Verified RealEstate™

RE REGULATORY RECORD

RERA Document

The document as the regulator published it, reproduced in full behind this page.

Published for reference. The authority's own register is the operative record.

Verified RealEstate™
3/350/2 Mettukuppam,
OMR Thoraipakkam,
Chennai 600 097, India

hello@verified.realestate
+91 9996 12 9996
verified.realestate

DIGITALLY VERIFIED RECORD

DESIGN BASIS REPORT

PROPOSED CONSTRUCTION OF CHONA KRISHNA APARTMENT AT SALEM

Er. PR. GANESAN, B.Tech
Registration No: 32/RSE-II/2024
Registered Structural Engineer Grade-II
304-2, Sona Nagar,
Alagapuram Periya Pudur,
SALEM - 636 016. Ph: 98427-43591

1	29.05.25	DESIGN BASIS REPORT/PROOF CHECKING									
Rev.	Date	Description/issued for			Prepared by		Checked by		Approved by		
		Promoter :	m/s. CHONA BUILDERS								
		project :	PROPOSED CONSTRUCTION OF CHONA KRISHNA APARTMENT AT SALEM								
		Title :	DESIGN BASIS REPORT								
Office :		India	Order :	document :	Rev:	0	Sheet:		of :	10	

SL.NO	TABLE OF CONTENT	PAGE No
1.	**INTRODUCTION**	3
2.	**SITE CONDITIONS**	3
3.	**REFERENCES, CODES AND STANDARDS**	4
4.	**LOAD DEFINITIONS**	
	4.1 Dead Loads (DL)	5
	4.2 Live Loads (LL)	6
	4.3 Wind Loads (WL)	6
	4.4 Earthquake Load (EL)	6
	4.5 Loading Combinations	7
5.	**REINFORCED CONCRETE WORKS**	
	5.1 General	9
	5.2 Cement and Aggregates	9
	5.3 Concrete Grades	9
	5.4 Reinforcing Steel	9
	5.5 Description of structural arrangement	9
	5.6 Properties for design purpose	10
	5.7 Development Length of bars	10
	5.8 Cover to Concrete	10
6.	**SOIL PROPERTIES & FOUNDATION**	
	6.1 Bearing Capacity of Soil	10
	6.2 Analysis and design methodology	10

1.Introduction :

This document presents the structural design basis for the Proposed Construction of Chona Krishna Apartment at Salem. All the parameters contained in this document shall be used by civil and structural discipline in the detail design and shall be used as reference at the construction stage.

1.1 No. of Storey's :

The building has been designed for (Stilt + 5 Floors).

2.SITE CONDITIONS:

2.1.1. Site location:

Proposed Construction of Chona Krishna Apartment at Salem.

2.1.2 Ground water:

Taken as per soil Report.

3.REFERENCES,CODES AND STANDARDS : The following codes and standards have been referred.

CODE OF PRACTICE FOR DESIGN LOADS (OTHER THAN EARTHQUAKE) FOR BUILDINGS AND STRUCTURES	
IS 875 Part 1 - 1987	Dead Loads - Unit weights of building Materials and stored materials.
IS 875 Part 2 - 1987	Imposed loads.
IS 875 Part 3 - 2015	Wind Loads.
IS 875 Part 5 - 1987	Special Loads and Combinations.
CODE OF PRACTICE FOR DESIGN	
IS 456 : 2000	Plain and Reinforced Concrete Code of Practice.
IS 1893(Part - 1): 2016	Criteria for Earthquake resistant design of structures (General provision and buildings).
IS 3370-(Part-1&2)-2009 IS 3370-Part-IV-1967	Code of practice for concrete structures for storage of liquids. & Design Tables.
IS 13920-2016	Code of practice for ductile design and detailing of reinforced concrete Structures subjected to seismic forces.
IS 1786-2008	Specification for high strength deformed steel bars and wires for concrete reinforcement.
SP - 24 – 1983	Explanatory hand book on Indian standard code of practice for plain and reinforced concrete.
SP - 16 : 1980	Design aids for reinforced concrete to IS 456 - 1978.
SP - 34(S&T) - 1987	Hand book on concrete reinforcement and detailing.
IS 1904 - 1986	Code of Practice for design and construction of foundations in soil : General requirements.
IS 2950 (Part I) -1981	Code of Practice for design & construction of raft Foundation.
SP – 38 (S&T) – 1987	Handbook of typified designs for structures with steel Roof trusses.
IS 800 : 2007	Code of practice for General construction in steel.
IS 808 : 1989	Dimensions for hot Rolled steel Beam, Column, Channel and Angle section.

4.LOAD DEFINITIONS :

4.1 Dead Loads (DL) :

Dead Load shall be the total weight of the materials forming the permanent part of structure. The Unit weights of materials and components shall be as per the code defined.

Self weights of the slabs are inbuilt with ETABS software at the time of application.

(i) Concrete unit weight is taken as 25 kN/m^3

(ii) AAC Block unit weight is taken as 6.5 kN/m^3

(iii) Water unit weight is taken as 10 kN/m^3

(iv) Sand (Toilet sunken) unit weight is taken as 18 kN/m^3

4.2 Live Loads (LL) :

Live Loads are all movable super imposed loads such as movable partitions, occupants and movable equipment, but not including wind or equipment dynamic loads. Live Loads shall be as specified in IS 875 Part 2 - 1987 Table 1.

I. EARTHQUAKE LOAD CALCULATIUON (EL):

Seismic loads are considered for Zone III as per IS 1893 (Part-1) : 2016.

Zone Factor	= 0.16
Importance Factor	= 1
Response reduction Factor (Special Moment Resisting Frames)	= 5
Damping	= 5%
Soil Type	= II

Time Period:

Time period are considered as per IS 1893(PART - 1): 2016 Clause No. 7.6.2(C)

$$0.075*(18.9)^{0.75} = 0.67$$

4.5 Loading Combinations :

SERVICEABILITY COMBINATION

1) 1.0 D.L + 1.0 L.L
2) 1.0 D.L + 1.0 W.L – (+X DIRECTION)
3) 1.0 D.L + 1.0 W.L – (-X DIRECTION)
4) 1.0 D.L + 1.0 W.L – (+Y DIRECTION)
5) 1.0 D.L + 1.0 W.L – (-Y DIRECTION)
6) 1.0 D.L + 1.0 E.L – (+X DIRECTION)
7) **1.0 D.L + 1.0 E.L – (-X DIRECTION)**
8) 1.0 D.L + 1.0 E.L – (+Y DIRECTION)
9) 1.0 D.L + 1.0 E.L – (-Y DIRECTION)

10) 1.0 D.L + 0.8 L.L + 0.8 W.L (+X DIRECTION)

11) 1.0 D.L + 0.8 L.L + 0.8 W.L (-X DIRECTION)

12) 1.0 D.L + 0.8 L.L + 0.8 W.L (+Y DIRECTION)

13) 1.0 D.L + 0.8 L.L + 0.8 W.L (-Y DIRECTION)

14) 1.0 D.L + 0.8 L.L + 0.8 E.L (+X DIRECTION)

15) 1.0 D.L + 0.8 L.L + 0.8 E.L (-X DIRECTION)

