

LOAD CALCULATION FOR RESIDENTIAL APARTMENT

FOR STILT + FIVE FLOORS

The Load Calculation is done for the Proposed Construction of RCC Roof

Residential Building for Block A, Block B & Block C having Stilt + Five floors at

Agaram Village S.F.No.25/6, 25/7, 25/8, 26/3a1a1b, 26/4a, Elakudi Village

s.f.no.6/5a2a at Balaji Nagar Trichy, Thiruverumbur taluk, Tiruchirappalli District.

The load coming over the individual column is distributed through Independent Foundations

Codes Referred:-

- ❖ **I.S. 875-1987** CODE OF PRACTICES for design loads (part 1,2 & 3)
- ❖ **I.S. 456-2000 & SP – 16** CODE OF PRACTICES for Plain and Reinforced Concrete
- ❖ **I.S. 1786-1985** CODE OF PRACTICES specified for high strength deformed steel bars & wires for concrete reinforcement.
- ❖ **I.S. 1904-1986** CODE OF PRACTICES for design of construction of foundation in soils.

Concrete Strength assumed	- M-30 for foundation (Isolated)
Concrete Strength assumed	- M-30 for column , Roof slab & Roof Beams
Steel	- Fe500
Zone	- II
Live Load for Residential	- 200 kg/Sqm
Depth of Foundation	- 2.5 mts.
Safe Bearing Capacity	- 210KN/ Sqm


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DESIGN CONCEPT

Limit state concept of design will be used as per IS : 456-2000 & SP- 16.

The detailing of reinforcement shall be done satisfying the requirements of IS 456-2000, SP-16 , IS :13920, IS 4326-1993 and SP-34

The slabs and beams are checked for deflection as per IS 456-2000

LOAD CASES

1. Dead load (DL)
2. Live load (LL)
3. Earthquake Load (EQ)

LOAD COMBINATIONS

The following combinations of loads as per IS 1893 is considered in the analysis

1. DL+LL
2. 1.5DL+1.5LL
3. 1.2DL+1.2LL +1.2 EQX
4. 1.2DL+1.2LL -1.2 EQX
5. 1.2DL+1.2LL +1.2 EQZ
6. 1.2DL+1.2LL -1.2 EQZ
7. 0.9DL+0.9EQX
8. 0.9DL-0.9EQX
9. 0.9DL+0.9EQZ
10. 0.9DL-0.9EQZ


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MATERIALS USED

Following materials are generally used in the design of the various components of the structure

1. M 30 grade concrete for Foundation .
2. M 30 grade concrete for Roof Slabs & Roof beams.
3. Fe 500 grade reinforcement steel for all reinforced concrete members

COVER FOR REINFORCEMENT

Cover for reinforcement is considered as per table 16A of NBC , for a fire resistance of 2 hrs

- | | |
|---------------|---------|
| 1. Footing | = 50 mm |
| 2. Columns | = 40 mm |
| 3. Roof slabs | = 20 mm |
| 4. Roof Beams | = 25 mm |

DEAD LOAD, LIVE LOAD AND FLOOR FINISH LOADS FOR RESIDENCE

Self weight of 125 thk slab = $12.5 \times 25 = 312.5 \text{ Kg / M}^2$

Live load = 200 Kg / M^2

Floor finish = 120 Kg / M^2
= 632.5 Kg / M^2
= 6.33 KN/ M^2


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DESIGN OF FOOTINGS

Size of Column = 300 x 760 mm

SBC of Soil assumed = 210 KN / Sqm

COLUMN

WIDTH (Breadth) =	300	mm
DEPTH (Length) =	760	Mm
Axial load from output (P1) =	2550	KN
Moment about Z axis (Mz) =	143	KN-m
Moment about X axis (Mx) =	1	KN-m
Safe bearing pressure =	300	KN/m2
AREA=	9.35	mm2
1	x2	-0.46
Required length of the footing		x
Required width of the footing		
Depth required	292.882403	
Over All Depth	362.882403	

WITHOUT PEDASTAL

Column Breath =	300	mm
Column Length =	760	mm

FOOTING

Revised Footing length (L, dim.) =	4.5	m
Revised Footing Breadth (W,) =	4.5	m
Depth of footing (t) =	750	mm
Clear cover of footing =	60	mm
Main bar dia of footing =	20	mm
Effective depth of footing =	680	mm
Selfweight of the footing =	379.69	KN
Area of Footing(A) =	20.25	m2
Sect mod of foot about Z axis (Zz) =	15.19	m3
Sec mod of foot about X axis (Zx) =	15.19	m3
Grade of concrete fck =	30	N/mm2
Grade of steel fy =	500	N/mm2
Unit wt of soil =	18	KN/m3

CHECK FOR GROSS BEARING PRESSURE

Safe NET bearing pressure =	200	KN/m2
Safe gross bearing pr. =	246.80	KN/m3
Axial load from output (P1) =	2550	KN
Moment about Z axis (Mz) =	143	KN-m

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Moment about X axis (Mx) =	1	KN-m
Depth of top of foot. from ground =	1.85	m
Unit wt of soil =	18	KN/m ³
Weight of soil retained above foot =	666.73	KN
P = (P1+soil+foot self wt) =	3596.42	KN
Maximum bearing pressure =	187.08	KN/m ²
Minimum bearing pressure =	168.12	KN/m ²
Hence footing is safe against max gross bearing pr.		

DESIGN FORCES

Axial load:(Pu) =	3825	KN
Moment about Z axis (Muz) =	214.5	KN-m
Moment about X axis (Mux) =	1.5	KN-m
Maximum effective soil pressure pe max (Pu/Area+ Muz/Zz + Mux/Zx) =	203.11	KN/m ²
Minimum effective soil pressure pe min (Pu/Area - Muz/Zz - Mux/Zx) =	174.67	KN/m ²

Design of footing is done using above maximum effective soil pressure

CALCULATION FOR BOTTOM STEEL

Mu about X1 X1 = (pe max x length²/2)=

$$A_{st} = \frac{0.5 f_{ck}}{f_y} \left[1 - \sqrt{1 - \frac{4.6 M_u}{f_{ck} b d^2}} \right] b d$$

Hence, Ast =	1238.786	mm ²
Min Ast =	816.000	mm ²
Spacing required =	253.60	mm
Spacing provided =	130	mm
pt provided =	0.36	%
pt required =	0.18	%
provide a maximum st	0.36	%

Hence provide 20 mm dia bar @ 130 mm c/c parellel to length of footing (|| to Z)

Mu about N1 N1 = (pe max x length²/2)=

Calc. Ast =	1575.672	mm ²
Min Ast =	816	mm ²
Spacing =	199.38	mm
Spacing provided =	130	mm
pt provided =	0.36	%
pt required =	0.23	%
provide a maximum st	0.36	%

Hence provide 20 mm dia bar @ 130 mm c/c parellel to breadth of footing (|| to X)

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DESIGN OF COLUMN

Size of Column = 300 x 760 mm
Ultimate Axial load = 3677 KN

Moment due to DL + LL + EQ = 118 KN-m

Total = 118KN-m

$$P_u / F_{ck} B_d = 3677 \times 1.5 \times 10^3 / 30 \times 760 \times 260 = 0.93$$

$$M_u / F_{ck} B_d^2 = 118 \times 1.5 \times 10^6 / 30 \times 760 \times 260^2 = 0.11$$

From SP 16 Chart 48 $P / F_{ck} = 0.08$

$$P = 0.08 \times 30 = 2.4 \%$$

Min 0.8 %

$$A_{st} = 2.4 \times 76 \times 30 / 100 = 54.72 \text{ cm}^2$$

Provide 12Nos. of 25 mm dia bar (58.8 cm²) Hence ok.

Provided 6L8Tor @ 200 c/c as Column ties

DESIGN OF BEAMS

Span of Beam - 3.25 M

$$\text{Load from Slab} = 1.78 \times 6.33 \times 1 = 11.26 \text{ KN/m}$$

$$\text{Load from Slab} = 2.8 \times 6.33 \times 1 = 17.72 \text{ KN/m}$$

$$\text{Self-weight of Beam} = 0.20 \times 0.60 \times 25 \times 1 = 3 \text{ KN/m}$$

$$\text{Wall load} = 2.43 \times 0.20 \times 6.5 \times 1 = 3.159 \text{ KN/m}$$

Total = 31.98 KN/m

$$\text{Maximum BM} = W L^2 / 8 = 31.98 \times 3.25^2 / 8 = 42.22 \text{ KN-m}$$

$$M_u / B_d^2 = 42.22 \times 1.5 \times 10^6 / 200 \times 550^2 = 1.04$$

$$P_t = 0.280$$

$$A_{st} = 0.280 \times 20 \times 55 / 100 = 3.00 \text{ cm}^2$$

Area of steel provided 2-16 Tor @ Bottom


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Area of steel provided 2- 16 Tor @ Top

Shear force at each support = $31.98 \times 3.25 / 2 = 52.44$ KN

Shear stress = $52.44 \times 1.5 \times 1000 / (200 \times 550) = 0.71 < 3.1$

Hence ok.

Vertical stirrups for shear = $52.44 \times 1.5 / 55 = 1.43$ KN/cm

Provided 2 Legged 8Tor@ 150MM c/c

Hence Ok.

DESIGN OF SLABS

Panel size of Slab **3.35 m x 4.57m**

$L_y / L_x = 4.57 / 3.35 = 1.36$ (Two way Slab)

$W = 6.33$ KN/M²

$L_x / 35 = 3.35 \times 1000 / 35 = 95.71$ $L_x = 3.35$ M

Provide Slab thickness = 125mm

$$\begin{aligned} M_x &= \alpha_x w L_x^2 & \alpha_x &= 0.096 \\ &= 0.096 \times 6.33 \times 3.35^2 \\ &= 6.819 \text{ kN-m} \end{aligned}$$

$$Mu/Bd^2 = 6.819 \times 1.5 \times 10^6 / 1000 \times 105^2 = 0.927$$

$P_t = 0.252$

$$A_{st} = 0.252 \times 100 \times 10.5 / 100 = 2.646 \text{ Cm}^2$$

Area of steel required 8 Tor @ 200mm C/C as Main reinforcement

$$\begin{aligned} M_y &= \alpha_y w L_x^2 & \alpha_y &= 0.053 \\ &= 0.053 \times 6.33 \times 3.35^2 \\ &= 3.76 \text{ kN-m} \end{aligned}$$

$$Mu/Bd^2 = 3.76 \times 1.5 \times 10^6 / 1000 \times 105^2 = 0.51$$

$P_t = 0.135$

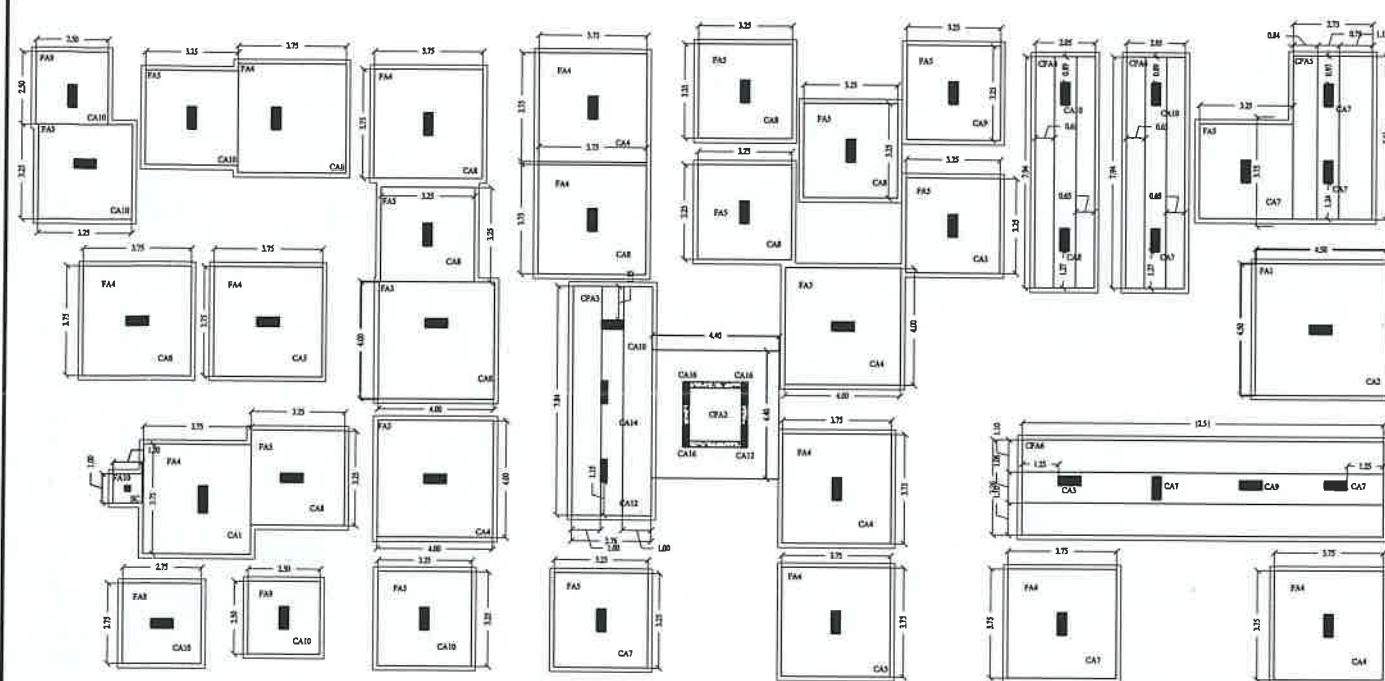
Min % 0.17

$$A_{st} = 0.17 \times 100 \times 10.5 / 100 = 1.78 \text{ Cm}^2$$

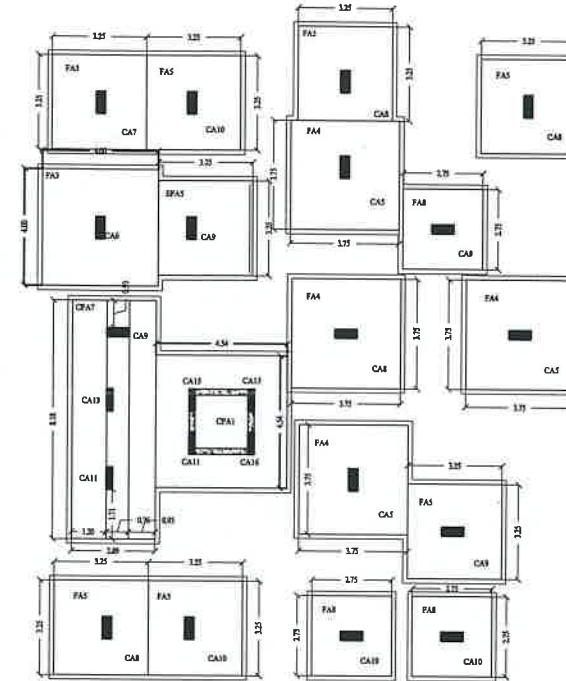
Area of steel provided 8 Tor @ 200 mm C/C

Hence Ok.


