg/cm²

Required Specials

- Source of Supply to OHT – More pressure.
- OHT to Rooms – Less pressure (Gravity Flow)

Type of Control Valves	Suitability
Gate Valves	More Pressure lines
Wheel Valves	Less Pressure lines

Note:

- Control Valves shall be provided at entry point of each room.
- Gate Valves are to be provided for every water line coming out from the OHT.

*OHT – Overhead Tank

SANITARY LINE

- Materials available – PVC, UPVC- SWR, CI, Stoneware pipes.

Generally used

Areas	Minimum diameter of Soil outlet pipe
Wash basin, Floor trap of Bath	50 mm dia (However, 75 mm diameter is preferable for easy flow)
Urinal & Water Closets	110 mm dia

➤ Septic Tank:

- The size / capacity of Septic Tank is based on number of users.
 - The **ratio of clear width to clear length** of Septic Tank is adopted as **1:3**, to ensure effective septic process.
 - The outlet of Septic tank to be let out either in Dispersion Trench (or) Sewage Treatment Plant line.
- Nahini Traps shall be provided in Bath area and wherever found necessary to drain except Sullage water
 - Gradient for Soil Pipeline – 1 in 50 minimum.

NAME OF WORK:-										
MODEL QUANTITY ABSTRACT										
<u>QUANTITY ABSTRACT</u>										
Sl. No	Description of Work	main building	Water supply	Sump	Approch road/pavement	Furniture	Fire fighting	Compound wall	Qty	Unit
1	Installation charges of piles	2.00							2.00	Nos
2	Installation of Vertical bored cast in situ RCC piles									
a	450mm dia pile	3480.00							3480.00	Rm
3	Initial Load Test	1.00							1.00	Nos
4	Routine load test	2.00							2.00	Nos
5	Earth work excavation									
a	Upto 2m depth	395.00			40.00			435.00	870.00	m3
6	Earth work open excavation	192.00		190.00					382.00	m3
7	Supplying and Filling sand	184.00		9.00	12.00			45.00	250.00	m3
8	Cement Concrete 1:5:10	140.00		6.00	19.00			30.00	195.00	m3
9	Supplying and Filling earth	274.00			260.00				534.00	m3
10	crushed stone dust	241.00			180.50			4.50	426.00	m3
11	Brick work in Cement mortar 1:3									
a	For foundation & basement	37.00							37.00	m3
12	Brick work in Cement mortar 1:5									
a	For foundation & basement	122.50			38.00			5.50	166.00	m3
b	In Ground floor			9.00				57.00	66.00	m3
13	Brick work in cement mortar 1:6									
a	In Stilt floor	106.00							106.00	m3
b	In First floor	215.00							215.00	m3
c	In Second floor	222.00							222.00	m3
d	In Third floor	221.00							221.00	m3
e	In Fourth floor	221.00							221.00	m3
f	In Fifth floor	82.00							82.00	m3
14	shuttering for RCC column footings,	930.00		10.00				260.00	1200.00	m2
15	strutting upto 3.29m height									
a	RCC floor slab, roof slab,	5880.00		70.00				30.00	5980.00	m2
b	vertical slab, side slabs of boxing	180.00		200.00					380.00	m2
c	RCC square or rectangular column	2755.00						325.00	3080.00	m2
16	Standardised Concrete Mix M-20 Grade									
a	Foundation & Basement	100.00						65.00	165.00	m3
b	In Ground floor							20.00	20.00	m3
17	Standardised Concrete Mix M-30 Grade									

Sl. No	Description of Work	main building	Water supply	Sump	Approach road/pavement	Furniture	Fire fighting	Compound wall	Qty	Unit
a	Foundation & Basement	212.00		48.00					260.00	m3
b	In Stilt floor	178.00		2.00					180.00	m3
c	In First Floor	195.00							195.00	m3
d	In Second Floor	190.00							190.00	m3
e	In Third Floor	185.00							185.00	m3
f	In Fourth floor	185.00							185.00	m3
g	In Fifth floor	84.00							84.00	m3
18	Mild steel or Ribbed for Steel rods	2010.00		63.00				87.00	2160.00	Qtl
19	Expansion joint in RCC twin columns							50.00	50.00	Rm
20	Weathering course	117.00		1.50				1.50	120.00	m3
21	Machine pressed tiles	800.00		15.00				20.00	835.00	m2
22	Brick partition walls of 11cm thickness									
a	In Stilt floor	21.00		4.00					25.00	m2
b	In First Floor	205.00							205.00	m2
c	In Second Floor	205.00							205.00	m2
d	In Third Floor	205.00							205.00	m2
e	In Fourth floor	205.00							205.00	m2
23	Granolithic floor	20.00		50.00					70.00	m2
24	Brick Jelly Lime Concrete of 1:2:5	61.00							61.00	m3
25	Paving the floor with Granite Stone Slabs	575.00							575.00	m2
26	Kota stone slabs	102.00						20.00	122.00	m2
27	double charged Vitrified tiles of size 600x600x8mm	2245.00							2245.00	m2
28	Flooring with Self design Joint free rectified Ceramic Tiles	280.00		42.00					322.00	m2
29	Dadoing walls with size of 300x600x10mm	1190.00							1190.00	m2
30	Dadoing walls with size of 300x200x6mm	72.00		110.00					182.00	m2
31	Clading the walls by White Galaxy granite	135.00							135.00	m2
32	anti-skid floor tiles	236.00							236.00	m2
33	Cuddapah slab	355.00							355.00	m2
34	manual foldable wheel Chair	2.00							2.00	Nos
35	Providing grooving	575.00							575.00	Rm
36	Providing double semi nosing	390.00							390.00	Rm
37	PVC Trims	645.00							645.00	Rm
38	Plastering with Cement Mortar 1:3 20mm thick	620.00							620.00	m2
39	Plastering with Cement Mortar 1:5 12mm thick	9840.00		80.00				545.00	10465.00	m2
40	ceiling putty	5215.00							5215.00	m2
41	Plastering with Cement Mortar 1:3 10mm thick	3608.00		52.00	175.00			355.00	4190.00	m2

Sl. No	Description of Work	main building	Water supply	Sump	Approach road/ pavement	Furniture	Fire fighting	Compound wall	Qty	Unit
42	cement paint	5218.00							5218.00	m2
43	Wall putty	41316.00							41316.00	kgs
44	Novafine paint	27.00							27.00	m2
45	Texture putty	3093.00							3093.00	m2
46	plastic emulsion paint	13422.00						900.00	14322.00	m2
47	Epoxy paint	340.00							340.00	m2
48	synthetic enamel paint				175.00				175.00	m2
49	Rubber corner guard for car parking	85.00							85.00	Nos
50	Stainless Steel Door Frame	475.00							475.00	Rm
51	solid core flush shutters									
a	Single Leaf	150.00							150.00	m2
b	Double Leaf	11.00							11.00	m2
52	Teak Wood frames for doors									
a	T.W Scantling upto 2m	0.05							0.05	m3
b	T.W Scantling below 3m & above 2m	0.35							0.35	m3
53	MS Hold fasts	8.00							8.00	Nos
54	Providing teak wood main door shutters	9.00							9.00	m2
55	Providing Cup board shutter arrangements	255.00							255.00	m2
56	Polishing the teak wood door	425.00							425.00	m2
57	FRP Door Frame with shutter	128.00							128.00	m2
58	Terracotta jally	43.00							43.00	m2
59	UPVC windows	382.50						3.50	386.00	m2
60	UPVC louvered ventilators	62.90		1.10					64.00	m2
61	Hydraulic Door Closer	85.00							85.00	Nos
62	Steel doors	4.50		2.50				4.50	11.50	m2
63	M.S. Grills	9593.00		25.00				6460.00	16078.00	Kgs
64	Painting new iron works	471.00		7.00				165.00	643.00	m2
65	Supplying and fixing curtains	405.00							405.00	m2
66	stainless steel hand rails	70.00							70.00	m2
67	SS hand rails 300mm welded to existing vertical post	22.00							22.00	Rm
68	PVC rain water down fall pipes									
a	160 mm diapvc pipe	218.00							218.00	Rm
b	110 mm diapvc pipe	20.00							20.00	Rm
69	Providing Anti-termite treatment	785.00							785.00	m2
70	Sthapathi band of width 75/100 mm	1115.00						395.00	1510.00	Rm
71	Sthapathi band of width 150/200 mm	228.00							228.00	Rm

Sl. No	Description of Work	main building	Water supply	Sump	Approch road/ pavement	Furniture	Fire fighting	Compound wall	Qty	Unit
72	gothic's Of 230mm width	126.00							126.00	Rm
73	polymer based water proofing treatment	573.00		262.00					835.00	m2
74	RO drinking water plant of 1000LPH	1.00							1.00	Nos
75	Cooler unit with 40 litres	5.00							5.00	Nos
76	Precast Reinforced Cement Concrete slabs of 75mm	160.00							160.00	m2
77	Hi tensile membrane structure parking canopy	110.00							110.00	m2
78	paver block of 63mm thick				885.00				885.00	m2
79	GYP Board false ceiling	115.00							115.00	m2
80	Cornice with gypboard	48.00							48.00	Rm
81	Finishing Elevation with Cement Concrete tiles	55.00							55.00	m2
82	Polycarbonate sheet	146.00							146.00	m2
83	Building model	1.00							1.00	No
84	cera board	145.00							145.00	m2
85	Aluminium Composite Panel (ACP)	96.00							96.00	m2
86	structural glazing	38.00							38.00	m2
WATER SUPPLY & SANITARY ARRANGEMENTS										
87	Drilling bore wells		120.00						120.00	Rm
88	Reaming 140 / 150 mm dia		120.00						120.00	Rm
89	Supplying of PVC casing pipes									
a	Slotted pipe 160 mm Dia		64.00						64.00	Rm
b	Plain pipe 160mm Dia		64.00						64.00	Rm
90	Labour charges for inserting PVC casing pipes		128.00						128.00	Rm
91	Charges for developing the bore well		32.00						32.00	Hrs
92	HDPE Pipes									
a	40mm Dia		128.00						128.00	Rm
b	25mm Dia		128.00						128.00	Rm
93	3 HP Double stage Jet Motor		4.00						4.00	Nos
94	Gun Metal Gate valve /wheel valve									
a	25 mm dia G.M. Wheel Valve		56.00						56.00	Nos
b	32mm dia G.M. Wheel Valve		48.00						48.00	Nos
c	40 mm dia G.M. Gate Valve		16.00						16.00	Nos
d	50 mm dia G.M. Gate Valve		11.00						11.00	Nos
95	15mm dia tap following type									
a	15mm dia CP Pillar Tap		6.00						6.00	Nos
b	15mm dia Long body Tap		67.00						67.00	Nos
c	15mm dia Stop Cock		70.00						70.00	Nos

Sl. No	Description of Work	main building	Water supply	Sump	Approch road/ pavement	Furniture	Fire fighting	Compound wall	Qty	Unit
d	15mm dia Swan Neck Tap		70.00						70.00	Nos
96	CP Bottle trap		70.00						70.00	Nos
97	Two way bib cock with health faucet		65.00						65.00	Nos
98	CP shower rose,Wall Mixture,Hand Shower, Shower Arm		65.00						65.00	Nos
99	edge mirror		70.00						70.00	Nos
100	SS towel rack		68.00						68.00	Nos
101	CP soap tray		70.00						70.00	Nos
102	SS Toilet roll holder		64.00						64.00	Nos
103	UPVC Specials									
I	UPVC Elbow									
a	50 mm dia		20.00						20.00	Nos
b	40 mm dia		50.00						50.00	Nos
c	32mm dia		90.00						90.00	Nos
d	25 mm dia		230.00						230.00	Nos
e	20 mm dia		350.00						350.00	Nos
II	UPVC Tee									
a	50 mm dia		20.00						20.00	Nos
b	40 mm dia		50.00						50.00	Nos
c	32mm dia		90.00						90.00	Nos
d	25 mm dia		200.00						200.00	Nos
e	20 mm dia		320.00						320.00	Nos
III	UPVC Reducer									
a	50x40mm dia		10.00						10.00	Nos
b	40x32mm dia		30.00						30.00	Nos
c	32x25mm dia		150.00						150.00	Nos
d	25 x 20 mm dia		200.00						200.00	Nos
IV	UPVC Reducer Elbow									
a	50x40mm dia		10.00						10.00	Nos
b	40x32mm dia		30.00						30.00	Nos
c	32x25mm dia		90.00						90.00	Nos
d	25 x 20 mm dia		180.00						180.00	Nos
V	UPVC Reducer Tee									
a	50x40mm dia		10.00						10.00	Nos
b	40x32mm dia		30.00						30.00	Nos
c	32x25mm dia		80.00						80.00	Nos
d	25 x 20 mm dia		158.00						158.00	Nos