16) 1.0 D.L + 0.8 L.L + 0.8 E.L (+Y DIRECTION)

17) 1.0 D.L + 0.8 L.L + 0.8 E.L (-Y DIRECTION)

ULTIMATE COMBINATION

18) 1.5 D.L + 1.5 L.L

19) 1.5 D.L + 1.5 W.L (+X DIRECTION)

20) 1.5 D.L + 1.5 W.L (-X DIRECTION)

21) 1.5 D.L + 1.5 W.L (+Y DIRECTION)

22) 1.5 D.L + 1.5 W.L (-Y DIRECTION)

23) 1.5 D.L + 1.5 E.L (+X DIRECTION)

24) 1.5 D.L + 1.5 E.L (-X DIRECTION)

25) 1.5 D.L + 1.5 E.L (+Y DIRECTION)

26) 1.5 D.L + 1.5 E.L (-Y DIRECTION)

27) 0.9 D.L + 1.5 W.L (+X DIRECTION)

28) 0.9 D.L + 1.5 W.L (-X DIRECTION)

29) 0.9 D.L + 1.5 W.L (+Y DIRECTION)

30) 0.9 D.L + 1.5 W.L (-Y DIRECTION)

31) 0.9 D.L + 1.5 E.L (+X DIRECTION)

32) 0.9 D.L + 1.5 E.L (-X DIRECTION)

33)0.9 D.L + 1.5 E.L (+Y DIRECTION)

34) 0.9 D.L + 1.5 E.L (-Y DIRECTION)

35) 1.2 D.L+ 1.2L.L+1.2W.L (+X DIRECTION)

36) 1.2 D.L+ 1.2L.L+1.2W.L (-X DIRECTION)

37) 1.2 D.L+ 1.2L.L+1.2W.L (+Y DIRECTION)

38) 1.2 D.L+ 1.2L.L+1.2W.L (-Y DIRECTION)

39) 1.2 D.L+ 1.2L.L+1.2E.L (+X DIRECTION)

40) 1.2 D.L+ 1.2L.L+1.2E.L (-X DIRECTION)

41) 1.2 D.L+ 1.2L.L+1.2E.L (+Y DIRECTION)

42) 1.2 D.L+ 1.2L.L+1.2E.L (-Y DIRECTION)

(D.L = Dead load, L.L = Live load, W.L = wind load, E.L = Earthquake load,).

Temperature Load is not considered since the lateral dimension of the building is limited as per Clauses 19.5.1 & 27.20 of IS 456:2000.

5. Reinforced concrete works :

5.1 General :

Design of Structural Concrete works shall be in accordance with IS 456:2000.

Design of Truss steel member works shall be in accordance with IS 800:2007.

5.2 Cement and Aggregates :

Cement to be ordinary Portland cement in accordance with (IS 269).

Aggregates shall be accordance with (IS 383).

5.3 Concrete Grades :

Structural Concrete :

Sub & Super Structure – M25

P.C.C - M7.5

5.4 Reinforcing Steel :

Reinforcing Steel Bars shall be CRS (Corrosion resistant steel) Uncoated High Yield deformed bars Fe 500 D of Minimum Characteristic Yield strength of 500 N/mm^2 having elongation of 16%. Deformed bars confirming to IS 1786:2008.

5.5 Description of structural arrangement :

Super structure :

The buildings will be designed as framed structure with columns and beams are Interconnected with flat R.C.C Roof Slab.

Sub structure :

The foundation will be designed generally as per the soil report recommendations.

5.6 Properties for design purpose :

a.	Grade of Concrete fck	- 25 N/mm^2
b.	Grade of Steel fy	- 500 N/mm^2
c.	Young's Modulus of Steel Es	- 200000 N/mm^2
d.	Modulus of Elasticity of Concrete Ec - 5000√fck	- 25000 N/mm^2

5.7 Development Length of bars :

For M25:

(Ld) In Tension = 50ø

(Ld) In Compression = 40ø

5.8 Cover to Concrete :

Footing	=	50 mm
Column	=	40 mm
Beam	=	30 mm
Slab	=	25 mm
Shear wall	=	25 mm
R.C.C Retaining Wall	=	25 mm

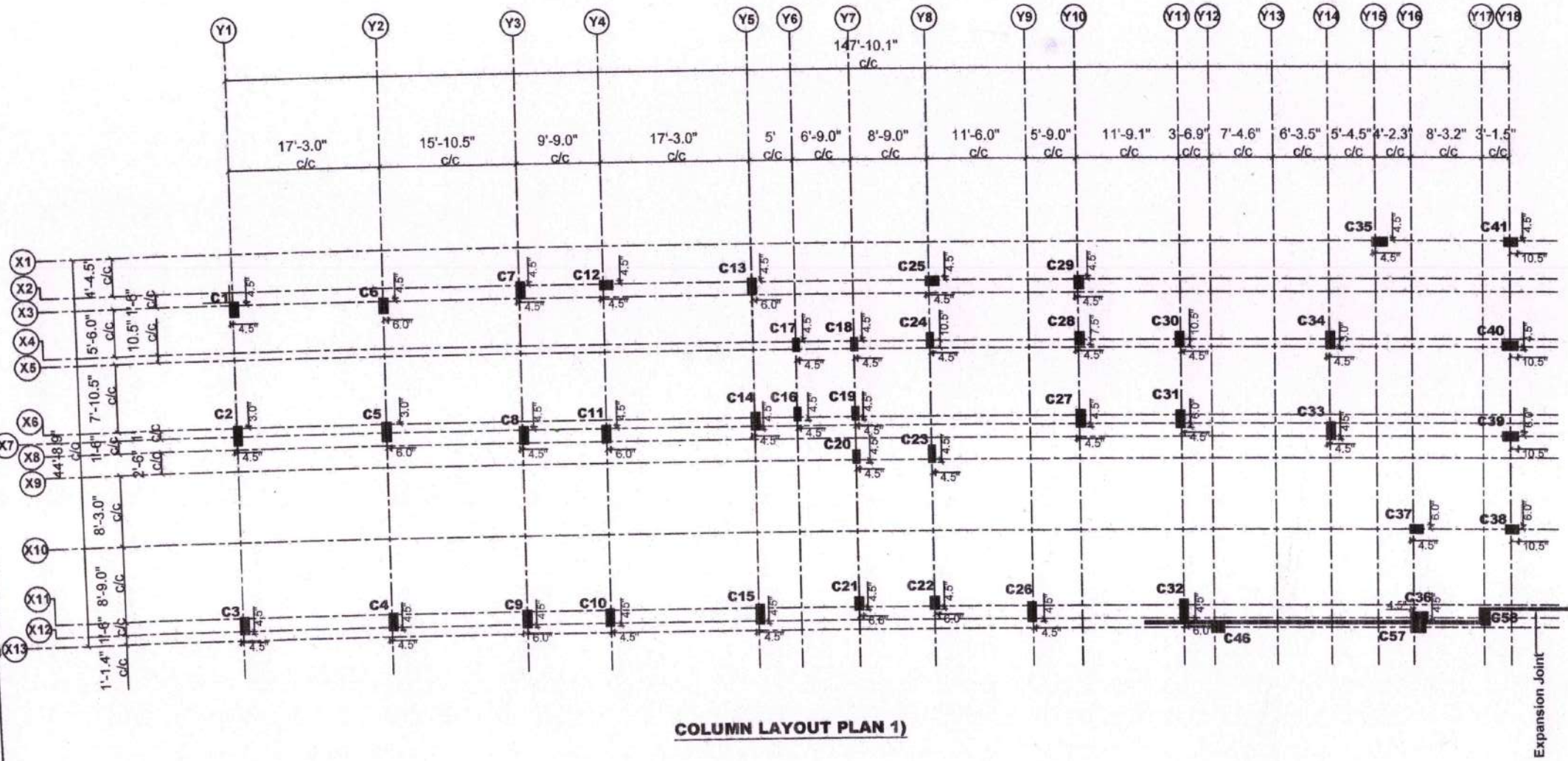
SOIL PROPERTIES & FOUNDATION DEPTH :