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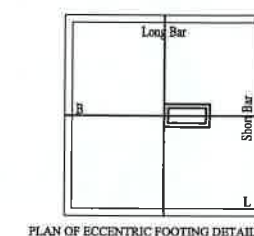
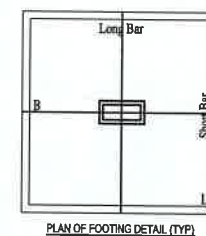
BLOCK A - FOOTING LAYOUT



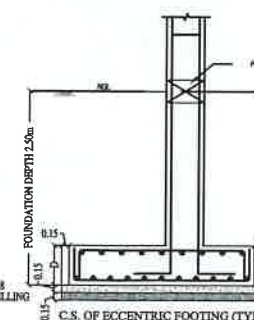
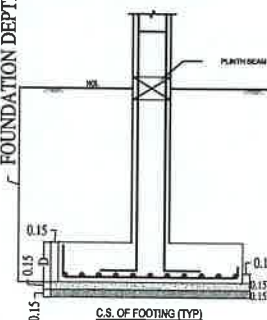
BLOCK A - PLINTH BEAM LAYOUT

COLUMN DETAILS (M30)											
CA1 12'x36"	TBS	CA3 12'x36"	TBS	CA5 12'x36"	TBS	CA7 12'x36"	TBS	CA9 12'x36"	TBS	CA11 12'x36"	TBS
16-25# 8@4" C/C		16-25# 8@4" C/C		16-25# 8@4" C/C		16-25# 8@4" C/C		16-25# 8@4" C/C		16-25# 8@4" C/C	
CA2 12'x36"	TBS	CA4 12'x36"	TBS	CA6 12'x36"	TBS	CA8 12'x36"	TBS	CA10 12'x36"	TBS	CA12 12'x36"	TBS
16-25# 8@4" C/C		16-25# 8@4" C/C		16-25# 8@4" C/C		16-25# 8@4" C/C		16-25# 8@4" C/C		16-25# 8@4" C/C	
CA13 8'x30"	TBS	CA15 8'x30"	TBS	CA17 8'x30"	TBS	CA19 8'x30"	TBS	CA21 8'x30"	TBS	CA23 8'x30"	TBS
16-16# 8@4" C/C		16-16# 8@4" C/C		16-16# 8@4" C/C		16-16# 8@4" C/C		16-16# 8@4" C/C		16-16# 8@4" C/C	
CA14 8'x30"	TBS	CA16 8'x30"	TBS	CA18 8'x30"	TBS	CA20 8'x30"	TBS	CA22 8'x30"	TBS	CA24 8'x30"	TBS
16-16# 8@4" C/C		16-16# 8@4" C/C		16-16# 8@4" C/C		16-16# 8@4" C/C		16-16# 8@4" C/C		16-16# 8@4" C/C	

FOUNDATION DETAILS (M30)					
TYPE	LENGTH	BREADTH	D	LONG BAR	SHORT BAR
FA1	4.50	4.50	0.80m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FA3	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FA4	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FA5	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
EFA5	3.25	3.25	0.60m	16mm Dia @175mm C/C T/B	16mm Dia @175mm C/C T/B
FA8	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FA9	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FA10	1.00	1.00	0.40m	10mm Dia @200mm C/C	10mm Dia @200mm C/C
CFA1	4.54	4.54		REFER DETAILS	
CFA2	4.40	4.40		REFER DETAILS	
CFA3	7.84	2.76		REFER DETAILS	
CFA4	7.94	2.05		REFER DETAILS	
CFA5	5.61	2.73		REFER DETAILS	
CFA6	12.51	3.26		REFER DETAILS	
CFA7	8.18	2.89		REFER DETAILS	



FOUNDATION DEPTH 2.50m



- GENERAL NOTES:-
- All dimensions in Feet & Inches.
 - Dimensions to be read, not scaled.
 - Clear cover to the main reinf. as follows
 - Col 25mm for 12mm bars & 40mm for >12mm
 - Footings 50mm
 - Plinth beams 30mm
 - Roof Slab 20mm
 - Roof Beams 25mm
 - Raft Slab & Beam 50 mm
 - Slab thickness 5" thick unless specified otherwise.
 - Provide 8@8" c/c as Dist. Steel wherever required
 - Crank length 0.25L of short span
 - Top rod extn 0.30L of short span
 - Use M25 Conc & Fe500 unless specified otherwise.
 - Found. designed for STILL+3 Fls. only.
 - Footng CL to coincide with Column CL.
 - SBC - 10-7/54.m

- Removal of formwork (Shuttering)
- Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
 - Vertical side of shuttering columns, Walls & beams - 24 Hours
 - Bottom shuttering of Slabs (Keeping the Props) - 3 Days
 - Bottom shuttering of Beams (Keeping the Props) - 7 Days
 - Props to Slabs:
 - Spanning Upto 4.5M - 14 Days
 - Spanning Over 4.5M-21 Days
 - Props to Beams & Arches:
 - Spanning Upto 6M - 21 Days
 - Spanning Over 6M - 28 Days
 - Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level v) Laps in beams and columns shall be provided at the point of contraflexure.
 - Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
 - Detailing of Rebars shall conform to SP-34 & IS 13920

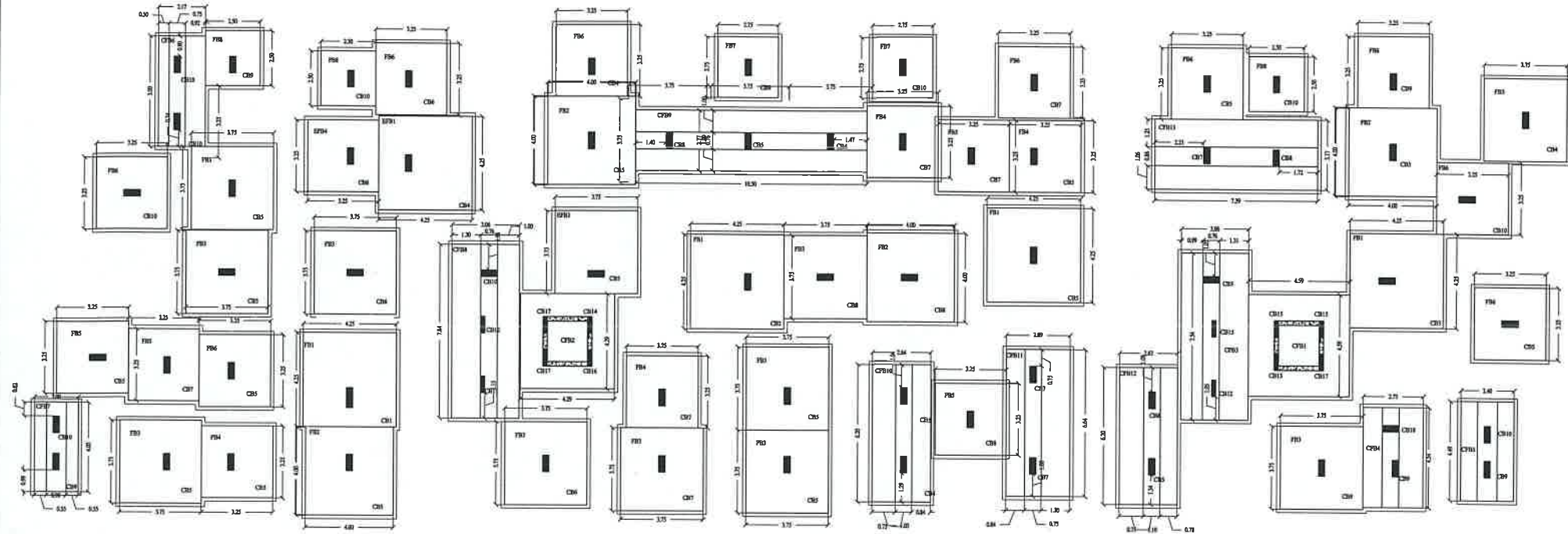
THE PROPOSED CONSTRUCTION OF
RCC ROOF RESIDENTIAL BUILDING
BLOCK - A, BLOCK - B & BLOCK - C
HAVING STILLT + FIVE FLOORS AND CLUB
HOUSE BUILDING HAVING STILLT +
THREE FLOORS AGARAM VILLAGE
S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A,
ELAKUDI VILLAGE S.F.NO.6/5A2A AT
BALAJI NAGAR TRICHY,
THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT.

TITLE **BLOCK A - FOUNDATION DETAILS**

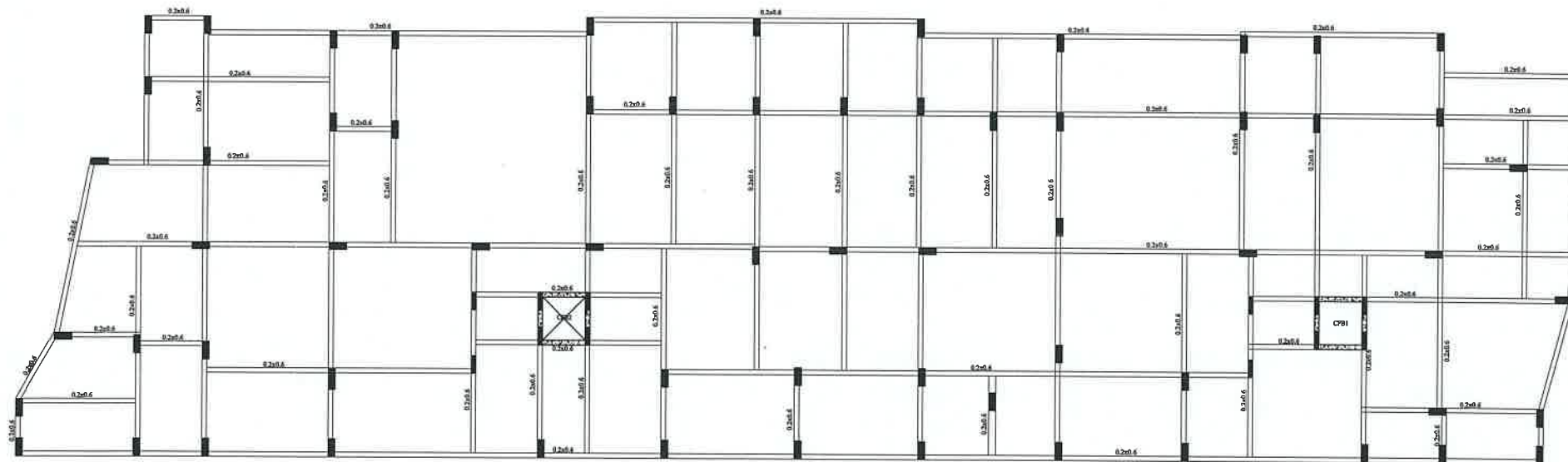
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SCALE : NTS

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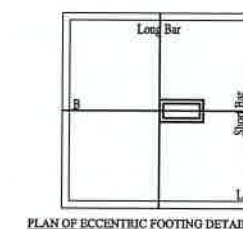
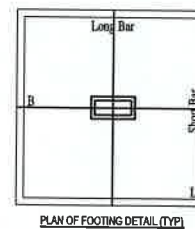
BLOCK B - FOOTING LAYOUT



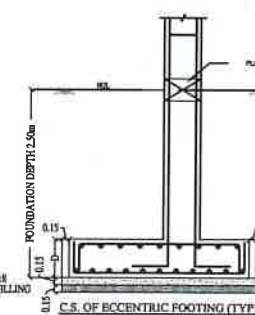
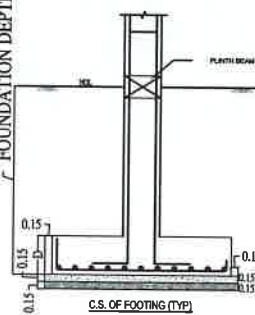
BLOCK B - PLINTH BEAM LAYOUT

COLUMN DETAILS (M30)		COLUMN DETAILS (M30)		COLUMN DETAILS (M30)		COLUMN DETAILS (M30)	
CB1 12"X36"	TIES	CB2 12"X36"	TIES	CB3 12"X36"	TIES	CB4 12"X36"	TIES
CB5 12"X36"	TIES	CB6 12"X36"	TIES	CB7 12"X36"	TIES	CB8 12"X36"	TIES
CB9 12"X36"	TIES	CB10 12"X36"	TIES	CB11 12"X36"	TIES	CB12 12"X36"	TIES
CB13 12"X36"	TIES	CB14 12"X36"	TIES	CB15 12"X36"	TIES	CB16 12"X36"	TIES
CB17 12"X36"	TIES	CB18 12"X36"	TIES	CB19 12"X36"	TIES	CB20 12"X36"	TIES
CB21 12"X36"	TIES	CB22 12"X36"	TIES	CB23 12"X36"	TIES	CB24 12"X36"	TIES
CB25 12"X36"	TIES	CB26 12"X36"	TIES	CB27 12"X36"	TIES	CB28 12"X36"	TIES
CB29 12"X36"	TIES	CB30 12"X36"	TIES	CB31 12"X36"	TIES	CB32 12"X36"	TIES
CB33 12"X36"	TIES	CB34 12"X36"	TIES	CB35 12"X36"	TIES	CB36 12"X36"	TIES
CB37 12"X36"	TIES	CB38 12"X36"	TIES	CB39 12"X36"	TIES	CB40 12"X36"	TIES
CB41 12"X36"	TIES	CB42 12"X36"	TIES	CB43 12"X36"	TIES	CB44 12"X36"	TIES
CB45 12"X36"	TIES	CB46 12"X36"	TIES	CB47 12"X36"	TIES	CB48 12"X36"	TIES
CB49 12"X36"	TIES	CB50 12"X36"	TIES	CB51 12"X36"	TIES	CB52 12"X36"	TIES
CB53 12"X36"	TIES	CB54 12"X36"	TIES	CB55 12"X36"	TIES	CB56 12"X36"	TIES
CB57 12"X36"	TIES	CB58 12"X36"	TIES	CB59 12"X36"	TIES	CB60 12"X36"	TIES
CB61 12"X36"	TIES	CB62 12"X36"	TIES	CB63 12"X36"	TIES	CB64 12"X36"	TIES
CB65 12"X36"	TIES	CB66 12"X36"	TIES	CB67 12"X36"	TIES	CB68 12"X36"	TIES
CB69 12"X36"	TIES	CB70 12"X36"	TIES	CB71 12"X36"	TIES	CB72 12"X36"	TIES
CB73 12"X36"	TIES	CB74 12"X36"	TIES	CB75 12"X36"	TIES	CB76 12"X36"	TIES
CB77 12"X36"	TIES	CB78 12"X36"	TIES	CB79 12"X36"	TIES	CB80 12"X36"	TIES
CB81 12"X36"	TIES	CB82 12"X36"	TIES	CB83 12"X36"	TIES	CB84 12"X36"	TIES
CB85 12"X36"	TIES	CB86 12"X36"	TIES	CB87 12"X36"	TIES	CB88 12"X36"	TIES
CB89 12"X36"	TIES	CB90 12"X36"	TIES	CB91 12"X36"	TIES	CB92 12"X36"	TIES
CB93 12"X36"	TIES	CB94 12"X36"	TIES	CB95 12"X36"	TIES	CB96 12"X36"	TIES
CB97 12"X36"	TIES	CB98 12"X36"	TIES	CB99 12"X36"	TIES	CB100 12"X36"	TIES

FOUNDATION DETAILS (M30)		FOUNDATION DETAILS (M30)		FOUNDATION DETAILS (M30)	
TYPE	LENGTH	BREADTH	D	LONG BAR	SHORT BAR
FB1	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB2	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB3	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB4	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB5	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB6	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB7	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB8	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB9	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FB10	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FB11	2.25	2.25	0.45m	12mm Dia @175mm C/C	12mm Dia @175mm C/C
FB12	2.00	2.00	0.40m	10mm Dia @150mm C/C	10mm Dia @150mm C/C
FB13	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB14	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB15	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB16	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB17	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB18	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB19	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB20	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB21	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FB22	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FB23	2.25	2.25	0.45m	12mm Dia @175mm C/C	12mm Dia @175mm C/C
FB24	2.00	2.00	0.40m	10mm Dia @150mm C/C	10mm Dia @150mm C/C
FB25	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB26	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB27	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB28	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB29	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB30	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB31	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB32	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB33	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FB34	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FB35	2.25	2.25	0.45m	12mm Dia @175mm C/C	12mm Dia @175mm C/C
FB36	2.00	2.00	0.40m	10mm Dia @150mm C/C	10mm Dia @150mm C/C
FB37	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB38	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB39	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB40	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB41	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB42	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB43	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB44	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB45	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FB46	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FB47	2.25	2.25	0.45m	12mm Dia @175mm C/C	12mm Dia @175mm C/C
FB48	2.00	2.00	0.40m	10mm Dia @150mm C/C	10mm Dia @150mm C/C
FB49	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB50	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB51	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB52	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB53	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB54	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB55	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB56	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB57	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FB58	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FB59	2.25	2.25	0.45m	12mm Dia @175mm C/C	12mm Dia @175mm C/C
FB60	2.00	2.00	0.40m	10mm Dia @150mm C/C	10mm Dia @150mm C/C
FB61	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB62	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB63	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB64	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB65	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB66	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB67	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB68	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB69	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FB70	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FB71	2.25	2.25	0.45m	12mm Dia @175mm C/C	12mm Dia @175mm C/C
FB72	2.00	2.00	0.40m	10mm Dia @150mm C/C	10mm Dia @150mm C/C
FB73	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB74	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB75	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB76	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB77	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB78	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB79	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB80	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB81	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FB82	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FB83	2.25	2.25	0.45m	12mm Dia @175mm C/C	12mm Dia @175mm C/C
FB84	2.00	2.00	0.40m	10mm Dia @150mm C/C	10mm Dia @150mm C/C
FB85	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB86	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB87	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB88	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB89	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB90	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB91	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB92	3.25	3.25	0.60m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FB93	2.75	2.75	0.60m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FB94	2.50	2.50	0.55m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FB95	2.25	2.25	0.45m	12mm Dia @175mm C/C	12mm Dia @175mm C/C
FB96	2.00	2.00	0.40m	10mm Dia @150mm C/C	10mm Dia @150mm C/C
FB97	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB98	4.25	4.25	0.75m	20mm Dia @130mm C/C	20mm Dia @130mm C/C
FB99	4.00	4.00	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
FB100	3.75	3.75	0.75m	16mm Dia @130mm C/C	16mm Dia @130mm C/C