Sl. No	Description of Work	main building	Water supply	Sump	Approch road/ pavement	Furniture	Fire fighting	Compound wall	Qty	Unit
VI	UPVC Hex Nipple									
a	50 mm dia		20.00						20.00	Nos
b	40 mm dia		40.00						40.00	Nos
c	32mm dia		70.00						70.00	Nos
d	25 mm dia		70.00						70.00	Nos
e	20 mm dia		70.00						70.00	Nos
VII	UPVC Union									
a	50 mm dia		10.00						10.00	Nos
b	40 mm dia		30.00						30.00	Nos
c	32mm dia		70.00						70.00	Nos
d	25 mm dia		70.00						70.00	Nos
e	20 mm dia		70.00						70.00	Nos
104	wash hand basin		65.00						65.00	Nos
105	SS Sink		2.00						2.00	Nos
106	Indian Water Closet		1.00						1.00	Nos
107	floor mounted EWC		64.00						64.00	Nos
108	CI Nahani Trap / Floor Trap									
a	Nahani Trap of size 100 x 75mm		140.00						140.00	Nos
109	stoneware gully trap		17.00						17.00	Nos
110	PVC soil / waste pipes									
a	75mm dia PVC soil waste pipe		695.00						695.00	Rm
c	110mm dia PVC soil waste pipe		676.00						676.00	Rm
d	160mm dia PVC soil waste pipe		215.00						215.00	Rm
111	PVC specials									
I	PVC Elbow									
a	110mm dia		140.00						140.00	Nos
b	75mm dia		210.00						210.00	Nos
II	PVC Elbow with Door									
a	110mm dia		70.00						70.00	Nos
b	75mm dia		70.00						70.00	Nos
III	PVC Tee									
a	110mm dia		140.00						140.00	Nos
b	75mm dia		210.00						210.00	Nos
IV	PVC Tee with Single Door									
a	110mm dia		70.00						70.00	Nos
b	75mm dia		70.00						70.00	Nos

Sl. No	Description of Work	main building	Water supply	Sump	Approch road/ pavement	Furniture	Fire fighting	Compound wall	Qty	Unit
V	PVC Y									
a	110mm dia		70.00						70.00	Nos
b	75mm dia		70.00						70.00	Nos
VI	PVC "Y" with Single Door									
a	110mm dia		70.00						70.00	Nos
b	75mm dia		70.00						70.00	Nos
VII	PVC bend									
a	110mm dia		70.00						70.00	Nos
b	75mm dia		70.00						70.00	Nos
112	PVC Cowl									
a	75 mm dia		20.00						20.00	Nos
b	110 mm dia		20.00						20.00	Nos
113	CPVC pipes									
a	25 mm dia		392.00						392.00	Rm
114	CPVC Specials									
I	CPVC Elbow									
a	25 mm dia		195.00						195.00	Nos
II	CPVC Tee									
a	25 mm dia		195.00						195.00	Nos
III	CPVC Reducer									
a	32x25mm dia		195.00						195.00	Nos
115	UPVC pipes									
a	20 mm dia		670.00						670.00	Rm
b	25 mm dia		726.00						726.00	Rm
c	32 mm dia		679.00						679.00	Rm
d	40 mm dia		362.00						362.00	Rm
e	50 mm dia		200.00						200.00	Rm
116	Construction of Inspection chamber									
a	0.60 x 0.60 x 0.60m		6.00						6.00	Nos
b	0.60 x 0.60 x 0.90m		8.00						8.00	Nos
c	0.60 x 0.60 x 1.20m		5.00						5.00	Nos
d	0.60 x 0.60 x 1.50m		7.00						7.00	Nos
e	0.60 x 0.60 x 1.80m		4.00						4.00	Nos
117	SFRC manhole		34.00	2.00					36.00	Nos
118	uPVC mould CI Steps		32.00	20.00					52.00	Nos
119	PVC water bar			31.00					31.00	Rm

Sl. No	Description of Work	main building	Water supply	Sump	Approach road/pavement	Furniture	Fire fighting	Compound wall	Qty	Unit
120	Providing rain water harvesting pit		8.00						8.00	Pits
121	5HP monoblock pump			2.00					2.00	Nos
	Landscaping arrangements									
122	red earth	28.00							28.00	m3
123	Korean grass	88.00							88.00	m2
124	Potted plants	15.00							15.00	Nos
125	Arica Palm	8.00							8.00	Nos
126	Fox Tail Palms									
a	fox tail palms(12ft height)	3.00							3.00	Nos
b	figus(6ft)	6.00							6.00	Nos
127	foliage and flowering shrubs	50.00							50.00	Nos
	FIRE FIGHTING									
128	Supply, erection, testing and commissioning of following MS „C“ Class Heavy Duty Pipe as per IS 1239 to withstand									
a	150mm nominal dia						150.00		150.00	RM
b	100mm nominal dia						90.00		90.00	RM
c	80mm nominal dia						12.00		12.00	RM
d	25mm nominal dia						3.00		3.00	RM
129	Providing, fixing pipe supports from columns / wall or suspenders from roof slab to suit various dia of pipes made						100.00		100.00	Nos
130	Wrapping and Coating Anti-Corrosive Treatment for under ground MS pipe having one coat of anti-corrosive metal						150.00		150.00	Mtr
131	Supply, erection, testing and commissioning of fire fighting application monoblock motor pumpset of 900 LPM at 40						1.00		1.00	No
132	Supply, erection, testing and commissioning of Fire Fighting Electrical Control Panel of 15 HP, 415 V, 50 Hz						1.00		1.00	No
133	Supply, erection, testing and commissioning of suitable Pressure Switch of reputed make line Indfoss or Donfoss						1.00		1.00	No
134	Supply, erection, testing and commissioning of Pressure Gauge with 0 to 14 kg. range of reputed make with						1.00		1.00	No
135	Supply and laying of 4 core 10 sq.mm. armoured copper cable for power wiring to the Terrace Pump Motor with						50.00		50.00	Mtr
136	Supply and laying of 2 core 1.5 sq.mm. armoured copper cable for control wiring to the Terrace Pump Motor with						15.00		15.00	Mtr
137	Supply, erection, testing and commissioning of cast iron body and bronze internal non-rising spindle sluice valve of									
a	150 mm nominal dia						2.00		2.00	Nos
b	100 mm nominal dia						2.00		2.00	Nos
c	80mm nominal dia						1.00		1.00	No

Sl. No	Description of Work	main building	Water supply	Sump	Approch road/ pavement	Furniture	Fire fighting	Compound wall	Qty	Unit
138	Supply, erection, testing and commissioning of Cast iron body and Gun metal or stainless steel internal Nonreturn						1.00		1.00	Nos
139	Supply and fixing of Fire fighting application oblique type stainless steel Hydrant Valve of size 63mm dia with						8.00		8.00	Nos
140	Supply, and fixing in position of Fire Fighting Application Hose of 63mm dia of 15 metres length binded by copper						16.00		16.00	Nos
141	Supply, and fixing in position of Fire Fighting Application 63mm dia stainless steel short length Branch Pipe with						8.00		8.00	Nos
142	Supply, installation of Fire Fighting Application 180 degree swinging type, hose reel drum with 20mm dia braided						4.00		4.00	Nos
143	Supply of Fire Fighting Application MS Hose Box to keep two number of hoses and 1 No. of branch pipe with nozzle						8.00		8.00	Nos
144	Supply, erection, testing and commissioning of Gun Metal Gate Valve of size 50mm dia size including necessary MS						4.00		4.00	Nos
145	Supply, erection, testing and commissioning of Air Release Valve of 20mm dia, so as to release airlock in 100mm dia						2.00		2.00	Nos
146	Making through holes in Plain or Reinforced Cement Concrete with Diamond Core Drilling System by using						6.00		6.00	Nos
	CONVENTIONAL FIRE ALARM SYSTEM									
147	Supply, installation, testing and commissioning of Micro Processor based conventional 4 Zone Fire Alarm Control						1.00		1.00	Nos
148	Supply, installation, testing and commissioning of Conventional Smoke Detector suitably mounted on ceiling						50.00		50.00	Nos
149	Supply, installation, testing and commissioning of Electronic Hooter / Sounder providing on wall using fixing						9.00		9.00	Nos
150	Supply, installation, testing and commissioning of Manual Call Point (MCP) providing on wall using fixing accessories						8.00		8.00	Nos
151	Supply and laying of 2 core 1.5 sq.mm. armoured copper cable for control wiring to the Terrace Pump Motor with						1000.00		1000.00	Mtrs
152	Supply & installation of Wire 2" Box type						100.00		100.00	Mtrs
153	Supply and fixing of stored pressure ABC (Mono Ammonium Phospate) Powder Type Fire Extinguisher of 6						15.00		15.00	Nos
	FURNITURES									
154	Sofa Two Seater Providing Two seater sofa with basic Silver Wood framework. The seat have flat type High					66.00			66.00	Nos
155	Wooden Teapoy of Size 3X1½ Teakwood with Melamine polish. The rate includes labour for manufacturing, supply, mosquitonet arrangements					66.00			66.00	Nos
156						445.40			445.40	Nos
157	Supply of wooden single special cot of size 6 1/4 ' x 3' made out of teak wood frame with head board & leg board					66.00			66.00	Nos

Sl. No	Description of Work	main building	Water supply	Sump	Approch road/pavement	Furniture	Fire fighting	Compound wall	Qty	Unit
158	Single Size Bed (4" Thick Coir bed)					66.00			66.00	Nos
159	Pillow					66.00			66.00	Nos
160	Single Bed spread with pillow covers					66.00			66.00	Nos
161	Bed Side Box made out of 25mm or 18mm thick Prelam Particle board, all exposed edges are Machine pressed					66.00			66.00	Nos
162	Table 4 X 2 Tops and legs made out of 25mm or 18mm thick Prelam Particle board, all exposed edges are Machine					66.00			66.00	Nos
163	Chair with arm steel frame and leg chair with cushion, 3" 18 gauge CR round pipe legs, seat and back high density					132.00			132.00	Nos
164	Bed room Wardrobe shutters(7X3) 18mm thick commercial plywood with one side 0.8 color laminate and one side 0.8					66.00			66.00	Nos
165	Office Room Table 6x 3 with Side Table 4 X 1½. Tops and legs made out of 25mm or 18mm thick Prelam Particle					1.00			1.00	Nos
166	Office Room Chair with back in Moulded frame covered with breathable Mesh with HEAD REST in black for back					1.00			1.00	Nos
167	Office Room Visitor Chair with arm steel frame and leg chair with cushion, 3" 18 gauge CR round pipe legs, seat					3.00			3.00	Nos
168	Reception Table Tops and legs made out of 25mm or 18mm thick Prelam Particle board, all exposed edges are					1.00			1.00	Nos
169	Five Seater Sofa Providing Five seater sofa with basic Silver Wood framework. The seat have flat type High					1.00			1.00	Nos
170	Single Seater Sofa Providing Single seater sofa with basic Silver Wood framework. The seat have flat type High					4.00			4.00	Nos
171	Corner Teapoy of Size 3X3 Square Teakwood with Melamine polish. The rate includes labour for					2.00			2.00	Nos
172	Center Teapoy of Size 3X1½ Teakwood with Melamine polish. The rate includes labour for manufacturing, supply,					1.00			1.00	Nos
173	Dining Table with 4 Chairs Providing & Fixing of dining table of Size 4 X 3 with 18 mm Granite Top with 16 gauge					8.00			8.00	Nos
174	Kitchen Wardrobe 18mm thick commercial plywood with one side 0.8 color laminate and one side 0.8 white					42.75			42.75	sqm
175	Supply of Dressing table of size 6' X 2' X 1-1/2 Shutter made with Commercial Plywood ISI Grade of 18mm thick					64.00			64.00	Nos

LEAD STATEMENT - 2024 - 2025

Sl. No.	Material	Source of Supply	Distance (Kms)	Unit	Cost	IC	Lead Charges	Loading & Unloading	Total
1	Cement	Kangeyam	29	MT	5602.50	0.00	185.38	0.00	5787.88
2	Steel	Tiruppur	57	MT	55665.00	0.00	324.22	0.00	55989.22
3	Crushed stone sand (CS Sand)	Nall road	37	cu.m.	1578.80	0.00	366.09	0.00	1944.89
4	Crushed stone sand (CS Sand) Plastering	Nall road	37	cu.m.	1584.70	0.00	366.09	0.00	1950.79
5	Fly ash Brick of size 230x1 10x70mm with Class Designation of 7.5	Muthur	22	1000 Nos.	6595.00	0.00	331.98	0.00	6926.98
6	HGB 40mm ISS metal	Muthur	22	cu.m.	1362.90	0.00	236.04	0.00	1598.94
7	HGB 25mm ISS metal	Muthur	22	cu.m.	1170.50	0.00	236.04	0.00	1406.54
8	HGB 20mm ISS metal	Muthur	22	cu.m.	1897.40	0.00	236.04	0.00	2133.44
9	HGB 12mm ISS metal	Muthur	22	cu.m.	1760.50	0.00	236.04	0.00	1996.54
10	HGB 10mm ISS metal	Muthur	22	cu.m.	1294.40	0.00	236.04	0.00	1530.44
11	HGB 10-12mm ISS metal	Muthur	22	cu.m.	1527.45	0.00	236.04	0.00	1763.49
12	HGB 6mm ISS metal	Muthur	22	cu.m.	875.40	0.00	236.04	0.00	1111.44
13	HGB 6-10mm ISS metal	Muthur	22	cu.m.	1084.90	0.00	236.04	0.00	1320.94
14	HGB 6-12mm ISS metal	Muthur	22	cu.m.	1317.95	0.00	236.04	0.00	1553.99
15	Brick jelly 40mm	Vellakoil	10	cu.m.	705.00	0.00	80.80	0.00	785.80
16	Brick jelly 20mm	Vellakoil	10	cu.m.	786.00	0.00	80.80	0.00	866.80
17	Shell lime	local	0	cu.m.	1348.00	0.00	0.00	0.00	1348.00
18	Slacked lime for mortor	local	3	cu.m.	993.00	0.00	24.24	0.00	1017.24
19	Pressed tiles 20 x 20 x 2 cm	Tiruppur	57	1000 Nos.	11356.00	0.00	292.14	0.00	11648.14
20	Pressed tiles 23 x 23 x 2 cm	Tiruppur	57	1000 Nos.	16106.00	0.00	292.14	0.00	16398.14
21	Gravel	local	5	cu.m.	222.70	0.00	58.95	0.00	281.65
22	Rough Stone	Muthur	22	cu.m.	449.40	0.00	236.04	0.00	685.44
23	Bond Stone	Muthur	22	cu.m.	648.40	0.00	236.04	0.00	884.44
24	Stone dust	Muthur	22	cu.m.	145.95	0.00	161.94	0.00	307.89