6.1 Safe Bearing Capacity of Soil :

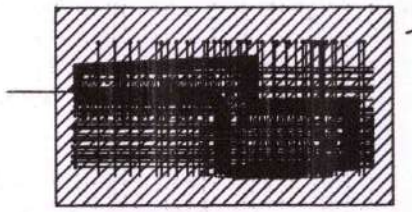
Net Allowable bearing capacity of soil is taken as per soil report = 300 KN/m^2

6.2 Analysis and design methodology :

The Building is analyzed as 3-D space structure using finite element method in ETABS the foundations is designed in 'SAFE' software & XL sheets. Fixed condition is considered at supports for 3-D structure & the steel member designed for the using 'ETABS' software, to carryout analysis for various load combinations as per design basis.



COLUMN LAYOUT PLAN 1)



KeyPlan

Legend :
c/c - Centre to Centre
C - Column

Notes:

1. All dimensions are in'Feet & Inches'unless otherwise noted.
2. All Grids are C/C of wall
3. Wherever applicable, this drawing must be read along with the relevant architectural drawings.
4. Concrete mix shall be **M25** for all RCC members conforming to IS 456 - 2500, unless otherwise noted.
5. **'Y'** Designate steel reinforcement diameter, and shall conform to IS-1786 - 2508, Fe 500D Grade with minimum yield strength of **500D N/mm²** having elongation of 16%.
6. Safe bearing capacity of soil is **25T/m²** (As per Soil Report)
7. Depth of foundation shall be **2.5m** from Lowest existing ground level (or) Depth upto Hard Strata (Whichever is more)
8. Clear cover for column reinforcement - **1 1/2" (40mm)**
   for footing reinforcement - **2" (50mm)**
   for footing side face reinforcement - **3" (75mm)**
9. Development length of bars:
   (Ld) In Tension - **50 Ø**
   (Ld) In Compression - **40 Ø**
   For **M25** grade of concrete & shall be kept staggered
10. The building has been designed for (Stilt+5)
11. Any discrepancy between this drawing and other drawings must be brought to the notice of consultant.
12. P.C.C **4"** Thk.
13. Column Reinforcement detail refer dwg.no: **MC/SLM/JN-356/KRISHNA/STR/102a**

Working Drawing

Revisions

Rev. no.	Particulars	Date	Chkd.by	Appd.by

Date : 15.04.2025	Drawn by : K.P	Designed by : S.M	Appd.by :N.M

Dwg no.: MC/SLM/JN-356/KRISHNA/STR/102

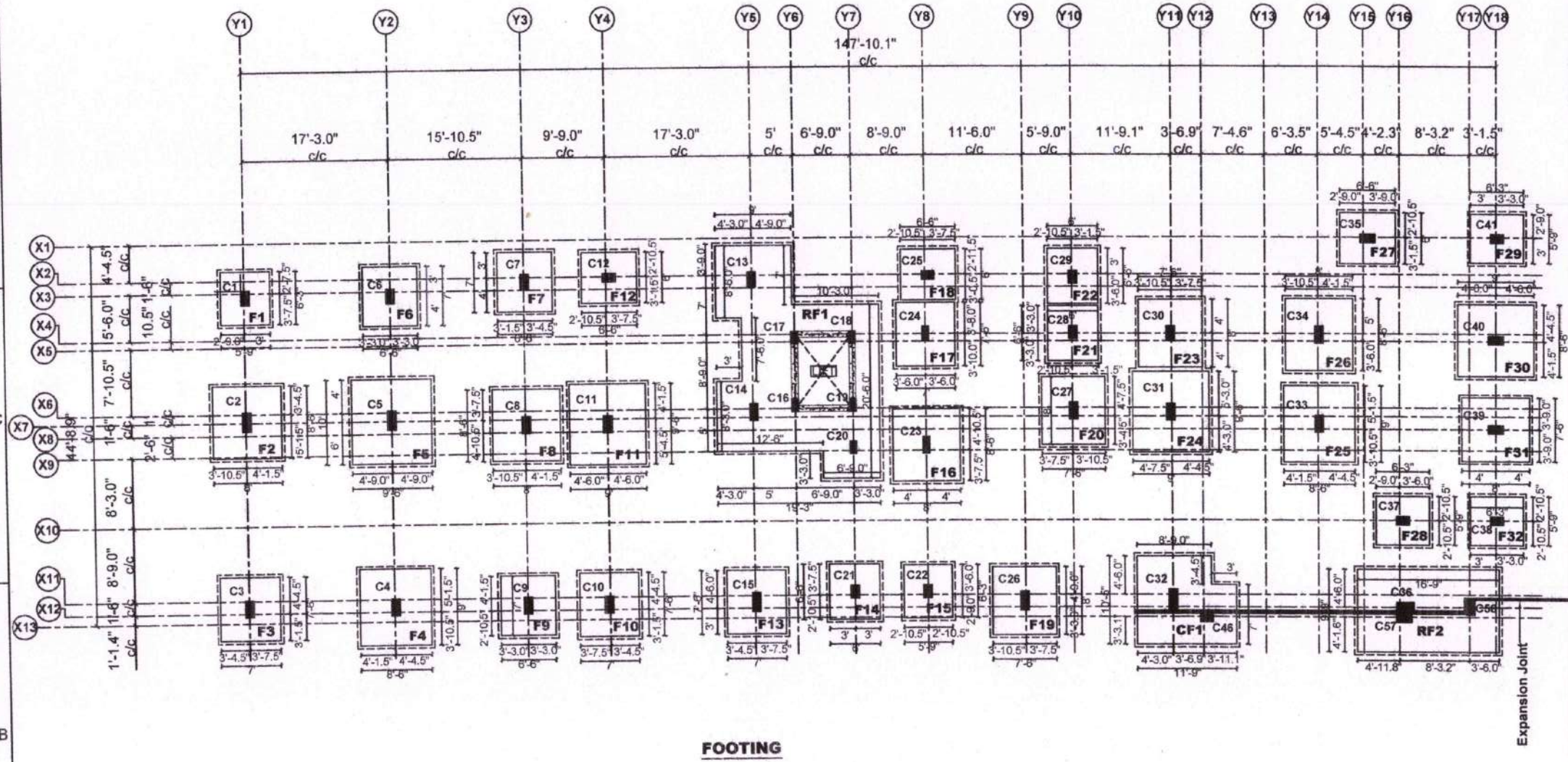
Proposed Construction of Apartment Building for Chona Krishna at Salem