FOUNDATION DEPTH 2.50m



- GENERAL NOTES:-**
- All dimensions in Feet & Inches.
 - Dimensions to be read, not scaled.
 - Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
 - Slab thickness 5" thick unless specified otherwise.
 - Provide 8M@8" c/c as Dist. Steel wherever required
 - Crank length 0.25L of short span
 - Top rod extn 0.30L of short span
 - Use M25 Conc & Fe500 unless specified otherwise.
 - Found. designed for STILT+3 Flrs. only.
 - Footing CL to coincide with Column CL.
 - SBC - 10-T/Sq.m

- Removal of formwork (Shuttering)**
- Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Up to 4.5M - 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

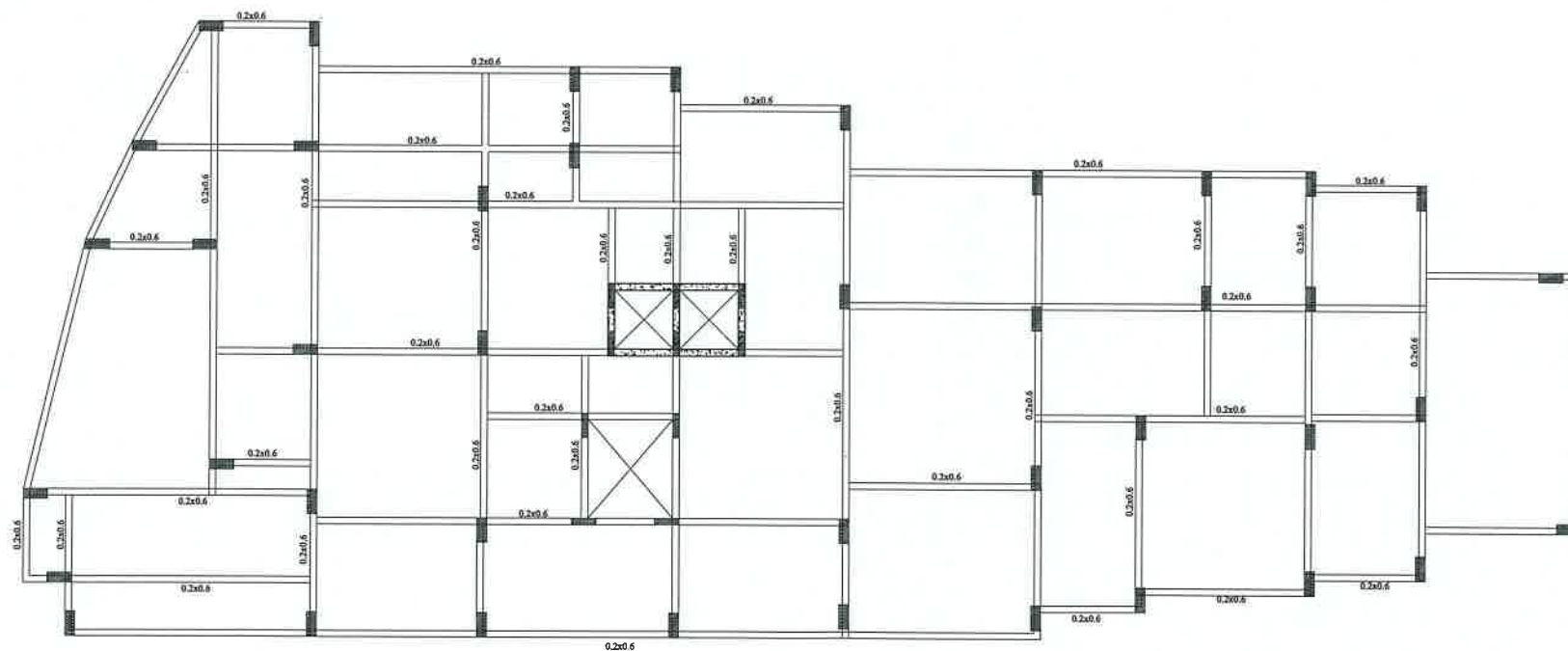
THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE BLOCK B - FOUNDATION DETAILS
SHEET NO: 01
SCALE : NTS

N.KARIKALAN, M.E., (Struc.Engg.), MIE
DTCP Reg.No : CGLDIST/SE/Gr-I/2022/08/004
Chartered Engineer (M-1644542/19)
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1st Street, Narasimman Nagar,
Ramapuram, Chennai - 600 089
Mobile : 98942 45633
Email : nkarikalan1985@gmail.com
STRUCTURAL ENGINEER



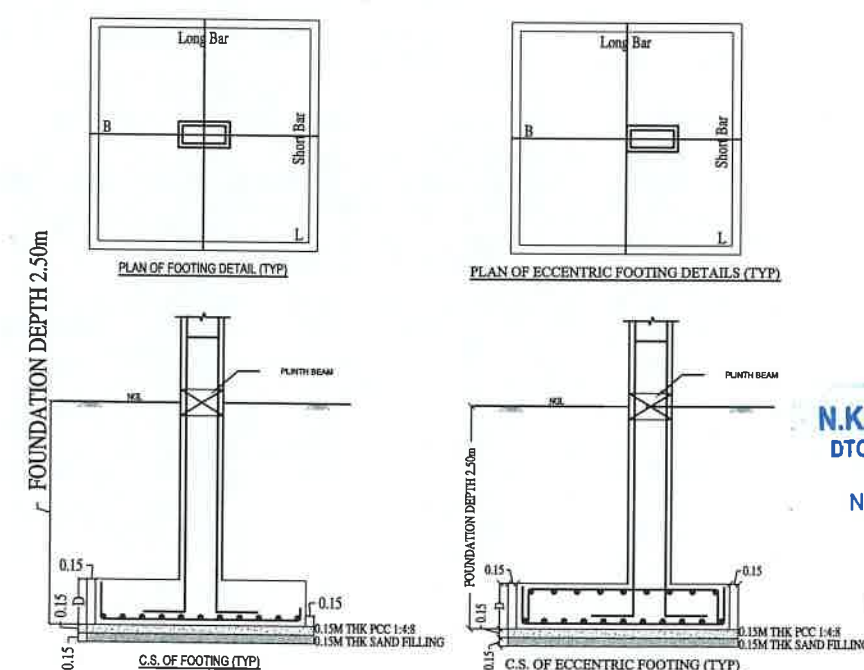
BLOCK C - FOOTING LAYOUT



BLOCK C - PLINTH BEAM LAYOUT

COLUMN DETAILS (M30)		COLUMN DETAILS (M30)		COLUMN DETAILS (M30)		COLUMN DETAILS (M30)	
CC1 12"X30"	TIES	CC2 12"X30"	TIES	CC3 12"X30"	TIES	CC4 12"X30"	TIES
• 14-20# 8#@4"C/C		• 12-20# 8#@4"C/C		• 10-20# 8#@4"C/C		• 16-16# 8#@4"C/C	
CC5 12"X30"	TIES	CC6 12"X30"	TIES	CC7 12"X30"	TIES	CC8 8"X30"	TIES
• 14-16# 8#@4"C/C		• 12-16# 8#@4"C/C		• 10-16# 8#@4"C/C		• 12-20# 8#@4"C/C	
CC9 8"X30"	TIES	CC10 8"X30"	TIES	CA11 8"X30"	TIES		
• 16-16# 8#@4"C/C		• 14-16# 8#@4"C/C		• 10-16# 8#@4"C/C			

FOUNDATION DETAILS (M30)					
TYPE	LENGTH	BREADTH	D	LONG BAR	SHORT BAR
FC1	3.75	3.75	0.700m	16mm Dia @130mm C/C	16mm Dia @130mm C/C
EFC1	3.75	3.75	0.700m	16mm Dia @130mm C/C T/B	16mm Dia @130mm C/C T/B
FC2	3.25	3.25	0.600m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
EFC2	3.25	3.25	0.600m	16mm Dia @150mm C/C T/B	16mm Dia @150mm C/C T/B
FC3	2.75	2.75	0.600m	16mm Dia @200mm C/C	16mm Dia @200mm C/C
FC4	2.5	2.5	0.550m	16mm Dia @150mm C/C	16mm Dia @150mm C/C
FC5	2.25	2.25	0.450m	12mm Dia @150mm C/C	12mm Dia @150mm C/C
FC6	2.00	2.00	0.400m	10mm Dia @175mm C/C	10mm Dia @175mm C/C
FC7	1.00	1.00	0.450m	10mm Dia @200mm C/C	10mm Dia @200mm C/C
EFC1	2.58	4.11			
REFER DETAILS					



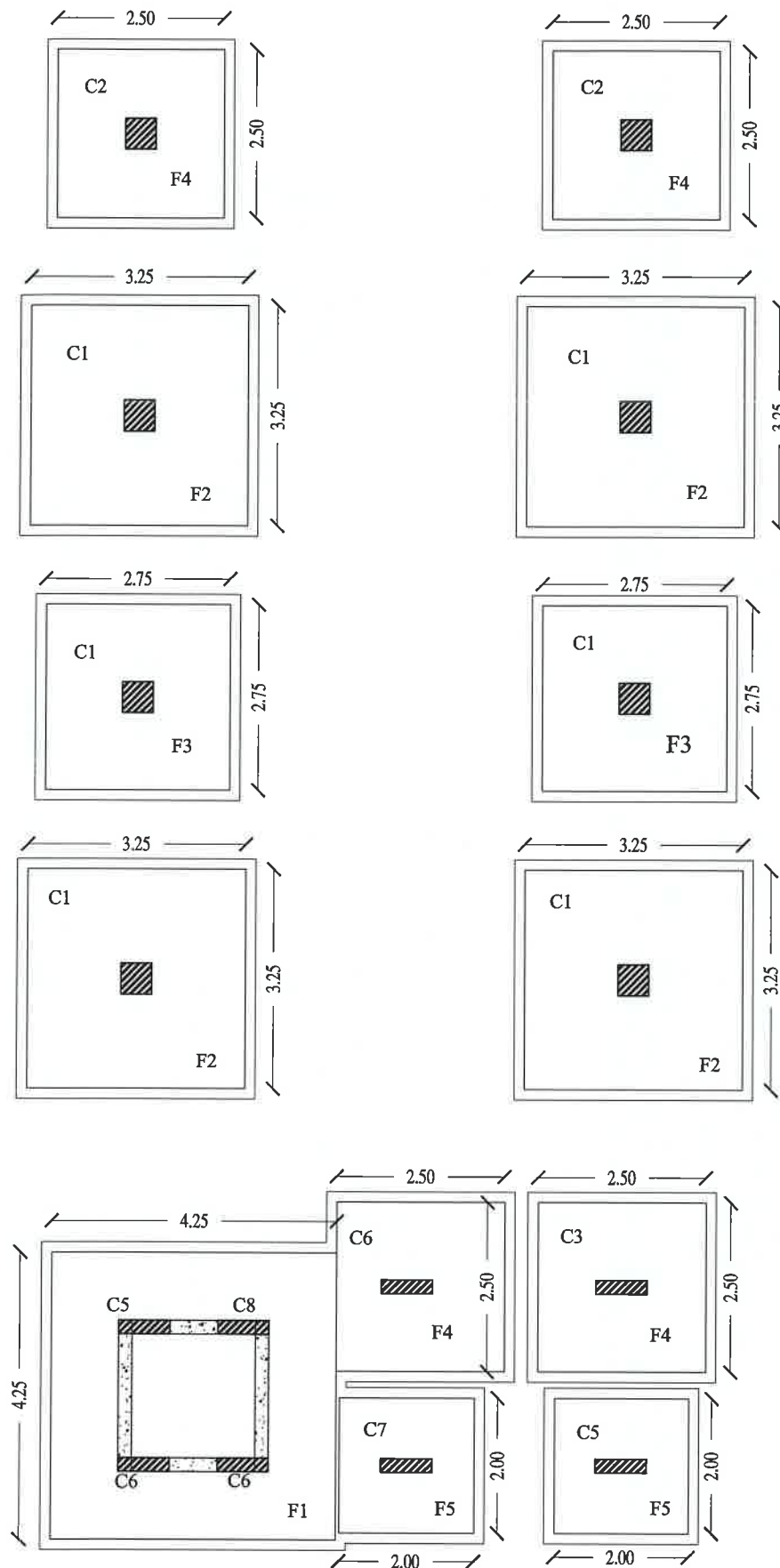
GENERAL NOTES:-
 1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
 a) Col 25mm for 12mm bars & 40mm for >12mm
 b) Footings 50mm
 c) Plinth beams 50mm
 d) Roof Slab 20mm
 e) Raft Beams 25mm
 f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8#@8" c/c as Dist. Steel wherever required
 6. Crank length 0.25L of short span
 7. Top rod extn 0.30L of short span
 8. Use M25 Conc & Fe500 unless specified otherwise.
 9. Found. designed for STILT+3 Flrs. only.
 10. Footing CL to coincide with Column CL.
 10.SBC - 10-T/Sqm

Removal of formwork(Shuttering)
 1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day.
 However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
 A) Vertical side of shuttering columns, Walls & beams - 24 Hours
 B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
 C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
 d) Props to Slabs:
 i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
 ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
 iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
 v) Laps in beams and columns shall be provided at the point of contraflexure.
 vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
 vii) Detailing of Rebars shall conform to SP-34 & IS 13920

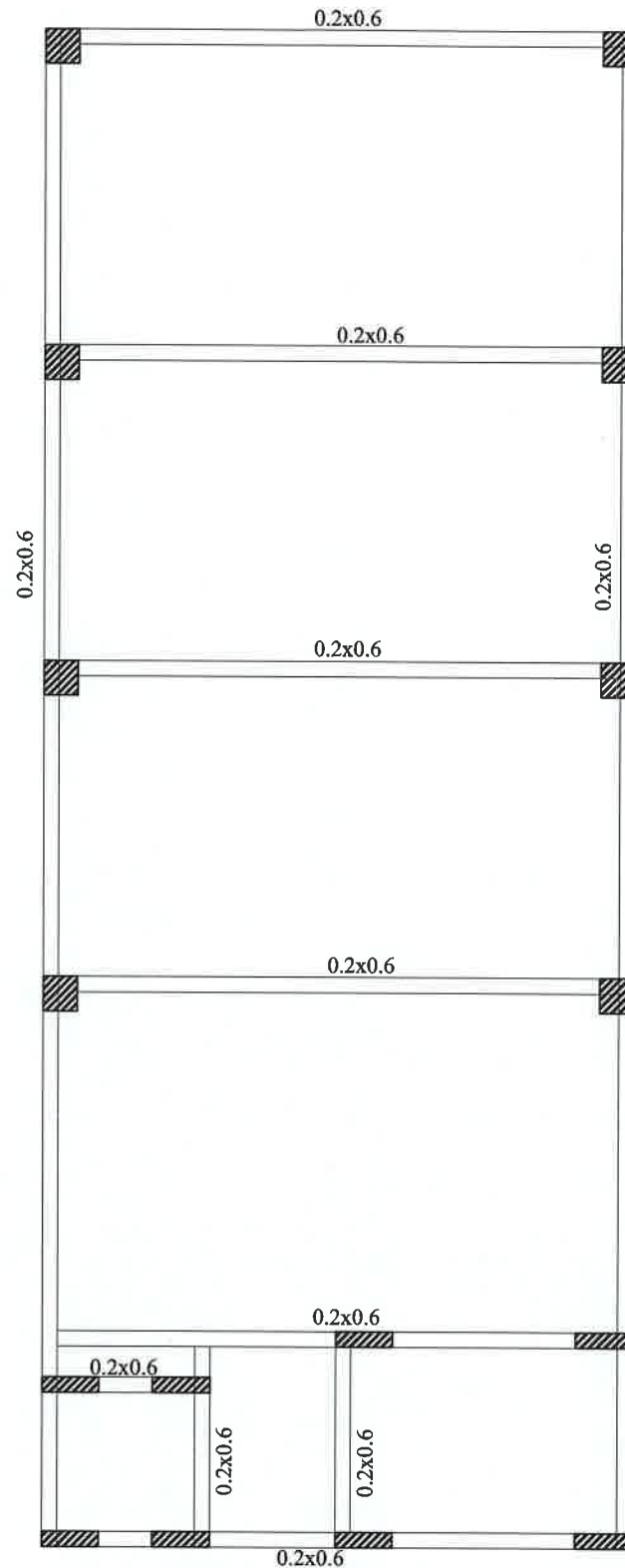
THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE **BLOCK C - FOUNDATION DETAILS**
 SHEET NO: 01
 SCALE : NTS