Note: Certificate shall be issued to the effect that the lead particulars furnished above are correct to the best of his knowledge and belief and the rates adopted are based on the current Schedule of Rates for the year 2012-13, by an Engineer not below the rank of Asst. Exe.Engineer

CONVEYANCE TABLE (PLAINS)

ANNEXURE-V

CONVEYANCE TABLE

(A). RATES FOR CONVEYANCE OF MATERIALS BY ROAD IN PLAINS

Unique Code	Item	Category	Basic Rate approved for the year 2025-2026 (w.e.f. 22.07.2025)	
C-0028	Cement, Steel (1 MT)	Co-efficient	1.00	
C-0029		0 - 10 km. (Add for every extra 1 km. and part thereof)	7.36	
C-0030		10 - 20 km. (Add for every extra 1 km. and part thereof)	6.30	
C-0031		20 - 40 km. (Add for every extra 1 km. and part thereof)	5.42	
C-0032		40 - 80 km. (Add for every extra 1 km. and part thereof)	4.66	
C-0033		Above 80 km. (Add for every extra 1 km. and part thereof)	4.26	
C-0034		Loading Charges	135.50	
C-0035		Unloading Charges	135.50	
C-0036		Add above extra for inter state works	27.25	
C-0037		Lime Stone, Laterite, Brick Jelly, Wood Work, Pond Ash (Wet / Dry), Stone Dust (One cubic metre)	Co-efficient	1.10
C-0038			0 - 10 km. (Add for every extra 1 km. and part thereof)	8.08
C-0039	10 - 20 km. (Add for every extra 1 km. and part thereof)		6.92	
C-0040	20 - 40 km. (Add for every extra 1 km. and part thereof)		5.97	
C-0041	40 - 80 km. (Add for every extra 1 km. and part thereof)		5.15	
C-0042	Above 80 km. (Add for every extra 1 km. and part thereof)		4.69	
C-0043	Loading Charges		64.65	
C-0044	Unloading Charges		64.65	
C-0045	Add above extra for inter state works		29.90	

Unique Code	Item	Category	Basic Rate approved for the year 2025-2026 (w.e.f. 22.07.2025)
C-0046	Rough Stone, Bond Stone, Cut Stone, Broken Stone Jelly, Sand, Gravel, Surki, Earth, Crushed Stone Sand (One cubic metre)	Co-efficient	1.60
C-0047		0 - 10 km. (Add for every extra 1 km. and part thereof)	11.79
C-0048		10 - 20 km. (Add for every extra 1 km. and part thereof)	10.08
C-0049		20 - 40 km. (Add for every extra 1 km. and part thereof)	8.67
C-0050		40 - 80 km. (Add for every extra 1 km. and part thereof)	8.13
C-0051		Above 80 km. (Add for every extra 1 km. and part thereof)	6.82
C-0052		Loading Charges	44.25
C-0053		Unloading Charges	44.25
C-0054		Add above extra for inter state works	43.75
C-0055		Third Class Country Bricks (Kiln Burnt) (1000 Nos.)	Co-efficient
C-0056	0 - 10 km. (Add for every extra 1 km. and part thereof)		9.94
C-0057	10 - 20 km. (Add for every extra 1 km. and part thereof)		8.51
C-0058	20 - 40 km. (Add for every extra 1 km. and part thereof)		7.30
C-0059	40 - 80 km. (Add for every extra 1 km. and part thereof)		6.30
C-0060	Above 80 km. (Add for every extra 1 km. and part thereof)		5.76
C-0061	Loading Charges		63.60
C-0062	Unloading Charges		63.60
C-0063	Add above extra for inter state works		36.75
C-0064	Mangalore Tiles (1000 Nos), Machine Pressed Tiles (2000 Nos), Hydraulically Pressed Mosaic Flooring Tiles (1500 Nos)		Co-efficient
C-0065		0 - 10 km. (Add for every extra 1 km. and part thereof)	13.26
C-0066		10 - 20 km. (Add for every extra 1 km. and part thereof)	11.35
C-0067		20 - 40 km. (Add for every extra 1 km. and part thereof)	9.76
C-0068		40 - 80 km. (Add for every extra 1 km. and part thereof)	8.41
C-0069		Above 80 km. (Add for every extra 1 km. and part thereof)	7.68
C-0070		Loading Charges	63.60
C-0071		Unloading Charges	63.60
C-0072		Add above extra for inter state works	49.15

Unique Code	Item	Category	Basic Rate approved for the year 2025-2026 (w.e.f. 22.07.2025)
C-0073		Co-efficient	2.25
C-0074	Bricks II Class Chamber Burnt Bricks (Table Moulded / Ground Moulded), Fly Ash Bricks (1000 Nos.)	0 - 10 km. (Add for every extra 1 km. and part thereof)	16.57
C-0075		10 - 20 km. (Add for every extra 1 km. and part thereof)	14.19
C-0076		20 - 40 km. (Add for every extra 1 km. and part thereof)	12.19
C-0077		40 - 80 km. (Add for every extra 1 km. and part thereof)	10.52
C-0078		Above 80 km. (Add for every extra 1 km. and part thereof)	9.60
C-0079		Loading Charges	63.60
C-0080		Unloading Charges	63.60
C-0081		Add above extra for inter state works	61.70
Note:			
1	The above rates do not include stacking charges [as per Circular Memo No. 230 Wks. IV (2) / 62-3, dated 10.06.1962 of Chief Engineer (General)].		
2	For conveyance of materials on cart track, allow 20% extra over the above rates excluding loading and unloading charges.		
3	For sandy and slusly soil tracks, add 50% extra over the above rates excluding loading and unloading charges.		
4	The quantity for payment towards conveyance of earth covered under co-efficient 1.60 is for the pit measured quantity at the site of excavation only.		
5	For conveyance of laterite, broken stone jelly, etc., through lorries, the rates provided are for the volume with voids.		
6	For all materials which finds place in all the co-efficients above, necessary incidental charges, loading charges and unloading charges have been included already under their basic cost furnished below the head Rates of Materials itself. Hence, no separate incidental charges, loading and unloading charges shall be allowed for the above materials.		
7	The Basic Rate adopted under this Head, Annexure-V - (A). Rates of Conveyance of Materials by Road in Plains is exclusive of all taxes and GST.		

CONVEYANCE TABLE (HILLS)

**ANNEXURE-V
CONVEYANCE TABLE**

(B). RATES FOR CONVEYANCE OF MATERIALS BY ROAD IN HILLS

Unique Code	Item	Category	Basic Rate approved for the year 2025-2026 (w.e.f. 22.07.2025)
C-0082	Cement, Steel (1 MT)	Co-efficient	1.00
C-0083		0 - 10 km. (Add for every extra 1 km. and part thereof)	14.72
C-0084		10 - 20 km. (Add for every extra 1 km. and part thereof)	12.60
C-0085		20 - 40 km. (Add for every extra 1 km. and part thereof)	10.84
C-0086		40 - 80 km. (Add for every extra 1 km. and part thereof)	9.32
C-0087		Above 80 km. (Add for every extra 1 km. and part thereof)	8.52
C-0088			Co-efficient
C-0089	Lime Stone, Laterite, Brick Jelly, Wood Work, Pond Ash (Wet / Dry), Stone Dust (One cubic metre)	0 - 10 km. (Add for every extra 1 km. and part thereof)	16.16
C-0090		10 - 20 km. (Add for every extra 1 km. and part thereof)	13.84
C-0091		20 - 40 km. (Add for every extra 1 km. and part thereof)	11.94
C-0092		40 - 80 km. (Add for every extra 1 km. and part thereof)	10.30
C-0093		Above 80 km. (Add for every extra 1 km. and part thereof)	9.38
C-0094			Co-efficient
C-0095	Rough Stone, Bond Stone, Cut Stone, Broken Stone Jelly, Sand, Gravel, Surki, Earth, Crushed Stone Sand (One cubic metre)	0 - 10 km. (Add for every extra 1 km. and part thereof)	23.58
C-0096		10 - 20 km. (Add for every extra 1 km. and part thereof)	20.16
C-0097		20 - 40 km. (Add for every extra 1 km. and part thereof)	17.34
C-0098		40 - 80 km. (Add for every extra 1 km. and part thereof)	16.26
C-0099		Above 80 km. (Add for every extra 1 km. and part thereof)	13.64

Unique Code	Item	Category	Basic Rate approved for the year 2025-2026 (w.e.f. 22.07.2025)
C-0100	Third Class Country Bricks (Kiln Burnt) (1000 Nos.)	Co-efficient	1.35
C-0101		0 - 10 km. (Add for every extra 1 km. and part thereof)	19.88
C-0102		10 - 20 km. (Add for every extra 1 km. and part thereof)	17.02
C-0103		20 - 40 km. (Add for every extra 1 km. and part thereof)	14.60
C-0104		40 - 80 km. (Add for every extra 1 km. and part thereof)	12.60
C-0105		Above 80 km. (Add for every extra 1 km. and part thereof)	11.52
C-0106	Mangalore Tiles (1000 Nos.), Machine Pressed Tiles (2000 Nos.), Hydraulically Pressed Mosaic Flooring Tiles (1500 Nos.)	Co-efficient	1.80
C-0107		0 - 10 km. (Add for every extra 1 km. and part thereof)	26.52
C-0108		10 - 20 km. (Add for every extra 1 km. and part thereof)	22.70
C-0109		20 - 40 km. (Add for every extra 1 km. and part thereof)	19.52
C-0110		40 - 80 km. (Add for every extra 1 km. and part thereof)	16.82
C-0111		Above 80 km. (Add for every extra 1 km. and part thereof)	15.36
C-0112	Bricks II Class Chamber Burnt Bricks (Table Moulded / Ground Moulded), Fly Ash Bricks (1000 Nos.)	Co-efficient	2.25
C-0113		0 - 10 km. (Add for every extra 1 km. and part thereof)	33.14
C-0114		10 - 20 km. (Add for every extra 1 km. and part thereof)	28.38
C-0115		20 - 40 km. (Add for every extra 1 km. and part thereof)	24.38
C-0116		40 - 80 km. (Add for every extra 1 km. and part thereof)	21.04
C-0117		Above 80 km. (Add for every extra 1 km. and part thereof)	19.20
Note:			
1	The above rates do not include stacking charges [as per Circular Memo No. 230 Wks. IV (2) / 62-3, dated 10.06.1962 of Chief Engineer (General)].		
2	For conveyance of materials on cart track, allow 20% extra over the above rates excluding loading and unloading charges.		

Unique Code	Item	Category	Basic Rate approved for the year 2025-2026 (w.e.f. 22.07.2025)
3		For sandy and slusly soil tracks, add 50% extra over the above rates excluding loading and unloading charges.	
4		The quantity for payment towards conveyance of earth covered under co-efficient 1.60 is for the pit measured quantity at the site of excavation only.	
5		For conveyance of laterite, broken stone jelly, etc., through lorries, the rates provided are for the volume with voids.	
6		For all materials which finds place in all the co-efficients above, necessary incidental charges, loading charges and unloading charges have been included already under their basic cost furnished below the head Rates of Materials itself. Hence, no separate incidental charges, loading and unloading charges shall be allowed for the above materials.	
7		The Basic Rate adopted under this Head, Annexure-V – (B). Rates of Conveyance of Materials by Road in Hills is exclusive of all taxes and GST.	

MODEL CALCULATION FOR LEAD CHARGES

HOW TO CALCULATE LEAD CHARGES?

Consider **Cement**,
Conveyance Distance from the Lead statement
is 29 Kms.

Refer **Annexure V (a) of SOR (Vol-I)** for
Cement if it is **Plains**. Incase of **Hills**, Refer
Annexure V (b) of SOR (Vol-I).

$$=(10 \times 7.36) + (10 \times 6.30) + (9 \times 5.42)$$
$$=185.38$$

Unique Code	Item	Category	Basic Rate approved for the year 2025-2026 (w.e.f. 22.07.2025)
C-0028	Cement, Steel (1 MT)	Co-efficient	1.00
C-0029		0 - 10 km. (Add for every extra 1 km. and part thereof)	7.36
C-0030		10 - 20 km. (Add for every extra 1 km. and part thereof)	6.30
C-0031		20 - 40 km. (Add for every extra 1 km. and part thereof)	5.42
C-0032		40 - 80 km. (Add for every extra 1 km. and part thereof)	4.66

LIFT CHARGES - Concrete - Brick or Stone Masonry - Above or Below Ground Level (Page 63 of SOR 2025-26)

A Concrete above ground level

B Brick or Stone Masonry above ground level

The extra rates as allowed for building works are applicable to the irrigation and road works.

The extra rates may be allowed for the structure **beyond 1 metre from ground level**

A Concrete below ground level

B Brick or Stone Masonry below ground level

The above extra rates are applicable to building, irrigation and road works. The extra rates may be allowed for the structure beyond **1.50 metre from ground level**. (The depth is to be reckoned from 1.50 metre below ground level).