Title :

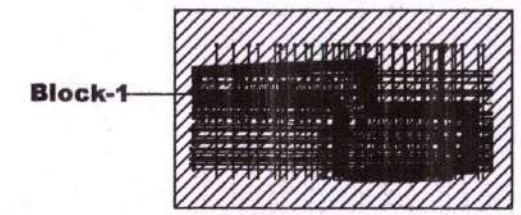
Column Layout Plan-1

Approved for Construction

Consultants :
CHONA BUILDERS
Structural Engineering, Civil, Planning & Project Management
304-2 sona nagar alagapuram pudur
Salem - 636016. Tamil Nadu
Ph: 9842 743 591 | 9159 083 591
E-Mail: chonaslm2005@gmail.com



FOOTING



KeyPlan

Legend :

c/c - Centre to Centre
C - Column
CF - Combined Footing
F - Isolated Footing
RF - Raft Footing
R.C.C- Reinforced Cement Concrete _____
P.C.C- Plain Cement Concre _ _ _ _ _

Notes:

1. All dimensions are in'Feet & Inches'unless otherwise noted.
2. All Grids are C/C of wall
3. Wherever applicable, this drawing must be read along with the relevant architectural drawings.
4. Concrete mix shall be **M25** for all RCC members conforming to IS 456 - 2500, unless otherwise noted.
5. **'Y'** Designate steel reinforcement diameter, and shall conform to IS-1786 - 2508, Fe 500D Grade with minimum yield strength of **500D N/mm²** having elongation of 16%.
6. Safe bearing capacity of soil is **25T/m²** (As per Soil Report)
7. Depth of foundation shall be **2.5m** from Lowest existing ground level (or) Depth upto Hard Strata (Whichever is more)
8. Clear cover for column reinforcement - **1 1/2" (40mm)**
   for footing reinforcement - **2" (50mm)**
   for footing side face reinforcement - **3" (75mm)**
9. Development length of bars:
   (Ld) In Tension - **50 Ø**
   (Ld) In Compression - **40 Ø**
   For **M25** grade of concrete & shall be kept staggered
10. The building has been designed for (Stilt+5)
11. Any discrepancy between this drawing and other drawings must be brought to the notice of consultant.
12. P.C.C **4"** Thk.
13. Footing Reinforcement detail refer dwg.no: **MC/SLM/JN-356/KRISHNA/STR/101a**

Working Drawing

Revisions

Rev. no.	Particulars	Date	Chkd.by	Appd.by

Date : 15.04.2025 | Drawn by : K.P | Designed by : S.M | Appd.by :N.M

Dwg no.: MC/SLM/JN-356/KRISHNA/STR/101

Proposed Construction of Apartment Building for Chona Krishna at Salem

Title :

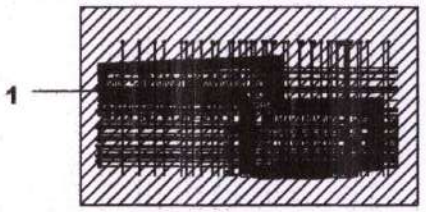
Footing Layout Plan

Approved for Construction

Consultants :
CHONA BUILDERS
Structural Engineering, Civil, Planning & Project Management
304-2 sona nagar alagapuram pudur
Salem - 636016. Tamil Nadu
Ph: 9842 743 591 | 9159 083 591
E-Mail: chonaslm2005@gmail.com

FOOTING REINFORCEMENT DETAIL - (1)

S.No	No.of Footings	Footing Type	Footing Size (Lx x Ly)	Footing Depth (D)	Footing Reinforcement detail (Bottom)		Footing Reinforcement detail (Top)	
					Along Shorter Span (Lx)	Along Longer Span (Ly)	Along Shorter Span (Lx)	Along Longer Span (Ly)
1.	5	F1,F15, F28, F29,F32	5'9" X 6'3"	18"	Y10 @ 5"c/c	Y10 @ 5"c/c	-	-
2.	7	F7,F12, F14,F18 F21, F22,F27	6'0" X 6'6"	20"	Y10 @ 5"c/c	Y10 @ 5"c/c	-	-
3.	2	F6, F9	6'6" X 7'0"	21"	Y10 @ 4"c/c	Y10 @ 4"c/c	-	-
4.	4	F3, F10, F13, F17	7'0" X 7'6"	22"	Y10 @ 4"c/c	Y10 @ 4"c/c	-	-
5.	4	F19, F20, F23, F31	7'6" X 8'0"	24"	Y12 @ 5"c/c	Y12 @ 5"c/c	-	-
6.	4	F2, F8, F16, F26	8'0" X 8'6"	26"	Y12 @ 5"c/c	Y12 @ 5"c/c	-	-
7.	3	F4, F25, F30	8'6" X 9'0"	26"	Y12 @ 5"c/c	Y12 @ 5"c/c	-	-
8.	2	F11, F24	9'0" X 9'6"	28"	Y12 @ 4"c/c	Y12 @ 4"c/c	-	-
9.	1	F5	9'6" X 10'0"	30"	Y12 @ 4"c/c	Y12 @ 4"c/c	Y10 @ 6"c/c	Y10 @ 6"c/c
10.	1	CF1	REFER PLAN	26"	For Footing Layout & Reinforcement Detail Refer Dwg No:101 To 101c			
11.	1	RF1	REFER PLAN	22"	For Footing Layout & Reinforcement Detail Refer Dwg No:101 To 101d			
12.	1	RF2	16'9" X 9'9"	24"	For Footing Layout & Reinforcement Detail Refer Dwg No:101 To 101c			



KeyPlan

Legend :

c/c	- Centre to Centre		
Eq.	- Equal		
Typ.	- Typical	CF	- Combined Footing
	- Bottom bar	Ld	-Developement Length
	- Top bar	D	- Depth of Footing
B	- Bottom rod	A	- Shorter Span of Column
T	- Top rod	B	- Longer Span of Column
RF	- Raft Footing		

Notes:

1. All dimensions are in'Feet & Inches'unless otherwise noted.
2. All Grids are C/C of wall
3. Wherever applicable, this drawing must be read along with the relevant architectural drawings.
4. Concrete mix shall be **M25** for all RCC members conforming to IS 456 - 2500, unless otherwise noted.
5. 'Y' Designate steel reinforcement diameter, and shall conform to IS-1786 - 2508, Fe 500D Grade with minimum yield strength of **500D N/mm²** having elongation of 16%.
6. Safe bearing capacity of soil is **25T/m²** (As per Soil Report)
7. Depth of foundation shall be **2.5m** from Lowest existing ground level (or) Depth upto Hard Strata (Whichever is more)
8. Clear cover for column reinforcement - **1 1/2" (40mm)**
   for footing reinforcement - **2" (50mm)**
   for footing side face reinforcement - **3" (75mm)**
9. Development length of bars:
   (Ld) In Tension - **50 ø**
   (Ld) In Compression - **40 ø**
   For **M25** grade of concrete & shall be kept staggered
10. The building has been designed for (Stilt+5)
11. Any discrepancy between this drawing and other drawings must be brought to the notice of consultant.
12. P.C.C **4"** Thk.
13. Footing layout Plan refer dwg.no: **MC/SLM/JN-356/KRISHNA/STR/101**