N.KARIKALAN, M.E., (Struc.Engg.), MIE
 DTC Reg.No : CGLDIST/SE/Gr-I/2022/08/004
 Chartered Engineer (M-1644542/19)
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 Email : nkarikalan1985@gmail.com
 STRUCTURAL ENGINEER



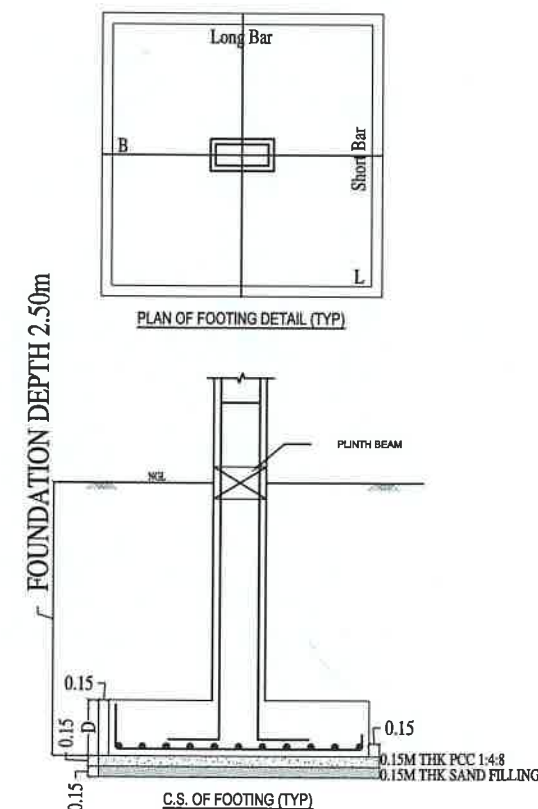
CLUB HOUSE - FOOTING LAYOUT



CLUB HOUSE - PLINTH BEAM LAYOUT

COLUMN DETAILS (M30)					
C1 18"x18"	TIES	C2 18"x18"	TIES	C3 8"x30"	TIES
• 12-25# 8#@6"C/C		• 12-20# 8#@6"C/C		• 12-25# 8#@6"C/C	
C4 8"x24"	TIES	C5 8"x24"	TIES	C6 8"x24"	TIES
• 12-25# 8#@4"C/C		• 8-25# 8#@4"C/C		• 12-20# 8#@4"C/C	
C7 8"x24"	TIES	C8 8"x24"	TIES		
• 16-16# 8#@4"C/C		• 14-16# 8#@4"C/C			

FOUNDATION DETAILS (M30)					
TYPE	LENGTH	BREADTH	D	LONG BAR	SHORT BAR
F1	4250	4250	750	20mm Dia @130mm C/C	20mm Dia @130mm C/C
F2	3250	3250	600	16mm Dia @175mm C/C	16mm Dia @175mm C/C
F3	2750	2750	600	16mm Dia @200mm C/C	16mm Dia @200mm C/C
F4	2500	2500	550	12mm Dia @150mm C/C	12mm Dia @150mm C/C
F5	2000	2000	400	10mm Dia @125mm C/C	10mm Dia @125mm C/C



- GENERAL NOTES:-
- All dimensions in Feet & Inches.
 - Dimensions to be read, not scaled.
 - Clear cover to the main reinf. as follows:
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
 - Slab thickness 5" thick unless specified otherwise.
 - Provide 8#@8"C/c as Dist. Steel wherever required
 - Crank length 0.25L of short span
 - Top rod extn 0.30L of short span
 - Use M30 Conc & Fe500 unless specified otherwise.
 - Found. designed for Ground+3 Flrs. only.
 - Footng CL to coincide with Column CL.
 - 10.SBC - 210 KN/Sq.m

- Removal of formwork(Shuttering)
- Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

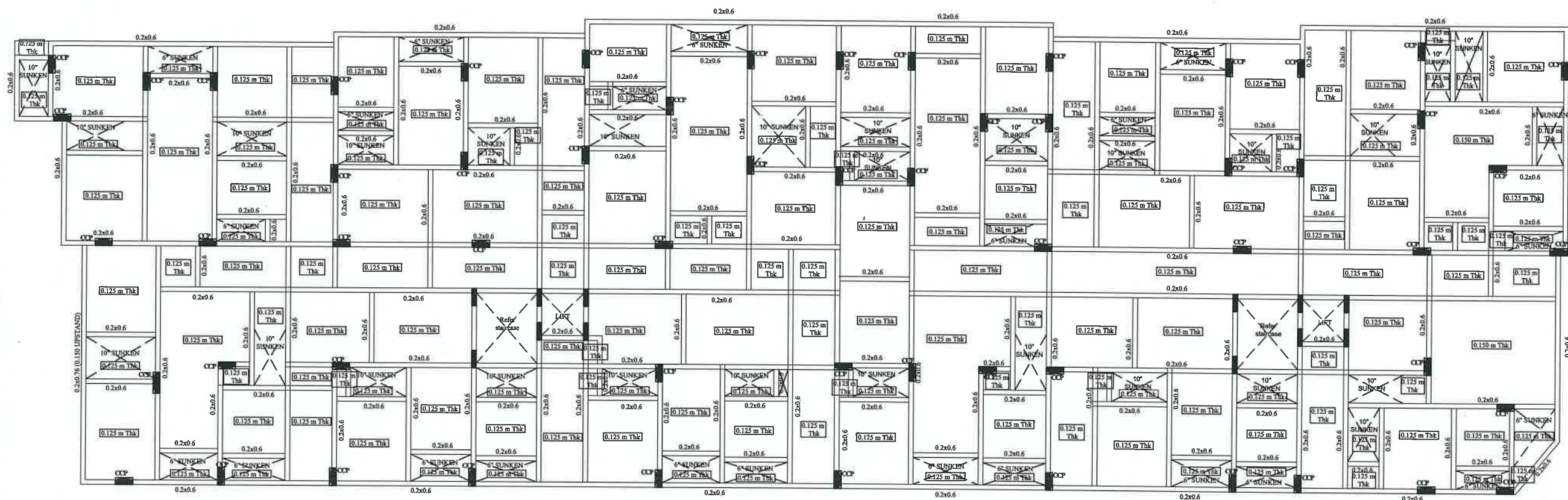
THE PROPOSED CONSTRUCTION OF
RCC ROOF RESIDENTIAL BUILDING
BLOCK - A, BLOCK - B & BLOCK - C
HAVING STILT + FIVE FLOORS AND
CLUB HOUSE BUILDING HAVING
STILT + THREE FLOORS AGARAM
VILLAGE S.F.NO.25/6, 25/7, 25/8,
26/3A1A1B, 26/4A, ELAKUDI VILLAGE
S.F.NO.6/5A2A AT BALAJI NAGAR
TRICHY, THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT.

TITLE	FOUNDATION LAYOUT & DETAILS CLUB HOUSE
SHEET NO: 01	
SCALE : NTS	

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STRUCTURAL ENGINEER

O W N E R S



BLOCK A - Stilt Floor Roof Beam Layout

- GENERAL NOTES:-**
- All dimensions in Feet & Inches.
 - Dimensions to be read, not scaled.
 - Clear cover to the main reinf. as follows
 - Col 25mm for 12mm bars & 40mm for >12mm
 - Foofings 50mm
 - Plinth beams 30mm
 - Roof Slab 20mm
 - Roof Beams 25mm
 - Raft Slab & Beam 50 mm
 - Slab thickness 5" thick unless specified otherwise.
 - Provide 8@8" c/c as Dist. Steel wherever required
 - Crank length 0.25L of short span
 - Top rod extn 0.30L of short span
 - Use M25Conc & Fe500 unless specified otherwise.
 - Found. designed for STILT+3 Flrs. only.
 - Footing CL to coincide with Column CL.
 - SBC - 10-T/Sq.m

Removal of formwork/Shuttering

- Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
 - Vertical side of shuttering columns, Walls & beams - 24 Hours
 - Bottom shuttering of Slabs (Keeping the Props) - 3 Days
 - Bottom shuttering of Beams (Keeping the Props) - 7 Days
 - Props to Slabs:
 - Spanning Up to 4.5M - 14 Days
 - Spanning Over 4.5M-21 Days
 - Props to Beams & Arches:
 - Spanning Up to 6M - 21 Days
 - Spanning Over 6M - 28 Days
- Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
- Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
- Laps in beams and columns shall be provided at the point of contraflexure.
- Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
- Detailing of Rebars shall conform to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

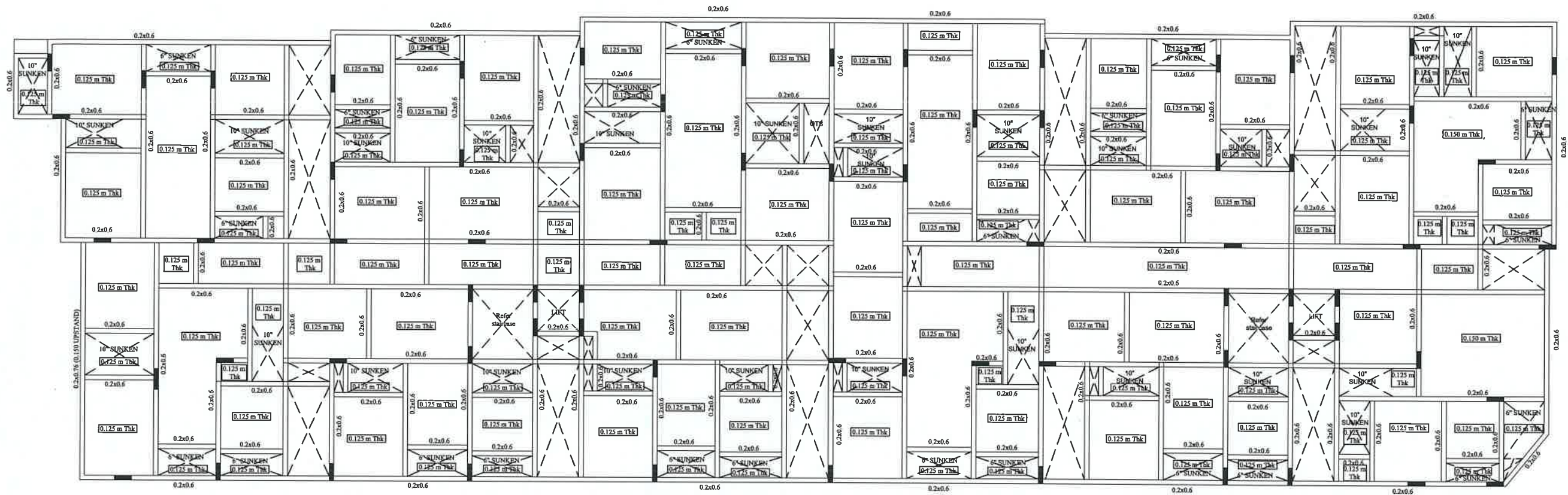
TITLE **BLOCK A - STILT FLOOR ROOF BEAM LAYOUT**

SHEET NO: 02

SCALE : NTS



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STRUCTURAL ENGINEER



BLOCK A - First Floor Roof Beam Layout

- GENERAL NOTES:-**
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5' thick unless specified otherwise.
 5. Provide 8@8" c/c as Dist. Steel wherever required
 5. Crack length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M25Conc & Fe500 unless specified otherwise.
 8. Found. designed for STILT+3 Flrs. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 10-T/Sq.m

- Removal of formwork (Shuttering)**
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Up to 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days c) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

**THE PROPOSED CONSTRUCTION OF
RCC ROOF RESIDENTIAL BUILDING
BLOCK - A, BLOCK - B & BLOCK - C
HAVING STILT + FIVE FLOORS AND
CLUB HOUSE BUILDING HAVING
STILT + THREE FLOORS AGARAM
VILLAGE S.F.NO.25/6, 25/7, 25/8,
26/3A1A1B, 26/4A, ELAKUDI VILLAGE
S.F.NO.6/5A2A AT BALAJI NAGAR
TRICHY, THIRUVERUMBUR TALUK,
THIRUCHIRAPALLI DISTRICT.**

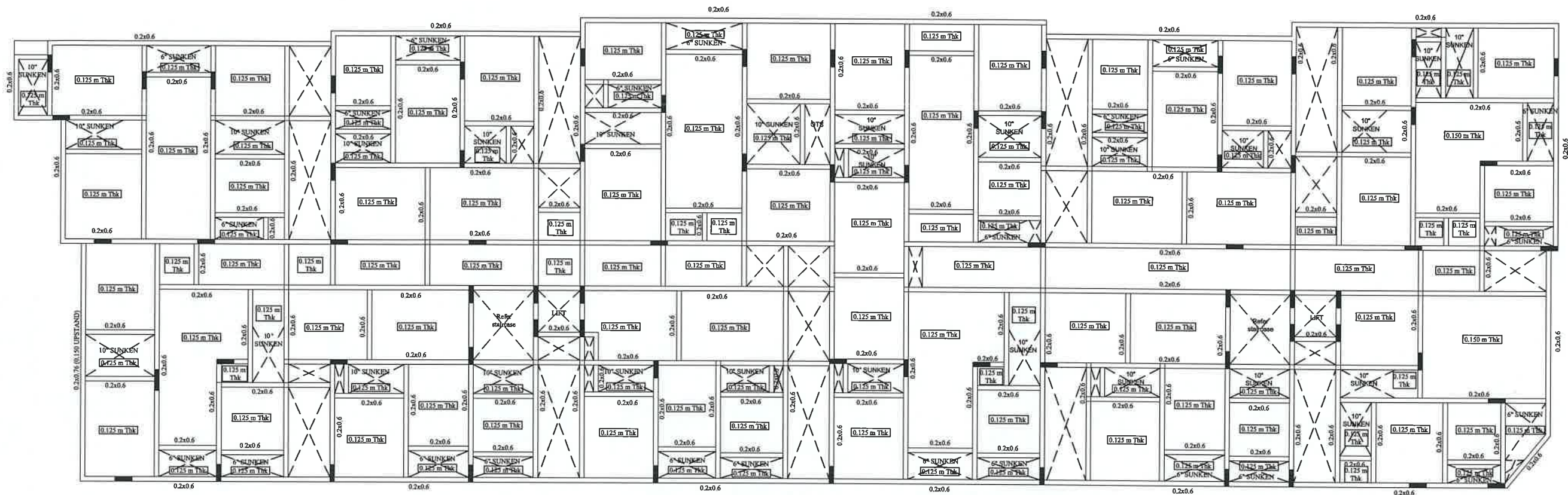
TITLE **BLOCK A - FIRST FLOOR ROOF BEAM LAYOUT**

SHEET NO: 03

SCALE : NTS



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STRUCTURAL ENGINEER



BLOCK A - Second Floor Roof Beam Layout

- GENERAL NOTES:-**
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8@8" c/c as Dist. Steel wherever required
 6. Crank length 0.25L of short span
 7. Top rod extn 0.30L of short span
 8. Use M25 Conc & Fe500 unless specified otherwise.
 9. Found. designed for STILT+3 Flrs. only.
 10. Footing CL to coincide with Column CL.
 - 10.SBC - 10-T/Sq.m

- Removal of formwork(Shuttering)**
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
 - A) Vertical side of shuttering columns, Walls & beams - 24 Hours
 - B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
 - C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
 - D) Props to Slabs:
i) Spanning Up to 4.5M - 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