**LIFT CHARGES - Concrete - Brick or Stone Masonry -
Above or Below Ground Level
(Page 34 & 35 of SOR 2025-26)**

Unique Code	Description	Unit	Basic Rate approved for the year 2025-2026 (w.e.f. 22.07.2025)
STATEMENT I : Concrete - Above Ground Level			
W-0090	Add to the basic rates for works up to 4.50M height in ground floor (height to be reckoned from floor level ie., plinth level in GL)	cum.	141.07
W-0091	Add for works in every upper floor over the rate of preceding floor	cum.	277.89
Brick or Stone Masonry - Above GL			
W-0092	Add to the basic rates for works up to 4.50M height in ground floor (height to be reckoned from floor level ie., plinth level in GL)	cum.	92.87
W-0093	Add for works in every upper floor over the rate of preceding floor	cum.	187.38

Unique Code	Description	Unit	Basic Rate approved for the year 2025-2026 (w.e.f. 22.07.2025)
STATEMENT II: Concrete - Below Ground Level			
W-0094	Add the basic rate for works 1.50m depth and up to 4.5m depth below ground level	cum.	138.77
W-0095	Add the basic rate for works 4.50m depth and up to 9m depth below ground level	cum.	278.6
W-0096	Add extra over the above item 2 for every additional 4.50m depth beyond 9.0m depth below ground level	cum.	278.6
Brick or Stone Masonry - Below GL			
W-0097	Add the basic rate for works 1.50m depth and up to 4.50m depth below GL	cum.	93.22
W-0098	Add the basic rate for works above 4.50m depth and up to 9.0m depth below GL	cum.	187.03
W-0099	Add extra over the above item 2 for every additional 4.50m depth beyond 9.0m depth below ground level	cum.	187.03

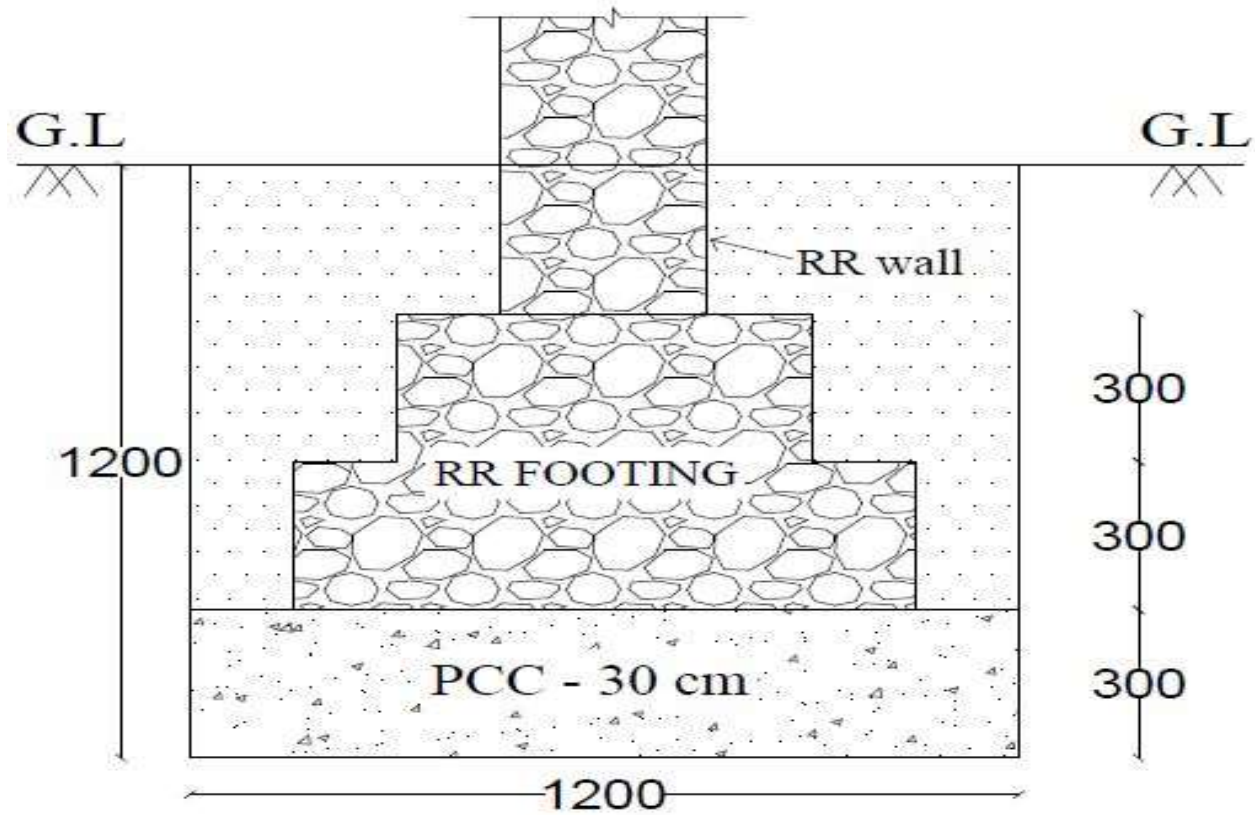
SUB-DATA FOR CEMENT MORTAR

1			Cement Mortar 1:3 (with P Sand)			
	480.00	KG	Cement	5787.88	MT	2778.18
	1.00	cu.m.	Plastering Sand	1950.79	cu.m.	1950.79
	1.92	lit	Mortar Plasticizer (Liquid)@ 200ml per bag	75.00	Lit	144.00
	1.00	cu.m.	Mixing Charges (Machine Mixing)	179.96	cu.m.	179.96
			Rate for 1 cu.m.			5052.93
2			Cement Mortar 1:4 (with P Sand)			
	360.00	kg	Cement	5787.88	MT	2083.64
	1.00	cu.m.	Plastering Sand	1950.79	cu.m.	1950.79
	1.44	lit	Mortar Plasticizer (Liquid)@ 200ml per bag	75.00	Lit	108.00
	1.00	cu.m.	Mixing Charges (Machine Mixing)	179.96	cu.m.	179.96
			Rate for 1 cu.m.			4322.39
3			Cement Mortar 1:5 (with P Sand)			
	288.00	kg	Cement	5787.88	MT	1666.91
	1.00	cu.m.	Plastering Sand	1950.79	cu.m.	1950.79
	1.15	lit	Mortar Plasticizer (Liquid)@ 200ml per bag	75.00	Lit	86.40
	1.00	cu.m.	Mixing Charges (Machine Mixing)	179.96	cu.m.	179.96
			Rate for 1 cu.m.			3884.06
4			Cement Mortar 1:6			
	240.00	kg	Cement	5787.88	MT	1389.09
	1.00	cu.m.	Crushed stone Sand	1944.89	cu.m.	1944.89
	0.96	lit	Mortar Plasticizer (Liquid)@ 200ml per bag	75.00	Lit	72.00
	1.00	cu.m.	Mixing Charges (Machine Mixing)	179.96	cu.m.	179.96
			Rate for 1 cu.m.			3585.94

DATA FOR EARTHWORK EXCAVATION (MANUAL MEANS)

Sl. No.	Qty.	Unit	Description	Rate	Per	Amount
119			Earth work excavation for foundation by manual means for RR/Brick and Other step type footings for Load bearing structures in all soils and sub-soils and to full depth as may be directed except in rock requiring blasting inclusive of shoring shuttering, bailing out water wherever necessary and depositing the surplus earth within the compound in places shown by the departmental officers with an initial lead of 10 mts and initial lift of 2.00mts. and clearing and levelling the site, etc., complete complying with standard specification and as directed by the departmental officers.			
			Note 1: The cost of earth work excavation shall be calculated based on the classifications of soils furnished in the trial pit details appended with the estimates			
	1.00	Cu.m	Earth work excavation in soil (average rate)		Cu.m	
	1.00	Cu.m	Add 100% extra		Cu.m	
	0.33	Cu.m	Refilling charges		Cu.m	
			Sub Total for 1 cu.m (X)			
			Add water charges @1% of Sub Total X			
			Rate for 1 Cu.m			

Foundation for Load Bearing structure (RR Footing)



Refilling Quantity of RR Footing – 33.00 %

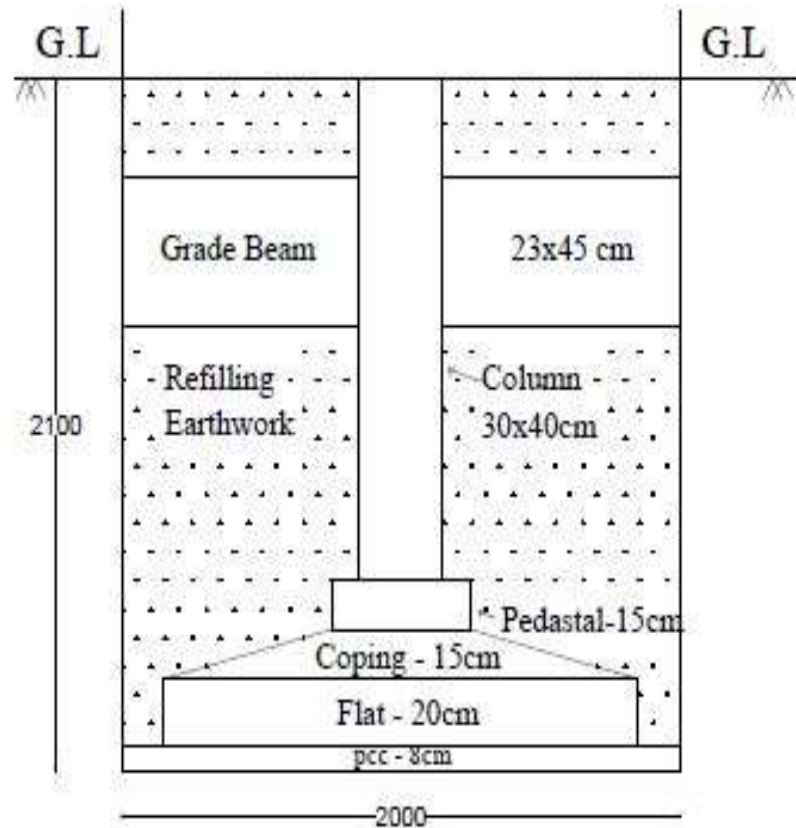
DATA FOR EARTHWORK EXCAVATION (MECHANICAL MEANS)

121			Earth work excavation for foundation by Mechanical means for Isolated & Combined Footing etc in all soils and sub-soils and to full depth as may be directed except in rock requiring blasting inclusive of shoring shuttering, bailing out water wherever necessary and depositing the surplus earth within the compound in places shown by the departmental officers with an initial lead of 100 mts and clearing and levelling including dressing of sides and raming of bottoms etc., complete complying with standard specification and as directed by the departmental officers.- Upto 2.40m Footing Depth. Data worked out for 48 m³ per day/8 hrs.			
			For 48 m ³			
	8.00	Hour	Earth Excavator - Wheeled Backhoe loader (0.50 m ³ Capacity)	784.00	Hour	6272.00
	8.00	Hour	Tractor with Trailor Incl. Driver and Fuel (For Conveyance of earth upto 100mts)	600.00	Hour	4800.00
	6.00	no	Mazdoor Category I	766.00	no	4596.00
38.8	38.50	cu.m	Refilling charges (48x0.802)	45.85	cu.m	1765.23
			Total for 48 m ³			17433.23
			Sub Total for 1 cu.m			363.19

FOOTING DEPTH UPTO 2.40M



Foundation for Framed Structure (Isolated Footing)



Column - C1

D - 350mm

SBC - 200 kN/sqm

Do - 200mm

1. Earthwork Quantity - $2.00 \times 2.00 \times 2.10 = 8.40$ cum
2. PCC 1:5:10 Quantity - $2.00 \times 2.00 \times 0.08 = 0.32$ cum
3. RCC Flat Quantity - $1.70 \times 1.70 \times 0.20 = 0.578$ cum
4. Coping Quantity - $0.15/3 \times ((1.70 \times 1.70) + (0.40 \times 0.50)) + \text{sq rt}((1.70 \times 1.70) \times (0.40 \times 0.50)) = 0.193$ cum
5. Pedastal Quantity - $0.40 \times 0.50 \times 0.15 = 0.03$ cum
6. Column Quantity - $0.30 \times 0.40 \times 1.57 = 0.182$ cum
7. Grade Beam Quantity - $0.85 \times 0.23 \times 0.45 = 0.088$ cum
 $1 \times 2 \times 0.80 \times 0.23 \times 0.45 = 0.166$ cum
8. Total Concrete Quantity = 1.556 cum

Total Earthwork Quantity - 8.40 cum

Balance Filling Quantity - 6.844 cum

Percentage of Filling Quantity - $6.844/8.400 = 81.47\%$

ISOLATED FOOTINGS - 9 No's			
Description	SBC 100 kN/sq.m	SBC 150 kN/sq.m	SBC 200 kN/sq.m
Column C1	81.11%	81.29%	81.47%
Column B3	78.69%	79.80%	80.22%
Column A1	83.15%	82.55%	81.94%
Average of total Nine footings -			81.14%

STRIP FOOTINGS - 3 No's			
Description	SBC 100 kN/sq.m	SBC 150 kN/sq.m	SBC 200 kN/sq.m
Column 1	74.42%	71.79%	70.57%
Average of total Three footings -			72.26%

Final Refilling Quantity Calculation			
Average of Isolated Footings	81.14%	0.90 (90 % of weightage)	73.02%
Average of Strip Footings	72.26%	0.10 (10 % of weightage)	7.23%
Total			80.25%
i.e Refilling Quantity required for 1 cum Earthwork			0.802

Data for Brick work in Cement Mortar 1:6 using best quality Fly ash Brick of size 230x110x70mm with class designation of 7.5