Working Drawing

Revisions

Rev. no.	Particulars	Date	Chkd.by	Appd.by

Date : 15.04.2025 | Drawn by : K.P | Designed by : S.M | Appd.by :N.M

Dwg no.: MC/SLM/JN-356/KRISHNA/STR/101a

Proposed Construction of Apartment Building for Chona Krishna at Salem

Title :

Footing Reinforcement Detail 1

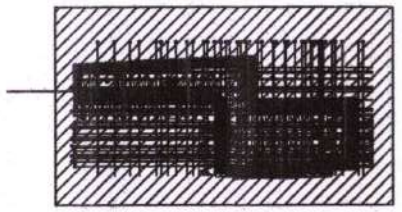
Approved for Construction

Consultants :
CHONA BUILDERS
Structural Engineering, Civil, Planning & Project Management
304-2 sona nagar alagapuram pudur
Salem - 636016. Tamil Nadu
Ph: 9842 743 591 | 9159 083 591
E-Mail: chonaslm2005@gmail.com

COLUMN REINFORCEMENT DETAIL (1)

Sl.no	No. of Columns	Column Name	Column Sizes	Column Reinf.Detail (UP To Footing Lvl to Stilt Floor Roof Lvl)	Column Reinf.Detail (Stilt Floor Roof Lvl to First Floor Roof Lvl)	Column Reinf.Detail (First Floor Roof Lvl to Second Floor Roof Lvl)	Column Reinf.Detail (Second Floor Roof Lvl to Third Floor Roof Lvl)	Column Reinf.Detail (Third Floor Roof Lvl to Fifth Floor Roof Lvl)	Lateral Ties		Lateral Ties
									Special Confining / Joint Reinforcement	Transverse Reinforcement	
1	2	C16,C19	0'9" x 1'6"	9" 1'-6" ·4-Y16+ ·6-Y12	9" 1'-6" ·4-Y16+ ·6-Y12	9" 1'-6" ·4-Y16+ ·6-Y12	9" 1'-6" ·4-Y16+ ·6-Y12	9" 1'-6" ·4-Y16+ ·6-Y12	Y8-4"c/c	Y8-6"c/c	
2	3	C17,C18, C20	0'9" x 1'6"	9" 1'-6" ·6-Y16+ ·4-Y12	9" 1'-6" ·6-Y16+ ·4-Y12	9" 1'-6" ·6-Y16+ ·4-Y12	9" 1'-6" ·6-Y16+ ·4-Y12	9" 1'-6" ·4-Y16+ ·6-Y12	Y8-4"c/c	Y8-6"c/c	
3	1	C24	0'9" x 1'9"	9" 1'-9" ·12-Y16	9" 1'-9" ·12-Y16	9" 1'-9" ·6-Y16+ ·6-Y12	9" 1'-9" ·6-Y16+ ·6-Y12	9" 1'-9" ·4-Y16+ ·8-Y12	Y8-4"c/c	Y8-6"c/c	
4	1	C23	0'9" x 2'0"	9" 2' ·6-Y20+ ·6-Y16	9" 2' ·6-Y20+ ·6-Y16	9" 2' ·8-Y16+ ·4-Y12	9" 2' ·8-Y16+ ·4-Y12	9" 2' ·6-Y16+ ·6-Y12	Y8-4"c/c	Y8-6"c/c	
5	3	C25,C29, C41	1'0" x 1'6" 0'9" x 1'6"	9" 3" 1'-6" ·6-Y16+ ·4-Y12 4-Y12	9" 1'-6" ·6-Y16+ ·4-Y12	9" 1'-6" ·6-Y16+ ·4-Y12	9" 1'-6" ·6-Y16+ ·4-Y12	9" 1'-6" ·4-Y16+ ·6-Y12	Y8-4"c/c	Y8-6"c/c	
6	3	C21,C22, C38	1'0" x 1'6" 0'9" x 1'6"	1' 1'-6" ·10-Y16	9" 1'-6" ·10-Y16	9" 1'-6" ·6-Y16+ ·4-Y12	9" 1'-6" ·6-Y16+ ·4-Y12	9" 1'-6" ·6-Y16+ ·4-Y12	Y8-4"c/c	Y8-6"c/c	
7	1	C37	1'0" x 1'6" 0'9" x 1'6"	1' 1'-6" ·4-Y20+ ·6-Y16	9" 1'-6" ·4-Y20+ ·6-Y16	9" 1'-6" ·10-Y16	9" 1'-6" ·10-Y16	9" 1'-6" ·6-Y16+ ·4-Y12	Y8-4"c/c	Y8-6"c/c	
8	1	C6	1'0" x 1'9" 0'9" x 1'9"	1' 1'-9" ·12-Y16	9" 1'-9" ·12-Y16	9" 1'-9" ·6-Y16+ ·6-Y12	9" 1'-9" ·6-Y16+ ·6-Y12	9" 1'-9" ·4-Y16+ ·8-Y12	Y8-4"c/c	Y8-6"c/c	
9	1	C13	1'0" x 1'9" 0'9" x 1'9"	1' 1'-9" ·4-Y20+ ·8-Y16	9" 1'-9" ·4-Y20+ ·8-Y16	9" 1'-9" ·8-Y16+ ·4-Y12	9" 1'-9" ·8-Y16+ ·4-Y12	9" 1'-9" ·6-Y16+ ·6-Y12	Y8-4"c/c	Y8-6"c/c	

1



KeyPlan

Legend :
c/c - Centre to Centre
C - Column

Notes:

1. All dimensions are in'Feet & Inches'unless otherwise noted.
2. All Grids are C/C of wall
3. Wherever applicable, this drawing must be read along with the relevant architectural drawings.
4. Concrete mix shall be **M25** for all RCC members conforming to IS 456 - 2500, unless otherwise noted.
5. 'Y' Designate steel reinforcement diameter, and shall conform to IS-1786 - 2508, Fe 500D Grade with minimum yield strength of **500D N/mm²** having elongation of 16%.
6. Safe bearing capacity of soil is **25T/m²** (As per Soil Report)
7. Depth of foundation shall be **2.5m** from Lowest existing ground level (or) Depth upto Hard Strata (Whichever is more)
8. Clear cover for column reinforcement - **1 1/2" (40mm)**
   for footing reinforcement - **2" (50mm)**
   for footing side face reinforcement - **3" (75mm)**
9. Development length of bars:
   (Ld) In Tension - **50 Ø**
   (Ld) In Compression - **40 Ø**
   For **M25** grade of concrete & shall be kept staggered
10. The building has been designed for (Stilt+5)
11. Any discrepancy between this drawing and other drawings must be brought to the notice of consultant.
12. P.C.C **4"** Thk.
13. Column layout Plan refer dwg.no:
    MC/SLM/JN-356/KRISHNA/STR/102