**THE PROPOSED CONSTRUCTION OF
RCC ROOF RESIDENTIAL BUILDING
BLOCK - A, BLOCK - B & BLOCK - C
HAVING STILT + FIVE FLOORS AND
CLUB HOUSE BUILDING HAVING
STILT + THREE FLOORS AGARAM
VILLAGE S.F.NO.25/6, 25/7, 25/8,
26/3A1A1B, 26/4A, ELAKUDI VILLAGE
S.F.NO.6/5A2A AT BALAJI NAGAR
TRICHY, THIRUVERUMBUR TALUK,
TIRUCHIRAPPALLI DISTRICT.**

TITLE **BLOCK A - SECOND FLOOR ROOF BEAM LAYOUT**

SHEET NO: 04

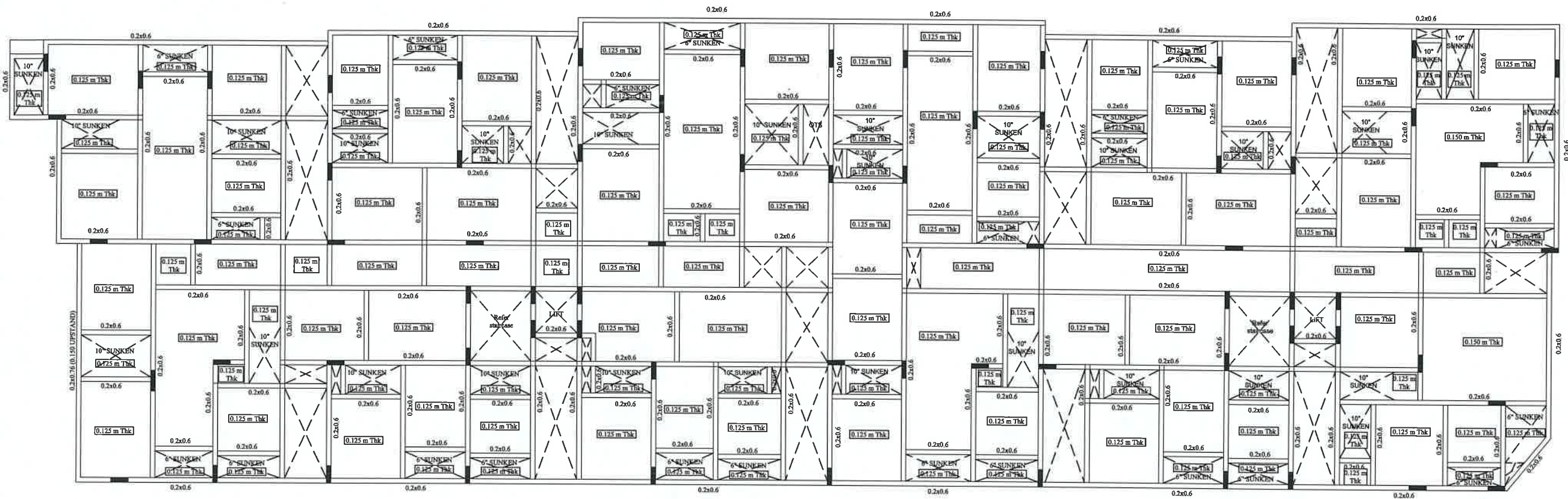
SCALE : NTS



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STRUCTURAL ENGINEER

O W N E R S



BLOCK A - Third Floor Roof Beam Layout

- GENERAL NOTES:-**
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Raft Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8@8" c/c as Dist. Steel wherever required.
 5. Crank length 0.25L of short span
 6. Top rod extra 0.30L of short span
 7. Use M25 Conc & Fe500 unless specified otherwise.
 8. Found. designed for STILL T+3 Fms. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 10-T/Sqm

- Removal of formwork (Shuttering)**
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
D) Props to Slabs:
i) Spanning Up to 4.5M - 14 Days ii) Spanning Over 4.5M-21 Days
e) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days
Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

**THE PROPOSED CONSTRUCTION OF
RCC ROOF RESIDENTIAL BUILDING
BLOCK - A, BLOCK - B & BLOCK - C
HAVING STILLT + FIVE FLOORS AND
CLUB HOUSE BUILDING HAVING
STILT + THREE FLOORS AGARAM
VILLAGE S.F.NO.25/6, 25/7, 25/8,
26/3A1A1B, 26/4A, ELAKUDI VILLAGE
S.F.NO.6/5A2A AT BALAJI NAGAR
TRICHY, THIRUVERUMBUR TALUK,
THIRUCHIRAPALLI DISTRICT.**

TITLE **BLOCK A - THIRD FLOOR ROOF BEAM LAYOUT**

SHEET NO: 05

SCALE : NTS

N

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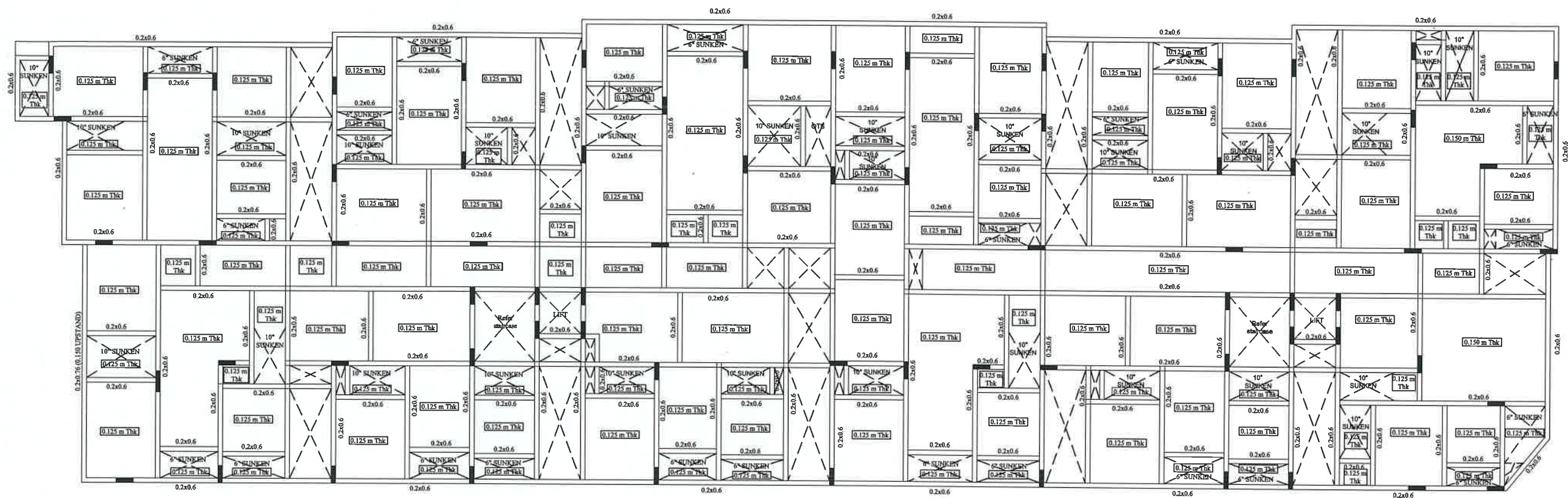
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STRUCTURAL ENGINEER

O W N E R S



BLOCK A - Fourth Floor Roof Beam Layout

- GENERAL NOTES:-**
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5' thick unless specified otherwise.
 5. Provide 8@8'c/c as Dist. Steel wherever required
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M25 Conc & Fe500 unless specified otherwise.
 8. Found. designed for STILT+3 Firs. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 10-T/Sq.m

Removal of formwork(Shuttering)

1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
- A) Vertical side of shuttering columns, Walls & beams - 24 Hours
- B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
- C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
- d) Props to Slabs:
i) Spanning Up to 4.5M - 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days
- Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
- ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
- iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
- v) Laps in beams and columns shall be provided at the point of contraflexure.
- vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
- vii) Detailing of Rebars shall conform to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

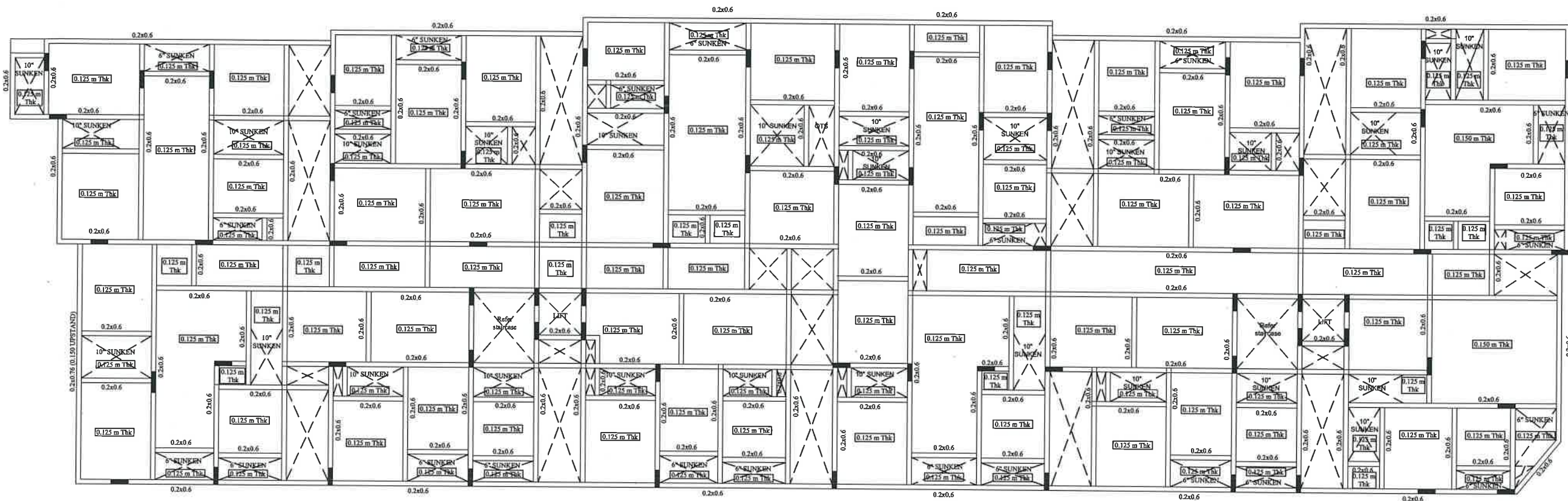
TITLE **BLOCK A - FOURTH FLOOR ROOF BEAM LAYOUT**

SHEET NO: 06

SCALE : NTS



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BLOCK A - Fifth Floor Roof Beam Layout

- GENERAL NOTES:-**
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 6@8" c/c as Dist. Steel wherever required
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M25 Conc & Fe500 unless specified otherwise.
 8. Found. designed for STILLT+3 Flrs. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 10-T/Sq.m

- Removal of formwork (Shuttering)**
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after (final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Up to 4.5M - 14 Days ii) Spanning Over 4.5M-21 Days
e) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days
Lap joints for Reinforcing bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

**THE PROPOSED CONSTRUCTION OF
RCC ROOF RESIDENTIAL BUILDING
BLOCK - A, BLOCK - B & BLOCK - C
HAVING STILLT + FIVE FLOORS AND
CLUB HOUSE BUILDING HAVING
STILT + THREE FLOORS AGARAM
VILLAGE S.F.NO.25/6, 25/7, 25/8,
26/3A1A1B, 26/4A, ELAKUDI VILLAGE
S.F.NO.6/5A2A AT BALAJI NAGAR
TRICHY, THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT.**

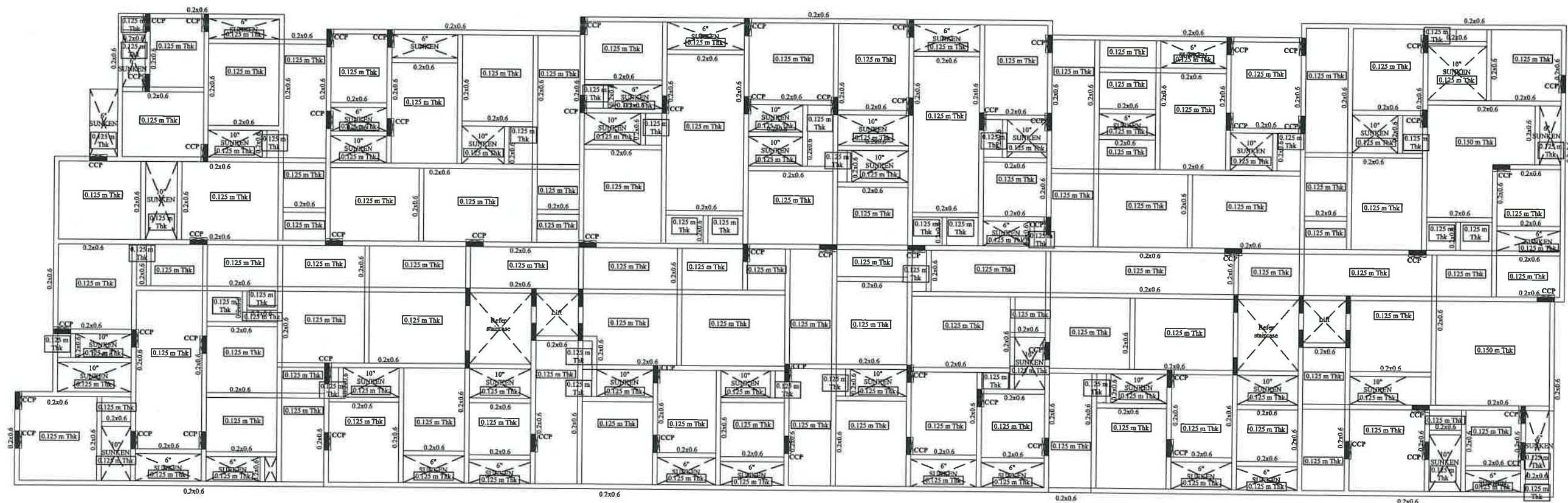
TITLE BLOCK A - FIFTH FLOOR ROOF BEAM LAYOUT

SHEET NO: 07

SCALE : NTS



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STRUCTURAL ENGINEER



BLOCK B - Stilt Floor Roof Beam Layout

- GENERAL NOTES:-**
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Rafter Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8#@8" c/c as Dist. Steel wherever required
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M25 Conc & Fe500 unless specified otherwise.
 8. Found. designed for STILL T+3 Flrs. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 10-T/Sq.m

- Removal of formwork (Shuttering)**
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Up to 4.5M - 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days
Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped.
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

**THE PROPOSED CONSTRUCTION OF
RCC ROOF RESIDENTIAL BUILDING
BLOCK - A, BLOCK - B & BLOCK - C
HAVING STILT + FIVE FLOORS AND
CLUB HOUSE BUILDING HAVING
STILT + THREE FLOORS AGARAM
VILLAGE S.F.NO.25/6, 25/7, 25/8,
26/3A1A1B, 26/4A, ELAKUDI VILLAGE
S.F.NO.8/5A2A AT BALAJI NAGAR
TRICHY, THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT.**