203			Brick work in following Cement Mortar using best quality Fly ash Brick of size 230x110x70mm with class designation of 7.5 conforming to IS 13757-1993 or IS 12894-2002 for foundation and basement including Cost of Mortar Plasticizer, curing, etc., complete complying with standard specification and as directed by the departmental officers. Brickwork shall be done as per IS 2212-1991 adopting English Bond generally. other type of bond shall be done as directed by the Executive Engineer in charge.				
a			In Cement Mortar 1:6				
	1300.00	Nos.	Cost of Fly ash Brick of size 230x110x70mm with class designation of 7.5	6926.98	1000 Nos.		9005.07
	0.708	Cum	Cement mortar 1:6	3585.94	Cum		2538.85
	1.00	Nos.	Mason I Class	1174.00	nos		1174.00
	3.00	Nos.	Mason II Class	1096.00	nos		3288.00
	2.00	Nos.	Mazdoor Category - I	766.00	nos		1532.00
	6.00	Nos.	Mazdoor Category - II	628.00	nos		3768.00
			Total for 100 cft (or) 2.83168 Cum				21305.92
			Sub Total for 1 Cum.				7524.13X
			Add water charges @1% of Sub Total X				75.24
			Rate for 1 Cu.m.				7599.37
			For foundation and basfement	7599.37			7599.37
			In ground floor	7599.37	92.87		7692.24
			In first floor	7692.24	187.38		7879.62
			In second floor	7879.62	187.38		8067.00
			In Third floor	8067.00	187.38		8254.38
			In fourth floor	8254.38	187.38		8441.76
			In fifth floor	8441.76	187.38		8629.14

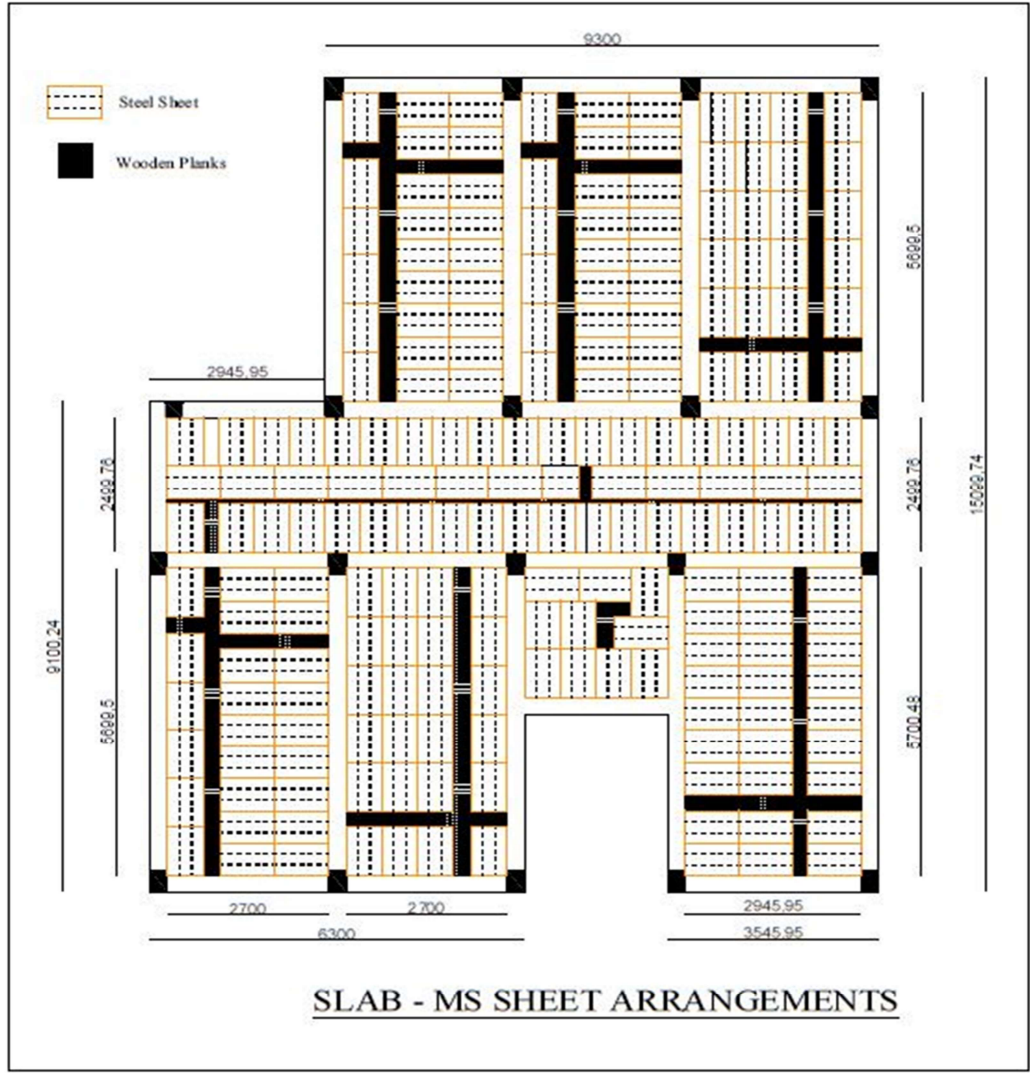
144	Supplying and erecting centering for plane surfaces such as RCC Floor/Roof Beam, Lintels, Cantilever Beams, Bed Blocks etc.. with necessary supports and strutting upto 3.60m height in all floors with all cross bracings using MS Sheets made of 10 gauge thick welded with MS angle of Size 25mm x 25mm x 3mm for boarding laid over Steel adjustable Span of Size 2m x 2m (expandable upto 3.60m) and Silver Oak Joists of Size 10 x 5 cm spaced at 50cm to 60cm c/c and supported by Steel Adjustable Telescopic Props of Size 2m x 2m (expandable upto 3.60m) made with outer steel pipe with dia 50mm (3.60mm thick) and inner steel pipe with dia 40mm (2.90mm thick) Spaced at not more than 50 to 60cm c/c , etc complete complying with standard specifications. Steel adjustable span and Steel Adjustable telescopic props shall be provided as directed by the departmental Officers. (Payment for centering shall be given after the concrete is laid).				
		Shuttering area of Beam Taken	83.13	m ²	
		Total Area of MS Sheet Required	92.91	m ²	
		Total Number of adjustable Telescopic Prop (Vertical) required for Slab (2.00 x 2.00m expandable upto 3.60m)	186.00	Nos	
		Props required as Cross Bracings	68.00	nos	
		Total	254.00	Nos	
		Silver Oak Joists required (10.00 x 5.00cm)	2.40	m ³	
		Silver Oak Joists required (7.50 x 5.00cm)	1.13	m ³	
		Total	3.53		
		Add 5% for Wastage	0.18	m ³	
		Total	3.71	m ³	
		Total number of adjustable span of 2m x 2m expandable upto 3.60m	68.00	Nos	
		Sub Data: 1 - Cost of MS Sheet Per Sq.m Per I use			
		Cost of MS sheets and angles for each set:			
		Weight of MS sheets 10 gauge of size 90cm x 60cm x 3.175mm			
		3.175 x 7850 / 1000 x 0.54 =	13.46	Kg	
		Weight of MS angles of size 25cm x 25mm x 3mm:			
		3.6 x 1.1 kg / m =	4.00	Kg	
	13.46	Kg	Cost of MS sheets	53.00	Kg 713.38
	4.00	Kg	Cost of MS angles	53.00	Kg 212.00
	LS		Add for cutting, bending, welding charges etc. @ 10% of material cost		LS 92.54
			Total cost for one set of 0.54m ² (0.9x0.6m) sheet for 40 uses		Rs. 1017.92
			Total Cost for one Sq.m per 40 uses		Rs. 1885.03
			Total Cost for one Sq.m per 1 use (A)		Rs. 47.13 A

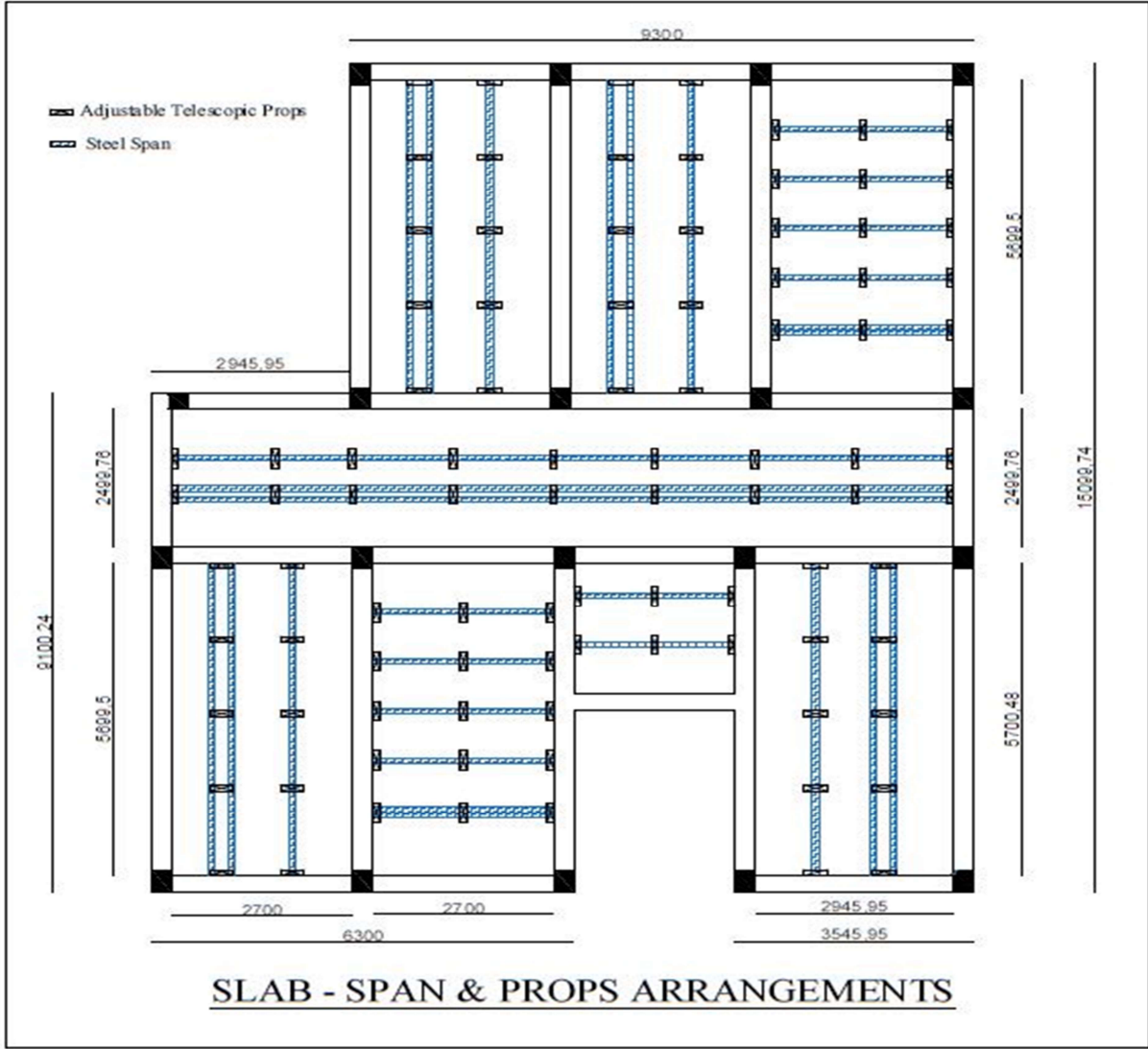
DATA FOR BEAM CENTERING

			Sub Data: 2 - Cost of Silver Oak Joists			
	3.71	m ³	Cost of Silver Oak Joists	15500.00	m ³	57505.00
			Total for 5 Uses			
			Total for 1 Use			Rs. 11501.00 B
			Sub Data: 3 (Cost of MS Sheet, Telescopic Prop and Adjustable Span)			
	254.00	Nos	Cost of Telescopic Steel Props of size 2.0 x 2.0m	1760.00	Nos	447040.00
	68.00	Nos	Cost of Adjustable Span	2950.00	Nos	200600.00
			Total for 40 Uses			647640.00
			Total for 1 Use			16191.00
			Say			Rs. 16191.00 C
			Main Data for 83.13 m²			
	92.91	m ²	Cost of MS Sheets per use (As per A)	47.13	m ²	4378.46
	1.00	Use	Cost of Silver Oak Joists (As per B)	11501.00	Use	11501.00
	1.00	Use	Cost of Telescopic Steel Props of size 2.0 x 2.0m (As per C)	16191.00	Use	16191.00
	4.00	Nos	Carpenter I Class	1148.00	Nos	4592.00
	19.00	Nos	Carpenter II Class	1096.00	Nos	20824.00
	35.00	Nos	Mazdoor Category I	766.00	Nos	26810.00
	6.00	Nos	Fitter II Class (Bar bending)	986.00	Nos	5916.00
			Add for Wedges, Coils, nails @ 1% of materials			320.70
			For Periodical Cleaning, Oiling and Maintenance of MS Sheets, Props, Spans and Joists @ 5% of Material			1603.52
			Total cost for 83.13 m ²			92136.69
			Rate for 1 Sq.m			1108.34 X
	a		Centering for curved RCC Beam surfaces upto 3.60m height			
	1.00	sq.m.	Rate for centering for plane surfaces such as RCC Floor/Roof Beam, Lintels, Cantilever Beams, Bed Blocks etc.. with necessary supports and strutting upto 3.60m height (X)	1108.34	sq.m.	1108.34
			Add 50% extra of above rate			554.17
			Total for 1 sq.m.			1662.52









NEW CENTERING & SHUTTERING DATA

			Main Data for 128.66 m²		
	1.00	Use	Cost of MS Sheets, Telescopic Prop and Adjustable Span		Use
	1.00	Use	Cost of CW Plank (as per C)		Use
	10.00	Nos	Carpenter I Class (as per B)		Nos
	30.00	Nos	Carpenter II Class		Nos
	54.00	Nos	Mazdoor Category I		Nos
	10.00	Nos	Fitter II Class (Bar bending)		Nos
			Add for Wedges, Coils, nails @ 1% of materials		
			For Periodical Cleaning, Oiling and Maintenance of MS Sheets, Props, Spans and Planks @ 5% of Material		
			Total cost for 128.66 m ²		
			Rate for 1sq.m		
a			Centering for curved RCC slab surfaces upto 3.60m height		
	1.00	sq.m.	Rate for centering for plane surfaces such as RCC Floor Slab, Roof Slab, Loft, Landing Slabs, etc with necessary supports and strutting upto 3.60m height (X)		sq.m
			Add 50% extra of above rate		
			Total for 1 sq.m.		