Working Drawing

Revisions

Rev. no.	Particulars	Date	Chkd.by	Appd.by

Date : 15.04.2025 | Drawn by : K.P | Designed by : S.M | Appd.by :N.M

Dwg no.: MC/SLM/JN-356/KRISHNA/STR/102a

Proposed Construction of Apartment Building for Chona Krishna at Salem

Title :

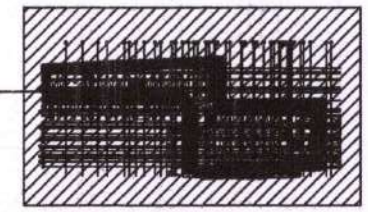
Column Reinforcement Detail 1 1

Consultants :
CHONA BUILDERS
Structural Engineering, Civil, Planning & Project Management
304-2 sona nagar alagapuram pudur
Salem - 636016. Tamil Nadu
Ph: 9842 743 591 | 9159 083 591
E-Mail: chonaslm2005@gmail.com

Approved for Construction

COLUMN REINFORCEMENT DETAIL (1)

Sl.no.	No. of Columns	Column Name	Column Sizes	Column Reinf.Detail (UP To Footing Lvl to Stilt Floor Roof Lvl)	Column Reinf.Detail (Stilt Floor Roof Lvl to First Floor Roof Lvl)	Column Reinf.Detail (First Floor Roof Lvl to Second Floor Roof Lvl)	Column Reinf.Detail (Second Floor Roof Lvl to Third Floor Roof Lvl)	Column Reinf.Detail (Third Floor Roof Lvl to Fifth Floor Roof Lvl)	Lateral Ties		Lateral Ties
									Special Confining / Joint Reinforcement	Transverse Reinforcement	
10	2	C39,C40	1'0" x 1'9" 0'9" x 1'9"	9" 3" ·6-Y20+ ·6-Y16 1'-9" 5-Y12	9" ·6-Y20+ ·6-Y16 1'-9"	9" ·4-Y20+ ·8-Y16 1'-9"	9" ·4-Y20+ ·8-Y16 1'-9"	9" ·12-Y16 1'-9"	Y8-4"c/c	Y8-6"c/c	
11	1	C9	1'0" x 2'0" 0'9" x 2'0"	1' ·4-Y20+ ·8-Y16 2'	9" ·4-Y20+ ·8-Y16 2'	9" ·12-Y16 2'	9" ·12-Y16 2'	9" ·6-Y16+ ·6-Y12 2'	Y8-4"c/c	Y8-6"c/c	
12	4	C8,C14, C27,C34	1'0" x 2'0" 0'9" x 2'0"	9" 3" ·6-Y20+ ·6-Y16 2' 5-Y12	9" ·6-Y20+ ·6-Y16 2'	9" ·4-Y20+ ·8-Y16 2'	9" ·4-Y20+ ·8-Y16 2'	9" ·8-Y16+ ·4-Y12 2'	Y8-4"c/c	Y8-6"c/c	
13	2	C3,C4	1'0" x 2'0" 0'9" x 2'0"	9" 3" ·8-Y20+ ·4-Y16 2' 5-Y12	9" ·8-Y20+ ·4-Y16 2'	9" ·6-Y20+ ·6-Y16 2'	9" ·6-Y20+ ·6-Y16 2'	9" ·6-Y20+ ·6-Y16 2'	Y8-4"c/c	Y8-6"c/c	
14	1	C11	1'0" x 2'0" 0'9" x 2'0"	1' ·12-Y20 2'	9" ·12-Y20 2'	9" ·6-Y20+ ·6-Y16 2'	9" ·6-Y20+ ·6-Y16 2'	9" ·12-Y16 2'	Y8-4"c/c	Y8-6"c/c	
15	2	C15,C26	1'0" x 2'3" 0'9" x 2'3"	9" 3" ·6-Y20+ ·8-Y16 2'-3" 6-Y12	9" ·6-Y20+ ·8-Y16 2'-3"	9" ·4-Y20+ ·10-Y16 2'-3"	9" ·4-Y20+ ·10-Y16 2'-3"	9" ·8-Y16+ ·6-Y12 2'-3"	Y8-4"c/c	Y8-6"c/c	
16	1	C5	1'0" x 2'3" 0'9" x 2'3"	1' ·4-Y25+ ·10-Y20 2'-3"	9" ·4-Y25+ ·10-Y20 2'-3"	9" ·10-Y20+ ·4-Y16 2'-3"	9" ·10-Y20+ ·4-Y16 2'-3"	9" ·6-Y20+ ·8-Y16 2'-3"	Y8-4"c/c	Y8-6"c/c	



KeyPlan

Legend :
c/c - Centre to Centre
C - Column

Notes:

1. All dimensions are in'Feet & Inches'unless otherwise noted.
2. All Grids are C/C of wall
3. Wherever applicable, this drawing must be read along with the relevant architectural drawings.
4. Concrete mix shall be **M25** for all RCC members conforming to IS 456 - 2500, unless otherwise noted.
5. 'Y' Designate steel reinforcement diameter, and shall conform to IS-1786 - 2508, Fe 500D Grade with minimum yield strength of **500D N/mm²** having elongation of 16%.
6. Safe bearing capacity of soil is **25T/m²** (As per Soil Report)
7. Depth of foundation shall be **2.5m** from Lowest existing ground level (or) Depth upto Hard Strata (Whichever is more)
8. Clear cover for column reinforcement - **1 1/2" (40mm)**
   for footing reinforcement - **2" (50mm)**
   for footing side face reinforcement - **3" (75mm)**
9. Development length of bars:
   (Ld) In Tension - **50 ø**
   (Ld) In Compression - **40 ø**
   For **M25** grade of concrete & shall be kept staggered
10. The building has been designed for (Stilt+5)
11. Any discrepancy between this drawing and other drawings must be brought to the notice of consultant.
12. P.C.C **4"** Thk.
13. Column layout Plan refer dwg.no:
    MC/SLM/JN-356/KRISHNA/STR/102

Working Drawing

Revisions

Rev. no.	Particulars	Date	Chkd.by	Appd.by

Date : 15.04.2025 | Drawn by : K.P | Designed by : S.M | Appd.by :N.M

Dwg no.: MC/SLM/JN-356/KRISHNA/STR/102b

Proposed Construction of Apartment Building for Chona Krishna at Salem

Title :

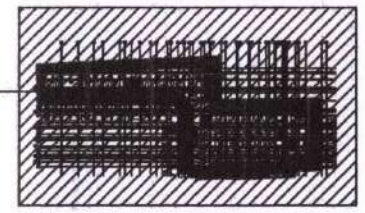
Column Reinforcement Detail-2/3 (Block-1)

Consultants :
CHONA BUILDERS
Structural Engineering, Civil, Planning & Project Management
304-2 sona nagar alagapuram pudur
Salem - 636016. Tamil Nadu
Ph: 9842 743 591 | 9159 083 591
E-Mail: chonaslm2005@gmail.com

Approved for Construction

COLUMN REINFORCEMENT DETAIL (1)