TITLE **BLOCK B - STILT FLOOR ROOF BEAM LAYOUT**

SHEET NO: 02

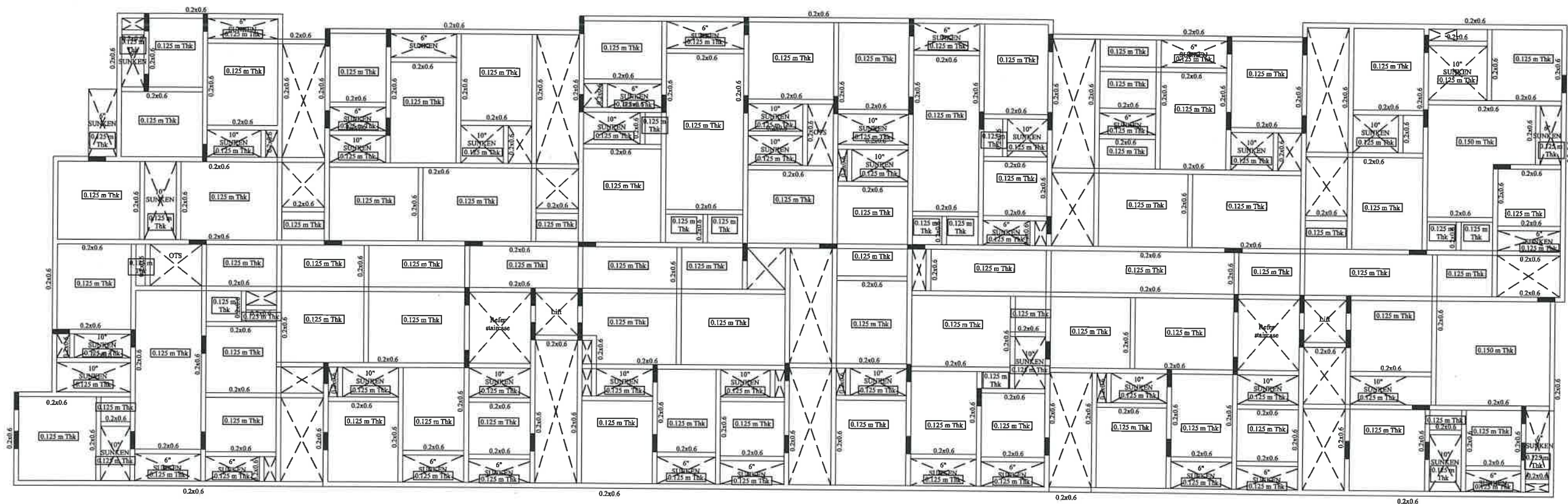
SCALE : NTS



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STRUCTURAL ENGINEER

O W N E R S



BLOCK B - First Floor Roof Beam Layout

- GENERAL NOTES:-**
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Pile/bas beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8@8" c/c as Dist. Steel wherever required.
 6. Crank length 0.25L of short span
 7. Top rod extn 0.30L of short span
 8. Use M25 Conc & Fe500 unless specified otherwise.
 9. Found. designed for STILT+3 Flrs. only.
 10. Footing CL to coincide with Column CL.
 11. SBC - 10-T/Sq.m

- Removal of formwork (Shuttering)**
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
D) Props to Slabs:
i) Spanning Up to 4.5M - 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days
Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

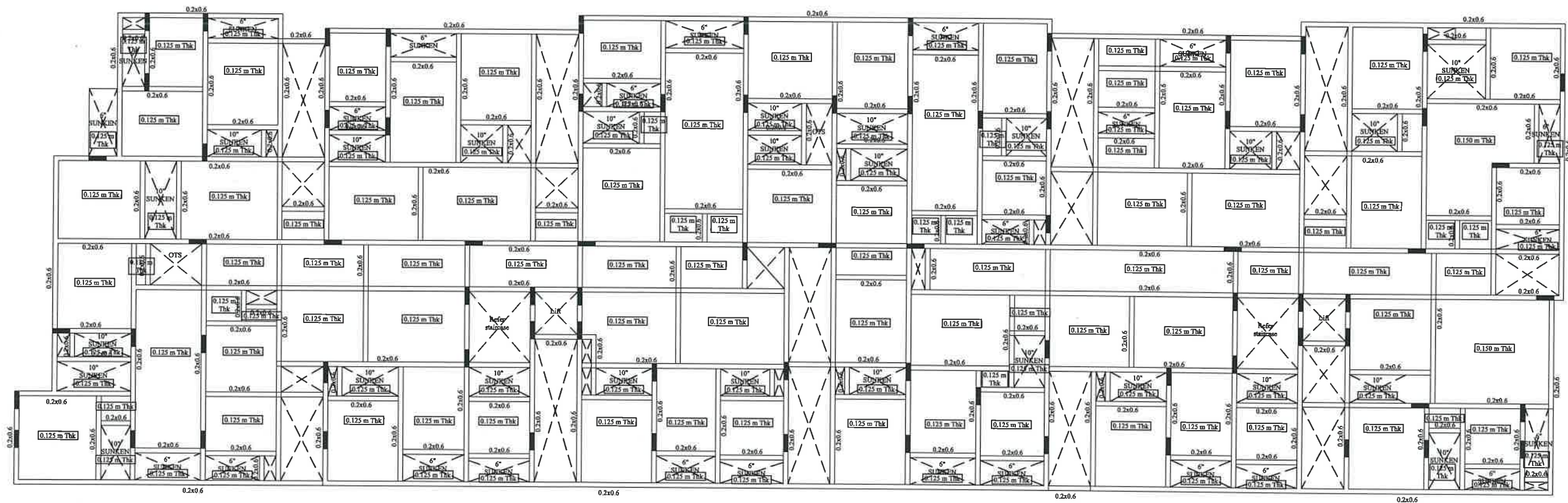
THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK B - FIRST FLOOR ROOF BEAM LAYOUT
SHEET NO:	03
SCALE	: NTS

N.KARIKALAN, M.E., (Struc.Engg.), MIE
 DTCP Reg.No : CGDIST/SE/Gr-I/2022/08/004
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STRUCTURAL ENGINEER

OWNERS



BLOCK B - Third Floor Roof Beam Layout

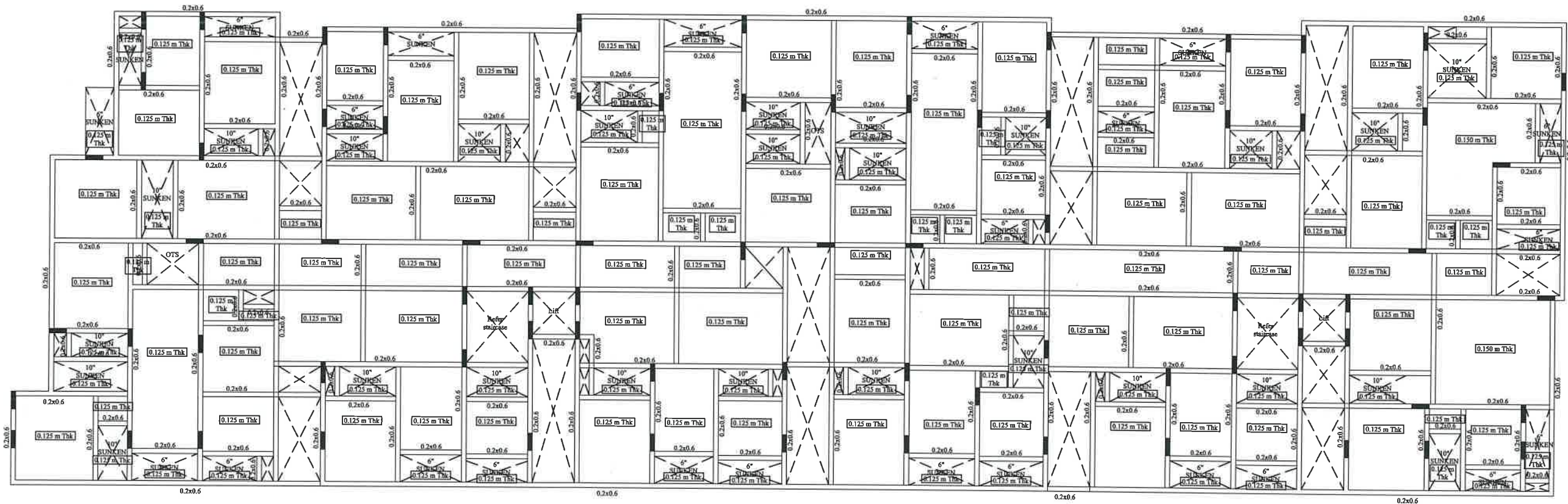
- GENERAL NOTES:-**
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 50mm
d) Roof Slab 20mm
e) Raft Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8M@8" c/c as Dist. Steel wherever required
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M25 Conc & Fe500 unless specified otherwise.
 8. Found. designed for STILT+3 Flr. only.
 9. Footing CL. to coincide with Column CL.
 10. SBC - 10-T/Sq.m

- Removal of formwork (Shuttering)**
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering : columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
D) Props to Slabs:
i) Spanning Up to 4.5M - 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	BLOCK C - THIRD FLOOR ROOF BEAM LAYOUT
SHEET NO: 05	
SCALE : NTS	

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STRUCTURAL ENGINEER



BLOCK B - Fourth Floor Roof Beam Layout

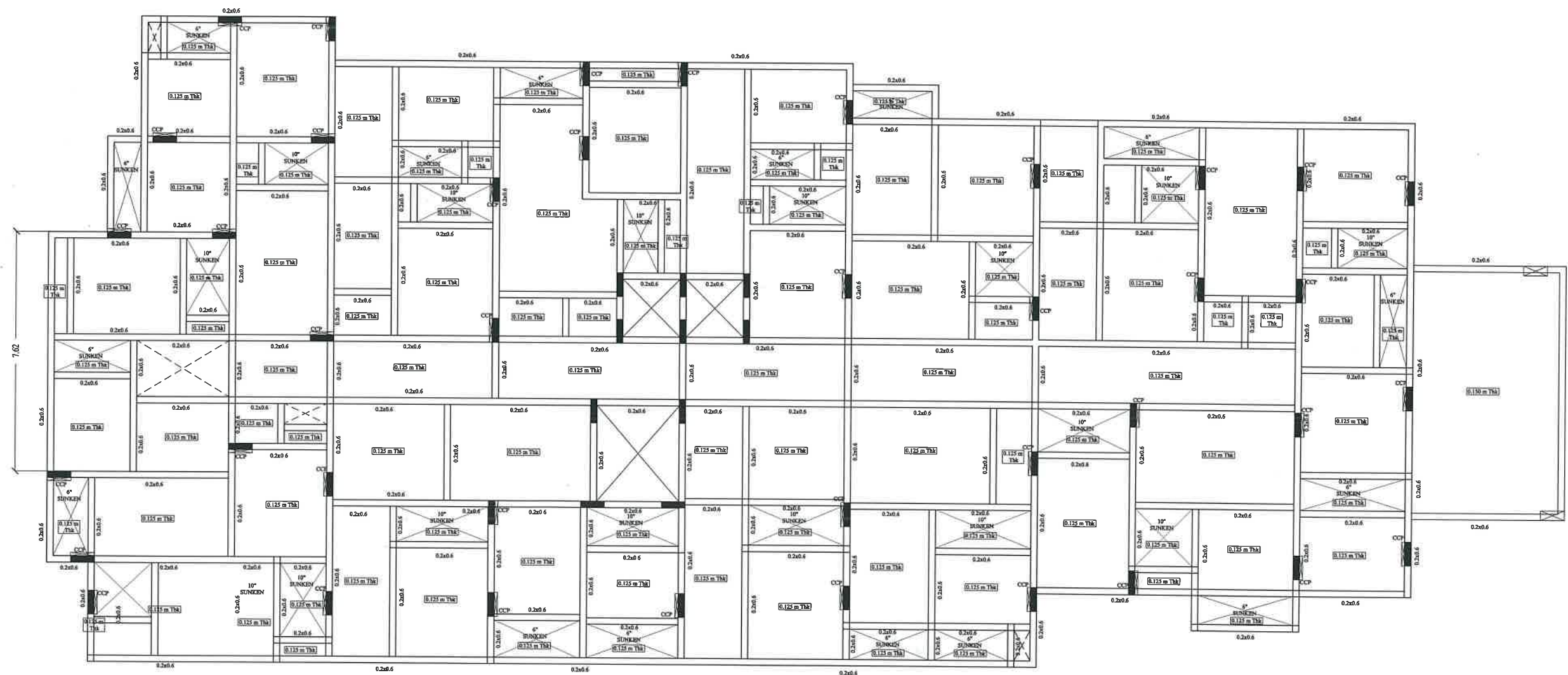
- GENERAL NOTES:-**
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Raft Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8@6" c/c as Dist. Steel wherever required
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M25 Conc & Fe500 unless specified otherwise.
 8. Found. designed for STILT+3 Fns. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 10-T/Sq.m

- Removal of formwork (Shuttering)**
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
D) Props to Slabs:
i) Spanning Up to 4.5M - 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days
Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

**THE PROPOSED CONSTRUCTION OF
RCC ROOF RESIDENTIAL BUILDING
BLOCK - A, BLOCK - B & BLOCK - C
HAVING STILT + FIVE FLOORS AND
CLUB HOUSE BUILDING HAVING
STILT + THREE FLOORS AGARAM
VILLAGE S.F.NO.25/6, 25/7, 25/8,
26/3A1A1B, 26/4A, ELAKUDI VILLAGE
S.F.NO.6/5A2A AT BALAJI NAGAR
TRICHY, THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT.**

TITLE	BLOCK B - FOURTH FLOOR ROOF BEAM LAYOUT
SHEET NO: 08	
SCALE : NTS	

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 Ramapuram, Chennai - 600 089
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 Email : nkarikalan1985@gmail.com



BLOCK C - Stilt floor roof beam layout

- GENERAL NOTES:-
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Raft Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8@8" c/c as Dist. Steel wherever required
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M25 Conc & Fe500 unless specified otherwise.
 8. Found. designed for STILT+3 Flrs. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 10-T/Sq.m

- Removal of formwork (Shuttering)
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Up to 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Up to 6M - 21 Days ii) Spanning Over 6M - 28 Days
Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

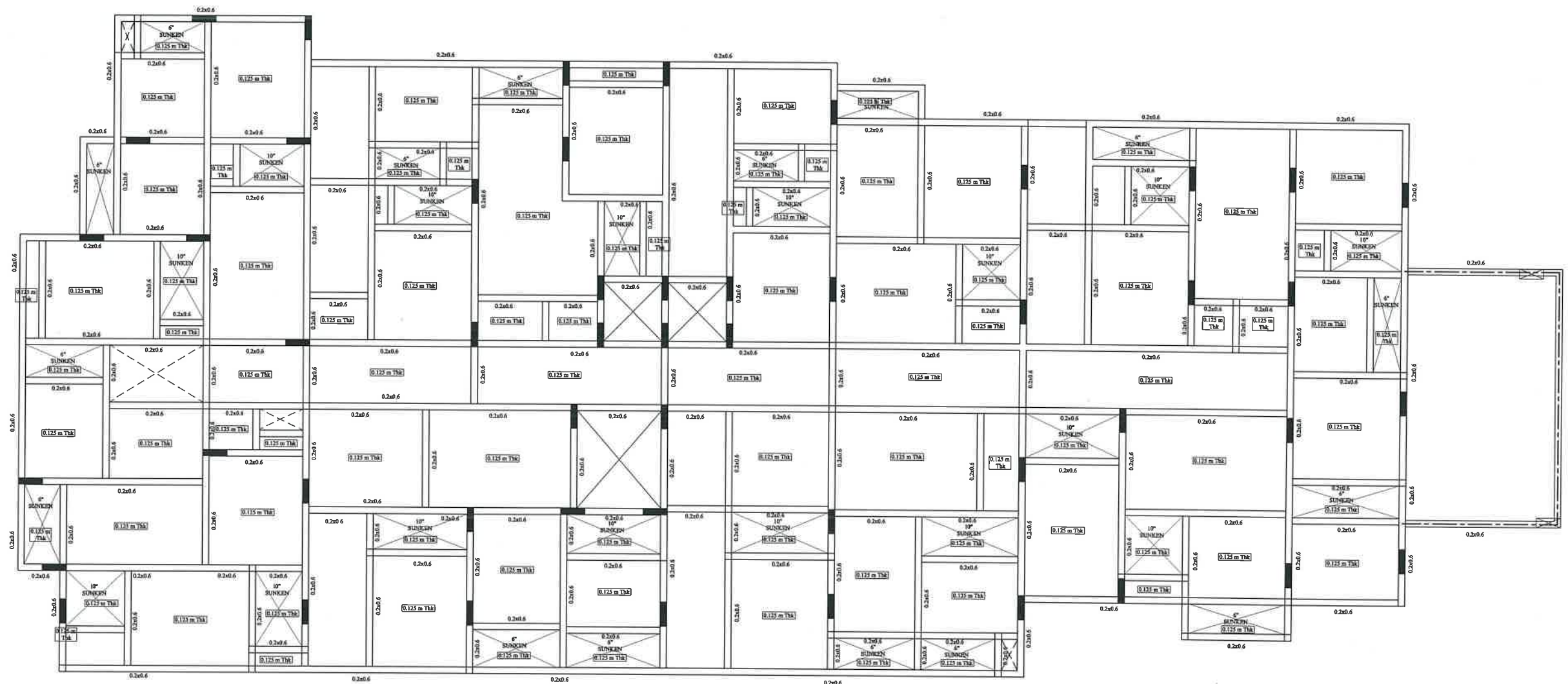
THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.8/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TRICHIRAPALLI DISTRICT.