158 Providing and laying in position, standardised concrete Mix M-20 Grade **by insitu machine mix concrete adopting weighing batch method** in accordance with IS 456 using 20mm and down graded hard broken granite stone jelly for all RCC items of works with minimum cement content of 325 kg/m³ and maximum water cement ratio of 0.55, including admixture (plasticiser / super plasticiser) in recommended proportions as per IS:9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability with about (5 cu.m.) 7730 kg. of 20mm machine crushed stone jelly and with about (3.3 cu.m.) 5156 kg. of 10-12mm machine crushed stone jelly and with about (4.79 cu.m) 7670 kg. of crushed stone sand, but excluding cost of reinforcement grill and fabricating charges, centering and shuttering and also including laying, vibrating with mechanical vibrators, finishing, curing, etc. and providing fixtures like fan clamps in the RCC floor/ roof slabs wherever necessary without claiming extra, etc., complete complying with standard specification and as directed by the departmental officers. The coarse and fine aggregates to be used should comply with the requirements of IS standards. (No separate payment will be made by the Department for the excess usage of materials).

SUB DATA					
For machine mix - 20 m³ per day					
mixing - 15 bags/hour(1 bag/4 minutes)					
	1.00	Day	Mixer machine with hopper	1500.00	Day 1500.00
	1.00	Day	Mixer machine driver	792.00	Day 792.00
			Total for 20 cu.m.		2292.00
			Total for 1 cu.m.		114.60A
			Main Data		
			M 20 CONCRETE		
	5.00	cu.m	20mm Machine Crushed Stone Jelly	2133.44	cu.m 10667.20
	3.30	cu.m	10-12mm Machine Crushed Stone Jelly	1763.49	cu.m 5819.52
	4.79	cu.m	Crushed stone Sand	1944.89	cu.m 9316.02
	3250.00	kg	Cement	5787.88	MT 18810.61
	19.50	lit	Super Plasticiser @0.60% of cement	65.00	lit 1267.50
	10.00	cu.m	Charges for mixing by mechanical means (as per sub Data A)	114.60	cu.m 1146.00
	0.50	Nos	Mason Ist Class	1174.00	Nos 587.00
	2.50	Nos	Mason IInd Class	1096.00	Nos 2740.00
	17.50	Nos	Mazdoor Category I	766.00	Nos 13405.00
	30.50	Nos	Mazdoor Category II	628.00	Nos 19154.00
			Total for 10 cu.m		82912.85
			For 1cu.m		8291.29

DATA FOR M20 GRADE CONCRETE (insitu machine mix concrete adopting Weighing Batch Method)

			Add for Vibration charge		cu.m	110.87	
			Sub-Total for 1 cu.m.			8402.16X	
			Add for water charges&other sundries(1%of Sub-Total X)			84.02	
			Rate for 1 cu.m			8486.18	
			Foundation and Basement			8486.18	
			For Ground floor	8486.18	141.07	8627.25	
			For First floor	8905.14	277.89	9183.03	
			For Second floor	9183.03	277.89	9460.92	
			For Third floor	9460.92	277.89	9738.81	
			For Fourth floor	9738.81	277.89	10016.70	
			For Fifth floor				


DATA FOR M20 GRADE CONCRETE (Insitu Concrete Batching Plant/ RMC)

Sl. No.	Qty.	Unit	Description	Rate	Per	Amount
163			Providing and laying in position, standardised concrete Mix M-20 Grade using In-situ Concrete batching plant/ Ready Mix Concrete (RMC) adopting weigh batch method in accordance with IS 456 using 20mm and down graded hard broken granite stone jelly for all RCC items of works with minimum cement content of 325 kg/m ³ and maximum water cement ratio of 0.55, including admixture (plasticiser / super plasticiser) in recommended proportions as per IS:9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability with about (5 Cu.m) 7730 kg. of 20mm machine crushed stone jelly and with about (3.3 Cu.m) 5156 kg. of 10-12mm machine crushed stone jelly and with about (4.79 cu.m) 7670 kg. of crushed stone sand, but excluding cost of reinforcement grill and fabricating charges, centering and shuttering and also including Conveyance of concrete from batching plant to Work site, Electricity charges and other works & labour cost involved for concrete production, laying, vibrating with mechanical vibrators, finishing, curing, etc. and providing fixtures like fan clamps in the RCC floor/ roof slabs wherever necessary without claiming extra, etc., complete complying with standard specification and as directed by the departmental officers. The coarse and fine aggregates to be used should comply with the requirements of IS standards. (No separate payment will be made by the Department for the excess usage of materials).			
			M 20 CONCRETE			
	5.00	cu.m	20mm Machine Crushed Stone Jelly		cu.m	
	3.30	cu.m	10-12mm Machine Crushed Stone Jelly		cu.m	
	4.79	cu.m	Crushed stone Sand		cu.m	
	3250.00	kg	Cement		MT	
	19.50	lit	Super Plasticiser @0.60% of cement		lit	
	10.00	cu.m	Production cost of concrete by batching plant including Conveyance, Electricity and other works.		cu.m	
	10.00	cu.m	Pumping charges of concrete including hire charges of pump, piping work & accessories etc.,		cu.m	
	0.50	Nos	Mason Ist Class		Nos	
	1.50	Nos	Mason IInd Class		Nos	
	12.50	Nos	Mazdoor Category I		Nos	
	20.50	Nos	Mazdoor Category II		Nos	
			Total for 10 cu.m			
			For 1cu.m			
			Add for Vibration charge		cu.m	
			Sub-Total For 1cu.m (X)			
			Add for water charges&other sundries(1%of Sub-Total X)			
			Rate for 1 cu.m			

DATA FOR PLASTERING WITH CEMENT MORTAR 1:5

297			Plastering with Cement Mortar 1:5 (One cement and Five Plastering sand), 12mm thick in all floors including mortar plasticizer at 200ml per 50Kg of cement used, curing etc. complete complying with standard specification and as directed by the departmental officers.			
	0.14	cu.m.	Cement mortar 1:5	3884.06	cu.m.	543.76832
	1.1	Nos.	Mason I Class	1174.00	Each	1291.4
	0.5	Nos.	Mazdoor Category I	766.00	Each	383
	1.1	Nos.	Mazdoor Category II	628.00	Each	690.8
			Total for 10 sq.m.			2908.9683
			Sub Total for 1sq.m.			290.89683X
			Add water charges @1% of Sub Total X			2.9089683
			Rate for 1sq.m.			293.81

SAMPLE QUOTATION


HARISH
BUILDING SOLUTIONS
 Formerly Harish Chemicals Tech

No. 100, Chinnasamy Naidu Road, New Siddhapudur, Coimbatore - 641 044.
 Ph : 0422 2522362, 98652 05138, 98422 05135 E-mail : info@hbsglobal.in Web : www.hbsglobal.in
 GST NO.33AA0FH2687L1ZU

QUOTATION

To
 The Executive Engineer, PWD,
 Buildings (C&M) Division,
 Coimbatore.


Respected Sir,

We quote our lowest rates for the following items and favour of further action please.

S. No.	Description	rate
1.	Technical specification for structural repairs & strengthening The area of repair should be properly assessed before taking up the following stages of repair. The Con, Scaffolding will be erected with proper bracing to the designated height by checking the vertically and using proper MS Pipes also providing platform at various levels to enable the repair. The concrete surface will be examined for loose and spalled portions and the same will be removed with the help of chisel & hammer. Prepare the final surface free from dust and debris and to a rough profile with at-least 5mm level difference between surface troughs and peaks. Retro fitting the RCC roof slab/beams by removal of rust, Application of Anti-corrosive coating to reinforcement rods, welding additional 8mm/10mm dia reinforcement bars of Fe500 rods in places of extreme corrosion. Replacement of the affected part of rebars will be necessary if the diameter is found reduced by more than 20% of the original diameter.	Rs.7150.00/m ²

Note: Excluding GST @ 18%.

➤ The above quoted rates are inclusive of materials and application charges.

HARISH BUILDING SOLUTIONS

PARTNERS

ABSTRACT – SAMPLE

NAME OF WORK:

ABSTRACT

Sl.No.	QTY	Unit	Description of Work	Rate	Per	AMOUNT
1	226.00	m ³	Earth work excavation for foundation by Mechanical means for Isolated & Combined Footing etc in all soils and sub-soils and to full depth as may be directed except in rock requiring blasting inclusive of shoring shuttering, bailing out water wherever necessary and depositing the surplus earth within the compound in places shown by the departmental officers with an initial lead of 100 mts and clearing and levelling including dressing of sides and raming of bottoms etc., complete complying with standard specification and as directed by the departmental officers.- Upto 2.40m Footing Depth. Data worked out for 48 m3 per day/8 hrs.	363.19	m ³	82080.94
2			Brick work in following Cement Mortar 1:6 using best quality Fly ash Brick of size 230x110x75mm with class designation of 7.5 conforming to IS 13757-1993 or IS 12894-2002 for foundation and basement including Cost of Mortar Plasticizer, curing, etc., complete complying with standard specification and as directed by the departmental officers. Brickwork shall be done as per IS 2212-1991 adopting English Bond generally.other type of bond shall be done as directed by the Executive Engineer in charge.			
a	41.00	M ³	For Superstructure in Ground floor	7692.24	M ³	315381.84
b	41.00	M ³	For Superstructure in First floor	7879.62	M ³	323064.42
c	21.00	M ³	For Superstructure in Second floor	8067.00	M ³	169407.00

Sl.No.	QTY	Unit	Description of Work	Rate	Per	AMOUNT
3	191.00	m ²	Supplying and erecting centering for plane surfaces such as RCC Floor/Roof Beam, Lintels, Cantilever Beams, Bed Blocks etc.. with necessary supports and strutting upto 3.60m height in all floors with all cross bracings using MS Sheets made of 10 gauge thick welded with MS angle of Size 25mm x 25mm x 3mm for boarding laid over Steel adjustable Span of Size 2m x 2m(expandable upto 3.60m) and Silver Oak Joists of Size 10 x 5 cm spaced at 50cm to 60cm c/c and supported by Steel Adjustable Telescopic Props of Size 2m x 2m (expandable upto 3.60m) made with outer steel pipe with dia 50mm (3.60mm thick) and inner steel pipe with dia 40mm (2.90mm thick) Spaced at not more than 50 to 60cm c/c , etc complete complying with standard specifications. Steel adjustable span and Steel Adjustable telescopic props shall be provided as directed by the departmental Officers. (Payment for centering shall be given after the concrete is laid).	1108.34	m ²	211692.94
4			Providing and laying in position, standardised concrete Mix M-20 Grade by insitu machine mix concrete adopting weighing batch method in accordance with IS 456 using 20mm and down graded hard broken granite stone jelly for all RCC items of works with minimum cement content of 325 kg/m ³ and maximum water cement ratio of 0.55, including admixture (plasticiser / super plasticiser) in recommended proportions as per IS:9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability with about (5 cu.m.) 7730 kg. of 20mm machine crushed stone jelly and with about (3.3 cu.m.) 5156 kg. of 10-12mm machine crushed stone jelly and with about (4.79 cu.m) 7670 kg. of crushed stone sand, but excluding cost of reinforcement grill and fabricating charges, centering and shuttering and also including laying, vibrating with mechanical vibrators, finishing, curing, etc. and providing fixtures like fan clamps in the RCC floor/ roof slabs wherever necessary without claiming extra, etc., complete complying with standard specification and as directed by the departmental officers. The coarse and fine aggregates to be used should comply with the requirements of IS standards. (No separate payment will be made by the Department for the excess usage of materials).			0.00
a	39.00	m ³	For Foundation and Basement.	8486.18	m ³	330960.89
b	43.00	m ³	For Superstructure in Ground floor	8627.25	m ³	370971.60
c	43.00	m ³	For Superstructure in First floor	8905.14	m ³	382920.87
d	2.00	m ³	For Superstructure in Second floor	9183.03	m ³	18366.05
5	913.00	m ²	Plastering with Cement Mortar 1:5 (One cement and Five Plastering sand), 12mm thick in all floors including mortar plasticizer at 200ml per 50Kg of cement used, curing etc. complete complying with standard specification and as directed by the departmental officers.	293.81	m ²	268248.53
Civil Work						2473095.08

GENERAL ABSTRACT – SAMPLE

NAME OF WORK:		
<u>GENERAL ABSTRACT</u>		
Sl. No	Description of works	Amount in Rs.
I	Civil Work	24,73,095.08
	CGST @ 9%	2,22,578.56
	SGST @ 9%	2,22,578.56
	SUB TOTAL	29,18,252.19
II	LUMPSUM PROVISIONS (Including GST @ 18%)	
1	Provision for Internal & External Electrical Work (to be made for Less than 1 Crore of Electrical work and Less than 15 crore project cost)	1,50,000.00
2	Provision for Approach Road arrangements	50,000.00
3	Provision for Soil Investigation	40,000.00
4	Provision for Front Elevation	20,000.00
5	Provision for tablet Stone Containing building information	10,000.00
6	Provision for Advertisement Charges	10,000.00
7	Provision for Foundation Stone Laying and Inaugural Function	13,000.00
8	Provision for Photographic charges	500
9	Provision for Documentation charges	5,000.00
10	Provision for statutory Approval	10,000.00
11	Provision for Petty Supervision & Contingencies Charges @ 1.25%	35,000.00
12	Provision for Unforeseen items of works	5,247.81
13	Provision for Labour Welfare Fund @1.00%	33,000.00
	Grand Total	33,00,000.00

WORKING ESTIMATE

- The detailed estimate prepared against the LS Provisions made in the technically Sanctioned detailed estimate are called working estimate.
- The working estimate shall be prepared, sanctioned and executed simultaneously with Main work in order to complete the work as a whole.