Sl.no	No. of Columns	Column Name	Column Sizes	Column Reinf.Detail (UP To Footing Lvl to Stilt Floor Roof Lvl)	Column Reinf.Detail (Stilt Floor Roof Lvl to First Floor Roof Lvl)	Column Reinf.Detail (First Floor Roof Lvl to Second Floor Roof Lvl)	Column Reinf.Detail (Second Floor Roof Lvl to Third Floor Roof Lvl)	Column Reinf.Detail (Third Floor Roof Lvl to Fifth Floor Roof Lvl)	Lateral Ties		Lateral Ties
									Special Confining / Joint Reinforcement	Transverse Reinforcement	
17	1	C32	1'0" x 2'6" 0'9" x 2'6"	1' ·8-Y20+ ·8-Y16	9" ·8-Y20+ ·8-Y16	9" ·8-Y20+ ·8-Y16	9" ·8-Y20+ ·8-Y16	9" ·8-Y20+ ·8-Y16	Y8-4"c/c	Y8-6"c/c	
18	2	C12,C28	1'0" x 1'6" 0'9" x 1'6"	9" 3" ·4-Y20+ ·6-Y16 4-Y12	9" ·4-Y20+ ·6-Y16	9" ·10-Y16	9" ·10-Y16	9" ·6-Y16+ ·4-Y12	Y8-4"c/c	Y8-6"c/c	
19	2	C1,C35	1'0" x 1'9" 0'9" x 1'9"	9" 3" ·12-Y16 5-Y12	9" ·12-Y16	9" ·6-Y16+ ·6-Y12	9" ·6-Y16+ ·6-Y12	9" ·4-Y16+ ·8-Y12	Y8-4"c/c	Y8-6"c/c	
20	2	C7,C30	1'0" x 1'9" 0'9" x 1'9"	9" 3" ·4-Y20+ ·8-Y16 5-Y12	9" ·4-Y20+ ·8-Y16	9" ·8-Y16+ ·4-Y12	9" ·8-Y16+ ·4-Y12	9" ·6-Y16+ ·6-Y12	Y8-4"c/c	Y8-6"c/c	
21	1	C10	1'0" x 2'0" 0'9" x 2'0"	9" 3" ·4-Y20+ ·8-Y16 5-Y12	9" ·4-Y20+ ·8-Y16	9" ·12-Y16	9" ·12-Y16	9" ·6-Y16+ ·6-Y12	Y8-4"c/c	Y8-6"c/c	
22	3	C31,C33, C36	1'0" x 2'0" 0'9" x 2'0"	9" 3" ·12-Y20 5-Y12	9" ·12-Y20	9" ·6-Y20+ ·6-Y16	9" ·6-Y20+ ·6-Y16	9" ·12-Y16	Y8-4"c/c	Y8-6"c/c	
23	1	C2	1'0" x 2'3" 0'9" x 2'3"	9" 3" ·4-Y25+ ·10-Y20 6-Y12	9" ·4-Y25+ ·10-Y20	9" ·10-Y20+ ·4-Y16	9" ·10-Y20+ ·4-Y16	9" ·6-Y20+ ·8-Y16	Y8-4"c/c	Y8-6"c/c	



KeyPlan

Legend :
c/c - Centre to Centre
C - Column

Notes:

1. All dimensions are in'Feet & Inches'unless otherwise noted.
2. All Grids are C/C of wall
3. Wherever applicable, this drawing must be read along with the relevant architectural drawings.
4. Concrete mix shall be **M25** for all RCC members conforming to IS 456 - 2500, unless otherwise noted.
5. 'Y' Designate steel reinforcement diameter, and shall conform to IS-1786 - 2508, Fe 500D Grade with minimum yield strength of **500D N/mm²** having elongation of 16%.
6. Safe bearing capacity of soil is **25T/m²** (As per Soil Report)
7. Depth of foundation shall be **2.5m** from Lowest existing ground level (or) Depth upto Hard Strata (Whichever is more)
8. Clear cover for column reinforcement - **1 1/2" (40mm)**
   for footing reinforcement - **2" (50mm)**
   for footing side face reinforcement - **3" (75mm)**
9. Development length of bars:
   (Ld) In Tension - **50 Ø**
   (Ld) In Compression - **40 Ø**
   For **M25** grade of concrete & shall be kept staggered
10. The building has been designed for (Stilt+5)
11. Any discrepancy between this drawing and other drawings must be brought to the notice of consultant.
12. P.C.C **4"** Thk.
13. Column layout Plan refer dwg.no:
    MC/SLM/JN-356/KRISHNA/STR/102

Working Drawing

Revisions

Rev. no.	Particulars	Date	Chkd.by	Appd.by

Date : 15.04.2025 | Drawn by : K.P | Designed by : S.M | Appd.by :N.M

Dwg no.: MC/SLM/JN-356/KRISHNA/STR/102c

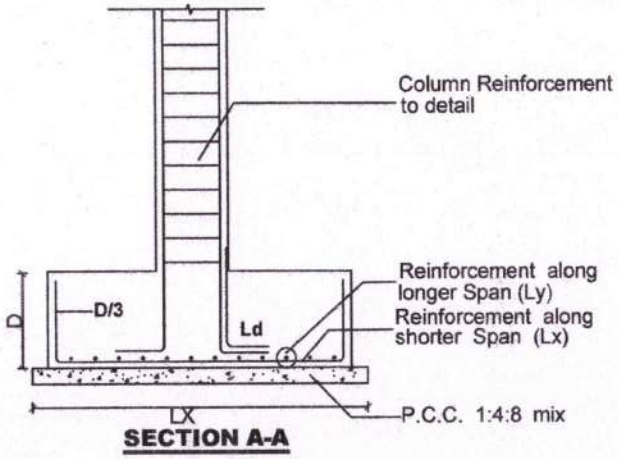
Proposed Construction of Apartment Building for Chona Krishna at Salem

Title :

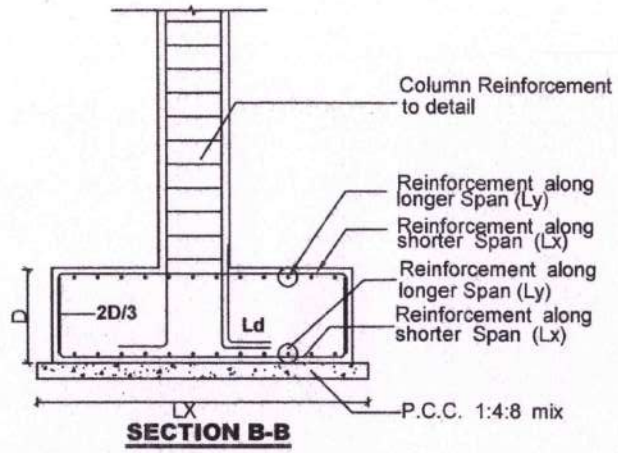
Column Reinforcement Detail-3/3 (Block-1)

Consultants :
CHONA BUILDERS
Structural Engineering, Civil, Planning & Project Management
304-2 sona nagar alagapuram pudur
Salem - 636016. Tamil Nadu
Ph: 9842 743 591 | 9159 083 591
E-Mail: chonaslm2005@gmail.com