TITLE	BLOCK-C STILT FLOOR ROOF BEAM LAYOUT
SHEET NO: 02	
SCALE : NTS	

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STRUCTURAL ENGINEER

OWNERS



BLOCK C - First floor roof beam layout

- GENERAL NOTES:-
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Raft Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8@8" c/c as Dist. Steel wherever required
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M25 Conc & Fe500 unless specified otherwise.
 8. Found. designed for STILT-43 Flrs. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 10-T/Sq.m

- Removal of formwork (Shuttering)
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & Part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
D) Props to Slabs:
i) Spanning Upto 4.5M - 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding, and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TRICHIRAPALLI DISTRICT.

TITLE BLOCK-C FIRST FLOOR ROOF BEAM LAYOUT

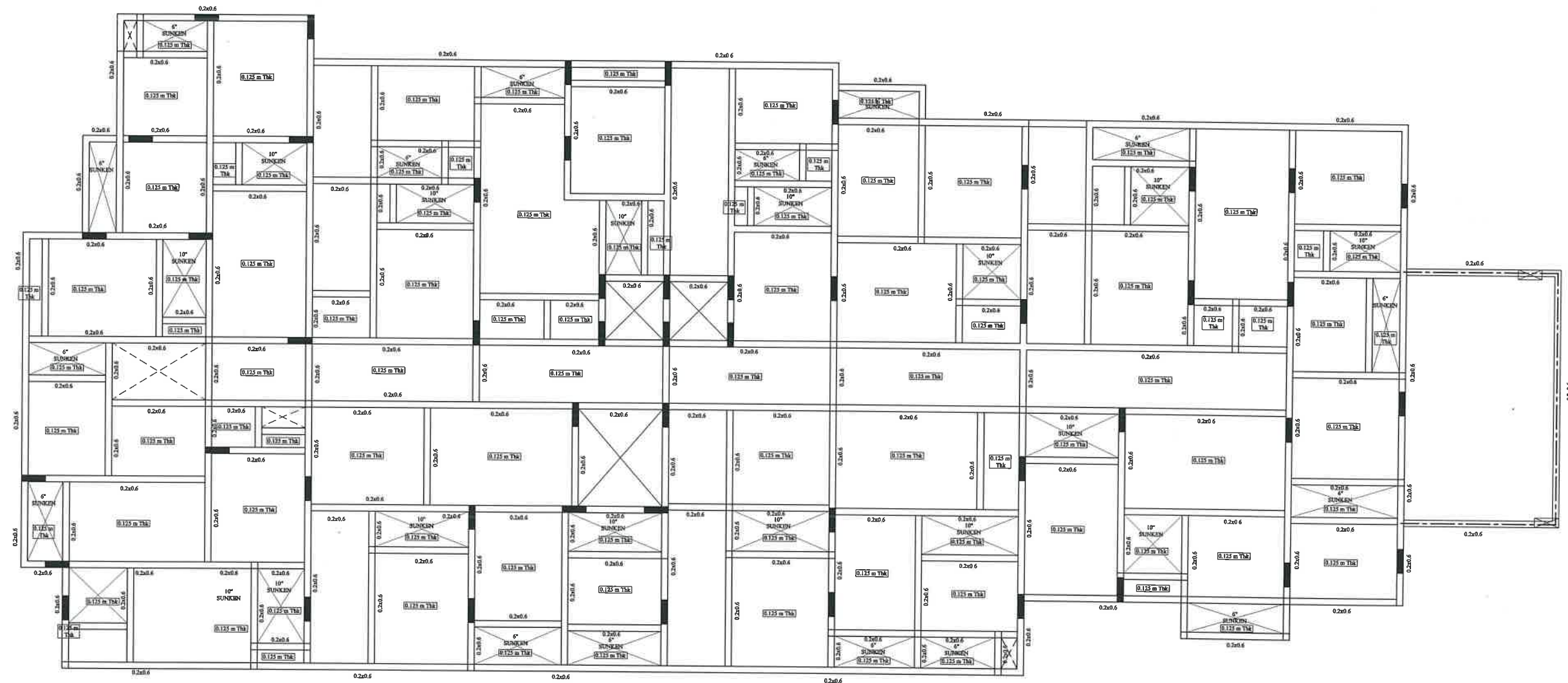
SHEET NO: 03

SCALE : NTS



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 Mobile : 98942 45633
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STRUCTURAL ENGINEER

O W N E R S



BLOCK C - Second floor roof beam layout

- GENERAL NOTES:-
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8#@8" c/c as Dist. Steel wherever required
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M25Conc & Fe500 unless specified otherwise.
 8. Found. designed for STILL-T+3 Firs. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 10-T/Sq.m

- Removal of formwork(Shuttering)
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days c) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall conform to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE **BLACK-C SECOND FLOOR ROOF BEAM LAYOUT**

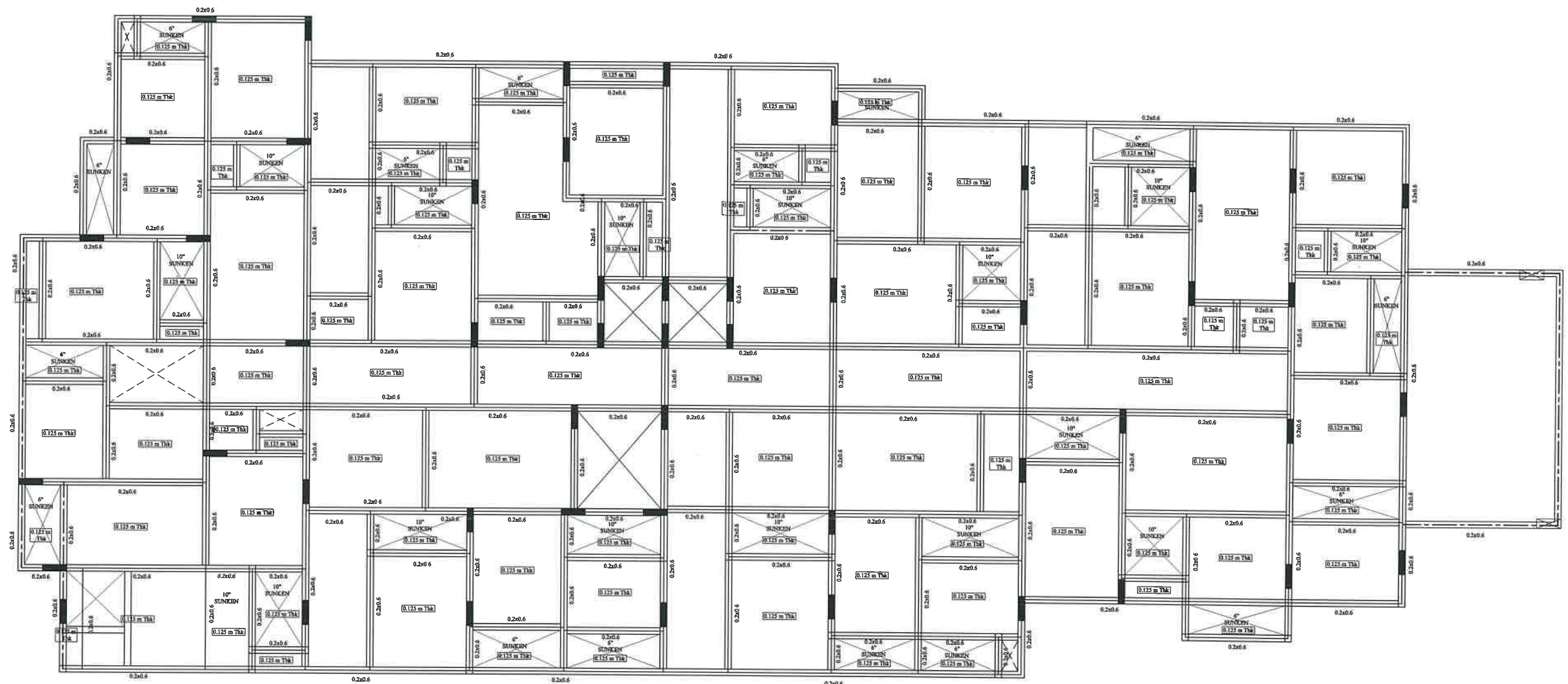
SHEET NO: 04

SCALE : NTS



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STRUCTURAL ENGINEER

O W N E R S



BLOCK C - Third floor roof beam layout

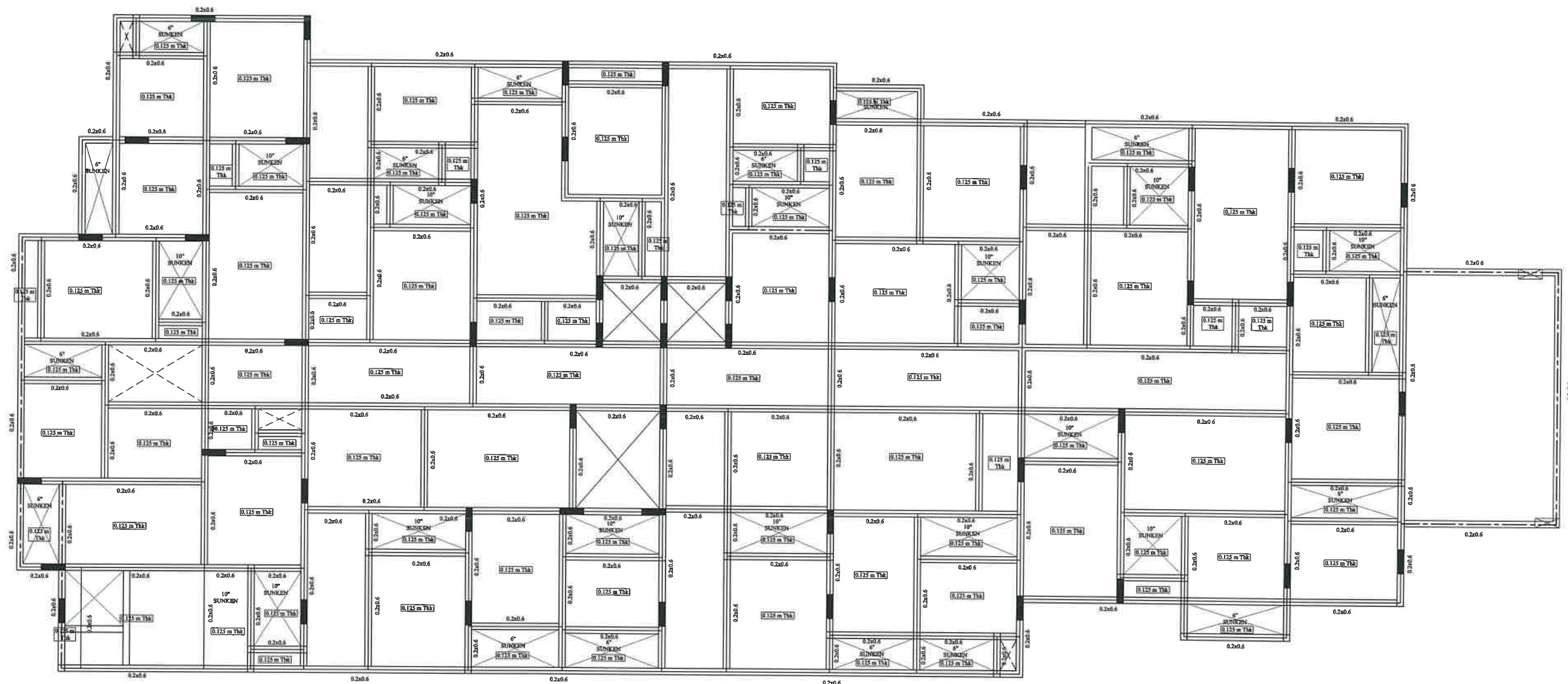
- GENERAL NOTES:-
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
 - a) Col 25mm for 12mm bars & 40mm for >12mm
 - b) Footings 50mm
 - c) Plinth beams 30mm
 - d) Roof Slab 20mm
 - e) Roof Beams 25mm
 - f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8@8" c/c as Dist. Steel wherever required
 6. Crank length 0.25L of short span
 7. Top rod extn 0.30L of short span
 8. Use M25 Conc & Fe500 unless specified otherwise.
 9. Found. designed for STILT+3 Flrs. only.
 10. Footing CL to coincide with Column CL.
 11. SBC - 10-T/Sq.m

- Removal of formwork/Shuttering)
- i) Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
 - A) Vertical side of shuttering columns, Walls & beams - 24 Hours
 - B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
 - C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
 - D) Props to Slabs:
 - i) Spanning Up to 4.5M - 14 Days
 - ii) Spanning Over 4.5M-21 Days
 - iii) Props to Beams & Arches:
 - i) Spanning Up to 6M - 21 Days
 - ii) Spanning Over 6M - 28 Days
 - At any cross section of the member not more than 50% of the Bars shall be lapped
 - ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
 - iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
 - v) Laps in beams and columns shall be provided at the point of contraflexure.
 - vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
 - vii) Detailing of Rebars shall conform to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.8/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TRICHIRAPALLI DISTRICT.

TITLE	BLOCK-C THIRD FLOOR ROOF BEAM LAYOUT
SHEET NO: 05	
SCALE : NTS	

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 STRUCTURAL ENGINEER



BLOCK C - Fourth floor roof beam layout

- GENERAL NOTES:-
- All dimensions in Feet & Inches.
 - Dimensions to be read, not scaled.
 - Clear cover to the main reinf. as follows
 - Col 25mm for 12mm bars & 40mm for >12mm
 - Footings 50mm
 - Plinth beams 30mm
 - Roof Slab 20mm
 - Roof Beams 25mm
 - Raft Slab & Beam 50 mm
 - Slab thickness 5" thick unless specified otherwise.
 - Provide 8#@8" c/c as Dist. Steel wherever required
 - Crank length 0.25L of short span
 - Top rod extn 0.30L of short span
 - Use M25 Conc & Fe500 unless specified otherwise.
 - Found. designed for STILT+3 Ftrs. only.
 - Footing CL to coincide with Column CL.
 - SBC - 10-T/Sq.m

- Removal of formwork(Shuttering)
- Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
 - Vertical side of shuttering columns, Walls & beams - 24 Hours
 - Bottom shuttering of Slabs (Keeping the Props) - 3 Days
 - Bottom shuttering of Beams (Keeping the Props) - 7 Days
 - Props to Slabs:
 - Spanning Up to 4.5M - 14 Days
 - Spanning Over 4.5M-21 Days
 - Props to Beams & Arches:
 - Spanning Up to 6M - 21 Days
 - Spanning Over 6M - 28 Days
 - At any cross section of the member not more than 50% of the Bars shall be lapped
 - Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
 - Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
 - Laps in beams and columns shall be provided at the point of contraflexure.
 - Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
 - Detailing of Rebars shall conform to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TRICHIRAPALLI DISTRICT.