ADMINISTRATIVE SANCTION

- Administrative sanction is nothing but a order issued by the Competent Authority like Government, Head of the Departments and District Level Officers, etc to carryout the work for the specified purpose or to procure equipment/instruments, etc.
- The Administrative Sanction generally accorded based on the estimates prepared by the PWD Officers for the above said purpose.
- Financial Sanction is also issued by the Competent Authority based on the AS given
- The expenditure is to be incurred after obtaining the financial sanction in the respective head of accounts as stipulated in the Financial Sanction.

TECHNICAL SANCTION

(Refer TNPWD Code Para No 99)

- According to this codal provision, on receipt of administrative approval, the technical sanction to the detailed estimate shall be Accorded by the Competent Authority vested with powers to accord technical Sanction as per Government Order issued from time to time.

TECHNICAL SANCTION POWERS (CIVIL WORKS)

G.O.Ms.No.159, Public Works (G2) Department, Dt.11.11.2021

TECHNICAL SANCTION FOR CIVIL WORKS

Chief Engineer	:	Above 2 crore irrespective of value
Superintending Engineer	:	Rs.50 lakhs to Rs.2 crore
Executive Engineer	:	Rs.20,000 to Rs.50 lakhs
Asst. Executive Engineer	:	Up to Rs.20,000/-

Only based on the technical sanction quantities, the tender schedule will be prepared to call for tender.

TECHNICAL SANCTION POWERS (ELECTRICAL WORKS)

G.O.Ms.No.159, Public Works (G2) Department, Dt.11.11.2021

TECHNICAL SANCTION POWERS FOR ELECTRICAL WORKS

Chief Engineer	:	Above 10 lakhs
Superintending Engineer	:	No Post
Executive Engineer (Electrical)	:	Upto 10.00 lakhs
Asst. Executive Engineer (Elec):		Nil

REVISED ADMINISTRATIVE SANCTION AND REVISED ESTIMATE

(Refer Para 214 of D-Code)

- Revised Administrative sanction is necessitate when expenditure is forecasted to exceed the Administrative sanction.
- If excess is forecast, first information report on exceeding over AS amount, shall be sent to the Competent Authority followed by a Revised Estimate proposal.
- Wherever any modification is proposed in the details of the scheme involving a departure from the approved design or alteration of other parts of the scheme, or affecting the standard of efficiency or stability of the whole work, revised administrative approval is necessary. (Para 416 a of TNWD Code.)

➤ After obtaining the administrative sanction, if the estimate warrants revision purely due to revision of schedule of rates, the Chief Engineer (B) may accord Technical Sanction for the building scheme based on the current schedule of rates and commence the execution of work' subject to the conditions that:-

A detailed line plan should be submitted along with the approximate cost estimate at the time of initial administrative sanction. The assessment cost should be as accurate as possible and the proposal should indicate all the necessary specification and characteristics of the structure. (G.O. Ms. No. 272 PWD dated 4.3.85)

- The first tender call should be made within 2 years from the date of administrative sanction, otherwise the sanction would lapse and fresh administrative sanction of Government should be obtained before starting the work.(G.O. Ms No. 272 PWD dated 4.3.85).
- No administrative approval is required for ordinary repairs and special repairs. In the case of mixed works described in Para 93 of TNPWD code require administrative approval as original work.(Para 142 of TNPWD code).
- The approval or sanction to an estimate for any Public Work other than annual repairs will, unless, such work has been commenced, cease to operate after a period of five years from the date on which it was accorded.(Para 186 of TNPWD Code).

ALTERATIONS IN DESIGN DURING CONSTRUCTION

[CHAPTER II OF CLAUSE V UNDER PARA 187 OF TNPWD CODE

Where important structural alterations are contemplated though and necessarily involving an increased outlay orders of the original sanctioning authority should be obtained.

A revised estimate should be submitted for technical sanction should the alterations involve any substantial change in the cost of the work.

LIST OF DOCUMENTS TO BE FURNISHED IN THE RAS PROPOSAL

1. Report with all relevant Letter/G.O. Copies
2. Proforma for RAS Proposal
3. PART-A (Tender Excess)
4. PART-B (Additional quantity)
5. PART-C (LS Provision Excess)
6. PART-D (Difference between AS and TS)
7. Summary
8. DATE and Events
9. Cost Analysis Statement
10. Item wise Comparative Statement

MEASUREMENT BOOK (M.BOOK)

MESASUREMENT BOOK (M.BOOK)

- The measurement book must be looked upon as a most important record since it is the basic of all accounts of quantities, whether of done by daily labour or by the piece or by contract or of materials received, which have to be counted or measured. The description of the work must be such as to admit of easy identification and check.
- Before the book is brought into use the pages should be examined and any serious defect such as the tearing off or the substitution of pages brought to notice at once.

HOW TO WRITE IN THE MEASUREMENT BOOK (M.BOOK)

WRITING IN THE BOOK

- Left side of the page contains - Description, No's, Length, Breadth, depth and contents
- Have 10 lines in a page, Measurement should be written only by AE's
- No page should be left without writing any thing
- Left side top, Name of Work, Estimate Amount, Technical sanction No.
- Right side top, Name of Contractor / Firm, Agreement No. and then signing date
- After writing the measurement in the left side by AE has to sign and close the item of work

WRITING THE MEASUREMENT

- All measurements should be neatly entered directly in the measurement book at the Site itself.
- Measurements should be written in the sequence of item of work done (practically one by one) and dates.
- Then write in the M.Book carefully without any correction and omission, if anything written wrong score out by your pen and put initial on it (don't erase or whiteners the mistake)

M.BOOK PAGES WRITTEN

- Monthly M.Book pages written statement to be submitted to Division.
- After passing bill for payment, the M.book pages written to be crossed in red ink
- **Separate M.Book for each item of work** (Earth work, Centering, reinforcement, concrete etc) may be used for convenient of writing measurement in Major multistoried building works

CHECK MEASUREMENT AND SUPER CHECK MEASUREMENT

- Before billing, the Measurement to be got **check measured by AEE for 70%** and **Super check measurement by EE for 30%** of work Value (not No.of lines) and in which Min. 10% Value of hidden measurement value

COMPLETED M.BOOK

- After completion of work, the completed M.book may be submitted to Division Office for Record by giving suitable certificate in the last page of the book

**MEASUREMENTS RECORDING IN M.BOOK – SEQUENCE FOR GENERAL WORK –
FRAMED STRUCTURE UPTO-GF**

1. Dismantling (if any)-Pre measurement
2. Earthwork
3. PCC 1:5:10 for Footing
4. Steel Fabrication for Footing & Column upto Basement
5. Shuttering for Footing
6. Shuttering for Pedestal
7. Shuttering for columns upto Grade Beam Bottom
8. RCC Quantity for Footing,Column upto Grade Beam Bottom
9. Earthwork for Grade Beam
- 10.PCC 1:5:10 for Grade Beam
- 11.Shuttering for Grade Beam
- 12.Steel Fabrication for Grade Beam
- 13.RCC Quantity for Grade Beam
- 14.Shuttering for Columns upto Lintel Bottom(with 2/3/4 (or) More Stages) and Steel Fabrication upto Lintel

15. DPC
16. Brickwork Quantity upto Basement
17. Inner Plastering for Basement (if any)
18. Filling Basement with Excavated Earth (if any)
19. Filling Basement with Conveyed Earth/Gravel/ SG Mix
20. Filling with CS Sand
21. PCC 1:5:10 for Flooring
22. Steel Fabrication and Shuttering for Structural Slab (if any) and Staircase First Flight & Mid landing
23. Shuttering and Steel for Sill Slab
24. Shuttering and steel for Lintel and Sunshade
25. Shuttering for Column upto Roof Beam bottom in 1 (or) 2 Stages and Steel fabrication upto Roof Top/ Dummy Column
26. RCC Quantity and Structural Slab, Column upto Roof Bottom, Sill Slab and Lintel, sunshade and Staircase First Flight and Midlanding
27. Shuttering And Steel for Roof Slab / Beam and Staircase 2nd flight , Landing area
28. RCC Quantity for Roof Slab / Beam and Staircase 2nd flight , Landing area

29. Shuttering for Dummy column (if any)
30. RCC Quantity for Dummy Column (if any)
31. Brickwork in Superstructure & Parapet Wall (1 (or)2 stages)
32. Ceiling Plastering/ Ceiling putty (if any)
33. S&F joinery items
34. Weathering Course/ PCC Roof Finishing
35. Inner wall plastering (1 (or) 2 stages)
36. Outer Plastering (1 (or) 2 stages)
37. Floor Finishing Items
38. Machine Pressed Tiles
39. S&F Water Supply items & rain Water pipe fixing
40. S&F Sanitary Items
41. Inner Wall Putty(if any)
42. Painting of inner Wall
43. Painting of Outer Wall & Joineries

PART BILL AND FINAL BILL

- Bill shall be prepared and paid to the contractor concerned at the interval of a Calendar month for the quantity of items executed by the Contractor in the prescribed forms.
- For LS agreements separate attachment of bill abstract shall be furnished with the bill forms.
- In case of, K2 agreements bill abstract shall be prepared in the bill form itself

Lump Sum Contract.
RUNNING ACCOUNT BILL.[See Local Rulings 1 and 5 under Article 125 in Section 5 of Chapter III of the Madras
Account Code, Vol. III.]

(To be used for "intermediate payments" to Contractors on Lump Sum Contracts.)

Cash Book Voucher No. _____, dated _____ Scheduled docket No. _____
Name of Contractor _____
Name of work _____
Serial number of this Bill _____ No. and date of this previous Bill for this work _____
Reference to Agreement _____ *Date of commencement of work _____

I. Account of Work.

	Rs.	P.
1. Value of items actually measured under clauses 62 (a) and (b) of the preliminary specification of the M. D. S.S. forming part of the contract, the details of which are given in the attached statement		
2. Value of measured up additions or alterations executed up-to-date as "authorized extras" the details of which are given in the attached statement		
3. Approximate value of work done up-to-date excluding the items specified in 1 and 2 above		
4. Deduct amount to be withheld, _____ per cent on Rs. _____		
5. Balance, i. e., "up-to-date" intermediate payments (Items 1+2+3-4) K		
6. Deduct intermediate payment already made as shown in entry "K" of the last Running Account Bill		
7. Intermediate payment now to be made (Items 5 & 6) D		
8. Total payments now to be made as detailed below †:-		

(a) By recovery of amounts creditable to this work G

(b) By recovery of amounts creditable to other works or heads of accounts

H

(c) By cheque

* Date of handing over of site in the case of work, or date or written order to commence supply in the case of supply of materials.

† The total figure against item 8 should be tested to see that it agrees with the figure against item 7.

II. Certificates and Signatures.

I have satisfied myself to the best of my knowledge by that the value of work done up-to-date under item 3 of "1. Amount of work" of this bill is not less than Rs. _____ conformably with the contractor's agreement.

2. The detailed measurement of authorized additions and alterations up-to-date and of the items of work specified in item 1 of Account I of this bill are recorded at page _____ of Measurement Book No. _____

Signature of Contractor.

Dated Signature of the officer preparing the bill. }
Rank _____

‡ Pay (Rs. _____) Rupees

Dated Signature of the officer authorizing payment. }
Rank _____

III. Acquittance.

§ Received (Rs. _____) Rupees
intermediate payment in connection with the contract referred to above. _____ as on _____

Amount in Indian language.

Dated _____

|| Witness _____

Sta. F

Full signature of Contractor.

Paid by me by Cash _____, dated _____
Cheque No. _____

Dated initial of person actually making the payment.

* Here specify the method employed for estimating the value of work.

† Of not less than that of a Sub-divisional Officer.

‡ Here specify the net amount payable, vide item 8 (c) of Account I, both in words and figures.

§ The payee's acknowledgment should be for the gross amount paid as per item 8 (a+b+c) of Account I, both in words and figures.

|| Payment should be attested by some known person when the payee's acknowledgment is given by a mark, seal or thumb-impression.

Lump-Sum Contract.
FINAL BILL.

[See Chapter X, paragraph 303, Madras P. W. Account Code.]

(To be used for "Final Payments" to Contractors on Lump-Sum Contracts.)

Cash Book Number No. _____ dated _____	Number and date of his previous bill for this work _____
Schedule Docket No. _____	Reference to Agreement _____
Name of Contractor _____	Date of commencement of work _____
Name of work _____	Date of actual completion of work or supplies _____
Serial number of this bill _____	

I.—Account of work executed.

	Rs.	P.
(i) Total lump-sum amount as entered in the contractor's agreement		
<i>Add--</i> (ii) Value of additional work done up to date as "Authorized extras," the details of which are given in the attached statement in form P.W.D. VI-74 (Inner).		
(iii) Value of items actually measured under clause 02 (a) and (b) of the preliminary specifications of the M.D.S.S. forming part of the contract (item 1) the details of which are given in the attached statement in form P.W.D. VI-74 (Inner).		
Total		
<i>Debit--</i> (iv) Value of items omitted to be executed as "Authorized omissions," the details of which are given in the attached statement in form P.W.D. VI-74 (Inner).		
(v) Value as per lump-sum contract for items of work covered by actual measurements-- vide item (iii) above.		
Net total value of work done		

II.—Certificates and signatures.