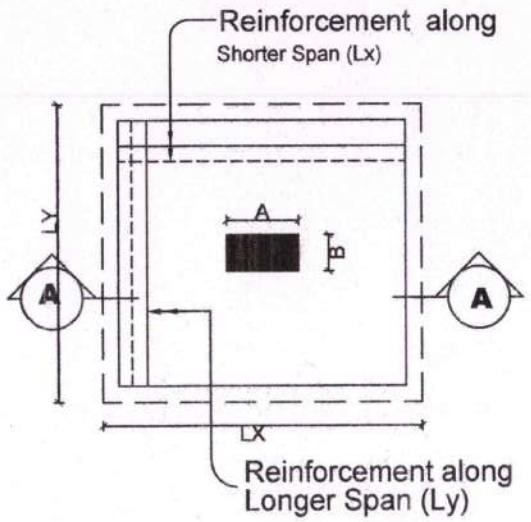
Approved for Construction



SECTION A-A



SECTION B-B

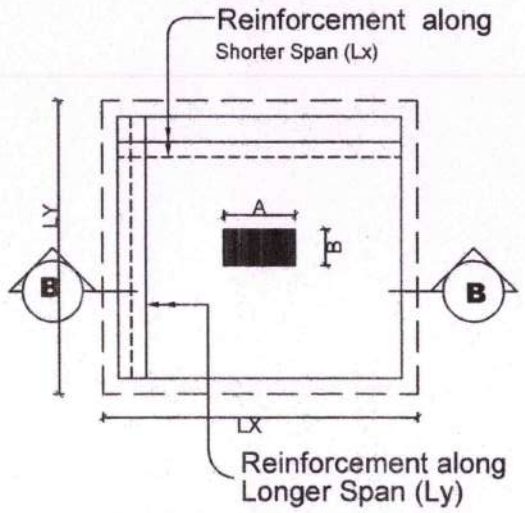


Plan

Typical Column Footing

Detail without Pedestal

Scale :- NTS

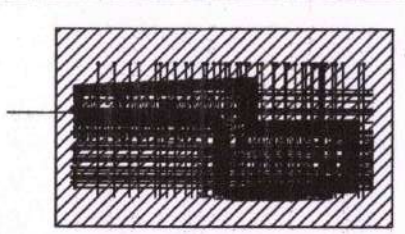


Plan

Typical Column Footing

Detail without Pedestal

Scale :- NTS



KeyPlan

Legend :

c/c	- Centre to Centre	CF	- Combined Footing
Eq.	- Equal	Ld	-Developement Length
Typ.	- Typical	D	- Depth of Footing
	- Bottom bar	A	- Shorter Span of Column
	- Top bar	B	- Longer Span of Column
B	- Bottom rod		
T	- Top rod		
RF	- Raft Footing		

Notes:

1. All dimensions are in'Feet & Inches'unless otherwise noted.
2. All Grids are C/C of wall
3. Wherever applicable, this drawing must be read along with the relevant architectural drawings.
4. Concrete mix shall be **M25** for all RCC members conforming to IS 456 - 2500, unless otherwise noted.
5. **'Y'** Designate steel reinforcement diameter, and shall conform to IS-1786 - 2508, Fe 500D Grade with minimum yield strength of **500D N/mm²** having elongation of 16%.
6. Safe bearing capacity of soil is **25T/m²** (As per Soil Report)
7. Depth of foundation shall be **2.5m** from Lowest existing ground level (or) Depth upto Hard Strata (Whichever is more)
8. Clear cover for column reinforcement - **1 1/2" (40mm)**
   for footing reinforcement - **2" (50mm)**
   for footing side face reinforcement - **3" (75mm)**
9. Development length of bars:
   (Ld) In Tension - **50 Ø**
   (Ld) In Compression - **40 Ø**
   For **M25** grade of concrete & shall be kept staggered
10. The building has been designed for (Stilt+5)
11. Any discrepancy between this drawing and other drawings must be brought to the notice of consultant.
12. P.C.C **4"** Thk.
13. Footing layout Plan refer dwg.no:
    MC/SLM/JN-356/KRISHNA/STR/101

Working Drawing

Revisions

Rev. no.	Particulars	Date	Chkd.by	Appd.by

Date : 15.04.2025	Drawn by : K.P	Designed by : S.M	Appd.by :N.M

Dwg no.: MC/SLM/JN-356/KRISHNA/STR/101b

Proposed Construction of Apartment Building for Chona Krishna at Salem

Title :

Footing Reinforcement Detail (1)

Consultants :

CHONA BUILDERS

Structural Engineering, Civil, Planning & Project Management

304-2 sona nagar alagapuram pudur

Salem - 636016. Tamil Nadu

Ph: 9842 743 591 | 9159 083 591

E-Mail: chonaslm2005@gmail.com

Approved for Construction

THE LANDLENS SUITE

Eight ways to know a piece of land before you pay for it.

This report covers one part of the picture. These cover the rest, drawn from the same government records, for any property in Tamil Nadu.

LandLens One
Ask anything about a property and get an answer grounded in live government records, with the sources shown.
/landlens/one

Verify My Land
Every record check run on one property and returned as a single report.
/landlens/verify-my-land

Legal Opinion
An advocate's written opinion on the title, built on the records we pull for it.
/landlens

One Map
Every layer on one map: the parcel, its boundary, zoning, water bodies and what sits around it.
/landlens/one/map

PriceMap
What land actually changed hands for around this plot, taken from the registered deeds.
/landlens/pricemap

Build Scope
What you are allowed to build here: floor space, height, coverage and setbacks.
/landlens/build-scope

Property Tracker
Watch a property and hear about it when something new is registered against it.
/landlens/property-tracker

Deal Room
Run the transaction in one place: documents, stamping, signatures and the parties.
/landlens/deal-room

FREE TOOLS · NO ACCOUNT NEEDED

Twenty-four checks you can run yourself, at no cost.

Records and verification

The registers themselves, read for you.

- Encumbrance Certificate
- Patta and Chitta
- Field Measurement Sketch
- EC Analyzer
- Bank charge check
- Court case search
- Seller background check
- Approval check by survey

Value and duty

What it is worth and what it costs to register.

- Guideline value by street
- Guideline value by survey
- Stamp duty and registration fees
- Capital gains
- Floor space index
- Area unit converter

Zoning and land use

What the plan says can happen on this land.

- Land use zone finder
- CMDA land use check
- Coastal regulation zone
- Master plan check
- Water bodies finder
- Airport height clearance

Registers and directories

Who holds it, and which office keeps the record.

- Find your registering office
- Temple property check
- Waqf property check
- RERA register

Every free tool
/tools

Services we run for you
/services

The LandLens suite
/landlens/one

Verified RealEstate™

Every claim in this document traces back to a government record.

- Legal opinions, due diligence and title verification
- Building plan, layout and sub-division approvals
- Completion and occupancy certificates, regularisation
- Escrow, negotiation and NRI property management
- Land survey, soil testing, architecture and construction

Verified RealEstate
3/350/2 Mettukuppam,
OMR Thoraipakkam,
Chennai 600 097, India
hello@verified.realestate
+91 9996 12 9996

Prepared from the registers named on the page each finding sits on. Where a register could not be read, this document says so in its place rather than leaving the gap to be read as a clean result.