TITLE BLOCK-C FOURTH FLOOR ROOF BEAM LAYOUT

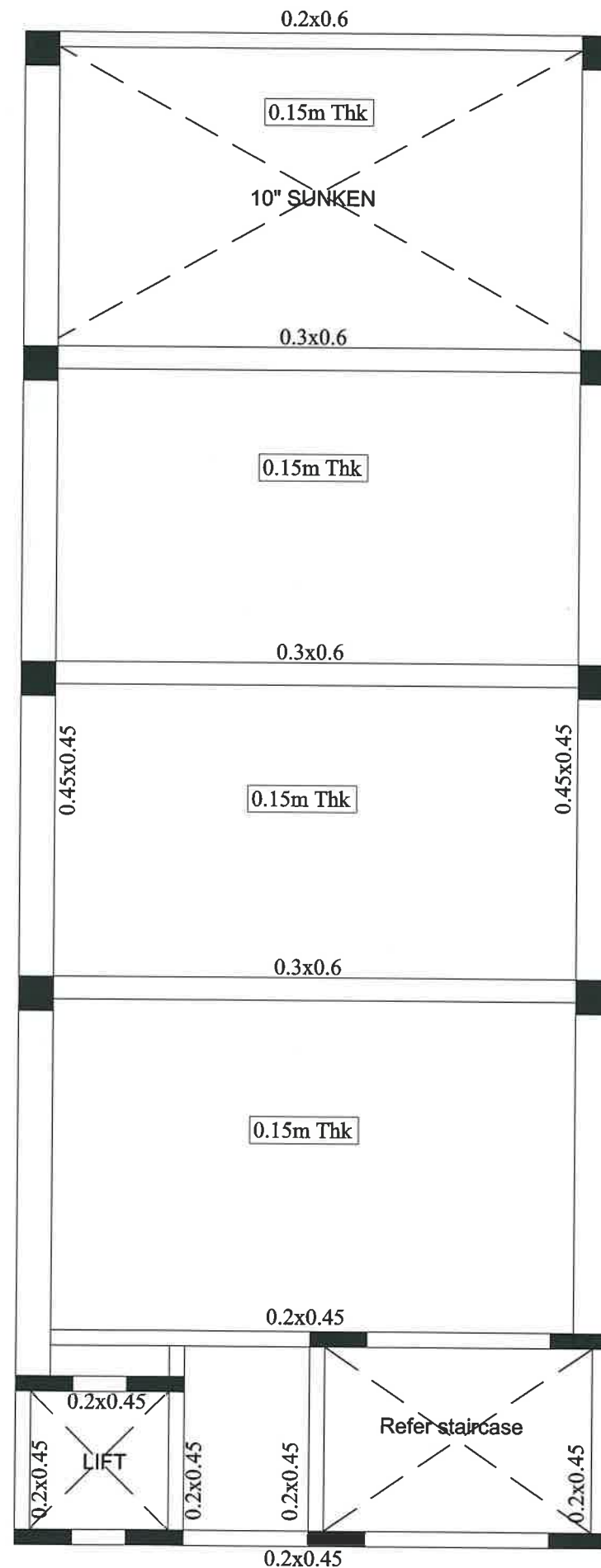
SHEET NO: 06

SCALE : NTS



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O W N E R S



GROUND FLOOR ROOF BEAM
LAYOUT

- GENERAL NOTES:-
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide $\#8@8"$ c/c as Dist. Steel wherever required
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M30 Conc & Fe500 unless specified otherwise.
 8. Found. designed for Ground+3 Flrs. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 210 Kn/Sq.m

- Removal of formwork(Shuttering)
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

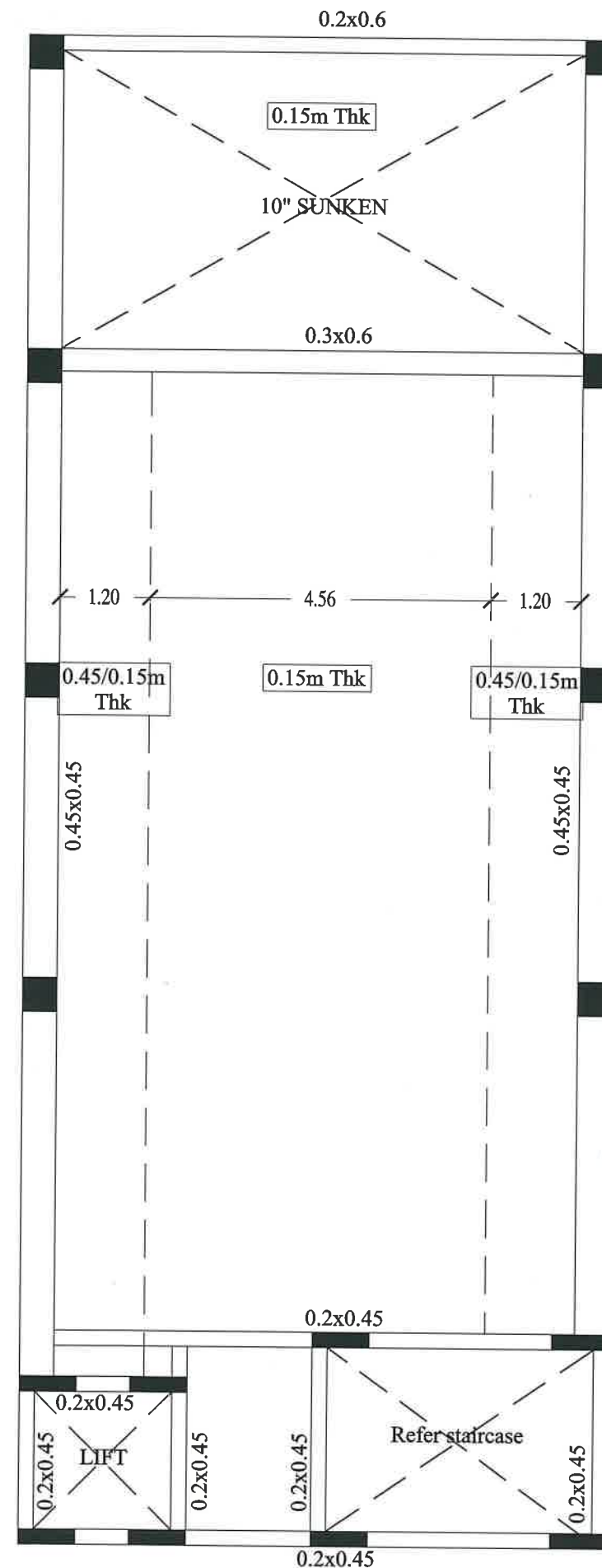
THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A,BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 25/3A1A1B, 25/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	GROUND FLOOR ROOF BEAM LAYOUT CLUB HOUSE
SHEET NO: 02	N
SCALE : NTS	

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O W N E R S



**FIRST FLOOR ROOF BEAM
LAYOUT**

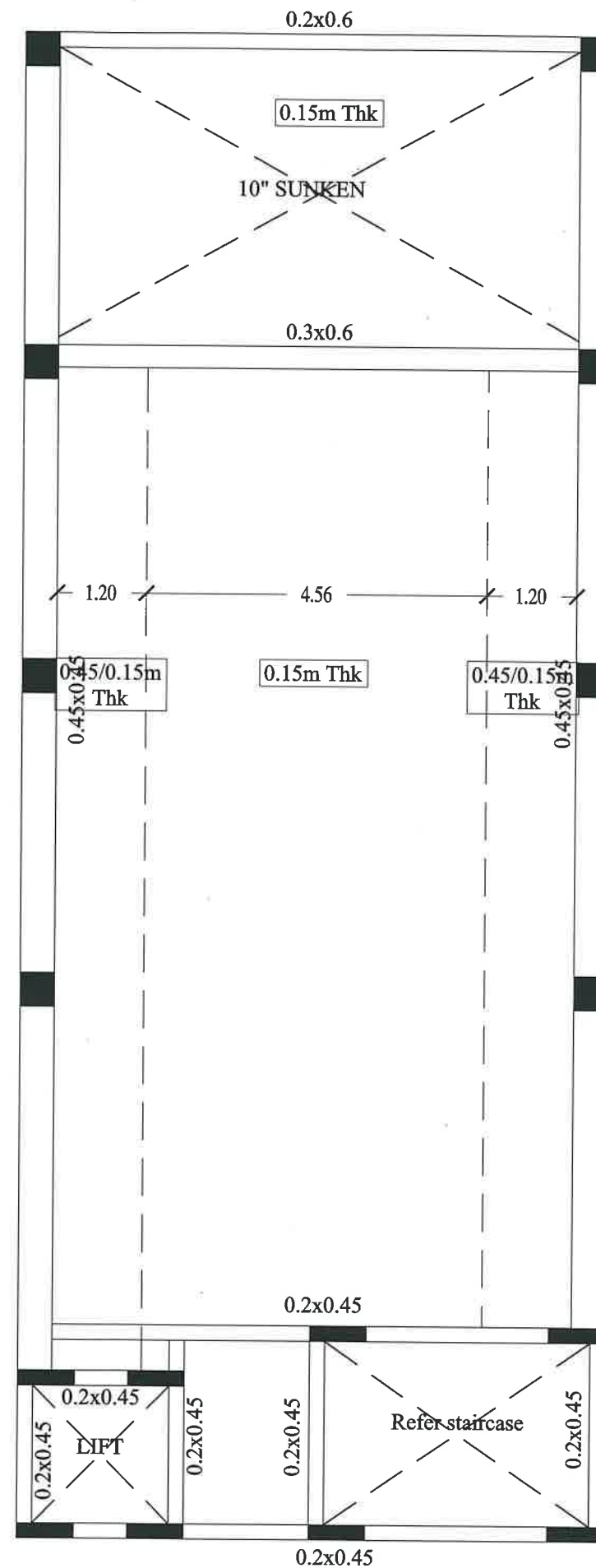
- GENERAL NOTES:-**
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Raft Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide $\phi 8 @ 8" c/c$ as Dist. Steel wherever required
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M30 Conc & Fe500 unless specified otherwise.
 8. Found. designed for Ground +3 Fls. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 210 Kn/Sq.m

- Removal of formwork (Shuttering)**
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days c) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS. AGARAM VILLAGE S.F.NO.25/8, 25/7, 26/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A, AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	FIRST FLOOR ROOF BEAM LAYOUT CLUB HOUSE
SHEET No: 03	
SCALE : NTS	
	N ↑


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SECOND FLOOR ROOF BEAM
LAYOUT

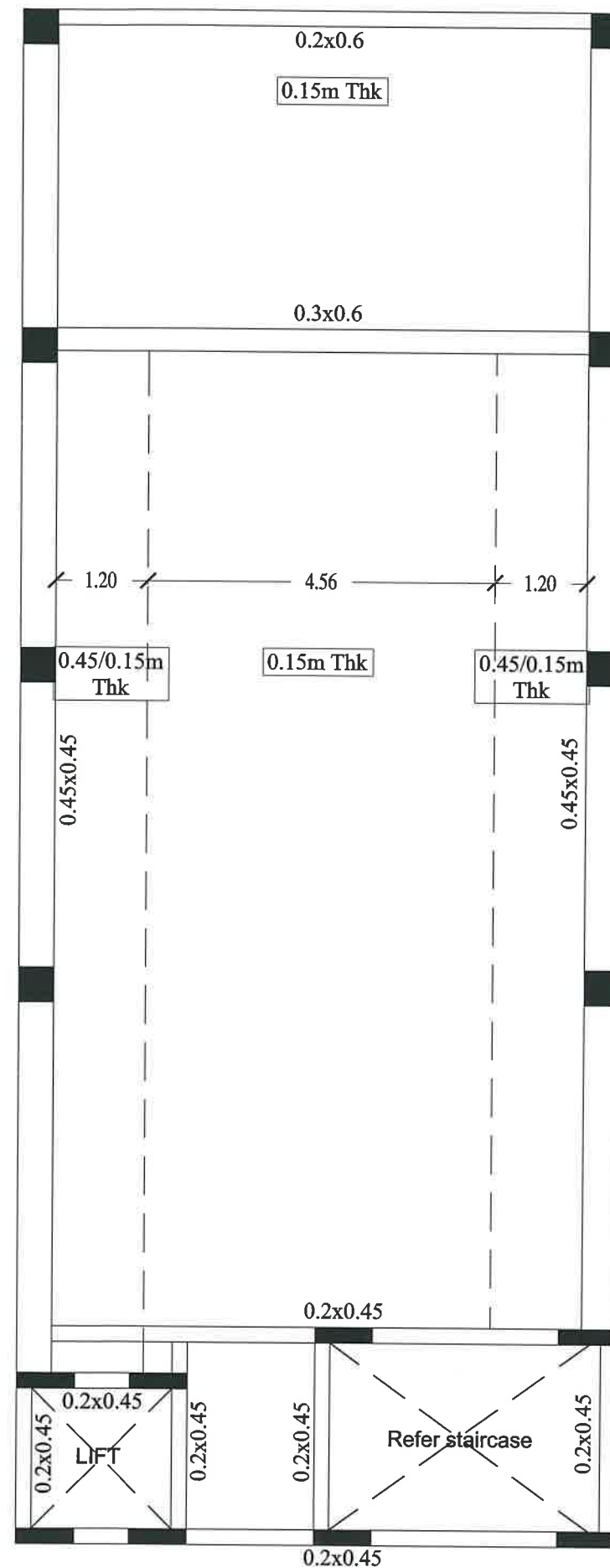
- GENERAL NOTES:-
1. All dimensions in Feet & Inches.
 2. Dimensions to be read, not scaled.
 3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Plinth beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Raft Slab & Beam 50 mm
 4. Slab thickness 5" thick unless specified otherwise.
 5. Provide 8mm @ 8" c/c as Dist. Steel wherever required.
 5. Crank length 0.25L of short span
 6. Top rod extn 0.30L of short span
 7. Use M30 Conc & Fe500 unless specified otherwise.
 8. Found. designed for Ground +3 Fms. only.
 9. Footing CL to coincide with Column CL.
 10. SBC - 210-Kn/Sq.m

- Removal of formwork (Shuttering)
1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seventh day. However the following minimum period after final pour) shall be allowed before removal of shuttering as per IS 1489-1991 Part I & part II
A) Vertical side of shuttering columns, Walls & beams - 24 Hours
B) Bottom shuttering of Slabs (Keeping the Props) - 3 Days
C) Bottom shuttering of Beams (Keeping the Props) - 7 Days
d) Props to Slabs:
i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days e) Props to Beams & Arches: i) Spanning Upto 6M - 21 Days ii) Spanning Over 6M - 28 Days Lap joints for Reinforcement bars i) At any cross section of the member not more than 50% of the Bars shall be lapped
ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members
iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members iv) Laps in columns shall be provided at midheight of floor and not at slab level
v) Laps in beams and columns shall be provided at the point of contraflexure.
vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer
vii) Detailing of Rebars shall confirm to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPALLI DISTRICT.

TITLE	SECOND FLOOR ROOF BEAM LAYOUT CLUB HOUSE
SHEET NO: 04	
SCALE : NTS	

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GENERAL NOTES:-

1. All dimensions in Feet & Inches.
2. Dimensions to be read, not scaled.
3. Clear cover to the main reinf. as follows
a) Col 25mm for 12mm bars & 40mm for >12mm
b) Footings 50mm
c) Pile/bearing beams 30mm
d) Roof Slab 20mm
e) Roof Beams 25mm
f) Rat Slab & Beam 50 mm
4. Slab thickness ≥ 150 mm unless specified otherwise.
5. Provide #8@8" c/c as Dist. Steel wherever required
6. Crank length 0.25L of short span
7. Top rod extn 0.30L of short span
8. Use M30 Conc & Fe500 unless specified otherwise.
9. Found. designed for Ground+3 Firs. only.
10. Footing CL to coincide with Column CL.
11. 10.SBC - 210 Nk/Sq.m

Removal of formwork (Shuttering)

1. Shuttering of any part of the structure shall not be removed until the concrete attains 70% of the specified strength of concrete at seven days.

However the following minimum period after final pour) shall be allowed, before removal of shuttering as per IS 1489-1991 Part 1 & part II

A) Vertical side of shuttering columns, Walls & beams
24 Hours

B) Bottom shuttering of Slabs (Keeping the Props)
- 3 Days

C) Bottom shuttering of Beams (Keeping the Props)
- 7 Days

d) Props to Slabs:

i) Spanning Upto 4.5M- 14 Days ii) Spanning Over 4.5M-21 Days

e) Props to Beams & Arches: i) Spanning Upto 6M- 21 Days ii) Spanning Over 6M- 28 Days

Lap joints for Reinforcement bars (i) At any cross section of the member not more than 50% of the Bars shall be lapped

ii) Laps shall be staggered with a minimum centre to centre distance of 1.3 times lap length of the bar for Tension & Compression members

iii) Lap length shall be 50 times the diameter of the bar for Tension & Compression members (iv) Laps in columns shall be provided at midheight of floor and not at slab level

v) Laps in beams and columns shall be provided at the point of contraflexure.

vi) Welding of bars shall be done as a stitch weld for 5 times diameter of bar and a gap of 5 times higher diameter bar and bar using arc welding and special electrodes after obtaining written approval from the structural designer

vii) Detailing of Rebars shall conform to SP-34 & IS 13920

THE PROPOSED CONSTRUCTION OF RCC ROOF RESIDENTIAL BUILDING BLOCK - A, BLOCK - B & BLOCK - C HAVING STILT + FIVE FLOORS AND CLUB HOUSE BUILDING HAVING STILT + THREE FLOORS AGARAM VILLAGE S.F.NO.25/6, 25/7, 25/8, 26/3A1A1B, 26/4A, ELAKUDI VILLAGE S.F.NO.6/5A2A AT BALAJI NAGAR TRICHY, THIRUVERUMBUR TALUK, TIRUCHIRAPPALLI DISTRICT.

TITLE		THIRD FLOOR ROOF BEAM LAYOUT CLUB HOUSE	
SHEET NO: 04			
SCALE : NTS			

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O W N E R S