I certify that the work has been completed in accordance with the prescribed specification and after taking into account all the authorized additions and alterations the value of work done up to date, conformably with the terms of the contractor's agreement is Rs. _____

The detailed measurements of the authorized additions and alterations mentioned above and of the items of work specified in item 1 of Account I of last bill are recorded at page _____ of Measurement Book No. _____ and I am satisfied that they are correct.

Dated signature of
the certifying Engineer
Name _____

Signature of Contractor _____

* Date of handing over of site in the case of work, or date of written order to commence supply in the case of supply of materials.
† This certificate must be signed by an officer of not less rank than that of an Executive Engineer in respect of work costing more than Rs. 6,000 and of not less rank than that of a Subdivisional Officer in respect of work costing Rs. 6,000 and less.

III.—Memorandum of payments.

	Rs.	P.
1. Total value of work done up to date as per 'I' of Account I of this bill		
2. <i>Deduct--</i>		
(i) Amount to be withheld as per cent on amount in item 1 above and credited to the head 'Public Works Deposits'.		
(ii) Up to date intermediate payment already made according to entry 'K' of Account I of previous bill No. _____, dated _____		
3. Payments now to be made:—		
(a) By recovery of amounts creditable to this work		G
(b) By recovery of amounts creditable to other works or heads of account.		
(c) By cheque		H

Pay (Rs. _____) Rupees _____
Dated signature and rank of officer authorizing payment.
* Here specify the net amount payable, vide item 3 (c) of Account III, both in words and figures.

IV.—Receiptance.

Received (Rs. _____) Rupees _____ as above, in full settlement of all demands on account of the contract.
Amount in vernacular.
Stamp _____
Dated _____
Witness _____ Signature of Contractor.

Paid by me by cash _____ dated _____
Dated initials of person actually making payment.

† The payee's acknowledgment should be for the gross amount as per item 3 (a+b+c) of Account III, both in words and figures.
‡ Payment should be attested by some known person when the payee's acknowledgment is given by mark, seal or thumb impression.

V.—Remarks.

FORM P.W.A. XX

(See Local Rules 1 and 4 under Article 125 in Chapter III.)

(1) Final payments must invariably be made on forms printed on yellow paper which should not be used for intermediate payments.

(2) The full name of the work as given in the estimate should be entered except in the case of bills for "Stock" Materials.

(3) The purpose of supply applicable to the case should be filled in and the rest scored out.

(4) This is the only form of Running Account which is suited to transactions with suppliers. This form can only be used if no advance payment is outstanding and if it is not proposed to make such a payment.

DIVISION—

SUBDIVISION—

CASH BOOK VOUCHER No.—

SCHEDULE DOCKET No.—

MONTH—

Running Account Bill C.

Name of work

Purpose of supply

Name of contractor

Serial number of this bill

Number and date of his last bill for this work

Reference to Agreement

M.A.C. (P.W.A.) XX-1,01,968-24-9-2007-G.B.P., Pt. 3
G.O. I No. 2

III.—Memorandum of payments.

- 1. Total value of work done as per Account I, column (5), entry (A)
- 2. Deduct amount withheld

Figures for works abstract		Rs.		P.	
(a)	From previous bills as per Running Account bill..				
(b)	From this bill				
3. Balance i.e., up-to-date payments (items 1-2) (K)†					
4. Total amount of payments already made as shown in entry (K) of last Running Account Bill No. _____ (C.B.V. No. _____ S. Dt. No. _____) of _____, forwarded with the accounts for _____					
5. Payments now to be made as detailed below—					
By recovery of accounts creditable to the work—					
Value of stock supplied as detailed in the ledger for					
(a)				(a)	
Total 2(b)+5(a) .. (G)					
By recovery of amounts creditable to other works on heads of accounts—					
(b)				(b)	
(c) By cheque					
Total 5(b)+(c) .. (H)					

Pay Rs. _____ by cheque. \$
Dated initials of disbursing officer

Received Rs. _____ as shown in the above memorandum or account of this work.
Witness _____ Full signature of contractor
Dated initials of person actually making the payment.

IV.—Remarks.

† In required in the case of bills on suppliers.
 ‡ His figures should be tested to see that it agrees with the total of items (4) and (5)
 § If the net amount to be paid is less than Rs. 10 and it cannot be included in a cheque, the payment should be made in cash, this entry being altered suitably and the alteration attested by dated initials.
 ¶ Here specify the net amount payable—item 5(a).
 †† The payee's acknowledgement should be for the gross amount paid as per item 5 (i.e. a + b + c).
 ††† Payment should be attested by source, known person when the payee's acknowledgement is given by a mark, seal or thumb-impression.

NOTES.

(Under VII of the P.W. Account Code paragraphs 33 and 34)

This form should be used for making payments both to contractors for work and to suppliers when a single payment is made for a job or contract, i.e. on its completion. A single form may be used for making payments to several contractors or suppliers. In they relate to the same work and are billed for at the same time.

2. In the case of payments to suppliers a red ink entry should be made across the page above the entries relating thereto, in one of the following forms applicable to the case:-

- (1) "Stock"
- (2) "Purchases for stock"
- (3) "Purchases for direct issue to work"

(4) "Purchases for the work"

issued to contractor

on

Division - Building (Constn & maint) Tirunelveli
Sub-division - Building (Constn & maint) Tirunelveli
Schedule Docket No.
Cash Book Voucher No.

Month ----- 200

FIRST AND FINAL BILL

Name of work (in the case of bills for work done.)

SR. No.:

Appt. No.:

Measurement Rec. P. - /

Bill Abstract Rec. P. - /

Certificates:

- i) Certified that the work is completed.
- ii) Certified that there is no recovery due from the contractor.
- iii) Certified that the contractor has used ISI approved cement only.

COMPLETION REPORT

Completion report shall be prepared after incurring all the expenditure in respect of the work in the prescribed form.

COMPLETION REPORT (P.W.A Form No.:44)

[Para 216 to 220 of TNPWD Code]

BUILDINGS (C&M) SECTION -----

BUILDINGS (C&M) SUB-DIVISION -----

BUILDINGS (C&M) DIVISION -----

COMPLETION REPORT

Division Folio No.	Name of work	Estimate Amount & CR/Agt. No.	Actual expenditure (in Rs.)	Excess	Savings	Percentage %	Remarks

Certificates:

1. Certified that the work has been completed in all respects. Final bill paid vide CB Voucher No.
2. Certified that there are no other MAS materials outstanding this work.
3. Certified that there are no further liabilities in this work

ASSISTANT ENGINEER,
BUILDINGS (C&M) SECTION

ASSISTANT EXECUTIVE ENGINEER,
BUILDINGS (C&M) SUB-DIVISION

COMPLETION PLAN

Completion Plan shall be prepared incorporating all the deviations executed in the works by indicating with red ink in the original sanctioned plan while according Technical Sanction

While Submitting completion plan, necessary details related to the works shall be furnished in the prescribed Proforma.

PROFORMA ACCOMPANYING THE COMPLETION PLAN

- 1 Name of work :
- 2 Location (S.F No. Door No.) :
- 3 Original (Plan & Drawing No) :
- 4 Occupying Department :
- 5 G.O. Ms. No. / Head of Account :
- 6 Administration sanction :
- 7 Technical sanction :
- 8 Agreement No and date :
- 9 Name of the Contractor :
- 10 Date of the site handed over by occupying department to P.W.D :
- 11 Date of the site handed over to the contractor :
- 12 Date of commencement of work :
- 13 Period of completion of work :
- 14 Date fixed for completion of work :
- 15 Extension of time granted :
- 16 a. Actual date of completion :
- b. Buildings handed over to occupying department] :

- 17 Name of the officer in charge of work :
 - A. Assistant Engineer / Junior Engineer
 - B. Asst Exe Engineer
 - C. Executive Engineer
- 18 Date of foundation concrete was laid :
- 19 In presence of whom foundation concrete was laid :
- 20 Who checked the foundation concrete :
- 21 In presence of whom RCC roof was laid :
- 22 Who checked the RCC roof concrete :
- 23 Designed for No of floors :
- 24 Deviation if any :
- 25 Authority of deviation :
- 26 Type of soil mets with in the foundation :
- 27 Actual expenditure :
- 28 Plinth area :
- 29 Plinth area Rate :
- 30 Cubical content :
- 31 Remarks :

Certified that the work has been completed as per plan

INCLUSION OF BUILDING IN THE REGISTER OF PUBLIC BUILDING

After submitting CR and CP to the Division, necessary proposal shall be prepared and submitted to include the building into the register of Public Building maintained by PWD for which necessary details to be furnished in the prescribed proforma.

PWD

**PROFORMA FOR THE REGISTER OF PUBLIC BUILDINGS TO
ACCOMPANY THE COMPLETION PLAN**

- 1 Serial No. of Building :
- Subsidiary Building :
- 2 Name of Buildings / subsidiary Buildings :
- 3 Survey No. Door No. Village :
- 4 Year of Construction :
- 5 No. of storey of present / ultimate :
- 6 Type of Buildings :
- 7 Height of Storey :
- 8 Dimensions of the Buildings :
- 9 Plinth area of the Buildings :
- 11 Nature of structure elements :
 - i) Walls :
 - ii) Roof :
 - iii) Floor finish
 - iv) Doors
 - v) Windows
 - vi) Ventilator
- 11 Book Value :
 - i. Cost of Construction of Civil works and Water supply arrangements

- ii. Electrical installing wire fittings and features :
- iii. Total cost of constructions :
- 12 Head of Account under which fund allotted for construction :
- 13 Occupying Department :
- 14 Remarks :

HANDING OVER OF THE BUILDING

Building shall be handed over to the User Department after Completing all works along with the Charge paper and Copy of building plan.

MODEL CHARGE PAPER

CHARGE PAPER

We have on this day Handed over / Taken over the Newly constructed
is

Handed over by **Public Works Department** and Taken Over by **USER DEPARTMENT**
with Internal and External water supply arrangements, Sanitary arrangements, Furniture
arrangements, Dining arrangements, Fire Fighting and RO Plant arrangements.

Estimate Amount: 1500.00 lakhs

RAS Amount : 1612.13 lakhs

Building Constructed vide GO

1.G.O.(Ms) No.

Dt:

2.G.O.(Ms) No.

Dt:

1. PLINTH AREA DETAILS:

Sl.No	Description of Building	Area Details	
		CA Job No.	Plinth Area
1	Building (G+4)	A20/6107	GF- 710.72 m ² FF - 680.00 m ² SF - 680.00 m ² TF - 680.00 m ² FF - 680.00 m ² Terrace - 51.70 m ² Total area- 3482.42 m²

The above buildings are completed with required all other arrangements as per the approved plan and as per the approved site plan.

2. OHT Details

Sl.No	Name of the Building	Type	Capacity	Number
1.	Building	RCC OHT	36000 liters	01

3. UG Sump Details

Sl.No	Name of the Building	Type	Capacity	Numbers
1.	Building	RCC	80000 liters	01

HANDED OVER

TAKEN OVER

4. Reverse Osmosis Plant Details

Sl.No	Name of the Building	Details	Numbers
1.	Building	RO Plant - 1000 litres capacity	01
2.	Building	Water Dispenser with Cold and Normal water - 40 litres capacity	05

5. Motor Details.

Sl.No	Sump/Borewell	Motor	Details	Numbers
1.	UG Sump to Building OHT	Submersible	5.00 HP	02
2.	Borewell and Well	Submersible	1.50 HP	02

6. Fire Fighting Arrangements

Fire alarms, yard hydrants, hydrant valve in each floor, Hose reel drum in each floor are provided as per the plan.

Sl.No	Description	Total No's
1	Monoblock Motor Pumpset	1
2	Firefighting application oblique type stainless steel Hydrant Valve	8
3	Fire Fighting Application Hose	16
4	180 degree swinging type, hose reel drum	4
5	ABC (Mono Ammonium Phosphate) Powder Type Fire Extinguisher of 6 kg. capacity	15

7. Water Supply & Sanitary Arrangements

Sl.No	Description	Total No's
1	IWC	6
2	EWC with 10 litre capacity PVC Flush Tank	8
3	Wash handbasin with pedestal	16
4	Bevelled edge mirror of size	16
5	PVC Water tank of 1000 litre capacity	4

HANDED OVER

TAKEN OVER

8. Furniture Details:

S.No	Description	Total No's
1	Sofa Two-Seater	66
2	Wooden Teapoy of Size 3X1½	66
3	Wooden single cot of size 6 1/4 ' x 3'	9
4	Single Size Bed with pillow&Bed spread	9
5	Queen size special cot of size 6 1/4 ' x 5'	55
6	Queen size Bed with pillow&Bed spread	55
7	King Size special cot of size 6 1/2 ' x 6'	4
8	King Size Bed with pillow&Bed spread	4
9	Bed Side Box	66
10	Table 4 X 2	66
11	Chair with arm steel frame and leg chair with cushion	132
12	Bed room Wardrobe with shutters(7X3)	66
13	Office Room Table 6x 3 with Side Table 4 X 1½.	1
14	Office Room Chair	1
15	Office Room Visitor Chair	3
16	Reception Table	1
17	Five Seater Sofa	1
18	Single Seater Sofa	4
19	Corner Teapoy of Size 3X3	2
20	Center Teapoy of Size 3X1½	1
21	Dining Table with 4 Chairs of Size 4 X 3	10
22	Dressing table of size 6' X 2' X 1-1/2	64
23	Manual Foldable Wheel Chair	2

HANDED OVER**TAKEN OVER**



○ ○

Thank You!

For your attention

